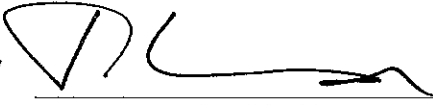


Civil Engineering and Development Department

**Agreement No. CE 59/2015 (EP)
Environmental Team for
Tseung Kwan O – Lam Tin Tunnel
Design and Construction**

**Monthly Environmental Monitoring and
Audit Report for
February 2021
(version 1.0)**

Approved By 
(Dr. HF Chan,
Environmental Team Leader)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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Civil Engineering and Development Department
East Development Office
8/F, South Tower, West Kowloon Government Offices
11 Hoi Ting Road
Yau Ma Tei
Kowloon

Your reference:

Our reference: HKCEDD08/50/107199

Date: 1 April 2021

Attention: Mr Raymond Chan

BY FAX & POST
(Fax no.: 2739 0076)

Dear Sirs

Agreement No.: NTE 06/2016
Independent Environmental Checker for Tseung Kwan O – Lam Tin Tunnel
Monthly Environmental Monitoring and Audit Report for February 2021 (version 1.0)

We refer to emails of 24 and 31 March 2021 from Cinotech Consultants Limited attaching the Monthly Environmental Monitoring and Audit Report for February 2021 (version 1.0).

We have no further comment and hereby verify the captioned report in accordance with Clause 4.4 of the Environmental Permit no. EP-458/2013/C.

Should you have any queries, please do not hesitate to contact the undersigned or our Mr Edric Lau on 2618 2831.

Yours faithfully
ANEWR CONSULTING LIMITED

James Choi
Independent Environmental Checker

CPSJ/LCCR/LTKE/lsm

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EXECUTIVE SUMMARY

Introduction

1. This is the 52nd Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the “Agreement No. CE 59/2015 (EP) Environmental Team for Tseung Kwan O – Lam Tin Tunnel – Design and Construction” (hereinafter called “the Project”). This report documents the findings of EM&A Works conducted in February 2021.
2. During the reporting month, the following works contracts were undertaken:
 - Contract No. NE/2015/01 – Tseung Kwan O – Lam Tin Tunnel – Main Tunnel and Associated Works;
 - Contract No. NE/2015/02 – Tseung Kwan O – Lam Tin Tunnel – Road P2 and Associated Works;
 - Contract No. NE/2015/03 – Tseung Kwan O – Lam Tin Tunnel – Northern Footbridge;
 - Contract No. NE/2017/01 – Tseung Kwan O – Lam Tin Tunnel – Tseung Kwan O Interchange and Associated Works
 - Contract No. NE/2017/02 – Tseung Kwan O – Lam Tin Tunnel – Road P2/D4 and Associated Works.
 - Contract No. NE/2017/06 – Tseung Kwan O – Lam Tin Tunnel – Traffic Control and Surveillance System(TCSS) and Associated Works
 - Contract No. NE/2017/07 – Cross Bay Link, Tseung Kwan O – Main Bridge and Associated Works.

Environmental Monitoring Works

3. Environmental monitoring for the Project was performed in accordance with the EM&A Manual and the monitoring results were checked and reviewed. Site Inspections/Audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.
4. Summary of the non-compliance (exceedance) in the reporting month for the Project is tabulated in **Table I**.

Table I Non-compliance (exceedance) Record for the Project in the Reporting Month

Environmental Monitoring	No. of Non-compliance (Exceedance)		No. of Non-compliance (Exceedance) due to Construction Activities of this Project		Action Taken
	Action Level	Limit Level	Action Level	Limit Level	
Air Quality	0	0	0	0	N/A
Noise	3	2	2	2	Refer to Appendix K & O
Marine Water Quality	23	76	0	0	Refer to Appendix K
Groundwater Level Monitoring (Piezometer Monitoring)	0	N/A ¹	0	N/A ¹	N/A
Ecological	N/A	N/A	N/A	N/A	N/A
Cultural Heritage	0	0	0	0	N/A
Landfill Gas	0	0	0	0	N/A

Note:(1) No Limit Level for Groundwater Level Monitoring (Piezometer Monitoring).

Air Quality Monitoring

- No Action/Limit Level exceedance for 1-hour TSP monitoring was recorded.
- No Action/Limit Level exceedance for 24-hour TSP monitoring was recorded.

Construction Noise Monitoring

- Two (2) Action Level exceedances were recorded due to the documented complaints received in this reporting month. The Summary of Documented Complaints in Reporting Month is tabulated in **Table III**.
- No Limit Level exceedance for day time & evening time and two (2) limit level exceedance for night time construction noise monitoring were recorded in the reporting month.

Water Quality Monitoring

- Groundwater quality monitoring had been suspended since October 2019 upon the agreement by EPD. Further details should be founded at **Section 5.1**.
- All marine water quality monitoring was conducted as scheduled in the reporting month. There were twenty-three (23) Action Level and seventy-six (76) Limit Level exceedances recorded in Monitoring Stations (M) during marine water quality monitoring. During this reporting month, no sand plume was observed during the water quality monitoring and site audits, therefore there is no direct evidence that the recent exceedances were due to the construction works of the Project. Details of this investigation are presented in **Section 5**. Daily silt curtain inspection and weekly diving inspection have been carried out by contractor, the record, as reviewed by the site auditors, indicated that silt curtains were found in good conditions.

-
11. Construction phase daily piezometer monitoring by the Contractor commenced in June 2018. It has switched to monthly basis since 3 October 2018 as the construction activity was 120m away from the piezometer gate. No monitoring was conducted in the reporting month.

Ecological Monitoring

12. Post-translocation coral monitoring survey shall be conducted once every 3 months for a period of 12 months after completion of coral translocation. The post-translocation coral monitoring surveys were completed in November 2017.

Monitoring on Cultural Heritage

13. Monitoring of impacts on Cultural Heritage at Cha Kwo Ling Tin Hau Temple commenced in May 2017. No Alert, Alarm and Action (AAA) Level exceedance was recorded in the reporting month.

Landscape and Visual Monitoring and Audit

14. The implementation of landscape and visual mitigation measures was checked during the environmental site inspections. Recommended follow-up actions have been discharged by the Contractor. Details of the audit findings and implementation status are presented in Section 10.

Landfill Gas Monitoring

15. Monitoring of landfill gases commenced in December 2016 and were carried out by the Contractor at excavation location, Portion III. No Limit Level exceedance was recorded.

Environmental Site Inspection

16. Joint weekly site inspections were conducted by representatives of the Contractor, Engineer and Environmental Team. The representative of the IEC joined the site inspection for NE/2015/01 on 24 February 2021 & NE/2015/02, NE/2017/01, NE/2017/02 and NE/2017/06 on 19 February 2021 respectively. Details of the audit findings and implementation status are presented in **Section 10**.

Waste Management

17. Wastes generated from this Project include inert construction and demolition (C&D) materials, non-inert C&D materials and marine sediment. Details of waste management data is presented in **Section 11** and **Appendix P**.

Key Information in the Reporting Month

18. Summary of key information in the reporting month is tabulated in **Table II**

Table II Key Information in the Reporting Month

Monthly Complaints	Event Details		Action Taken	Status
	Number	Nature		
February 2021	3	Noise	Details refer to App O	Draft CIRs submitted / Ongoing
January 2021	13	Noise / Air	Details refer to App O	Draft CIRs submitted / Ongoing / Closed
December 2020	13	Noise / Operating hours	Details refer to App O	Draft CIRs submitted / Ongoing / Closed
November 2020	14	Air / Noise	Details refer to App O	Draft CIRs submitted / Ongoing / Closed
October 2020	11	Air / Noise	Details refer to App O	Draft CIRs submitted / Ongoing
September 2020	9	Noise / Operation hours / Water	Details refer to App O	Draft CIRs submitted / Ongoing / Closed
August 2020	6	Noise / Operation hours / Water	Details refer to App O	Draft CIRs submitted / Closed
Notifications of any summons & prosecutions received	0	---	N/A	N/A

19. Summary of complaints received in the reporting month is tabulated in **Table III**.

Table III Summary of Complaints Details in Reporting Month

Complaint No.	Complaint	Investigation Findings	Follow-up Action / Mitigation Measure
Tseung Kwan O Side			
517	Noise nuisance from excavator	No PME was operating on-site at the time of complaint and the complaint is considered as non-project-related. The details shall be referred to CIR-N131.	Nil
519	Noise nuisance on morning (Feb 2021)	No clear judgement was made as the complainant's information is too vague and it is hard to pinpoint the excavator mentioned in the complaint was in fact the one located at the project site. The details shall be referred to CIR-N129.	The Contractor is reminded to strictly follow the approved CNMP.
Lam Tin Side			
518	Percussive Noise Nuisance from underground works	Investigation undergoing	

Key Construction Work in the reporting month & the next reporting month

20. Summary of key construction work in the reporting month is tabulated in **Table IV**.

Table IV Summary Table for Key Construction Work in the Reporting Month

Contract No.	Project Title	Site Activities (February 2021)	
NE/2015/01	Tseung Kwan O – Lam Tin Tunnel – Main Tunnel and Associated Works	Lam Tin Interchange	1) EHC2 U-Trough 2) Site Formation – Area 1G1, Area 1G2, Area 2 & Area 5 3) Site Formation – Slope stabilization & Retaining Wall

Contract No.	Project Title	Site Activities (February 2021)	
			4) Administration Building, West Ventilation Building & Bridge Construction 5) Stormwater Tank Construction 6) S01_2, EHC1&4 Construction 7) CKLR Underground Utilities 8) Landscape Deck
		Main Tunnel	9) S02_2 Excavation 10) Main Tunnel Lining Works
		TKO Interchange	11) Bridge Construction 12) East Ventilation Building
NE/2015/02	Tseung Kwan O – Lam Tin Tunnel – Road P2 and Associated Works	1) Site formation works, road and drainage for Road P2 CH500-CH650 and SR1 2) Sloping seawall construction 3) Excavation at CH821 – CH105 Cofferdam 4) Excavation at CH105 – CH318 Cofferdam 5) Installation of ELS at CH105 – CH821 Cofferdam 6) Installation of ELS at cofferdam CH105 – CH318 7) Installation of de-watering system at CH821 – CH105 Cofferdam 8) Construction of U-trough at CH821 – CH105 9) Construction of Underpass at CH105 – CH318 10) Re-construction of watermains DN150/DN200 at Tong Yin Street 11) Structure works for underpass CH105 – CH318 12) Reinstatement of Tong Yin Street 13) Reinstatement of Chiu Shin Street 14) Water works PE315 and DN300 15) Removal of temporary cofferdam 16) Installation of socketed H-pile at CT01 CH117 – CH336 17) Construction of seawall coping 18) Road & drainage works at SR1 footpath / cycle track 19) Excavation of 3rd layer of ELS at CH105 – CH318 cofferdam 20) Construction of storm water drain system for SHH 9101 – 9103 21) Drainage works at U-trough CH318 – CH363.50 22) H-Pile Remedial Works at CH105 – CH318 Cofferdam	
NE/2015/03	Tseung Kwan O – Lam Tin Tunnel – Northern Footbridge	The construction works under the contract had been completed in December 2019. The EM&A works were terminated in late April 2020.	
NE/2017/01	Tseung Kwan O – Lam Tin Tunnel – Tseung Kwan O Interchange and Associated Works	1) Construction of Pier 2) Construction of Pier Head Works 3) Construction of Pile Cap 4) Segment Erection Works 5) Installation of Parapet Skin	
NE/2017/02	Tseung Kwan O – Lam Tin Tunnel – Road P2/D4 and Associated Works	1) Inspection pit excavation and utility diversion works 2) Construction of drainage and watermain 3) Asphalt Paving 4) Pier, Staircase and Lift Shaft Construction 5) Road Works	
NE/2017/06	Tseung Kwan O – Lam Tin Tunnel – Traffic Control and Surveillance System(TCSS) and Associated Works	1) System Integration Test 2) Installation works at Tunnel 3) Project Signboard set up 4) Goods arrival & storage on site	

Future Key Issues

21. The future key environmental issues in the coming month include:

Table V Summary Table for Site Activities in the next Reporting Period

Contract No. and Project Title	Site Activities (March 2021)		Key Environmental Issues *
NE/2015/01 - Tseung Kwan O – Lam Tin Tunnel – Main Tunnel and Associated Works	Lam Tin Interchange	1) EHC2 U-Trough 2) Site Formation – Area 1G1, Area 1G2, Area 2 & Area 5 3) Site Formation – Slope stabilization & Retaining Wall 4) Administration Building, West Ventilation Building & Bridge Construction 5) Stormwater Tank Construction 6) S01_2, EHC1&4 Construction 7) CKLR Underground Utilities 8) Landscape Deck	(A) / (B) / (C) / (D) / (E) / (G)
	Main Tunnel	9) S02_2 Excavation 10) Main Tunnel Lining Works	(B)
	TKO Interchange	11) Bridge Construction 12) East Ventilation Building	(A) / (C) / (D) / (E) / (F) / (I)
NE/2015/02 - Tseung Kwan O – Lam Tin Tunnel – Road P2 and Associated Works	1) Construction of pillar box and ducting system at Portion IV adjacent to Ocean Shores EVA 2) Site formation at Road P2 CH500-CH650 and SR1 3) Road and drainage works at Road P2 CH500 – 650, slip road SR1 footpath and cycle track, slip road SR2 CH250 – CH350 4) ELS at underpass P2 CH105 – CH318 5) 4th of excavation at CH105 – CH318 cofferdam 6) Excavation/ELS at CH821 – CH105 Cofferdam 7) Installation of socketed H-pile at CT01 CH117 – CH336 8) Reinstatement of Tong Yin Street 9) Installation of de-watering system at CH821 – CH105 10) Excavation & ELS installation works at CH821 – CH105 11) Construction of U-tough at CH821 – CH105 12) Drainage works at U-trough CH318 – CH363.50 13) Pre-bore/ELS works for U-trough CH363.50 – CH411/U-trough SR2 CH110-CH170 14) Construction of profile barrier at U-trough CH318 – CH363.50 15) Construction of sloping seawall 16) Removal of temporary cofferdam 17) Construction of seawall coping 18) Drainage works at SR1 footpath / cycle truck 19) Installation of ELS at cofferdam CH105 – CH318 20) Backfilling works for reinstatement of Tong Yin Street 21) Construction of U-trough at CH821 – CH 105 Cofferdam 22) Excavation and re-compaction at S100 CH280 – S200 CH755 and S300 CH405 – CH326 23) Waterworks – DN300/PE315 24) RC Structure works for U-trough A-B 25) RC Structure works for U-trough C		(A) / (B) / (C) / (D) / (E) / (G) / (I)
NE/2015/03 - Tseung Kwan O – Lam Tin Tunnel – Northern Footbridge	The construction works under the contract had been completed in December 2019. Materials are being removed from works area.		N/A

Contract No. and Project Title	Site Activities (March 2021)	Key Environmental Issues *
NE/2017/01 – Tseung Kwan O Interchange and Associated Works	1) Construction of Pier 2) Construction of Pier Head works 3) Segment erection works 4) Construction of Bridge Decks 5) Installation of Parapet Skin	(A) / (B) / (E) / (F) / (G)
NE/2017/02 – Tseung Kwan O - Lam Tin Tunnel - Road P2/D4 and Associated Works	1) Inspection pit excavation and utility diversion works 2) Construction of drainage and watermain 3) Asphalt Paving 4) Pier, Staircase and Lift Shaft Construction 5) Road Works	(A) / (B) / (E) / (F) / (G)
NE/2017/06 – Tseung Kwan O – Lam Tin Tunnel – Traffic Control and Surveillance System(TCSS) and Associated Works	1) System Integration Test 2) Goods arrival & storage on site	N/A

Note:

- (A) Watering for dust generation from haul road, stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
- (B) Noisy construction activity such as rock-breaking activities and piling works;
- (C) Runoff from exposed slope or site area;
- (D) Wastewater and runoff discharge from site;
- (E) Accumulation of silt, mud and sand along U-channels and sedimentation tanks;
- (F) Set up and implementation of temporary drainage system for the surface runoff;
- (G) Storage of chemicals/fuel and chemical waste/waste oil on site;
- (H) Accumulation and storage of general and construction waste on site; and
- (I) Marine water quality impact and indirect impact to coral communities due to marine construction for TKO-LTT reclamation

1. INTRODUCTION

- 1.1 Cinotech Consultants Limited (Cinotech) was commissioned by Civil Engineering and Development Department (CEDD) as the Environmental Team (ET) to undertake environmental monitoring and auditing services for the Works Contracts involved in the implementation of Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) project to ensure that the environmental performance of the Works Contracts comply with the requirements specified in the Environmental Permit (EP), Environmental Monitoring & Audit (EM&A) Manual, Environmental Impact Assessment (EIA) Report of the TKO-LTT project and other relevant statutory requirements. This is the 52nd Monthly EM&A report summarizing the EM&A works for the Project in February 2021.

Purpose of the Report

- 1.2 This is the 52nd Monthly EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period in February 2021.

Structure of the Report

- 1.3 The structure of the report is as follows:

Section 1: **Introduction** – purpose and structure of the report.

Section 2: **Contract Information** – summarises background and scope of the Contract, site description, project organization and contact details, construction programme, the construction works undertaken and the status of Environmental Permits/Licenses during the reporting month.

Section 3: **Air Quality Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.

Section 4: **Noise Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.

Section 5: **Water Quality Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.

Section 6: **Ecological Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations and Action and Limit Levels, monitoring results and Event / Action Plans.

Section 7: **Cultural Heritage** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations and monitoring results.

Section 8: **Landscape and Visual Monitoring Requirements** – summarises the requirements of landscape and visual monitoring

Section 9: **Landfill Gas Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, monitoring results and Limit Levels and Action Plan

Section 10: **Environmental Site Inspection** – summarises the audit findings of the weekly site inspections undertaken within the reporting month.

Section 11: **Waste Management** – summarises the waste management data in the reporting month.

Section 12: **Environmental Non-conformance** – summarises any monitoring exceedance, environmental complaints, environmental summons and successful prosecutions within the reporting month.

Section 13: **Future Key Issues** – summarises the impact forecast and monitoring schedule for the next three months.

Section 14: **Conclusions and Recommendation**

2. PROJECT INFORMATION

Background

- 2.1 In 2002, Civil Engineering and Development Department (CEDD) commissioned an integrated planning and engineering study under Agreement No. CE 87/2001 (CE) “Further Development of Tseung Kwan O – Feasibility Study” (the “TKO Study”) to formulate a comprehensive plan for further development of TKO New Town. It recommended to further develop TKO to house a total population of 450,000 besides the district’s continuous commercial and industrial developments.
- 2.2 At present, the Tseung Kwan O Tunnel is the main connection between Tseung Kwan O (TKO) and other areas in the territory. To cope with the anticipated transport need, the TKO Study recommended the provision of Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) (hereinafter referred to as “the Project”) and Cross Bay Link (CBL) to meet the long-term traffic demand between TKO and the external areas. The site layout plan for the Project is shown in **Figure 1**. CBL was also entrusted with part of the marine viaducts near Tseung Kwan O Interchange since the commencement of the CBL project the December 2018.
- 2.3 The Environmental Impact Assessment (EIA) Report for the TKO-LTT project was approved under the Environmental Impact Assessment Ordinance (EIAO) in July 2013. The corresponding Environmental Permit (EP) was issued in August 2013 (EP no.: EP-458/2013). Variations to the EP was applied and the latest EP (EP no.: EP-458/2013/C) was issued by the Director of Environmental Protection (DEP) in January 2017.
- 2.4 The commencement dates of construction of this Project are:
- Contract No. NE/2015/01 and Contract No. NE/2015/02: 7 November 2016.
 - Contract No. NE/2015/03: 29 May 2017.
 - Contract No. NE/2017/02: 15 March 2018.
 - Contract No. NE/2017/01: 23 May 2018.
 - Contract No. NE/2017/06: 09 November 2018.
 - Contract No. NE/2017/07: 22 February 2021

Project Organizations

- 2.5 Different parties with different levels of involvement in the project organization include:
- Project Proponent – Civil Engineering and Development Department (CEDD)
 - The Engineer and the Engineer’s Representative (ER) – AECOM
 - Environmental Team (ET) – Cinotech Consultants Limited (Cinotech)
 - Independent Environmental Checker (IEC) – AnewR Consulting Limited (AnewR)

2.6 The key contacts of the Project are shown in **Table 2.1**.

Table 2.1 Key Project Contacts

Party	Role	Contact Person	Phone No.	Fax No.
CEDD	Project Proponent	Mr. LO Sai Pak, Sunny	2301 1384	2739 0076
AECOM	Engineer's Representative	Mr. KY Chan	3922 9000	2759 1698
Cinotech	Environmental Team	Dr. HF Chan	2151 2088	3107 1388
		Mr. KS Lee	2151 2091	
AnewR	Independent Environmental Checker	Mr. James Choi	2618 2836	3007 8648

Construction Activities undertaken during the Reporting Month

2.7 The major site activities undertaken in the reporting month included:

Table 2.2 Summary Table for Major Site Activities in the Reporting Month

Contract No.	Project Title	Site Activities (February 2021)	
NE/2015/01	Tseung Kwan O – Lam Tin Tunnel – Main Tunnel and Associated Works	Lam Tin Interchange	1) NE/2015/01
		Main Tunnel	2) S02_2 Excavation 3) Main Tunnel Lining Works
		TKO Interchange	4) Bridge Construction 5) East Ventilation Building
NE/2015/02	Tseung Kwan O – Lam Tin Tunnel – Road P2 and Associated Works	1) Site formation works, road and drainage for Road P2 CH500-CH650 and SR1 2) Sloping seawall construction 3) Excavation at CH821 – CH105 Cofferdam 4) Excavation at CH105 – CH318 Cofferdam 5) Installation of ELS at CH105 – CH821 Cofferdam 6) Installation of ELS at cofferdam CH105 – CH318 7) Installation of de-watering system at CH821 – CH105 Cofferdam 8) Construction of U-trough at CH821 – CH105 9) Construction of Underpass at CH105 – CH318 10) Re-construction of watermains DN150/DN200 at Tong Yin Street 11) Structure works for underpass CH105 – CH318 12) Reinstatement of Tong Yin Street 13) Reinstatement of Chiu Shin Street 14) Water works PE315 and DN300 15) Removal of temporary cofferdam 16) Installation of socketed H-pile at CT01 CH117 – CH336 17) Construction of seawall coping 18) Road & drainage works at SR1 footpath / cycle track 19) Excavation of 3rd layer of ELS at CH105 – CH318 cofferdam 20) Construction of storm water drain system for SHH 9101 – 9103 21) Drainage works at U-trough CH318 – CH363.50 22) H-Pile Remedial Works at CH105 – CH318 Cofferdam	
NE/2015/03	Tseung Kwan O – Lam Tin Tunnel – Northern Footbridge	The construction works under the contract had been completed in December 2019. The EM&A works were terminated in late April 2020.	

Contract No.	Project Title	Site Activities (February 2021)
NE/2017/01	Tseung Kwan O – Lam Tin Tunnel – Tseung Kwan O Interchange and Associated Works	1) Construction of Pier 2) Construction of Pier Head Works 3) Construction of Pile Cap 4) Segment Erection Works 5) Installation of Parapet Skin
NE/2017/02	Tseung Kwan O – Lam Tin Tunnel – Road P2/D4 and Associated Works	1) Inspection pit excavation and utility diversion works 2) Construction of drainage and watermain 3) Asphalt Paving 4) Pier, Staircase and Lift Shaft Construction 5) Road Works
NE/2017/06	Tseung Kwan O – Lam Tin Tunnel – Traffic Control and Surveillance System(TCSS) and Associated Works	1) System Integration Test 2) Installation works at Tunnel 3) Project Signboard set up 4) Goods arrival & storage on site

2.8 The construction programme showing the inter-relationship with environmental protection/mitigation measures are presented in **Table 2.3**.

Table 2.3 Construction Programme Showing the Inter-Relationship with Environmental Protection/Mitigation Measures

Construction Works	Major Environmental Impact	Control Measures
As mentioned in Table 2.2	Noise, dust impact, water quality and waste generation	<ul style="list-style-type: none"> • Sufficient watering of the works site with active dust emitting activities • Properly cover the stockpiles • On-site waste sorting and implementation of trip ticket system • Appropriate desilting/sedimentation devices provided on site for treatment before discharge • Use of quiet plant and well-maintained construction plant • Provide movable noise barrier

Status of Environmental Licences, Notification and Permits

2.9 A summary of the relevant permits, licences, and/or notifications on environmental protection for this Project is presented in **Table 2.4**.

Table 2.4 Summary of the Status of Environmental Licences, Notification and Permits

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
Environmental Permit (EP)				
N/A	EP-458/2013/C	20/1/2017	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation				
NE/2015/01	EPD Ref no.: 405305	21/07/2016	N/A	Valid
	EPD Ref no.: 405582	28/07/2016	N/A	Valid
NE/2015/02	EPD Ref no.: 406100	12/08/2016	N/A	Valid
NE/2015/03	EPD Ref no.: 416072	26/04/2017	N/A	Valid
NE/2017/02	EPD Ref no.: 429867	19/01/2018	N/A	Valid

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
NE/2017/01	EPD Ref no.: 430070	25/01/2018	N/A	Valid
NE/2017/06	EPD Ref no.: 461507	03/11/2020	N/A	Valid
Billing Account for Construction Waste Disposal				
NE/2015/01	Account No. 7025431	11/07/2016	N/A	Valid
NE/2015/02	Account No. 7025654	16/08/2016	N/A	Valid
NE/2015/03	Account No. 7026805	30/12/2016	N/A	Valid
NE/2017/02	Account No. 7029651	22/12/2017	N/A	Valid
NE/2017/01	Account No. 7029994	01/02/2018	N/A	Valid
NE/2017/06	Account No. 7032520	22/11/2018	N/A	Valid
Registration of Chemical Waste Producer				
NE/2015/01	Waste Producer No. 5218-290-L2881-02	22/08/2016	N/A	Valid
	Waste Producer No. 5213-833-L2532-03	22/08/2016	N/A	Valid
NE/2015/02	Waste Producer No. 5213-838-C4094-01	23/08/2016	N/A	Valid
NE/2015/03	Waste Producer No. 5213-265-W3435-04	19/07/2017	N/A	Valid
NE/2017/02	Waste Producer No. 5213-833-Z4004-04	01/02/2018	N/A	Valid
NE/2017/01	Waste Producer No. 5213-833-C4262-01	12/02/2018	N/A	Valid
Effluent Discharge License under Water Pollution Control Ordinance				
NE/2015/01	WT00025806-2016	18/07/2018	30/11/2021	Valid
	WT00026212-2016	16/05/2017	30/11/2021	Valid
	WT00027354-2017	22/03/2017	31/03/2022	Valid
	WT00027405-2017	22/03/2017	31/03/2022	Valid
	WT00028495-2017	11/08/2017	31/08/2022	Valid
NE/2015/02	WT00026386-2016	15/12/2016	31/12/2021	Valid
	WT00027226-2017	23/02/2017	28/02/2022	Valid
	WT00030654-2018	16/04/2018	30/04/2023	Valid
NE/2015/03	WT00027295-2017	20/03/2017	31/03/2022	Valid
NE/2017/01	WT00030711-2018	11/04/2018	30/04/2023	Valid
	WT00030716-2018	23/05/2018	31/05/2023	Valid
NE/2017/02	WT00030654-2018	16/04/2018	30/04/2023	Valid
Construction Noise Permit (CNP)				
NE/2015/01	GW-RE0697-20	04/09/2020	03/03/2021	Valid
	GW-RE0767-20	23/09/2020	21/03/2021	Valid
	GW-RE0909-20	06/11/2020	05/01/2021	Valid until 05 Jan 2021
	GW-RE0959-20	21/11/2020	20/02/2021	Valid
	GW-RE1039-20	16/12/2020	16/03/2021	Valid
	GW-RE1070-20	22/12/2020	21/06/2021	Valid
	GW-RE1094-20	01/01/2021	05/04/2021	Valid

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
	GW-RE0058-21	24/01/2021	28/02/2021	Valid
NE/2015/02	GW-RE0503-20	12/06/2020	04/12/2020	Valid
	GW-RE0730-20	13/09/2020	12/03/2021	Cancelled on 14 Jan 2021 due to non-compliance
	GW-RE0970-20	28/10/2020	27/01/2021	Valid until 27 Jan 2021
	GW-RE1080-20	14/12/2020	06/05/2021	Valid
NE/2017/01	GW-RE0549-20	30/06/2020	28/12/2020	Valid
NE/2017/02	GW-RE0896-20	03/11/2020	02/05/2021	Valid
Marine Dumping Permit				
NE/2017/01	EP/MD/21-011	N/A	N/A	N/A
NE/2015/01	CEDD01062	N/A	10/11/2020	Valid
Specified Process (SP) License				
NE/2015/01	L-11-053	09/03/2018	08/03/2021	Valid

Summary of EM&A Requirements

- 2.10 The EM&A programme requires construction noise monitoring, air quality monitoring, water quality monitoring, environmental site audit, etc. The EM&A requirements for each parameter are described in the following sections, including:
- All monitoring parameters;
 - Action and Limit levels for all environmental parameters;
 - Event Action Plans;
 - Environmental mitigation measures, as recommended in the Project EIA Report.
- 2.11 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in **Section 10** of this report.
- 2.12 This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the monitoring parameters of the required environmental monitoring works and audit works for the Project in February 2021.

3. AIR QUALITY

Monitoring Requirements

- 3.1 According to EM&A Manual of the Project, 1-hour and 24-hour TSP monitoring are required to monitor the air quality. For regular impact monitoring, a sampling frequency of at least once in every six days shall be undertaken at all of the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six days shall be undertaken when the highest dust impact occurs. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

Monitoring Locations

- 3.2 Six designated monitoring stations were selected for air quality monitoring programme. **Table 3.1** describes the air quality monitoring locations, which are also depicted in **Figure 2**.

Table 3.1 Locations for Air Quality Monitoring

Monitoring Stations	Location	Location of Measurement
AM1	Tin Hau Temple	Ground Level
AM2	Sai Tso Wan Recreation Ground	Ground Level
AM3	Yau Lai Estate Bik Lai House	Rooftop (41/F)
AM4 ⁽¹⁾	Sitting-out Area at Cha Kwo Ling Village	Ground Level
AM4(A) ^{(2) (*)}	Cha Kwo Ling Public Cargo Working Area Administrative Office	Rooftop (3/F)
AM5(A) ^(*)	Tseung Kwan O DSD Desilting Compound	Ground Level
AM6(A) ^(*)	Park Central, L1/F Open Space Area	1/F

Remarks: (1) For 1-hour TSP monitoring; (2) For 24-hour TSP monitoring

(*) Air quality monitoring at designated station AM4(24-hr TSP), AM5 and AM6 was rejected by the premise owners. Therefore, baseline and impact air quality monitoring works were carried out at alternative air quality monitoring stations AM4(A) (24-hr TSP only), AM5(A) and AM6(A) respectively.

Monitoring Equipment

- 3.3 High Volume Samplers (HVS) were used to carry out 24-hour TSP monitoring. Direct reading dust meter were also used to measure 1-hour average TSP levels. The 1-hour sampling was determined periodically by HVS to check the validity and accuracy of the results measured by direct reading method.
- 3.4 Wind data monitoring equipment was set at rooftop (about 41/F) of Yau Lai Estate Bik Lai House for logging wind speed and wind direction such that the wind sensors are clear of obstructions or turbulence caused by building. The wind data monitoring equipment is re-calibrated at least once every six months and the wind directions are divided into 16 sectors of 22.5 degrees each. The location is shown in **Figure 2**.
- 3.5 **Table 3.2** summarizes the equipment to be used in the air quality monitoring. Copies of calibration certificates are attached in **Appendix B**.

Table 3.2 Air Quality Monitoring Equipment

Equipment	Model and Make	Quantity
Calibrator	TISCH Model: TE-5025A	1
1-hour TSP Dust Meter	Sibata Model No.: LD-3B / LD-5R	7
	Met One Instruments Model No.: AEROCET-831	0
	Handheld Particle Counter Hal-HPC300 / Hal-HPC301	0
HVS Sampler	TISCH Model: TE-5170	1
	GMW Model: GS2310	5
Wind Anemometer	Davis Weather Monitor II, Model no. 7440	1
	Davis Weather Stations, Vantage Pro 2, Model No. 6152CUK	0

Monitoring Parameters and Frequency

3.6 **Table 3.3** summarizes the monitoring parameters, monitoring period and frequencies of air quality monitoring.

Table 3.3 Frequency and Parameters of Air Quality Monitoring

Monitoring Stations	Parameter	Frequency
AM1, AM2, AM3, AM4, AM5(A) and AM6(A)	1-hour TSP	3 times per 6 days
AM1, AM2, AM3, AM4(A), AM5(A) and AM6(A)	24-hour TSP	Once per 6 days

Monitoring Methodology

1-hour TSP Monitoring

Measuring Procedures

3.7 The measuring procedures of the 1-hour dust meter are in accordance with the Manufacturer's Instruction Manual as follows:

(Model LD3 / LD3B / LD5R)

- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Set POWER to "ON" and make sure that the battery level was not flash or in low level.
- Allow the instrument to stand for about 3 minutes and then the cap of the air sampling inlet has been released.
- Push the knob at MEASURE position.
- Set time/mode setting to [BG] by pushing the time setting switch. Then, start the background measurement by pushing the start/stop switch once. It will take 6 sec. to complete the background measurement.
- Push the time setting switch to change the time setting display to [MANUAL] at the bottom left of the liquid crystal display. Finally, push the start/stop switch to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, count value and site condition were recorded during the monitoring period.

(AEROCET-531)

- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Remove the red rubber cap from the AEROCET-531 inlet nozzle.
- Turn on the power switch that is located on the right side of the AEROCET-531.
- On power up the product intro screen is displayed for 3 seconds. The intro screen displays the product name and firmware version.
- Then the main counter screen will be displayed.
- Press the START button. Internal vacuum pump start running. After 1 minute the pump will stop and the 0.5 μ m and 5 μ m channels will show the cumulative counts of particles larger than 0.5 μ m and 5 μ m per cubic foot.
- The AEROCET-531 is now checked out and ready for use.
- To switch off the AEROCET-531 power to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, and display value and site condition were recorded during the monitoring period.

(Equipment: Hal Technology; Model no. Hal-HPC300 / Hal-HPC301)

- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Set POWER to “ON” and make sure that the battery level was not flash or in low level.
- Allow the instrument to stand for about 3 minutes and then the cap of the air sampling inlet has been released.
- Push the knob at MEASURE position.
- Set time/mode setting to [BG] by pushing the time setting switch. Then, start the background measurement by pushing the start/stop switch once. It will take 6 sec. to complete the background measurement.
- Push the time setting switch to change the time setting display to [MANUAL] at the bottom left of the liquid crystal display. Finally, push the start/stop switch to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, count value and site condition were recorded during the monitoring period.

Maintenance/Calibration

- 3.8 The following maintenance/calibration is required for the direct dust meters:
- Check and calibrate the meter by HVS to check the validity and accuracy of the results measured by direct reading method at 2-month intervals throughout all stages of the air quality monitoring.

24-hour TSP MonitoringInstrumentation

- 3.9 High volume samplers (HVS) (TISCH Model: TE-5170 and GMW Model: GS2310) completed with appropriate sampling inlets were employed for 24-hour TSP monitoring. The sampler is composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).
- 3.10 The positioning of the HVS samplers are as follows:
- a horizontal platform with appropriate support to secure the samplers against gusty wind shall be provided;
 - no two samplers shall be placed less than 2 meter apart

- the distance between the sampler and an obstacle, such as buildings, must be at least twice the height that the obstacle protrudes above the sampler;
- a minimum of 2 metres of separation from walls, parapets and penthouses is required for rooftop samplers;
- a minimum of 2 metres of separation from any supporting structure, measured horizontally is required;
- no furnace or incinerator flue is nearby;
- airflow around the sampler is unrestricted;
- the sampler is more than 20 metres from the dripline;
- any wire fence and gate, to protect the sampler, shall not cause any obstruction during monitoring;
- permission must be obtained to set up the samplers and to obtain access to the monitoring stations; and
- a secured supply of electricity is needed to operate the samplers.

Operating/analytical procedures for the operation of HVS

- 3.11 Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 1.1 m³/min. and 1.4 m³/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.
- 3.12 For TSP sampling, fiberglass filters with a collection efficiency of > 99% for particles of 0.3µm diameter were used.
- 3.13 The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- 3.14 The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter was carefully centred with the stamped number upwards, on a supporting screen.
- 3.15 The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.
- 3.16 The shelter lid was closed and secured with the aluminium strip.
- 3.17 The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- 3.18 After sampling, the filter was removed and sent to the HOKLAS laboratory (ALS Hong Kong) for weighing. The elapsed time will be also recorded.
- 3.19 Before weighing, all filters was equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than ±3°C; the relative humidity (RH) should be < 50% and not vary by more than ±5%. A convenient working RH is 40%.

Maintenance/Calibration

- 3.20 The following maintenance/calibration is required for the HVS:
- The high volume motors and their accessories will be properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking will be made to ensure that the equipment and necessary power supply are in good working condition.
 - High volume samplers will be calibrated at bi-monthly intervals using TE-5025A Calibration Kit throughout all stages of the air quality monitoring.

Results and Observations

- 3.21 No Action/Limit Level exceedance was recorded for both 1-hour TSP and 24-hour TSP monitoring respectively.
- 3.22 The air temperature, precipitation and the relative humidity data was obtained from Hong Kong Observatory where the wind speed and wind direction were recorded by the installed Wind Anemometer at rooftop of Yau Lai Estate Bik Lai House (41/F). The location is shown in **Figure 2**. This weather information for the reporting month is summarized in **Appendix C**.
- 3.23 The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix E** and **Appendix F** respectively.
- 3.24 According to our field observations, the major dust source identified at the designated air quality monitoring stations are as follows:

Table 3.4 Major Dust Source during Air Quality Monitoring

Station	Major Dust Source
AM1 – Tin Hau Temple	Road Traffic at Cha Kwo Ling Road
AM2 – Sai Tso Wan Recreation Ground	N/A
AM3 – Yau Lai Estate Bik Lai House	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza
AM4 - Sitting-out Area at Cha Kwo Ling Village	Road Traffic at Cha Kwo Ling Road
AM4(A) - Cha Kwo Ling Public Cargo Working Area Administrative Office	Road Traffic at Cha Kwo Ling Road
AM5(A) - Tseung Kwan O DSD Desilting Compound	Vehicle Movement within the Desilting Compound
AM6(A) - Park Central, L1/F Open Space Area	Road Traffic at Po Yap Road

4. NOISE

Monitoring Requirements

- 4.1 According to EM&A Manual of the Project, construction noise monitoring was conducted to monitor the construction noise arising from the construction activities. The regular monitoring frequency for each monitoring station shall be on a weekly basis and conduct one set of measurements between 0700 and 1900 hours on normal weekdays. **Appendix A** shows the established Action and Limit Levels for the environmental monitoring works.

Monitoring Locations

- 4.2 Noise monitoring was conducted at 9 designated monitoring stations (CM1, CM2, CM3, CM4, CM5, CM6(A), CM7(A), CM8(A), CM9(A)) in the reporting period. **Table 4.1** and **Figure 3** show the locations of these stations.

Table 4.1 Noise Monitoring Stations

Monitoring Stations	Locations	Location of Measurement
CM1	Nga Lai House, Yau Lai Estate Phase 1, Yau Tong	Rooftop (41/F)
CM2	Bik Lai House, Yau Lai Estate Phase 1, Yau Tong	Rooftop (41/F)
CM3	Block S, Yau Lai Estate Phase 5, Yau Tong	Rooftop (40/F)
CM4	Tin Hau Temple, Cha Kwo Ling	Ground Level
CM5	CCC Kei Faat Primary School, Yau Tong	Rooftop (6/F)
CM6(A)*	Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores	Ground Level
CM7(A)*	Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores	Ground Level
CM8(A)*	Park Central, L1/F Open Space Area	1/F
CM9(A) ¹	Rooftop of Capri Tower 10	Rooftop (12/F)

Remarks:

* Noise monitoring at designated station CM6, CM7 & CM8 was rejected by the premise owners. Therefore, baseline and impact noise monitoring works were carried out at alternative noise monitoring stations CM6(A), CM7(A) and CM8(A) respectively.

¹ Ad-hoc noise monitoring at station CM9(A) was commenced in September 2019.

- 4.3 Since the population intake of Capri had commenced during the construction of the TKOLTT, the noise monitoring work in daytime period was conducted at CM9(A) – Rooftop of Capri Tower 10 on normal weekdays. The background Noise Level was recorded during the Lunch Hour of Construction Site (i.e. 12:00-13:00) and to be used as the referencing value for compliance checking for Noise Action and Limit Level.

Monitoring Equipment

- 4.4 Integrating Sound Level Meter was used for impact noise monitoring. The meters are Type 1 sound level meter capable of giving a continuous readout of the noise level readings including equivalent continuous sound pressure level (L_{eq}) and percentile sound pressure level (L_x) that also complied with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. **Table 4.2** summarizes the noise monitoring equipment being used. Copies of calibration certificates are attached in **Appendix B**.

Table 4.2 Noise Monitoring Equipment

Equipment	Model and Make	Quantity
Integrating Sound Level Meter	SVAN 957/ 959 / 979	0
	BSWA308 SLM	3
Calibrator	SV30A	1
	Brüel & Kjær 4231	1
	ST-120	2

4.5 **Table 4.3** summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix D**. Additional weekly impact monitoring are carried out for evening time (1900 – 2300 hours) for monitoring stations CM1, CM2, CM3 & CM6(A) and night-time (2300 – 0700 hours) for monitoring stations CM1, CM2 & CM3.

Table 4.3 Frequency and Parameters of Noise Monitoring

Monitoring Stations	Parameter	Period	Frequency	Measurement
CM1	L ₁₀ (30 min) dB(A) L ₉₀ (30 min) dB(A) L _{eq} (30 min) dB(A)	0700-1900 hrs on normal weekdays	Once per week	Façade
CM2				Façade
CM3				Façade
CM4				Façade
CM5				Façade
CM6(A)				Free Field
CM7(A)				Free Field
CM8(A)				Façade
CM9(A)				Façade
CM1	L ₁₀ (5 min) dB(A)	1900 – 0700 hrs on normal weekdays		Façade
CM2	L ₉₀ (5 min) dB(A)			Façade
CM3	L _{eq} (5 min) dB(A)			Façade
CM6(A)	L _{eq} (5 min) dB(A)	1900 – 2300 hrs on normal weekdays		Free Field

Monitoring Methodology and QA/QC Procedure

4.6 The monitoring procedures are as follows:

- The monitoring station was normally be at a point 1m from the exterior of the sensitive receivers building façade and be at a position 1.2m above the ground.
- For free field measurement, the meter was positioned away from any nearby reflective surfaces. All records for free field noise levels was adjusted with a correction of +3 dB(A).
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time was set as follows:
 - frequency weighting: A
 - time weighting : Fast
 - measurement time : 30 minutes
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after

measurement will be more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.

- At the end of the monitoring period, the L_{eq} , L_{90} and L_{10} was recorded. In addition, noise sources was recorded on a standard record sheet.
- Noise monitoring will be cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s. Supplementary monitoring was provided to ensure sufficient data would be obtained.

Maintenance and Calibration

- 4.7 The microphone head of the sound level meter and calibrator was cleaned with a soft cloth at quarterly intervals.
- 4.8 The sound level meter and calibrator was checked and calibrated at yearly intervals.
- 4.9 Immediately prior to and following each noise measurement the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration levels from before and after the noise measurement agree to within 1.0 dB.

Results and Observations

- 4.10 Two (2) Action Level exceedances were recorded due to the documented complaints received in this reporting month. Two (2) Limit level exceedances for night-time construction noise monitoring were recorded and no Limit Level exceedance for day time was recorded in the reporting month.
- 4.11 Noise monitoring results and graphical presentations are shown in **Appendix G**.
- 4.12 The major noise source identified at the noise monitoring stations are shown in **Table 4.4**.

Table 4.4 Major Noise Source during Noise Monitoring

Monitoring Stations	Locations	Major Noise Source
CM1	Nga Lai House, Yau Lai Estate Phase 1, Yau Tong	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza
CM2	Bik Lai House, Yau Lai Estate Phase 1, Yau Tong	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza
CM3	Block S, Yau Lai Estate Phase 5, Yau Tong	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza
CM4	Tin Hau Temple, Cha Kwo Ling	Road Traffic at Cha Kwo Ling Road
CM5	CCC Kei Faat Primary School, Yau Tong	Road Traffic at Yau Tong Road
CM6(A)	Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores	Road Traffic at O King Road near Ocean Shores
CM7(A)	Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores	Road Traffic at Tong Yin Street
CM8(A)	Park Central, L1/F Open Space Area	Road Traffic at Po Yap Road
CM9(A)	Rooftop of Capri Tower 10	Construction Noise from Portion V/Area A of NE/2015/02 site area

- 4.13 All the Construction Noise Levels (CNLs) reported in this report were adjusted with the corresponding baseline level (i.e. Measured L_{eq} – Baseline L_{eq} = CNL), in order to facilitate the interpretation of the noise exceedance. The baseline noise level and the Noise Limit Level at each designated noise monitoring station are presented in **Table 4.5, 4.6 and 4.7.**

Table 4.5 Baseline Noise Level and Noise Limit Level for Monitoring Stations

Station	Baseline Noise Level, dB (A) (at 0700 – 1900 hrs on normal weekdays)	Noise Limit Level, dB (A) (at 0700 – 1900 hrs on normal weekdays)
CM1	65.5	75
CM2	63.6	
CM3	65.6	
CM4	62.0	
CM5	68.2	70*
CM6(A)	61.9	75
CM7(A)	58.3	
CM8(A)	69.1	
CM9(A)	N/A ⁽¹⁾	

(*) Noise Limit Level is 65 dB(A) during school examination periods.
(1) The background Noise Level was recorded during the Lunch Hour of Construction Site (i.e. 12:00-13:00) and to be used as the referencing value for compliance checking for Noise Action and Limit Level.

Table 4.6 Baseline Noise Level and Noise Limit Level for Monitoring Stations (Evening-time & Daytime (Holiday))

Station	Baseline Noise Level, dB (A) (Evening time on all days (1900-2300 hrs) and Holidays (including Sundays) during daytime (0700-1900 hrs))	Noise Limit Level, dB (A) (Evening time on all days (1900-2300 hrs) and Holidays (including Sundays) during daytime (0700-1900 hrs))
CM1	64.4	70
CM2	62.2	
CM3	64.7	
CM6(A)	60.2	65 ¹

1. ASR B was adopted according to the EIA as traffic in the surrounding area has not been changed.

Table 4.7 Baseline Noise Level and Noise Limit Level for Monitoring Stations (Night-time)

Station	Baseline Noise Level, dB (A) (Night-time (2300 – 0700 hrs))	Noise Limit Level, dB (A) (Night-time (2300 – 0700 hrs))
CM1	14-day baseline monitoring results for the time period of impact measurement at each station would be adopted	55
CM2		
CM3		

Current Tunnel Blasting Arrangement

- 4.14 The drill and blast method was evaluated as the most appropriate method and the general practice of this method was introduced during the EIA report assessment. The paragraphs 2.9.9 and 2.9.33 of the EIA Report mention that there might be one blast or multiple blasts and the maximum number of blast location per day would be determined by the Contractor to suite his method of working.
- 4.15 Notwithstanding the information provided by the Engineer at paragraphs 4.6.4 and 6.6.12 of the EIA Report, to minimize blast nuisance to the public and to respond to the community concerns, the tunnel blast should be arranged, where possible, avoiding the blast to be carried out during night time and shortening the blast duration by arranging various work fronts to be blasted at different time slots. Hence, it has become more desirable to split one tunnel blasting operation, which may consist of several blasting work fronts along the tunnels, into a total of two to three tunnel blasts per day. The tunnel blasts, which locate outside the MTR Protection Zone (RPZ) possessing insignificant risk to the MTR's structures would be carried out during day time and before 22:00. For the tunnel blasts within and in close vicinity to RPZ, Contractor's blasting assessment report revealed that those blasts have to be carried out after train service and, generally, at around 01:40.

5. WATER QUALITY

Monitoring Requirements

Groundwater Quality

- 5.1 The existing groundwater quality monitoring programme has been suspended as the monitoring results had been deemed non-representative of the impact from the project justified by two major factors: (1) influence on the monitoring results from non-project related factors, such as anthropogenic activities and natural phenomenon; and (2) large separation between the monitoring stations and works area. In addition, as no alternative locations for the groundwater quality monitoring were available, the groundwater quality monitoring has been suspended since October 2019 upon the agreement by EPD.

Marine Water Quality

- 5.2 Marine water quality monitoring was conducted three times per week at the designated monitoring stations. Monitoring took place two times per monitoring day during mid ebb and mid flood tides at three depths (1 meter from surface, mid depth and 1 meter from the bottom). For Tseung Kwan O Salt Water Intake (i.e. Station M6), water sampling and in-situ measurements was taken at the vertical level where the water abstraction point of the intake is located (i.e. approximately mid-depth level). If the water depth is less than 6m, the mid-depth measurement may be omitted. If the depth is less than 3m, only the mid-depth measurements need to be taken.
- 5.3 Duplicate in-situ measurements (Dissolved oxygen (DO) concentration, DO saturation, turbidity, pH, temperature and salinity) and water samples (suspended solids (SS)) at each depth were monitored in accordance with the requirements in the EM&A Manual. For selection of tides for in-situ measurement and water sampling, tidal range of individual flood and ebb tides were not less than 0.5m.
- 5.4 According to the Environmental Review Report (ERR) for Variations of Environmental Permit (Ref: C45-03), water quality monitoring and audit programme was implemented for monitoring of oxygen depletion (e.g. Dissolved Oxygen (DO) level) in this embayed waters during the period when the fully enclosed barrier is installed. A “Proposal for Water Quality Monitoring in Temporary Marine Embayment” has been submitted to EPD in July 2017 to propose the monitoring frequency, parameter, location, etc. EPD has no further comment on the Proposal. Since January 2020, the cofferdam has been partially removed and the seawater is no longer enclosed. Therefore, no embayment water quality monitoring is required.

Groundwater Level Monitoring (Piezometer Monitoring)

- 5.5 Daily piezometer monitoring at any time of the day shall be carried throughout the whole period when any tunnel construction activities are carried out within +/- 50m of the piezometer gate in plan. The monitoring commenced in June 2018. It has switched to monthly basis since 3 October 2018 as the construction activity was 120m away from the piezometer gate. No monitoring was conducted in the reporting month.

Monitoring Locations

Marine Water Quality

- 5.6 A total of twelve monitoring stations are designated for the water quality monitoring program according to EM&A Manual. One additional monitoring station (W1) is designated for monitoring of oxygen depletion in the embayed waters during the period when the fully enclosed barrier is installed. The locations are also summarized in **Table 5.2** and shown on **Figure 5**.

Table 5.2 Marine Quality Monitoring Stations

Monitoring Stations	Descriptions	Coordinates	
		Easting	Northing
M1	Junk Bay Coral Site – Junk Bay near Chiu Keng Wan	844255	817565
M2	Junk Bay Coral Site – Junk Bay	844076	817087
M3	Junk Bay Coral Site – Junk Island	844491	817890
M4	Junk Bay Coral Site – Chiu Keng Wan	843209	816416
M5	Junk Bay Coral Site – Fat Tong Chau	845463	815769
M6	Tseung Kwan O Salt Water Intake	845512	817442
C1	Control Station – Southeast	844696	814773
C2	Control Station – Northwest	842873	816014
G1	Gradient Station	844418	817560
G2	Gradient Station	844290	817384
G3	Gradient Station	844488	817735
G4	Gradient Station	844967	817551

Monitoring Equipment

- 5.7 For in-situ monitoring, a multi-parameter meter (Aquaread AP-2000-D) was used to measure Dissolved oxygen (DO) concentration, DO saturation (DO %), pH, temperature and turbidity. A sampler was used to collect water samples for laboratory analysis of SS, BOD₅, TOC, Total Nitrogen, Ammonia-N and Total Phosphate.

Dissolved Oxygen (DO) and Temperature Measuring Equipment

- 5.8 The instrument for measuring dissolved oxygen and temperature was portable and weatherproof complete with cable, sensor, comprehensive operation manuals and use DC power source. It was capable of measuring:
- a dissolved oxygen level in the range of 0-20 mg/L and 0-200% saturation; and
 - a temperature of 0-45 degree Celsius.
- 5.9 It has a membrane electrode with automatic temperature compensation complete with a cable.
- 5.10 Sufficient stocks of spare electrodes and cables were available for replacement where necessary.
- 5.11 Salinity compensation was built-in in the DO equipment.

Turbidity

- 5.12 Turbidity was measured in-situ by the nephelometric method. The instrument was portable and weatherproof using a DC power source complete with cable, sensor and comprehensive operation manuals. The equipment was capable of measuring turbidity between 0-1000 NTU. The probe cable was not be less than 25m in length.

pH

- 5.13 The instrument was consisting of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device. It was readable to 0.1pH in a range of 0 to 14. Standard buffer solutions of at least pH 7 and pH 10 were used for calibration of the instrument before and after use.

Water Depth Detector

- 5.14 A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station.

Water Sampler

- 5.15 Water samples collected for laboratory analysis were stored in high density polythene bottles sample containers, with appropriate preservatives added. All sampling bottles were labelled (waterproof) with the sampling date and time, sample lot number and sampling location reference number to avoid mishandling.

Sample Container and Storage

- 5.16 Following collection, water samples for laboratory analysis were stored in high density polythene bottles, with preservative appropriately added where necessary. They will be packed in ice (cooled to 4°C without being frozen), delivered to the laboratory and analysed as soon as possible.

Calibration of In-Situ Instruments

- 5.17 All in-situ monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or other international accreditation scheme before use, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring.
- 5.18 For the on-site calibration of field equipment, the BS 1427:1993, "Guide to Field and on-site test methods for the analysis of waters" was observed.
- 5.19 Before each round of monitoring, a zero check in distilled water was performed with the turbidity probe of Aquaread AP-2000-D. The probe was then be calibrated with a solution of known NTU.
- 5.20 Sufficient stocks of spare parts were maintained for replacements when necessary. Backup monitoring equipment was also made available so that monitoring can proceed uninterrupted even when some equipment is under maintenance, calibration, etc.
- 5.21 **Table 5.3** summarizes the equipment used in the water quality monitoring program. Copies of the calibration certificates of the equipment are shown in **Appendix B**.

Table 5.3 Water Quality Monitoring Equipment

Equipment	Model and Make	Qty.
Water Sampler	Kahlsico Water-Bottle Model 135DW 150	1
Multi-parameter Water Quality System	YSI 6820-C-M	0
	Aquaread AP-2000-D	0
	YSI EXO1 Multiparameter Sondes	1
Monitoring Position Equipment	“Magellan” Handheld GPS Model GPS-320	1
Water Depth Detector	Fishfinder 140	1

Monitoring Parameters and Frequency

5.22 **Table 5.4** summarizes the monitoring parameters, monitoring period and frequencies of the water quality monitoring in the reporting period.

Table 5.4 Water Quality Monitoring Parameters and Frequency

Monitoring Stations	Parameters, unit	Depth	Frequency
Marine Water Quality			
M1 M2 M3 M4 M5 M6 C1 C2 G1 G2 G3 G4	<i>In-situ:</i> Dissolved oxygen (DO) concentration, DO saturation, turbidity, pH, temperature and salinity <i>Laboratory Testing:</i> Suspended Solids (SS)	<u>M1-M5, C1-C2, G1-G4</u> <ul style="list-style-type: none"> 3 water depths: 1m below water surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If the water depth is less than 6m, omit mid-depth sampling. <u>M6</u> <ul style="list-style-type: none"> at the vertical level where the water abstraction point of the intake is located(i.e. approximately mid-depth level) 	3 days per week / 2 per monitoring day (1 for mid-ebb and 1 for mid-flood)

Monitoring Methodology

Marine Water Quality

- 5.23 The monitoring stations were accessed using survey boat by the guide of a hand-held Global Positioning System (GPS). The depth of the monitoring location was measured using depth meter in order to determine the sampling depths. Afterwards, the probes of the in-situ measurement equipment was lowered to the predetermined depths (1 m below water surface, mid-depth and 1 m above seabed) and the measurements was carried out accordingly. The in-situ measurements at predetermined depths was carried out in duplicate. In case the difference in the duplicate in-situ measurement results was larger than 25%, the third set of in-situ measurement would be carried out for result confirmation purpose.
- 5.24 Water sampler was lowered into the water to the required depths of sampling. Upon reaching the pre-determined depth, a messenger to activate the sampler was then released to travel down the wire. The water sample was sealed within the sampler before retrieving. At each station, water samples for SS at three depths (1 m below water surface, mid-depth and 1 m above seabed) were collected accordingly. Water samples were stored in a cool box and kept at less than 4°C but without frozen and sent to the laboratory as soon as possible.

Laboratory Analytical Methods

- 5.25 The testing of all parameters were conducted by ALS Hong Kong (HOKLAS Registration No.083) and comprehensive quality assurance and control procedures in place in order to ensure quality and consistency in results. The testing method and limit of reporting are provided in **Table 5.5**.

Table 5.5 Methods for Laboratory Analysis for Water Samples

Parameters (Unit)	Proposed Method	Reporting Limit	Detection Limit
SS (mg/L)	APHA 2540 D	0.5 mg/L ⁽¹⁾	0.5 mg/L
BOD ₅ (mg O ₂ /L)	APHA 19ed 5210B	2 mg O ₂ /L	--
TOC (mg-TOC/L)	In-house method SOP020 (Wet Oxidation)	1 mg-TOC/L	--
Total Nitrogen (mg/L)	In-house method SOP063 (FIA)	0.6 mg/L	--
Ammonia-N (mg NH ₃ -N/L)	In-house method SOP057 (FIA)	0.05 mg NH ₃ -N/L	--
Total Phosphorus (mg-P/L) ⁽²⁾	In-house method SOP055 (FIA)	0.05 mg-P/L	--

Note:

1) Limit of Reporting is reported as Detection Limit for non-HOKLAS report.

2) Parameter Total Phosphorus represents the laboratory testing for total phosphate content in water which is the sum of all three forms of phosphates in water.

QA/QC Requirements

Decontamination Procedures

- 5.26 Water sampling equipment used during the course of the monitoring programme was decontaminated by manual washing and rinsed clean seawater/distilled water after each sampling event. All disposal equipment was discarded after sampling.

Sampling Management and Supervision

- 5.27 Water samples were dispatched to the testing laboratory for analysis as soon as possible after the sampling. All samples were stored in a cool box and kept at less than 4°C but without frozen. All water samples were handled under chain of custody protocols and relinquished to the laboratory representatives at locations specified by the laboratory.
- 5.28 QA/QC procedures as attached in **Appendix J** are available for the parameters analysed in the HOKLAS-accredited laboratory, ALS Hong Kong.

Results and Observations

Groundwater Quality Monitoring

- 5.29 Monitoring of groundwater quality had been suspended since October 2019. (Details refer to Section 5.1)

Marine Water Quality Monitoring

- 5.30 Marine water monitoring results and graphical presentations are shown in **Appendix I**. Other relevant data was also recorded, such as monitoring location / position, time, sampling depth, weather conditions and any special phenomena or work underway nearby.

Calculated Action and Limit Levels for Marine Water Quality is presented in **Appendix I**. There were twenty-three (23) Action Level and seventy-six (76) Limit Level exceedances recorded in Monitoring Stations (M) during marine water quality monitoring.

- 5.31 Exceedances of turbidity and suspended solid were recorded on from various monitoring stations non-specifically among all stations including the control stations. Investigations over February 2021 showed that the range of SS levels recorded in February 2021 remained consistent with the records in recent months. All Contractor is reminded to strictly follow the approved drainage plan and clear drainage regularly. In particular, all drainage shall be checked and cleared after heavy rainstorm as sediments may accumulate along pipes and culverts. Further details can be found in **Appendix K**.
- 5.32 Silt curtain inspections are carried out before the commencement of the construction works every day and diving surveys are also conducted once a week to inspect the silt curtain below the water level. The inspection report are verified by both the RE and the diving specialist and the records are reviewed weekly during the site audits.

Groundwater Level Monitoring (Piezometer Monitoring)

- 5.33 Daily piezometer monitoring at any time of the day shall be carried throughout the whole period when any tunnel construction activities are carried out within +/- 50m of the piezometer gate in plan.
- 5.34 Tunnel construction activities are within +/- 50m of the piezometer gate in plan. Construction phase daily piezometer monitoring by the Contractor commenced in June 2018. It has switched to monthly basis since 3 October 2018 as the construction activity was 120m away from the piezometer gate. No monitoring was conducted in the reporting month.

Mitigation Measures Adopted by Contractors for Surface runoff Prevention

- 5.35 During dry season, the Contractors have maintained the mitigation measures adopted on Site, in order to prevent surface run-off and muddy water from discharging to the public areas. The mitigation measures adopted by each Contract are summarised below:

NE2015/01

- 5.36 At Lam Tin Side, the Site drainage systems are divided into two parts, namely the site formation and tunnel site drainage which includes:
1. Site formation drainage system collects surface run-off from open excavation areas including slope works and flows naturally to the lowest point in the Site, where they are pumped to the wetseps and sedimentation tank for treatment near LTI site entrance before they are discharged to the designated discharge point.
 2. Tunnel drainage system collects surface run-off from the tunnel which are then pumped to the sedimentation tanks near tunnel adit, where three sets of wetseps and sedimentation tanks were set up. The treated water will be discharged to designated discharge point near the Eastern Harbour Crossing (EHC) area.
- 5.37 At Eastern Harbour Crossing (EHC), two sets of wetseps and sedimentation tanks are set up on site. The wastewater will flow to the lowest catchpit by gravity, which are then pumped to wetseps for wastewater treatment. The sandbags/bunds are also set up at the vehicle entrance to surface run-off from the Site.
- 5.38 At Tseung Kwan O (TKO), the surface run-off from the slope are directed to the lowest point at cavern via the permanent drainage, which are then pumped to the sedimentation tanks for wastewater treatment via temporary pipes. The treated water will be discharged at designated discharge points. The wetseps and sedimentation tanks are provided under the BMCPC bridge and at the two sides of marine working platform. Water from natural stream will also be diverted to existing drainage to avoid overloading the capacity of the wastewater treatment system. The reservoir on the right side of marine working platform will be enlarged to cater for higher water storage demands. During heavy rainfall, the water stored at the exit of the tunnel shall be pumped into the sedimentation tanks on the right.

NE2015/02

- 5.39 The exposed sloped area at Portion 9 has been covered with geotextile or tarpaulin to avoid surface run-off. Temporary peripheral open U-channel are also provided along the surcharge area within the rock mount to collect stormwater and surface run-off.
- 5.40 Soak away pit with a 600mm in diameter were bored into the ground, down to -14mPD, near the piling works area to cater for the surface runoff at Portion IX (Figure 1C). The stormwater and the water generated from the piling works are stored temporary at the pit around the soak away pit, which shall be pumped automatically into the soak away pit where they are soaked into the soil naturally.
- 5.41 The stormwater received in Portion 9 shall be directed and pumped via the flex tube and sump towards the water treatment system and the approved discharge points. Water generated from Portion VI and V and some water in Portion IX are treated via storage tanks and sedimentation tanks and discharged into approved discharge points (manholes of DN2100 Drain and Area Z).
- 5.42 The peripheral open U-channel are also provided along the site boundary, which shall be directed to the storage tank and WetSep for treatment in Area A.
- 5.43 Regular cleaning depending on site conditions are provided for the WetSep at Area A and Z; and the storage tanks and sedimentation tanks at Area A. The water treated by the sedimentation tank and the wetsep shall be discharged towards the designated discharge point. Quality of the effluent are also monitored regularly.

NE2017/02

- 5.44 Existing manholes are covered with sandbags and geotextiles to avoid surface run-off from entering the channels.
- 5.45 Stockpiles are covered with tarpaulin to avoid surface run-off.
- 5.46 Concrete blocks and sandbags are placed along the periphery of the site boundary to avoid surface run-off.
- 5.47 Stormwater within the site enters the excavated area and flow naturally into the sump due height difference. The stormwater collected in the sump shall be pumped into the sedimentation tank where the run-off is treated before discharging into the designated discharge point.

NE2015/03

- 5.48 The existing manhole cover are covered with geotextile to prevent muddy water from entering the existing U-channels along the side of Po Shun Road. Manhole inspection are carried out by taking silt measurement regularly in case if silt enters the channel, and silt shall be removed from the manhole if silt were found.
- 5.49 Sandbags were placed at the periphery of the site along the hoarding to prevent surface runoff from escaping the site.
- 5.50 Exposed slopes are covered with tarpaulin to prevent surface run-off.

- 5.51 The surface run-off shall be pumped into the sedimentation tank where they are treated before entering the designated discharge points.

NE2017/01

- 5.52 Temporary peripheral open U-channels and sumps are provided for collecting the stormwater, which are pumped and directed towards the sedimentation tank for treatment. The treated water shall be directed to the designated discharge point.

6. ECOLOGY

Post-Translocation Coral Monitoring

- 6.1 Post-translocation monitoring survey is recommended in the EM&A Manual to audit the success of coral translocation. Information gathered during each post-translocation monitoring survey should include observations on the presence, survival, health condition and growth of the translocated coral colonies. These parameters should then be compared with the baseline results collected from the pre-translocation survey.
- 6.2 Under Contract No. NE/2015/01 and NE/2015/02, a total of 14 and 29 coral colonies were tagged and translocated respectively from the Donor Site to the Recipient Site in November 2016. Ten (10) corals at the Recipient Site were also tagged by each Contract as reference for post-translocation monitoring.
- 6.3 The post-translocation coral monitoring shall be conducted once every 3 months after completion for a period of 12 months. Location of post-translocation coral monitoring is shown in **Figure 7**. The fourth post-translocation coral monitoring was carried out on 07 November 2017. No further monitoring is required.

7. CULTURAL HERITAGE

Monitoring Requirement

- 7.1 According to the EP Conditions and EM&A Manual, monitoring of vibration impacts was conducted when the construction works are less than 100m from the Built Heritage in close proximity of the worksite, namely the Cha Kwo Ling Tin Hau temple. Tilting and settlement monitoring should be applied on the Cha Kwo Ling Tin Hau Temple. Construction works less than 100m from the Cha Kwo Ling Tin Hau temple commenced on 8 May 2017.
- 7.2 As stated in the “*Built Heritage Mitigation Plan*” for this Project, during the period of the construction works conducted within 100m from the Cha Kwo Ling Tin Hau Temple, monitoring on settlement and tilting will be conducted once a day for the Cha Kwo Ling. Monitoring of vibration will be conducted during blasting at Cha Kwo Ling area once a day. When there is no blasting to be conducted at the area, vibration monitoring at the Cha Kwo Ling Tin Hau Temple will be conducted once per day when there are piling works or rock breaking works within the 100m from the Cha Kwo Ling Tin Hau Temple.

Monitoring Locations

- 7.3 One vibration monitoring point and three building settlement monitoring points were proposed for monitoring of the cultural heritage. The building settlement markers were placed on the wall on three sides of the Temple, except the front, of the Cha Kwo Ling Tin Hau Temple and the vibration monitoring point is located within the Cha Kwo Ling Tin Hau Temple. Monitoring Location is shown in **Figure 8**.

Monitoring Equipment

- 7.4 Building settlement is measured via a settlement marker attached to the wall of Cha Kwo Ling Tin Hau Temple by adhesive tape.
- 7.5 Vibration monitoring was conducted by using vibrographs: Minimate Plus manufactured by InstanTel. These vibrographs will be calibrated annually and its performance follows the requirements given in the “*Guidance Note on Vibration Monitoring*” (GN-VM) issued by the Civil Engineering and Development Department, which is based on the Performance Specification for Blasting Seismographs by International Society of Explosive Engineers (ISEE (2000)).
- 7.6 **Table 7.1** summarizes the equipment employed by the Contractor for cultural heritage monitoring. Copies of calibration certificates are attached in **Appendix B**.

Table 7.1 Cultural Heritage Monitoring Equipment

Equipment	Manufacturer and Model	Quantity
Digital Level for tilting	Leica LS15 Serial No.: 701141	1
Digital Caliper for tilting	Mitutoyo CD-6” ASX Serial No.: A17047921	1
iCivil-1011 Inclinometer for building settlement	iCivil-1011 Inclinometer Serial No.: HK110118 / HK110120	2
Vibrographs for vibration monitoring	MiniMate Plus / MicroMate manufactured by InstanTel Model No.: 716A0403 / 721A2501	33

Monitoring Methodology

- 7.7 Vibrograph (velocity seismograph) was deployed at each monitoring station to measure and record the PPV and amplitude of ground motion in three mutually perpendicular directions. Vibration monitoring equipment fulfils the requirements stated in the Government guidelines and is calibrated to HOKLAS standards. Each monitoring would not be more than 10 minutes. Settlement monitoring should be conducted by surveyors manually.

Alert, Alarm and Action Levels

- 7.8 The Alert, Alarm and Action (AAA) Levels are given in **Table 7.2**.

Table 7.2 AAA Levels for Monitoring for Cultural Heritage

Parameter	Alert Level	Alarm Level	Action Level
Vibration	ppv: 4.5 mm/s	ppv: 4.8 mm/s	ppv: 5mm/s Maximum Allowable Vibration Amplitude: 0.1mm
Building Settlement Markers	6mm	8mm	10mm
Building Tilting ⁽¹⁾	1:2000	1:1500	1:1000

Remarks:

- (1) Building tilting measurement was replaced by building settlement point measurement. The tilting can be calculated by the ratio of the maximum settlement difference between 2 points and the distance between the 2 points.

Results

- 7.9 In the reporting month, cultural heritage monitoring was carried out by the Contractor at the aforesaid location on 26 occasions. No AAA Level exceedance was recorded in the reporting month. The monitoring results are presented in **Appendix T**.

Mitigation Measures for Cultural Heritage

- 7.10 According to Condition 3.6 of the EP (EP No.: EP-458/2013/C), to prevent damage to Cha Kwo Ling Tin Hau Temple and its Fung Shui rocks (Child-given rocks) during the construction phase, a temporarily fenced-off buffer zone (Rocks buffer zone is 5 m from the edge of Rocks and 15m from the edge of Rocks alter) with allowance for public access (minimum 1 m) around the temple and the Fung Shui rocks shall be provided. The open yard in front of the temple should be kept as usual for annual Tin Hau festival.
- 7.11 As there is a large buffer distance from the current works to Cha Kwo Ling Tin Hau Temple and the Fung Shui rocks (Child-given rocks), the temporarily fenced-off rocks buffer zone and from the edge of Rocks alter is not required. The fenced-off rocks buffer zone would be implemented when there is construction activities in vicinity of the cultural heritage.

8. LANDSCAPE AND VISUAL IMPACT REQUIREMENTS

- 8.1 Landscape and visual mitigation measures during the construction phase shall be checked to ensure that they are fully realized and implemented on site.
- 8.2 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of landscape and visual mitigation measures listed in “Implementation Schedule and Recommended Mitigation Measures” (shown in **Appendix N**). The summaries of observations and recommendations related to landscape and visual impacts, if any, are shown in **Appendix L**.
- 8.3 No non-compliance of the landscape and visual impact was recorded in the reporting month.

9. LANDFILL GAS MONITORING

Monitoring Requirement

- 9.1 In accordance with the EM&A Manual, monitoring of landfill gas is required for construction works within the Sai Tso Wan Landfill Consultation Zone during the construction phase. This section presents the results of landfill gas measurements performed by the Contractor. **Appendix A** shows the Limit Levels for the monitoring works.
- 9.2 The “Landfill Gas Monitoring Proposal”, including the monitoring programme and detailed actions, is submitted to the EPD for approval. Details of monitoring in this Proposal is in line with the monitoring requirements stipulated in the EM&A Manual.

Monitoring Parameters and Frequency

- 9.3 Monitoring parameters for Landfill gas monitoring include Methane, Carbon dioxide and Oxygen.
- 9.4 According to the implementation schedule and recommended mitigation measures of the EM&A Manual, measurements of the following frequencies should be carried out:

Excavations deeper than 1m

- at the ground surface before excavation commences;
- immediately before any worker enters the excavation;
- at the beginning of each working day for the entire period the excavation remains open; and
- periodically throughout the working day whilst workers are in the excavation.

Excavations between 300mm and 1m deep

- directly after the excavation has been completed; and
- periodically whilst the excavation remains open.

For excavations less than 300mm deep

- monitoring may be omitted, at the discretion of the Safety Officer or other appropriately qualified person

Monitoring Locations

- 9.5 Monitoring of oxygen, methane and carbon dioxide was performed for excavations at 1m depth or more within the Consultation Zone. In this reporting month, the area required to be monitored for landfill gas are shown below and **Figure 6** shows the landfill gas monitoring locations.
- | | |
|----------------------------------|---------------|
| ➤ Excavation Locations | : Portion III |
| ➤ Manholes and Chambers | : N/A |
| ➤ Relocation of monitoring wells | : N/A |
| ➤ Any other Confined Spaces | : N/A |

Monitoring Equipment noise mitigation

- 9.6 **Table 9.1** summarizes the equipment employed by the Contractor for the landfill gas monitoring.

Table 9.1 Landfill Gas Monitoring Equipment

Equipment	Model and Make	Quantity
Portable gas detector	ALTAIR 5X Multigas Detector (Serial No. 137333)	1

Results and Observations

- 9.7 In the reporting month, landfill gas monitoring was carried out by the Contractor at the aforesaid locations on 130 occasions. No Limit Level exceedance for landfill gas monitoring was recorded in the reporting month. The monitoring results are provided in **Appendix R**. Copies of calibration certificates are attached in **Appendix B**.

10. ENVIRONMENTAL AUDIT

Site Audits

- 10.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix L**.
- 10.2 Joint weekly site audits by the representatives of the Engineer, Contractor and the ET were conducted in the reporting month as shown in below:
- Contract No. NE/2015/01: 3, 10, 17, 24
 - Contract No. NE/2015/02: 4, 11, 19, 25
 - Contract No. NE/2017/01: 4, 9, 19, 25
 - Contract No. NE/2017/02: 4, 11, 19, 25
 - Contract No. NE/2017/06: 4, 11, 19, 25
- 10.3 Monthly joint site inspection with the representative of IEC was conducted for NE/2015/01 on 24 February 2021; while NE/2015/02, NE/2017/01, NE/2017/02 and NE/2017/06 were conducted on 19 February 2021.
- 10.4 The EM&A programme of Contract No. NE/2015/03 had been terminated on 21 April 2020 under the approval of EPD.

Implementation Status of Environmental Mitigation Measures

- 10.5 According to the EIA Study Report, Environmental Permit and the EM&A Manual of the Project, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An updated summary of the Implementation Schedule and Recommended Mitigation Measures is provided in **Appendix N**.
- 10.6 During site inspections in the reporting month, no non-compliance was recorded on reporting month. The observations and recommendations made during the audit sessions are summarized in **Appendix L**.

11. WASTE MANAGEMENT

- 11.1 Waste generated from this Project includes inert construction and demolition (C&D) materials, non-inert C&D materials and marine sediments. Inert C&D waste includes soil, broken rock, broken concrete and building debris, while non-inert C&D materials are made up of C&D waste which cannot be reused or recycled and has to be disposed of at the designated landfill sites. Marine sediment shall be expected from excavation and dredging works of this Project.
- 11.2 With reference to relevant handling records of this Project, the quantities of different types of waste generated in the reporting month are summarised and presented in **Appendix P**.
- 11.3 The Contractors are advised to minimize the wastes generated through the recycling or reusing. All mitigation measures stipulated in the approved EM&A Manual and waste management plans shall be fully implemented. The status of implementation of waste management and reduction measures are summited in **Appendix N**.

12. ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

- 12.1 Two (2) Action Level exceedances of noise were recorded due to the documented complaints received in the reporting month. No Limit Level exceedances of construction noise monitoring were recorded for day-time in the reporting month. Two (2) Limit Level exceedances of construction noise monitoring were recorded for day-time in the reporting month.
- 12.2 Twenty-three (23) Action Level and seventy-six (76) Limit Level exceedances were recorded in Monitoring Stations (M) during marine water quality monitoring.
- 12.3 Actions carried out in accordance with the Event and Action Plans in **Appendix M** are presented in **Appendix K** – Summary of Exceedance.

Summary of Environmental Complaint

- 12.4 Three (3) environmental complaints were received in the reporting month. The Cumulative Complaint Log is presented in **Appendix O**. The investigation status and result is also reported in **Appendix O**.

Summary of Environmental Summon and Successful Prosecution

- 12.5 No notification of summon or successful environmental prosecution was received in this reporting period. The Cumulative Log for environmental summon and successful prosecution since the commencement of the Project is presented in **Appendix O**.

13. FUTURE KEY ISSUES

13.1 Tentative construction programmes for the next three months are provided in **Appendix Q**.

13.2 Major site activities to be undertaken for the next reporting period are summarized in **Table 13.1**.

Table 13.1 Summary Table for Site Activities in the next Reporting Period

Contract No. and Project Title	Site Activities (March 2021)		Key Environmental Issues *
NE/2015/01 - Tseung Kwan O – Lam Tin Tunnel – Main Tunnel and Associated Works	Lam Tin Interchange	1) EHC2 U-Trough 2) Site Formation – Area 1G1, Area 1G2, Area 2 & Area 5 3) Site Formation – Slope stabilization & Retaining Wall 4) Administration Building, West Ventilation Building & Bridge Construction 5) Stormwater Tank Construction 6) S01_2, EHC1&4 Construction 7) CKLR Underground Utilities 8) Landscape Deck	(A) / (C) / (D) / (E) / (F) / (I)
	Main Tunnel	9) S02_2 Excavation 10) Main Tunnel Lining Works	(B)
	TKO Interchange	11) Bridge Construction 12) East Ventilation Building	(A) / (C) / (D) / (E) / (F) / (I)
NE/2015/02 - Tseung Kwan O – Lam Tin Tunnel – Road P2 and Associated Works	1) Construction of pillar box and ducting system at Portion IV adjacent to Ocean Shores EVA 2) Site formation at Road P2 CH500-CH650 and SR1 3) Road and drainage works at Road P2 CH500 – 650, slip road SR1 footpath and cycle track, slip road SR2 CH250 – CH350 4) ELS at underpass P2 CH105 – CH318 5) 4th of excavation at CH105 – CH318 cofferdam 6) Excavation/ELS at CH821 – CH105 Cofferdam 7) Installation of socketed H-pile at CT01 CH117 – CH336 8) Reinstatement of Tong Yin Street 9) Installation of de-watering system at CH821 – CH105 10) Excavation & ELS installation works at CH821 – CH105 11) Construction of U-tough at CH821 – CH105 12) Drainage works at U-trough CH318 – CH363.50 13) Pre-bore/ELS works for U-trough CH363.50 – CH411/U-trough SR2 CH110-CH170 14) Construction of profile barrier at U-trough CH318 – CH363.50 15) Construction of sloping seawall 16) Removal of temporary cofferdam 17) Construction of seawall coping 18) Drainage works at SR1 footpath / cycle truck 19) Installation of ELS at cofferdam CH105 – CH318 20) Backfilling works for reinstatement of Tong Yin Street 21) Construction of U-trough at CH821 – CH 105 Cofferdam 22) Excavation and re-compaction at S100 CH280 – S200 CH755 and S300 CH405 – CH326 23) Waterworks – DN300/PE315 24) RC Structure works for U-trough A-B		(A) / (B) / (C) / (D) / (E) / (G) / (I)

Contract No. and Project Title	Site Activities (March 2021)	Key Environmental Issues *
	25) RC Structure works for U-trough C	
NE/2015/03 - Tseung Kwan O – Lam Tin Tunnel – Northern Footbridge	The construction works under the contract had been completed in December 2019. Materials are being removed from works area.	N/A
NE/2017/01 – Tseung Kwan O Interchange and Associated Works	1) Construction of Pier 2) Construction of Pier Head works 3) Segment erection works 4) Construction of Bridge Decks 5) Installation of Parapet Skin	(A) / (B) / (E) / (F) / (G)
NE/2017/02 – Tseung Kwan O - Lam Tin Tunnel - Road P2/D4 and Associated Works	1) Inspection pit excavation and utility diversion works 2) Construction of drainage and watermain 3) Asphalt Paving 4) Pier, Staircase and Lift Shaft Construction 5) Road Works	(A) / (B) / (E) / (F) / (G)
NE/2017/06 – Tseung Kwan O – Lam Tin Tunnel – Traffic Control and Surveillance System(TCSS) and Associated Works	1) System Integration Test 2) Goods arrival & storage on site	N/A

Note:

- (A) Watering for dust generation from haul road, stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
- (B) Noisy construction activity such as rock-breaking activities and piling works;
- (C) Runoff from exposed slope or site area;
- (D) Wastewater and runoff discharge from site;
- (E) Accumulation of silt, mud and sand along U-channels and sedimentation tanks;
- (F) Set up and implementation of temporary drainage system for the surface runoff;
- (G) Storage of chemicals/fuel and chemical waste/waste oil on site;
- (H) Accumulation and storage of general and construction waste on site; and
- (I) Marine water quality impact and indirect impact to coral communities due to marine construction for TKO-LTT reclamation.

Key Issues for the Coming Month

13.3 Key environmental issues in the coming month include:

- Watering for dust generation from haul road, stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
- Noisy construction activity such as rock-breaking activities and piling works;
- Runoff from exposed slope or site area;
- Wastewater and runoff discharge from site;
- Accumulation of silt, mud and sand along U-channels and sedimentation tanks;
- Set up and implementation of temporary drainage system for the surface runoff;
- Precaution measures in case of heavy rainfall brought along by typhoon;
- Storage of chemicals/fuel and chemical waste/waste oil on site;
- Accumulation and storage of general and construction waste on site; and
- Marine water quality impact and indirect impact to coral communities due to marine construction for TKO-LTT reclamation.

14. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 14.1 This is the 52nd Environmental Monitoring and Audit (EM&A) Report which presents the EM&A works undertaken during the period in February 2021 in accordance with EM&A Manual and the requirement under EP.

Air Quality Monitoring

- 14.2 No Action/Limit Level exceedance for 1-hour TSP monitoring was recorded.
- 14.3 No Action/Limit Level exceedance for 24-hour TSP monitoring was recorded.

Construction Noise Monitoring

- 14.4 Two (2) Action Level exceedances were recorded due to the documented complaints received in this reporting month.
- 14.5 No Limit Level exceedances was recorded for daytime construction noise in the reporting month. No limit level exceedances were recorded for night-time.

Water Quality Monitoring

- 14.6 Groundwater quality monitoring had been suspended since October 2019. Details shall be referred to **Section 5.1**.
- 14.7 Twenty-three (23) Action Level and seventy-six (76) Limit Level exceedances were recorded in Monitoring Stations (M) during marine water quality monitoring.
- 14.8 Tunnel construction activities are within +/- 50m of the piezometer gate in plan. Construction phase daily piezometer monitoring by the Contractor commenced in June 2018. It has switched to monthly basis since 3 October 2018 as the construction activity was 120m away from the piezometer gate. No monitoring was conducted in the reporting month.

Ecological Monitoring

- 14.9 The post-translocation coral monitoring surveys were completed in November 2017.

Monitoring on Cultural Heritage

- 14.10 No Alert Alarm and Action (AAA) Level exceedance of cultural heritage monitoring on cultural heritage was recorded in the reporting month.

Landscape and Visual Monitoring and Audit

- 14.11 No non-compliance of the landscape and visual impact was recorded in the reporting month.

Landfill Gas Monitoring

- 14.12 Monitoring of landfill gases in the reporting month was carried out by the Contractor at excavation location, Portion III. No Limit Level exceedance was recorded.

Environmental Site Inspection

- 14.13 Joint weekly site inspections were conducted by representatives of the Contractor, Engineer and Environmental Team. During site inspections in the reporting month, no non-compliance was identified. The environmental deficiency observed during the reporting month are shown in **Appendix L**.

Complaint, Prosecution and Notification of Summons

- 14.14 Three (3) environmental complaints, no successful prosecution and notification of summon were received during the reporting period.

Recommendations

- 14.15 The following recommendations were made to the Contractor for the reporting month:
Air Quality Impact

- To regularly apply watering on dry surface should be applied to minimize erosion.
- To aim the water spray at the rock breaking point for effective dust suppression.
- To water materials before loading/unloading.
- To turn off idle equipment.

Construction Noise

- To provide sufficient noise barriers for noisy PMEs as practically at LTI according to CNMP.
- To repair the gaps between the noise barriers.
- To place compatible noise barrier close to the breaking point for effective noise screening.
- To erect sound proof canvases on derrick lighter barge

Water Quality Impact

- To clear the oil slick and check for any damage of the silt curtain.
- To repair damaged or missing silt curtain
- To check whether the curtain has been set to the seabed.
- To ensure that the pumping rate of bored pile is sufficient to avoid discharging waste water into the sea.
- To clear floating refuse between the cofferdam and silt curtain.
- To clear oil slick within and outside cofferdam.
- To control the amount of loading materials in the barge to avoiding spillage.
- To cover stockpile near seafront.
- To remove wastewater and oil in drip tray.
- To remove pond/still water.

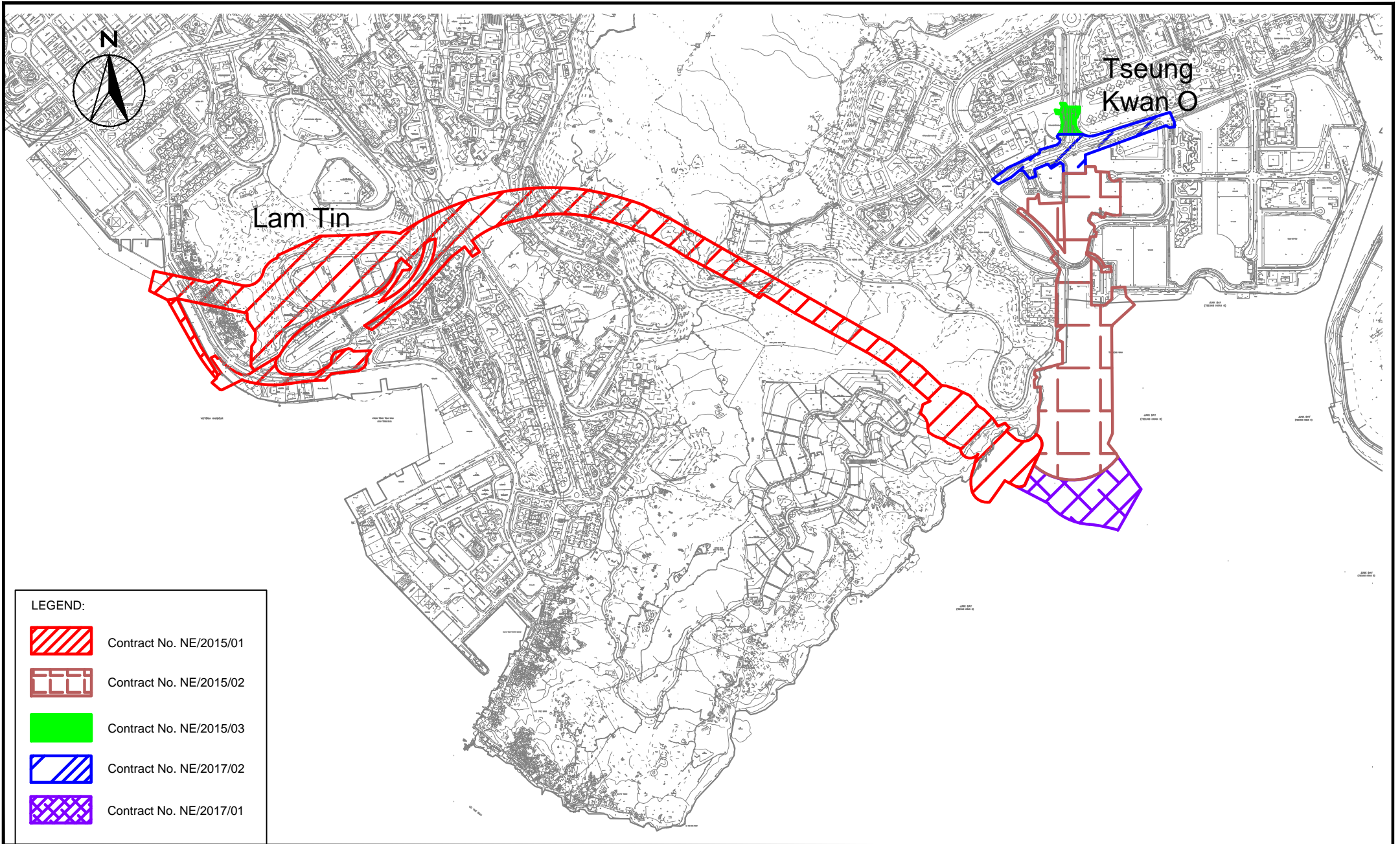
Waste/Chemical Management

- To bund or lock the chemical storage area.
- To clear dripping oil from bored piling machine.
- To clear oil slick on seawater.
- To clear oil on the floor.


Landscape and Visual

- To avoid placing any construction materials in the tree protection zone.

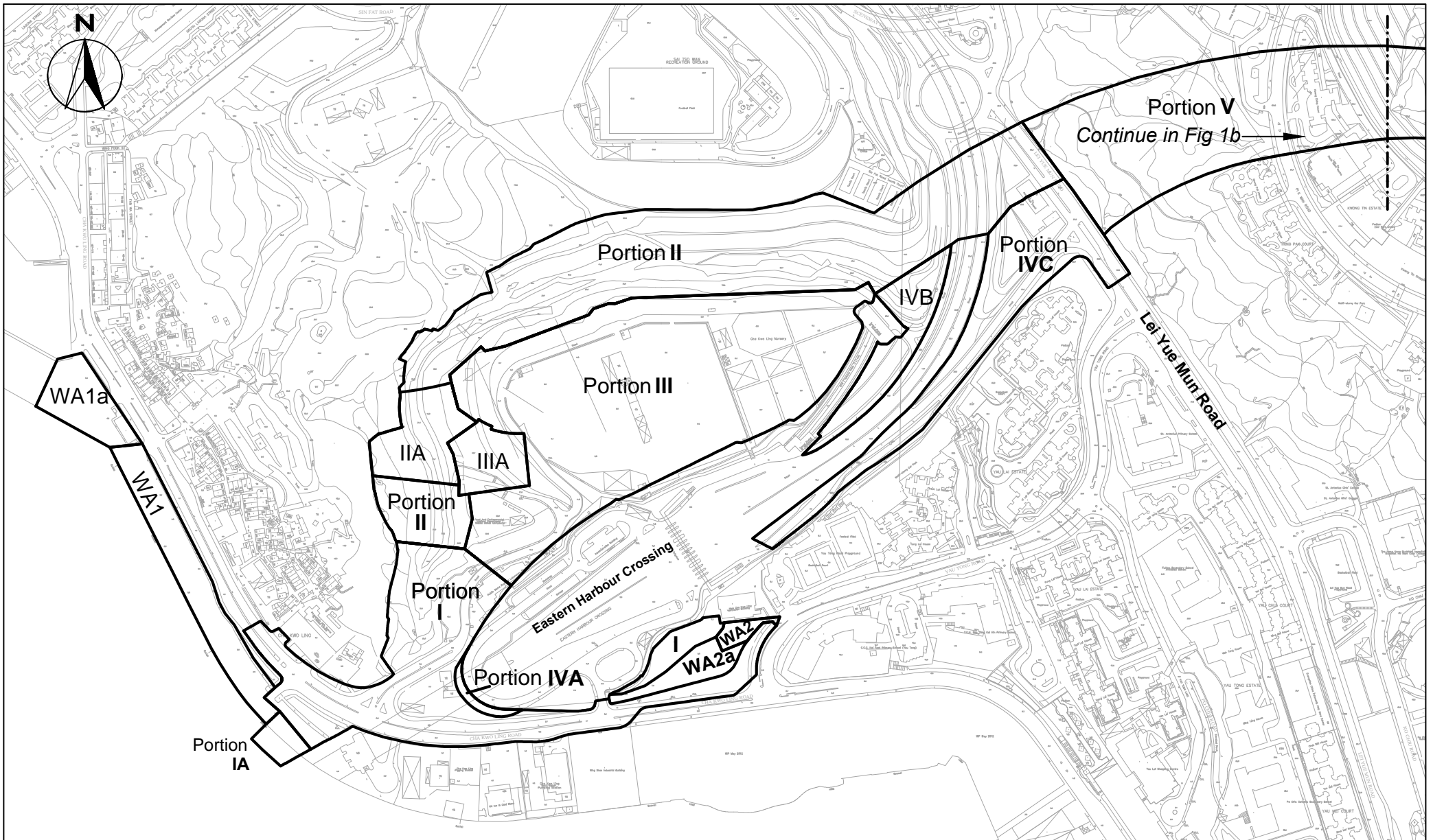
FIGURES



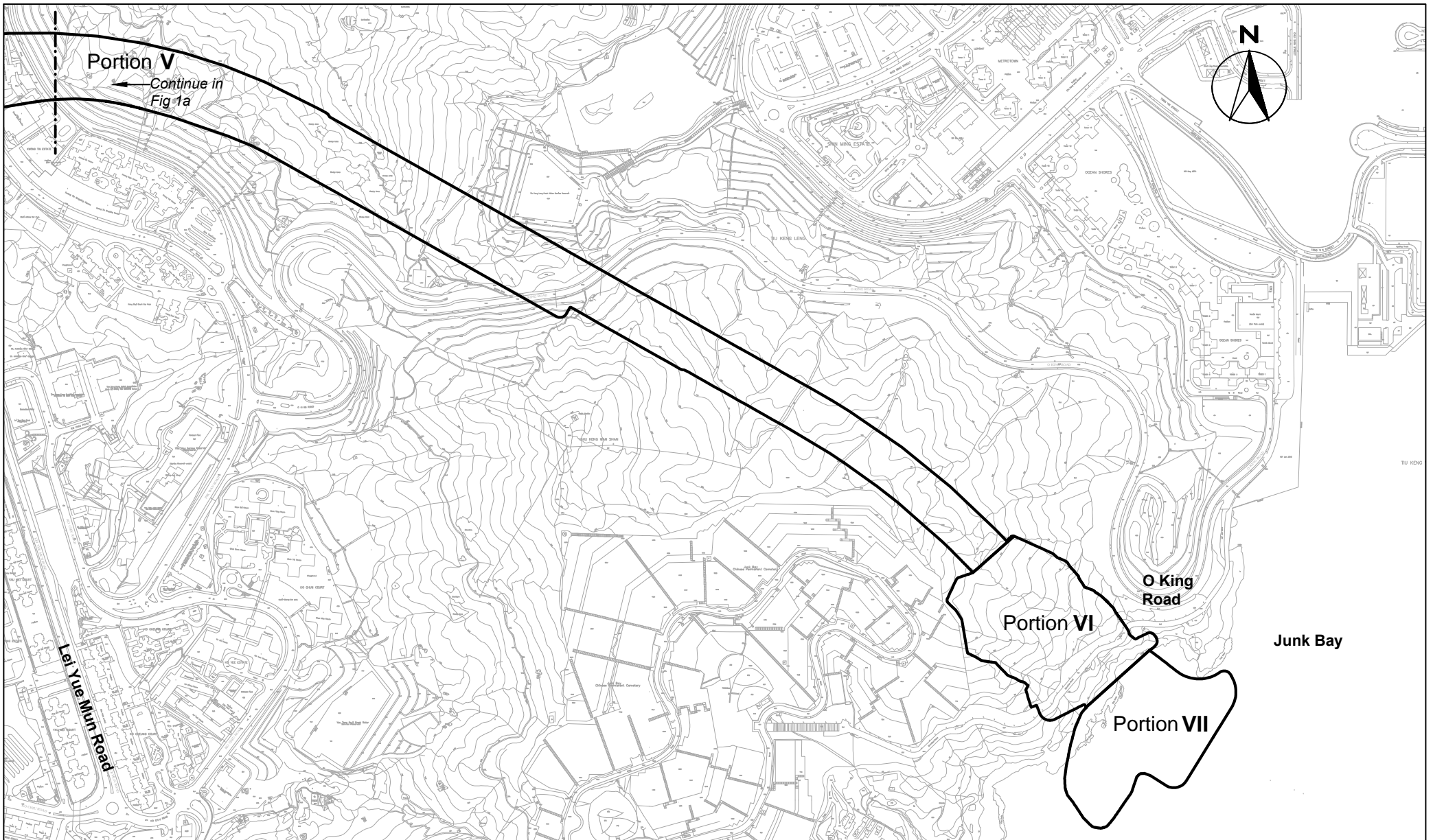
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-  Contract No. NE/2015/01
-  Contract No. NE/2015/02
-  Contract No. NE/2015/03
-  Contract No. NE/2017/02
-  Contract No. NE/2017/01

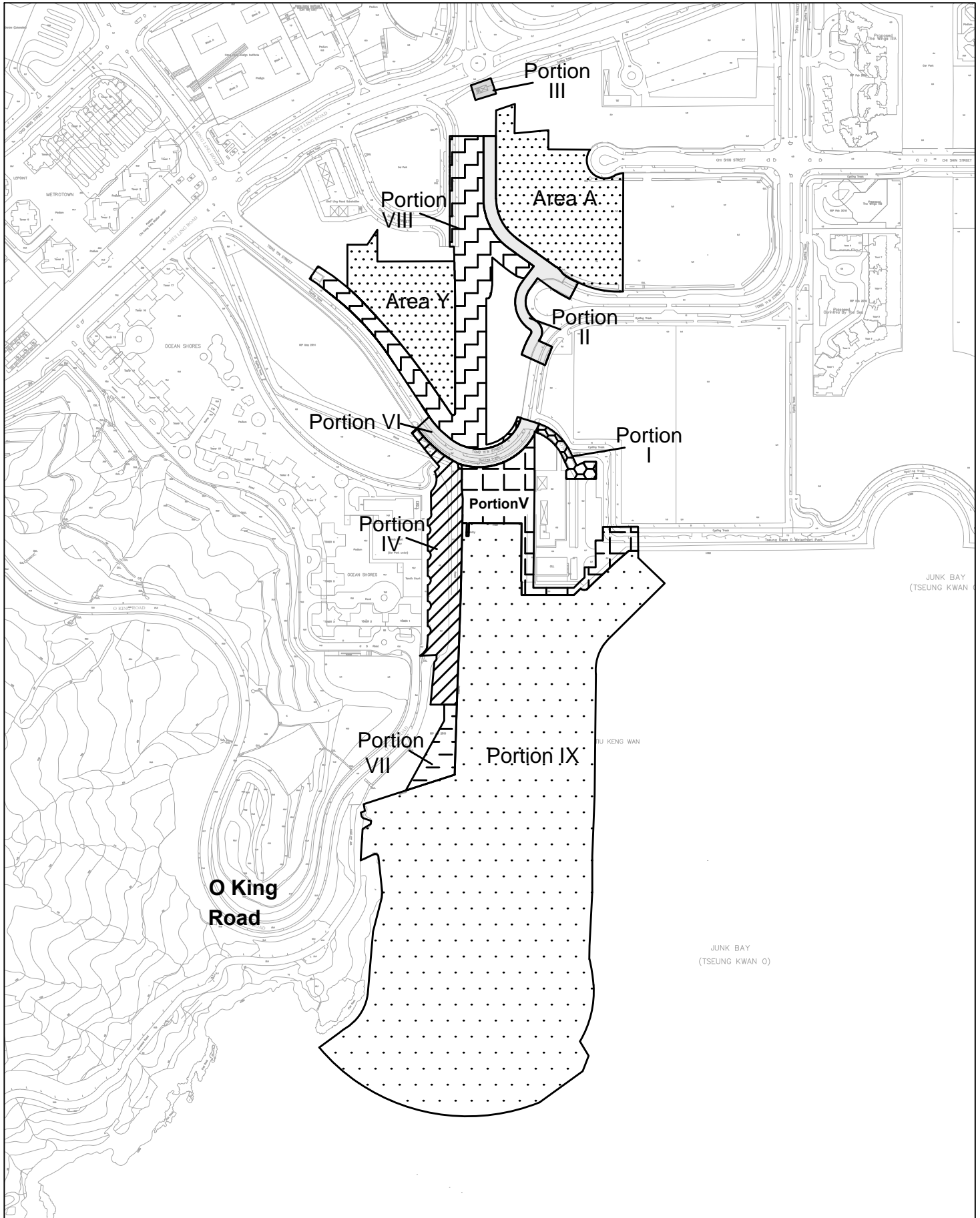
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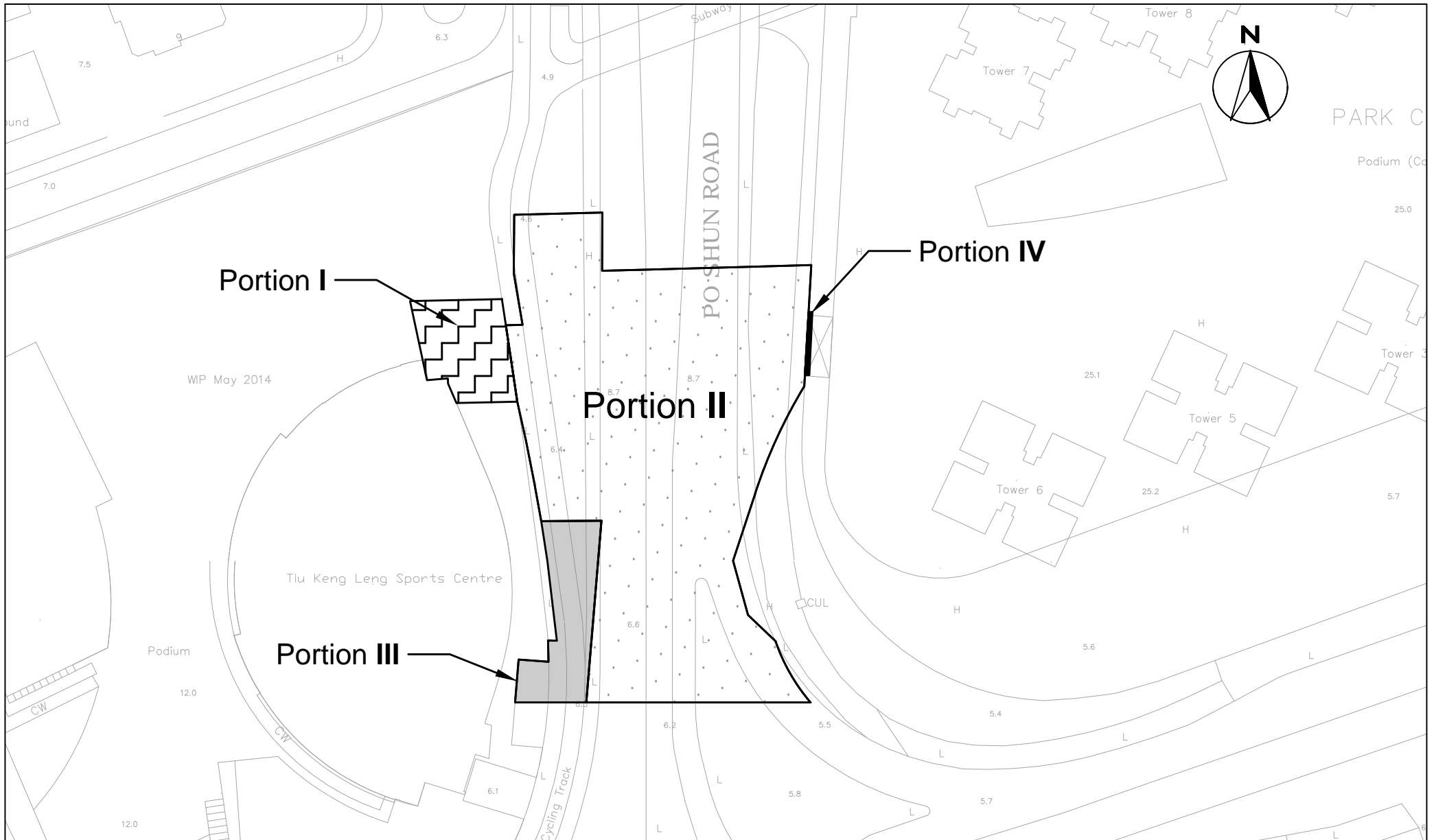
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JOB No.	MA16034	FIGURE NO.	1a
		REV	-



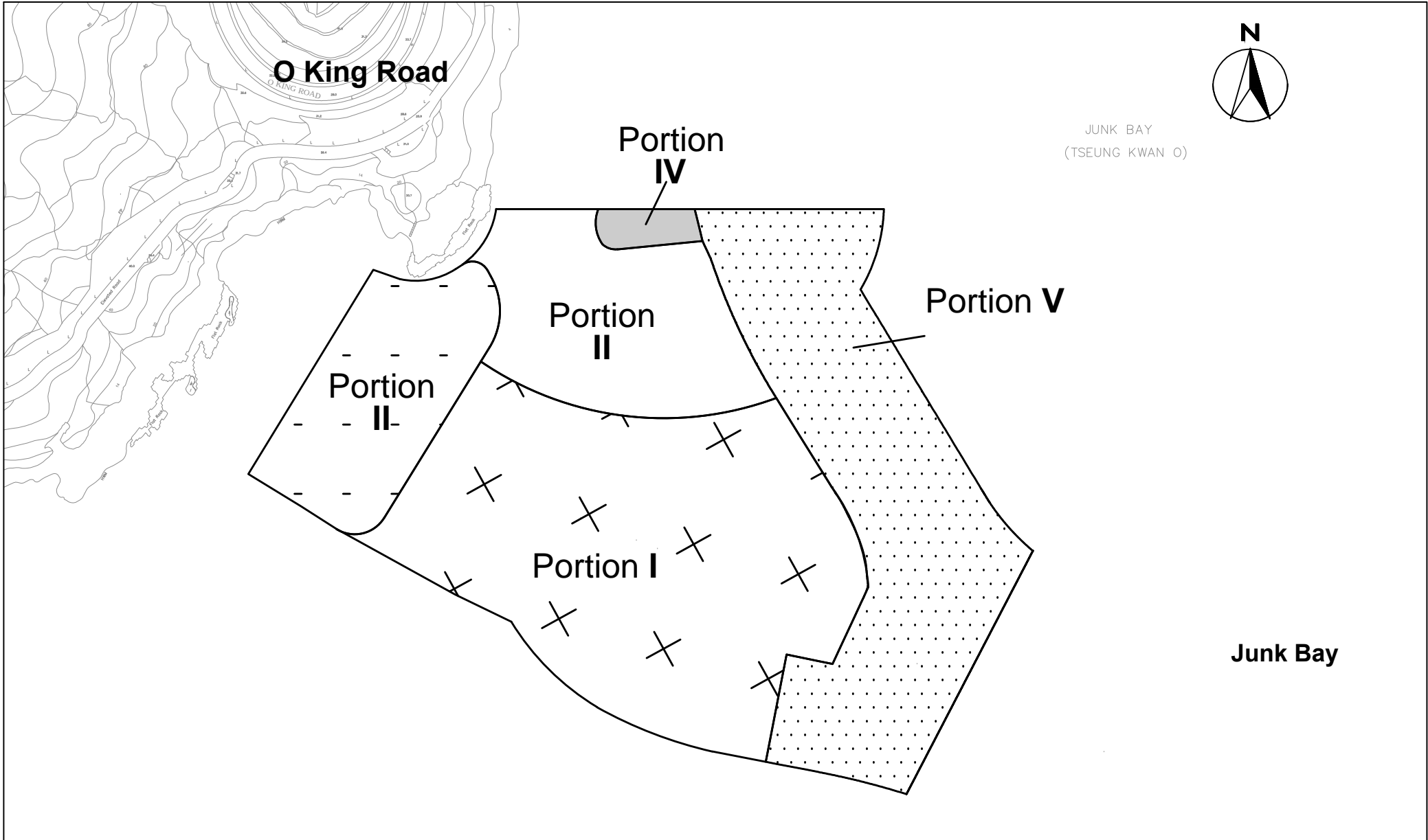
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JOB No.	MA16034	FIGURE NO.	1b
		REV	-




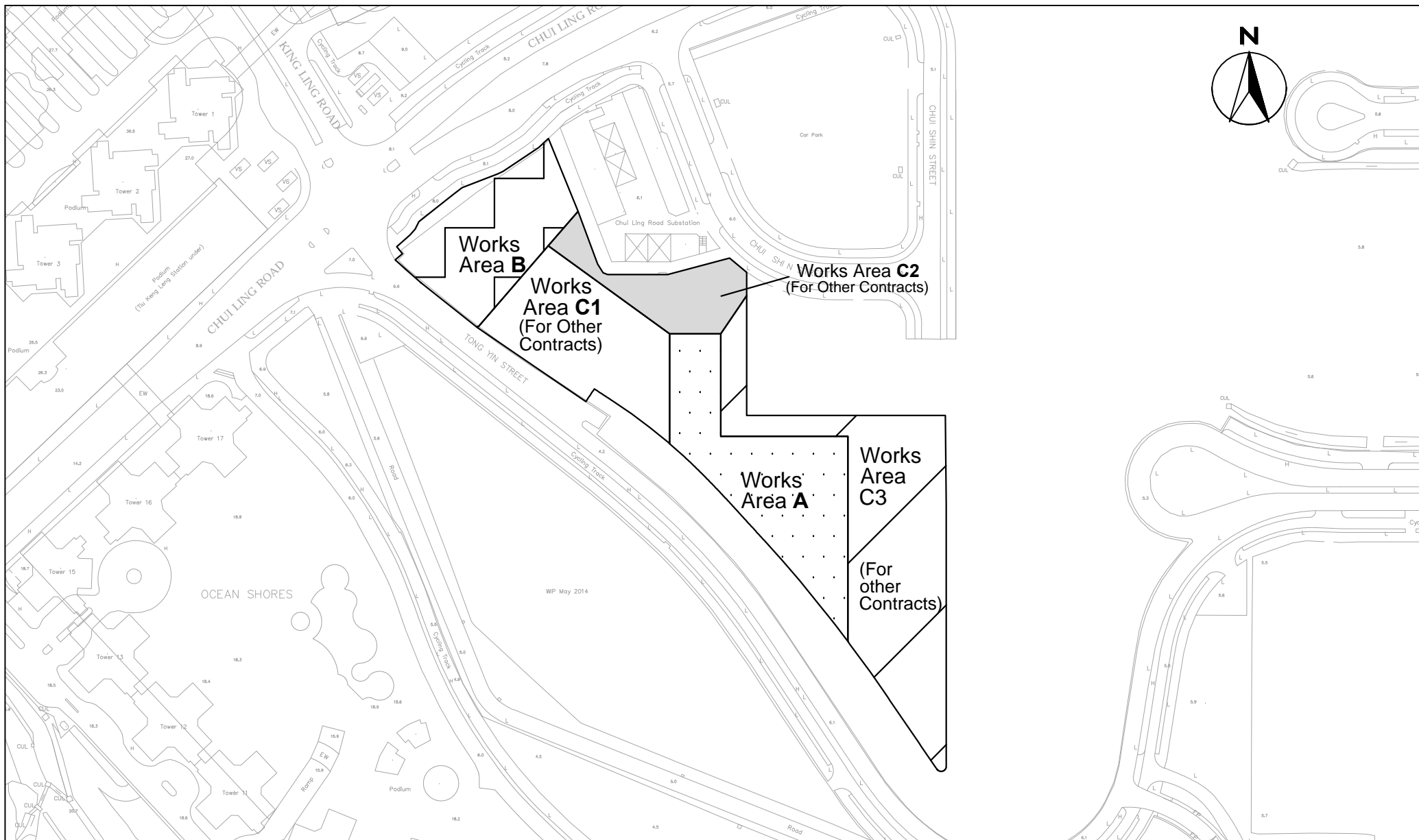
 Cinotech Consultants Limited	Agreement No. CE 59/2015 (EP) Environmental Team for Tseung Kwan O – Lam Tin Tunnel– Design and Construction Site Portions under Works Contract No. NE/2015/02	SCALE 1:5000@A4 CHECK CC JOB No. MA16034	DATE 11 March 2021 DRAWN KC FIGURE NO. 1C REV -



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JOB No.	MA16034	FIGURE NO.	1d
		REV	-

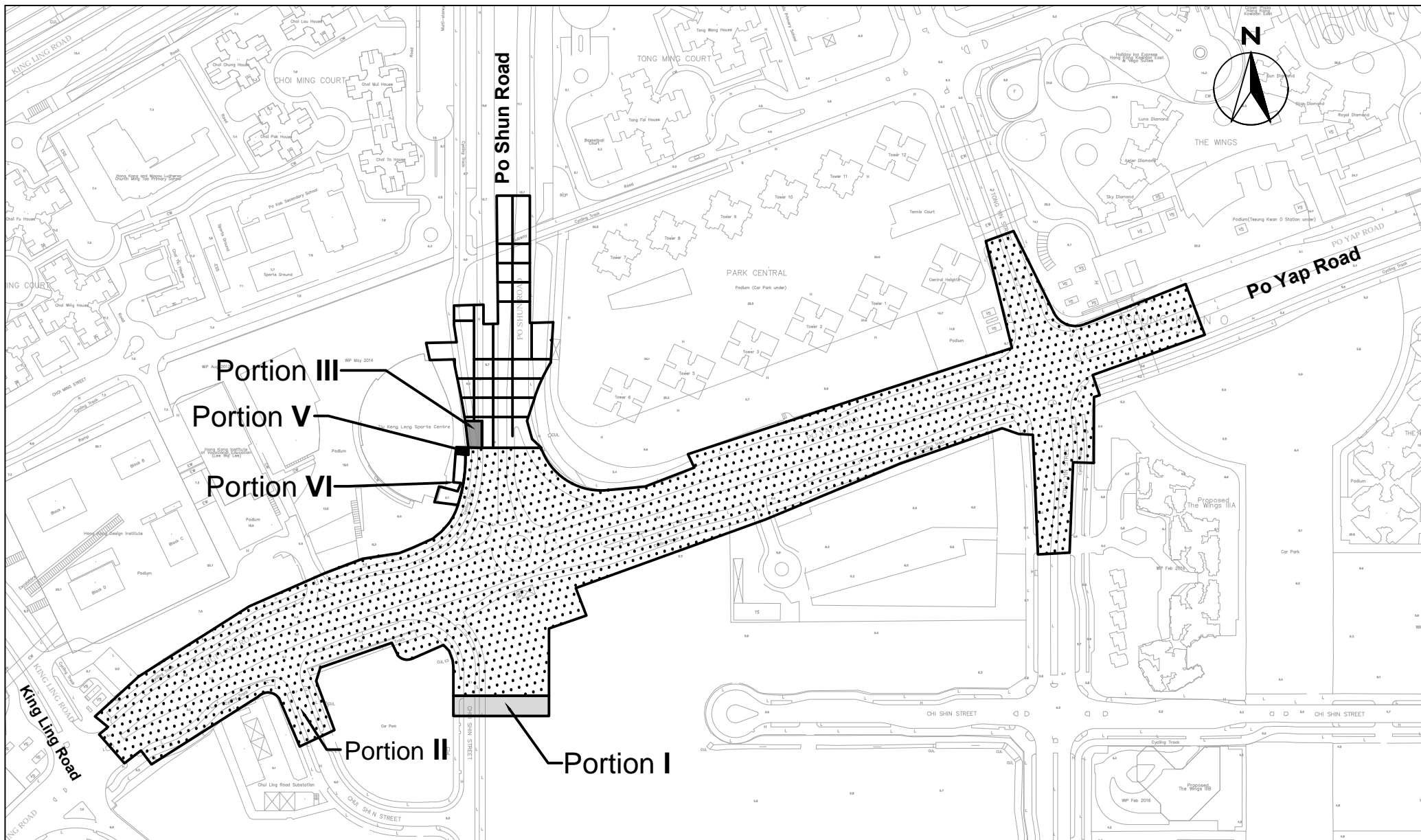


 CINOTECH Cinotech Consultants Limited	Agreement No. CE 59/2015 (EP) Environmental Team for Tseung Kwan O – Lam Tin Tunnel– Design and Construction Site Portions in Tseung Kwan O under Works Contract No. <u>NE/2017/01</u>	SCALE	1:3000@A4	DATE	15 April 2021
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Agreement No. CE 59/2015 (EP)
 Environmental Team for Tseung Kwan O – Lam Tin Tunnel– Design and Construction
 Site Portions in Tseung Kwan O (Site Office) under Works Contract No. NE/2017/02

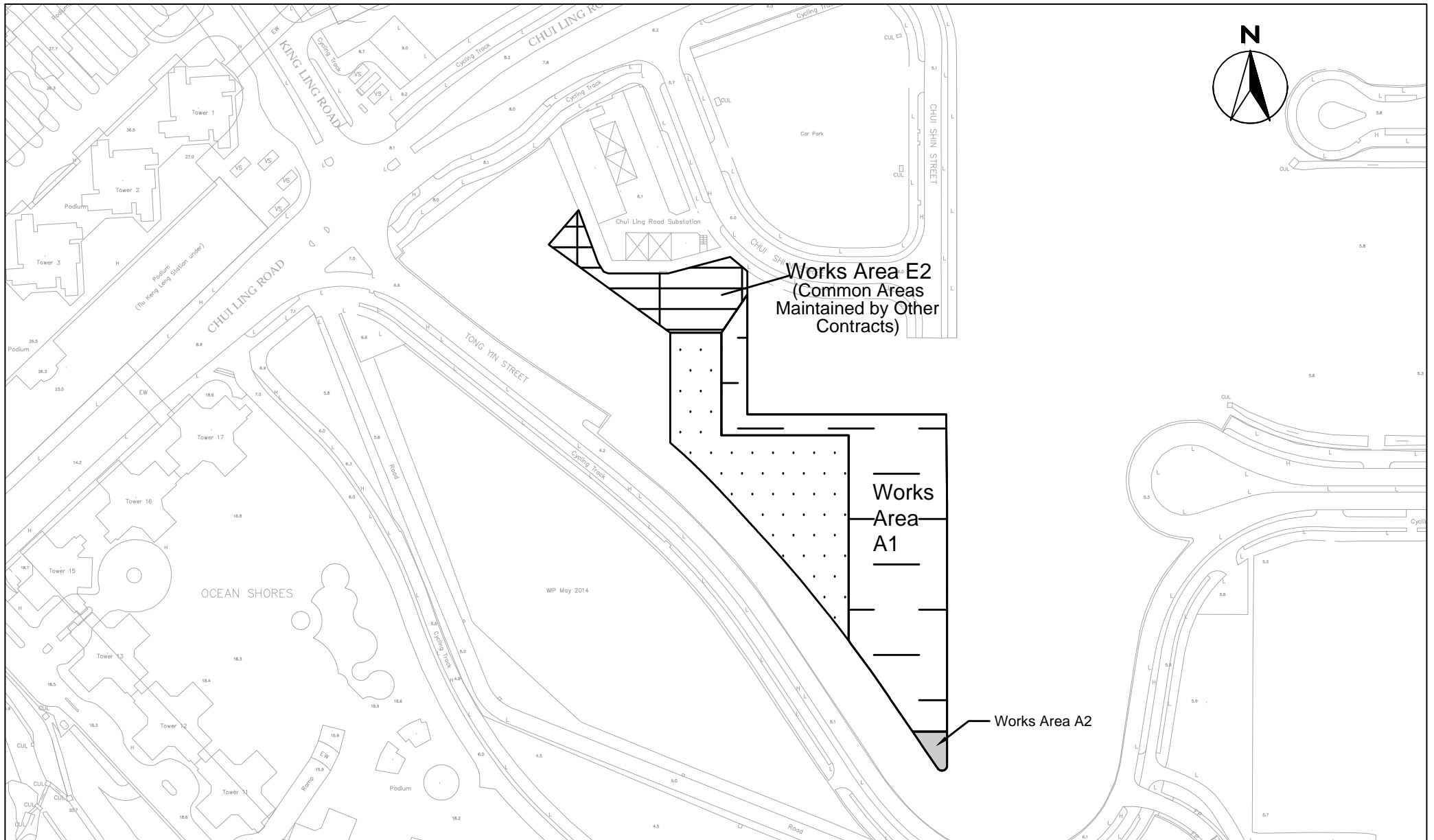
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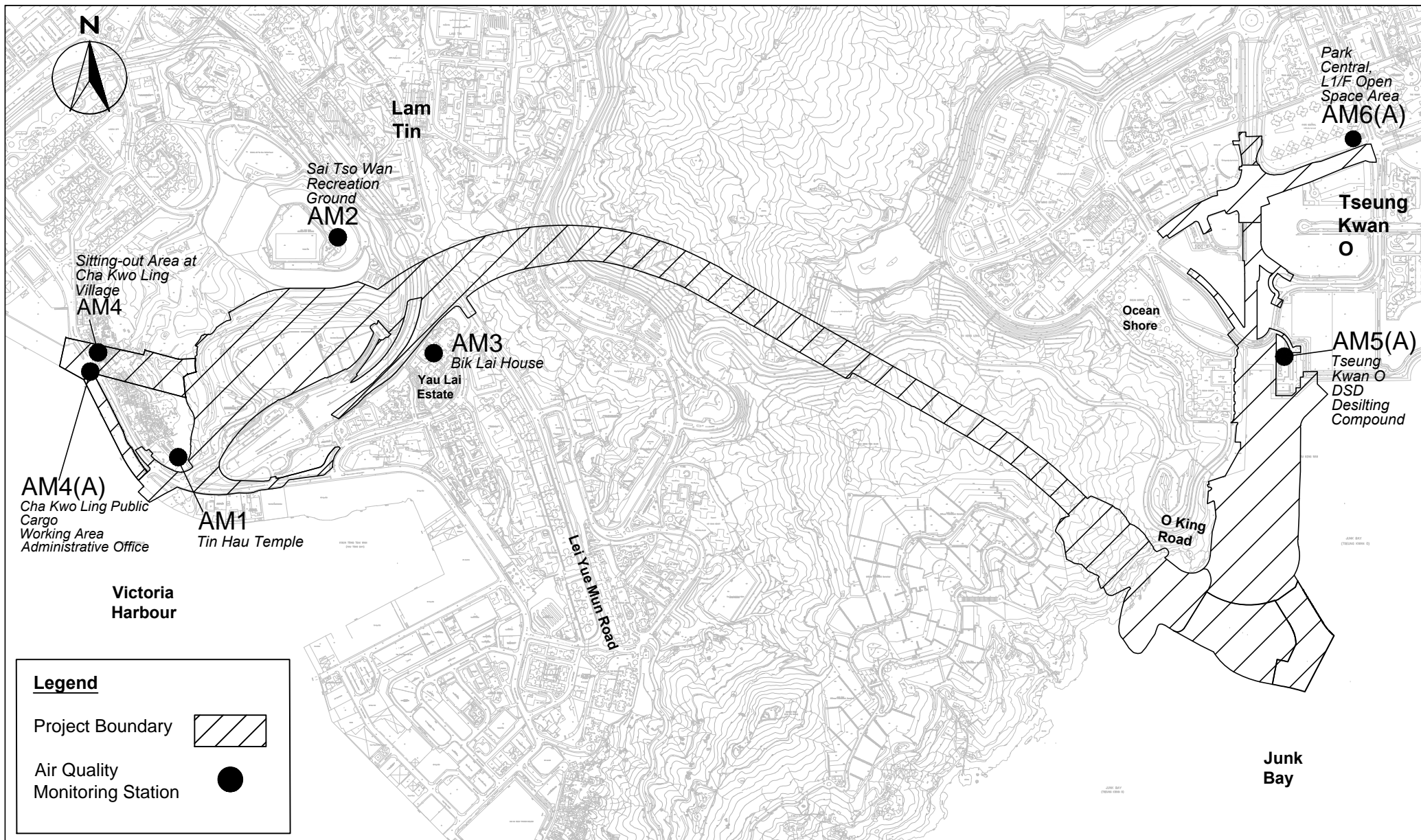
Agreement No. CE 59/2015 (EP)
 Environmental Team for Tseung Kwan O – Lam Tin Tunnel– Design and Construction

Site Portions in Tseung Kwan O under Works Contract No. NE/2017/02

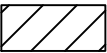
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JOB No.	MA16034	FIGURE NO.	1h	REV -



Legend

Project Boundary 

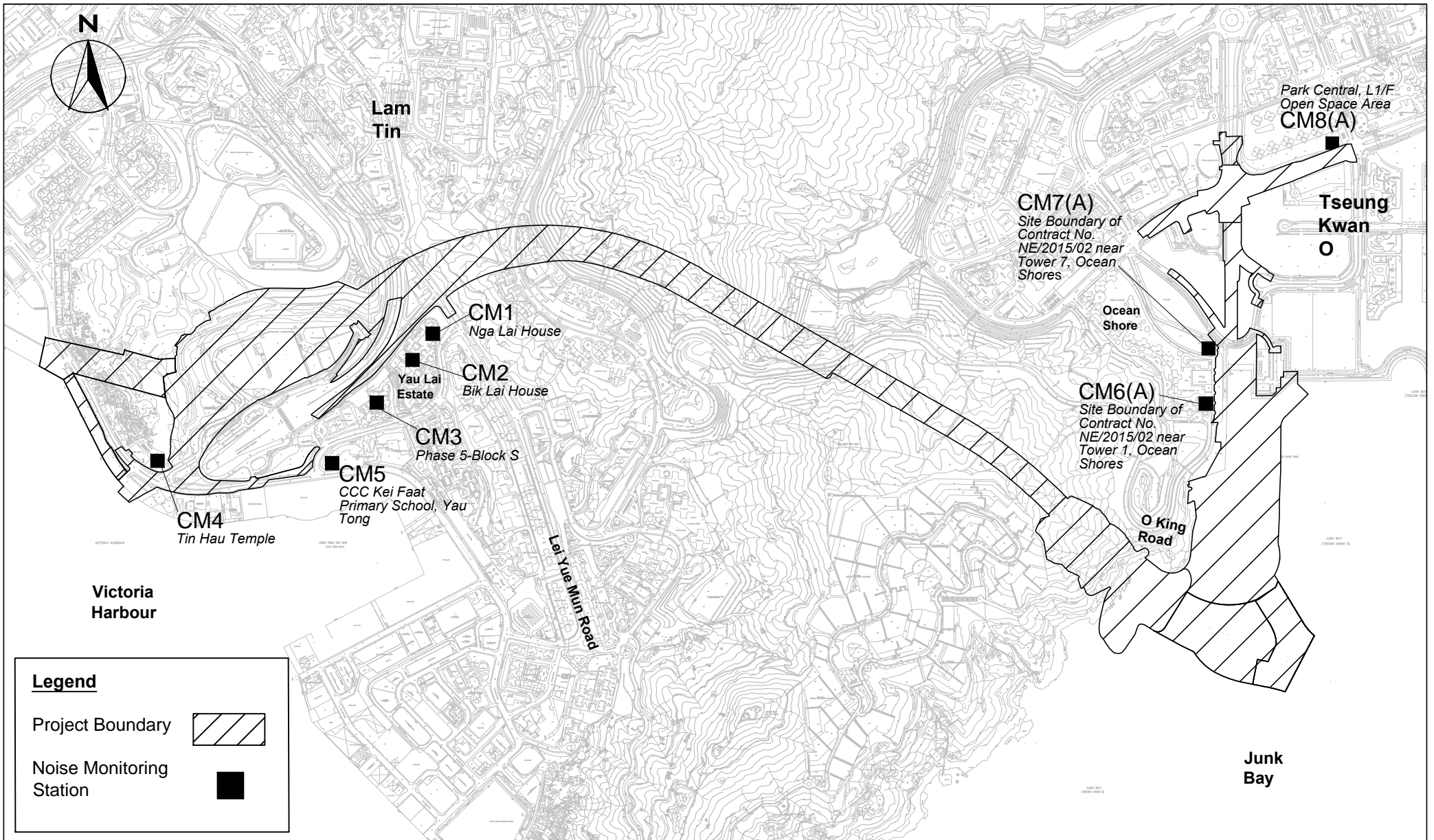
Air Quality Monitoring Station 



Agreement No. CE 59/2015 (EP)
 Environmental Team for Tseung Kwan O – Lam Tin Tunnel– Design and Construction

Air Quality Monitoring Station

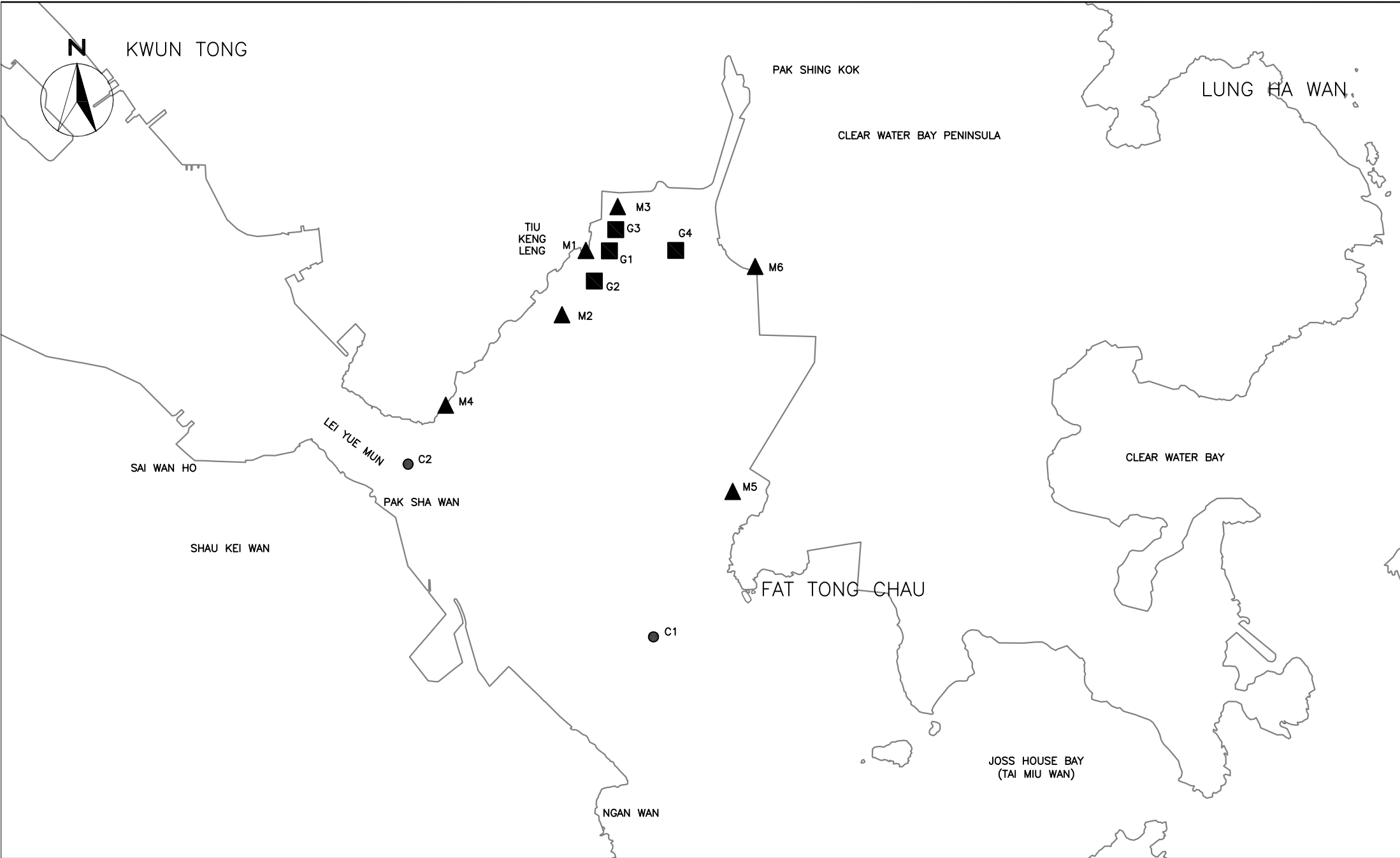
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JOB No.	MA16034	FIGURE NO.	2	REV -



Agreement No. CE 59/2015 (EP)
 Environmental Team for Tseung Kwan O – Lam Tin Tunnel– Design and Construction

Noise Monitoring Stations

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JOB No.	MA16034	FIGURE NO.	3	REV -



CINOTECH

Cinotech Consultants Limited

Agreement No. CE/59/2015 (EP)
 Environmental Team for Tseung Kwan O – Lam Tin Tunnel –
 Design and Construction

Locations of Water Quality Monitoring Stations

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PROJECT NO.	MA16034	FIGURE NO.	5	REV —

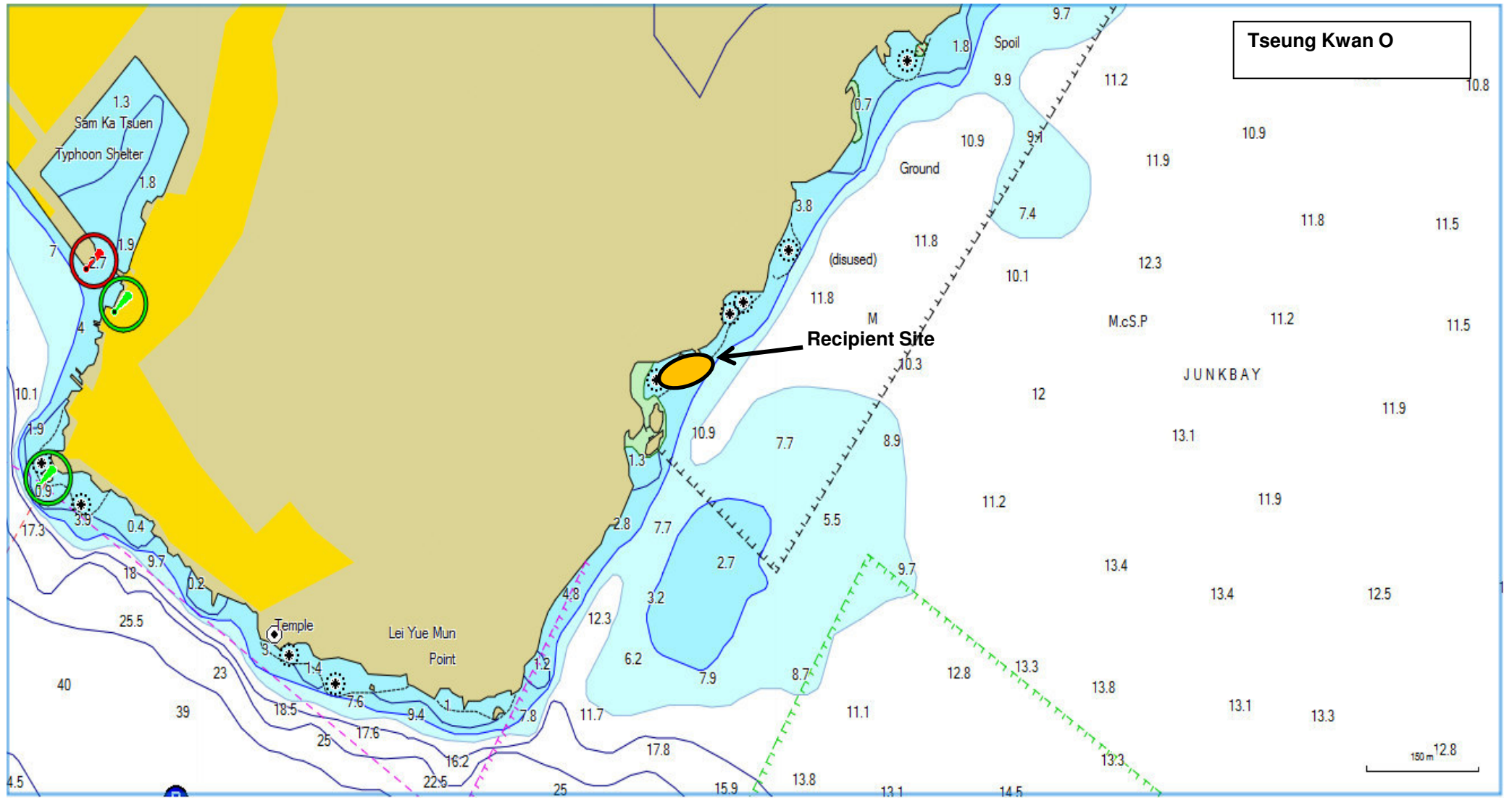


Title Agreement No. CE/59/2015 (EP)
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
 Locations of Landfill Gas Monitoring

Scale N.T.S
 Date Dec-16

Project No. MA16034
 Figure 6



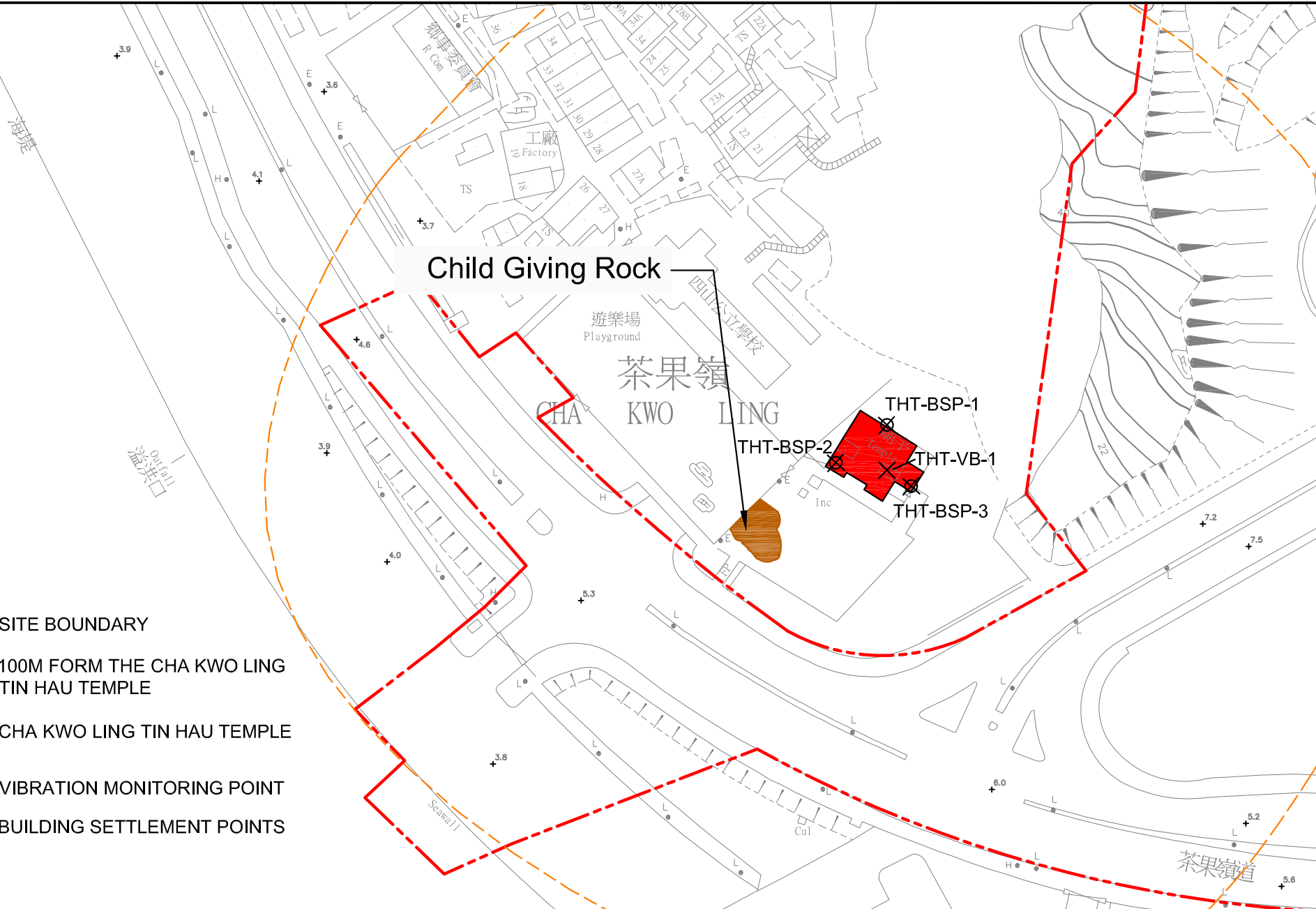
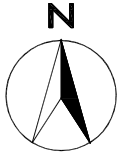


Title Agreement No. CE/59/2015 (EP)
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
 Location of Post-translocation Coral Monitoring

Scale N.T.S
 Date Mar-17

Project No. MA16034
 Figure 7





LEGEND

- SITE BOUNDARY
- 100M FORM THE CHA KWO LING TIN HAU TEMPLE
- CHA KWO LING TIN HAU TEMPLE
- × VIBRATION MONITORING POINT
- ⊗ BUILDING SETTLEMENT POINTS

SCALE	N.T.S.	DATE	FEB 2018	
CHECK	JF	DRAWN	AC	
JOB No.	MA16034	FIGURE NO.	8	REV -

APPENDIX C
WEATHER INFORMATION

Appendix C - Weather Conditions During Monitoring Period

Feb 2021				
Table I				
Day	Mean Pressure (hPa)	Air Temperature	Mean Relative Humidity (%)	Total Rainfall (mm)
		Mean (°C)		
1	1019.4	20.3	76.0	0.0
2	1019.7	20.9	76.0	0.0
3	1022.0	18.4	69.0	0.0
4	1021.7	19.4	68.0	0.0
5	1019.8	19.9	72.0	0.0
6	1017.4	20.7	73.0	0.0
7	1017.6	20.3	74.0	0.0
8	1018.9	19.9	79.0	0.0
9	1017.5	18.5	76.0	Trace
10	1013.5	16.5	89.0	32.2
11	1014.7	17.4	78.0	0.0
12	1016.3	18.4	69.0	0.0
13	1017.3	19.2	76.0	0.0
14	1016.1	19.9	75.0	0.0
15	1015.0	21.1	70.0	0.0
16	1016.1	20.3	71.0	0.0
17	1019.6	20.4	70.0	0.0
18	1024.5	18.5	65.0	0.0
19	1023.4	18.5	66.0	0.0
20	1019.9	19.6	73.0	0.0
21	1017.5	20.4	74.0	0.0
22	1015.8	21.4	78.0	0.0
23	1015.0	21.7	74.0	0.0
24	1014.3	20.3	79.0	Trace
25	1011.2	20.2	85.0	1.8
26	1009.8	22.3	86.0	14.7
27	1014.0	18.8	89.0	13.4
28	1015.7	19.9	83.0	Trace

Appendix C - Weather Conditions during Monitoring Period

Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
1 Feb 2021	12:00 AM	W	1.3
1 Feb 2021	1:00 AM	W	1.3
1 Feb 2021	2:00 AM	WNW	1.3
1 Feb 2021	3:00 AM	W	0.9
1 Feb 2021	4:00 AM	W	1.3
1 Feb 2021	5:00 AM	W	1.8
1 Feb 2021	6:00 AM	W	1.3
1 Feb 2021	7:00 AM	W	1.3
1 Feb 2021	8:00 AM	WNW	1.3
1 Feb 2021	9:00 AM	W	1.3
1 Feb 2021	10:00 AM	W	1.3
1 Feb 2021	11:00 AM	W	0.9
1 Feb 2021	12:00 PM	NE	0
1 Feb 2021	1:00 PM	NNW	0
1 Feb 2021	2:00 PM	NE	0
1 Feb 2021	3:00 PM	NE	0
1 Feb 2021	4:00 PM	NNW	0.4
1 Feb 2021	5:00 PM	NNW	1.3
1 Feb 2021	6:00 PM	NNW	2.2
1 Feb 2021	7:00 PM	NNW	3.6
1 Feb 2021	8:00 PM	NNW	3.6
1 Feb 2021	9:00 PM	NNW	3.1
1 Feb 2021	10:00 PM	NNW	3.1
1 Feb 2021	11:00 PM	NNW	1.8
2 Feb 2021	12:00 AM	NNW	1.3
2 Feb 2021	1:00 AM	NE	0.4
2 Feb 2021	2:00 AM	ENE	0.9
2 Feb 2021	3:00 AM	NNE	0.9
2 Feb 2021	4:00 AM	ENE	0.9
2 Feb 2021	5:00 AM	NE	0.9
2 Feb 2021	6:00 AM	NW	1.3
2 Feb 2021	7:00 AM	NW	0.9
2 Feb 2021	8:00 AM	NW	0.9
2 Feb 2021	9:00 AM	W	0.9
2 Feb 2021	10:00 AM	NW	1.3
2 Feb 2021	11:00 AM	NW	1.8
2 Feb 2021	12:00 PM	WNW	1.3
2 Feb 2021	1:00 PM	NW	1.3
2 Feb 2021	2:00 PM	NW	1.3
2 Feb 2021	3:00 PM	NW	1.3
2 Feb 2021	4:00 PM	NW	0.4
2 Feb 2021	5:00 PM	E	0.9
2 Feb 2021	6:00 PM	ESE	0.9
2 Feb 2021	7:00 PM	E	1.3
2 Feb 2021	8:00 PM	ENE	1.3

Appendix C - Weather Conditions during Monitoring Period

Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
2 Feb 2021	9:00 PM	ENE	0.9
2 Feb 2021	10:00 PM	E	0.9
2 Feb 2021	11:00 PM	ENE	0.9
3 Feb 2021	12:00 AM	E	0.4
3 Feb 2021	1:00 AM	ENE	0.9
3 Feb 2021	2:00 AM	NW	0.4
3 Feb 2021	3:00 AM	ENE	0.9
3 Feb 2021	4:00 AM	WNW	0.9
3 Feb 2021	5:00 AM	ENE	0.9
3 Feb 2021	6:00 AM	ESE	1.3
3 Feb 2021	7:00 AM	NW	0.4
3 Feb 2021	8:00 AM	NW	0.4
3 Feb 2021	9:00 AM	NW	0.9
3 Feb 2021	10:00 AM	NNE	0.4
3 Feb 2021	11:00 AM	NNW	0.4
3 Feb 2021	12:00 PM	W	0.4
3 Feb 2021	1:00 PM	WNW	0.9
3 Feb 2021	2:00 PM	WSW	0.9
3 Feb 2021	3:00 PM	WSW	0.4
3 Feb 2021	4:00 PM	WSW	0.4
3 Feb 2021	5:00 PM	W	0.4
3 Feb 2021	6:00 PM	NW	0.9
3 Feb 2021	7:00 PM	W	1.3
3 Feb 2021	8:00 PM	W	1.3
3 Feb 2021	9:00 PM	W	1.3
3 Feb 2021	10:00 PM	WNW	1.3
3 Feb 2021	11:00 PM	W	0.9
4 Feb 2021	12:00 AM	W	1.3
4 Feb 2021	1:00 AM	W	1.8
4 Feb 2021	2:00 AM	W	1.3
4 Feb 2021	3:00 AM	W	1.3
4 Feb 2021	4:00 AM	WNW	1.3
4 Feb 2021	5:00 AM	W	1.3
4 Feb 2021	6:00 AM	W	1.3
4 Feb 2021	7:00 AM	W	0.9
4 Feb 2021	8:00 AM	W	1.3
4 Feb 2021	9:00 AM	W	1.3
4 Feb 2021	10:00 AM	W	1.8
4 Feb 2021	11:00 AM	W	1.3
4 Feb 2021	12:00 PM	W	1.8
4 Feb 2021	1:00 PM	W	1.8
4 Feb 2021	2:00 PM	W	2.2
4 Feb 2021	3:00 PM	W	1.3
4 Feb 2021	4:00 PM	W	1.8
4 Feb 2021	5:00 PM	W	1.3

Appendix C - Weather Conditions during Monitoring Period

Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
4 Feb 2021	6:00 PM	W	0.9
4 Feb 2021	7:00 PM	NW	0.9
4 Feb 2021	8:00 PM	W	1.3
4 Feb 2021	9:00 PM	W	1.3
4 Feb 2021	10:00 PM	WNW	0.9
4 Feb 2021	11:00 PM	WNW	1.3
5 Feb 2021	12:00 AM	W	0.9
5 Feb 2021	1:00 AM	NW	1.3
5 Feb 2021	2:00 AM	NW	1.3
5 Feb 2021	3:00 AM	NW	1.8
5 Feb 2021	4:00 AM	NW	0.9
5 Feb 2021	5:00 AM	NW	1.3
5 Feb 2021	6:00 AM	NW	1.3
5 Feb 2021	7:00 AM	NW	2.2
5 Feb 2021	8:00 AM	NW	1.8
5 Feb 2021	9:00 AM	NW	1.8
5 Feb 2021	10:00 AM	NW	1.8
5 Feb 2021	11:00 AM	NW	1.8
5 Feb 2021	12:00 PM	NW	0.9
5 Feb 2021	1:00 PM	NW	0.9
5 Feb 2021	2:00 PM	NW	1.3
5 Feb 2021	3:00 PM	NW	1.3
5 Feb 2021	4:00 PM	NW	1.3
5 Feb 2021	5:00 PM	NW	1.3
5 Feb 2021	6:00 PM	NW	1.8
5 Feb 2021	7:00 PM	NW	0.9
5 Feb 2021	8:00 PM	NW	1.3
5 Feb 2021	9:00 PM	NW	0.9
5 Feb 2021	10:00 PM	NW	1.8
5 Feb 2021	11:00 PM	NW	3.6
6 Feb 2021	12:00 AM	NW	3.1
6 Feb 2021	1:00 AM	NW	3.1
6 Feb 2021	2:00 AM	NW	3.6
6 Feb 2021	3:00 AM	ENE	1.3
6 Feb 2021	4:00 AM	E	1.3
6 Feb 2021	5:00 AM	E	1.3
6 Feb 2021	6:00 AM	E	0.9
6 Feb 2021	7:00 AM	E	0.9
6 Feb 2021	8:00 AM	E	0.9
6 Feb 2021	9:00 AM	E	0.9
6 Feb 2021	10:00 AM	ENE	1.3
6 Feb 2021	11:00 AM	E	0.9
6 Feb 2021	12:00 PM	ENE	0.9
6 Feb 2021	1:00 PM	E	0.4
6 Feb 2021	2:00 PM	E	0.9

Appendix C - Weather Conditions during Monitoring Period

Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
6 Feb 2021	3:00 PM	ENE	1.8
6 Feb 2021	4:00 PM	E	0.9
6 Feb 2021	5:00 PM	E	1.8
6 Feb 2021	6:00 PM	E	1.3
6 Feb 2021	7:00 PM	ESE	0.4
6 Feb 2021	8:00 PM	ESE	0.4
6 Feb 2021	9:00 PM	NW	0.9
6 Feb 2021	10:00 PM	E	0.9
6 Feb 2021	11:00 PM	E	1.8
7 Feb 2021	12:00 AM	E	0.9
7 Feb 2021	1:00 AM	E	0.9
7 Feb 2021	2:00 AM	ENE	1.8
7 Feb 2021	3:00 AM	E	1.8
7 Feb 2021	4:00 AM	E	1.3
7 Feb 2021	5:00 AM	ENE	1.3
7 Feb 2021	6:00 AM	ENE	1.3
7 Feb 2021	7:00 AM	ENE	0.9
7 Feb 2021	8:00 AM	E	1.3
7 Feb 2021	9:00 AM	ESE	0.4
7 Feb 2021	10:00 AM	NW	0
7 Feb 2021	11:00 AM	ENE	0
7 Feb 2021	12:00 PM	ENE	0.4
7 Feb 2021	1:00 PM	E	0.4
7 Feb 2021	2:00 PM	E	0.9
7 Feb 2021	3:00 PM	E	1.3
7 Feb 2021	4:00 PM	E	0.9
7 Feb 2021	5:00 PM	E	0.9
7 Feb 2021	6:00 PM	ENE	0.9
7 Feb 2021	7:00 PM	ESE	0.4
7 Feb 2021	8:00 PM	E	0.9
7 Feb 2021	9:00 PM	E	1.3
7 Feb 2021	10:00 PM	E	1.8
7 Feb 2021	11:00 PM	ESE	1.8
8 Feb 2021	12:00 AM	ENE	0.9
8 Feb 2021	1:00 AM	E	1.3
8 Feb 2021	2:00 AM	NW	1.3
8 Feb 2021	3:00 AM	NW	0.9
8 Feb 2021	4:00 AM	NW	2.7
8 Feb 2021	5:00 AM	NW	1.3
8 Feb 2021	6:00 AM	NW	0.9
8 Feb 2021	7:00 AM	NW	0.9
8 Feb 2021	8:00 AM	W	0
8 Feb 2021	9:00 AM	W	0.4
8 Feb 2021	10:00 AM	WSW	0
8 Feb 2021	11:00 AM	W	0.4

Appendix C - Weather Conditions during Monitoring Period

Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
8 Feb 2021	12:00 PM	ENE	0.4
8 Feb 2021	1:00 PM	ESE	0.4
8 Feb 2021	2:00 PM	ENE	0.4
8 Feb 2021	3:00 PM	ENE	0
8 Feb 2021	4:00 PM	ESE	0.4
8 Feb 2021	5:00 PM	E	0.4
8 Feb 2021	6:00 PM	W	0.4
8 Feb 2021	7:00 PM	E	0.4
8 Feb 2021	8:00 PM	ENE	0.4
8 Feb 2021	9:00 PM	ENE	0.4
8 Feb 2021	10:00 PM	E	0.4
8 Feb 2021	11:00 PM	N	0.4
9 Feb 2021	12:00 AM	ENE	0.4
9 Feb 2021	1:00 AM	E	1.3
9 Feb 2021	2:00 AM	NW	1.3
9 Feb 2021	3:00 AM	NW	2.2
9 Feb 2021	4:00 AM	NW	1.3
9 Feb 2021	5:00 AM	NW	0.4
9 Feb 2021	6:00 AM	E	0.9
9 Feb 2021	7:00 AM	E	0.4
9 Feb 2021	8:00 AM	ESE	0.4
9 Feb 2021	9:00 AM	ESE	0.4
9 Feb 2021	10:00 AM	ESE	0.4
9 Feb 2021	11:00 AM	ESE	0.4
9 Feb 2021	12:00 PM	NNE	0.4
9 Feb 2021	1:00 PM	E	0.4
9 Feb 2021	2:00 PM	NW	0.4
9 Feb 2021	3:00 PM	NW	0.9
9 Feb 2021	4:00 PM	NE	0.4
9 Feb 2021	5:00 PM	NW	0.9
9 Feb 2021	6:00 PM	NW	0.4
9 Feb 2021	7:00 PM	NE	0.9
9 Feb 2021	8:00 PM	NW	1.3
9 Feb 2021	9:00 PM	NW	1.3
9 Feb 2021	10:00 PM	NW	1.8
9 Feb 2021	11:00 PM	NW	1.8
10 Feb 2021	12:00 AM	NW	2.2
10 Feb 2021	1:00 AM	NW	1.3
10 Feb 2021	2:00 AM	NW	2.7
10 Feb 2021	3:00 AM	NW	2.2
10 Feb 2021	4:00 AM	NW	2.2
10 Feb 2021	5:00 AM	NW	1.3
10 Feb 2021	6:00 AM	ENE	0.9
10 Feb 2021	7:00 AM	NW	1.8
10 Feb 2021	8:00 AM	NW	1.8

Appendix C - Weather Conditions during Monitoring Period

Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
10 Feb 2021	9:00 AM	NW	1.3
10 Feb 2021	10:00 AM	NW	1.3
10 Feb 2021	11:00 AM	NW	1.8
10 Feb 2021	12:00 PM	NW	1.3
10 Feb 2021	1:00 PM	NW	0.9
10 Feb 2021	2:00 PM	NW	0.4
10 Feb 2021	3:00 PM	NW	0.4
10 Feb 2021	4:00 PM	N	0.9
10 Feb 2021	5:00 PM	NNW	0
10 Feb 2021	6:00 PM	NNW	0.4
10 Feb 2021	7:00 PM	NW	0.9
10 Feb 2021	8:00 PM	NNW	0.4
10 Feb 2021	9:00 PM	NW	0.9
10 Feb 2021	10:00 PM	NW	0.9
10 Feb 2021	11:00 PM	NW	0.9
11 Feb 2021	12:00 AM	NW	1.3
11 Feb 2021	1:00 AM	NW	2.2
11 Feb 2021	2:00 AM	NW	2.7
11 Feb 2021	3:00 AM	NNE	1.3
11 Feb 2021	4:00 AM	NW	1.3
11 Feb 2021	5:00 AM	NW	1.8
11 Feb 2021	6:00 AM	NW	1.3
11 Feb 2021	7:00 AM	NW	1.3
11 Feb 2021	8:00 AM	NW	0.9
11 Feb 2021	9:00 AM	NW	0.9
11 Feb 2021	10:00 AM	NW	0.4
11 Feb 2021	11:00 AM	NW	0
11 Feb 2021	12:00 PM	NW	0.4
11 Feb 2021	1:00 PM	NW	0
11 Feb 2021	2:00 PM	---	0
11 Feb 2021	3:00 PM	---	0
11 Feb 2021	4:00 PM	NNW	0
11 Feb 2021	5:00 PM	NW	0.4
11 Feb 2021	6:00 PM	NW	0.4
11 Feb 2021	7:00 PM	NW	0.4
11 Feb 2021	8:00 PM	NW	0.4
11 Feb 2021	9:00 PM	E	1.3
11 Feb 2021	10:00 PM	E	1.3
11 Feb 2021	11:00 PM	ENE	1.3
12 Feb 2021	12:00 AM	ESE	0.9
12 Feb 2021	1:00 AM	NW	1.8
12 Feb 2021	2:00 AM	NW	1.3
12 Feb 2021	3:00 AM	NW	2.2
12 Feb 2021	4:00 AM	NW	1.8
12 Feb 2021	5:00 AM	NW	2.2

Appendix C - Weather Conditions during Monitoring Period

Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
12 Feb 2021	6:00 AM	NW	1.3
12 Feb 2021	7:00 AM	NW	0.4
12 Feb 2021	8:00 AM	NW	0.9
12 Feb 2021	9:00 AM	NW	0.4
12 Feb 2021	10:00 AM	NW	0.4
12 Feb 2021	11:00 AM	NE	0.9
12 Feb 2021	12:00 PM	NW	0.4
12 Feb 2021	1:00 PM	NNW	0.4
12 Feb 2021	2:00 PM	NW	0.9
12 Feb 2021	3:00 PM	NNE	0
12 Feb 2021	4:00 PM	NW	0.9
12 Feb 2021	5:00 PM	NW	0.9
12 Feb 2021	6:00 PM	NNE	0.9
12 Feb 2021	7:00 PM	WNW	0.4
12 Feb 2021	8:00 PM	NW	1.3
12 Feb 2021	9:00 PM	ENE	0.4
12 Feb 2021	10:00 PM	NNE	0.9
12 Feb 2021	11:00 PM	NW	0.9
13 Feb 2021	12:00 AM	NW	1.3
13 Feb 2021	1:00 AM	NW	2.7
13 Feb 2021	2:00 AM	NW	2.7
13 Feb 2021	3:00 AM	NW	2.7
13 Feb 2021	4:00 AM	NW	1.8
13 Feb 2021	5:00 AM	NW	0.4
13 Feb 2021	6:00 AM	NW	0.9
13 Feb 2021	7:00 AM	NW	1.3
13 Feb 2021	8:00 AM	W	0.4
13 Feb 2021	9:00 AM	NW	0.9
13 Feb 2021	10:00 AM	NW	0.4
13 Feb 2021	11:00 AM	WSW	0.4
13 Feb 2021	12:00 PM	NW	1.3
13 Feb 2021	1:00 PM	NW	0.9
13 Feb 2021	2:00 PM	NW	1.8
13 Feb 2021	3:00 PM	NW	1.8
13 Feb 2021	4:00 PM	NW	1.8
13 Feb 2021	5:00 PM	NW	0.9
13 Feb 2021	6:00 PM	NW	1.3
13 Feb 2021	7:00 PM	NW	0.9
13 Feb 2021	8:00 PM	W	0.4
13 Feb 2021	9:00 PM	NW	0.4
13 Feb 2021	10:00 PM	NW	0.9
13 Feb 2021	11:00 PM	NE	1.3
14 Feb 2021	12:00 AM	NE	0.9
14 Feb 2021	1:00 AM	NW	1.3
14 Feb 2021	2:00 AM	NW	1.8

Appendix C - Weather Conditions during Monitoring Period

Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
14 Feb 2021	3:00 AM	NW	2.7
14 Feb 2021	4:00 AM	NW	1.8
14 Feb 2021	5:00 AM	NW	0.9
14 Feb 2021	6:00 AM	NNW	0.4
14 Feb 2021	7:00 AM	NW	0.4
14 Feb 2021	8:00 AM	NW	0.4
14 Feb 2021	9:00 AM	NW	0.4
14 Feb 2021	10:00 AM	NW	0.4
14 Feb 2021	11:00 AM	NW	0.4
14 Feb 2021	12:00 PM	ESE	2.2
14 Feb 2021	1:00 PM	WNW	0.9
14 Feb 2021	2:00 PM	WNW	0.9
14 Feb 2021	3:00 PM	E	2.2
14 Feb 2021	4:00 PM	ENE	1.8
14 Feb 2021	5:00 PM	NW	1.8
14 Feb 2021	6:00 PM	ENE	2.2
14 Feb 2021	7:00 PM	ENE	2.2
14 Feb 2021	8:00 PM	NW	1.3
14 Feb 2021	9:00 PM	NE	1.8
14 Feb 2021	10:00 PM	NW	1.8
14 Feb 2021	11:00 PM	ENE	1.3
15 Feb 2021	12:00 AM	E	2.7
15 Feb 2021	1:00 AM	E	2.7
15 Feb 2021	2:00 AM	E	2.7
15 Feb 2021	3:00 AM	E	3.1
15 Feb 2021	4:00 AM	E	1.8
15 Feb 2021	5:00 AM	E	1.8
15 Feb 2021	6:00 AM	ESE	1.3
15 Feb 2021	7:00 AM	E	1.3
15 Feb 2021	8:00 AM	E	1.3
15 Feb 2021	9:00 AM	ENE	0.9
15 Feb 2021	10:00 AM	ESE	0.9
15 Feb 2021	11:00 AM	ESE	1.3
15 Feb 2021	12:00 PM	E	0.9
15 Feb 2021	1:00 PM	NNW	0.9
15 Feb 2021	2:00 PM	ENE	0.9
15 Feb 2021	3:00 PM	E	1.3
15 Feb 2021	4:00 PM	E	1.8
15 Feb 2021	5:00 PM	ENE	0.9
15 Feb 2021	6:00 PM	SE	1.3
15 Feb 2021	7:00 PM	NW	0.9
15 Feb 2021	8:00 PM	NW	1.3
15 Feb 2021	9:00 PM	E	2.7
15 Feb 2021	10:00 PM	E	2.2
15 Feb 2021	11:00 PM	E	2.2

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Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
16 Feb 2021	12:00 AM	E	1.8
16 Feb 2021	1:00 AM	E	1.8
16 Feb 2021	2:00 AM	SE	1.3
16 Feb 2021	3:00 AM	E	1.3
16 Feb 2021	4:00 AM	ESE	1.3
16 Feb 2021	5:00 AM	ESE	0.9
16 Feb 2021	6:00 AM	ESE	0.9
16 Feb 2021	7:00 AM	ESE	0.9
16 Feb 2021	8:00 AM	ESE	1.3
16 Feb 2021	9:00 AM	ESE	0.9
16 Feb 2021	10:00 AM	ESE	1.3
16 Feb 2021	11:00 AM	ESE	0.9
16 Feb 2021	12:00 PM	E	0.4
16 Feb 2021	1:00 PM	SE	0.9
16 Feb 2021	2:00 PM	SE	0.9
16 Feb 2021	3:00 PM	SE	1.3
16 Feb 2021	4:00 PM	SE	1.3
16 Feb 2021	5:00 PM	WNW	1.8
16 Feb 2021	6:00 PM	WNW	1.3
16 Feb 2021	7:00 PM	WNW	1.8
16 Feb 2021	8:00 PM	NNW	1.8
16 Feb 2021	9:00 PM	WNW	0.9
16 Feb 2021	10:00 PM	WNW	0.9
16 Feb 2021	11:00 PM	NNW	1.3
17 Feb 2021	12:00 AM	NNW	1.8
17 Feb 2021	1:00 AM	WNW	0.9
17 Feb 2021	2:00 AM	NW	0.4
17 Feb 2021	3:00 AM	NW	0.4
17 Feb 2021	4:00 AM	NNW	0.4
17 Feb 2021	5:00 AM	ESE	0.4
17 Feb 2021	6:00 AM	NNW	1.3
17 Feb 2021	7:00 AM	NNW	0.4
17 Feb 2021	8:00 AM	NNW	0.4
17 Feb 2021	9:00 AM	WNW	0.4
17 Feb 2021	10:00 AM	SE	0
17 Feb 2021	11:00 AM	NNW	0.4
17 Feb 2021	12:00 PM	NW	0.9
17 Feb 2021	1:00 PM	NW	0
17 Feb 2021	2:00 PM	NNW	0.4
17 Feb 2021	3:00 PM	NNW	0.9
17 Feb 2021	4:00 PM	NNW	1.8
17 Feb 2021	5:00 PM	NNW	1.3
17 Feb 2021	6:00 PM	NNW	2.2
17 Feb 2021	7:00 PM	NNW	2.7
17 Feb 2021	8:00 PM	NNW	2.7

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Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
17 Feb 2021	9:00 PM	NNW	1.3
17 Feb 2021	10:00 PM	NNW	1.8
17 Feb 2021	11:00 PM	NNW	1.3
18 Feb 2021	12:00 AM	NNW	0.9
18 Feb 2021	1:00 AM	NNW	0.4
18 Feb 2021	2:00 AM	N	0.4
18 Feb 2021	3:00 AM	NNW	0.9
18 Feb 2021	4:00 AM	NNW	0.9
18 Feb 2021	5:00 AM	NW	0.4
18 Feb 2021	6:00 AM	NNW	0.4
18 Feb 2021	7:00 AM	N	0.4
18 Feb 2021	8:00 AM	NNW	0.9
18 Feb 2021	9:00 AM	NNW	0.9
18 Feb 2021	10:00 AM	N	0.4
18 Feb 2021	11:00 AM	ENE	0
18 Feb 2021	12:00 PM	ENE	0
18 Feb 2021	1:00 PM	ENE	0
18 Feb 2021	2:00 PM	ENE	0
18 Feb 2021	3:00 PM	ENE	0
18 Feb 2021	4:00 PM	N	0
18 Feb 2021	5:00 PM	N	0
18 Feb 2021	6:00 PM	N	0.4
18 Feb 2021	7:00 PM	NNW	0.9
18 Feb 2021	8:00 PM	NW	0.9
18 Feb 2021	9:00 PM	NNW	1.8
18 Feb 2021	10:00 PM	NNW	1.8
18 Feb 2021	11:00 PM	W	0.9
19 Feb 2021	12:00 AM	NNW	0.9
19 Feb 2021	1:00 AM	W	1.3
19 Feb 2021	2:00 AM	W	0.9
19 Feb 2021	3:00 AM	W	0.4
19 Feb 2021	4:00 AM	NNW	0.4
19 Feb 2021	5:00 AM	ENE	0.4
19 Feb 2021	6:00 AM	E	0.9
19 Feb 2021	7:00 AM	ENE	0.9
19 Feb 2021	8:00 AM	NE	0.9
19 Feb 2021	9:00 AM	NE	0.9
19 Feb 2021	10:00 AM	ENE	1.3
19 Feb 2021	11:00 AM	E	1.3
19 Feb 2021	12:00 PM	0.0	0
19 Feb 2021	1:00 PM	0.0	0
19 Feb 2021	2:00 PM	E	0.9
19 Feb 2021	3:00 PM	E	0.9
19 Feb 2021	4:00 PM	ENE	0.9
19 Feb 2021	5:00 PM	ENE	0.9

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Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
19 Feb 2021	6:00 PM	N	0.9
19 Feb 2021	7:00 PM	ENE	0.9
19 Feb 2021	8:00 PM	NE	0.9
19 Feb 2021	9:00 PM	NNW	1.3
19 Feb 2021	10:00 PM	W	1.8
19 Feb 2021	11:00 PM	NNW	1.3
20 Feb 2021	12:00 AM	NNW	1.8
20 Feb 2021	1:00 AM	NNW	1.8
20 Feb 2021	2:00 AM	NNW	2.2
20 Feb 2021	3:00 AM	NNW	1.8
20 Feb 2021	4:00 AM	NNW	2.2
20 Feb 2021	5:00 AM	NE	1.8
20 Feb 2021	6:00 AM	ENE	0.9
20 Feb 2021	7:00 AM	N	0.4
20 Feb 2021	8:00 AM	N	0
20 Feb 2021	9:00 AM	E	0.4
20 Feb 2021	10:00 AM	NE	0
20 Feb 2021	11:00 AM	NE	0
20 Feb 2021	12:00 PM	NE	0
20 Feb 2021	1:00 PM	NNE	0
20 Feb 2021	2:00 PM	NNE	0
20 Feb 2021	3:00 PM	NE	0
20 Feb 2021	4:00 PM	NE	0
20 Feb 2021	5:00 PM	NE	0
20 Feb 2021	6:00 PM	NNW	0
20 Feb 2021	7:00 PM	NE	0
20 Feb 2021	8:00 PM	NE	0
20 Feb 2021	9:00 PM	NNW	0.4
20 Feb 2021	10:00 PM	NNW	1.3
20 Feb 2021	11:00 PM	NNW	2.2
21 Feb 2021	12:00 AM	NNW	3.6
21 Feb 2021	1:00 AM	NNW	3.6
21 Feb 2021	2:00 AM	NNW	3.1
21 Feb 2021	3:00 AM	NNW	3.1
21 Feb 2021	4:00 AM	NNW	1.8
21 Feb 2021	5:00 AM	NNW	1.3
21 Feb 2021	6:00 AM	NE	0.4
21 Feb 2021	7:00 AM	ENE	0.9
21 Feb 2021	8:00 AM	NNE	0.9
21 Feb 2021	9:00 AM	ENE	0.9
21 Feb 2021	10:00 AM	NE	0.9
21 Feb 2021	11:00 AM	WNW	0.4
21 Feb 2021	12:00 PM	WNW	0.4
21 Feb 2021	1:00 PM	WNW	0.4
21 Feb 2021	2:00 PM	NW	0.4

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Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
21 Feb 2021	3:00 PM	W	0
21 Feb 2021	4:00 PM	W	0
21 Feb 2021	5:00 PM	WNW	0
21 Feb 2021	6:00 PM	WNW	0.4
21 Feb 2021	7:00 PM	W	0.4
21 Feb 2021	8:00 PM	W	0.9
21 Feb 2021	9:00 PM	W	0.9
21 Feb 2021	10:00 PM	SSW	0.9
21 Feb 2021	11:00 PM	SSW	0.9
22 Feb 2021	12:00 AM	W	1.3
22 Feb 2021	1:00 AM	SW	1.3
22 Feb 2021	2:00 AM	SW	0.9
22 Feb 2021	3:00 AM	SSW	0
22 Feb 2021	4:00 AM	SSW	0.4
22 Feb 2021	5:00 AM	SSW	1.3
22 Feb 2021	6:00 AM	WNW	0.4
22 Feb 2021	7:00 AM	WNW	0.4
22 Feb 2021	8:00 AM	WNW	0.4
22 Feb 2021	9:00 AM	WNW	0
22 Feb 2021	10:00 AM	WNW	0.4
22 Feb 2021	11:00 AM	W	0.9
22 Feb 2021	12:00 PM	WNW	0
22 Feb 2021	1:00 PM	WNW	0.4
22 Feb 2021	2:00 PM	WNW	0.9
22 Feb 2021	3:00 PM	WNW	1.8
22 Feb 2021	4:00 PM	NW	1.3
22 Feb 2021	5:00 PM	ESE	2.2
22 Feb 2021	6:00 PM	ESE	2.7
22 Feb 2021	7:00 PM	NW	2.7
22 Feb 2021	8:00 PM	WNW	1.3
22 Feb 2021	9:00 PM	WNW	1.8
22 Feb 2021	10:00 PM	WNW	0
22 Feb 2021	11:00 PM	WNW	0.9
23 Feb 2021	12:00 AM	SW	1.3
23 Feb 2021	1:00 AM	ENE	1.3
23 Feb 2021	2:00 AM	ENE	1.3
23 Feb 2021	3:00 AM	SW	1.3
23 Feb 2021	4:00 AM	SW	1.8
23 Feb 2021	5:00 AM	SSW	0.9
23 Feb 2021	6:00 AM	SW	1.3
23 Feb 2021	7:00 AM	ENE	0.9
23 Feb 2021	8:00 AM	ENE	0.9
23 Feb 2021	9:00 AM	SW	0.4
23 Feb 2021	10:00 AM	ESE	0.9
23 Feb 2021	11:00 AM	W	0.4

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Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
23 Feb 2021	12:00 PM	NE	0.4
23 Feb 2021	1:00 PM	NW	0.4
23 Feb 2021	2:00 PM	WNW	0
23 Feb 2021	3:00 PM	W	0
23 Feb 2021	4:00 PM	W	0.4
23 Feb 2021	5:00 PM	NW	0.4
23 Feb 2021	6:00 PM	WNW	0.9
23 Feb 2021	7:00 PM	WNW	1.3
23 Feb 2021	8:00 PM	NW	1.3
23 Feb 2021	9:00 PM	W	0.9
23 Feb 2021	10:00 PM	WSW	0.9
23 Feb 2021	11:00 PM	WNW	0.9
24 Feb 2021	12:00 AM	WNW	2.7
24 Feb 2021	1:00 AM	ESE	2.2
24 Feb 2021	2:00 AM	E	0.9
24 Feb 2021	3:00 AM	WNW	0.4
24 Feb 2021	4:00 AM	NW	0.4
24 Feb 2021	5:00 AM	W	0.4
24 Feb 2021	6:00 AM	W	0.9
24 Feb 2021	7:00 AM	NW	0.9
24 Feb 2021	8:00 AM	WNW	0.9
24 Feb 2021	9:00 AM	WNW	1.3
24 Feb 2021	10:00 AM	ESE	1.8
24 Feb 2021	11:00 AM	E	2.7
24 Feb 2021	12:00 PM	WNW	3.6
24 Feb 2021	1:00 PM	NW	2.2
24 Feb 2021	2:00 PM	W	2.2
24 Feb 2021	3:00 PM	W	1.8
24 Feb 2021	4:00 PM	NW	1.3
24 Feb 2021	5:00 PM	WNW	0.9
24 Feb 2021	6:00 PM	NW	0.4
24 Feb 2021	7:00 PM	WNW	0.4
24 Feb 2021	8:00 PM	WNW	0.4
24 Feb 2021	9:00 PM	NW	0.9
24 Feb 2021	10:00 PM	NW	0.9
24 Feb 2021	11:00 PM	NW	1.3
25 Feb 2021	12:00 AM	NW	0.4
25 Feb 2021	1:00 AM	NW	0.9
25 Feb 2021	2:00 AM	NW	1.8
25 Feb 2021	3:00 AM	NW	0.4
25 Feb 2021	4:00 AM	NW	0.9
25 Feb 2021	5:00 AM	NW	0.9
25 Feb 2021	6:00 AM	SE	0.9
25 Feb 2021	7:00 AM	NW	1.8
25 Feb 2021	8:00 AM	NW	0.9

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Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
25 Feb 2021	9:00 AM	NW	0.4
25 Feb 2021	10:00 AM	NW	0
25 Feb 2021	11:00 AM	NW	0.9
25 Feb 2021	12:00 PM	NW	0.4
25 Feb 2021	1:00 PM	NW	0.9
25 Feb 2021	2:00 PM	NW	0.9
25 Feb 2021	3:00 PM	NW	1.3
25 Feb 2021	4:00 PM	NW	2.7
25 Feb 2021	5:00 PM	NNW	2.2
25 Feb 2021	6:00 PM	NW	2.7
25 Feb 2021	7:00 PM	NW	3.1
25 Feb 2021	8:00 PM	NW	2.2
25 Feb 2021	9:00 PM	NW	1.3
25 Feb 2021	10:00 PM	NW	0.9
25 Feb 2021	11:00 PM	NW	0.9
26 Feb 2021	12:00 AM	NW	0.9
26 Feb 2021	1:00 AM	NW	0.9
26 Feb 2021	2:00 AM	NW	0.9
26 Feb 2021	3:00 AM	NW	0.9
26 Feb 2021	4:00 AM	NW	0.9
26 Feb 2021	5:00 AM	WNW	1.3
26 Feb 2021	6:00 AM	NW	0.9
26 Feb 2021	7:00 AM	NW	1.8
26 Feb 2021	8:00 AM	NW	0.9
26 Feb 2021	9:00 AM	NW	0.9
26 Feb 2021	10:00 AM	W	0.9
26 Feb 2021	11:00 AM	W	0.9
26 Feb 2021	12:00 PM	NW	0.9
26 Feb 2021	1:00 PM	NW	1.3
26 Feb 2021	2:00 PM	NW	0.9
26 Feb 2021	3:00 PM	W	0
26 Feb 2021	4:00 PM	WNW	0
26 Feb 2021	5:00 PM	W	0
26 Feb 2021	6:00 PM	WNW	0
26 Feb 2021	7:00 PM	NNE	0
26 Feb 2021	8:00 PM	W	0
26 Feb 2021	9:00 PM	WNW	0
26 Feb 2021	10:00 PM	WNW	0
26 Feb 2021	11:00 PM	WNW	0
27 Feb 2021	12:00 AM	WNW	0
27 Feb 2021	1:00 AM	WNW	0
27 Feb 2021	2:00 AM	WNW	0
27 Feb 2021	3:00 AM	WNW	0
27 Feb 2021	4:00 AM	WNW	0
27 Feb 2021	5:00 AM	WNW	1.3

Appendix C - Weather Conditions during Monitoring Period

Feb 2021			
Table II: Wind Speed and Directions			
Date	Time	Wind Speed m-s	Direction
27 Feb 2021	6:00 AM	WNW	1.8
27 Feb 2021	7:00 AM	WSW	0.9
27 Feb 2021	8:00 AM	WSW	1.3
27 Feb 2021	9:00 AM	WSW	0.9
27 Feb 2021	10:00 AM	WSW	1.3
27 Feb 2021	11:00 AM	W	2.7
27 Feb 2021	12:00 PM	NE	2.2
27 Feb 2021	1:00 PM	ENE	2.2
27 Feb 2021	2:00 PM	NE	0.9
27 Feb 2021	3:00 PM	NE	0.4
27 Feb 2021	4:00 PM	WSW	0.4
27 Feb 2021	5:00 PM	W	0.4
27 Feb 2021	6:00 PM	WSW	0.9
27 Feb 2021	7:00 PM	WSW	0.9
27 Feb 2021	8:00 PM	WSW	0.9
27 Feb 2021	9:00 PM	WSW	1.3
27 Feb 2021	10:00 PM	WNW	1.8
27 Feb 2021	11:00 PM	WNW	2.7
28 Feb 2021	12:00 AM	WSW	3.6
28 Feb 2021	1:00 AM	ENE	2.2
28 Feb 2021	2:00 AM	SW	2.2
28 Feb 2021	3:00 AM	ENE	1.8
28 Feb 2021	4:00 AM	E	1.3
28 Feb 2021	5:00 AM	SW	0.9
28 Feb 2021	6:00 AM	ENE	0.4
28 Feb 2021	7:00 AM	ENE	0.4
28 Feb 2021	8:00 AM	SW	0.4
28 Feb 2021	9:00 AM	SW	0.9
28 Feb 2021	10:00 AM	SSW	0.9
28 Feb 2021	11:00 AM	SW	1.3
28 Feb 2021	12:00 PM	E	0.9
28 Feb 2021	1:00 PM	ENE	0.9
28 Feb 2021	2:00 PM	E	0.4
28 Feb 2021	3:00 PM	ENE	0.9
28 Feb 2021	4:00 PM	NW	0.4
28 Feb 2021	5:00 PM	ENE	0.9
28 Feb 2021	6:00 PM	WNW	0.9
28 Feb 2021	7:00 PM	ENE	0.9
28 Feb 2021	8:00 PM	ESE	1.3
28 Feb 2021	9:00 PM	NW	0.4
28 Feb 2021	10:00 PM	NW	0.4
28 Feb 2021	11:00 PM	NW	0.9

**APPENDIX D
ENVIRONMENTAL MONITORING
SCHEDULES**

Agreement No. CE/59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
Impact Air Quality and Noise Monitoring Schedule (February 2021)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
3-Jan	1-Feb	2-Feb	3-Feb	4-Feb	5-Feb	6-Feb
		1 hr TSP X3 [AM5(A), AM6(A)] [AM1, AM2, AM3, AM4] Noise [Daytime (07:00-19:00)] [CM6(A), CM7(A), CM8(A)] [CM1, CM2, CM3, CM4, CM5] Noise [Evening time (19:00-23:00)] [CM6(A)]			Noise [Evening time (19:00-23:00)] [CM1, CM2, CM3] Noise [Night-time (23:00-07:00)] [CM1, CM2, CM3]	
	24hr TSP					24hr TSP
7-Feb	8-Feb	9-Feb	10-Feb	11-Feb	12-Feb	13-Feb
	1 hr TSP X3 [AM5(A), AM6(A)] [AM1, AM2, AM3, AM4] Noise [Daytime (07:00-19:00)] [CM6(A), CM7(A), CM8(A)] [CM1, CM2, CM3, CM4, CM5] Noise [Evening time (19:00-23:00)] [CM6(A)]			1 hr TSP X3 [AM5(A), AM6(A)] [AM1, AM2, AM3, AM4] Noise [Evening time (19:00-23:00)] [CM1, CM2, CM3] Noise [Night-time (23:00-07:00)] [CM1, CM2, CM3]		
			24hr TSP			
14-Feb	15-Feb	16-Feb	17-Feb	18-Feb	19-Feb	20-Feb
			1 hr TSP X3 [AM5(A), AM6(A)] [AM1, AM2, AM3, AM4] Noise [Daytime (07:00-19:00)] [CM6(A), CM7(A), CM8(A)] [CM1, CM2, CM3, CM4, CM5] Noise [Evening time (19:00-23:00)] [CM6(A)]		Noise [Evening time (19:00-23:00)] [CM1, CM2, CM3] Noise [Night-time (23:00-07:00)] [CM1, CM2, CM3]	
		24hr TSP				
21-Feb	22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb
		1 hr TSP X3 [AM5(A), AM6(A)] [AM1, AM2, AM3, AM4] Noise [Daytime (07:00-19:00)] [CM6(A), CM7(A), CM8(A)] [CM1, CM2, CM3, CM4, CM5] Noise [Evening time (19:00-23:00)] [CM6(A)]			Noise [Evening time (19:00-23:00)] [CM1, CM2, CM3] Noise [Night-time (23:00-07:00)] [CM1, CM2, CM3]	
	24hr TSP					24hr TSP
28-Feb						

Air Quality Monitoring Station

AM1 - Tin Hau Temple
 AM2 - Sai Tso Wan Recreation Ground
 AM3 - Yau Lai Estate Bik Lai House
 AM4⁽¹⁾ - Sitting-out Area at Cha Kwo Ling Village
 AM4(A)⁽²⁾ - Cha Kwo Ling Public Cargo Working Area Administrative Office
 AM5(A) - Tseung Kwan O DSD Desilting Compound
 AM6(A) - Park Central, L1/F Open Space Area

Noise Monitoring Station

CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong
 CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong
 CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong
 CM4 - Tin Hau Temple, Cha Kwo Ling
 CM5 - CCC Kei Faat Primary School, Yau Tong
 CM6(A) - Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores
 CM7(A) - Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores
 CM8(A) - Park Central, L1/F Open Space Area

Note (1) For 1-hour TSP monitoring; (2) For 24-hour TSP monitoring

Agreement No. CE/59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
Tentative Impact Water Quality Monitoring Schedule (February 2021)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-Feb	2-Feb	3-Feb	4-Feb	5-Feb	6-Feb
	Mid-Ebb 14:59 Mid-Flood 09:23		Mid-Ebb 16:42 Mid-Flood 10:45		Mid-Ebb 19:07 Mid-Flood 12:15	
7-Feb	8-Feb	9-Feb	10-Feb	11-Feb	12-Feb	13-Feb
	Mid-Ebb 10:03 Mid-Flood 15:01		Mid-Ebb 11:51 Mid-Flood 16:54			
14-Feb	15-Feb	16-Feb	17-Feb	18-Feb	19-Feb	20-Feb
		Mid-Ebb 15:29 Mid-Flood 09:34		Mid-Ebb 16:52 Mid-Flood 10:28		Mid-Ebb 19:00 Mid-Flood 11:22
21-Feb	22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb
	Mid-Ebb N/A Mid-Flood 09:09		Mid-Ebb N/A Mid-Flood 10:39		Mid-Ebb 12:05 Mid-Flood 17:22	
28-Feb	1-Mar	2-Mar	3-Mar	4-Mar	5-Mar	6-Mar

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

Monitoring Station:

C1, C2, G1, G2, G3, G4, M1, M2, M3, M4, M5, M6

**APPENDIX E
1-HOUR TSP MONITORING RESULTS
AND GRAPHICAL PRESENTATIONS**

APPENDIX E - 1-HOUR TSP MONITORING RESULTS

Location AM1 - Tin Hau Temple			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
2-Feb-21	9:00	Sunny	125.4
2-Feb-21	10:00	Sunny	121.0
2-Feb-21	11:00	Sunny	125.4
8-Feb-21	10:30	Fine	118.0
8-Feb-21	11:30	Fine	116.0
8-Feb-21	12:30	Fine	120.0
11-Feb-21	13:00	Sunny	51.3
11-Feb-21	14:00	Sunny	53.2
11-Feb-21	15:00	Sunny	49.4
17-Feb-21	13:00	Sunny	51.3
17-Feb-21	14:00	Sunny	53.2
17-Feb-21	15:00	Sunny	49.4
23-Feb-21	9:00	Fine	197.5
23-Feb-21	10:00	Fine	175.0
23-Feb-21	11:00	Fine	162.5
		Average	104.6
		Maximum	197.5
		Minimum	49.4

Location AM2 - Sai Tso Wan Recreation Ground			
Date	Time	Weather	<i>Particulate Concentration ($\mu\text{g}/\text{m}^3$)</i>
2-Feb-21	15:30	Sunny	30.0
2-Feb-21	16:30	Sunny	34.0
2-Feb-21	17:30	Sunny	34.0
8-Feb-21	15:45	Cloudy	65.1
8-Feb-21	16:45	Cloudy	77.7
8-Feb-21	17:45	Cloudy	81.9
11-Feb-21	9:00	Sunny	28.8
11-Feb-21	10:00	Sunny	32.4
11-Feb-21	11:00	Sunny	30.6
17-Feb-21	9:00	Sunny	27.0
17-Feb-21	10:00	Sunny	30.6
17-Feb-21	11:00	Sunny	28.8
23-Feb-21	16:00	Cloudy	44.0
23-Feb-21	17:00	Cloudy	77.0
23-Feb-21	18:00	Cloudy	70.4
		Average	46.2
		Maximum	81.9
		Minimum	27.0

APPENDIX E - 1-HOUR TSP MONITORING RESULTS

Location AM3 - Yau Lai Estate Bik Lai House			
Date	Time	Weather	<i>Particulate Concentration ($\mu\text{g}/\text{m}^3$)</i>
2-Feb-21	13:48	Sunny	48.4
2-Feb-21	14:48	Sunny	48.4
2-Feb-21	15:48	Sunny	39.6
8-Feb-21	14:00	Fine	100.0
8-Feb-21	15:00	Fine	104.0
8-Feb-21	16:00	Fine	96.0
11-Feb-21	9:00	Sunny	63.0
11-Feb-21	10:00	Sunny	73.5
11-Feb-21	11:00	Sunny	67.2
17-Feb-21	9:00	Sunny	28.6
17-Feb-21	10:00	Sunny	24.2
17-Feb-21	11:00	Sunny	30.8
23-Feb-21	16:00	Fine	39.6
23-Feb-21	17:00	Fine	45.0
23-Feb-21	18:00	Fine	41.4
		Average	56.6
		Maximum	104.0
		Minimum	24.2

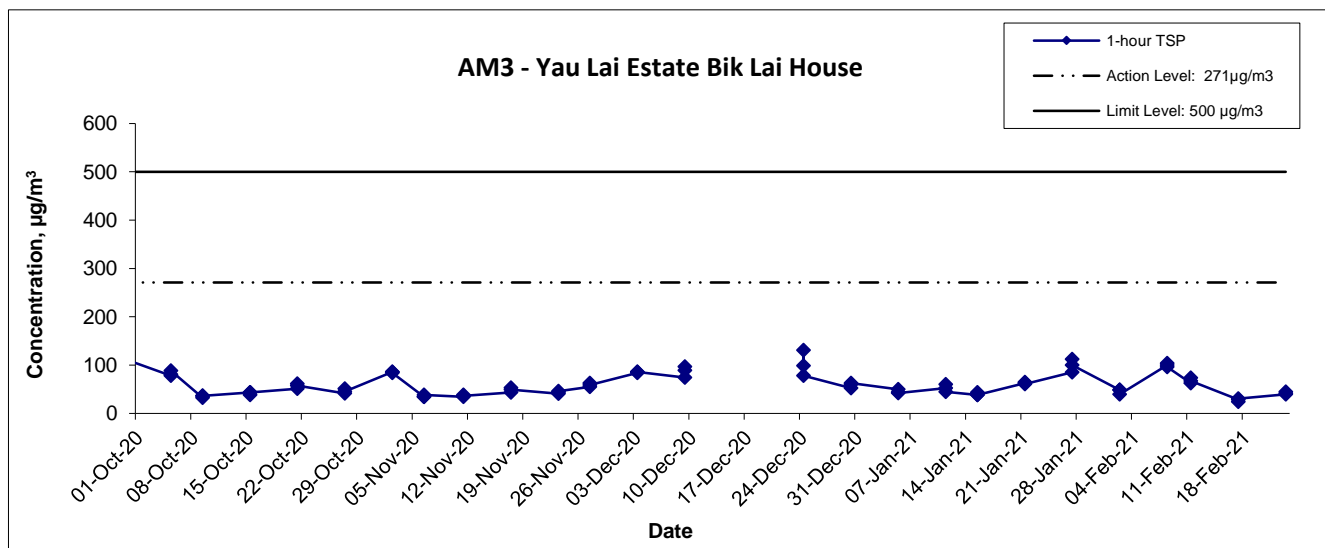
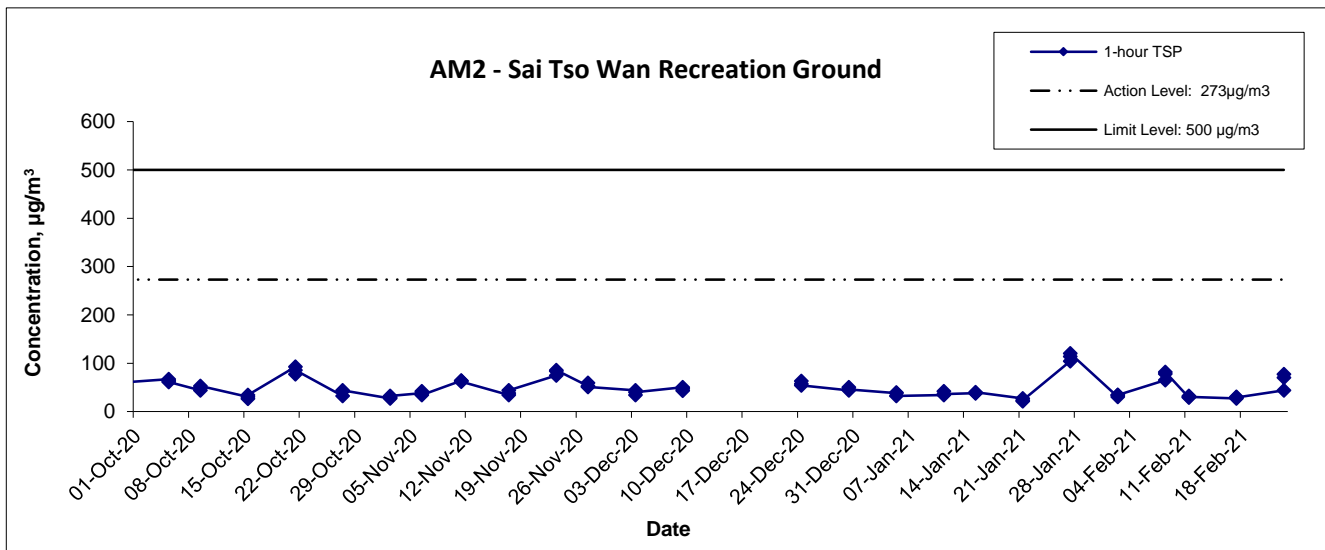
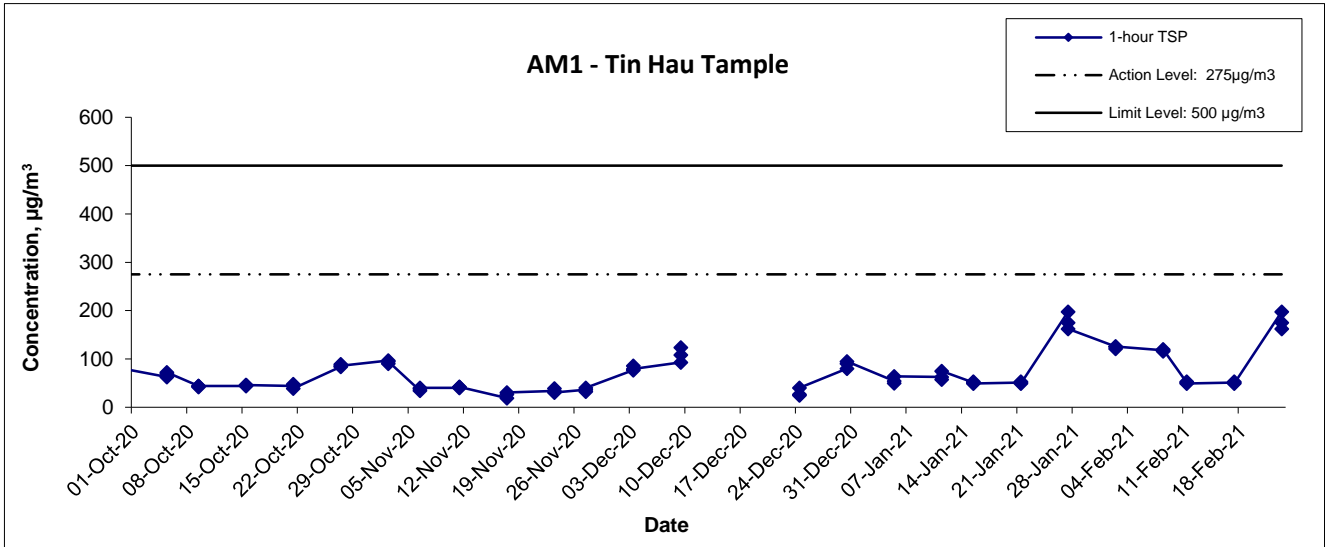
Location AM4 - Sitting-out Area at Cha Kwo Ling Village			
Date	Time	Weather	<i>Particulate Concentration ($\mu\text{g}/\text{m}^3$)</i>
2-Feb-21	9:00	Sunny	72.6
2-Feb-21	10:00	Sunny	81.4
2-Feb-21	11:00	Sunny	88.0
8-Feb-21	17:00	Fine	70.0
8-Feb-21	18:00	Fine	66.0
8-Feb-21	19:00	Fine	74.0
11-Feb-21	16:00	Sunny	42.0
11-Feb-21	17:00	Sunny	52.5
11-Feb-21	18:00	Sunny	48.3
17-Feb-21	16:00	Sunny	28.6
17-Feb-21	17:00	Sunny	24.2
17-Feb-21	18:00	Sunny	24.2
23-Feb-21	13:00	Sunny	63.0
23-Feb-21	14:00	Sunny	59.4
23-Feb-21	15:00	Sunny	55.8
		Average	56.7
		Maximum	88.0
		Minimum	24.2

APPENDIX E - 1-HOUR TSP MONITORING RESULTS


Location AM5(A) - Tseung Kwan O DSD Desilting Compound			
Date	Time	Weather	<i>Particulate Concentration ($\mu\text{g}/\text{m}^3$)</i>
2-Feb-21	9:00	Sunny	28.8
2-Feb-21	10:00	Sunny	25.2
2-Feb-21	11:00	Sunny	23.4
8-Feb-21	9:00	Cloudy	88.2
8-Feb-21	10:00	Cloudy	71.4
8-Feb-21	11:00	Cloudy	79.8
11-Feb-21	13:00	Sunny	37.8
11-Feb-21	14:00	Sunny	39.6
11-Feb-21	15:00	Sunny	43.2
17-Feb-21	13:00	Sunny	39.6
17-Feb-21	14:00	Sunny	45.0
17-Feb-21	15:00	Sunny	43.2
23-Feb-21	9:00	Sunny	30.8
23-Feb-21	10:00	Sunny	37.4
23-Feb-21	11:00	Sunny	37.4
		Average	44.7
		Maximum	88.2
		Minimum	23.4

Location AM6(A) - Park Central, L1/F Open Space Area			
Date	Time	Weather	<i>Particulate Concentration ($\mu\text{g}/\text{m}^3$)</i>
2-Feb-21	13:20	Sunny	32.4
2-Feb-21	14:20	Sunny	34.2
2-Feb-21	15:20	Sunny	37.8
8-Feb-21	9:00	Sunny	107.8
8-Feb-21	10:00	Sunny	74.8
8-Feb-21	11:00	Sunny	77.0
11-Feb-21	16:00	Sunny	43.2
11-Feb-21	17:00	Sunny	45.0
11-Feb-21	18:00	Sunny	43.2
17-Feb-21	16:00	Sunny	46.8
17-Feb-21	17:00	Sunny	45.0
17-Feb-21	18:00	Sunny	50.4
23-Feb-21	13:00	Sunny	37.4
23-Feb-21	14:00	Sunny	30.8
23-Feb-21	15:00	Sunny	35.2
		Average	49.4
		Maximum	107.8
		Minimum	30.8

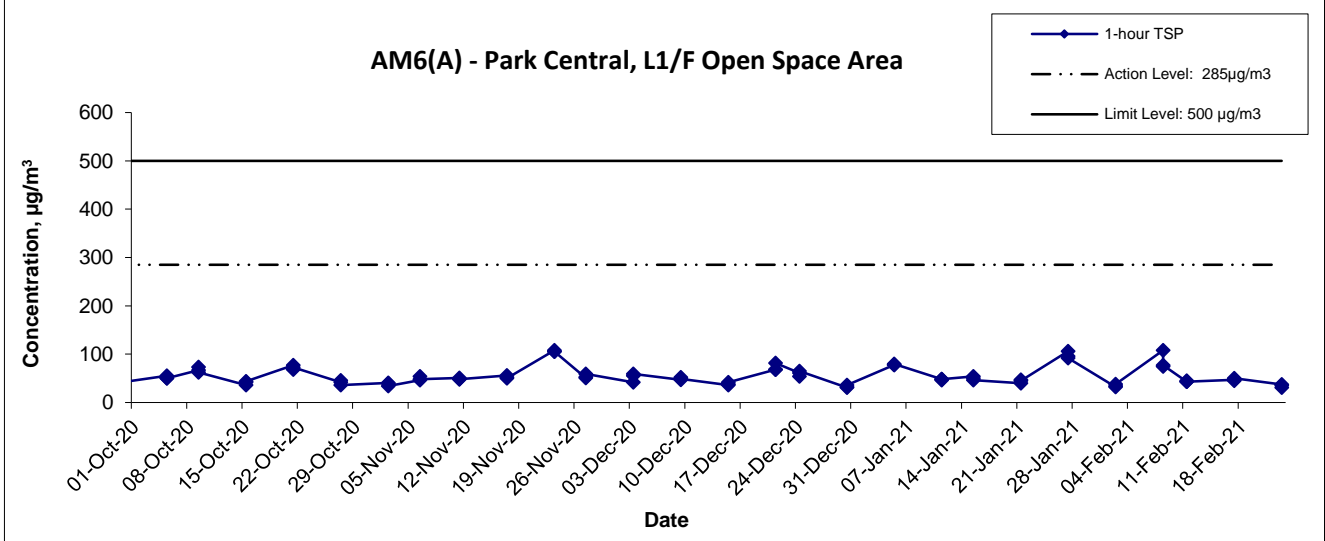
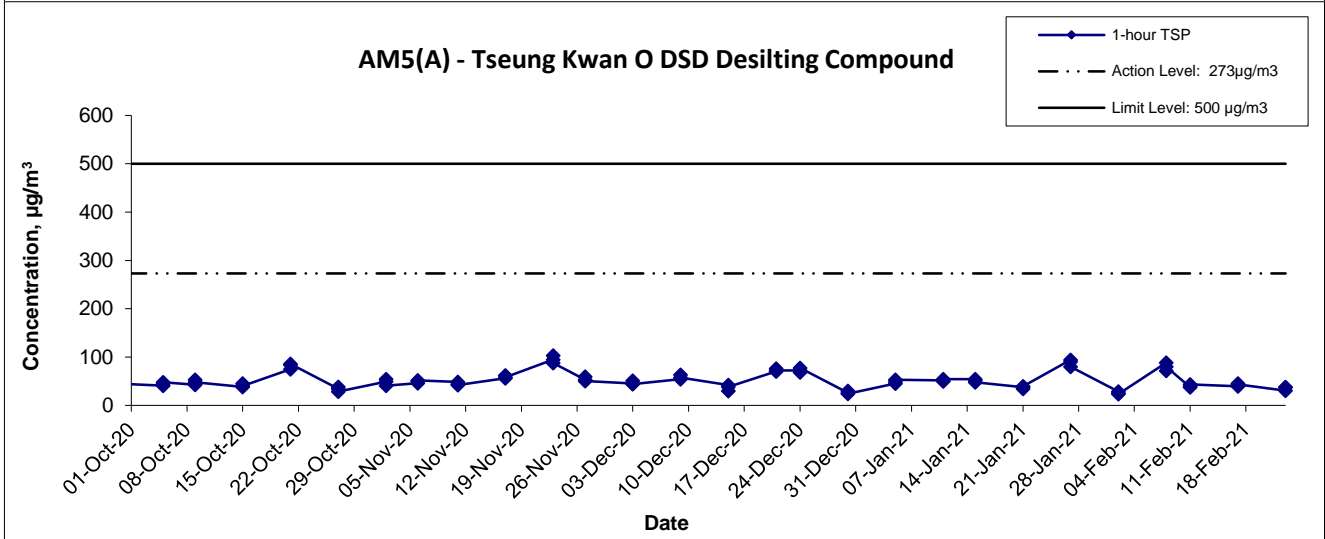
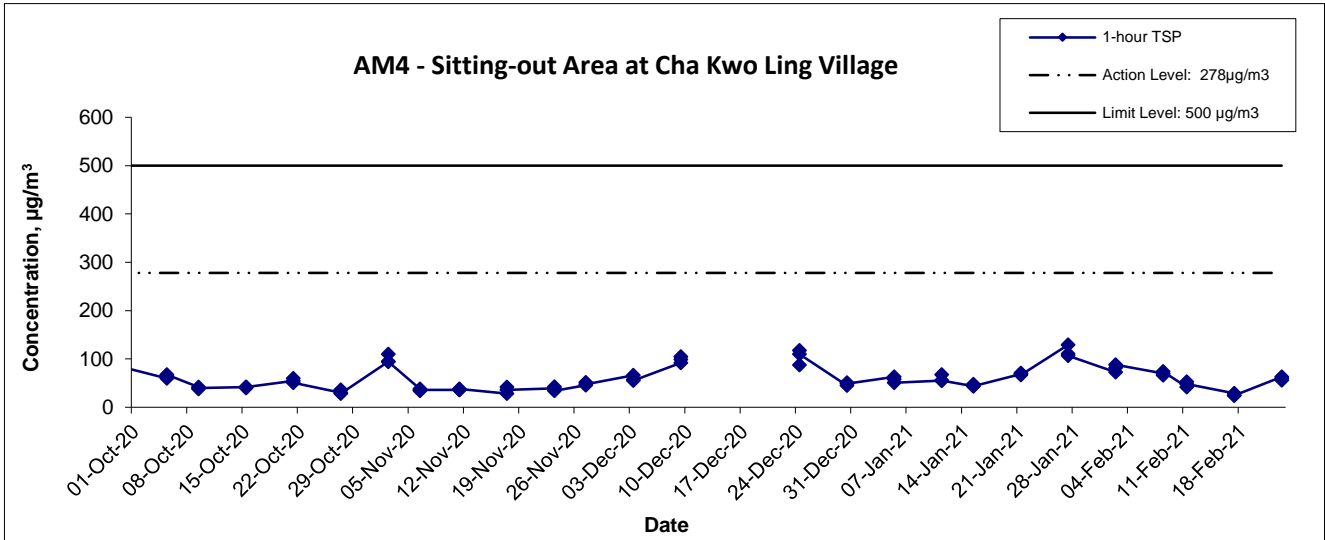
1-hr TSP Concentration Levels



Monitoring at Lam Tin side was suspended during 9th Dec 2020 - 23rd Dec 2020 due to COVID-19 outbreak

Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of 1-hour TSP Monitoring Results	Scale	Project	
	Date	No.	
	N.T.S	MA16034	
	Feb 2021	Appendix	
		E	

1-hr TSP Concentration Levels



Monitoring at Lam Tin side was suspended during 9th Dec 2020 - 23rd Dec 2020 due to COVID-19 outbreak

Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction	Scale N.T.S	Project No. MA16034	CINOTECH
Graphical Presentation of 1-hour TSP Monitoring Results	Date Feb 2021	Appendix E	

**APPENDIX F
24-HOUR TSP MONITORING RESULTS
AND GRAPHICAL PRESENTATIONS**

Appendix F - 24-hour TSP Monitoring Results

Location AM1 - Tin Hau Temple

Start Date	Weather	Filter Weight (g)		Particulate	Elapse Time		Sampling	Flow Rate (m ³ /min.)		Av. flow	Total vol.	Conc.
	Condition	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m ³ /min)	(m ³)	(µg/m ³)
1-Feb-21	Sunny	2.6650	2.9262	0.2612	7810.7	7834.7	24.0	1.22	1.22	1.22	1757.7	148.6
6-Feb-21	Cloudy	2.6770	2.8834	0.2064	7834.7	7858.7	24.0	1.22	1.22	1.22	1758.0	117.4
10-Feb-21	Sunny	2.6611	2.7249	0.0638	7858.7	7882.7	24.0	1.23	1.22	1.23	1764.1	36.2
16-Feb-21	Sunny	2.7412	2.8706	0.1294	7882.7	7906.7	24.0	1.21	1.21	1.21	1746.7	74.1
22-Feb-21	Sunny	2.6567	2.8565	0.1998	7906.7	7930.7	24.0	1.21	1.21	1.21	1740.9	114.8
27-Feb-21	Sunny	2.7649	2.9474	0.1825	7930.7	7954.7	24.0	1.21	1.21	1.21	1747.2	104.5
											Min	36.2
											Max	148.6
											Average	99.2

Location AM2 - Sai Tso Wan Recreation Ground

Start Date	Weather	Filter Weight (g)		Particulate	Elapse Time		Sampling	Flow Rate (m ³ /min.)		Av. flow	Total vol.	Conc.
	Condition	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m ³ /min)	(m ³)	(µg/m ³)
1-Feb-21	Sunny	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6-Feb-21	Cloudy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10-Feb-21	Sunny	2.6155	2.6909	0.0754	28963.0	28987.0	24.0	1.23	1.22	1.23	1764.1	42.7
16-Feb-21	Sunny	2.7471	2.8091	0.0620	28987.0	29011.0	24.0	1.21	1.21	1.21	1744.6	35.5
22-Feb-21	Sunny	2.7643	2.8360	0.0717	29011.0	29035.0	24.0	1.21	1.21	1.21	1739.1	41.2
27-Feb-21	Sunny	2.747	2.8021	0.0551	29035.0	29059.0	24.0	1.21	1.21	1.21	1745.0	31.6
											Min	31.6
											Max	42.7
											Average	37.8

N/A: The HVS was broken-down during the first two week of February 2021.

Location AM3 - Yau Lai Estate, Bik Lai House

Start Date	Weather	Filter Weight (g)		Particulate	Elapse Time		Sampling	Flow Rate (m ³ /min.)		Av. flow	Total vol.	Conc.
	Condition	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m ³ /min)	(m ³)	(µg/m ³)
1-Feb-21	Sunny	2.6706	2.7923	0.1217	3293.0	3317.0	24.0	1.22	1.22	1.22	1755.6	69.3
6-Feb-21	Cloudy	2.6432	2.7796	0.1364	3317.0	3341.0	24.0	1.22	1.22	1.22	1755.9	77.7
10-Feb-21	Sunny	2.6737	2.7154	0.0417	3341.0	3365.0	24.0	1.22	1.22	1.22	1762.2	23.7
16-Feb-21	Sunny	2.7407	2.8548	0.1141	3365.0	3389.0	24.0	1.21	1.21	1.21	1743.4	65.4
22-Feb-21	Sunny	2.6625	2.8213	0.1588	3389.0	3413.0	24.0	1.21	1.21	1.21	1737.5	91.4
27-Feb-21	Sunny	2.7565	2.8768	0.1203	3413.0	3437.0	24.0	1.21	1.21	1.21	1743.8	69.0
											Min	23.7
											Max	91.4
											Average	66.1

Appendix F - 24-hour TSP Monitoring Results

Location AM4(A) - Cha Kwo Ling Public Cargo Working Area Administrative Office

Start Date	Weather	Filter Weight (g)		Particulate	Elapse Time		Sampling	Flow Rate (m ³ /min.)		Av. flow	Total vol.	Conc.
	Condition	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m ³ /min)	(m ³)	(µg/m ³)
1-Feb-21	Sunny	2.4415	2.6728	0.2313	14058.38	14082.4	24.0	1.22	1.22	1.22	1757.5	131.6
6-Feb-21	Cloudy	2.6757	2.8205	0.1448	14082.38	14106.4	24.0	1.22	1.22	1.22	1757.8	82.4
10-Feb-21	Sunny	2.6677	2.7987	0.1310	14106.38	14130.4	24.0	1.23	1.22	1.22	1763.4	74.3
16-Feb-21	Sunny	2.6693	2.7123	0.0430	14130.38	14154.4	24.0	1.21	1.21	1.21	1746.7	24.6
22-Feb-21	Sunny	2.6783	2.7970	0.1187	14154.38	14178.4	24.0	1.21	1.21	1.21	1741.4	68.2
27-Feb-21	Sunny	2.7746	2.9291	0.1545	14178.38	14202.4	24.0	1.21	1.21	1.21	1747.1	88.4
											Min	24.6
											Max	131.6
											Average	78.2

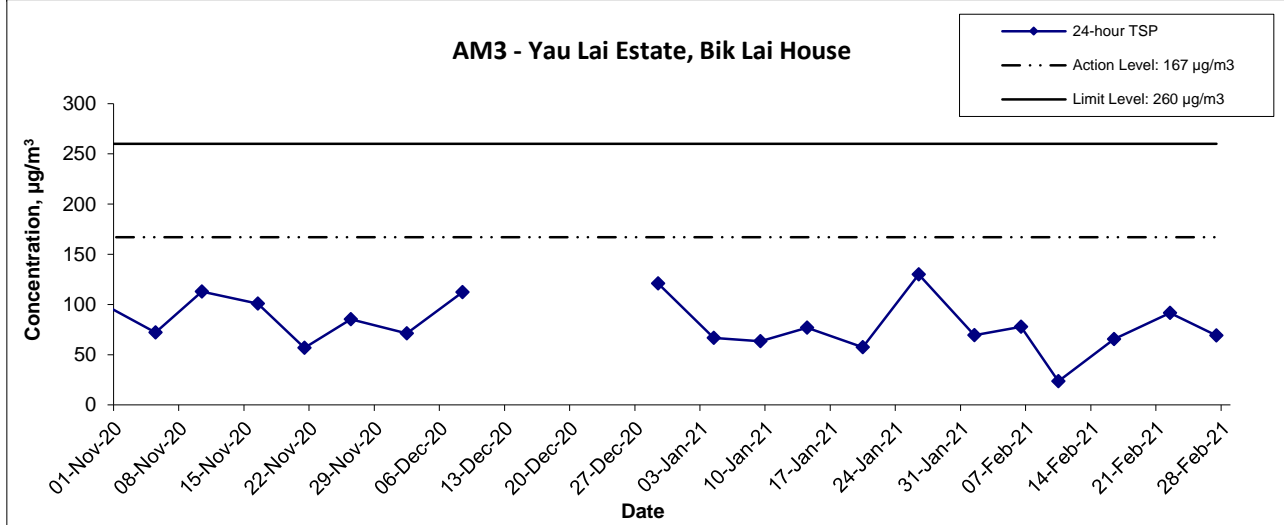
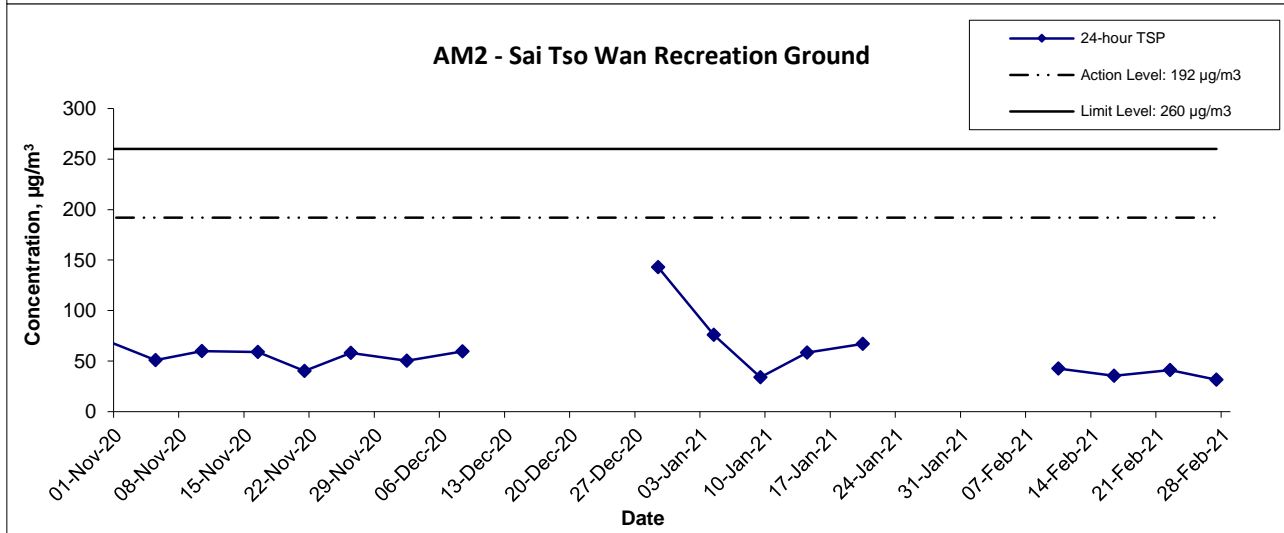
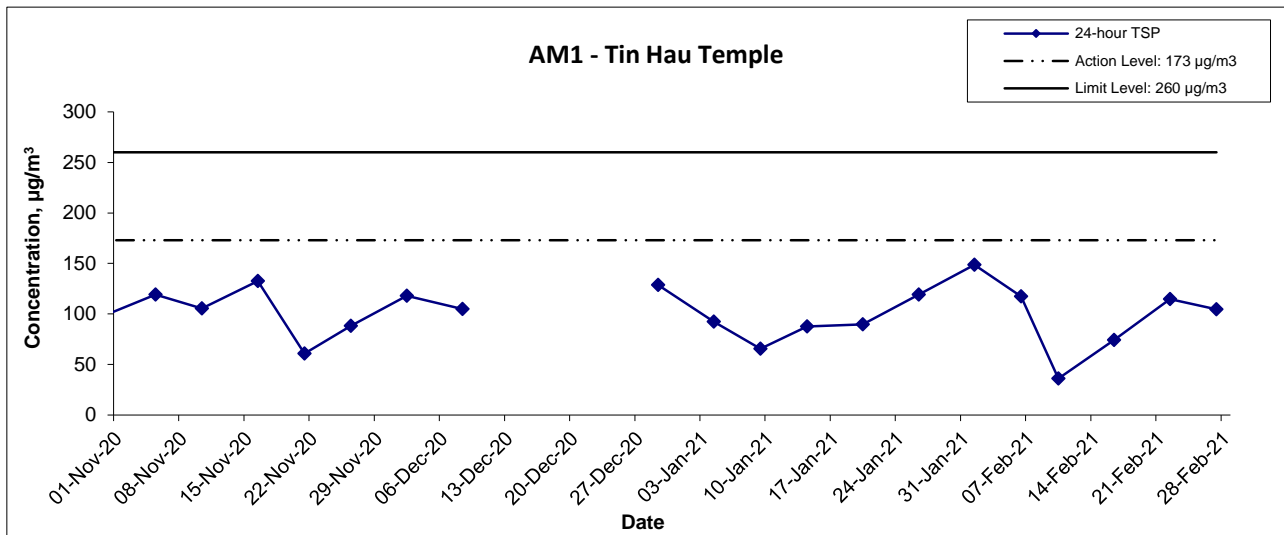
Location AM5(A) - Tseung Kwan O DSD Desilting Compound

Start Date	Weather	Filter Weight (g)		Particulate	Elapse Time		Sampling	Flow Rate (m ³ /min.)		Av. flow	Total vol.	Conc.
	Condition	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m ³ /min)	(m ³)	(µg/m ³)
1-Feb-21	Sunny	2.6683	2.7049	0.0366	30666.6	30690.6	24.0	1.22	1.22	1.22	1754.6	20.9
6-Feb-21	Cloudy	2.6860	2.8435	0.1575	30690.6	30714.6	24.0	1.22	1.22	1.22	1754.9	89.7
10-Feb-21	Sunny	2.6543	2.6917	0.0374	30714.6	30738.6	24.0	1.22	1.22	1.22	1760.6	21.2
16-Feb-21	Sunny	2.7558	2.8492	0.0934	30738.6	30762.6	24.0	1.21	1.21	1.21	1746.7	53.5
22-Feb-21	Sunny	2.7589	2.8735	0.1146	30762.6	30786.6	24.0	1.21	1.21	1.21	1741.2	65.8
27-Feb-21	Sunny	2.7429	2.8361	0.0932	30786.6	30810.6	24.0	1.20	1.20	1.20	1734.2	53.7
											Min	20.9
											Max	89.7
											Average	50.8

Location AM6(A) - Park Central, L1/F Open Space Area

Start Date	Weather	Filter Weight (g)		Particulate	Elapse Time		Sampling	Flow Rate (m ³ /min.)		Av. flow	Total vol.	Conc.
	Condition	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m ³ /min)	(m ³)	(µg/m ³)
1-Feb-21	Sunny	2.6797	2.7850	0.1053	2556.8	2580.8	24.0	1.21	1.21	1.21	1745.7	60.3
6-Feb-21	Cloudy	2.6848	2.7285	0.0437	2580.8	2604.8	24.0	1.21	1.21	1.21	1746.0	25.0
10-Feb-21	Sunny	2.6638	2.7004	0.0366	2604.8	2628.8	24.0	1.21	1.21	1.21	1746.0	21.0
16-Feb-21	Sunny	2.7477	2.7833	0.0356	2628.8	2652.8	24.0	1.22	1.22	1.22	1752.1	20.3
22-Feb-21	Sunny	2.7655	2.8073	0.0418	2652.8	2676.8	24.0	1.21	1.21	1.21	1745.0	24.0
27-Feb-21	Sunny	2.6644	2.7106	0.0462	2676.8	2700.8	24.0	1.21	1.21	1.21	1739.2	26.6
											Min	20.3
											Max	60.3
											Average	29.5

24-hr TSP Concentration Levels



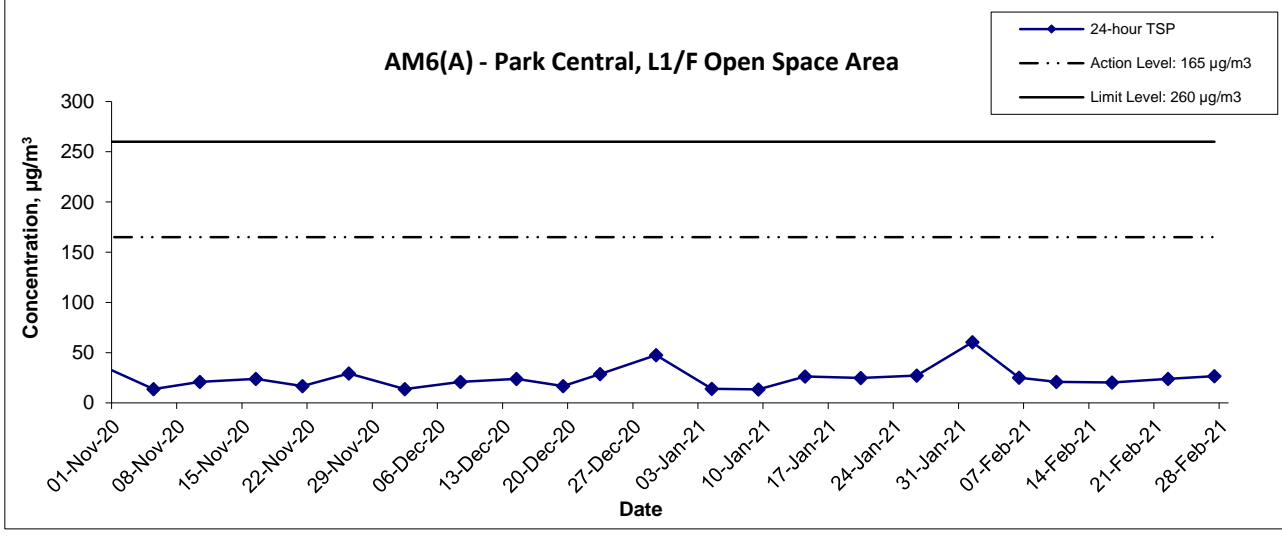
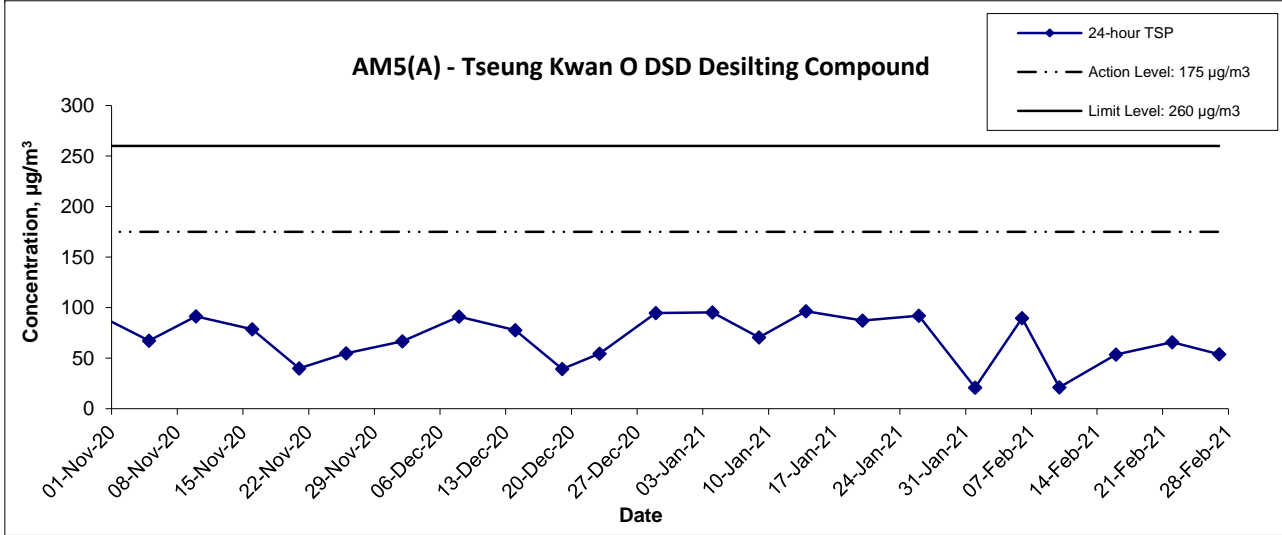
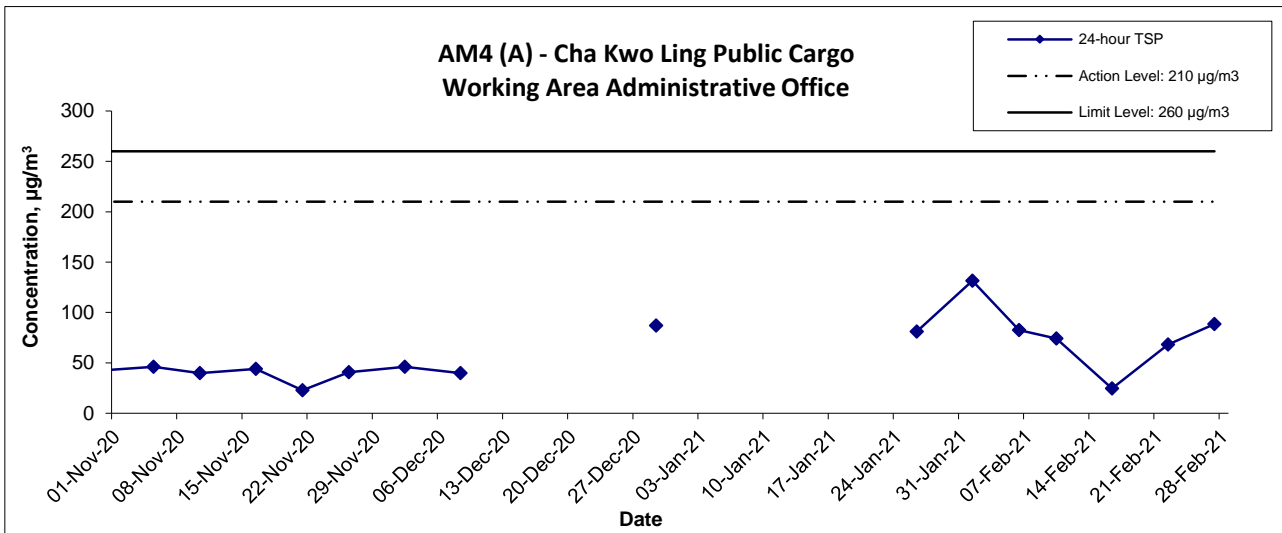
*Measurement cannot be carried out for AM1 between 12 Sep 2020 - 7 Oct 2020 as no power supply due to technical problems in the system of the Temple.

Monitoring at Lam Tin side was suspended during 9th Dec 2020 - 23rd Dec 2020 due to COVID-19 outbreak


The HVS at AM2 was broken-down during the first two week of February 2021.

Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction	Scale	N.T.S	Project No.	MA16034	
	Date	Feb-21	Appendix	F	
Graphical Presentation of 24-hour TSP Monitoring Results					

24-hr TSP Concentration Levels



Monitoring at Lam Tin side was suspended during 9th Dec 2020 - 23rd Dec 2020 due to COVID-19 outbreak

Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of 24-hour TSP Monitoring Results	Scale	Project	
	Date	Appendix	
	N.T.S	No. MA16034	
	Feb-21	F	

**APPENDIX G
NOISE MONITORING RESULTS AND
GRAPHICAL PRESENTATIONS**

Appendix G - Noise Monitoring Results

(0700-1900 hrs on Normal Weekdays)

Location CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
02-Feb-21	18:00	Fine	74.3	78.3	67.6	65.5	74
08-Feb-21	14:15	Fine	70.4	73.6	68.1	65.5	69
17-Feb-21	11:30	Sunny	68.9	70.4	66.9	65.5	66
23-Feb-21	13:00	Sunny	68.7	70.2	66.7	65.5	66

Location CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
02-Feb-21	16:45	Cloudy	73.9	76.0	70.7	63.6	73
08-Feb-21	13:00	Fine	70.1	73.3	66.6	63.6	69
17-Feb-21	10:30	Sunny	70.0	71.8	67.5	63.6	69
23-Feb-21	14:00	Sunny	70.2	72.5	67.9	63.6	69

Location CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
02-Feb-21	15:30	Sunny	71.2	73.2	68.1	65.6	70
08-Feb-21	9:00	Fine	73.2	75.0	71.1	65.6	72
17-Feb-21	13:05	Sunny	68.5	70.2	66.3	65.6	65
23-Feb-21	16:00	Sunny	68.9	70.5	66.4	65.6	66

Location CM4 - Tin Hau Temple, Cha Kwo Ling							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
02-Feb-21	10:00	Sunny	64.4	66.4	60.2	62.0	61
08-Feb-21	10:20	Fine	64.1	66.5	57.5	62.0	60
17-Feb-21	14:45	Sunny	56.4	59.5	50.2	62.0	56 Measured \leq Baseline
23-Feb-21	9:00	Sunny	56.8	59.7	50.4	62.0	57 Measured \leq Baseline

Location CM5 - CCC Kei Faat Primary School, Yau Tong							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
02-Feb-21	14:35	Sunny	70.8	73.4	64.4	68.2	67
08-Feb-21	9:45	Fine	68.0	70.4	63.4	68.2	68 Measured \leq Baseline
17-Feb-21	14:00	Sunny	66.4	68.1	64.9	68.2	66 Measured \leq Baseline
23-Feb-21	10:30	Sunny	65.9	68.0	64.7	68.2	66 Measured \leq Baseline

Appendix G - Noise Monitoring Results

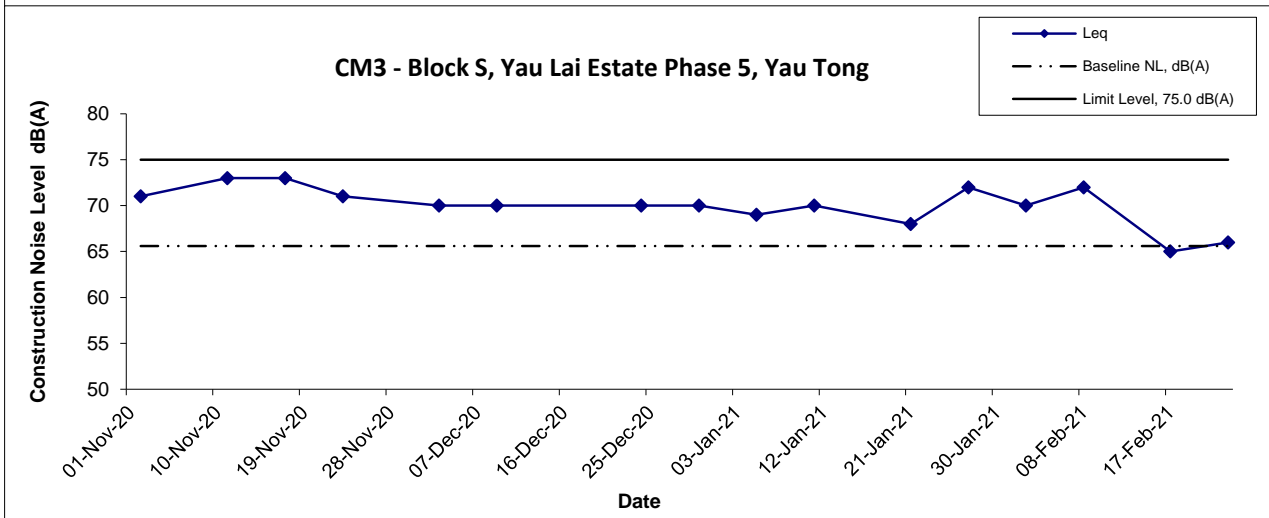
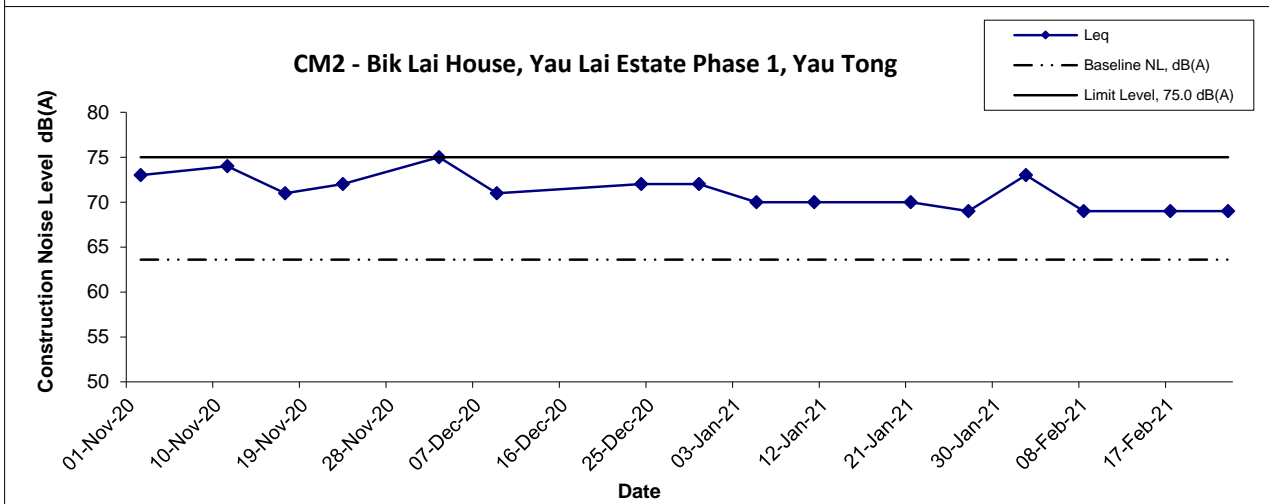
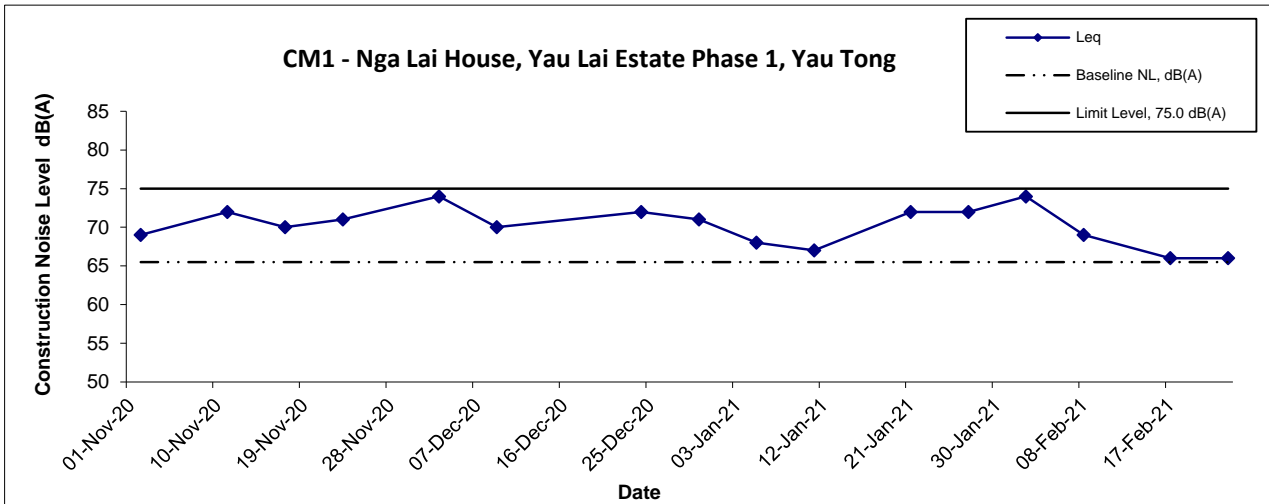
(0700-1900 hrs on Normal Weekdays)

Location CM6(A) - Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
02-Feb-21	9:00	Sunny	67.6	68.9	65.3	61.9	66
08-Feb-21	10:54	Cloudy	64.2	64.8	54.9	61.9	60
17-Feb-21	13:30	Sunny	69.3	72.1	65.8	61.9	68
23-Feb-21	13:00	Sunny	68.6	70.8	57.1	61.9	68

Location CM7(A) - Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
02-Feb-21	10:00	Sunny	69.7	72.6	65.5	58.3	69
08-Feb-21	11:30	Cloudy	64.4	67.4	57.8	58.3	63
17-Feb-21	14:30	Sunny	70.2	72.8	66.7	58.3	70
23-Feb-21	11:10	Sunny	65.2	66.3	57.4	58.3	64

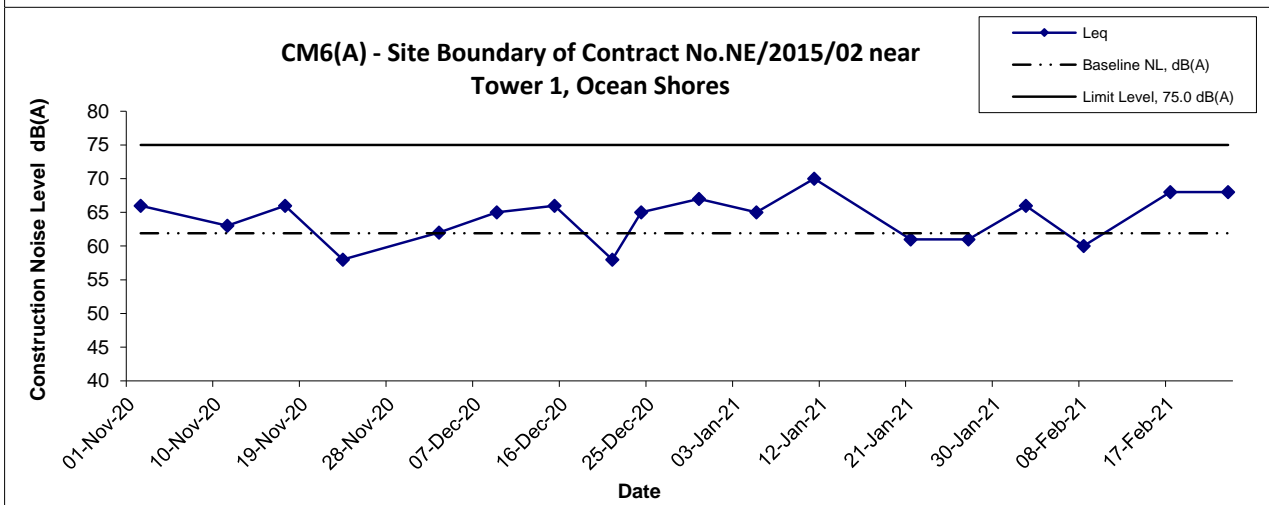
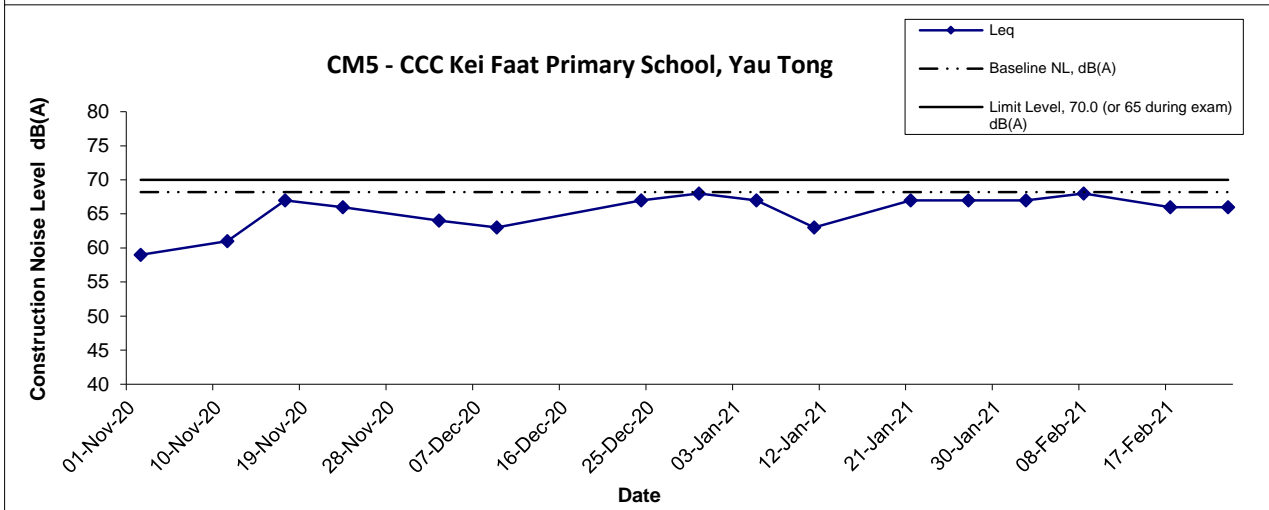
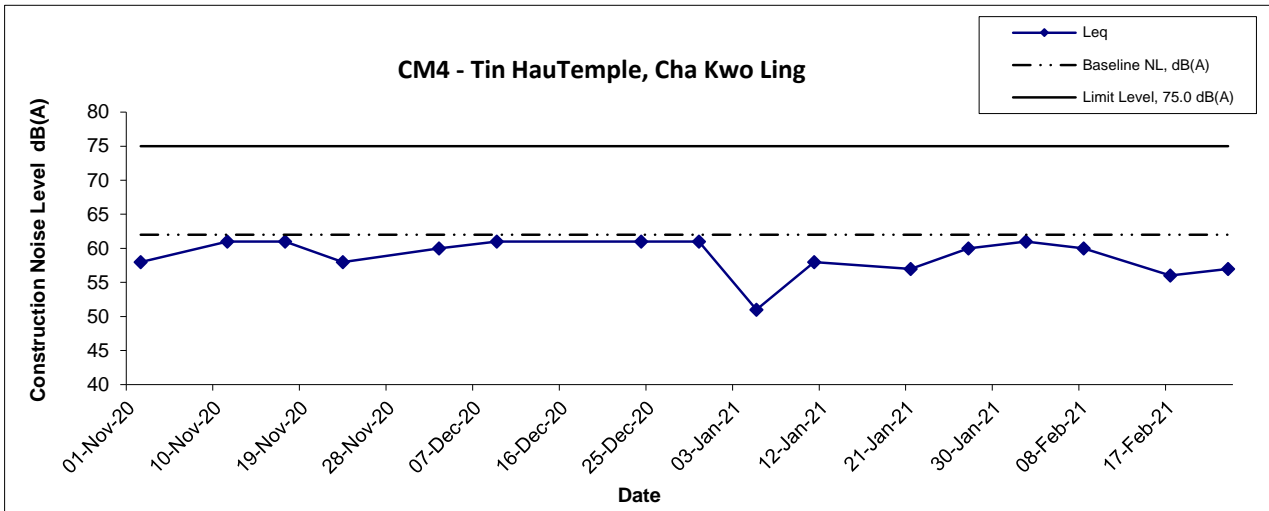
Location CM8(A) - Park Central, L1/F Open Space Area							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
02-Feb-21	11:00	Sunny	64.2	66.4	61.1	69.1	64 Measured ≤ Baseline
08-Feb-21	13:00	Cloudy	66.4	70.3	59.9	69.1	66 Measured ≤ Baseline
17-Feb-21	15:30	Sunny	65.1	67.3	61.8	69.1	65 Measured ≤ Baseline
23-Feb-21	14:45	Sunny	66.3	69.0	60.9	69.1	66 Measured ≤ Baseline

Noise Levels



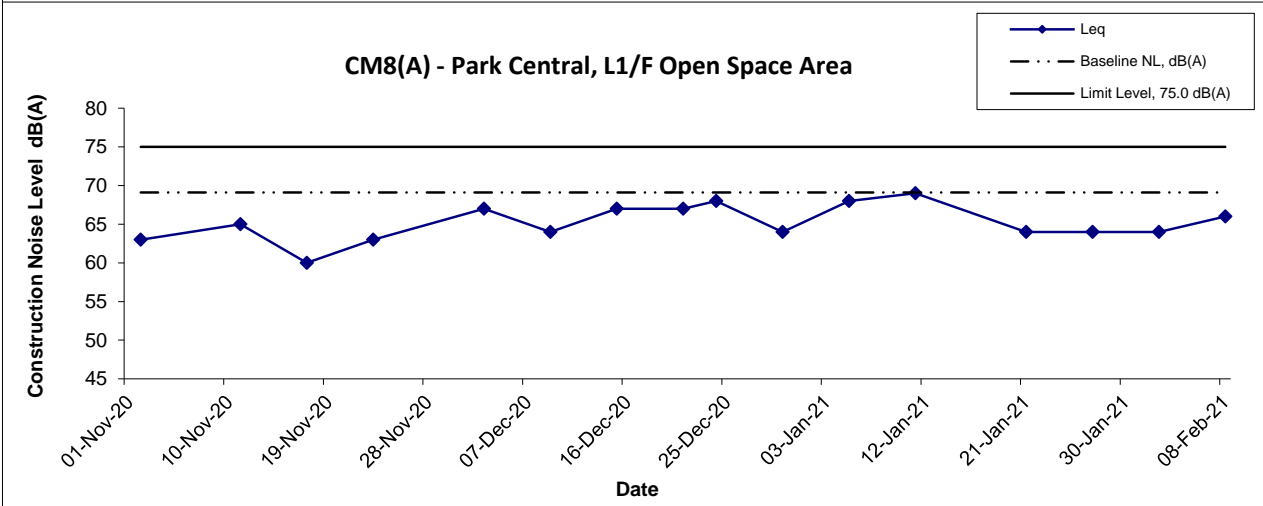
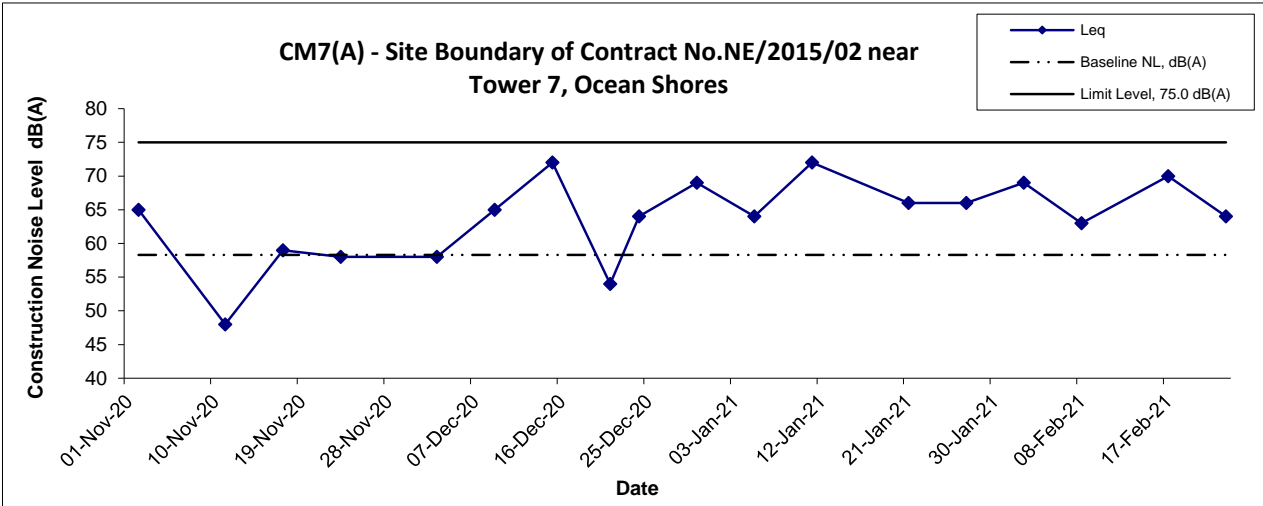
Title Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA16034	CINOTECH
	Date Mar 21	Appendix G	

Noise Levels



Title Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of Construction Noise Monitoring Results	Scale	Project	CINOTECH
	N.T.S	No. MA16034	
	Date	Appendix	
	Mar 21	G	

Noise Levels



Title Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of Construction Noise Monitoring Results	Scale	Project	CINOTECH
	N.T.S	No. MA16034	
	Date	Appendix	
	Mar 21	G	

Appendix G - Noise Monitoring Results

(Restricted Hours - 19:00 to 23:00 on all other days & 07:00 to 23:00 holidays)

Location CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong														
Date	Time	Weather	dB (A) (5-min)				Average L _{eq}	Baseline Level	Construction Noise Level					
			L _{eq}	L ₁₀	L ₉₀	L _{eq}		L _{eq}						
5-Feb-21	22:40	Fine	63.8	65.9	61.8	63.8	64.4	64 Measured ≤ Baseline						
	22:45		63.8	66.0	61.9									
	22:50		63.7	65.9	61.9									
10-Feb-21	20:00	Fine	64.1	66.5	62.3	64.1			64.4	64 Measured ≤ Baseline				
	20:05		64.0	66.4	62.3									
	20:10		64.2	66.3	62.1									
20-Feb-21	21:30	Fine	63.5	64.9	61.5	63.5					64.4	64 Measured ≤ Baseline		
	21:35		63.2	64.6	61.2									
	21:40		63.7	64.8	61.4									
26-Feb-21	22:00	Fine	61.5	64.7	57.2	61.3							64.4	61 Measured ≤ Baseline
	22:05		61.3	64.8	57.0									
	22:10		61.0	63.2	59.0									

Location CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong														
Date	Time	Weather	dB (A) (5-min)				Average L _{eq}	Baseline Level	Construction Noise Level					
			L _{eq}	L ₁₀	L ₉₀	L _{eq}		L _{eq}						
5-Feb-21	22:20	Fine	64.0	66.3	61.9	64.2	62.2	60						
	22:25		64.3	66.3	61.8									
	22:30		64.2	66.0	62.3									
10-Feb-21	20:30	Fine	63.8	66.1	61.9	63.7			62.2	58				
	20:35		63.6	65.9	61.6									
	20:40		63.8	66.2	61.8									
20-Feb-21	21:00	Fine	65.3	67.4	63.2	65.5					62.2	63		
	21:05		65.5	67.3	63.5									
	21:10		65.6	67.4	63.6									
26-Feb-21	22:20	Fine	60.5	63.9	56.5	60.9							62.2	61 Measured ≤ Baseline
	22:25		60.8	64.1	56.8									
	22:30		61.4	63.4	59.2									

Location CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong														
Date	Time	Weather	dB (A) (5-min)				Average L _{eq}	Baseline Level	Construction Noise Level					
			L _{eq}	L ₁₀	L ₉₀	L _{eq}		L _{eq}						
5-Feb-21	22:00	Fine	63.9	66.2	62.1	64.0	64.7	64 Measured ≤ Baseline						
	22:05		64.1	66.4	62.1									
	22:10		64.0	66.3	62.3									
10-Feb-21	21:00	Fine	64.3	66.5	62.1	64.2			64.7	64 Measured ≤ Baseline				
	21:05		64.2	66.4	62.2									
	21:10		64.0	66.1	61.8									
20-Feb-21	22:30	Fine	63.8	65.7	60.4	63.5					64.7	64 Measured ≤ Baseline		
	22:35		63.5	65.5	60.2									
	22:40		63.2	65.3	60.1									
26-Feb-21	22:40	Fine	62.2	65.2	57.3	61.8							64.7	62 Measured ≤ Baseline
	22:45		62.0	64.8	57.1									
	22:50		61.0	63.3	59.7									

Location CM6(A) - Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores														
Date	Time	Weather	dB (A) (5-min)				Average L _{eq}	Baseline Level	Construction Noise Level					
			L _{eq}	L ₁₀	L ₉₀	L _{eq}		L _{eq}						
2-Feb-21	19:00	Fine	58.9	61.3	56.1	58.6	60.2	59 Measured ≤ Baseline						
	19:05		58.7	61.2	55.9									
	19:10		58.2	61.2	56.1									
8-Feb-21	22:30	Windy	64.8	63.7	51.0	63.0			60.2	60				
	22:35		60.6	63.5	51.6									
	22:40		62.7	64.0	52.2									
17-Feb-21	19:00	Fine	61.9	64.2	59.3	61.7					60.2	56		
	19:05		61.7	63.9	59.1									
	19:10		61.6	63.8	59.2									
23-Feb-21	19:45	Fine	51.1	53.9	47.3	50.4							60.2	50 Measured ≤ Baseline
	19:50		49.8	52.0	47.4									
	19:55		50.3	53.3	46.6									

Appendix G - Noise Monitoring Results

(Restricted Hours - 2300-0700 on all days)

Location CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong									
Date	Time	Weather	dB (A) (5-min)				Average L _{eq}	Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}		L _{eq}	
5-Feb-21	23:00	Fine	63.1	64.9	61.0	63.3	63.7	63 Measured ≤ Baseline	
	23:05		63.2	65.8	61.4				
	23:10		63.5	66.1	61.5				
10-Feb-21	11:25	Fine	62.1	64.2	60.3	62.1	63.7	62 Measured ≤ Baseline	
	11:30		62.2	64.2	60.3				
	11:35		61.9	64.1	59.9				
20-Feb-21	1:50	Fine	59.9	61.0	56.4	60.0	59.6	49	
	1:55		60.1	61.7	56.2				
	2:00		60.1	61.7	56.5				
26-Feb-21	23:40	Fine	56.6	60.4	53.2	56.6	62.8	57 Measured ≤ Baseline	
	23:45		56.8	60.5	53.1				
	23:50		56.3	62.8	58.2				

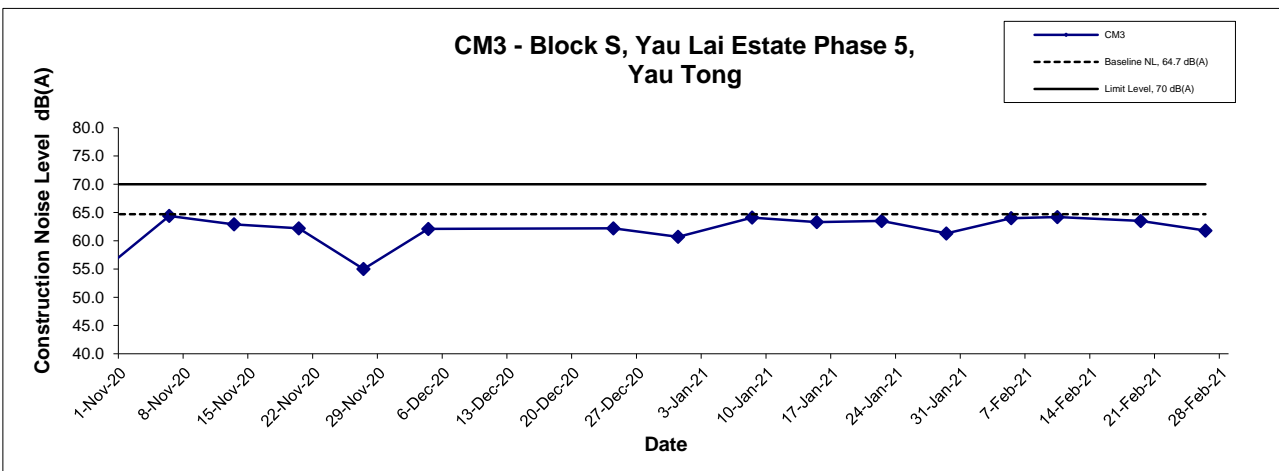
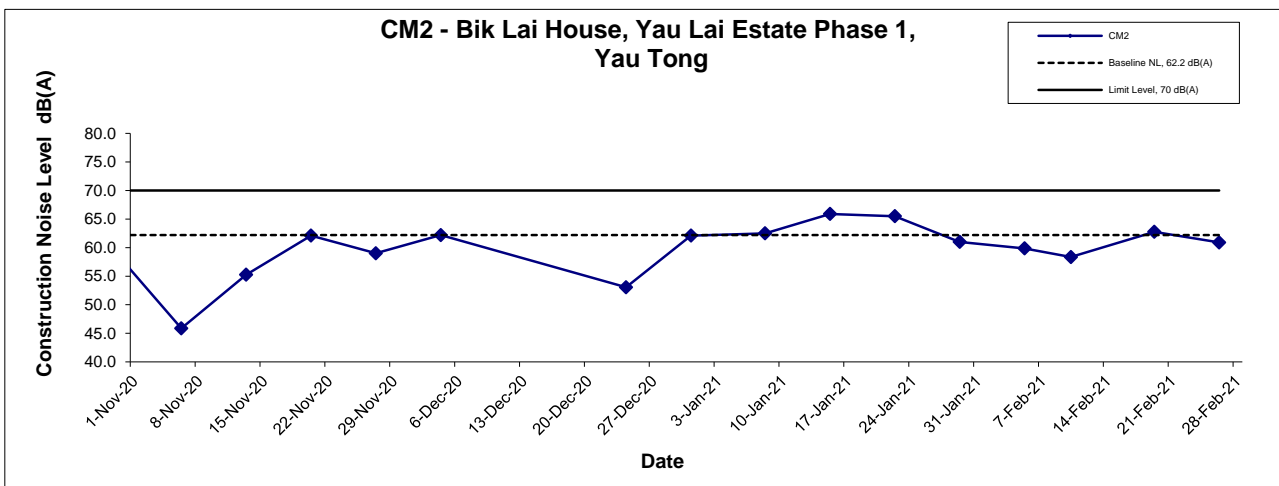
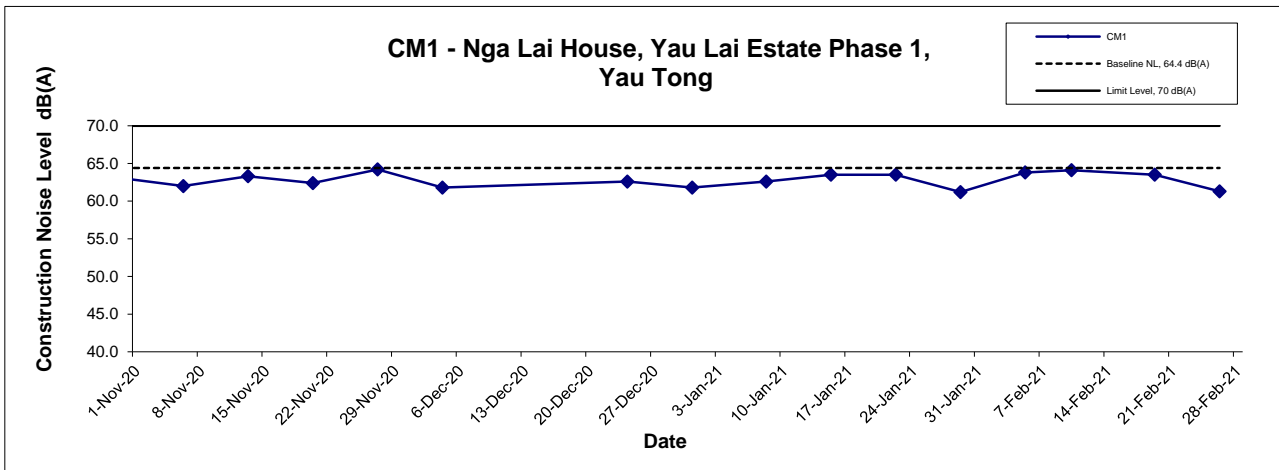
Location CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong									
Date	Time	Weather	dB (A) (5-min)				Average L _{eq}	Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}		L _{eq}	
5-Feb-21	23:20	Fine	63.8	66.0	61.7	63.5	61.6	<u>59</u>	
	23:25		63.5	65.4	61.5				
	23:30		63.2	65.3	61.0				
10-Feb-21	23:00	Sunny	60.7	63.5	58.1	60.7	61.6	61 Measured ≤ Baseline	
	23:05		60.8	63.6	58.4				
	23:10		60.7	63.4	58.3				
20-Feb-21	0:50	Fine	62.4	64.2	59.3	62.2	58.4	<u>60</u>	
	0:55		62.2	63.9	59.4				
	1:00		62.0	63.8	59.4				
26-Feb-21	23:20	Fine	57.8	61.5	53.4	57.8	61.6	58 Measured ≤ Baseline	
	23:25		57.9	61.7	53.5				
	23:30		57.6	62.7	58.3				

Location CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong									
Date	Time	Weather	dB (A) (5-min)				Average L _{eq}	Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}		L _{eq}	
5-Feb-21	23:40	Fine	61.9	63.8	59.3	62.5	62.9	63 Measured ≤ Baseline	
	23:45		62.7	64.9	60.8				
	23:50		62.9	64.8	60.8				
10-Feb-21	11:45	Fine	61.2	64.1	58.9	61.1	62.9	61 Measured ≤ Baseline	
	11:50		61.1	63.9	58.8				
	11:55		61.0	63.7	58.6				
20-Feb-21	2:35	Fine	60.6	60.3	55.1	60.2	58.7	55	
	2:40		60.4	61.2	55.5				
	2:45		59.6	60.6	54.6				
26-Feb-21	23:00	Fine	54.7	58.2	51.0	54.5	64.0	55 Measured ≤ Baseline	
	23:05		54.5	57.9	50.8				
	23:10		54.3	63.5	59.3				

Remark:

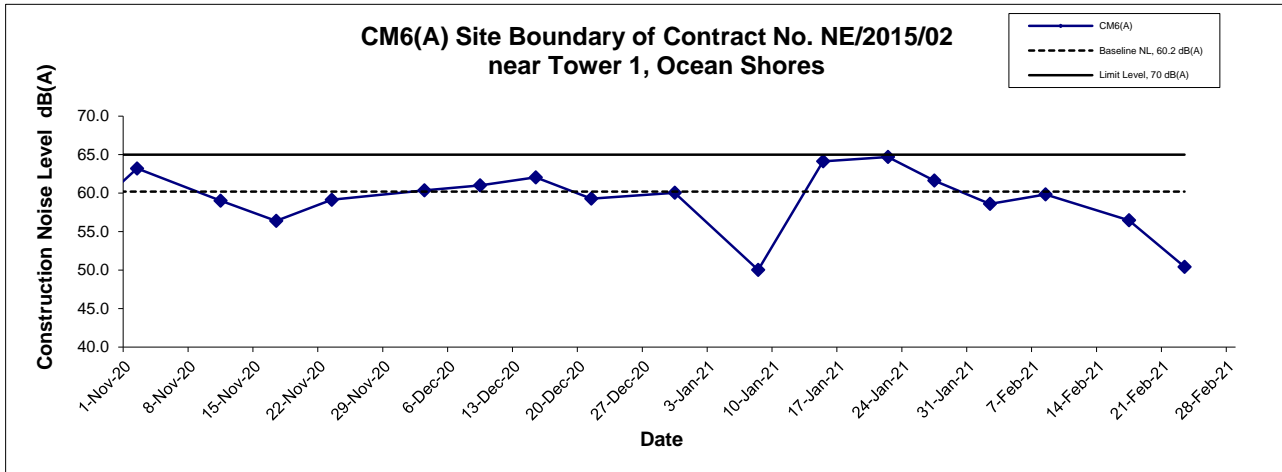
"Measured ≤ Baseline" means that the averaged measured Leq is smaller than the baseline Leq, and therefore the measured levels are not valid exceedances.

Noise Levels (Restricted Hours - 19:00 - 23:00 on normal weekdays)



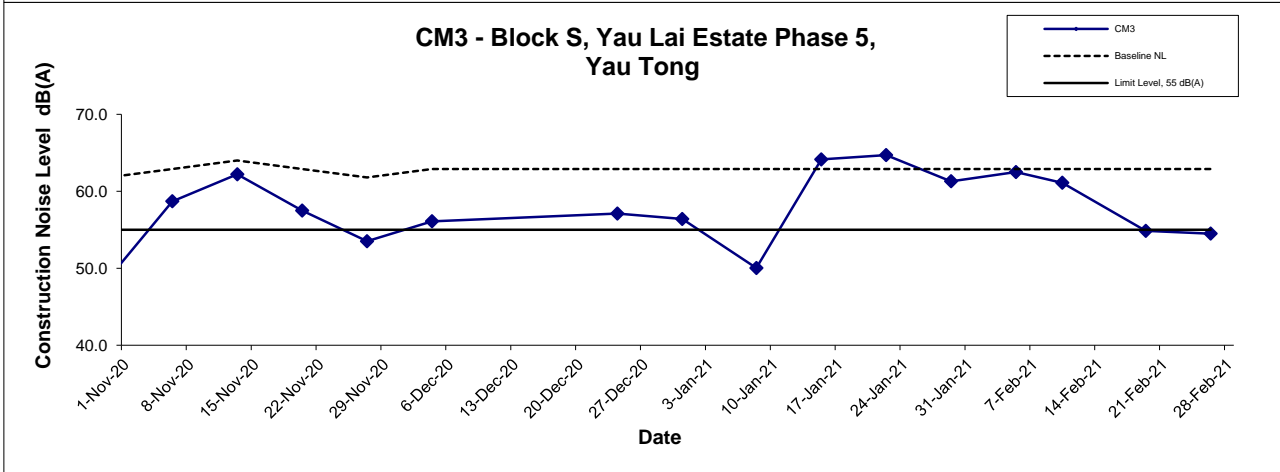
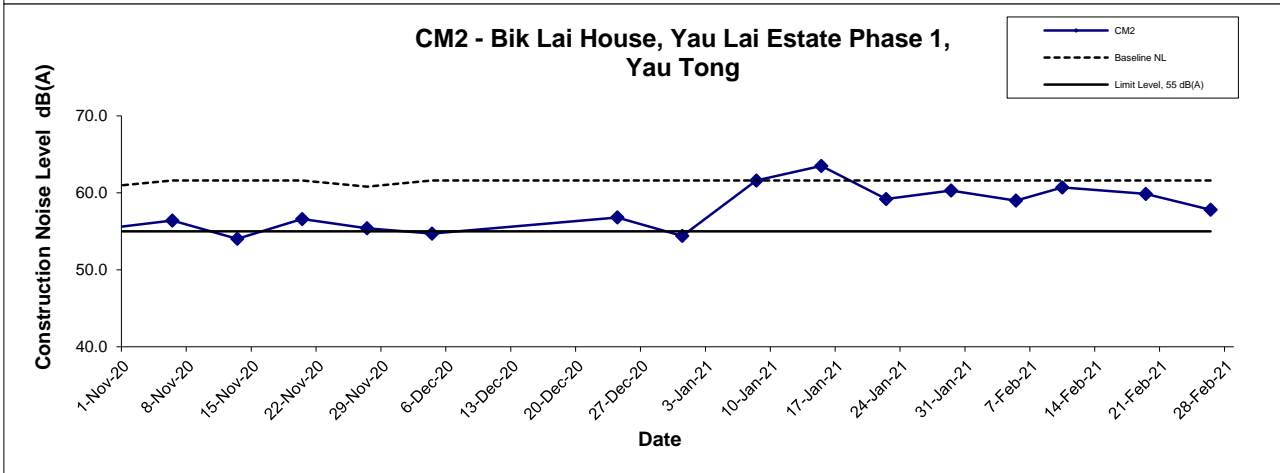
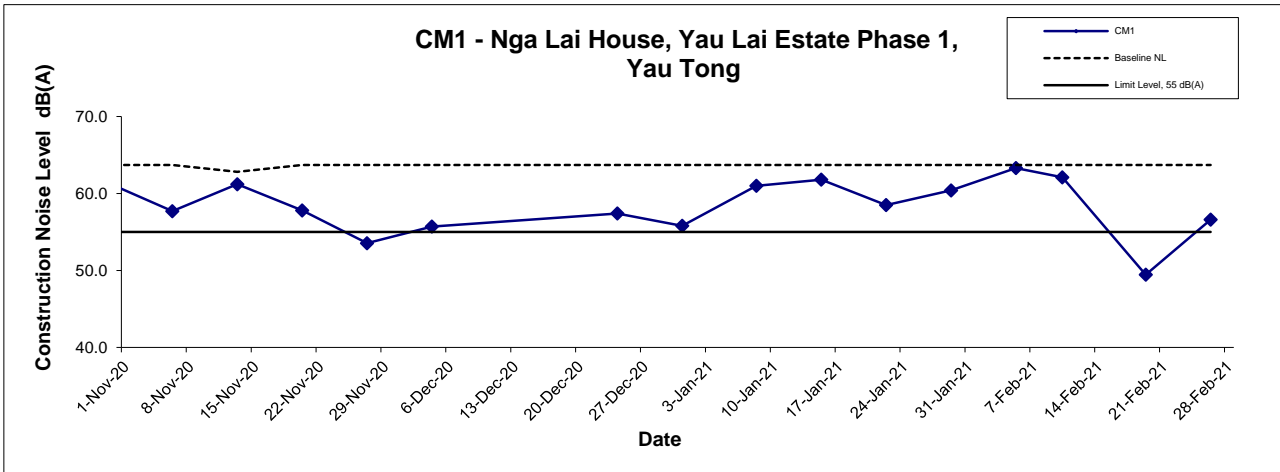
Title Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of Restricted Noise Monitoring Results	0	Project No. MA16034	
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Noise Levels
(Restricted Hours - 19:00 - 23:00 on normal weekdays)



Title Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of Restricted Noise Monitoring Results	Scale N.T.S	Project No. MA16034	CINOTECH
	Date Mar-21	Appendix G	

Noise Levels (Restricted Hours - 2300-0700 on normal weekdays)



Title Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of Restricted Noise Monitoring Results	Scale N.T.S	Project No. MA16034	
	Date Mar-21	Appendix G	

**APPENDIX I
MARINE WATER QUALITY
MONITORING RESULTS AND
GRAPHICAL PRESENTATIONS**

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 01 February 2021

(Mid-Ebb Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*
C1	Sunny	Moderate	11:19	Surface	1.2	17.8	17.8	16.8	16.9	33.3	33.3	112.6	116.3	8.8	9.1	9.2	1.3	1.4	1.2	0.0	0.0	1.7
				Middle	9.2	17.6	17.6	17.3	17.0	33.3	33.3	118.5	119.2	9.3	9.3		1.0	1.1		1.7	1.6	
				Bottom	17.0	17.5	17.5	17.3	17.0	33.3	33.3	116.3	117.1	9.1	9.2		1.0	1.0		3.6	3.5	
C2	Sunny	Moderate	12:08	Surface	1.0	17.9	17.9	15.4	15.4	33.3	33.2	119.5	120.8	9.3	9.4	9.3	1.0	1.0	1.1	0.0	0.0	1.4
				Middle	16.1	17.7	17.7	15.6	15.5	33.3	33.3	117.0	117.5	9.1	9.2		1.0	1.0		1.8	1.9	
				Bottom	31.4	17.7	17.7	15.5	15.4	33.3	33.3	117.2	117.3	9.1	9.1		1.6	1.3		2.2	2.3	
G1	Sunny	Moderate	11:43	Surface	1.1	18.0	18.0	15.5	15.5	33.2	33.2	122.6	123.0	9.5	9.5	9.6	0.9	0.9	0.9	2.3	2.4	1.3
				Middle	4.1	17.9	17.9	15.6	15.6	33.3	33.3	123.9	123.7	9.6	9.6		0.9	0.9		1.5	1.4	
				Bottom	7.1	17.9	17.9	15.6	15.6	33.3	33.3	123.5	123.4	9.6	9.6		1.0	0.9		0.0	0.0	
G2	Sunny	Moderate	11:56	Surface	1.1	17.9	18.0	15.5	15.5	33.3	33.3	122.3	122.6	9.5	9.5	9.5	1.0	0.9	1.0	2.0	2.2	1.8
				Middle	5.2	17.9	17.9	15.5	15.5	33.3	33.3	122.4	122.6	9.5	9.5		1.0	1.0		1.8	1.9	
				Bottom	9.0	17.9	17.9	15.5	15.5	33.3	33.3	122.2	122.4	9.5	9.5		1.2	1.1		1.3	1.4	
G3	Sunny	Moderate	11:39	Surface	1.0	18.2	18.2	15.5	15.5	33.2	33.2	121.3	122.9	9.4	9.5	9.8	0.9	0.9	0.9	1.6	1.5	0.5
				Middle	4.0	18.0	18.0	15.6	15.6	33.4	33.4	127.3	130.0	9.9	10.1		0.9	0.9		0.0	0.0	
				Bottom	7.0	17.9	17.9	15.7	15.7	33.4	33.4	127.9	127.6	9.9	9.9		0.9	0.9		0.0	0.0	
G4	Sunny	Moderate	11:33	Surface	1.1	18.3	18.2	15.6	15.6	33.3	33.3	116.2	118.7	9.0	9.2	9.3	0.8	0.9	0.9	1.3	1.4	0.5
				Middle	4.1	17.9	18.0	15.8	15.8	33.3	33.3	120.9	120.9	9.4	9.4		0.9	0.9		0.0	0.0	
				Bottom	7.1	17.8	17.9	15.8	15.8	33.3	33.3	121.3	121.1	9.4	9.4		0.9	0.9		0.0	0.0	
M1	Sunny	Moderate	11:51	Surface	1.1	18.1	18.1	15.6	15.6	33.2	33.2	119.2	119.7	9.2	9.3	9.3	1.2	1.3	1.2	1.6	1.6	2.1
				Middle	3.1	18.0	18.0	15.7	15.7	33.3	33.3	120.0	120.0	9.3	9.3		1.0	1.2		1.7	1.7	
				Bottom	5.0	17.9	17.9	15.7	15.7	33.3	33.3	120.2	119.9	9.3	9.3		1.2	1.2		2.9	3.0	
M2	Sunny	Moderate	12:00	Surface	1.1	18.1	18.1	15.4	15.4	33.2	33.2	119.7	120.4	9.3	9.3	9.3	0.8	0.8	0.9	1.2	1.4	1.7
				Middle	6.1	17.9	17.9	15.5	15.5	33.3	33.3	120.0	120.2	9.3	9.3		0.9	0.9		1.5	1.7	
				Bottom	11.1	17.8	17.8	15.5	15.5	33.3	33.3	120.0	120.1	9.4	9.4		1.0	1.0		2.2	2.2	
M3	Sunny	Moderate	11:36	Surface	1.2	18.2	18.2	15.6	15.6	33.2	33.2	117.9	119.2	9.1	9.2	9.5	1.2	1.2	1.1	1.2	1.3	1.9
				Middle	4.1	18.0	18.0	15.6	15.6	33.4	33.3	124.7	125.1	9.7	9.7		1.0	1.1		1.9	1.8	
				Bottom	7.1	17.9	17.9	15.7	15.6	33.4	33.4	124.9	125.1	9.7	9.7		0.9	1.0		2.4	2.5	
M4	Sunny	Moderate	12:04	Surface	1.1	18.1	18.1	15.4	15.4	33.2	33.2	119.4	120.4	9.3	9.3	9.4	0.8	0.8	1.0	1.5	1.6	2.0
				Middle	5.1	17.8	17.8	15.5	15.4	33.3	33.3	120.1	120.4	9.4	9.4		1.0	1.0		2.0	2.1	
				Bottom	9.1	17.8	17.8	15.5	15.5	33.3	33.3	120.7	120.7	9.4	9.4		1.3	1.3		2.5	2.4	
M5	Sunny	Moderate	11:24	Surface	1.1	18.0	18.0	15.7	15.7	33.2	33.2	115.2	116.9	8.9	9.1	9.1	0.8	0.8	0.8	2.5	2.5	1.8
				Middle	6.2	17.9	17.9	15.8	15.7	33.2	33.2	117.1	117.8	9.1	9.2		0.8	0.8		1.9	1.8	
				Bottom	11.1	17.8	17.8	15.8	15.8	33.3	33.3	117.4	117.7	9.1	9.2		0.9	0.9		1.2	1.2	
M6	Sunny	Moderate	11:31	Surface	-	-	-	-	-	-	-	-	-	-	9.2	-	-	1.1	-	-	2.1	
				Middle	2.1	18.0	18.0	15.9	15.9	33.3	33.3	118.3	118.8	9.2		9.2	1.1		1.1	2.2		2.1
				Bottom	-	-	-	-	-	-	-	-	-	-		-	-		-	-		-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 1 February 2021 (Mid-Ebb Tide)

<u>Parameter (unit)</u>	<u>Depth</u>	<u>Action Level</u>	<u>Limit Level</u>
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.6 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.7 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 0.0 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 0.0 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 0.0 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 0.0 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.8 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.0 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 01 February 2021

(Mid-Flood Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
C1	Sunny	Moderate	14:06	Surface	1.1	18.3 18.3	18.3	15.3 15.3	15.3	33.2 33.2	33.2	122.6 121.5	122.1	9.5 9.4	9.4	9.4	0.9 0.9	0.9	0.9	2.2 2.4	2.3	2.9
				Middle	9.1	17.8 17.7	17.8	15.4 15.4	15.4	33.3 33.3	33.3	121.1 120.6	120.9	9.4 9.4	9.4		0.9 0.9			2.8 2.5		
				Bottom	17.2	17.6 17.7	17.6	15.5 15.5	15.5	33.3 33.3	33.3	118.5 119.5	119.0	9.3 9.3	9.3		1.0 1.0			3.9 3.6		
C2	Sunny	Moderate	13:21	Surface	1.1	18.0 18.1	18.0	17.0 16.1	16.6	33.3 33.3	33.3	113.4 123.2	118.3	8.8 9.6	9.2	9.2	0.9 1.3	1.1	1.2	2.2 2.4	2.3	3.6
				Middle	16.0	17.7 17.8	17.8	17.3 16.0	16.6	33.3 33.3	33.3	116.5 120.3	118.4	9.1 9.4	9.2		1.0 1.0			3.4 3.8		
				Bottom	31.2	17.7 17.8	17.7	16.7 16.0	16.4	33.3 33.3	33.3	116.3 118.5	117.4	9.1 9.2	9.2		1.8 1.0			4.8 5.2		
G1	Sunny	Moderate	13:43	Surface	1.1	18.2 18.0	18.1	15.5 15.5	15.5	33.3 33.3	33.3	122.5 123.8	123.2	9.5 9.6	9.5	9.6	1.4 1.4	1.4	1.5	1.6 1.9	1.8	2.7
				Middle	4.0	18.1 18.0	18.0	15.5 15.5	15.5	33.3 33.3	33.3	122.8 123.9	123.4	9.5 9.6	9.6		1.5 1.4			2.4 2.1		
				Bottom	7.1	18.0 17.9	17.9	15.5 15.6	15.5	33.3 33.3	33.3	122.8 123.9	123.4	9.5 9.6	9.6		1.6 1.5			4.2 3.9		
G2	Sunny	Moderate	13:34	Surface	1.1	18.6 18.7	18.7	15.2 15.3	15.3	33.2 33.2	33.2	119.4 121.6	120.5	9.2 9.3	9.2	9.4	0.8 0.8	0.9	0.9	1.8 1.9	1.9	3.0
				Middle	5.2	17.9 17.9	17.9	15.4 15.4	15.4	33.3 33.3	33.3	121.7 122.6	122.2	9.5 9.5	9.5		0.9 1.0			2.8 3.2		
				Bottom	9.1	17.9 17.9	17.9	15.5 15.5	15.5	33.3 33.3	33.3	122.7 123.5	123.1	9.5 9.6	9.6		0.9 1.0			3.8 4.2		
G3	Sunny	Moderate	13:46	Surface	1.1	18.4 18.3	18.4	15.3 15.4	15.4	33.2 33.3	33.2	121.2 124.9	123.1	9.3 9.6	9.5	9.5	1.1 1.2	1.2	1.1	2.7 3.1	2.9	2.7
				Middle	4.1	18.1 18.1	18.1	15.4 15.4	15.4	33.3 33.3	33.3	121.9 124.4	123.2	9.4 9.6	9.5		1.4 1.3			2.9 2.6		
				Bottom	7.1	17.9 17.9	17.9	15.5 15.5	15.5	33.4 33.4	33.4	126.9 127.5	127.2	9.9 9.9	9.9		0.9 0.9			2.5 2.5		
G4	Sunny	Moderate	13:52	Surface	1.0	18.6 18.5	18.6	15.2 15.4	15.3	33.2 33.2	33.2	119.0 125.2	122.1	9.1 9.6	9.4	9.6	0.8 0.8	1.0	1.0	3.2 2.9	3.1	2.2
				Middle	4.1	18.0 18.2	18.1	15.4 15.4	15.4	33.3 33.3	33.3	128.1 124.5	126.3	9.9 9.6	9.8		1.0 0.9			2.3 2.2		
				Bottom	7.1	17.9 18.0	18.0	15.5 15.4	15.5	33.4 33.3	33.3	127.8 126.5	127.2	9.9 9.8	9.9		1.3 1.2			1.4 1.3		
M1	Sunny	Moderate	13:40	Surface	1.1	18.5 18.3	18.4	15.4 15.5	15.5	33.3 33.2	33.2	121.2 122.3	121.8	9.3 9.4	9.4	9.4	1.2 1.3	1.3	1.3	0.0 0.0	0.0	0.9
				Middle	3.1	18.4 18.3	18.4	15.5 15.5	15.5	33.3 33.3	33.3	121.7 122.2	122.0	9.4 9.4	9.4		1.2 1.4			1.2 1.3		
				Bottom	5.1	18.3 18.3	18.3	15.5 15.5	15.5	33.3 33.3	33.3	121.8 122.2	122.0	9.4 9.4	9.4		1.2 1.2			1.7 1.6		
M2	Sunny	Moderate	13:31	Surface	1.1	18.5 18.5	18.5	15.3 15.4	15.3	33.3 33.3	33.3	122.2 123.3	122.8	9.4 9.5	9.4	9.5	0.9 0.9	0.9	0.9	2.4 2.2	2.3	1.2
				Middle	6.1	17.9 18.1	18.0	15.4 15.4	15.4	33.3 33.3	33.3	122.9 122.9	122.9	9.6 9.5	9.5		1.0 0.9			1.5 1.2		
				Bottom	10.9	17.8 17.8	17.8	15.6 15.5	15.5	33.3 33.3	33.3	121.9 121.9	121.9	9.5 9.5	9.5		1.1 1.0			0.0 0.0		
M3	Sunny	Moderate	13:49	Surface	1.1	18.9 18.6	18.7	15.2 15.4	15.3	33.1 33.1	33.1	117.5 129.9	123.7	9.0 10.0	9.5	9.9	0.9 1.4	1.1	1.1	1.7 1.4	1.6	2.1
				Middle	4.1	18.0 18.2	18.1	15.4 15.3	15.3	33.3 33.3	33.3	129.4 135.1	132.3	10.0 10.4	10.2		1.3 1.1			2.2 2.4		
				Bottom	7.1	17.9 18.0	18.0	15.5 15.4	15.5	33.4 33.3	33.4	129.3 136.1	132.7	10.0 10.6	10.3		1.0 0.9			2.4 2.3		
M4	Sunny	Moderate	13:27	Surface	1.1	18.1 18.1	18.1	15.6 15.6	15.6	33.3 33.3	33.3	122.4 122.7	122.6	9.5 9.5	9.5	9.5	1.0 1.0	1.0	1.0	1.6 1.7	1.7	1.9
				Middle	5.1	17.9 17.9	17.9	15.7 15.6	15.7	33.3 33.3	33.3	121.6 121.6	121.6	9.5 9.5	9.5		1.0 1.0			1.5 1.6		
				Bottom	9.1	17.7 17.8	17.8	15.8 15.7	15.7	33.3 33.3	33.3	117.9 119.6	118.8	9.2 9.3	9.3		1.1 1.0			2.4 2.3		
M5	Sunny	Moderate	14:02	Surface	1.2	18.4 18.3	18.3	15.4 15.4	15.4	33.2 33.2	33.2	118.1 123.4	120.8	9.1 9.5	9.3	9.4	1.1 1.1	1.1	1.1	2.1 2.3	2.2	1.6
				Middle	6.0	17.9 18.1	18.0	15.5 15.4	15.5	33.3 33.2	33.3	121.2 122.8	122.0	9.4 9.5	9.5		0.9 1.1			1.4 1.4		
				Bottom	11.1	17.8 17.8	17.8	15.6 15.5	15.5	33.3 33.3	33.3	122.0 121.9	122.0	9.5 9.5	9.5		1.1 1.1			1.3 1.1		
M6	Sunny	Moderate	13:57	Surface	-	-	-	-	-	-	-	-	-	-	9.6	-	-	-	-	-	4.7	
				Middle	2.0	18.1 18.1	18.1	15.3 15.4	15.4	33.3 33.3	33.3	122.6 124.6	123.6	9.5 9.6		9.6			8.0 8.0			4.8 4.5
				Bottom	-	-	-	-	-	-	-	-	-	-		-			-			-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 1 February 2021 (Mid-Flood Tide)

<u>Parameter (unit)</u>	<u>Depth</u>	<u>Action Level</u>	<u>Limit Level</u>
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.2 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.3 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 2.8 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 3.0 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 2.8 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 3.0 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 4.5 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 4.9 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 03 February 2021

(Mid-Ebb Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*
C1	Sunny	Moderate	10:47	Surface	1.0	26.0 25.9	26.0	8.8 8.8	8.8	32.8 32.8	32.8	88.4 84.1	86.3	6.0 5.7	5.8	5.8	1.9 2.0	1.9	2.2	2.2 2.5	2.4	1.7
				Middle	9.1	25.7 25.8	25.7	8.8 8.8	8.8	33.6 33.4	33.5	84.9 84.2	84.6	5.7 5.7	5.7		2.5 2.5	2.5		1.6 1.5	1.6	
				Bottom	17.1	25.7 25.7	25.7	8.8 8.8	8.8	33.7 33.7	33.7	84.5 84.1	84.3	5.7 5.7	5.7		2.2 2.2	2.2		1.1 1.3	1.2	
C2	Sunny	Moderate	9:50	Surface	1.1	26.0 26.0	26.0	8.9 9.0	8.9	32.0 32.0	32.0	83.4 82.6	83.0	5.7 5.6	5.6	5.6	1.7 1.6	1.6	1.4	1.9 1.6	1.8	2.1
				Middle	16.0	25.6 25.7	25.7	8.9 9.0	8.9	33.8 33.6	33.7	83.6 83.7	83.7	5.6 5.7	5.6		1.3 1.4	1.4		1.7 1.8	1.8	
				Bottom	31.0	25.7 25.6	25.6	8.9 9.0	8.9	33.6 33.9	33.8	83.6 83.4	83.5	5.6 5.6	5.6		1.2 1.3	1.2		2.7 3.0	2.9	
G1	Sunny	Moderate	10:16	Surface	1.1	25.9 25.9	25.9	8.9 8.9	8.9	33.0 33.0	33.0	90.0 88.5	89.3	6.1 6.0	6.0	6.0	1.4 1.4	1.4	1.4	2.8 2.7	2.8	2.0
				Middle	4.1	25.9 25.9	25.9	8.9 8.9	8.9	33.0 33.0	33.0	89.1 88.7	88.9	6.0 6.0	6.0		1.5 1.4	1.4		2.2 2.1	2.2	
				Bottom	7.1	25.9 25.9	25.9	8.9 8.9	8.9	33.1 33.1	33.1	88.2 87.9	88.1	6.0 5.9	5.9		1.5 1.3	1.4		1.2 1.0	1.1	
G2	Sunny	Moderate	10:07	Surface	1.1	25.8 25.8	25.8	8.9 9.0	8.9	33.1 33.3	33.2	94.2 87.1	90.7	6.4 5.9	6.1	6.1	1.9 2.0	2.0	1.7	2.3 2.5	2.4	1.8
				Middle	5.0	25.8 25.8	25.8	9.0 8.9	9.0	33.2 33.2	33.2	89.6 87.8	88.7	6.1 5.9	6.0		1.5 1.4	1.4		1.5 1.7	1.6	
				Bottom	9.1	25.6 25.7	25.6	8.9 8.9	8.9	34.0 33.8	33.9	86.1 86.1	86.1	5.8 5.8	5.8		2.2 1.1	1.6		1.4 1.1	1.3	
G3	Sunny	Moderate	10:19	Surface	1.1	25.9 25.9	25.9	8.8 8.9	8.9	31.9 32.7	32.3	87.1 84.9	86.0	5.9 5.7	5.8	5.8	1.6 1.7	1.7	2.0	3.5 3.1	3.3	2.4
				Middle	4.1	25.9 25.9	25.9	8.9 8.9	8.9	33.0 32.6	32.8	85.0 84.6	84.8	5.7 5.7	5.7		2.1 2.1	2.1		2.2 2.4	2.3	
				Bottom	7.0	25.6 25.9	25.7	8.9 8.8	8.9	34.0 33.1	33.6	85.1 84.2	84.7	5.7 5.7	5.7		2.3 2.2	2.3		1.6 1.8	1.7	
G4	Sunny	Moderate	10:30	Surface	1.1	26.0 25.9	25.9	8.8 8.8	8.8	31.5 32.5	32.0	91.4 86.4	88.9	6.2 5.9	6.0	5.9	2.3 2.2	2.2	2.2	2.6 2.8	2.7	2.2
				Middle	4.0	25.9 25.9	25.9	8.8 8.8	8.8	32.9 33.1	33.0	84.5 83.8	84.2	5.7 5.7	5.7		2.0 2.1	2.1		2.1 2.4	2.3	
				Bottom	7.0	25.8 26.7	25.7	8.8 8.8	8.8	33.6 33.9	33.7	84.2 84.5	84.4	5.7 5.7	5.7		2.3 2.4	2.3		1.6 1.4	1.5	
M1	Sunny	Moderate	10:11	Surface	1.1	26.0 25.9	25.9	8.9 8.9	8.9	32.2 32.9	32.6	89.2 87.4	88.3	6.0 5.9	6.0	6.0	1.0 1.1	1.1	1.5	1.8 1.6	1.7	1.1
				Middle	3.0	25.9 25.9	25.9	8.9 8.9	8.9	32.6 32.8	32.7	88.2 87.1	87.7	6.0 5.9	5.9		1.2 1.1	1.1		1.6 1.7	1.7	
				Bottom	5.0	25.8 25.8	25.8	8.9 8.9	8.9	33.2 33.2	33.2	87.6 87.2	87.4	5.9 5.9	5.9		2.2 2.3	2.3		0.0 0.0	0.0	
M2	Sunny	Moderate	10:03	Surface	1.1	25.8 25.8	25.8	8.9 8.9	8.9	33.3 33.3	33.3	90.5 87.3	88.9	6.1 5.9	6.0	5.9	1.2 1.3	1.3	1.5	3.6 3.9	3.8	2.2
				Middle	6.0	25.6 25.7	25.7	8.9 8.9	8.9	34.1 33.6	33.8	86.1 86.9	86.5	5.8 5.9	5.8		1.4 1.4	1.4		1.8 1.5	1.7	
				Bottom	11.0	25.5 25.5	25.5	9.0 9.0	9.0	34.2 34.2	34.2	86.0 86.2	86.1	5.8 5.8	5.8		1.8 1.9	1.8		1.2 1.4	1.3	
M3	Sunny	Moderate	10:26	Surface	1.0	25.8 25.8	25.8	8.8 8.8	8.8	31.6 33.0	32.3	87.2 84.3	85.8	5.9 5.7	5.8	5.8	2.1 2.1	2.1	2.3	1.7 1.5	1.6	2.5
				Middle	4.0	25.9 25.9	25.9	8.8 8.8	8.8	33.0 32.7	32.9	84.5 84.0	84.3	5.7 5.7	5.7		2.3 2.3	2.3		2.3 2.2	2.3	
				Bottom	7.1	25.6 25.6	25.6	8.8 8.8	8.8	33.9 34.0	33.9	83.9 83.9	83.9	5.7 5.7	5.7		2.4 2.5	2.4		3.2 3.4	3.6	
M4	Sunny	Moderate	9:57	Surface	1.1	25.9 25.8	25.8	9.0 9.0	9.0	32.5 33.2	32.8	84.0 84.6	84.3	5.7 5.7	5.7	5.7	2.0 2.0	2.0	2.1	1.4 1.7	1.6	2.2
				Middle	5.0	25.7 25.8	25.7	9.0 9.0	9.0	33.4 33.3	33.4	84.6 84.4	84.5	5.7 5.7	5.7		1.9 1.9	1.9		2.6 2.3	2.5	
				Bottom	9.0	25.7 25.7	25.7	9.0 8.9	8.9	33.5 33.6	33.6	84.6 85.3	85.0	5.7 5.8	5.7		2.4 2.3	2.3		2.5 2.8	2.7	
M5	Sunny	Moderate	10:42	Surface	1.0	25.9 25.9	25.9	8.8 8.8	8.8	33.0 33.1	33.0	88.5 85.5	87.0	6.0 5.8	5.9	5.8	2.1 2.1	2.1	2.2	0.0 0.0	0.0	1.0
				Middle	6.1	25.8 25.8	25.8	8.8 8.8	8.8	33.1 33.1	33.1	85.8 85.3	85.6	5.8 5.8	5.8		2.5 2.5	2.5		1.4 1.1	1.3	
				Bottom	11.1	25.8 25.8	25.8	8.8 8.8	8.8	33.3 33.2	33.3	85.1 84.9	85.0	5.7 5.7	5.7		2.1 2.1	2.1		1.6 1.9	1.8	
M6	Sunny	Moderate	10:35	Surface	-	-	-	-	-	-	-	-	-	-	6.1	-	-	1.3	-	-	2.3	
				Middle	2.0	25.9 25.9	25.9	8.8 8.8	8.8	32.4 32.4	32.4	90.8 89.1	90.0	6.1 6.0		6.1	1.4 1.3		1.3	2.3 2.2		2.3
				Bottom	-	-	-	-	-	-	-	-	-	-		-	-		-	-		-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 3 February 2021 (Mid-Ebb Tide)

<u>Parameter (unit)</u>	<u>Depth</u>	<u>Action Level</u>	<u>Limit Level</u>
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.5 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.6 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.1 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 2.3 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.1 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 2.3 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 3.4 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.7 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 03 February 2021

(Mid-Flood Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
C1	Sunny	Moderate	17:45	Surface	1.0	26.1 26.1	26.1	8.7 8.8	8.7	31.7 31.9	31.8	84.2 81.2	82.7	5.7 5.5	5.6	5.5	1.8 1.9	1.9	2.2	0.0 0.0	1.1	
				Middle	9.1	25.9 25.9	25.9	8.8 8.8	8.8	32.5 32.5	32.5	81.0 80.6	80.8	5.5 5.5	5.5		1.9 1.9	1.9		1.4 1.8		1.6
				Bottom	17.0	25.7 25.4	25.5	8.8 8.8	8.8	33.5 34.4	34.0	81.4 81.3	81.4	5.5 5.5	5.5		2.9 2.8	2.9		1.7 1.5		1.6
C2	Sunny	Moderate	16:43	Surface	1.0	26.4 26.4	26.4	8.9 8.9	8.9	30.7 30.8	30.7	84.7 81.7	83.2	5.7 5.5	5.6	5.5	1.4 1.5	1.4	1.3	3.4 3.7	2.8	
				Middle	16.0	25.8 25.8	25.8	8.9 8.9	8.9	32.9 33.1	33.0	80.0 80.8	80.4	5.4 5.5	5.4		1.1 1.2	1.1		2.5 2.8		2.7
				Bottom	31.1	25.8 25.8	25.8	8.9 8.9	8.9	33.1 33.1	33.1	80.4 80.8	80.6	5.4 5.5	5.4		1.4 1.5	1.4		2.0 2.2		2.1
G1	Sunny	Moderate	17:09	Surface	1.1	26.1 26.1	26.1	8.8 8.8	8.8	32.2 32.3	32.2	93.5 89.8	91.7	6.3 6.1	6.2	6.1	1.3 1.2	1.3	1.2	1.5 1.6	2.6	
				Middle	4.1	26.0 26.1	26.0	8.8 8.8	8.8	32.5 32.6	32.5	88.9 90.2	89.6	6.0 6.1	6.0		1.0 1.0	1.0		2.2 2.6		2.4
				Bottom	7.0	26.0 26.0	26.0	8.8 8.8	8.8	32.9 32.8	32.9	87.9 88.4	88.2	5.9 6.0	5.9		1.3 1.3	1.3		4.1 3.8		4.0
G2	Sunny	Moderate	16:58	Surface	1.1	26.1 26.0	26.1	8.9 8.9	8.9	32.6 32.8	32.7	92.1 87.6	89.9	6.2 5.9	6.1	6.0	1.5 1.5	1.5	1.8	1.9 1.8	2.3	
				Middle	5.0	26.0 26.0	26.0	8.9 8.9	8.9	32.8 33.0	32.9	89.6 86.9	88.3	6.0 5.9	5.9		1.6 1.7	1.7		2.0 2.4		2.2
				Bottom	9.0	25.9 25.9	25.9	8.9 8.8	8.8	33.2 33.2	33.2	86.9 85.8	86.4	5.9 5.8	5.8		2.1 2.2	2.1		2.7 3.1		2.9
G3	Sunny	Moderate	17:14	Surface	1.0	26.3 25.9	26.1	8.8 8.8	8.8	31.3 31.6	31.4	93.1 89.9	91.5	6.3 6.1	6.2	6.2	1.3 1.4	1.4	1.3	1.4 1.1	1.7	
				Middle	4.0	26.0 25.9	26.0	8.8 8.8	8.8	32.7 32.7	32.7	91.9 90.0	91.0	6.2 6.1	6.1		1.3 1.3	1.3		1.6 1.8		1.7
				Bottom	7.0	25.9 25.9	25.9	8.8 8.8	8.8	33.1 33.0	33.0	84.3 83.8	84.1	5.7 5.7	5.7		1.2 1.2	1.2		2.0 2.2		2.1
G4	Sunny	Moderate	17:26	Surface	1.1	26.0 26.3	26.2	8.6 8.6	8.6	32.2 31.2	31.7	91.9 93.9	92.9	6.2 6.4	6.3	6.2	1.4 1.4	1.4	1.4	4.4 4.2	2.8	
				Middle	4.1	26.0 26.0	26.0	8.6 8.6	8.6	32.6 32.8	32.7	90.1 89.8	90.0	6.1 6.1	6.1		1.3 1.2	1.3		2.6 3.0		2.8
				Bottom	7.1	25.9 25.9	25.9	8.6 8.6	8.6	33.0 33.2	33.1	85.0 83.2	84.1	5.7 5.6	5.7		1.6 1.5	1.5		1.2 1.4		1.3
M1	Sunny	Moderate	17:04	Surface	1.0	26.4 26.0	26.2	8.8 8.8	8.8	31.8 32.8	32.3	93.1 85.5	89.3	6.3 5.8	6.0	6.0	1.6 1.6	1.6	2.0	2.2 2.0	1.6	
				Middle	3.1	26.2 26.1	26.1	8.8 8.8	8.8	32.3 32.6	32.4	89.8 86.3	88.1	6.1 5.8	5.9		1.5 1.6	1.5		1.4 1.6		1.5
				Bottom	5.0	26.0 26.0	26.0	8.8 8.8	8.8	32.9 32.8	32.9	85.3 85.0	85.2	5.8 5.7	5.7		2.8 2.8	2.8		1.1 1.3		1.2
M2	Sunny	Moderate	16:53	Surface	1.0	26.2 26.0	26.1	9.0 9.0	9.0	32.4 33.0	32.7	93.6 87.3	90.5	6.3 5.9	6.1	6.0	1.1 1.2	1.1	1.4	2.2 2.1	2.5	
				Middle	6.0	25.9 26.0	26.0	9.0 8.9	9.0	33.1 32.9	33.0	88.5 88.9	88.7	6.0 6.0	6.0		1.3 1.2	1.2		2.4 2.3		2.4
				Bottom	11.0	25.7 25.6	25.7	9.0 8.9	9.0	33.8 34.0	33.9	86.1 84.0	85.1	5.8 5.7	5.7		1.8 1.8	1.8		3.1 2.9		3.0
M3	Sunny	Moderate	17:22	Surface	1.1	26.1 25.9	26.0	8.7 8.7	8.7	31.8 32.7	32.2	91.9 88.3	90.1	6.2 6.0	6.1	5.9	1.6 1.6	1.6	1.5	1.9 1.7	1.0	
				Middle	4.0	26.0 26.0	26.0	8.7 8.7	8.7	32.7 32.7	32.7	85.7 84.1	84.9	5.8 5.7	5.7		1.3 1.2	1.2		1.2 1.0		1.3
				Bottom	7.0	25.9 25.9	25.9	8.7 8.7	8.7	33.0 33.2	33.1	84.9 82.4	83.7	5.7 5.6	5.6		1.6 1.7	1.6		0.4 0.0		0.0
M4	Sunny	Moderate	16:48	Surface	1.1	26.4 26.1	26.2	8.9 8.9	8.9	31.5 32.0	31.7	86.4 80.6	83.5	5.8 5.5	5.6	5.6	2.4 2.5	2.4	2.5	4.0 3.8	2.7	
				Middle	5.0	26.0 26.0	26.0	8.9 9.0	8.9	32.2 32.4	32.3	81.0 80.8	80.9	5.5 5.5	5.5		2.4 2.4	2.4		1.9 2.3		2.4
				Bottom	9.1	25.9 25.9	25.9	8.9 8.9	8.9	32.7 32.7	32.7	82.6 82.6	82.6	5.6 5.6	5.6		2.8 2.8	2.8		1.5 1.5		1.7
M5	Sunny	Moderate	17:38	Surface	1.0	26.3 26.1	26.2	8.7 8.7	8.7	32.0 32.1	32.0	87.5 81.6	84.6	5.9 5.5	5.7	5.6	1.5 1.6	1.5	1.6	1.2 1.4	1.9	
				Middle	6.0	26.1 26.1	26.1	8.7 8.7	8.7	32.1 32.2	32.1	83.1 81.4	82.3	5.6 5.5	5.6		1.3 1.3	1.3		1.7 1.9		1.8
				Bottom	11.1	26.1 26.1	26.1	8.7 8.7	8.7	32.1 32.2	32.2	81.6 81.4	81.5	5.5 5.5	5.5		2.0 1.9	2.0		2.8 2.5		2.7
M6	Sunny	Moderate	17:32	Surface	-	-	-	-	-	-	-	-	-	-	6.2	-	-	2.3	-	4.1		
				Middle	2.0	26.2 26.0	26.1	8.7 8.7	8.7	31.9 32.7	32.3	93.3 90.1	91.7	6.3 6.1		6.2	2.4 2.3		2.3		3.9 4.2	4.1
				Bottom	-	-	-	-	-	-	-	-	-	-		-	-		-		-	-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 3 February 2021 (Mid-Flood Tide)

Parameter (unit)	Depth	Action Level	Limit Level
DO in mg/L (See Note 1 and 4)	Stations G1-G4, M1-M5		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	Station M6		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	Stations G1-G4, M1-M5		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>CI: 3.4 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>CI: 3.7 NTU</u>
	Station M6		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	Stations G1-G4		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 0.0 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 0.0 mg/L</u>
	Stations M1-M5		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 0.0 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 0.0 mg/L</u>
	Stations G1-G4, M1-M5		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 1.9 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 2.1 mg/L</u>
	Station M6		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 05 February 2021

(Mid-Ebb Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value
C1	Sunny	Moderate	13:08	Surface	1.1	18.1 18.1	18.1	15.8 15.7	15.7	33.4 33.4	33.4	125.3 127.0	126.2	9.7 9.8	9.8	9.8	0.7 0.8	0.8	0.9	0.0 0.0	0.0	0.0
				Middle	9.0	18.0 18.0	18.0	15.7 15.7	15.7	33.4 33.4	33.4	125.8 125.9	125.9	9.8 9.8	9.8		0.9 0.8	0.8		0.0 0.0	0.0	
				Bottom	17.1	17.9 17.9	17.9	15.7 15.7	15.7	33.5 33.5	33.5	120.4 119.1	119.8	9.4 9.2	9.3		1.0 0.9	1.0		0.0 0.0	0.0	
C2	Sunny	Moderate	12:16	Surface	1.1	18.1 18.2	18.2	16.1 16.0	16.0	33.3 33.3	33.3	121.8 122.4	122.1	9.4 9.5	9.4	9.4	0.7 0.7	0.7	0.8	0.0 1.3	0.7	1.2
				Middle	16.0	18.0 18.1	18.1	16.1 16.0	16.0	33.3 33.3	33.3	121.6 122.0	121.8	9.4 9.5	9.4		0.8 0.8	0.8		1.6 1.4	1.5	
				Bottom	31.0	18.0 17.9	17.9	16.1 16.0	16.1	33.4 33.5	33.4	120.4 117.7	119.1	9.3 9.1	9.2		0.8 1.0	0.9		1.6 1.4	1.5	
G1	Sunny	Moderate	12:43	Surface	1.1	18.4 18.4	18.4	15.8 15.7	15.8	33.1 33.1	33.1	124.8 126.7	125.8	9.6 9.8	9.7	9.8	0.9 0.8	0.9	1.1	1.4 1.6	1.5	0.5
				Middle	4.1	18.2 18.2	18.2	15.8 15.7	15.8	33.3 33.2	33.2	126.6 127.5	127.1	9.8 9.9	9.8		1.1 1.0	1.1		0.0 0.0	0.0	
				Bottom	7.0	18.0 18.0	18.0	15.8 15.8	15.8	33.4 33.4	33.4	126.7 128.0	127.4	9.8 9.9	9.9		1.3 1.5	1.4		0.0 0.0	0.0	
G2	Sunny	Moderate	12:35	Surface	1.0	18.2 18.1	18.1	15.8 15.8	15.8	33.3 33.3	33.3	119.5 125.9	122.7	9.2 9.7	9.5	9.7	1.1 1.1	1.1	1.0	0.0 0.0	0.0	0.7
				Middle	5.0	18.0 18.0	18.0	15.9 15.8	15.8	33.3 33.3	33.3	126.8 127.2	127.0	9.8 9.9	9.8		1.0 1.1	1.0		0.0 1.2	0.6	
				Bottom	9.0	17.9 17.9	17.9	15.9 15.8	15.8	33.4 33.4	33.4	124.4 125.5	125.0	9.7 9.7	9.7		1.1 0.9	1.0		1.4 1.5	1.5	
G3	Sunny	Moderate	12:46	Surface	1.1	18.4 18.4	18.4	15.8 15.7	15.8	33.3 33.3	33.3	128.3 131.8	130.1	9.9 10.2	10.0	10.1	0.9 0.9	0.9	1.1	1.3 1.3	1.3	2.0
				Middle	4.1	18.2 18.2	18.2	15.8 15.8	15.8	33.3 33.3	33.3	129.8 131.6	130.7	10.0 10.2	10.1		1.2 1.1	1.1		2.2 2.1	2.2	
				Bottom	7.0	17.9 18.0	18.0	15.8 15.8	15.8	33.4 33.4	33.4	119.2 123.7	121.5	9.3 9.6	9.4		1.2 1.3	1.3		2.3 2.9	2.6	
G4	Sunny	Moderate	12:54	Surface	1.1	18.3 18.2	18.3	15.7 15.7	15.7	33.3 33.3	33.3	123.9 125.2	124.6	9.6 9.7	9.6	9.7	1.0 1.1	1.1	1.2	1.5 1.4	1.5	1.9
				Middle	4.1	18.0 18.0	18.0	15.7 15.7	15.7	33.3 33.3	33.3	125.2 125.5	125.4	9.7 9.7	9.7		1.1 1.1	1.1		1.9 2.0	2.0	
				Bottom	7.1	17.9 17.9	17.9	15.8 15.8	15.8	33.4 33.4	33.4	120.0 121.3	120.7	9.3 9.4	9.4		1.5 1.6	1.5		2.1 2.4	2.3	
M1	Sunny	Moderate	12:39	Surface	1.2	18.2 18.3	18.3	15.8 15.8	15.8	33.3 33.4	33.3	119.7 119.3	119.5	9.3 9.2	9.2	9.3	1.3 1.3	1.3	1.5	2.0 1.8	1.9	2.1
				Middle	3.1	18.1 18.3	18.2	15.8 15.8	15.8	33.3 33.2	33.3	120.1 120.7	120.4	9.3 9.3	9.3		1.7 1.3	1.5		2.1 2.2	2.2	
				Bottom	5.0	18.0 18.2	18.1	15.8 15.8	15.8	33.3 33.3	33.3	119.5 120.1	119.8	9.3 9.3	9.3		1.6 1.6	1.6		2.2 2.5	2.4	
M2	Sunny	Moderate	12:30	Surface	1.1	17.8 18.2	18.0	15.8 15.7	15.8	33.6 33.3	33.4	117.2 125.6	121.4	9.1 9.7	9.4	9.6	1.0 1.0	1.0	1.1	0.0 0.0	0.0	0.2
				Middle	6.0	18.1 18.1	18.1	15.8 15.7	15.8	33.3 33.3	33.3	125.2 127.7	126.5	9.7 9.9	9.8		1.0 1.0	1.0		0.0 1.1	0.6	
				Bottom	11.1	17.9 18.0	17.9	15.8 15.8	15.8	33.4 33.4	33.4	114.7 121.8	118.3	8.9 9.5	9.2		1.7 1.0	1.4		0.0 0.0	0.0	
M3	Sunny	Moderate	12:50	Surface	1.2	18.1 18.4	18.2	15.7 15.8	15.8	33.3 33.3	33.3	122.6 132.7	127.7	9.5 10.2	9.9	10.0	0.9 1.0	0.9	1.0	1.4 1.3	1.4	1.1
				Middle	4.0	18.2 18.3	18.3	15.8 15.8	15.8	33.3 33.3	33.3	127.9 133.1	130.5	9.9 10.3	10.1		1.0 1.0	1.0		1.3 1.3	1.3	
				Bottom	7.1	18.0 18.1	18.0	15.9 15.8	15.8	33.4 33.3	33.3	122.9 123.5	123.2	9.5 9.6	9.5		1.2 1.2	1.2		0.0 1.0	0.5	
M4	Sunny	Moderate	12:22	Surface	1.0	18.1 18.1	18.1	16.0 15.9	15.9	33.3 33.3	33.3	120.1 124.1	122.1	9.3 9.6	9.4	9.5	0.7 0.8	0.8	0.9	1.1 1.5	1.3	1.7
				Middle	5.1	18.0 18.0	18.0	16.0 15.9	15.9	33.4 33.4	33.4	122.2 123.1	122.7	9.5 9.5	9.5		0.8 0.8	0.8		1.8 1.5	1.7	
				Bottom	9.0	17.9 18.0	18.0	16.0 15.9	15.9	33.4 33.4	33.4	120.9 121.8	121.4	9.4 9.5	9.4		0.8 1.6	1.2		2.3 2.2	2.3	
M5	Sunny	Moderate	13:03	Surface	1.1	18.2 18.2	18.2	15.7 15.7	15.7	33.4 33.4	33.4	125.1 126.9	126.0	9.7 9.8	9.7	9.7	1.0 0.9	0.9	0.9	0.0 0.0	0.0	0.0
				Middle	6.1	18.1 18.0	18.1	15.7 15.7	15.7	33.4 33.4	33.4	125.5 126.5	126.0	9.7 9.8	9.8		0.9 0.8	0.9		0.0 0.0	0.0	
				Bottom	11.1	17.9 17.9	17.9	15.7 15.7	15.7	33.5 33.5	33.5	120.4 119.4	119.9	9.3 9.3	9.3		0.9 0.9	0.9		0.0 0.0	0.0	
M6	Sunny	Moderate	12:58	Surface	-	-	-	-	-	-	-	-	-	-	10.0	-	-	1.0	-	-	1.4	
				Middle	2.1	18.1 18.1	18.1	15.9 15.8	15.8	33.4 33.4	33.4	126.9 130.4	128.7	9.8 10.1		10.0	1.0 1.0		1.0	1.5 1.2		1.4
				Bottom	-	-	-	-	-	-	-	-	-	-		-	-		-	-		-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 5 February 2021 (Mid-Ebb Tide)

<u>Parameter (unit)</u>	<u>Depth</u>	<u>Action Level</u>	<u>Limit Level</u>
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.1 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.2 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 0.8 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 0.8 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 0.8 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 0.8 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 1.8 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 2.0 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 05 February 2021

(Mid-Flood Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
C1	Sunny	Moderate	14:45	Surface	1.0	18.2 18.3	18.2	15.7 15.6	15.6	33.4 33.4	33.4	125.7 128.1	126.9	9.7 9.9	9.8	9.8	0.9 0.9	0.9	0.9	1.0 1.4	1.2	1.7
				Middle	8.9	18.1 18.1	18.1	15.7 15.6	15.6	33.5 33.5	33.5	126.3 127.7	127.0	9.8 9.9	9.8		0.8 0.9	0.8		1.5 1.8	1.7	
				Bottom	17.0	17.9 17.9	17.9	15.7 15.6	15.7	33.5 33.5	33.5	121.4 122.8	122.1	9.4 9.5	9.5		0.9 0.9	0.9		2.2 2.4	2.3	
C2	Sunny	Moderate	14:01	Surface	1.1	18.3 18.3	18.3	14.9 15.5	15.2	33.3 33.3	33.3	121.2 125.0	123.1	9.4 9.6	9.5	9.5	0.8 0.8	0.8	0.9	0.0 1.4	0.7	1.6
				Middle	16.0	18.1 18.1	18.1	15.3 15.6	15.4	33.3 33.4	33.4	122.4 122.8	122.6	9.5 9.5	9.5		0.9 0.9	0.9		1.8 1.9	1.9	
				Bottom	31.1	17.9 17.9	17.9	15.5 15.7	15.6	33.5 33.5	33.5	116.4 117.4	116.9	9.0 9.1	9.1		1.0 1.0	1.0		2.3 2.2	2.3	
G1	Sunny	Moderate	14:23	Surface	1.0	18.6 18.6	18.6	15.7 15.7	15.7	33.2 33.2	33.2	128.1 131.5	129.8	9.8 10.1	10.0	10.0	0.9 0.9	0.9	1.0	1.3 0.0	0.7	1.4
				Middle	4.1	18.4 18.4	18.4	15.7 15.7	15.7	33.2 33.2	33.2	128.8 131.3	130.1	9.9 10.1	10.0		1.2 1.0	1.1		1.4 1.2	1.3	
				Bottom	7.0	18.0 18.2	18.1	15.8 15.7	15.7	33.4 33.3	33.3	126.2 129.8	128.0	9.8 10.0	9.9		1.1 1.1	1.1		2.3 2.1	2.2	
G2	Sunny	Moderate	14:16	Surface	1.0	18.3 18.4	18.3	15.7 15.7	15.7	33.3 33.3	33.3	130.0 129.3	129.7	10.0 10.0	10.0	10.0	1.1 0.9	1.0	1.1	1.0 0.0	0.5	1.1
				Middle	5.1	18.0 18.2	18.1	15.8 15.7	15.7	33.3 33.3	33.3	128.7 129.9	129.3	10.0 10.0	10.0		1.0 1.0	1.0		1.3 1.2	1.3	
				Bottom	9.1	17.9 17.9	17.9	15.8 15.8	15.8	33.5 33.4	33.4	119.8 120.3	120.1	9.3 9.3	9.3		1.2 1.3	1.3		1.5 1.5	1.5	
G3	Sunny	Moderate	14:26	Surface	1.1	18.5 18.5	18.5	15.7 15.7	15.7	33.3 33.3	33.3	130.0 132.9	131.5	10.0 10.2	10.1	10.1	0.9 1.0	0.9	1.0	1.2 1.2	1.2	1.7
				Middle	4.1	18.4 18.3	18.3	15.7 15.7	15.7	33.3 33.3	33.3	131.0 132.8	131.9	10.1 10.2	10.2		1.0 1.0	1.0		1.5 1.6	1.6	
				Bottom	7.2	18.1 18.1	18.1	15.7 15.7	15.7	33.3 33.3	33.3	123.5 123.8	123.7	9.6 9.6	9.6		1.1 1.2	1.1		2.4 2.4	2.4	
G4	Sunny	Moderate	14:33	Surface	1.1	18.3 18.3	18.3	15.7 15.8	15.7	33.3 33.3	33.3	124.1 127.2	125.7	9.6 9.8	9.7	9.7	1.0 1.0	1.0	1.0	2.7 2.4	2.6	1.7
				Middle	4.2	18.2 18.3	18.3	15.7 15.7	15.7	33.3 33.3	33.3	126.0 127.3	126.7	9.7 9.8	9.8		1.0 1.0	1.0		1.6 1.4	1.5	
				Bottom	7.1	18.1 18.2	18.1	15.8 15.7	15.7	33.4 33.3	33.4	126.9 127.6	127.3	9.8 9.9	9.8		1.1 1.0	1.0		1.2 1.0	1.1	
M1	Sunny	Moderate	14:20	Surface	0.9	18.5 18.5	18.5	15.7 15.7	15.7	33.3 33.3	33.3	120.6 123.0	121.8	9.3 9.5	9.4	9.4	1.2 1.1	1.1	1.1	2.8 3.4	3.1	2.3
				Middle	3.1	18.4 18.4	18.4	15.7 15.7	15.7	33.3 33.3	33.3	121.5 122.6	122.1	9.4 9.4	9.4		1.1 1.1	1.1		1.9 2.1	2.0	
				Bottom	5.1	18.2 18.2	18.2	15.8 15.8	15.8	33.3 33.3	33.3	121.7 122.4	122.1	9.4 9.5	9.4		1.0 1.1	1.1		1.8 1.8	1.8	
M2	Sunny	Moderate	14:12	Surface	1.1	18.4 18.4	18.4	15.8 15.7	15.7	33.3 33.3	33.3	125.7 128.7	127.2	9.7 9.9	9.8	9.9	1.2 0.9	1.1	4.0	2.2 2.1	2.2	0.7
				Middle	6.1	18.0 18.2	18.1	15.8 15.7	15.7	33.4 33.3	33.3	126.5 129.8	128.2	9.8 10.0	9.9		0.9 0.9	0.9		0.0 0.0	0.0	
				Bottom	11.1	17.9 17.9	17.9	15.8 15.7	15.8	33.5 33.4	33.5	121.5 121.2	121.4	9.4 9.4	9.4		17.4 2.7	10.1		0.0 0.0	0.0	
M3	Sunny	Moderate	14:28	Surface	1.2	18.5 18.6	18.5	15.7 15.6	15.6	33.3 33.3	33.3	132.7 135.3	134.0	10.2 10.4	10.3	10.3	1.0 0.9	1.0	1.1	2.0 1.7	1.9	1.3
				Middle	4.2	18.4 18.4	18.4	15.7 15.6	15.6	33.3 33.3	33.3	133.8 136.5	135.2	10.3 10.5	10.4		1.0 1.1	1.1		1.7 1.3	1.5	
				Bottom	7.0	18.1 18.1	18.1	15.7 15.7	15.7	33.3 33.3	33.3	126.1 127.7	126.9	9.8 9.9	9.8		1.2 1.2	1.2		1.1 0.0	0.6	
M4	Sunny	Moderate	14:07	Surface	1.1	18.3 18.3	18.3	15.9 15.8	15.8	33.3 33.3	33.3	130.4 131.4	130.9	10.1 10.1	10.1	10.0	0.8 0.9	0.8	1.0	1.3 1.4	1.4	0.5
				Middle	5.0	18.1 18.0	18.1	15.9 15.8	15.8	33.4 33.4	33.4	129.0 128.5	128.8	10.0 10.0	10.0		0.9 0.9	0.9		0.0 0.0	0.0	
				Bottom	9.0	18.0 18.0	18.0	15.9 15.8	15.8	33.4 33.4	33.4	127.2 125.2	126.2	9.9 9.7	9.8		1.0 1.5	1.2		0.0 0.0	0.0	
M5	Sunny	Moderate	14:37	Surface	1.2	18.2 18.2	18.2	15.7 15.6	15.7	33.4 33.4	33.4	134.6 129.3	132.0	10.4 10.0	10.2	10.1	0.9 0.8	0.8	0.8	1.6 1.7	1.7	1.0
				Middle	6.2	18.1 18.2	18.1	15.7 15.6	15.6	33.4 33.4	33.4	130.4 130.1	130.3	10.1 10.1	10.1		0.8 0.9	0.8		1.4 1.2	1.3	
				Bottom	11.1	17.9 18.0	18.0	15.7 15.6	15.7	33.5 33.5	33.5	123.1 127.4	125.3	9.6 9.9	9.7		0.8 0.9	0.9		0.0 0.0	0.0	
M6	Sunny	Moderate	14:36	Surface	-	-	-	-	-	-	-	-	-	-	10.2	-	-	1.1	-	-	1.4	
				Middle	2.1	18.2 18.2	18.2	15.8 15.8	15.8	33.4 33.4	33.4	131.4 132.0	131.7	10.1 10.2		10.2	1.0 1.1		1.1	1.2 1.5		1.4
				Bottom	-	-	-	-	-	-	-	-	-	-		-	-		-	-		-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 5 February 2021 (Mid-Flood Tide)

<u>Parameter (unit)</u>	<u>Depth</u>	<u>Action Level</u>	<u>Limit Level</u>
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.1 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.2 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 1.4 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 1.6 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 1.4 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 1.6 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 2.8 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 3.0 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 08 February 2021

(Mid-Ebb Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value
C1	Cloudy	Moderate	10:25	Surface	1.1	19.5	19.5	8.3	8.3	33.2	33.2	124.4	124.5	9.6	9.6	9.1	0.7	0.7	0.6	1.2	1.3	0.6
				Middle	9.0	19.2	19.2	8.3	8.3	33.3	33.3	112.6	112.6	8.7	8.7		0.5	0.5		0.0	0.5	
				Bottom	17.1	19.1	19.1	8.3	8.2	33.3	33.3	108.2	108.1	8.4	8.4		0.5	0.5		0.0	0.0	
C2	Cloudy	Moderate	09:26	Surface	1.1	19.5	19.5	8.2	8.2	33.2	33.2	121.7	121.5	9.4	9.4	9.2	0.8	0.7	0.9	1.4	1.3	0.8
				Middle	16.1	19.4	19.4	8.2	8.2	33.3	33.3	117.0	117.8	9.0	9.1		0.8	0.8		1.0	1.1	
				Bottom	31.0	19.4	19.4	8.2	8.2	33.3	33.3	112.8	112.6	8.7	8.7		1.1	1.1		0.0	0.0	
G1	Cloudy	Moderate	09:56	Surface	1.1	19.7	19.7	8.3	8.3	33.0	33.0	131.2	131.3	10.1	10.1	10.0	1.0	1.0	1.7	1.4	1.5	1.3
				Middle	4.1	19.6	19.6	8.3	8.3	33.2	33.2	128.3	128.7	9.9	9.9		1.7	1.7		1.4	1.3	
				Bottom	7.1	19.5	19.5	8.3	8.3	33.3	33.3	116.1	116.0	8.9	8.9		2.5	2.5		1.1	1.1	
G2	Cloudy	Moderate	09:44	Surface	1.1	19.7	19.7	8.3	8.3	33.2	33.2	130.1	130.1	10.0	10.0	9.5	0.9	0.9	0.7	1.2	1.1	0.4
				Middle	5.0	19.5	19.5	8.3	8.3	33.3	33.3	117.7	117.7	9.1	9.1		0.6	0.6		0.0	0.0	
				Bottom	9.1	19.4	19.4	8.3	8.3	33.3	33.3	117.3	117.2	9.0	9.0		0.7	0.7		0.0	0.0	
G3	Cloudy	Moderate	10:00	Surface	1.1	19.7	19.7	8.3	8.3	33.1	33.1	130.0	130.1	10.0	10.0	9.7	1.2	1.2	1.8	1.2	1.6	0.8
				Middle	4.0	19.6	19.6	8.3	8.3	33.2	33.2	122.4	122.4	9.4	9.4		1.7	1.7		1.0	1.1	
				Bottom	7.1	19.5	19.5	8.3	8.3	33.3	33.3	115.2	115.2	8.9	8.9		2.4	2.4		0.0	0.0	
G4	Cloudy	Moderate	10:07	Surface	1.0	19.7	19.7	8.4	8.4	33.2	33.2	132.7	132.8	10.2	10.2	9.8	0.8	0.8	1.2	0.0	0.0	1.0
				Middle	4.0	19.5	19.5	8.3	8.3	33.3	33.3	121.2	121.2	9.3	9.3		1.5	1.5		1.1	1.2	
				Bottom	7.0	19.5	19.5	8.3	8.3	33.3	33.3	116.4	116.4	9.0	9.0		1.4	1.4		1.9	1.9	
M1	Cloudy	Moderate	09:49	Surface	1.0	19.7	19.7	8.3	8.3	33.2	33.2	126.7	126.8	9.7	9.7	9.6	2.0	2.0	2.2	0.0	0.0	0.0
				Middle	3.1	19.6	19.6	8.3	8.3	33.3	33.3	124.0	124.0	9.5	9.5		2.1	2.1		0.0	0.0	
				Bottom	5.0	19.5	19.5	8.3	8.3	33.3	33.3	118.8	118.8	9.1	9.1		2.6	2.6		0.0	0.0	
M2	Cloudy	Moderate	09:40	Surface	1.1	19.6	19.6	8.3	8.3	33.2	33.2	125.9	125.9	9.7	9.7	9.4	1.0	1.0	0.9	0.0	0.0	0.0
				Middle	6.1	19.5	19.5	8.3	8.3	33.2	33.2	119.3	119.4	9.2	9.2		0.9	0.9		0.0	0.0	
				Bottom	11.1	19.4	19.4	8.2	8.2	33.3	33.3	115.0	114.9	8.9	8.9		0.9	0.9		0.0	0.0	
M3	Cloudy	Moderate	10:03	Surface	1.1	19.8	19.8	8.4	8.4	33.1	33.2	138.5	138.3	10.6	10.6	10.2	0.6	0.7	0.8	0.0	0.0	0.0
				Middle	4.1	19.6	19.7	8.3	8.3	33.2	33.2	128.0	128.3	9.8	9.8		0.8	0.8		0.0	0.0	
				Bottom	7.0	19.6	19.6	8.3	8.3	33.2	33.2	123.1	123.0	9.5	9.5		0.9	0.9		0.0	0.0	
M4	Cloudy	Moderate	09:34	Surface	1.0	19.4	19.5	8.2	8.3	33.2	33.2	118.3	122.0	9.1	9.4	9.1	0.8	0.8	0.9	1.2	1.0	0.4
				Middle	5.1	19.3	19.3	8.2	8.2	33.3	33.3	113.0	112.5	8.7	8.7		0.9	0.9		0.0	0.0	
				Bottom	9.0	19.3	19.3	8.2	8.2	33.3	33.3	111.9	111.8	8.6	8.6		0.9	0.9		0.0	0.0	
M5	Cloudy	Moderate	10:19	Surface	1.1	19.5	19.5	8.3	8.3	33.2	33.2	122.0	122.5	9.4	9.4	9.3	1.0	1.0	1.1	0.0	0.0	1.2
				Middle	5.5	19.4	19.4	8.3	8.3	33.3	33.3	116.7	119.5	9.0	9.1		1.2	1.2		1.5	1.4	
				Bottom	10.0	19.3	19.4	8.3	8.3	33.3	33.3	113.7	116.5	8.8	8.9		1.0	1.0		2.0	2.2	
M6	Cloudy	Moderate	10:12	Surface	-	-	-	-	-	-	-	-	-	-	10.1	-	-	0.5	-	-	1.5	
				Middle	2.0	19.6	19.6	8.3	8.3	33.2	33.2	131.6	131.4	10.1		10.1	0.5		0.5	1.6		1.3
				Bottom	-	-	-	-	-	-	-	-	-	-		-	-		-	-		-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 8 February 2021 (Mid-Ebb Tide)

<u>Parameter (unit)</u>	<u>Depth</u>	<u>Action Level</u>	<u>Limit Level</u>
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.4 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.5 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 1.6 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 1.8 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 1.6 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 1.8 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 0.0 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 0.0 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 08 February 2021

(Mid-Flood Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
C1	Cloudy	Moderate	15:22	Surface	1.1	19.2 19.2	19.2	8.3 8.3	8.3	33.3 33.3	33.3	118.9 118.9	118.9	9.2 9.2	9.2	8.8	0.4 0.4	0.4	0.5	1.5 1.4	1.5	0.9
				Middle	9.1	19.1 19.1	19.1	8.3 8.3	8.3	33.3 33.3	33.3	109.4 109.4	109.4	8.5 8.5	8.5	8.5	0.5 0.5	0.5		1.1 1.2	1.2	
				Bottom	17.1	19.1 19.1	19.1	8.2 8.2	8.2	33.4 33.4	33.4	107.8 107.7	107.8	8.4 8.4	8.4	8.4	0.6 0.6	0.6		0.0 0.0	0.0	
C2	Cloudy	Moderate	14:23	Surface	1.0	19.6 19.6	19.6	8.3 8.3	8.3	33.2 33.2	33.2	128.9 128.9	128.9	9.9 9.9	9.9	9.4	0.7 0.7	0.7	0.8	1.2 1.4	1.3	1.2
				Middle	16.1	19.4 19.4	19.4	8.2 8.2	8.2	33.3 33.3	33.3	114.8 114.8	114.8	8.9 8.9	8.9	8.9	0.9 0.9	0.9		1.1 1.1	1.2	
				Bottom	31.1	19.3 19.3	19.3	8.2 8.2	8.2	33.3 33.3	33.3	111.4 111.3	111.4	8.6 8.6	8.6	8.6	0.9 0.9	0.9		1.1 1.2	1.2	
G1	Cloudy	Moderate	14:53	Surface	1.1	19.9 19.9	19.9	8.4 8.4	8.4	33.1 33.1	33.1	148.2 148.5	148.4	11.3 11.4	11.4	10.5	0.8 0.8	0.8	1.6	3.5 4.0	3.8	1.7
				Middle	4.0	19.6 19.6	19.6	8.3 8.3	8.3	33.2 33.2	33.2	125.6 125.6	125.6	9.7 9.7	9.7	9.7	1.7 1.8	1.7		1.3 1.3	1.3	
				Bottom	7.0	19.5 19.5	19.5	8.3 8.3	8.3	33.3 33.3	33.3	116.6 116.6	116.6	9.0 9.0	9.0	9.0	2.3 2.3	2.3		0.0 0.0	0.0	
G2	Cloudy	Moderate	14:41	Surface	1.0	19.7 19.7	19.7	8.4 8.4	8.4	33.2 33.2	33.2	134.3 134.4	134.4	10.3 10.3	10.3	9.8	1.0 1.0	1.0	0.8	2.7 3.2	3.0	2.0
				Middle	5.0	19.4 19.4	19.4	8.3 8.3	8.3	33.3 33.3	33.3	120.4 120.4	120.4	9.3 9.3	9.3	9.3	0.7 0.7	0.7		1.6 1.8	1.7	
				Bottom	8.6	19.3 19.3	19.3	8.3 8.3	8.3	33.3 33.3	33.3	112.4 112.4	112.4	8.7 8.7	8.7	8.7	0.5 0.5	0.5		1.4 1.2	1.3	
G3	Cloudy	Moderate	14:57	Surface	1.1	19.9 19.9	19.9	8.4 8.4	8.4	33.0 33.0	33.0	145.5 145.6	145.6	11.2 11.2	11.2	10.4	0.8 0.8	0.8	1.4	1.6 1.8	1.7	0.6
				Middle	4.1	19.6 19.6	19.6	8.3 8.3	8.3	33.2 33.2	33.2	126.7 126.7	126.7	9.7 9.7	9.7	9.7	1.0 1.0	1.0		0.0 0.0	0.0	
				Bottom	7.1	19.5 19.5	19.5	8.3 8.3	8.3	33.3 33.3	33.3	116.6 116.2	116.4	9.0 9.0	9.0	9.0	2.2 2.3	2.2		0.0 0.0	0.0	
G4	Cloudy	Moderate	15:04	Surface	1.1	19.7 19.7	19.7	8.4 8.4	8.4	33.2 33.2	33.2	136.9 136.9	136.9	10.5 10.5	10.5	10.2	0.8 0.9	0.9	1.3	0.0 0.0	0.0	0.5
				Middle	4.0	19.5 19.5	19.5	8.3 8.3	8.3	33.2 33.2	33.2	127.6 127.6	127.6	9.8 9.8	9.8	9.8	1.2 1.2	1.2		0.0 0.0	0.0	
				Bottom	7.1	19.4 19.4	19.4	8.3 8.3	8.3	33.3 33.3	33.3	118.5 118.6	118.6	9.1 9.1	9.1	9.1	2.0 2.0	2.0		1.5 1.4	1.5	
M1	Cloudy	Moderate	14:46	Surface	1.0	19.7 19.7	19.7	8.3 8.3	8.3	33.2 33.2	33.2	128.8 132.9	130.9	9.9 10.2	10.0	10.0	1.0 1.3	1.3	1.4	1.3 1.0	1.2	1.6
				Middle	3.1	19.7 19.6	19.6	8.3 8.3	8.3	33.2 33.2	33.2	130.6 128.8	129.7	10.0 9.9	10.0	10.0	1.5 1.5	1.5		1.6 1.6	1.6	
				Bottom	5.0	19.5 19.4	19.5	8.3 8.3	8.3	33.3 33.3	33.3	122.0 116.9	119.5	9.4 9.0	9.2	9.2	1.3 1.3	1.3		1.9 2.2	2.1	
M2	Cloudy	Moderate	14:37	Surface	1.0	19.7 19.7	19.7	8.4 8.4	8.4	33.2 33.2	33.2	137.3 137.4	137.4	10.5 10.5	10.5	10.0	0.9 1.0	0.9	1.1	2.2 2.2	2.2	1.9
				Middle	6.1	19.5 19.5	19.5	8.3 8.3	8.3	33.3 33.3	33.3	121.8 121.9	121.9	9.4 9.4	9.4	9.4	1.0 1.0	1.0		1.6 1.9	1.8	
				Bottom	11.1	19.3 19.3	19.3	8.2 8.2	8.2	33.3 33.3	33.3	113.9 113.8	113.9	8.8 8.8	8.8	8.8	1.2 1.3	1.2		1.6 1.6	1.6	
M3	Cloudy	Moderate	15:00	Surface	1.0	19.8 19.8	19.8	8.4 8.4	8.4	33.1 33.1	33.1	138.0 138.0	138.0	10.6 10.6	10.6	10.0	0.7 0.7	0.7	1.1	0.0 0.0	0.0	0.8
				Middle	4.1	19.5 19.5	19.5	8.3 8.3	8.3	33.3 33.3	33.3	123.1 123.1	123.1	9.5 9.5	9.5	9.5	1.2 1.2	1.2		1.2 1.0	1.1	
				Bottom	7.1	19.4 19.4	19.4	8.3 8.3	8.3	33.3 33.3	33.3	115.3 115.3	115.3	8.9 8.9	8.9	8.9	1.6 1.6	1.6		1.4 1.4	1.4	
M4	Cloudy	Moderate	14:30	Surface	1.1	19.7 19.7	19.7	8.3 8.3	8.3	33.2 33.2	33.2	135.1 135.1	135.1	10.4 10.4	10.4	9.7	0.6 0.6	0.6	0.9	1.3 1.2	1.3	1.6
				Middle	5.1	19.4 19.4	19.4	8.3 8.3	8.3	33.3 33.3	33.3	117.9 118.0	118.0	9.1 9.1	9.1	9.1	1.0 0.9	0.9		1.5 1.6	1.6	
				Bottom	9.0	19.4 19.4	19.4	8.3 8.3	8.3	33.3 33.3	33.3	116.6 116.6	116.6	9.0 9.0	9.0	9.0	1.1 1.0	1.0		1.9 2.2	2.1	
M5	Cloudy	Moderate	15:16	Surface	1.1	19.6 19.6	19.6	8.3 8.3	8.3	33.2 33.2	33.2	133.2 133.3	133.3	10.2 10.2	10.2	9.6	1.0 1.1	1.0	1.3	0.0 0.0	0.0	1.8
				Middle	5.5	19.4 19.4	19.4	8.3 8.3	8.3	33.3 33.3	33.3	117.2 117.4	117.3	9.1 9.1	9.1	9.1	1.4 1.4	1.4		1.2 1.6	1.4	
				Bottom	10.1	19.2 19.2	19.2	8.2 8.2	8.2	33.3 33.3	33.3	107.4 107.5	107.5	8.3 8.3	8.3	8.3	1.5 1.5	1.5		3.9 4.0	4.0	
M6	Cloudy	Moderate	15:09	Surface	-	-	-	-	-	-	-	-	-	-	-	9.8	-	-	1.3	-	-	3.6
				Middle	2.1	19.5 19.5	19.5	8.3 8.3	8.3	33.3 33.3	33.3	126.8 126.7	126.8	9.8 9.8	9.8	9.8	8.0 8.0	8.0		3.7 3.5	3.6	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 8 February 2021 (Mid-Flood Tide)

<u>Parameter (unit)</u>	<u>Depth</u>	<u>Action Level</u>	<u>Limit Level</u>
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>CI: 0.7 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>CI: 0.8 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 1.7 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 1.9 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 1.7 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 1.9 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 0.0 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 0.0 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 10 February 2021

(Mid-Ebb Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)	Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)				
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*		
C1	Cloudy	Calm	11:53	Surface	1.0	20.0 20.0	20.0	8.0 8.0	8.0	34.0 34.0	34.0	96.7 96.7	96.7	7.2 7.2	7.2	7.2	7.2	1.2 1.2	1.2	1.2	2.0 2.6	2.3	2.1
				Middle	8.5	20.0 20.0	20.0	8.0 8.0	8.0	34.0 34.0	34.0	96.1 96.1	96.1	7.2 7.2	7.2	7.2		1.3 1.2	1.2		2.5 1.7	2.1	
				Bottom	16.1	20.0 20.0	20.0	8.0 8.0	8.0	34.0 34.0	34.0	95.8 95.7	95.8	7.1 7.1	7.1	7.1		1.3 1.3	1.3		1.9 1.8	1.9	
C2	Cloudy	Calm	10:22	Surface	1.1	20.0 20.0	20.0	8.2 8.2	8.2	34.0 34.0	34.0	96.8 96.8	96.8	7.2 7.2	7.2	7.2	7.2	1.6 1.7	1.7	1.6	1.1 1.3	1.2	1.9
				Middle	16.1	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	95.9 95.8	95.9	7.1 7.1	7.1	7.1		1.6 1.7	1.6		1.7 2.0	1.9	
				Bottom	31.1	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	95.8 95.8	95.8	7.1 7.1	7.1	7.1		1.4 1.5	1.5		2.9 2.1	2.5	
G1	Cloudy	Calm	10:57	Surface	1.0	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.7 96.7	96.7	7.2 7.2	7.2	7.2	7.2	1.3 1.3	1.3	1.3	2.6 2.0	2.3	1.8
				Middle	3.8	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.5 96.5	96.5	7.2 7.2	7.2	7.2		1.4 1.4	1.4		1.6 1.8	1.7	
				Bottom	6.5	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.3 96.3	96.3	7.2 7.2	7.2	7.2		1.4 1.3	1.3		1.3 1.4	1.4	
G2	Cloudy	Calm	10:40	Surface	1.1	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.6 96.6	96.6	7.2 7.2	7.2	7.2	7.2	1.4 1.4	1.4	1.4	1.8 1.8	1.8	1.6
				Middle	5.0	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.5 96.5	96.5	7.2 7.2	7.2	7.2		1.4 1.7	1.4		1.4 1.7	1.6	
				Bottom	9.1	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.2 96.1	96.2	7.2 7.2	7.2	7.2		1.4 1.4	1.4		1.6 1.4	1.5	
G3	Cloudy	Calm	11:05	Surface	1.0	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.7 96.7	96.7	7.2 7.2	7.2	7.2	7.2	1.4 1.3	1.4	1.3	2.0 2.8	2.4	2.0
				Middle	3.8	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.5 96.5	96.5	7.2 7.2	7.2	7.2		1.3 1.3	1.3		2.2 1.9	2.1	
				Bottom	6.5	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.3 96.2	96.3	7.2 7.2	7.2	7.2		1.3 1.3	1.3		1.8 1.3	1.6	
G4	Cloudy	Calm	11:23	Surface	1.0	20.0 20.0	20.0	8.0 8.0	8.0	34.0 34.0	34.0	96.7 96.7	96.7	7.2 7.2	7.2	7.2	7.2	1.3 1.3	1.3	1.3	1.5 1.3	1.4	1.6
				Middle	3.8	20.0 20.0	20.0	8.0 8.0	8.0	34.0 34.0	34.0	96.6 96.6	96.6	7.2 7.2	7.2	7.2		1.3 1.3	1.3		1.2 1.8	1.5	
				Bottom	6.6	20.0 20.0	20.0	8.0 8.0	8.0	34.0 34.0	34.0	96.3 96.3	96.3	7.2 7.2	7.2	7.2		1.3 1.3	1.3		1.8 1.8	1.8	
M1	Cloudy	Calm	10:45	Surface	1.1	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.5 96.5	96.5	7.2 7.2	7.2	7.2	7.2	1.4 1.4	1.4	1.3	2.0 2.7	2.4	1.5
				Middle	3.1	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.5 96.5	96.5	7.2 7.2	7.2	7.2		1.3 1.3	1.3		1.7 0.0	0.9	
				Bottom	5.1	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.4 96.4	96.4	7.2 7.2	7.2	7.2		1.3 1.3	1.3		1.5 1.0	1.3	
M2	Cloudy	Calm	10:34	Surface	1.0	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.7 96.7	96.7	7.2 7.2	7.2	7.2	7.2	1.5 1.5	1.5	1.4	1.1 1.1	1.1	1.8
				Middle	5.3	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.3 96.4	96.4	7.2 7.2	7.2	7.2		1.4 1.4	1.4		2.1 2.0	2.1	
				Bottom	9.5	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.0 96.0	96.0	7.2 7.2	7.2	7.2		1.4 1.4	1.4		2.3 2.0	2.2	
M3	Cloudy	Calm	11:15	Surface	1.1	20.0 20.0	20.0	8.0 8.0	8.0	34.0 34.0	34.0	96.8 96.8	96.8	7.2 7.2	7.2	7.2	7.2	1.3 1.3	1.3	1.3	1.1 1.8	1.5	2.0
				Middle	3.7	20.0 20.0	20.0	8.0 8.0	8.0	34.0 34.0	34.0	96.6 96.7	96.7	7.2 7.2	7.2	7.2		1.3 1.3	1.3		2.0 1.9	2.0	
				Bottom	6.5	20.0 20.0	20.0	8.0 8.0	8.0	34.0 34.0	34.0	96.3 96.3	96.3	7.2 7.2	7.2	7.2		1.3 1.3	1.3		2.9 2.4	2.7	
M4	Cloudy	Calm	10:28	Surface	1.1	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.6 96.6	96.6	7.2 7.2	7.2	7.2	7.2	1.4 1.4	1.4	1.4	3.6 2.9	3.3	2.5
				Middle	5.0	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.5 96.5	96.5	7.2 7.2	7.2	7.2		1.4 1.4	1.4		2.7 1.8	2.3	
				Bottom	9.0	20.0 20.0	20.0	8.1 8.1	8.1	34.0 34.0	34.0	96.2 96.2	96.2	7.2 7.2	7.2	7.2		1.5 1.5	1.5		2.4 1.5	2.0	
M5	Cloudy	Calm	11:41	Surface	1.1	20.0 20.0	20.0	8.0 8.0	8.0	34.0 34.0	34.0	96.7 96.7	96.7	7.2 7.2	7.2	7.2	7.2	1.3 1.3	1.3	1.3	1.0 1.1	1.1	1.6
				Middle	5.6	20.0 20.0	20.0	8.0 8.0	8.0	34.0 34.0	34.0	96.4 96.4	96.4	7.2 7.2	7.2	7.2		1.2 1.2	1.2		1.6 2.0	1.8	
				Bottom	10.1	20.0 20.0	20.0	8.0 8.0	8.0	34.0 34.0	34.0	96.0 96.0	96.0	7.2 7.2	7.2	7.2		1.2 1.3	1.3		1.8 2.3	2.1	
M6	Cloudy	Calm	11:29	Surface	-	-	-	-	-	-	-	-	-	-	-	7.2	-	-	1.2	-	-	1.9	
				Middle	2.0	20.0 20.0	20.0	8.0 8.0	8.0	34.0 34.0	34.0	96.6 96.6	96.6	7.2 7.2	7.2		7.2	1.2 1.2		1.2	2.4 1.4		1.9
				Bottom	-	-	-	-	-	-	-	-	-	-	-		-	-		-	-		-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 10 February 2021 (Mid-Ebb Tide)

Parameter (unit)	Depth	Action Level	Limit Level
DO in mg/L (See Note 1 and 4)	Stations G1-G4, M1-M5		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	Station M6		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	Stations G1-G4, M1-M5		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.8 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.9 NTU</u>
	Station M6		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	Stations G1-G4		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 1.4 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 1.6 mg/L</u>
	Stations M1-M5		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 1.4 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 1.6 mg/L</u>
	Stations G1-G4, M1-M5		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 0.0 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 0.0 mg/L</u>
	Station M6		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 10 February 2021

(Mid-Flood Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)	Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)				
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*		
C1	Cloudy	Calm	17:12	Surface	1.0	21.1 21.0	21.1	8.0 8.0	8.0	34.0 34.0	34.0	96.7 96.7	96.7	7.2 7.2	7.2	7.2	7.2	1.2 1.2	1.2	1.2	2.7 1.9	2.3	1.9
				Middle	9.0	20.9 21.4	21.2	8.0 8.0	8.0	34.0 34.0	34.0	96.0 96.1	96.1	7.2 7.2	7.2	7.2		1.2 1.2	1.2		2.4 1.6	2.0	
				Bottom	17.0	20.9 21.0	20.9	8.0 8.0	8.0	34.0 34.0	34.0	95.8 95.8	95.8	7.1 7.1	7.1	7.1		1.3 1.3	1.3		1.2 1.8	1.5	
C2	Cloudy	Calm	15:34	Surface	1.1	21.9 20.9	21.4	8.2 8.1	8.2	34.0 34.0	34.0	96.8 96.7	96.8	7.2 7.2	7.2	7.2	1.7 1.7	1.7	1.6	1.6 1.8	1.7	1.4	
				Middle	16.6	20.9 20.9	20.9	8.1 8.1	8.1	34.0 34.0	34.0	95.8 95.8	95.8	7.1 7.1	7.1		7.1	1.7 1.7		1.7	1.4 1.2		1.3
				Bottom	32.0	20.9 20.9	20.9	8.1 8.1	8.1	34.0 34.0	34.0	95.8 95.8	95.8	7.1 7.1	7.1		7.1	1.5 1.5		1.5	1.3 1.2		1.3
G1	Cloudy	Calm	16:10	Surface	1.1	21.6 20.9	21.2	8.1 8.1	8.1	34.0 34.0	34.0	96.6 96.7	96.7	7.2 7.2	7.2	7.2	1.3 1.3	1.3	1.4	1.5 1.4	1.5	1.7	
				Middle	4.0	20.9 20.9	20.9	8.1 8.1	8.1	34.0 34.0	34.0	96.5 96.5	96.5	7.2 7.2	7.2		7.2	1.4 1.4		1.4	1.5 1.9		1.7
				Bottom	7.0	20.8 20.8	20.8	8.1 8.1	8.1	34.0 34.0	34.0	96.4 96.3	96.4	7.2 7.2	7.2		7.2	1.4 1.4		1.4	2.0 1.6		1.8
G2	Cloudy	Calm	15:52	Surface	1.0	21.5 20.9	21.2	8.1 8.1	8.1	34.0 34.0	34.0	96.6 96.6	96.6	7.2 7.2	7.2	7.2	1.3 1.4	1.3	1.4	1.4 2.1	1.8	1.9	
				Middle	5.1	20.9 20.9	20.9	8.1 8.1	8.1	34.0 34.0	34.0	96.4 96.4	96.4	7.2 7.2	7.2		7.2	1.4 1.4		1.4	2.3 1.6		2.0
				Bottom	9.0	20.8 20.9	20.8	8.1 8.1	8.1	34.0 34.0	34.0	96.2 96.2	96.2	7.2 7.2	7.2		7.2	1.3 1.4		1.3	1.6 2.5		2.1
G3	Cloudy	Calm	16:18	Surface	1.0	21.4 20.9	21.2	8.1 8.1	8.1	34.0 34.0	34.0	96.7 96.7	96.7	7.2 7.2	7.2	7.2	1.3 1.3	1.3	1.3	1.2 2.1	1.7	2.0	
				Middle	4.1	20.9 20.9	20.9	8.1 8.1	8.1	34.0 34.0	34.0	96.5 96.6	96.6	7.2 7.2	7.2		7.2	1.3 1.3		1.3	2.2 1.2		1.7
				Bottom	7.1	20.7 20.8	20.8	8.1 8.1	8.1	34.0 34.0	34.0	96.2 96.2	96.2	7.2 7.2	7.2		7.2	1.3 1.3		1.3	2.9 2.1		2.5
G4	Cloudy	Calm	16:31	Surface	1.1	21.7 21.0	21.4	8.0 8.0	8.0	34.0 34.0	34.0	96.8 96.8	96.8	7.2 7.2	7.2	7.2	1.3 1.3	1.3	1.3	1.0 1.5	1.3	1.6	
				Middle	4.0	21.0 20.9	21.0	8.0 8.0	8.0	34.0 34.0	34.0	96.6 96.7	96.7	7.2 7.2	7.2		7.2	1.4 1.4		1.4	1.6 1.1		1.4
				Bottom	7.1	20.9 20.9	20.9	8.0 8.0	8.0	34.0 34.0	34.0	96.3 96.2	96.3	7.2 7.2	7.2		7.2	1.3 1.2		1.2	2.6 1.8		2.2
M1	Cloudy	Calm	15:58	Surface	1.0	21.2 21.1	21.1	8.1 8.1	8.1	34.0 34.0	34.0	96.6 96.6	96.6	7.2 7.2	7.2	7.2	1.4 1.4	1.4	1.3	1.4 1.9	1.7	1.7	
				Middle	3.1	20.9 21.0	20.9	8.1 8.1	8.1	34.0 34.0	34.0	96.5 96.5	96.5	7.2 7.2	7.2		7.2	1.3 1.3		1.3	2.0 1.4		1.7
				Bottom	5.0	20.8 20.8	20.8	8.1 8.1	8.1	34.0 34.0	34.0	96.4 96.4	96.4	7.2 7.2	7.2		7.2	1.3 1.3		1.3	2.0 1.5		1.8
M2	Cloudy	Calm	15:46	Surface	1.1	21.7 20.9	21.3	8.1 8.1	8.1	34.0 34.0	34.0	96.7 96.7	96.7	7.2 7.2	7.2	7.2	1.5 1.4	1.4	1.4	2.0 1.3	1.7	2.3	
				Middle	5.5	20.9 20.9	20.9	8.1 8.1	8.1	34.0 34.0	34.0	96.4 96.4	96.4	7.2 7.2	7.2		7.2	1.4 1.4		1.4	2.5 1.8		2.2
				Bottom	10.0	20.8 20.8	20.8	8.1 8.1	8.1	34.0 34.0	34.0	96.0 96.0	96.0	7.2 7.1	7.1		7.1	1.4 1.5		1.4	3.1 2.8		3.0
M3	Cloudy	Calm	16:25	Surface	1.0	21.3 21.0	21.1	8.0 8.0	8.0	34.0 34.0	34.0	96.8 96.8	96.8	7.2 7.2	7.2	7.2	1.4 1.3	1.3	1.3	2.6 1.9	2.3	1.7	
				Middle	4.0	20.9 20.9	20.9	8.0 8.0	8.0	34.0 34.0	34.0	96.6 96.6	96.6	7.2 7.2	7.2		7.2	1.3 1.3		1.3	1.0 1.8		1.4
				Bottom	7.1	20.7 20.8	20.7	8.0 8.0	8.0	34.0 34.0	34.0	96.3 96.3	96.3	7.2 7.2	7.2		7.2	1.3 1.3		1.3	1.0 1.6		1.3
M4	Cloudy	Calm	15:41	Surface	1.0	21.4 21.0	21.2	8.1 8.1	8.1	34.0 34.0	34.0	96.6 96.6	96.6	7.2 7.2	7.2	7.2	1.4 1.4	1.4	1.4	1.6 1.9	1.8	1.9	
				Middle	5.0	20.9 20.8	20.9	8.1 8.1	8.1	34.0 34.0	34.0	96.5 96.5	96.5	7.2 7.2	7.2		7.2	1.4 1.4		1.4	1.6 2.0		1.8
				Bottom	9.0	20.8 20.9	20.8	8.1 8.1	8.1	34.0 34.0	34.0	96.3 96.2	96.3	7.2 7.2	7.2		7.2	1.5 1.5		1.5	1.8 2.2		2.0
M5	Cloudy	Calm	17:01	Surface	1.1	21.0 21.0	21.0	8.0 8.0	8.0	34.0 34.0	34.0	96.7 96.7	96.7	7.2 7.2	7.2	7.2	1.3 1.3	1.3	1.3	1.9 1.5	1.7	1.9	
				Middle	6.0	20.9 21.9	21.4	8.0 8.0	8.0	34.0 34.0	34.0	96.5 96.5	96.5	7.2 7.2	7.2		7.2	1.2 1.2		1.2	1.4 1.9		1.7
				Bottom	11.1	20.9 20.9	20.9	8.0 8.0	8.0	34.0 34.0	34.0	96.0 96.0	96.0	7.2 7.1	7.1		7.1	1.3 1.3		1.3	1.8 2.7		2.3
M6	Cloudy	Calm	16:44	Surface	-	-	-	-	-	-	-	-	-	-	7.2	-	-	1.2	-	-	1.5		
				Middle	2.2	21.1 21.0	21.0	8.0 8.0	8.0	34.0 34.0	34.0	96.6 96.6	96.6	7.2 7.2		7.2	7.2		1.2 1.2	1.2		1.1 1.8	1.5
				Bottom	-	-	-	-	-	-	-	-	-	-		-	-		-	-		-	-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 10 February 2021 (Mid-Flood Tide)

Parameter (unit)	Depth	Action Level	Limit Level
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.6 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.7 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 2.8 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 3.0 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 2.8 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 3.0 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 1.8 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 2.0 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 16 February 2021

(Mid-Ebb Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)	Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)				
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	
C1	Sunny	Calm	10:53	Surface	1.1	21.7 21.6	21.7	8.5 8.5	8.5	33.6 33.7	33.7	92.7 92.4	92.6	7.1 7.1	7.1	7.1	1.3 1.3	1.3	1.3	1.9 2.3	2.1	1.9
				Middle	8.5	21.6 21.6	21.6	8.5 8.5	8.5	33.7 33.7	33.7	91.1 91.3	91.2	7.0 7.0	7.0	7.0	1.4 1.4	1.4	1.4	1.9 1.8	1.9	
				Bottom	16.1	21.6 21.6	21.6	8.5 8.5	8.5	33.7 33.7	33.7	90.1 90.2	90.2	6.9 6.9	6.9	6.9	1.3 1.3	1.3	1.3	1.7 1.9	1.8	
C2	Sunny	Calm	09:22	Surface	1.1	21.9 21.8	21.8	8.4 8.4	8.4	33.4 33.4	33.4	91.2 91.1	91.2	7.0 7.0	7.0	7.0	1.5 1.5	1.5	1.5	2.3 2.0	2.2	1.7
				Middle	16.0	21.6 21.6	21.6	8.4 8.4	8.4	33.6 33.6	33.6	89.5 89.5	89.5	6.9 6.9	6.9	6.9	1.9 1.9	1.9	1.9	1.5 1.4	1.5	
				Bottom	31.1	21.5 21.5	21.5	8.5 8.5	8.5	33.7 33.7	33.7	89.2 89.3	89.3	6.9 6.9	6.9	6.9	2.0 2.0	2.0	2.0	1.4 1.6	1.5	
G1	Sunny	Calm	10:03	Surface	1.0	21.8 21.7	21.7	8.5 8.5	8.5	33.5 33.5	33.5	91.5 91.2	91.4	7.0 7.0	7.0	7.0	1.8 1.9	1.9	1.9	2.3 2.0	2.2	1.8
				Middle	3.7	21.6 21.7	21.6	8.5 8.5	8.5	33.6 33.6	33.6	89.9 90.0	90.0	6.9 6.9	6.9	6.9	2.7 2.7	2.7	2.7	1.6 1.8	1.7	
				Bottom	6.6	21.5 21.5	21.5	8.5 8.5	8.5	33.7 33.8	33.7	89.8 89.9	89.9	6.9 6.9	6.9	6.9	2.2 2.0	2.1	2.1	1.7 2.0	1.6	
G2	Sunny	Calm	09:43	Surface	1.1	21.6 21.6	21.6	8.5 8.5	8.5	33.7 33.7	33.7	92.4 92.2	92.3	7.1 7.1	7.1	7.1	1.2 1.2	1.2	1.2	2.0 1.8	1.9	1.7
				Middle	5.0	21.6 21.6	21.6	8.5 8.5	8.5	33.7 33.7	33.7	91.3 91.4	91.4	7.0 7.0	7.0	7.0	1.1 1.1	1.1	1.1	1.7 1.6	1.7	
				Bottom	9.1	21.5 21.5	21.5	8.5 8.5	8.5	33.8 33.8	33.8	90.5 90.5	90.5	7.0 7.0	7.0	7.0	1.2 1.2	1.2	1.2	1.7 1.3	1.5	
G3	Sunny	Calm	10:09	Surface	1.0	21.8 21.8	21.8	8.5 8.5	8.5	33.3 33.3	33.3	93.2 93.1	93.2	7.2 7.2	7.2	7.2	0.7 0.7	0.7	0.7	1.4 2.0	1.7	2.0
				Middle	3.7	21.6 21.6	21.6	8.5 8.5	8.5	33.7 33.6	33.6	91.4 91.5	91.5	7.0 7.0	7.0	7.0	0.8 0.8	0.8	0.8	2.2 1.8	2.0	
				Bottom	6.6	21.6 21.6	21.6	8.5 8.5	8.5	33.7 33.8	33.7	90.9 90.6	90.8	7.0 7.0	7.0	7.0	0.8 0.8	0.8	0.8	1.9 2.5	2.2	
G4	Sunny	Calm	10:26	Surface	1.1	21.9 21.8	21.9	8.5 8.5	8.5	33.4 33.4	33.4	92.6 92.6	92.6	7.1 7.1	7.1	7.1	0.9 0.9	0.9	0.9	1.2 1.5	1.4	1.9
				Middle	3.7	21.7 21.7	21.7	8.5 8.5	8.5	33.6 33.6	33.6	91.0 91.2	91.1	7.0 7.0	7.0	7.0	0.9 0.9	0.9	0.9	1.7 2.0	1.9	
				Bottom	6.6	21.6 21.6	21.6	8.5 8.5	8.5	33.7 33.7	33.7	90.4 90.3	90.4	7.0 6.9	6.9	6.9	1.0 1.0	1.0	1.0	2.5 2.6	2.6	
M1	Sunny	Calm	09:51	Surface	1.1	21.7 21.7	21.7	8.5 8.5	8.5	33.5 33.5	33.5	90.1 90.0	90.1	6.9 6.9	6.9	6.9	2.8 3.0	2.9	2.9	2.1 2.4	2.3	1.9
				Middle	3.0	21.7 21.7	21.7	8.5 8.5	8.5	33.5 33.5	33.5	89.6 89.6	89.6	6.9 6.9	6.9	6.9	3.3 3.3	3.3	3.3	2.3 2.0	2.2	
				Bottom	5.0	21.7 21.6	21.6	8.5 8.5	8.5	33.5 33.6	33.6	89.5 89.5	89.5	6.9 6.9	6.9	6.9	2.6 2.5	2.6	2.6	1.2 1.6	1.4	
M2	Sunny	Calm	09:37	Surface	1.0	21.8 21.7	21.7	8.5 8.5	8.5	33.5 33.6	33.6	93.3 93.0	93.2	7.2 7.1	7.1	7.1	1.2 1.1	1.1	1.1	1.5 1.3	1.4	1.9
				Middle	5.3	21.6 21.6	21.6	8.5 8.5	8.5	33.7 33.7	33.7	91.7 91.8	91.8	7.0 7.1	7.0	7.0	0.9 1.0	1.0	1.0	2.1 2.0	2.1	
				Bottom	9.5	21.6 21.5	21.6	8.5 8.5	8.5	33.7 33.7	33.7	91.1 91.1	91.1	7.0 7.0	7.0	7.0	0.8 0.8	0.8	0.8	2.6 2.1	2.4	
M3	Sunny	Calm	10:18	Surface	1.1	22.0 22.0	22.0	8.5 8.5	8.5	32.7 32.8	32.7	89.5 89.4	89.5	6.9 6.9	6.9	6.9	1.9 2.0	1.9	1.9	1.3 0.0	0.7	1.4
				Middle	3.7	21.7 21.7	21.7	8.5 8.5	8.5	33.2 33.1	33.2	89.2 89.2	89.2	6.9 6.9	6.9	6.9	1.7 1.7	1.7	1.7	2.0 1.4	1.7	
				Bottom	6.5	21.6 21.6	21.6	8.5 8.5	8.5	33.6 33.7	33.7	90.4 90.3	90.4	7.0 6.9	6.9	6.9	1.2 1.3	1.3	1.3	1.4 2.2	1.8	
M4	Sunny	Calm	09:29	Surface	1.1	21.5 21.5	21.5	8.5 8.5	8.5	33.7 33.7	33.7	91.6 91.5	91.6	7.1 7.0	7.0	7.0	1.8 1.8	1.8	1.8	2.5 2.8	2.7	2.3
				Middle	5.0	21.4 21.4	21.4	8.5 8.5	8.5	33.7 33.7	33.7	91.1 91.1	91.1	7.0 7.0	7.0	7.0	1.8 1.8	1.8	1.8	2.8 2.3	2.6	
				Bottom	9.1	21.4 21.4	21.4	8.5 8.5	8.5	33.8 33.8	33.8	91.1 91.1	91.1	7.0 7.0	7.0	7.0	1.9 2.0	2.0	2.0	1.6 1.7	1.7	
M5	Sunny	Calm	10:43	Surface	1.0	22.0 21.8	21.9	8.5 8.5	8.5	33.3 33.4	33.4	91.7 91.7	91.7	7.0 7.0	7.0	7.0	1.5 1.5	1.5	1.5	1.2 1.2	1.2	1.6
				Middle	5.5	21.3 21.3	21.3	8.5 8.5	8.5	33.8 33.8	33.8	92.1 92.1	92.1	7.1 7.1	7.1	7.1	2.1 2.0	2.0	2.0	1.5 1.5	1.5	
				Bottom	10.0	21.3 21.3	21.3	8.5 8.5	8.5	33.8 33.8	33.8	92.1 92.1	92.1	7.1 7.1	7.1	7.1	2.3 2.3	2.3	2.3	2.2 1.8	2.0	
M6	Sunny	Calm	10:33	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6
				Middle	2.1	22.2 22.0	22.1	8.5 8.5	8.5	33.4 33.5	33.5	93.0 92.6	92.8	7.1 7.1	7.1	7.1	0.9 0.9	0.9	0.9	1.3 1.9	1.6	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 16 February 2021 (Mid-Ebb Tide)

<u>Parameter (unit)</u>	<u>Depth</u>	<u>Action Level</u>	<u>Limit Level</u>
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 2.4 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 2.6 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.6 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 2.8 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.6 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 2.8 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 1.8 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 2.0 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 16 February 2021

(Mid-Flood Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
C1	Sunny	Calm	16:33	Surface	1.0	21.8 21.7	21.8	8.5 8.5	8.5	33.6 33.6	33.6	92.9 92.8	92.9	7.1 7.1	7.1	7.0	1.4 1.4	1.4	1.5	2.0 2.4	2.2	1.9
				Middle	9.1	21.7 22.3	22.0	8.5 8.5	8.5	33.7 33.7	33.7	90.8 91.0	90.9	7.0 7.0	7.0	7.0	1.6 1.6	1.6		1.6 1.6	1.7	
				Bottom	17.1	21.6 21.6	21.6	8.5 8.5	8.5	33.7 33.7	33.7	90.1 90.1	90.1	6.9 6.9	6.9	6.9	1.6 1.5	1.5		1.6 1.5	1.7	
C2	Sunny	Calm	14:51	Surface	1.0	22.3 21.6	22.0	8.4 8.4	8.4	33.5 33.6	33.5	90.9 90.8	90.9	7.0 7.0	7.0	6.9	1.7 1.7	1.7	1.9	1.3 1.4	1.4	1.6
				Middle	16.5	21.6 21.6	21.6	8.4 8.4	8.4	33.6 33.6	33.6	89.6 89.7	89.7	6.9 6.9	6.9	6.9	2.0 2.0	2.0		1.4 1.7	1.6	
				Bottom	32.1	21.5 21.5	21.5	8.5 8.5	8.5	33.7 33.7	33.7	89.3 89.6	89.5	6.9 6.9	6.9	6.9	2.1 2.2	2.1		1.7 2.0	1.9	
G1	Sunny	Calm	15:30	Surface	1.1	22.3 21.8	22.1	8.5 8.5	8.5	33.4 33.4	33.4	91.8 91.7	91.8	7.0 7.0	7.0	7.0	1.9 1.9	1.9	2.5	1.4 1.0	1.2	1.5
				Middle	4.0	21.7 21.7	21.7	8.5 8.5	8.5	33.7 33.6	33.6	89.7 89.8	89.8	6.9 6.9	6.9	6.9	2.9 2.9	2.9		1.9 1.1	1.5	
				Bottom	7.0	21.5 21.5	21.5	8.5 8.5	8.5	33.7 33.7	33.7	89.6 89.7	89.7	6.9 6.9	6.9	6.9	2.7 2.6	2.6		1.4 2.0	1.7	
G2	Sunny	Calm	15:12	Surface	1.1	22.0 21.6	21.8	8.5 8.5	8.5	33.7 33.7	33.7	92.7 92.6	92.7	7.1 7.1	7.1	7.1	1.4 1.4	1.4	1.3	2.3 1.5	1.9	1.6
				Middle	5.1	21.6 21.6	21.6	8.5 8.5	8.5	33.7 33.7	33.7	91.1 91.2	91.2	7.0 7.0	7.0	7.0	1.3 1.3	1.3		1.1 1.8	1.7	
				Bottom	9.1	21.5 21.5	21.5	8.5 8.5	8.5	33.8 33.8	33.8	90.5 90.5	90.5	7.0 7.0	7.0	7.0	1.3 1.3	1.3		1.1 1.1	1.1	
G3	Sunny	Calm	15:36	Surface	1.1	22.0 21.8	21.9	8.5 8.5	8.5	33.4 33.4	33.4	93.0 92.8	92.9	7.1 7.1	7.1	7.1	0.9 0.9	0.9	0.9	1.6 2.5	2.1	2.0
				Middle	4.1	21.7 21.7	21.7	8.5 8.5	8.5	33.6 33.6	33.6	91.7 91.9	91.8	7.0 7.1	7.0	7.0	0.9 1.0	0.9		1.7 2.2	2.0	
				Bottom	7.0	21.6 21.6	21.6	8.5 8.5	8.5	33.8 33.8	33.8	90.6 90.3	90.5	7.0 6.9	6.9	6.9	1.0 1.0	1.0		1.7 2.1	1.9	
G4	Sunny	Calm	15:50	Surface	1.0	22.6 21.9	22.2	8.5 8.5	8.5	33.4 33.5	33.4	92.4 92.2	92.3	7.1 7.1	7.1	7.1	1.1 1.1	1.1	1.1	2.5 2.2	2.4	1.9
				Middle	4.1	21.8 21.8	21.8	8.5 8.5	8.5	33.6 33.5	33.5	91.3 91.5	91.4	7.0 7.0	7.0	7.0	1.1 1.1	1.1		1.8 2.0	1.9	
				Bottom	7.0	21.6 21.6	21.6	8.5 8.5	8.5	33.7 33.7	33.7	90.2 90.1	90.2	6.9 6.9	6.9	6.9	1.1 1.1	1.1		1.3 1.4	1.4	
M1	Sunny	Calm	15:17	Surface	1.1	22.5 21.7	22.1	8.5 8.5	8.5	33.5 33.5	33.5	90.0 89.9	90.0	6.9 6.9	6.9	6.9	3.4 3.5	3.4	3.2	1.9 2.2	2.1	2.6
				Middle	3.1	21.7 21.8	21.7	8.5 8.5	8.5	33.5 33.5	33.5	89.6 89.7	89.7	6.9 6.9	6.9	6.9	3.6 3.6	3.6		2.6 2.9	2.8	
				Bottom	5.1	21.6 21.6	21.6	8.5 8.5	8.5	33.6 33.6	33.6	89.5 89.5	89.5	6.9 6.9	6.9	6.9	2.5 2.6	2.5		2.8 3.0	2.9	
M2	Sunny	Calm	15:04	Surface	1.0	21.9 21.7	21.8	8.5 8.5	8.5	33.6 33.6	33.6	93.0 92.9	93.0	7.1 7.1	7.1	7.1	1.3 1.3	1.3	1.2	1.0 1.5	1.3	1.5
				Middle	5.5	21.7 21.7	21.7	8.5 8.5	8.5	33.6 33.6	33.6	91.9 92.1	92.0	7.1 7.1	7.1	7.1	1.2 1.2	1.2		1.4 1.5	1.5	
				Bottom	10.0	21.6 21.5	21.6	8.5 8.5	8.5	33.7 33.7	33.7	91.0 90.9	91.0	7.0 7.0	7.0	7.0	1.1 1.1	1.1		1.5 2.0	1.8	
M3	Sunny	Calm	15:43	Surface	1.0	22.4 22.1	22.3	8.5 8.5	8.5	32.7 32.7	32.7	89.9 89.7	89.8	6.9 6.9	6.9	6.9	1.8 1.9	1.9	1.7	2.3 2.6	2.5	2.0
				Middle	4.0	21.7 21.8	21.7	8.5 8.5	8.5	33.3 33.2	33.3	89.4 89.3	89.4	6.9 6.9	6.9	6.9	1.8 1.8	1.8		2.1 2.3	2.2	
				Bottom	7.0	21.7 21.6	21.7	8.5 8.5	8.5	33.6 33.6	33.6	90.3 90.4	90.4	6.9 7.0	6.9	6.9	1.3 1.4	1.3		1.2 1.7	1.5	
M4	Sunny	Calm	14:59	Surface	1.0	22.1 21.5	21.8	8.5 8.5	8.5	33.7 33.7	33.7	91.8 91.6	91.7	7.1 7.1	7.1	7.1	1.8 1.9	1.8	2.0	2.2 2.5	2.4	2.1
				Middle	5.1	21.5 21.5	21.5	8.5 8.5	8.5	33.7 33.7	33.7	91.1 91.1	91.1	7.0 7.0	7.0	7.0	2.0 2.0	2.0		2.3 2.0	2.2	
				Bottom	9.1	21.4 21.4	21.4	8.5 8.5	8.5	33.8 33.8	33.8	91.0 91.1	91.1	7.0 7.0	7.0	7.0	2.1 2.1	2.1		1.6 1.9	1.8	
M5	Sunny	Calm	16:21	Surface	1.1	21.8 21.6	21.7	8.5 8.5	8.5	33.5 33.6	33.6	91.7 91.8	91.8	7.0 7.1	7.0	7.0	1.7 1.7	1.7	2.1	2.6 3.2	2.9	2.6
				Middle	6.0	21.4 22.0	21.7	8.5 8.5	8.5	33.8 33.8	33.8	92.0 92.0	92.0	7.1 7.1	7.1	7.1	2.0 2.0	2.0		3.0 2.5	2.8	
				Bottom	11.0	21.3 21.3	21.3	8.5 8.5	8.5	33.8 33.8	33.8	92.1 92.2	92.2	7.1 7.1	7.1	7.1	2.5 2.6	2.6		2.4 1.7	2.1	
M6	Sunny	Calm	16:04	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	-	-	1.9
				Middle	2.3	22.5 22.3	22.4	8.5 8.5	8.5	33.3 33.4	33.3	93.4 93.2	93.3	7.1 7.1	7.1	7.1	8.0 8.0	8.0		1.8 2.0	1.9	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 16 February 2021 (Mid-Flood Tide)

<u>Parameter (unit)</u>	<u>Depth</u>	<u>Action Level</u>	<u>Limit Level</u>
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>C1: 1.9 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>C1: 2.0 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C1: 2.6 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C1: 2.9 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C1: 2.6 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C1: 2.9 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C1: 2.0 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C1: 2.2 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 18 February 2021

(Mid-Ebb Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*
C1	Sunny	Calm	11:17	Surface	1.1	20.7	20.7	8.1	8.1	34.5	34.5	96.6	96.6	7.1	7.1	7.1	0.9	0.9	1.0	1.1	1.3	2.4
				Middle	8.5	20.6	20.6	8.1	8.1	34.5	34.5	95.7	95.8	7.0	7.0		0.9			2.4	2.6	
				Bottom	16.0	20.6	20.5	8.1	8.1	34.5	34.5	94.4	94.3	6.9	6.9		1.1			2.7	3.5	
C2	Sunny	Calm	9:49	Surface	1.1	20.6	20.6	7.9	7.9	34.4	34.4	92.8	92.8	6.8	6.8	6.8	0.9	0.9	0.9	2.6	3.0	2.2
				Middle	16.0	20.6	20.6	7.9	7.9	34.4	34.4	92.6	92.4	6.8	6.8		0.9			2.5	2.3	
				Bottom	31.1	20.6	20.6	7.9	7.9	34.4	34.4	92.4	92.3	6.8	6.8		0.9			1.5	1.4	
G1	Sunny	Calm	10:24	Surface	1.0	20.8	20.8	8.1	8.1	34.4	34.4	97.2	97.2	7.1	7.1	7.1	1.1	1.1	1.5	3.2	3.1	2.8
				Middle	3.7	20.5	20.5	8.1	8.1	34.5	34.5	95.4	95.7	7.0	7.0		1.5			3.0	2.8	
				Bottom	6.6	20.4	20.4	8.1	8.1	34.5	34.5	93.8	93.5	6.9	6.9		1.9			2.2	2.5	
G2	Sunny	Calm	10:09	Surface	1.0	20.6	20.6	8.1	8.1	34.4	34.4	95.4	95.3	7.0	7.0	7.0	1.1	1.1	1.5	1.9	2.1	2.6
				Middle	5.1	20.5	20.5	8.1	8.1	34.5	34.5	94.2	94.4	6.9	6.9		1.6			2.3	2.5	
				Bottom	9.0	20.4	20.4	8.1	8.1	34.6	34.6	93.7	93.8	6.9	6.9		1.7			3.5	3.3	
G3	Sunny	Calm	10:32	Surface	1.0	20.8	20.8	8.1	8.1	34.3	34.3	96.5	96.6	7.1	7.1	7.1	0.9	0.8	0.9	3.3	3.4	2.9
				Middle	3.8	20.6	20.6	8.1	8.1	34.4	34.4	97.2	97.4	7.1	7.1		0.8			3.0	3.0	
				Bottom	6.6	20.5	20.5	8.1	8.1	34.5	34.5	96.4	96.2	7.1	7.1		1.0			2.2	2.4	
G4	Sunny	Calm	10:49	Surface	1.0	20.9	20.9	8.1	8.1	34.4	34.4	97.3	97.3	7.1	7.1	7.1	1.4	1.4	1.3	3.9	4.2	3.3
				Middle	3.8	20.6	20.7	8.1	8.1	34.4	34.4	95.9	96.0	7.0	7.0		1.3			3.0	3.3	
				Bottom	6.5	20.5	20.5	8.1	8.1	34.5	34.5	95.7	95.7	7.0	7.0		1.3			2.7	2.5	
M1	Sunny	Calm	10:14	Surface	1.0	20.8	20.7	8.1	8.1	34.4	34.4	95.9	95.7	7.0	7.0	6.9	1.8	1.8	2.1	3.6	3.5	2.9
				Middle	3.1	20.5	20.5	8.1	8.1	34.4	34.4	93.5	93.4	6.9	6.9		2.3			2.6	2.8	
				Bottom	5.1	20.5	20.5	8.1	8.1	34.4	34.4	93.4	93.4	6.9	6.9		2.3			3.0	2.5	
M2	Sunny	Calm	10:01	Surface	1.1	20.7	20.7	8.0	8.0	34.4	34.4	97.3	97.2	7.1	7.1	7.1	1.3	1.2	1.0	2.9	2.7	3.3
				Middle	5.3	20.5	20.5	8.1	8.1	34.5	34.5	95.6	95.6	7.0	7.0		0.9			3.3	3.1	
				Bottom	9.5	20.5	20.5	8.1	8.1	34.5	34.5	95.8	95.9	7.0	7.0		1.0			4.3	4.1	
M3	Sunny	Calm	10:42	Surface	1.1	20.6	20.6	8.1	8.1	34.4	34.4	95.9	96.1	7.0	7.1	7.1	0.5	0.5	0.5	3.8	3.9	3.4
				Middle	3.7	20.5	20.5	8.1	8.1	34.5	34.5	96.2	96.2	7.1	7.1		0.5			3.2	3.2	
				Bottom	6.6	20.5	20.5	8.1	8.1	34.5	34.5	95.5	95.2	7.0	7.0		0.4			3.0	3.0	
M4	Sunny	Calm	9:56	Surface	1.1	20.5	20.5	8.0	8.0	34.5	34.5	93.4	93.4	6.9	6.9	6.9	1.6	1.6	1.7	3.4	3.5	2.9
				Middle	5.0	20.5	20.5	8.0	8.0	34.5	34.5	92.9	93.0	6.8	6.8		1.7			2.6	2.8	
				Bottom	9.1	20.5	20.5	8.0	8.0	34.5	34.5	92.5	92.5	6.8	6.8		1.7			2.4	2.3	
M5	Sunny	Calm	11:06	Surface	1.1	20.7	20.7	8.1	8.1	34.5	34.5	95.6	95.5	7.0	7.0	7.1	1.5	1.5	1.6	1.8	2.0	2.4
				Middle	5.5	20.5	20.5	8.2	8.2	34.7	34.7	97.3	97.2	7.1	7.1		1.7			2.5	2.3	
				Bottom	10.1	20.5	20.5	8.2	8.2	34.7	34.7	97.5	97.5	7.2	7.2		1.6			3.2	3.1	
M6	Sunny	Calm	10:56	Surface	-	-	-	-	-	-	-	-	-	-	6.9	-	-	1.0	-	-	3.1	
				Middle	2.1	20.5	20.5	8.1	8.1	34.4	34.4	93.7	93.5	6.9		6.9			1.0	3.3		2.9
				Bottom	-	-	-	-	-	-	-	-	-	-		-			-	-		-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 18 February 2021 (Mid-Ebb Tide)

Parameter (unit)	Depth	Action Level	Limit Level
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.1 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.2 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 3.5 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.8 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 3.5 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.8 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 1.6 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 1.8 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 18 February 2021

(Mid-Flood Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
C1	Sunny	Calm	17:47	Surface	1.1	20.7 20.7	20.7	8.1 8.1	8.1	34.5 34.5	34.5	96.8 96.7	96.8	7.1 7.1	7.1	7.0	0.9 1.1	1.0	1.0	2.8 3.3	3.1	3.6
				Middle	9.1	20.6 21.3	21.0	8.1 8.1	8.1	34.5 34.5	34.5	95.5 95.6	95.6	7.0 7.0	7.0		1.0 1.0			3.4 3.5		
				Bottom	17.0	20.6 20.6	20.6	8.1 8.1	8.1	34.5 34.5	34.5	94.7 94.5	94.6	7.0 6.9	6.9		1.1 1.1			4.4 3.9		
C2	Sunny	Calm	16:03	Surface	1.0	20.7 20.6	20.6	7.9 7.9	7.9	34.4 34.4	34.4	92.7 92.7	92.7	6.8 6.8	6.8	6.8	0.9 0.9	0.9	1.0	3.4 2.9	3.2	2.5
				Middle	16.6	20.6 20.6	20.6	7.9 7.9	7.9	34.4 34.4	34.4	92.4 92.4	92.4	6.8 6.8	6.8		1.0 1.0			2.2 2.2		
				Bottom	32.1	20.6 20.6	20.6	7.9 7.9	7.9	34.4 34.4	34.4	92.3 92.3	92.3	6.8 6.8	6.8		0.9 1.0			2.1 1.9		
G1	Sunny	Calm	16:43	Surface	1.0	21.3 20.8	21.1	8.1 8.1	8.1	34.3 34.4	34.3	97.3 97.2	97.3	7.1 7.1	7.1	7.1	1.1 1.2	1.2	1.5	2.8 3.1	3.0	2.4
				Middle	4.1	20.5 20.5	20.5	8.1 8.1	8.1	34.5 34.5	34.5	95.0 95.2	95.1	7.0 7.0	7.0		1.6 1.5			2.4 2.4		
				Bottom	7.0	20.5 20.4	20.5	8.1 8.1	8.1	34.5 34.5	34.5	94.2 94.0	94.1	6.9 6.9	6.9		1.7 1.8			1.7 2.1		
G2	Sunny	Calm	16:23	Surface	1.0	21.3 20.6	21.0	8.1 8.1	8.1	34.4 34.4	34.4	95.8 95.6	95.7	7.0 7.0	7.0	7.0	1.1 1.1	1.1	1.5	2.6 2.6	2.6	2.3
				Middle	5.0	20.5 20.5	20.5	8.1 8.1	8.1	34.5 34.5	34.5	94.0 94.1	94.1	6.9 6.9	6.9		1.7 1.6			2.2 2.2		
				Bottom	9.1	20.5 20.5	20.5	8.1 8.1	8.1	34.5 34.6	34.6	93.6 93.6	93.6	6.9 6.9	6.9		1.8 1.7			2.1 1.9		
G3	Sunny	Calm	16:49	Surface	1.1	21.0 20.8	20.9	8.1 8.1	8.1	34.3 34.4	34.3	96.7 97.1	96.9	7.1 7.1	7.1	7.1	0.8 0.8	0.8	0.9	2.1 2.3	2.2	2.0
				Middle	4.0	20.7 20.7	20.7	8.1 8.1	8.1	34.4 34.4	34.4	97.5 97.6	97.6	7.2 7.2	7.2		0.8 0.8			2.2 1.8		
				Bottom	7.0	20.5 20.5	20.5	8.1 8.1	8.1	34.5 34.5	34.5	95.9 95.5	95.7	7.1 7.0	7.0		1.0 1.1			1.8 1.6		
G4	Sunny	Calm	17:03	Surface	1.0	21.0 20.8	20.9	8.1 8.1	8.1	34.4 34.4	34.4	97.0 96.7	96.9	7.1 7.1	7.1	7.1	1.4 1.4	1.4	1.3	2.7 2.8	2.8	2.0
				Middle	4.1	20.7 20.7	20.7	8.1 8.1	8.1	34.4 34.4	34.4	96.1 96.2	96.2	7.0 7.1	7.0		1.3 1.3			1.8 1.6		
				Bottom	7.0	20.5 20.5	20.5	8.1 8.1	8.1	34.5 34.5	34.5	95.8 95.8	95.8	7.1 7.1	7.1		1.3 1.2			1.4 1.4		
M1	Sunny	Calm	16:31	Surface	1.1	21.5 20.7	21.1	8.1 8.1	8.1	34.4 34.4	34.4	95.3 95.1	95.2	7.0 7.0	7.0	6.9	1.8 1.8	2.2	2.2	3.0 2.6	2.8	2.3
				Middle	3.1	20.6 20.5	20.6	8.1 8.1	8.1	34.5 34.5	34.5	93.4 93.5	93.5	6.9 6.9	6.9		2.2 2.3			2.6 2.3		
				Bottom	5.0	20.6 20.6	20.6	8.1 8.1	8.1	34.5 34.5	34.5	93.3 93.2	93.3	6.9 6.9	6.9		2.4 2.4			1.9 1.6		
M2	Sunny	Calm	16:16	Surface	1.0	21.5 20.7	21.1	8.0 8.0	8.0	34.4 34.4	34.4	96.8 96.7	96.8	7.1 7.1	7.1	7.1	1.2 1.1	1.2	1.0	2.4 2.1	2.3	1.8
				Middle	5.6	20.6 20.6	20.6	8.1 8.0	8.0	34.5 34.5	34.5	95.7 95.7	95.7	7.0 7.0	7.0		0.8 0.8			1.8 1.6		
				Bottom	10.0	20.5 20.5	20.5	8.1 8.1	8.1	34.5 34.6	34.5	95.9 95.9	95.9	7.1 7.1	7.1		1.1 1.1			1.5 1.6		
M3	Sunny	Calm	16:57	Surface	1.0	21.1 20.7	20.9	8.1 8.1	8.1	34.4 34.4	34.4	95.4 95.7	95.6	7.0 7.0	7.0	7.0	0.5 0.5	0.5	0.5	2.4 2.5	2.5	2.2
				Middle	4.1	20.6 20.6	20.6	8.1 8.1	8.1	34.5 34.5	34.5	96.2 96.2	96.2	7.1 7.1	7.1		0.5 0.5			2.3 2.4		
				Bottom	7.1	20.5 20.5	20.5	8.1 8.1	8.1	34.5 34.5	34.5	95.8 95.7	95.8	7.1 7.0	7.0		0.5 0.4			1.8 2.0		
M4	Sunny	Calm	16:10	Surface	1.1	20.6 20.5	20.5	8.0 8.0	8.0	34.5 34.5	34.5	93.7 93.5	93.6	6.9 6.9	6.9	6.9	1.5 1.5	1.5	1.6	2.4 2.2	2.3	2.0
				Middle	5.1	20.5 20.5	20.5	8.0 8.0	8.0	34.5 34.5	34.5	92.8 92.9	92.9	6.8 6.8	6.8		1.7 1.7			2.0 1.9		
				Bottom	9.1	20.5 20.5	20.5	8.0 8.0	8.0	34.5 34.5	34.5	92.5 92.5	92.5	6.8 6.8	6.8		1.7 1.7			1.7 1.6		
M5	Sunny	Calm	17:35	Surface	1.0	20.6 20.6	20.6	8.1 8.1	8.1	34.6 34.6	34.6	95.1 94.9	95.0	7.0 7.0	7.0	7.0	1.5 1.6	1.5	1.6	2.6 2.4	2.5	2.1
				Middle	6.0	20.6 21.1	20.9	8.2 8.2	8.2	34.7 34.7	34.7	97.0 96.8	96.9	7.1 7.1	7.1		1.7 1.7			1.8 2.1		
				Bottom	11.0	20.6 20.5	20.6	8.2 8.2	8.2	34.7 34.7	34.7	97.5 97.5	97.5	7.2 7.2	7.2		1.6 1.6			2.0 1.5		
M6	Sunny	Calm	17:15	Surface	-	-	-	-	-	-	-	-	-	-	6.9	-	-	1.0	-	-	1.9	
				Middle	2.2	21.5 20.6	21.0	8.1 8.1	8.1	34.4 34.4	34.4	94.5 94.1	94.3	6.9 6.9		6.9			1.0 1.0			2.0 1.7
				Bottom	-	-	-	-	-	-	-	-	-	-		-			-			-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 18 February 2021 (Mid-Flood Tide)

Parameter (unit)	Depth	Action Level	Limit Level
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.3 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.4 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 3.7 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 4.0 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 3.7 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 4.0 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 5.0 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 5.4 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

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 Water Quality Monitoring Results on 20 February 2021

(Mid-Ebb Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*
C1	Cloudy	Calm	12:25	Surface	1.1	20.9 20.8	20.9	8.1 8.1	8.1	34.5 34.4	34.4	94.0 93.8	93.9	6.8 6.8	6.8	6.9	0.8 0.8	0.8	0.8	1.0 1.8	1.4	2.1
				Middle	11.0	20.7 20.7	20.7	8.2 8.2	8.2	34.7 34.7	34.7	96.4 96.1	96.3	7.0 7.0	7.0		0.8 0.7	0.8		2.3 2.0	2.2	
				Bottom	21.1	20.7 20.7	20.7	8.2 8.2	8.2	34.9 34.9	34.9	97.4 97.3	97.4	7.1 7.1	7.1		0.8 0.9	0.9		2.3 2.0	2.7	
C2	Cloudy	Calm	10:33	Surface	1.1	20.7 20.7	20.7	7.8 8.0	7.9	34.4 34.5	34.5	94.1 93.9	94.0	6.9 6.9	6.9	6.8	0.6 0.8	0.7	0.8	2.6 2.9	2.8	2.3
				Middle	16.0	20.6 20.6	20.6	7.9 8.0	7.9	34.5 34.5	34.5	93.7 93.1	93.4	6.9 6.8	6.8		0.8 0.8	0.8		2.5 2.1	2.3	
				Bottom	31.1	20.6 20.6	20.6	7.9 8.0	8.0	34.6 34.5	34.6	93.8 93.1	93.5	6.9 6.8	6.8		0.8 0.8	0.8		1.7 2.0	1.9	
G1	Cloudy	Calm	11:28	Surface	1.0	20.7 20.7	20.7	8.2 8.1	8.1	34.4 34.4	34.4	95.1 94.1	94.6	6.9 6.9	6.9	6.9	0.7 0.8	0.8	1.2	2.1 2.5	2.3	1.6
				Middle	4.5	20.7 20.6	20.6	8.2 8.1	8.1	34.4 34.4	34.4	94.4 93.6	94.0	6.9 6.8	6.9		1.0 1.0	1.0		1.1 1.2	1.2	
				Bottom	8.0	20.6 20.5	20.5	8.1 8.1	8.1	34.4 34.5	34.4	92.7 91.2	92.0	6.8 6.7	6.7		2.0 1.8	1.9		1.2 1.3	1.3	
G2	Cloudy	Calm	11:06	Surface	1.1	20.7 20.7	20.7	8.1 8.1	8.1	34.4 34.4	34.4	94.4 94.6	94.5	6.9 6.9	6.9	6.9	0.8 1.1	1.0	1.2	1.6 2.0	1.8	1.6
				Middle	5.1	20.7 20.7	20.7	8.1 8.1	8.1	34.4 34.4	34.4	93.8 94.1	94.0	6.9 6.9	6.9		1.0 1.2	1.1		1.3 1.8	1.6	
				Bottom	9.1	20.6 20.6	20.6	8.1 8.1	8.1	34.5 34.5	34.5	93.2 93.4	93.3	6.8 6.8	6.8		1.6 1.4	1.5		1.8 1.2	1.5	
G3	Cloudy	Calm	11:38	Surface	1.0	20.7 20.7	20.7	8.2 8.1	8.1	34.3 34.4	34.3	94.9 95.0	95.0	6.9 6.9	6.9	6.9	0.5 0.6	0.6	0.7	1.7 1.9	1.8	1.9
				Middle	4.5	20.6 20.7	20.6	8.2 8.1	8.1	34.4 34.4	34.4	94.1 95.1	94.6	6.9 7.0	6.9		0.7 0.6	0.6		1.8 1.9	1.9	
				Bottom	8.1	20.5 20.6	20.5	8.1 8.1	8.1	34.5 34.4	34.4	92.3 94.9	93.6	6.8 6.9	6.9		0.9 0.8	0.8		1.8 2.4	2.1	
G4	Cloudy	Calm	11:57	Surface	1.1	20.8 20.7	20.8	8.1 8.1	8.1	34.4 34.4	34.4	94.9 94.7	94.8	6.9 6.9	6.9	6.9	0.7 0.7	0.7	1.4	1.5 2.4	2.0	2.2
				Middle	4.5	20.8 20.7	20.7	8.2 8.1	8.1	34.4 34.4	34.4	94.6 94.4	94.5	6.9 6.9	6.9		0.8 0.8	0.8		2.0 2.3	2.2	
				Bottom	8.1	20.6 20.7	20.6	8.1 8.1	8.1	34.5 34.4	34.5	93.3 93.8	93.6	6.8 6.9	6.8		2.6 2.7	2.7		2.3 2.6	2.5	
M1	Cloudy	Calm	11:15	Surface	1.0	20.8 20.9	20.8	8.1 8.1	8.1	34.3 34.2	34.3	94.2 94.2	94.2	6.9 6.9	6.9	6.9	0.7 0.8	0.8	0.9	2.0 2.4	2.2	1.9
				Middle	3.9	20.6 20.8	20.7	8.1 8.1	8.1	34.4 34.3	34.3	93.7 94.1	93.9	6.9 6.9	6.9		0.8 0.9	0.9		1.8 2.0	1.9	
				Bottom	6.0	20.5 20.6	20.6	8.1 8.1	8.1	34.5 34.4	34.4	91.6 93.5	92.6	6.7 6.8	6.8		1.0 1.0	1.0		1.2 1.8	1.5	
M2	Cloudy	Calm	10:58	Surface	1.1	20.7 20.7	20.7	8.1 8.1	8.1	34.4 34.4	34.4	94.0 93.8	93.9	6.9 6.9	6.9	6.8	1.4 1.4	1.4	1.2	2.7 1.9	2.3	2.0
				Middle	6.0	20.6 20.6	20.6	8.1 8.1	8.1	34.5 34.5	34.5	93.2 92.9	93.1	6.8 6.8	6.8		1.4 1.1	1.3		2.2 1.8	2.0	
				Bottom	11.1	20.6 20.6	20.6	8.1 8.1	8.1	34.5 34.5	34.5	92.8 92.4	92.6	6.8 6.8	6.8		1.1 1.0	1.0		1.3 2.0	1.7	
M3	Cloudy	Calm	11:47	Surface	1.0	20.8 20.7	20.8	8.2 8.1	8.2	34.3 34.3	34.3	95.7 95.8	95.8	7.0 7.0	7.0	7.0	0.5 0.5	0.5	0.7	1.5 2.0	1.8	2.0
				Middle	4.5	20.7 20.7	20.7	8.2 8.1	8.2	34.4 34.4	34.4	96.2 96.4	96.3	7.0 7.0	7.0		0.5 0.5	0.5		1.5 2.1	1.8	
				Bottom	8.0	20.4 20.5	20.5	8.1 8.1	8.1	34.5 34.5	34.5	89.3 91.4	90.4	6.6 6.7	6.6		1.1 1.1	1.1		2.6 2.3	2.5	
M4	Cloudy	Calm	10:47	Surface	1.0	20.8 20.7	20.7	8.1 8.1	8.1	34.4 34.4	34.4	95.4 95.1	95.3	7.0 6.9	6.9	6.9	0.6 0.6	0.6	0.8	3.1 2.1	2.6	2.3
				Middle	5.0	20.6 20.6	20.6	8.1 8.1	8.1	34.4 34.4	34.4	94.0 93.3	93.7	6.9 6.8	6.8		0.8 0.9	0.9		2.4 2.5	2.5	
				Bottom	9.0	20.6 20.6	20.6	8.1 8.1	8.1	34.5 34.5	34.5	93.3 92.9	93.1	6.8 6.8	6.8		1.0 0.9	0.9		2.2 1.6	1.9	
M5	Cloudy	Calm	12:14	Surface	1.1	20.7 20.7	20.7	8.2 8.1	8.1	34.5 34.5	34.5	93.8 94.2	94.0	6.8 6.9	6.9	6.9	2.0 1.9	1.9	2.6	2.4 2.9	2.7	1.1
				Middle	6.6	20.7 20.7	20.7	8.2 8.2	8.2	34.7 34.7	34.7	94.8 95.1	95.0	6.9 6.9	6.9		3.3 2.9	3.1		1.1 0.0	0.6	
				Bottom	12.1	20.7 20.7	20.7	8.2 8.2	8.2	34.8 34.8	34.8	96.1 96.1	96.1	7.0 7.0	7.0		2.9 2.8	2.8		0.0 0.0	0.0	
M6	Cloudy	Calm	12:08	Surface	-	-	-	-	-	-	-	-	-	-	6.8	-	-	1.1	-	-	0.6	
				Middle	2.1	20.7 20.7	20.7	8.1 8.1	8.1	34.4 34.4	34.4	93.3 93.5	93.4	6.8 6.8		6.8	1.1 1.1		1.1	0.0 1.2		0.6
				Bottom	-	-	-	-	-	-	-	-	-	-		-	-		-	-		-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 20 February 2021 (Mid-Ebb Tide)

Parameter (unit)	Depth	Action Level	Limit Level
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.0 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 1.1 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 3.3 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.6 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 3.3 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.6 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.2 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 2.4 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 20 February 2021

(Mid-Flood Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
C1	Cloudy	Calm	19:29	Surface	1.0	20.9 20.8	20.9	8.1 8.1	8.1	34.5 34.5	34.5	97.4 97.4	97.4	7.1 7.1	7.1	7.1	0.9 0.9	0.9	0.9	1.8 1.1	1.5	0.9
				Middle	9.0	20.7 21.1	20.9	8.2 8.2	8.2	34.8 34.8	34.8	97.1 97.1	97.1	7.1 7.1	7.1		0.8 0.7	0.8		1.6 0.0	0.8	
				Bottom	17.1	20.7 20.7	20.7	8.2 8.2	8.2	34.8 34.8	34.8	97.0 96.9	97.0	7.1 7.1	7.1		1.0 0.9	1.0		1.0 1.0	0.5	
C2	Cloudy	Calm	17:47	Surface	1.1	21.4 20.7	21.0	7.8 7.8	7.8	34.5 34.6	34.5	94.7 94.6	94.7	6.9 6.9	6.9	6.9	0.9 1.0	0.9	1.0	0.0 1.2	0.6	0.6
				Middle	16.5	20.7 20.7	20.7	7.9 7.9	7.9	34.6 34.6	34.6	94.9 94.9	94.9	6.9 6.9	6.9		0.9 0.9	0.9		1.2 1.0	1.1	
				Bottom	32.0	20.7 20.7	20.7	8.0 8.0	8.0	34.7 34.7	34.7	93.7 93.5	93.6	6.8 6.8	6.8		1.0 1.1	1.0		0.0 0.0	0.0	
G1	Cloudy	Calm	18:26	Surface	1.0	21.5 20.7	21.1	8.2 8.2	8.2	34.4 34.4	34.4	99.2 99.3	99.3	7.2 7.2	7.2	7.2	0.9 0.9	0.9	1.3	1.8 1.1	1.5	0.9
				Middle	4.1	20.7 20.6	20.7	8.2 8.2	8.2	34.4 34.4	34.4	98.5 98.7	98.6	7.2 7.2	7.2		1.1 1.2	1.2		0.0 1.0	0.5	
				Bottom	7.0	20.6 20.6	20.6	8.2 8.2	8.2	34.5 34.4	34.5	97.7 97.3	97.5	7.1 7.1	7.1		1.8 1.8	1.8		1.2 0.0	0.6	
G2	Cloudy	Calm	18:07	Surface	1.1	21.5 20.7	21.1	8.2 8.1	8.1	34.4 34.4	34.4	97.4 97.3	97.4	7.1 7.1	7.1	7.1	1.0 1.1	1.0	1.2	1.8 0.0	0.9	0.3
				Middle	5.1	20.7 20.7	20.7	8.1 8.1	8.1	34.5 34.5	34.5	96.4 96.4	96.4	7.0 7.0	7.0		1.1 1.1	1.1		0.0 0.0	0.0	
				Bottom	9.0	20.6 20.6	20.6	8.1 8.1	8.1	34.5 34.5	34.5	94.9 94.4	94.7	6.9 6.9	6.9		1.5 1.5	1.5		0.0 0.0	0.0	
G3	Cloudy	Calm	18:33	Surface	1.0	21.6 20.7	21.2	8.2 8.2	8.2	34.4 34.5	34.4	97.1 97.2	97.2	7.1 7.1	7.1	7.1	0.7 0.7	0.7	0.8	1.2 0.0	0.6	0.2
				Middle	4.1	20.6 20.7	20.7	8.2 8.2	8.2	34.5 34.4	34.4	98.2 98.3	98.3	7.2 7.2	7.2		0.8 0.8	0.8		0.0 0.0	0.0	
				Bottom	7.1	20.5 20.6	20.6	8.2 8.2	8.2	34.4 34.5	34.4	96.5 96.3	96.4	7.0 7.0	7.0		0.9 1.0	1.0		0.0 0.0	0.0	
G4	Cloudy	Calm	18:46	Surface	1.1	21.6 20.8	21.2	8.1 8.1	8.1	34.4 34.4	34.4	98.9 99.1	99.0	7.2 7.2	7.2	7.2	0.9 0.8	0.9	1.4	0.0 0.0	0.0	0.6
				Middle	4.0	20.8 20.7	20.8	8.1 8.1	8.1	34.4 34.4	34.4	98.5 98.7	98.6	7.2 7.2	7.2		0.9 0.9	0.9		1.0 0.0	0.5	
				Bottom	7.0	20.6 20.7	20.7	8.1 8.1	8.1	34.5 34.4	34.4	96.9 96.5	96.7	7.1 7.0	7.0		2.5 2.4	2.4		1.2 1.5	1.4	
M1	Cloudy	Calm	18:14	Surface	1.1	21.6 20.9	21.2	8.1 8.1	8.1	34.3 34.4	34.3	96.0 96.0	96.0	7.0 7.0	7.0	7.0	0.9 0.8	0.9	1.0	0.0 1.0	0.5	0.3
				Middle	3.1	20.6 20.8	20.7	8.1 8.1	8.1	34.3 34.4	34.4	96.0 96.0	96.0	7.0 7.0	7.0		1.0 1.0	1.0		0.0 1.0	0.5	
				Bottom	5.1	20.6 20.6	20.6	8.1 8.1	8.1	34.5 34.5	34.5	95.7 95.7	95.7	7.0 7.0	7.0		1.1 1.1	1.1		0.0 0.0	0.0	
M2	Cloudy	Calm	17:59	Surface	1.0	21.3 20.7	21.0	8.1 8.1	8.1	34.4 34.5	34.4	97.3 97.4	97.4	7.1 7.1	7.1	7.1	1.3 1.3	1.3	1.2	1.2 0.0	0.6	0.2
				Middle	5.5	20.6 20.6	20.6	8.1 8.1	8.1	34.5 34.6	34.5	97.0 97.1	97.1	7.1 7.1	7.1		1.3 1.3	1.3		0.0 0.0	0.0	
				Bottom	10.0	20.6 20.6	20.6	8.1 8.1	8.1	34.6 34.5	34.6	95.7 95.3	95.5	7.0 7.0	7.0		1.1 1.1	1.1		0.0 0.0	0.0	
M3	Cloudy	Calm	18:40	Surface	1.0	21.3 20.8	21.0	8.2 8.1	8.1	34.4 34.3	34.4	97.9 97.9	97.9	7.1 7.1	7.1	7.1	0.3 0.4	0.4	0.6	1.0 0.0	0.5	0.2
				Middle	4.0	20.7 20.7	20.7	8.2 8.2	8.2	34.4 34.4	34.4	97.5 97.4	97.5	7.1 7.1	7.1		0.5 0.5	0.5		0.0 0.0	0.0	
				Bottom	7.0	20.5 20.6	20.5	8.2 8.2	8.2	34.5 34.5	34.5	95.9 95.7	95.8	7.0 7.0	7.0		0.9 1.0	0.9		0.0 0.0	0.0	
M4	Cloudy	Calm	17:53	Surface	1.0	20.9 20.8	20.8	8.3 8.3	8.3	34.5 34.4	34.4	94.6 94.6	94.6	6.9 6.9	6.9	6.9	0.7 0.8	0.7	0.9	0.0 0.0	0.0	0.0
				Middle	5.0	20.7 20.7	20.7	8.3 8.3	8.3	34.5 34.5	34.5	94.4 94.4	94.4	6.9 6.9	6.9		0.9 0.9	0.9		0.0 0.0	0.0	
				Bottom	9.0	20.6 20.6	20.6	8.3 8.3	8.3	34.5 34.6	34.6	94.4 94.5	94.5	6.9 6.9	6.9		1.1 1.2	1.2		0.0 0.0	0.0	
M5	Cloudy	Calm	19:17	Surface	1.1	20.8 20.8	20.8	8.2 8.2	8.2	34.6 34.7	34.6	96.0 96.1	96.1	7.0 7.0	7.0	7.0	2.0 2.1	2.1	2.6	0.0 0.0	0.0	0.0
				Middle	6.1	20.7 21.1	20.9	8.2 8.2	8.2	34.6 34.7	34.7	95.3 95.5	95.4	7.0 7.0	7.0		2.9 2.8	2.9		0.0 0.0	0.0	
				Bottom	11.1	20.7 20.7	20.7	8.2 8.2	8.2	34.7 34.7	34.7	95.8 95.7	95.8	7.0 7.0	7.0		2.7 2.8	2.7		0.0 0.0	0.0	
M6	Cloudy	Calm	19:00	Surface	-	-	-	-	-	-	-	-	-	-	7.1	-	-	1.0	-	-	0.6	
				Middle	2.2	21.0 20.7	20.9	8.1 8.1	8.1	34.4 34.4	34.4	96.7 96.9	96.8	7.1 7.1		7.1	1.0 1.0		1.0	0.0 1.2		0.6
				Bottom	-	-	-	-	-	-	-	-	-	-		-	-		-	-		-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 20 February 2021 (Mid-Flood Tide)

Parameter (unit)	Depth	Action Level	Limit Level
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.1 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.2 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 1.7 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 1.9 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 1.7 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 1.9 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 4.7 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 5.1 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 22 February 2021

(Mid-Flood Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
C1	Sunny	Calm	10:07	Surface	1.1	20.0 20.1	20.0	16.2 16.2	16.2	33.6 33.6	33.6	107.1 107.7	107.4	8.0 8.0	8.0	8.0	1.0 1.0	1.0	1.4	2.4 2.0	2.2	2.0
				Middle	9.1	19.5 19.5	19.5	16.3 16.3	16.3	33.8 33.8	33.8	105.8 105.9	105.9	8.0 8.0	8.0		1.1 1.1	1.1		1.6 2.2	1.9	
				Bottom	17.2	19.3 19.3	19.3	16.4 16.4	16.4	33.9 33.9	33.9	104.7 104.6	104.7	7.9 7.9	7.9		2.0 2.1	2.1		2.1 1.5	1.8	
C2	Sunny	Calm	9:00	Surface	1.0	19.8 19.7	19.8	16.4 16.5	16.5	33.7 33.6	33.6	104.7 104.9	104.8	7.8 7.9	7.8	7.8	1.0 1.0	1.0	1.4	2.3 2.7	2.5	2.2
				Middle	16.0	19.4 19.4	19.4	16.9 16.6	16.8	33.9 33.9	33.9	103.2 103.3	103.3	7.8 7.8	7.8		1.4 1.4	1.4		2.0 1.5	2.2	
				Bottom	30.5	19.3 19.3	19.3	16.8 16.6	16.7	33.9 33.9	33.9	101.8 102.2	102.0	7.7 7.7	7.7		1.7 1.8	1.7		2.0 2.0	1.8	
G1	Sunny	Calm	9:40	Surface	1.1	20.1 20.0	20.1	16.3 16.3	16.3	33.7 33.7	33.7	107.3 106.4	106.9	8.0 7.9	8.0	7.9	1.1 1.0	1.1	1.3	1.8 1.4	1.6	2.4
				Middle	4.2	19.7 19.8	19.8	16.3 16.3	16.3	33.8 33.7	33.8	104.9 105.9	105.4	7.9 7.9	7.9		1.2 1.1	1.1		2.4 3.1	2.8	
				Bottom	7.1	19.5 19.5	19.5	16.5 16.4	16.4	33.8 33.8	33.8	102.2 103.1	102.7	7.7 7.8	7.7		1.6 1.5	1.6		2.6 3.3	3.0	
G2	Sunny	Calm	9:32	Surface	1.1	19.9 19.9	19.9	16.3 16.4	16.4	33.7 33.8	33.7	108.0 107.8	107.9	8.1 8.0	8.0	8.0	0.9 1.0	0.9	1.2	1.7 2.6	2.2	2.6
				Middle	5.1	19.5 19.7	19.6	16.5 16.4	16.4	33.8 33.8	33.8	106.2 107.2	106.7	8.0 8.0	8.0		1.1 1.1	1.1		3.0 2.8	2.9	
				Bottom	9.1	19.4 19.4	19.4	16.5 16.5	16.5	33.8 33.8	33.8	103.2 103.0	103.1	7.8 7.8	7.8		1.6 1.6	1.6		3.2 2.4	2.8	
G3	Sunny	Calm	9:44	Surface	1.1	20.3 20.4	20.3	16.1 16.2	16.2	33.7 33.7	33.7	111.3 111.4	111.4	8.3 8.3	8.3	8.2	0.8 0.8	0.8	1.2	3.2 2.3	2.8	2.2
				Middle	4.1	19.9 20.1	20.0	16.3 16.2	16.2	33.8 33.7	33.8	110.3 110.2	110.3	8.2 8.2	8.2		1.1 1.0	1.1		2.7 2.4	2.1	
				Bottom	7.1	19.6 19.7	19.7	16.4 16.3	16.3	33.8 33.8	33.8	104.4 107.4	105.9	7.8 8.0	7.9		1.7 1.6	1.7		2.0 1.3	1.7	
G4	Sunny	Calm	9:52	Surface	1.1	20.1 20.2	20.2	16.3 16.2	16.3	33.7 33.7	33.7	108.5 108.5	108.5	8.1 8.1	8.1	8.0	1.0 1.0	1.0	1.3	1.7 2.3	2.0	2.4
				Middle	4.1	19.9 19.9	19.9	16.3 16.2	16.3	33.8 33.7	33.7	107.2 107.4	107.3	8.0 8.0	8.0		1.2 1.1	1.2		2.4 2.7	2.6	
				Bottom	7.0	19.6 19.6	19.6	16.4 16.3	16.4	33.8 33.8	33.8	103.3 104.6	104.0	7.8 7.9	7.8		1.7 1.5	1.6		3.0 2.5	2.8	
M1	Sunny	Calm	9:36	Surface	1.1	20.1 20.1	20.1	16.2 16.3	16.3	33.7 33.7	33.7	104.7 105.3	105.0	7.8 7.8	7.8	7.8	0.9 0.9	0.9	1.1	1.8 2.0	1.9	1.7
				Middle	3.1	19.7 19.8	19.8	16.3 16.3	16.3	33.8 33.8	33.8	104.2 104.2	104.2	7.8 7.8	7.8		1.1 1.1	1.1		1.3 1.6	1.5	
				Bottom	5.1	19.6 19.7	19.7	16.4 16.3	16.4	33.8 33.8	33.8	104.1 104.1	104.1	7.8 7.8	7.8		1.3 1.2	1.2		1.6 1.6	1.6	
M2	Sunny	Calm	9:27	Surface	1.1	20.0 20.2	20.1	16.3 16.3	16.3	33.7 33.7	33.7	107.6 108.4	108.0	8.0 8.1	8.0	8.0	0.9 0.9	0.9	1.0	2.6 3.4	3.0	2.4
				Middle	6.0	19.7 19.6	19.7	16.5 16.4	16.4	33.8 33.8	33.8	107.3 106.8	107.1	8.0 8.0	8.0		0.9 1.0	1.0		2.3 2.0	2.2	
				Bottom	11.0	19.4 19.4	19.4	16.6 16.5	16.5	33.8 33.8	33.8	104.3 105.0	104.7	7.9 7.9	7.9		1.2 1.2	1.2		2.0 2.2	2.1	
M3	Sunny	Calm	9:48	Surface	1.1	20.4 20.1	20.3	16.2 16.4	16.3	33.7 33.8	33.7	114.0 112.0	113.0	8.4 8.3	8.4	8.3	0.9 0.9	0.9	1.1	3.4 2.4	2.9	2.3
				Middle	4.1	19.8 19.9	19.8	16.4 16.3	16.3	33.8 33.8	33.8	106.3 111.5	108.9	8.0 8.3	8.1		1.2 1.1	1.1		2.0 2.1	2.1	
				Bottom	7.1	19.7 19.7	19.7	16.4 16.4	16.4	33.8 33.8	33.8	105.9 104.8	105.4	7.9 7.9	7.9		1.3 1.4	1.4		2.1 1.9	2.0	
M4	Sunny	Calm	9:08	Surface	1.1	19.8 19.8	19.8	16.4 16.4	16.4	33.6 33.6	33.6	105.8 105.8	105.8	7.9 7.9	7.9	7.9	1.1 1.1	1.1	1.9	1.8 2.4	2.1	12.3
				Middle	5.1	19.5 19.6	19.5	16.5 16.4	16.5	33.8 33.8	33.8	103.3 105.2	104.3	7.8 7.9	7.8		1.6 1.5	1.6		2.9 2.5	2.7	
				Bottom	9.0	19.5 19.6	19.6	16.5 16.5	16.5	33.8 33.8	33.8	102.5 103.7	103.1	7.7 7.8	7.7		3.0 3.0	3.0		24.8 39.2	32.0	
M5	Sunny	Calm	10:02	Surface	1.1	20.2 20.0	20.1	16.2 16.3	16.2	33.6 33.7	33.7	107.8 106.7	107.3	8.0 8.0	8.0	7.9	1.0 1.0	1.0	1.3	2.4 1.4	1.9	2.2
				Middle	6.6	19.6 19.6	19.6	16.3 16.2	16.3	33.8 33.8	33.8	104.4 104.7	104.6	7.9 7.9	7.9		1.2 1.2	1.2		2.5 1.9	2.2	
				Bottom	12.3	19.4 19.4	19.4	16.4 16.4	16.4	33.8 33.8	33.8	103.8 103.8	103.8	7.8 7.8	7.8		1.6 1.6	1.6		2.7 2.1	2.4	
M6	Sunny	Calm	9:57	Surface	-	-	-	-	-	-	-	-	-	-	7.8	-	-	0.9	-	-	2.0	
				Middle	2.2	20.0 20.0	20.0	16.2 16.2	16.2	33.7 33.7	33.7	105.1 104.2	104.7	7.8 7.8		7.8	0.9 0.9		0.9	1.6 2.4		2.0
				Bottom	-	-	-	-	-	-	-	-	-	-		-	-		-	-		-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 22 February 2021 (Mid-Flood Tide)

Parameter (unit)	Depth	Action Level	Limit Level
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>CI: 2.5 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>CI: 2.7 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 2.6 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 2.9 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 2.6 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 2.9 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 2.2 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 2.3 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 24 February 2021

(Mid-Flood Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
C1	Cloudy	Moderate	11:04	Surface	1.0	18.7	18.7	8.3	8.3	33.8	33.8	100.0	100.0	7.8	7.8	7.7	1.1	1.1	1.2	0.0	0.8	1.4
				Middle	9.0	18.5	18.5	8.3	8.3	33.8	33.8	97.7	97.7	7.6	7.6		1.1	1.1		1.4	1.9	
				Bottom	17.0	18.4	18.4	8.3	8.3	33.9	33.9	96.6	96.6	7.6	7.6		1.2	1.3		1.5	1.5	
C2	Cloudy	Moderate	10:02	Surface	1.0	18.8	18.8	8.2	8.3	33.8	33.8	98.5	98.6	7.7	7.7	7.6	0.9	0.8	0.8	0.0	0.9	2.2
				Middle	16.1	18.5	18.5	8.3	8.3	33.8	33.8	96.7	96.7	7.6	7.5		0.8	0.8		1.9	1.8	
				Bottom	31.0	18.5	18.5	8.3	8.3	33.8	33.8	96.3	96.3	7.5	7.5		0.7	0.7		3.6	4.0	
G1	Cloudy	Moderate	10:34	Surface	1.0	19.0	19.0	8.3	8.3	33.6	33.6	97.1	97.1	7.5	7.5	7.5	2.2	2.2	2.2	2.3	2.2	1.7
				Middle	4.0	18.6	18.6	8.3	8.3	33.7	33.7	96.1	96.1	7.5	7.5		2.3	2.3		2.7	2.2	
				Bottom	7.0	18.6	18.6	8.3	8.3	33.8	33.8	96.0	96.0	7.5	7.5		2.1	2.1		1.5	0.8	
G2	Cloudy	Moderate	10:26	Surface	1.0	18.9	18.9	8.2	8.2	33.7	33.7	96.6	96.6	7.5	7.5	7.5	2.3	2.3	2.1	2.1	1.7	1.6
				Middle	5.0	18.7	18.7	8.3	8.3	33.8	33.8	96.6	96.6	7.5	7.5		2.1	2.1		2.1	1.8	
				Bottom	9.0	18.5	18.5	8.3	8.3	33.8	33.8	96.0	96.0	7.5	7.5		1.8	1.8		1.2	1.2	
G3	Cloudy	Moderate	10:39	Surface	1.0	19.3	19.3	8.4	8.4	33.7	33.7	97.6	97.6	7.5	7.5	7.5	2.0	2.0	2.7	0.0	0.0	1.4
				Middle	4.1	18.6	18.6	8.4	8.4	33.8	33.8	95.7	95.7	7.5	7.5		3.0	3.0		1.7	2.0	
				Bottom	7.1	18.5	18.5	8.4	8.4	33.8	33.8	94.8	94.8	7.4	7.4		3.2	3.2		2.5	2.3	
G4	Cloudy	Moderate	10:50	Surface	1.1	18.8	18.8	8.3	8.3	33.7	33.7	98.1	98.0	7.6	7.6	7.6	2.5	2.5	2.5	2.7	2.6	2.1
				Middle	4.0	18.6	18.6	8.3	8.3	33.7	33.7	96.3	96.3	7.5	7.5		3.0	3.0		1.7	1.8	
				Bottom	7.0	18.5	18.5	8.3	8.3	33.8	33.8	95.7	95.7	7.5	7.5		2.2	2.1		2.0	1.9	
M1	Cloudy	Moderate	10:30	Surface	1.0	19.1	19.1	8.2	8.3	33.7	33.7	96.2	96.2	7.4	7.4	7.4	3.3	3.3	3.2	1.2	1.4	0.9
				Middle	3.1	18.9	18.9	8.3	8.3	33.7	33.7	95.2	95.2	7.4	7.4		3.0	3.0		1.7	1.4	
				Bottom	5.0	18.6	18.6	8.3	8.3	33.8	33.8	94.8	94.8	7.4	7.4		3.3	3.3		0.0	0.0	
M2	Cloudy	Moderate	10:15	Surface	1.1	18.8	18.8	8.2	8.2	33.8	33.8	100.4	100.4	7.8	7.8	7.7	0.7	0.7	1.2	1.8	1.4	1.7
				Middle	6.1	18.6	18.6	8.2	8.2	33.8	33.8	97.6	97.7	7.6	7.6		1.2	1.2		1.4	0.7	
				Bottom	11.0	18.4	18.4	8.3	8.3	33.8	33.8	96.3	96.3	7.5	7.5		1.7	1.7		2.4	2.9	
M3	Cloudy	Moderate	10:44	Surface	1.0	19.0	19.0	8.3	8.3	33.7	33.6	96.3	96.3	7.5	7.5	7.4	2.0	2.0	2.7	1.9	1.6	1.7
				Middle	4.1	18.7	18.7	8.3	8.3	33.8	33.8	94.4	94.2	7.4	7.3		3.4	3.5		1.4	1.4	
				Bottom	7.0	18.6	18.6	8.3	8.3	33.8	33.8	94.1	94.1	7.3	7.3		2.6	2.6		1.9	2.1	
M4	Cloudy	Moderate	10:10	Surface	1.1	18.8	18.8	8.2	8.2	33.8	33.8	99.1	99.1	7.7	7.7	7.7	0.7	0.7	0.9	2.1	2.7	1.7
				Middle	5.1	18.7	18.7	8.3	8.3	33.8	33.8	98.4	98.4	7.7	7.7		0.9	0.9		1.3	1.2	
				Bottom	9.1	18.7	18.7	8.3	8.3	33.8	33.8	97.8	97.8	7.6	7.6		1.1	1.1		1.6	1.3	
M5	Cloudy	Moderate	10:58	Surface	1.1	18.5	18.5	8.3	8.3	33.8	33.8	100.0	99.9	7.8	7.8	7.7	1.4	1.4	1.2	0.0	0.0	1.4
				Middle	6.0	18.4	18.4	8.3	8.3	33.8	33.8	97.6	97.6	7.6	7.6		1.1	1.0		1.4	1.9	
				Bottom	11.0	18.4	18.4	8.3	8.3	33.9	33.9	97.0	97.0	7.6	7.6		1.2	1.2		2.2	2.2	
M6	Cloudy	Moderate	10:55	Surface	-	-	-	-	-	-	-	-	-	-	7.5	-	-	1.5	-	-	0.6	
				Middle	2.0	18.6	18.6	8.3	8.3	33.7	33.7	96.8	96.8	7.5		7.5	1.5		1.5	1.2		0.6
				Bottom	-	-	-	-	-	-	-	-	-	-		-	-		-	-		-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 24 February 2021 (Mid-Flood Tide)

Parameter (unit)	Depth	Action Level	Limit Level
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.5 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.7 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 1.0 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 1.0 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 1.0 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 1.0 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 1.7 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 1.9 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 26 February 2021

(Mid-Ebb Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)			pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*
C1	Cloudy	Calm	12:16	Surface	1.0	20.1 20.1	20.1	7.5 7.5	7.5	34.0 34.0	34.0	97.4 99.1	98.3	7.2 7.4	7.3	7.3	1.7 1.4	1.6	2.0	2.8 2.5	2.7	2.3		
				Middle	8.5	20.1 20.1	20.1	7.4 7.6	7.5	34.1 34.2	34.1	97.5 99.2	98.4	7.2 7.4	7.3		2.9 1.2			2.0			2.2 2.3	
				Bottom	16.1	20.2 20.3	20.2	7.4 7.5	7.5	34.3 34.4	34.4	98.8 99.5	99.2	7.3 7.4	7.3		3.2 1.8			2.5			1.8 1.9	
C2	Cloudy	Calm	10:42	Surface	1.0	20.1 20.1	20.1	8.1 7.9	8.0	34.1 34.1	34.1	99.4 99.3	99.4	7.4 7.4	7.4	7.4	1.3 1.3	1.3	1.5	4.4 4.4	4.4	3.2		
				Middle	16.0	20.2 20.2	20.2	8.1 7.8	7.9	34.3 34.3	34.3	98.0 99.1	99.1	7.3 7.3	7.3		1.5 1.4			1.5			2.7 3.2	3.0
				Bottom	31.1	20.2 20.2	20.2	7.9 7.7	7.8	34.4 34.4	34.4	98.3 98.4	98.4	7.3 7.3	7.3		1.9 1.6			1.7			2.4 2.2	2.3
G1	Cloudy	Calm	11:22	Surface	1.0	20.1 20.1	20.1	7.5 7.5	7.5	34.0 34.0	34.0	98.3 97.2	97.8	7.3 7.2	7.3	7.2	1.6 1.5	1.5	2.6	2.8 2.5	2.7	2.3		
				Middle	3.8	20.0 20.0	20.0	7.5 7.5	7.5	34.0 34.0	34.0	96.6 96.4	96.5	7.2 7.2	7.2		3.0 3.3			3.1			2.2 2.5	2.4
				Bottom	6.6	20.0 20.0	20.0	7.5 7.5	7.5	34.1 34.1	34.1	96.1 96.1	96.1	7.2 7.2	7.2		2.9 3.2			3.1			1.9 2.0	
G2	Cloudy	Calm	11:03	Surface	1.0	20.1 20.1	20.1	7.5 7.6	7.5	34.0 34.0	34.0	99.3 98.7	99.0	7.4 7.3	7.4	7.3	1.2 1.3	1.2	1.7	3.1 2.9	3.0	2.5		
				Middle	5.1	20.1 20.1	20.1	7.6 7.6	7.6	34.1 34.1	34.1	98.1 98.0	98.1	7.3 7.3	7.3		2.1 1.9			2.0			2.6 2.3	2.5
				Bottom	9.0	20.2 20.2	20.2	7.6 7.5	7.6	34.3 34.2	34.2	99.1 99.2	99.2	7.3 7.4	7.3		1.9 1.8			1.9			2.4 1.8	2.1
G3	Cloudy	Calm	11:29	Surface	1.0	20.2 20.1	20.1	7.3 7.5	7.4	33.7 33.9	33.8	94.2 96.4	95.3	7.0 7.2	7.1	7.1	1.0 1.1	1.1	1.3	2.2 2.6	2.4	2.0		
				Middle	3.7	20.0 20.0	20.0	7.5 7.5	7.5	34.0 34.0	34.0	96.3 95.4	95.9	7.2 7.1	7.1		1.3 1.3			1.3			1.8 2.2	2.0
				Bottom	6.6	20.0 20.0	20.0	7.5 7.5	7.5	34.1 34.1	34.1	98.4 98.1	98.3	7.3 7.3	7.3		1.5 1.5			1.5			1.3 1.6	1.5
G4	Cloudy	Calm	11:45	Surface	1.1	20.1 20.1	20.1	7.3 7.4	7.4	33.8 34.0	33.9	96.1 98.5	97.3	7.2 7.3	7.2	7.3	1.2 1.3	1.3	1.5	4.2 4.0	4.1	3.4		
				Middle	3.8	20.0 20.0	20.0	7.4 7.5	7.5	34.0 34.0	34.0	97.5 97.9	97.7	7.3 7.3	7.3		1.5 1.7			1.6			3.6 3.2	3.4
				Bottom	6.6	20.0 20.0	20.0	7.5 7.5	7.5	34.0 34.0	34.0	97.6 97.7	97.7	7.3 7.3	7.3		1.8 1.8			1.8			3.0 2.5	2.8
M1	Cloudy	Calm	11:10	Surface	1.1	20.1 20.1	20.1	7.5 7.6	7.5	33.9 33.9	33.9	97.1 96.5	96.8	7.2 7.2	7.2	7.2	1.2 1.2	1.2	1.4	3.2 3.0	3.1	2.1		
				Middle	3.1	20.0 20.0	20.0	7.6 7.6	7.6	33.9 33.9	33.9	96.6 96.4	96.5	7.2 7.2	7.2		1.3 1.3			1.3			1.6 1.6	1.9
				Bottom	5.1	20.0 20.0	20.0	7.6 7.6	7.6	33.9 34.0	33.9	95.7 95.1	95.4	7.1 7.1	7.1		1.6 1.6			1.6			1.4 1.2	1.3
M2	Cloudy	Calm	10:56	Surface	1.1	20.2 20.2	20.2	7.7 7.6	7.6	34.0 34.0	34.0	98.4 97.8	98.1	7.3 7.3	7.3	7.3	1.4 1.7	1.5	2.4	1.7 1.6	1.7	2.4		
				Middle	5.2	20.1 20.1	20.1	7.8 7.6	7.7	34.2 34.1	34.2	98.9 98.0	98.5	7.3 7.3	7.3		1.6 1.5			1.6			2.4 2.1	2.3
				Bottom	9.5	20.2 20.2	20.2	7.7 7.6	7.6	34.3 34.3	34.3	98.7 99.0	98.9	7.3 7.3	7.3		6.0 2.2			4.1			3.2 3.5	3.4
M3	Cloudy	Calm	11:37	Surface	1.0	20.1 20.1	20.1	7.4 7.5	7.4	33.8 33.8	33.8	95.5 96.7	96.1	7.1 7.2	7.1	7.2	1.1 1.2	1.2	1.4	3.5 3.6	3.6	3.1		
				Middle	3.8	20.0 20.0	20.0	7.4 7.5	7.5	33.9 34.0	34.0	95.8 97.4	96.6	7.1 7.3	7.2		1.3 1.4			1.3			3.0 3.3	3.2
				Bottom	6.6	20.0 20.0	20.0	7.5 7.5	7.5	34.0 34.0	34.0	97.6 98.0	97.8	7.3 7.3	7.3		1.5 1.6			1.6			2.2 2.8	2.5
M4	Cloudy	Calm	10:49	Surface	1.0	20.2 20.1	20.1	7.6 7.7	7.6	34.1 34.1	34.1	99.5 99.6	99.6	7.4 7.4	7.4	7.4	1.3 1.3	1.3	1.3	2.5 3.0	2.8	2.2		
				Middle	5.0	20.1 20.1	20.1	7.7 7.7	7.7	34.1 34.1	34.1	99.2 99.4	99.3	7.4 7.4	7.4		1.5 1.3			1.4			1.8 2.0	1.9
				Bottom	9.1	20.1 20.1	20.1	7.7 7.7	7.7	34.2 34.2	34.2	99.1 99.2	99.2	7.4 7.4	7.4		1.2 1.3			1.3			1.8 1.9	1.9
M5	Cloudy	Calm	12:06	Surface	1.0	20.0 20.2	20.1	7.5 7.5	7.5	34.0 33.9	34.0	98.0 96.8	97.4	7.3 7.2	7.2	7.3	1.7 1.5	1.6	2.1	3.0 3.0	3.0	2.8		
				Middle	5.5	20.1 20.1	20.1	7.4 7.5	7.4	34.0 34.1	34.1	98.6 97.6	98.1	7.3 7.2	7.3		1.7 3.0			2.3			2.9 2.8	2.9
				Bottom	10.0	20.1 20.2	20.1	7.5 7.5	7.5	34.0 34.3	34.2	98.7 99.1	98.9	7.3 7.3	7.3		1.5 3.4			2.5			2.8 2.5	2.7
M6	Cloudy	Calm	11:53	Surface	-	-	-	-	-	-	-	-	-	-	-	7.3	-	-	1.5	-	-	2.5		
				Middle	2.0	20.1 20.0	20.1	7.5 7.5	7.5	34.0 34.0	34.0	98.0 98.1	98.1	7.3 7.3	7.3		1.3 1.7			1.5			2.3 2.6	2.5
				Bottom	-	-	-	-	-	-	-	-	-	-	-		-			-			-	-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 26 February 2021 (Mid-Ebb Tide)

Parameter (unit)	Depth	Action Level	Limit Level
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 2.1 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 2.3 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 5.3 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 5.7 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 5.3 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 5.7 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.8 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.0 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Water Quality Monitoring Results on 26 February 2021

(Mid-Flood Tide)

Location	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)					
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*		
C1	Cloudy	Calm	17:42	Surface	1.1	21.2 21.1	21.1	7.6 7.7	7.6	34.2 34.2	34.2	98.9 99.0	99.0	7.3 7.3	7.3	7.4	1.3 1.3	1.3	2.2	2.7 2.8	2.8	3.3		
				Middle	9.0	20.9 21.6	21.3	7.5 7.5	7.5	34.0 34.0	34.0	101.9 102.3	102.1	7.5 7.5	7.5		4.0 4.3			4.2			3.4 3.1	3.3
				Bottom	17.0	20.9 21.0	20.9	7.6 7.6	7.6	34.1 34.1	34.1	99.1 99.1	99.1	7.3 7.3	7.3		1.2 1.1			1.1			4.2 3.5	3.9
C2	Cloudy	Calm	15:58	Surface	1.0	21.9 20.9	21.4	8.4 8.4	8.4	34.0 34.0	34.0	98.4 98.3	98.4	7.3 7.3	7.3	7.2	1.4 1.4	1.4	1.8	2.6 2.5	2.6	2.4		
				Middle	16.5	20.9 20.9	20.9	8.7 8.7	8.7	34.1 34.1	34.1	96.3 96.4	96.4	7.2 7.2	7.2		1.9 1.9			1.9			2.4 2.2	2.5
				Bottom	32.1	20.9 20.9	20.9	8.6 8.5	8.6	34.2 34.2	34.2	95.9 95.9	95.9	7.1 7.1	7.1		1.9 2.0			2.0			2.2 2.3	2.3
G1	Cloudy	Calm	16:41	Surface	1.0	21.1 20.9	21.0	7.8 7.8	7.8	34.0 34.0	34.0	96.9 96.9	96.9	7.2 7.2	7.2	7.2	1.7 1.8	1.8	1.8	2.8 2.4	2.6	2.3		
				Middle	4.0	20.9 20.9	20.9	7.8 7.8	7.8	34.0 34.0	34.0	97.0 97.0	97.0	7.2 7.2	7.2		1.8 1.8			1.8			2.0 2.3	2.2
				Bottom	7.1	20.8 20.8	20.8	7.8 7.8	7.8	34.0 34.0	34.0	97.0 97.0	97.0	7.2 7.2	7.2		1.8 1.8			1.8			2.0 2.0	2.0
G2	Cloudy	Calm	16:19	Surface	1.1	21.9 20.9	21.4	7.8 7.8	7.8	34.0 34.0	34.0	97.0 97.0	97.0	7.2 7.2	7.2	7.2	1.6 1.6	1.6	1.7	2.6 3.2	2.9	2.6		
				Middle	5.0	20.9 20.9	20.9	7.8 7.8	7.8	34.0 34.0	34.0	97.1 97.1	97.1	7.2 7.2	7.2		1.8 1.8			1.8			2.4 2.1	2.5
				Bottom	9.0	20.8 20.9	20.8	7.8 7.8	7.8	34.0 34.0	34.0	97.1 97.1	97.1	7.2 7.2	7.2		1.8 1.8			1.8			2.6 2.4	2.3
G3	Cloudy	Calm	16:47	Surface	1.1	21.2 20.9	21.1	7.8 7.8	7.8	34.0 34.1	34.0	96.5 96.5	96.5	7.2 7.2	7.2	7.2	1.8 1.8	1.8	1.7	2.4 2.2	2.3	3.4		
				Middle	4.1	20.9 20.9	20.9	7.8 7.8	7.8	34.1 34.1	34.1	96.5 96.5	96.5	7.2 7.2	7.2		1.8 1.8			1.8			3.4 3.7	3.6
				Bottom	7.1	20.7 20.8	20.8	7.7 7.7	7.7	34.2 34.2	34.2	99.1 99.0	99.1	7.3 7.3	7.3		1.5 1.5			1.5			4.2 4.6	4.4
G4	Cloudy	Calm	17:01	Surface	1.0	21.8 21.0	21.4	7.6 7.6	7.6	34.0 34.1	34.1	98.8 98.7	98.8	7.3 7.3	7.3	7.3	1.3 1.3	1.3	1.3	3.6 4.1	3.9	7.3		
				Middle	4.0	21.0 20.9	21.0	7.7 7.7	7.7	34.2 34.2	34.2	98.7 98.7	98.7	7.3 7.3	7.3		1.5 1.5			1.5			3.2 28.3	15.8
				Bottom	7.0	20.9 20.9	20.9	7.6 7.6	7.6	34.0 34.0	34.0	98.8 98.7	98.8	7.3 7.3	7.3		1.2 1.3			1.2			2.2 2.2	2.2
M1	Cloudy	Calm	16:27	Surface	1.0	21.1 21.1	21.1	7.8 7.8	7.8	34.0 34.0	34.0	96.6 96.5	96.6	7.2 7.2	7.2	7.2	1.7 1.7	1.7	1.7	3.3 3.3	3.3	3.7		
				Middle	3.0	20.8 21.0	20.9	7.8 7.8	7.8	34.1 34.1	34.1	96.4 96.5	96.5	7.2 7.2	7.2		1.7 1.7			1.7			3.7 3.4	3.6
				Bottom	5.1	20.8 20.8	20.8	7.8 7.8	7.8	34.0 34.0	34.0	96.9 96.9	96.9	7.2 7.2	7.2		1.6 1.7			1.6			4.1 4.4	4.3
M2	Cloudy	Calm	16:14	Surface	1.1	21.9 20.9	21.4	7.9 7.9	7.9	34.1 34.1	34.1	96.7 96.7	96.7	7.2 7.2	7.2	7.2	1.7 1.7	1.7	1.7	4.3 4.1	4.2	3.3		
				Middle	5.6	20.8 20.9	20.8	7.9 7.9	7.9	34.1 34.1	34.1	96.7 96.7	96.7	7.2 7.2	7.2		1.8 1.7			1.7			3.6 3.6	3.6
				Bottom	10.0	20.8 20.8	20.8	7.8 7.8	7.8	34.0 34.0	34.0	97.2 97.1	97.2	7.2 7.2	7.2		1.6 1.6			1.6			2.0 2.4	2.2
M3	Cloudy	Calm	16:53	Surface	1.1	21.4 21.0	21.2	7.6 7.6	7.6	34.0 34.0	34.0	99.5 99.5	99.5	7.3 7.3	7.3	7.3	1.3 1.2	1.3	1.3	3.1 3.4	3.3	2.9		
				Middle	4.1	20.9 20.9	20.9	7.6 7.6	7.6	34.0 34.1	34.0	98.9 98.8	98.9	7.3 7.3	7.3		1.4 1.3			1.3			3.2 3.0	3.1
				Bottom	7.1	20.7 20.8	20.7	7.7 7.7	7.7	34.1 34.1	34.1	98.8 98.8	98.8	7.3 7.3	7.3		1.4 1.4			1.4			2.6 2.2	2.4
M4	Cloudy	Calm	16:06	Surface	1.1	21.1 21.0	21.0	8.1 8.1	8.1	33.9 33.9	33.9	97.6 97.6	97.6	7.2 7.2	7.2	7.3	1.5 1.5	1.5	1.5	2.6 2.5	2.6	2.4		
				Middle	5.0	20.9 20.8	20.9	7.8 7.8	7.8	33.9 33.9	33.9	98.1 98.2	98.2	7.3 7.3	7.3		1.5 1.5			1.5			2.4 2.4	2.4
				Bottom	9.0	20.8 20.9	20.8	7.8 7.8	7.8	33.9 33.9	33.9	98.1 98.0	98.1	7.3 7.3	7.3		1.4 1.4			1.4			2.3 2.0	2.2
M5	Cloudy	Calm	17:31	Surface	1.1	21.0 21.0	21.0	7.6 7.6	7.6	34.0 34.0	34.0	99.6 99.6	99.6	7.4 7.4	7.4	7.4	1.2 1.2	1.2	1.2	3.4 3.3	3.4	3.0		
				Middle	6.1	20.9 21.9	21.4	7.6 7.6	7.6	34.0 34.0	34.0	99.4 99.6	99.5	7.3 7.4	7.3		1.2 1.2			1.2			3.1 3.2	3.2
				Bottom	11.0	20.9 20.9	20.9	7.6 7.6	7.6	34.2 34.2	34.2	98.9 98.9	98.9	7.3 7.3	7.3		1.2 1.3			1.3			2.3 2.7	2.5
M6	Cloudy	Calm	17:12	Surface	-	-	-	-	-	-	-	-	-	-	7.3	-	-	1.3	-	-	2.9			
				Middle	2.2	21.5 20.9	21.2	7.6 7.6	7.6	34.0 34.0	34.0	98.7 98.6	98.7	7.3 7.3		7.3			1.3 1.3			1.3	3.1 2.7	2.9
				Bottom	-	-	-	-	-	-	-	-	-	-		-			-			-	-	-

Remarks: *DA: Depth-Averaged
 **Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher.

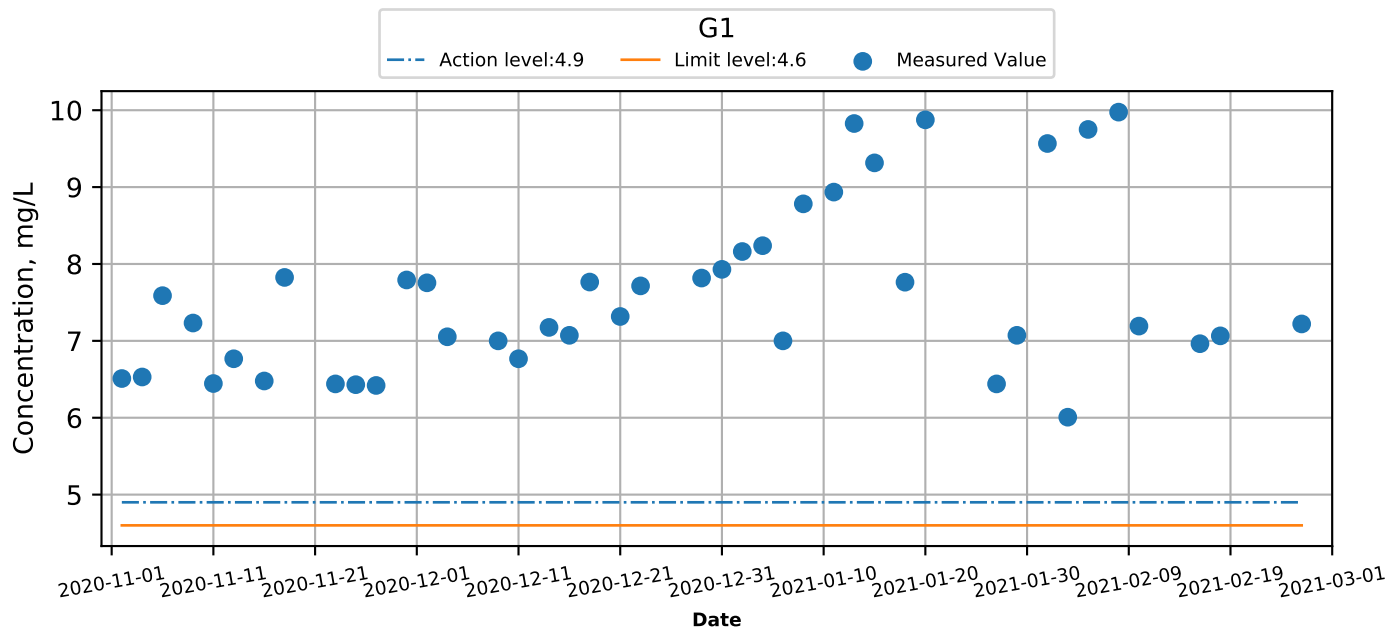
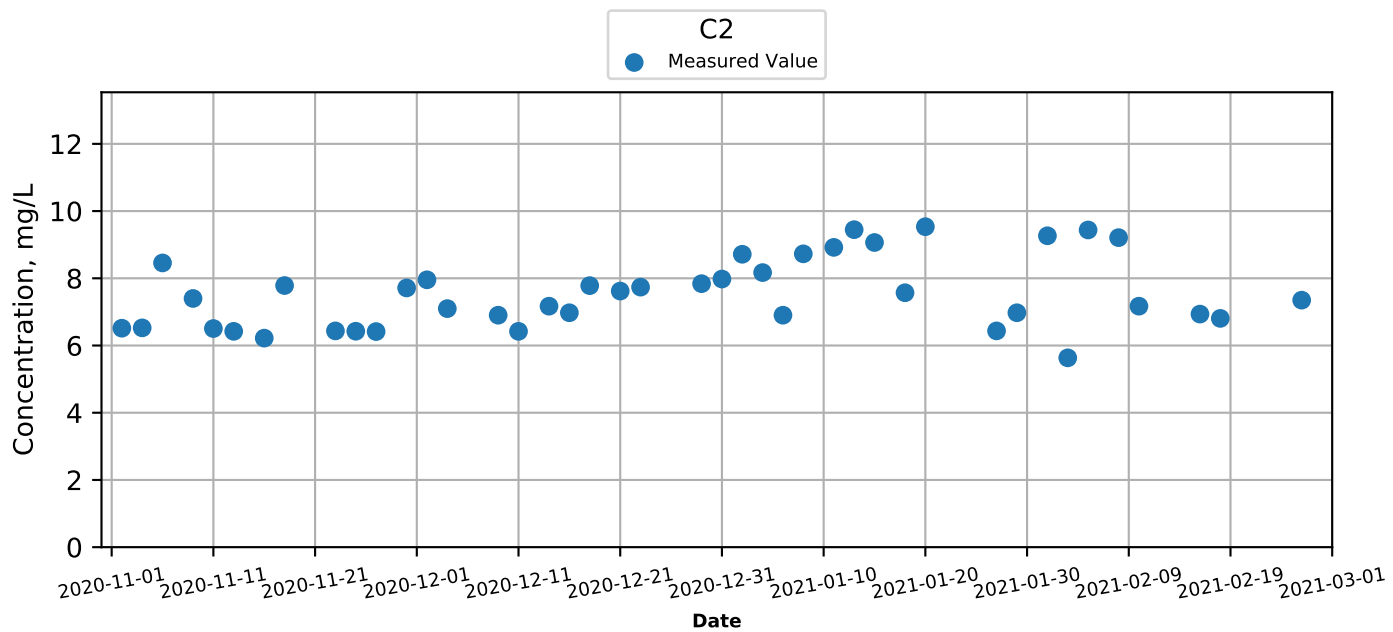
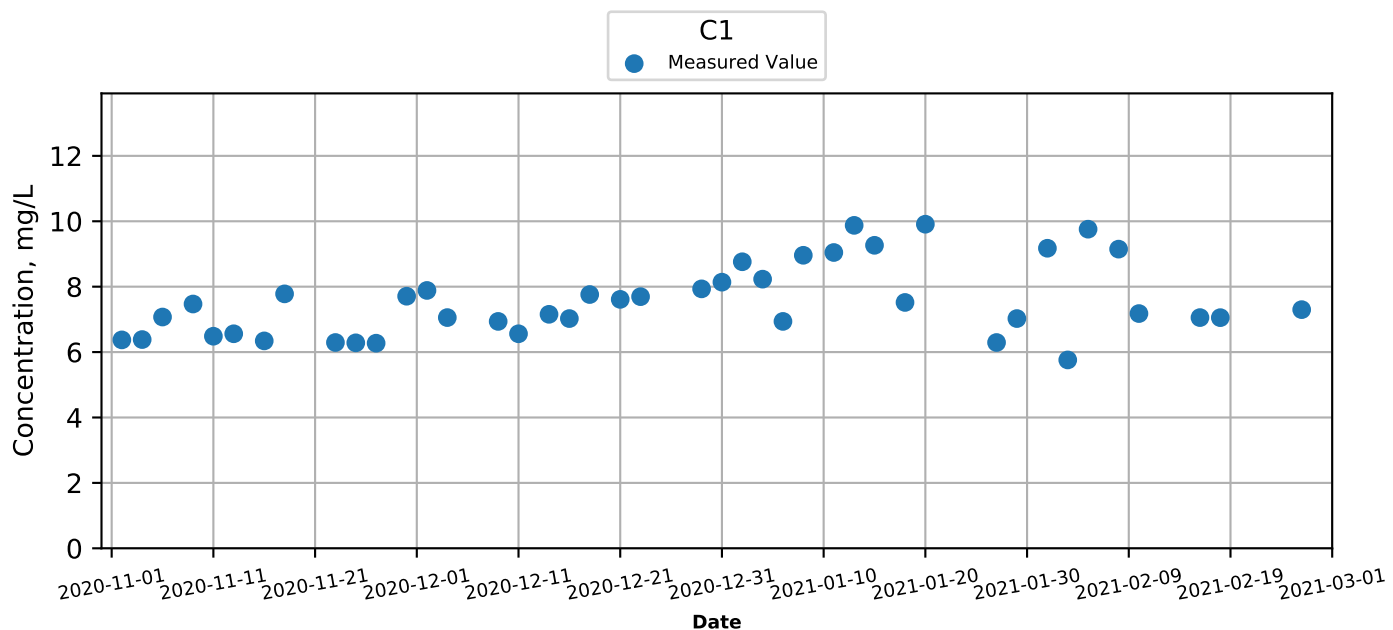
Appendix I - Action and Limit Levels for Marine Water Quality on 26 February 2021 (Mid-Flood Tide)

Parameter (unit)	Depth	Action Level	Limit Level
DO in mg/L (See Note 1 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Depth Average	<u>4.9 mg/L</u>	<u>4.6 mg/L</u>
	Bottom	<u>4.2 mg/L</u>	<u>3.6 mg/L</u>
	<u>Station M6</u>		
	Intake Level	<u>5.0 mg/L</u>	<u>4.7 mg/L</u>
Turbidity in NTU (See Note 2 and 4)	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>19.3 NTU</u>	<u>22.2 NTU</u>
		or 120% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.4 NTU</u>	or 130% of upstream control station's Turbidity at the same tide of the same day <u>CI: 1.5 NTU</u>
	<u>Station M6</u>		
	Intake Level	<u>19.0 NTU</u>	<u>19.4 NTU</u>
SS in mg/L (See Note 2 and 4)	<u>Stations G1-G4</u>		
	Surface	<u>6.0 mg/L</u>	<u>6.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 3.3 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 3.6 mg/L</u>
	<u>Stations M1-M5</u>		
	Surface	<u>6.2 mg/L</u>	<u>7.4 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 3.3 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 3.6 mg/L</u>
	<u>Stations G1-G4, M1-M5</u>		
	Bottom	<u>6.9 mg/L</u>	<u>7.9 mg/L</u>
		or 120% of upstream control station's SS at the same tide of the same day <u>CI: 4.6 mg/L</u>	or 130% of upstream control station's SS at the same tide of the same day <u>CI: 5.0 mg/L</u>
	<u>Station M6</u>		
Intake Level	<u>8.3 mg/L</u>	<u>8.6 mg/L</u>	

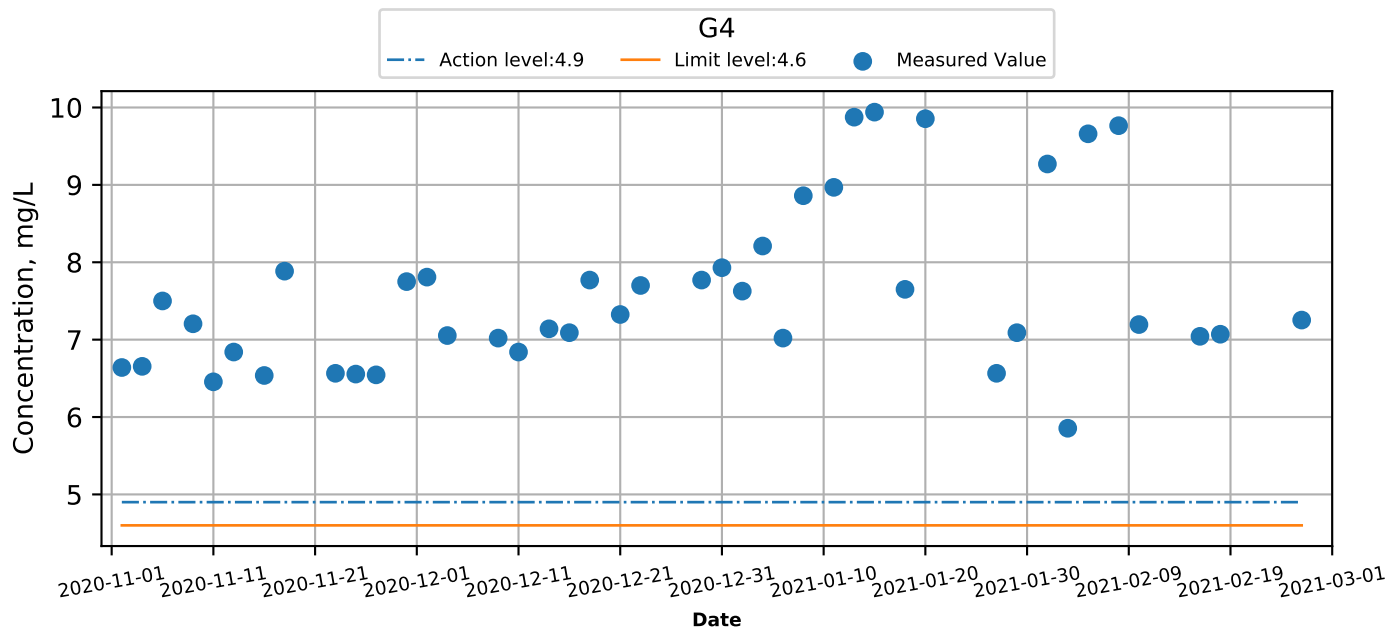
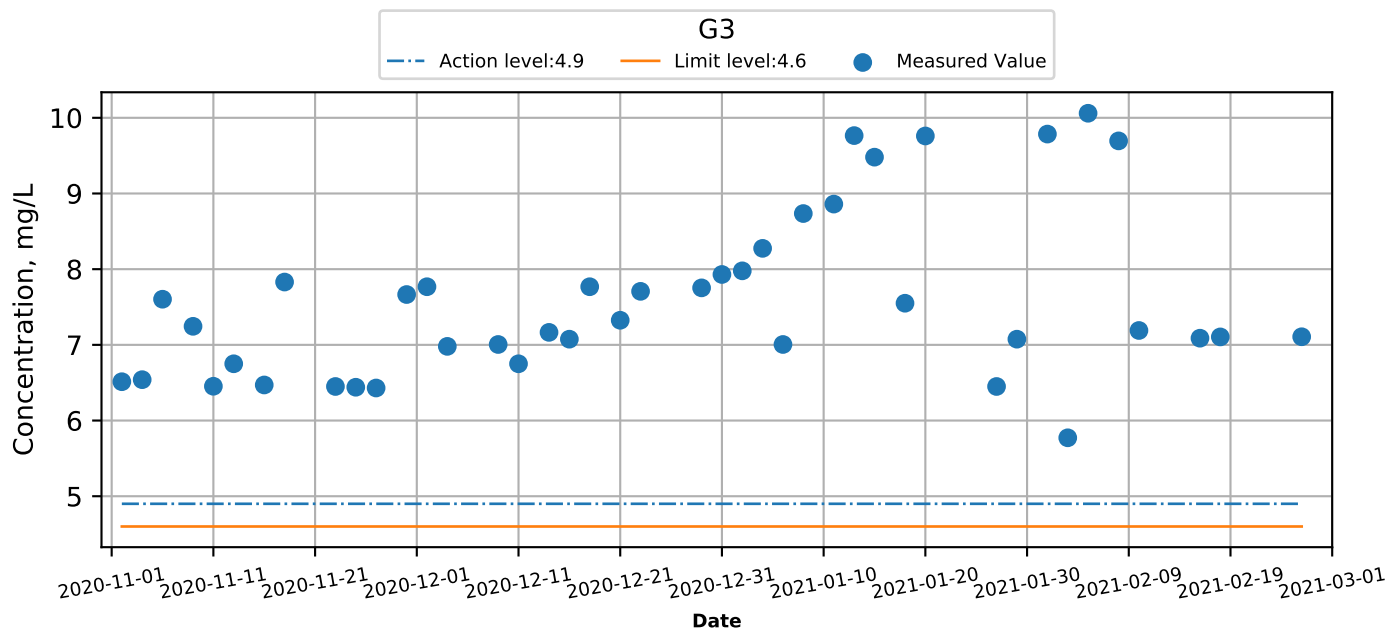
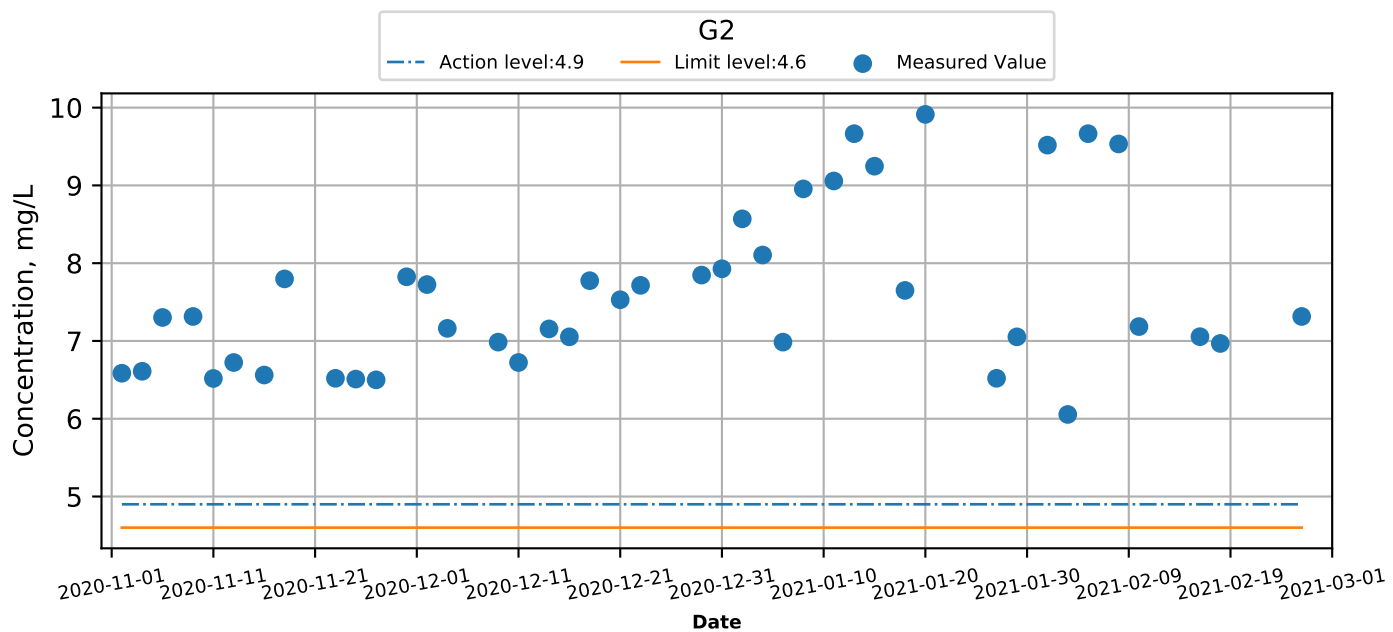
Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

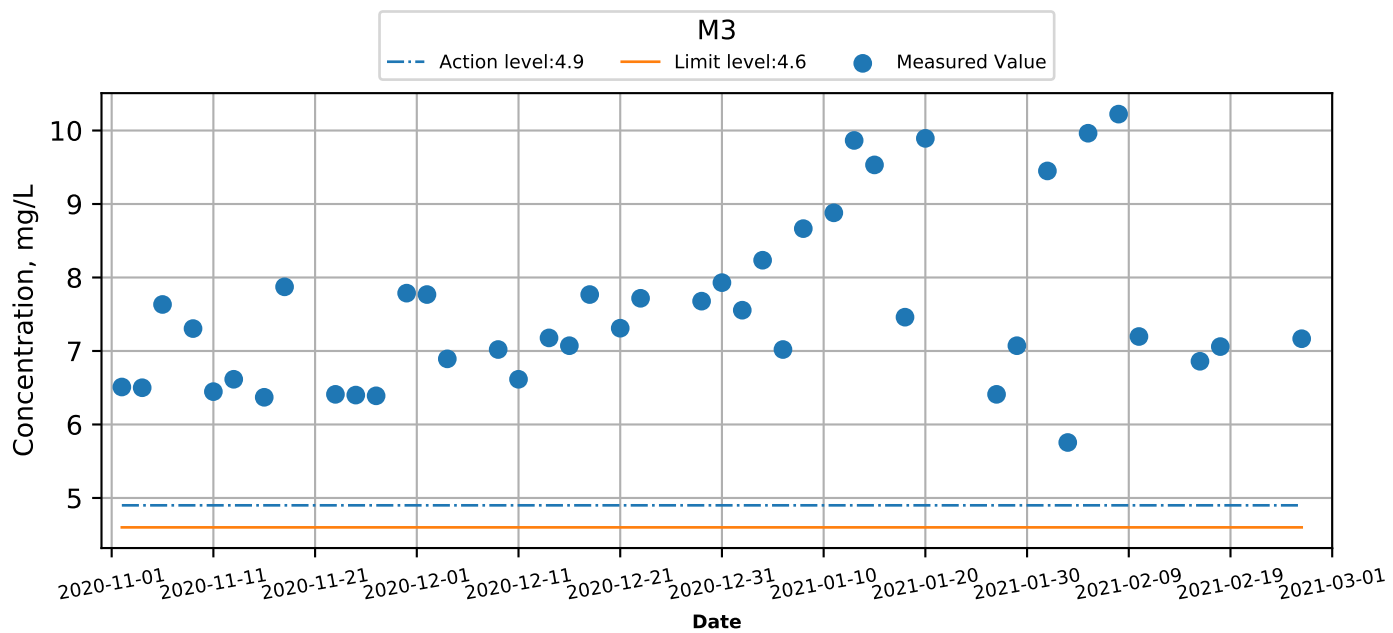
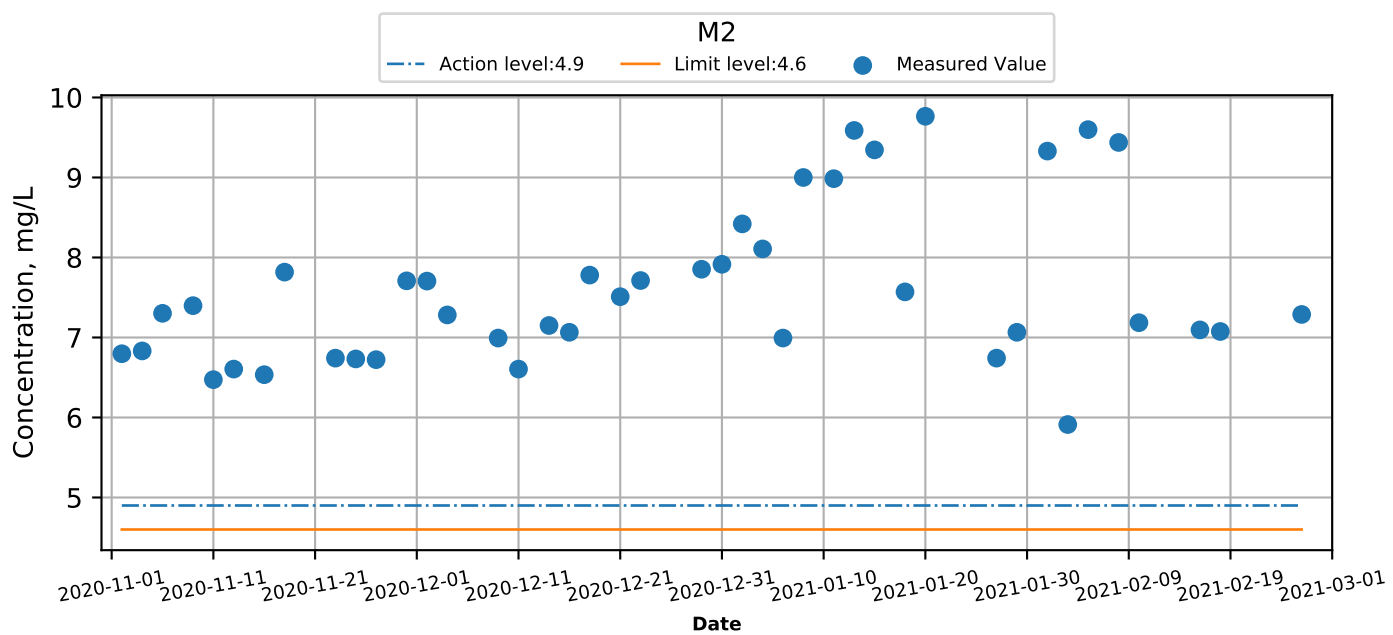
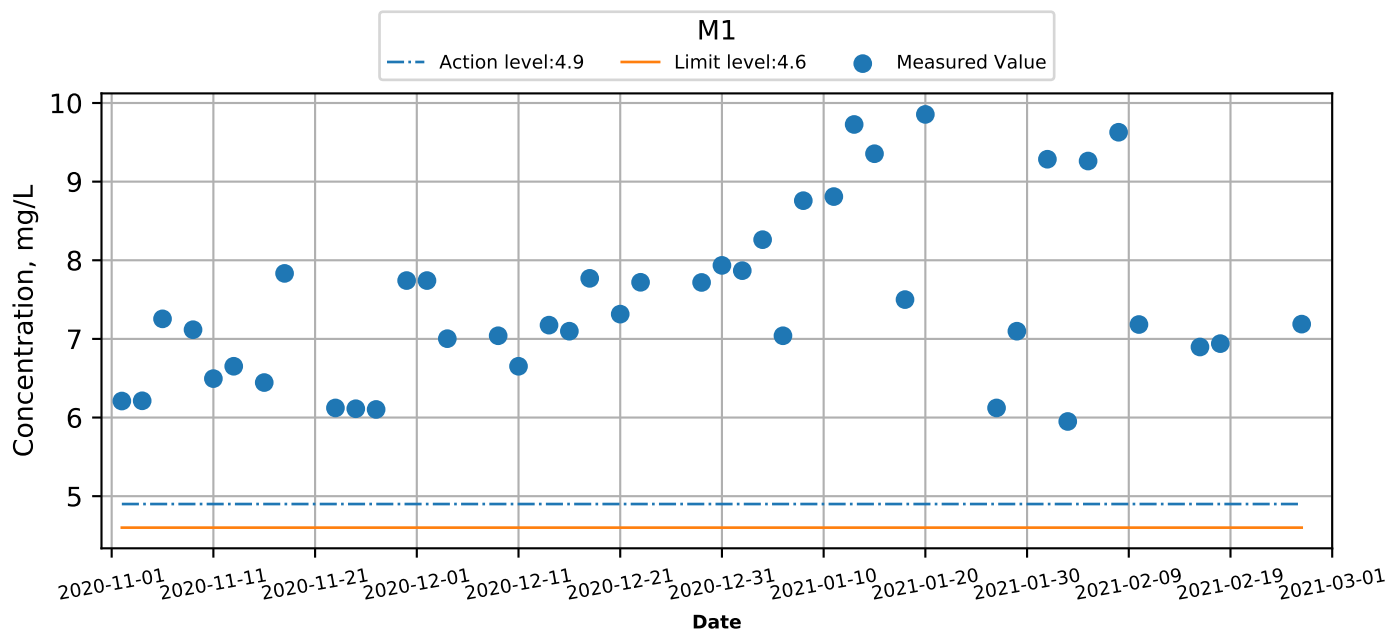
Dissolved Oxygen (Depth-Averaged) at Monitoring Stations during Mid-Ebb



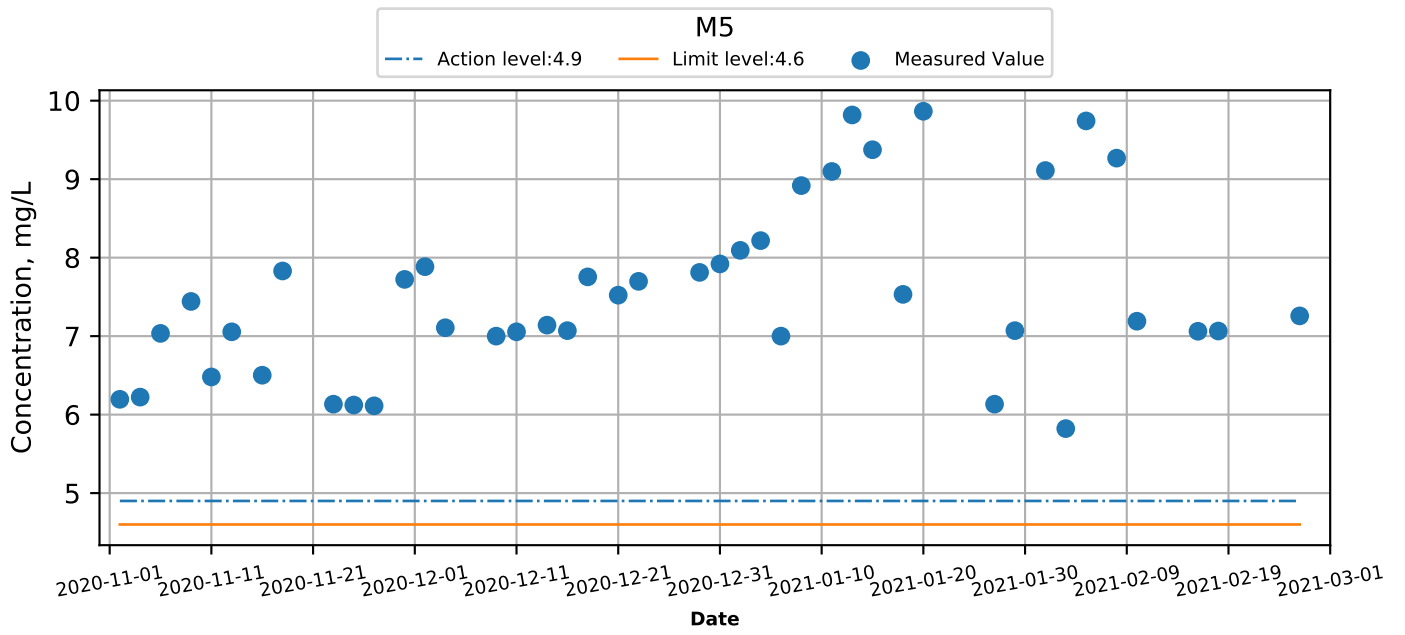
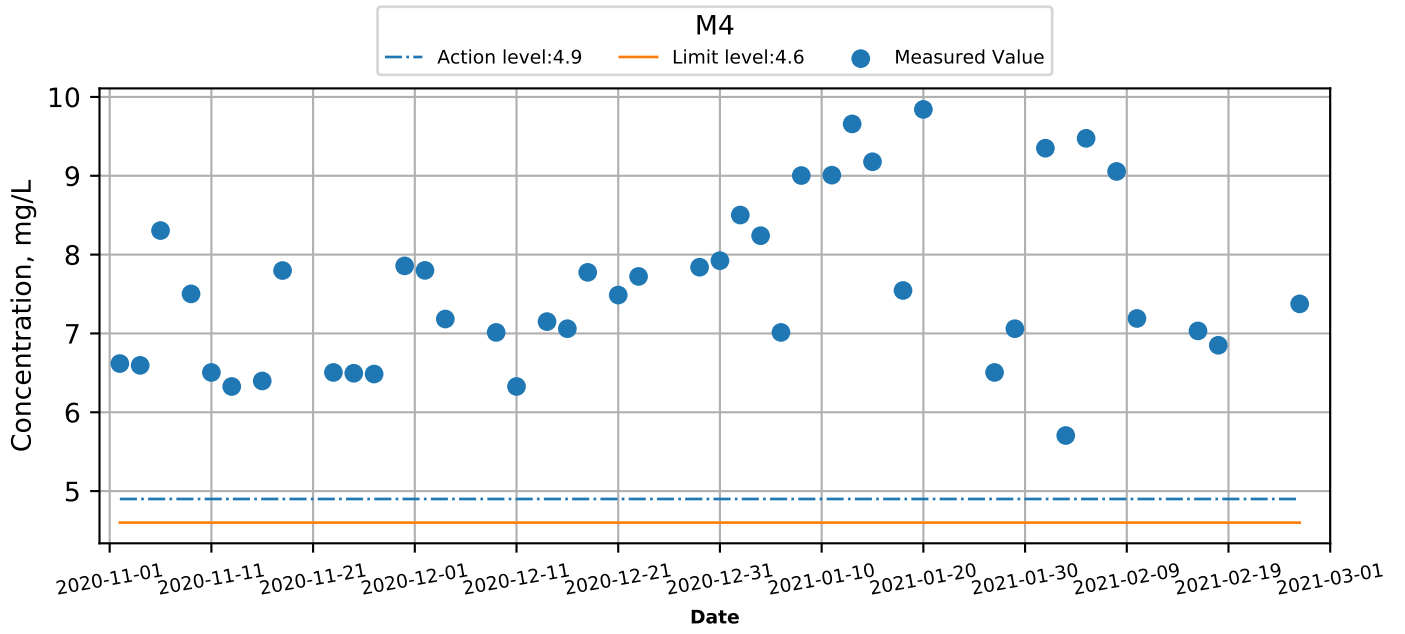
Dissolved Oxygen (Depth-Averaged) at Monitoring Stations during Mid-Ebb



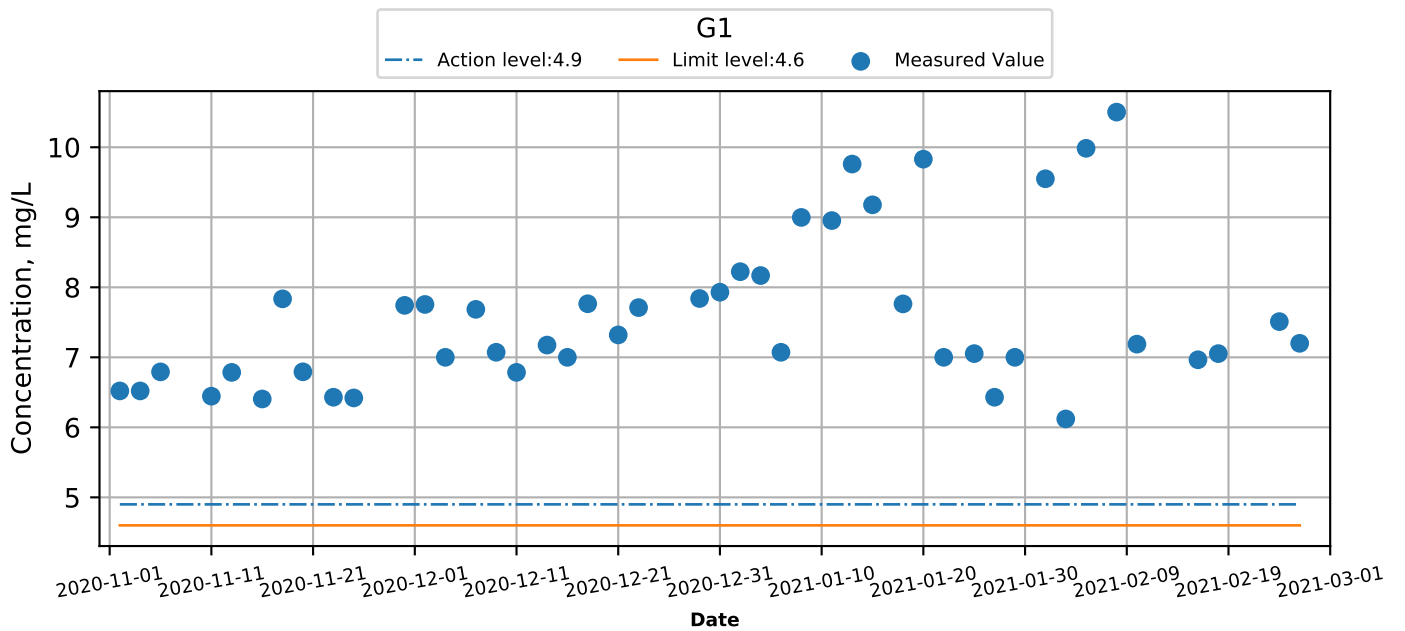
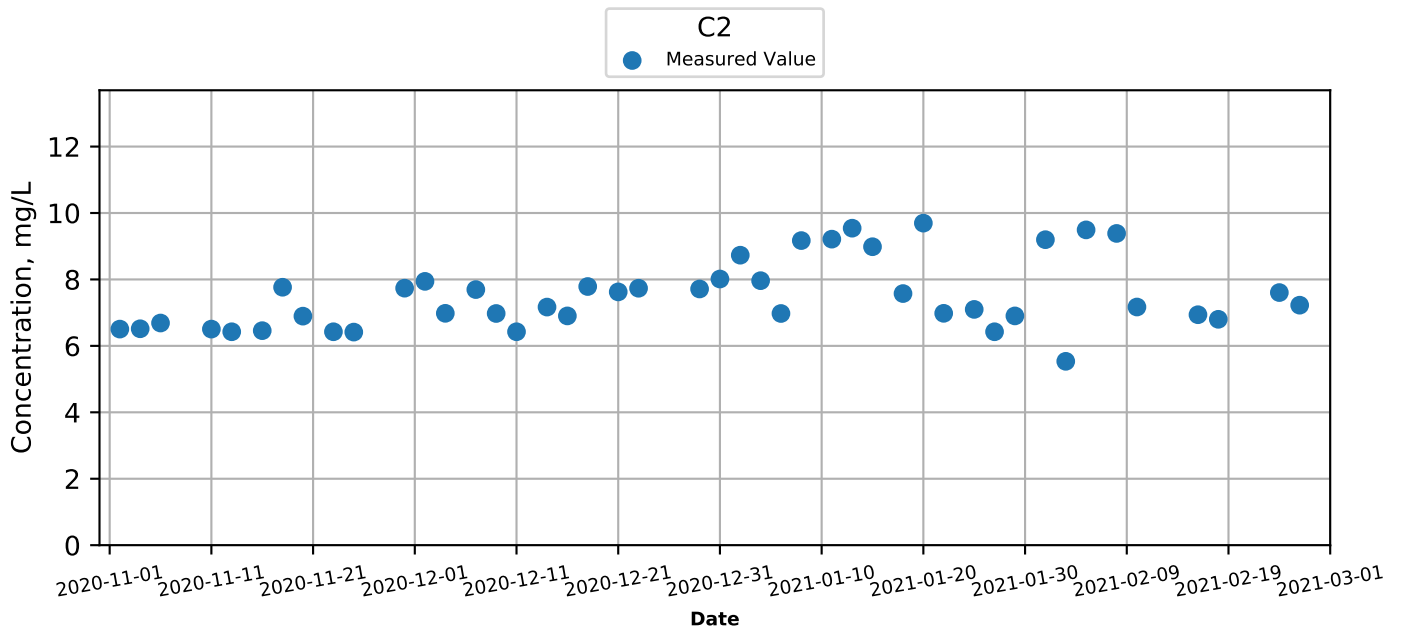
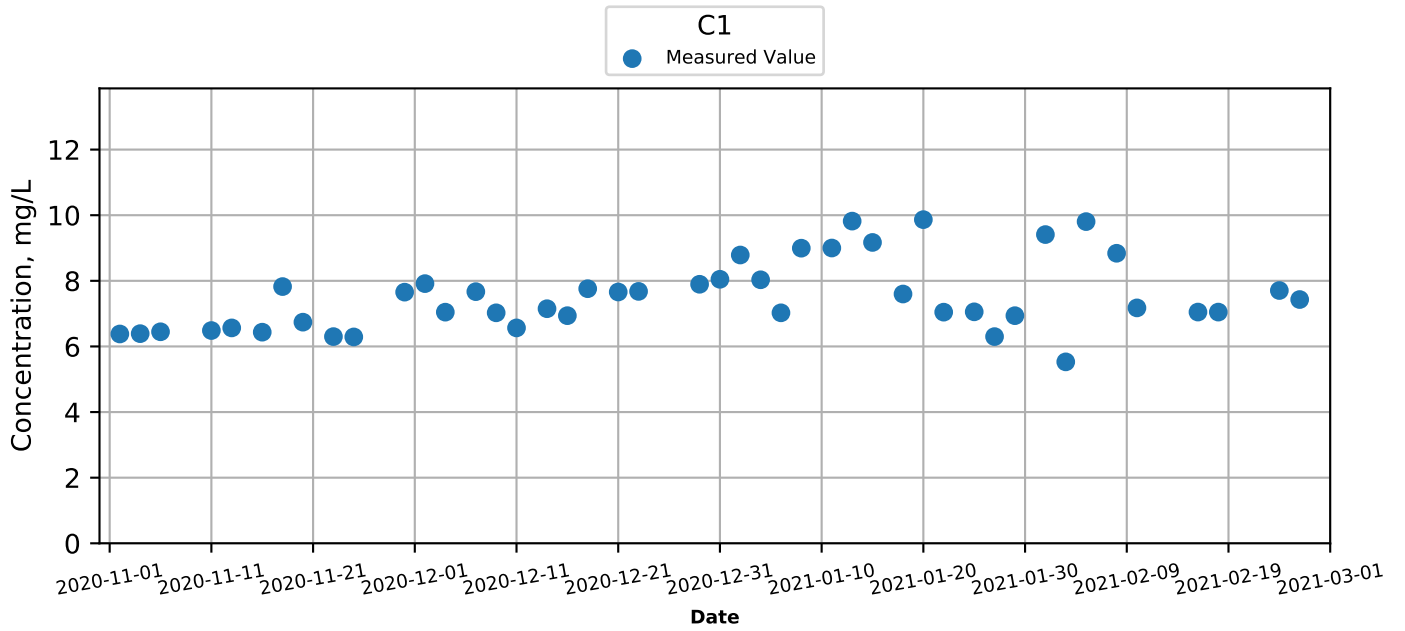
Dissolved Oxygen (Depth-Averaged) at Monitoring Stations during Mid-Ebb



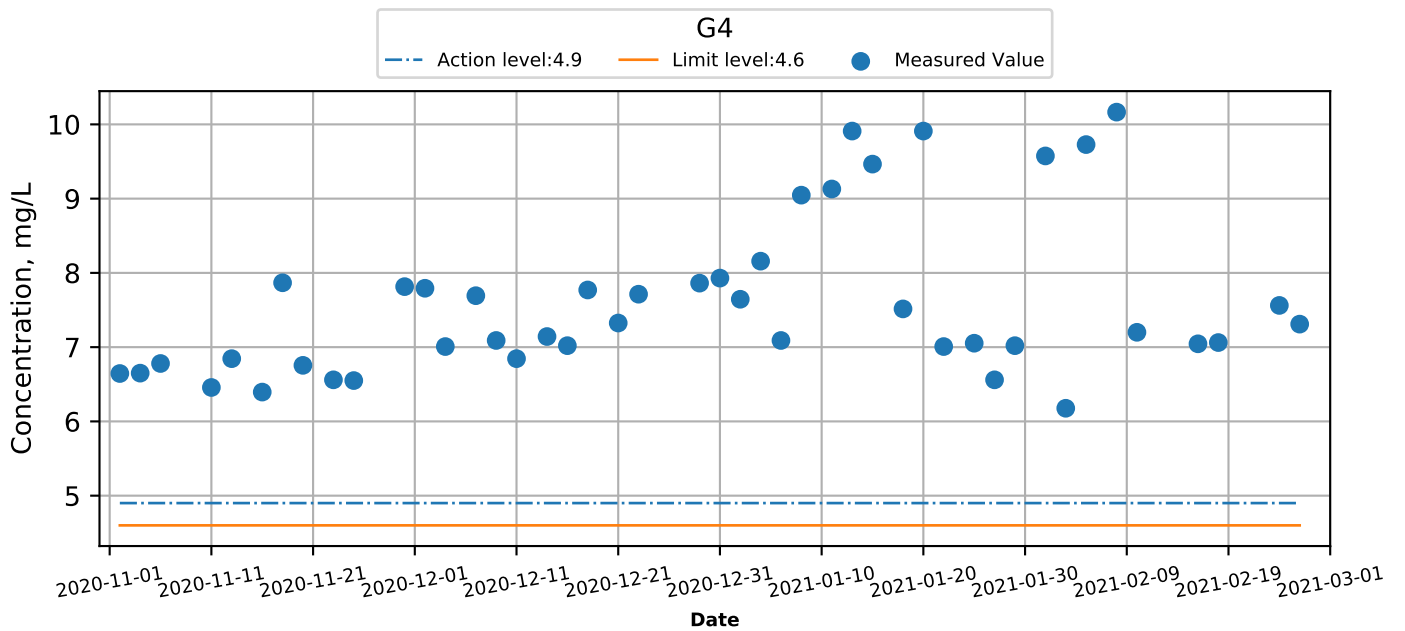
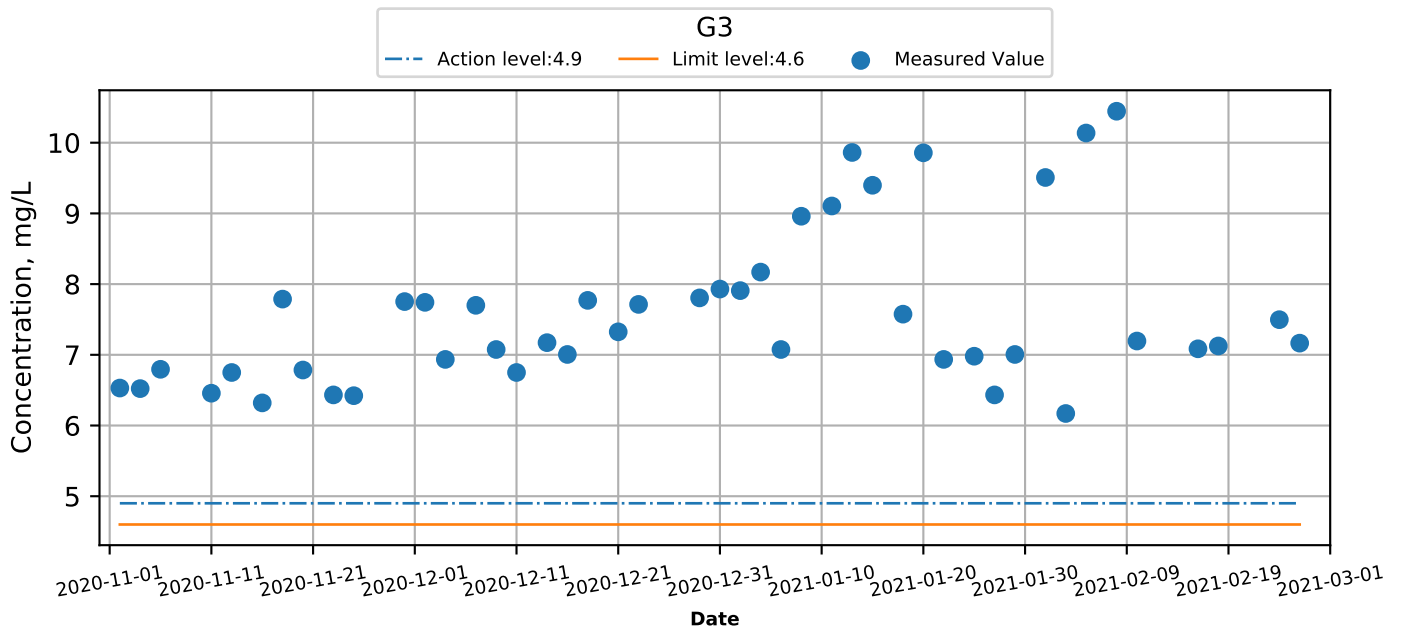
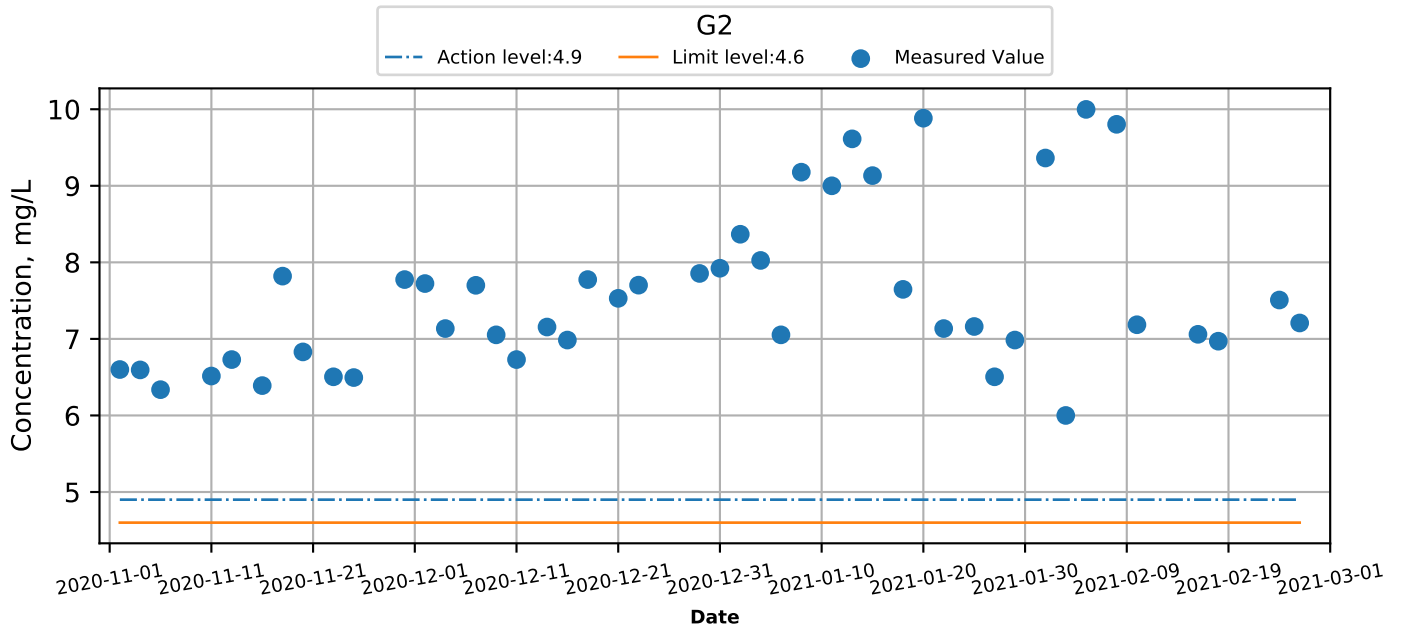
Dissolved Oxygen (Depth-Averaged) at Monitoring Stations during Mid-Ebb



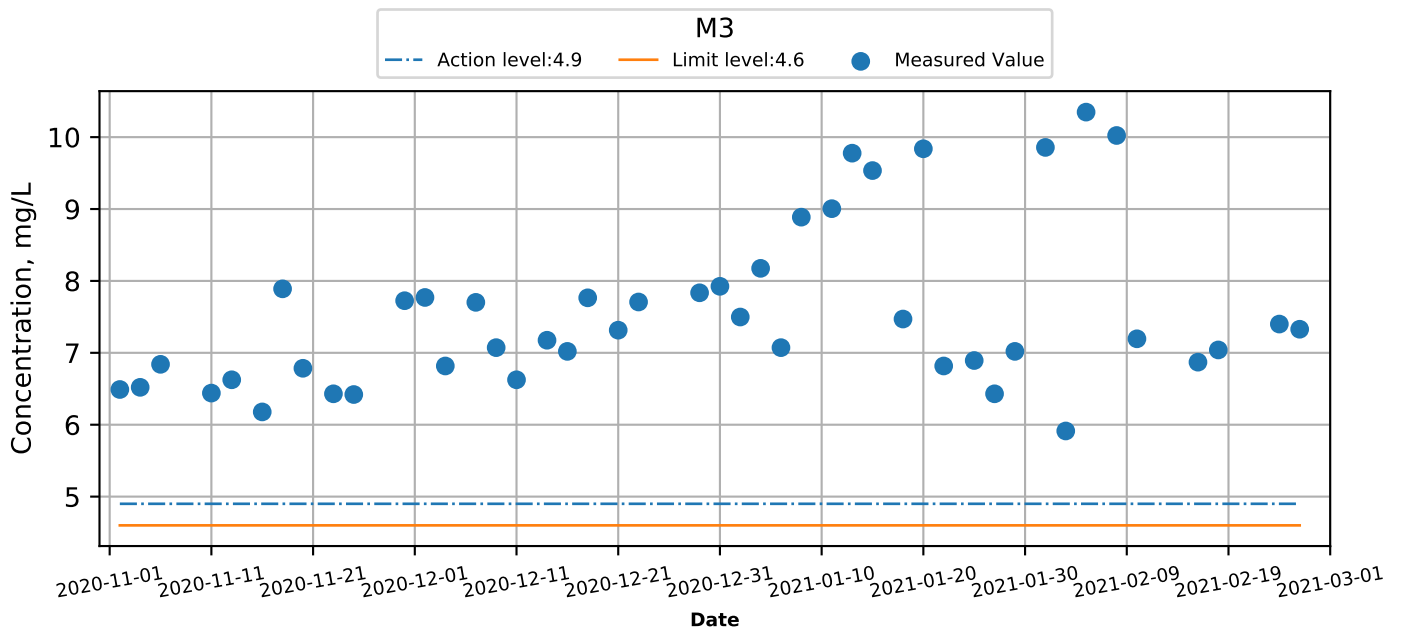
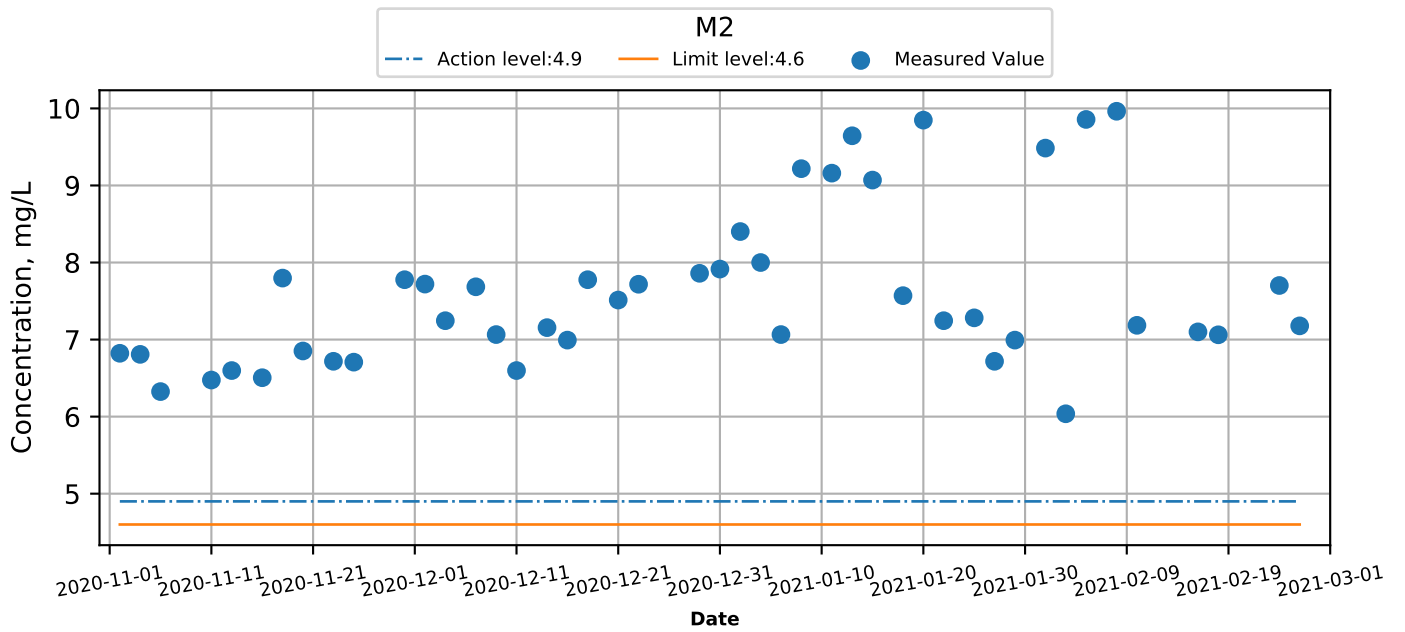
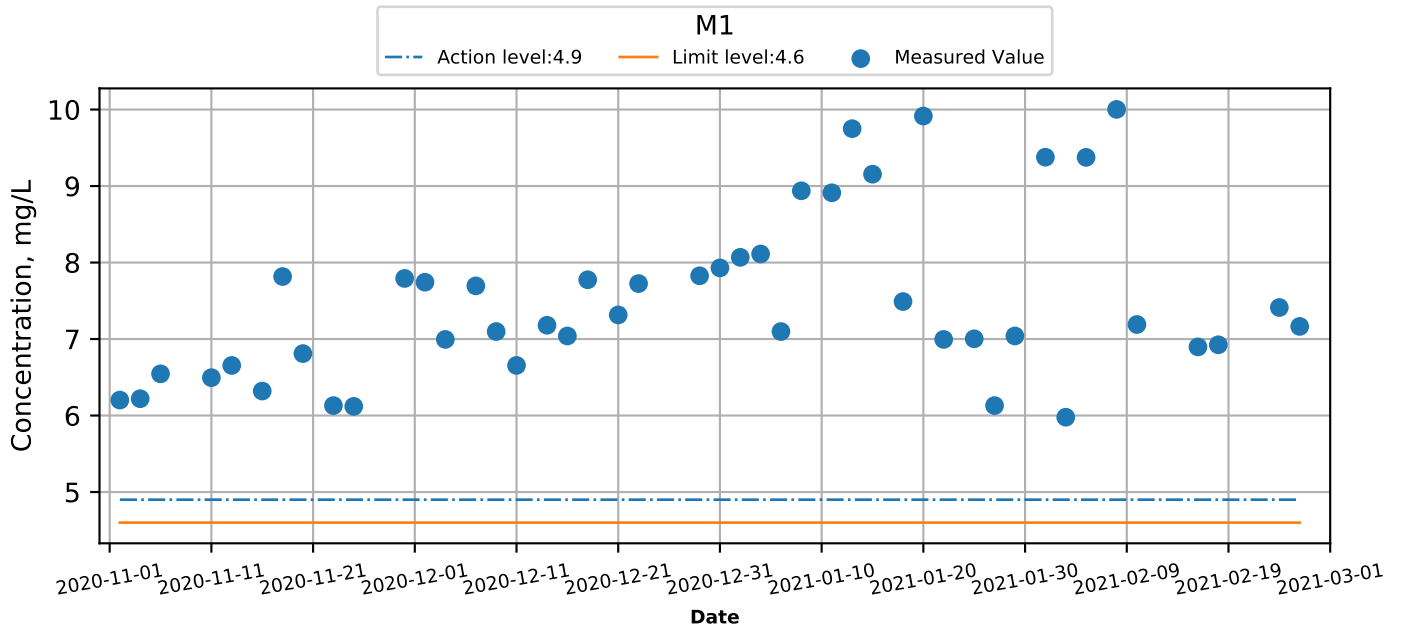
Dissolved Oxygen (Depth-Averaged) at Monitoring Stations during Mid-Flood



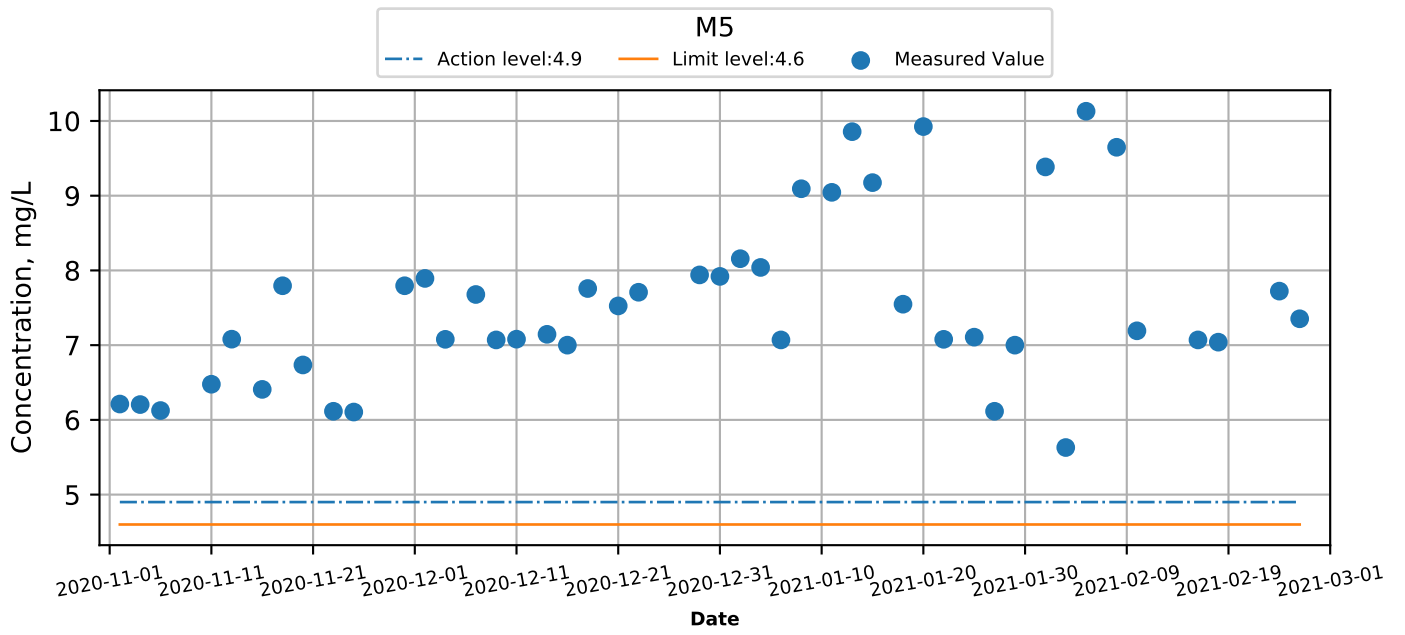
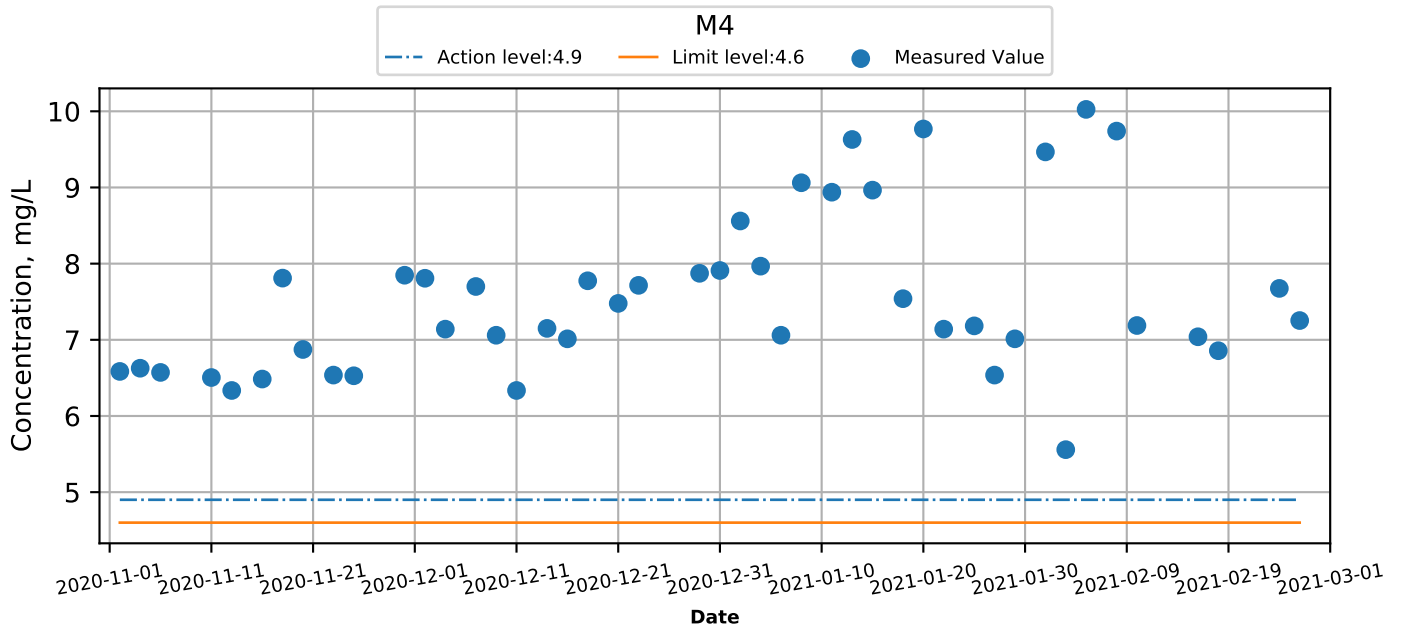
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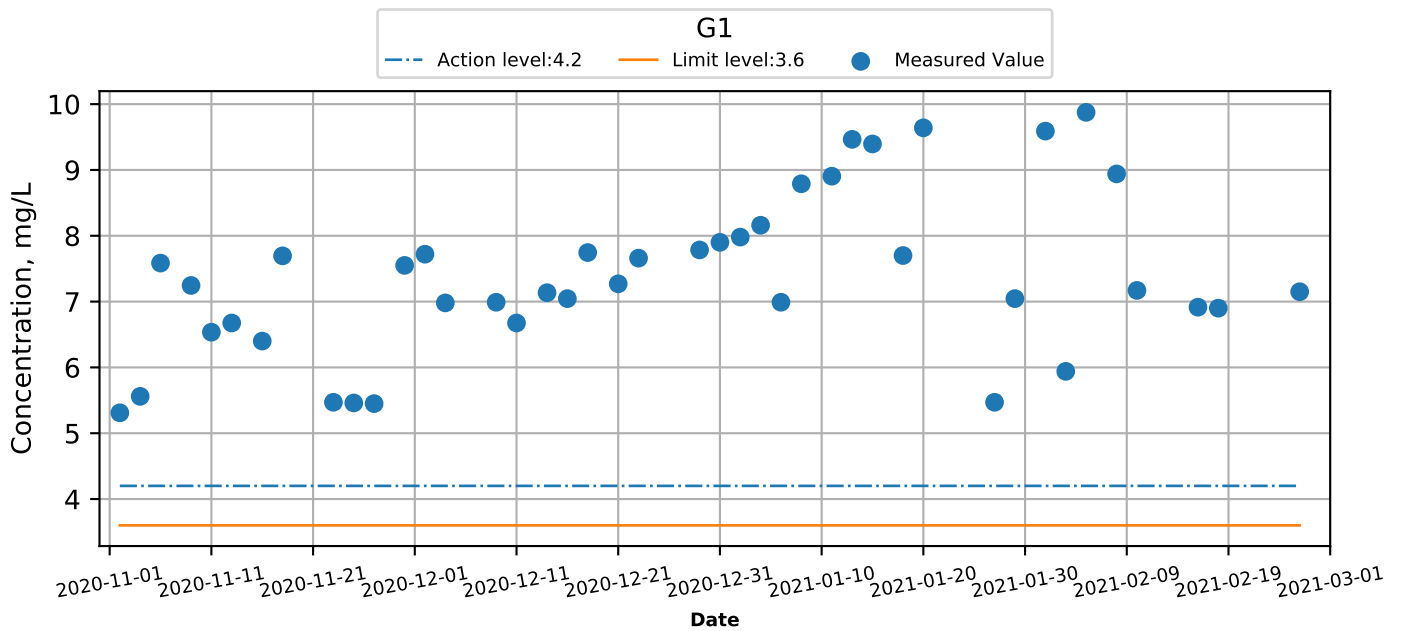
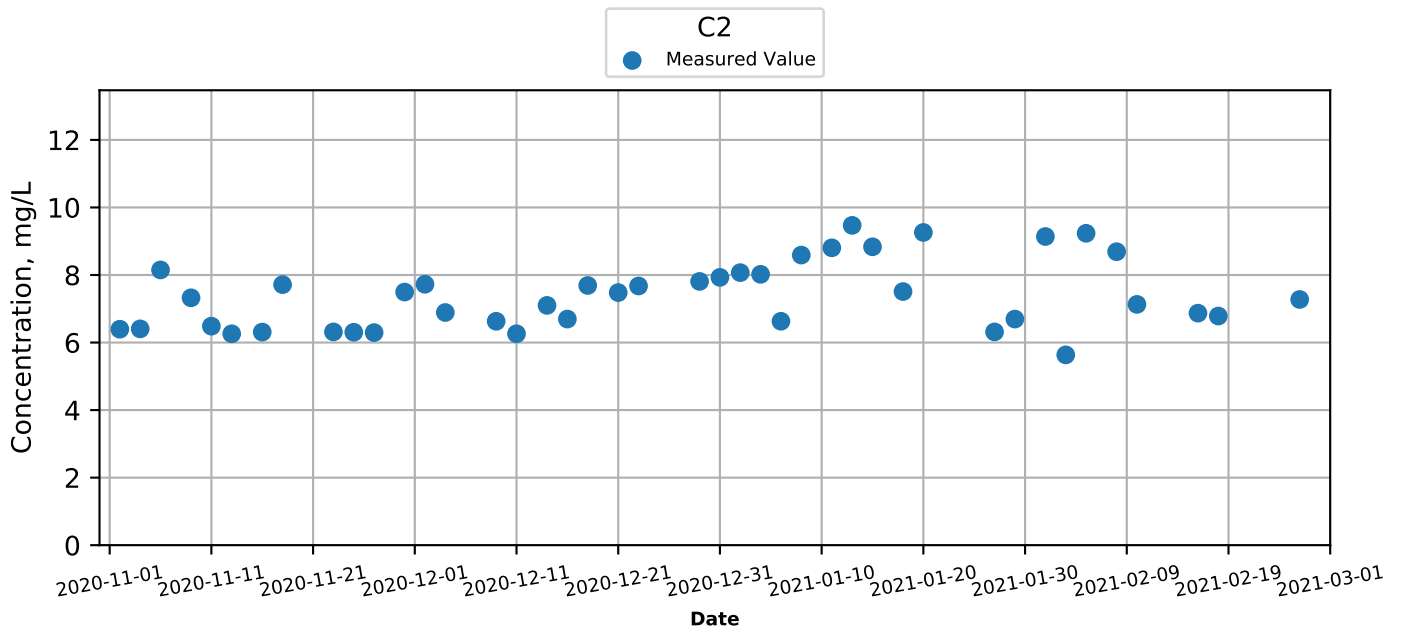
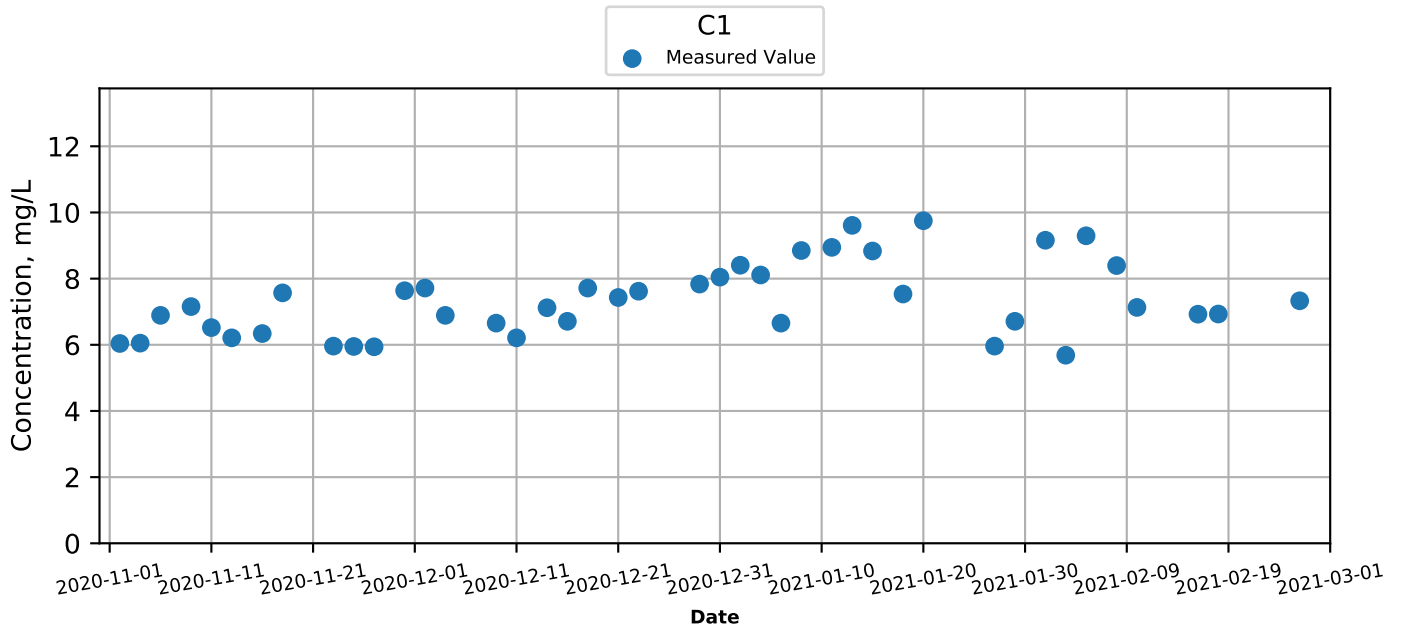
Dissolved Oxygen (Depth-Averaged) at Monitoring Stations during Mid-Flood



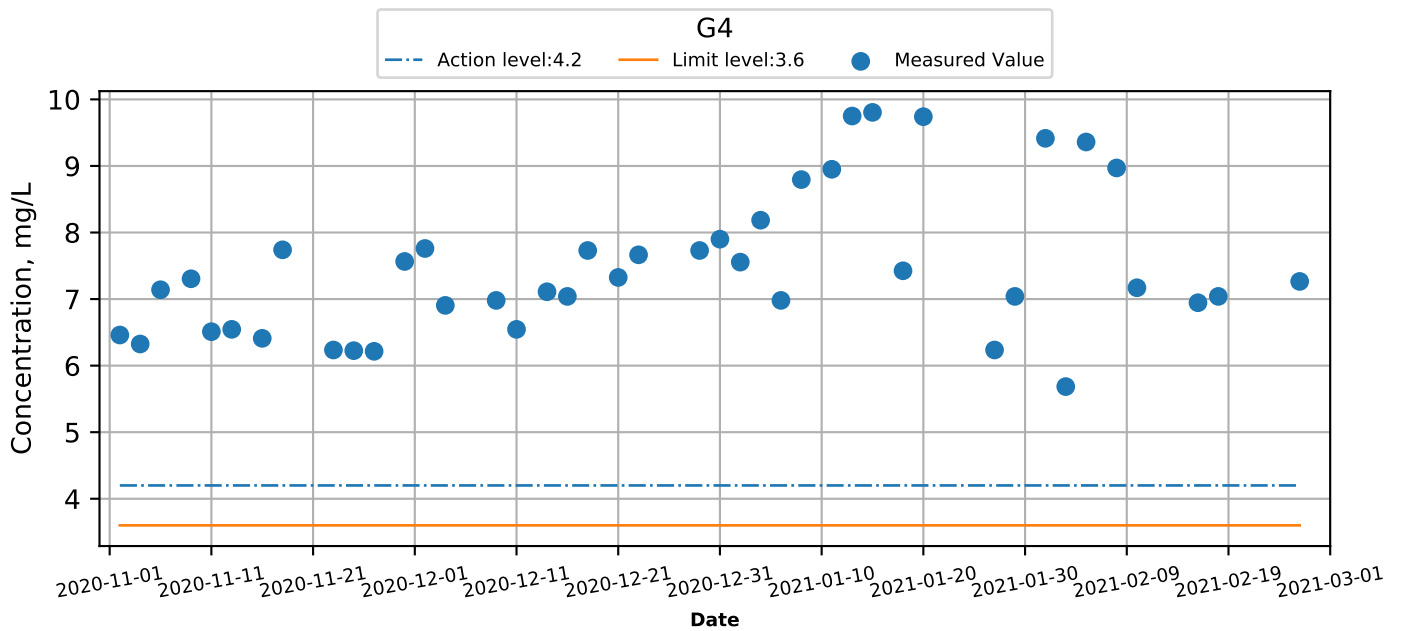
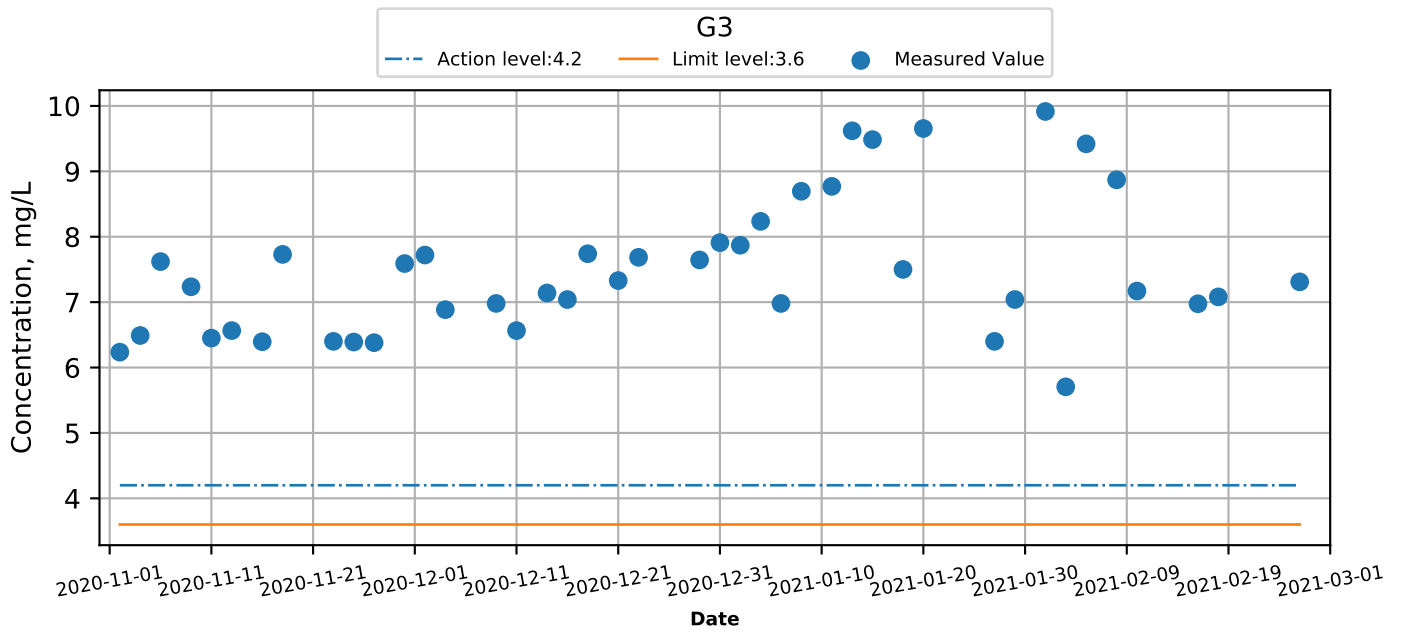
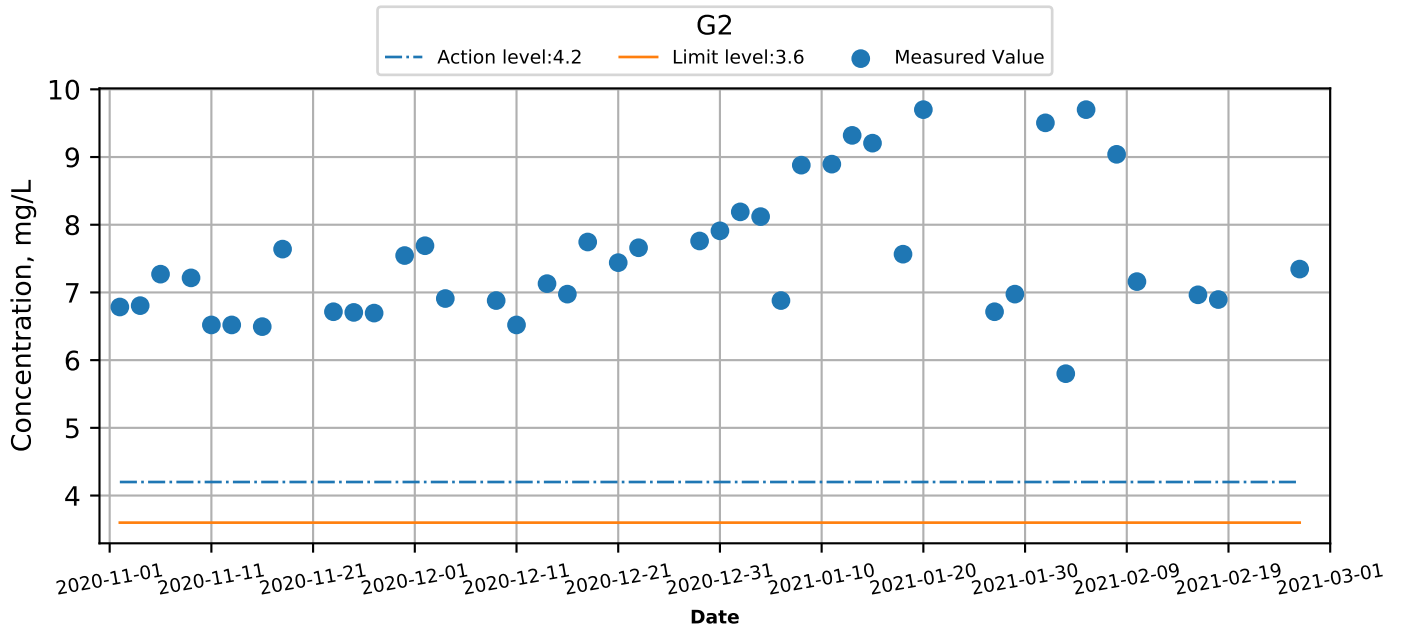
Dissolved Oxygen (Depth-Averaged) at Monitoring Stations during Mid-Flood



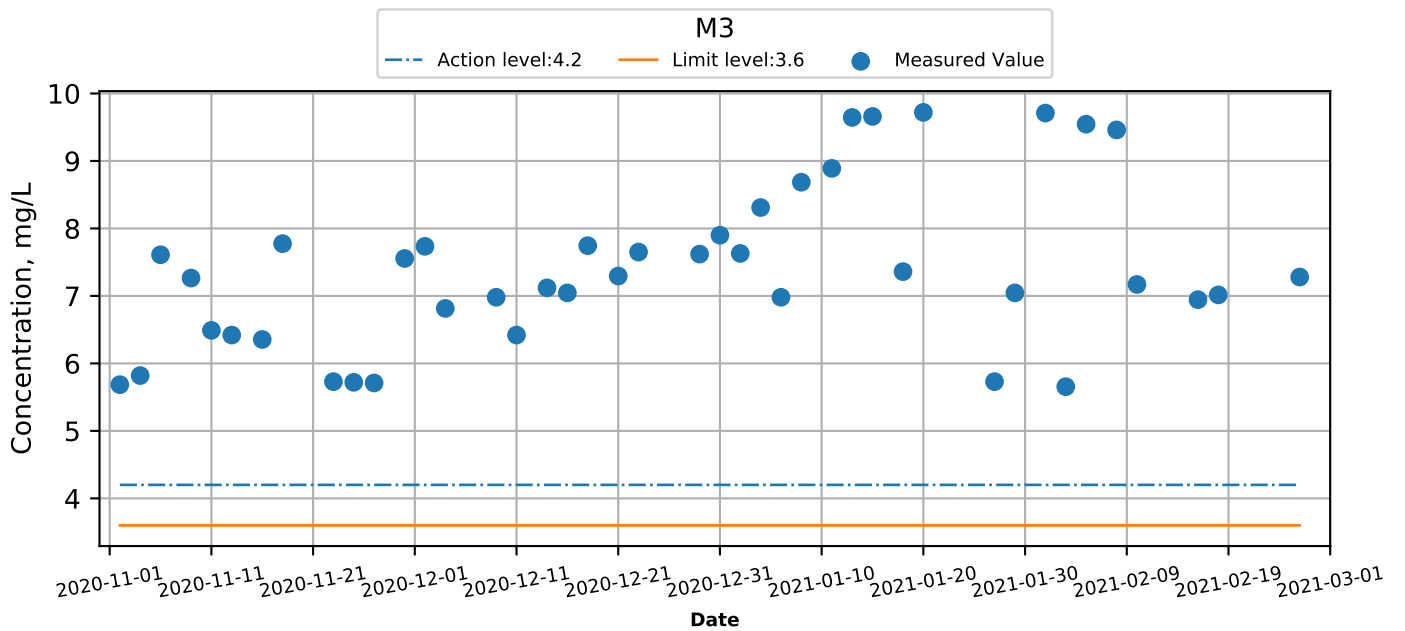
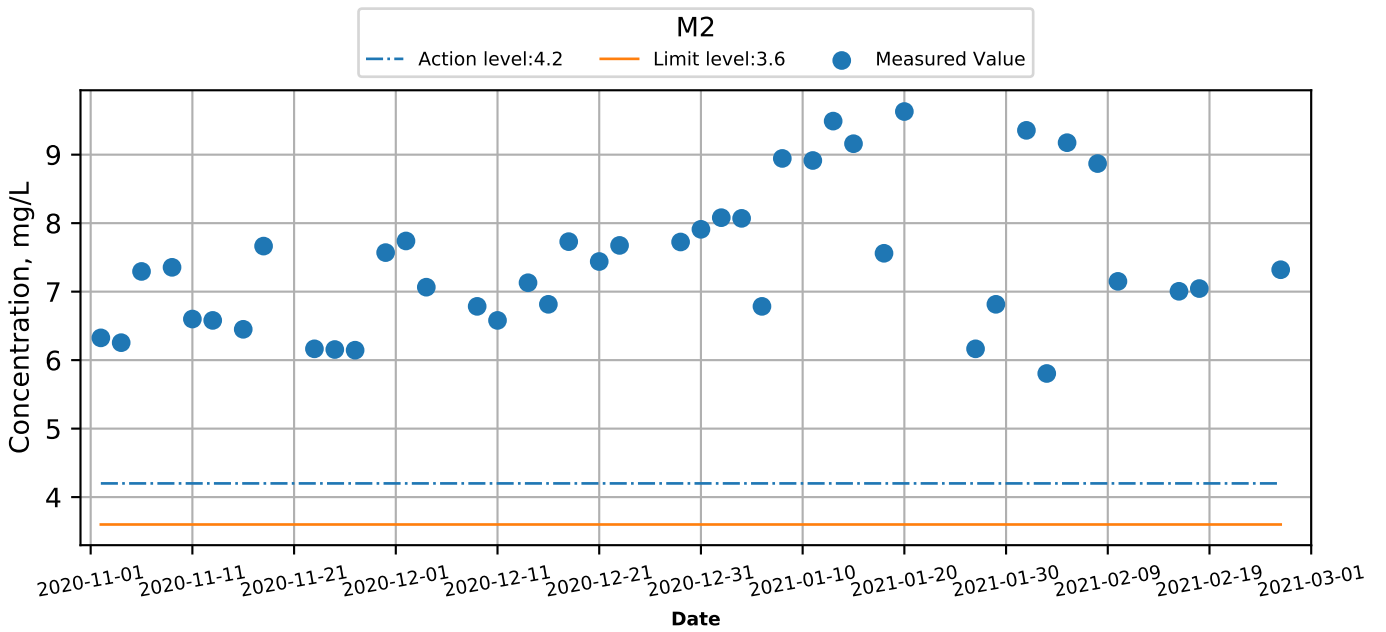
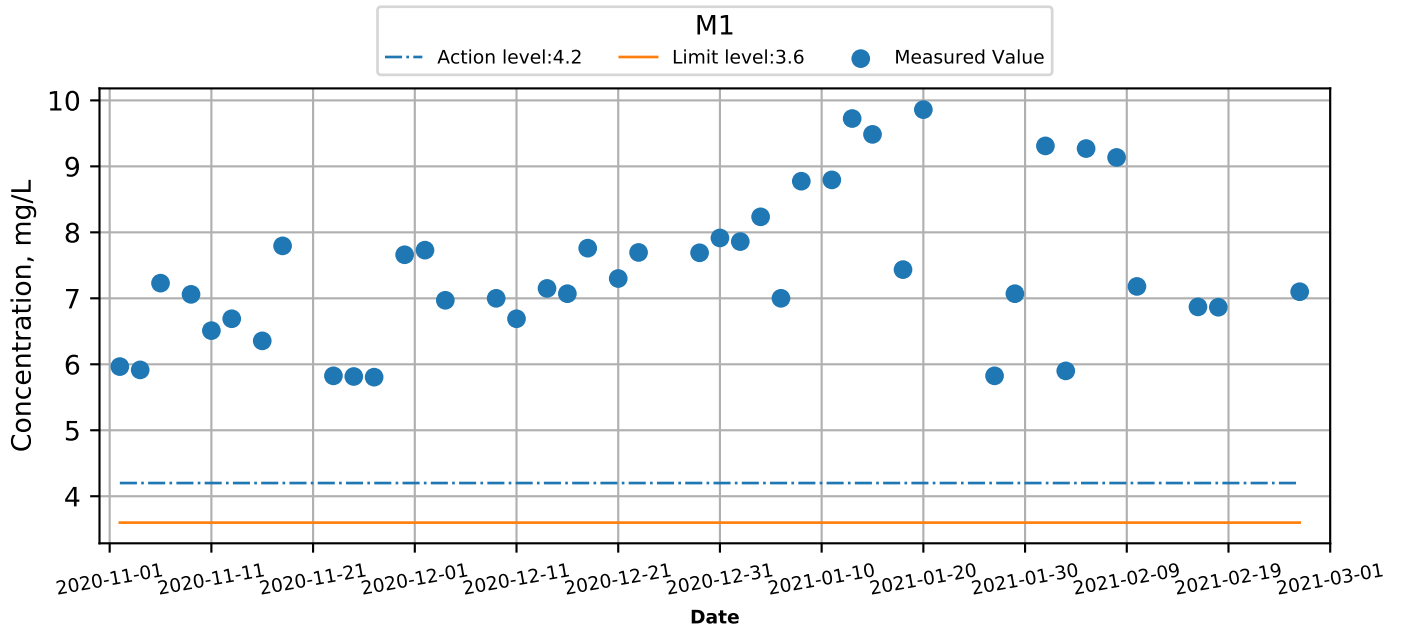
Dissolved Oxygen (Bottom) at Monitoring Stations during Mid-Ebb



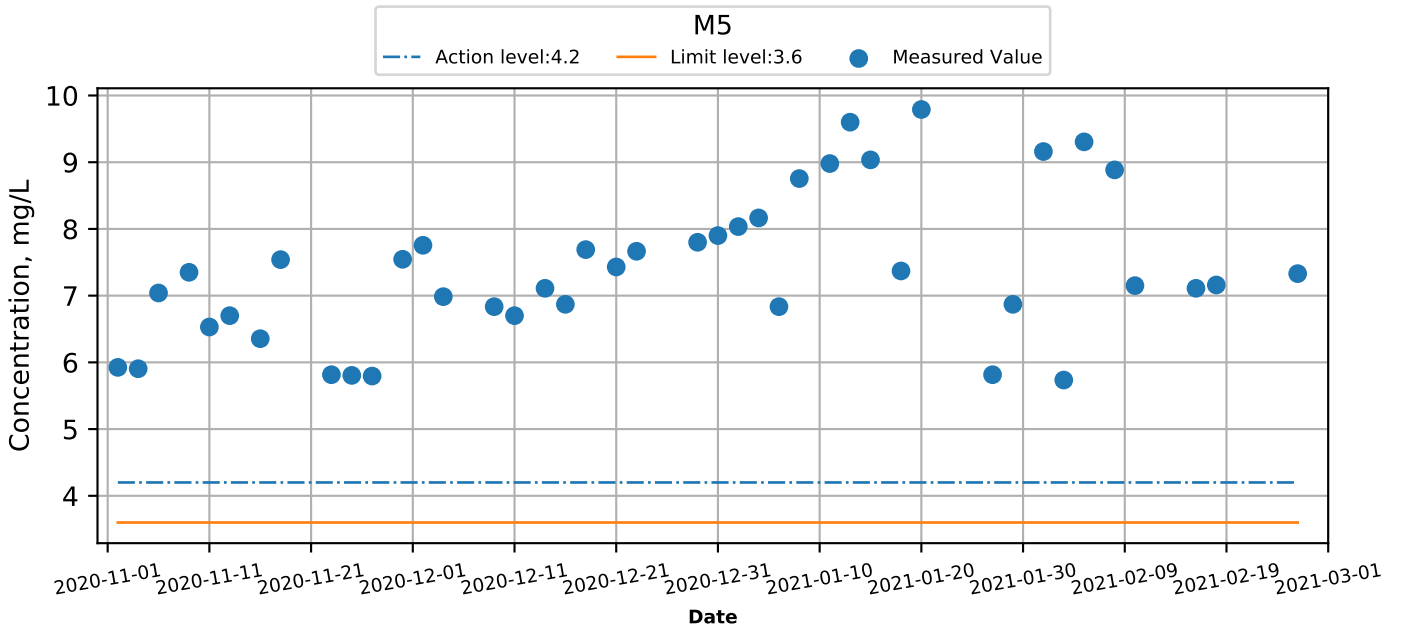
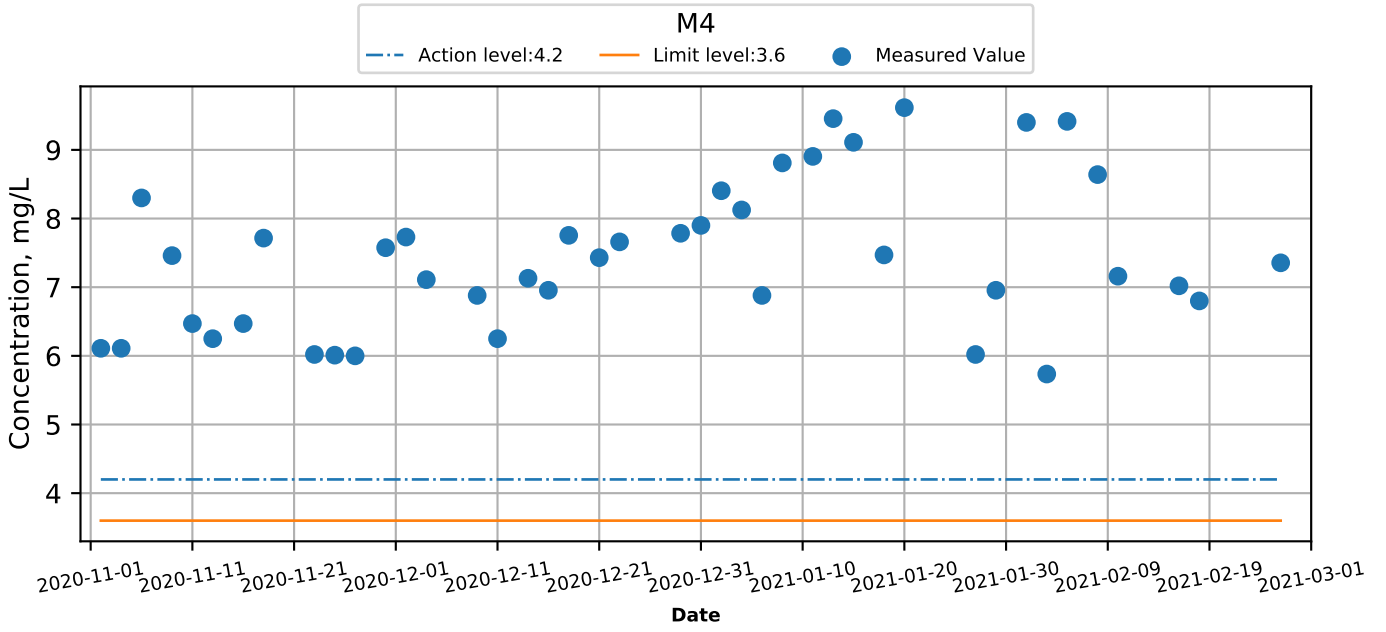
Dissolved Oxygen (Bottom) at Monitoring Stations during Mid-Ebb



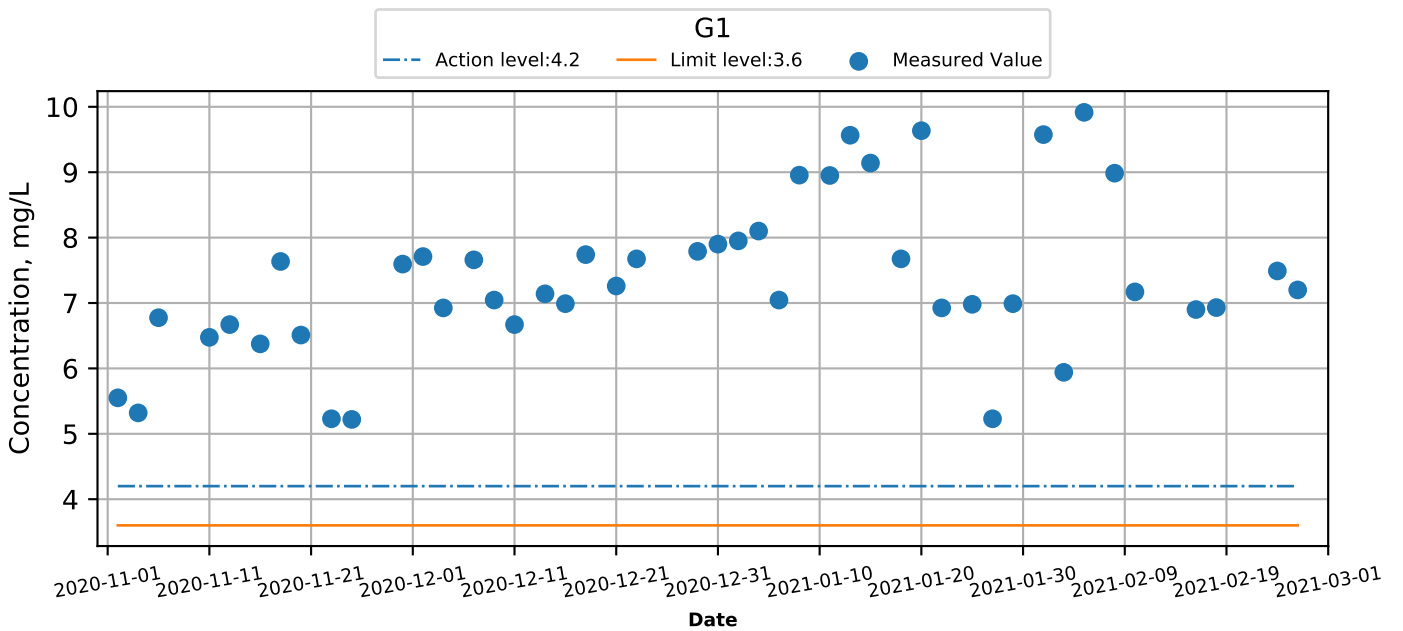
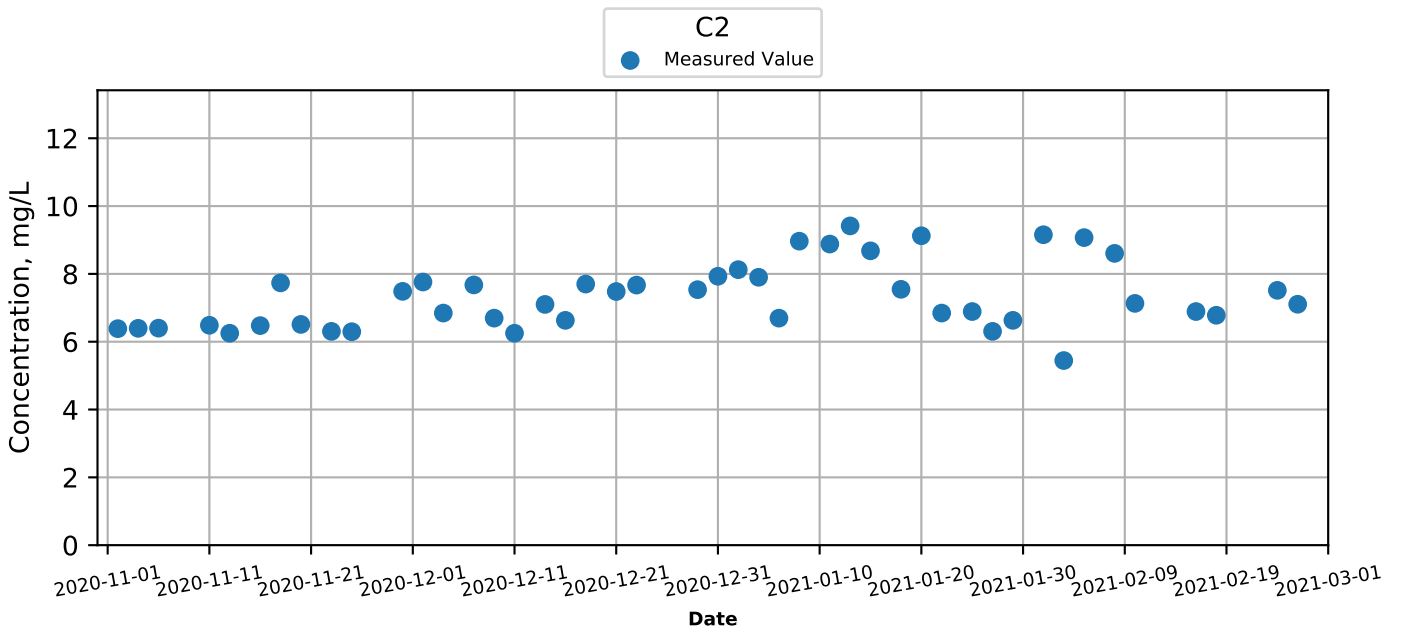
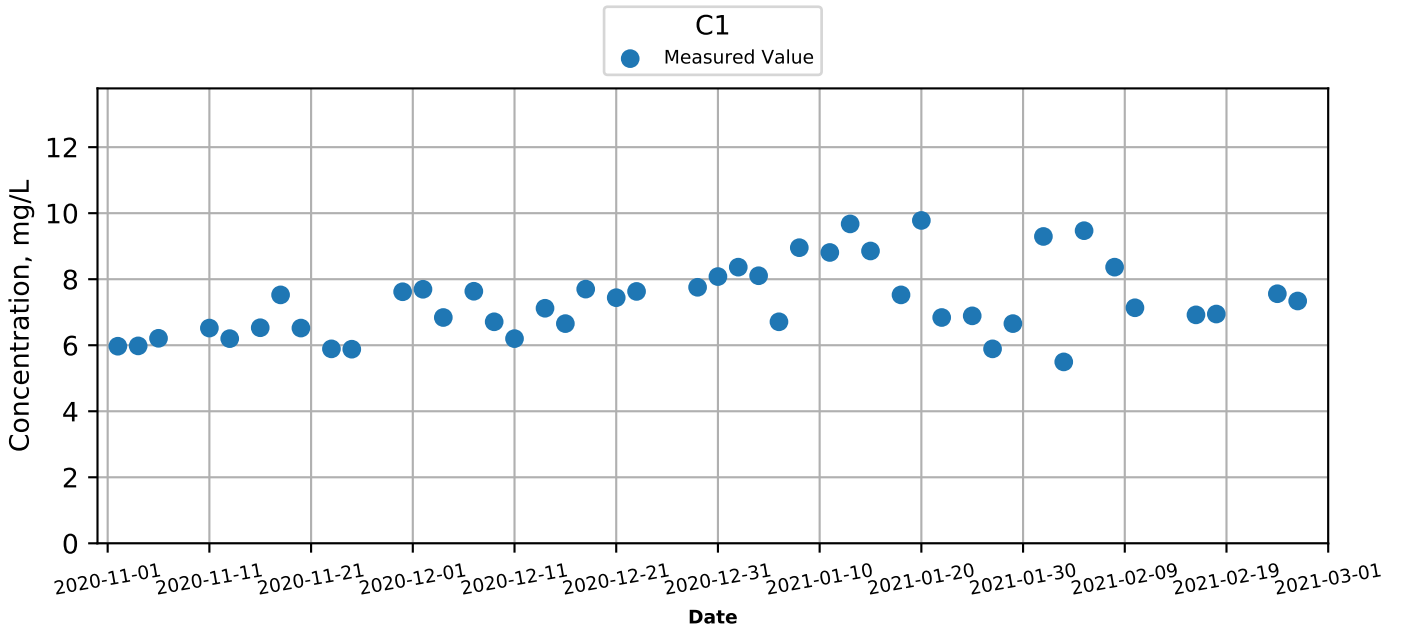
Dissolved Oxygen (Bottom) at Monitoring Stations during Mid-Ebb



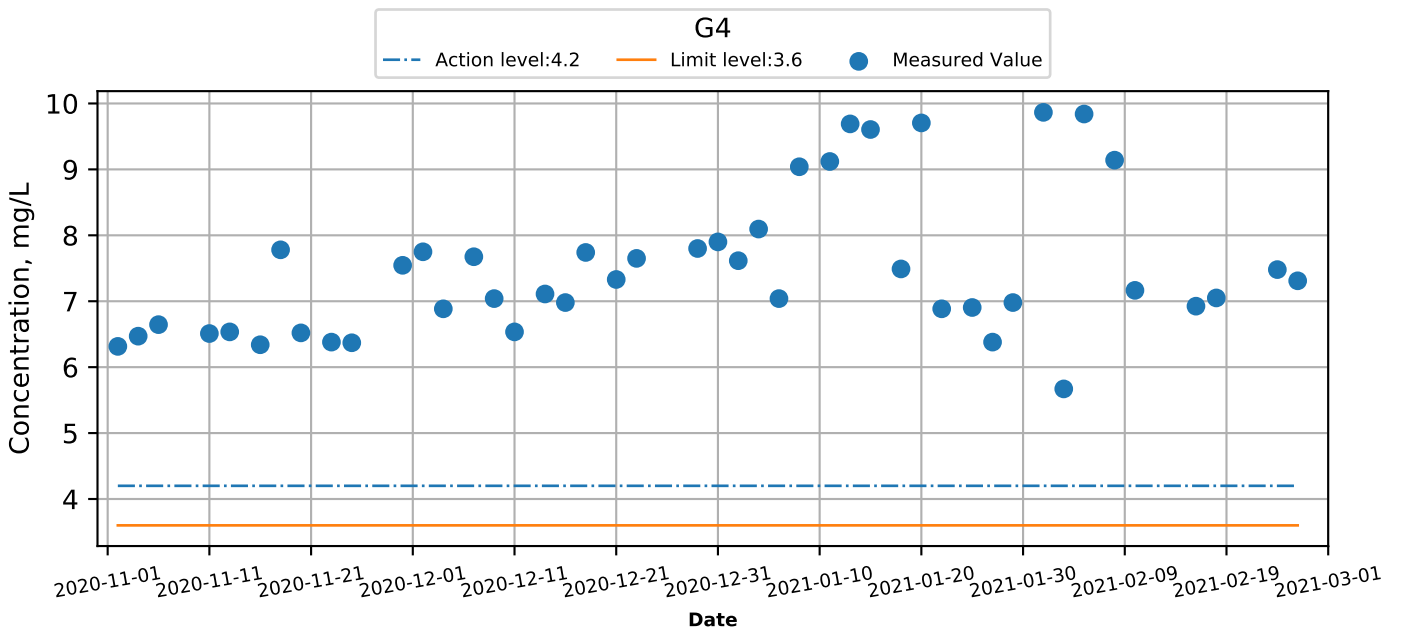
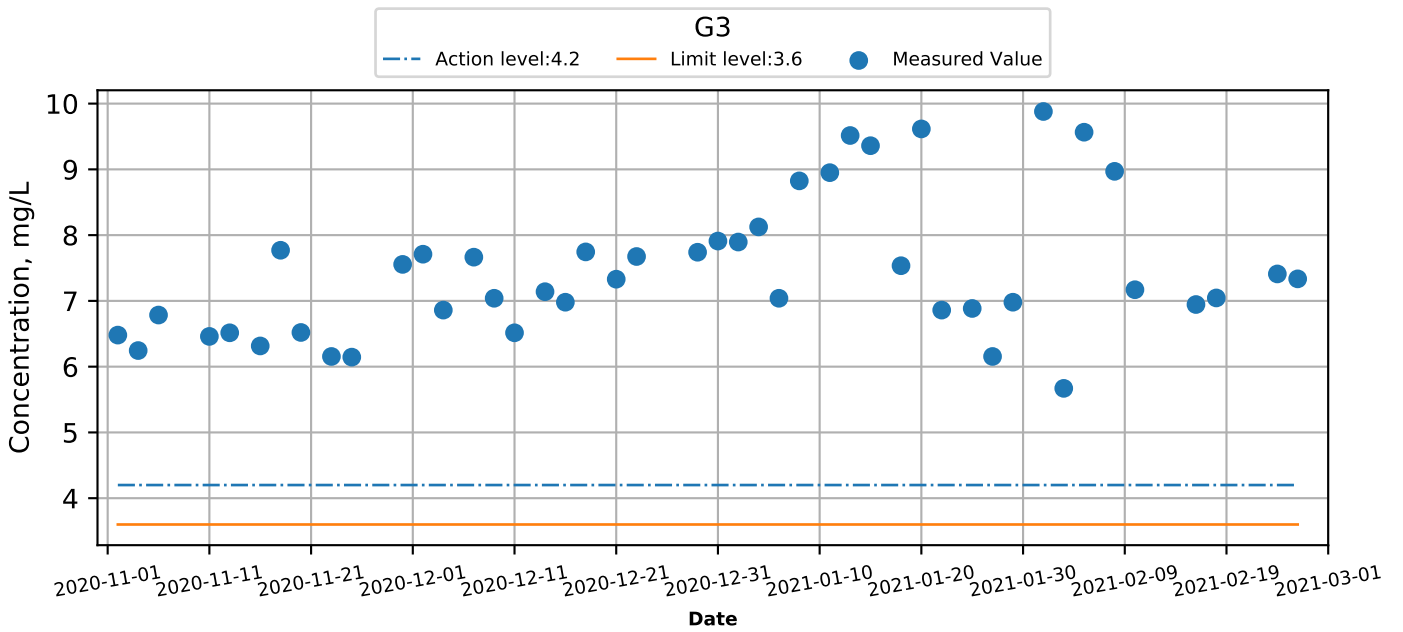
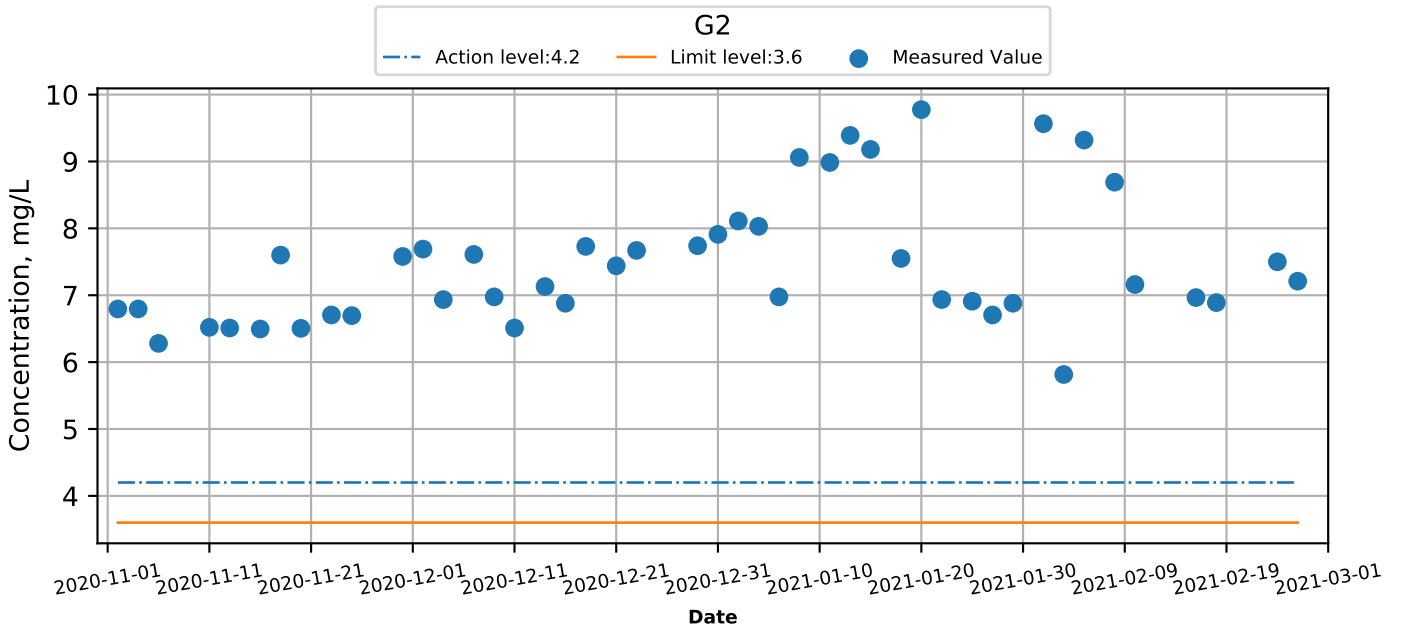
Dissolved Oxygen (Bottom) at Monitoring Stations during Mid-Ebb



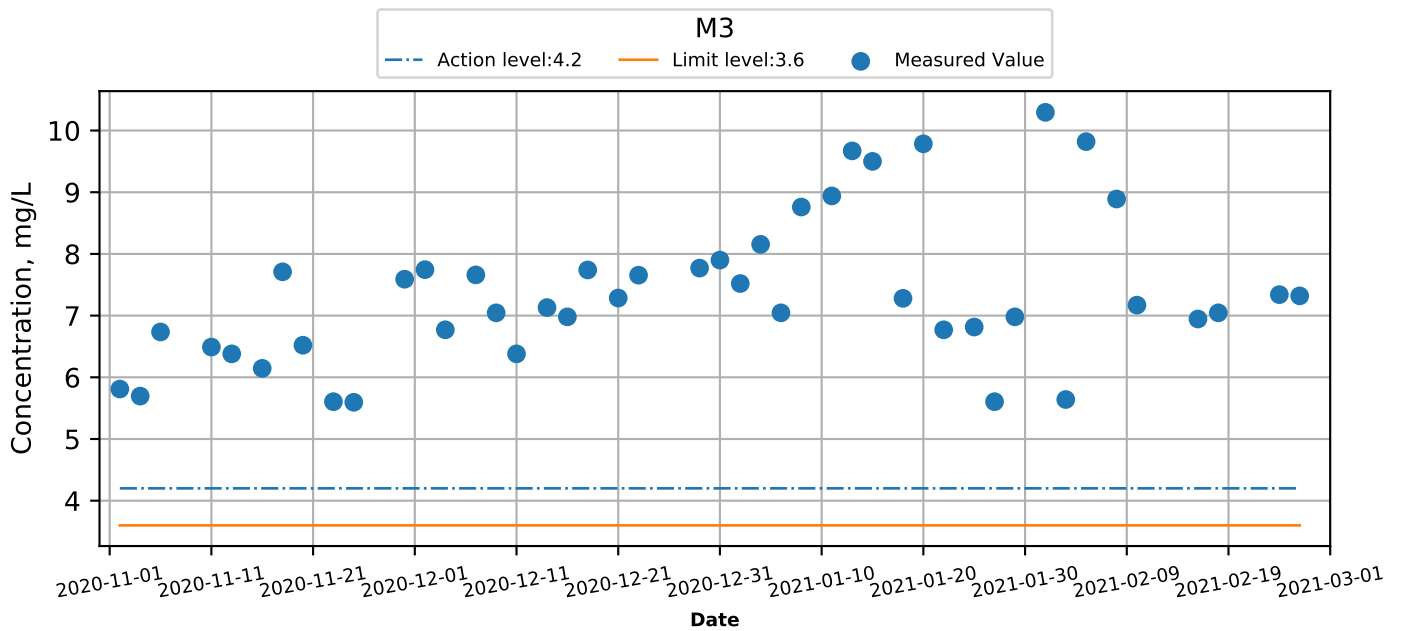
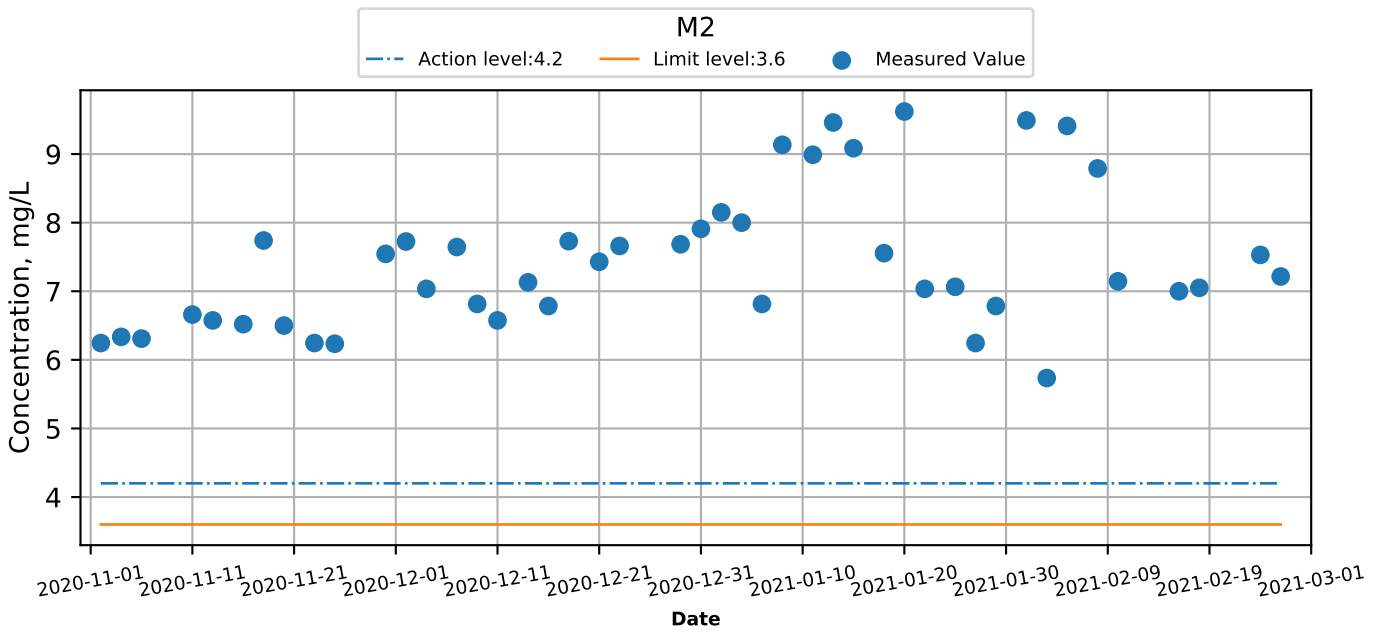
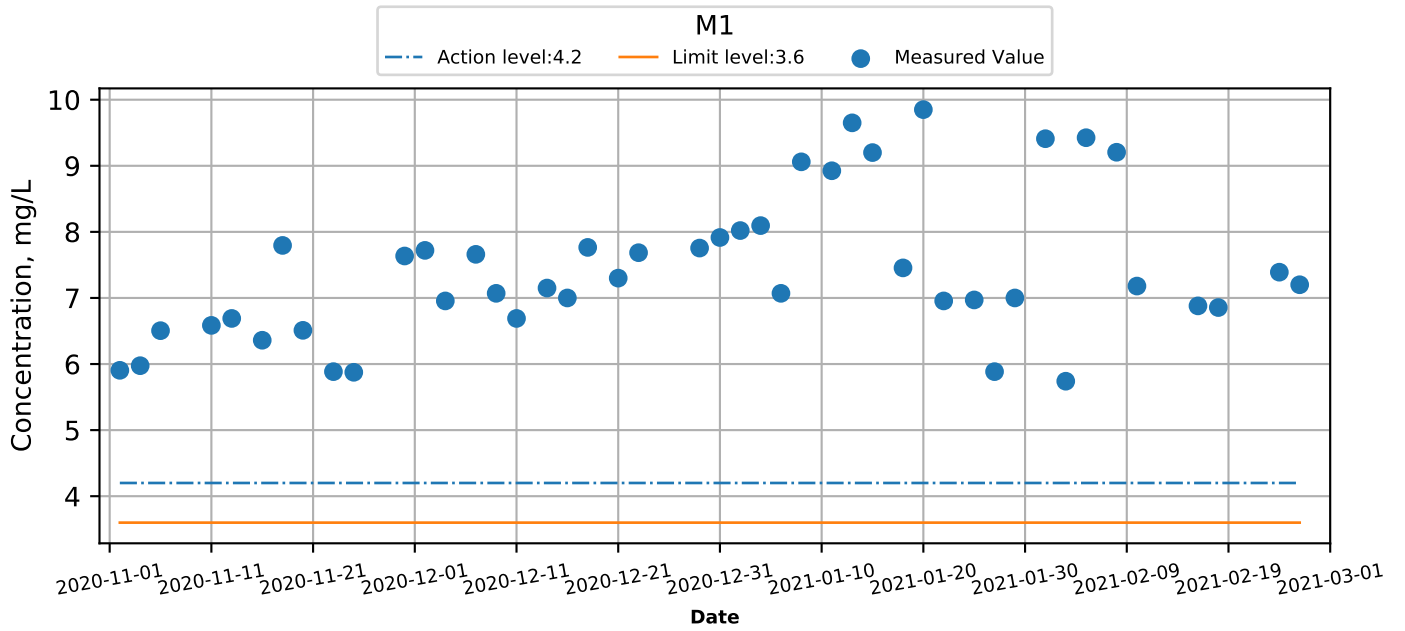
Dissolved Oxygen (Bottom) at Monitoring Stations during Mid-Flood



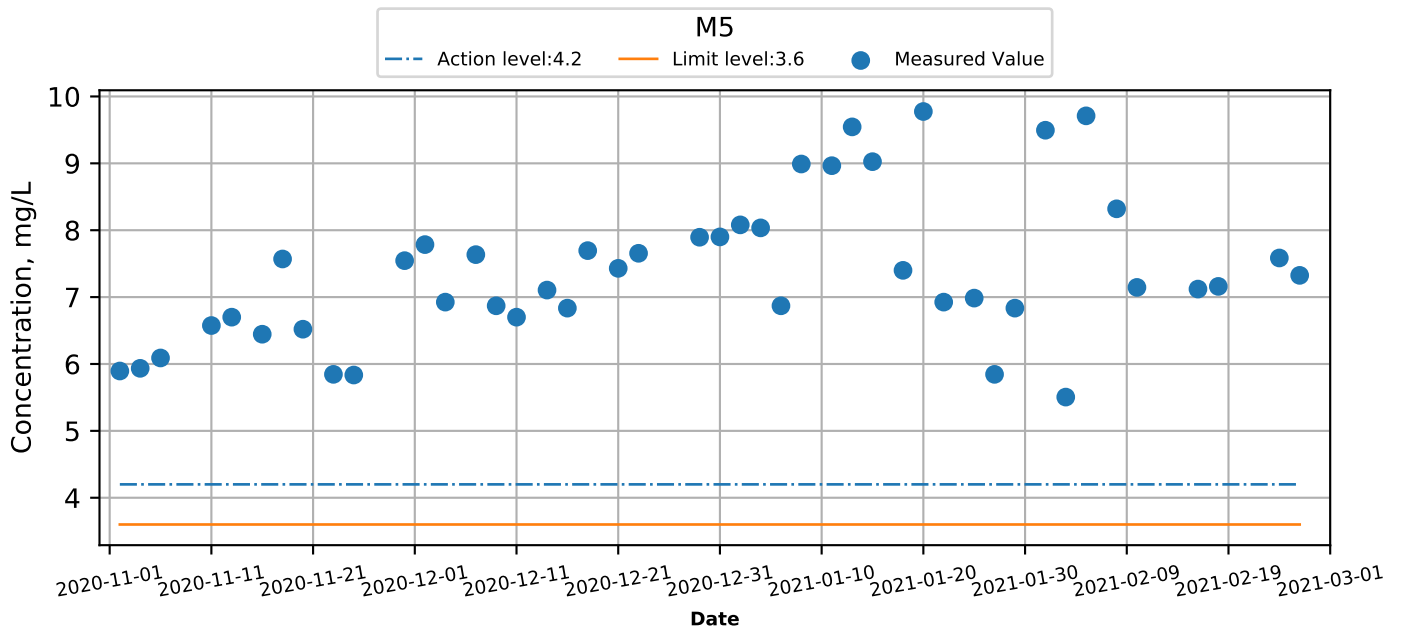
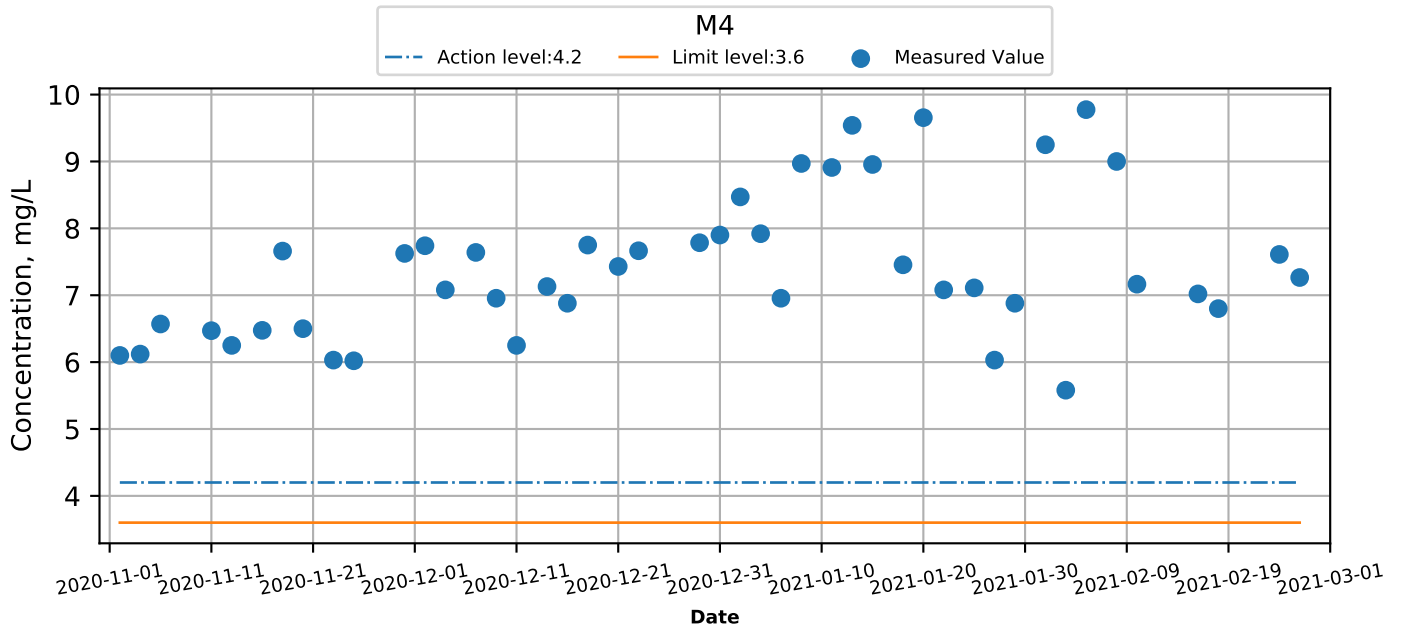
Dissolved Oxygen (Bottom) at Monitoring Stations during Mid-Flood



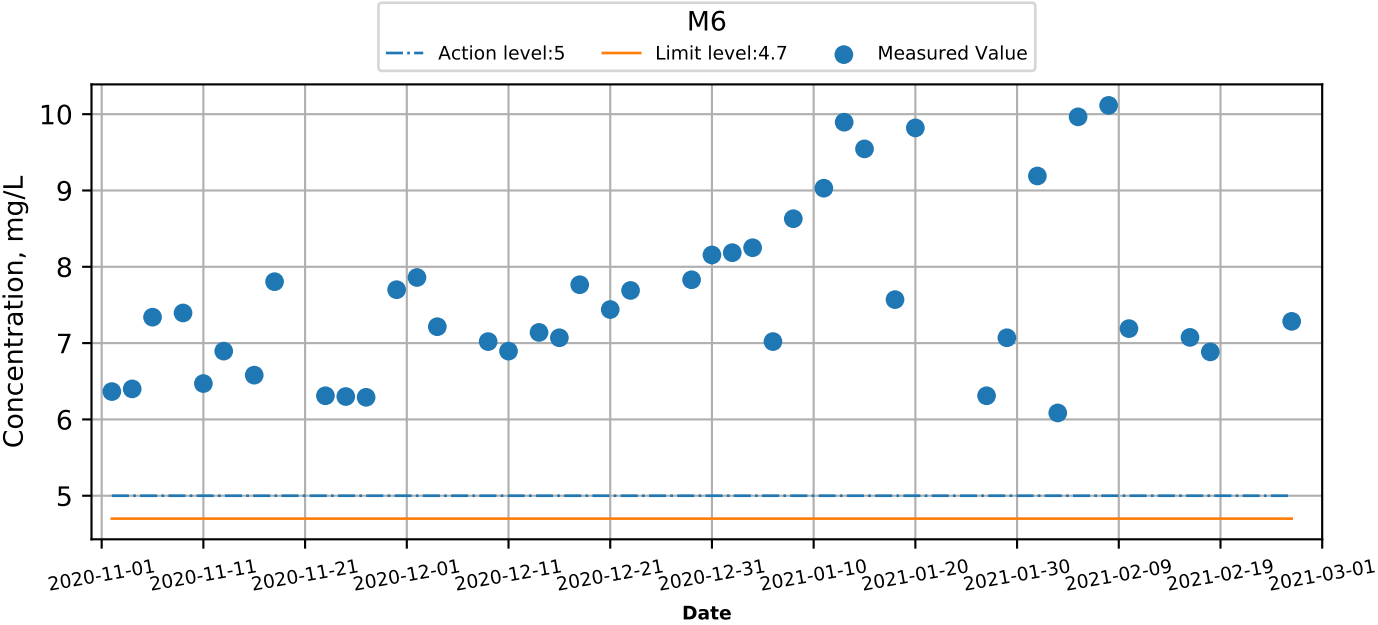
Dissolved Oxygen (Bottom) at Monitoring Stations during Mid-Flood



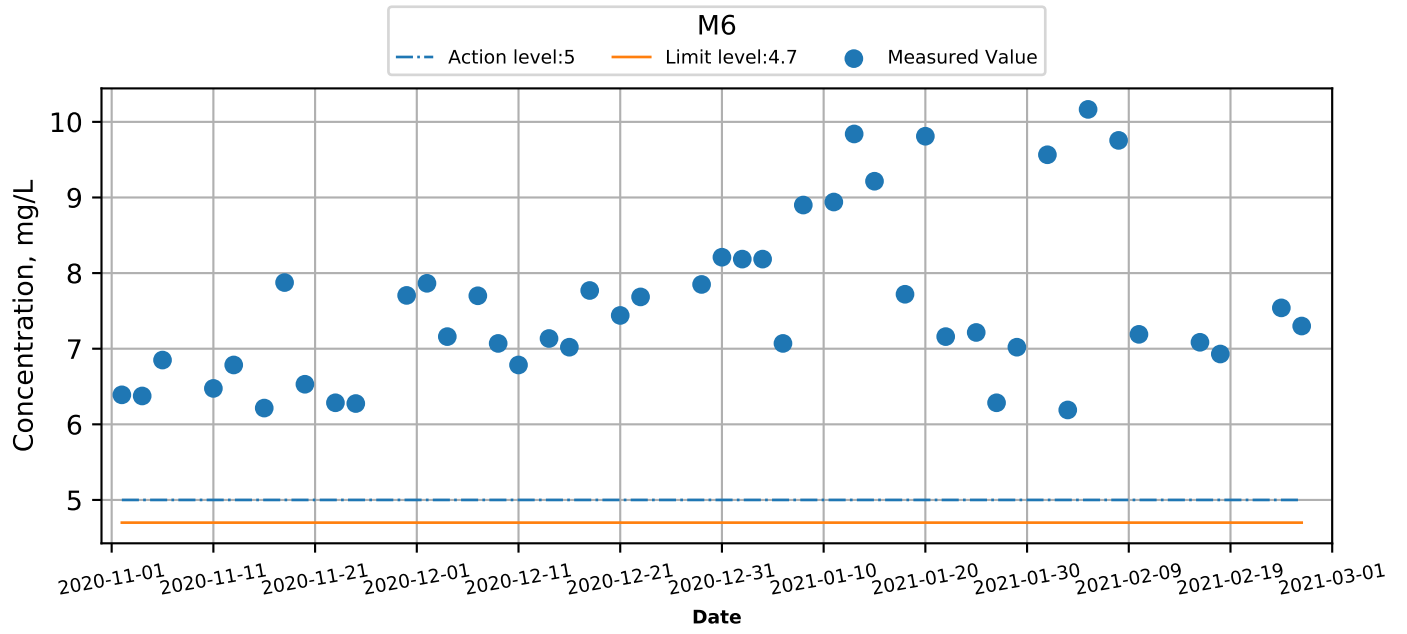
Dissolved Oxygen (Bottom) at Monitoring Stations during Mid-Flood



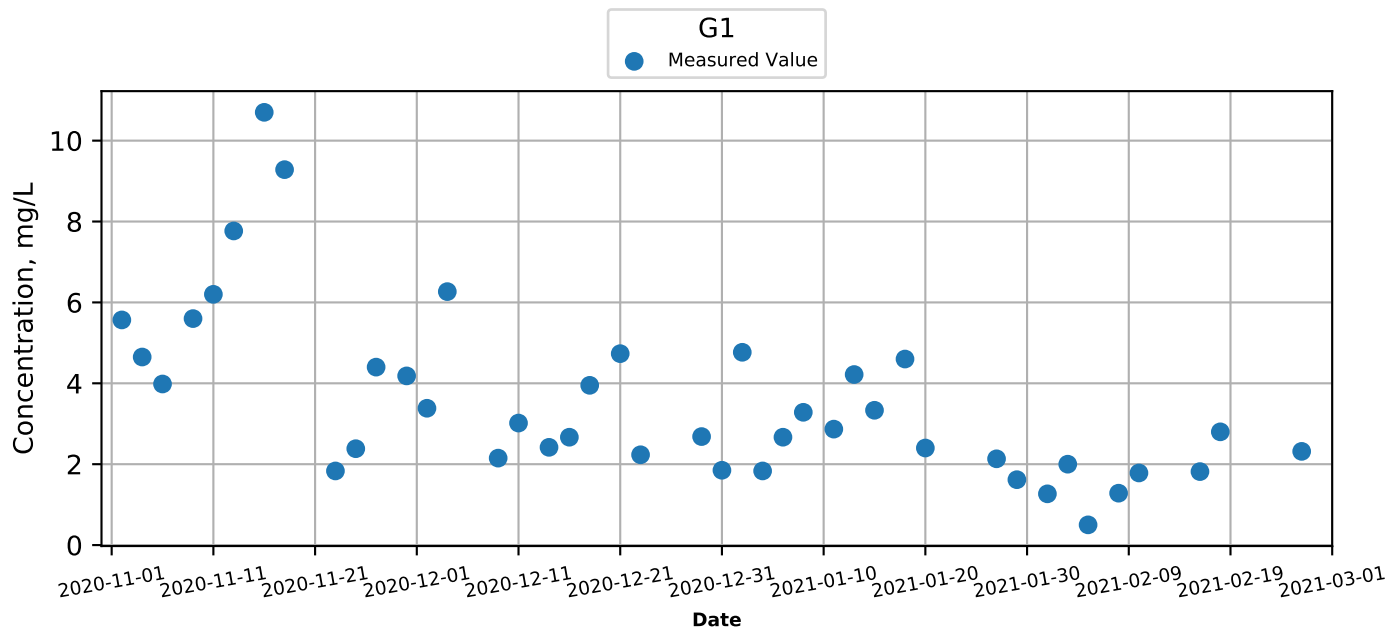
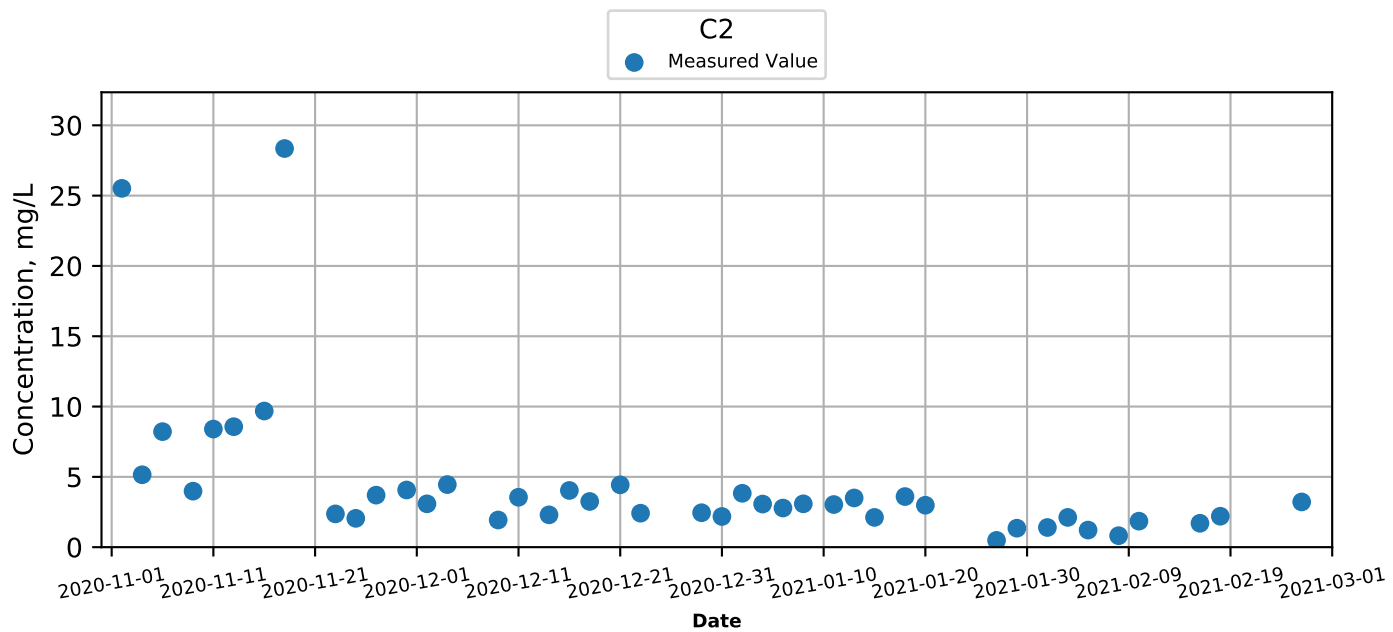
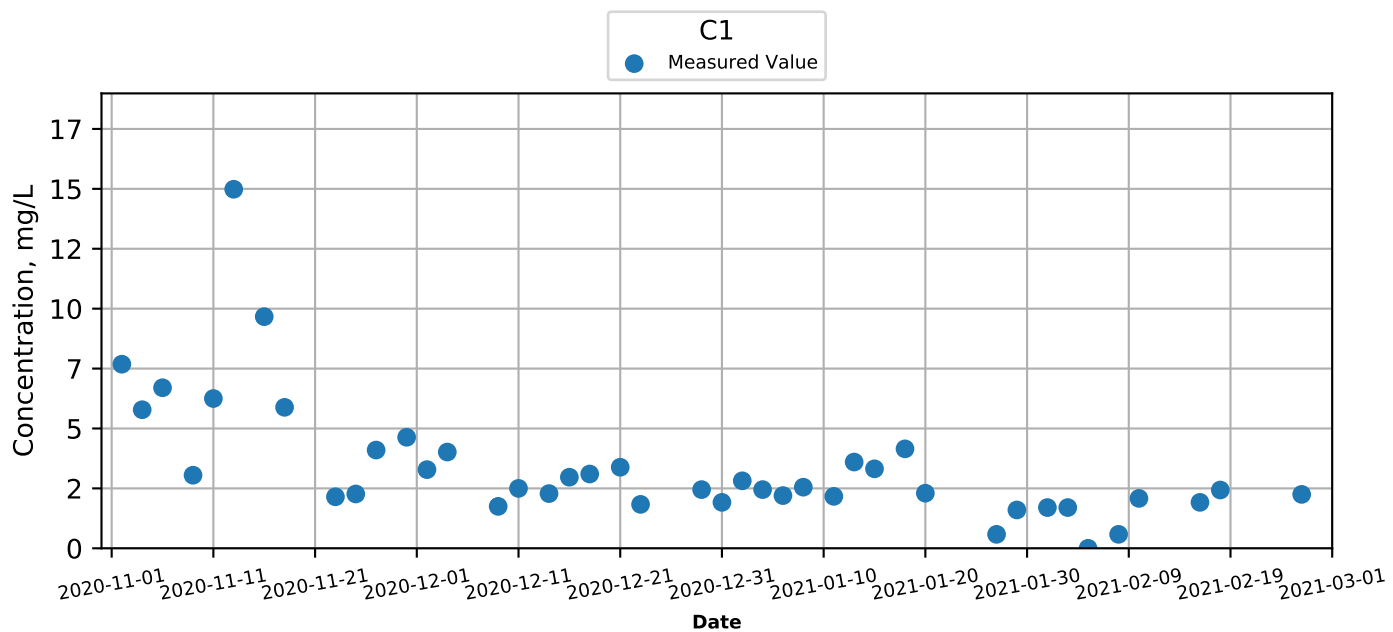
Dissolved Oxygen (Intake level) at Monitoring Stations during Mid-Ebb



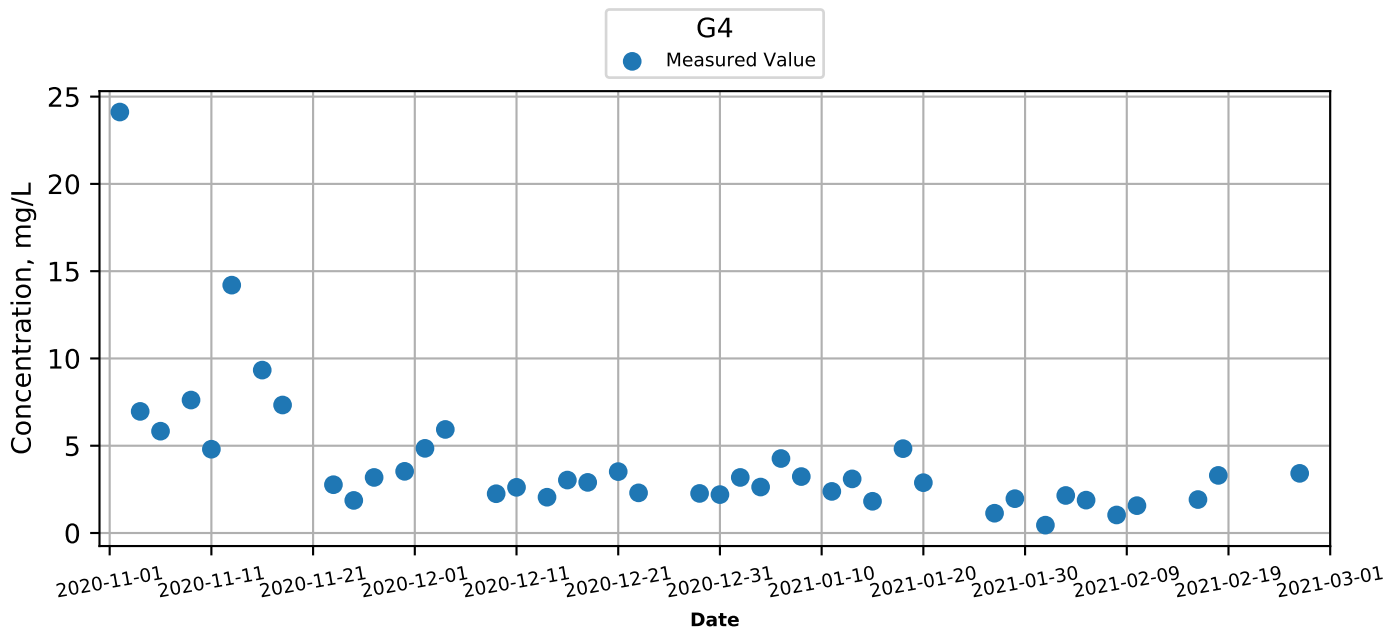
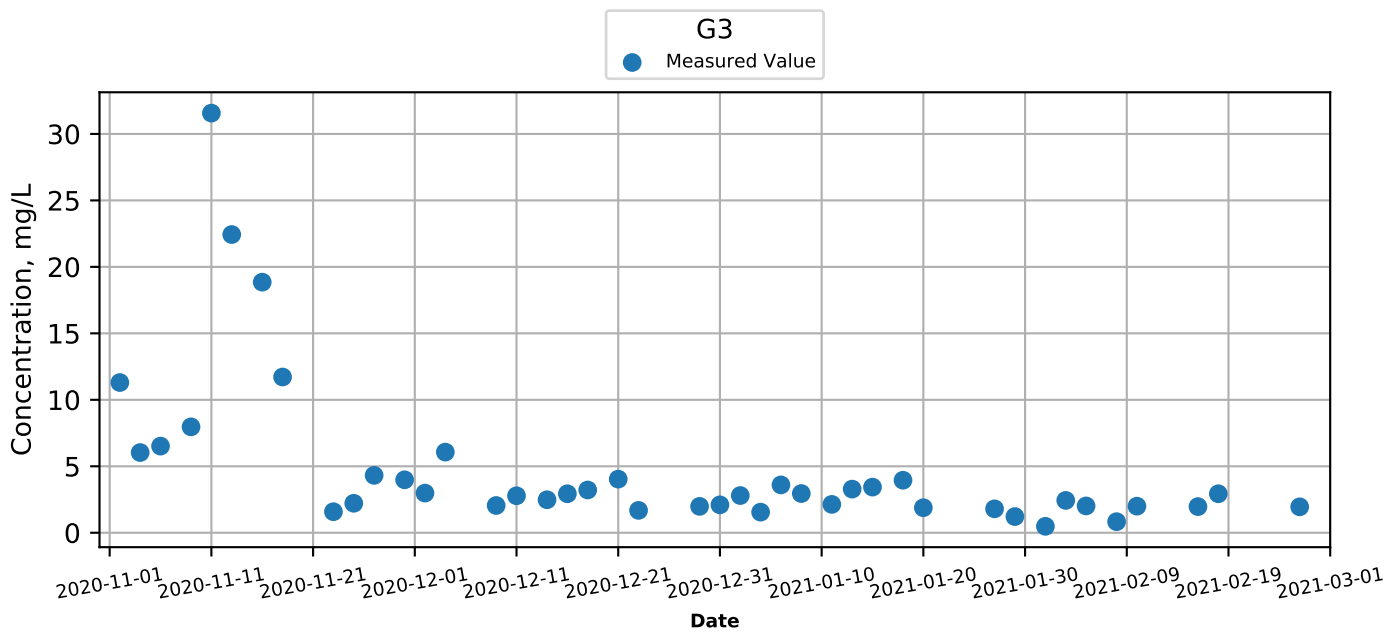
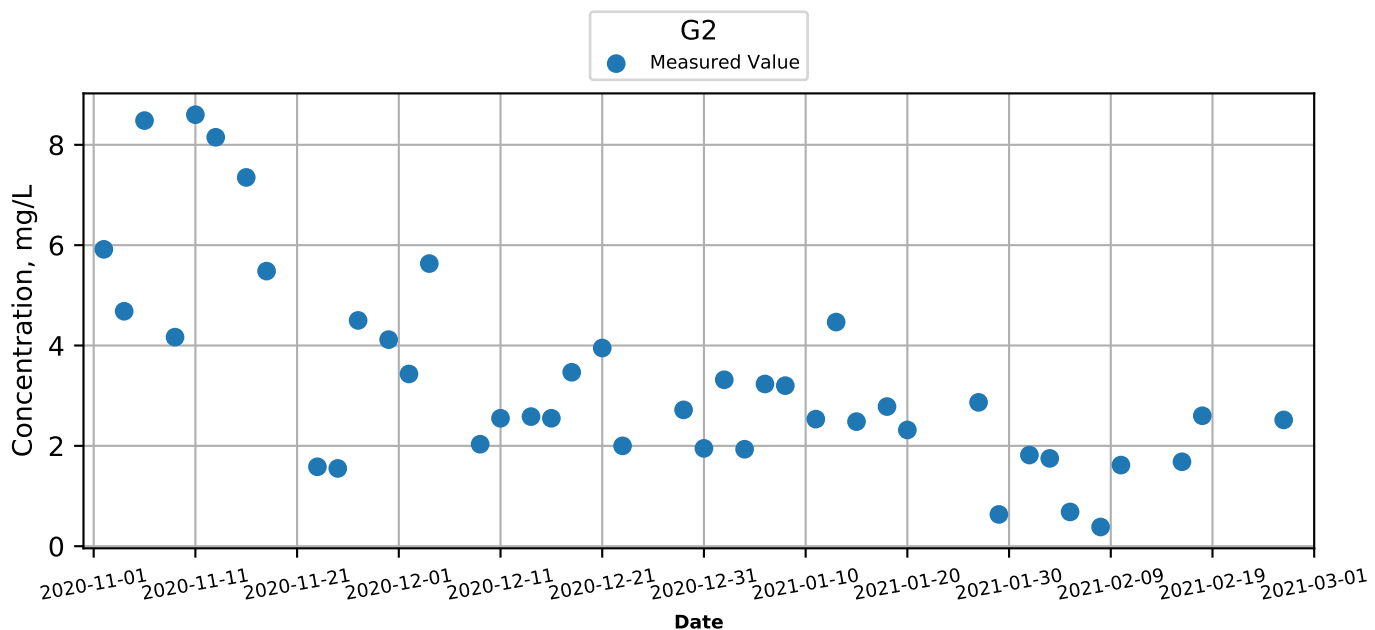
Dissolved Oxygen (Intake level) at Monitoring Stations during Mid-Flood



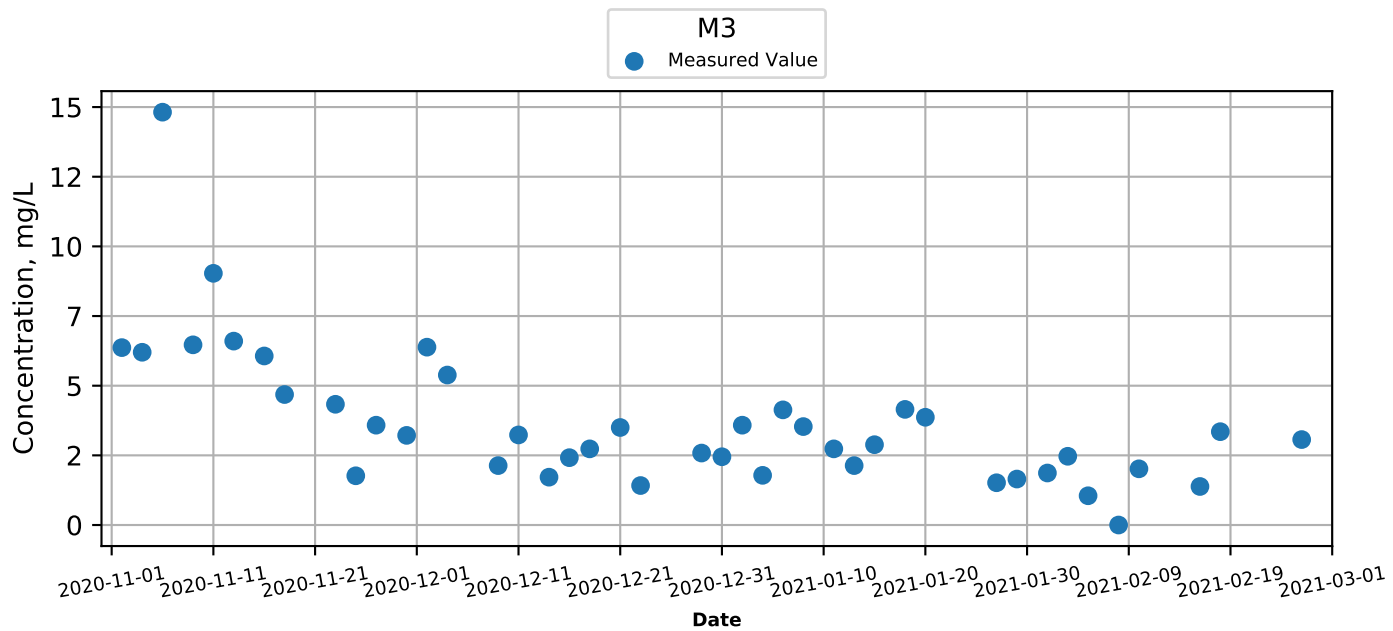
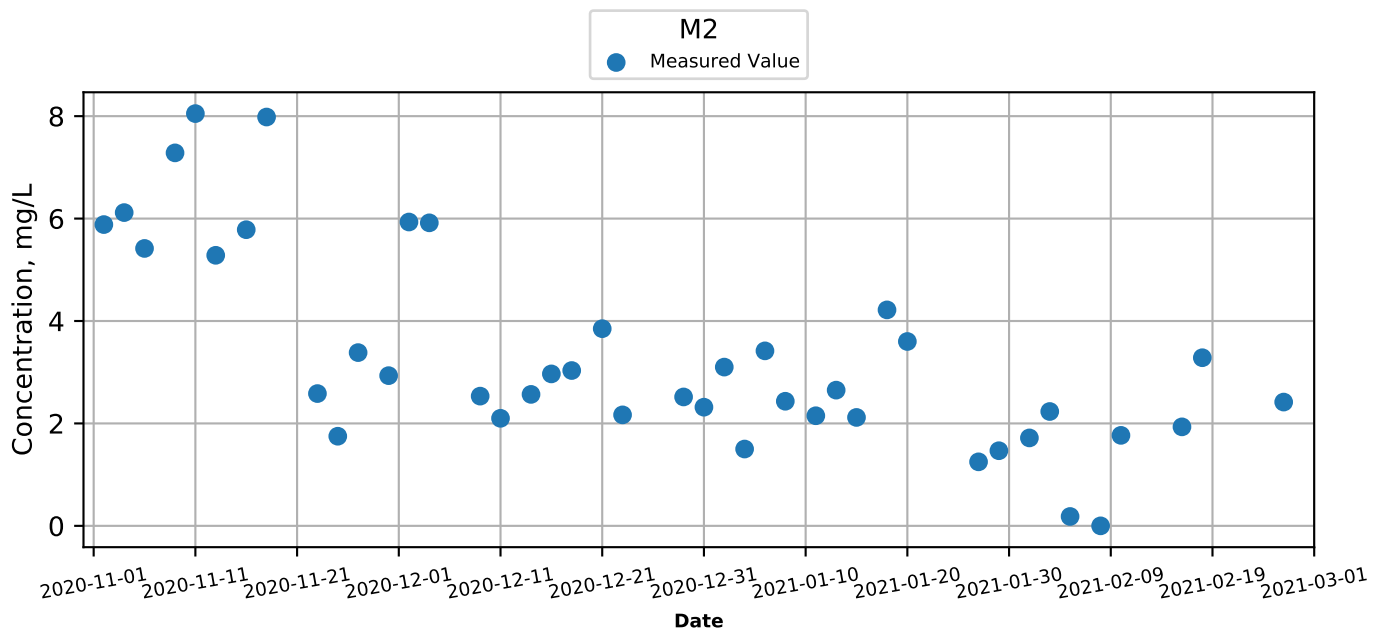
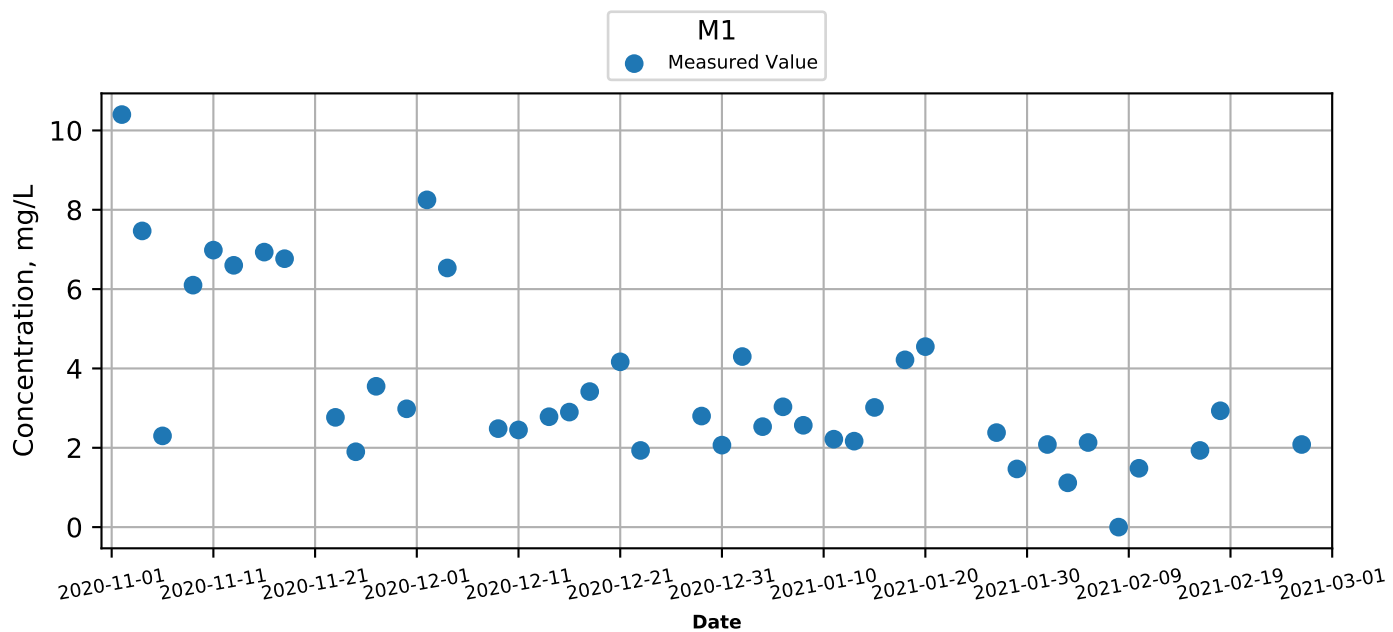
Suspended Solids (Depth-Averaged) at Monitoring Stations during Mid-Ebb



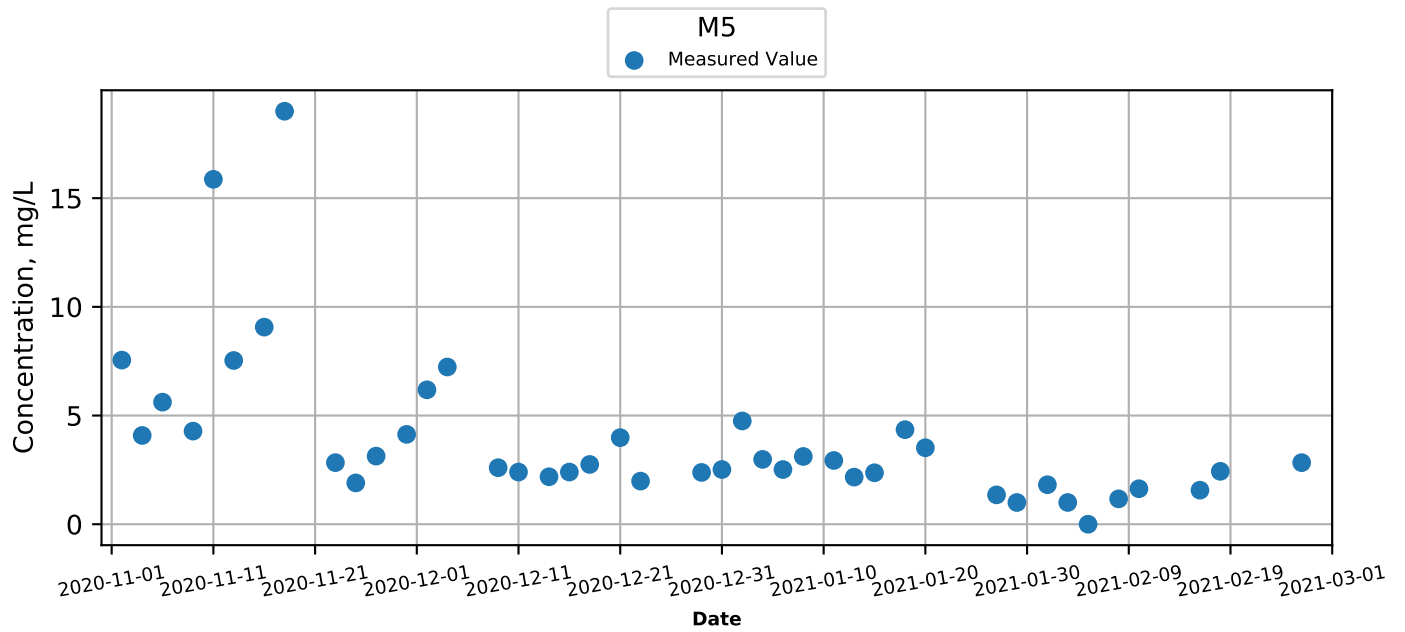
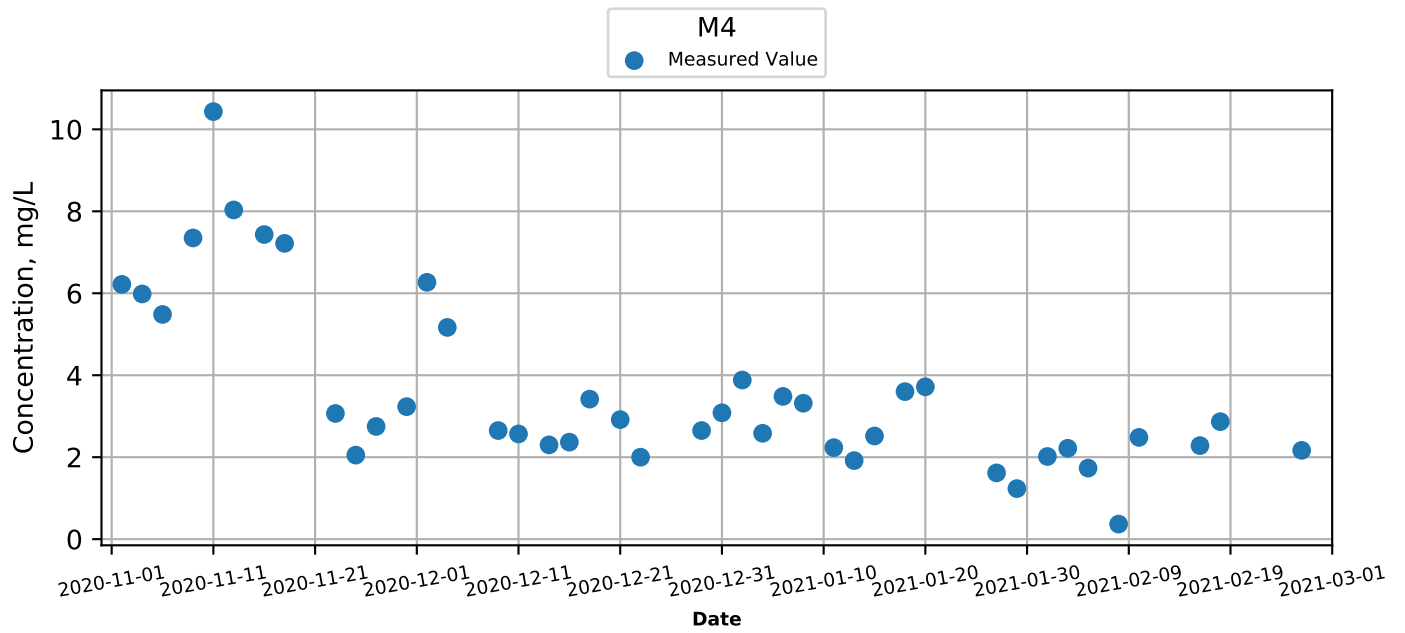
Suspended Solids (Depth-Averaged) at Monitoring Stations during Mid-Ebb



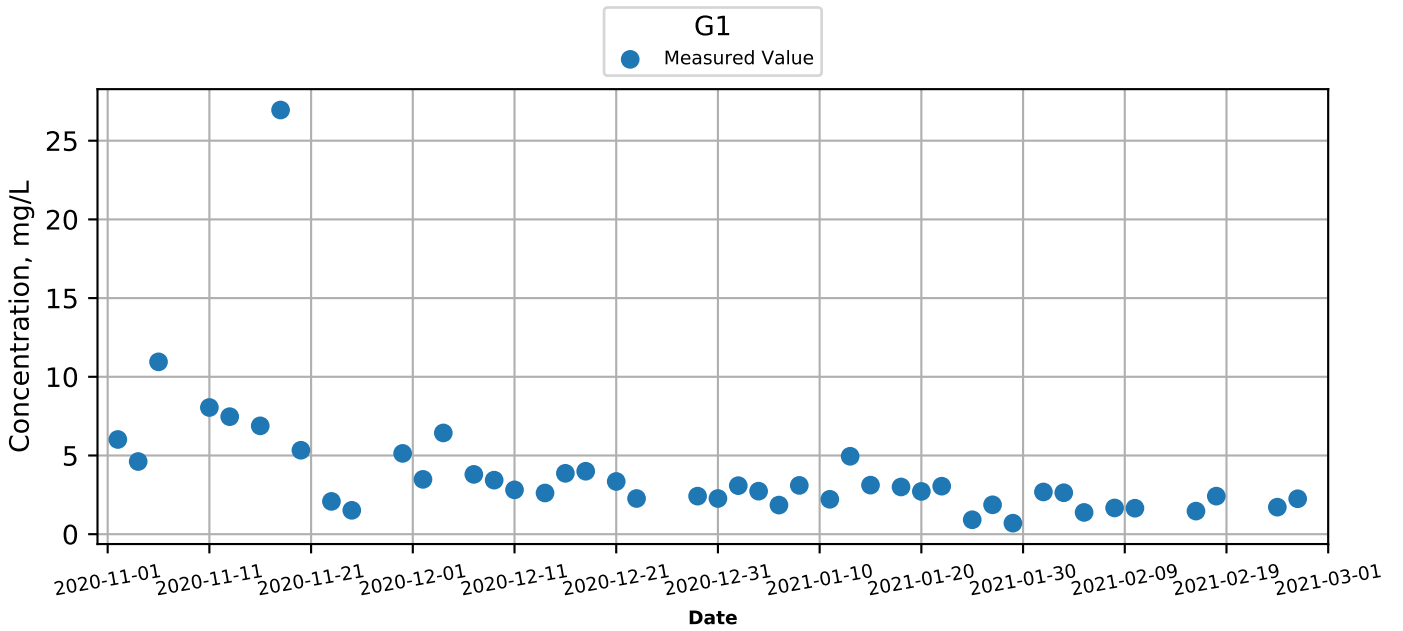
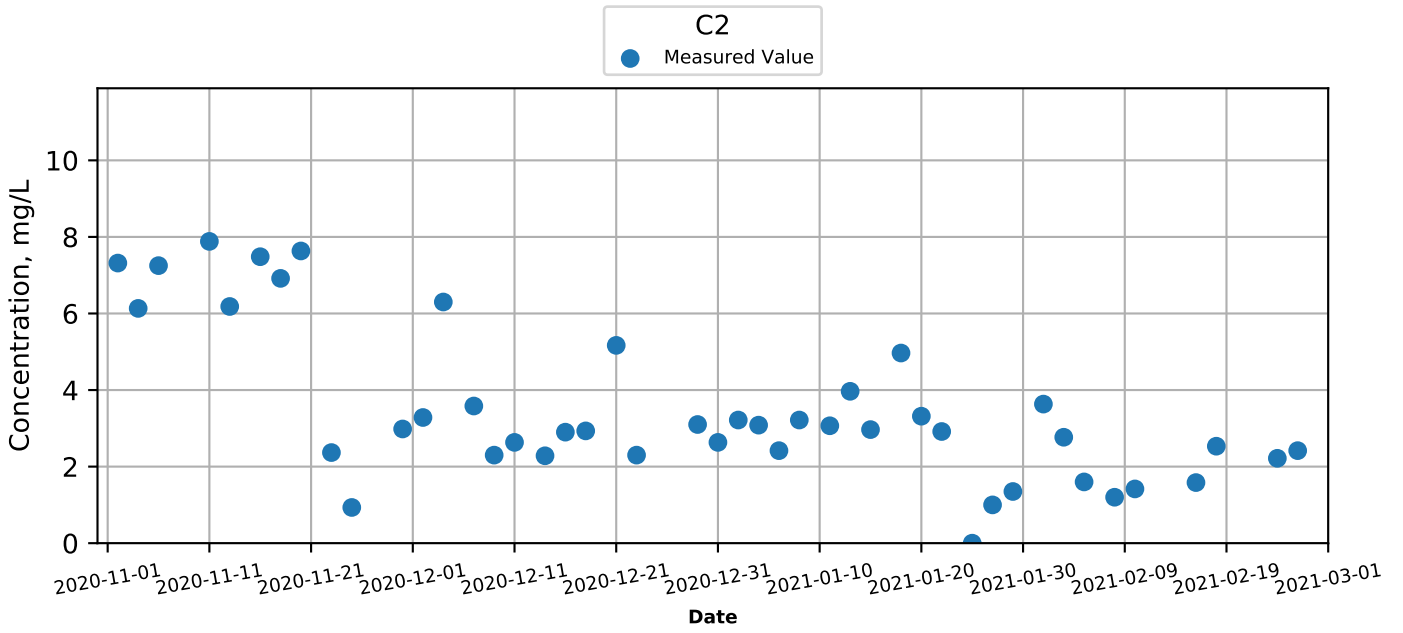
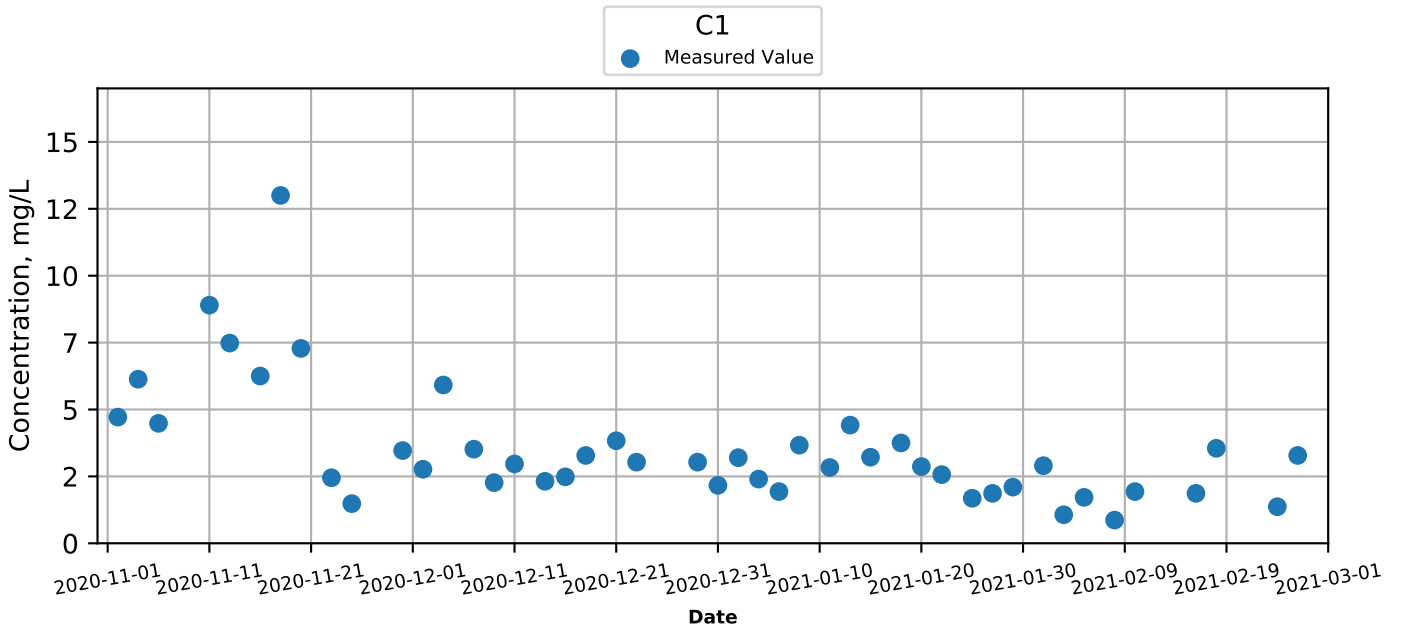
Suspended Solids (Depth-Averaged) at Monitoring Stations during Mid-Ebb



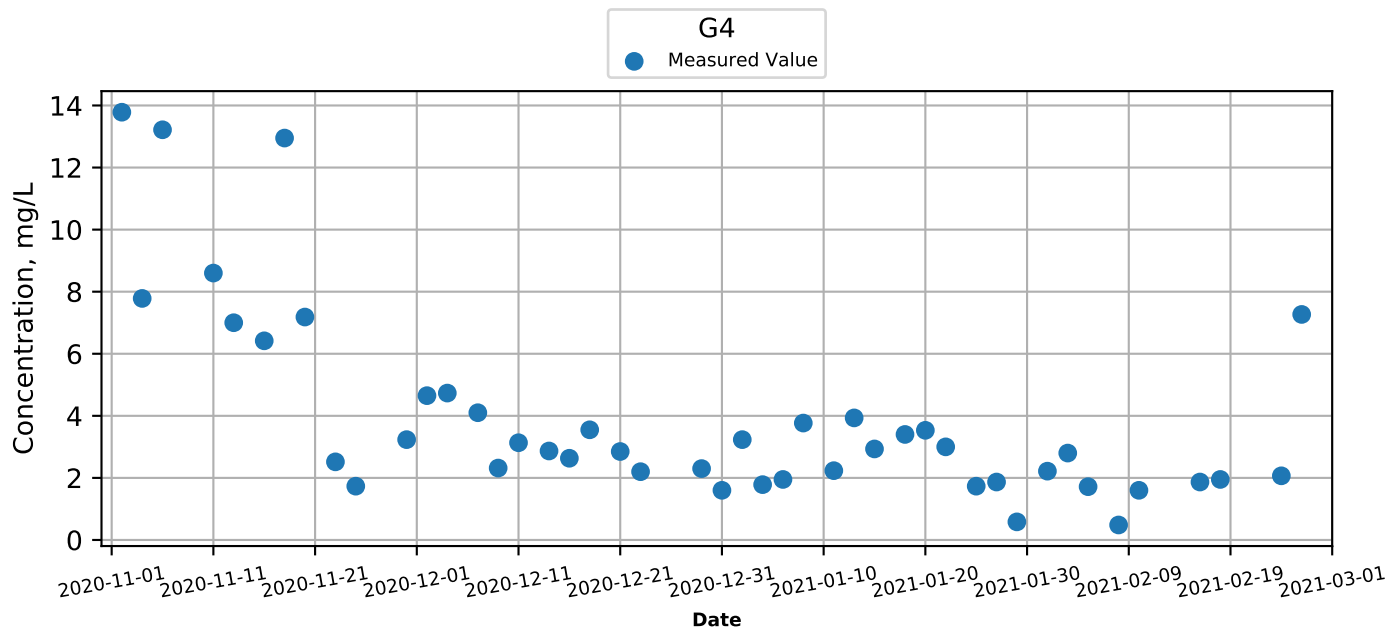
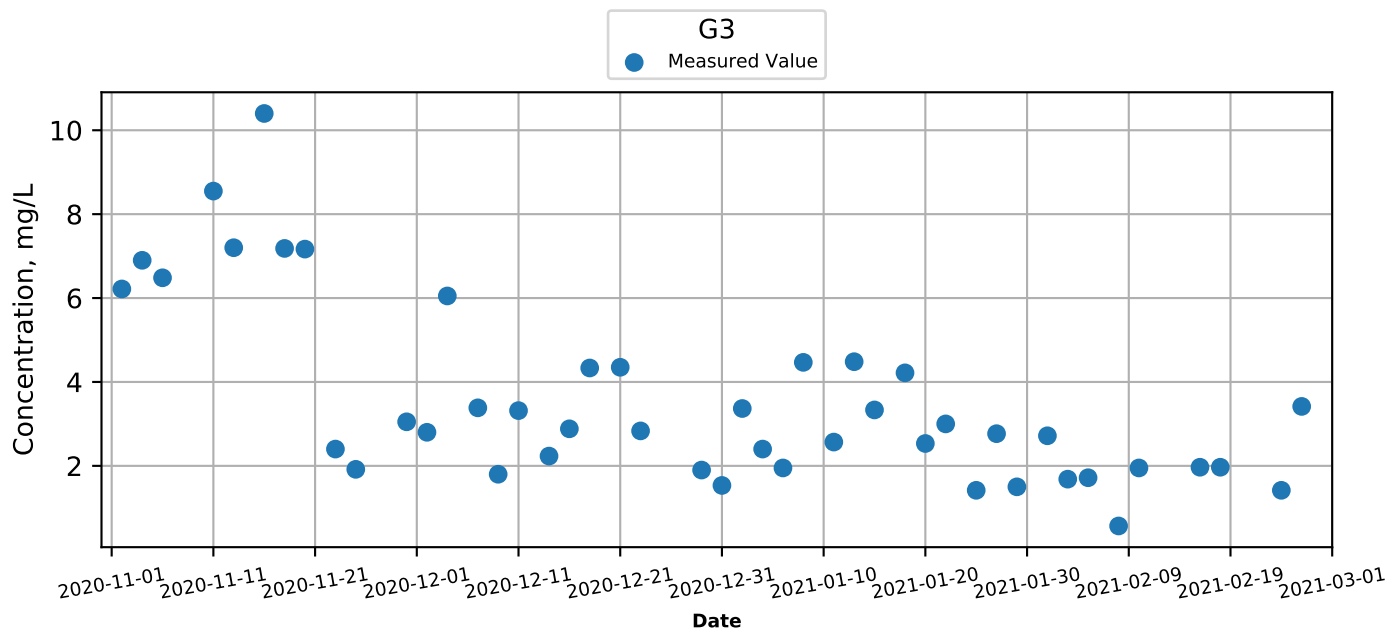
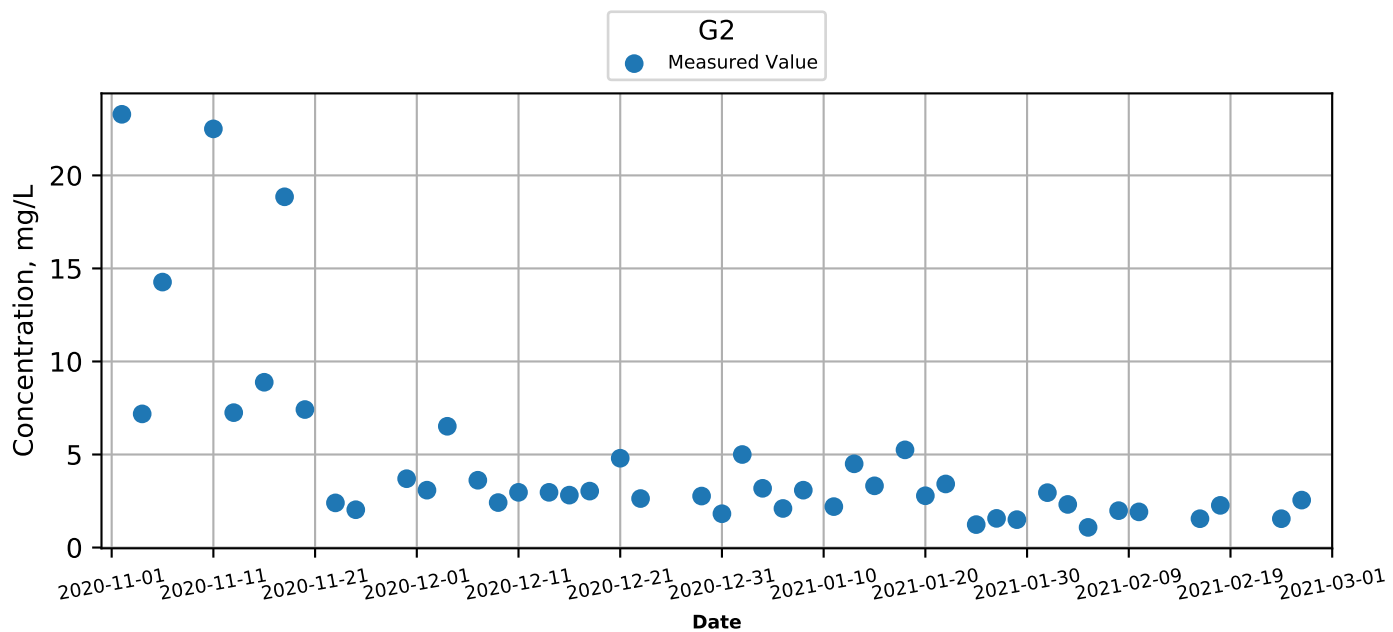
Suspended Solids (Depth-Averaged) at Monitoring Stations during Mid-Ebb



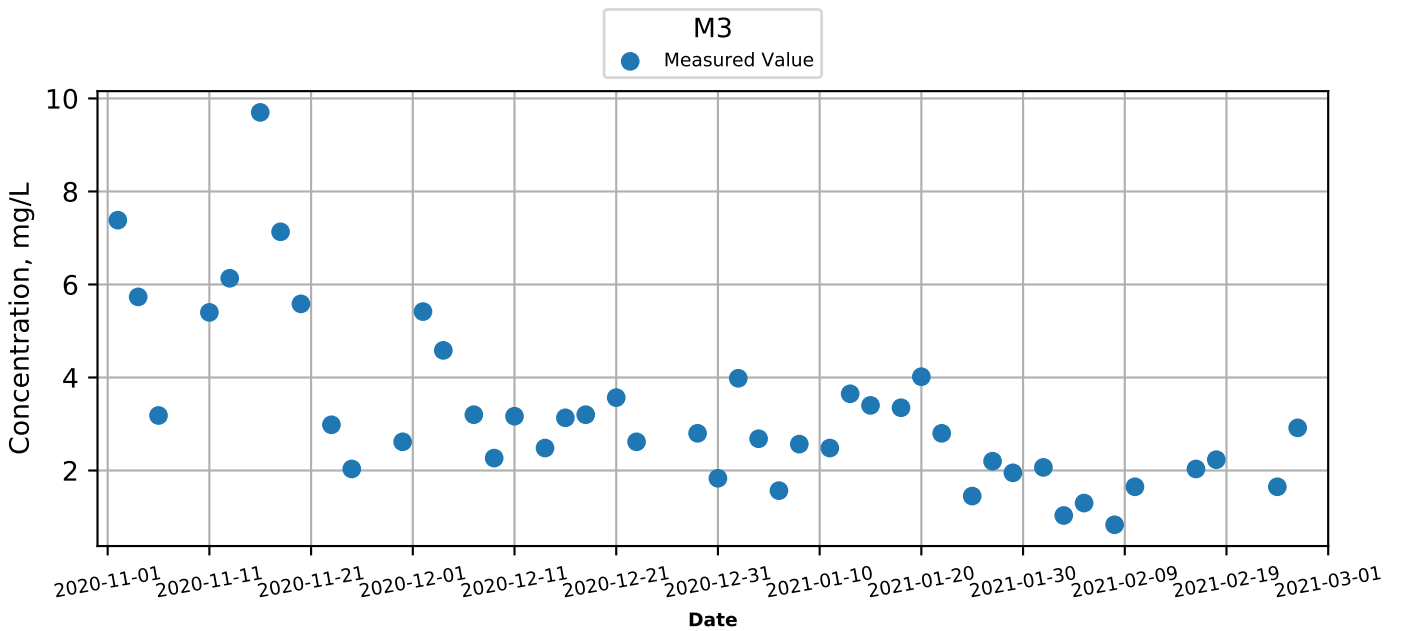
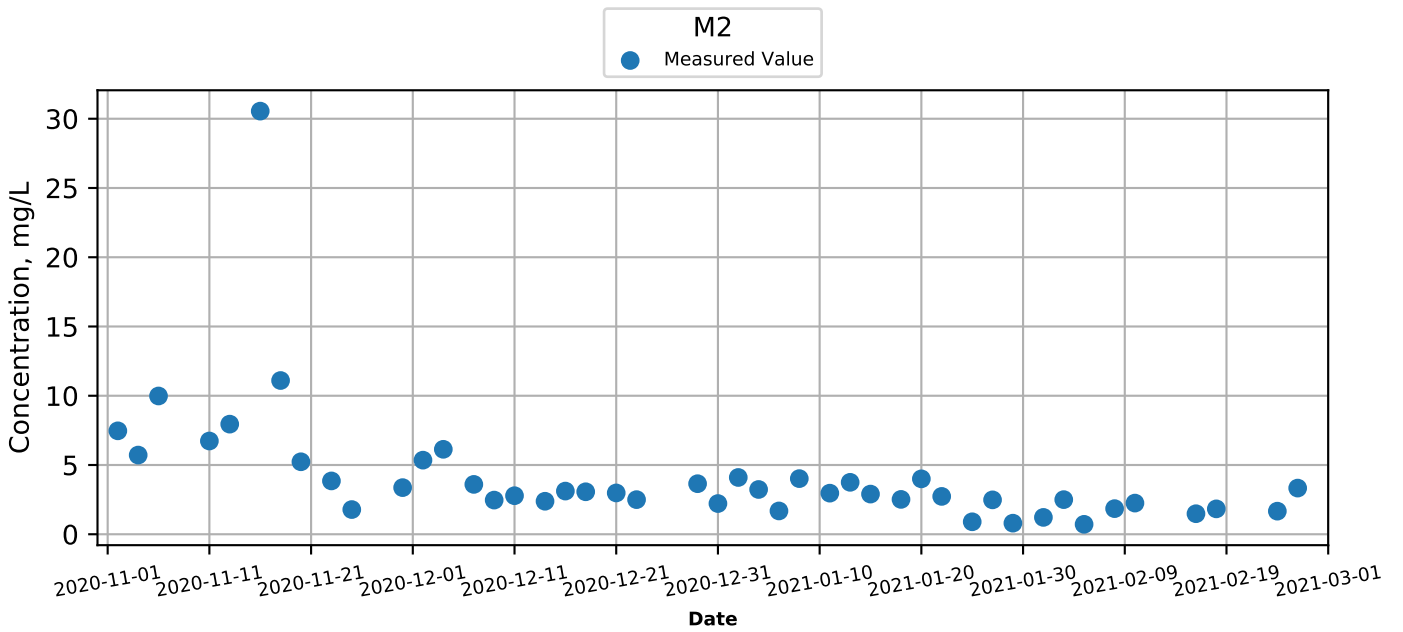
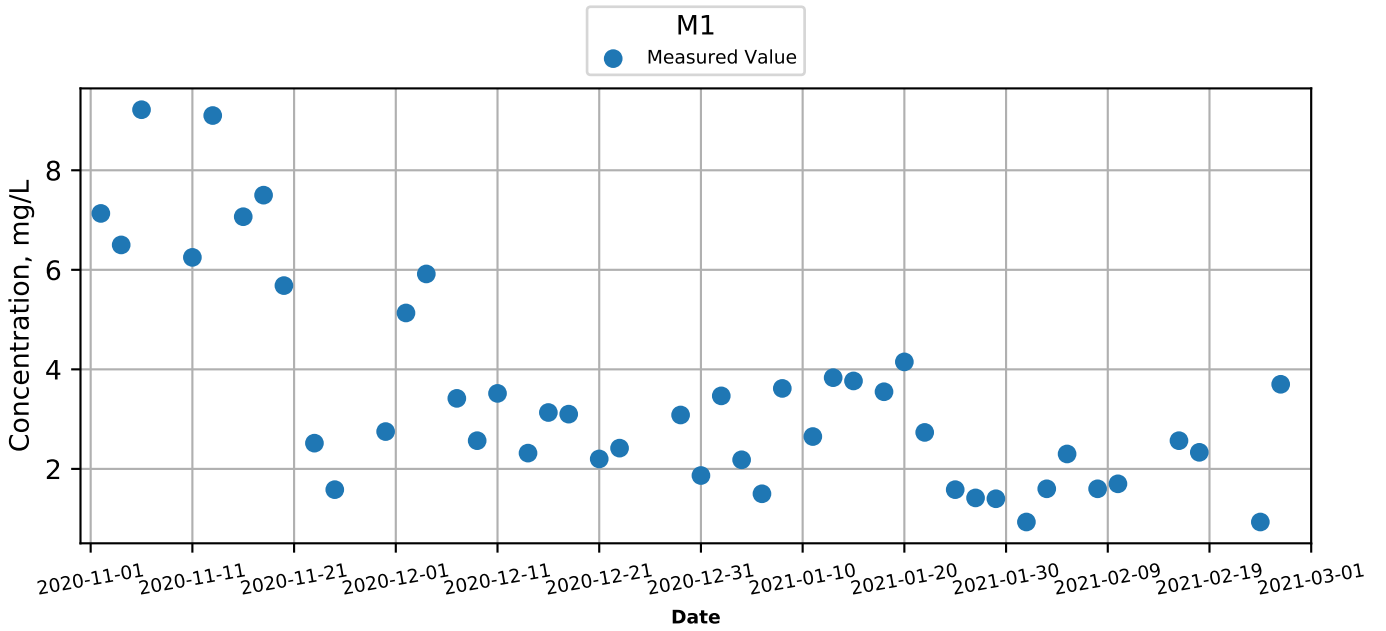
Suspended Solids (Depth-Averaged) at Monitoring Stations during Mid-Flood



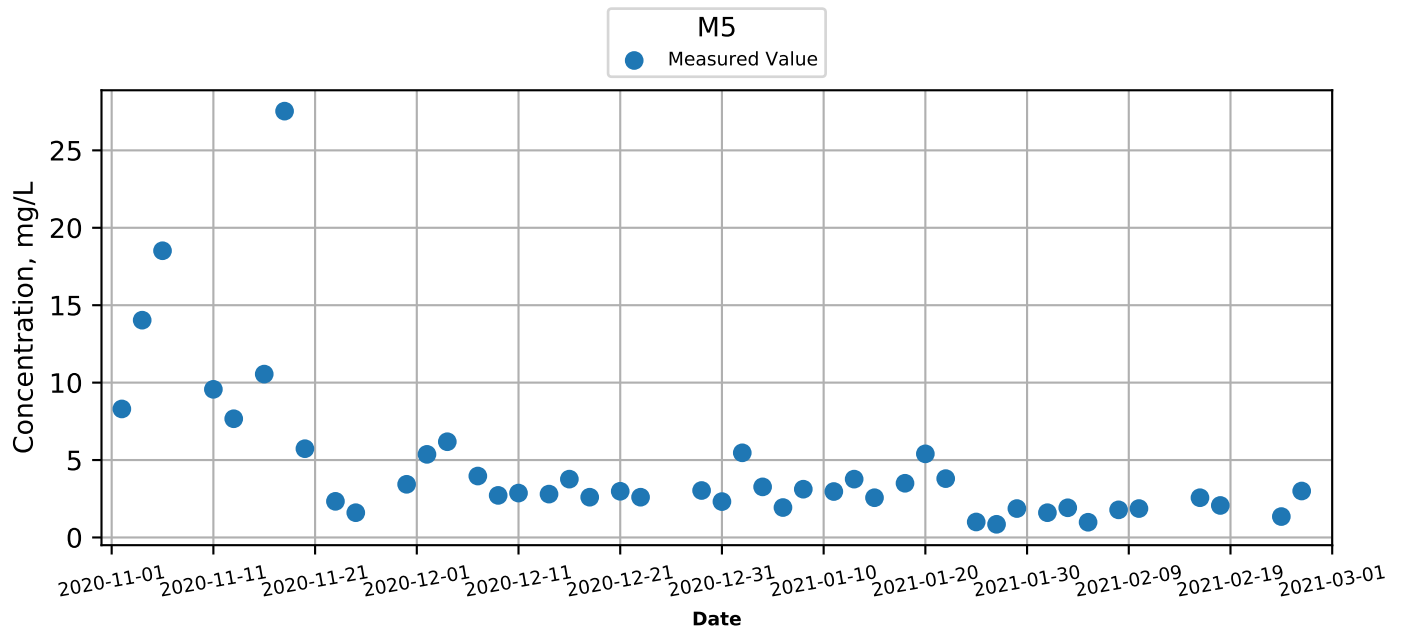
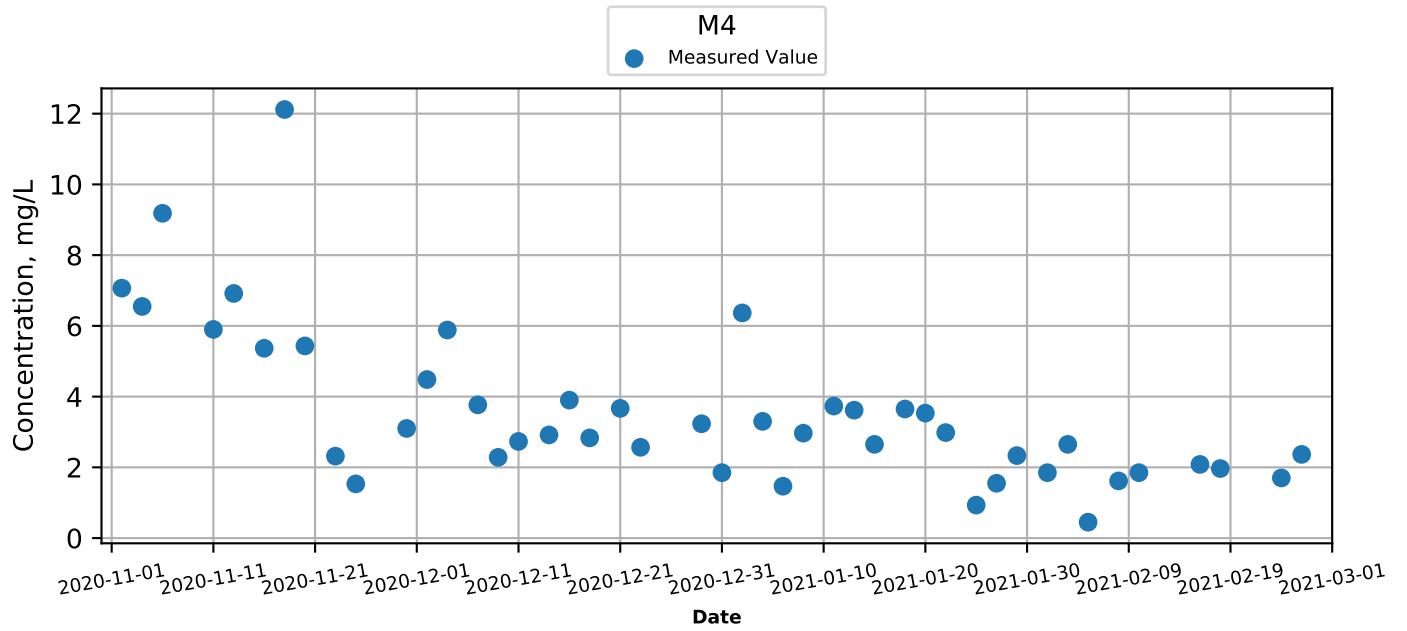
Suspended Solids (Depth-Averaged) at Monitoring Stations during Mid-Flood



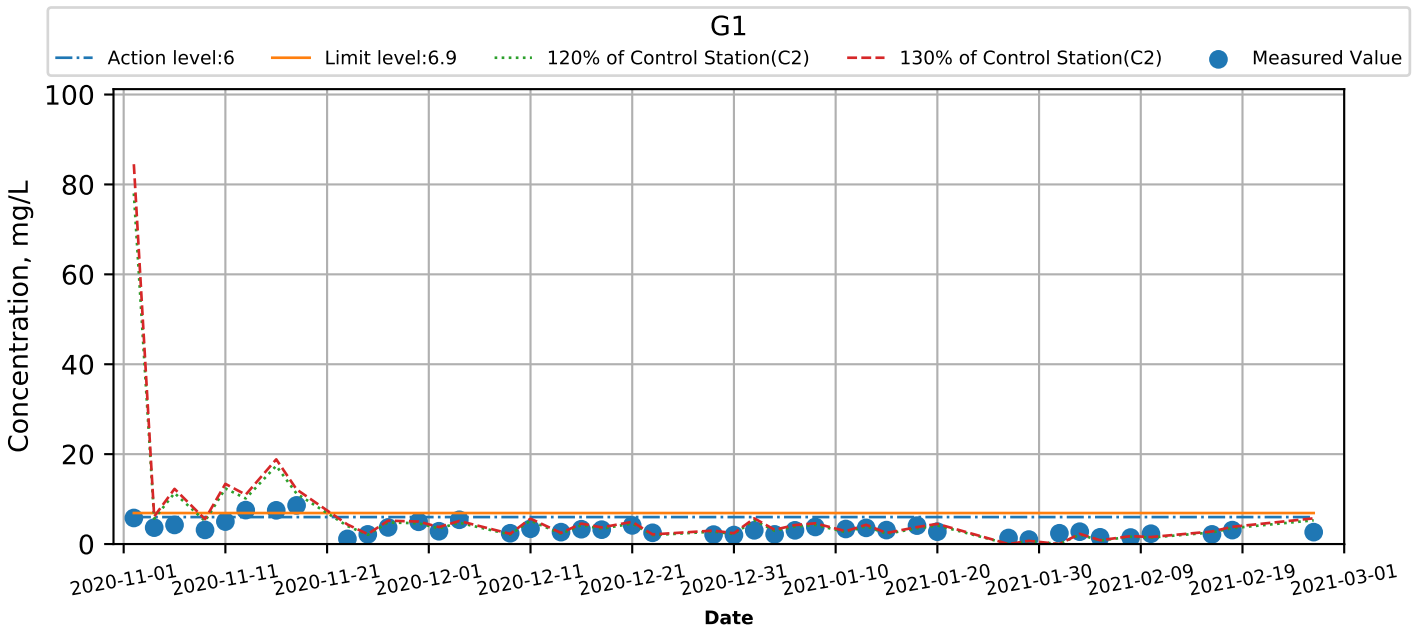
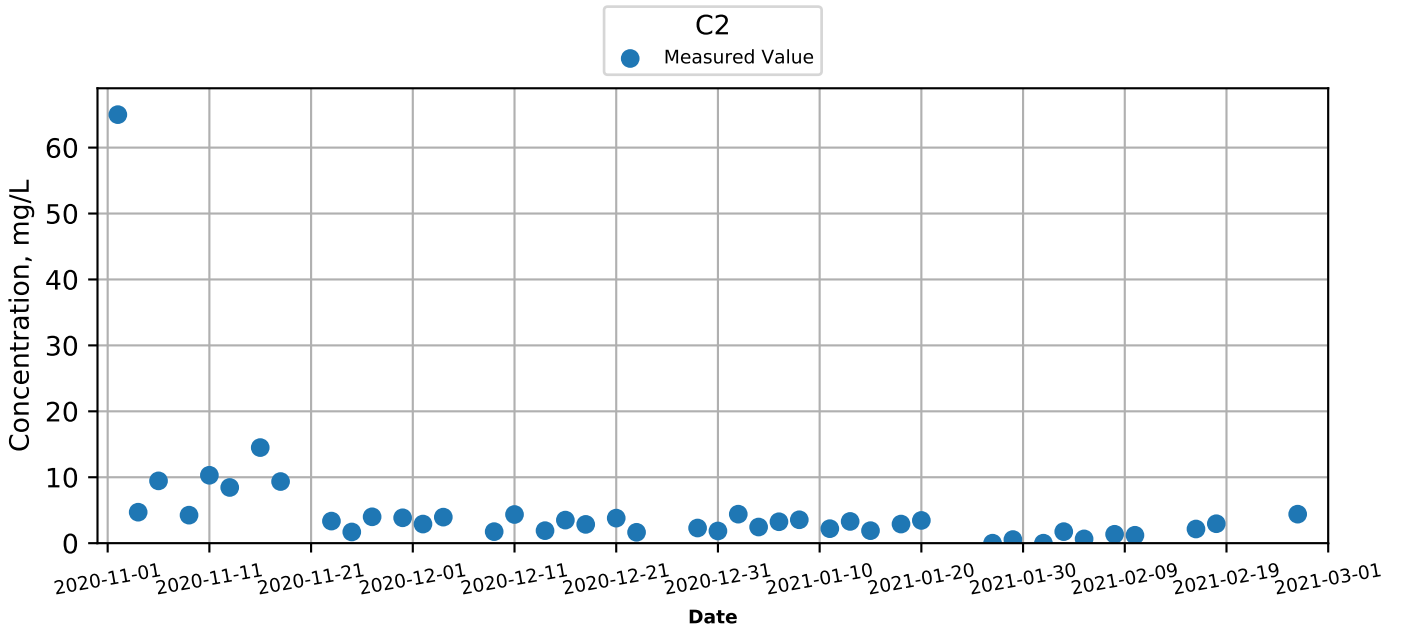
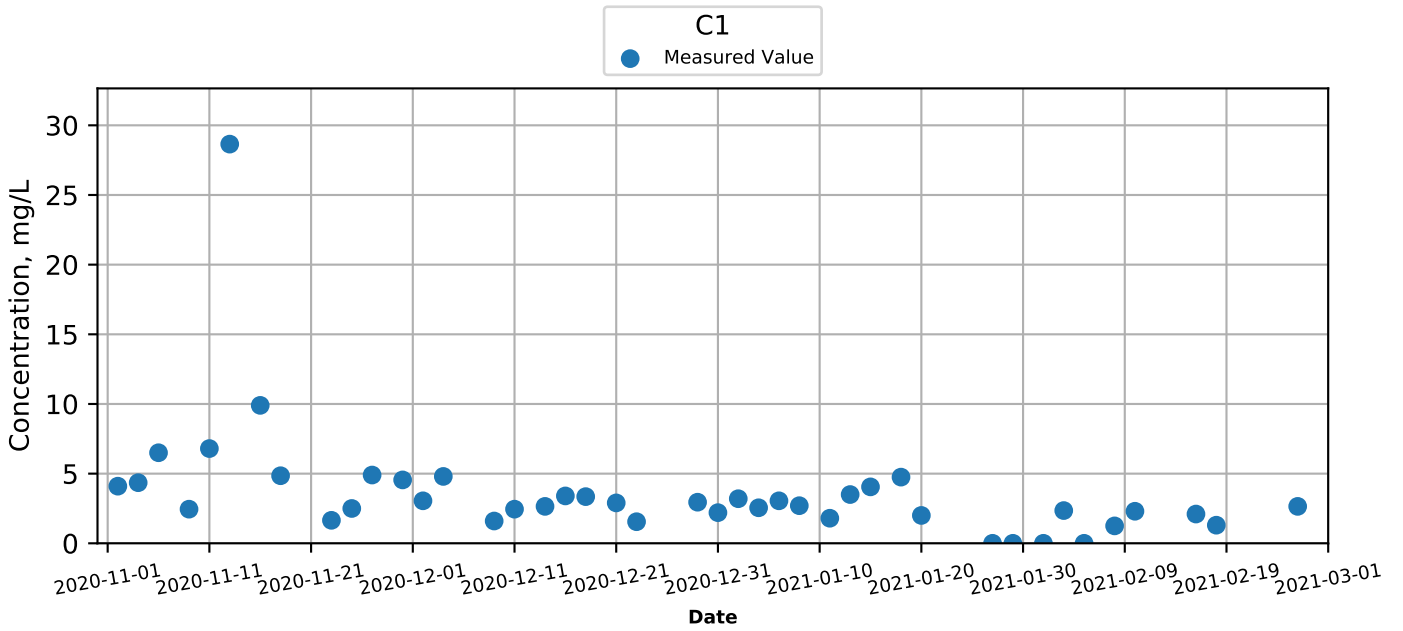
Suspended Solids (Depth-Averaged) at Monitoring Stations during Mid-Flood



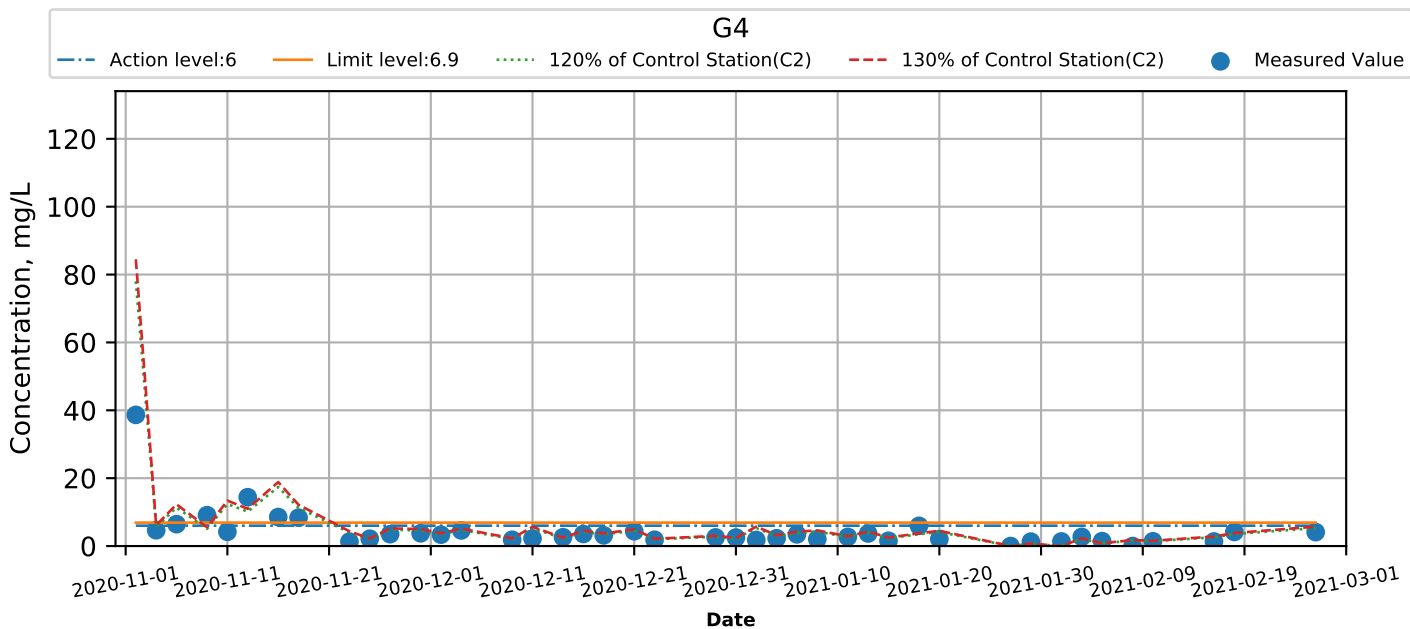
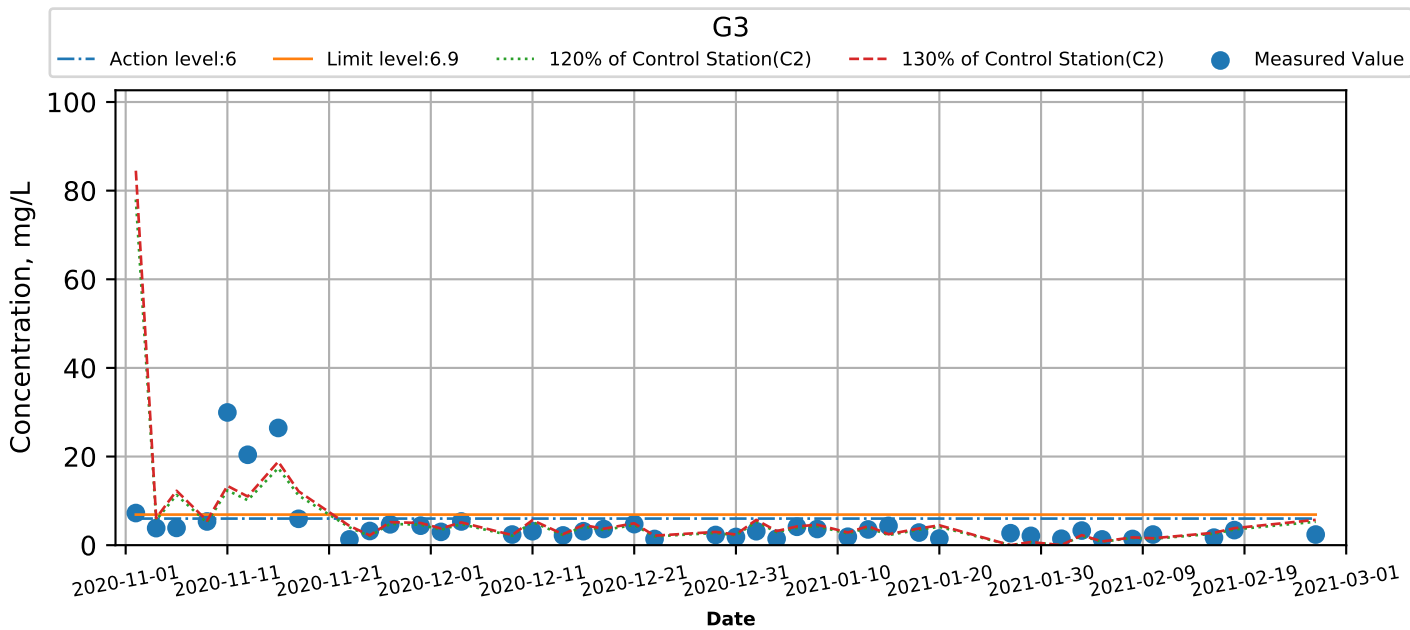
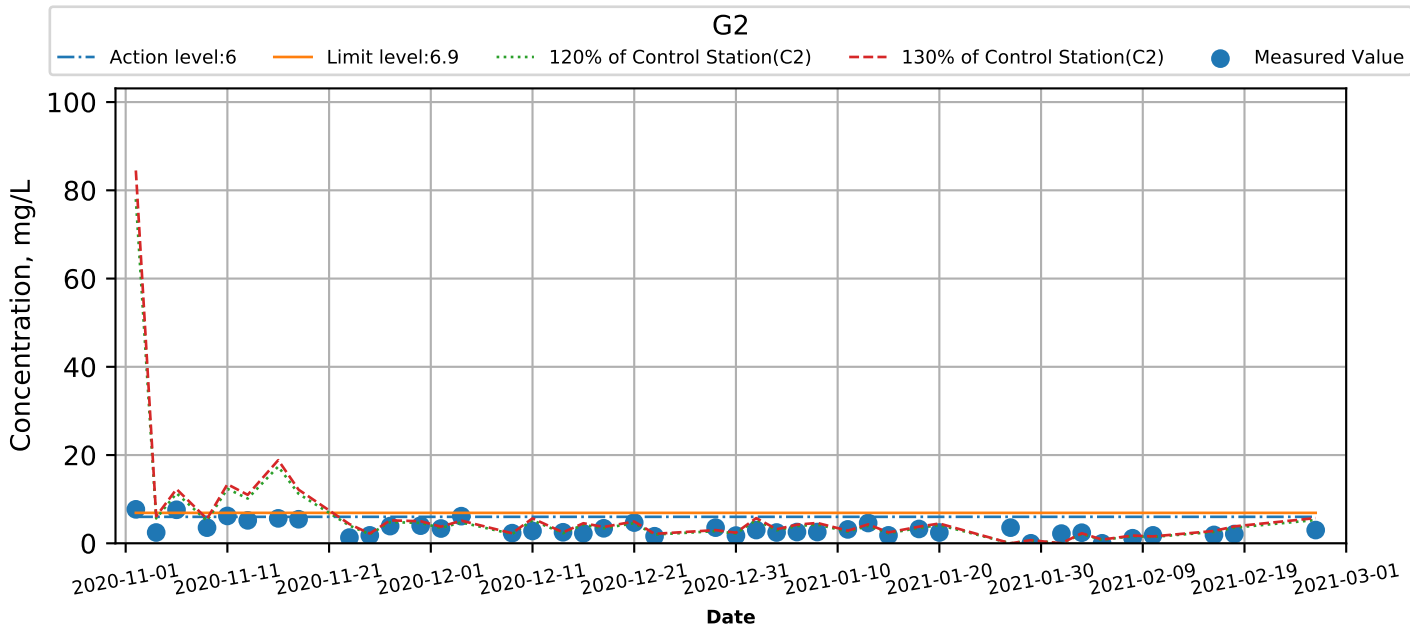
Suspended Solids (Depth-Averaged) at Monitoring Stations during Mid-Flood



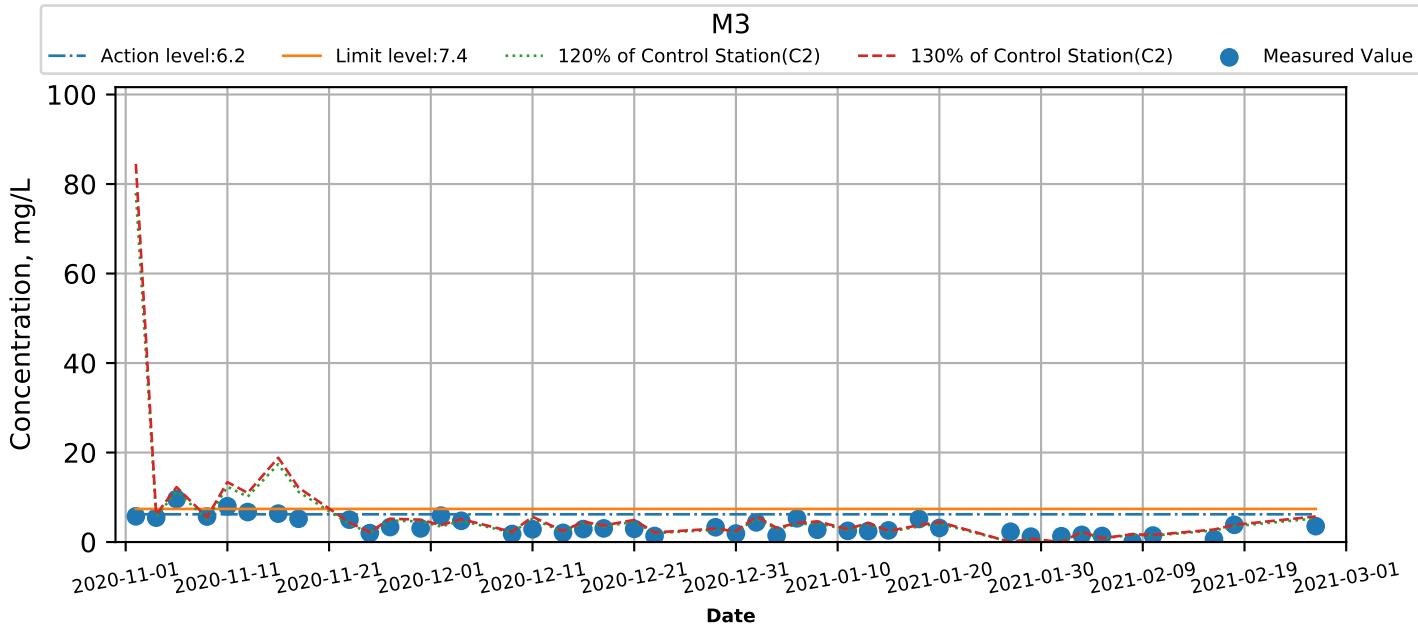
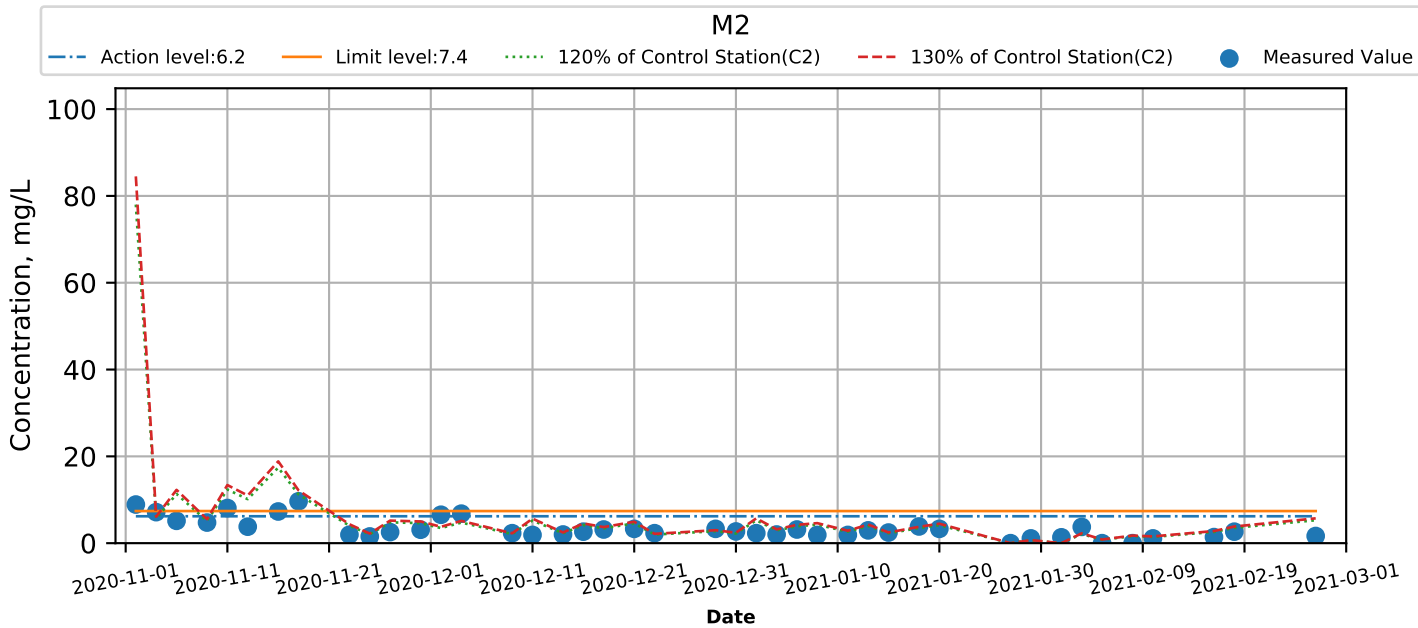
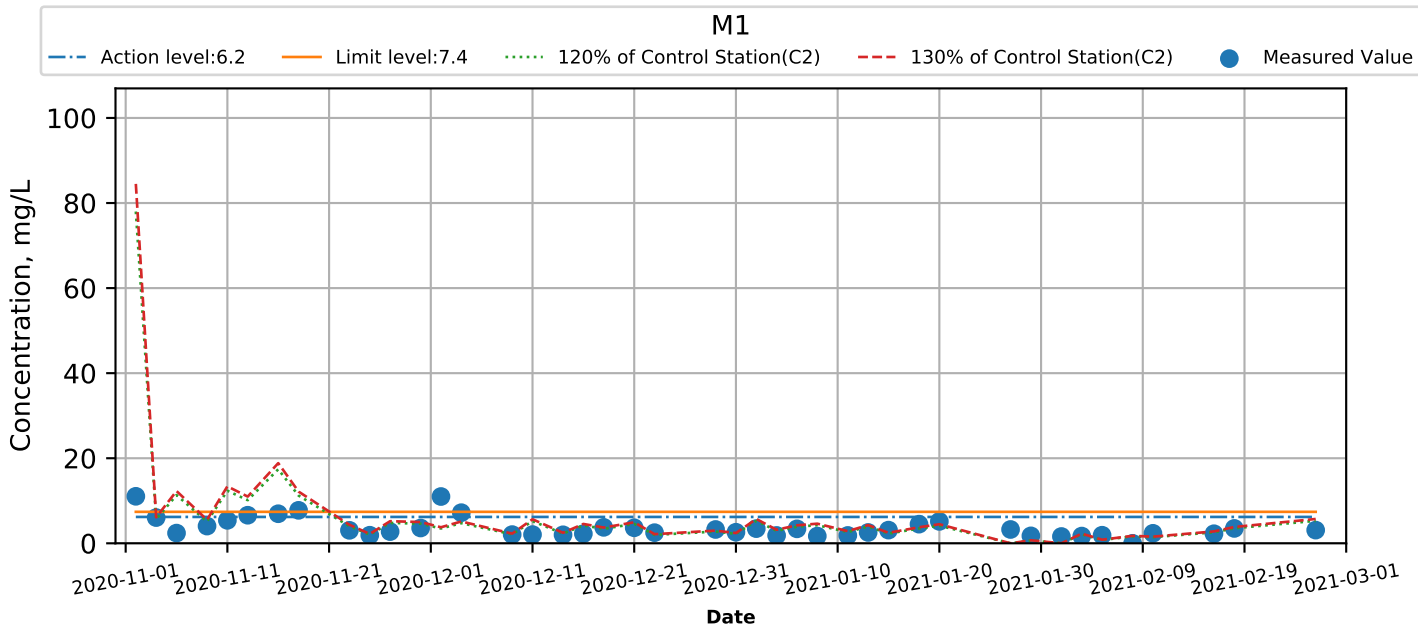
Suspended Solids (Surface) at Monitoring Stations during Mid-Ebb



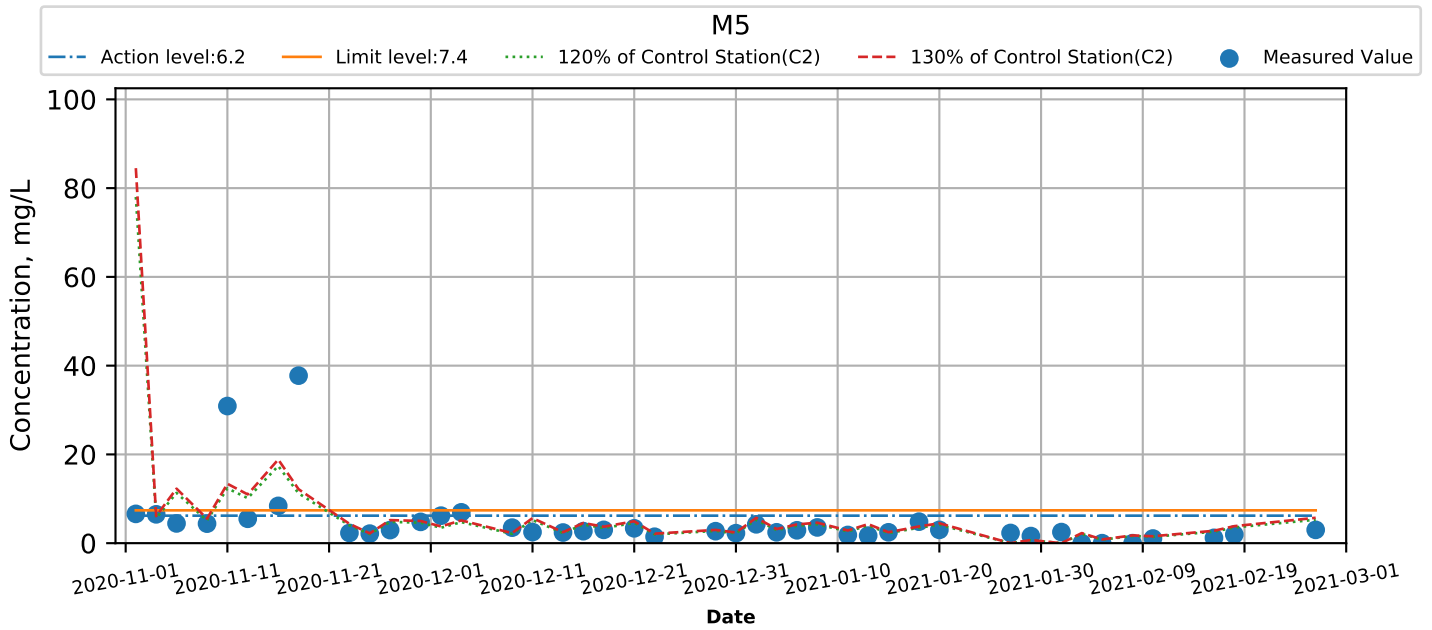
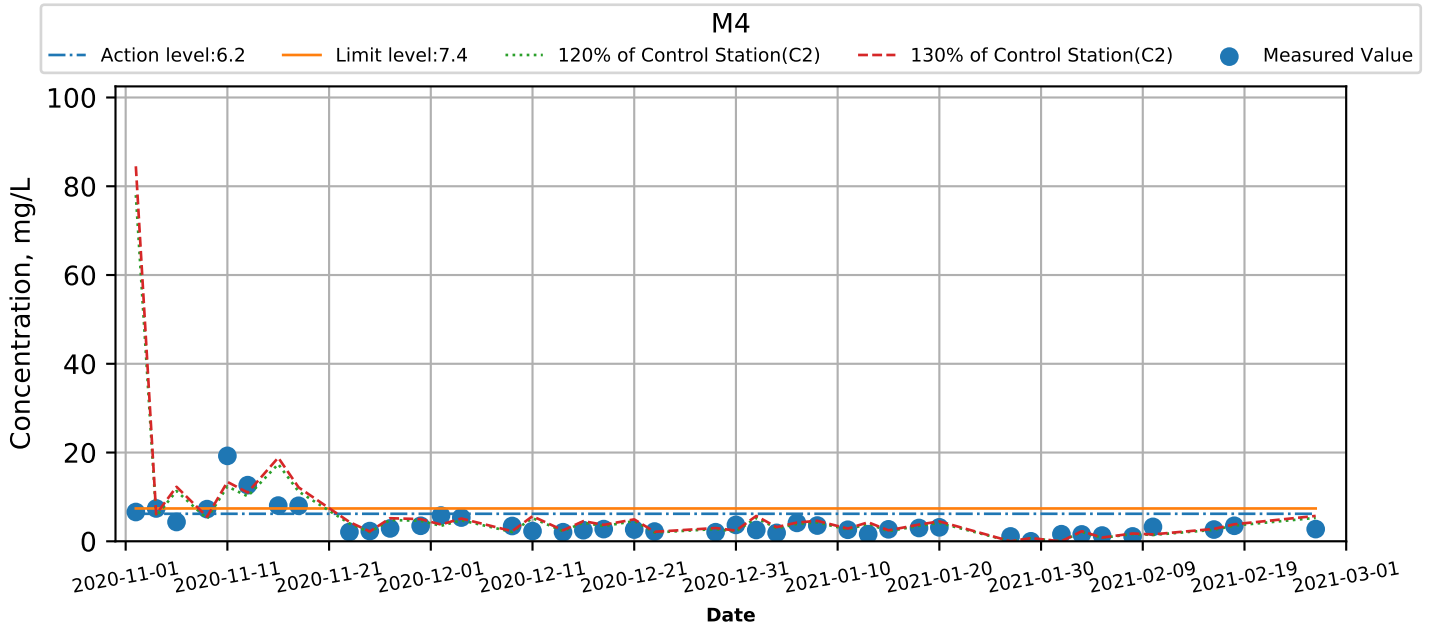
Suspended Solids (Surface) at Monitoring Stations during Mid-Ebb



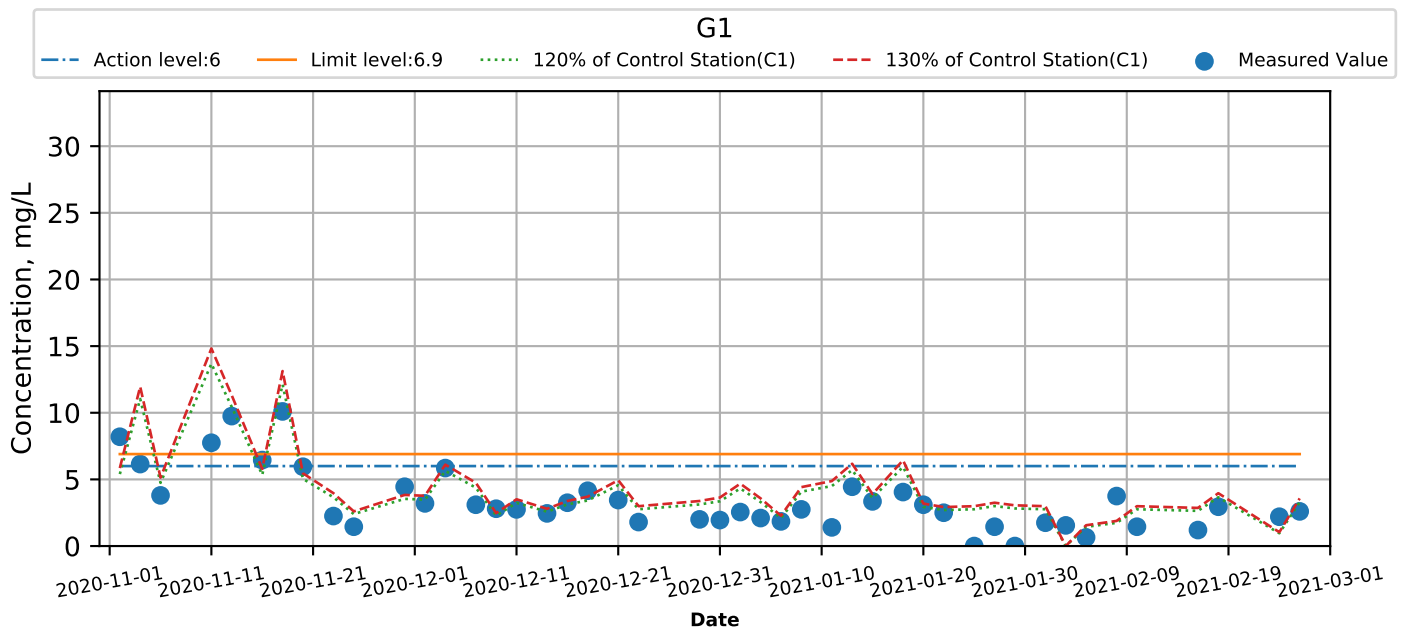
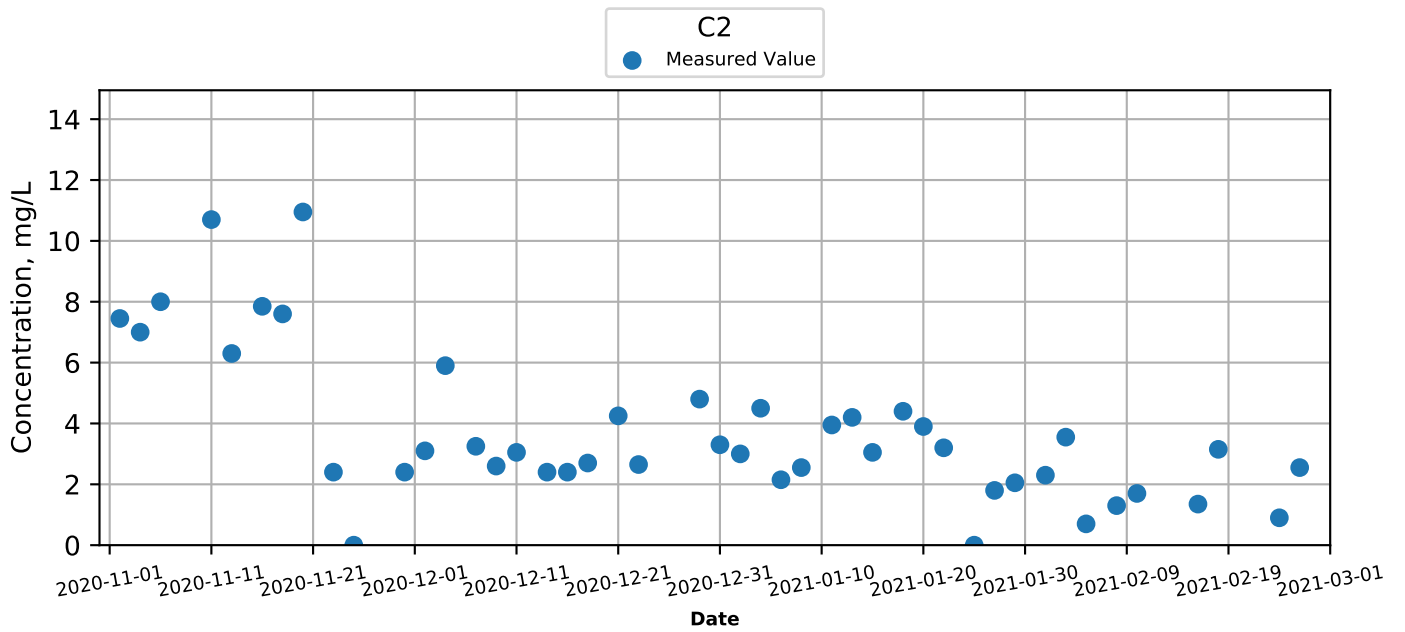
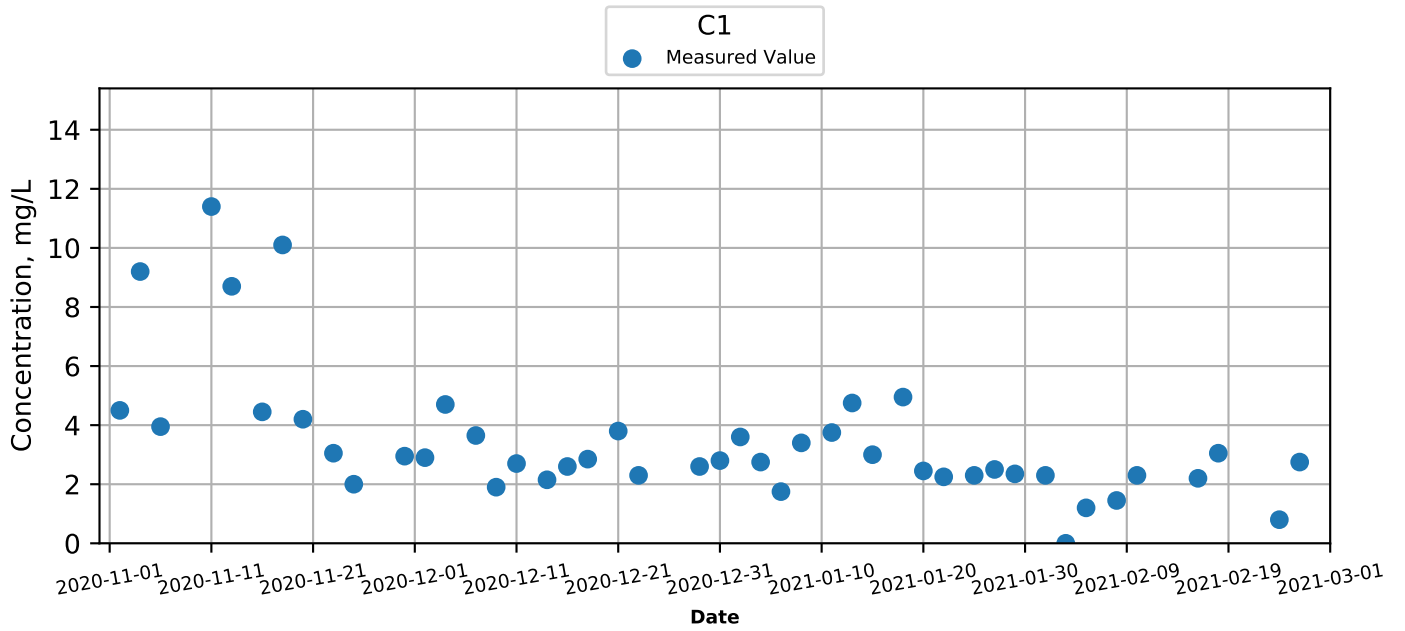
Suspended Solids (Surface) at Monitoring Stations during Mid-Ebb



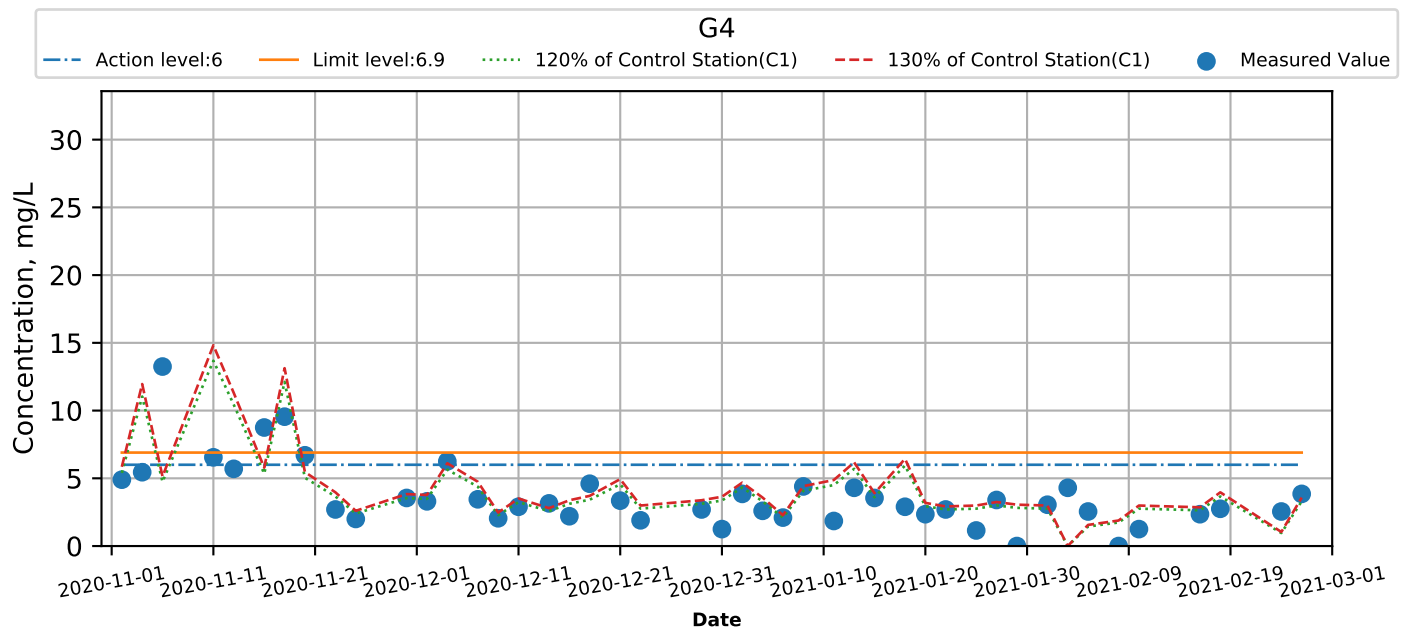
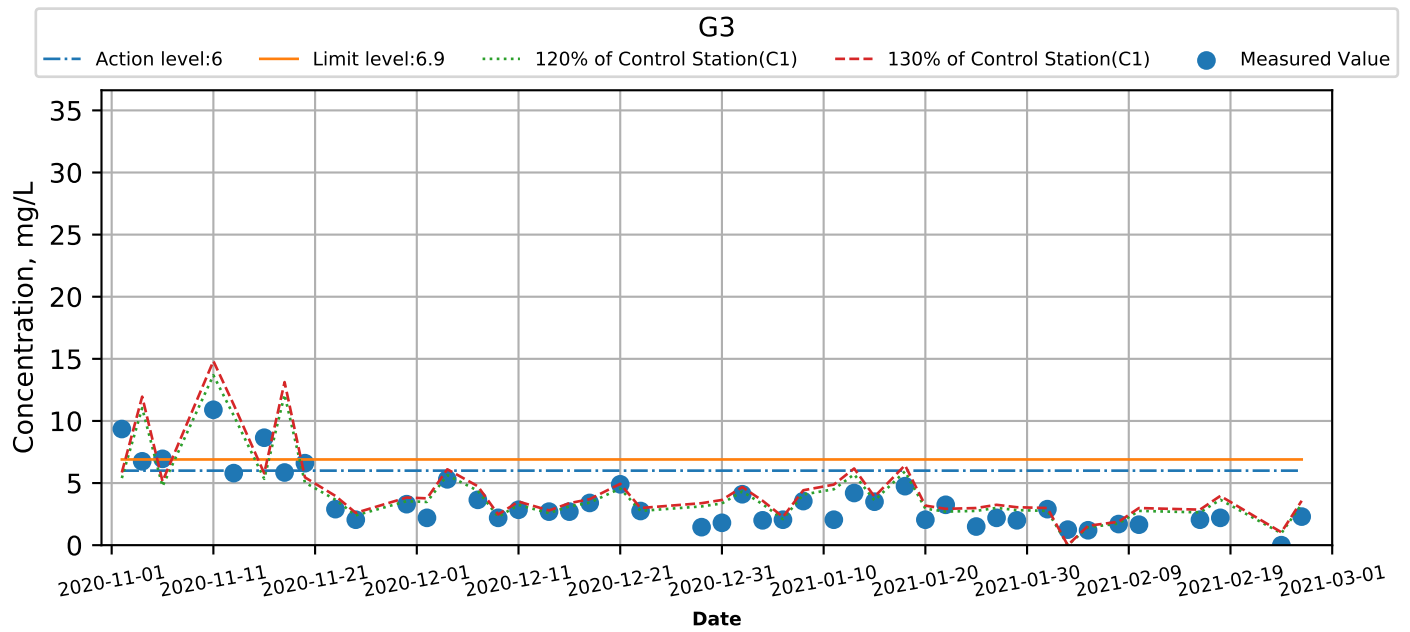
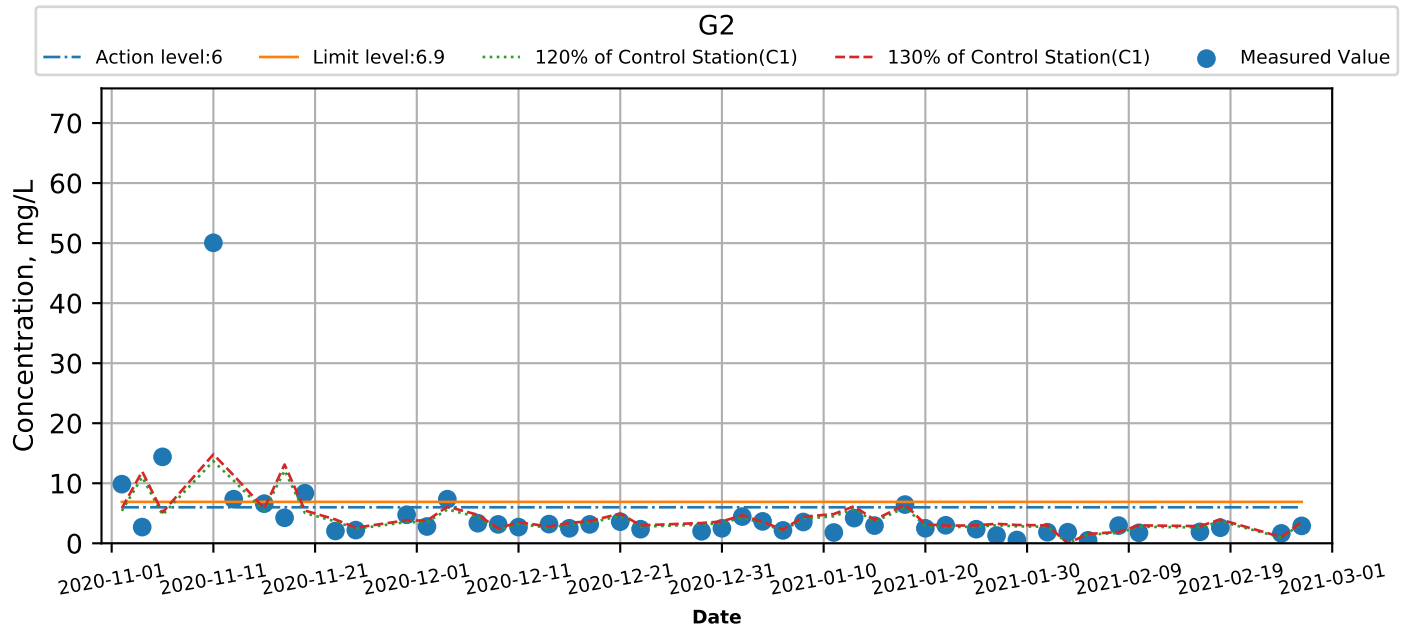
Suspended Solids (Surface) at Monitoring Stations during Mid-Ebb



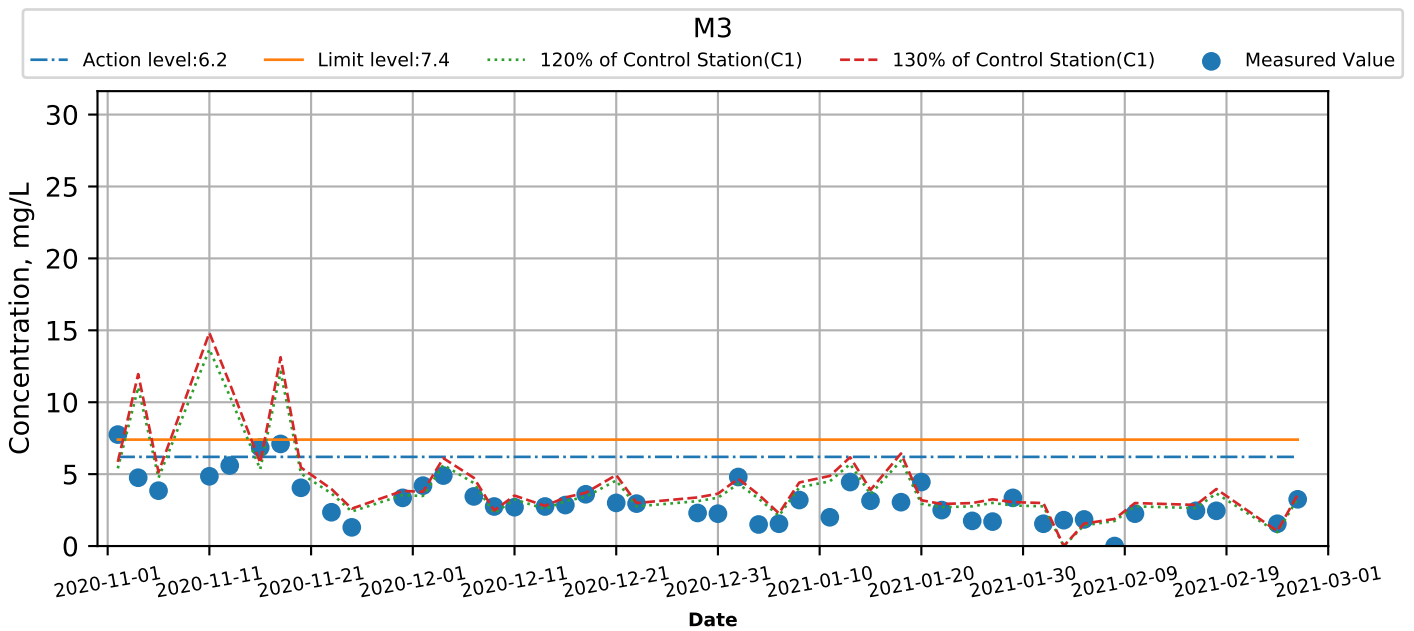
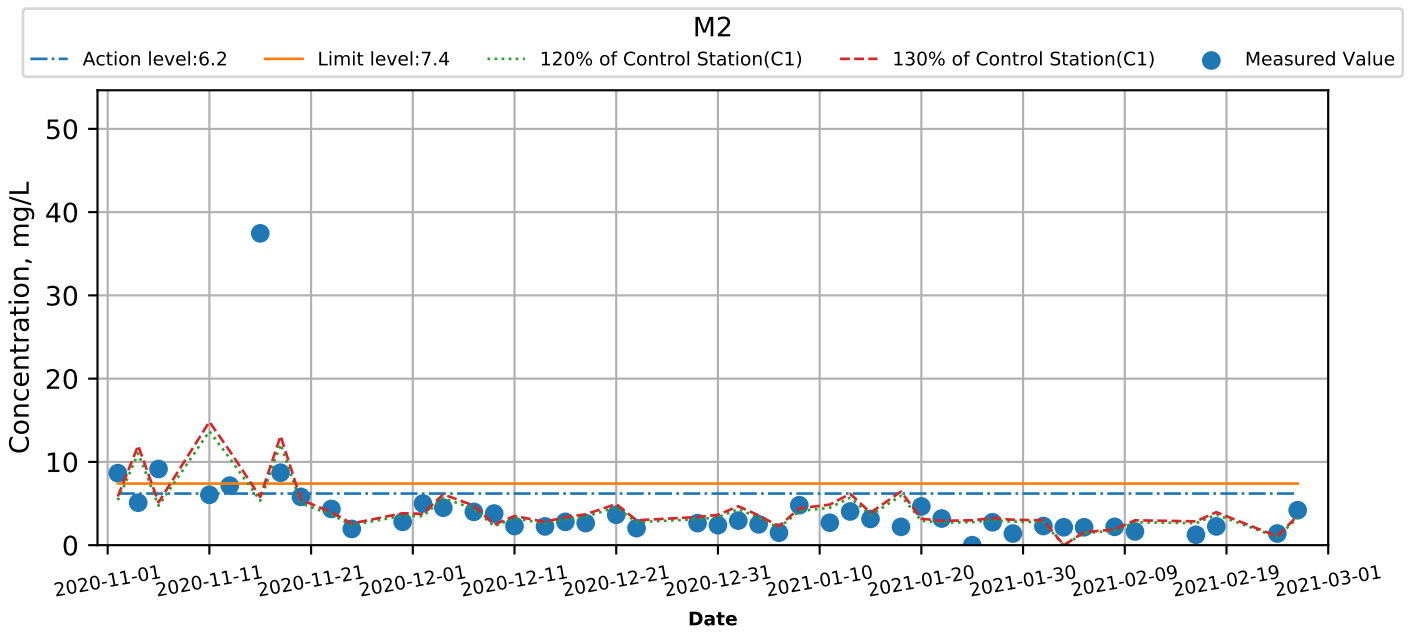
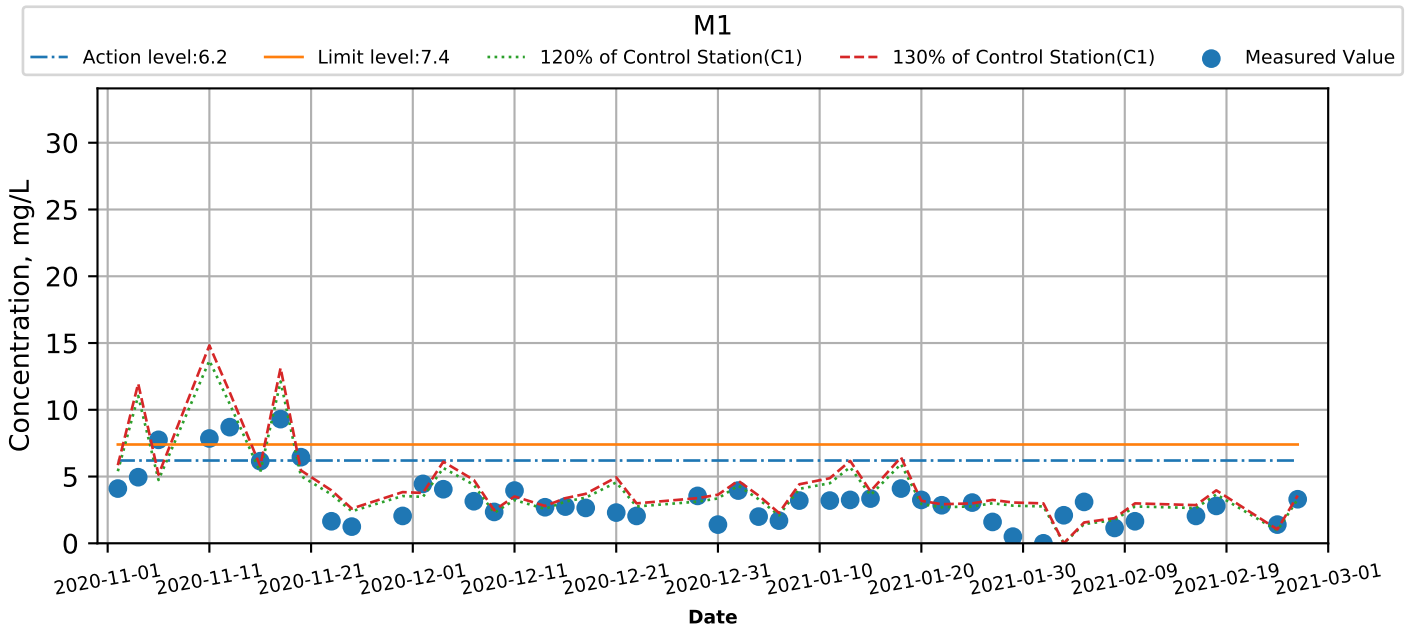
Suspended Solids (Surface) at Monitoring Stations during Mid-Flood



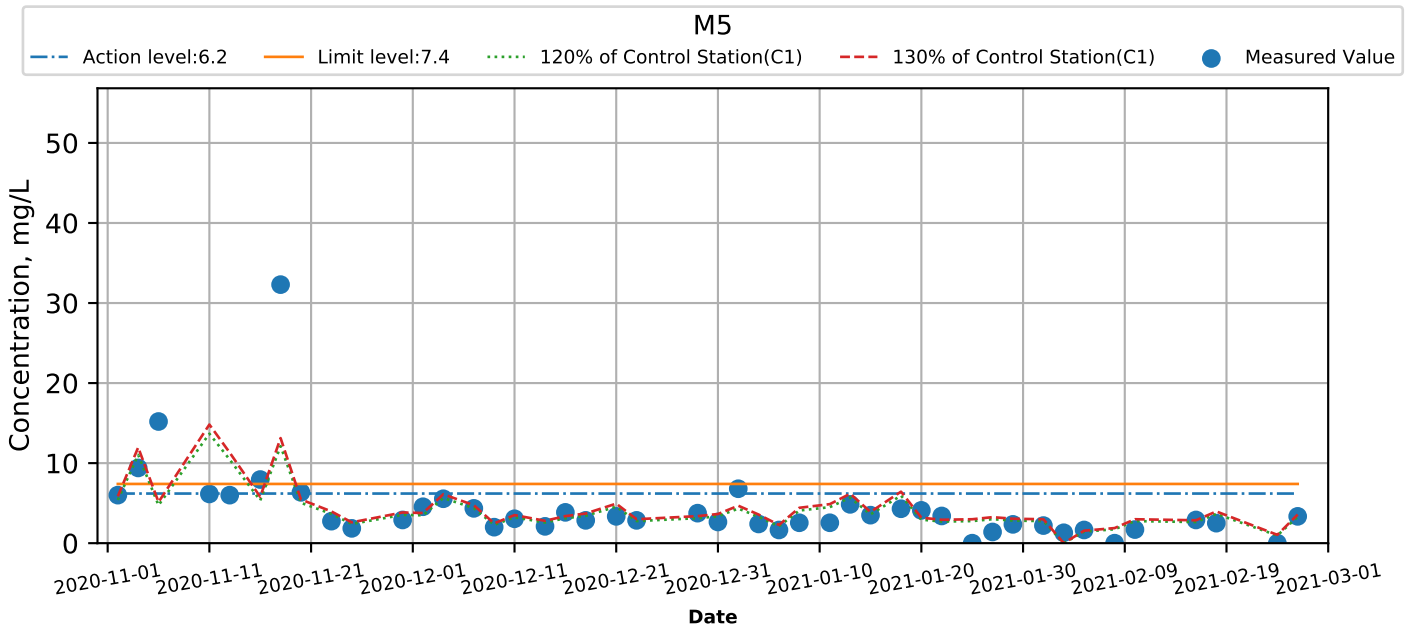
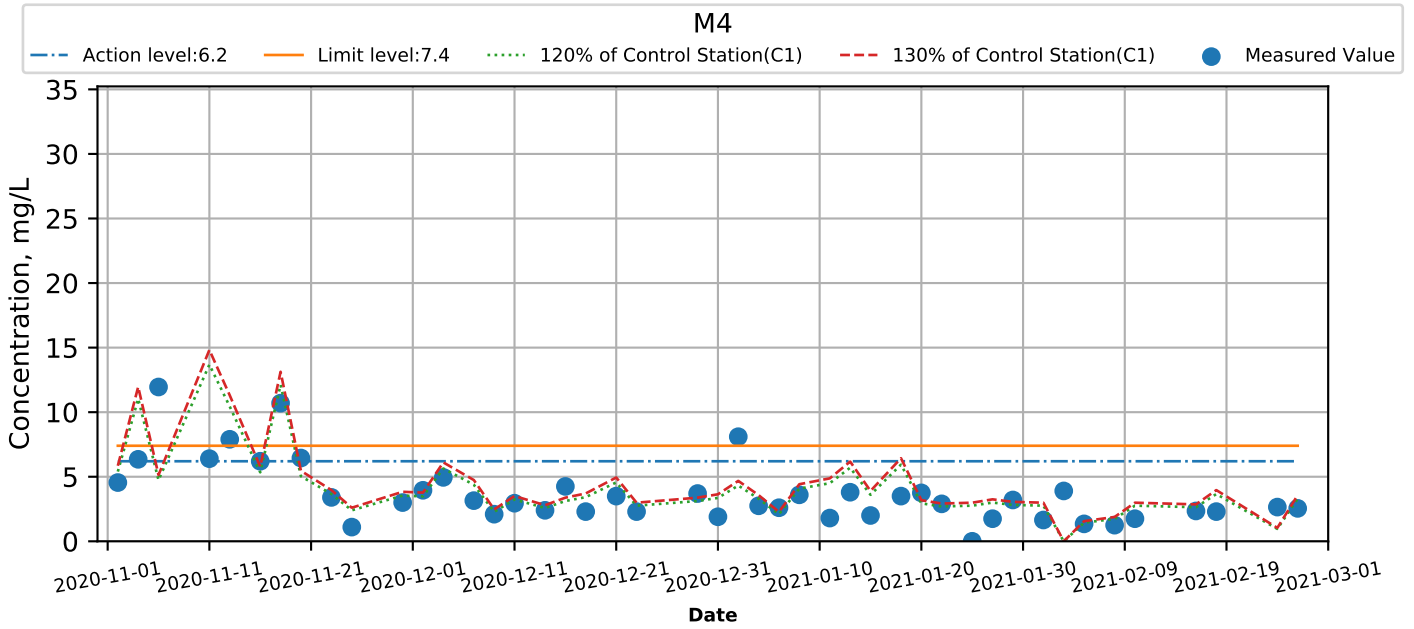
Suspended Solids (Surface) at Monitoring Stations during Mid-Flood



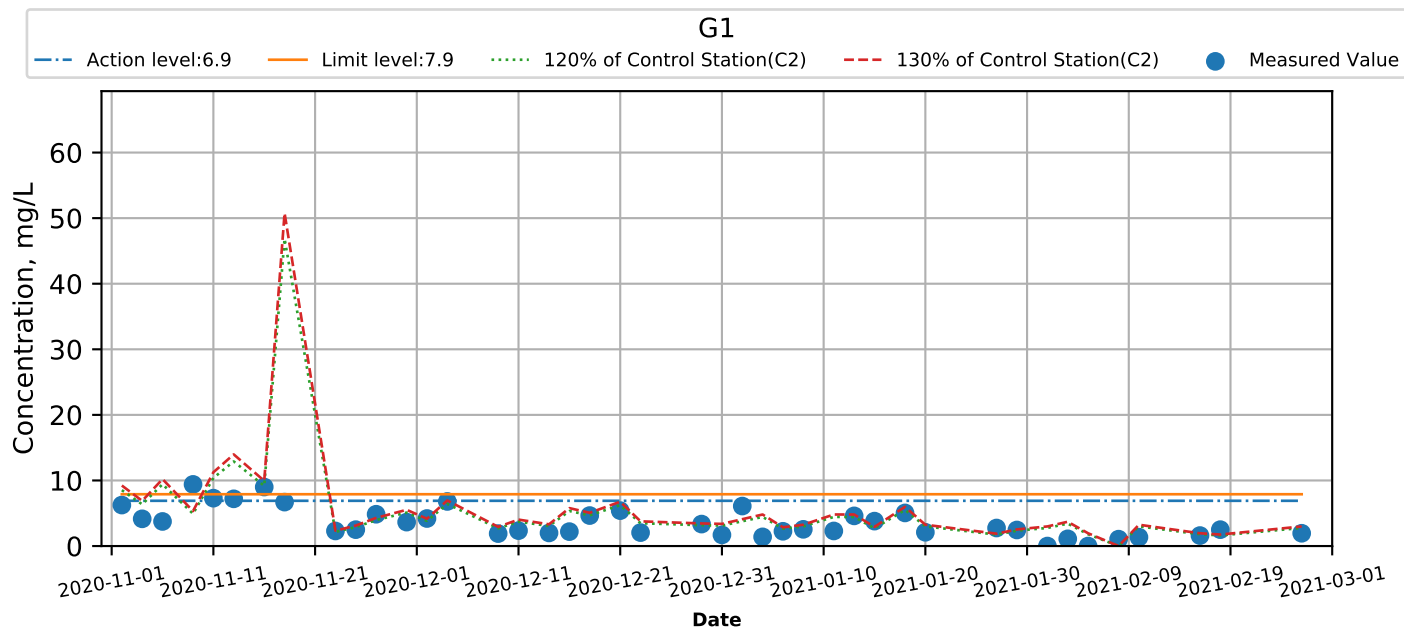
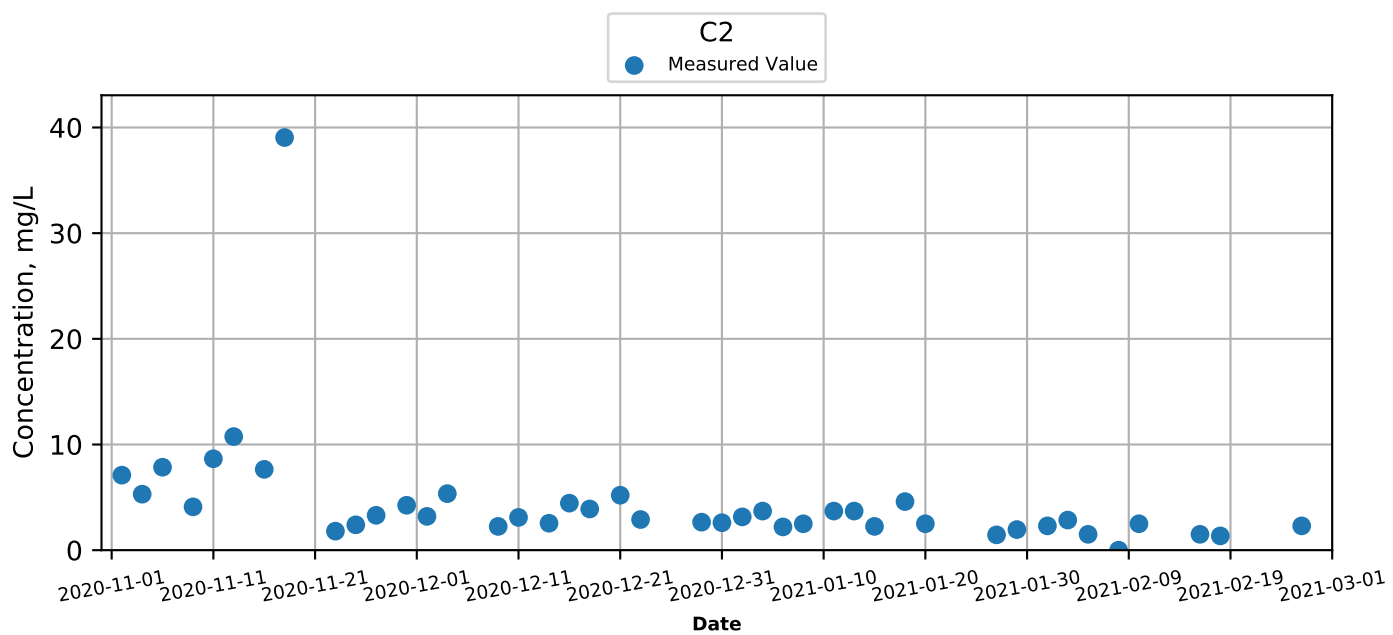
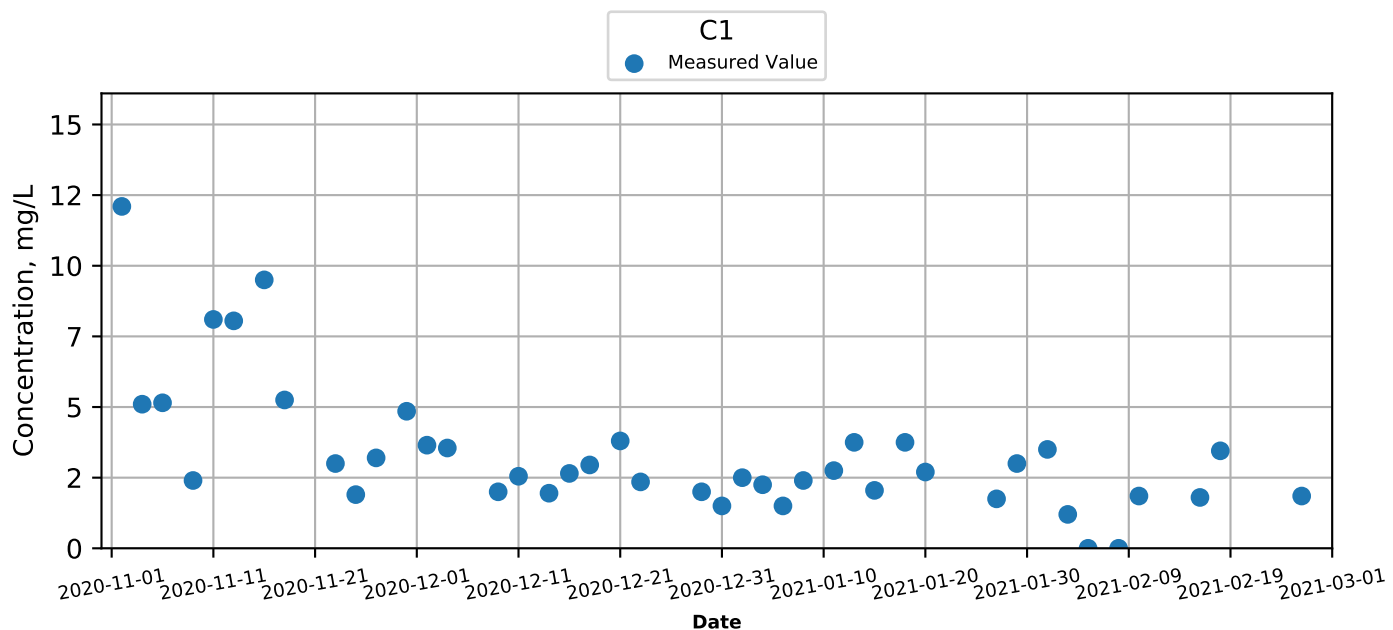
Suspended Solids (Surface) at Monitoring Stations during Mid-Flood



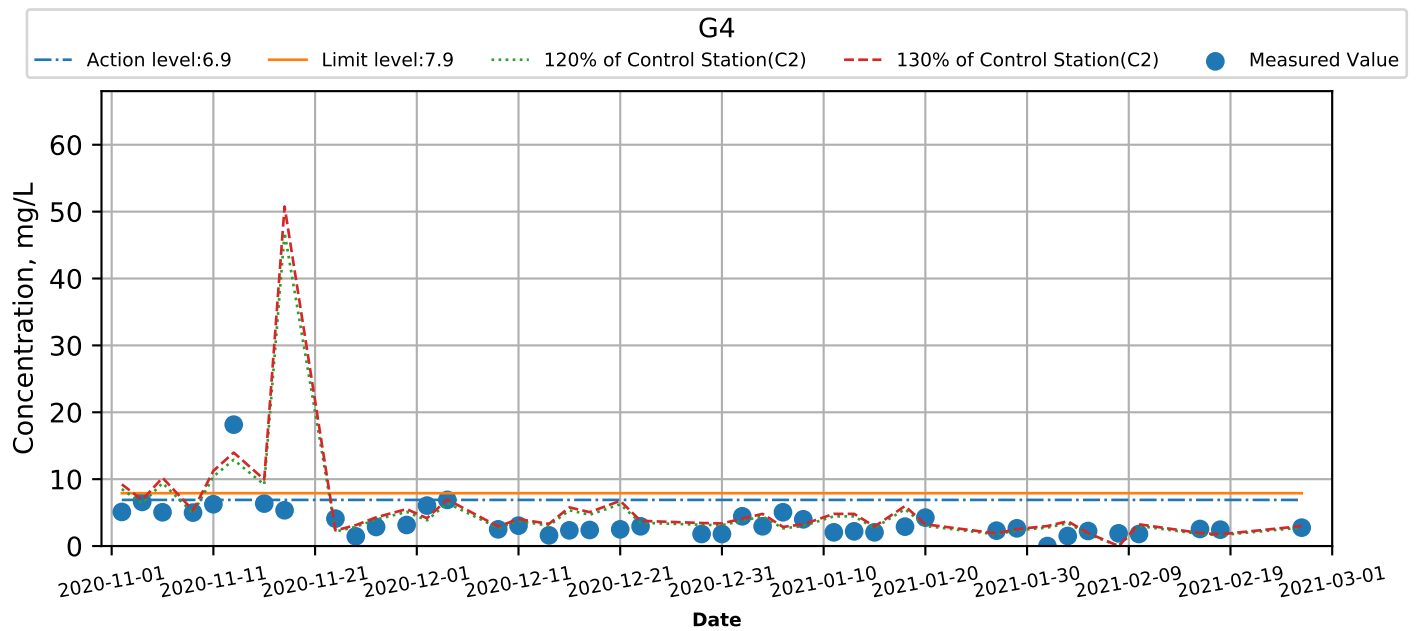
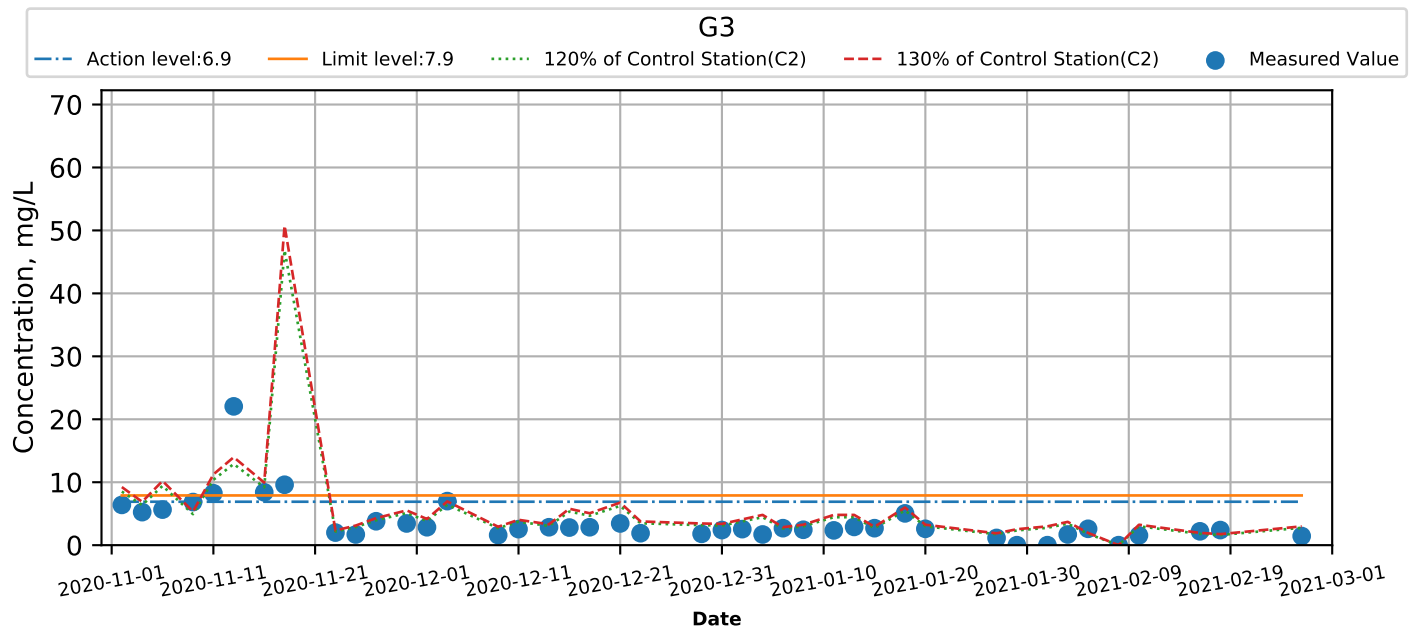
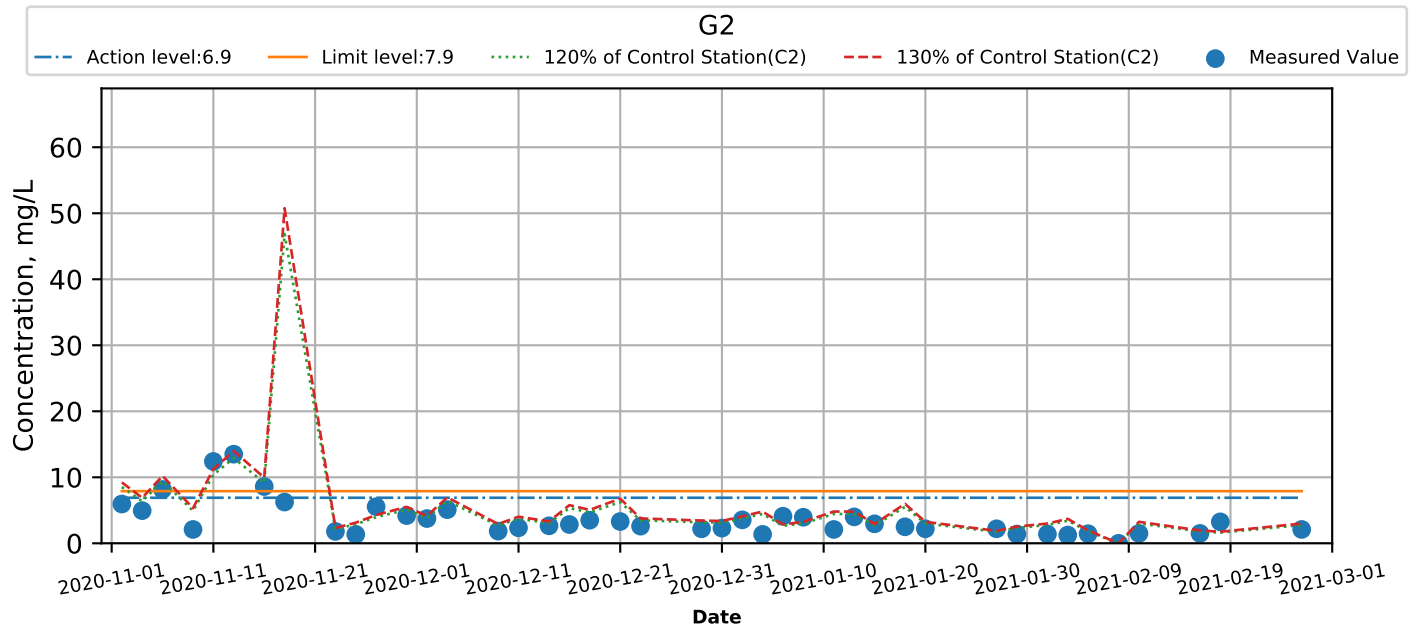
Suspended Solids (Surface) at Monitoring Stations during Mid-Flood



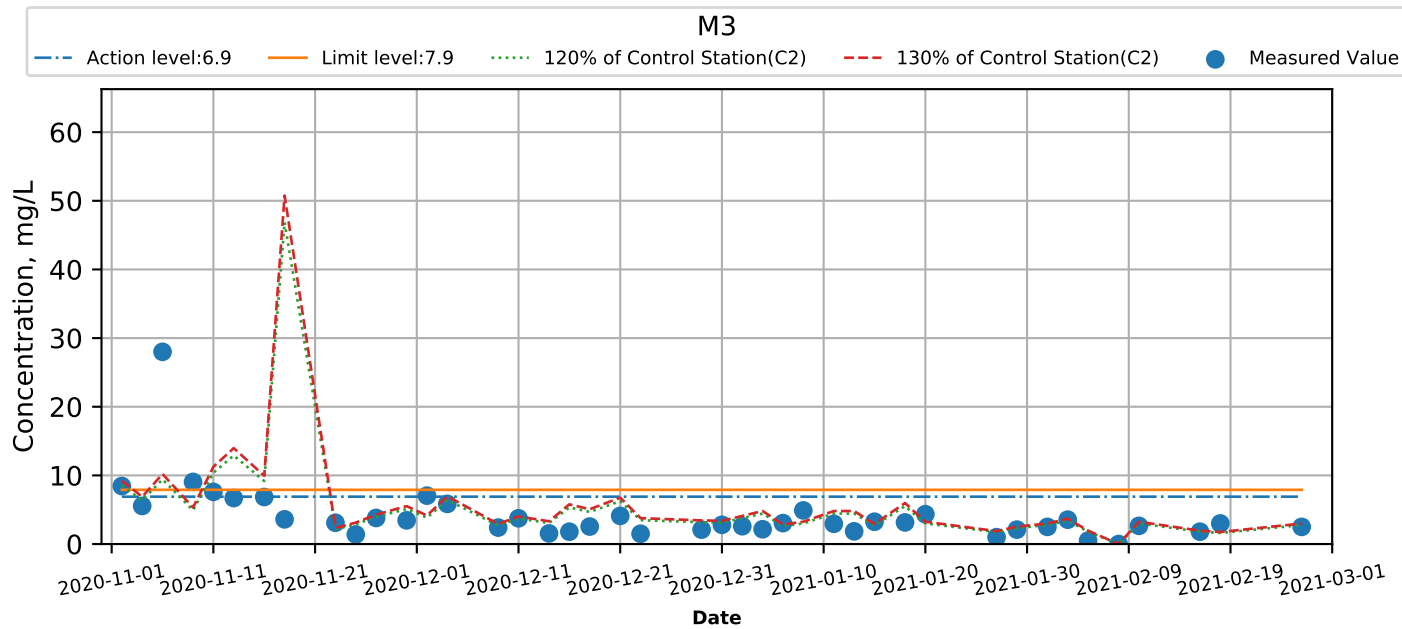
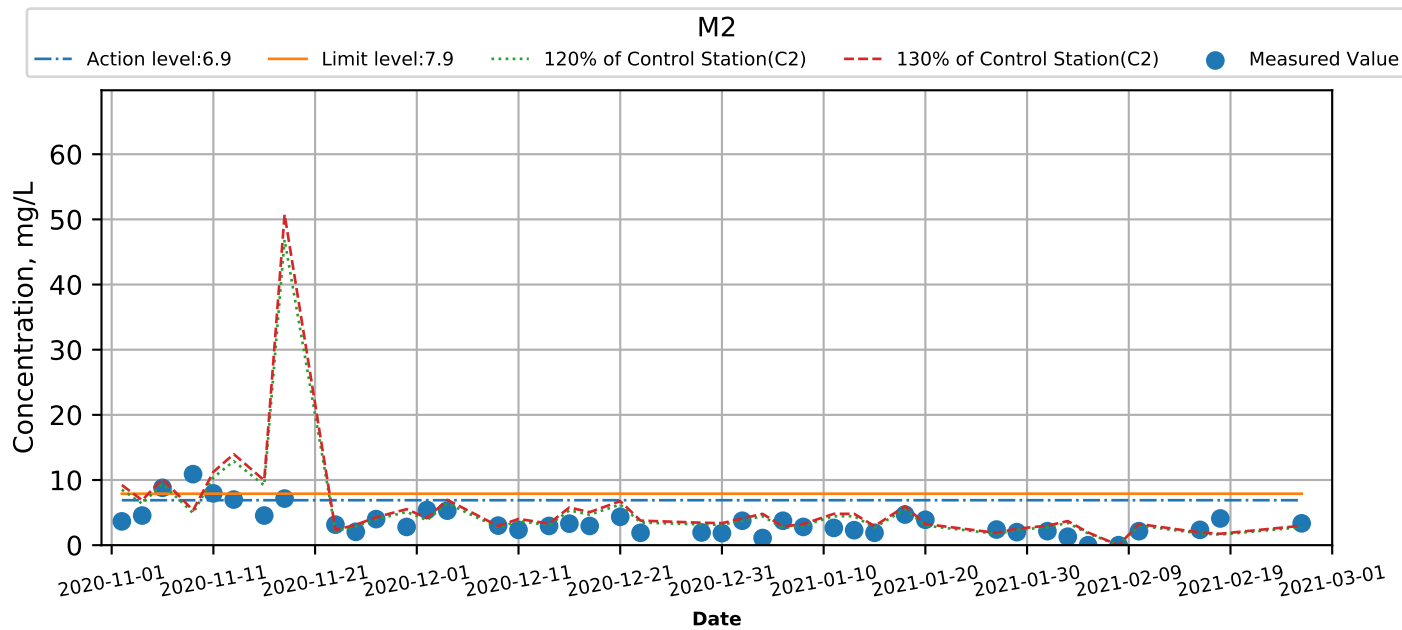
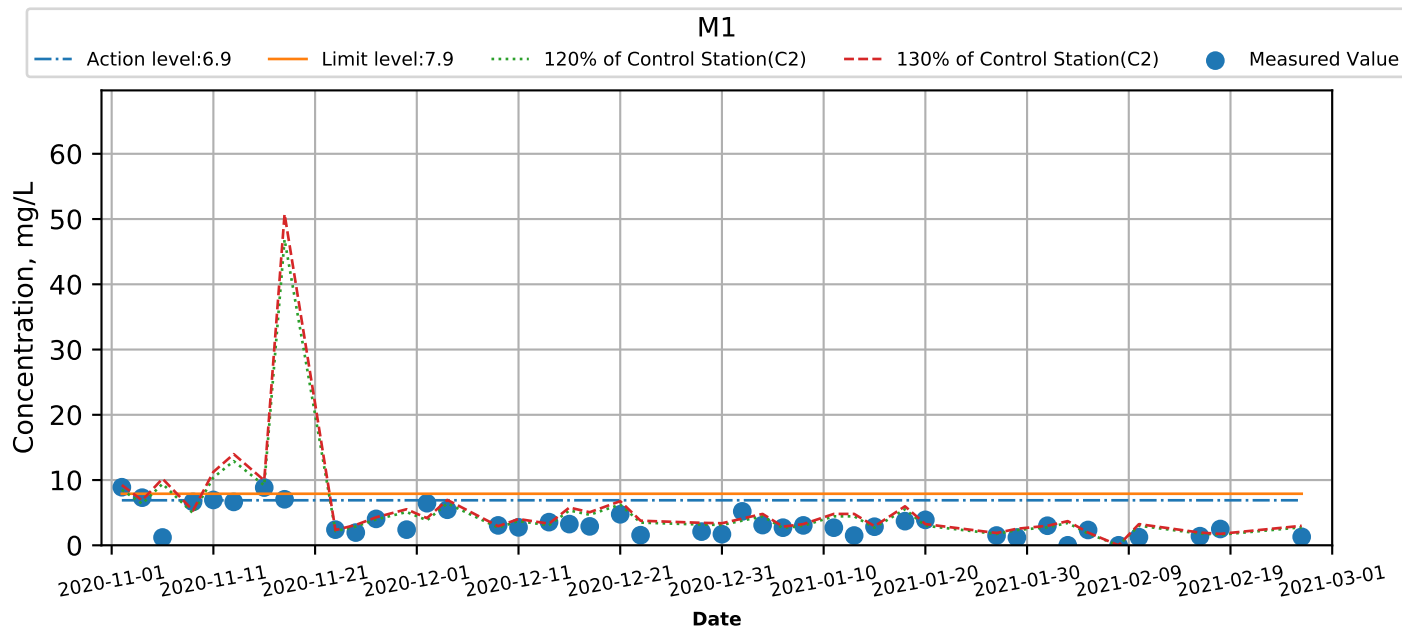
Suspended Solids (Bottom) at Monitoring Stations during Mid-Ebb



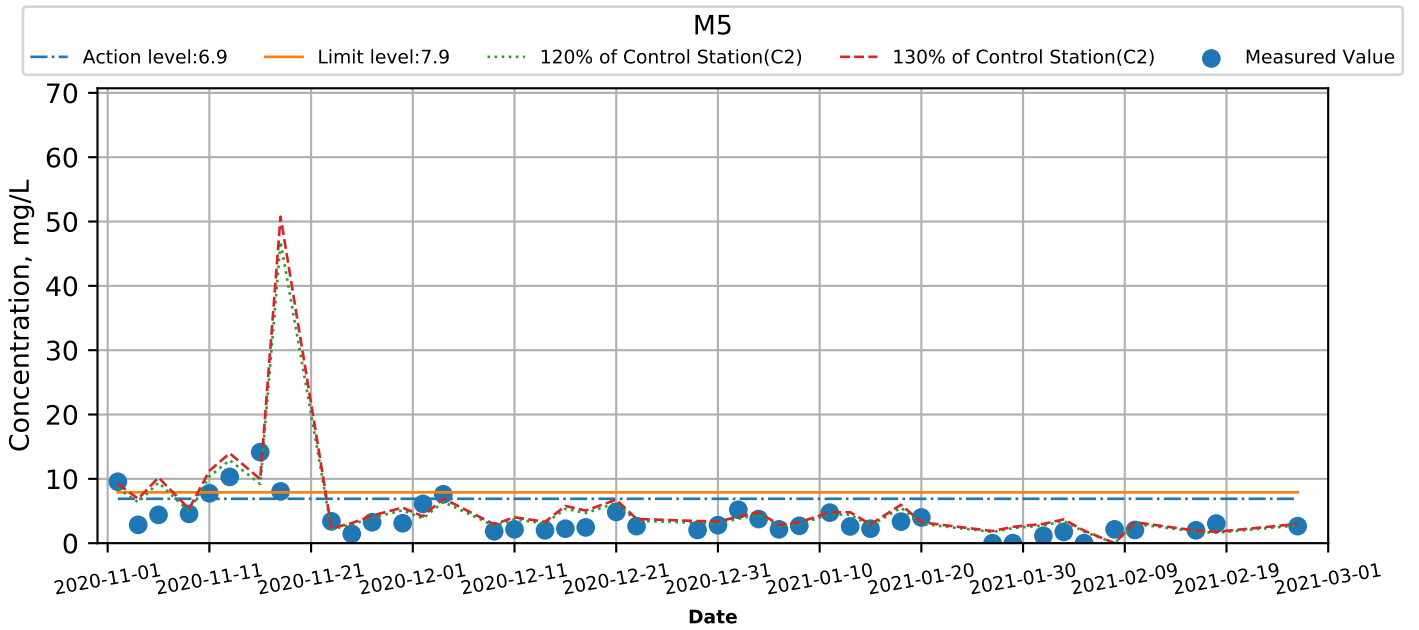
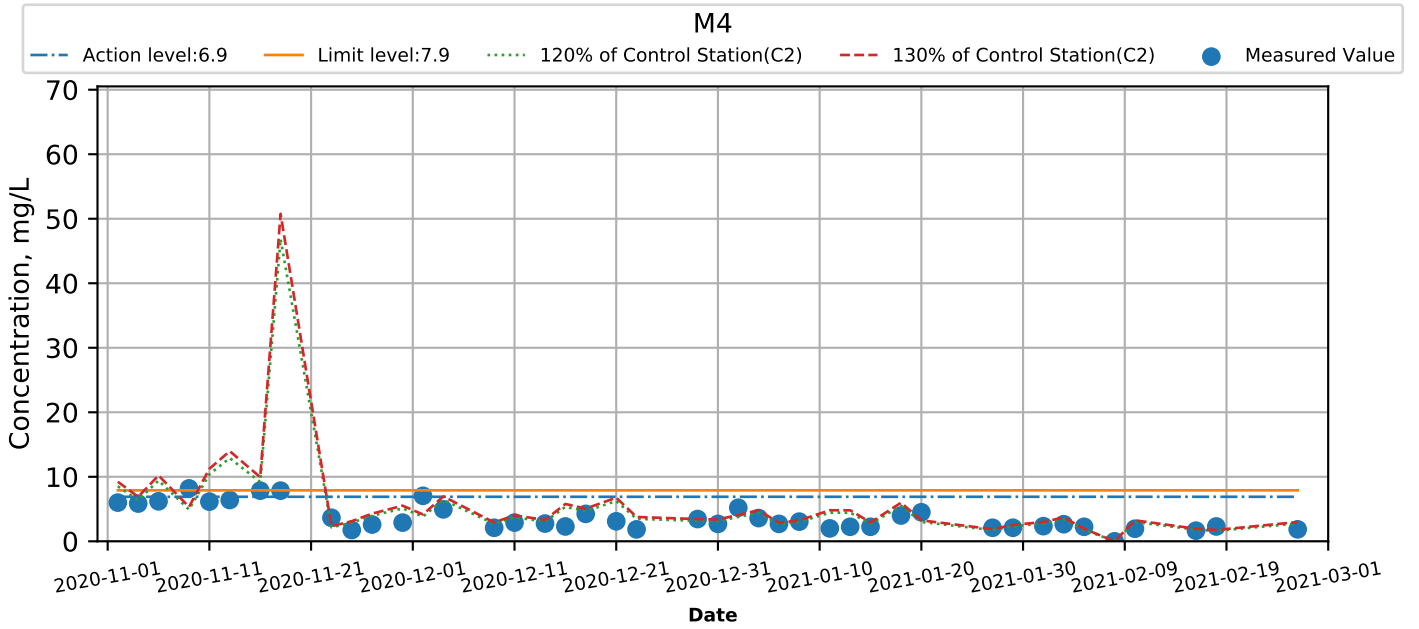
Suspended Solids (Bottom) at Monitoring Stations during Mid-Ebb



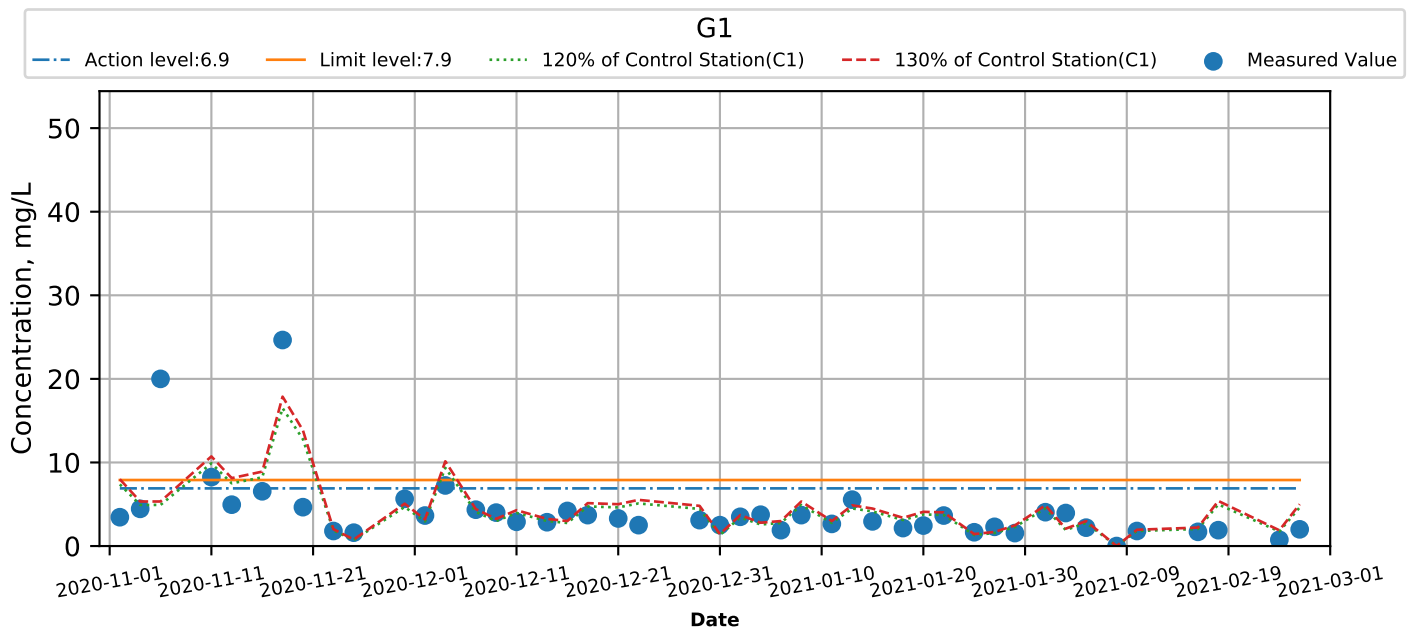
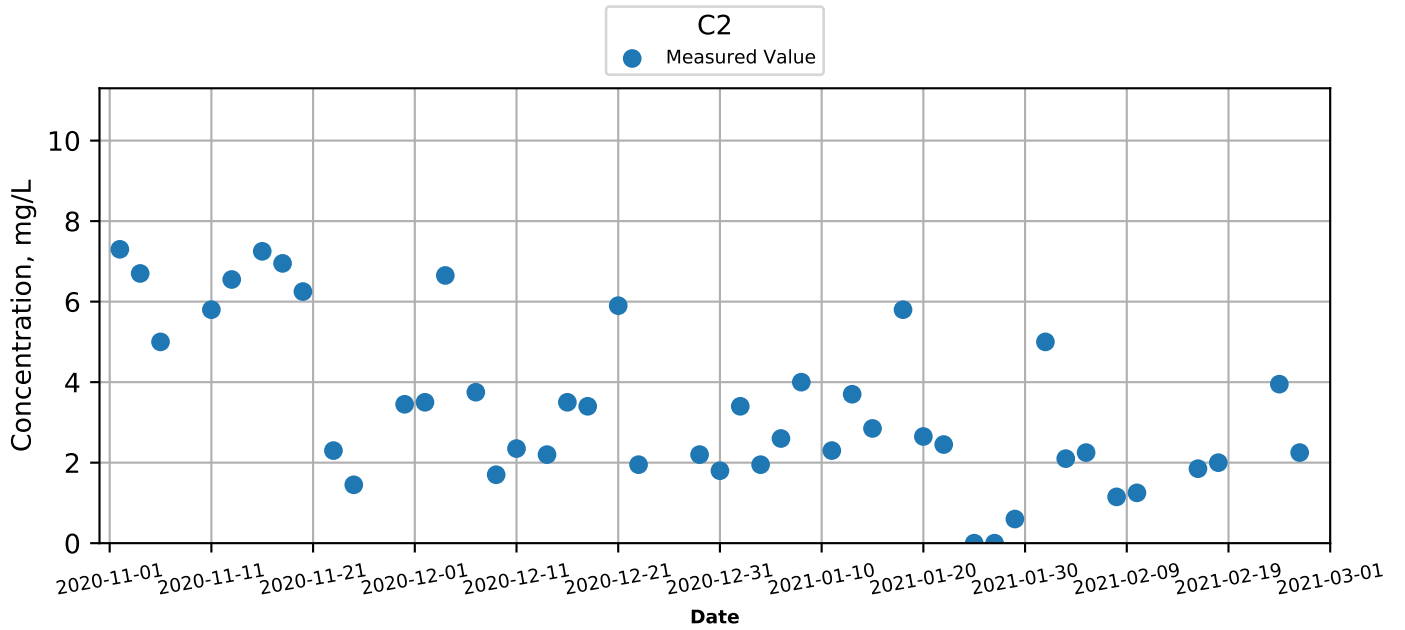
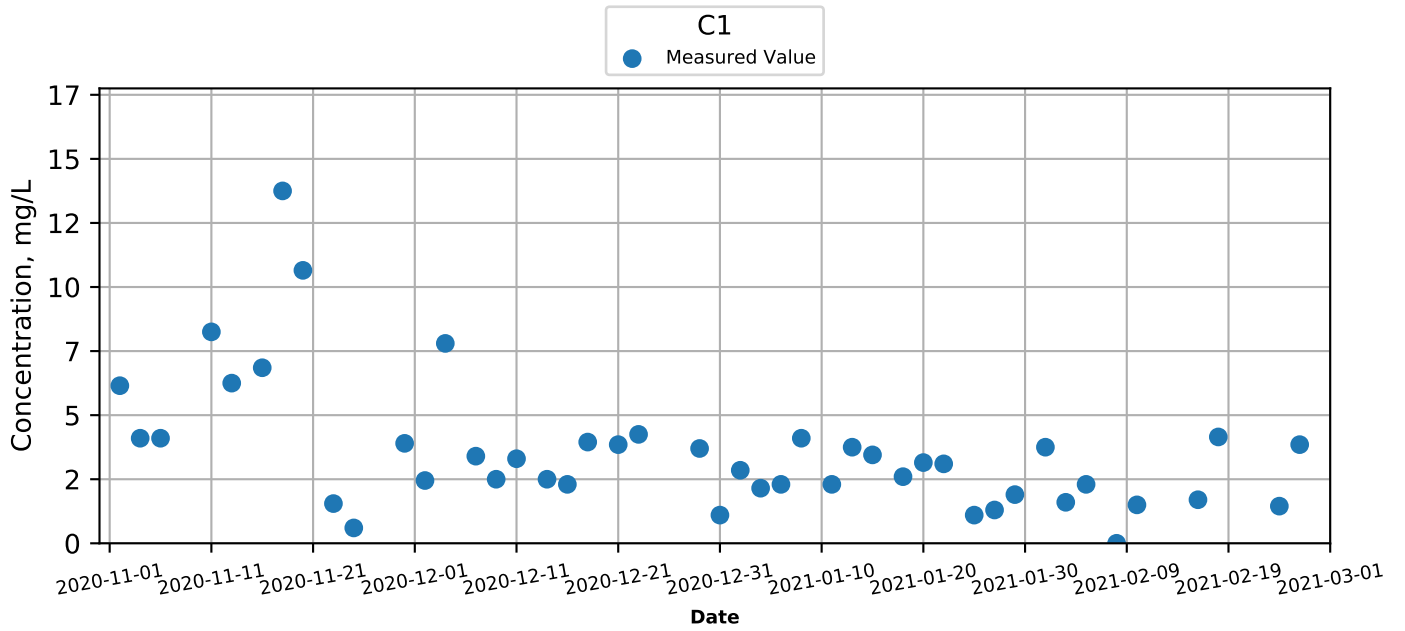
Suspended Solids (Bottom) at Monitoring Stations during Mid-Ebb



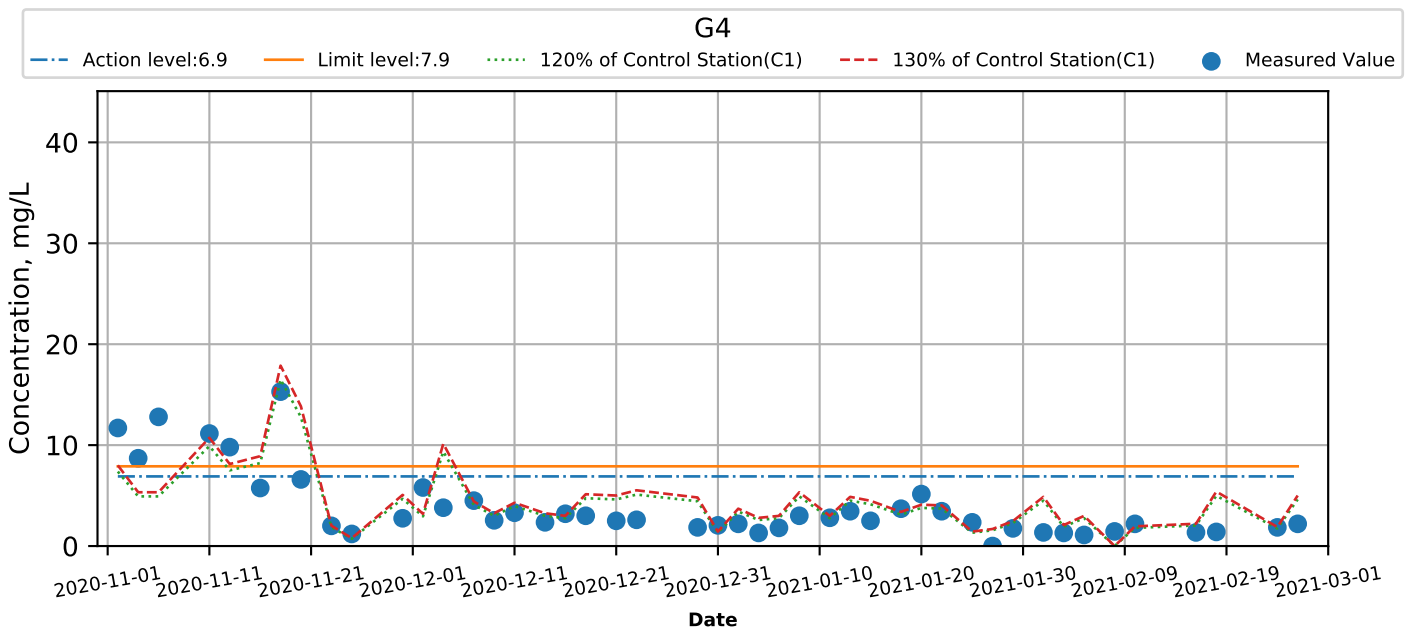
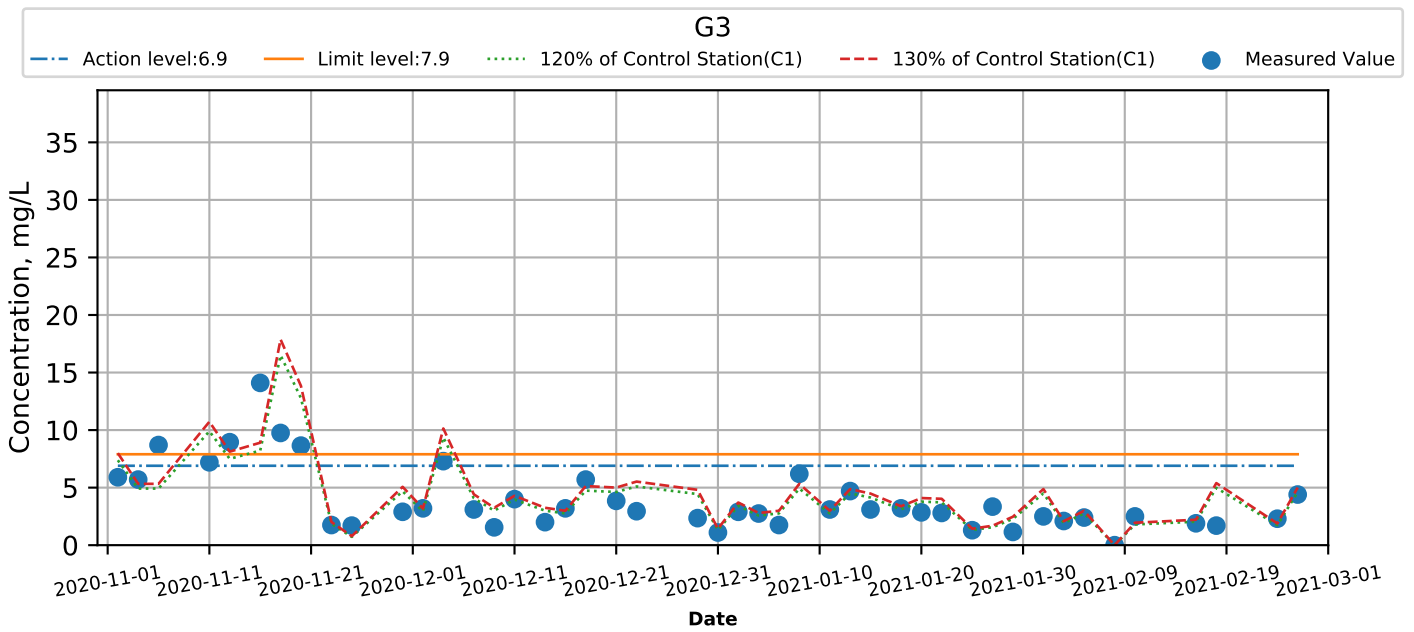
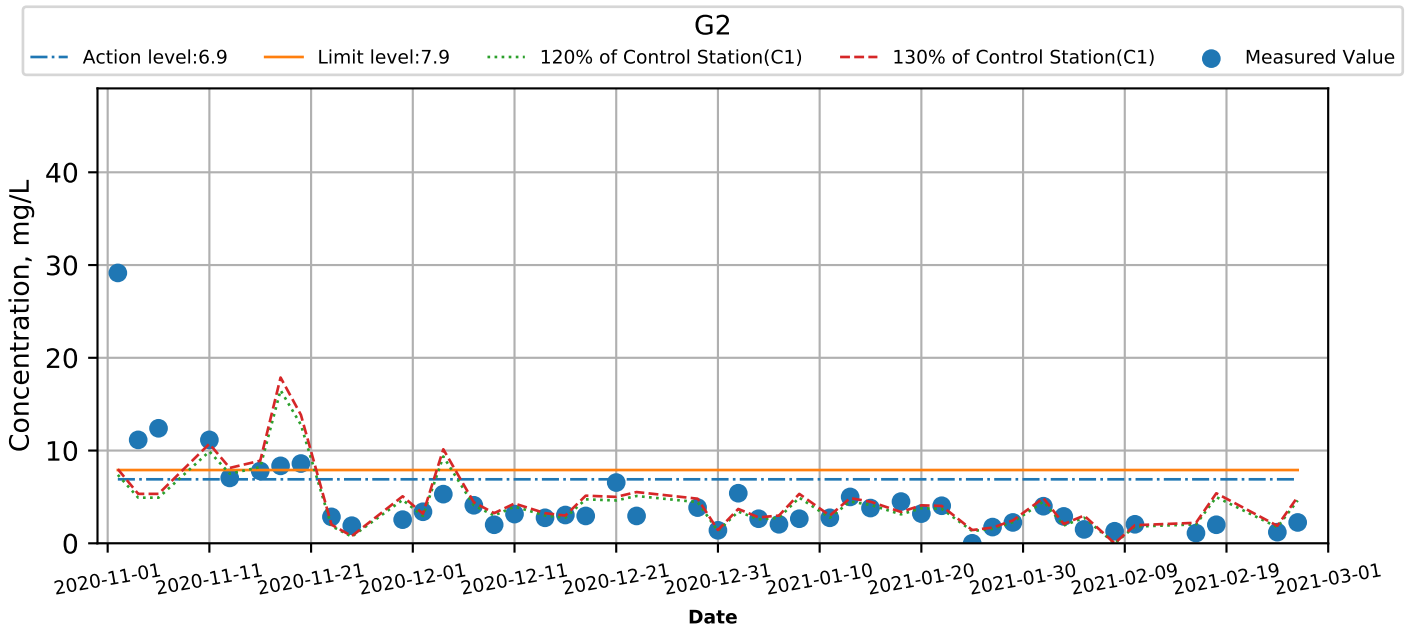
Suspended Solids (Bottom) at Monitoring Stations during Mid-Ebb



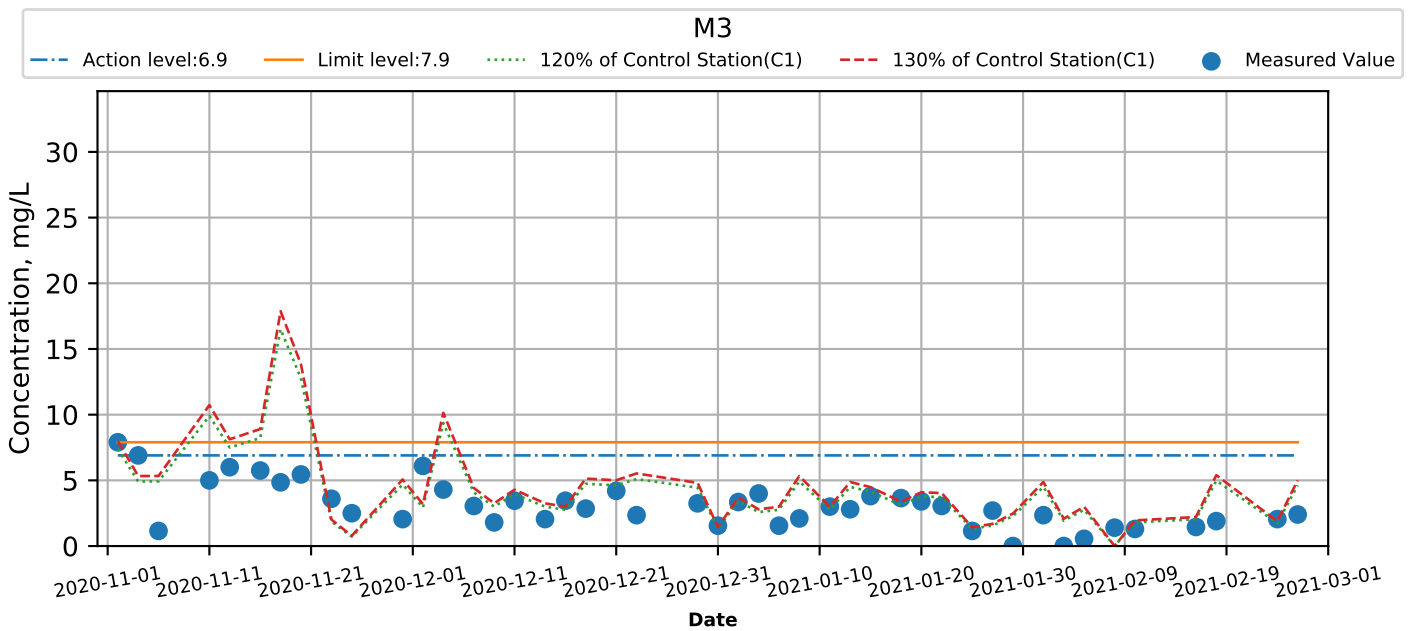
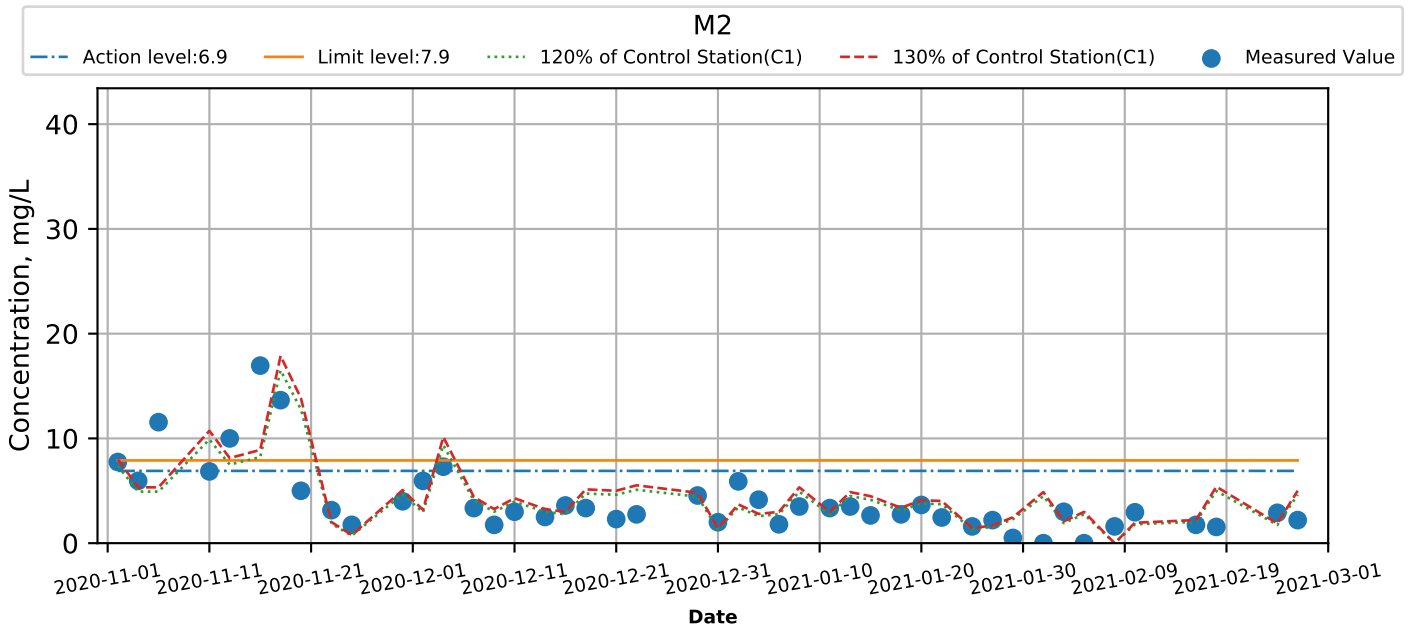
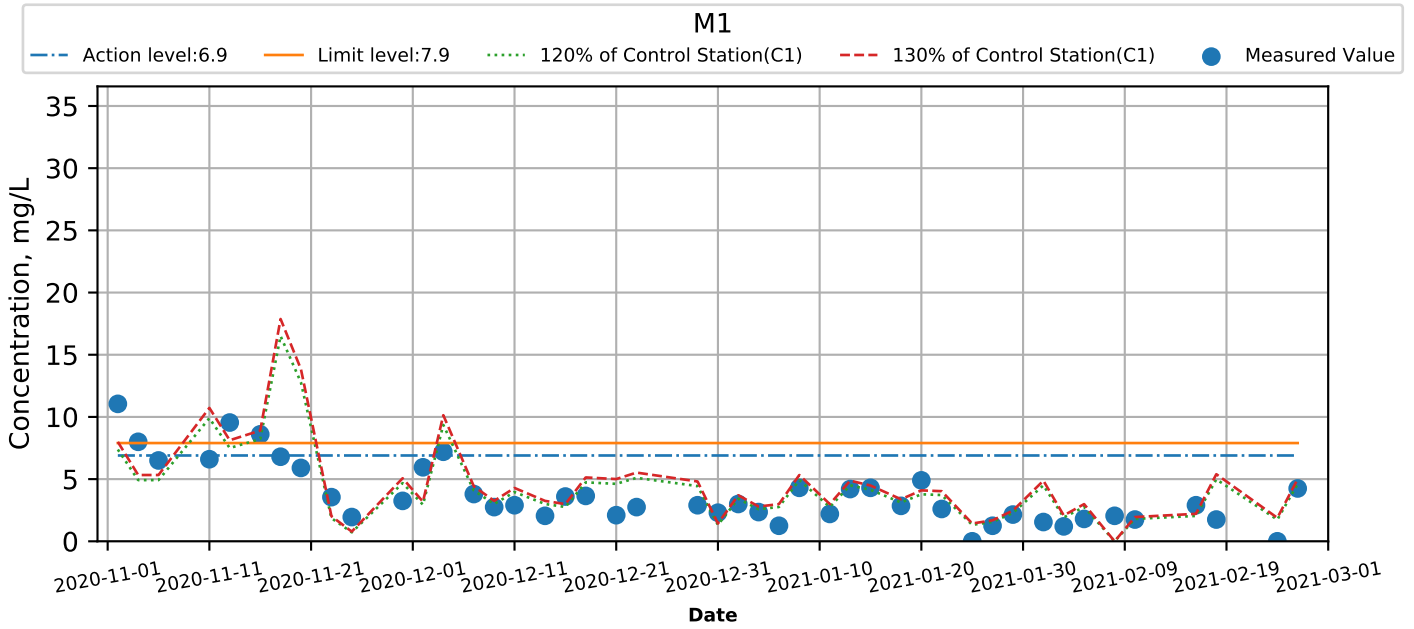
Suspended Solids (Bottom) at Monitoring Stations during Mid-Flood



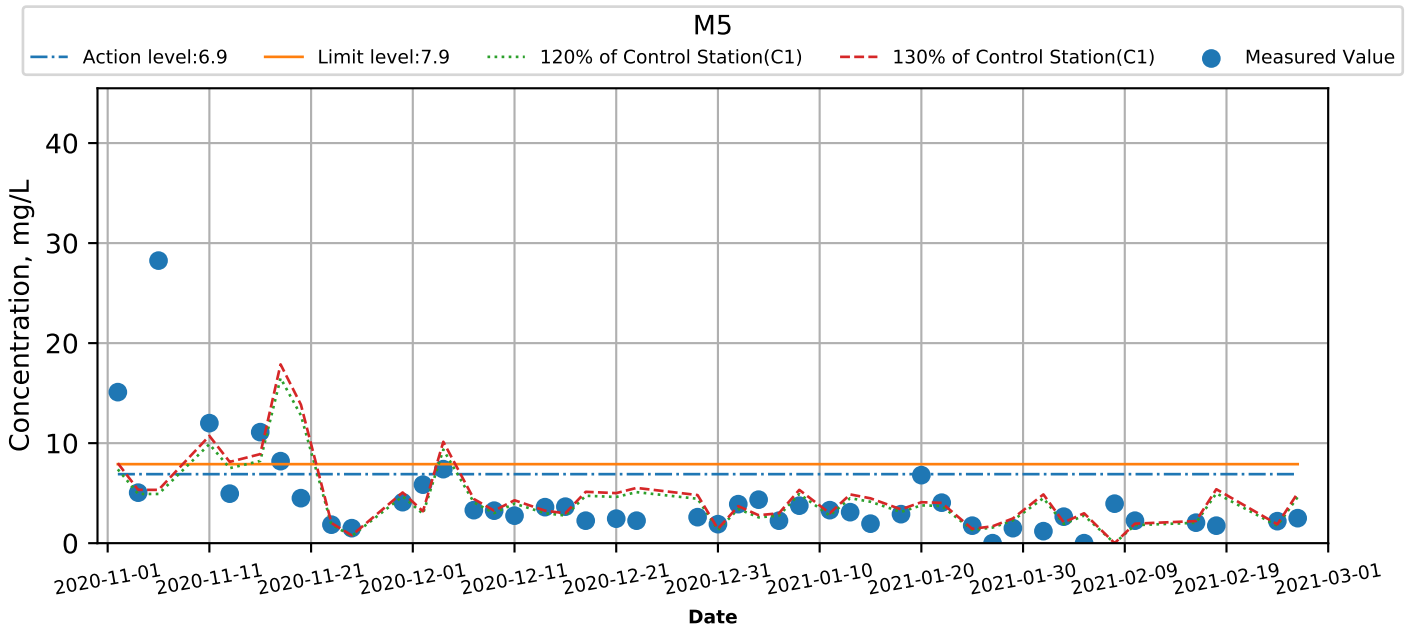
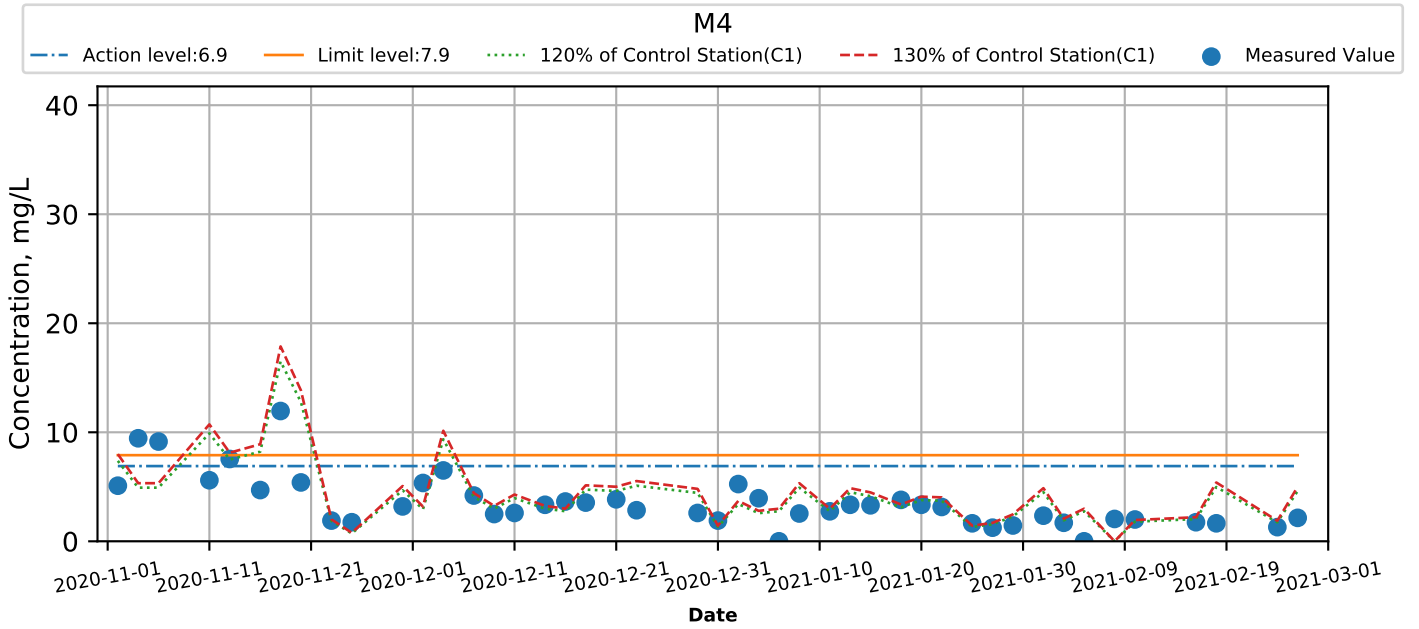
Suspended Solids (Bottom) at Monitoring Stations during Mid-Flood



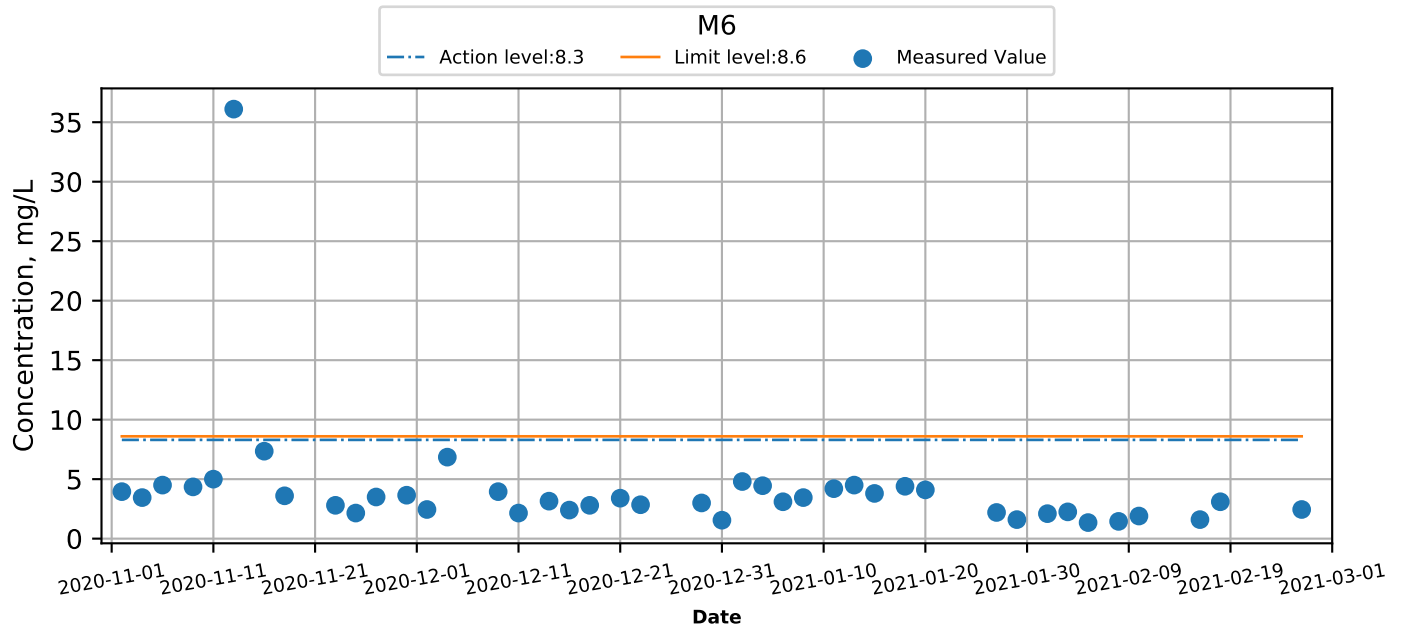
Suspended Solids (Bottom) at Monitoring Stations during Mid-Flood



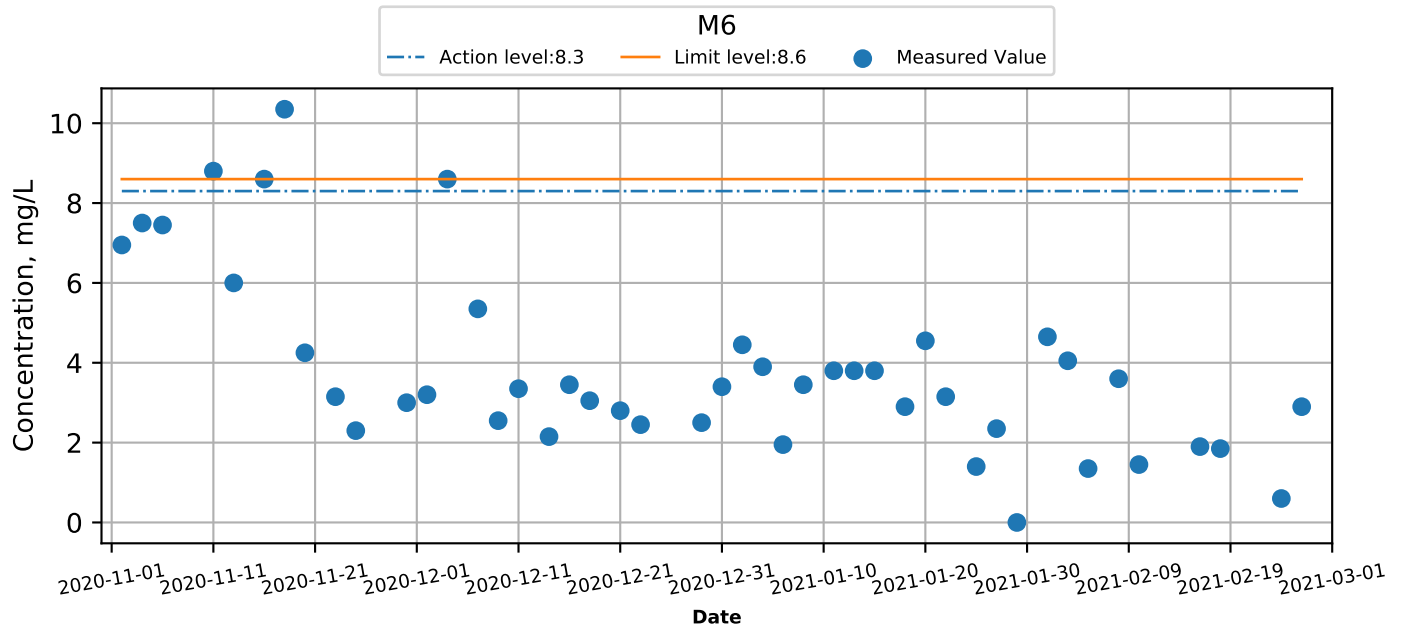
Suspended Solids (Bottom) at Monitoring Stations during Mid-Flood



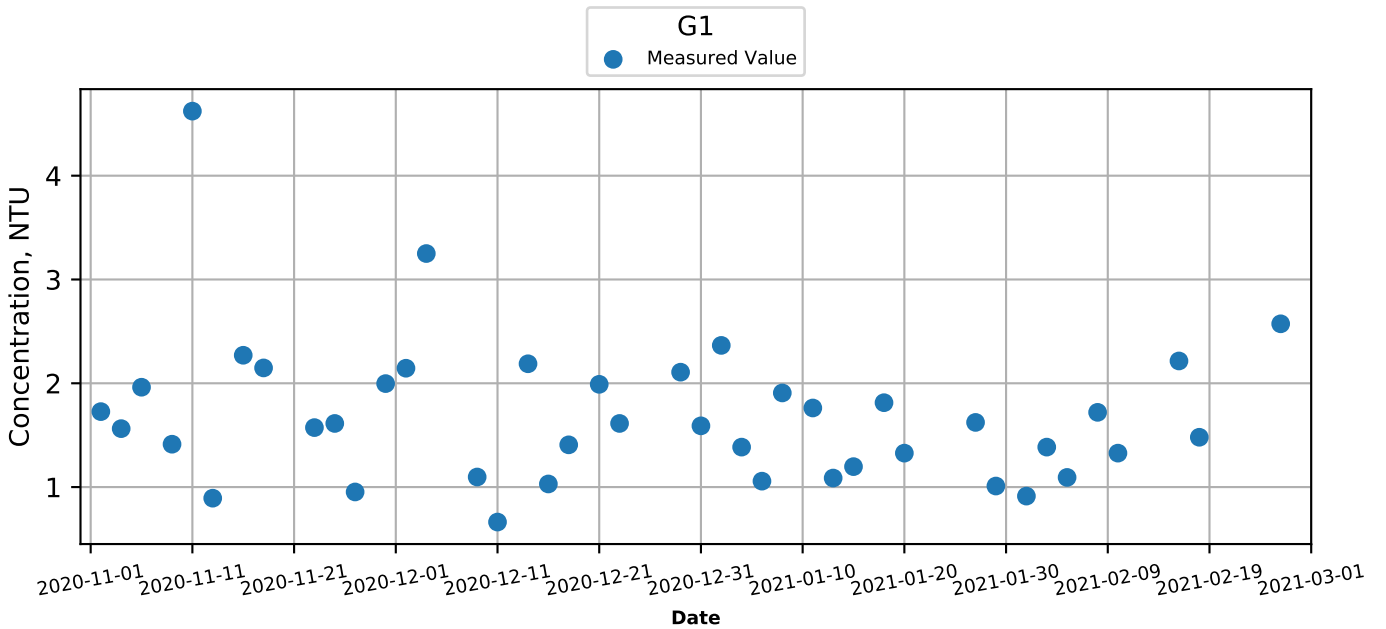
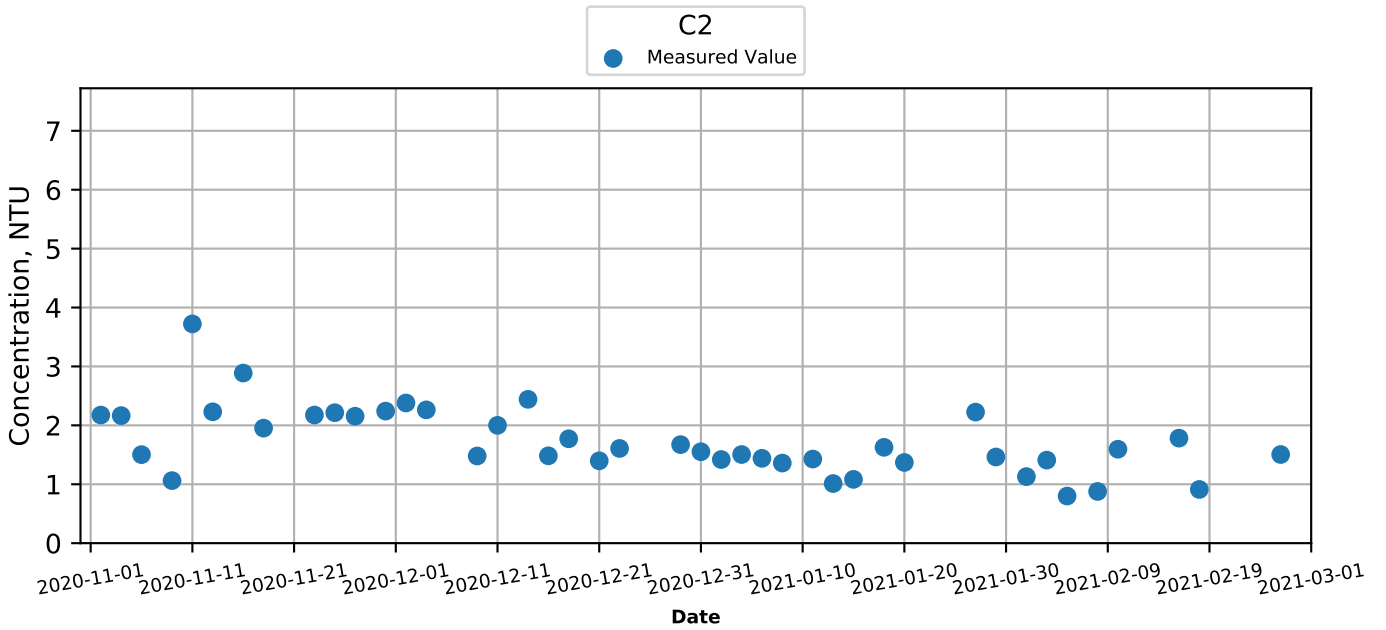
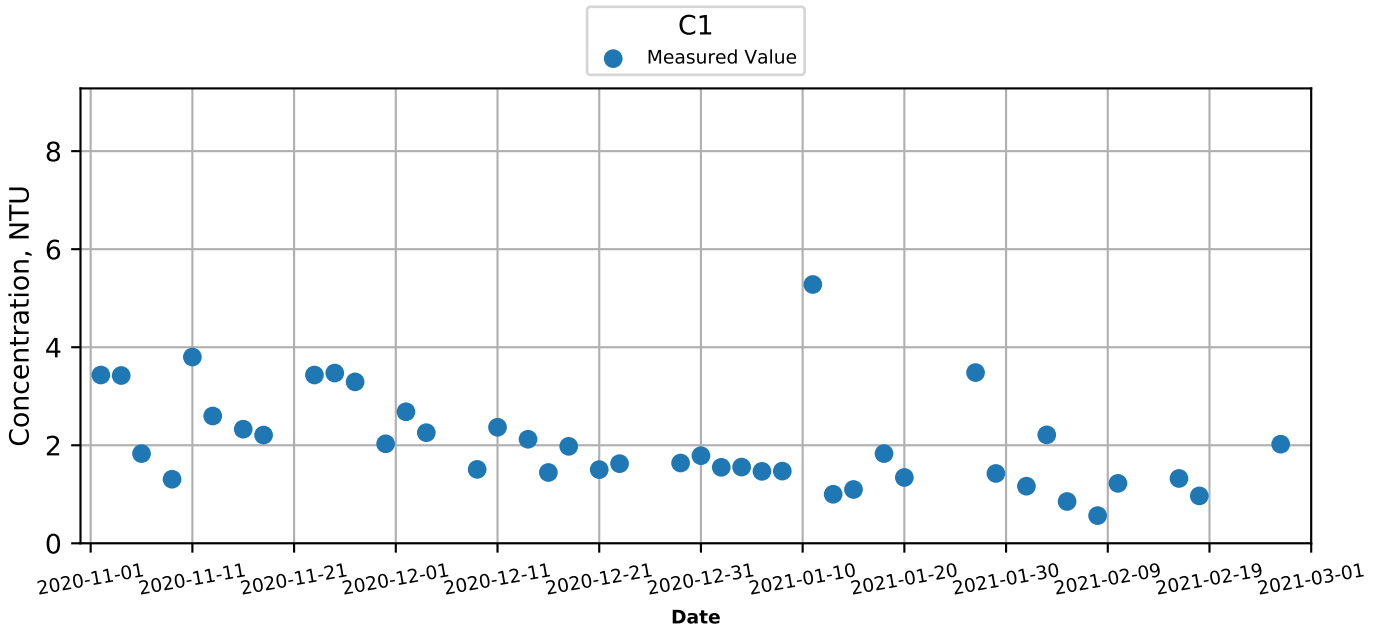
Suspended Solids (Intake level) at Monitoring Stations during Mid-Ebb



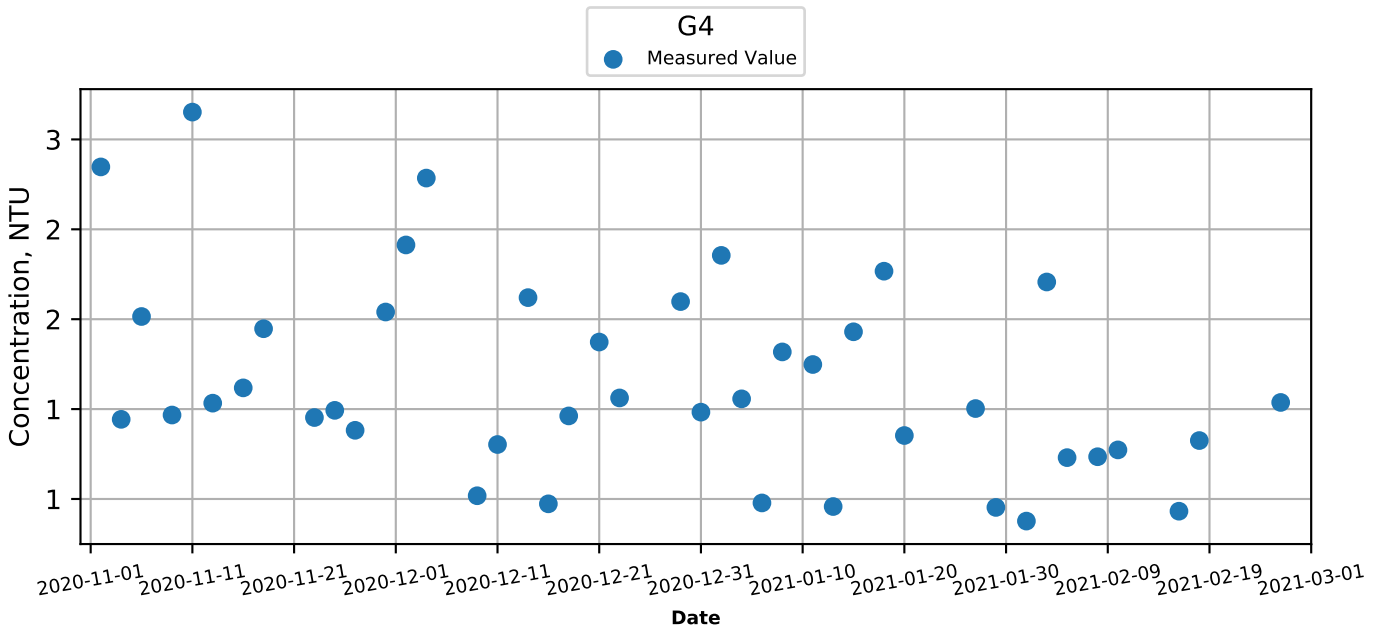
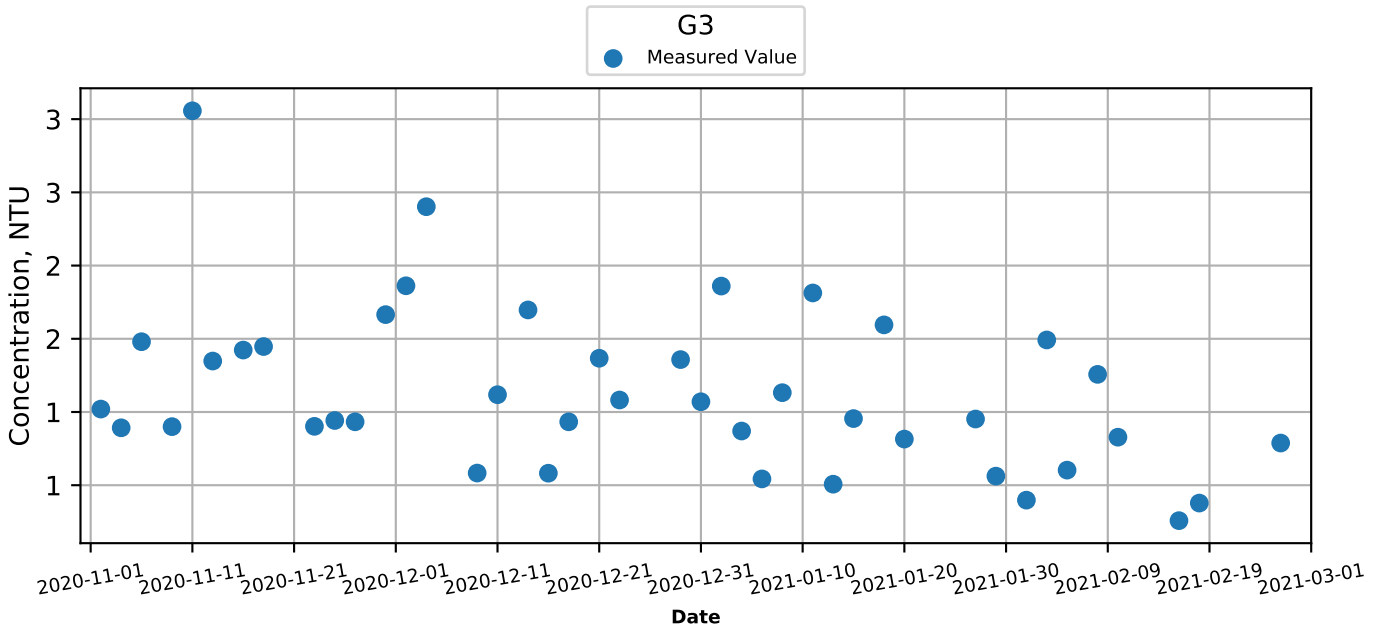
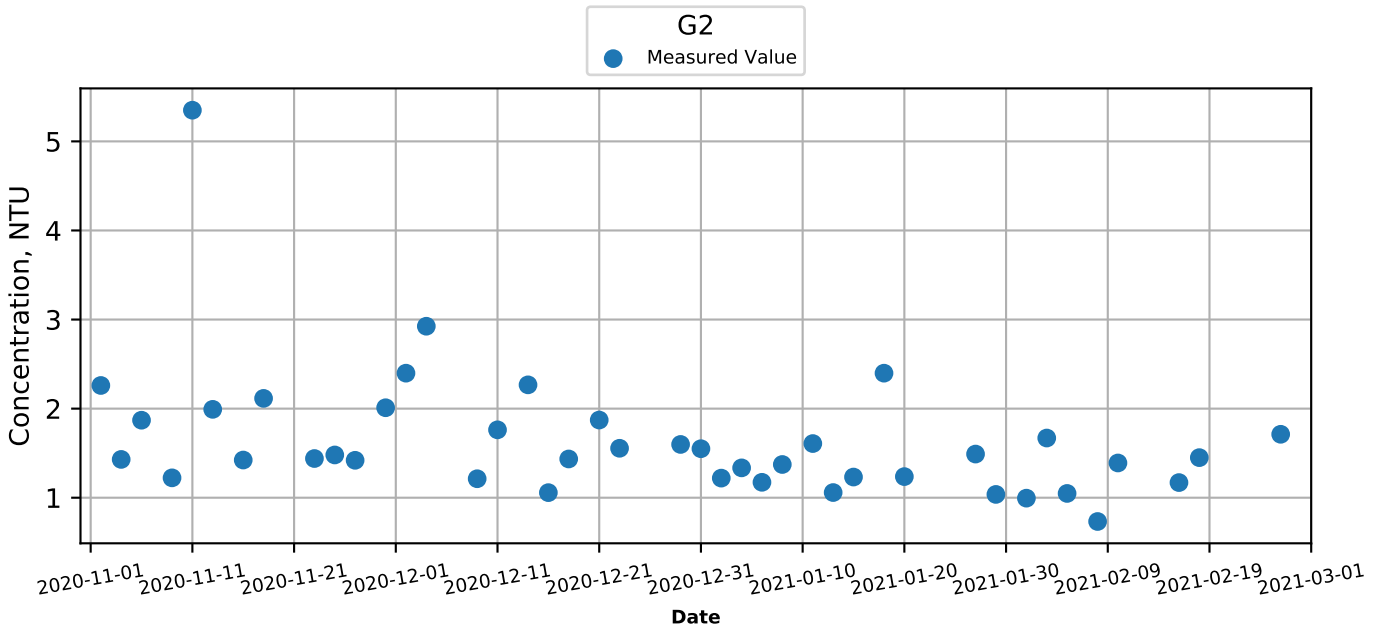
Suspended Solids (Intake level) at Monitoring Stations during Mid-Flood



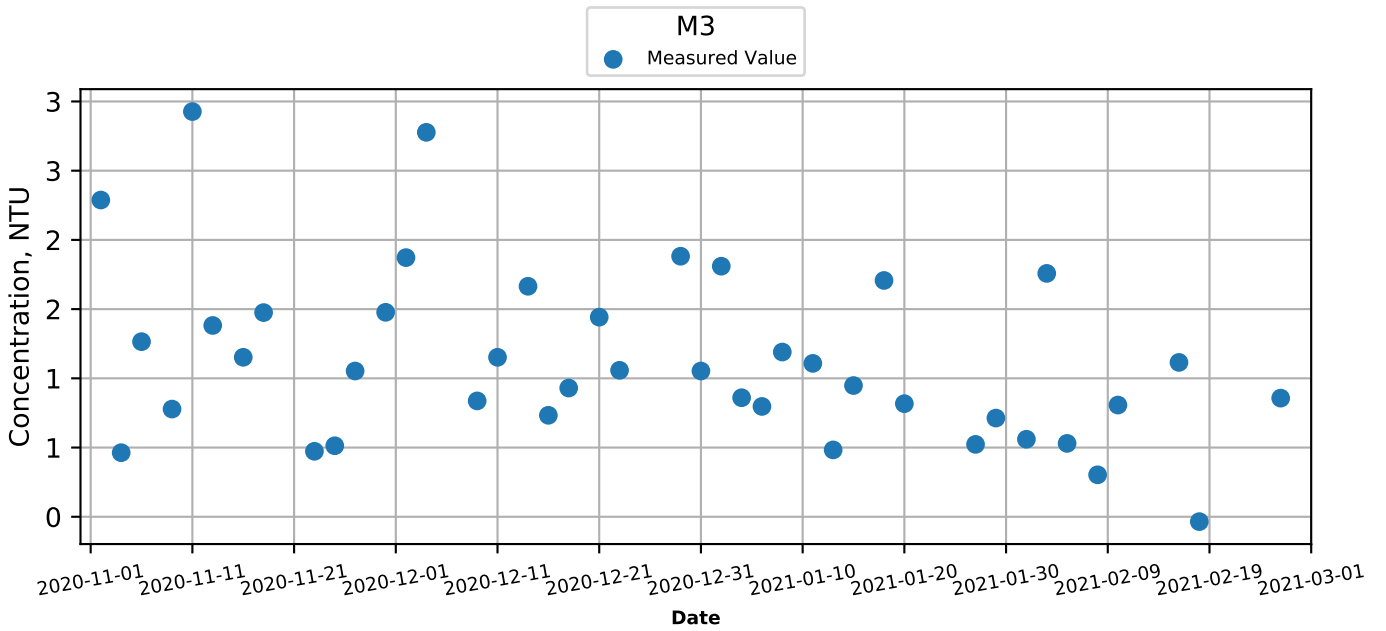
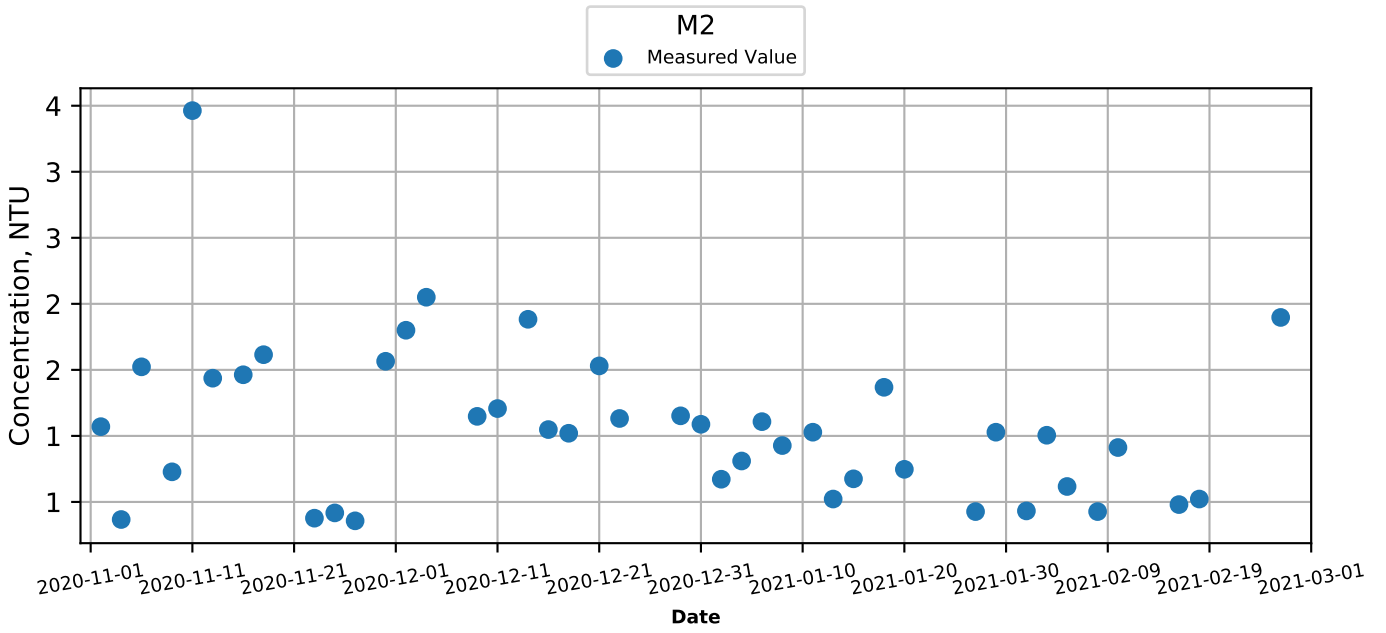
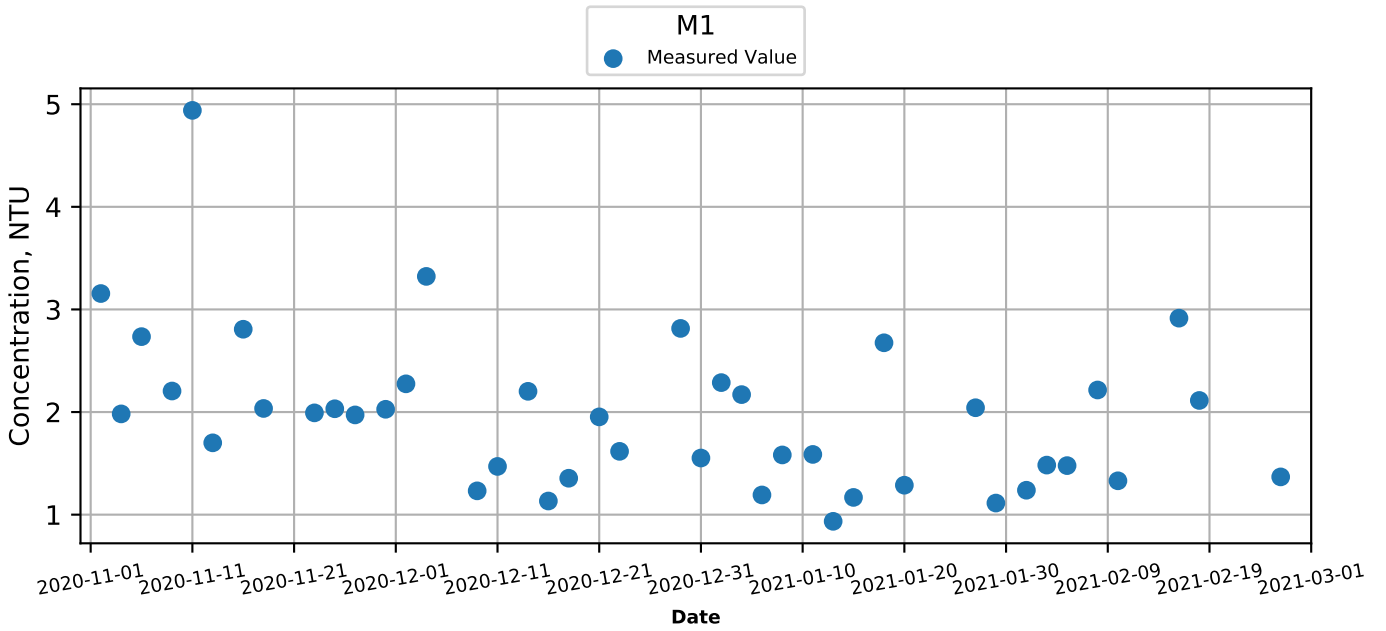
Turbidity (Depth-Averaged) at Monitoring Stations during Mid-Ebb



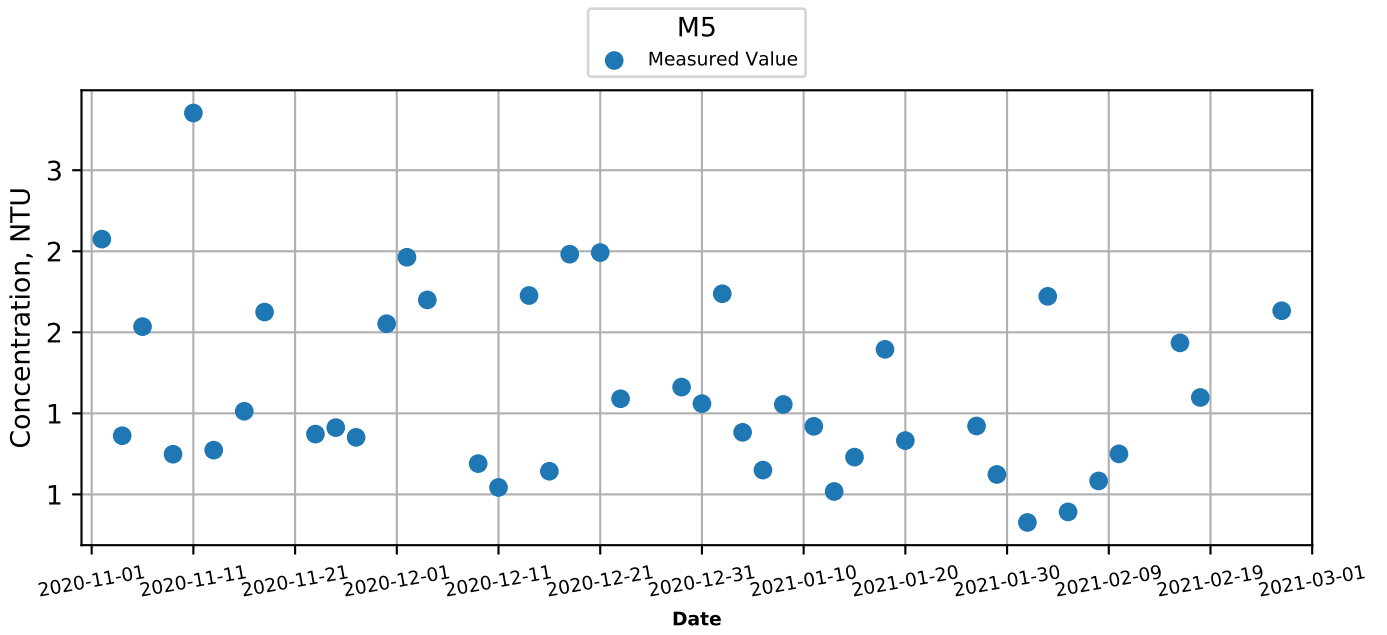
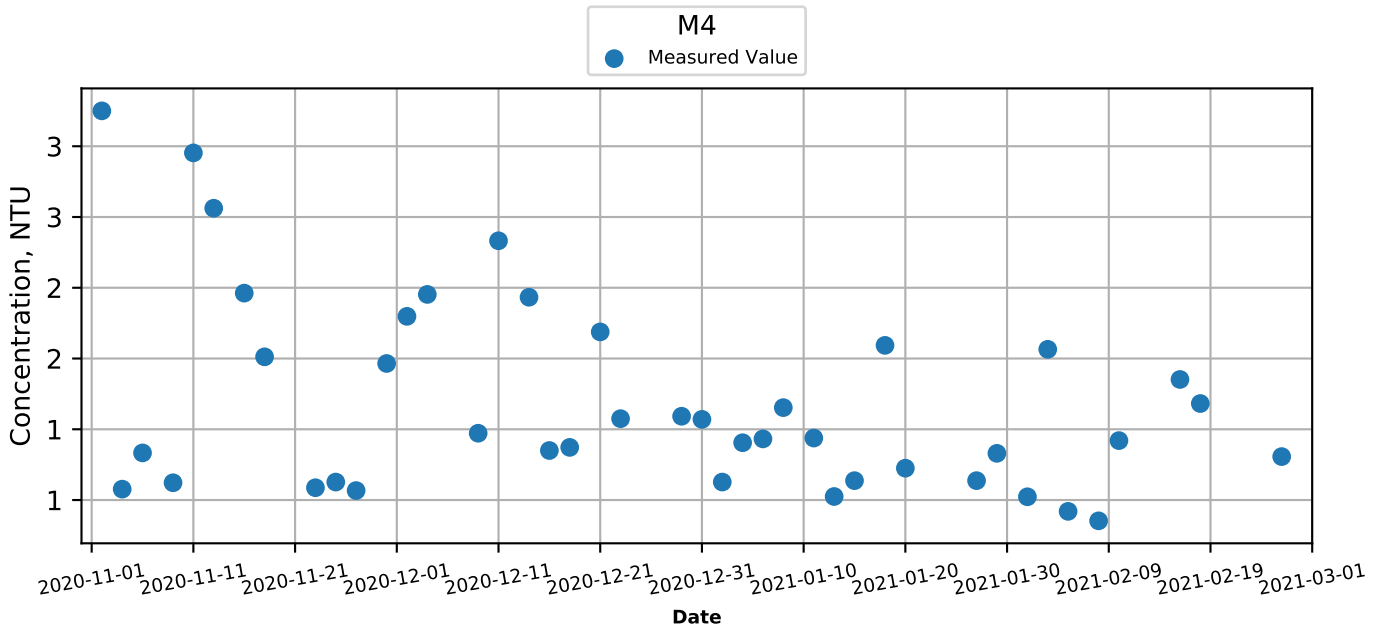
Turbidity (Depth-Averaged) at Monitoring Stations during Mid-Ebb



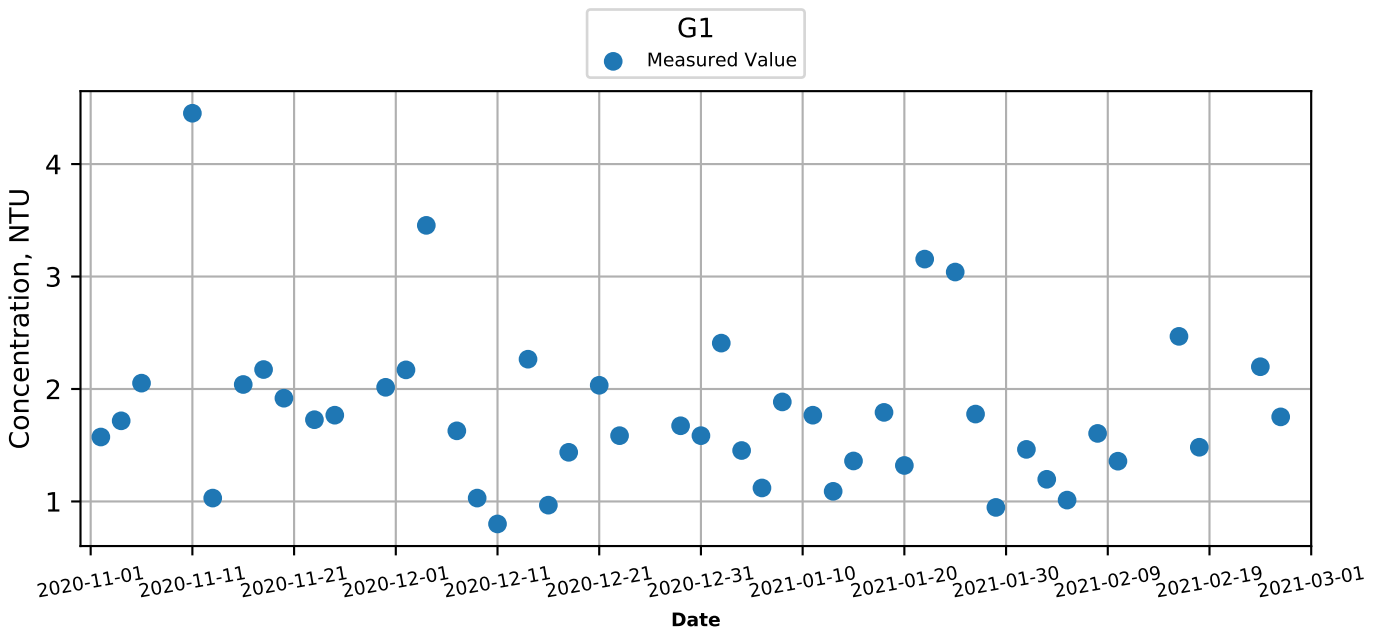
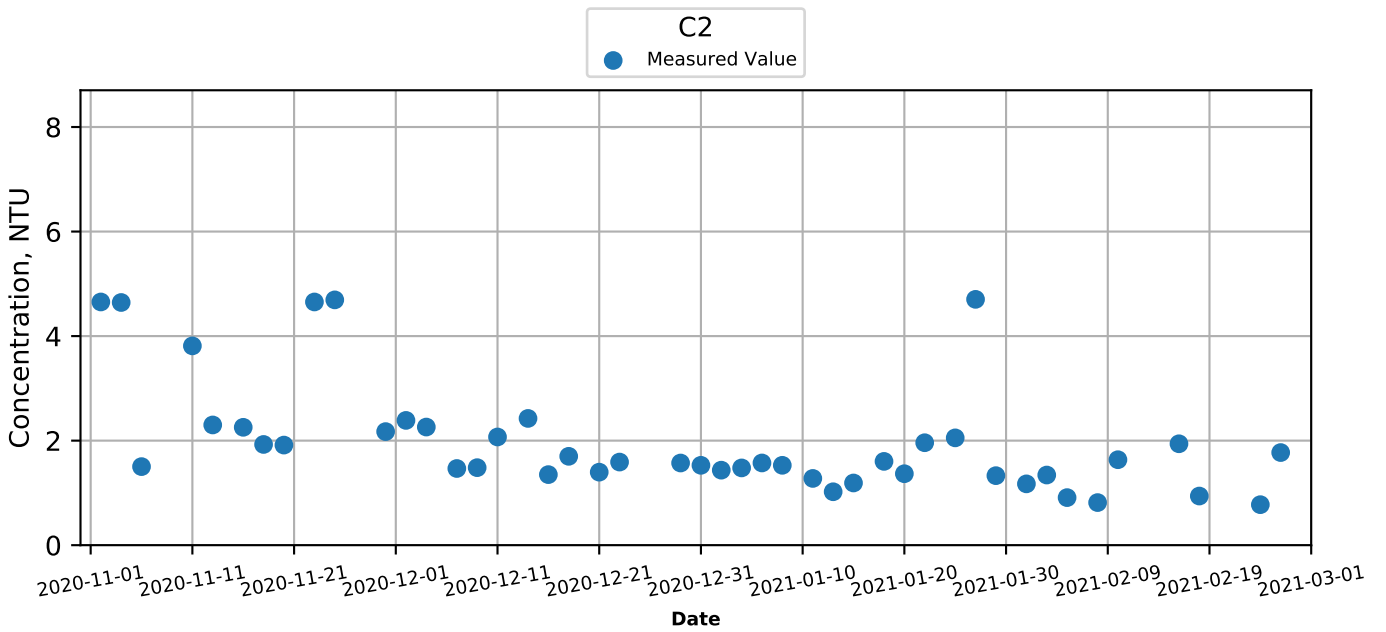
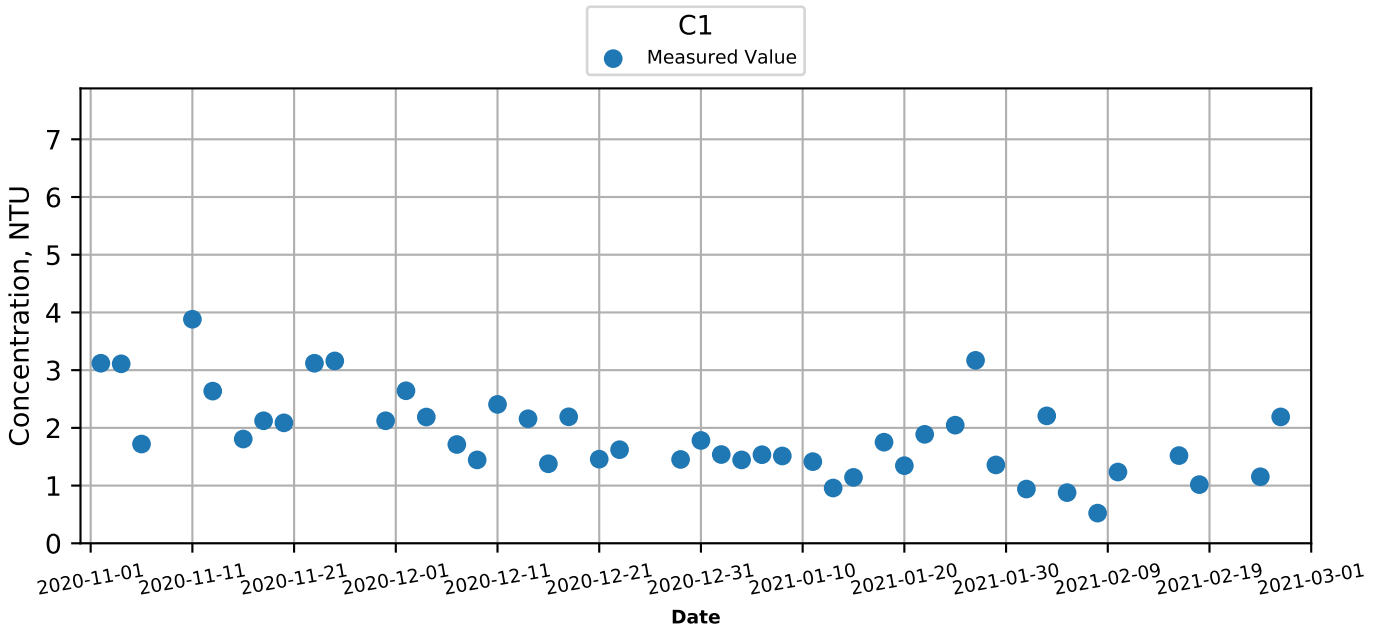
Turbidity (Depth-Averaged) at Monitoring Stations during Mid-Ebb



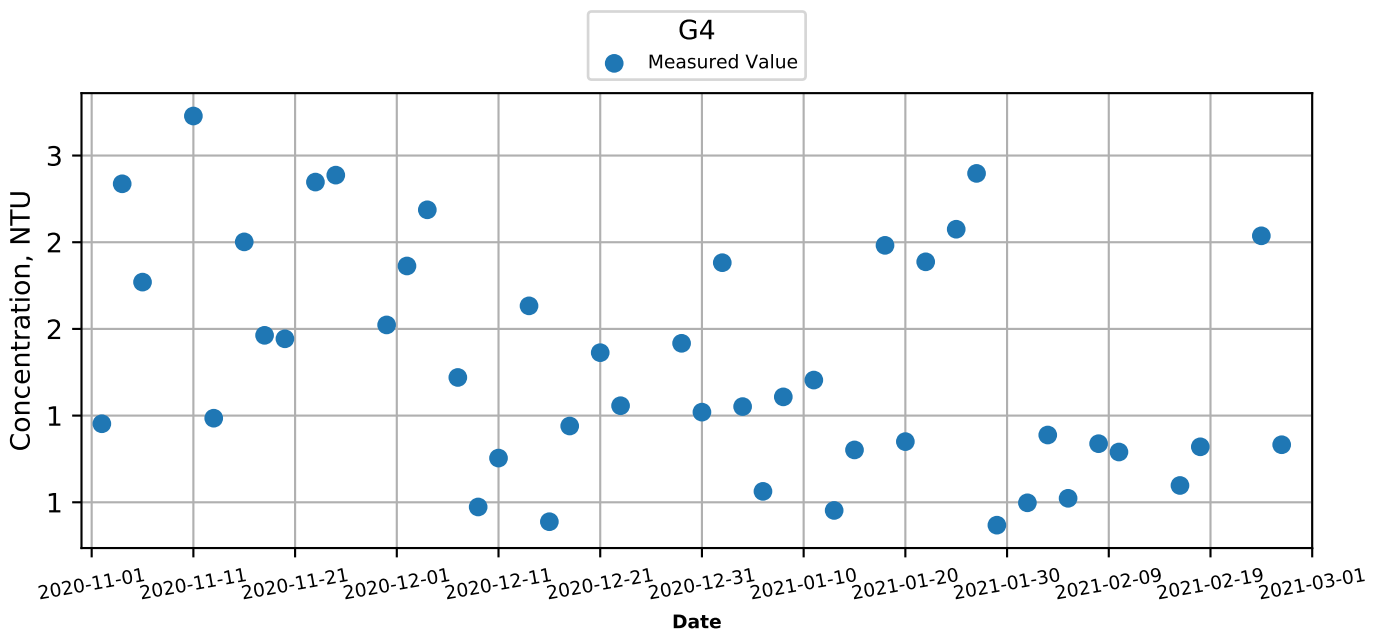
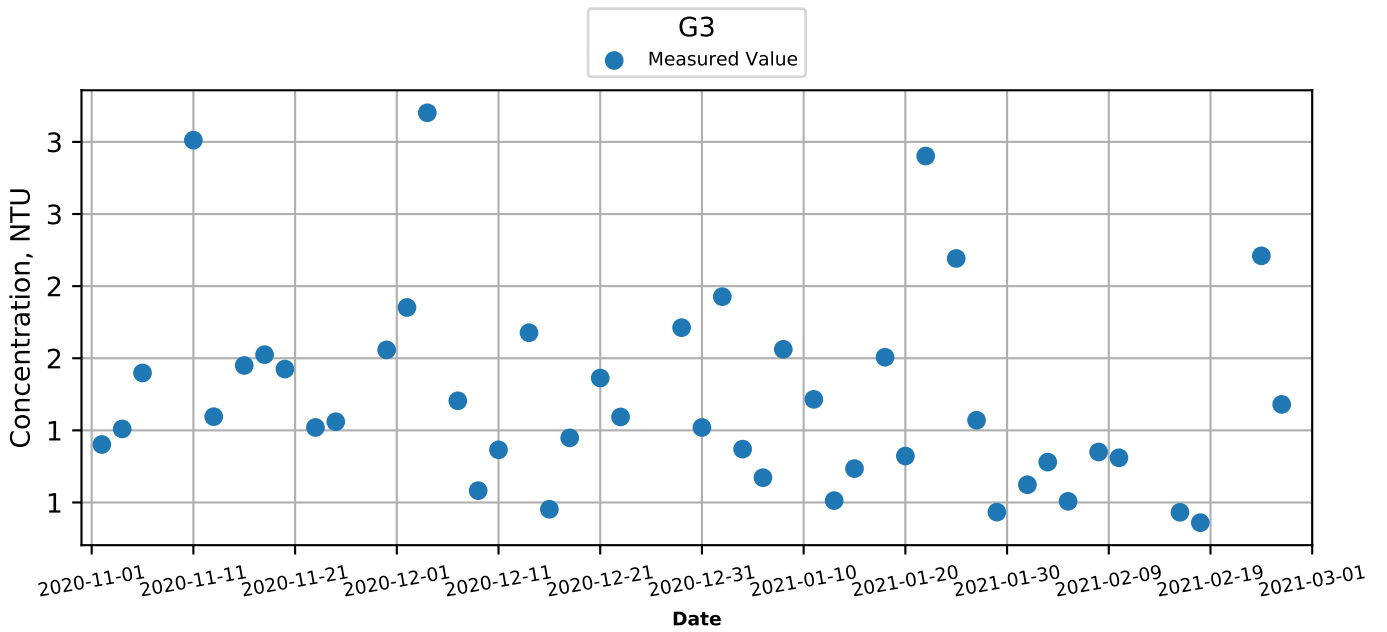
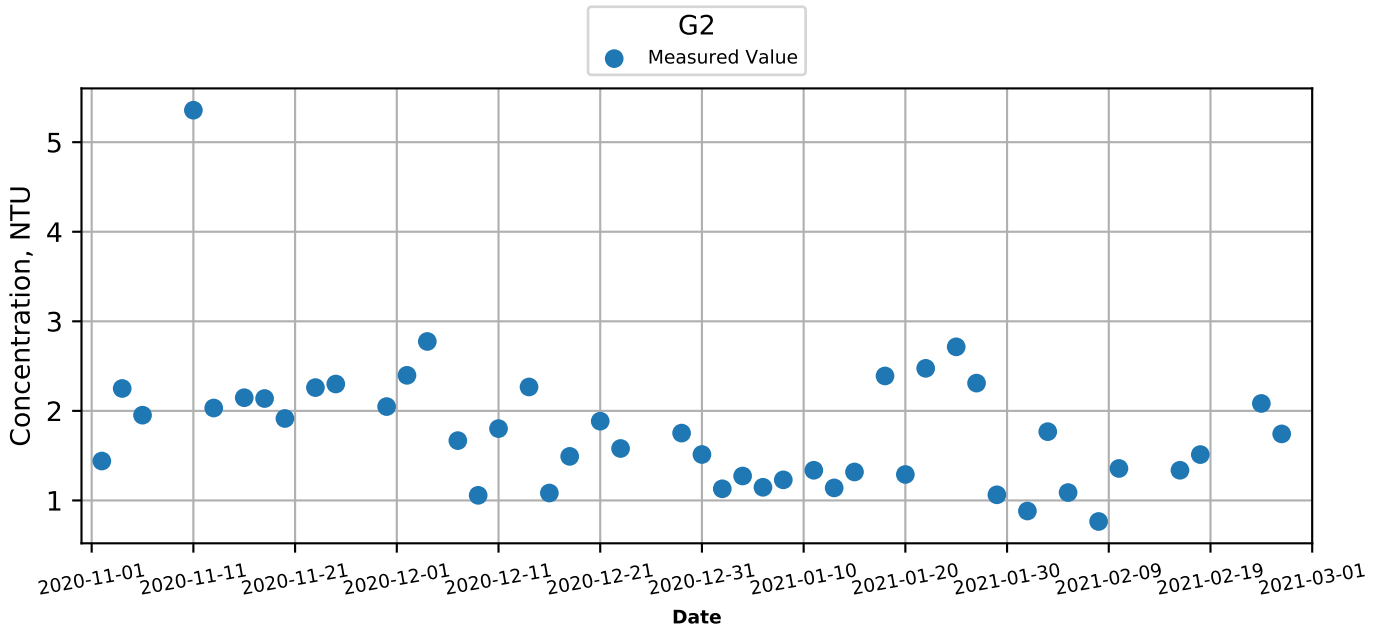
Turbidity (Depth-Averaged) at Monitoring Stations during Mid-Ebb



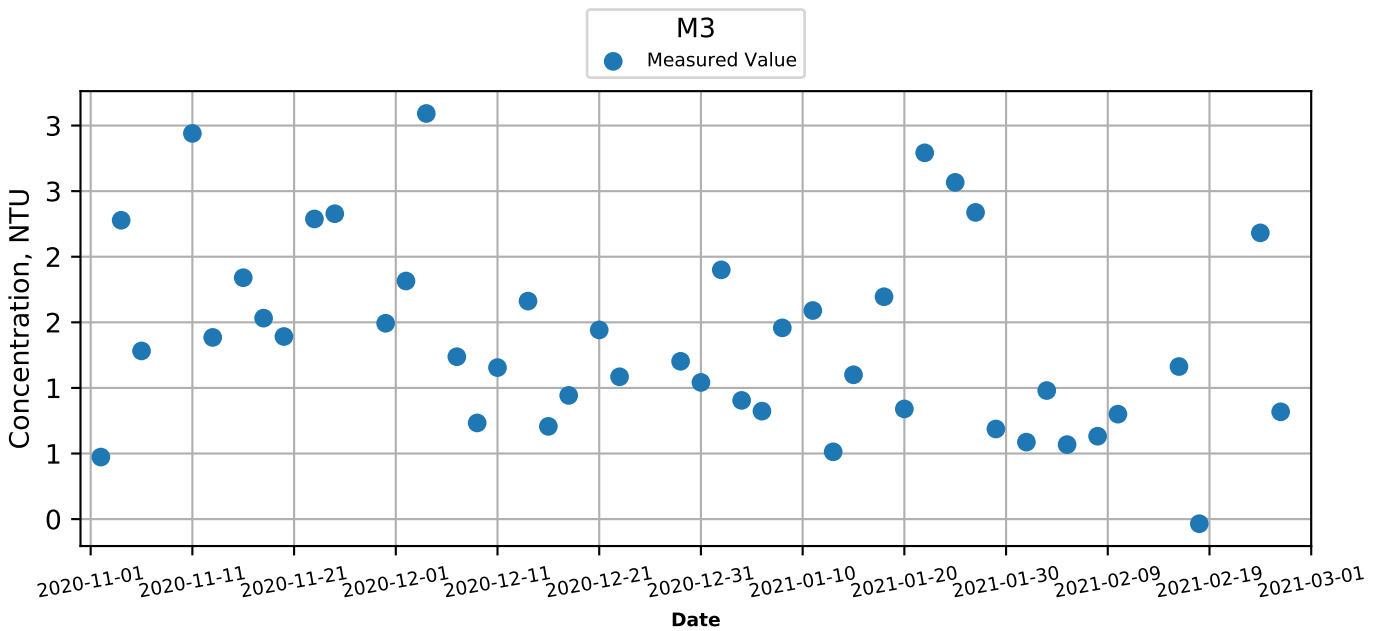
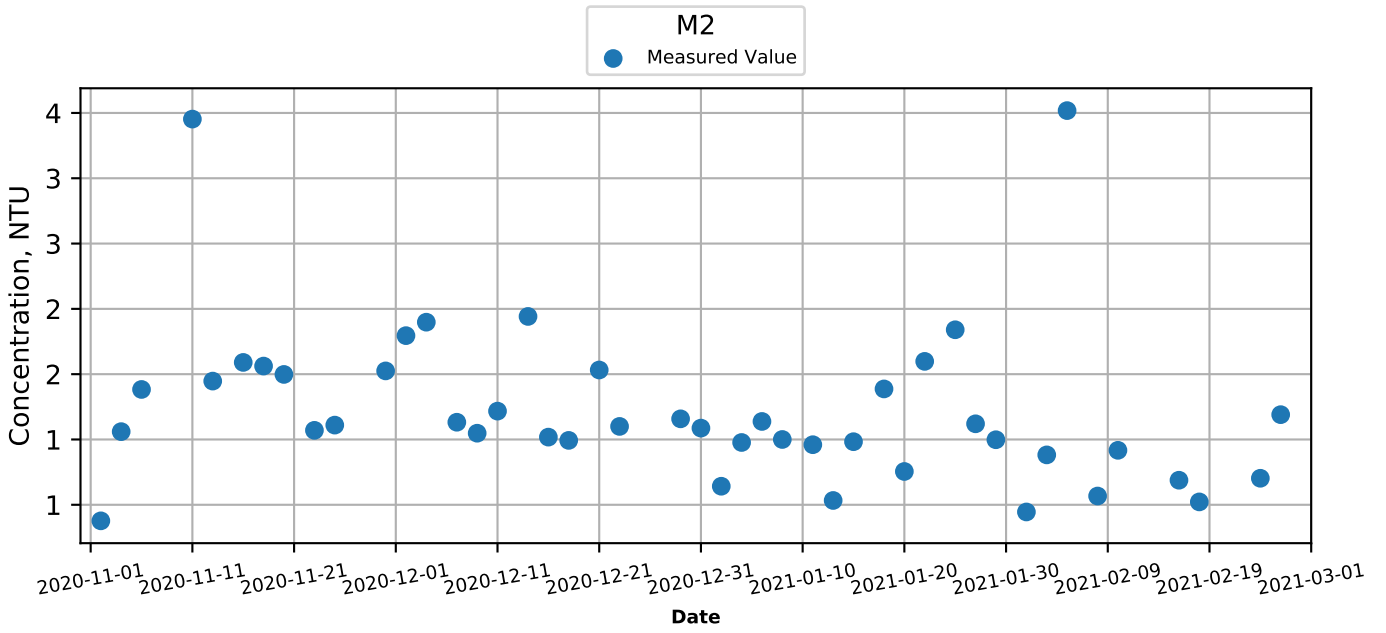
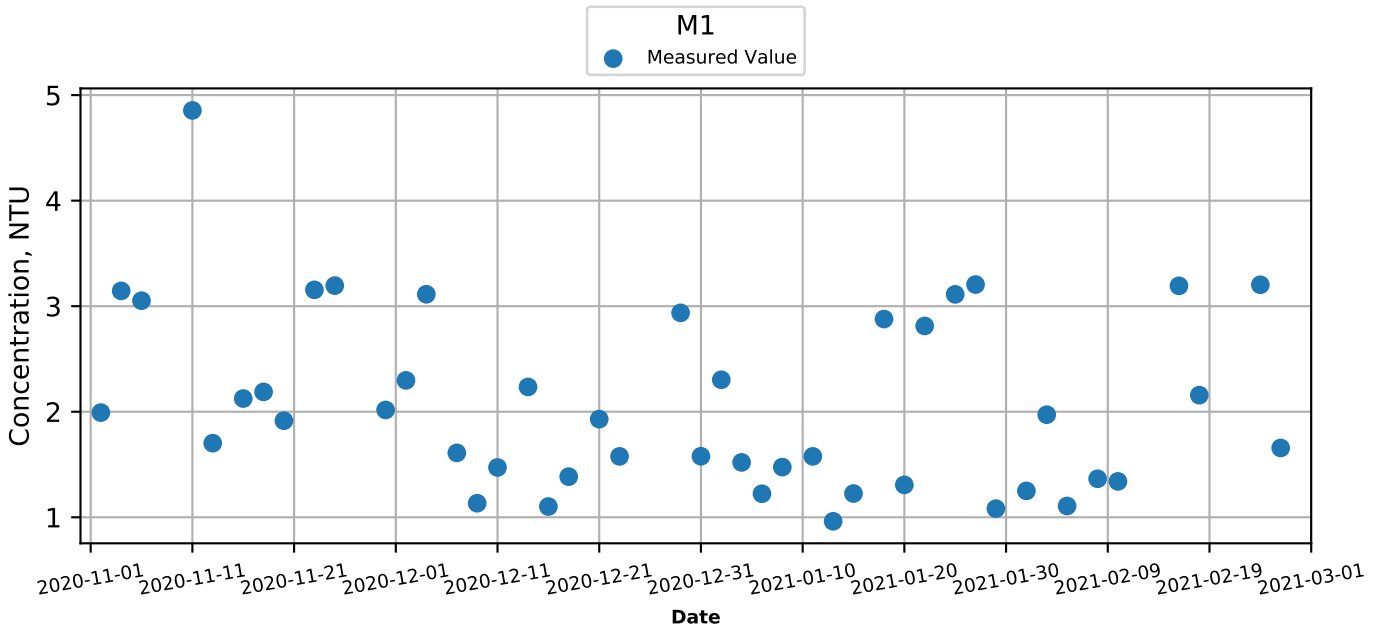
Turbidity (Depth-Averaged) at Monitoring Stations during Mid-Flood



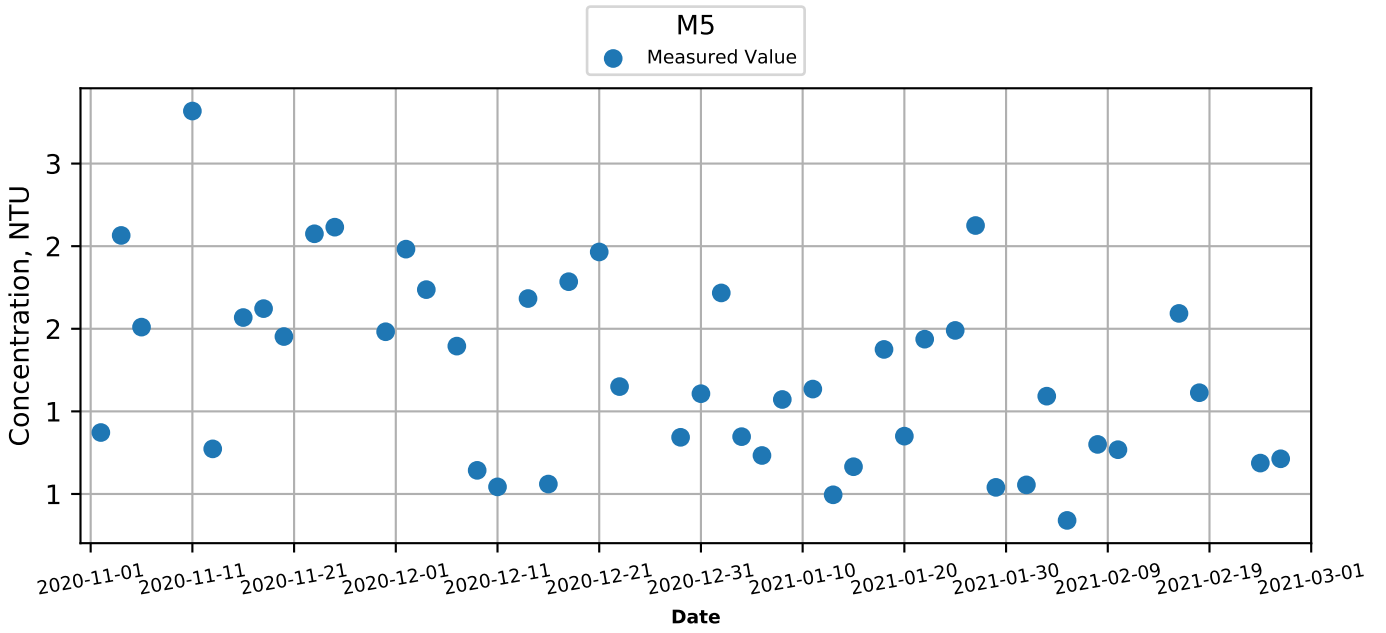
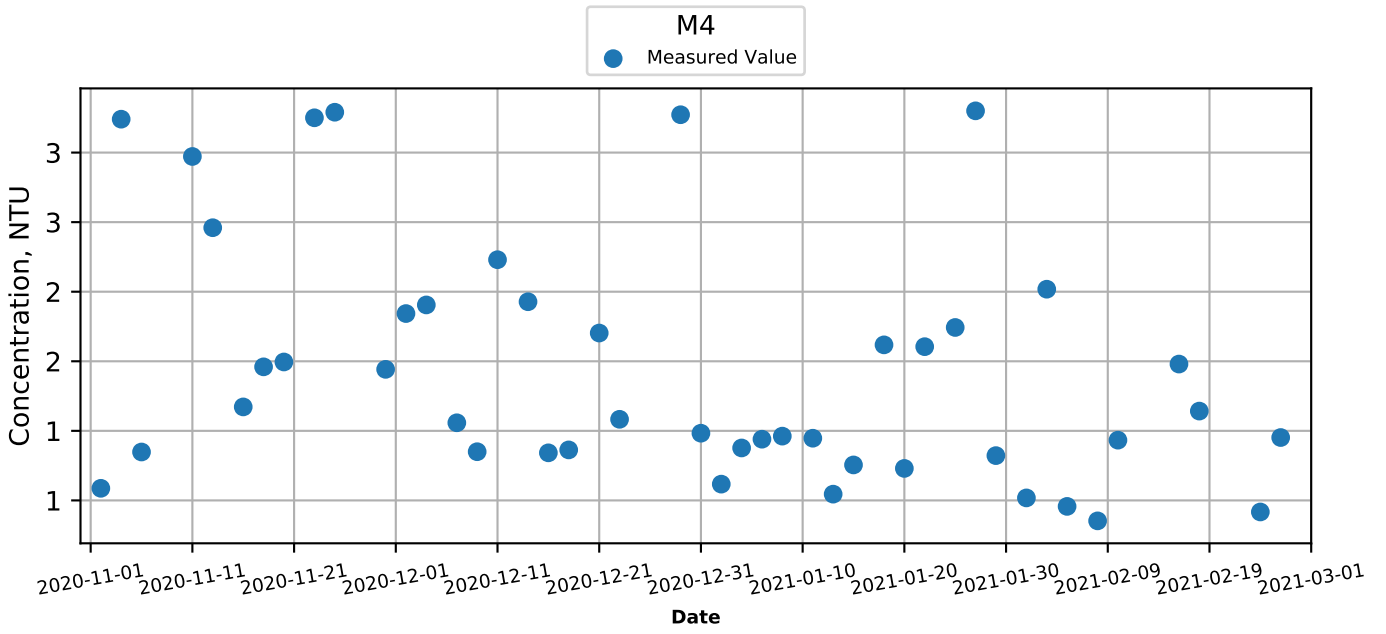
Turbidity (Depth-Averaged) at Monitoring Stations during Mid-Flood



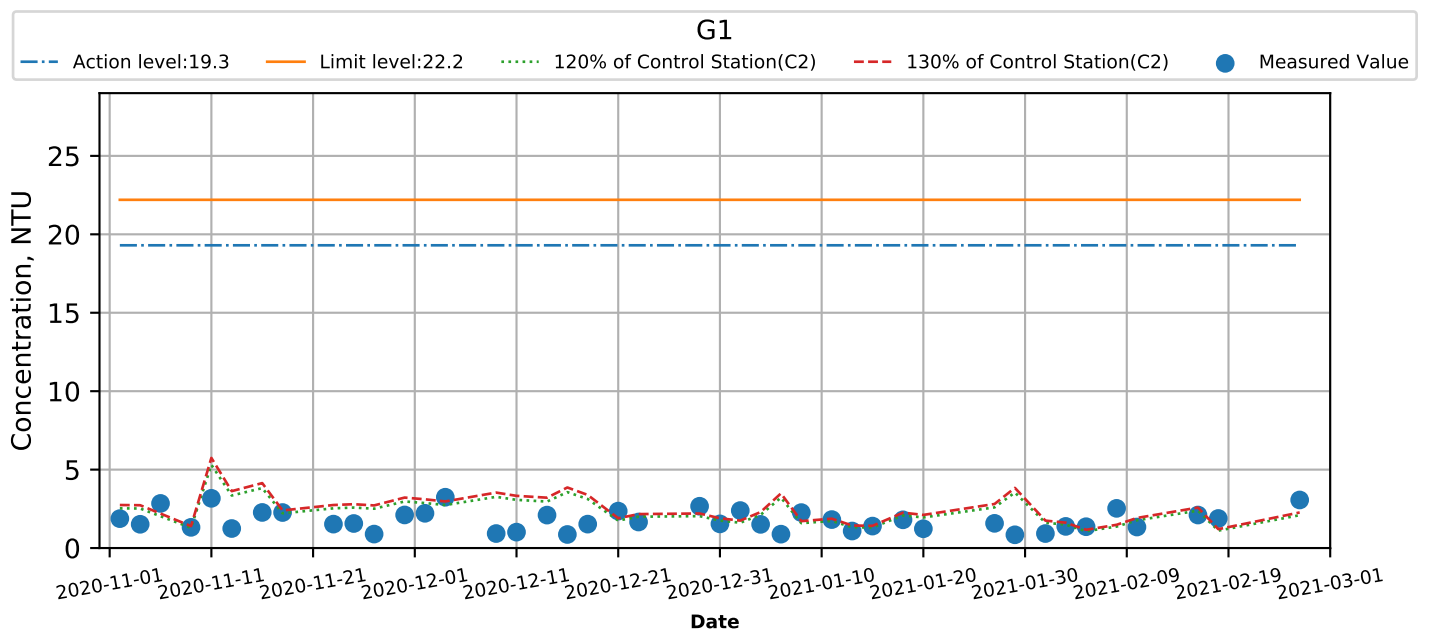
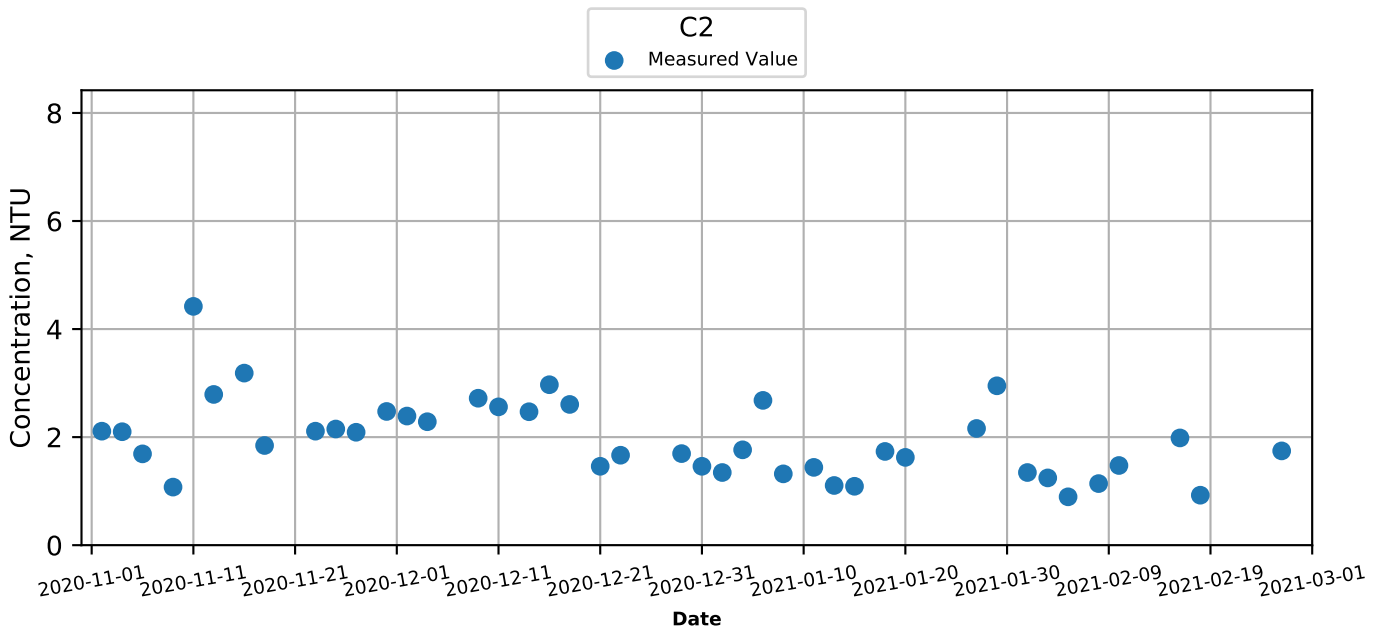
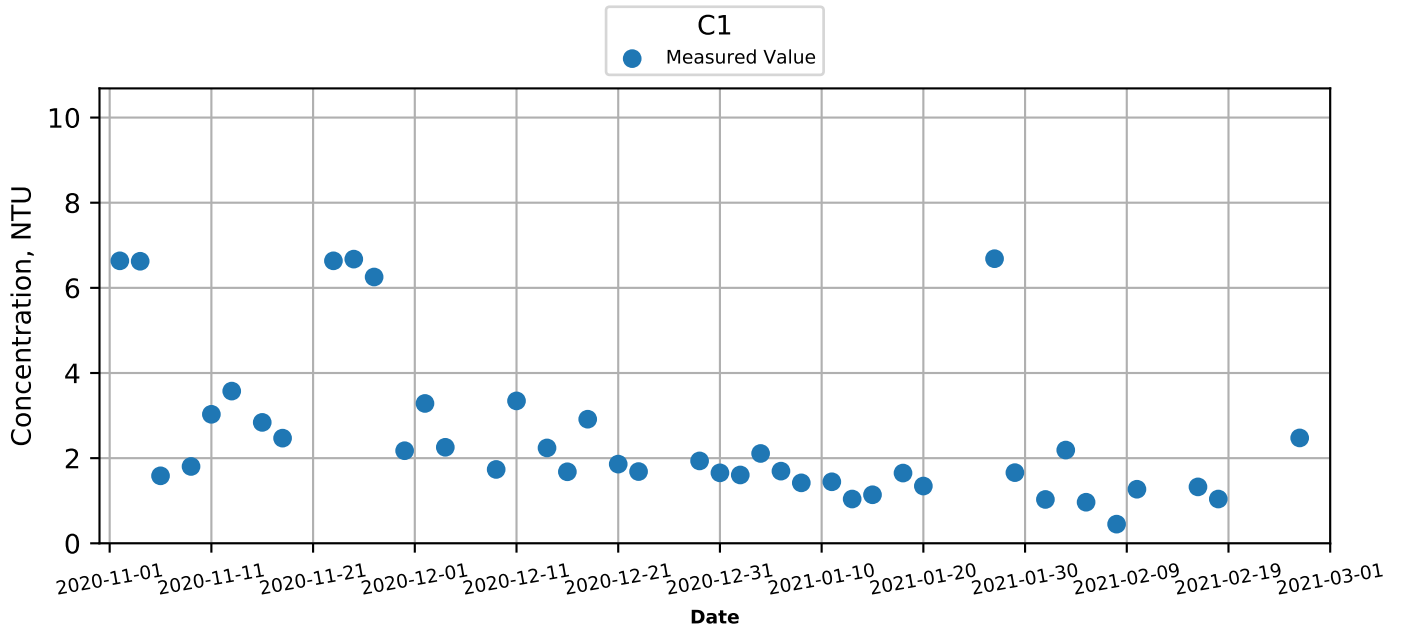
Turbidity (Depth-Averaged) at Monitoring Stations during Mid-Flood



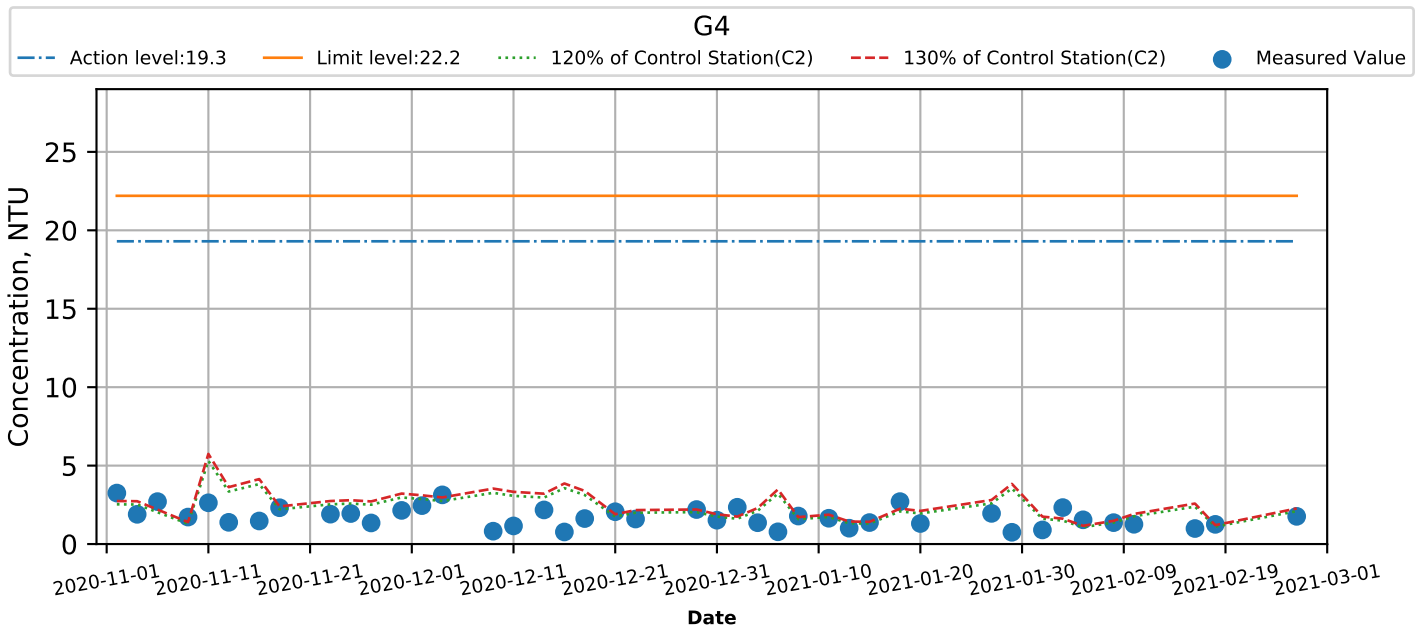
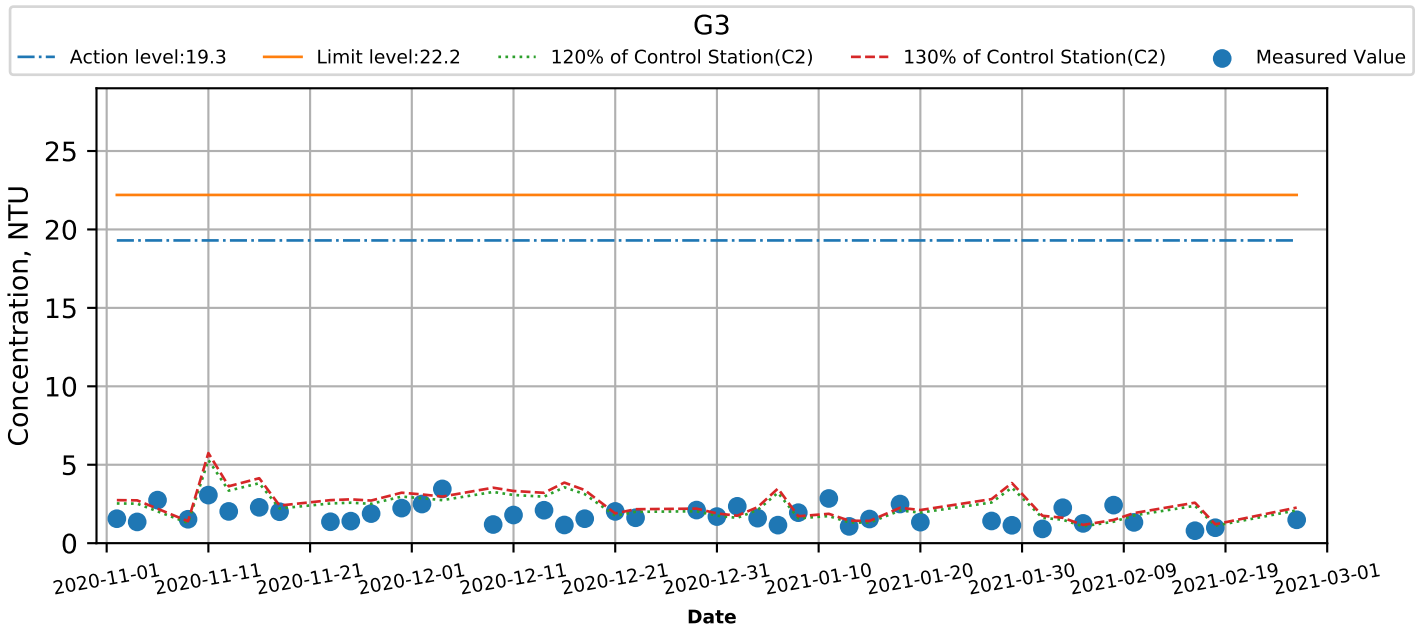
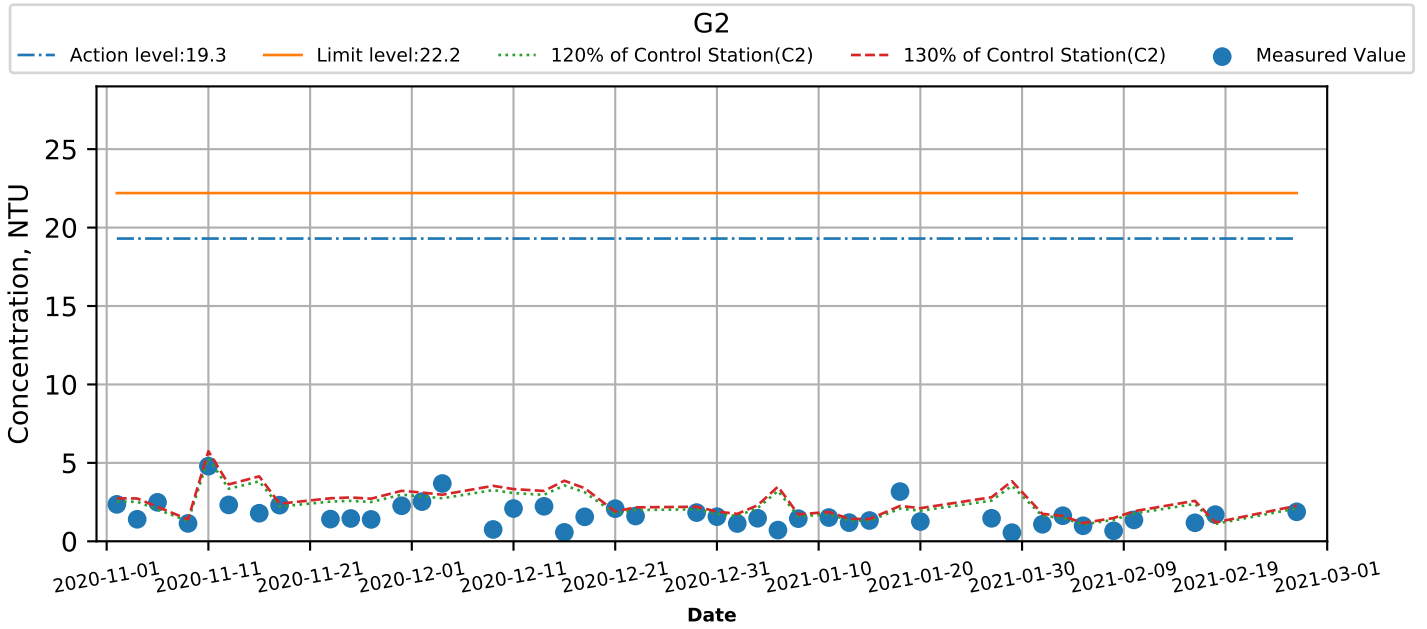
Turbidity (Depth-Averaged) at Monitoring Stations during Mid-Flood



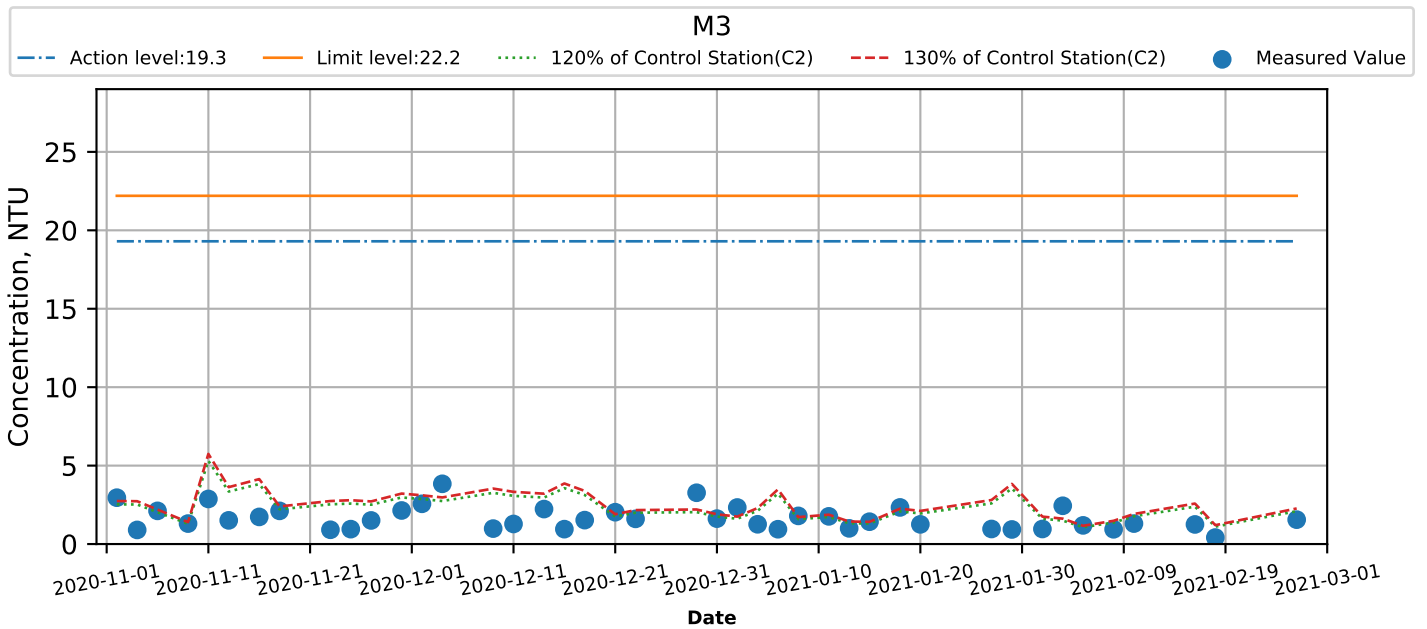
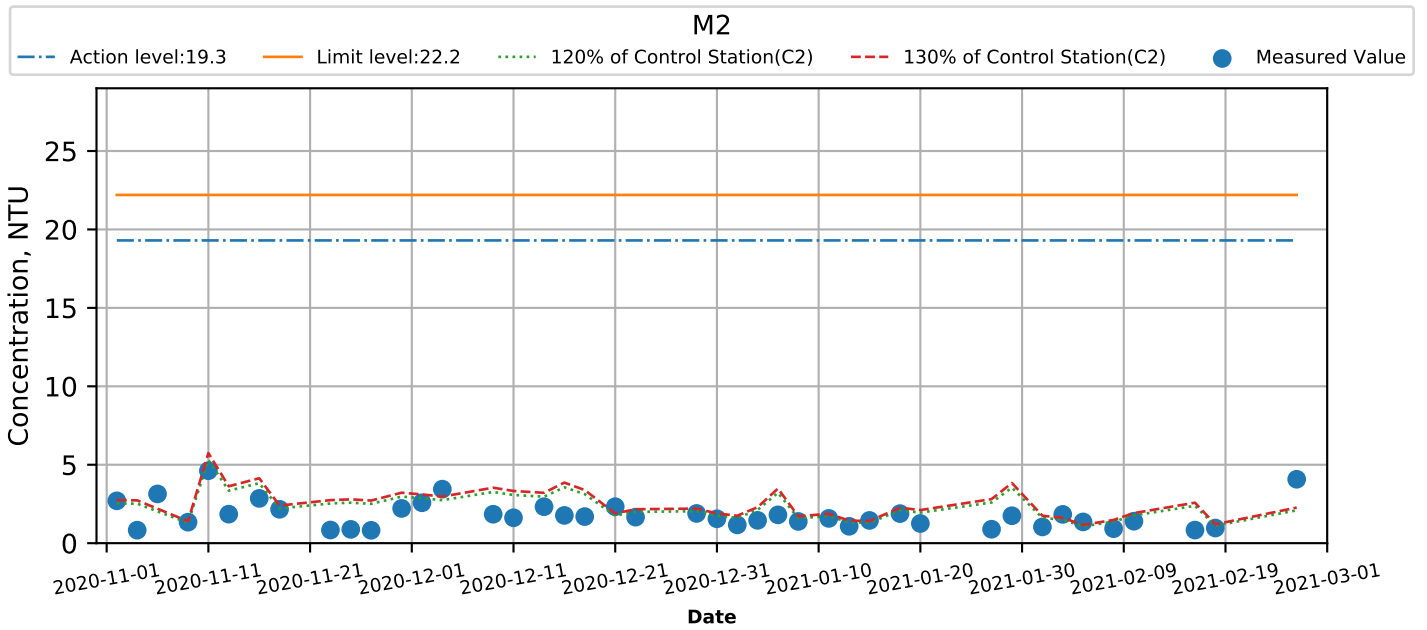
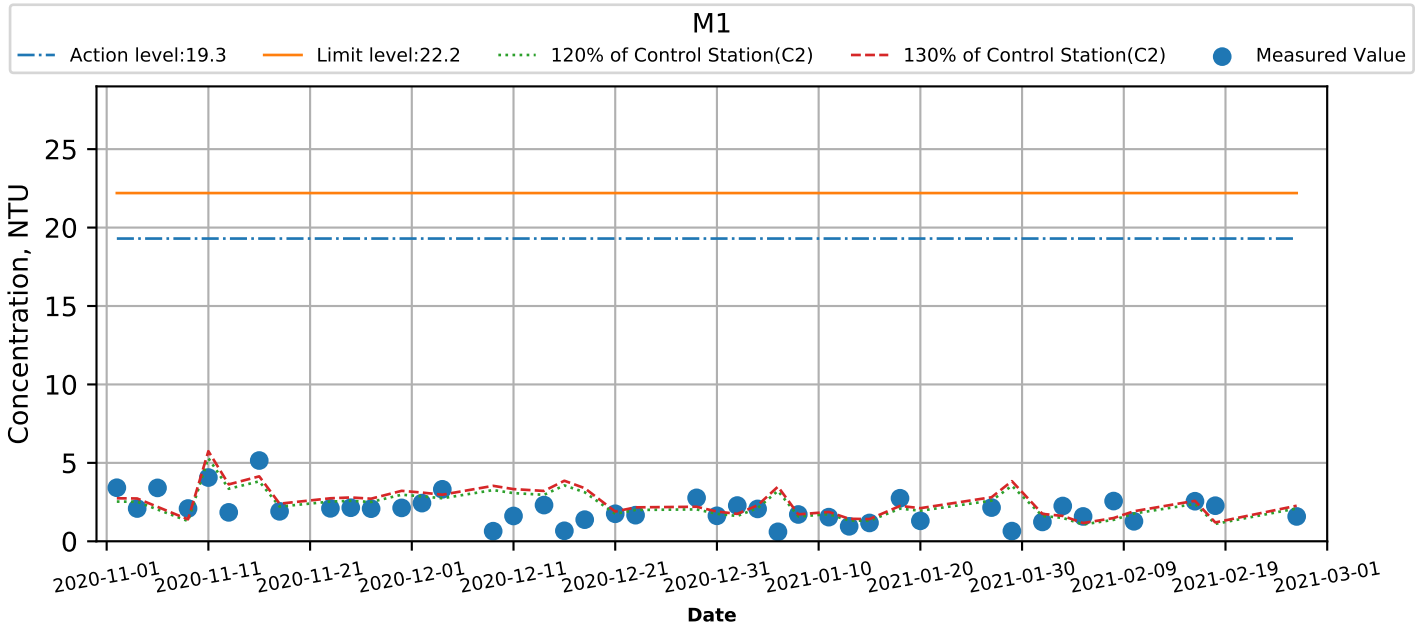
Turbidity (Bottom) at Monitoring Stations during Mid-Ebb



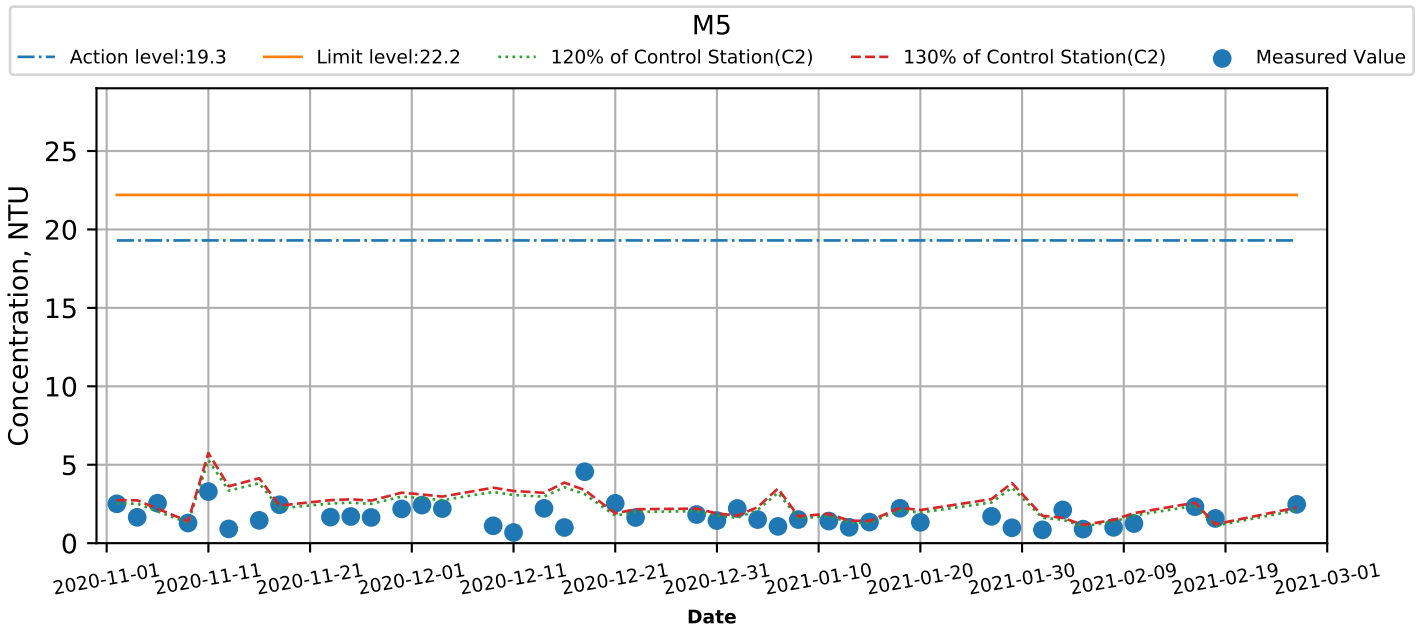
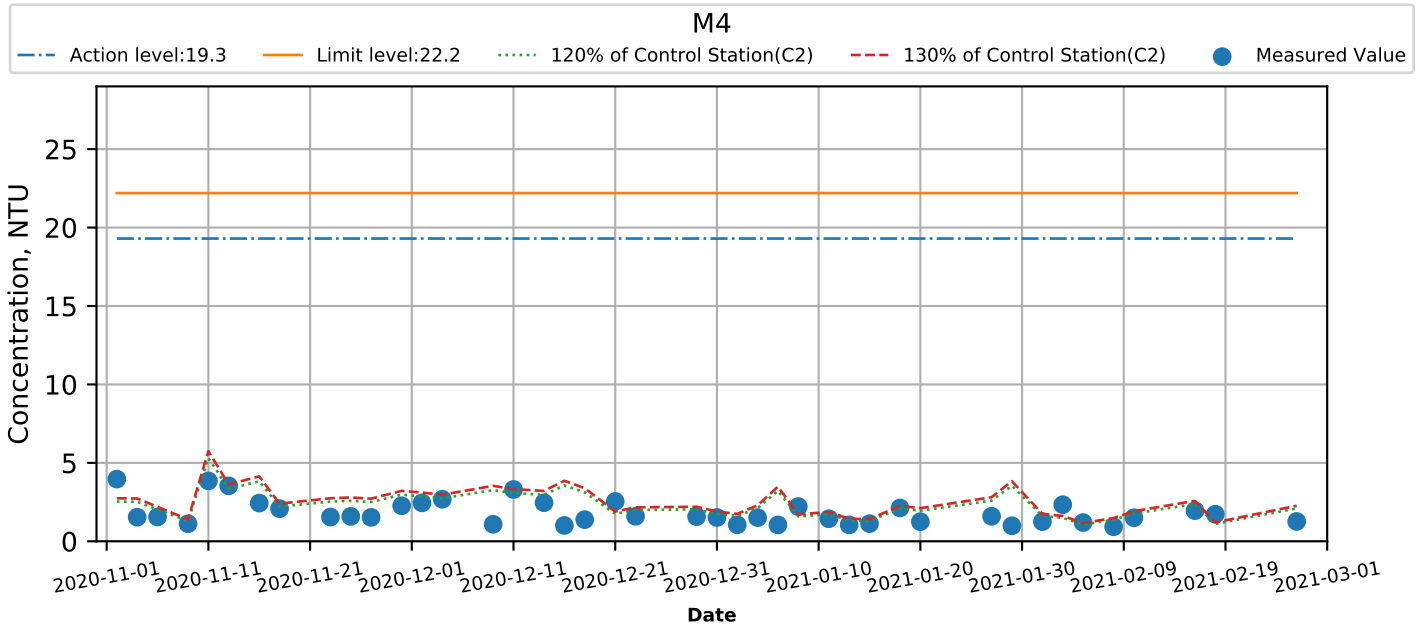
Turbidity (Bottom) at Monitoring Stations during Mid-Ebb



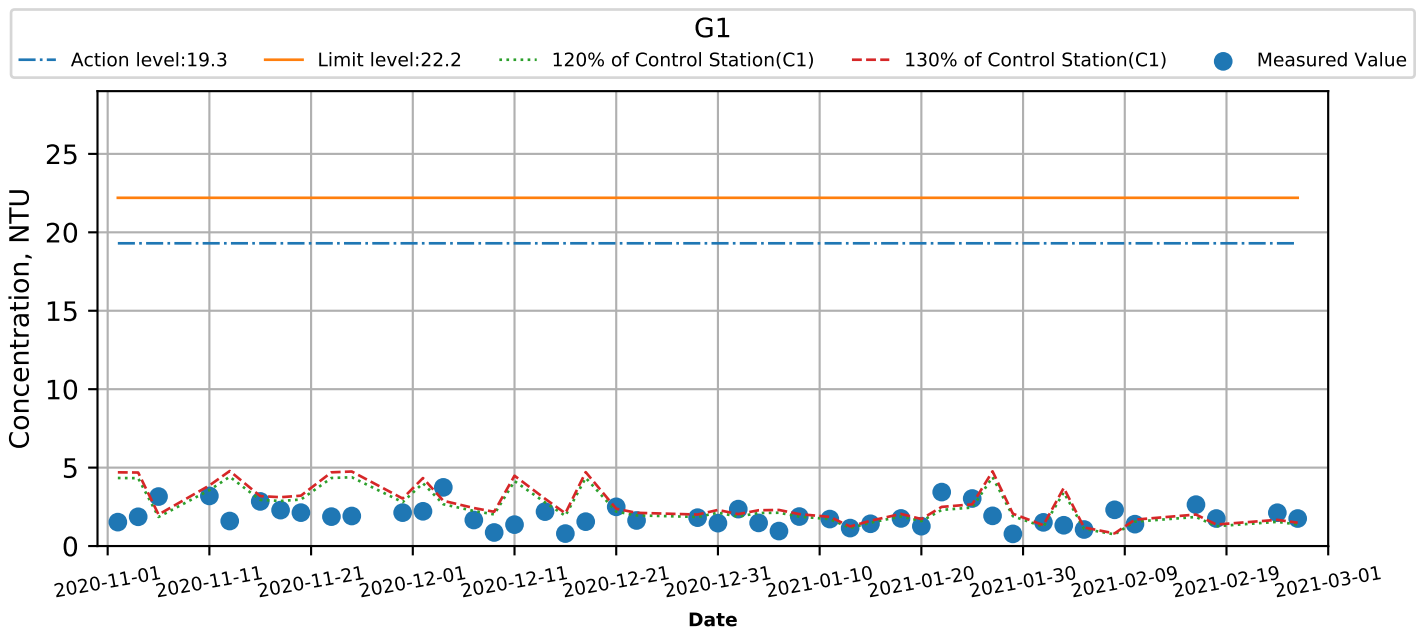
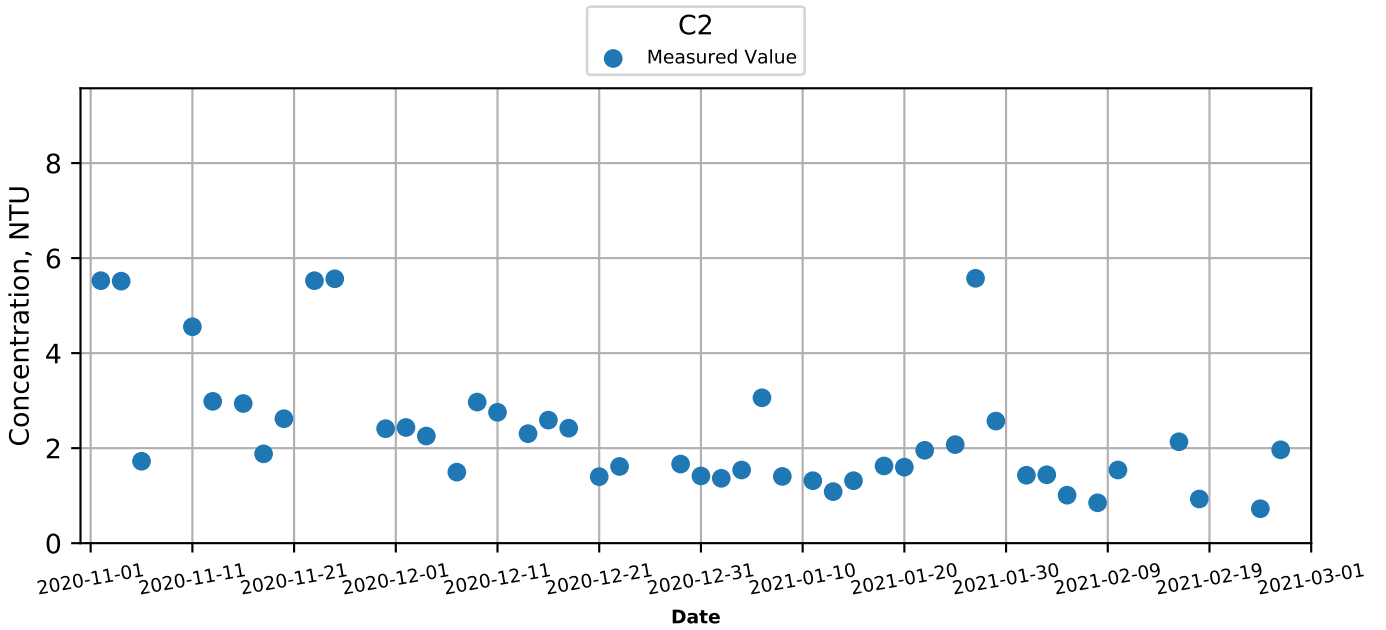
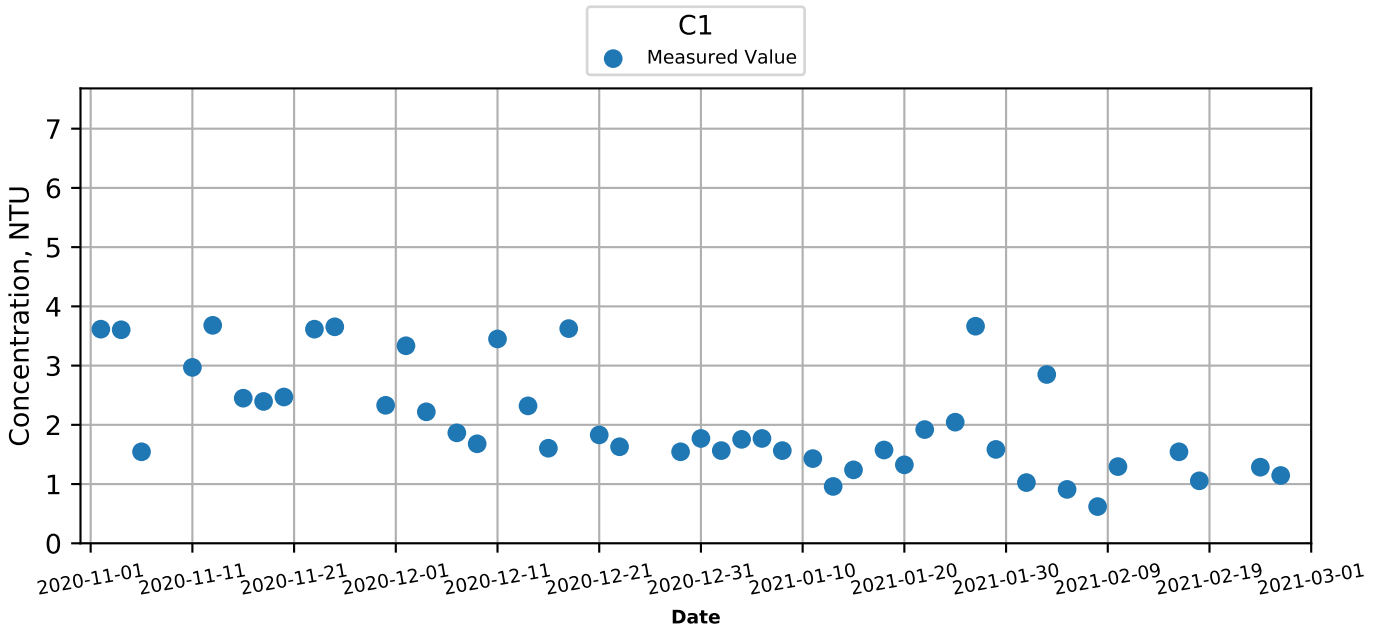
Turbidity (Bottom) at Monitoring Stations during Mid-Ebb



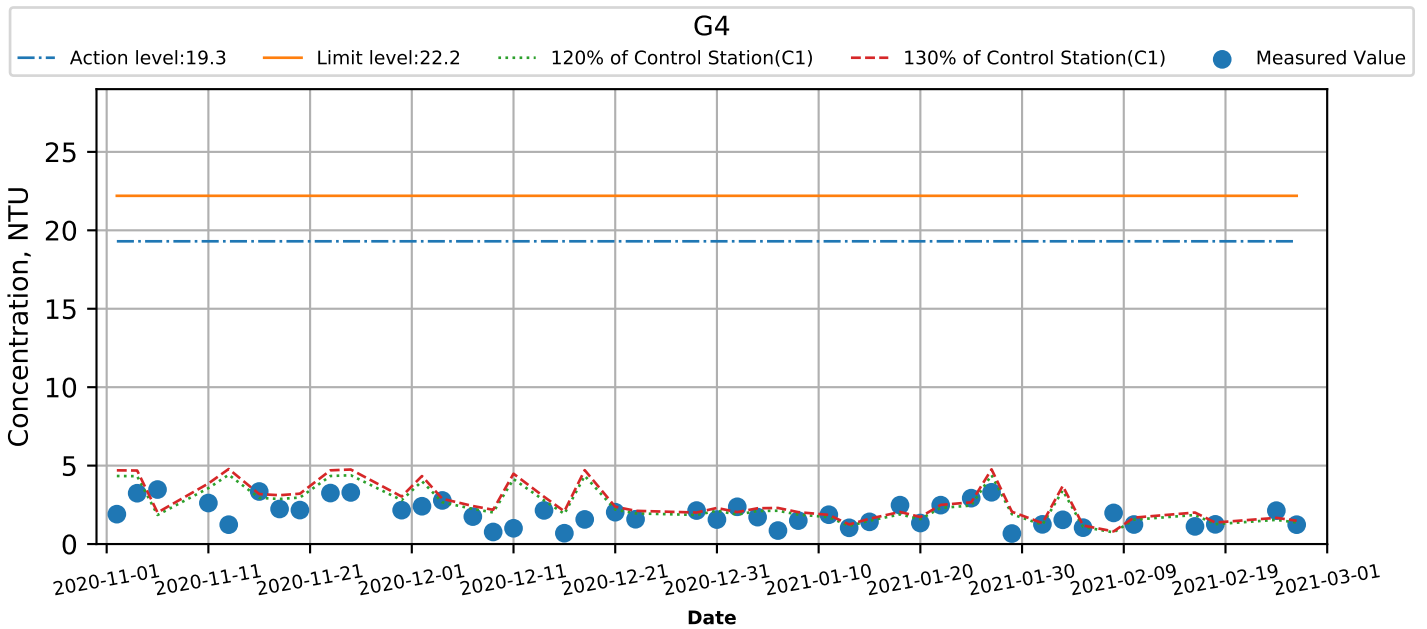
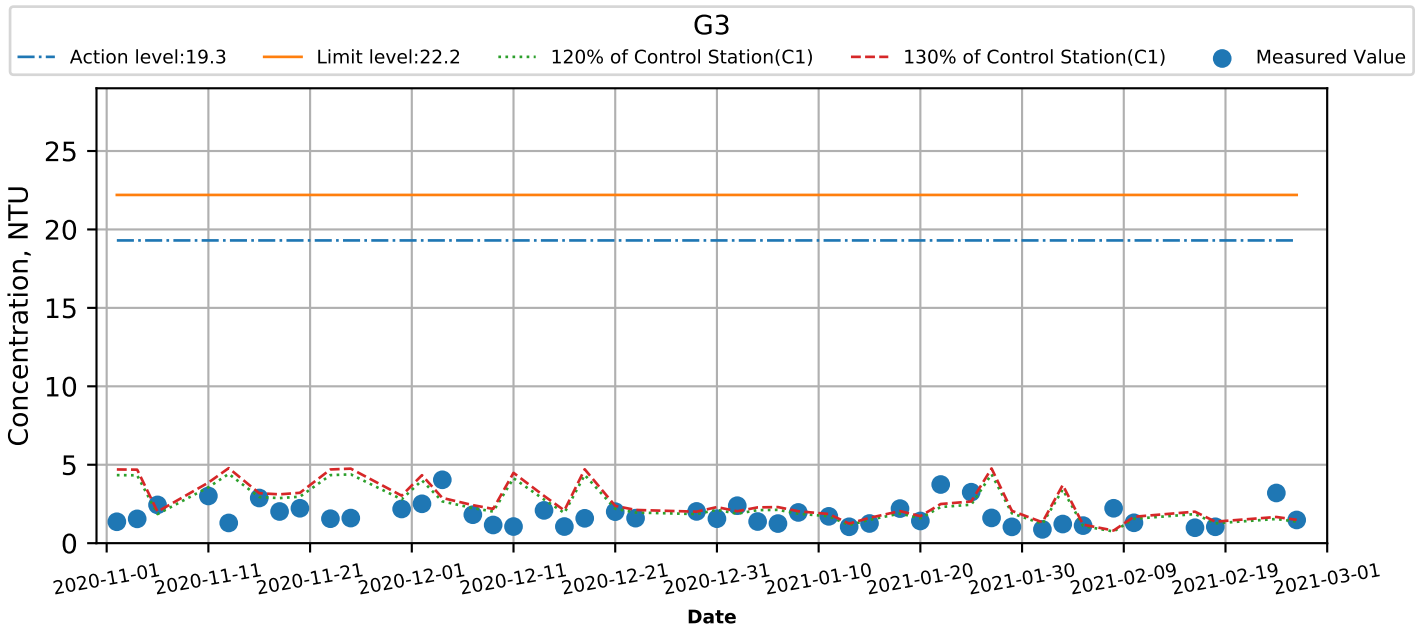
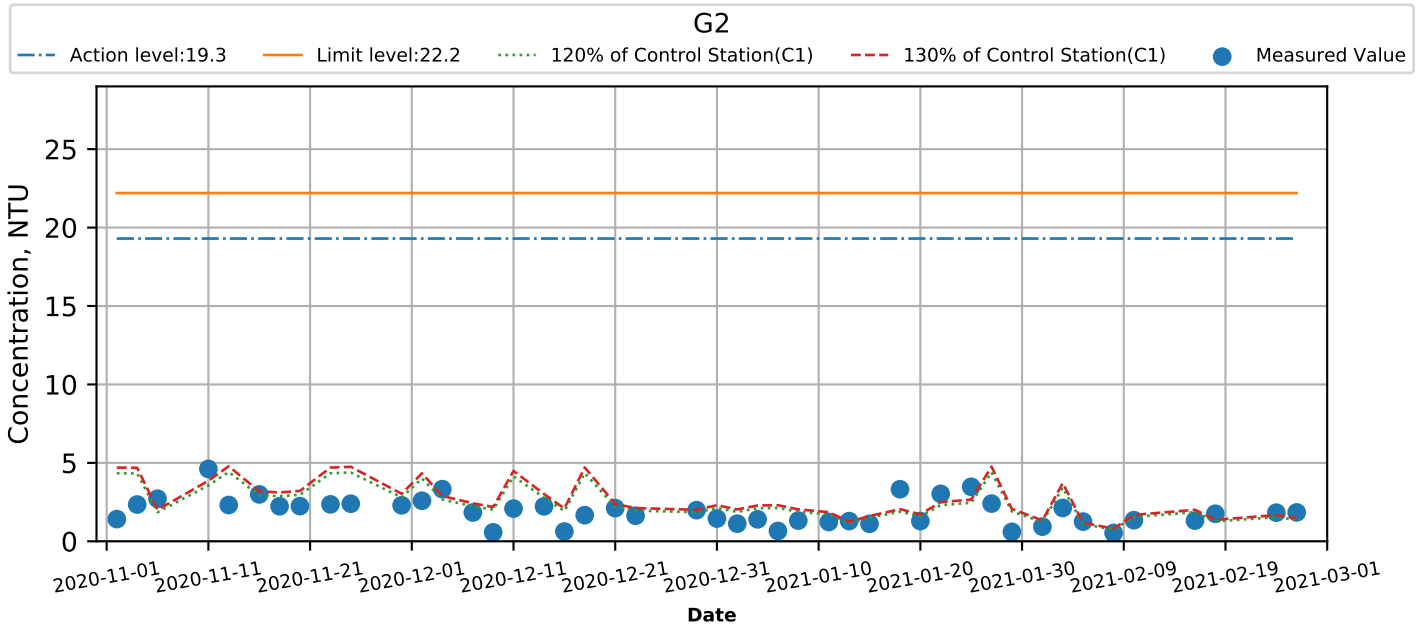
Turbidity (Bottom) at Monitoring Stations during Mid-Ebb



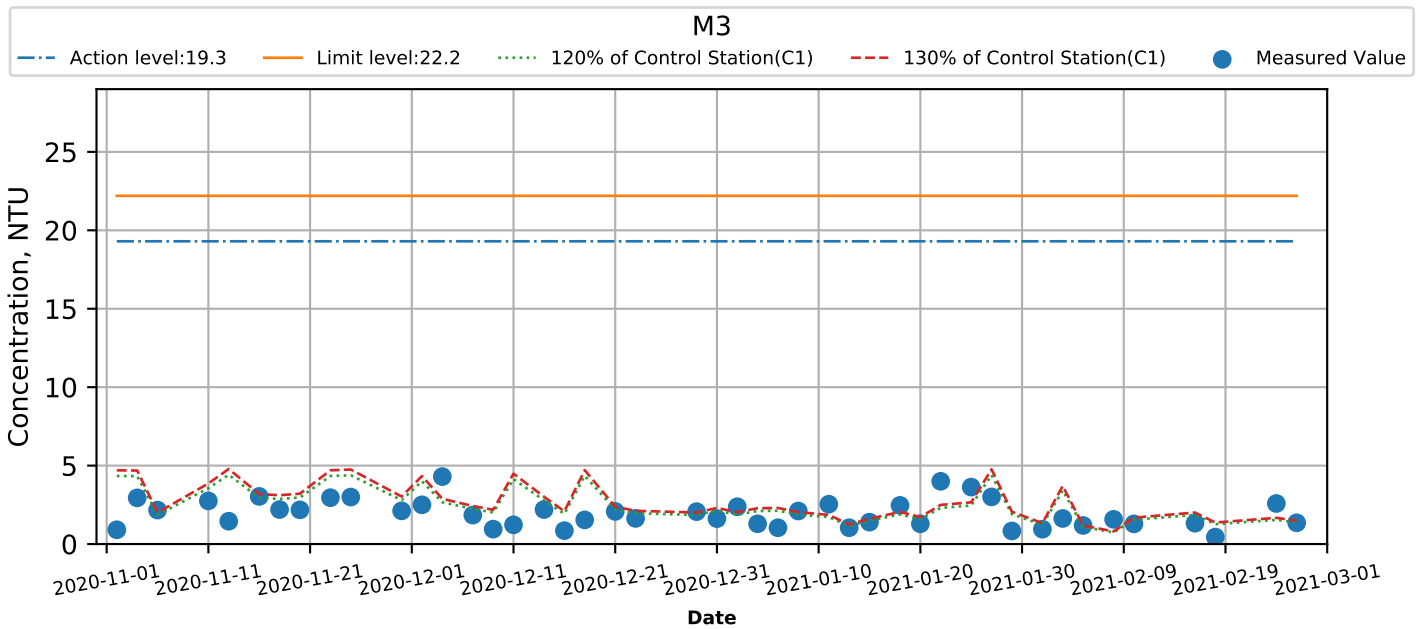
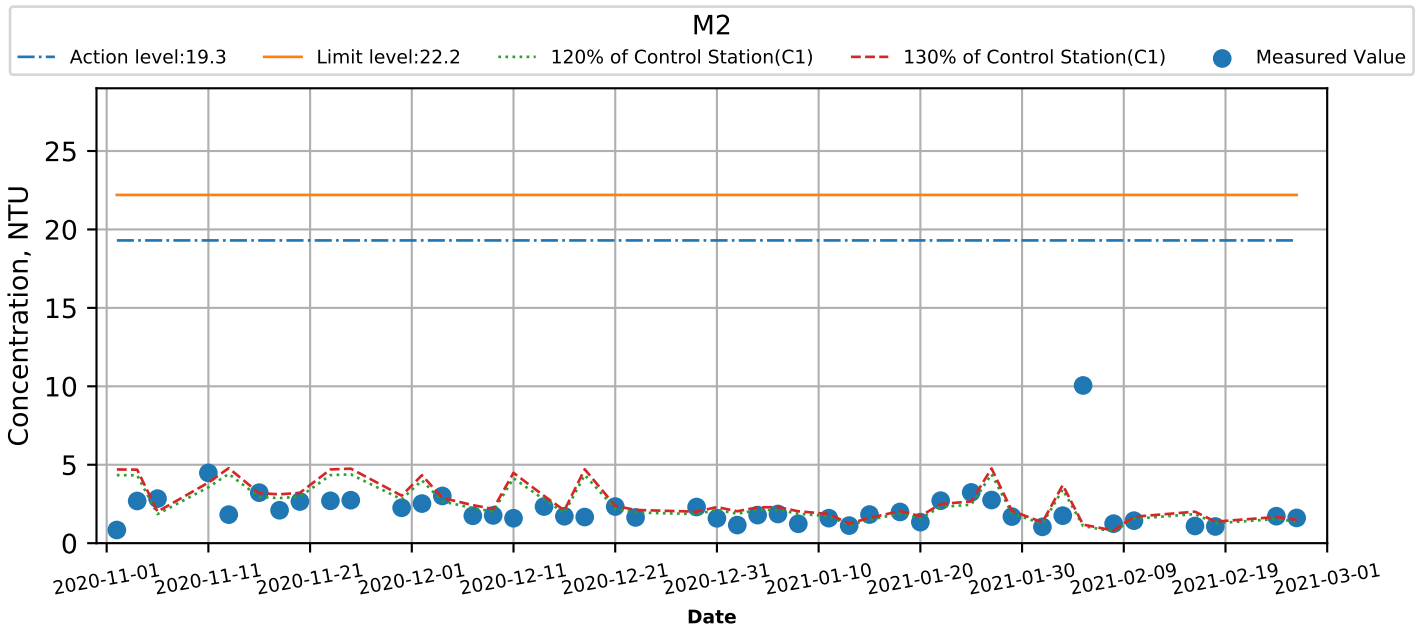
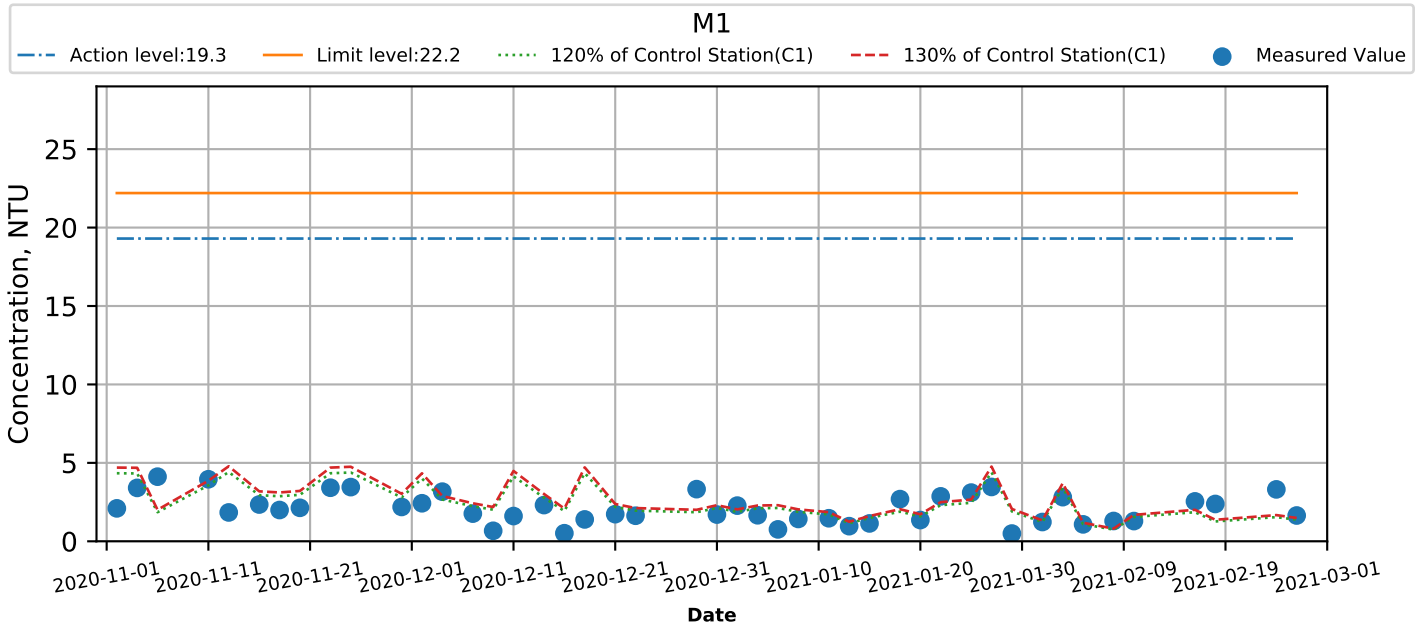
Turbidity (Bottom) at Monitoring Stations during Mid-Flood



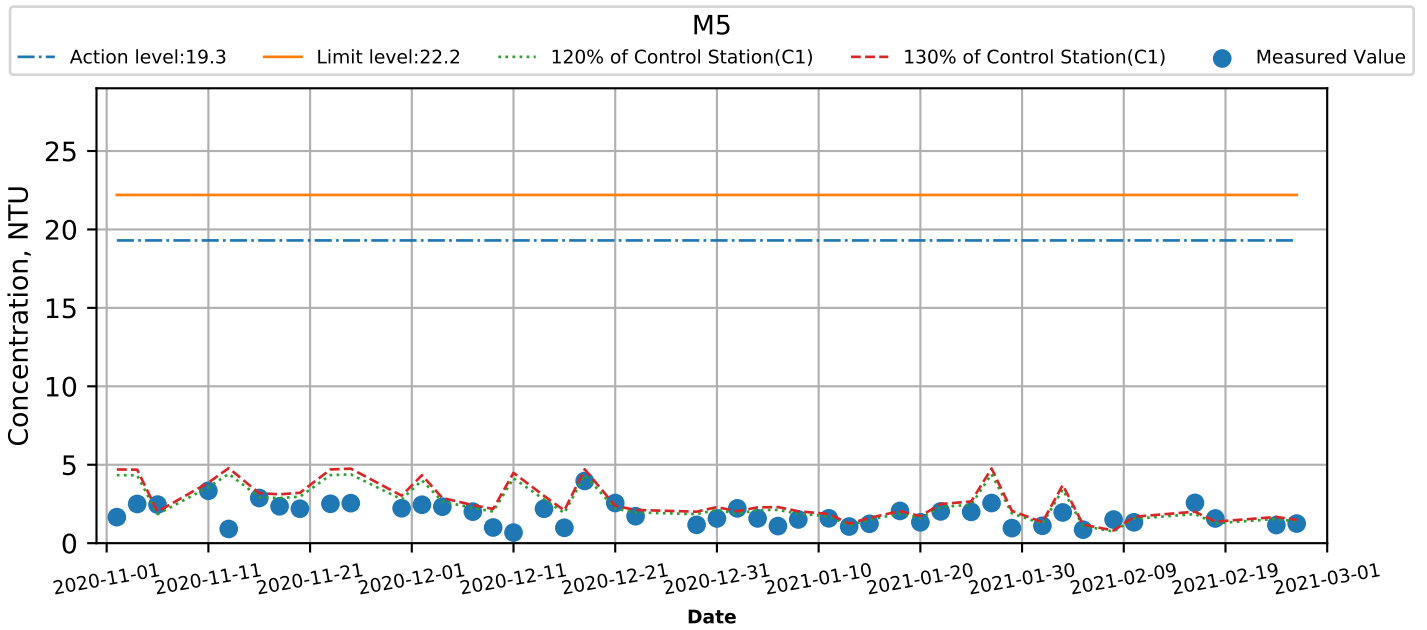
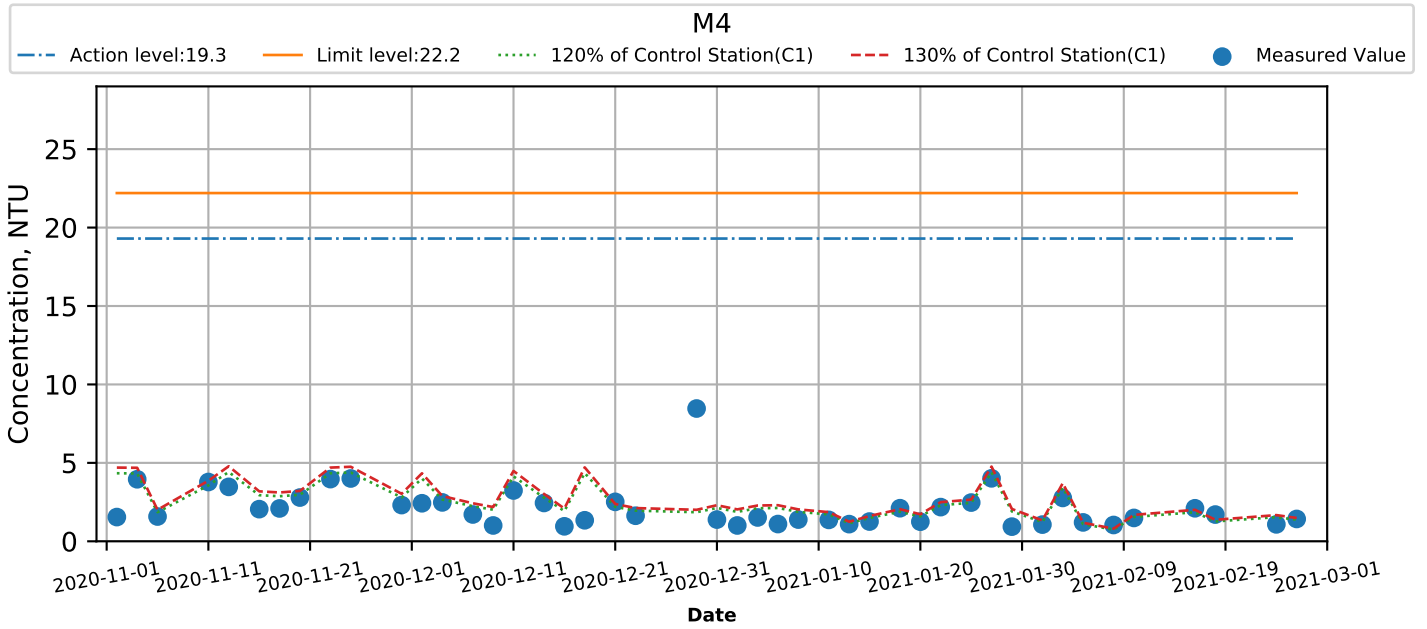
Turbidity (Bottom) at Monitoring Stations during Mid-Flood



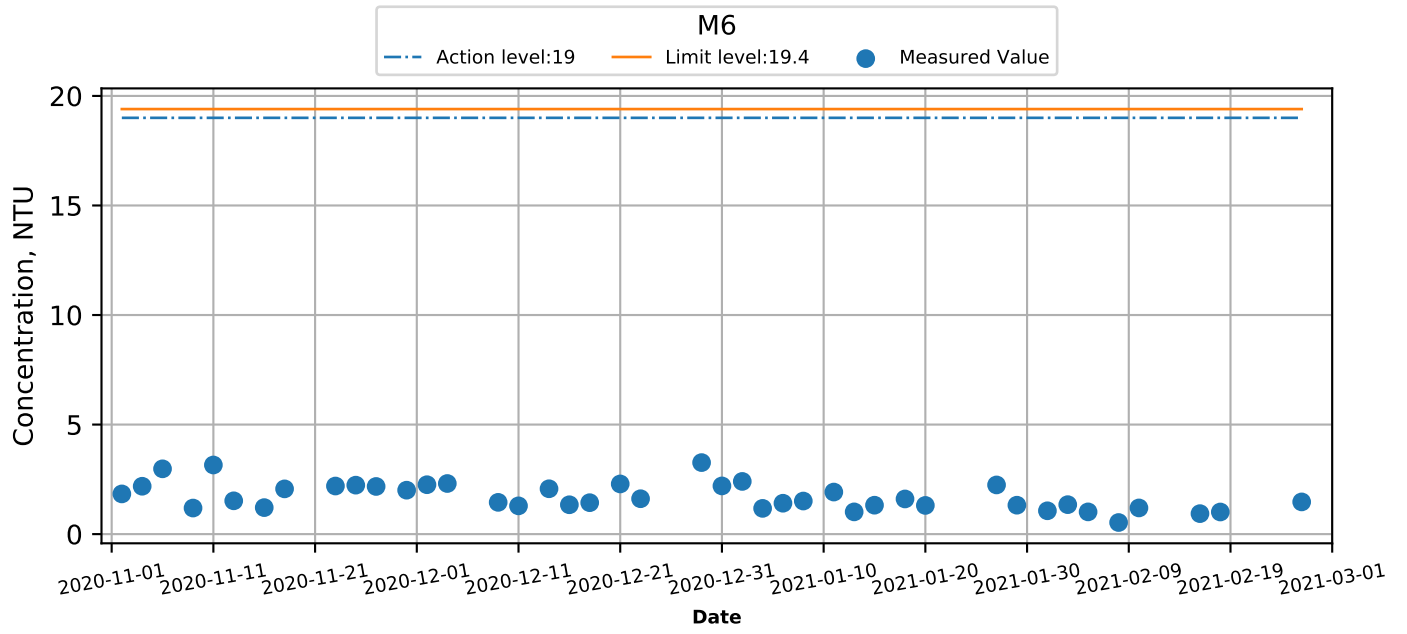
Turbidity (Bottom) at Monitoring Stations during Mid-Flood



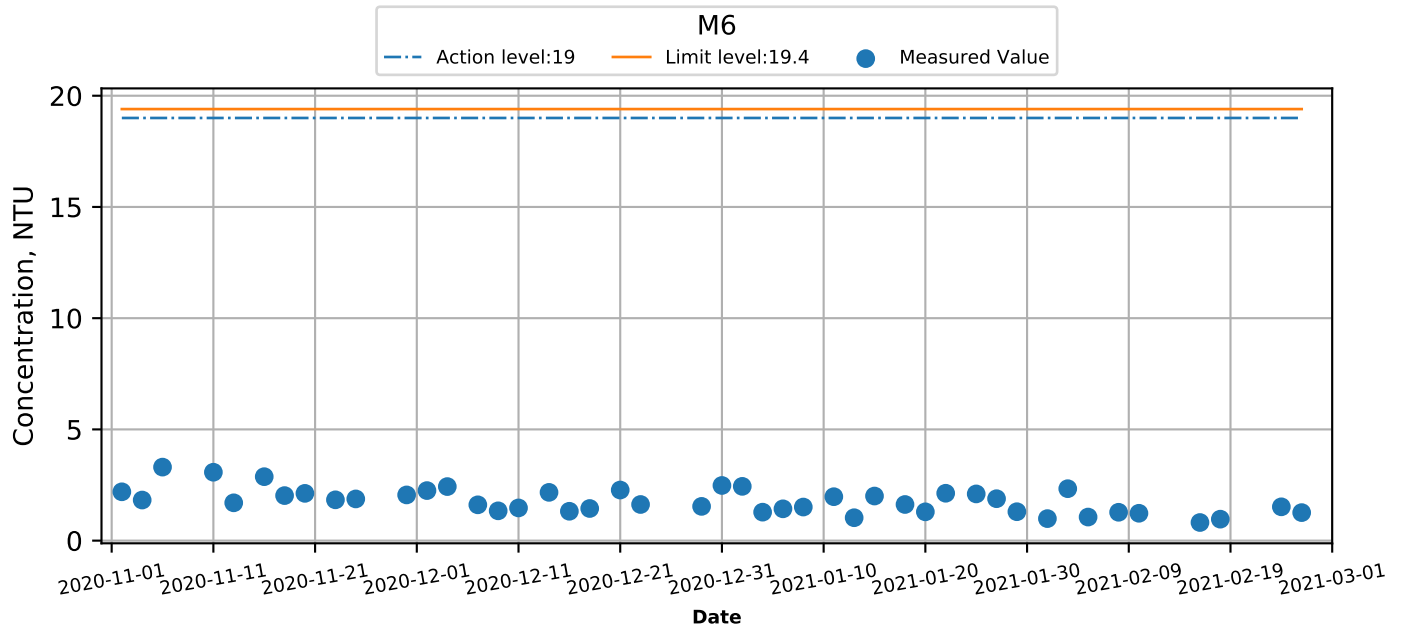
Turbidity (Bottom) at Monitoring Stations during Mid-Flood



Turbidity (Intake level) at Monitoring Stations during Mid-Ebb



Turbidity (Intake level) at Monitoring Stations during Mid-Flood



**APPENDIX K
SUMMARY OF EXCEEDANCE**

Agreement No. CE 59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel –
Design and Construction

Appendix K – Summary of Exceedance

Reporting Period: February 2021

(A) Exceedance Report for Air Quality
 (NIL in the reporting month)

(B) Exceedance Report for Construction Noise

Action Level for Construction Noise

Two (2) Action Level exceedances were recorded due to the documented complaints received in this reporting month.

Limit Level for Construction Noise

No exceedance for daytime and evening-time construction noise monitoring was recorded in the reporting month.

Two (2) limit level exceedances for nighttime construction noise monitoring was recorded in the reporting month.

Exceedance recorded during daytime
 (NIL in the reporting month)

Exceedance recorded during night-time

Location CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong								
Date	Time	Weather	dB (A) (5-min)				Baseline Level L _{eq}	Construction Noise Level L _{eq}
			L _{eq}	L ₁₀	L ₉₀	Average L _{eq}		
5-Feb-21	23:20	Fine	63.8	66.0	61.7	63.5	61.6	<u>59</u>
	23:25		63.5	65.4	61.5			
	23:30		63.2	65.3	61.0			
20-Feb-21	0:50	Fine	62.4	64.2	59.3	62.2	58.4	<u>60</u>
	0:55		62.2	63.9	59.4			
	1:00		62.0	63.8	59.4			

(C) Exceedance Report for Water Quality

Twenty-three (23) Action Level and seventy-six (76) Limit Level exceedances were recorded in Monitoring Stations (M) during marine water quality monitoring. Refer to the attached notifications and investigation report for details.

Since October 2019, groundwater monitoring had been suspended.

(D) Exceedance Report for Ecology
 (NIL in the reporting month)

(E) Exceedance Report for Cultural Heritage
 (NIL in the reporting month)

(F) Exceedance Report for Landfill Gas
 (NIL in the reporting month)

Date of Water Quality Monitoring: 01 February 2021

Part A – Exceedance Summary Tables

Table I: Parameter(s) – ~~Dissolved Oxygen (DO)~~ / ~~Turbidity (TURB)~~ / Suspended Solids (SS)

Tide	Control Station(s)	Depth	Measured Value at Control Station (mg/L)	Station(s)	Time (hrs)	Baseline Action Level (mg/L)	Baseline Limit Level (mg/L)	120% of Control Station Action Level (mg/L)	130% of Control Station Limit Level (mg/L)	Measured Value (mg/L)
Mid-Ebb	C2	bottom	2.3	M1	11:51	6.9	7.9	2.8	3.0	3.0
Mid-Flood	C1	surface	2.3	G3	13:46	6.0	6.9	2.8	3.0	2.9
Mid-Flood	C1	surface	2.3	G4	13:52	6.0	6.9	2.8	3.0	<u>3.1</u>

Note: ***Bold*** means Action Level exceedance of Control (**Regular**) & Baseline (*Italic*)
Bold with underline means Limit Level exceedance of Control (**Regular**) & Baseline (*Italic*)

Date of Water Quality Monitoring: 01 February 2021

Part A – Exceedance Summary Tables

Table II: Parameter(s) – ~~Dissolved Oxygen (DO)~~ / Turbidity (TURB) / ~~Suspended Solids (SS)~~

Depth	Baseline Action Level (NTU)	Baseline Limit Level (NTU)	Tide	Control Station(s)	Measured Value at Control Station (NTU)	Station(s)	Time (hrs)	120% of Control Station Action Level (NTU)	130% of Control Station Limit Level (NTU)	Measured Value (NTU)
Bottom	19.3	22.2	Mid-flood	C1	1.0	G1	13:43	1.2	1.3	<u>1.5</u>
Bottom	19.3	22.2	Mid-flood	C1	1.0	G4	13:52	1.2	1.3	1.3
Intake	N/A	N/A	Mid-flood	C1	1.0	M6	13:57	1.2	1.3	<u>8.0</u>

Note: ***Bold*** means Action Level exceedance of Control (**Regular**) & Baseline (*Italic*)
Bold with underline means Limit Level exceedance of Control (**Regular**) & Baseline (*Italic*)

Date of Water Quality Monitoring: 03 February 2021

Part A – Exceedance Summary Tables

Table I: Parameter(s) – ~~Dissolved Oxygen (DO)~~ / Turbidity (TURB) / Suspended Solids (SS)

Tide	Control Station(s)	Depth	Measured Value at Control Station (mg/L)	Station(s)	Time (hrs)	Baseline Action Level (mg/L)	Baseline Limit Level (mg/L)	120% of Control Station Action Level (mg/L)	130% of Control Station Limit Level (mg/L)	Measured Value (mg/L)
Mid-Ebb	C2	surface	1.8	M2	10:03	6.2	7.4	2.1	2.3	<u>3.8</u>
Mid-Ebb	C2	bottom	2.9	M3	10:26	6.9	7.9	3.4	3.7	<u>3.6</u>
Mid-Flood	C1	bottom	1.6	M2	16:53	6.9	7.9	1.9	2.1	<u>3.0</u>
Mid-Flood	C1	bottom	1.6	M4	9:57	6.9	7.9	1.9	2.1	<u>2.7</u>
Mid-Flood	C1	bottom	1.6	M5	17:38	6.9	7.9	1.9	2.1	<u>2.7</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)
Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 03 February 2021

Part A – Exceedance Summary Tables

Table II: Parameter(s) – ~~Dissolved Oxygen (DO)~~/ Turbidity (TURB) /~~Suspended Solids (SS)~~

Depth	Baseline Action Level (NTU)	Baseline Limit Level (NTU)	Tide	Control Station(s)	Measured Value at Control Station (NTU)	Station(s)	Time (hrs)	120% of Control Station Action Level (NTU)	130% of Control Station Limit Level (NTU)	Measured Value (NTU)
Bottom	19.3	22.2	Mid-Ebb	C2	1.2	M1	10:11	1.5	1.6	<u>2.3</u>
Bottom	19.3	22.2	Mid-Ebb	C2	1.2	M2	10:03	1.5	1.6	<u>1.8</u>
Bottom	19.3	22.2	Mid-Ebb	C2	1.2	M3	10:26	1.5	1.6	<u>2.4</u>
Bottom	19.3	22.2	Mid-Ebb	C2	1.2	M4	9:57	1.5	1.6	<u>2.3</u>
Bottom	19.3	22.2	Mid-Ebb	C2	1.2	M5	10:42	1.5	1.6	<u>2.1</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)

Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 05 February 2021

Part A – Exceedance Summary Tables

Table I: Parameter(s) – Dissolved Oxygen (DO) / Turbidity (TURB) / Suspended Solids (SS)

Tide	Control Station(s)	Depth	Measured Value at Control Station (mg/L)	Station(s)	Time (hrs)	Baseline Action Level (mg/L)	Baseline Limit Level (mg/L)	120% of Control Station Action Level (mg/L)	130% of Control Station Limit Level (mg/L)	Measured Value (mg/L)
Mid-Ebb	C2	surface	0.7	M1	12:39	6.2	7.4	0.8	0.8	<u>1.9</u>
Mid-Ebb	C2	surface	0.7	M3	12:50	6.2	7.4	0.8	0.8	<u>1.4</u>
Mid-Ebb	C2	surface	0.7	M4	12:22	6.2	7.4	0.8	0.8	<u>1.3</u>
Mid-Ebb	C2	bottom	1.5	M1	12:39	6.9	7.9	1.8	2.0	<u>2.4</u>
Mid-Ebb	C2	bottom	1.5	M4	12:22	6.9	7.9	1.8	2.0	<u>2.3</u>
Mid-Flood	C1	surface	1.2	M1	14:20	6.2	7.4	1.4	1.6	<u>3.1</u>
Mid-Flood	C1	surface	1.2	M2	14:12	6.2	7.4	1.4	1.6	<u>2.2</u>
Mid-Flood	C1	surface	1.2	M3	14:28	6.2	7.4	1.4	1.6	<u>1.9</u>
Mid-Flood	C1	surface	1.2	M5	14:37	6.2	7.4	1.4	1.6	<u>1.7</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)
Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 05 February 2021

Part A – Exceedance Summary Tables

Table II: Parameter(s) – Dissolved Oxygen (DO)/ Turbidity (TURB) /Suspended Solids (SS)

Depth	Baseline Action Level (NTU)	Baseline Limit Level (NTU)	Tide	Control Station(s)	Measured Value at Control Station (NTU)	Station(s)	Time (hrs)	120% of Control Station Action Level (NTU)	130% of Control Station Limit Level (NTU)	Measured Value (NTU)
Bottom	19.3	22.2	Mid-Ebb	C2	0.9	M1	12:39	1.1	1.2	<u>1.6</u>
Bottom	19.3	22.2	Mid-Ebb	C2	0.9	M2	12:30	1.1	1.2	<u>1.4</u>
Bottom	19.3	22.2	Mid-Ebb	C2	0.9	M3	12:50	1.1	1.2	1.2
Bottom	19.3	22.2	Mid-Ebb	C2	0.9	M4	12:22	1.1	1.2	1.2
Bottom	19.3	22.2	Mid-flood	C1	0.9	M2	14:12	1.1	1.2	<u>10.1</u>
Bottom	19.3	22.2	Mid-flood	C1	0.9	M3	14:28	1.1	1.2	1.2
Bottom	19.3	22.2	Mid-flood	C1	0.9	M4	14:07	1.1	1.2	1.2

Note: **Bold** means Action Level exceedance of Control & Baseline (*Italic*)
Bold with underline means Limit Level exceedance of Control & Baseline (*Italic*)

Date of Water Quality Monitoring: 08 February 2021

Part A – Exceedance Summary Tables

Table I: Parameter(s) – ~~Dissolved Oxygen (DO)~~ / ~~Turbidity (TURB)~~ / Suspended Solids (SS)

Tide	Control Station(s)	Depth	Measured Value at Control Station (mg/L)	Station(s)	Time (hrs)	Baseline Action Level (mg/L)	Baseline Limit Level (mg/L)	120% of Control Station Action Level (mg/L)	130% of Control Station Limit Level (mg/L)	Measured Value (mg/L)
Mid-Flood	C1	surface	1.5	M2	14:37	6.2	7.4	1.7	1.9	<u>2.2</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)
Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 08 February 2021

Part A – Exceedance Summary Tables

Table II: Parameter(s) – Dissolved Oxygen (DO) / Turbidity (TURB) / Suspended Solids (SS)

Depth	Baseline Action Level (NTU)	Baseline Limit Level (NTU)	Tide	Control Station(s)	Measured Value at Control Station (NTU)	Station(s)	Time (hrs)	120% of Control Station Action Level (NTU)	130% of Control Station Limit Level (NTU)	Measured Value (NTU)
Bottom	19.3	22.2	Mid-Ebb	C2	1.1	M1	9:49	1.4	1.5	<u>2.6</u>
Bottom	19.3	22.2	Mid-flood	C1	0.6	M1	14:46	0.7	0.8	<u>1.3</u>
Bottom	19.3	22.2	Mid-flood	C1	0.6	M2	14:37	0.7	0.8	<u>1.2</u>
Bottom	19.3	22.2	Mid-flood	C1	0.6	M3	15:00	0.7	0.8	<u>1.6</u>
Bottom	19.3	22.2	Mid-flood	C1	0.6	M4	14:30	0.7	0.8	<u>1.0</u>
Bottom	19.3	22.2	Mid-flood	C1	0.6	M5	15:16	0.7	0.8	<u>1.5</u>
Intake	N/A	N/A	Mid-flood	C1	0.6	M6	15:09	0.7	0.8	<u>8.0</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)
Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 10 February 2021

Part A – Exceedance Summary Tables

Table I: Parameter(s) – ~~Dissolved Oxygen (DO)~~/ ~~Turbidity (TURB)~~/ Suspended Solids (SS)

Tide	Control Station(s)	Depth	Measured Value at Control Station (mg/L)	Station(s)	Time (hrs)	Baseline Action Level (mg/L)	Baseline Limit Level (mg/L)	120% of Control Station Action Level (mg/L)	130% of Control Station Limit Level (mg/L)	Measured Value (mg/L)
Mid-Ebb	C2	surface	1.2	M1	10:45	6.2	7.4	1.4	1.6	<u>2.4</u>
Mid-Ebb	C2	surface	1.2	M3	11:15	6.2	7.4	1.4	1.6	1.5
Mid-Ebb	C2	surface	1.2	M4	10:28	6.2	7.4	1.4	1.6	<u>3.3</u>
Mid-Flood	C1	surface	2.3	M4	10:28	6.2	7.4	2.8	3.0	<u>3.3</u>
Mid-Flood	C1	bottom	1.5	M2	15:46	6.9	7.9	1.8	2.0	<u>3.0</u>
Mid-Flood	C1	bottom	1.5	M4	10:28	6.9	7.9	1.8	2.0	2.0
Mid-Flood	C1	bottom	1.5	M5	17:01	6.9	7.9	1.8	2.0	<u>2.3</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)
Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 16 February 2021

Part A – Exceedance Summary Tables

Table I: Parameter(s) – Dissolved Oxygen (DO) / Turbidity (TURB) / Suspended Solids (SS)

Tide	Control Station(s)	Depth	Measured Value at Control Station (mg/L)	Station(s)	Time (hrs)	Baseline Action Level (mg/L)	Baseline Limit Level (mg/L)	120% of Control Station Action Level (mg/L)	130% of Control Station Limit Level (mg/L)	Measured Value (mg/L)
Mid-Ebb	C2	surface	2.2	M4	9:29	6.2	7.4	2.6	2.8	2.7
Mid-Ebb	C2	bottom	1.5	M2	9:37	6.9	7.9	1.8	2.0	<u>2.4</u>
Mid-Ebb	C2	bottom	1.5	M5	10:43	6.9	7.9	1.8	2.0	2.0
Mid-Flood	C1	surface	2.2	M4	9:29	6.2	7.4	2.6	2.9	2.7
Mid-Flood	C1	surface	2.2	M5	16:21	6.2	7.4	2.6	2.9	2.9
Mid-Flood	C1	bottom	1.7	M1	15:17	6.9	7.9	2.0	2.2	<u>2.9</u>
Mid-Flood	C1	bottom	1.7	M5	16:21	6.9	7.9	2.0	2.2	2.1

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)
Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 16 February 2021

Part A – Exceedance Summary Tables

Table II: Parameter(s) – Dissolved Oxygen (DO) / Turbidity (TURB) / Suspended Solids (SS)

Depth	Baseline Action Level (NTU)	Baseline Limit Level (NTU)	Tide	Control Station(s)	Measured Value at Control Station (NTU)	Station(s)	Time (hrs)	120% of Control Station Action Level (NTU)	130% of Control Station Limit Level (NTU)	Measured Value (NTU)
Bottom	19.3	22.2	Mid-Ebb	C2	2.0	M1	9:51	2.4	2.6	2.6
Bottom	19.3	22.2	Mid-flood	C1	1.5	M1	15:17	1.9	2.0	<u>2.5</u>
Bottom	19.3	22.2	Mid-flood	C1	1.5	M4	14:59	1.9	2.0	<u>2.1</u>
Bottom	19.3	22.2	Mid-flood	C1	1.5	M5	16:21	1.9	2.0	<u>2.6</u>
Intake	N/A	N/A	Mid-flood	C1	1.5	M6	16:04	1.9	2.0	<u>8.0</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)
Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 18 February 2021

Part A – Exceedance Summary Tables

Table I: Parameter(s) – ~~Dissolved Oxygen (DO)~~ / Turbidity (TURB) / Suspended Solids (SS)

Tide	Control Station(s)	Depth	Measured Value at Control Station (mg/L)	Station(s)	Time (hrs)	Baseline Action Level (mg/L)	Baseline Limit Level (mg/L)	120% of Control Station Action Level (mg/L)	130% of Control Station Limit Level (mg/L)	Measured Value (mg/L)
Mid-Ebb	C2	surface	3.0	M3	10:42	6.2	7.4	3.5	3.8	<u>3.9</u>
Mid-Ebb	C2	bottom	1.4	M1	10:14	6.9	7.9	1.6	1.8	<u>2.5</u>
Mid-Ebb	C2	bottom	1.4	M2	10:01	6.9	7.9	1.6	1.8	<u>4.1</u>
Mid-Ebb	C2	bottom	1.4	M3	10:42	6.9	7.9	1.6	1.8	<u>3.0</u>
Mid-Ebb	C2	bottom	1.4	M4	9:56	6.9	7.9	1.6	1.8	<u>2.3</u>
Mid-Ebb	C2	bottom	1.4	M5	11:06	6.9	7.9	1.6	1.8	<u>3.1</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)

Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 18 February 2021

Part A – Exceedance Summary Tables

Table II: Parameter(s) – Dissolved Oxygen (DO) / Turbidity (TURB) / Suspended Solids (SS)

Depth	Baseline Action Level (NTU)	Baseline Limit Level (NTU)	Tide	Control Station(s)	Measured Value at Control Station (NTU)	Station(s)	Time (hrs)	120% of Control Station Action Level (NTU)	130% of Control Station Limit Level (NTU)	Measured Value (NTU)
Bottom	19.3	22.2	Mid-Ebb	C2	0.9	M1	10:14	1.1	1.2	<u>2.3</u>
Bottom	19.3	22.2	Mid-Ebb	C2	0.9	M4	9:56	1.1	1.2	<u>1.7</u>
Bottom	19.3	22.2	Mid-Ebb	C2	0.9	M5	11:06	1.1	1.2	<u>1.6</u>
Bottom	19.3	22.2	Mid-flood	C1	1.1	M1	16:31	1.3	1.4	<u>2.4</u>
Bottom	19.3	22.2	Mid-flood	C1	1.1	M4	16:10	1.3	1.4	<u>1.7</u>
Bottom	19.3	22.2	Mid-flood	C1	1.1	M5	17:35	1.3	1.4	<u>1.6</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)

Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 20 February 2021

Part A – Exceedance Summary Tables

Table I: Parameter(s) – ~~Dissolved Oxygen (DO)~~ / ~~Turbidity (TURB)~~ / Suspended Solids (SS)

Tide	Control Station(s)	Depth	Measured Value at Control Station (mg/L)	Station(s)	Time (hrs)	Baseline Action Level (mg/L)	Baseline Limit Level (mg/L)	120% of Control Station Action Level (mg/L)	130% of Control Station Limit Level (mg/L)	Measured Value (mg/L)
Mid-Ebb	C2	bottom	1.9	M3	11:47	6.9	7.9	2.2	2.4	<u>2.5</u>
Mid-Flood	C1	surface	1.5	M4	10:47	6.2	7.4	1.7	1.9	<u>2.6</u>
Mid-Flood	C1	bottom	0.5	M4	10:47	6.9	7.9	0.6	0.7	<u>1.9</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)

Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 20 February 2021

Part A – Exceedance Summary Tables

Table II: Parameter(s) – ~~Dissolved Oxygen (DO)~~/ Turbidity (TURB) /~~Suspended Solids (SS)~~

Depth	Baseline Action Level (NTU)	Baseline Limit Level (NTU)	Tide	Control Station(s)	Measured Value at Control Station (NTU)	Station(s)	Time (hrs)	120% of Control Station Action Level (NTU)	130% of Control Station Limit Level (NTU)	Measured Value (NTU)
Bottom	19.3	22.2	Mid-Ebb	C2	0.8	M3	11:47	1.0	1.1	1.1
Bottom	19.3	22.2	Mid-Ebb	C2	0.8	M5	12:14	1.0	1.1	<u>2.8</u>
Intake	N/A	N/A	Mid-Ebb	C2	0.8	M6	12:08	1.0	1.1	1.1
Bottom	19.3	22.2	Mid-flood	C1	1.0	M4	17:53	1.1	1.2	1.2
Bottom	19.3	22.2	Mid-flood	C1	1.0	M5	19:17	1.1	1.2	<u>2.7</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)

Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 22 February 2021

Part A – Exceedance Summary Tables

Table I: Parameter(s) – ~~Dissolved Oxygen (DO)~~ / ~~Turbidity (TURB)~~ / Suspended Solids (SS)

Tide	Control Station(s)	Depth	Measured Value at Control Station (mg/L)	Station(s)	Time (hrs)	Baseline Action Level (mg/L)	Baseline Limit Level (mg/L)	120% of Control Station Action Level (mg/L)	130% of Control Station Limit Level (mg/L)	Measured Value (mg/L)
Mid-Flood	C1	surface	2.2	M2	9:27	6.2	7.4	2.6	2.9	3.0
Mid-Flood	C1	surface	2.2	M3	9:48	6.2	7.4	2.6	2.9	2.9
Mid-Flood	C1	bottom	1.8	M5	10:02	6.9	7.9	2.2	2.3	<u>2.4</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)
Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 22 February 2021

Part A – Exceedance Summary Tables

Table II: Parameter(s) – ~~Dissolved Oxygen (DO)~~/ Turbidity (TURB) /~~Suspended Solids (SS)~~

Depth	Baseline Action Level (NTU)	Baseline Limit Level (NTU)	Tide	Control Station(s)	Measured Value at Control Station (NTU)	Station(s)	Time (hrs)	120% of Control Station Action Level (NTU)	130% of Control Station Limit Level (NTU)	Measured Value (NTU)
Bottom	19.3	22.2	Mid-flood	C1	2.1	M4	9:08	2.5	2.7	<u>3.0</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)
Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 24 February 2021

Part A – Exceedance Summary Tables

Table I: Parameter(s) – ~~Dissolved Oxygen (DO)~~ / ~~Turbidity (TURB)~~ / Suspended Solids (SS)

Tide	Control Station(s)	Depth	Measured Value at Control Station (mg/L)	Station(s)	Time (hrs)	Baseline Action Level (mg/L)	Baseline Limit Level (mg/L)	120% of Control Station Action Level (mg/L)	130% of Control Station Limit Level (mg/L)	Measured Value (mg/L)
Mid-Flood	C1	surface	0.8	M1	10:30	6.2	7.4	1.0	1.0	<u>1.4</u>
Mid-Flood	C1	surface	0.8	M2	10:15	6.2	7.4	1.0	1.0	<u>1.4</u>
Mid-Flood	C1	surface	0.8	M3	10:44	6.2	7.4	1.0	1.0	<u>1.6</u>
Mid-Flood	C1	bottom	1.5	M2	10:15	6.9	7.9	1.7	1.9	<u>2.9</u>
Mid-Flood	C1	bottom	1.5	M3	10:44	6.9	7.9	1.7	1.9	<u>2.1</u>
Mid-Flood	C1	bottom	1.5	M5	10:58	6.9	7.9	1.7	1.9	<u>2.2</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)
Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 24 February 2021

Part A – Exceedance Summary Tables

Table II: Parameter(s) – ~~Dissolved Oxygen (DO)~~/ Turbidity (TURB) /~~Suspended Solids (SS)~~

Depth	Baseline Action Level (NTU)	Baseline Limit Level (NTU)	Tide	Control Station(s)	Measured Value at Control Station (NTU)	Station(s)	Time (hrs)	120% of Control Station Action Level (NTU)	130% of Control Station Limit Level (NTU)	Measured Value (NTU)
Bottom	19.3	22.2	Mid-flood	C1	1.3	M1	10:30	1.5	1.7	<u>3.3</u>
Bottom	19.3	22.2	Mid-flood	C1	1.3	M2	10:15	1.5	1.7	1.7
Bottom	19.3	22.2	Mid-flood	C1	1.3	M3	10:44	1.5	1.7	<u>2.6</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)
Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 26 February 2021

Part A – Exceedance Summary Tables

Table I: Parameter(s) – ~~Dissolved Oxygen (DO)~~ / ~~Turbidity (TURB)~~ / Suspended Solids (SS)

Tide	Control Station(s)	Depth	Measured Value at Control Station (mg/L)	Station(s)	Time (hrs)	Baseline Action Level (mg/L)	Baseline Limit Level (mg/L)	120% of Control Station Action Level (mg/L)	130% of Control Station Limit Level (mg/L)	Measured Value (mg/L)
Mid-Ebb	C2	bottom	2.3	M2	10:56	6.9	7.9	2.8	3.0	<u>3.4</u>
Mid-Flood	C1	surface	2.8	M2	16:14	6.2	7.4	3.3	3.6	<u>4.2</u>
Mid-Flood	C1	surface	2.8	M5	17:31	6.2	7.4	3.3	3.6	<u>3.4</u>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)
Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Date of Water Quality Monitoring: 26 February 2021

Part A – Exceedance Summary Tables

Table II: Parameter(s) – ~~Dissolved Oxygen (DO)~~ / Turbidity (TURB) / ~~Suspended Solids (SS)~~

Depth	Baseline Action Level (NTU)	Baseline Limit Level (NTU)	Tide	Control Station(s)	Measured Value at Control Station (NTU)	Station(s)	Time (hrs)	120% of Control Station Action Level (NTU)	130% of Control Station Limit Level (NTU)	Measured Value (NTU)
Bottom	19.3	22.2	Mid-Ebb	C2	1.7	M2	10:56	2.1	2.3	<i>4.1</i>
Bottom	19.3	22.2	Mid-Ebb	C2	1.7	M5	12:06	2.1	2.3	<i><u>2.5</u></i>
Bottom	19.3	22.2	Mid-flood	C1	1.1	M1	16:27	1.4	1.5	<i><u>1.6</u></i>
Bottom	19.3	22.2	Mid-flood	C1	1.1	M2	16:14	1.4	1.5	<i><u>1.6</u></i>

Note: ***Bold*** means Action Level exceedance of Control & Baseline (***Italic***)

Bold with underline means Limit Level exceedance of Control & Baseline (***Italic***)

Agreement No. CE 59/2015 (EP) Environmental Team for Tseung Kwan O – Lam Tin Tunnel

- Notification of Exceedances

NOE No. 210205_noise (CM2) **Exceedance Level:** Limit

Time of Measurement: 23:00-23:30

Date of Noise Monitoring: 05 February 2021

Part A – Exceedance Summary Tables

Table I: Parameter(s) – Construction Noise

Station	Location	Time	Measured Level (L _{eq} dB(A))	Baseline Noise Level (L _{eq} dB(A))	Construction Noise Level (L _{eq} dB(A))	Action Level	Limit Level (L _{eq} dB(A))	Level exceeded
CM2	Bik Lai House, Yau Lai Estate Phase 1, Yau Tong	23:20-23:30	63.5	61.6	<u>59</u>	When one documented complaint is received.	55	Limit

Field Observation(s) and Conclusion

(a) Statement of exceedance(s)

Construction noise measured at CM2 exceeded the construction noise (night time) limit level.

(b) Cause of exceedance(s)

The exceedance was not considered related to the Project works:

- According to our field observation, road traffic noise was identified as the dominant noise source. No noticeable noise from the tunneling works was identified.
- No construction activity was observed in Lam Tin Interchange during monitoring, and thus no noticeable noise outside the tunnel was identified.

Part B – Conclusion: The exceedance of night time noise limit levels was not related to the Project, the road traffic noise was identified as the dominant noise source.

Part C – Recommendation: No further action is required.



**Agreement No. CE 59/2015 (EP) Environmental Team for Tseung Kwan O – Lam Tin Tunnel
- Notification of Exceedances**

ETL Signature: _____

Date: 06 Feb 2021

Agreement No. CE 59/2015 (EP) Environmental Team for Tseung Kwan O – Lam Tin Tunnel

- Notification of Exceedances

NOE No. 210220_noise (CM2) Exceedance Level: Limit

Time of Measurement: 00:50-01:00

Date of Noise Monitoring: 20 February 2021

Part A – Exceedance Summary Tables

Table I: Parameter(s) – Construction Noise

Station	Location	Time	Measured Level (L _{eq} dB(A))	Baseline Noise Level (L _{eq} dB(A))	Construction Noise Level (L _{eq} dB(A))	Action Level	Limit Level (L _{eq} dB(A))	Level exceeded
CM2	Bik Lai House, Yau Lai Estate Phase 1, Yau Tong	00:50-01:00	62.2	58.4	<u>60</u>	When one documented complaint is received.	55	Limit

Field Observation(s) and Conclusion

(a) Statement of exceedance(s)

Construction noise measured at CM2 exceeded the construction noise (night time) limit level.

(b) Cause of exceedance(s)

The exceedance was not considered related to the Project works:

- According to our field observation, road traffic noise was identified as the dominant noise source. No noticeable noise from the tunneling works was identified.
- No construction activity was observed in Lam Tin Interchange during monitoring, and thus no noticeable noise outside the tunnel was identified.

Part B – Conclusion: The exceedance of night time noise limit levels was not related to the Project, the road traffic noise was identified as the dominant noise source.

Part C – Recommendation: No further action is required.

Agreement No. CE 59/2015 (EP) Environmental Team for Tseung Kwan O – Lam Tin Tunnel
- Notification of Exceedances

ETL Signature: _____

Date: 21 Feb 2021

APPENDIX L
SITE AUDIT SUMMARY

Agreement No. CE 59/2015 (EP)
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
 Monthly EM&A Report

Appendix L - Site Audit Summary

Contract No. — NE2015/01

Tseung Kwan O - Lam Tin Tunnel — Main Tunnel and Associated Works

Items	Date	Status*	Follow up Action
<i>Water Quality</i>			
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<i>Ecology</i>			
--	--	--	--
<i>Noise</i>			
A driller was operated without a noise barrier. The contractor is reminded to provide a cantilever noise barrier to reduce noise impact.	27-Jan-21	✓	3-Feb-21: Noise barrier are provided.
<i>Landscape and Visual</i>			
--	--	--	--
<i>Air Quality</i>			
Stockpiles of dusty materials should be covered by tarpaulin and watered	27-Jan-21	✓	3-Feb-21: The stockpile are removed.
The Contractor is reminded to water work site regularly to avoid dust generation.	24-Feb-21	✓	24-Feb-21: The Contractor immediately asked workers to sprinkle water.
<i>Waste/Chemical Management</i>			
A drip tray should be provided for chemicals.	27-Jan-21	✓	3-Feb-21: The chemical had been removed.
The Contractor is reminded to provide a drip tray for chemical	3-Feb-21	✓	3, 10 & 17-Feb-21: The chemical was removed immediately
	10-Feb-21	✓	
	17-Feb-21	✓	
	24-Feb-21	#	
The Contractor is reminded to avoid accumulation of general refuse.	3-Feb-21	✓	3 & 10-Feb-21: The refuse was removed immediately
	10-Feb-21		
<i>Impact on Cultural Heritage</i>			
--	--	--	--
<i>Permit/Licenses</i>			
--	--	--	--

- ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit
- ✗ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit
- # Follow up action will be reported in next reporting month
- * Non-compliance of mitigation measure
- Non-compliance but improved by the contractor

Agreement No. CE 59/2015 (EP)
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
 Monthly EM&A Report

Appendix L - Site Audit Summary

Contract No. — NE2015/02

Tseung Kwan O - Lam Tin Tunnel — Road P2 and Associated Works

Items	Date	Status*	Follow up Action
<i>Water Quality</i>			
--	--	--	--
<i>Ecology</i>			
--	--	--	--
<i>Noise</i>			
<i>Landscape and Visual</i>			
--	--	--	--
<i>Air Quality</i>			
The Contractor is reminded to water regularly to suppress dust emission	19-Feb-21	✓	19-Feb-21: The contractor immediately called workers to sprinkle water.
<i>Waste/Chemical Management</i>			
--	--	--	--
<i>Impact on Cultural Heritage</i>			
--	--	--	--
<i>Permit/Licenses</i>			
--	--	--	--

- ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit
- ✗ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit
- # Follow up action will be reported in next reporting month
- * Non-compliance of mitigation measure
- Non-compliance but improved by the contractor

Agreement No. CE 59/2015 (EP)
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
 Monthly EM&A Report

Appendix L - Site Audit Summary

Contract No. — NE2017/02
 Tseung Kwan O - Lam Tin Tunnel — Road P2/D4 and Associated Works

Items	Date	Status*	Follow up Action
<i>Water Quality</i>			
--	--	--	--
<i>Ecology</i>			
--	--	--	--
<i>Noise</i>			
--	--	--	--
<i>Landscape and Visual</i>			
--	--	--	--
<i>Air Quality</i>			
--	--	--	--
<i>Waste/Chemical Management</i>			
--	--	--	--
<i>Impact on Cultural Heritage</i>			
--	--	--	--
<i>Permit/Licenses</i>			
--	--	--	--

- ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit
- ✗ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit
- # Follow up action will be reported in next reporting month
- * Non-compliance of mitigation measure
 - Non-compliance but improved by the contractor

Agreement No. CE 59/2015 (EP)
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
 Monthly EM&A Report

Appendix L - Site Audit Summary

Contract No. — NE2017/06

Tseung Kwan O - Lam Tin Tunnel — Traffic Control and Surveillance System (TCSS) and Associated Works

Items	Date	Status*	Follow up Action
<i>Water Quality</i>			
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<i>Ecology</i>			
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<i>Noise</i>			
<i>Landscape and Visual</i>			
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<i>Air Quality</i>			
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<i>Waste/Chemical Management</i>			
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<i>Impact on Cultural Heritage</i>			
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<i>Permit/Licenses</i>			
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- ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit
- ✗ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit
- # Follow up action will be reported in next reporting month
- * Non-compliance of mitigation measure
 - Non-compliance but improved by the contractor

Agreement No. CE 59/2015 (EP)
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
 Monthly EM&A Report

Appendix L - Site Audit Summary

Contract No. — NE2017/01

Tseung Kwan O - Lam Tin Tunnel — Tseung Kwan O Interchange and Associated Works

Items	Date	Status*	Follow up Action
<i>Water Quality</i>			
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<i>Ecology</i>			
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<i>Noise</i>			
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<i>Landscape and Visual</i>			
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<i>Air Quality</i>			
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<i>Waste/Chemical Management</i>			
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<i>Impact on Cultural Heritage</i>			
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<i>Permit/Licenses</i>			
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- ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit
- ✗ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit
- # Follow up action will be reported in next reporting month
- * Non-compliance of mitigation measure
 - Non-compliance but improved by the contractor

APPENDIX M
EVENT AND ACTION PLANS

Event and Action Plan for Air Quality (Dust)

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action level being exceeded by one sampling	<ol style="list-style-type: none"> 1. Identify source, investigate the causes of complaint and propose remedial measures; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method. 	<ol style="list-style-type: none"> 1. Notify Contractor. 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
Action level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC and ER; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Submit proposals for remedial actions to IEC within three working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	8. If exceedance stops, cease additional monitoring.			
Limit level being exceeded by one sampling	<ol style="list-style-type: none"> 1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform Contractor ,IEC, ER, and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
Limit level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> 1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals;

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	5. Carry out analysis of Contractor’s working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor’s remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	3. Supervise the implementation of remedial measures.	4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event and Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level	<ol style="list-style-type: none"> 1. Notify IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC; 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC, ER, EPD and Contractor; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.			

Event and Action Plan for Marine Water Quality

Event	Action			
	ET	IEC	ER	CONTRACTOR
Action level being exceeded by one sampling day at water sensitive receiver(s)	<ul style="list-style-type: none"> Identify the source(s) of impact by comparing the results with those collected at the control stations as appropriate; If exceedance is found to be caused by the reclamation activities, repeat <i>in-situ</i> measurement to confirm findings; Inform IEC and contractor; Check monitoring data, all plant, equipment and Contractor's working methods; If exceedance occurs at WSD salt water intake, inform WSD; Discuss mitigation measures with IEC and Contractor; Repeat measurement on next day of exceedance. 	<ul style="list-style-type: none"> Discuss with ET and Contractor on the mitigation measures; Review proposal on mitigation measures submitted by Contractor and advise the ER accordingly; Assess the effectiveness of the implemented mitigation measures. 	<ul style="list-style-type: none"> Discuss with IEC on the proposed mitigation measures; Make agreement on the mitigation proposal. 	<ul style="list-style-type: none"> Inform the ER and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Amend working methods if appropriate; Discuss with ET and IEC and propose mitigation measures to IEC and ER; Implement the agree mitigation measures.
Action level being exceeded by two or more consecutive	<ul style="list-style-type: none"> Identify the source(s) of impact by comparing the results with those collected at the control stations as appropriate; 	<ul style="list-style-type: none"> Discuss with ET and Contractor on the mitigation measures; 	<ul style="list-style-type: none"> Discuss with IEC on the proposed mitigation measures; Make agreement on the mitigation proposal; 	<ul style="list-style-type: none"> Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice;

Event	Action			
	ET	IEC	ER	CONTRACTOR
sampling days at water sensitive receiver(s)	<ul style="list-style-type: none"> • If exceedance is found to be caused by the reclamation activities, repeat in-situ measurement to confirm findings; • Inform IEC and contractor; • Check monitoring data, all plant, equipment and Contractor's working methods; • Discuss mitigation measures with IEC and Contractor; • Ensure mitigation measures are implemented; • Prepare to increase the monitoring frequency to daily; • If exceedance occurs at WSD salt water intake, inform WSD; • Repeat measurement on next day of exceedance. 	<ul style="list-style-type: none"> • Review proposal on mitigation measures submitted by Contractor and advise the ER accordingly; • Assess the effectiveness of the implemented mitigation measures. 	<ul style="list-style-type: none"> • Assess the effectiveness of the implemented mitigation measures. 	<ul style="list-style-type: none"> • Check all plant and equipment and consider changes of working methods; • Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days; • Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day at water sensitive receiver(s)	<ul style="list-style-type: none"> • Identify the source(s) of impact by comparing the results with those collected at the control stations as appropriate; 	<ul style="list-style-type: none"> • Discuss with ET and Contractor on the mitigation measures; • Review proposal on mitigation measures submitted by Contractor and advise the ER accordingly; 	<ul style="list-style-type: none"> • Discuss with IEC, ET and Contractor on the proposed mitigation measures; • Request Contractor to critically review the working methods; 	<ul style="list-style-type: none"> • Inform the ER and confirm notification of the non-compliance in writing; • Rectify unacceptable practice;

Event	Action			
	ET	IEC	ER	CONTRACTOR
	<ul style="list-style-type: none"> • If exceedance is found to be caused by the reclamation activities, repeat <i>in-situ</i> measurement to confirm findings; • Inform IEC, contractor, AFCD and EPD • Check monitoring data, all plant, equipment and Contractor's working methods; • Discuss mitigation measures with IEC, ER and Contractor; • Ensure mitigation measures are implemented; • Increase the monitoring frequency to daily until no exceedance of Limit level; • If exceedance occurs at WSD salt water intake, inform WSD. 	<ul style="list-style-type: none"> • Assess the effectiveness of the implemented mitigation measures. 	<ul style="list-style-type: none"> • Make agreement on the mitigation measures to be implemented; • Assess the effectiveness of the implemented mitigation measures. 	<ul style="list-style-type: none"> • Check all plant and equipment and consider changes of working methods; • Discuss with ET, IEC and ER and submit proposal of mitigation measures to IEC and ER within 3 working days of notification; • Implement the agreed mitigation measures.
Limit level being exceeded by two or more consecutive sampling days at	<ul style="list-style-type: none"> • Identify the source(s) of impact by comparing the results with those collected at the control stations as appropriate; 	<ul style="list-style-type: none"> • Discuss with ET and Contractor on the mitigation measures; • Review proposal on mitigation measures submitted by Contractor and advise the ER accordingly; 	<ul style="list-style-type: none"> • Discuss with IC(E), ET and Contractor on the proposed mitigation measures; • Request Contractor to critically review the working methods; 	<ul style="list-style-type: none"> • Inform the ER and confirm notification of the non-compliance in writing; • Rectify unacceptable practice;

Event	Action			
	ET	IEC	ER	CONTRACTOR
water sensitive receiver(s)	<ul style="list-style-type: none"> • If exceedance is found to be caused by the reclamation activities, repeat in-situ measurement to confirm findings; • Inform IC(E), AFCD, contractor and EPD; • Check monitoring data, all plant, equipment and Contractor's working methods; • Discuss mitigation measures with IC(E), ER and Contractor; • Ensure mitigation measures are implemented; • Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days; • If exceedance occurs at WSD salt water intake, inform WSD. 	<ul style="list-style-type: none"> • Assess the effectiveness of the implemented mitigation measures. 	<ul style="list-style-type: none"> • Make agreement on the mitigation measures to be implemented; • Assess the effectiveness of the implemented mitigation measures; • Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit level. 	<ul style="list-style-type: none"> • Check all plant and equipment and consider changes of working methods; • Discuss with ET, IC(E) and ER and submit proposal of mitigation measures to IC(E) and ER within 3 working days of notification; • Implement the agreed mitigation measures; • As directed by the Engineer, to slow down or to stop all or part of the construction activities.

Limit Levels and Action Plan for Landfill Gas

Parameter	Limit Level	Action
Oxygen	<19%	<ul style="list-style-type: none"> • Ventilate to restore oxygen to >19%
	<18%	<ul style="list-style-type: none"> • Stop works • Evacuate personnel/prohibit entry • Increase ventilation to restore oxygen to >19%
Methane	>10% LEL (i.e. > 0.5% by volume)	<ul style="list-style-type: none"> • Prohibit hot works • Ventilate to restore methane to <10% LEL
	>20% LEL (i.e. > 1% by volume)	<ul style="list-style-type: none"> • Stop works • Evacuate personnel / prohibit entry • Increase ventilation to restore methane to <10% LEL
Carbon Dioxide	>0.5%	<ul style="list-style-type: none"> • Ventilate to restore carbon dioxide to < 0.5%
	>1.5%	<ul style="list-style-type: none"> • Stop works • Evacuate personnel / prohibit entry • Increase ventilation to restore carbon dioxide to < 0.5%

Event and Action Plan for Coral Post-Translocation Monitoring

Event	Action			
	ET Leader	IEC	ER	Contractor
Action Level Exceedance	1. Check monitoring data; 2. Inform the IEC, ER and Contractor of the findings; 3. Increase the monitoring to at least once a month to confirm findings; 4. Propose mitigation measures for consideration	1. Discuss monitoring with the ET and the Contractor; 2. Review proposals for additional Monitoring and any other measures submitted by the Contractor and advise the ER accordingly.	1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET; 2. Make agreement on the measures to be implemented.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Discuss with the ET and the IEC and propose measures to the IEC and the ER; 3. Implement the agreed measures.
Limit Level Exceedance	Undertake Steps 1-4 as in the Action Level Exceedance. If further exceedance of Limit Level, suspend construction works until an effective solution is identified.	1. Discuss monitoring with the ET and the Contractor; 2. Review proposals for additional Monitoring and any other measures submitted by the Contractor and advise the ER accordingly.	1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET; 2. Make agreement on the measures to be implemented.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Discuss with the ET and the IEC and propose measures to the IEC and the ER; 3. Implement the agreed measures.

Mitigation Measures for Vibration Monitoring

Level	Contingency Action
Alert Level	<ul style="list-style-type: none"> ● The Engineer shall be informed immediately. ● The Contractor shall submit an investigation report to describe works being undertaken. To review the instrument responses and to study the cause of undue response. ● The Contractor shall review and increase the instrumentation monitoring and reporting frequency, if applicable. ● The Contractor shall submit a detailed plan of action describing the measures to be taken should the concerned instrument reach the action level to the Engineer for approval.
Alarm Level	<ul style="list-style-type: none"> ● The Engineer shall be informed immediately. ● The active construction works may require to be suspended subject to the Engineer's review of monitoring data. ● The Contractor shall immediately implement the measures as defined in the detailed plan of action to prevent further ground movement and groundwater drawdown etc. ● The Contractor shall prepare a detailed investigation report to study the cause of the exceedance ● The Contractor shall propose a contingency plan for the Engineer's approval in the event that alarm value is reached or exceeded ● The Contractor shall develop an emergency plan for the Engineer's approval in the event the applied contingency measures cannot control the situation. ● The Contractor shall meet the Engineer to discuss the instrument response and review the effectiveness of the implemented measures. ● The Contractor shall carry out design review of the works

Action Level	<ul style="list-style-type: none">● Consideration shall be given to suspend all active construction works and the Engineer shall be informed immediately● The Contractor shall immediately implement the measures defined in the contingency plan● The Contractor shall implement the measures defined in the emergency plan in the event that the applied contingency measures are found inadequate● The Contractor shall provide a complete report to examine the construction method and review the response of the instruments with full history of the monitoring data and construction activities and necessary design update● To resume the suspended activities, the Contractor shall demonstrate to the Engineer's satisfaction that it is safe to do so with approval from the Engineer.
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**APPENDIX N
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)**

App N1 - IMPLEMENTATION SCHEDULE AND RECOMMENDED MITIGATION MEASURES

Table I - Recommended Mitigation Measures stipulated in EM&A Manual for the Project

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
Air Quality						
S3.8.1	Watering eight times a day on active works areas, exposed areas and paved haul roads	To minimize the dust impact	Contractor	All Active Work Sites	Construction phase	APCO
S3.8.1	Enclosing the unloading process at barging point by a 3-sided screen with top tipping hall / mixing area in Work Area A, provision of water spraying and flexible dust curtains	To minimize the dust impact	Contractor	Barging Points	Construction phase	APCO
S3.8.7	Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides.	To minimize the dust impact	Contractor	All Construction Work Sites	Construction phase	APCO and Air Pollution Control (Construction Dust) Regulation
S3.8.7	<ul style="list-style-type: none"> Use of frequent watering for particularly dusty construction areas and areas close to ASRs.. 					
S3.8.7	<ul style="list-style-type: none"> Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines. 					
S3.8.7	<ul style="list-style-type: none"> Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs. 					
S3.8.7	<ul style="list-style-type: none"> Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. 					
S3.8.7	<ul style="list-style-type: none"> Establishment and use of vehicle wheel and body washing facilities at the exit points of the site. 					
S3.8.7	<ul style="list-style-type: none"> Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading area of barging point, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods. 					
S3.8.7	<ul style="list-style-type: none"> Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit. 					
S3.8.7	<ul style="list-style-type: none"> Imposition of speed controls for vehicles on site haul roads. 					
S3.8.7	<ul style="list-style-type: none"> Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs 					
S3.8.7	<ul style="list-style-type: none"> Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides. 					
S3.8.7	<ul style="list-style-type: none"> Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise. 					
/	<p>Emission from Vehicles and Plants</p> <ul style="list-style-type: none"> All vehicles shall be shut down in intermittent use. Only well-maintained plant should be operated on-site and plant should be serviced regularly to avoid emission of black smoke. All diesel fuelled construction plant within the works areas shall be powered by ultra low sulphur diesel fuel (ULSD) 	Reduce air pollution emission from construction vehicles and plants	Contractor	All construction sites	Construction stage	APCO

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
/	Valid No-road Mobile Machinery (NRMM) labels should be provided to regulated machines	Reduce air pollution emission from construction vehicles and plants	Contractor	All construction sites	Construction stage	APCO
Noise Impact (Construction Phase)						
S4.8	<ul style="list-style-type: none"> Use of quiet PME. Use of movable noise barriers for Excavator, Lorry, Dump Truck, Mobile Crane, Compactor, Concrete Mixer Truck, Concrete Lorry Mixer, Breaker, Mobile Crusher, Backhoe, Vibratory Poker, Saw, Asphalt Paver, Vibratory Roller, Vibrolance, Hydraulic Vibratory Lance and Piling (Vibration Hammer). Use of full enclosure for Air Compressor, Compressor, Bar Bender, Generator, Drilling Rig, Chisel, Large Diameter Bore Piling, Grout Mixer & Pump and Concrete Pump. 	To minimize construction noise impact arising from the Project at the affected NSRs	Contractor	Work Sites	Construction phase	EIAO-TM, NCO
Noise Mitigation Plan	Use of Temporary Noise Barriers (i.e Acoustic box, SilentUp and etc.) or Full Enclosure for PME according to the approved Noise Mitigation Plan	To minimize construction noise impact arising from the Project at the affected NSRs	Contractor	Work Sites	Construction phase	EIAO-TM, NCO
S4.9	<p>Good Site Practice</p> <ul style="list-style-type: none"> Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program. Mobile plant, if any, should be sited as far away from NSRs as possible. Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs. Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities. 	To minimize construction noise impact arising from the Project at the affected NSRs	Project Proponent	Work sites	Construction Period	EIAO-TM, NCO
S4.9	Scheduling of Construction Works during School Examination Period	To minimize construction noise impact arising from the Project at the affected NSRs	Contractor	Work site near school	Construction phase	EIAO-TM, NCO
Water Quality Impact (Construction Phase)						
S5.6.24	The dry density of filling material for the TKO-LT Tunnel reclamation should be 1,900kg/m ³ , with fine content of 25% or less	Control potential impacts from filling activities	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO
S5.8.1	Non-dredged method by constructing steel cellular caisson structure with stone column shall be adopted for construction of seawall foundation. During the stone column installation (also including the installation of steel cellular caisson), silt curtain shall be employed around the active stone column installation points.	Control potential impacts from filling activities	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO
S5.8.2	Formation of seawall enclosing the reclamation for Road P2 (notwithstanding an opening of about 50m for marine access) shall be completed prior to the filling activities. The seawall opening of about 50m wide for marine access shall be selected at a location as indicatively shown in Appendix 5.10. No more than 3 filling barge trips per day shall be made with a maximum daily rate of 3,000m ³ (i.e. 1,000 m ³ per trip) for the filling operation at the reclamation area for Road P2. All filling works shall be carried out behind the seawall with the use of single silt curtain at the marine access.	Control potential impacts from filling activities	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO
Silt Curtain Deployment Plan	<ul style="list-style-type: none"> Silt curtains should be deployed properly to surround the works area. Maintenance of silt curtain should be provided. Sufficient stock of silt curtain should be provided on site. 	Control potential impacts from marine works	Contractor	NE/2015/01	Construction stage	EIAO

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
S5.8.3	<p>Other good site practices should be undertaken during filling operations include:</p> <ul style="list-style-type: none"> • all marine works should adopt the environmental friendly construction methods as far as practically possible including the use of cofferdams to cover the construction area to separate the construction works from the sea; • floating single silt curtain shall be employed for all marine works; • all vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; • all hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; • excess material shall be cleaned from the decks and exposed fittings of barges before the vessel is moved; • adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action; • loading of barges and hoppers should be controlled to prevent splashing of filling material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation; • any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes; • construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site or dumping grounds; and • before commencement of the reclamation works, the holder of Environmental Permit has to submit plans showing the phased construction of the reclamation, design and operation of the silt curtain. 	Control potential impacts from filling activities and marine-based construction	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO, Waste Disposal Ordinance (WDO)
S5.8.4	Site specific mitigation plan for reclamation areas using public fill materials should be submitted for EPD agreement before commencement of construction phase with due consideration of good site practices.	Control potential impacts from filling activities and marine based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
ERR S5.6.1	<p>To minimize water quality impact arising from the dredging and filling works for Reclamation for Road P2, the following mitigation measures shall be implemented:</p> <ul style="list-style-type: none"> - Before carrying out any dredging and underwater filling works, a temporary barrier shall first be constructed to a height above the high water mark to completely enclose the works site (without any opening at the barrier wall) - The temporary barrier fully enclosing the dredging and underwater filling works site shall not be removed before completion of all dredging and underwater filling works. - Water quality sampling and testing shall be carried out to demonstrate that the water quality inside the enclosed barrier is comparable to the ambient or baseline levels prior to the removal of the fully enclosed barrier. - Silt curtains shall be deployed for the installation and removal of the temporary barrier and at the double water gates marine access opening during its operation. 	Control potential impacts from dredging and filling works for Reclamation for Road P2	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
S5.8.5	It is important that appropriate measures are implemented to control runoff and drainage and prevent high loading of SS from entering the marine environment. Proper site management is essential to minimise surface water runoff, soil erosion and sewage effluents.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.6	Any practical options for the diversion and realignment of drainage should comply with both engineering and environmental requirements in order to ensure adequate hydraulic capacity of all drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Design Stage and Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO, TM-DSS
S5.8.7	Construction site runoff and drainage should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). Good housekeeping and stormwater best management practices, as detailed in below, should be implemented to ensure that all construction runoff complies with WPCO standards and no unacceptable impact on the WSRs arises due to construction of the TKO-LT Tunnel. All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the corresponding WCZ under the TM-DSS.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO, TM-DSS
S5.8.8	Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include:	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.8	<ul style="list-style-type: none"> • use of sediment traps; and 					
S5.8.8	<ul style="list-style-type: none"> • adequate maintenance of drainage systems to prevent flooding and overflow. 					
S5.8.9	Construction site should be provided with adequately designed perimeter channel and pretreatment facilities and proper maintenance. The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.10	Ideally, construction works should be programmed to minimise surface excavation works during the rainy season (April to September). All exposed earth areas should be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.11	Sedimentation tanks of sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8m ³ capacity, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity is flexible and able to handle multiple inputs from a variety of sources and particularly suited to applications where the influent is pumped.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.12	Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO

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S5.8.13	Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.14	Open stockpiles of construction materials (for examples, aggregates, sand and fill material) of more than 50m ³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.15	Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.16	Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.17	Oil interceptors should be provided in the drainage system and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.18	All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and located wheel washing bay should be provided at every site exit, and washwater should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheelwash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.19	Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.20	It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There shall be no direct discharge of effluent from the site into the sea.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.21	All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment control measures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage should be reinstated to its original condition when the construction work has finished or the temporary diversion is no longer required.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
S5.8.22	All fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.23	Minimum distances of 100m shall be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes during construction and operational phases	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO, TMDSS
S5.8.24	Under normal circumstances, groundwater pumped out of wells, etc. for the lowering of ground water level in basement or foundation construction, and groundwater seepage pumped out of tunnels or caverns under construction should be discharged into storm drains after the removal of silt in silt removal facilities.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.25 - S5.8.27 & Table 5.18	Grouting would be adopted as measure to reduce the groundwater inflow into the tunnel. During the tunnel excavation, the inflow rate of groundwater into the tunnel will be measured during the excavation. The groundwater levels above the tunnel will also be monitored by piezometers. If the inflow rate exceeds the pre-determined groundwater control criteria or the groundwater drawdown exceeds the required limit, pre-excavation grouting will be required to reduce the groundwater inflow. No significant change of groundwater levels would therefore be expected. Any chemicals/foaming agents which would be entrained to the groundwater should be biodegradable and non-toxic throughout the tunnel construction. Potential groundwater quality impact would be minimal as the used material is non-toxic and biodegradable. No adverse groundwater quality would therefore be expected. Prescriptive measures in the form of an Action Plan with pre-emptive and reactive to preserve the groundwater levels at all times during the tunnel construction are set out in Table 5.18.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO, Buildings Ordinance
S5.8.28	Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be recirculated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Design Stage and Construction Phas	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.29 - S5.8.31	Wastewater generated from the washing down of mixing trucks and drum mixers and similar equipment should whenever practicable be recycled. The discharge of wastewater should be kept to a minimum. To prevent pollution from wastewater overflow, the pump sump of any water recycling system should be provided with an online standby pump of adequate capacity and with automatic alternating devices. Under normal circumstances, surplus wastewater may be discharged into foul sewers after treatment in silt removal and pH adjustment facilities (to within the pH range of 6 to 10). Disposal of wastewater into storm drains will require more elaborate treatment.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.32	All vehicles and plant should be cleaned before they leave a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfall to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO

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S5.8.33	Bentonite slurries used in diaphragm wall and borepile construction should be reconditioned and reused wherever practicable. If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil grounds subject to obtaining a marine dumping licence from EPD on a case-by-case basis.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.34	If the used bentonite slurry is intended to be disposed of through the public drainage system, it should be treated to the respective effluent standards applicable to foul sewer, storm drains or the receiving waters as set out in the WPCO Technical Memorandum on Effluent Standards.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.35	Water used in water testing to check leakage of structures and pipes should be reused for other purposes as far as practicable. Surplus unpolluted water could be discharged into storm drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.36	Sterilization is commonly accomplished by chlorination. Specific advice from EPD should be sought during the design stage of the works with regard to the disposal of the sterilizing water. The sterilizing water should be reused wherever practicable.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Design Stage and Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.37	Before commencing any demolition works, all sewer and drainage connections should be sealed to prevent building debris, soil, sand etc. from entering public sewers/drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.38	Wastewater generated from building construction activities including concreting, plastering, internal decoration, cleaning of works and similar activities should not be discharged into the stormwater drainage system. If the wastewater is to be discharged into foul sewers, it should undergo the removal of settleable solids in a silt removal facility, and pH adjustment as necessary	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.39	Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10 before discharging into foul sewers. If there is no public foul sewer in the vicinity, the neutralized wastewater should be tinkered off site for disposal into foul sewers or treated to a standard acceptable to storm drains and the receiving waters	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.40	Wastewater collected from canteen kitchens, including that from basins, sinks and floor drains, should be discharged into foul sewer via grease traps capable of providing at least 20 minutes retention during peak flow.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.41	Drainage serving an open oil filling point should be connected to storm drains via a petrol interceptor with peak storm bypass.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.42	Vehicle and plant servicing areas, vehicle wash bays and lubrication bays should as far as possible be located within roofed areas. The drainage in these covered areas should be connected to foul sewers via a petrol interceptor. Oil leakage or spillage should be contained and cleaned up immediately. Waste oil should be collected and stored for recycling or disposal in accordance with the Waste Disposal Ordinance.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.43	Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage may need to be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor shall also be responsible for waste disposal and maintenance practices.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO

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S5.8.44	Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	Control potential impacts from accidental spillage of chemicals	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO, WDO
S5.8.45	Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	Control potential impacts from accidental spillage of chemicals	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO
S5.8.46	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The "Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes" published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: <ul style="list-style-type: none"> suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport; chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents; and storage area should be selected at a safe location on site and adequate space should be allocated to the storage area. 	Control potential impacts from accidental spillage of chemicals	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO, WDO
S5.8.47	Collection and removal of floating refuse should be performed at regular intervals on a daily basis. The contractor should be responsible for keeping the water within the site boundary and the neighbouring water free from rubbish.	Control potential impacts from floating refuse and debris	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO,
Ecological Impact						
S6.8.4	<p>Measures to Minimize Disturbance</p> <ul style="list-style-type: none"> Use of Quiet Mechanical Plant during the construction phase should be adopted wherever possible. Hoarding or fencing should be erected around the works area boundaries during the construction phase. The hoarding would screen adjacent habitats from construction phase activities, reduce noise disturbance to these habitats and also to restrict access to habitats adjacent to works areas by site workers; Regular spraying of haul roads to minimize impacts of dust deposition on adjacent vegetation and habitats during the construction activities 	Minimize noise, human and traffic disturbance to terrestrial habitat and wildlife; and reduce dust generation	Design Team / Contractor	Land-based works are	Construction Phase	N/A
S6.8.5	<p>Standard Good Site Practice</p> <ul style="list-style-type: none"> Placement of equipment or stockpile in designated works areas and access routes selected on existing disturbed land to minimise disturbance to natural habitats. Construction activities should be restricted to works areas that should be clearly demarcated. The works areas should be reinstated after completion of the works. Waste skips should be provided to collect general refuse and construction wastes. The wastes should be properly disposed off-site in a timely manner. General drainage arrangements should include sediment and oil traps to collect and control construction site run-off. Open burning on works sites is illegal, and should be strictly prohibited. Measures should also be put into place so that litter, fuel and solvents do not enter the nearby watercourses. 	Reduce disturbance to surrounding habitats	Contractor	Land-based works are	Construction Phase	N/A

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S6.8.6	<p>Measure to Minimize Groundwater Inflow</p> <ul style="list-style-type: none"> The drained tunnel construction method with groundwater inflow control measures would generally be adopted. During the tunnel excavation, pre-excavation grouting could be adopted to reduce the groundwater inflow and ensure that the tunnel would meet the long term water tightness requirements. 	Minimize groundwater inflow	Contractor	Tunnel	Construction Phase	N/A
S6.8.8	<p>Measure to Minimize Impact on Corals</p> <p><u>Coral translocation</u></p> <ul style="list-style-type: none"> It is recommended to translocate the affected coral colonies, except the locally common <i>Oulastrea crispata</i>, within the reclamation area and bridge footprint to the other suitable locations as far as practicable. The coral translocation should be conducted during the winter months (November-March) in order to avoid disturbance during their spawning period (i.e. July to October). A detailed coral translocation plan with a description on the methodology for pretranslocation coral survey, translocation methodology, identification/proposal of coral recipient site, monitoring methodology for posttranslocation should be prepared during the detailed design stage. The coral translocation plan should be subject to approval by relevant authorities (e.g. EPD and AFCDD) before commencement of the coral translocation. All the translocation exercises should be conducted by experienced marine ecologist(s) who is/are approved by AFCDD prior to commencement of coral translocation. <p><u>Post translocation Monitoring</u></p> <ul style="list-style-type: none"> A coral monitoring programme is recommended to assess any adverse and unacceptable impacts to the translocated coral communities Information gathered during each posttranslocation monitoring survey should include observations on the presence, survival, health condition and growth of the translocated coral colonies. These parameters should then be compared with the baseline results collected from the pre-translocation survey. 	Minimize loss of coral	Design team, contractor, project operator	Within reclamation areas and pier footprint	Prior construction	N/A
S6.8.9 S6.8.10	<p>Measure to Control Water Quality Impact</p> <ul style="list-style-type: none"> Deployment of silt curtains around the active stone column installation points, opening of newly installed seawall and marine works area. Diverting of the site runoff to silt trap facilities before discharging into storm drain; Proper waste and dumping management; and Standard good-site practice for land-based construction. 	Control water quality impact, especially on suspended solid level; minimize the contamination of wastewater discharge, accidental chemical spillage and construction site runoff to the receiving water bodies	Design Team, contractor	Marine and landbased works area	Construction phase	WQO
S6.8.11	<p>Compensation for Vegetation Loss</p> <ul style="list-style-type: none"> Felling of mature trees should be compensated by planting of standard or heavy standard trees within or in vicinity of the affected area as far as practicable. Such compensatory planting for trees should be provided with at least a 1:1 ratio. In addition, vegetation at the temporarily affected area should be reinstated with species similar to the existing condition. 	Compensate for the vegetation loss	Design Team, contractor	Land-based works area	Construction phase	N/A

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Fisheries Impact						
S7.7.3	Measure to Control Water Quality Impact <ul style="list-style-type: none"> Deployment of silt curtains around the active stone column installation points, opening of newly installed seawall and marine works area. 	Control water quality impact, especially on suspended solid level	Design Team / Contractor	Marine work area	Construction phase	WQO
Waste Management (Construction Phase)						
S8.6.3	Good Site Practices and Waste Reduction Measures <ul style="list-style-type: none"> Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; Training of site personnel in site cleanliness, proper waste management and chemical handling procedures; Provision of sufficient waste disposal points and regular collection of waste; Appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; and Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors. 	To reduce waste management impacts	Contractor	All work sites	Construction Phase	Waste Disposal Ordinance (Cap. 354) Land (Miscellaneous Provisions) Ordinance (Cap. 28)
S8.6.4	Good Site Practices and Waste Reduction Measures (con't) <ul style="list-style-type: none"> Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the workforce; Proper storage and site practices to minimize the potential for damage or contamination of construction materials; and Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste. 	To achieve waste reduction	Contractor	All work sites	Construction Phase	Waste Disposal Ordinance (Cap. 354) Land (Miscellaneous Provisions) Ordinance (Cap. 28)
S8.6.5	Good Site Practices and Waste Reduction Measures (con't) The Contractor shall prepare and implement a WMP as part of the EMP in accordance with ETWB TCW No. 19/2005 which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities. Such a management plan should incorporate site specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP should be submitted to the Engineer for approval. The Contractor should implement the waste management practices in the EMP throughout the construction stage of the Project. The EMP should be reviewed regularly and updated by the Contractor.	To achieve waste reduction	Contractor	All work sites	Construction Phase	ETWB TCW No. 19/2005
S8.6.6	Good Site Practices and Waste Reduction Measures (con't) <ul style="list-style-type: none"> C&D materials would be reused in the project and other local concurrent projects as far as possible. 	To achieve waste reduction	Contractor	All work sites	Construction Phase	ETWB TCW No. 19/2005

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S8.6.7	<p>Storage, Collection and Transportation of Waste</p> <p>Should any temporary storage or stockpiling of waste is required, recommendations to minimize the impacts include:</p> <ul style="list-style-type: none"> Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution; Maintain and clean storage areas routinely; Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and Different locations should be designated to stockpile each material to enhance reuse. 	To minimize potential adverse environmental impacts arising from waste storage	Contractor	All work sites	Construction Phase	ETWB TCW No. 19/2005
S8.6.8/ Waste Management Plan S8.6.8/ Waste Management Plan S8.6.8/ Waste Management Plan S8.6.8/ Waste Management Plan S8.6.8/ Waste Management Plan S8.6.8/ Waste Management Plan S8.6.8/ Waste Management Plan	<p>Storage, Collection and Transportation of Waste (con't)</p> <ul style="list-style-type: none"> Remove waste in timely manner; Waste collectors should only collect wastes prescribed by their permits; Impacts during transportation, such as dust and odour, should be mitigated by the use of covered trucks or in enclosed containers; Obtain relevant waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28); Waste should be disposed of at licensed waste disposal facilities/ alternative disposal ground approved by RE and DEP; and Maintain records of quantities of waste generated, recycled and disposed. 	To minimize potential adverse environmental impacts arising from waste collection and disposal	Contractor	All work sites	Construction Phase	ETWB TCW No. 19/2005
S8.6.9/ Waste Management Plan	<p>Storage, Collection and Transportation of Waste (con't)</p> <ul style="list-style-type: none"> Implementation of trip ticket system with reference to DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials, to monitor disposal of waste and to control fly-tipping at PFRFs or landfills. A recording system for the amount of waste generated, recycled and disposed (including disposal sites) should be proposed. 	To minimize potential adverse environmental impacts arising from waste collection and disposal	Contractor	All work sites	Construction Phase	DEVB TCW No. 6/2010
S8.6.11 - S8.6.13/ Waste Management Plan	<p>Sorting of C&D Materials</p> <ul style="list-style-type: none"> Sorting to be performed to recover the inert materials, reusable and recyclable materials before disposal off-site. Specific areas shall be provided by the Contractors for sorting and to provide temporary storage areas for the sorted materials. The C&D materials should at least be segregated into inert and non-inert materials, in which the inert portion could be reused and recycled in the reclamation as far as practicable before delivery to PFRFs. While opportunities for reusing the non-inert portion should be investigated before disposal of at designated landfills 	To minimize potential adverse environmental	Contractor	All work sites	Construction Phase	DEVB TCW No. 6/2010 ETWB TCW No. 33/2002 ETWB TCW No. 19/2005
	<p>Sediments (con't)</p> <ul style="list-style-type: none"> Requirements of the Air Pollution Control (Construction Dust) Regulation, where relevant, shall be adhered to during boring, excavation, transportation and disposal of sediments or cement stabilization of sediment. 					

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
S8.6.17 – S8.6.20	<ul style="list-style-type: none"> A treatment area should be confined for carrying out the cement stabilization mixing and temporary stockpile. The area should be designed to prevent leachate from entering the ground. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO). In order to minimise the potential odour / dust emissions during boring, excavation and transportation of the sediment, the excavated sediments should be kept wet during excavation/boring and should be properly covered when placed on barges/trucks. Loading of the excavated sediment to the barge should be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water. In order to minimise the exposure to contaminated materials, workers should, when necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities should also be provided on site. 	To determine the best handling and treatment of sediment	Contractor	All works areas with sediments concern	Construction Phase	ETWB TCW No. 19/2005
S8.6.24 - S8.6.28/ Waste Management Plan	<p>Sediments (con't)</p> <ul style="list-style-type: none"> The excavated sediments is expected to be loaded onto the barge and transported to the designated disposal sites allocated by the MFC. The excavated sediment would be disposed of according to its determined disposal options and ETWB TC(W) No. 34/2002. Stockpiling of contaminated sediments should be avoided as far as possible. If temporary stockpiling of contaminated sediments is necessary, the excavated sediment should be covered by tarpaulin and the area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The stockpiling areas should be completely paved or covered by linings in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO). In order to minimise the potential odour / dust emissions during boring and transportation of the sediment, the excavated sediments should be kept wet during excavation/boring and should be properly covered when placed on barges. Loading of the excavated sediment to the barge should be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water. The barge transporting the sediments to the designated disposal sites should be equipped with tight fitting seals to prevent leakage and should not be filled to a level that would cause overflow of materials or laden water during loading or transportation. In addition, monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP. In order to minimise the exposure to contaminated materials, workers should, when necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities should also be provided on site. 	To ensure handling of sediments are in accordance to statutory requirements	Contractor	All works areas with sediments concern	Construction Phase	ETWB TC(W) No. 34/2002 & Dumping at Sea Ordinance

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
	<ul style="list-style-type: none"> Another possible arrangement for Type 3 disposal is by geosynthetic containment. A geosynthetic containment method is a method whereby the sediments are sealed in geosynthetic containers and, at the disposal site, the containers would be dropped into the designated contaminated mud pit where they would be covered by further mud disposal and later by the mud pit capping, thereby meeting the requirements for fully confined mud disposal. 					

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
S8.6.26/ Waste Management Plan	<p>Chemical Wastes.</p> <ul style="list-style-type: none"> If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the Chemical Waste Treatment Centre at Tsing Yi, or other licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. 	To ensure proper management of chemical waste	Contractor	All works sites	Construction Phase	Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes Waste Disposal (Chemical Waste) (General) Regulation
S8.6.27/ Waste Management Plan	<p>General Refuse</p> <ul style="list-style-type: none"> General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material. 	To ensure proper management of general refuse	Contractor	All works sites	Construction Phase	Public Health and Municipal Services Ordinance (Cap. 132)
Impact on Cultural Heritage (Construction Phase)						
S9.6.4	<p>Dust and visual impacts</p> <ul style="list-style-type: none"> Temporarily fenced off buffer zone with allowance for public access (minimum 1 m) should be provided; The open yard in front of the temple should be kept as usual for annual Tin Hau festival; Monitoring of vibration impacts should be conducted when the construction works are less than 100m from the temple. 	To prevent dust and visual impacts	Contractors	Work areas	Construction Phase	EIAO; GCHIA; AMO
S9.6.4	<p>Indirect vibration impact</p> <ul style="list-style-type: none"> Vibration level is suggest to be controlled within a peak particle velocity (ppv) limit of 5mm/s measured inside the historical buildings; Monitoring of vibration should be carried out during construction phase. Tilting and settlement monitoring should will be applied on the Cha Kwo Ling Tin Hau Temple as well. A proposal with details for the mitigation measures and monitoring of impacts on built heritage shall be submitted to AMO for comments before commencement of work. 	To prevent indirect vibration impact	Contractors	Work areas	Construction Phase	Vibration Limits on Heritage Buildings by CEDD; GCHIA; AMO.
Built Heritage Mitigation Plan	<ul style="list-style-type: none"> Established Alert, Alarm and Action Level for the monitoring parameters. To increase the instrumentation monitoring and reporting frequency. To propose detailed action plan or contingency plan for the Engineer's approval when AAA Level is reached or exceeded. 	To prevent vibration impacts	NE/2015/01	Tin Hau Temple	Construction Phase	Vibration Limits on Heritage Buildings by CEDD; GCHIA; AMO.

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
Landscape and Visual Impact (Construction Phase)						
Table 10.8.1/ Landscape Mitigation Plan	CM1 - Construction area and contractor's temporary works areas to be minimised to avoid impacts on adjacent landscape.	Avoid impact on adjacent landscape areas	CEDD (via Contractor)	General	Construction planning and during construction period	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM2 - Reduction of construction period to practical minimum.	Minimise duration of impact	CEDD (via Contractor)	N/A	Construction planning	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM3 - Topsoil, where the soil material meets acceptable criteria and where practical, to be stripped and stored for re-use in the construction of the soft landscape works. The Contract Specification shall include storage and reuse of topsoil as appropriate.	To allow re-use of topsoil	CEDD (via Contractor)	General	Site clearance	As per the Particular Specification
Table 10.8.1/ Landscape Mitigation Plan	CM4 - Existing trees at boundary of site and retained trees within site boundary to be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification, under which the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in contractor's works areas. (Tree protection measures will be detailed at Tree Removal Application stage).	To minimize tree loss	CEDD (via Contractor)	As per approved Tree Removal Application(s)	Site clearance and throughout construction period	ETWB TC 3/2006 and as per tree protection measures in Particular Specification
Table 10.8.1/ Landscape Mitigation Plan	CM5 - Trees unavoidably affected by the works shall be transplanted where practicable. Where possible, trees should be transplanted direct to permanent locations rather than temporary holding nurseries. A detailed tree transplanting specification shall be provided in the Contract Specification and sufficient time for preparation shall be allowed in the construction programme.	To maximize preservation of existing trees	CEDD (via Contractor)	As per approved Tree Removal Application(s)	Site clearance	ETWB TC 3/2006 and as per tree protection measures in Particular Specification
Table 10.8.1/ Landscape Mitigation Plan	CM6 - Advance screen planting of fast growing tree and shrub species to noise barriers and hoardings. Trees shall be capable of reaching a height >10m within 10 years.	To maximize screening of the works	CEDD (via Contractor)	At Lam Tin Interchange and edge of Road P2 landscape deck, TKO	Beginning of construction period	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM7 - Hydroseeding or sheeting of soil stockpiles with visually unobtrusive material	To reduce visual intrusion	CEDD (via Contractor)	General	Throughout construction period	As per Particular Specification
Table 10.8.1/ Landscape Mitigation Plan	CM8 - Control of night-time lighting by hooding all lights and through minimisation of night working periods.	To reduce visual intrusion	CEDD (via Contractor)	General	Throughout construction period	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM9 - Screening of works areas with hoardings with appropriate colours compatible with the surrounding area	Reduction of visual intrusion	CEDD (via Contractor)	Project site Boundary	Excretion of site hoarding	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM10 - Avoidance of excessive height and bulk of site buildings and structure	Reduction of visual intrusion and integration with environment	CEDD (via Contractor)	Built structures	Design and construction stage	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM11 - Limitation of run-off into freshwater streams, ponds and sea areas	Avoidance of contamination of water courses and water bodie	CEDD (via Contractor)	TKO reclamation, TKO tunnel portal, Cha Kwo Ling roadworks	Throughout construction period	N/A

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
Table 10.8.1	CM12 - Minimise area of reclamation and design the edges sensitively to tie in with adjacent coastline character	Minimise loss of Junk Bay and integration with existing coastline	CEDD (via Contractor)	Temporary reclamation for barging points at TKO and Lam Tin and permanent reclamation for TKO Interchange slip roads and Road P2	Construction planning and reclamation stages	N/A
Landfill Gas Hazard (Design and Construction Phase)						
S11.5.9	<p>A Safety Officer, trained in the use of gas detection equipment and landfill gas-related hazards, should be present on site throughout the groundworks phase. The Safety Officer should be provided with an intrinsically safe portable instrument, which is appropriately calibrated and able to measure the following gases in the ranges indicated below:</p> <p>Methane 0-100% LEL and 0100% v/v Carbon dioxide 0-100% Oxygen 0-21%</p>	Protect the workers from landfill gas hazards	Contractor	Project sites within the Sai Tso Wan Landfill Consultation Zone	Construction phase	EPD's Landfill Gas Hazard Assessment Guidance Note
	<p>Safety Measures</p> <ul style="list-style-type: none"> For staff who work in, or have responsibility for "at risk" area, such as all excavation workers, supervisors and engineers working within the Consultation Zone, should receive appropriate training on working in areas susceptible to landfill gas, fire and explosion hazards. An excavation procedure or code of practice to minimize landfill gas related risk should be devised and carried out. No worker should be allowed to work alone at any time in or near to any excavation. At least one other worker should be available to assist with a rescue if needed. Smoking, naked flames and all other sources of ignition should be prohibited within 15m of any excavation or ground-level confined space. "No smoking" and "No naked flame" notices should be posted prominently on the construction site and, if necessary, special areas should be designed for smoking. Welding, flame-cutting or other hot works should be confined to open areas at least 15m from any trench or excavation. Welding, flame-cutting or other hot works may only be carried out in trenches or confined spaces when controlled by a "permit to work" procedure, properly authorized by the Safety Officer (or, in the case of small developments, other appropriately qualified person). The permit to work procedure should set down clearly the requirements for continuous monitoring for methane, carbon dioxide and oxygen throughout the period during which the hot works are in progress. The procedure should also require the presence of an appropriately qualified person, in attendance outside the 'confined area', who should be responsible for reviewing the gas measurements as they are made, and who should have executive responsibility for suspending the work in the event of unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise should be permitted to carry out hot works in confined areas. 					

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
S11.5.10 S11.5.25	<ul style="list-style-type: none"> • Where there are any temporary site offices, or any other buildings located within the Sai Tso Wan Landfill Consultation Zone which have enclosed spaces with the capacity to accumulate landfill gas, then they should either be located in an area which has been proven to be free of landfill gas (by survey using portable gas detectors); or be raised clear of the ground by a minimum of 500mm. This aims to create a clear void under the structure which is ventilated by natural air movement such that emission of gas from the ground are mixed and diluted by air. • Any electrical equipment, such as motors and extension cords, should be intrinsically safe. During piping assembly or conduiting construction, all valves/seals should be closed immediately after installation. As construction progresses, all valves/seals should be closed to prevent the migration of gases through the pipeline/conduit. All piping /conduiting should be capped at the end of each working day. • During construction, adequate fire extinguishing equipment, fire-resistant clothing and breathing apparatus (BA) sets should be made available on site. • Fire drills should be organized at not less than six monthly intervals. • The contractor should formulate a health and safety policy, standards and instructions for site personnel to follow. • All personnel who work on the site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of excavations. Safety notices (in Chinese and English) should be posted at prominent position around the site warning danger of the potential hazards. • Service runs within the Consultation Zone should be designated as “special routes”; utilities companies should be informed of this and precautionary measures should be implemented. Precautionary measures should include ensuring that staff members are aware of the potential hazards of working in confined spaces such as manholes and service chambers, and that appropriate monitoring procedures are in place to prevent hazards due to asphyxiating atmospheres in confined spaces. Detailed guidance on entry into confined spaces is given in Code of Practice on Safety and Health at Work in Confined Spaces (Labour Department, Hong Kong). • Periodically during ground-works construction within the 250m Consultation Zone, the works area should be monitored for methane, carbon dioxide and oxygen using appropriately calibrated portable gas detection equipment. The monitoring frequency and areas to be monitored should be set down prior to commencement of ground-works either by the Safety Officer or an approved and appropriately qualified person. 	Protect the workers from landfill gas hazards	Contractor	Project sites within the Sai Tso Wan Landfill Consultation Zone	Construction phase	EPD’s Landfill Gas Hazard Assessment Guidance Note Labour Department’s Code of Practice for Safety and Health at Work in Confined Space
	<p>Monitoring</p> <ul style="list-style-type: none"> • Routine monitoring should be carried out in all excavations, manholes, chambers, relocation of monitoring wells and any other confined spaces that may have been created. All measurements in excavations should be made with the extended monitoring tube located not more than 10 mm from the exposed ground surface. Monitoring should be performed properly to make sure that the area is free of landfill gas before any man enters into the area. • For excavations deeper than 1m, measurements should be carried out: <ul style="list-style-type: none"> • at the ground surface before excavation commences;- • immediately before any worker enters the excavation; 					

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
S11.5.26 - S11.5.31	<ul style="list-style-type: none"> • at the beginning of each working day for the entire period the excavation remains open; and • periodically throughout the working day whilst workers are in the excavation. ● For excavations between 300mm and 1m deep, measurements should be carried out: <ul style="list-style-type: none"> • directly after the excavation has been completed; and • periodically whilst the excavation remains open. ● For excavations less than 300mm deep, monitoring may be omitted, at the discretion of the Safety Officer or other appropriately qualified person. ● Depending on the results of the measurements, actions required will vary and should be set down by the Safety Officer or other appropriately qualified person. ● The exact frequency of monitoring should be determined prior to the commencement of works, but should be at least once per day, and be carried out by a suitably qualified or qualified person before starting the work of the day. Measurements shall be recorded and kept as a record of safe working conditions with copies of the site diary and submitted to the Engineer for approval. The Contractor may elect to carry out monitoring via an automated monitoring system. 	Protect the workers from landfill gas hazards	Contractor	Project sites within the Sai Tso Wan Landfill Consultation Zone	Construction phase	EPD's Landfill Gas Hazard Assessment Guidance Note
S11.5.32	The hazards from landfill gas during the construction stage within the Sai Tso Wan Landfill Consultation Zone should be minimized by suitable precautionary measures recommended in Chapter 8 of the Landfill Gas Hazard Assessment Guidance Note.	<p>construction stage within the Sai Tso Wan</p> <p>Protect the workers from landfill gas hazards</p>	Contractor	Project sites within the Sai Tso Wan Landfill Consultation Zone	Construction phase	EPD's Landfill Gas Hazard Assessment Guidance Note

Table II - Observation / Reminder / Non-compliance made during Site Audit

- Key:
- ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit
 - ✗ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit
 - # Follow up action will be reported in next reporting month
 - * Non-compliance of mitigation measure
 - Non-compliance but improved by the contractor

EIA Ref	Recommended Mitigation Measures	Contract No.	Work Sites	Details of Reminder/Observation	Recorded Date	Status
Water Quality Impact						
--	--	--	--	--	--	--
Ecological Impact						
--	--	--	--	--	--	--
Construction Noise Impact						
Noise Mitigation Plan	Use of Temporary Noise Barriers (i.e Acoustic box, SilentUp and etc.) or Full Enclosure for PME according to the approved Noise Mitigation Plan	NE2015/01	Portion III	A driller was operated without a noise barrier. The contractor is reminded to provide a cantilever noise barrier to reduce noise impact.	27-Jan-21	✓
Landscape and Visual Impact						
--	--	--	--	--	--	--
Air Quality Impact						
S3.8.7	· Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.	NE2015/01	Portion III	Stockpiles of dusty materials should be covered by tarpaulin and watered	27-Jan-21	✓
S3.8.1	Watering eight times a day on active works areas, exposed areas and paved haul roads	NE2015/01	General Site Condition	The Contractor is reminded to water work site regularly to avoid dust generation.	19-Feb-21	✓
S3.8.1	Watering eight times a day on active works areas, exposed areas and paved haul roads	NE2015/02	General Site Condition	The Contractor is reminded to water regularly to suppress dust emission	19-Feb-21	✓
Fisheries Impact						
--	--	--	--	--	--	--
Waste Management						
S5.8.22	All fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters.	NE2015/01	Various Portion	A drip tray should be provided for chemicals.	27-Jan-21	✓
S5.8.22	All fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters.	NE2015/01	Portion VII	The Contractor is reminded to provide a drip tray for chemical	3-Feb-21 10-Feb-21 17-Feb-21 24-Feb-21	✓ ✓ ✓ #
S8.6.8/ Waste Management Plan	· Remove waste in timely manner;	NE2015/01	Portion IX	The Contractor is reminded to avoid accumulation of general refuse.	3-Feb-21 10-Feb-21	✓
Landfill Gas Hazards						
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**APPENDIX O
SUMMARIES OF ENVIRONMENTAL
COMPLAINT, WARNING, SUMMON
AND NOTIFICATION OF SUCCESSFUL
PROSECUTION**

Appendix O - Cumulative Log for Complaints, Notifications of Summons and Successful Prosecutions

Table O1 - Cumulative Complaint Log for Tseung Kwan O - Lam Tin Tunnel

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
519	24-Feb-21	Noise	Noise nuisance on morning (Feb 2021)	N	No PME was operating on-site at the time of complaint and the complaint is considered as non-project-related. The details shall be referred to CIR-N131	Draft CIR submitted
518	19-Feb-21	Noise	Percussive Noise Nuisance from underground works	Y	Investigation undergoing	On-going
517	8-Feb-21	Noise	Noise Nuisance from Excavator	Y	No clear judgement was made as the complainant's information is too vague and it is hard to pinpoint the excavator mentioned in the complaint was in fact the one located at the project site. The details shall be referred to CIR-N129.	Draft CIR submitted
516	26-Jan-21	Noise / Operating Hours	Continuous Noise Nuisance during Nighttime (Jan 2021)	N	No PME was operating on-site on the date of complaint. The details shall be referred to CIR-N128	Draft CIR submitted
515	23-Jan-21	Noise		N	See complaint #504	Draft CIR submitted
514	22-Jan-21	Noise		Y	See complaint #511	Draft CIR submitted
513	22-Jan-21	Air	Air quality impact due to open stockpile	N	See Complaint #507 & #508	Draft CIR submitted
512	22-Jan-21			N		
511	20-Jan-21	Noise	Continuous Noise Nuisance during Nighttime (Jan 2021)	Y	The complaint is considered as project-related as barge was operating in during time of complaint. The details shall be referred to CIR-N128	Draft CIR submitted
510	19-Jan-21	Noise		N	See complaint #505	Draft CIR submitted
509	15-Jan-21	Noise		N	See complaint #505	Draft CIR submitted
508	13-Jan-21	Air	Air quality impact due to open stockpile	N	The Complaint was found project-related. The dust origin was from the stockpile at Zone A of C3. The Contractor had sprayed water regularly to suppress the dust emission and improvement had been observed over Jan 2021. Details shall be referred to CIR-A20.	Draft CIR submitted
507		Air		N		
506	7-Jan-21	Noise	Continuous Noise Nuisance during Nighttime (Jan 2021)	Y	See Complaint #500	Closed
505	4-Jan-21	Noise		N	No clear judgement was made. Other than the construction site, other source for low-frequency noise was also identified. Details shall be referred to CIR-N128	Draft CIR submitted
504	4-Jan-21	Noise	Suspected noise nuisance from work site	N	The complaint was considered non-project-related as there was no PME working on site. The details shall be referred to CIR-N127.	Draft CIR submitted

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
503	30-Dec-20	Noise	Noise nuisance at nighttime on a weekday	Y	See complaint #500	Closed
502	28-Dec-20	Noise		Y		Closed
501B	23-Dec-20	Noise		Y		Closed
501A	23-Dec-20	Noise		N	No direct evidence show that the Contractor operated barges at the time of complaint. Therefore the complaint was considered as non-project-related. The details shall be referred to CIR-N126.	Closed
501	23-Dec-20	Noise		Y	The Contractor operated PME(s) at evening-/night- time without an approved valid CNP. The complaint is considered as project-related. The details shall be referred to CIR-N126.	Closed
500	22-Dec-20	Noise		Y		Closed
499	21-Dec-20	Operating hours / Noise	Horning noise nuisance on Sunday	N	The complaint is considered as non-project-related as no barge was working under the TKOLTT project at the time of complaint. The details shall be referred to CIR-O6.	Draft CIR submitted
498	18-Dec-20	Noise	Low frequency noise & occasional piling noise nuisance during night-time	Y	The complaint is considered as project-related as the noise nuisance was coming from water pumps that working 24/7. Details shall be referring to CIR-N125.	Draft CIR submitted
497	9-Dec-20	Air & Noise	Dust & Noise Nuisance near Lam Tin Interchange (December)	Y	Investigation undergoing	On-going
496	3-Dec-20	Noise	Noise Nuisance near Lam Tin Interchange (Restricted Hour)	Y	Investigation undergoing	On-going
495	16-Dec-20	Noise	Night time machanical noise nuisance	Y	The complaint is considered as project-related as the noise nuisance was coming from water pumps that working 24/7. Details shall be referring to N124.	On-going
494	5-Dec-20	Noise	Noise Nuisance near Lam Tin Interchange (December)	Y	Investigation undergoing	On-going
493	8-Dec-20	Noise	Percussive noise nuisance from at early morning	N	The complaint is considered as non-project-related. No operating PME(s) under TKO-LTT project at the time of complaint was known to emit percussive noise at the time of complaint. The details shall be referred to CIR-N123.	Draft CIR submitted
492	18-Nov-20	Noise	Construction Noise nuisance at Morning	Y	Preliminary result reveals that pre-boring and breaking works had been conducted at the time of complaint. The details shall be referred to CIR-N122.	Draft CIR submitted
491	18-Nov-20	Noise	Noise Nuisance near Lam Tin Interchange (Restricted Hour)	Y	Investigation on-going	On-going
490	13 & 16 Nov 20	Noise	Noise Nuisance near Lam Tin Interchange (Restricted Hour)	Y	Investigation on-going	On-going

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
489	13-Nov-20	Air & Noise	Dust and Noise Nuisance in Portion IVC	Y	The complaint was found project-related. The contractor had adopted various noise mitigation measures such as rock splitting method and erection of semi-enclosure to further reduce the noise impact to its surrounding. The details shall be referred to CIR-C39.	Draft CIR submitted
488	13-Nov-20	Air	Dust emission from construction works	N	The complaint was found project-related. The Contractor is recommended to spray water more frequently to suppress the dust nuisance. The details shall be referred to CIR-A19.	Closed
487	11-Nov-20	Noise	Noise Nuisance near Lam Tin Interchange (Late September to November)	Y	See Complaint #476	Draft CIR submitted
486	11-Nov-20	Noise	Noise Nuisance near Lam Tin Interchange (Late September to November)	Y	See Complaint #476	Draft CIR submitted
485	7-Nov-20	Noise	Percussive noise nearby Park Central	Y	The complaint is considered non-project-related as no PME that know to emit percussive noise was operating during the time of complaint. The details shall be referred to CIR-N120.	Draft CIR submitted
484	7-Nov-20	Noise	Noise Nuisance from Excavation Works	Y	See complaint #481	Draft CIR submitted
483	6-Nov-20	Noise	Low-frequency noise at night (Oct&Nov 2020)	N	The low-frequency noise was found coming from the water pumps that works 24/7 and other source may also contribute to the noise nuisance. The Contractor had followed the approved CNP. The complaint is considered project-related and shall be referred to CIR-N119	Draft CIR submitted
482	30-Oct-20	Air	Dust emission from construction works	N	Despite the contractor had sprinkle water regularly, the haul road was found dry during site audit session. The Contractor is reminded to sprinkle water more frequently and cover stockpiles of dusty material to reduce dust emission. The details shall be referred to CIR-A19	Closed
481	3-Nov-20	Noise	Noise Nuisance from Excavation Works	Y	The complaint is considered project-related as no other possible noise origin is known to emit such kind of noise at the surrounding. The Contractor had been reminded to apply lubricants and tighten the screws to reduce noise level. The details shall be referred to CIR-N118	Draft CIR submitted
480	3-Nov-20	Noise	Noise Nuisance near Lam Tin Interchange (Late September to November)	Y	See Complaint #476	Draft CIR submitted
479	3-Nov-20	Noise	Noise Nuisance near Lam Tin Interchange (Late September to Early November)	Y	See Complaint #476	Draft CIR submitted
478	3-Nov-20	Noise	Noise Nuisance near Lam Tin Interchange (Late September to Early November)	Y	See Complaint #476	Draft CIR submitted
477	30-Oct-20	Air	Air & Noise Nuisance near Lam Tin Interchange (October)	N	See Complaint #475	Draft CIR submitted

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
476	29-Oct-20	Noise	Noise Nuisance near Lam Tin Interchange (Late September to Early November)	Y	Investigation undergoing	On-going
475	28-Oct-20	Noise	Air & Noise Nuisance near Lam Tin Interchange (October)	Y	The details shall be referred to CIR-C38. The complaint is considered project-related. The noise origin is believed to be generated through breaking/excavation activities at Portion IVC.	Draft CIR submitted
474	23-Oct-20	Noise	Low-frequency noise at night (Oct-Nov 2020)	N	The low-frequency noise was found coming from the water pumps that works 24/7 and other source may also contribute to the noise nuisance. The Contractor had followed the approved CNP. The complaint is considered project-related and shall be referred to CIR-N119	Draft CIR submitted
473	21-Oct-20	Noise	Noise Nuisance near Portion IX	Y	See complaint #459	On-going
472	20-Oct-20	Noise	Noise Nuisance from Excavation Works	Y	Preliminary results show the noise source was from the backhoe at Portion IV. The Contractor had applied mitigation measures such as adding lubricant to mounting parts to alleviate the problem. The details shall be referred to CIR-N118	Draft CIR submitted
471	6-Oct-20	Noise	Noise nuisance at morning (Oct 2020)	Y	See complaint #459	On-going
470	10-Oct-20	Noise	Noise Nuisance near Lam Tin Interchange (Late September to Early November)	Y	Investigation on-going	On-going
469	10-Oct-20	Noise	Air & Noise Nuisance near Lam Tin Interchange (October)	Y	Investigation on-going	On-going
468	5-Oct-20	Noise	Noise Nuisance near Lam Tin Interchange (Late September to Early November)	Y	Investigation on-going	On-going
467	23-Sep-20	Noise	Daytime noise nuisance (mid-September)	Y	See complaint #459	On-going
466	22-Sep-20	Noise / Working Hours	Noise nuisance on Sunday	Y	Investigation result shows none of the contract under TKOLTT conducted works on Sunday. The details shall be referred to CIR-O5	Closed
465	20-Sep-20			Y		Closed
464	17-Sep-20	Noise	Continuous Noise Nuisance over Aug 2020	Y	The investigation shows no non-compliance and action level for noise is triggered. The details shall be referred to CIR-N113	Draft CIR submitted
463	15-Sep-20	Noise	Percussive noise nuisance at early morning	Y	The complaint is considered non-project-related. The investigation pointed out the Contractor had maintain wastewater treatment facilities properly and no action or limit level of surface SS was triggered after the incident. The muddy water was coming from DSD desilting compound. Details shall be referred to CIR-W16	Closed
462	8-Sep-20	Noise	Suspected muddy water discharge	N		Closed
461	5-Sep-20	Noise	Squeaky noise on a Saturday Morning	Y	The squeaky noise believed was coming from operating barges at C6. No non compliance was found. Details shall be referred to CIR-N115	Draft CIR submitted
460	8-Sep-20	Noise	Noise nuisance near East Harbour Cross Tunnel	Y	See complaint #456 - #458	Draft CIR submitted

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
459	4-Sep-20	Noise	Noise nuisance at morning (Early Sep 2020)	Y	The complainant had repeatedly complaint about the continuous noise nuisance from September to October 2020. The CIR will be prepared in one-go. Meanwhile, no action level of construction noise was recorded during noise monitoring; no non-compliance was identified during site inspection.	On-going

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
458	28-Aug-20	Noise	Long-term noise nuisance since early August	Y	Investigation showed the nuisance was generated by breaking works. The contractor had promised to complete the semi-enclosure by October 2020. The details shall be referred to CIR-N112	Draft CIR submitted
457	27-Aug-20	Noise	Noise nuisance at morning (Late August 2020)	Y		Draft CIR submitted
456	18-Aug-20	Noise	Noise nuisance near East Harbour Cross Tunnel	Y		Draft CIR submitted
455	18-Aug-20	Noise	Noise nuisance from tunnel works	Y	Breaking had been conducted during the time of complaint. The details shall be referred to CIR-N111	Draft CIR submitted
454	11-Aug-20	Operation Hours	Working on restricted hours and public holiday	N	The working barge was believed to be working under the Cross Bay Link project. None of the barges working on the time of complaint belongs to TKOLTT project. Despite works had been conducted, no PME was turned on during the time of complaint. The details shall be referred to CIR-O4.	Closed
453	3-Aug-20	Water	Suspected muddy water and worn out silt curtain	N	The suspected muddy water was due to the strong tidal movement under typhoon influence. The silt curtain was not deployed properly when the typhoon was landed. Details shall be referred to CIR-W15	Closed
452	1-Aug-20	Noise	Squeaky noise during nighttime	Y	The noise was originated from the wires that used for tightening the barge. The Contractor had not fasten the wire completely as strong wave and wind action may tear up the wire and made the barge stranded. The details shall be referred to CIR-N110.	Closed
451	28-Jul-20	Noise	Breaking noise on the morning	Y	Breaking had been conducted during the time of complaint. The details shall be referred to CIR-N109	Closed
450	23-Jul-20 24-Jul-20	Noise	Noise nuisance on weekdays	Y	The noise nuisance was originated from high-noise level works such as breaking and drilling. The details shall be referred to CIR-N108	Draft CIR submitted
449	16-Jul-20	Noise	Noise Nuisance Suspected from Tunnel (C1)	Y	Breaking work was conducted near the underground of Hong Pak Court. No non-conformance of CNP was identified, contractor is reminded to strictly follow the conditions of CNP and the time period of CNP. The details shall be referred to CIR-N110.	Closed
448	4-Jul-20	Air	Dark Smoke Emission from Barge	N	The dark smoke was originated from the barge. It is common that dark smoke will be released when the barge's engine was starting. The details shall be referred to CIR-A18.	Draft CIR submitted
447C	10-Jul-20	Water	Suspected oil leakage at the TKO south open sea	N	The suspected oil leakage was believed to be an algae bloom over the whole bay area. The noise nuisance from speeding was considered not project related. The details shall be referred to CIR-C37	Closed
447B	10-Jul-20	Water / Noise	Suspected muddy water spillage and noise nuisance due to speeding	N		
447A	10-Jul-20	Noise	Long-term noise nuisance and insufficient noise mitigation measures	Y		

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
446	12-Jun-20	Noise	Noise nuisance at Morning nearby East Harbour Crossing	Y	See complaint 442.	Closed
445	11-Jun-20	Air	Pungent smell suspected coming from the work sites	N	See complaint 443B.	Closed
444	6-Jun-20	Water	Flooding within work site and suspected muddy water spillage after downpour	N	The flooding is a normal phenomenon as the site boundary have been embarked. The suspected muddy water is wide-spread among the open sea at TKO south and no exceedance of SS were recorded after the incident. The complaint is considered non-project-related and details shall be referred to CIR-W14.	Closed
443B	6-May-20	Air/Noise	Odour nuisance nearby TKO MTR Station	N	The preliminary result showed no direct relationship between the nuisance and the construction works. The details shall be referred to CIR-A17.	Closed
443A			Noise nuisance at Night and Air Quality Impact from Works	Y	The complaint is considered non-project-related. There is no direct evidence showing the project site is the origin of the nuisance. The details shall be referred to CIR-C36	Closed
442	22-May-20	Noise	Noise nuisance from Tunnel Works	Y	The noise is believed to be breakin inside the tunnel. The CNP was compiled with and contractor is reminded to review breaking schedule to less sensitive hour. The details shall refer to CIR-N105.	Closed
441	8&9-Apr-20	Air/Noise	Noise Nuisance on early morning and Air Quality Works from Excavation Works	Y	The work schedule of C2 had been reviewed. The"beeping" noise is originated from C2 due to safety issue (for mobilization of materials with crane). The noise nuisance is believed to be coming from the vibration hammer. The Contractor had water the exposed area regular to reduce dust impact to the surrounding. The details shall be referred to CIR-C35	Closed
440	13&17-May-20	Noise	Noise generation in early mornings of early May	Y	The work schedule of C2, C3 & C6 had been reviewed. The noise source is believed to be generated from C2 due to sheet-piling. The details shall be referred to CIR-N104.	Closed
439	7-Apr-20 & 24-Apr-20	Odour	Continuous diesel fuel odour nuisance near Park Central	N	No direct evidence proved that the odour source was originated from the work sites of TKOLTT. The details shall be referred to CIR-A16.	Closed
438	18-Apr-20	Noise/ Light	Blasting, High Frequency Noise and Light in Tseung Kwan O	Y	The complaint was valid in regard of noise. Blasting had been carried out during the midnight and the Contractor is reminded to strict follow requirements of CNP. The light source was originated from the construction vessels due to safety reason and guard watching. Details shall be referred to CIR-C34.	Closed
437	27-Mar-20	Noise	Low Frequency Noise during Midnight	Y	The noise source was the malfunctioned dewatering pumps. The details shall be referred to CIR-N103	Closed
436	26-Mar-20	Noise	Noise nuisance, vibration and spectedly insufficient mitigation measures in Lam Tin	Y	See complaint #431-433.	Closed
435	23-Mar-20	Noise	Groundborne Noise from Blasting in the Evening	Y	Blasting was conducted at the time of complaint. The vibration monitoring conducted near Tin Hau Temple was considered the vibration level was acceptable. The details shall be referred to CIR-N102.	Closed
434	23-Mar-20	Noise	Noise nuisance from Construction Works during Holiday	Y	See compliant #427.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
433	20-Mar-20	Noise	Noise nuisance, vibration and suspectedly insufficient mitigation measures in Lam Tin	Y	The time period and PME's of major works conducted during daytime of the complaints, no non-compliance in CNMP and during site audits has been recorded. The Contractor is recommended to provide alternative noise mitigation measures such as acoustic box for noisy PME's and regularly repair materials of the noise mitigation measures. Details shall be referred to CIR-N101.	Closed
432	18-Mar-20	Noise	Noise nuisance, vibration and suspectedly insufficient mitigation measures in Lam Tin	Y		
431	14-Mar-20	Noise	Noise nuisance, vibration and suspectedly insufficient mitigation measures in Lam Tin	Y		
430	17-Mar-20	Water	Muddy Water at the Surcharge Area	N	The "muddy water" was created by the tug boat's screw propeller. The Contractor claimed the propeller stirred up seedbed sediment and generated "muddy water". The details shall be referred to CIR-W13.	Closed
429	10-Mar-20	Noise	Noise nuisance in early morning (Mar 2020)	Y	No construction works had been conducted at the time of complaint for C3 and the major works area in C2 was at least 300m away from the complainant. It is believed that the major noise source was coming from ASD's work site. The details shall be referred to CIR-N100	Closed
428	4-Mar-20	Odour / Noise	Odour and low frequency noise nuisance from construction site	Y	Only minor works had been conducted at the time of complaint. No direct evidence showed that the odour source was originated from C3. The suspected nuisance source is believed to be ASD's works area. The details shall be referred to CIR-C33	Closed
427	1-Mar-20	Noise	Noise nuisance from Construction Works during Holiday	Y	No construction works were conducted at the concerned locations and no direct evidence showing the complaint is project-related. The details shall be referred to CIR-N99	Closed
426	19-Feb-20	Noise	Noise nuisance from breaking works	Y	Refer to complaint #423 and #424.	Closed
425	18-Feb-20		Noise nuisance from barge in morning	Y	No works had been conducted in the time period of complaint. The noise is believed to be non-project-related. The details shall be referred to CIR-N95.	Closed
424	11-Feb-20		Noise nuisance from breaking works	Y	The complaint was valid and the contractor had been operating only 1 breaker at a time. The contractor is suggested to further increase the mitigation measures to reduce impact to the surrounding neighborhood. The details shall be referred to CIR-N97	Closed
423	3-Feb-20		Noise nuisance from breaking works	Y		
422	3-Feb-20		Noise nuisance suspected to be related to works involving metal hammering on Site near EHC	Y	No construction activities were conducted at the concerned locations during the period of complaint. The Contractor is reminded to keep conducting good site practice and strictly follows the requirements of approved CNP. The details shall be referred to CIR-N98	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
421	21-Jan-20	Noise	Noise nuisance due to Blasting at midnight	Y	Blasting was conducted around 1:30am due to the vicinity of the Railway protection zone of MTR. The Contractor is reminded to keep the blast door closed during blasting to minimize noise impacts and re-schedule blasting to less sensitive hours as far as practicable. The details shall be referred to CIR-N96.	Closed
420	7-Jan-20		Irritating loud noise nuisance from Portion IX (C2)	Y	See complaint #417	Closed
419	7-Jan-20		Noise nuisance from Tunnel Works	Y	See Complaint #416.	Closed
418	7-Jan-20		High-frequency noise during night-time	Y	The high frequency noise was believe to be noise emitted from the marine works area of C1. The details shall be referred to CIR-N94.	Closed
417	3-Jan-20		Annoying noise emission and inefficient noise mitigation measures	Y	The noise source is believed to come from a breaker and mitigation was insufficient. The Contractor was requested to strictly follow the Noise Mitigation Plan. The details shall be referred to CIR-N93.	Closed
416	29-Dec-19	Noise	Groundborne Noise from Works area	Y	Project-related with valid CNP. Contractor is reminded to reduce noise emission and prevent breaking and noisy activities during restricted hours. The details shall be referred to CIR-N92.	Closed
415	27-Dec-19	Noise	Noise nuisance from Portion IVC	Y	Non project-related due to maintenance works of East Cross-harbor Tunnel. The details shall be referred to CIR-N91.	Closed
414	24-Dec-19	Noise	Piling noise nuisance near Lam Tin Interchange	Y	Project-related with valid CNP. Contractor is reminded to reduce noise emission and prevent breaking and noisy activities during restricted hours. The details shall be referred to CIR-N91.	Closed
413	24-Dec-19	Noise	Loud and continuous noise emission from Portion IX	Y	No breaking activity was conducted by the C3. It was believed that C2 was the major noise source and the mitigation measures were insufficient. The details shall be referred to CIR-C32.	Closed
412	19-Dec-19	Noise	Noise nuisance from the marine works area	Y	The major construction work was driven by pin piles. The noise emitted due to the construction activities is considered to be reduced to an acceptable level as no NSR falls under the ambit of 300m study area of the work site. Details should be referred to CIR-N90.	Closed
411	2-Dec-19	Air / Noise	Non-effective noise mitigation measures and related dust and noise nuisance	Y	The construction noise created by breaking works are considered non-project related due to the large separation distance between noise source and the Complainant's Location. Major dust emission from the works area next to C3 was recorded. The Contractor is reminded to provide regular watering to dusty works. Details should be referred to CIR-C31.	Closed
410	28-Nov-19	Noise	Noise nuisance from Lam Tin Works Area and operation hours	Y	Refer to Complaint #408	Closed
409	27-Nov-19	Air / Noise	Dust emission due to excavation works and noise nuisance from Piling works	Y	Although noise barrier had been erected and around the breakers, the direct line of sight to the NSRs at Park Central could not be totally blocked. The Contractor is recommended to provide cantilevered noise barrier with noise absorbing materials to minimise noise impact as far as practicable. Details should be referred to CIR-C31.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
408	25-Nov-19	Noise	Serious Noise Nuisance from Lam Tin Works Area	Y	Despite the Contractor had applied different noise mitigation measures (e.g. semi enclosure and noise barrier). Environmental deficiency was observed during site audit session. The Contractor is recommended to apply alternative noise mitigation measures to improve the situation. The details shall be refer to CIR-N89.	Closed
407	12-Nov-19	Operation Hours	Inquiries on operating hours & Noise Nuisance	N	The time of complaint falls under day-time. According to the Contractor and RE, the general starting time of construction works are 08:15 on normal week days. The Contractor had avoid conduct noisy works on morning to minimize noise impacts for the nearby residents. The details shall be refer to CIR-O3	Closed
406	5-Nov-19	Noise	Noise nuisance from Blasting activities during night-time	Y	No blasting was carried out on that night. The construction activities were conducted inside the tunnel with the blast door closed. The CNP that the Contractor held remained valid during the time of complaint. The details shall be refer to CIR-N88	Closed
405	29-Oct-19	Noise	Daytime times noise nuisance	Y	The complaint details does not tally up with the information provided with the Contractor and RE. Referring to the Contractor, there was construction works was starting at 09:00. Noise mitigation measures, such as acoustic mats, were applied to minimize noise impact. The details shall be refer to CIR-N87	Closed
404	15-Oct-19	Noise / Working Hours	Noise nuisance due to operation of barge on Saturday early morning	Y	The time of complaint falls within daytime and the major works conducted are dredging and reclamation. The contractor did not require any extra mitigation measures. The contractor had applied sound-proofing mat on the engine floor of the barges and is recommended to strictly follow the requirements of noise mitigation plan. The details shall be refer to CIR-N86	Closed
403	15-Oct-19	Noise / Working Hours	Operation of marine construction works during late hours	Y	The major construction works is trimming works for the rock mount during the time period of complaint. Mitigation measures provided by the Contractor included provision of noise insulating mats to the engine floor of the barges and shorten the work hours by ending construction works on or before 21:00 since early Oct 2019. Details shall be referred to CIR-N85.	Closed
402	10-Oct-19	Noise	Noise nuisance of construction works at marine work area during early morning	Y	No construction activity at both the Cavern near the BCMCP Bridge and Platform 1B, including the barge, in particular during the complaint period between 2am and 3am on 9 Oct 2019. Since no works had conducted during the time of complaint, no mitigation measures are required. The details shall be referred to CIR-N84.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
401	5-Oct-19	Noise	High noise level from works area during daytime	Y	The time period of complaint falls under day-time and therefore the Contractor is required to carry out mitigation measures according to the latest CNMP only. The construction activities had been reviewed and no non-compliance was identified. No Limit Level of Exceedance at daytime was recorded during October 2019. For mitigation measures, the Contractor had set up sound-proofing mats and SlientUp to reduce noise impact. The details shall be refer to CIR-N83.	Closed
400	16-Sep-19	Water	Muddy water discharge and deficiency in water quality mitigation measures	N	With accordance to the Contractor and RE, the silt curtains were deployed regarding to SCDP ver. 8 since 10-Sep-19, site inspection on 12-Sep-19 also showed the silt curtains were deployed properly. Despite there are chances of accidental muddy water discharge due to the removal of cofferdam on 13-Sep-19, local silt curtain had been place in order to minimize the unavoidable impact by related loading and unloading of fill materials. No muddy water had been observed outside the silt curtain area. Nevertheless, the Contractor is recommend to expand the coverage of the local silt curtain in order to well-confine the muddy water released from the grab. On top of that, the Contractor shall always follow the SCDP to ensure the minimization of impacts. Details should be referred to CIR-C30.	Closed
399	16-Sep-19	Noise	Noise emission from the tunnel entrance (Potion III)	Y	No construction works was carried out during the time of complaint. Details should be referred to CIR-N82.	Closed
398	16-Sep-19	Air / Water	Dark smoke emission and muddy water discharge from the marine work vessels near shore	N	No dark smoke emission was observed during the site inspection conducted in the week of the complaint. The Contractor has applied an air filtering tank to clean the exhaust from the barge before emission. Details should be referred to CIR-C30.	Closed
397	6-Sep-19	Noise / Working hours	Noise emitted from Barge during Evening times	Y	The unloading works had been reviewed and no limit level of exceedance were recorded during August to early September. Since the period of complaint falls under evening times, no mitigation measures were required by the CNP. Details should be referred to CIR-N81.	Closed
396	6-Sep-19	Noise	Noise nuisance from LT-TKO Tunnel	Y	The major works conducted were shortcreting, mucking out, maintaining, drilling and unloading. No limit level of exceedance in the restricted hours (19:00-23:00) between late August and early September were recorded. The Contractor is recommended to keep following noise mitigation plan to minimize noise nuisance. Details should be referred to CIR-N80.	Closed
395	6-Sep-19	Noise	Noise Nuisance during evening and night times	Y		Closed
394	6-Sep-19	Noise / Operating Hours	Noise nuisance during Evening & occasionally in Night time	Y		Closed

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393	30-Aug-19	Water	Alleged muddy water discharge	N	High rainfall was recorded during period of complaint, therefore muddy water discharge at outfall from upstream and some surface runoff within the site is expected. However, no major silt curtain deficiency was observed during on-site observation and no leakage of muddy water from the marine works area was observed. Details should be referred to CIR-W12.	Closed
392	29-Aug-19	Noise	Noise nuisance from the operation of heavy machineries and missing of noise mitigation measures at Portion 4C	Y	A noise insulating cover was erected before the period of complaint, however, due to restricted site condition in the relocated breaking works area, the erection of the cover could not be carried out. Nevertheless, movable noise barriers and local semi-enclosure was adopted for breaking works. Details should be referred to CIR-N79.	Closed
391	26-Aug-19	Noise	Operation of construction works during late hours	Y	1 derrick barge was operated during the period of complaint with valid CNP. Regular maintenance and checking should be conducted for all operating barges. Details should be referred to CIR-N78.	Closed
390	26-Aug-19	Noise	Intermittent noise emitted from collision during night-time	Y	The noise source is suspected to be the collision between cofferdam and its broken part as the cofferdam was found damaged next morning. No construction was conducted at night time of 31 July. The contractor is recommended to maintain and check cofferdam regularly. Details should be referred to CIR-N77.	Closed
389	29-Jul-19	Noise	Noise nuisance from the barge operating in reclamation works area near O King Road during evening times.	Y	1 derrick barge was operated during the period of complaint with valid CNP. Regular maintenance should be provided for all operating barges. Details shall refer to CIR-N76.	Closed
388	12-Jul-19	Noise	Noise nuisance and inadequate noise barrier at the construction site near Ocean shore	Y	Although Contractor has adopted a noise mitigation measure of drill rigs at Portion IV near Ocean Shore such as noise barrier with sound insulating fabric, the existing noise barrier in Portion IX and some in Portion IV are not adequate in screening the direct line of sight to Ocean Shore. Details should be referred to CIR-N75.	Closed
387	12-Jul-19	Noise	Breaking noise emitted from the operation of 2 PMEs at Portion 4C during weekday daytime.	Y	Two breakers were operated intermittently at the Portion 4C of C1 construction site during the period of complaint between 07:00 to 19:00. As observed during the site inspection/noise monitoring, movable noise barrier could not completely screen off the direct line-of-sight from PMEs to Yau Lai Estate. Contractor has adopted mitigation measure to minimize the noise impact from breakers including using a noise barrier with noise insulating fabric, adopted a less noisy hydraulic spitting method for breaking works and has been developing a semi-enclosure noise barrier to replace the existing movable noise barrier. Details should be referred to CIR-N74.	Closed
386	10-Jul-19	Noise	Noise nuisance and disturbance from the TKOLT tunnel construction site involves intermittent noise emitted from collision during night-time.	Y	No construction works was carried out during the time of complaint. Details should be referred to CIR-N73.	Closed

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385	4-Jul-19	Noise	The reclamation works continued into the evening during weekdays and works were also operated on Sunday.	Y	See Complaint no 384.	Closed
384	3-Jul-19	Noise	The construction site was constantly emitting metallic percussion noise in the early morning.	Y	The concerned metallic percussion noise source was suspected from the collision between the detached sheet pile and the adjacent sheet pile of the broken cofferdam. The detached sheet pile was fixed by re-sealing it to the adjacent sheet pile. Details should be referred to CIR-N72.	Closed
383	29-Jun-19	Noise	Noise nuisance from construction works during weekday daytime and evening times. Noise barriers was found missing in certain parts of the construction areas.	Y	Some noise mitigation measures were observed during the site inspection including idle equipment were turned off and noise barrier has been erected close to noisy PME in the right direction facing Yau Lai Estate. However, the above mitigation measures were not applied to whole construction site such as noise barriers were not placed close enough to the noisy PMEs due to the uneven surface and other inconvenience. Details should be referred to CIR-N71.	Closed
382 (N08/RE/000110 19-19)	17-Jun-19	Air	Dark smoke nuisance from the tug boat inside the cofferdam area.	N	During site audit, no violation of the Air Pollution Control (Smoke) Regulation from the construction site was observed by the ET. Air filter has been replaced on derrick barge to reduce the dark smoke emission upon the receipt of the complaint. The Contractor is recommended to replace the air filters regularly. Details should be referred to CIR-A15.	Closed
381 (N08/RE/000150 98-19)	11-Jun-19	Water	Muddy water discharge from construction site near the cofferdam area on 4 June 19	N	High volume of upstream muddy water was collected due high rainfall according to reports and observation. As a result, the muddy water from upstream was discharged into the Junk Bay via various outfalls in Junk Bay, as observed during the rainstorm events. No sand plume within the cofferdam area and no muddy water discharge at the designated discharge point within the Site was identified during the site inspection and water quality monitoring. Details should be referred to CIR-W11.	Closed
380	11-Jun-19	Air	Odour nuisance from construction site near Tong Yin Street	N	No oil leakage from mobile crane was observed during the site inspection in June 2019. According to the testing reports, all ULSD fuel applied in the PMEs during the construction period contains sulphur content lower than 0.005% by weight, which complied with the Air Pollution Control (Fuel Restriction) Regulations. Details should be referred to CIR-A14.	Closed
379	11-Jun-19	Water	Discharge of mud water into Junk Bay from TKOLT construction site	N	See Complaint no 381.	Closed
378	11-Jun-19	Air	Dark smoke nuisance from construction site involves derrick barge operation near cofferdam area (daytime)	N	No violation of the Air Pollution Control (Smoke) Regulation was recorded from the construction site was observed. The contractor was recommended to install carbon filter at smoke exhaust of the barge as a more effective mitigation measures. Details should be referred to CIR-C27.	Closed
377	11-Jun-19	Noise	Complaint about the noise nuisance from Lam Tin Interchange construction site in daytime holiday.	Y	Only drilling works inside the tunnel was conducted during daytime under valid CNP. Groundborne noise is considered as the major factor contributing to the noise nuisance, the Contractor are recommended to re-schedule the drilling works inside the tunnel to less sensitive hours. Details should be referred to CIR-N70.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
376	11-Jun-19	Noise	Complaint about the noise nuisance near Yau Lai Estate involves vehicle movement (roller) during morning to 15:00 in holiday.	Y	No works involving roller was involved. Only drilling works inside the tunnel and dismantling of crusher shelter was conducted during Sunday daytime under valid CNP. Groundborne noise is considered as the major factor contributing to the noise nuisance, the Contractor are recommended to re-schedule the drilling works inside the tunnel to less sensitive hours. Details should be referred to CIR-N70.	Closed
375	11-Jun-19	Noise	Complaint about the noise nuisance from Lam Tin Interchange construction site in daytime holiday.	Y	See Complaint no. 376.	Closed
374	4-Jun-19	Noise	Vibration from the construction of Lam Tin Interchange in evening time at around 20:00	Y	Groundborne noise is considered as the major factor contributing to the noise nuisance. The reverse circulation drilling works may have emitted groundborne noise, however, only 1 unit was used in Portion II. Therefore, blasting is considered as the major cause for the vibration. Details should be referred to CIR-N69.	Closed
373	4-Jun-19	Noise	Complaint about the noise nuisance from the construction site near Ocean Shore and the construction site operation in day time holiday.	Y	No construction activity was conducted at the time of complaint as confirmed by Engineer. Therefore, the noise nuisance was not due to the construction site. Details should be referred to CIR-N68.	Closed
372	4-Jun-19	Others	Complaint about the construction site operation in the early morning on Saturday.	N	See Complaint no. 373.	Closed
371	30-May-19	Noise	Noise nuisance from construction site near Ocean Shore during night time.	Y	See Complaint no. 373.	Closed
370 (N08/RE/000150 98-19)	29-May-19	Noise	Noise nuisance about dredging mud and loudspeaker in the construction site near Ocean Shore during daytime holiday.	Y	Noise barriers/ Noise absorptive materials have been used to mitigate the noise generated from the construction works. Only walkie-talkies were used for communication in the construction site. Details should be referred to CIR-N67.	Closed
369	13-May-19	Noise	Noise nuisance from the blasting work inside tunnel which involves explosion noise impact during midnight	Y	Contractor has adopted a mitigation measure for reduce the blasting noise impact from the tunnel such as blasting doors and did not conduct blasting works during mid-night blasting since mid-May 2019. Details should be referred to CIR-N66.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
368	19-May-19	Noise	Noise nuisance from barge with in cofferdam area in daytime holiday	Y	See Investigation / Mitigation Action for complaint no. 361.	Closed
367	5-May-19	Noise & Air	Noise and air nuisance from construction near Lam Tin Tunnel - TKO entrance	Y	The major works during the period of complaint is scaling by breaker on day time holiday (Sunday). The works is compiled with CNP and no air quality action and noise limit level exceedance during the monitoring. Regarding the existing air quality mitigation measures, the water spray for the breaker was insufficient and the dust emission during unloading of dusty materials was observed. As the review of exiting noise mitigation measure, a broken noise SilentMat was found on the hammer of breaker. According to the above observation, Contractor has adopted serval improvement such as conduct a sufficient water spray during breaking and unloading materials, replaced the noise SilentMat of the breaker and placed the noise barrier between PME and NSRs. Details should be referred to CIR-C29.	Closed
366	4-May-19	Noise	Noise nuisance from construction of Lam Tin Interchange in daytime.	Y	Regarding the observation during site inspection, the hammer of the breaker was surrounded by a broken noise absorption material and a noise barrier of a driller was placed in the incorrect direction of NSRs. Contractor has improved the above mitigation measures including replaced the noise absorption materials and relocated the noise barrier to facing the NSRs. Details should be referred to CIR-N65.	Closed
365	1-May-19	Noise	Noise nuisance from construction of Lam Tin Interchange in daytime.	Y	See investigation / mitigation actions for Complaint No.366	Closed
364	1-May-19	Noise	Noise nuisance from construction of Lam Tin Interchange in daytime	Y	See investigation / mitigation actions for Complaint No.366	Closed
363	30-Apr-19	Noise	Noise nuisance from construction of Lam Tin Interchange in daytime and evening time	Y	See investigation / mitigation actions for Complaint No.366	Closed
362 (N08/RE/000133 96-19)	8-May-19	Noise	Noise nuisance from marine works in the Junk Bay in the night-time (06:45)	Y	No marine works in the Junk Bay was conducted as confirmed by RE. No CCTV footage was recorded during the time of complaint. It was suggested that Contractor should conduct 24 hours CCTV monitoring. Details should be referred to CIR-N64.	Closed
361	7-May-19	Noise	Noise nuisance from construction site at cofferdam area in holiday	Y	The reclamation works involves barges during the time of complaints has been compiled with the CNP. As review of existing mitigation measure, the sound proofing canvases for the barges were hanged up. Details should be referred to CIR-N63.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
360	2-May-19	Noise	The complaint about the noise nuisance from cofferdam area during daytime and evening-time.	Y	The light source was found from the lighting of derrick barge within the cofferdam area and the noise source was found from the barge during filling works. Contractor has adopted The sound proofing canvases for the derrick barge was hanged up but no light mitigation measure. Details should be referred to CIR-C28.	Closed
359	30-Apr-19	Noise	The complaint about the noise nuisance involve percussion noise near Ocean Shore during daytime.	Y		Closed
358	30-Apr-19	Noise	The complaint about the noise nuisance during evening time.	Y		Closed
357	23-Apr-19	Noise	The complaint about the noise nuisance near cofferdam area during daytime.	Y		Closed
356	23-Apr-19	Noise	The complaint about the noise nuisance near cofferdam area during holiday.	Y		Closed
355	17-Apr-19	Noise & light	The complaint about the noise nuisance and light pollution near cofferdam area during evening-time.	Y		Closed
354	30-Apr-19	Others	The construction site near O King Road is operated in holiday during day-time and weekday during night-time.	N	The marine reclamation works at the Portion IX in C2 construction site was the major construction activity during the period of complaints. The concerned reclamation works is compiled with the relevant CNP. Details should be referred to CIR-O2.	Closed
353	13-Apr-19	Air	According to the complainant, large amount of smoke and exhaust was seen emitting from barges working within the cofferdam	N	See Investigation / Mitigation Action for complaint no. 329.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
352	13-Apr-19	Noise	The complainant complained about the noise nuisance from the cofferdam area in Tiu Keng Leng during day-time.	Y	The major works during the time of complaints was a crawler crane unloading H piles to the Portion V of C2 construction site. Noise barriers were erected between the crane and NSRs to reduce noise impact. Details should be referred to CIR-N62.	Closed
351	13-Apr-19	Noise	The complainant complained the noise nuisance from the cofferdam area in Tiu Keng Leng during day-time.	Y		
350	8-Apr-19	Air & Others	The complainant complained the dark smoke generation and the construction works from the cofferdam area in Tiu Keng Leng during holiday.	N	See Investigation / Mitigation Action for complaint no. 329.	Closed
349	7-Apr-19	Air	Dark smoke generation from the cofferdam area in Tiu Keng Leng during day-time.	N		Closed
348	2-Apr-19	Others	The complainant complained the LTT construction site was working during holiday.	N		Closed
347	1-Apr-19	Noise	Percussive noise from the cofferdam area in Tiu Keng Leng during day-time.	Y		Closed
346	31-Mar-19	Others	Complaint about the construction site operation of Road P2 in day time holiday	N	A tug boat and a derrick barge were operated for the marine reclamation work within the cofferdam area during the time of complaint. As the review of relevant CNP, no violation was observed. Details should be referred to CIR-O1.	Closed
345	26-Mar-19	Noise	Complaint about the noise nuisance in day time.	Y	See Investigation / Mitigation Action for complaint no. 329.	Closed
344	28-Mar-19	Noise	Complaint letter received regarding noise nuisance and dark smoke generation from the marine barges	Y	See Investigation / Mitigation Action for complaint no. 378.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
343	25-Mar-19	Noise	Complaint about the noise nuisance sound like a breaking works in day time.	Y	See Investigation / Mitigation Action for complaint no. 329.	Closed
342	25-Mar-19	Noise	Complaint about the noise nuisance from the construction of Lam Tin Interchange in day time hoilday (Sunday). The noise monitoring was conducted in Hong Nga Court by staff after the complaint and the noise level is result in acceptable level, but the complainant replied that the noise monitoring is meaningless and the noise nuisance is not acceptable for her.	Y	See Investigation / Mitigation Action for complaint no. 330.	Closed
341	24-Mar-19	Noise	Complaint about the noise nuisance from Lam Tin Tunnel construction works in day time.	Y		Closed
340	24-Mar-19	Noise	Complaint about the noise nuisance from the construction site day time holiday (Sunday).	Y		Closed
339	21-Mar-19	Noise	Complaint about the construction noise nuisance involving percussive noise in early morning (07:00)	Y		Closed
338	21-Mar-19	Noise	Construction noise	Y	See Investigation / Mitigation Action for complaint no. 323.	Closed
337	20-Mar-19	Noise	Complaint about the noise nuisance from the construction vehicle near Park Central in night time.	Y	See Investigation / Mitigation Action for complaint no. 329.	Closed
336	20-Mar-19	Noise & Pest	Complaint about the noise and pest nuisance from the construction site near Park Central in evening time.	Y		Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
335	19-Mar-19	Noise	Construction noise nuisance from reclamation works near the TKO-LTT reclamation site during the evening time (19:00-23:00).	Y	See Investigation / Mitigation Action for complaint no. 323.	Closed
334	19-Mar-19	Noise	Construction noise nuisance from the TKO-LTT reclamation site during evening time (after 19:00).	Y		Closed
333	19-Mar-19	Noise	Construction noise nuisance from construction noise in evening time (around 20:30).	Y		Closed
332	18-Mar-19	Noise	Complaint about the noise nuisance during day time, evening time and night time.	Y	The construction activities in the complaint dates are complied with CNP. No noise limited level exceedance was recorded. During the site inspection, no noise barriers were erected between noisy PMEs and NSRs at LTI. Regarding the observation in the inspection, Contractor has adopted an improvement such as placed the noise barriers between the PMEs and NSPs to reduce noise nuisance. Details should be referred to CIR-N61.	Closed
331	18-Mar-19	Noise	Complaint about the noise nuisance in night time and the past few days. (Before 07:00)	Y		Closed
330	17-Mar-19	Noise	Complaint about the noise nuisance from in night time holiday.	Y		Closed
329	15-Mar-19	Noise & Air	Complaint about the noise from the construction works and the odour nuisance involves engine oil from construction machine	Y	The construction activities in the complaint dates are compiled with the CNMP. No noise and air quality limit level exceedance were recorded. Contractor had implemented the mitigation measures for the noise and odour nuisances including acoustic mat was erected between the PME and NSR, ultra-low sulphur diesel was applied as fuel oil in PME and general refuses were disposed properly. Details should be referred to CIR-C26.	Closed
328	14-Mar-19	Noise	Complaint about the noise nuisance involve drilling work in the day time (08:00).	Y	A formation works was conducted in 7 am to 7pm on 9 Mar 2019. No noise limit level exceedance was recorded in the nearest noise monitoring result. However, there was no any adoption of mitigation measure to minimize the noise nuisance from the site. As response the received complaint, the contractor should place the noise barrier between the PMEs and NSR. Details should be referred to CIR-N58.	Closed
327	13-Mar-19	Noise	Noise nuisance suspected from the construction works involving chiseling during evening time (22:07).	Y	A handing processed rock at Lam Tin Interchange was conducted on the complaint date in 7 pm to 11 pm involving dump truck and excavator which construction activities was compiled with the CNP. No noise limit level exceedance was record in the evening time monitoring. However, the noise barrier was not placed in the direction of the Yau Lai Estate during breaking works, the contractor had implemented a mitigation measure such as placed the noise barrier to reduce noise level from the breaker but the noise barrier was far from the concerned breaker. Details should be referred to CIR-N59.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
326	13-Mar-19	Noise	Noise nuisance suspected from marine works near Ocean Shores in the day time (16:30)	Y	See Investigation / Mitigation Action for complaint no. 322.	Closed
325	9-Mar-19	Noise	Complaint about the noise nuisance involve machine and percussive noise in night time (02:00 -03:00).	Y	Only drilling works were conducted inside the tunnel in early morning under valid CNP. Groundborne noise is considered as the factor that contributes to the noise nuisance. The Contractor is recommended to reschedule drilling works to less sensitive hours. Details should be referred to CIR-N56.	Closed
324	7-Mar-19	Noise	Complaint about the noise nuisance involving chiseling noise from the construction site near Hong Pak Court during day time and evening time in the past few months.	Y	Only drilling works were conducted inside the tunnel in early morning and daytime under valid CNP. Groundborne noise is considered as the factor that contributes to the noise nuisance. The Contractor is recommended to reschedule drilling works to less sensitive hours. Details should be referred to CIR-N56.	Closed
323 (EPD-N08/RE/000065 23-19)	4-Mar-19	Noise	Construction noise (Evening time)	Y	Only 1 derrick barge and a tug boat was used in the evening time under valid CNP. No Limit Level Exceedances were recorded at Station CM6(A) during evening time. Acoustic mat should be used to screen the engine of the barge to reduce the noise nuisance from the reclamation works. Lubricants should be applied to the barge to reduce the noise emission during barge movement.	Closed
322	13-Mar-19	Noise	Noise nuisance suspected from a yellow excavator near Ocean Shores in day time (15:44).	Y	No noise limit level exceedance was recorded and the number of operating PMEs complied with the CNMP. The sound proofing canvases were not always adopted as a mitigation measure to screen the noise emitted from the engine of the barge. Contractor should adopt the aforementioned mitigation measures as far as practicable. The contractor was also recommended to enhance the mitigation measure including frequently checking the noise barriers/sound proofing canvases, frequent checking and repair the gaps or broken acoustic sheets and continue to strictly follow the requirements in the approved CNMP.	Closed
321	28-Feb-19	Noise	Construction noise (Night time)	Y	Only drilling works were conducted inside the tunnel in early morning under valid CNP. Groundborne noise is considered as the factor that contributes to the noise nuisance. The Contractor is recommended to reschedule drilling works to less sensitive hours. Details should be referred to CIR-N55.	Closed
320	22-Feb-19	Noise	Complaint about the noise nuisance involving percussive noise in early morning (Day time). Complainant said the construction should be operated after 08:00.	Y		Closed
319	21-Feb-19	Noise	Complaint about the noise nuisance involving percussive noise in night time	Y	See Investigation / Mitigation Action for complaint no. 313.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
318	21-Feb-19	Noise	Complaint about the noise nuisance involving percussive noise from the construction in night time	Y		Closed
317	25-Feb-19	Air	Complained about the odour nuisance of petroleum smell	N	See Investigation/ Mitigation Action on Complaint no.294. Details should be referred to CIR-A12.	Closed
316	18-Feb-19	Air	Complaint about the dark smoke and odour nuisances	N		Closed
315	17-Feb-19	Noise	Complained about construction noise (Daytime)	Y		The metal wire used for anchoring the barge inside the cofferdam area are the source for the noise nuisance. Ropes were used to replace metal wire to reduce noise nuisance from metal collision while mooring boats. Details should be referred to CIR-N54.
314	17-Feb-19	Air	Dust nuisance suspected from the construction works and absence of water spraying near Lam Tin Interchange in daytime.	N	No Air Quality action level or limit level exceedance during the monitoring conducted by ETL. Contractor had implemented mitigation measure to reduce and prevent dust emission including conducted water sprays and covered the cement bags. Details should be referred to CIR-A13.	Closed
313	17-Feb-19	Noise	Construction noise nuisance from the drilling and breaking works at Branch Tunnel in the morning (Day time)	Y	Breaking and drilling works were conducted during the time of complaint. The breakers were often seen wrapped with acoustic mat, however, they are easily damaged during the breaking works. Noise barrier are more effective in reducing the noise nuisance than the acoustic mat, but the erection of noise barrier are not often adopted properly to screen the noise from the NSR due to the additional works involved and the landform on site. Groundborne noise could also be a factor contributing to noise nuisance. Details should be referred to CIR-N53.	Closed
312	16-Feb-19	Noise	Complained about the explosion noise (Daytime)	Y	No exceedances were recorded and recommendation were made to further enhance the mitigation measures, such as regularly and reviewing the noise control activities that are being carried out on site regularly to ensure compliance with statutory requirement, provide training for the workers to prevent unnecessary noise disturbance and frequently check and maintain the absorptive lining adhered on blasting doors on a regular basis.	Closed
311	15-Feb-19	Noise	Complained about the explosion noise (Daytime)	Y	See Investigation / Mitigation Action for complaint no. 312.	Closed
310	14-Feb-19	Noise	Construction noise nuisance about the rock handling work at LTI (Daytime)	Y	Dump truck and excavator was used to transfer crushed rocks from the crusher with valid CNP. Additional noise barrier was added at the site boundary near Shun Lai house, Yau Lai Estate to reduce the direct-line of sight from the NSRs to the site. Details should be referred to the CIR-N51.	Closed
309	13-Feb-19	Noise	Construction noise nuisance about the rock handling work at LTI (evening time)	Y		Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
308	13-Feb-19	Noise	Complaint about construction noise (Night time)	Y	See Investigation/ Mitigation Action on Complaint no.302. Details should be referred to CIR-N48.	Closed
307	13-Feb-19	Noise	The complaint about the noise nuisance in day time	Y	Noise nuisance was originated from the beeping noise emitted during vehicle reversing of the loader. The total length of beeping noise should be less than 5 mins. The reverse alarm system is a necessary safety measure that cannot be revoked. Details should be referred to CIR-N50.	Closed
306	13-Feb-19	Noise	Noise nuisance suspected from the construction works involving chiseling noise in night time	Y	See Investigation/ Mitigation Action on Complaint no.302. Details should be referred to CIR-N48.	Closed
305	12-Feb-19	Noise	Noise nuisance suspected from the construction works involving chiseling noise in night time.	Y		Closed
304	8-Feb-19	Noise	Noise nuisance suspected from marine works near Ocean Shores in the day time	Y	There were two construction activities in the site including dredging and trimming in day time on 8 Feb 2019. Details should be referred to CIR-N49.	Closed
303	2-Feb-19	Noise	Noise nuisance suspected from the construction works involving chiseling noise during day time, evening time and night time.	Y	Project-related. The following recommendations were made to further enhance the mitigation measures: <input type="checkbox"/> Frequent checking and repair the gaps or broken acoustic sheets; <input type="checkbox"/> Replace any broken SilentMat for wrapping the breaker head; <input type="checkbox"/> To adopt Cantilever noise barriers at Lam Tin Interchange to screen noise effectively; <input type="checkbox"/> The deployment of Cantilever noise barrier should screen the line-of-sight from sensitive receivers; <input type="checkbox"/> To continue to strictly follow the requirements in the approved CNMP; <input type="checkbox"/> To conduct an ad hoc ground-borne noise monitoring with the coordination of the Engineer; and <input type="checkbox"/> Engineer should monitor the plant and machine to ensure construction activities are in compliance of CNP.	Closed
302	2-Feb-19	Noise	Noise nuisance suspected from the construction works involving chiseling noise during day time	Y		Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
301	31th January 2019	Noise	Noise nuisance suspected from the	Y	See Investigation/ Mitigation Action on Complaint no.290. Details should be referred to CIR-N45.	Closed
300	30th January 2019	Noise	Beeping Noise nuisance suspected from the construction works involving mobile crane	Y	See investigation / Mitigation Action for complaint no. 296. Details should be referred to CIR-N47.	Closed
299	30th January 2019	Noise	Beeping Noise nuisance suspected from the construction works involving mobile crane and also suspected from elevation platform	Y	See investigation / Mitigation Action for complaint no. 296. Details should be referred to CIR-N47.	Closed
298	30th January 2019	Noise & Air Quality	The dust generation and noise nuisance from the construction site near Po Shun Road	Y	There were several construction activities in the site including the removal of steel mould & scaffolding of bridge deck, erection of scaffolding for staircase and construction of Pour 1 of main deck (GL4-5) during time of complaint. Details should be referred to CIR-C25.	Closed
297	30th January 2019	Noise	Noise nuisance suspected from the construction involving chiselling works	Y	See Investigation/ Mitigation Action on Complaint no.290. Details should be referred to CIR-N45.	Closed
296	29th January 2019	Noise	Beeping Noise nuisance suspected from the mobile crane at the Footbridge near Park Central Block 6	Y	Project-related. The following recommendations were made to further enhance the mitigation measures: <input type="checkbox"/> To arrange a signalman instead of mobile crane reversing signal for minimize the beeping noise disturbance; <input type="checkbox"/> Frequent checking and repair the operating PME; <input type="checkbox"/> The deployment of Cantilever noise barrier should screen the line-of-sight from sensitive receivers; <input type="checkbox"/> To continue to strictly follow the requirements in the approved CNMP; <input type="checkbox"/> To ensure noise barrier and sound proofing canvases wrapped on PME are intact and in good condition.	Closed
295	29th January 2019	Noise	Complaint about the noise nuisance from the steel cable wire for anchoring between barge and pier	Y	There was a salvage works for the sunken barge (CS306) in a whole day on 27 Jan, 12 am to 3 pm on 28 Jan and 11:40 am on 29 Jan 2019. Details should be referred to CIR-N46.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
294	29th January 2019	Air Quality	Complaint about the dark smoke and odour nuisances from barge.	Y	The sulphur content percentage of the adopted diesel fuel was lower than 0.05% which is compiled with the Hong Kong Air Pollution Control (Marine Light Diesel) Regulation, therefore the odour problem should be minimised. Smoke filtering tanks were adopted on deck level of derrick barges to reduce emission of dark smoke and exhaust smell. The situation has improved after the filter has been replaced. Details should be referred to CIR-A12.	Closed
293 (EPD- K15/RE/000032 91-19)	29th January 2019	Noise & Air Quality	Complained about construction noise & dust (Day & Night time)	Y	See investigation / Mitigation Action for complaint no. 270. Details should be referred to CIR-C29.	Closed
292	29th January 2019	Noise	Complained about the construction noise from breaking work.	Y	Project-related. The following recommendations were made to further enhance the mitigation measures: <input type="checkbox"/> To arrange a signalman instead of mobile crane reversing signal for minimize the beeping noise disturbance; <input type="checkbox"/> Frequent checking and repair the operating PME; <input type="checkbox"/> The deployment of Cantilever noise barrier should screen the line-of-sight from sensitive receivers; <input type="checkbox"/> To continue to strictly follow the requirements in the approved CNMP; <input type="checkbox"/> To ensure noise barrier and sound proofing canvases wrapped on PME are intact and in good condition.	Closed
291	29th January 2019	Noise	Complained about the construction noise from breaking work.	Y		Closed
290	29th January 2019	Noise	Complained about the construction noise from Tunnel Works	Y		Closed
289 (EPD- N08/RE/000008 59-19)	24th January 2019	Noise	Complained about the construction noise from Tunnel Works	Y	See Investigation/ Mitigation Action on Complaint no.288. Details should be referred to CIR-N44.	Closed
288	18th January 2019	Noise	Complained about the construction noise from Tunnel Works	Y	No major construction works at the concerned night time. There was only salvage operation carried out in 11 pm to 12 pm on 17 Jan 2019. No violation of CNP nor Noise Control Ordinance is found in this regard. Details should be referred to CIR-N44.	Closed
287	17th January 2019	Noise	Complained about the construction noise from Kam Tin Interchange.	Y	Project-related. The following recommendations are made to further enhance the mitigation measures: <input type="checkbox"/> To regularly check and review the noise control activities that are being carried out on site to ensure compliance with statutory requirement. <input type="checkbox"/> Machines may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. <input type="checkbox"/> To provide training for the workers to prevent unnecessary noise disturbance. <input type="checkbox"/> To provide cantilever barrier to screen the construction noise from the NSRs	Closed
286	17th January 2019	Noise	High frequency machine noise nuisance involving air compressor from the construction site near the Park Central in day time	N	See Investigation/ Mitigation Action on Complaint no. 285. The concerned air compressor has been removed on 16 th Jan 2019. Details should be referred to CIR-N41.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
285	17th January 2019	Noise	Complained about the construction noise from an air blower/fan with generator near Tiu Keng Leng Sport Centre and Park Central.	N	The concerned air compressor was removed from the construction site since 16 January 2019 afternoon, but the high frequency noise nuisance complaints were received on 17 January 2019. According to the CM8(A) noise monitoring record by environmental team, the other noise source from construction site are beeping noise of the reverse alarm system of the plant. Therefore, the high frequency noise nuisance is considered project related after 16 January 2019. Details should be referred to CIR-N41.	Closed
284	16th January 2019	Noise	Complained about the construction noise from an air compressor near Tiu Keng Leng Sport Centre and Park Central.	N	See Investigation/ Mitigation Action on Complaint no. 272. Additional noise barrier was erected around the said air compressor. Details should be referred to CIR-N41.	Closed
283	15th January 2019	Noise	Complained about the construction noise from an air compressor near Tiu Keng Leng Sport Centre and Park Central.	N	See Investigation/ Mitigation Action on Complaint no. 272. Additional noise barrier was erected around the said air compressor. Details should be referred to CIR-N41.	Closed
282	15th January 2019	Noise	Complained about the construction noise from an air compressor near Tiu Keng Leng Sport Centre and Park Central.	N	See Investigation/ Mitigation Action on Complaint no. 272. Additional noise barrier was erected around the said air compressor. Details should be referred to CIR-N41.	Closed
281	15th January 2019	Noise	High frequency machine noise nuisance involving air compressor from the construction site near Chui Ling Road roundabout and Tiu Keng Leng Sport Centre in day time.	N	See Investigation/ Mitigation Action on Complaint no. 272. Additional noise barrier was erected around the said air compressor. Details should be referred to CIR-N41.	Closed
280	14th January 2019	Noise	High frequency machine noise nuisance involving air compressor from the construction site near Chui Ling Road roundabout and Tiu Keng Leng Sport Centre in day time.	N	See Investigation/ Mitigation Action on Complaint no. 272. Details should be referred to CIR-N41.	Closed
279	14th January 2019	Noise	High frequency machine noise nuisance involving air compressor from the construction site near Tiu Keng Leng Sport Centre in day time Saturday and Holiday (Sunday).	N	See Investigation/ Mitigation Action on Complaint no. 272. Details should be referred to CIR-N41.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
278	12th January 2019	Noise	High frequency machine noise nuisance involving air compressor from the construction site between Tiu Keng Leng Sport Centre and Park Central in day time	Y	See Investigation/ Mitigation Action on Complaint no. 272. Details should be referred to CIR-N41.	Closed
277	12th January 2019	Noise	Complained about the noise from breaking activities.	N	See investigation/ Mitigation Action on Complaint no. 264. Details should be referred to N39.	Closed
276	11th - 12th January 2019	Noise	Complained about the construction noise from Tunnel Works	Y	The complaints are considered as project-related. The following recommendations were made to further enhance the mitigation measures: <input type="checkbox"/> Frequent checking and repair the gaps or broken acoustic sheets; <input type="checkbox"/> Replace any broken SilentMat for wrapping the breaker head; <input type="checkbox"/> To adopt Cantilever noise barriers at Lam Tin Interchange to screen noise effectively; <input type="checkbox"/> The deployment of Cantilever noise barrier <input type="checkbox"/> To continue to strictly follow the requirements in the relevant CNP. <input type="checkbox"/> To conduct an ad hoc ground-borne noise monitoring with the coordination of the Engineer <input type="checkbox"/> Engineer should monitor the plant and machine to ensure construction activities are in compliance of CNP. Details can be referred to CIR-N40.	Closed
275	11th January 2019	Noise	Complained about the construction noise from a crane near footbridge between Tiu Keng Leng Sport Centre and Park Central	Y	See Investigation/ Mitigation Action on Complaint no. 272.	Closed
274 (EPD-N08/RE/000012 34-19)	11th January 2019	Noise	Complaint about the high frequency machine noise nuisance from the construction site of footbridge between Tiu Keng Leng Sport Centre and park Central.	Y	No high-frequency noise was detected near the complaint location, however, the noise similar to description was detected within the renovation works inside Park Central. Details should be referred to complaint no. 272 and CIR-N41.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
273	10th January 2019	Noise	Complained about the construction noise from Tunnel Works	Y	<p>The complaints are considered as project-related.</p> <p>The following recommendations were made to further enhance the mitigation measures:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Frequent checking and repair the gaps or broken acoustic sheets; <input type="checkbox"/> Replace any broken SilentMat for wrapping the breaker head; <input type="checkbox"/> To adopt Cantilever noise barriers at Lam Tin Interchange to screen noise effectively; <input type="checkbox"/> The deployment of Cantilever noise barrier <input type="checkbox"/> To continue to strictly follow the requirements in the relevant CNP. <input type="checkbox"/> To conduct an ad hoc ground-borne noise monitoring with the coordination of the Engineer <input type="checkbox"/> Engineer should monitor the plant and machine to ensure construction activities are in compliance of CNP. 	Closed
272	8th January 2019	Noise	Complaint about the high frequency machine noise nuisance from the construction site near Park Central in day time.	Y	<p>High frequency noise emitted from an air compressor was suspected. Noise barrier was seen erected. Noise barrier using material with higher absorption coefficient such as mineral wool is recommended. Details should be referred to CIR-N41.</p>	Closed
271	8th January 2019	Noise	Complained about the construction noise from Tunnel Works	Y	<p>The complaints are considered as project-related.</p> <p>The following recommendations were made to further enhance the mitigation measures:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Frequent checking and repair the gaps or broken acoustic sheets; <input type="checkbox"/> Replace any broken SilentMat for wrapping the breaker head; <input type="checkbox"/> To adopt Cantilever noise barriers at Lam Tin Interchange to screen noise effectively; <input type="checkbox"/> The deployment of Cantilever noise barrier <input type="checkbox"/> To continue to strictly follow the requirements in the relevant CNP. <input type="checkbox"/> To conduct an ad hoc ground-borne noise monitoring with the coordination of the Engineer <input type="checkbox"/> Engineer should monitor the plant and machine to ensure construction activities are in compliance of CNP. 	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
270 (EPD-K15/RE/000006 91-19)	7th January 2019	Noise & Air Quality	Complained about construction noise & dust (Day & Night-time)	Y	Regular noise monitoring results for day time and night time show full compliance of the noise criteria. Air quality monitoring result in all stations show that no adverse air quality impact has been brought about to the nearby sensitive receivers during the time of complain. During Site audit, damaged acoustic material on the breaker was observed. Watering was provided at during rock breaking to avoid dust generation. The Contractor was reminded to deploy noise barrier to screen the line-of-sight from sensitive receiver.	Closed
269	7th January 2019	Noise	Complained about the night time construction noise near Park Central.	Y	No noticeable high frequency noise was detected from the air compressor and noise barrier was seen erected in the line-of-sight from the NSR to the Air compressor. Refer to CIR-41 for details.	Closed
268	7th January 2019	Noise	Complained about the construction noise at Lam Tin Interchange.	Y	<p>No exceedances were record at the nearest monitoring station. The following recommendation were made to further enhance the mitigation measure:</p> <p>• Frequent checking and repair the gaps or broken acoustic sheets;</p> <p>• Replace any broken Silent Mat for wrapping the breaker head;</p> <p>• To adopt Cantilever noise barriers at Lam Tin Interchange to screen noise effectively;</p> <p>• The deployment of Cantilever noise barrier should screen the line-of-sight from sensitive receiver;</p> <p>• To continue to strictly follow the requirements in the relevant CNP;</p> <p>• To conduct an ad hoc ground-borne noise monitoring with the coordination of the Engineer; and</p> <p>• Engineer should monitor the plant and machine to ensure construction activities are in compliance of CNP.</p>	Closed
267	7th January 2019	Noise	Complained about the construction noise from breaking activities.	Y	Refer to Investigation/ Mitigation Action on Complaint no. 264. Details should be referred to N39.	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
266	7th January 2019	Noise	Complained about the construction noise from breaking activities.	Y	<p>No exceedances were recorded at the nearest monitoring station, however, the approved location for noise monitoring was located at the podium of Ocean Shores. Due to inaccessibility to private unit, it is not possible to perform monitoring at higher floor. ET will keep approaching Ocean Shore Management Office for impact noise monitoring at higher floor. The recommendations for Contractor is as follows:</p> <ul style="list-style-type: none"> · only well-maintained plant on-site and plant should be serviced regularly during the construction program; · Plants known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby noise sensitive receivers; <p>Machines and plants that may be in intermittent use should be shut down between works periods or should be throttled down to minimum.</p>	Closed
265	7th January 2019	Noise	Complained about the construction noise from Tunnel Works	Y	<p>No exceedances were record at the nearest monitoring station. The following recommendation were made to further enhance the mitigation measure:</p> <ul style="list-style-type: none"> • Frequent checking and repair the gaps or broken acoustic sheets; • Replace any broken Silent Mat for wrapping the breaker head; • To adopt Cantilever noise barriers at Lam Tin Interchange to screen noise effectively; • The deployment of Cantilever noise barrier should screen the line-of-sight from sensitive receiver; • To continue to strictly follow the requirements in the relevant CNP; • To conduct an ad hoc ground-borne noise monitoring with the coordination of the Engineer; and • Engineer should monitor the plant and machine to ensure construction activities are in compliance of CNP. 	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
264	2nd January 2019	Noise	Complained about the construction noise from breaking activities.	Y	No noise limit level exceedance was recorded at the noise monitoring stations near ocean shores. The contractor has applied lubricants to the joint of the excavators to dampen the noise emitted from the PMEs. The contractor is recommended to use noise barriers to screen the PMEs from the NSRs as per the Noise mitigation plan.	Closed
263 (EPD-)	1st January 2019	Water	Complained concerning oil leakage/ on the sea surface near the sunken barge at C2 site.	N	Oil leakage happened due to the derrick lighter was submerged to the sea within the cofferdam. As the oil leakage was found outside the cofferdam during site inspection, there was a gap in the cofferdam. The oil leakage was cleaned up and the floating oil absorber has been used to surround the cofferdam by Contractor. The Contractor are reminded to 1) regular check if the site vessels and cofferdam are in good-condition; 2) To regular monitor the operation of any activities in the cofferdam area; 3) To implement the proposed site vessels safety and the emergency responses including clearance measures. Details of the investigation should be referred to CIR-W10.	Closed
262	30 th December 2018	Noise	Complained about the construction noise from tunnel works of Lam Tin Interchange.	Y	Refer to investigation for complaint no. 254	Closed
261	26 th December 2018	Noise	Complained about the construction noise from tunnel works of Lam Tin Interchange.	Y	Refer to investigation for complaint no. 254	Closed
260	26 th December 2018	Noise	Complained about the construction noise of Lam Tin Interchange.	Y	Refer to investigation for complaint no. 254	Closed
259	26 th December 2018	Noise	Complained about the construction noise of Lam Tin Interchange.	Y	Refer to investigation for complaint no. 254	Closed
					There was no major construction works at the concerned area during the time of complaint and confirmed by the Resident Engineer. Steel cable wire for anchoring between barge and pier is considered as a possible noise source. The complaint is considered project related.	

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
258	18 th December 2018	Noise	Complained about the construction noise from the marine works.	Y	<p>Mitigation measures:</p> <p>Cable wire for anchoring between barge and pier has been replaced by rope between 27 Dec and 2 Jan to reduce noise impact. In addition, other good site practices recommended in the "Implementation Schedule of Proposed Mitigation Measures" of EM&A Manual and the approved CNMP of this Contract had been implemented by the Contractor, including the following:</p> <ul style="list-style-type: none"> • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program; • Plants known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby noise sensitive receivers; • Machines and plants that may be in intermittent use should be shut down between works periods or should be throttled down to minimum. 	Closed
257	18 th December 2018	Noise	Complained about the construction noise from the marine works.	Y	There was no major construction works at the concerned area during the time of complaint and confirmed by the Resident Engineer. Steel cable wire for anchoring between barge and pier is considered as a possible noise source. The Contractor has replaced the cable wire for anchoring between barge and pier with ropes between 27 Dec and 2 Jan to reduce noise impact.	Closed
256	17 th December 2018	Noise	Complained about the construction noise from breaking and piling activities	N	<p>No exceedance was recorded in the noise monitoring result. The number of PME operated in LTI was consistent with the proposed Construction Noise mitigation Plan (CNMP)</p> <p>The following recommendations were made for the Contractor to enhance the mitigation measures:</p> <ul style="list-style-type: none"> • To frequently check and repair operating PME if any loosen or worn parts of the equipment to reduce excessive noise disturbance; • Noise barriers should be designed and erected around the noise sources to block the direct line-of-sight from the NSR as per the CNMP; <p>To ensure all erected noise barriers and sound proofing canvases wrapped on PME are intact and in good condition.</p>	Closed
254	16 th December 2018	Noise	Complained about the construction noise from Tunnel Works	Y	• The night-time works were only conducted inside the tunnels with valid CNP. The noise nuisances are not considered as air-borne in nature, but ground-borne noise. 2.17 In order to confirm the possible ground-borne nature of the noise nuisances for complaints summarized in this report, CEDD has engaged the environmental team to conduct ad hoc ground-borne noise monitoring with the coordination of the Engineer. The findings will be provided in a separate report for the ad hoc monitoring.	Closed
253	15 th December 2018	Noise	Complained about the construction noise from Tunnel Works	Y	Refer to the investigation for complaint no. 254	Closed
			Complained about the construction		<p>The number of PMEs operated on site and on-time percentage from 19 to 30 November complied with the CNMP, thus, no violation was identified.</p> <p>Based on the noise and air monitoring results in November 2018, no Limit Level Exceedance was recorded.</p>	

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
252	30 th November 2018	Noise & Air	noise and dust resuspension in Road D4.	Y	Mitigation Measures Ÿ A more effective acoustic barrier was erected between the drill rig and Park Central. Ÿ Frequent water spraying along the Po Yap Road for eight times a day, Stockpile are covered with impervious material to avoid dust resuspension	Closed
251	28 th November 2018	Noise	Complained about the construction noise from the marine works.	Y	The complaint lodged on 25 th November 2018 is considered as non-project related, as no works was conducted on that day. The complaint on 27 th November 2018 is considered project related. The contractor is reminded to 1) frequently check and repair operating PME if any loosen or worn parts of the equipment to reduce excessive noise disturbance; 2) Ensure no further use of PA system for marine works.	Closed
250	26 th November 2018	Noise	Complained about the noise nuisance from the operation of derrick barge on Sunday.	Y	Refer to the investigation for complaint no. 251	Closed
249	25 th November 2018	Noise	Complained about the noise nuisance from the Excavators in LTI on Sunday morning.	Y	Refer to the investigation for complaint no. 251	Closed
248	20 th November 2018	Noise	Complained about the noise nuisance during transfer of material in evening time at LTI	Y	Regular noise monitoring results for restricted and non-restricted hours show full compliance of the noise criteria (night-time noise exceedance is considered non-project related). The contractor is reminded to adopt cantilever noise barriers at Lam Tin Interchange to screen noise effectively by screening the line-of-sight from sensitive receivers	Closed
247	20 th November 2018	Noise	Complained about the noise nuisance from rock dropping during evening time	Y	Refer to the investigation for complaint no. 248	Closed
246	19 th November 2018	Noise	Complained about the noise nuisance from dump truck in evening time	Y	Refer to the investigation for complaint no. 248	Closed
245	8 th November 2018	Noise	Complained about construction noise during night time from LTI	Y	Refer to the investigation for complaint no. 248	Closed
243	8 th November 2018	Noise	Complained about the construction noise during evening time from LTI.	Y	Refer to the investigation for complaint no. 248	Closed
242	7 th November 2018	Noise	Complained about the construction noise and dust nuisance.	Y	Refer to the investigation for complaint no. 248	Closed

Complaint No.	Received Date	Nature	Details of Complaint	Noise Action Level Exceedance	Investigation/ Mitigation Action	Status
241	6 th November 2018	Noise	Complained about the noise nuisance from LTI during evening time	Y	Refer to the investigation for complaint no. 248	Closed
240	6 th November 2018	Noise	Complained about the noise nuisance from LTI during evening time	Y	Refer to the investigation for complaint no. 248	Closed

Appendix O - Cumulative Log for Complaints, Notifications of Summons and Successful Prosecutions
Table O2 - Summary of Cumulative Complaint Log for Tseung Kwan O - Lam Tin Tunnel

Reporting Month/Year	Number of Complaints in Reporting Month	Number of Summons in Reporting Month	Number of Prosecutions in Reporting Month
2016	11	0	0
2017	99	1	0
2018	150	0	1
2019	156	0	0
2020	81	0	0
Jan-21	13	0	0
Feb-21	3	0	0
Total	519	1	1

Table O3 - Cumulative Log for Notifications of Summons

Contract No.	Log Ref.	Date/Location	Subject	Status	Total no. Received in this reporting month	Total no. Received since project commencement
NE/2015/01	--	--	--	--	--	--
NE/2015/02	KTS24138/2017	25 June 2017/ Marine construction site at Junk Bay	Contrary to: Sections 6 (1) (b) and 6 (5), Noise Control Ordinance, Cap.400	The Summon was issued on 22 Dec 2017 First hearing on 29/3/2018	0	1
NE/2015/03	--	--	--	--	--	--
NE/2017/01	--	--	--	--	--	--
NE/2017/02	--	--	--	--	--	--
NE/2017/06	--	--	--	--	--	--

Table O4 - Cumulative Log for Successful Prosecutions

Contract No.	Log Ref.	Date/Location	Subject	Status	Total no. Received in this reporting month	Total no. Received since project commencement
NE/2015/01	--	--	--	--	--	--
NE/2015/02	KTS24138/2017	25 June 2017/ Marine construction site at Junk Bay	Contrary to: Sections 6 (1) (b) and 6 (5), Noise Control Ordinance, Cap.400	Successful prosecution to the subcontractor on 27 June 2018	1	1
NE/2015/03	--	--	--	--	--	--
NE/2017/01	--	--	--	--	--	--
NE/2017/02	--	--	--	--	--	--

**APPENDIX P
WASTE GENERATION IN THE
REPORTING MONTH**



Monthly Summary Waste Flow Table for Feb 2021

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	a.Total Quantity Generated (see Note 8)	b. Hard Rock and Large Broken Concrete	c. Reused in the Contract	d. Reused in Other Projects	e. Disposed as Public Fill	f. Imported Fill	g. Metals (see Note 5)	h. Paper / Cardboard Packaging (see Note 5)	i. Plastics (see Note 3) (see Note 5)	j. Chemical Waste	k. Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
January	11.091	6.430	0.000	6.430	4.661	0.000	0.000	0.000	0.000	0.000	0.239
February	14.149	4.329	0.000	4.329	9.820	0.000	0.000	0.000	0.000	0.000	0.533
March											
April											
May											
June											
Sub-total	25.240	10.759	0.000	10.759	14.481	0.000	0.000	0.000	0.000	0.000	0.772
July											
August											
September											
October											
November											
December											
Total	25.240	10.759	0.000	10.759	14.481	0.000	0.000	0.000	0.000	0.000	0.772

Total inert C&D waste generated = c+d+e

Total inert C&D waste recycled = c+d

% of recycled inert C&D waste = Total C&D waste recycled / Total C&D waste generated

Name of Department: Civil Engineering Development Department

Contract No.: NE/2015/01



- Notes: (1) The performance target are given in PS Clause 6(14)
- (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site
- (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
- (4) The Contractor shall also submit the latest forecast of the amount of C&D materials expected to be generated from the Works, together with a break down of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m³. (PS Clause 1.105(4) refers)
- (5) All recyclable materials, including metals, paper / cardboard packaging, plastics, etc. will be collected by registered collector for recycling.
- (6) Conversion factors for reporting purpose:
in-situ: rock = 2.5 tonnes/m³; soil = 2.0 tonnes/m³
- (7) excavated: rock = 2.0 tonnes/m³; soil = 1.8 tonnes/m³; broken concrete and bitumen = 2.4 tonnes/m³, soil and rock = 1.9 tonnes/m³
- (8) C&D Waste = 0.9 tonnes/m³; bentonite slurry = 2.8 tonnes/m³
Diesel density: 0.8kg/l
Numbers are rounded off to the nearest three decimal places
The "Total Quantity Generated" equals to the sum of "Reuse in the Contract", "Reuse in Other Projects" and "Disposed as Public Fill"

Monthly Summary Waste Flow Table for 2021 Year

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Borken Concrete	Reused in the Contract	Reused in other Projects	Disposal as Public Fill	Imported Fill	Metals	Paper / Cardboard Packaging	Plastics (See note 3)	Chemical Waste	Other, e.g. general refuse
	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000m ³]
Jan	2.66301	0.00000	0.00000	0.00000	2.66301	0.00000	0.00000	0.00000	0.00000	0.00000	0.11320
Feb	0.89033	0.00000	0.00000	0.00000	0.89033	0.00000	0.00000	0.00000	0.00000	0.00000	0.12088
Mar	0.00000										
Apr	0.00000										
May	0.00000										
June	0.00000										
SUB-TOTAL	3.55334	0.00000	0.00000	0.00000	3.55334	0.00000	0.00000	0.00000	0.00000	0.00000	0.23408
Jul	0.00000										
Aug	0.00000										
Sep	0.00000										
Oct	0.00000										
Nov	0.00000										
Dec	0.00000										
TOTAL	3.55334	0.00000	0.00000	0.00000	3.55334	0.00000	0.00000	0.00000	0.00000	0.00000	0.23408

Note: Conversion to 1000m³ for general refuse is weight in 1000kg multiply by 0.002
 Conversion to 1000m³ for Inert C&D is weight in 1000kg multiply by 0.0005
 Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material
 Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material



Monthly Summary of Waste Flow Table for 2020

Name of Person completing the Record: Joshua Tam

Month	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of Non-inert C&D Wastes Generated Monthly				
	Total Quantity Generated	Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
		(see Note 1)						(see Note 2)		
(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000m ³)	
Jan	0.5830	0	0	0	0.5830	0	0	0	0	0.0032
Feb	0.2614	0	0	0	0.2614	0	0	0	0	0.0081
Mar	0.0000	0	0	0	0.0000	0	0	0	0	0
Apr	0.0000	0	0	0	0.0000	0	0	0	0	0
May	0.0000	0	0	0	0.0000	0	0	0	0	0
Jun	0.0000	0	0	0	0.0000	0	0	0	0	0
Sub-total	0.8444	0	0	0	0.8444	0	0	0	0	0.0113
Jul	0.0000	0	0	0	0.0000	0	0	0	0	0
Aug	0.0000	0	0	0	0.0000	0	0	0	0	0
Sep	0.0000	0	0	0	0.0000	0	0	0	0	0
Oct	0.0000	0	0	0	0.0000	0	0	0	0	0
Nov	0.0000	0	0	0	0.0000	0	0	0	0	0
Dec	0.0000	0	0	0	0.0000	0	0	0	0	0
Total	0.8444	0	0	0	0.8444	0	0	0	0	0.0113

Notes:

- (1) Broken concrete for recycling into aggregates.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Use the conversion factor: 1 full load of 24t / 30t dumping truck being equivalent to 6.5m³ / 8.125 m³ by volume.



Monthly Summary Waste Flow Table For 2021

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock & Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Chemical Waste	Others, e.g. General Refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
Jan	0	0	0	0	0	0	0	0	0	0	0.003
Feb	0	0	0	0	0	0	0	0	0	0	0.006
Mar											
Apr											
May											
Jun											
Sub-total	0	0	0	0	0	0	0	0	0	0	0.009
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total											

- Notes:
- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 - (2) Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material.
 - (3) Each dump truck carries 6m³ of general refuse.
 - (4) The commencement date of the Contract is 9 November 2018. The current reporting period is from 1 February 2021 to 28 February 2021.

Monthly Summary Waste Flow Table for 2021

Name of Department: Civil Engineering and Development Department

Contract No.: NE/2017/01

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
Jan	0.0174	0.0000	0.0000	0.0000	0.0174	0.0000	9.0500	0.0000	0.0000	0.0000	0.0107
Feb	0.0492	0.0000	0.0000	0.0000	0.0492	0.0000	0.0000	0.0000	0.0000	0.0000	0.0077
Mar											
Apr											
May											
Jun											
Sub-total	0.0666	0.0000	0.0000	0.0000	0.0666	0.0000	9.0500	0.0000	0.0000	0.0000	0.0184
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	0.0666	0.0000	0.0000	0.0000	0.0666	0.0000	9.0500	0.0000	0.0000	0.0000	0.0184

- Notes:
1. Assume the density of soil fill is 2 ton/m³.
 2. Assume the density of rock and broken concrete is 2.5 ton/m³.
 3. Assume the density of mixed rock and soil is 1.9 ton/m³.
 4. Assume the density of slurry and bentonite is 2.8 ton/m³.
 5. The slurry and bentonite are disposed at Tseung Kwan O Area 137 Fill Bank.
 6. Assume the density of C&D waste is 0.9 ton/m³.
 7. The non-inert C&D wastes are disposed at NENT.

**APPENDIX Q
TENTATIVE CONSTRUCTION
PROGRAMME**

High Level 3 Months Look Ahead Programme

Activities	Mar-21	Apr-21	May-21
Lam Tin Interchange			
EHC2 U-Trough			
Site Formation - Area 1G1 & 1G2 &5			
Site Formation - Area 2			
Site Formation - Slope Stabilisation			
Site Formation - Retaining Wall			
Administration Building			
West Ventilation Building			
Bridge Construction			
Stormwater Tank Construction			
S01_2, EHC1 & 4 Construction			
CKLR Underground Utilities			
Landscape Deck			
Tunnel			
Main Tunnel Lining Works			
S02_2 Excavation & Lining			
TKO Interchange			
Bridge Construction			
East Ventilation Building			

Calendar	Activity ID	Activity Name	Original Duration	Remaining Dur	Start	Finish	Total Float	Activity % Complete	Variance - Act	Duration	2021	Feb	Mar	Apr	May	Jun
NE/2015/02 Tseung Kwan O - Lam Tin Tunnel-Road P2 and Associated Works (Feb-21)																
Project Commencement and Completion																
P2-Cal.A	K10020	Project Completion Date	0.0	0.0	20-Feb-21	20-Feb-21	-15.0	0%	0.0							
Revised Contract Key Date and Section Completion of Works under CE57,124,135,																
P2-Cal.A	K10406	Key Date 3_Portion IV, V, .VI, VIII and IX Road P2, Slip Roads and E&M Works	0.0	0.0	20-Feb-21	20-Feb-21	-9.5	0%	0.0							
Possible Contract Key Date & Section Completion of the Works under CE154, 159,																
P2-Cal.A	K10419-13	Key Date 3_Portion IV, V, .VI, VIII and IX Road P2, Slip Roads and E&M Works	0.0	0.0	18-Mar-21	18-Mar-21	0.0	0%	0.0							
Area Handover Date																
P2-Cal.A	A10640	Area B	0.0	0.0	20-Feb-21	20-Feb-21	-50.0	0%	0.0							
P2-Cal.A	A10730	Zone 2 of Area Y (Additional Works Area)	0.0	0.0	20-Feb-21	20-Feb-21	-50.0	0%	0.0							
P2-Cal.A	A10740	Area Z (Additional Works Area)	0.0	0.0	20-Feb-21	20-Feb-21	-145.0	0%	0.0							
P2-Cal.A	A10660	Area C	0.0	0.0	01-Mar-21	01-Mar-21	0.0	0%	0.0							
PMI																
P2-Cal.C	B42450	PMI No. 216: TCSS Cable Tray Behind the VE Panel at S200 CH821 to Road P2 CH105	0.0	0.0	20-Feb-21	20-Feb-21	673.0	0%	0.0							
Preliminaries, Submission, Contractor's Design Submission and Approval																
Contractor's Design Submission and Acceptance																
E&M Design																
Detail Design for E&M Works (Tunnel and associated)																
MVAC Detail Design																
Underpass																
P2-Cal.A	S11640-20	Resubmission of Detailed Design	21.0	21.0	04-Dec-20	12-Mar-21	-273.5	0%	-78.0							
P2-Cal.A	S11640-23	Acceptance of Details Design by Supervisor	14.0	14.0	13-Mar-21	26-Mar-21	-273.5	0%	0.0							
FS Detail Design																
Underpass and Plant Room																
P2-Cal.A	S11651-51	Acceptance of Details Design by Supervisor	4.0	4.0	10-Feb-21	26-Feb-21	-173.5	0%	-3.0							
Plumbing and Drainage Detail Design																
Underpass and Plant Room																
P2-Cal.A	S11658-08	Re-submission of Detail Design	21.0	14.0	19-Dec-20	05-Mar-21	-137.5	33.33%	-56.0							
P2-Cal.A	S11659	Accept detail design by the Supervisor	14.0	14.0	06-Mar-21	19-Mar-21	-137.5	0%	0.0							
Electrical Detail Design																
Underpass Lighting																
P2-Cal.A	S11660-80	Acceptance of Detail Design	14.0	7.0	10-Feb-21	26-Feb-21	-277.5	50%	-7.0							
External Road Lighting																
P2-Cal.A	S11660-79	Acceptance of Detail Design by Supervisor	21.0	7.0	15-Dec-20	26-Feb-21	-277.5	66.67%	-53.0							
Plantroom																
P2-Cal.C	S11667-03	Re-submission of Detail Design	7.0	6.0	19-Dec-20	26-Feb-21	-238.5	14.29%	-47.0							
P2-Cal.A	S11668	Accept detail design by the Supervisor	13.0	13.0	27-Feb-21	11-Mar-21	-290.5	0%	0.0							
LED Design																
			59.0	63.0	10-Feb-21	23-Apr-21	-285.5		-3.0							

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NE/2015/02 Tseung Kwan O - Lam Tin Tunnel-Road P2 and Associated Works (Feb-21)

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										Feb	Mar	Apr	May	Jun	
P2-Cal.A	S11693	Review and Comment by Supervisor	14.0	7.0	10-Feb-21	26-Feb-21	-285.5	50%	-3.0	Review and Comment by Supervisor					
P2-Cal.A	S11703	Prepare and Submit Revised LED Lighting Design Report	14.0	14.0	27-Feb-21	12-Mar-21	-285.5	0%	0.0	Prepare and Submit Revised LED Lighting Design Report					
P2-Cal.A	S11713	Review and Acceptance of LED Lighting Design Report by PM	21.0	21.0	13-Mar-21	02-Apr-21	-285.5	0%	0.0	Review and Acceptance of LED Lighting Design Report by PM					
P2-Cal.A	S11723	Review and Acceptance of LED Lighting Design Report by EMSD	21.0	21.0	03-Apr-21	23-Apr-21	-285.5	0%	0.0	Review and Acceptance of LED Lighting Design Report by EMSD					
Sign Gantry and Road Signage			61.0	61.0	19-Jan-21	07-May-21	-237.5		-86.0						
P2-Cal.A	S10870	Review of Sign Gantry Shop Drawings	5.0	12.0	19-Jan-21	03-Mar-21	-289.5	0%	-44.0	Review of Sign Gantry Shop Drawings					
P2-Cal.C	S10890	Prepare and re-submit Sign Gantry Shop Drawings according to revised design	30.0	30.0	04-Mar-21	12-Apr-21	-237.5	0%	-30.0	Prepare and re-submit Sign Gantry Shop Drawings according to revised design					
P2-Cal.C	S10910	Review and Acceptance of Sign Gantry Shop Drawings	21.0	21.0	13-Apr-21	07-May-21	-237.5	0%	-21.0	Review and Acceptance of Sign Gantry Shop Drawing					
Design of Architectural Finishes for Internal Walls of U-Trough Structures			37.0	18.0	21-Dec-20	09-Mar-21	-264.5		-42.0						
P2-Cal.A	S11750	Review and Accept Design of Architectural Finishes for Internal Walls of U-Trough Structures (VE and PC Panel) (Rev.B)	37.0	18.0	21-Dec-20	09-Mar-21	-264.5	51.35%	-42.0	Review and Accept Design of Architectural Finishes for Internal Walls of U-Trough Structures (VE and PC Panel) (Rev.B)					
FS System & Cleansing System			93.0	93.0	20-Feb-21	23-May-21	-218.5		0.0						
P2-Cal.A	S11788	Prepare & Submission of Form 542 and plumbing proposal for Project Manager's review	30.0	30.0	20-Feb-21	21-Mar-21	-218.5	0%	0.0	Prepare & Submission of Form 542 and plumbing proposal for Project Manager's review					
P2-Cal.A	S11789	Reviewed by WSD	28.0	28.0	22-Mar-21	18-Apr-21	-218.5	0%	0.0	Reviewed by WSD					
P2-Cal.A	S11790	Formal Submission to Supervisor /Submission of Form WWO46 Part I/II	14.0	14.0	19-Apr-21	02-May-21	-218.5	0%	0.0	Formal Submission to Supervisor /Submission of Form WWO46 Part I/II					
P2-Cal.A	S11800	Review and Accept Submission and associated elements	21.0	21.0	03-May-21	23-May-21	-218.5	0%	0.0	Review and Accept Submission and associated elements					
Major Construction Works Method Statement			74.0	74.0	20-Feb-21	04-May-21	-301.5		0.0						
Construction of U-Troughs structure (P2 CH363-411)			74.0	74.0	20-Feb-21	04-May-21	-301.5		0.0						
P2-Cal.A	S14130	Prepare and Submit Method Statement for Construction of U-Troughs Structure (P2 CH363-411)	18.0	18.0	20-Feb-21	09-Mar-21	-301.5	0%	0.0	Prepare and Submit Method Statement for Construction of U-Troughs Structure (P2 CH363-411)					
P2-Cal.A	S14132	Review and Discuss Method Statement for Construction of U-Troughs Structure (P2 CH363-411)	21.0	21.0	10-Mar-21	30-Mar-21	-301.5	0%	0.0	Review and Discuss Method Statement for Construction of U-Troughs Structure (P2 CH363-411)					
P2-Cal.A	S14134	Resubmit Method Statement for Construction of U-Troughs Structure (P2 CH363-411)	14.0	14.0	31-Mar-21	13-Apr-21	-301.5	0%	0.0	Resubmit Method Statement for Construction of U-Troughs Structure (P2 CH363-411)					
P2-Cal.A	S14136	Accept Method Statement for Construction of U-Troughs Structure (P2 CH363-411)	21.0	21.0	14-Apr-21	04-May-21	-301.5	0%	0.0	Accept Method Statement for Construction of U-Troughs Structure (P2 CH363-411)					
Procurement of Major Material			1780.0	288.0	20-Jan-17	04-Dec-21	-264.5		-41.0						
Civil/Structural			1749.0	257.0	20-Jan-17	03-Nov-21	-293.5		-68.0						
P2-Cal.A	S14983	Procurement and Delivery of ELS Walling & Struts Members	1015.0	14.0	20-Jan-17	05-Mar-21	-392.5	98.62%	-491.0	Procurement and Delivery of ELS Walling & Struts Members					
P2-Cal.A	S14987	Cast-in for sign gantry and Road Works	120.0	120.0	20-Feb-21	19-Jun-21	-156.5	0%	0.0	Cast-in for sign gantry and Road Works					
P2-Cal.A	S14997	Offsite Fabrication of Steel Works for the Sign Gantry	180.0	180.0	08-May-21*	03-Nov-21	-293.5	0%	0.0	Offsite Fabrication of Steel Works for the Sign Gantry					
Architectural			270.0	270.0	10-Mar-21	04-Dec-21	-264.5		0.0						
P2-Cal.A	S15142	Trial Panels for V-Panel / Precast Concrete Panel	60.0	60.0	10-Mar-21	08-May-21	-264.5	0%	0.0	Trial Panels for V-Panel / Precast Concrete Panel					
P2-Cal.A	S15142-02	Manufacturing of Precast Concrete Panel	170.0	170.0	21-Apr-21	07-Oct-21	-206.5	0%	0.0	Manufacturing of Precast Concrete Panel					
P2-Cal.A	S15142-01	Manufacturing of VE Panel	210.0	210.0	09-May-21	04-Dec-21	-264.5	0%	0.0	Manufacturing of VE Panel					
E&M			336.0	178.0	15-Sep-20	16-Aug-21	-255.5		0.0						
P2-Cal.A	S15180	Procurement and Delivery of ELV Equipment (SCADA and ELV)	48.0	48.0	20-Feb-21	08-Apr-21	-146.5	0%	0.0	Procurement and Delivery of ELV Equipment (SCADA and ELV)					
P2-Cal.A	S15148	Procurement and Delivery of P/D Equipment	280.0	32.0	15-Sep-20	20-Apr-21	-137.5	88.57%	62.0	Procurement and Delivery of P/D Equipment					
P2-Cal.A	S15146	Procurement and Delivery of FS Equipment	59.0	59.0	27-Feb-21	26-Apr-21	-173.5	0%	0.0	Procurement and Delivery of FS Equipment					
P2-Cal.A	S15144	Procurement and Delivery of MVAC Plant	131.0	131.0	27-Mar-21	04-Aug-21	-273.5	0%	49.0	Procurement and Delivery of MVAC Plant					
P2-Cal.A	S15150	Procurement and Delivery of EL Equipment	152.0	152.0	12-Mar-21	10-Aug-21	-290.5	0%	0.0	Procurement and Delivery of EL Equipment					
P2-Cal.A	S15190	Procurement and Delivery of LED Lighting	115.0	115.0	24-Apr-21	16-Aug-21	-285.5	0%	20.0	Procurement and Delivery of LED Lighting					
Section 2 of the Works (All Works Within Portion II)			398.0	90.0	07-Feb-20	11-Jun-21	-6.5		-31.0						

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											Feb	Mar	Apr	May	Jun	
Roadworks																
SR1 CH0.00 to P2 CH650																
P2-Cal.C	LC12104	Construction of Road Kerb/Sign Post	14.0	10.0	10-Jun-20 A	03-Mar-21	59.5	28.57%	-204.0		Construction of Road Kerb/Sign Post					
P2-Cal.C	LC12124	Installation of Type II Railing/ Granite Stone Facing	21.0	14.0	02-Dec-20 A	19-Mar-21	59.5	33.33%	-66.0		Installation of Type II Railing/ Granite Stone Facing					
Adjacent to site office (SMH SR05 & SR06)																
P2-Cal.C	LC12132	Acceptance of Quotation PMI177 (PMI249)	60.0	6.0	07-Feb-20 A	26-Feb-21	-71.5	90%	-254.0		Acceptance of Quotation PMI177 (PMI249)					
P2-Cal.C	LC12134	Review and Approval of ELS	16.0	16.0	13-Feb-20 A	10-Mar-21	-81.5	0%	-303.0		Review and Approval of ELS					
P2-Cal.C	LC12144	Construction of ELS for SMH-SR06	12.0	12.0	11-Mar-21	24-Mar-21	-81.5	0%	0.0		Construction of ELS for SMH-SR06					
P2-Cal.C	LC12154	Construction of SMH-SR06 and Backfilling	26.0	26.0	25-Mar-21	28-Apr-21	-81.5	0%	0.0		Construction of SMH-SR06 and Backfilling					
P2-Cal.C	LC12164	Construction of ELS for SMH-SR07	12.0	12.0	29-Apr-21	13-May-21	-81.5	0%	0.0		Construction of ELS for SMH-SR07					
P2-Cal.C	LC12174	Construction of SMH-SR07and Backfilling	24.0	24.0	14-May-21	11-Jun-21	-81.5	0%	0.0		Construct					
Section 3 of the Works All Works within Portion IV, V, VI, VII,VIII, and IX																
Existing Land Section																
Retaining Wall P2-A CH 500- 650																
P2-Cal.C	LC11933	Slope Works (Slope P)	45.0	12.0	20-Sep-19 A	05-Mar-21	661.0	73.33%	-387.0		Slope Works (Slope P)					
P2-Cal.C	LC12003	Utility Works	30.0	30.0	20-Feb-21	26-Mar-21	-65.5	0%	0.0		Utility Works					
P2-Cal.C	LC12013	Road Works at Tong Yin Street	30.0	30.0	27-Mar-21	06-May-21	-65.5	0%	0.0		Road Works at Tong Yin Street					
P2 Road																
P2 CH 318 - 363																
Structure P2 CH 318 - 363 & SR2 CH100-110 (U Trough B)																
Bay 1																
P2-Cal.C	LC13410	Construction of insitu Concrete Profile Barrier (2moulds) (NCE193 & NCE219)	81.0	81.0	20-Feb-21	01-Jun-21	-89.5	0%	0.0		Construction of insitu					
P2 CH 363 - 411																
ELS P2 CH 363 - 411																
P2-Cal.C	LC13970	Preboring Works for Sheet Piles	95.0	27.0	26-Nov-20 A	23-Mar-21	-316.5	71.58%	0.0		Preboring Works for Sheet Piles					
P2-Cal.C	LC15020	Installation of Sheet Pile Wall	20.0	20.0	12-Mar-21	08-Apr-21	-316.5	0%	0.0		Installation of Sheet Pile Wall					
P2-Cal.C	LC15025	Installation of King Post	10.0	10.0	24-Mar-21	08-Apr-21	-316.5	0%	0.0		Installation of King Post					
P2-Cal.C	LC15045	Ground Improvement Works	7.0	7.0	27-Mar-21	08-Apr-21	-316.5	0%	0.0		Ground Improvement Works					
P2-Cal.C	LC15200	Installation of Dewatering Well	7.0	7.0	09-Apr-21	16-Apr-21	-316.5	0%	0.0		Installation of Dewatering Well					
P2-Cal.C	LC15210	Pumping Test	7.0	7.0	17-Apr-21	24-Apr-21	-316.5	0%	0.0		Pumping Test					
P2-Cal.C	LC15220	Excavation to +2.8mPD (4608m3)	7.0	7.0	26-Apr-21	04-May-21	-316.5	0%	0.0		Excavation to +2.8mPD (4608m3)					
P2-Cal.C	LC15280	Installation of 1st Layer Strut/ Waler at +3.8mPD	10.0	10.0	05-May-21	15-May-21	-316.5	0%	0.0		Installation of 1st Layer Strut/ Waler at +3.8mPD					
P2-Cal.C	LC15290	Excavate to +1.0mPD (1296m3)	5.0	5.0	17-May-21	22-May-21	-316.5	0%	0.0		Excavate to +1.0mPD (1296m3)					
SR2																
SR2 CH110 - 170																
ELS																
P2-Cal.C	LC16010	Pre-boring Works for Sheet Piles	95.0	27.0	26-Nov-20 A	23-Mar-21	-288.5	71.58%	0.0		Pre-boring Works for Sheet Piles					
P2-Cal.C	LC16130	Installation of Sheetpile Wall	20.0	20.0	12-Mar-21	08-Apr-21	-288.5	0%	0.0		Installation of Sheetpile Wall					

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P2-Cal.C	LC16140	Installation of Dewatering Well	7.0	7.0	09-Apr-21	16-Apr-21	-288.5	0%	0.0				Installation of Dewatering Well		
P2-Cal.C	LC16150	Pumping Test	7.0	7.0	17-Apr-21	24-Apr-21	-288.5	0%	0.0				Pumping Test		
P2-Cal.C	LC16160	Excavate to +3.6mPD (1927m3)	5.0	5.0	26-Apr-21	30-Apr-21	-288.5	0%	0.0				Excavate to +3.6mPD (1927m3)		
P2-Cal.C	LC16170	Installation of 1st layer struts @ +4.6mPD	10.0	10.0	03-May-21	13-May-21	-288.5	0%	0.0				Installation of 1st layer struts @ +4.6mPD		
P2-Cal.C	LC16180	Excavate to +0.6mPD (2412m3)	5.0	5.0	14-May-21	20-May-21	-288.5	0%	0.0				Excavate to +0.6mPD (2412m3)		
SR2 CH170 - 250			40.0	5.0	28-Feb-19 A	17-Jul-21	-135.5		-665.0						
Structure SR2 CH 170 - 250 (U Trough A)			40.0	5.0	28-Feb-19 A	17-Jul-21	-135.5		-665.0						
P2-Cal.C	LC17510	Waterproofing, Backfilling and Remove sheetpile	40.0	5.0	28-Feb-19 A	17-Jul-21	-135.5	87.5%	-665.0						
Road and Drainage & Utilities Works (P2 CH318 - 650 & SR2 CH100 - 310)			368.0	236.0	06-Apr-18 A	14-Apr-22	-257.5		-827.0						
P2-Cal.C	LC17590	Road and Drainage & Utilities Works (SR2 CH100 - 250)	300.0	200.0	28-Jun-18 A	02-Mar-22	-221.5	33.33%	-791.0						
P2-Cal.C	LC17560	Road and Drainage & Utilities Works (P2 CH318 - 500)	300.0	200.0	06-Apr-18 A	14-Apr-22	-257.5	33.33%	-895.0						
TKO Town Centre South Reinstatement (PS Cl. 1.45)			68.0	68.0	02-Mar-21	26-May-21	-144.5		0.0						
P2-Cal.C	LC17720	TTA application of road works (After handover of Area C)	35.0	35.0	02-Mar-21	15-Apr-21	-144.5	0%	0.0				TTA application of road works (After handover of Area C)		
P2-Cal.C	LC17721	TTA Implementation	3.0	3.0	16-Apr-21	19-Apr-21	-144.5	0%	0.0				TTA Implementation		
P2-Cal.C	LC17722	Reinstatement of existing footpath	30.0	30.0	20-Apr-21	26-May-21	-144.5	0%	0.0				Reinstatement of existing footpath		
New Reclaimed Section			499.0	313.0	16-Nov-19 A	11-Mar-22	-229.5		-188.0						
Marine Works			182.0	11.0	03-Jan-20 A	04-Mar-21	72.5		-164.0						
Concrete Coping			67.0	11.0	27-Apr-20 A	04-Mar-21	72.5		-188.0						
Eastern Seawall			32.0	2.0	09-Jun-20 A	22-Feb-21	81.5		-179.0						
P2-Cal.C	MC13495	Coping Area 5 (CH500S) (146m)	32.0	2.0	09-Jun-20 A	22-Feb-21	81.5	93.75%	-179.0				Coping Area 5 (CH500S) (146m)		
Western Seawall			61.0	10.0	27-Apr-20 A	04-Mar-21	-16.5		-194.0						
P2-Cal.C	MC13595	Coping Area 6 (CH440-471W) (31m)	4.0	3.0	06-Jul-20 A	24-Feb-21	-16.5	25%	-187.0				Coping Area 6 (CH440-471W) (31m)		
P2-Cal.C	MC13575	Coping Area 5 (CH371-440W) (89m)	12.0	4.0	02-May-20 A	01-Mar-21	-16.5	66.67%	-237.0				Coping Area 5 (CH371-440W) (89m)		
P2-Cal.C	MC13555	Coping Area 4 (CH271-371W) (100m)	15.0	3.0	27-Apr-20 A	04-Mar-21	-16.5	80%	-240.0				Coping Area 4 (CH271-371W) (100m)		
Armour Protection			182.0	3.0	03-Jan-20 A	23-Feb-21	22.5		-156.0						
Laying of Armour Rock (West)			133.0	3.0	03-Jan-20 A	23-Feb-21	-11.5		-205.0						
P2-Cal.C	MC13755	Armour CH440-500 (4735m3)	15.0	1.0	11-May-20 A	20-Feb-21	-16.5	93.33%	-220.0				Armour CH440-500 (4735m3)		
P2-Cal.C	MC13735	Armour CH375-440 (4882m3)	15.0	1.0	15-May-20 A	20-Feb-21	-14.5	93.33%	-216.0				Armour CH375-440 (4882m3)		
P2-Cal.C	MC13715	Armour CH311-375 (4767m3)	7.0	1.0	22-May-20 A	22-Feb-21	-14.5	85.71%	-219.0				Armour CH311-375 (4767m3)		
P2-Cal.C	MC13695	Armour CH271-311 (1833m3)	8.0	1.0	03-Jan-20 A	23-Feb-21	-11.5	87.5%	-330.0				Armour CH271-311 (1833m3)		
Laying of Armour Rock (East)			156.0	3.0	13-Jan-20 A	23-Feb-21	22.5		-174.0						
P2-Cal.C	MC13955	Armour CH375-440 (4882m3)	12.0	1.0	14-Mar-20 A	20-Feb-21	24.5	91.67%	-266.0				Armour CH375-440 (4882m3)		
P2-Cal.C	MC13935	Armour CH300-375 (4767m3)	12.0	1.0	06-Feb-20 A	20-Feb-21	17.5	91.67%	-298.0				Armour CH300-375 (4767m3)		
P2-Cal.C	MC13915	Armour CH250-300 (3181m3)	10.0	1.0	13-Jan-20 A	22-Feb-21	17.5	90%	-319.0				Armour CH250-300 (3181m3)		
P2-Cal.C	MC13895	Armour CH190-250 (2310m3)	9.0	1.0	13-Aug-20 A	23-Feb-21	17.5	88.89%	-149.0				Armour CH190-250 (2310m3)		
Land Works			499.0	313.0	16-Nov-19 A	11-Mar-22	-229.5		-188.0						
Road P2 Underpass (CH105-CH318)			499.0	313.0	16-Nov-19 A	11-Mar-22	-229.5		-188.0						
Instrumentation and Monitoring for Road P2 Structure Construction			460.0	313.0	16-Nov-19 A	11-Mar-22	-229.5		-226.0						

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P2-Cal.C	LC17760	Monitoring of Instrumentation	460.0	313.0	16-Nov-19	11-Mar-22	-229.5	31.96%	-226.0								
Underpass																	
Underpass P2 CH 105 - 318																	
Foundation (On Top Surcharge)																	
P2-Cal.C	LC17823-1	Installation of Sokceted H-pile (6 nos) for Electrical Plant Room Drilling to FL - 3d/nos	9.0	9.0	13-Apr-21	22-Apr-21	-211.5	0%	0.0								
P2-Cal.C	LC17825-1	Installation of Sokceted H-pile (6 nos) for Electrical Plant Room Grouting - 2d/nos	6.0	6.0	23-Apr-21	29-Apr-21	-211.5	0%	0.0								
P2-Cal.C	LC17840-01	Loading Test for Pre-bored Socketed H-Pile for Electrical Plant Room	10.0	10.0	30-Apr-21	12-May-21	-211.5	0%	0.0								
ELS																	
P2 CH105-223			19.0	1.0	30-Dec-20	20-Feb-21	-273.5		-23.0								
P2-Cal.C	LC30090-1	Excavate and construct vertical blinding for sunken slabs at P2 CH132-CH223 (CE089)	19.0	1.0	30-Dec-20	20-Feb-21	-273.5	94.74%	-23.0								
Base Slab (Team 1 to 4)																	
P2-Cal.C	LC18110	Construction of base slab - bay 2 (Team 1) (with sunken slab under CE089)	11.0	8.0	16-Jan-21	01-Mar-21	-280.5	27.27%	-24.0								
P2-Cal.C	LC18070	Construction of base slab - bay 12 (Team 4) (with sunken slab under CE089)	14.0	7.0	16-Jan-21	01-Mar-21	-268.5	50%	-21.0								
P2-Cal.C	LC18085	Construction of base slab - bay 10 (Team 3) (with sunken slab under CE089)	14.0	12.0	16-Jan-21	06-Mar-21	-273.5	14.29%	-26.0								
P2-Cal.C	LC18115-01	Mass Concrete fill (Bay 1 & 3) + backfilling from -7.4~-5.8mPD to -5.5~-4.9mPD (7Layer, 1D/layer)	9.0	9.0	02-Mar-21	11-Mar-21	-280.5	0%	0.0								
P2-Cal.C	LC18115-11	Mass Concrete fill (Bay 2 & 4) + backfilling from -7.5~-6.4mPD to -5.5~-4.9mPD (7Layer, 1D/layer)	9.0	9.0	02-Mar-21	11-Mar-21	-270.5	0%	0.0								
P2-Cal.C	LC18120-01	Mass Concrete Fill (Bay 10 & 12) + Backfilling from -7.5mPD to -5.8mPD (6 Layers, 1D/Layer)	8.0	8.0	08-Mar-21	16-Mar-21	-257.5	0%	0.0								
P2-Cal.C	LC18065	Construction of base slab - bay 14 (Team 4) (with sunken slab under CE089)	14.0	14.0	02-Mar-21	17-Mar-21	-268.5	0%	0.0								
P2-Cal.C	LC18115-06	Removal of 3rd water/strut @ -4.5 ~ -3.6mPD for Bay 1 & 3	6.0	6.0	12-Mar-21	18-Mar-21	-280.5	0%	0.0								
P2-Cal.C	LC18115-16	Removal of 3rd water/strut @ -4.5 ~ -3.6mPD for Bay 2 & 4	6.0	6.0	12-Mar-21	18-Mar-21	-270.5	0%	0.0								
P2-Cal.C	LC18090	Construction of base slab - bay 7 (Team 3) (with sunken slab under CE089)	14.0	14.0	08-Mar-21	23-Mar-21	-273.5	0%	0.0								
P2-Cal.C	LC18120-06	Removal of 3rd Struts @ -4.5mPD for Bay 10 & 12	6.0	6.0	17-Mar-21	23-Mar-21	-253.5	0%	0.0								
P2-Cal.C	LC18120-11	Mass Concrete Fill (Bay 7 & 14) + Backfilling from -7.5mPD to -5.8mPD (6 Layers, 1D/Layer)	8.0	8.0	24-Mar-21	01-Apr-21	-263.5	0%	0.0								
P2-Cal.C	LC18060	Construction of base slab - bay 13 (Team 4) (with sunken slab under CE089)	14.0	14.0	18-Mar-21	07-Apr-21	-268.5	0%	0.0								
P2-Cal.C	LC18080	Construction of base slab - bay 8 (Team 3) (with sunken slab under CE089)	14.0	14.0	24-Mar-21	13-Apr-21	-273.5	0%	0.0								
P2-Cal.C	LC18120-16	Removal of 3rd Struts @ -4.5mPD for Bay 7 & 14	6.0	6.0	07-Apr-21	13-Apr-21	-261.5	0%	0.0								
P2-Cal.C	LC18120-21	Mass Concrete Fill (Bay 8 & 13) + Backfilling from -7.7mPD to -5.8mPD (6 Layers, 1D/Layer)	8.0	8.0	14-Apr-21	22-Apr-21	-269.5	0%	0.0								
P2-Cal.C	LC18055	Construction of base slab - bay 11 (Team 4) (with sunken slab under CE089)	14.0	14.0	08-Apr-21	23-Apr-21	-268.5	0%	0.0								
P2-Cal.C	LC18075	Construction of base slab - bay 9 (Team 3) (with sunken slab under CE089)	14.0	14.0	14-Apr-21	29-Apr-21	-273.5	0%	0.0								
P2-Cal.C	LC18120-26	Removal of 3rd Struts @ -4.5mPD for Bay 8 & 13	6.0	6.0	23-Apr-21	29-Apr-21	-269.5	0%	0.0								
P2-Cal.C	LC18120-31	Mass Concrete Fill (Bay 9 & 11) + Backfilling from -7.7mPD to -5.8mPD (6 Layers, 1D/Layer)	8.0	8.0	30-Apr-21	10-May-21	-273.5	0%	0.0								
P2-Cal.C	LC18120-36	Removal of 3rd Struts @ -4.5~-3.5mPD for Bay 9 & 11	6.0	6.0	11-May-21	17-May-21	-273.5	0%	0.0								
1st Wall (Team 1 to 6)																	
P2-Cal.C	LC18192	Construction of pour wall (1st East, West and Mid interim level -2.2mPD) - bay 1 (Team 1)	10.0	10.0	19-Mar-21	30-Mar-21	-280.5	0%	0.0								
P2-Cal.C	LC18185	Construction of pour wall (1st East, West and Mid interim level -2.2mPD) - bay 3 (Team 2)	10.0	10.0	19-Mar-21	30-Mar-21	-280.5	0%	0.0								
P2-Cal.C	LC18198-01	Waterproofing and Backfilling from -5.8~-4.9mPD to -3.8~-2.8mPD for Bay 1 & 3 (7 layers, 1D/layer)	9.0	9.0	31-Mar-21	14-Apr-21	-280.5	0%	0.0								
P2-Cal.C	LC18180	Construction of pour wall (1st East, West and Mid interim level -2.2mPD) - bay 4 (Team 2)	10.0	10.0	31-Mar-21	15-Apr-21	-280.5	0%	0.0								
P2-Cal.C	LC18190	Construction of pour wall (1st East, West and Mid interim level -2.2mPD) - bay 2 (Team 1)	10.0	10.0	31-Mar-21	15-Apr-21	-280.5	0%	0.0								

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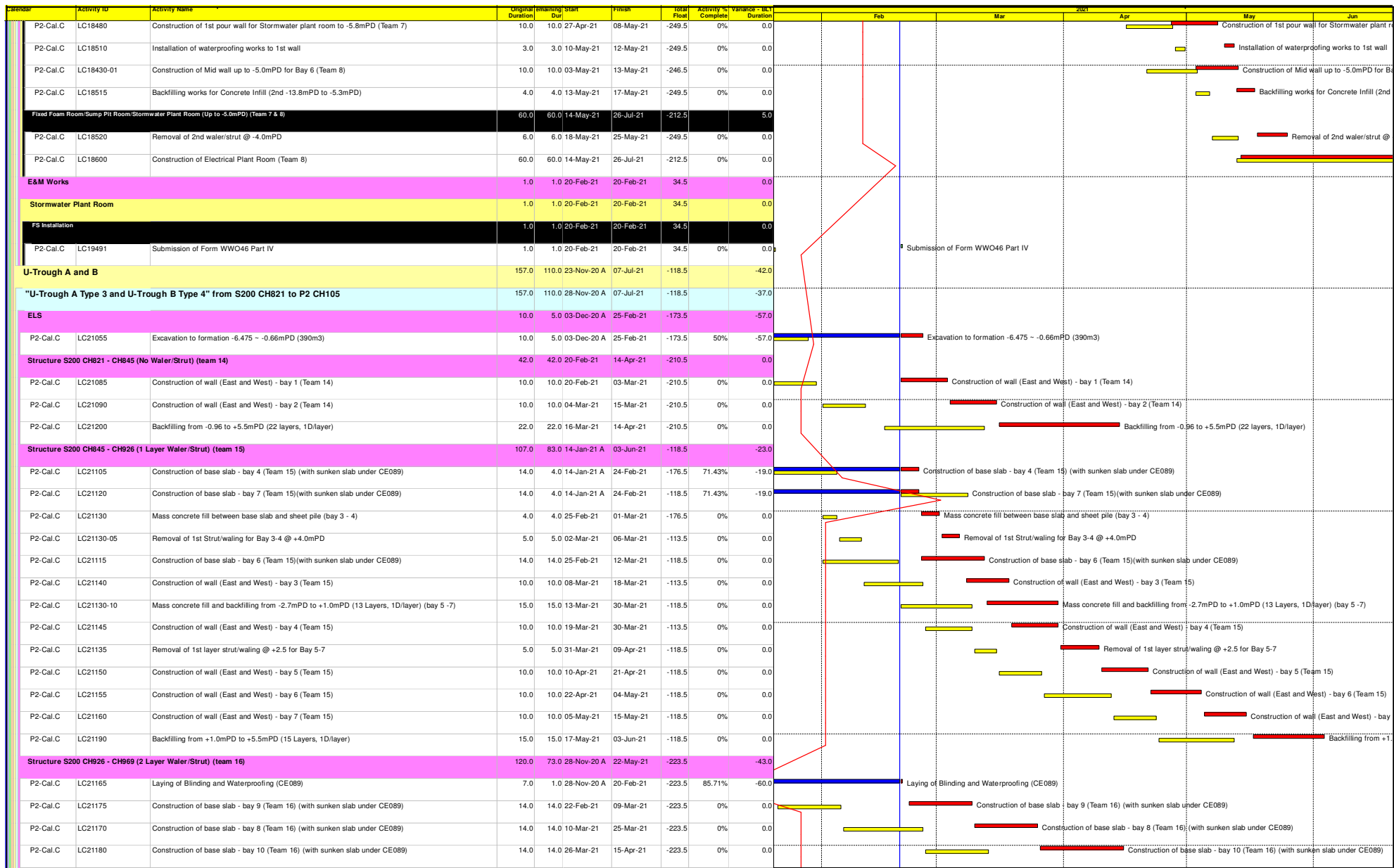
Calendar	Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	Total Float	Activity % Complete	Variance - Act. Duration	2021												
										Feb	Mar	Apr	May	Jun								
P2-Cal.C	LC18198-06	Removal of 2nd Strut @ -1.5~-2.5mPD for Bay 1 & 3	6.0	6.0	15-Apr-21	21-Apr-21	-280.5	0%	0.0													
P2-Cal.C	LC18198-11	Waterproofing and Backfilling from -5.8~-4.9mPD to -3.8~-2.8mPD for Bay 2 & 4 (7 layers, 1D/layer)	9.0	9.0	16-Apr-21	26-Apr-21	-280.5	0%	0.0													
P2-Cal.C	LC18198-16	Removal of 2nd Strut @ -1.5~-2.5mPD for Bay 2 & 4	6.0	6.0	27-Apr-21	04-May-21	-280.5	0%	0.0													
P2-Cal.C	LC18135	Construction of pour wall (1st East, West and Mid interim level -2.2mPD) - bay 14 (Team 6)	10.0	10.0	30-Apr-21	12-May-21	-269.5	0%	0.0													
P2-Cal.C	LC18145	Construction of pour wall (1st East, West and Mid interim level -2.2mPD) - bay 12 (Team 5)	10.0	10.0	30-Apr-21	12-May-21	-269.5	0%	0.0													
P2-Cal.C	LC18155	Construction of pour wall (1st East, West and Mid interim level -2.2mPD) - bay 10 (Team 4)	10.0	10.0	30-Apr-21	12-May-21	-269.5	0%	0.0													
P2-Cal.C	LC18165	Construction of pour wall (1st East, West and Mid interim level -2.2mPD) - bay 8 (Team 3)	10.0	10.0	30-Apr-21	12-May-21	-269.5	0%	0.0													
P2-Cal.C	LC18200-11	Waterproofing and Backfilling from -5.8mPD to -3.8mPD for Bay 8, 10, 12, 14 (7 layers, 1D/layer)	9.0	9.0	13-May-21	24-May-21	-246.5	0%	0.0													
P2-Cal.C	LC18140	Construction of pour wall (1st East, West and Mid interim level -2.2mPD) - bay 13 (Team 6)	10.0	10.0	18-May-21	29-May-21	-273.5	0%	0.0													
P2-Cal.C	LC18150	Construction of pour wall (1st East, West and Mid interim level -2.2mPD) - bay 11 (Team 5)	10.0	10.0	18-May-21	29-May-21	-273.5	0%	0.0													
P2-Cal.C	LC18160	Construction of pour wall (1st East, West and Mid interim level -2.2mPD) - bay 9 (Team 4)	10.0	10.0	18-May-21	29-May-21	-273.5	0%	0.0													
P2-Cal.C	LC18170	Construction of pour wall (1st East, West and Mid interim level -2.2mPD) - bay 7 (Team 3)	10.0	10.0	18-May-21	29-May-21	-273.5	0%	0.0													
2nd Wall (Team 1 to 6)			36.0	36.0	22-Apr-21	04-Jun-21	-280.5		0.0													
P2-Cal.C	LC18260	Construction of pour wall (2nd East, West and Mid interim level +0.8mPD) - bay 3 (Team 2)	10.0	10.0	22-Apr-21	04-May-21	-280.5	0%	0.0													
P2-Cal.C	LC18267	Construction of pour wall (2nd East, West and Mid interim level +0.8mPD) - bay 1 (Team 1)	10.0	10.0	22-Apr-21	04-May-21	-280.5	0%	0.0													
P2-Cal.C	LC18255	Construction of pour wall (2nd East, West and Mid interim level +0.8mPD) - bay 4 (Team 2)	10.0	10.0	05-May-21	15-May-21	-280.5	0%	0.0													
P2-Cal.C	LC18265	Construction of pour wall (2nd East, West and Mid interim level +0.8mPD) - bay 2 (Team 1)	10.0	10.0	05-May-21	15-May-21	-280.5	0%	0.0													
P2-Cal.C	LC18274-01	Waterproofing and Backfilling from -3.8~-2.8mPD to +0.2mPD for Bay 1 & 3 (14 Layers, 1D/layer)	16.0	16.0	05-May-21	24-May-21	-280.5	0%	0.0													
P2-Cal.C	LC18274-11	Waterproofing and Backfilling from -3.8~-2.8mPD to +0.2mPD for Bay 2 & 4 (14 Layers, 1D/layer)	16.0	16.0	17-May-21	04-Jun-21	-280.5	0%	0.0													
Fixed Foam Room/Sump Pit Room/Stormwater Plant Room			126.0	126.0	04-Feb-21 A	26-Jul-21	-212.5		12.0													
Fixed Foam Room/Sump Pit Room (Team 7)			43.0	43.0	04-Feb-21 A	15-Apr-21	-223.5		-9.0													
P2-Cal.C	LC18385	Construction of Eastern wall up to -7.3mPD (Team 7)	7.0	7.0	04-Feb-21 A	27-Feb-21	-246.5	0%	-11.0													
P2-Cal.C	LC18390	Construction of Western wall up to -5.0mPD (Team 7)	10.0	7.0	04-Feb-21 A	27-Feb-21	-246.5	30%	-8.0													
P2-Cal.C	LC18402-01	Petrol Interceptor Manholes	8.0	8.0	01-Mar-21	09-Mar-21	-246.5	0%	-8.0													
P2-Cal.C	LC18405	Erection of scaffold/fitework for 1st slab construction	7.0	7.0	10-Mar-21	17-Mar-21	-246.5	0%	0.0													
P2-Cal.C	LC18410	Construction of 2nd pour wall and slab up to -6.0mPD (Team 7)	10.0	10.0	18-Mar-21	29-Mar-21	-246.5	0%	0.0													
P2-Cal.C	LC18395	Installation of waterproofing works to 1st wall	7.0	7.0	30-Mar-21	10-Apr-21	-223.5	0%	0.0													
P2-Cal.C	LC18400	Backfilling works for Concrete Infill (1st -10.1mPD to -5.3mPD)	4.0	4.0	12-Apr-21	15-Apr-21	-223.5	0%	0.0													
Stormwater Plant Room (Team 7 & 8)			61.0	69.0	20-Feb-21 A	17-May-21	-249.5		0.0													
P2-Cal.C	LC18417	Construction of wall up to -7.3mPD (Team 8)	8.0	8.0	20-Feb-21 A	01-Mar-21	-249.5	0%	0.0													
P2-Cal.C	LC18417-01	Installation of 3rd layer strut/water @ -10.0mPD	6.0	6.0	02-Mar-21	08-Mar-21	-231.5	0%	0.0													
P2-Cal.C	LC18418	Cast mass concrete fill / vertical blinding (with sunken slab under CE089)	10.0	10.0	02-Mar-21	12-Mar-21	-249.5	0%	0.0													
P2-Cal.C	LC18420	Construction of main tunnel base slab - bay 5 (Team 8) (with sunken slab under CE089)	14.0	14.0	13-Mar-21	29-Mar-21	-249.5	0%	0.0													
P2-Cal.C	LC18465	Excavation to formation -13.8 - 14.5mPD	3.0	3.0	30-Mar-21	01-Apr-21	-249.5	0%	0.0													
P2-Cal.C	LC18470	Construction of 2nd half base slab for Well Set (Team 7)	9.0	9.0	07-Apr-21	16-Apr-21	-249.5	0%	0.0													
P2-Cal.C	LC18425	Construction of main tunnel base slab - bay 6 (Team 8) (with sunken slab under CE089)	14.0	14.0	30-Mar-21	19-Apr-21	-246.5	0%	0.0													
P2-Cal.C	LC18475	Concrete Infill and Removal of 3rd water/strut @ -10.0mPD	8.0	8.0	17-Apr-21	26-Apr-21	-249.5	0%	0.0													
P2-Cal.C	LC18430	Construction of Mid wall up to -5.0mPD for Bay 5 (Team 8)	10.0	10.0	20-Apr-21	30-Apr-21	-246.5	0%	0.0													

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Calendar	Activity ID	Activity Name	Original Duration	Remaining Duration	Start Date	Finish Date	Total Float	Activity % Complete	Variance - Act. Duration	2021	Feb	Mar	Apr	May	Jun
P2-Cal.C	LC25640	Installation of waterproofing works to 1st wall	7.0	7.0	16-Apr-21	23-Apr-21	-223.5	0%	0.0						
P2-Cal.C	LC25660	Mass concrete fill (20 layers, 1D/layer)	6.0	6.0	24-Apr-21	30-Apr-21	-223.5	0%	0.0						
P2-Cal.C	LC25680	Removal of 2nd layer strut/waling @ +0.0 - -1.0mPD	7.0	7.0	03-May-21	10-May-21	-223.5	0%	0.0						
P2-Cal.C	LC25700	Construction of 1st wall (East and West interim level@ +1.5mPD) - bay 8 (Team 16)	10.0	10.0	11-May-21	22-May-21	-223.5	0%	0.0						
Structure S200 CH965 - P2 CH105 (3 Layer Water/Strut) (team 14)			34.0	34.0	16-Apr-21	27-May-21	-211.5	0%	0.0						
P2-Cal.C	LC26000	Construction of base slab - bay 11 (Team 14) (with sunken slab under CE089)	14.0	14.0	16-Apr-21	03-May-21	-211.5	0%	0.0						
P2-Cal.C	LC26040	Mass concrete fill between base slab and sheet pile (Bay 11)	4.0	4.0	04-May-21	07-May-21	-211.5	0%	0.0						
P2-Cal.C	LC26060	Removal of 3rd layer strut/waling @ -2.5mPD	6.0	6.0	08-May-21	14-May-21	-211.5	0%	0.0						
P2-Cal.C	LC26080	Construction of 1st wall (East, West and Mid interim level@ -1.0mPD) - bay 11 (Team 14)	10.0	10.0	15-May-21	27-May-21	-211.5	0%	0.0						
Remaining Works			72.0	72.0	10-Apr-21	07-Jul-21	-118.5	0%	0.0						
P2-Cal.C	LC26390	Construction of insitu Concrete Profile Barrier and Sign Gantry (S200 CH821 to P2 CH941) (6 moulds) (NCE193 & NCE219)	72.0	72.0	10-Apr-21	07-Jul-21	-118.5	0%	0.0						
Retaining Wall Type W1 S200 CH755 - CH821 / S300 CH326 - CH261			83.0	77.0	05-Feb-21 A	27-May-21	-140.5		-12.0						
Construction of Base Slab (team 17-22)			83.0	77.0	05-Feb-21 A	27-May-21	-140.5		-12.0						
P2-Cal.C	LC21440-01	Excavation, Recompaction and Blinding	15.0	5.0	05-Feb-21 A	25-Feb-21	-173.5	66.67%	0.0						
P2-Cal.C	LC21440-03	Construction of Retaining Wall Type W1 (S200 CH768 to CH781) (Base Slab Bay 2) (Team 17)	10.0	10.0	26-Feb-21	09-Mar-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-05	Construction of Retaining Wall Type W1 (S200 CH795 to CH809) (Base Slab Bay 4) (Team 18)	10.0	10.0	26-Feb-21	09-Mar-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-065	Construction of Retaining Wall Type W1 (S300 CH287 to CH274 East) (Base Slab Bay 11) (Team 20)	10.0	10.0	26-Feb-21	09-Mar-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-02	Construction of Retaining Wall Type W1 (S200 CH755 to CH768) (Base Slab Bay 1) (Team 17)	10.0	10.0	10-Mar-21	20-Mar-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-04	Construction of Retaining Wall Type W1 (S200 CH781 to CH795) (Base Slab Bay 3) (Team 18)	10.0	10.0	10-Mar-21	20-Mar-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-06	Construction of Retaining Wall Type W1 (S200 CH809 to CH821) (Base Slab Bay 5) (Team 19)	10.0	10.0	10-Mar-21	20-Mar-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-066	Construction of Retaining Wall Type W1 (S300 CH274 to CH261 East) (Base Slab Bay 12) (Team 20)	10.0	10.0	10-Mar-21	20-Mar-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-061	Construction of Retaining Wall Type W1 (S300 CH313 to CH300) (Base Slab Bay 7) (Team 19)	10.0	10.0	22-Mar-21	01-Apr-21	-128.5	0%	0.0						
P2-Cal.C	LC21440-0630	Cutting of Sheet Pile at S200 CH821 for Construction of Bay 10	5.0	5.0	15-Apr-21	20-Apr-21	-210.5	0%	0.0						
P2-Cal.C	LC21440-064	Construction of Retaining Wall Type W1 (S300 CH274 to CH261 West) (Base Slab Bay 10) (Team 21)	10.0	10.0	21-Apr-21	03-May-21	-210.5	0%	0.0						
P2-Cal.C	LC21440-060	Construction of Retaining Wall Type W1 (S300 CH326 to CH313) (Base Slab Bay 6) (Team 19)	10.0	10.0	30-Apr-21	12-May-21	-128.5	0%	0.0						
P2-Cal.C	LC21440-063	Construction of Retaining Wall Type W1 (S300 CH287 to CH274 West) (Base Slab Bay 9) (Team 21)	10.0	10.0	04-May-21	14-May-21	-210.5	0%	0.0						
P2-Cal.C	LC21440-062	Construction of Retaining Wall Type W1 (S300 CH300 to CH287) (Base Slab Bay 8) (Team 22)	10.0	10.0	15-May-21	27-May-21	-210.5	0%	0.0						
Construction of 1st Pour Wall (team 17-22)			52.0	52.0	22-Mar-21	27-May-21	-160.5		-22.0						
P2-Cal.C	LC21440-08	Construction of Retaining Wall Type W1 (S200 CH768 to CH781) (1st pour Wall Bay 2) (Team 17)	10.0	10.0	22-Mar-21	01-Apr-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-10	Construction of Retaining Wall Type W1 (S200 CH795 to CH809) (1st pour Wall Bay 4) (Team 18)	10.0	10.0	22-Mar-21	01-Apr-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-115	Construction of Retaining Wall Type W1 (S300 CH287 to CH274 East) (1st pour Wall Bay 11) (Team 20)	10.0	10.0	22-Mar-21	01-Apr-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-11	Construction of Retaining Wall Type W1 (S200 CH809 to CH821) (1st pour Wall Bay 5) (Team 18)	10.0	10.0	07-Apr-21	17-Apr-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-111	Construction of Retaining Wall Type W1 (S300 CH313 to CH300) (1st pour Wall Bay 7) (Team 19)	10.0	10.0	07-Apr-21	17-Apr-21	-128.5	0%	0.0						
P2-Cal.C	LC21440-07	Construction of Retaining Wall Type W1 (S200 CH755 to CH768) (1st pour Wall Bay 1) (Team 17)	10.0	10.0	19-Apr-21	29-Apr-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-09	Construction of Retaining Wall Type W1 (S200 CH781 to CH795) (1st pour Wall Bay 3) (Team 18)	10.0	10.0	19-Apr-21	29-Apr-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-116	Construction of Retaining Wall Type W1 (S300 CH274 to CH261 East) (1st pour Wall Bay 12) (Team 20)	10.0	10.0	19-Apr-21	29-Apr-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-114	Construction of Retaining Wall Type W1 (S300 CH274 to CH261 West) (1st pour Wall Bay 10) (Team 21)	10.0	10.0	15-May-21	27-May-21	-210.5	0%	0.0						
Construction of 2nd Pour Wall (team 17-22)			30.0	30.0	07-Apr-21	12-May-21	-138.5		0.0						

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Calendar	Activity ID	Activity Name	Original Duration	Remaining Dur.	Start	Finish	Total Float	Activity % Complete	Variance - Act. Duration	2021	Feb	Mar	Apr	May	Jun
P2-Cal.C	LC21440-15	Construction of Retaining Wall Type W1 (S200 CH768 to CH781) (2nd pour Wall Bay 2) (Team 17)	10.0	10.0	07-Apr-21	17-Apr-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-22	Construction of Retaining Wall Type W1 (S300 CH287 to CH274 East) (2nd pour Wall Bay 11) (Team 20)	10.0	10.0	07-Apr-21	17-Apr-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-18	Construction of Retaining Wall Type W1 (S300 CH313 to CH300) (2nd pour Wall Bay 7) (Team 19)	10.0	10.0	19-Apr-21	29-Apr-21	-128.5	0%	0.0						
P2-Cal.C	LC21440-14	Construction of Retaining Wall Type W1 (S200 CH755 to CH768) (2nd pour Wall Bay 1) (Team 17)	10.0	10.0	30-Apr-21	12-May-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-16	Construction of Retaining Wall Type W1 (S200 CH781 to CH795) (2nd pour Wall Bay 3) (Team 18)	10.0	10.0	30-Apr-21	12-May-21	-158.5	0%	0.0						
P2-Cal.C	LC21440-23	Construction of Retaining Wall Type W1 (S300 CH274 to CH261 East) (2nd pour Wall Bay 12) (Team 20)	10.0	10.0	30-Apr-21	12-May-21	-158.5	0%	0.0						
"U-Trough A Type 1 & 2" from S200 CH674 - CH821, S100/CH280, S300/CH403.5 & S400/CH158.1			110.0	72.0	23-Nov-20	21-May-21	-97.5		-31.0						
ELS (S200 CH674 - CH755 & S100/CH280)			3.0	1.0	23-Nov-20	20-Feb-21	-207.5		-69.0						
P2-Cal.C	LC22230	Construction of Blinding and Waterproofing	3.0	1.0	23-Nov-20	20-Feb-21	-207.5	66.67%	-69.0						
ELS (S300/CH403.5 & S400/CH158.1)			3.0	2.0	07-Dec-20	22-Feb-21	-280.5		-58.0						
P2-Cal.C	LC22830	Construction of Blinding and Waterproofing	3.0	2.0	07-Dec-20	22-Feb-21	-280.5	33.33%	-58.0						
Structure "U-Trough A Type 1" from S200 CH674 - CH755 & S100/CH280			94.0	70.0	01-Feb-21	20-May-21	-197.5		-15.0						
Base Slab (team 23-26)			32.0	20.0	20-Feb-21	16-Mar-21	-167.5		-1.0						
P2-Cal.C	LC22910	Construction of U-trough A Structure Bay 7 (S200 CH731 - S200 CH743) (Base Slab) (Team 26)	10.0	10.0	20-Feb-21	04-Mar-21	-167.5	0%	-1.0						
P2-Cal.C	LC22920	Construction of U-trough A Structure Bay 8 (S200 CH743 - S200 CH755) (Base Slab) (Team 26)	10.0	10.0	05-Mar-21	16-Mar-21	-167.5	0%	0.0						
1st Pour Wall (Team 23-26)			94.0	70.0	01-Feb-21	20-May-21	-207.5		-15.0						
P2-Cal.C	LC22940	Construction of U-trough A Structure Bay 2 (S200 CH674 - S200 CH683) (1st Pour Wall) (Team 23)	10.0	10.0	01-Feb-21	04-Mar-21	-207.5	0%	-15.0						
P2-Cal.C	LC22930	Construction of U-trough A Structure Bay 1 (S100 CH280 - S200 CH674) (1st Pour Wall) (Team 23)	10.0	10.0	05-Mar-21	16-Mar-21	-207.5	0%	0.0						
P2-Cal.C	LC22950	Construction of U-trough A Structure Bay 3 (S200 CH683 - S200 CH795) (1st Pour Wall) (Team 24)	10.0	10.0	17-Mar-21	27-Mar-21	-207.5	0%	0.0						
P2-Cal.C	LC22970	Construction of U-trough A Structure Bay 5 (S200 CH707 - S200 CH719) (1st Pour Wall) (Team 25)	10.0	10.0	29-Mar-21	13-Apr-21	-207.5	0%	0.0						
P2-Cal.C	LC22960	Construction of U-trough A Structure Bay 4 (S200 CH695 - S200 CH707) (1st Pour Wall) (Team 24)	10.0	10.0	14-Apr-21	24-Apr-21	-207.5	0%	0.0						
P2-Cal.C	LC22980	Construction of U-trough A Structure Bay 6 (S200 CH719 - S200 CH731) (1st Pour Wall) (Team 25)	10.0	10.0	26-Apr-21	07-May-21	-207.5	0%	0.0						
P2-Cal.C	LC23000	Construction of U-trough A Structure Bay 8 (S200 CH743 - S200 CH755) (1st Pour Wall) (Team 26)	10.0	10.0	08-May-21	20-May-21	-207.5	0%	0.0						
2nd Pour Wall (team 23-25)			40.0	40.0	29-Mar-21	20-May-21	-197.5		0.0						
P2-Cal.C	LC23020	Construction of U-trough A Structure Bay 2 (S200 CH683 - S200 CH695) (2nd Pour Wall) (Team 23)	10.0	10.0	29-Mar-21	13-Apr-21	-187.5	0%	0.0						
P2-Cal.C	LC23010	Construction of U-trough A Structure Bay 1 (S100 CH280 - S200 CH683) (2nd Pour Wall) (Team 23)	10.0	10.0	14-Apr-21	24-Apr-21	-177.5	0%	0.0						
P2-Cal.C	LC23040	Construction of U-trough A Structure Bay 4 (S200 CH707 - S200 CH719) (2nd Pour Wall) (Team 24)	10.0	10.0	26-Apr-21	07-May-21	-207.5	0%	0.0						
P2-Cal.C	LC23030	Construction of U-trough A Structure Bay 3 (S200 CH695 - S200 CH707) (2nd Pour Wall) (Team 24)	10.0	10.0	08-May-21	20-May-21	-207.5	0%	0.0						
Structure "U-Trough A Type 1 & 2" from S300/CH403.5 & S400/CH158.1			74.0	70.0	02-Feb-21	21-May-21	-187.5		-5.0						
Base Slab (Team 27-28)			54.0	50.0	02-Feb-21	26-Apr-21	-177.5		-5.0						
P2-Cal.C	LC23110	Construction of U-trough A Structure S300 Bay 4 (S300 CH367 - S300 CH355) (Base Slab) (Team 28)	10.0	1.0	02-Feb-21	23-Feb-21	-138.5	90%	-6.0						
P2-Cal.C	LC23140	Construction of U-trough A Structure S400 Bay 3 (S400 CH136 - S300 CH124) (Base Slab) (Team 28)	10.0	10.0	23-Feb-21	05-Mar-21	-280.5	0%	0.0						
P2-Cal.C	LC23100	Construction of U-trough A Structure S300 Bay 3 (S300 CH379 - S300 CH367) (Base Slab) (Team 28)	10.0	10.0	24-Feb-21	06-Mar-21	-138.5	0%	0.0						
P2-Cal.C	LC23160	Construction of U-trough A Structure S300 Bay 5 (S300 CH355 - S300 CH340) (Base Slab) (Team 27)	10.0	10.0	30-Mar-21	14-Apr-21	-280.5	0%	0.0						
P2-Cal.C	LC23170	Construction of U-trough A Structure S300 Bay 6 (S300 CH340 - S300 CH326) (Base Slab) (Team 27)	10.0	10.0	15-Apr-21	26-Apr-21	-280.5	0%	0.0						
Wall (Team 27-28)			70.0	70.0	23-Feb-21	21-May-21	-187.5		10.0						
P2-Cal.C	LC23190	Construction of U-trough A Structure S300 Bay 2 (S300 CH391 - S300 CH379) (Wall) (Team 27)	10.0	10.0	23-Feb-21	05-Mar-21	-137.5	0%	0.0						
P2-Cal.C	LC23220	Construction of U-trough A Structure S400 Bay 1 (S400 CH158 - S300 CH148) (Wall) (Team 27)	10.0	10.0	23-Feb-21	05-Mar-21	-270.5	0%	0.0						

- Primary Baseline
- Critical...
- Actual Work
- Baselin...
- Remaining Work
- Milesto...

NE/2015/02 Tseung Kwan O - Lam Tin Tunnel-Road P2 and Associated Works (Feb-21)

3 Monthly Rolling Programme Update (Data Date : 20 Feb 2021)

Date	Revision	Checked	Approved
20-Jan-21			

Calendar	Activity ID	Activity Name	Original Duration	Remaining Duration	Start Date	Finish Date	Total Float	Activity % Complete	Variance - Act. Duration	2021	Feb	Mar	Apr	May	Jun
P2-Cal.C	LC23210	Construction of U-trough A Structure S300 Bay 4 (S300 CH367 - S300 CH355) (Wall) (Team 28)	10.0	10.0	24-Feb-21	06-Mar-21	-138.5	0%	0.0						
P2-Cal.C	LC23180	Construction of U-trough A Structure S300 Bay 1 (S300 CH403 - S300 CH391) (Wall) (Team 27)	10.0	10.0	06-Mar-21	17-Mar-21	-137.5	0%	0.0						
P2-Cal.C	LC23240	Construction of U-trough A Structure S400 Bay 3 (S400 CH136 - S300 CH124) (Wall) (Team 28)	10.0	10.0	06-Mar-21	17-Mar-21	-280.5	0%	0.0						
P2-Cal.C	LC23200	Construction of U-trough A Structure S300 Bay 3 (S300 CH379 - S300 CH367) (Wall) (Team 28)	10.0	10.0	08-Mar-21	18-Mar-21	-138.5	0%	0.0						
P2-Cal.C	LC23230	Construction of U-trough A Structure S400 Bay 2 (S400 CH148 - S300 CH136) (Wall) (Team 27)	10.0	10.0	18-Mar-21	29-Mar-21	-280.5	0%	0.0						
P2-Cal.C	LC23250	Construction of U-trough A Structure S400 Bay 4 (S400 CH124 - S300 CH111) (Wall) (Team 28)	10.0	10.0	18-Mar-21	29-Mar-21	-280.5	0%	0.0						
P2-Cal.C	LC23260	Construction of U-trough A Structure S300 Bay 5 (S300 CH355 - S300 CH340) (Wall) (Team 27)	10.0	10.0	27-Apr-21	08-May-21	-280.5	0%	0.0						
P2-Cal.C	LC23270	Construction of U-trough A Structure S300 Bay 6 (S300 CH340 - S300 CH326) (Wall) (Team 27)	10.0	10.0	10-May-21	21-May-21	-280.5	0%	0.0						
Remaining Works			46.0	46.0	19-Mar-21	17-May-21	-94.5	0%	0.0						
P2-Cal.C	LC23350-000	Road and Drainage Works and Backfilling to Formation (S300 CH403 - S300 CH355)	30.0	30.0	19-Mar-21	27-Apr-21	-138.5	0%	0.0						
P2-Cal.C	LC23350-017	In situ Concrete Profile Barrier Construction for S300 CH403-S300 CH355 (6moulds) (NCE193&NCE219)	16.0	16.0	28-Apr-21	17-May-21	-94.5	0%	0.0						
U-Trough C Structures			132.0	70.0	09-Nov-20 A	18-May-21	-215.5		-25.0						
"U-Trough C Type 1, 2, 3 & 4" from CT01 CH117.156 - CH366			132.0	70.0	09-Nov-20 A	18-May-21	-215.5		-25.0						
ELS & Structure "U-Trough C Type 1, 2, 3 & 4" from CT01 CH117.156 - CH366			132.0	70.0	09-Nov-20 A	18-May-21	-215.5		-25.0						
Base Slab (Team 29)			132.0	70.0	09-Nov-20 A	18-May-21	-275.5		-25.0						
P2-Cal.C	LC23490	Construction of Cycle Track Bay 2 Base Slab CT01 CH354 to CH342 (Team 29)	10.0	10.0	19-Feb-21	03-Mar-21	-295.5	0%	-1.0						
P2-Cal.C	LC23470	Excavation, Recompaction and Installation of Capping Plate	35.0	16.0	09-Nov-20 A	10-Mar-21	-295.5	54.29%	-64.0						
P2-Cal.C	LC23510	Construction of Cycle Track Bay 4 Base Slab CT01 CH330 to CH318 (Team 29)	10.0	10.0	04-Mar-21	15-Mar-21	-275.5	0%	0.0						
P2-Cal.C	LC23520	Construction of Cycle Track Bay 5 Base Slab CT01 CH318 to CH306 (Team 29)	10.0	10.0	16-Mar-21	26-Mar-21	-275.5	0%	0.0						
P2-Cal.C	LC23530	Construction of Cycle Track Bay 6 Base Slab CT01 CH306 to CH294 (Team 29)	10.0	10.0	27-Mar-21	12-Apr-21	-275.5	0%	0.0						
P2-Cal.C	LC23540	Construction of Cycle Track Bay 7 Base Slab CT01 CH294 to CH282 (Team 29)	10.0	10.0	13-Apr-21	23-Apr-21	-275.5	0%	0.0						
P2-Cal.C	LC23550	Construction of Cycle Track Bay 8 Base Slab CT01 CH282 to CH270 (Team 29)	10.0	10.0	24-Apr-21	06-May-21	-275.5	0%	0.0						
P2-Cal.C	LC23560	Construction of Cycle Track Bay 9 Base Slab CT01 CH270 to CH 260 (Team 29)	10.0	10.0	07-May-21	18-May-21	-275.5	0%	0.0						
1st Wall (Team 30)			60.0	60.0	04-Mar-21	18-May-21	-295.5		0.0						
P2-Cal.C	LC23690	Construction of Cycle Track Bay 1 1st Wall CT01 CH366 to CH354 (Team 30)	10.0	10.0	04-Mar-21	15-Mar-21	-295.5	0%	0.0						
P2-Cal.C	LC23700	Construction of Cycle Track Bay 2 1st Wall CT01 CH354 to CH342 (Team 30)	10.0	10.0	16-Mar-21	26-Mar-21	-295.5	0%	0.0						
P2-Cal.C	LC23710	Construction of Cycle Track Bay 3 1st Wall CT01 CH342 to CH330 (Team 30)	10.0	10.0	27-Mar-21	12-Apr-21	-295.5	0%	0.0						
P2-Cal.C	LC23720	Construction of Cycle Track Bay 4 1st Wall CT01 CH330 to CH318 (Team 30)	10.0	10.0	13-Apr-21	23-Apr-21	-295.5	0%	0.0						
P2-Cal.C	LC23730	Construction of Cycle Track Bay 5 1st Wall CT01 CH318 to CH306 (Team 30)	10.0	10.0	24-Apr-21	06-May-21	-295.5	0%	0.0						
P2-Cal.C	LC23740	Construction of Cycle Track Bay 6 1st Wall CT01 CH306 to CH294 (Team 30)	10.0	10.0	07-May-21	18-May-21	-295.5	0%	0.0						
2nd Wall (Team 31)			50.0	50.0	16-Mar-21	18-May-21	-215.5		0.0						
P2-Cal.C	LC90550	Construction of Cycle Track Bay 1 2nd Wall CT01 CH366 to CH354 (Team 31)	10.0	10.0	16-Mar-21	26-Mar-21	-215.5	0%	0.0						
P2-Cal.C	LC90560	Construction of Cycle Track Bay 2 2nd Wall CT01 CH354 to CH342 (Team 31)	10.0	10.0	27-Mar-21	12-Apr-21	-215.5	0%	0.0						
P2-Cal.C	LC90570	Construction of Cycle Track Bay 3 2nd Wall CT01 CH342 to CH330 (Team 31)	10.0	10.0	13-Apr-21	23-Apr-21	-215.5	0%	0.0						
P2-Cal.C	LC90580	Construction of Cycle Track Bay 4 2nd Wall CT01 CH330 to CH318 (Team 31)	10.0	10.0	24-Apr-21	06-May-21	-215.5	0%	0.0						
P2-Cal.C	LC90590	Construction of Cycle Track Bay 5 2nd Wall CT01 CH318 to CH306 (Team 31)	10.0	10.0	07-May-21	18-May-21	-215.5	0%	0.0						
Section 4 of the Works - Preservation and Protection of Existing Trees			1563.0	474.0	12-Jan-17 A	08-Jun-22	-369.5		-411.0						
P2-Cal.A	LC25260	Preservation and Protection of Existing Trees	1451.0	474.0	12-Jan-17 A	08-Jun-22	-369.5	67.33%	-523.0						

- Primary Baseline
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NE/2015/02 Tseung Kwan O - Lam Tin Tunnel-Road P2 and Associated Works (Feb-21)

3 Monthly Rolling Programme Update (Data Date : 20 Feb 2021)

Date	Revision	Checked	Approved
20-Jan-21			

Calendar	Activity ID	Activity Name	Original Duration	Remaining Dur	Start	Finish	Total Float	Activity % Complete	Variance - B.C.	2021
P2-CalA	LC25280	Nursery Transplanted Trees at the Contractor's holding nursery	1177.0	474.0	28-Apr-17 A	08-Jun-22	-369.5	59.73%	-691.0	Feb Mar Apr May Jun



Primary Baseline Actual Work Remaining Work Critical... Baselin... Milesto...	NE/2015/02 Tseung Kwan O - Lam Tin Tunnel-Road P2 and Associated Works (Feb-21)	3 Monthly Rolling Programme Update (Data Date : 20 Feb 2021)	Date 20-Jan-21	Revision	Checked	Approved
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High Level 3 Months Look Ahead Programme			
Activities	Apr-21	May-21	Jun-21
Trial pit			
Underground utilities detection			
Temporary traffic arrangement Setup			
Construction of drainage and watermain			
Pile Cap construction			
Asphalt Paving			
Pier, Staircase and lift shaft construction			

Activity ID	Activity Name	Original Duration	Remaining Duration	Schedule % Complete	Start	Finish	Total Float	2020											
								Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
NE/2017/06 TKO-LTT TCSS_3MRP								29-Apr-21, NE/2017/06 TKO-LTT TCSS_3MRP											
NE/2017/06.CW Contract Award / Commencement of Work:																			
NE/2017/06.AD Access Date								10-Apr-21, NE/2017/06.AD Access Date											
NE/2017/06.AD.000 General								10-Apr-21, NE/2017/06.AD.000: General											
NE/2017/06.AD.000.AD Access Date								10-Apr-21, NE/2017/06.AD.000.AD Access Date											
DWP1	Portion 4A of the Site	0	0	0%	10-Apr-2		9	◆ Portion 4A of the Site, 10-Apr-21*											
DWP1	Portion 3A of the Site	0	0	0%	01-Mar-2		19	◆ Portion 3A of the Site, 01-Mar-21*											
DWP1	Portion 1C of the Site	0	0	0%	20-Feb-2		-1	◆ Portion 1C of the Site, 20-Feb-21*											
DWP1	Portion 1A of the Site	0	0	0%	20-Feb-2		-37	◆ Portion 1A of the Site, 20-Feb-21*											
DWP1	Portion 1B of the Site	0	0	0%	20-Feb-2		-69	◆ Portion 1B of the Site, 20-Feb-21*											
NE/2017/06.KD Key Date and Stages / Sections of the Achi																			
NE/2017/06.MD Cost Centre Milestone Dates								28-Apr-21, NE/2017/06.MD Cost Centre Milestone Dates											
NE/2017/06.MD.1 General								28-Apr-21, NE/2017/06.MD.1 General											
NE/2017/06.MD.1.1 CC B - Central System - TKOLTT								08-Mar-21, NE/2017/06.MD.1.1 CC B - Central System - TKOLTT											
DWP8	Acceptance of Factory Acceptance Tests of all equipment for Works	0	0	0%	08-Mar-2	08-Mar-2	111	◆ Acceptance of Factory Acceptance Tests of all equipment for Works,											
NE/2017/06.MD.1.2 CC B1 - Central System - CBL								08-Mar-21, NE/2017/06.MD.1.2 CC B1 - Central System - CBL											
DWP8	Acceptance of Final System Proposal for Works	0	0	0%	20-Feb-2	20-Feb-2	560	◆ Acceptance of Final System Proposal for Works,											
DWP8	Acceptance of Factory Acceptance Tests of all equipment for Works	0	0	0%	08-Mar-2	08-Mar-2	543	◆ Acceptance of Factory Acceptance Tests of all equipment for Works,											
NE/2017/06.MD.1.3 CC C - Traffic Control Devices - TKOLTT								28-Apr-21, NE/2017/06.MD.1.3 CC C - Traffic Control Devices - TKOLTT											
DWP8	Acceptance of Factory Acceptance Tests of all equipment for Works	0	0	0%	23-Feb-2	23-Feb-2	124	◆ Acceptance of Factory Acceptance Tests of all equipment for Works,											
DWP8	Complete order and delivery on Site of all equipment for Works	0	0	0%	28-Apr-21	28-Apr-21	61	◆ Complete order and delivery on Site of all equipment for Works,											
NE/2017/06.MD.1.4 CC C1 - Traffic Control Devices - CBL								23-Feb-21, NE/2017/06.MD.1.4 CC C1 - Traffic Control Devices - CBL											
DWP9	Acceptance of Final System Proposal for Works	0	0	0%	20-Feb-2	20-Feb-2	560	◆ Acceptance of Final System Proposal for Works,											
DWP9	Acceptance of Factory Acceptance Tests of all equipment for Works	0	0	0%	23-Feb-2	23-Feb-2	556	◆ Acceptance of Factory Acceptance Tests of all equipment for Works,											
NE/2017/06.MD.1.5 CC D - Communication System - TKOLTT								01-Mar-21, NE/2017/06.MD.1.5 CC D - Communication System - TKOLTT											
DWP9	Acceptance of Factory Acceptance Tests of all equipment for Works	0	0	0%	20-Feb-2	20-Feb-2	128	◆ Acceptance of Factory Acceptance Tests of all equipment for Works,											
DWP9	Complete order and delivery on Site of all equipment for Works	0	0	0%	01-Mar-2	01-Mar-2	118	◆ Complete order and delivery on Site of all equipment for Works,											
NE/2017/06.MD.1.6 CC D1 - Communication System - CBL								20-Feb-21, NE/2017/06.MD.1.6 CC D1 - Communication System - CBL											
DWP9	Acceptance of Final System Proposal for Works	0	0	0%	20-Feb-2	20-Feb-2	560	◆ Acceptance of Final System Proposal for Works,											
DWP9	Acceptance of Factory Acceptance Tests of all equipment for Works	0	0	0%	20-Feb-2	20-Feb-2	560	◆ Acceptance of Factory Acceptance Tests of all equipment for Works,											
NE/2017/06.MD.1.7 CC E - CCTV System - TKOLTT								20-Feb-21, NE/2017/06.MD.1.7 CC E - CCTV System - TKOLTT											
DWP9	Acceptance of Factory Acceptance Tests of all equipment for Works	0	0	0%	20-Feb-2	20-Feb-2	128	◆ Acceptance of Factory Acceptance Tests of all equipment for Works,											
NE/2017/06.MD.1.8 CC E1 - CCTV System - CBL								20-Feb-21, NE/2017/06.MD.1.8 CC E1 - CCTV System - CBL											
DWP9	Acceptance of Final System Proposal for Works	0	0	0%	20-Feb-2	20-Feb-2	560	◆ Acceptance of Final System Proposal for Works,											
DWP9	Acceptance of Factory Acceptance Tests of all equipment for Works	0	0	0%	20-Feb-2	20-Feb-2	560	◆ Acceptance of Factory Acceptance Tests of all equipment for Works,											
NE/2017/06.MD.1.9 CC F - Building PABX System - TKOLTT								20-Feb-21, NE/2017/06.MD.1.9 CC F - Building PABX System - TKOLTT											
DWP9	Acceptance of Factory Acceptance Tests of all equipment for Works	0	0	0%	20-Feb-2	20-Feb-2	128	◆ Acceptance of Factory Acceptance Tests of all equipment for Works,											
DWP9	Complete order and delivery on Site of all equipment for Works	0	0	0%	20-Feb-2	20-Feb-2	128	◆ Complete order and delivery on Site of all equipment for Works,											
NE/2017/06.MD.1.11 CC G - ET System - TKOLTT								20-Feb-21, NE/2017/06.MD.1.11 CC G - ET System - TKOLTT											
DWP9	Acceptance of Factory Acceptance Tests of all equipment for Works	0	0	0%	20-Feb-2	20-Feb-2	128	◆ Acceptance of Factory Acceptance Tests of all equipment for Works,											
DWP9	Complete order and delivery on Site of all equipment for Works	0	0	0%	20-Feb-2	20-Feb-2	128	◆ Complete order and delivery on Site of all equipment for Works,											
NE/2017/06.MD.1.10 CC H - PA System - TKOLTT								01-Mar-21, NE/2017/06.MD.1.10 CC H - PA System - TKOLTT											
DWP9	Acceptance of Factory Acceptance Tests of all equipment for Works	0	0	0%	20-Feb-2	20-Feb-2	128	◆ Acceptance of Factory Acceptance Tests of all equipment for Works,											
DWP9	Complete order and delivery on Site of all equipment for Works	0	0	0%	01-Mar-2	01-Mar-2	118	◆ Complete order and delivery on Site of all equipment for Works,											
NE/2017/06.MD.1.12 CC I - Radio System - TKOLTT								20-Feb-21, NE/2017/06.MD.1.12 CC I - Radio System - TKOLTT											
DWP9	Acceptance of Factory Acceptance Tests of all equipment for Works	0	0	0%	20-Feb-2	20-Feb-2	128	◆ Acceptance of Factory Acceptance Tests of all equipment for Works,											
NE/2017/06.MD.1.13 CC J - Detection System - TKOLTT								05-Mar-21, NE/2017/06.MD.1.13 CC J - Detection System - TKOLTT											
DWP9	Acceptance of Factory Acceptance Tests of all equipment for Works	0	0	0%	20-Feb-2	20-Feb-2	128	◆ Acceptance of Factory Acceptance Tests of all equipment for Works,											
DWP9	Complete order and delivery on Site of all equipment for Works	0	0	0%	05-Mar-2	05-Mar-2	114	◆ Complete order and delivery on Site of all equipment for Works,											
NE/2017/06.MD.1.15 CC J1 - Detection System - CBL								20-Feb-21, NE/2017/06.MD.1.15 CC J1 - Detection System - CBL											
DWP9	Acceptance of Final System Proposal for Works	0	0	0%	20-Feb-2	20-Feb-2	560	◆ Acceptance of Final System Proposal for Works,											

■ Actual Level of Effort
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■ Actual Work
 ■ Critical Remaining Work
 ▼ summary

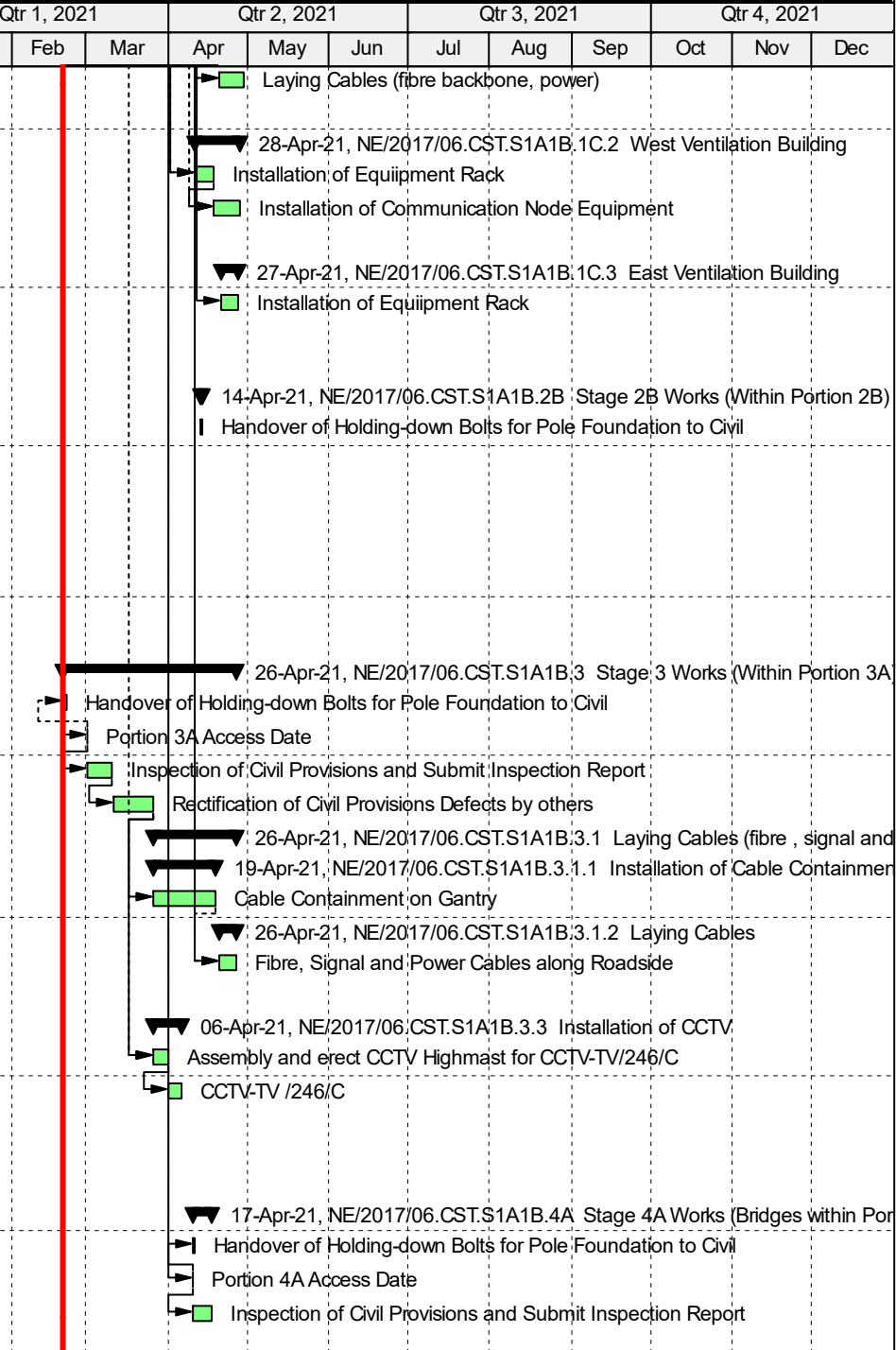
Activity ID	Activity Name	Original Duration	Remaining Duration	Schedule % Complete	Start	Finish	Total Float	2021														
								Qtr 1, 2021			Qtr 2, 2021			Qtr 3, 2021			Qtr 4, 2021					
								Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
NE/2017/06.DS.FAT Preparation / Submission of FAT Procedures								0														
NE/2017/06.DS.SCT Preparation / Submission of SCT Procedures								67														
NE/2017/06.DS.SCT.1 Central System								56														
DWP8	Preparation & Submission of Central System SCT Procedure	28	28	0%	27-Feb-2	27-Mar-2	446															
DWP8	Comment on SCT Procedure / Meeting With Engineer	28	28	0%	27-Mar-2	24-Apr-21	446															
NE/2017/06.DS.SCT.2 Traffic Control Devices								56														
DWP8	Preparation & Submission of Traffic Control System SCT Procedure	28	28	0%	20-Feb-2	19-Mar-2	-10															
DWP8	Comment on SCT Procedure / Meeting With Engineer	28	28	0%	20-Mar-2	16-Apr-21	-10															
NE/2017/06.DS.SCT.3 Communication System								56														
DWP8	Preparation & Submission of Communication System SCT Procedure	28	14	0%	20-Jan-2	05-Mar-2	-10															
DWP8	Comment on SCT Procedure / Meeting With Engineer	28	28	0%	06-Mar-2	02-Apr-21	-10															
DWP8	Resubmission of SCT Procedure	14	14	0%	03-Apr-21	16-Apr-21	-10															
NE/2017/06.DS.SCT.4 CCTV System								56														
DWP8	Preparation & Submission of CCTV System SCT Procedure	28	28	0%	20-Feb-2	19-Mar-2	-24															
DWP8	Comment on SCT Procedure / Meeting With Engineer	28	28	0%	20-Mar-2	16-Apr-21	-24															
NE/2017/06.DS.SCT.5 Building PABX System								56														
DWP8	Preparation & Submission of Building PABX System SCT Procedure	28	28	0%	20-Feb-2	19-Mar-2	-10															
DWP8	Comment on SCT Procedure / Meeting With Engineer	28	28	0%	20-Mar-2	16-Apr-21	-10															
NE/2017/06.DS.SCT.6 Emergency Telephone System								56														
DWP8	Preparation & Submission of Emergency Telephone System SCT Procedure	28	28	0%	20-Feb-2	19-Mar-2	-10															
DWP8	Comment on SCT Procedure / Meeting With Engineer	28	28	0%	20-Mar-2	16-Apr-21	-10															
NE/2017/06.DS.SCT.7 Public Address System								56														
DWP8	Preparation & Submission of Public Address System SCT Procedure	28	28	0%	20-Feb-2	19-Mar-2	-3															
DWP8	Comment on SCT Procedure / Meeting With Engineer	28	28	0%	20-Mar-2	16-Apr-21	-3															
NE/2017/06.DS.SCT.8 Radio System								56														
DWP8	Preparation & Submission of Radio System SCT Procedure	28	28	0%	20-Feb-2	19-Mar-2	13															
DWP8	Comment on SCT Procedure / Meeting With Engineer	28	28	0%	20-Mar-2	16-Apr-21	13															
NE/2017/06.DS.SCT.9 Detection System								56														
DWP8	Preparation & Submission of Detection System SCT Procedure	28	28	0%	20-Feb-2	19-Mar-2	-10															
DWP8	Comment on SCT Procedure / Meeting With Engineer	28	28	0%	20-Mar-2	16-Apr-21	-10															
NE/2017/06.DS.SCT.10 Manual Fallback System								56														
DWP8	Preparation & Submission of Manual Fallback System SCT Procedure	28	28	0%	03-Mar-2	31-Mar-2	7															
DWP8	Comment on SCT Procedure / Meeting With Engineer	28	28	0%	31-Mar-2	28-Apr-21	7															
NE/2017/06.DS.SCT.11 Operation Facilities								56														
DWP8	Preparation & Submission of Operation Facilities SCT Procedure	28	28	0%	20-Feb-2	19-Mar-2	-10															
DWP8	Comment on SCT Procedure / Meeting With Engineer	28	28	0%	20-Mar-2	16-Apr-21	-10															
NE/2017/06.DS.SCT.12 Power Distribution System								56														
DWP8	Preparation & Submission of Power Distribution System SCT Procedure	28	28	0%	20-Feb-2	19-Mar-2	-45															
DWP8	Comment on SCT Procedure / Meeting With Engineer	28	28	0%	20-Mar-2	16-Apr-21	-45															
NE/2017/06.DS.SCT.13 Speed Enforcement System								56														
DWP8	Preparation & Submission of Speed Enforcement System SCT Procedure	28	28	0%	20-Feb-2	19-Mar-2	34															
DWP8	Comment on SCT Procedure / Meeting With Engineer	28	28	0%	20-Mar-2	16-Apr-21	34															
NE/2017/06.DS.SCT.14 Optical Fibre system								14														
DWP8	Resubmission of SCT Procedure	14	14	0%	20-Mar-2	02-Apr-21	-10															
NE/2017/06.DS.SAT Preparation / Submission of SAT Procedures								0														
NE/2017/06.EMT Equipment Manufacturing and FAT Stage								101														
NE/2017/06.EMT.1 Sub-systems Equipment Manufacturing (Including FAT)								101														
DWP3670	Traffic Control Devices	50	50	0%	20-Feb-2	10-Apr-21	-20															
DWP3750	Manual Fallback System	70	35	0%	20-Jan-2	26-Mar-2	-12															
DWP3760	Operation Facilities	50	50	0%	20-Feb-2	10-Apr-21	-17															
DWP3780	Enforcement system	30	30	0%	20-Feb-2	21-Mar-2	-28															
DWP3770	Power Distribution System	80	0	38.75%	20-Jan-2	08-Feb-2																

█ Actual Level of Effort
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Activity ID	Activity Name	Original Duration	Remaining Duration	Schedule % Complete	Start	Finish	Total Float	2020											
								Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
NE/2017/06.EMT.2 System and Equipment FAT								15-Mar-21, NE/2017/06.EMT.2 System and Equipment FAT											
DWP3810	TCS System Software (For TKO-LTT TCSS & CBL TCSS)	5	5	0%	04-Mar-2	08-Mar-2	-28	TCS System Software (For TKO-LTT TCSS & CBL TCSS)											
DWP3820	Traffic Control Device (For TKO-LTT TCSS & CBL TCSS)	4	4	0%	20-Feb-2	23-Feb-2	-20	Traffic Control Device (For TKO-LTT TCSS & CBL TCSS)											
DWP3900	Manual Fallback Control System Software	7	7	0%	09-Mar-2	15-Mar-2	4	Manual Fallback Control System Software											
DWP3930	Enforcement System (For TKO-LTT TCSS & CBL TCSS)	6	6	0%	20-Feb-2	25-Feb-2	-28	Enforcement System (For TKO-LTT TCSS & CBL TCSS)											
DWP3920	Power Distribution System (For TKO-LTT TCSS & CBL TCSS)	1	0	100%	20-Jan-2	21-Jan-2		Power Distribution System (For TKO-LTT TCSS & CBL TCSS)											
DWP3940	Cables (For TKO-LTT TCSS & CBL TCSS)	2	0	100%	20-Jan-2	22-Jan-2		Cables (For TKO-LTT TCSS & CBL TCSS)											
DWP3950	Control Cabinet and Equipment rack (For TKO-LTT TCSS & CBL TCSS)	2	0	100%	20-Jan-2	22-Jan-2		Control Cabinet and Equipment rack (For TKO-LTT TCSS & CBL TCSS)											
NE/2017/06.EMT.3 Sub-systems Equipment delivery (Main Batch)								28-Apr-21, NE/2017/06.EMT.3 Sub-systems Equipment delivery (Main Batch)											
DWP3960	Traffic Control Devices (For TKO-LTT TCSS)	25	18	0%	11-Mar-2	28-Apr-21	40	Traffic Control Devices (For TKO-LTT TCSS)											
DWP3970	Communications System (For TKO-LTT TCSS)	10	10	0%	20-Feb-2	01-Mar-2	11	Communications System (For TKO-LTT TCSS)											
DWP3980	CCTV System (For TKO-LTT TCSS)	10	10	0%	20-Feb-2	01-Mar-2	18	CCTV System (For TKO-LTT TCSS)											
DWP4030	Detection System (For TKO-LTT TCSS)	14	14	0%	20-Feb-2	05-Mar-2	-27	Detection System (For TKO-LTT TCSS)											
DWP4060	Power Distribution System (For TKO-LTT TCSS)	35	35	0%	20-Feb-2	26-Mar-2	-27	Power Distribution System (For TKO-LTT TCSS)											
DWP4080	Cables (For TKO-LTT TCSS)	10	10	0%	10-Apr-21	19-Apr-21	18	Cables (For TKO-LTT TCSS)											
DWP4090	Control Cabinet and Equipment Rack (For TKO-LTT TCSS)	7	7	0%	04-Apr-21	10-Apr-21	33	Control Cabinet and Equipment Rack (For TKO-LTT TCSS)											
DWP3990	Building PABX System	10	0	100%	21-Jan-2	31-Jan-2		Building PABX System											
DWP4000	ET System	10	0	100%	21-Jan-2	31-Jan-2		ET System											
DWP4010	PA System	14	10	100%	20-Jan-2	01-Mar-2	11	PA System											
NE/2017/06.EMT.4 Assembly of Equipment in Control Cabinet								17-Apr-21, NE/2017/06.EMT.4 Assembly of Equipment in Control Cabinet											
DWP4100	Assembly of Equipment in Control Cabinet	7	7	0%	11-Apr-21	17-Apr-21	33	Assembly of Equipment in Control Cabinet											
NE/2017/06.CST Construction Stage for TKO-LTT TCSS								29-Apr-21, NE/2017/06.CST Construction Stage for TKO-LTT TCSS											
NE/2017/06.CST.S1A1B Works For Section 1A and Section 1B								29-Apr-21, NE/2017/06.CST.S1A1B Works For Section 1A and Section 1B											
NE/2017/06.CST.S1A1B.1A Stage 1A Works (ADB within Portion 1A)								20-Apr-21, NE/2017/06.CST.S1A1B.1A Stage 1A Works (ADB within Portion 1A)											
DWP4	Inspection of Civil Provisions and Submit Inspection Report	56	28	0%	20-Feb-2	19-Mar-2	-37	Inspection of Civil Provisions and Submit Inspection Report											
DWP4	Rectification of Civil Provisions Defects by others	21	21	0%	20-Mar-2	09-Apr-21	-37	Rectification of Civil Provisions Defects by others											
DWP1	Portion 1A Access Date	0	0	0%	20-Feb-2	20-Feb-2	-37	Portion 1A Access Date											
NE/2017/06.CST.S1A1B.1A.3 Administration Building								20-Apr-21, NE/2017/06.CST.S1A1B.1A.3 Administration Building											
DW	Installation of Equipment Rack	10	10	0%	11-Apr-21	20-Apr-21	53	Installation of Equipment Rack											
NE/2017/06.CST.S1A1B.1A.1 Site Commissioning Test of Fibre Cable								0											
NE/2017/06.CST.S1A1B.1A.2 Sub-system Site Commissioning Test								0											
NE/2017/06.CST.S1A1B.1B Stage 1B Works (Tunnel, Underpass and Open Road)								31-Mar-21, NE/2017/06.CST.S1A1B.1B Stage 1B Works (Tunnel, Underpass and Open Road)											
DWP4	Handover of Holding-down Bolts for Pole Foundation to Civil	1	1	0%	20-Feb-2	21-Feb-2	1016	Handover of Holding-down Bolts for Pole Foundation to Civil											
DWP4	Portion 1B Access Date	0	0	0%	20-Feb-2	20-Feb-2	-69	Portion 1B Access Date											
DWP4	Inspection of Civil Provisions and Submit Inspection Report	40	40	0%	20-Feb-2	31-Mar-2	-69	Inspection of Civil Provisions and Submit Inspection Report											
NE/2017/06.CST.S1A1B.1B.1 Installation of Cable Containment								0											
NE/2017/06.CST.S1A1B.1B.2 Laying Cables								0											
NE/2017/06.CST.S1A1B.1B.3 Installation of Traffic Control Field Equipment								0											
NE/2017/06.CST.S1A1B.1B.4 Installation of Leaky Cable and Radio Equipment								0											
NE/2017/06.CST.S1A1B.1B.5 Installation of CCTV								0											
NE/2017/06.CST.S1A1B.1B.6 Installation of Vehicle Detectors								0											
NE/2017/06.CST.S1A1B.1B.7 Installation of ET Equipment inside Tunnel								0											
NE/2017/06.CST.S1A1B.1B.8 Installation of PA Equipment								0											
NE/2017/06.CST.S1A1B.1B.9 Installation of Enforcement Equipment								0											
NE/2017/06.CST.S1A1B.1B.10 Installation of Control Cabinet								0											
NE/2017/06.CST.S1A1B.1B.11 Local Cables Installation, Testing and Termination								0											
NE/2017/06.CST.S1A1B.1B.12 Site Commissioning Test of TCD and fibre Cables								0											
NE/2017/06.CST.S1A1B.1C Stage 1C Works (EVB and WVB within Portion 1C)								29-Apr-21, NE/2017/06.CST.S1A1B.1C Stage 1C Works (EVB and WVB within Portion 1C)											
DWP4	Portion 1C Access Date	0	0	0%	20-Feb-2	20-Feb-2	-1	Portion 1C Access Date											
DWP4	Inspection of Civil provisions and Submit Inspection Report	7	7	0%	20-Feb-2	26-Feb-2	-1	Inspection of Civil provisions and Submit Inspection Report											
DWP4	Rectifications of Civil Provisions Defects by others	3	3	0%	27-Feb-2	01-Mar-2	-1	Rectifications of Civil Provisions Defects by others											
DWP4	Installation of Cable Containment	7	7	0%	02-Mar-2	08-Mar-2	60	Installation of Cable Containment											

█ Actual Level of Effort █ Remaining Work ◆ Milestone
█ Actual Work █ Critical Remaining Work ▼ summary

Activity ID	Activity Name	Original Duration	Remaining Duration	Schedule % Complete	Start	Finish	Total Float	2021														
								Qtr 1, 2021			Qtr 2, 2021			Qtr 3, 2021			Qtr 4, 2021					
								Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
DWP4	Laying Cables (fibre backbone, power)	10	10	0%	20-Apr-21	29-Apr-21	18															
NE/2017/06.CST.S1A1B.1C.5	Site Commissioning Test of Fibre Cable	0	0	0%			0															
NE/2017/06.CST.S1A1B.1C.2	West Ventilation Building	18	18	0%	11-Apr-21	28-Apr-21	53															
DW	Installation of Equipment Rack	8	8	0%	11-Apr-21	18-Apr-21	53															
DW	Installation of Communication Node Equipment	10	10	0%	18-Apr-21	28-Apr-21	53															
NE/2017/06.CST.S1A1B.1C.1	Sub-systems Site Commissioning Test	0	0	0%			0															
NE/2017/06.CST.S1A1B.1C.3	East Ventilation Building	7	7	0%	21-Apr-21	27-Apr-21	44															
DW	Installation of Equipment Rack	7	7	0%	21-Apr-21	27-Apr-21	44															
NE/2017/06.CST.S1A1B.1C.4	Sub-systems Site Commissioning Test-1	0	0	0%			0															
NE/2017/06.CST.S1A1B.2A	Stage 2A Works (Within Portion 2A)	0	0	0%			0															
NE/2017/06.CST.S1A1B.2B	Stage 2B Works (Within Portion 2B)	1	1	0%	13-Apr-21	14-Apr-21	817															
DWP5	Handover of Holding-down Bolts for Pole Foundation to Civil	1	1	0%	13-Apr-21	14-Apr-21	964															
NE/2017/06.CST.S1A1B.2B.1	Laying Cables (Fibre , Signal and Power)	0	0	0%			0															
NE/2017/06.CST.S1A1B.2B.2	Installation of Leaky Cable and Radio Equip	0	0	0%			0															
NE/2017/06.CST.S1A1B.2B.3	Installation of CCTV	0	0	0%			0															
NE/2017/06.CST.S1A1B.2B.4	Installation of Vehicle Detectors	0	0	0%			0															
NE/2017/06.CST.S1A1B.2B.5	Installation of Control Cabinet	0	0	0%			0															
NE/2017/06.CST.S1A1B.2B.6	Local Cables Installation , Testing and Termi	0	0	0%			0															
NE/2017/06.CST.S1A1B.2B.7	Site Commissioning Test of TCD and Fibre Cal	0	0	0%			0															
NE/2017/06.CST.S1A1B.3	Stage 3 Works (Within Portion 3A)	53	53	0%	20-Feb-2	26-Apr-21	806															
DWP5	Handover of Holding-down Bolts for Pole Foundation to Civil	1	1	0%	20-Feb-2	21-Feb-2	1016															
DWP5	Portion 3A Access Date	0	0	0%	01-Mar-2	01-Mar-2	19															
DWP5	Inspection of Civil Provisions and Submit Inspection Report	10	10	0%	01-Mar-2	10-Mar-2	19															
DWP5	Rectification of Civil Provisions Defects by others	16	16	0%	11-Mar-2	26-Mar-2	19															
NE/2017/06.CST.S1A1B.3.1	Laying Cables (fibre , signal and power)	31	31	0%	26-Mar-2	26-Apr-21	27															
NE/2017/06.CST.S1A1B.3.1.1	Installation of Cable Containment	24	24	0%	26-Mar-2	19-Apr-21	28															
I	Cable Containment on Gantry	24	24	0%	26-Mar-2	19-Apr-21	28															
NE/2017/06.CST.S1A1B.3.1.2	Laying Cables	7	7	0%	20-Apr-21	26-Apr-21	27															
I	Fibre, Signal and Power Cables along Roadside	7	7	0%	20-Apr-21	26-Apr-21	27															
NE/2017/06.CST.S1A1B.3.2	Installation of Traffic Control Field Equipment	0	0	0%			0															
NE/2017/06.CST.S1A1B.3.3	Installation of CCTV	11	11	0%	26-Mar-2	06-Apr-21	76															
DW	Assembly and erect CCTV Highmast for CCTV-TV/246/C	6	6	0%	26-Mar-2	01-Apr-21	76															
DW	CCTV-TV /246/C	5	5	0%	01-Apr-21	06-Apr-21	76															
NE/2017/06.CST.S1A1B.3.5	Installation of Control Cabinet	0	0	0%			0															
NE/2017/06.CST.S1A1B.3.6	Local Cables Installation , Testing and Termin	0	0	0%			0															
NE/2017/06.CST.S1A1B.3.7	Site Commissioning Test of TCD and Fibre Cabl	0	0	0%			0															
NE/2017/06.CST.S1A1B.4A	Stage 4A Works (Bridges within Portion 4A)	7	7	0%	10-Apr-21	17-Apr-21	813															
DWP5	Handover of Holding-down Bolts for Pole Foundation to Civil	1	1	0%	10-Apr-21	11-Apr-21	967															
DWP5	Portion 4A Access Date	0	0	0%	10-Apr-21	10-Apr-21	9															
DWP5	Inspection of Civil Provisions and Submit Inspection Report	8	8	0%	10-Apr-21	17-Apr-21	9															
NE/2017/06.CST.S1A1B.4A.1	Laying Cables (fibre , signal and power)	0	0	0%			0															
NE/2017/06.CST.S1A1B.4A.2	Installation of Traffic Control Field Equipme	0	0	0%			0															
NE/2017/06.CST.S1A1B.4A.3	Installation of CCTV	0	0	0%			0															
NE/2017/06.CST.S1A1B.4A.4	Installation of Vehicle Detectors	0	0	0%			0															
NE/2017/06.CST.S1A1B.4A.5	Installation of Control Cabinet	0	0	0%			0															
NE/2017/06.CST.S1A1B.4A.6	Local Cables Installation , Testing and Termi	0	0	0%			0															
NE/2017/06.CST.S1A1B.4A.7	Site Commissioning Test of TCD and Fibre Cal	0	0	0%			0															
NE/2017/06.CST.S1A1B.4B	Stage 4B Works (Bridges within Portion 4B)	0	0	0%			0															
NE/2017/06.SATT	SAT for TKO-LTT TCSS	0	0	0%			0															
NE/2017/06.OPTT	Operability Period Test for the TKO-LTT	0	0	0%			0															
NE/2017/06.DLPT	DLP for the TKO-LTT TCSS	0	0	0%			0															
NE/2017/06.DOC1	Documentation Submission for TKO-LT	0	0	0%			0															
NE/2017/06.TRT	Training for TKO-LTT TCSS	0	0	0%			0															



█ Actual Level of Effort █ Remaining Work ◆ Milestone
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Activity ID	Activity Name	Original Duration	Remaining Duration	Schedule % Complete	Start	Finish	Total Float	2020	Qtr 1, 2021			Qtr 2, 2021			Qtr 3, 2021			Qtr 4, 2021		
								Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NE/2017/06.EMC	Equipment Manufacturing and Delivery for CBL TCSS	0	0	0%			0													
NE/2017/06.CSC1	Construction Stage for CBL TCSS	0	0	0%			0													
NE/2017/06.SATC	SAT for CBL TCSS	0	0	0%			0													
NE/2017/06.OPTC	Operability Period Test For the CBL TCS	0	0	0%			0													
NE/2017/06.DLPC	DLP for the CBL TCSS	0	0	0%			0													
NE/2017/06.DOC	Documentation Submission for CBL TCS	0	0	0%			0													
NE/2017/06.TRC	Training for CBL TCSS	0	0	0%			0													

Activity ID	Activity Name	Original Duration	Start	Finish	2021			
					Feb	Mar	Apr	May
Tseung Kwan O Interchange and Associated Works 202102_20210226		677	10-07-19 A	20-07-21				
Contract Key Date & Milestone		255	21-03-20 A	19-06-21				
Contractor's Planned Completion Date		0	29-03-21	29-03-21				
CD-10120	Planned Completion of KD1 - Bridge ML for TCSS (23 Sep 20) -> (27 Oct 20)	0		29-03-21*				
Contract Key Date		61	08-02-21	09-04-21				
CD-10080	KD1 - Bridge ML for TCSS (23 Sep 20) -> (27 Oct 20)	0		08-02-21*				
CD-10090	KD2 - Bridge S300, Pier 2J and 1K (18 Nov 20) -> (30 Jan 21)	0		08-02-21*				
CD-10100	KD3 - TCSS work (except S200) (21 Jan 21) -> (9 Apr 21)	0		09-04-21*				
Contractor's Target Key Date		255	21-03-20 A	19-06-21				
Sloping Seawall Structure		0	08-02-21	08-02-21				
CD-10170	Acceptance of Reinstatement of all Seawall coping wall and associated work by Others' contract	0		08-02-21				
Major Safety/ Environment Element		0	08-02-21	08-02-21				
Independent Safety Audit		0	08-02-21	08-02-21				
CD-10440	Completion of 5th Independent Safety Audit (22 Jul 20)	0		08-02-21*				
CD-10450	Completion of 6th Independent Safety Audit (22 Jan 21)	0		08-02-21*				
Safety Bulletin Board		0	08-02-21	08-02-21				
CD-10462	Completion of 3rd Safety Bulletin Board (22 Jan 21)	0		08-02-21*				
Miscellaneous Work		255	21-03-20 A	19-06-21				
Video Film		255	21-03-20 A	19-06-21				
CD-10472	Project Manager Review and Contractor Revision on Script of Construction Video Film for Release I	51	21-03-20 A	28-02-21				
CD-10482	Project Manager Review and Contractor Revision on Script of Construction Video Film for Release II	51	21-03-20 A	28-02-21				
CD-10474	Project Manager Review and Contractor Revision on Video of Construction Video Film for Release I	51	17-06-20 A	21-03-21				
CD-10484	Project Manager Review and Contractor Revision on Video of Construction Video Film for Release II	51	11-07-20 A	21-03-21				
CD-10492	Project Manager Review and Contractor Revision on Script of Construction Video Film for Release III	51	08-02-21*	30-03-21				
CD-10475	Final Video Preparation and Submission with Voice Over of Construction Video Film for Release I	30	22-03-21	20-04-21				
CD-10485	Final Video Preparation and Submission with Voice Over of Construction Video Film for Release II	30	22-03-21	20-04-21				
CD-10493	Video Preparation and Submission of Construction Video Film for Release III	30	31-03-21	29-04-21				
CD-10470	Completion of Construction Video Film for Release I (17 Apr 19)	0		20-04-21				
CD-10480	Completion of Construction Video Film for Release II (16 Apr 20)	0		20-04-21				
CD-10494	Project Manager Review and Contractor Revision on Video of Construction Video Film for Release III	51	30-04-21	19-06-21				
Major Construction Work		97	08-02-21	15-05-21				
Bridge ML		50	08-02-21	29-03-21				
CD-10540	Completion of Pier Head Segment Diaphragm Bridge ML	0		08-02-21				
CD-10550	Completion of Segment Erection Bridge ML	0		10-02-21				
CD-10560	Completion of Parapet Installation Bridge ML	0		29-03-21				
Bridge S300		97	08-02-21	15-05-21				
CD-10600	Completion of Bored Pile (Construction) Bridge S300	0		08-02-21				
CD-10610	Completion of Pile Cap Bridge S300	0		08-03-21				
CD-10620	Completion of Pier Bridge S300	0		09-04-21				
CD-10630	Completion of Pier Head Segment Diaphragm Bridge S300	0		15-05-21				
Bridge S200		93	08-02-21	11-05-21				
CD-10690	Completion of Bored Pile (Construction) Bridge S200	0		08-02-21				
CD-10700	Completion of Pile Cap Bridge S200	0		22-03-21				
CD-10710	Completion of Pier Bridge S200	0		11-05-21				
Bridge S100		92	08-02-21	10-05-21				
CD-10780	Completion of Bored Pile (Construction) Bridge S100	0		08-02-21				
CD-10790	Completion of Pile Cap Bridge S100	0		04-03-21				
CD-10800	Completion of Pier Bridge S100	0		08-04-21				
CD-10810	Completion of Pier Head Segment Diaphragm Bridge S100	0		10-05-21				
Preliminary & Pre-Construction Work		120	10-07-19 A	21-02-21				
Initial Document Submission		120	10-07-19 A	21-02-21				
BIM & Simulation of Construction Method		120	10-07-19 A	21-02-21				
Construction Method Simulation (CMS)		120	10-07-19 A	21-02-21				
PRE-10810	Prepare and Submit the Construction Method Simulation - Span Segment Erection	120	10-07-19 A	21-02-21				
Document Submission (Design, Drawing, Method Statement, Application etc)		195	23-09-20 A	25-04-21				
Major Method Statement		77	08-02-21	25-04-21				
Installation of Bridge Furniture		77	08-02-21	25-04-21				
PRE-14290	Prepare 1st Submission of Method Statement Installation of Bridge Furniture	28	08-02-21	07-03-21				
PRE-14310	Contractor's Review with Project Manager, Revised Method Statement for Installation of Bridge Furniture	21	08-03-21	28-03-21				
PRE-14330	ICE Certification & Submit Revised Method Statement for Installation of Bridge Furniture	7	29-03-21	04-04-21				

Works Critical Works Actual

Activity ID	Activity Name	Original Duration	Start	Finish	2021			
					Feb	Mar	Apr	May
PRE-14340	Project Manager to review and approve Method Statement Installation of Bridge Furniture	21	05-04-21	25-04-21				
Design Calculation/ Drawing of Temporary Work		21	23-09-20 A	13-02-21				
Design for Temp.work of Parapet Construction		21	23-09-20 A	13-02-21				
PRE-14640	Project Manager to review and approve the Design for Temp.work of Parapet Construction	21	23-09-20 A	13-02-21				
Pre-Fabrication Element		239	10-09-20 A	03-06-21				
Pre-Fabrication of Parapet Skin		239	10-09-20 A	03-06-21				
FD-10280	Pre-Fabrication for Parapet Skin for Bridge S100 (180m Length x 2 Sides)- 6 Sets Mould	35	10-09-20 A	10-02-21				
FD-10260	Pre-Fabrication for Parapet Skin for Bridge ML (402m Length x 2 Sides) - 6 Sets Mould	67	15-09-20 A	21-03-21				
FD-10270	Pre-Fabrication for Parapet Skin for Bridge S300 (413m Length x 2 Sides) - 6 Sets Mould	74	22-03-21	03-06-21				
Construction Work		169	30-11-20 A	20-07-21				
Pile Cap Construction		52	27-01-21 A	22-03-21				
Trimming of Bored Pile Head		19	27-01-21 A	09-02-21				
Bridge S300		11	27-01-21 A	08-02-21				
CON-11980	Trimming Bored Pile 4J (Team F)	11	27-01-21 A	08-02-21				
Bridge S200		11	28-01-21 A	09-02-21				
CON-12070	Trimming Bored Pile 2C (Team E)	11	28-01-21 A	09-02-21				
Pile Cap Rebar Erection, Concreting and Curing		34	05-02-21 A	22-03-21				
Bridge S300		21	09-02-21	08-03-21				
CON-12280	Pile Cap Rebar Erection, Concreting and Curing for Pier 4J (1 nos.Pile Cap/ Team 3r)	21	09-02-21	08-03-21				
Bridge S200		32	10-02-21	22-03-21				
CON-12310	Pile Cap Rebar Erection, Concreting and Curing for Pier 2C (1 nos.Pile Cap/ Team 2r)	32	10-02-21	22-03-21				
Bridge S100		21	05-02-21 A	04-03-21				
CON-12400	Pile Cap Rebar Erection, Concreting and Curing for Pier 3D (1 nos.Pile Cap/ Team 1r)	21	05-02-21 A	04-03-21				
Construction Pier Element		78	08-02-21	18-05-21				
Construction of Pier		53	05-03-21	11-05-21				
Bridge S300		24	09-03-21	09-04-21				
CON-12560	Construction of Pier 4J, type 1 (1 Pour) Erection of Platform & Rebar (1 no.Pier/ Team 3r)	15	09-03-21	25-03-21				
CON-12561	Construction of Pier 4J, type 1 (1 Pour) Falsework, Formwork and Concreting (1 no.Pier/ Team 3c)	9	26-03-21	09-04-21				
Bridge S200		38	23-03-21	11-05-21				
CON-12650	Construction of Pier 2C, type 1 (3 Pours) Erection of Platform & Rebar (1 no.Pier/ Team 4r) - 1st Pour	8	23-03-21	31-03-21				
CON-12651	Construction of Pier 2C, type 1 (3 Pours) Falsework, Formwork and Concreting (1 no.Pier/ Team 4c) - 1st Pour	4	01-04-21	09-04-21				
CON-12652	Construction of Pier 2C, type 1 (3 Pours) Erection of Platform & Rebar (1 no.Pier/ Team 4r) - 2nd Pour	8	10-04-21	19-04-21				
CON-12653	Construction of Pier 2C, type 1 (3 Pours) Falsework, Formwork and Concreting (1 no.Pier/ Team 4c) - 2nd Pour	4	20-04-21	23-04-21				
CON-12654	Construction of Pier 2C, type 1 (3 Pours) Erection of Platform & Rebar (1 no.Pier/ Team 4r) - 3rd Pour	10	24-04-21	06-05-21				
CON-12655	Construction of Pier 2C, type 1 (3 Pours) Falsework, Formwork and Concreting (1 no.Pier/ Team 4c) - 3rd Pour	4	07-05-21	11-05-21				
Bridge S100		26	05-03-21	08-04-21				
CON-12680	Construction of Pier 3D, type 1 (2 Pours) Erection of Platform & Rebar (1 no.Pier/ Team 1r) - 1st Pour	8	05-03-21	13-03-21				
CON-12681	Construction of Pier 3D, type 1 (2 Pours) Falsework, Formwork and Concreting (1 no.Pier/ Team 1c) - 1st Pour	4	15-03-21	18-03-21				
CON-12682	Construction of Pier 3D, type 1 (2 Pours) Erection of Platform & Rebar (1 no.Pier/ Team 1r) - 2nd Pour	10	19-03-21	30-03-21				
CON-12683	Construction of Pier 3D, type 1 (2 Pours) Falsework, Formwork and Concreting (1 no.Pier/ Team 1c) - 2nd Pour	4	31-03-21	08-04-21				
Concrete Curing and Removal of Temp. Work		33	09-04-21	18-05-21				
Bridge S300		6	12-04-21	17-04-21				
CON-12840	Concrete Curing and Removal Temp. Work of Pier 4J (Team L)	6	12-04-21	17-04-21				
Bridge S200		6	12-05-21	18-05-21				
CON-12930	Concrete Curing and Removal Temp. Work of Pier 2C (Team L)	6	12-05-21	18-05-21				
Bridge S100		6	09-04-21	15-04-21				
CON-12960	Concrete Curing and Removal Temp. Work of Pier 3D (Team L)	6	09-04-21	15-04-21				
Bearing Installation		2	08-02-21	09-02-21				
Bridge S300		2	08-02-21	09-02-21				
CON-13150	Bearing Installation Pier 4L (Portion IV)	2	08-02-21	09-02-21				
Bridge S200		2	08-02-21	09-02-21				
CON-13240	Bearing Installation Pier 2A (Portion IV)	2	08-02-21	09-02-21				
Bridge S100		2	08-02-21	09-02-21				
CON-13300	Bearing Installation Pier 3F (Portion IV)	2	08-02-21	09-02-21				
Construction of Pier Head Segment Diaphragm		118	15-01-21 A	11-06-21				
Installation of Pier Head Segment & Temporary Works		91	29-01-21 A	25-05-21				
Bridge S300		61	08-02-21	27-04-21				
CON-13540	Installation Pier Head Segment 4K (1 no. Pier Head Segment) (Team Z)	5	08-02-21	16-02-21				
CON-13550	Installation Pier Head Segment 4L (Precast Diaphragm) (1 no. Pier Head Segment) (Team Z)	2	20-02-21	22-02-21				
CON-13530	Installation Pier Head Segment 4J (1 no. Pier Head Segment) (Team Z)	5	22-04-21	27-04-21				

Works Critical Works Actual

Activity ID	Activity Name	Original Duration	Start	Finish	2021				
					Feb	Mar	Apr	May	
Bridge S200									
CON-13640	Installation Pier Head Segment 2A (Precast Diaphragm) (1 no. Pier Head Segment) (Team Z)	2	17-02-21	18-02-21					
CON-13630	Installation Pier Head Segment 2C (1 no. Pier Head Segment) (Team Z)	5	20-05-21	25-05-21					
Bridge S100									
CON-13700	Installation Pier Head Segment 3F (Precast Diaphragm) (1 no. Pier Head Segment) (Team Z)	2	29-01-21 A	19-02-21					
CON-13680	Installation Pier Head Segment 3D (1 no. Pier Head Segment) (Team Z)	5	16-04-21	21-04-21					
Construction Cast-in-situ Diaphragm									
Bridge S300									
CON-13940	Rebar, Formwork/Falsework & Concreting for Pier Head Segment Diaphragm 4K (1 no. Pier Head Segment/ Team 4c/ Team 4r)	15	17-02-21	05-03-21					
CON-13950	Alignment and Miscellaneous Work Pier Head Segment Diaphragm 4L (Precast Diaphragm) (1 no. Pier Head Segment/ Team 1)	5	23-02-21	27-02-21					
CON-13930	Rebar, Formwork/Falsework & Concreting for Pier Head Segment Diaphragm 4J (1 no. Pier Head Segment/ Team 3c/ Team 3r)	15	28-04-21	15-05-21					
Bridge S200									
CON-13960	Alignment and Miscellaneous Work Pier Head Segment Diaphragm 2A (Precast Diaphragm) (1 no. Pier Head Segment)	5	19-02-21	24-02-21					
CON-13980	Rebar, Formwork/Falsework & Concreting for Pier Head Segment Diaphragm 2C (1 no. Pier Head Segment/ Team 4c/ Team 4r)	15	26-05-21	11-06-21					
Bridge S100									
CON-14100	Alignment and Miscellaneous Work Pier Head Segment Diaphragm 3F (Precast Diaphragm) (1 no. Pier Head Segment/ Team 4)	5	20-02-21	25-02-21					
CON-14080	Rebar, Formwork/Falsework & Concreting for Pier Head Segment Diaphragm 3D (1 no. Pier Head Segment/ Team 1c/ Team 1r)	15	22-04-21	10-05-21					
Concrete Curing and Formwork Removal									
Bridge S300									
CON-14340	Concrete Curing & Formwork Removal for Pier Head Segment Diaphragm 4K (1 no.) (Team U)	10	06-03-21	17-03-21					
CON-14330	Concrete Curing & Formwork Removal for Pier Head Segment Diaphragm 4J (1 no.) (Team U)	10	17-05-21	28-05-21					
Bridge S200									
CON-14420	Concrete Curing & Formwork Removal for Pier Head Segment Diaphragm 2B (1 no.) (Team U)	10	08-02-21	22-02-21					
Bridge S100									
CON-14490	Concrete Curing & Formwork Removal for Pier Head Segment Diaphragm 3E (1 no.) (Team U)	10	15-01-21 A	16-02-21					
CON-14480	Concrete Curing & Formwork Removal for Pier Head Segment Diaphragm 3D (1 no.) (Team U)	10	11-05-21	22-05-21					
Span Segment Erection									
Span Segment Erection (Including Plant Mobilisation, Erection & removal of Temp. Work)									
Bridge S300									
Span Segment S300-2									
CON-14790	[HB2-11] Erection of Span Segment@Bridge S300-2 - Span 4K (12 nos./ 6 Pairs)	26	18-03-21	21-04-21					
Bridge S200									
Span Segment S200-1									
CON-14850	[HB1-13] Erection of Span Segment@Bridge S200-1 - Span 2B (12 nos./ 6 Pairs)	26	23-02-21	24-03-21					
CON-14830	[LF-19] Erection of Span Segment@Bridge S200-1 - Span 2D (12 nos./ 6 Pairs)	26	27-02-21	29-03-21					
Span Segment S200-2									
CON-14890	[LF-17] Erection of Span Segment@Bridge S200-2 - Span 2H (4 nos./ 2 Pairs)	8	08-01-21 A	08-02-21					
CON-14880	[LF-18] Erection of Span Segment@Bridge S200-2 - Span 2G (6 nos./ 3 Pairs)	13	09-02-21	26-02-21					
CON-14891	[HB1-14] Erection of Span Segment@Bridge S200-2 - Span 2H (16 nos./ 8 Pairs)	33	25-03-21	07-05-21					
CON-14910	[TB1-04] Erection of Span Segment@Bridge S200-2 - Span 2J (4 nos.- TB)	27	08-05-21	09-06-21					
Bridge S100									
Span Segment S100									
CON-14960	[HB2-10] Erection of Span Segment@Bridge S100 - Span 3E (10 nos./ 5 Pairs)	21	17-02-21	12-03-21					
CON-14970	[TB2-06] Erection of Span Segment@Bridge S100 - Span 3F (8 nos.- TB)	45	13-03-21	10-05-21					
CON-14950	[HB1-15] Erection of Span Segment@Bridge S100 - Span 3D (10 nos./ 5 Pairs)	21	24-05-21	17-06-21					
Key Segment Erection (Including Plant Setting of Segment Erector, Segment Erection and Stitch Joint)									
Bridge ML									
Bridge ML-2S(S)									
CON-15120	[ML15] Stitching & Mid -Span Stressing @ML 1DS(S) - 1ES(S) (Stitching)	6	04-02-21 A	10-02-21					
Bridge S300									
CON-15140	[S300-02] Erect Key Segment,Stitching & Mid -Span Stressing @S300 4C - 4D (1 no.- Key Segment) [KB2-06]	6	11-01-21 A	10-02-21					
CON-15130	[S300-01] Erect Key Segment,Stitching & Mid -Span Stressing @S300 4D - 4E (1 no.- Key Segment) [KB2-02]	6	18-01-21 A	18-02-21					
CON-15170	[S300-05] Erect Key Segment,Stitching & Mid -Span Stressing @S300 4E - 4F (1 no.- Key Segment) [KB2-11]	6	19-02-21	25-02-21					
CON-15180	[S300-06] Erect Key Segment,Stitching & Mid -Span Stressing @S300 4F - 4G (1 no.- Key Segment) [KB2-12]	6	26-02-21	04-03-21					
Bridge S200									
CON-15230	[S200-01] Erect Key Segment,Stitching & Mid -Span Stressing @S200 2G - 2H (1 no.- Key Segment) [KB2-09]	6	08-05-21	14-05-21					
CON-15250	[S200-02] Erect Key Segment,Stitching & Mid -Span Stressing @S200 2F - 2G (1 no.- Key Segment) [KB2-10]	6	15-05-21	22-05-21					
Bridge Parapet & Utility Trough									
Bridge ML									
CON-15360	External Tendon Stressing for Bridge ML	10	09-01-21 A	23-02-21					

Works Critical Works Actual

Activity ID	Activity Name	Original Duration	Start	Finish	2021			
					Feb	Mar	Apr	May
CON-15370	Survey Profile Checking for Bridge ML	8	23-02-21	03-03-21				
CON-15380	Installation of Parapet Wall Skin for Bridge ML	19	24-02-21	17-03-21				
CON-15371	Installation of Movement Joint for Bridge ML	21	04-03-21	27-03-21				
CON-15372	Cast -in situ Longitudinal Joint between ML- North and ML- South	19	04-03-21	25-03-21				
CON-15390	Construction of RC barrier & Installation of Traffic Sign, Sign Gantry & TCSS Civil Provision for Bridge ML	19	08-03-21	29-03-21				
Bridge S100		145	30-11-20 A	17-03-21				
CON-15502	Installation of Parapet Wall Skin for Bridge S100 (3A to 3C)	30	30-11-20 A	24-02-21				
CON-15503	Construction of Utility trough - R.C. Partitions for Bridge S100 (3A to 3C)	30	08-02-21	17-03-21				
CON-15521	Construction of RC barrier & Installation of Traffic Sign, Sign Gantry & TCSS Civil Provision for Bridge S100 (3A to 3C)	30	08-02-21	17-03-21				
Bridge Furniture & Road Work		70	26-04-21	20-07-21				
Bridge ML		70	26-04-21	20-07-21				
CON-15540	Installation of Steel Parapet Post and Rail for Bridge ML	49	26-04-21	24-06-21				
CON-15550	Installation of Road Drainage and Drain Pipe for Bridge ML	58	26-04-21	06-07-21				
CON-15560	Road Pavement and Road Marking for Bridge ML	58	11-05-21	20-07-21				

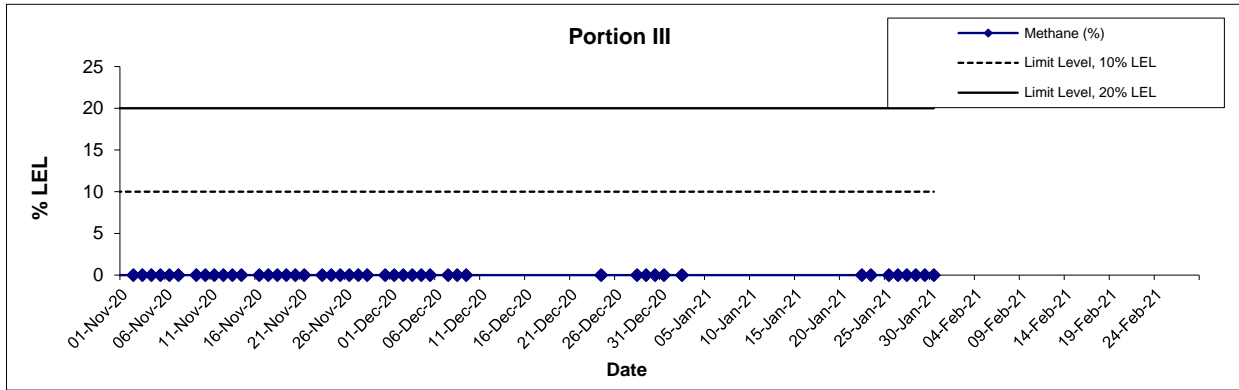
**APPENDIX R
RECORD OF LANDFILL GAS
MONITORING BY CONTRACTOR**

APPENDIX R - RECORD OF LANDFILL GAS MONITORING BY THE CONTRACTOR

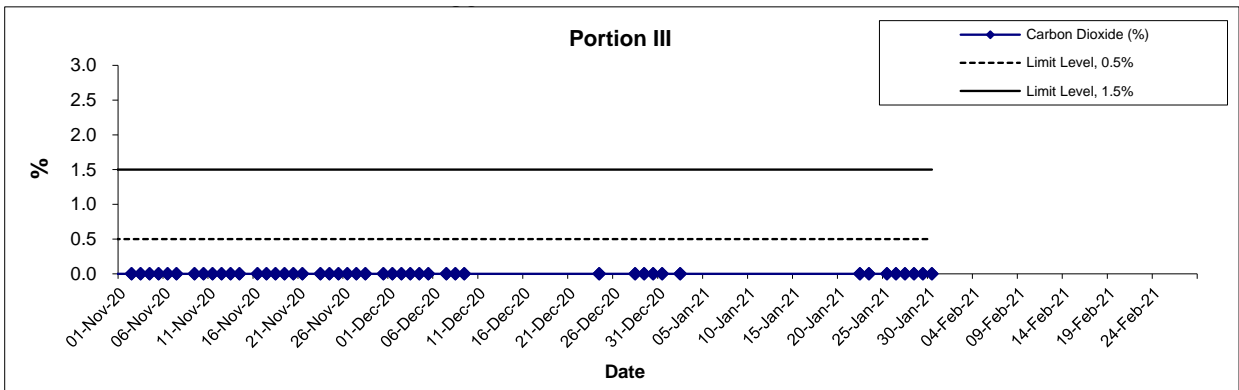
Location	Date of Measurement	Sampling time	Weather Condition	Temperature (°C)	Methane (%)	Carbon dioxide (%)	Oxygen (%)
Portion III	1-Feb-21	8:30	Sunny	17	0	0	20.9
Portion III	1-Feb-21	13:35	Sunny	19	0	0	20.9
Portion III	2-Feb-21	8:35	Sunny	18	0	0	20.9
Portion III	2-Feb-21	13:15	Sunny	20	0	0	20.9
Portion III	3-Feb-21	8:25	Sunny	17	0	0	20.9
Portion III	3-Feb-21	13:25	Sunny	19	0	0	20.9
Portion III	4-Feb-21	8:23	Sunny	16	0	0	20.9
Portion III	4-Feb-21	13:10	Sunny	18	0	0	20.9
Portion III	5-Feb-21	8:45	Sunny	17	0	0	20.9
Portion III	5-Feb-21	13:05	Sunny	18	0	0	20.9
Portion III	6-Feb-21	8:33	Sunny	20	0	0	20.9
Portion III	6-Feb-21	13:15	Sunny	21	0	0	20.9
Portion III	8-Feb-21	8:35	Sunny	18	0	0	20.9
Portion III	8-Feb-21	13:21	Sunny	19	0	0	20.9
Portion III	9-Feb-21	8:30	Cloudy	16	0	0	20.9
Portion III	9-Feb-21	13:15	Rainy	17	0	0	20.9
Portion III	10-Feb-21	8:45	Cloudy	16	0	0	20.9
Portion III	10-Feb-21	13:07	Rainy	16	0	0	20.9
Portion III	11-Feb-21	8:55	Cloudy	16	0	0	20.9
Portion III	11-Feb-21	13:17	Sunny	15	0	0	20.9
Portion III	16-Feb-21	8:40	Sunny	16	0	0	20.9
Portion III	16-Feb-21	13:10	Sunny	18	0	0	20.9
Portion III	17-Feb-21	8:33	Cloudy	19	0	0	20.9
Portion III	17-Feb-21	13:17	Sunny	23	0	0	20.9
Portion III	18-Feb-21	8:55	Sunny	17	0	0	20.9
Portion III	18-Feb-21	14:15	Sunny	19	0	0	20.9
Portion III	19-Feb-21	8:19	Sunny	17	0	0	20.9
Portion III	19-Feb-21	13:11	Sunny	19	0	0	20.9
Portion III	20-Feb-21	8:31	Cloudy	18	0	0	20.9
Portion III	20-Feb-21	14:00	Sunny	21	0	0	20.9
Portion III	22-Feb-21	8:27	Sunny	20	0	0	20.9
Portion III	22-Feb-21	13:20	Sunny	23	0	0	20.9
Portion III	23-Feb-21	8:30	Sunny	19	0	0	20.9
Portion III	23-Feb-21	13:15	Sunny	24	0	0	20.9
Portion III	24-Feb-21	9:00	Cloudy	19	0	0	20.9
Portion III	24-Feb-21	13:10	Cloudy	19	0	0	20.9
Portion III	25-Feb-21	8:15	Cloudy	19	0	0	20.9
Portion III	25-Feb-21	13:17	Rainy	19	0	0	20.9
Portion III	26-Feb-21	8:37	Rainy	20	0	0	20.9
Portion III	26-Feb-21	13:41	Rainy	20	0	0	20.9
Portion III	27-Feb-21	8:15	Rainy	19	0	0	20.9
Portion III	27-Feb-21	13:15	Cloudy	19	0	0	20.9

APPENDIX R - RECORD OF LANDFILL GAS MONITORING BY THE CONTRACTOR

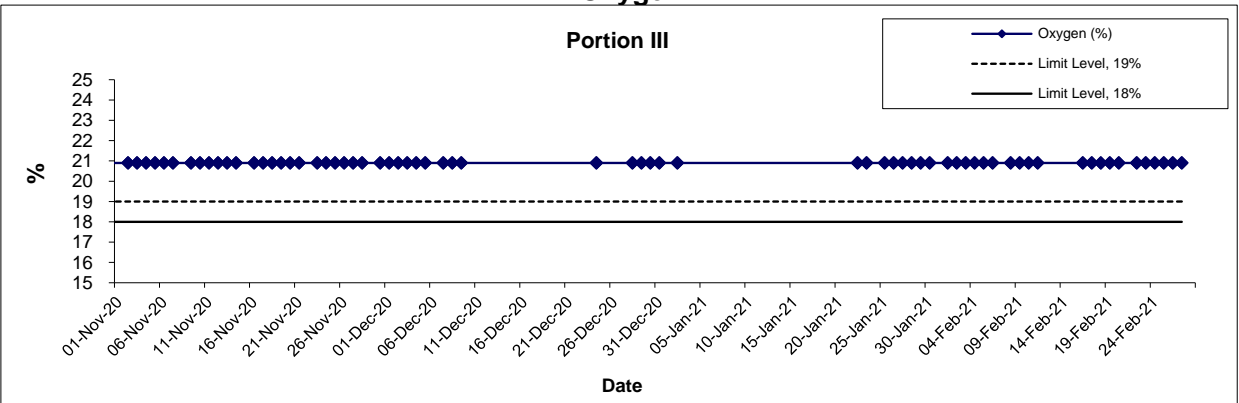
Methane




Carbon Dioxide



Oxygen



Agreement No. CE 59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel – Design and Construction	Scale	Project	
	Date	No. MA16034	
	Mar-21	Appendix R	

**APPENDIX T
CULTURAL HERITAGE MONITORING
RESULTS**

Appendix T – Cultural Heritage Monitoring Results

Date	Tilting				Settlement (mm)			Vibration (mm/s)		
	THT-TM-01	THT-TM-02	THT-TM-03	THT-TM-04	THT-BSP-1	THT-BSP-2	THT-BSP-3	Measurement Direction		
								Tran	Vertical	Longitude
1-Feb-21		-1 : 10464	-1 : 12857	1 : 6618	Obstructed by work from stakeholder	-1	Stop monitoring	Stop monitoring	0.536	1.230
2-Feb-21		-1 : 11249	-1 : 14062	1 : 5844	Obstructed by work from stakeholder	+0	Stop monitoring	Stop monitoring	0.150	0.331
3-Feb-21		-1 : 10464	-1 : 19564	1 : 6338	Obstructed by work from stakeholder	+3	Stop monitoring	Stop monitoring	OBS	OBS
4-Feb-21		-1 : 8181	-1 : 22499	1 : 5625	Obstructed by work from stakeholder	+0	Stop monitoring	Stop monitoring	0.544	0.749
5-Feb-21		-1 : 9782	-1 : 17307	1 : 6081	Obstructed by work from stakeholder	+1	Stop monitoring	Stop monitoring	0.158	0.252
6-Feb-21		-1 : 9183	-1 : 15517	1 : 6338	Obstructed by work from stakeholder	+0	Stop monitoring	Stop monitoring	0.315	0.583
8-Feb-21		-1 : 11249	-1 : 19564	1 : 5844	Obstructed by work from stakeholder	-1	Stop monitoring	Stop monitoring	0.236	0.315
9-Feb-21		-1 : 10464	-1 : 14062	1 : 6338	Obstructed by work from stakeholder	+2	Stop monitoring	Stop monitoring	0.142	0.158
10-Feb-21		-1 : 12161	-1 : 17307	1 : 6618	Obstructed by work from stakeholder	Bad Weather	Stop monitoring	Stop monitoring	0.189	0.236
11-Feb-21		-1 : 20453	-1 : 12857	1 : 6081	Obstructed by work from stakeholder	OBS	Stop monitoring	Stop monitoring	OBS	OBS
16-Feb-21		OBS	OBS	OBS	Obstructed by work from stakeholder	OBS	Stop monitoring	Stop monitoring	OBS	OBS
17-Feb-21		-1 : 14515	Obstructed by Tin Hau Temple Activities	1 : 5844	Obstructed by work from stakeholder	OBS	Stop monitoring	Stop monitoring	0.418	0.662
18-Feb-21		-1 : 11249	-1 : 14062	1 : 6618	Obstructed by work from stakeholder	+1	Stop monitoring	Stop monitoring	0.142	0.205

Appendix T – Cultural Heritage Monitoring Results

19-Feb-21		-1 : 8653	-1 : 19564	1 : 7627 1 : 5844 1 : 5422 1 : 6338 1 : 5844 1 : 7258 1 : 9574 1 : 8490	Obstructed by work from stakeholder	+1	Stop monitoring	Stop monitoring	0.410	0.560
20-Feb-21		-1 : 9183	-1 : 17307		Obstructed by work from stakeholder	+1	Stop monitoring	Stop monitoring	0.315	0.339
22-Feb-21		-1 : 12161	-1 : 12857		Obstructed by work from stakeholder	OBS	Stop monitoring	Stop monitoring	0.150	0.158
23-Feb-21		-1 : 9183	-1 : 11842		Obstructed by work from stakeholder	+2	Stop monitoring	Stop monitoring	0.158	0.173
24-Feb-21		-1 : 9782	-1 : 10227		Obstructed by work from stakeholder	+0	Stop monitoring	Stop monitoring	0.166	0.197
25-Feb-21		-1 : 14515	-1 : 11842		Obstructed by work from stakeholder	Bad Weather	Stop monitoring	Stop monitoring	0.402	0.528
26-Feb-21		-1 : 11249	-1 : 10975		Obstructed by work from stakeholder	OBS	Stop monitoring	Stop monitoring	0.370	0.536
27-Feb-21		-1 : 8653	-1 : 9574		Obstructed by work from stakeholder	Bad Weather	Stop monitoring	Stop monitoring	0.150	0.325
Alert Level		1:2000			6				4.5	
Alarm Level		1:1500			8				4.8	
Action Level		1:1000			10				5	

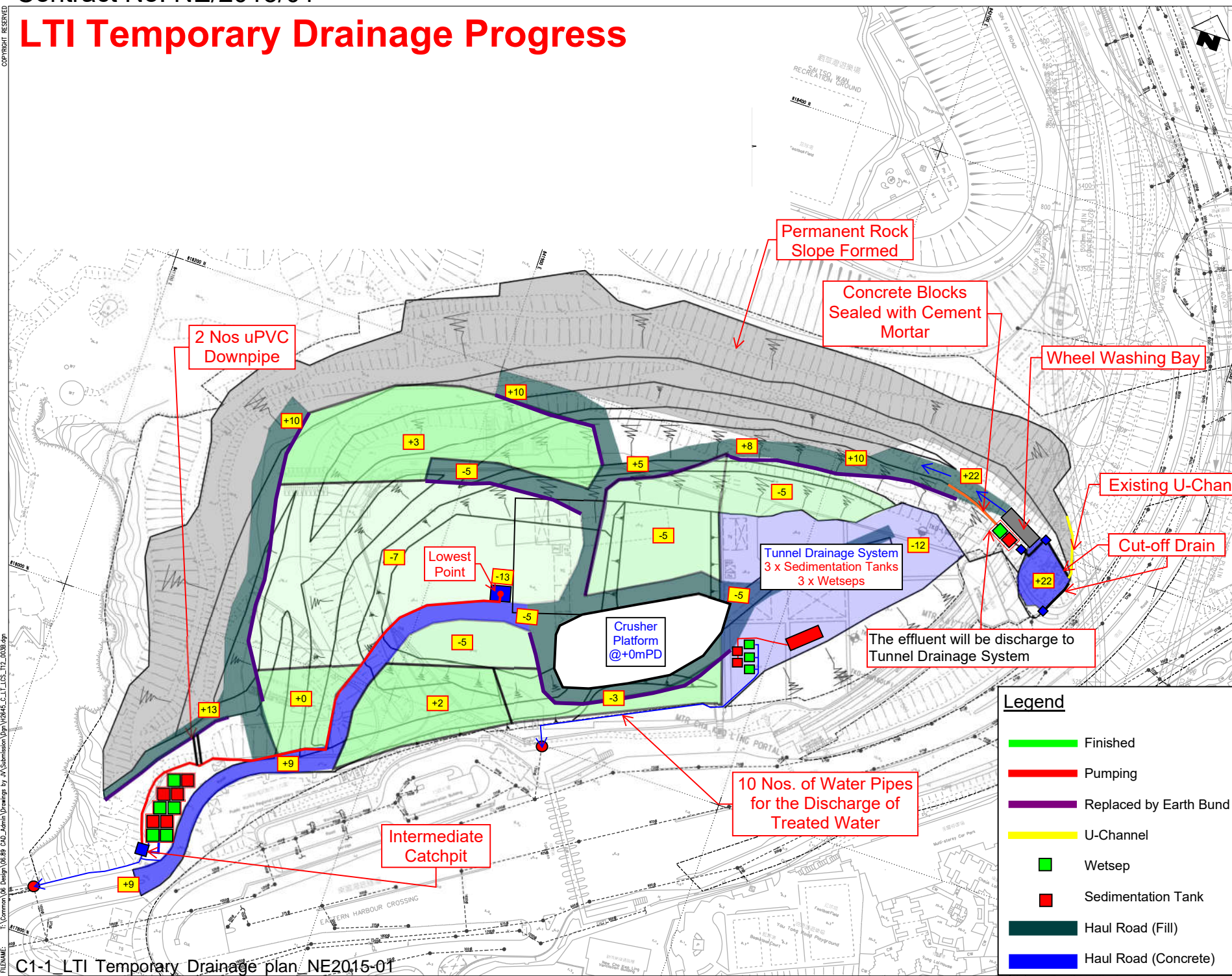
Note:

Bold means Alert Level exceedance**Bold Italic** means Alarm Level exceedance**Bold Italic with underline** means Action Level exceedance

**APPENDIX V
SURFACE RUNOFF MANAGEMENT
PLAN**

LTI Temporary Drainage Progress

COPYRIGHT RESERVED



- NOTES:**
1. ALL DIMENSIONS ARE LARGE 1000 MILLIMETRES UNLESS OTHERWISE SPECIFIED.
 2. 75mm THK. SHOTCRET SHALL BE APPLIED ON CHANNEL SURFACE.
 3. CHANNEL DIMENSION AS FOLLOW:
 4. REFER HAUL ROAD AND TEMPORARY CUT SLOPE DESIGN UNDER SEPARATE SUBMISSION.
 5. REFER TO DRAWING NO. H2645/T/CL/T/01/02/3 & 02/1 FOR PIPE CONNECTION DETAILS.

- LEGENDS:**
- DRAINAGE PIPE
 - WATER TREATMENT (100m³/HR)
 - SUMP PIT
 - SITE BOUNDARY
 - PROPOSED TEMPORARY DRAINAGE CHANNEL
 - EXISTING STORMWATER DRAIN
 - EXISTING U-CHANNEL
 - EXCAVATION / HAUL ROAD LEVEL
 - 6" PUMP
 - SEDIMENTATION TANK
 - UC CUT OFF DRAIN

REV.	DESCRIPTION	DATE	BY	APP.
A	FIRST ISSUE	17/08/30	RA	JT

土木工程師 土木工程師
CEDD Civil Engineering and Development Department

AECOM
 TSEUNG KWAN O - LAM TIN TUNNEL - MAIN TUNNEL AND ASSOCIATED WORKS

LAM TIN
 TEMPORARY DRAINAGE DESIGN
 LAYOUT PLAN - STAGE 3

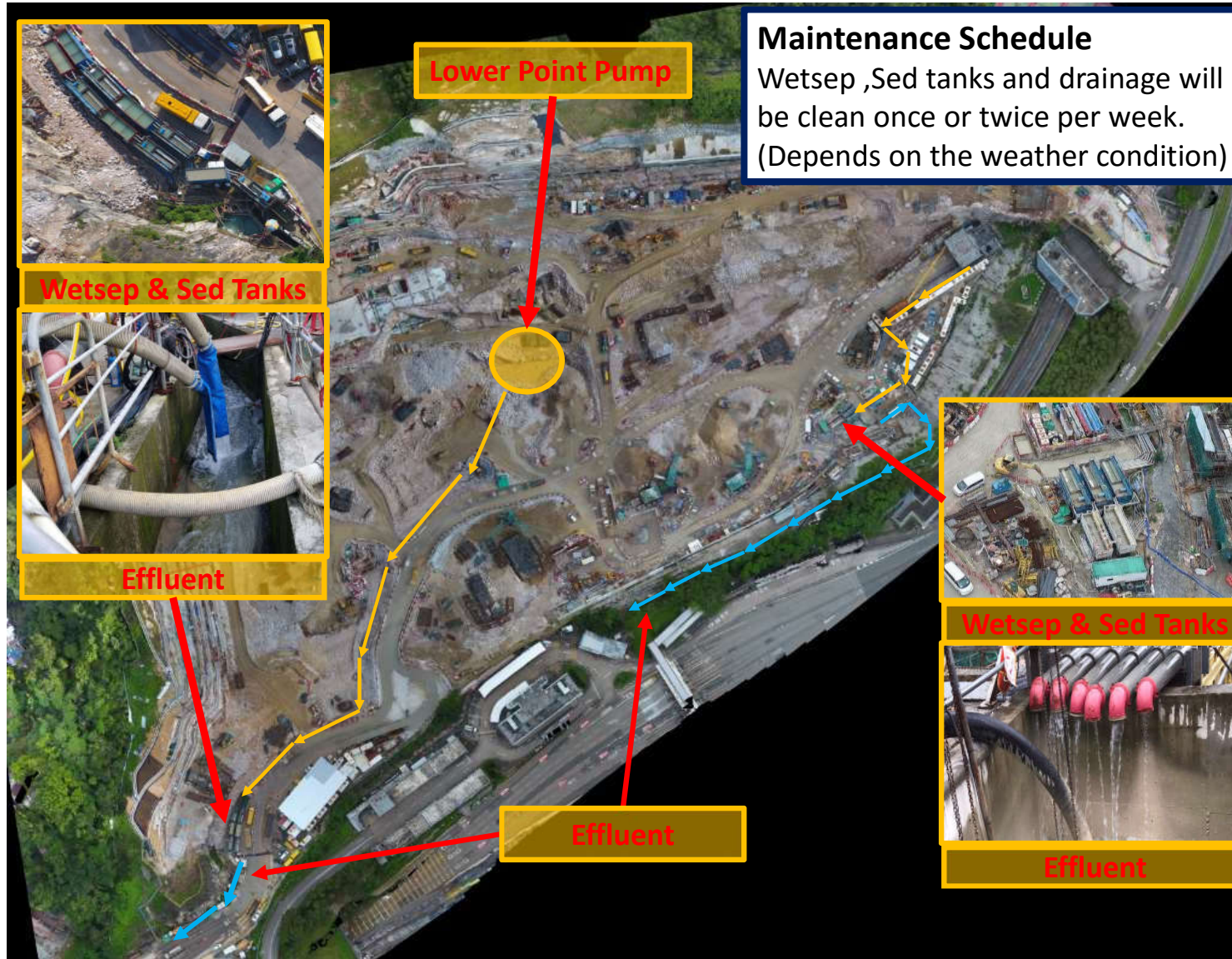
LEIGHTON 禮頓
 Leighton - China State Joint Ventures
 SUBCONTRACTOR / SUBCONSULTANT

DRG. NO. H2645/C/LT/CS/T/12/003	REV. A
CONTRACT NO. NE/2015/01	DATE OF ISSUE 2017-08-30
CHECKED BY RA	DRAWN BY CC
SCALE 1 : 1000	STATUS FOR INFORMATION
DIMENSIONS ARE IN MILLIMETRES	PAPER SIZE A1 1

Legend

- Finished
- Pumping
- Replaced by Earth Bund
- U-Channel
- Wetsep
- Sedimentation Tank
- Haul Road (Fill)
- Haul Road (Concrete)

T:\Common\06 Design\06_09 CAD_Admin\Plot_dwg\PDF_COLOUR_A1M10.ctb
 T:\Common\06 Design\06_09 CAD_Admin\Drawings by A\Submission_Dwg\H2645_C.LT.LTCS.T12_00303.dwg
 PLOT DATE: 2017/08/30 10:00:00
 PLOT BY: [Name]
 PLOT SCALE: 1:1000



Maintenance Schedule
Wetsep ,Sed tanks and drainage will be clean once or twice per week.
(Depends on the weather condition)

Sed tanks

Site Clearance & provide cover to exposed excavation area

Wetsep

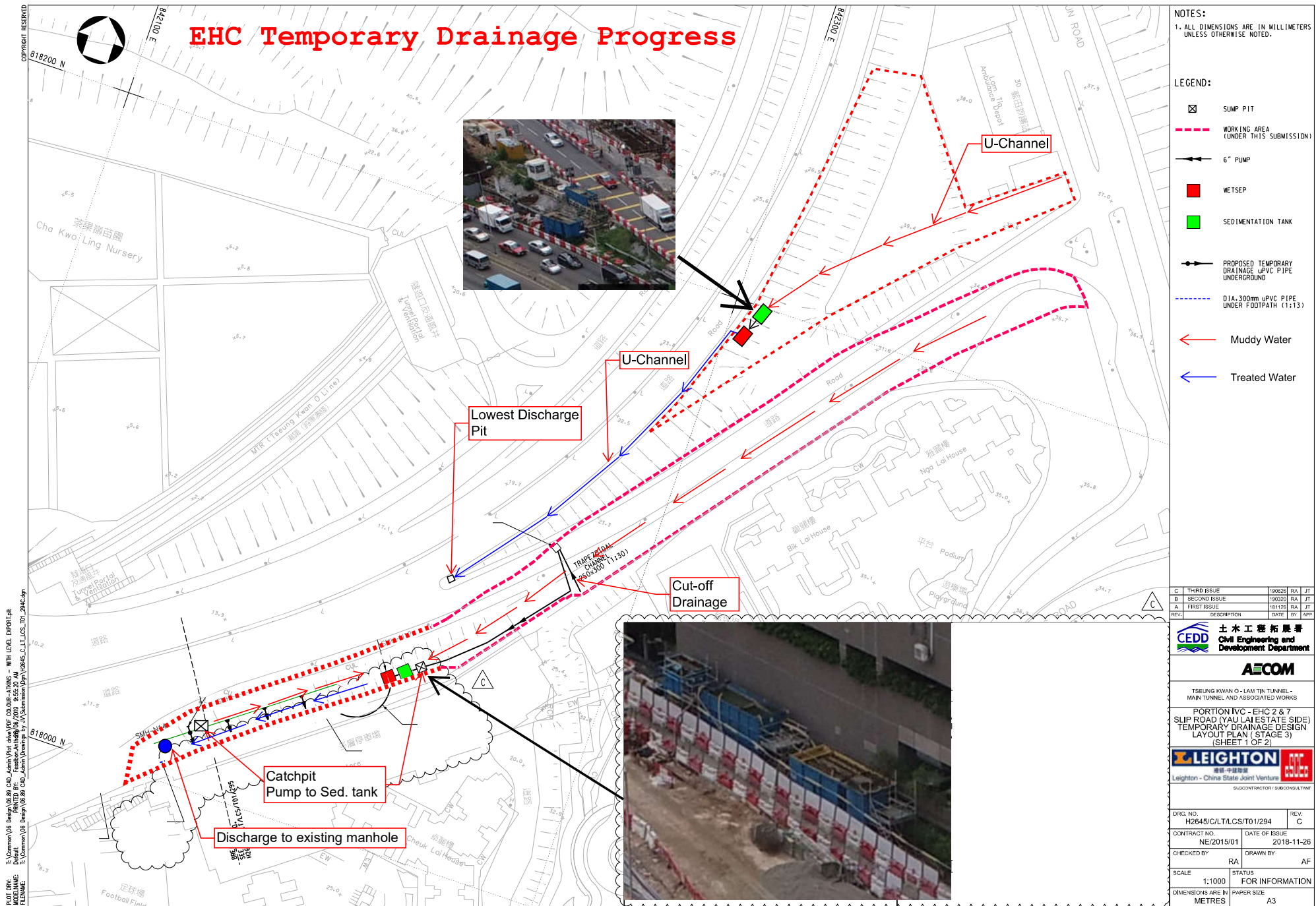
Effluent

Extension of Sed tanks

Contract Number NE/2015/01

2019年6月28日
新界

The image is an aerial photograph of a construction site for a road or bridge project. The site is situated on a hillside with terraced slopes. A large concrete structure, likely a bridge or viaduct, is under construction. Several callout boxes with yellow borders and red text are overlaid on the image, pointing to specific areas. A blue tarp is visible on the left side of the hillside. A worker in a yellow safety vest is seen near a concrete wall. A blue truck is parked near a wet separator. Water is flowing through a drainage system. The text 'Contract Number NE/2015/01' is written across the center of the image. A date stamp '2019年6月28日 新界' is visible in the top left corner of the callout box for the tarp.



C	THIRD ISSUE	190226	RA	JT
B	SECOND ISSUE	190320	RA	JT
A	FIRST ISSUE	181126	RA	JT
REV.	DESCRIPTION	DATE	BY	APP

CEPD 土木工程拓展署
Civil Engineering and Development Department

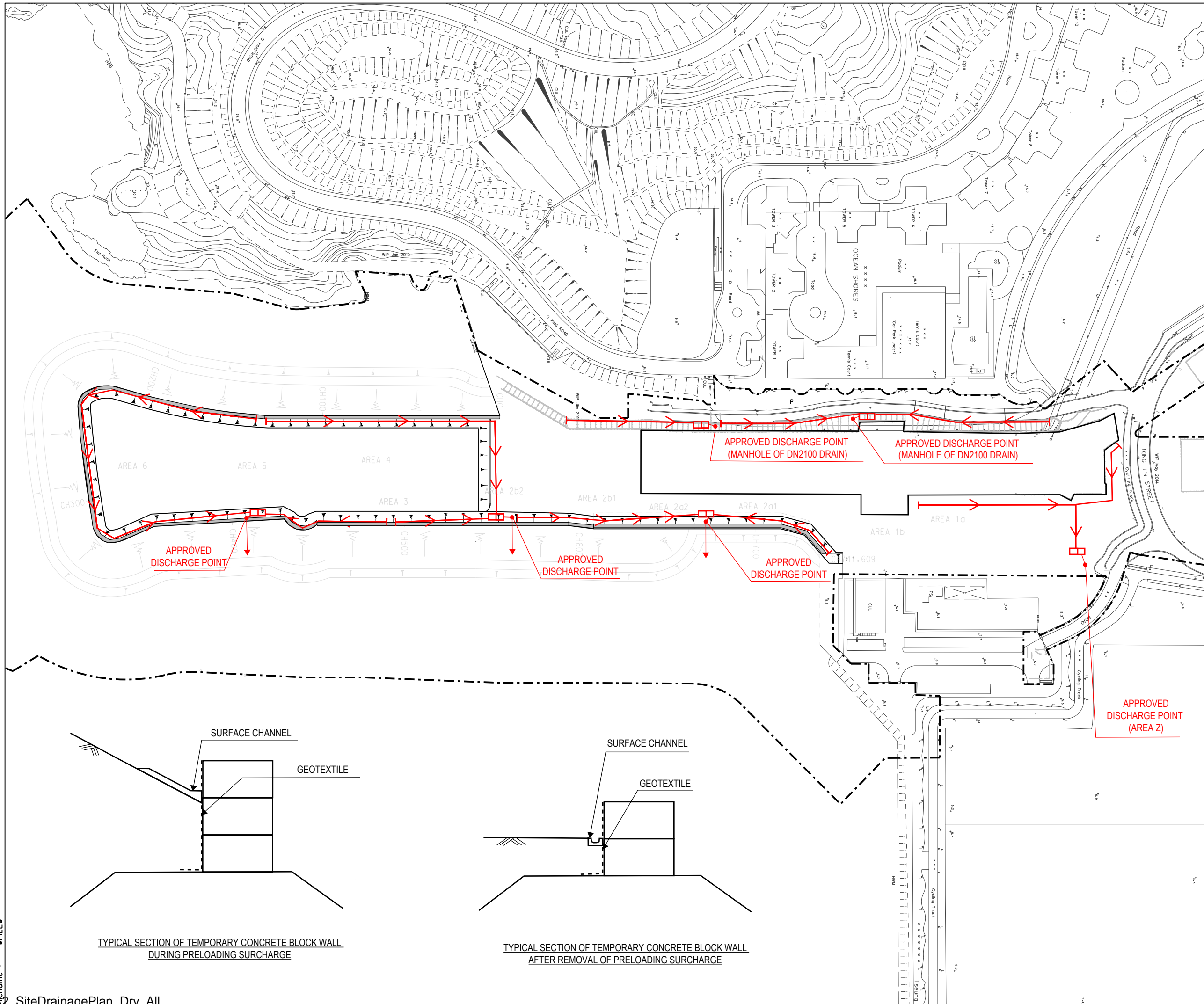
AECOM

TSEUNG KWAN O - LAM TIN TUNNEL - MAIN TUNNEL AND ASSOCIATED WORKS

PORTION IVC - EHC 2 & 7
SLIP ROAD (YAU LAI ESTATE SIDE)
TEMPORARY DRAINAGE DESIGN LAYOUT PLAN (STAGE 3)
(SHEET 1 OF 2)

LEIGHTON **ASOEA**
Leighton - China State Joint Venture
SUBCONTRACTOR / SUBCONSULTANT

DRG. NO.	H2645/C/LT/LCS/T01/294	REV.	C
CONTRACT NO.	NE/2015/01	DATE OF ISSUE	2018-11-26
CHECKED BY	RA	DRAWN BY	AF
SCALE	1:1000	STATUS	FOR INFORMATION
DIMENSIONS ARE IN	METRES	PAPER SIZE	A3



LEGEND

- FLOW PATH
- SEDIMENTATION/ DESILTING TANK AND WETSEP (80m3/hr)
- TEMPORARY CONCRETE BLOCK WALL

Temporary Works Design Drawings
in compliance with Contract No. NE/2015/02

22/05/2019

Chengrui HU MSc, CEng, MICE, MHKIE, RPE Date
Independent Checking Engineer
on behalf of: Hewson Consulting Limited,
Unit 1101, 11/F, 9 Chong Yip Street,
Kwun Tong, Kowloon, Hong Kong

Rev.	Description	By	Date

PM
CEDD 土木工程拓展署
Civil Engineering and
Development Department

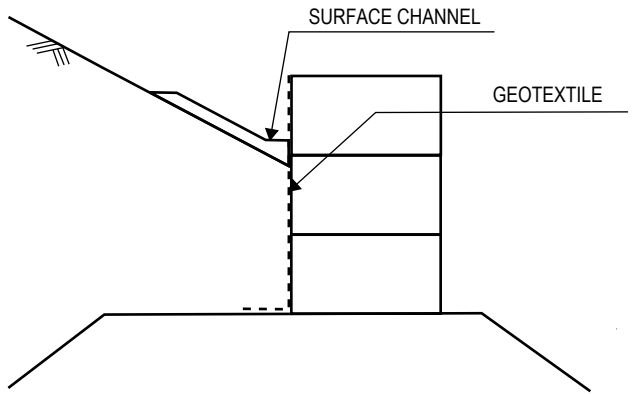
Supervisor
AECOM AECOM Asia Co. Ltd.

Contractor
CRBC 中國路橋 BuildKing
CRBC-Build King Joint Venture

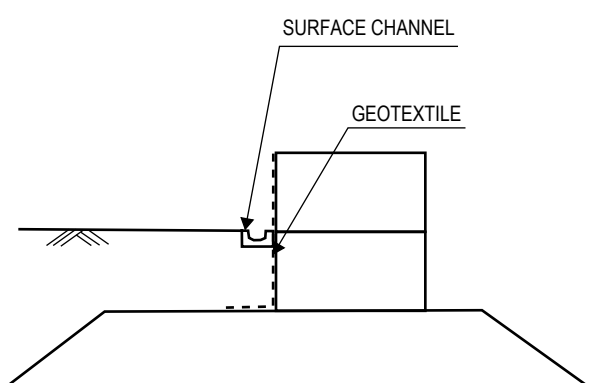
Project title
Contract No. NE/2015/02
Tseung Kwan O - Lam Tin Tunnel
Road P2 and Associated Works

Drawing title
TEMPORARY DRAINAGE MANAGEMENT PLAN
AT PORTION V, VI, IX AND AREA Z AFTER THE
REMOVAL OF TEMPORARY STEEL COFFERDAM

Drawing no. 圖紙編號	NE/2015/02/SK/1321	Rev. 修訂	-
Drawn By 繪圖	AL	Checked By 覆核	Approved By 批准人
Scale 比例	1:600 @ A1	Status 階段	7

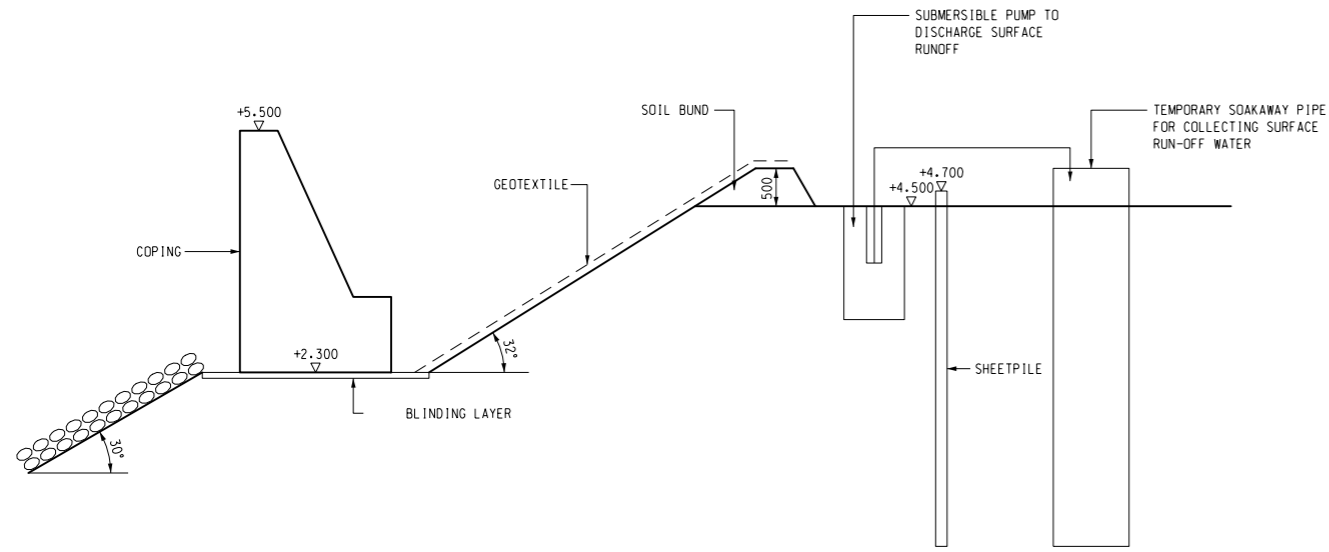


TYPICAL SECTION OF TEMPORARY CONCRETE BLOCK WALL
DURING PRELOADING SURCHARGE

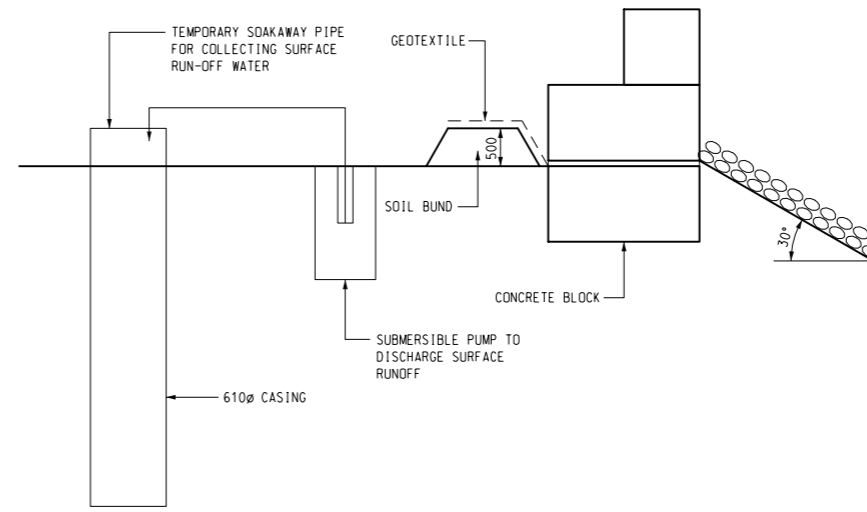


TYPICAL SECTION OF TEMPORARY CONCRETE BLOCK WALL
AFTER REMOVAL OF PRELOADING SURCHARGE

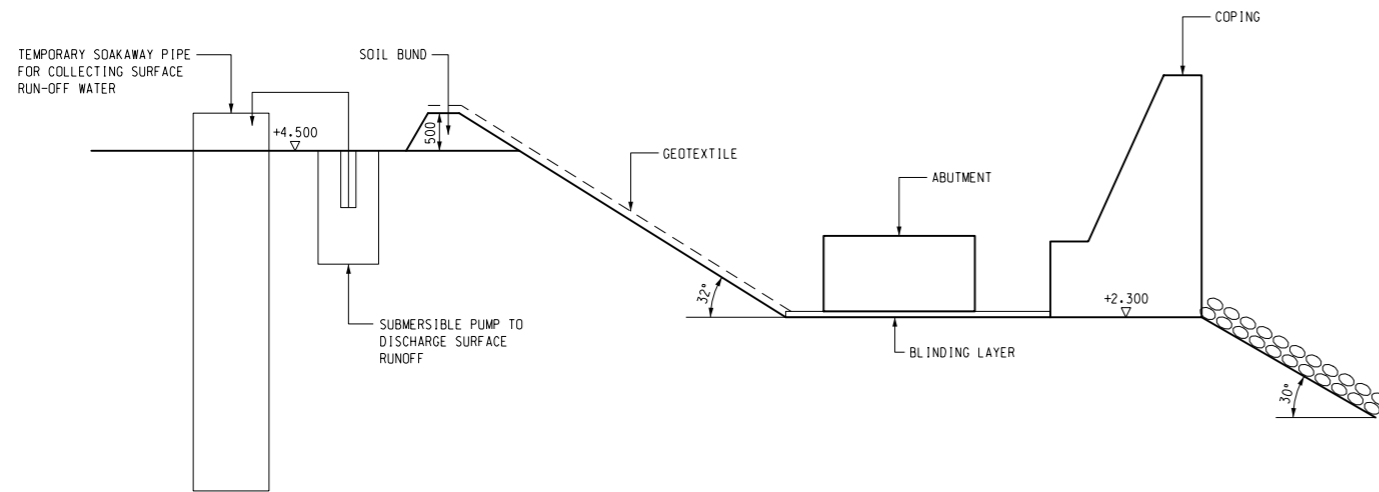
Printed by : 31/3/2020
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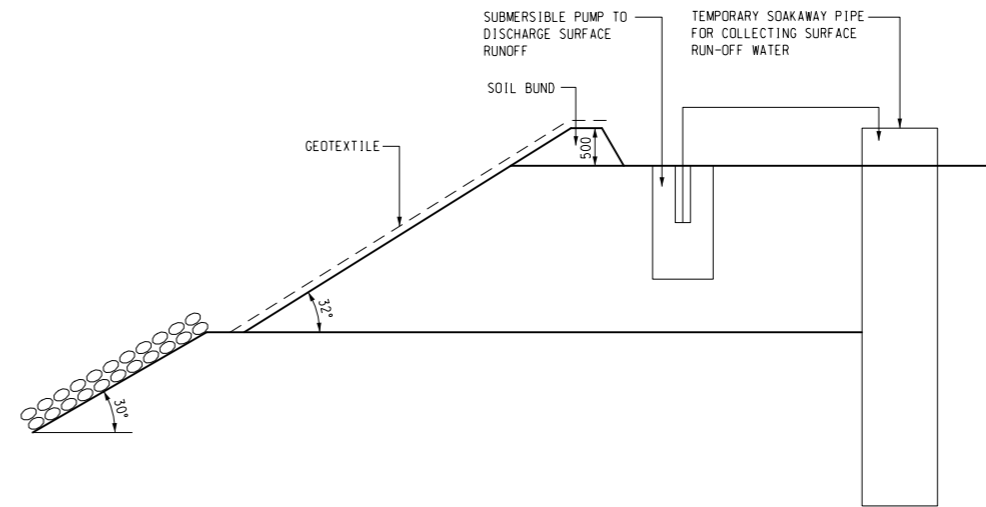
A WEST SIDE




B EAST SIDE



C SOUTH SIDE



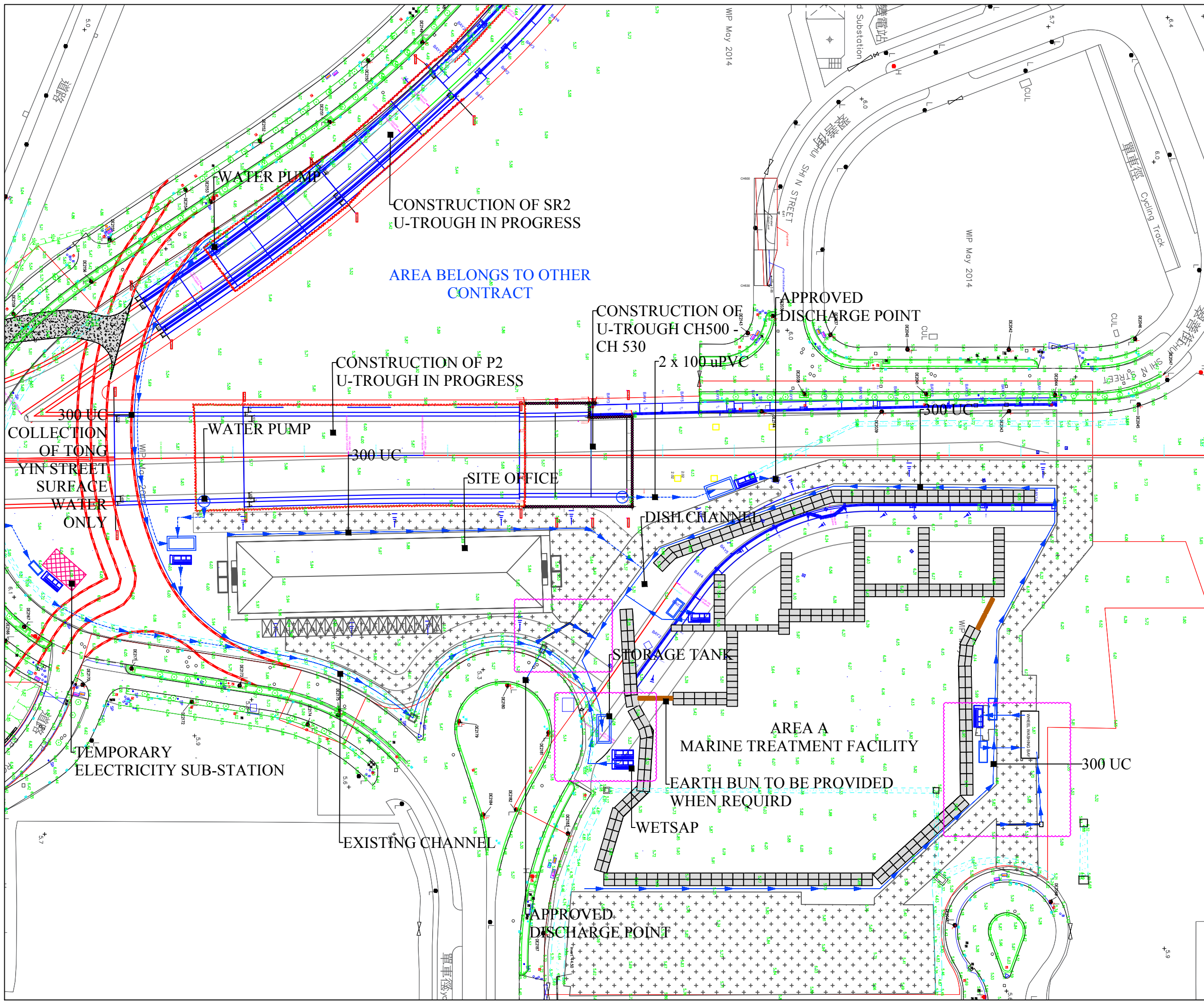
D TYPICAL SECTION

Rev.	Description	By	Date
PM	 土木工程拓展署 Civil Engineering and Development Department		
Supervisor	 AECOM Asia Co. Ltd.		
Contractor	 中國路橋 CRBC BuildKing CRBC-Build King Joint Venture		
Project title 工程名稱			
Contract No. NE/2015/02			
Tseung Kwan O - Lam Tin Tunnel Road P2 and Associated Works			
Drawing title 圖紙名稱			
SEAWALL SECTION AND DETAILS			
Drawing no. 圖紙編號	NE/2015/02/SK/0465		Rev. 修訂
Drawn By 繪圖	AL	Checked By 覆核	Approved By 批准人
Scale 比例	1:50 @ A1		Status 階段

Surface Runoff Assessment for Portion IX (inc. surcharge area)	
Portion IX Surface area :	19683.57 m ²
Design rainfall	
Assuming 1 hour of heavy rainfall has occurred :	70 mm/h
Design flow Rate (Qp):	$Q_p = C i A$ $= 0.18 \times 70 \times 19683.5$ $= 248 \text{ m}^3/\text{h}$
Water Treatment Facility	
Capacity of water treatment plan	= 80 m ³ /h
Number of water treatment plant*	= 248 / 80
	= 3

Thus, 3 nos of water treatment plant are required. In addition, 2 others are provided on site for emergency use

*Treatment of stormwater within the worst affected hour is assumed



- NOTES**
 1. ALL DIMENSION ARE IN m UNLESS STATED.
- LEGEND:**
- FLOW PATH
 - WETSAP
 - WATER PUMP (TO BE INSTALLED WHEN REQUIRED)
 - EARTH BUN (TO BE PROVIDED WHEN REQUIRED)
 - AREA OF UPDATE

Rev	Amendment	By	Chk.	App.	Date

PM
 土木工程拓展署
 Civil Engineering and Development Department

SUPERVISOR

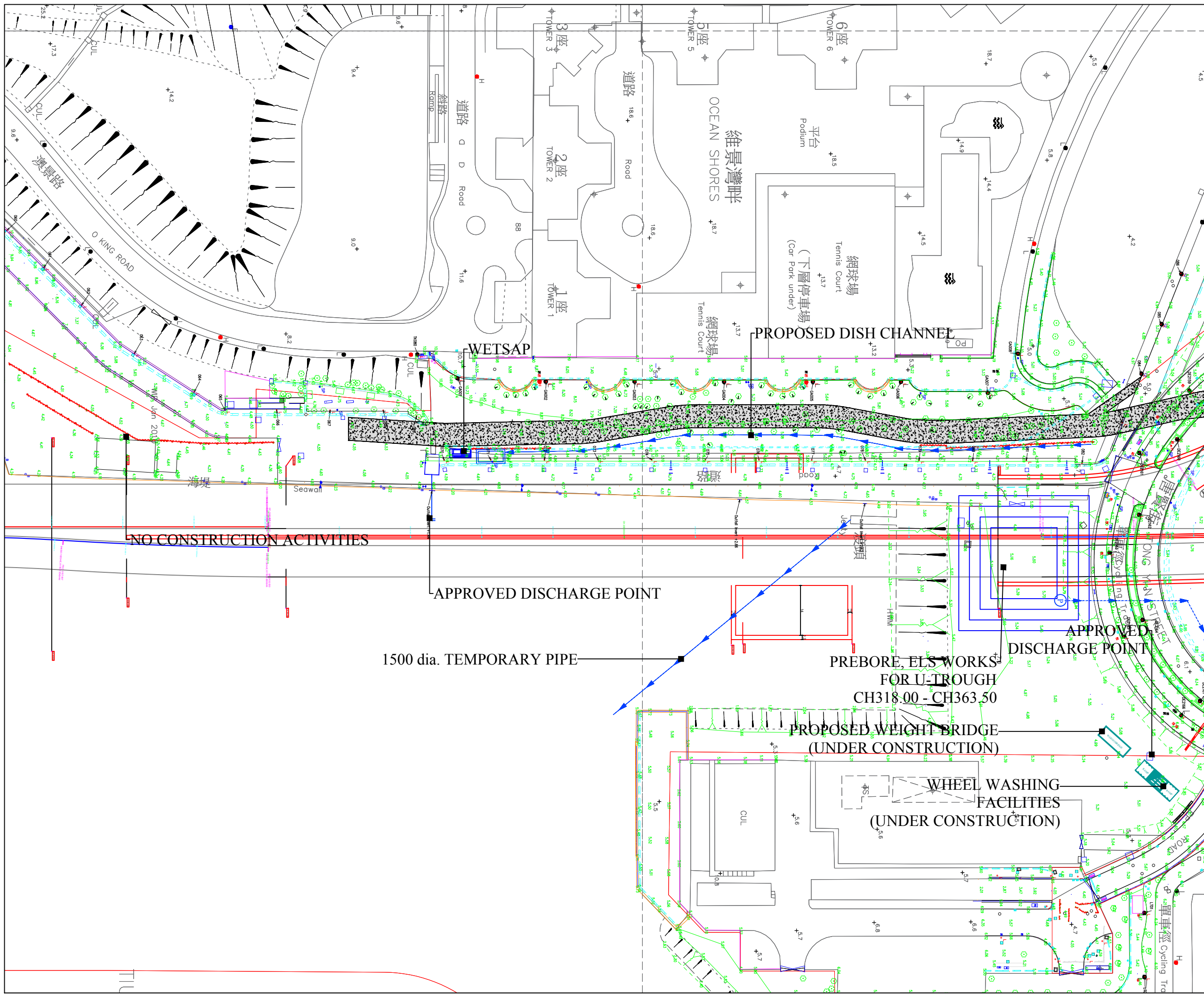
Contractor

 CRBC-Build King Joint Venture

Project
 TSEUNG KWAN O - LAM TIN TUNNEL ROAD P2 AND ASSOCIATED WORKS

Title
 TEMPORARY DRAINAGE PROPOSAL (UPDATE JULY 2018)

Status SUBMISSION		
Drawn	Checked	Approved
Scale 1:1000 A3	CAD File No. SK096E	Date 20-07-2018
First issued 20-07-18	Drawing No.	Rev.
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NOTES
 1. ALL DIMENSION ARE IN m UNLESS STATED.

LEGEND:

- FLOW PATH
- WETSAP
- WATER PUMP (TO BE INSTALLED WHEN REQUIRED)
- EARTH BUN (TO BE PROVIDED WHEN REQUIRED)

Rev	Amendment	By	Chk.	App.	Date
PM					

CEDD 土木工程拓展署
 Civil Engineering and Development Department

SUPERVISOR
AECOM

Contractor
CRBC 中國路橋 **Build King**
 CRBC-Build King Joint Venture

Project
 TSEUNG KWAN O - LAM TIN TUNNEL ROAD P2 AND ASSOCIATED WORKS

Title
 TEMPORARY DRAINAGE PROPOSAL (UPDATE JULY 2018)

Status SUBMISSION

Drawn	Checked	Approved
Scale 1:1000 A3	CAD File No. SK096E	Date 20-07-2018
First issued 20-07-2018	Drawing No.	Rev.
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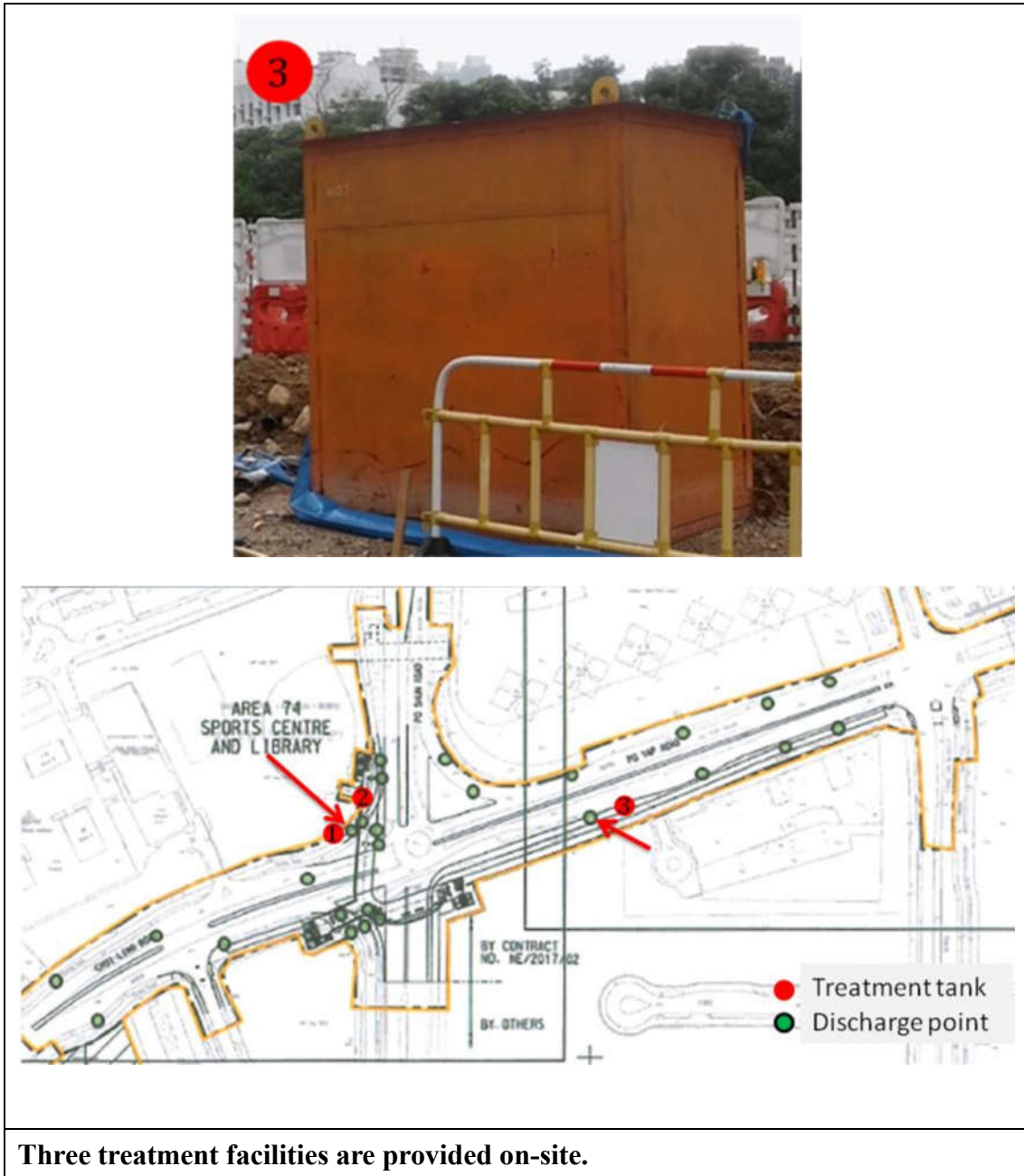
Contract No.: NE/2017/02

**Contract Title: Tseung Kwan O – Lam Tin Tunnel – Road P2/D4 and
Associated Works**

Flooding Mitigation Plan

Treatment facility







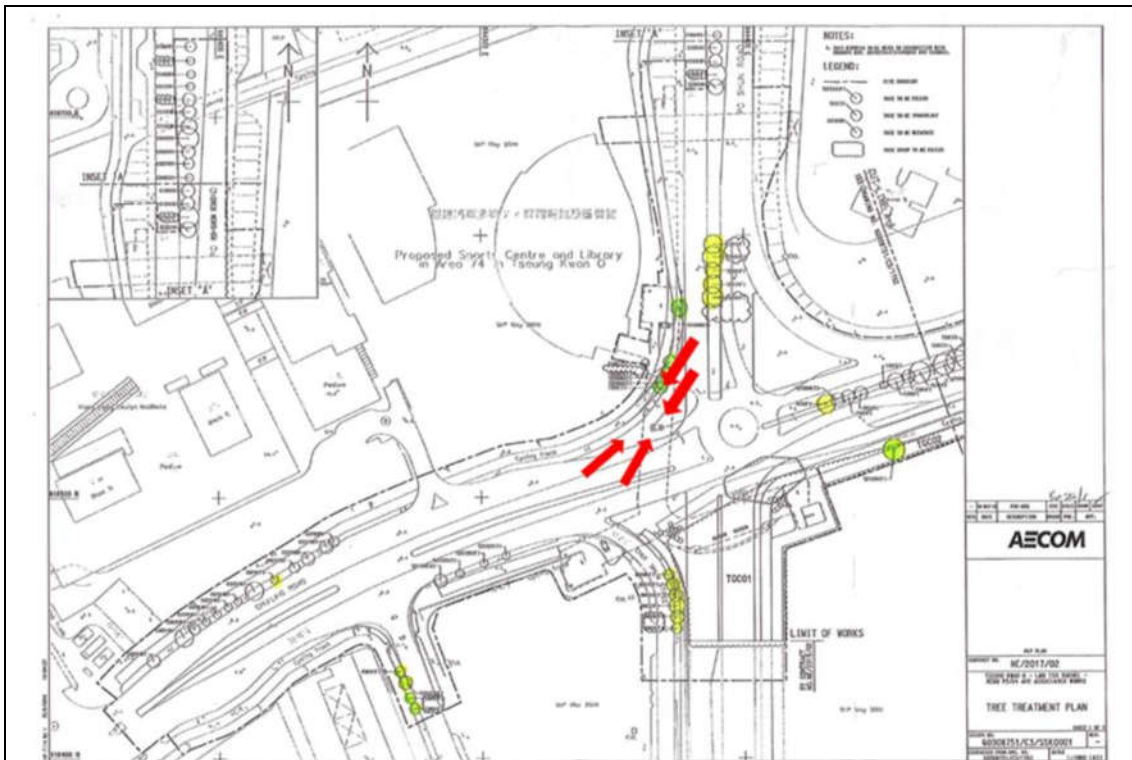
Bunding





Surface runoff collection





Height difference between the road and site area to form a natural flow. Sump pit was provided for wastewater collection.



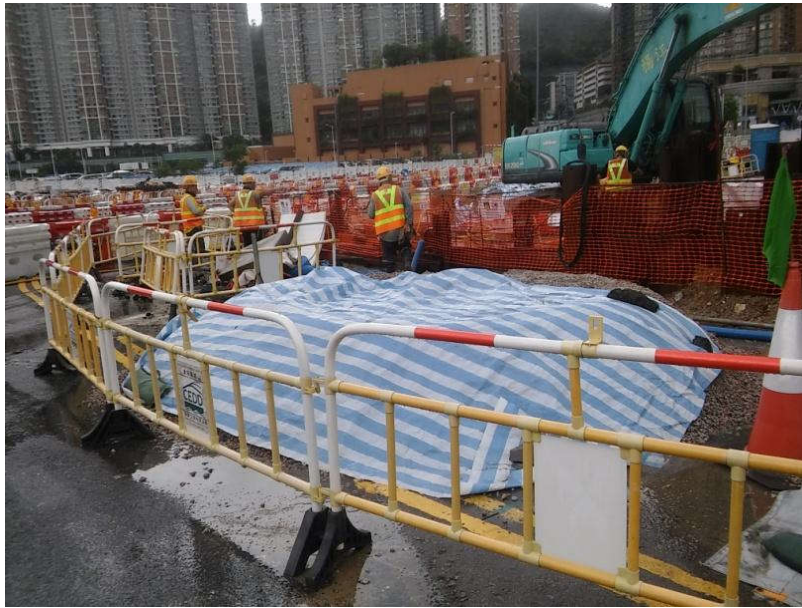
Gully Protection

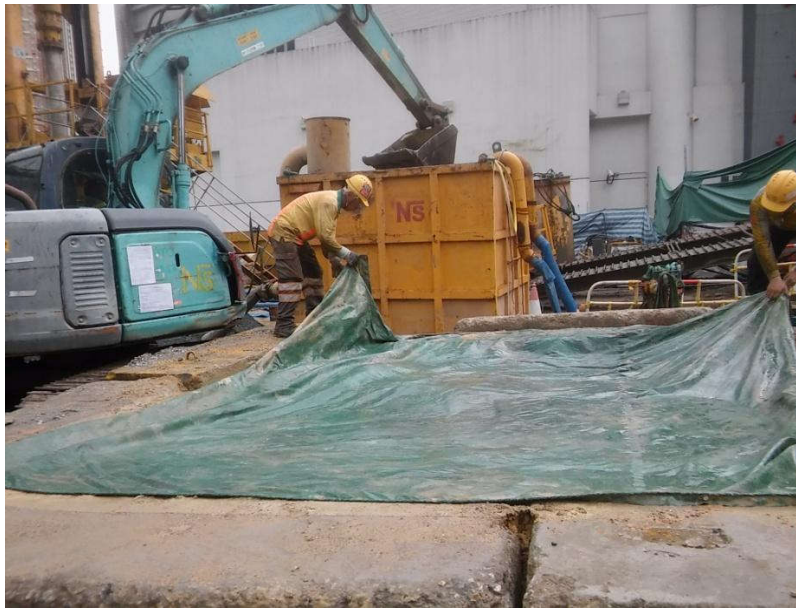


Gully were protected and covered by geotextile.



Stockpile Cover





Stockpile Should be proper cover with tarpaulin.

CATCHPIT SCHEDULE

U/S ID	D/S ID	U/S G.L. (mPD)	D/S G.L. (mPD)	LENGTH (m)	GRADIENT 1 IN	U/S I.L. (mPD)	D/S I.L. (mPD)	UC SIZE (mm)	U/S ID TYPE	UC MATERIAL	BEDDING
CP01	CP02	6.50	6.50	6	100	6.275	6.219	225	CATCHPIT	CONCRETE	B
CP03	CP04	8.00	5.50	6	2	7.775	5.342	225	CATCHPIT	CONCRETE	B

- Water Flow
- Precautionary measures
- Silt Measurement
- Sedimentation tank
- Sampling Point

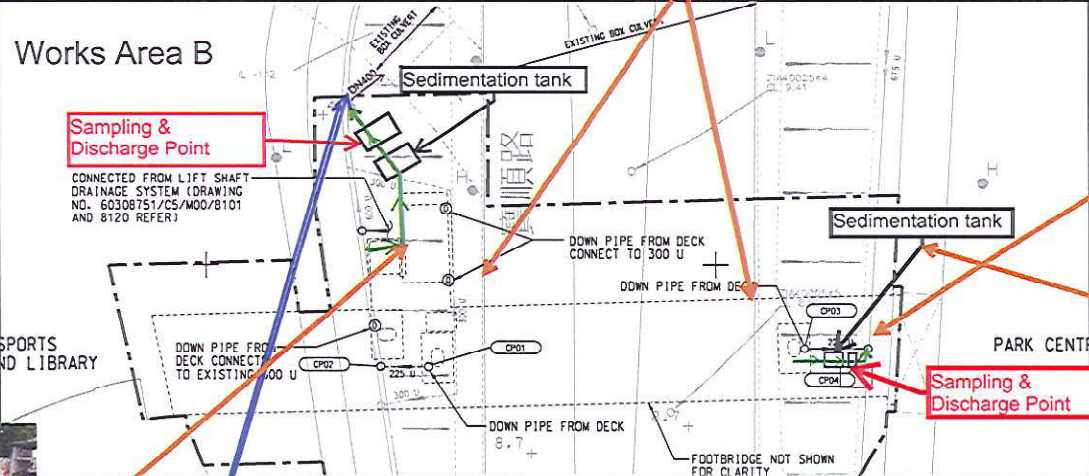
Geotextiles are on the top of gully cover along the site as a filter to avoid any muddy water discharge directly into the drainage system.



Exposed slope is covered by taupaulin



Manhole Inspection for Silt measurement, we have regular cleaning the channel weekly or in an emergency



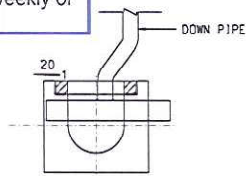
Sampling & Discharge Point

Sampling & Discharge Point

Sandbag is placed along the water barrier boundary to avoid the surface runoff.



Manhole Inspection for Silt measurement, we have regular cleaning the channel weekly or in an emergency



DETAILS CONNECTION OF DOWNPIPE TO U-CHANNEL WITH GRATING



PROJECT
TSEUNG KWAN O - LAM TIN TUNNEL

CONTRACT TITLE
TSEUNG KWAN O - LAM TIN TUNNEL
NORTHERN FOOTBRIDGE

CLIENT
CEDD
Civil Engineering and
Development Department

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION NO.	DATE	DESCRIPTION	CHK BY
-	AUG.16	TENDER DRAWING	AMH

STATUS

SCALE A1:1:250
DIMENSION UNIT METRES

PROJECT NO. 60308751
CONTRACT NO. NE/2015/03

SHEET TITLE DRAINAGE LAYOUT

SHEET NUMBER 60308751/CS/C00/1301

Site Surface Runoff Measures

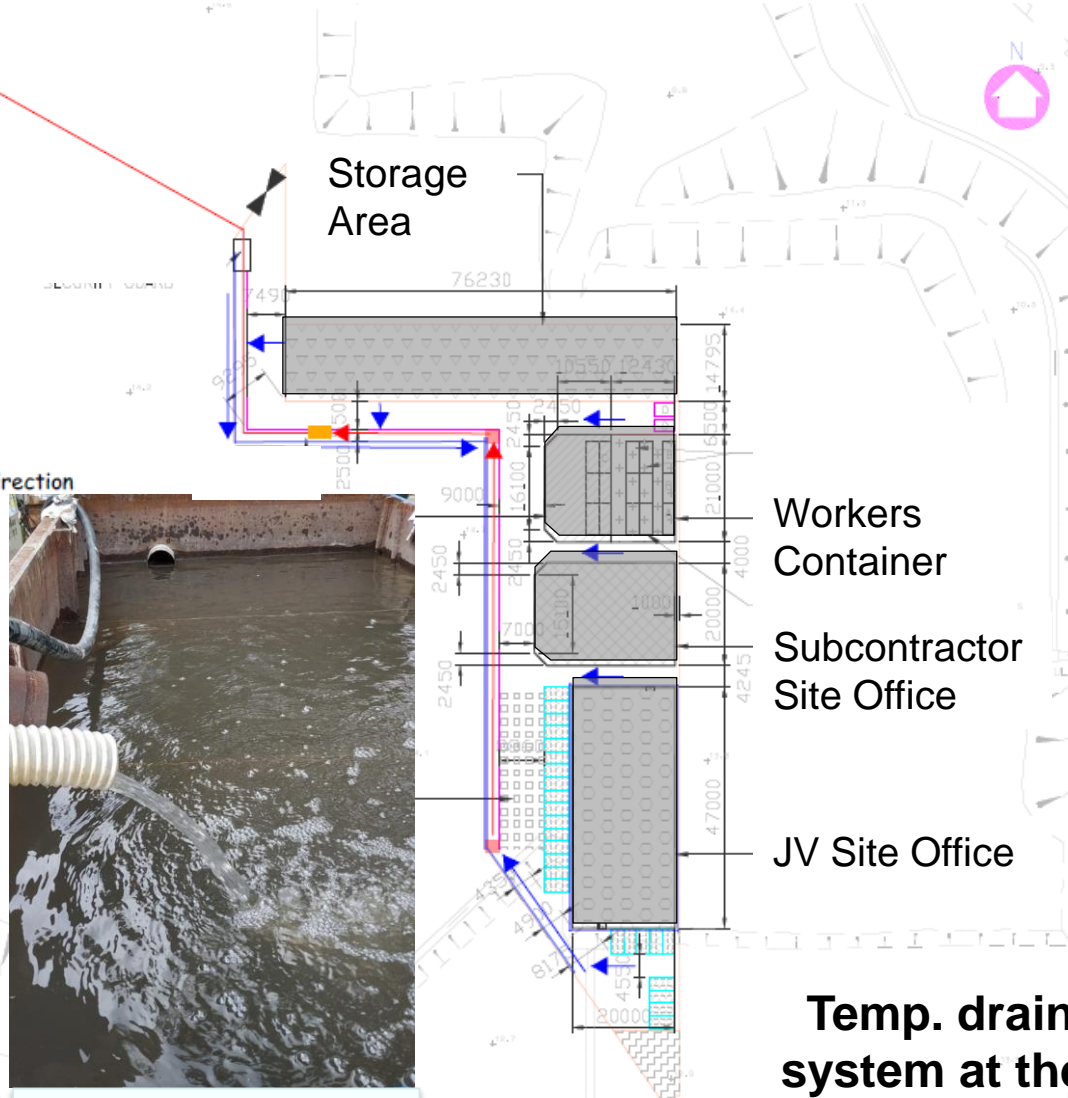
俊和-上隧-中冶聯營
CW - STEC - CMGC JV



Temp. Channel

Discharge to manhole "ZIA 4004921"

- ← channel / surface water flow direction
- ← water pump direction
- sump pit
- sedimentation tank



Sump Pit



Sedimentation Tank

Temp. drainage system at the site office area