JOB NO.: TCS00975/18

CEDD CONTRACT AGREEMENT NO. EDO/04/2018 - ENVIRONMENTAL TEAM FOR CROSS BAY LINK, TSEUNG KWAN O

FINAL ENVIRONMENTAL MONITORING AND AUDIT (EM&A) REVIEW REPORT

PREPARED FOR
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT (CEDD)

Date	Reference No.	Prepared By	Certified By
8 August 2025	TCS00975/18/600/R0912v2	Martin Li (Environmental Consultant)	Tam Tak Wing (Environmental Team Leader)

Version	Date	Remarks
1	27 June 2025	First Submission
2	8 August 2025	Amended as per IEC's comments

Acuity Sustainability Consulting Limited
Nature & Technologies (HK) Limited
Joint Venture

Our ref: PL-202508033

AECOM Asia Company Limited
8/F., Grand Central Plaza, Tower 2
138 Shatin Rural Committee Road
Shatin, New Territories, Hong Kong

Attention: Mr. Conrad NG

19 August 2025

Dear Sir,

Contract No. NE/2017/07 & NE/2017/08
Cross Bay Link, Tseung Kwan O
Final EM&A Review Report

I refer to the email of the ET concerning the Final Environmental Monitoring and Audit Review Report (Version 2) with Ref. No. TCS00975/18/600/R0912v2. We have no adverse comment on it and verify the captioned Final EM&A Review Report according to Conditions 1.9 of Environmental Permit with No. EP-459-2013.

Yours faithfully,

Li Wai Ming Kevin
Independent Environmental Checker

cc. Mr. T.W. TAM (ETL)
Ms. Sheri S.Y. LEUNG (CEDD)

EXECUTIVE SUMMARY

ES01 Civil Engineering and Development Department (hereafter referred as "CEDD") is the Project Proponent and the Permit Holder of the Project Cross Bay Link, Tseung Kwan O (hereinafter referred as "the Project") which is a Designated Project to be implemented under Environmental Permit number EP-459/2013 (hereinafter referred as "the EP-459/2013" or "the EP").

ES02 AUES was awarded the CEDD Contract Agreement No. EDO/04/2018 - Environmental Team for Cross Bay Link, Tseung Kwan O (hereinafter called "the Service Contract"). The Services under the Service Contract is to provide environmental monitoring and audit (EM&A) services for the Works Contracts pursuant to the requirement of Environmental Team (ET) under the Approved EM&A Manual to ensure that the environmental performance of the Works Contracts comply with the requirement specified in the EM&A Manual and EIA Report of Agreement No. CE 43/2008 (HY) Cross Bay Link, Tseung Kwan O - Investigation and other relevant statutory requirements.

ES03 To facilitate management, the proposed Works of the project was divided into two Civil Engineering and Development Department (CEDD) Works contracts included *Contract 1 (Contract No. NE/2017/07)* and *Contract 2 (Contract No. NE/2017/08).* The date for commencement of Contract 1 was ***3rd December 2018*** while the date for commencement of Contract 2 was ***17th January 2019***.

ES04 According to the Approved Environmental Monitoring & Audit (EM&A) Manual, air quality, noise and water quality monitoring are required to be conducted during the construction phase of the Project. As part of the EM&A programme, baseline monitoring shall undertake before the Project construction work commencement to determine the ambient environment condition. The baseline air quality, background noise and water quality monitoring has been carried out between ***21st September 2018*** and ***13th November 2018*** at the designated and interim locations. The baseline monitoring report under the EP-459/2013 has been compiled by the ET and verified by Independent Environmental Checker (hereinafter the "IEC') prior submitted to EPD on ***19th November 2018*** for endorsement.

ES05 Since all the Work Contracts under the Project have been completed and it is confirmed that all construction activities that have the potential to result in a significant environmental impact were completed, a proposal was prepared and submitted to EPD to terminate the Construction Phase EM&A program for the Project. The proposal was approved by EPD on ***15th April 2025*** and the construction phase EM&A Programme was terminated on ***30th April 2025***.

ES06 This is the Final EM&A Report of Construction Phase for Contract 1 and 2 (hereinafter 'the Construction Period'), summarizing the monitoring results and inspection findings during the construction period from ***3rd December 2018*** to ***30th April 2025***.

ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES IN THE CONSTRUCTION PERIOD

ES07 Environmental monitoring and audit activities under the EM&A program in the Construction Phase are summarized in the following table.

Table ES-1 Summary Environmental Monitoring Activities Undertaken in the Construction Period

Issues	Environmental Monitoring Parameters / Inspection		Sessions
Air Quality	1-Hour TSP		2265
	24-Hour TSP		657
Construction Noise	Leq (30min) Daytime		902
	Leq (5min) Evening		118
	Leq (5min) Night		12
Water Quality	Marine Water Sampling		216
Inspection / Audit	Contract 1	ET Regular Environmental Site Inspection	334
		Joint site audit with Project Consultant and IEC	76
	Contract 2	ET Regular Environmental Site Inspection	327
		Joint site audit with Project Consultant and IEC	74

BREACH OF ACTION AND LIMIT (A/L) LEVELS

ES08 No air quality exceedance was recorded throughout the Construction Phase. However, a total of 38 Action Level and 110 Limit Level exceedances were recorded in construction noise monitoring. For water quality monitoring, 22 Action Level and 33 Limit Level exceedances were recorded. The statistics of environmental exceedance and investigation of exceedance are summarized in the following table.

Table ES-2 Summary Environmental Monitoring Parameter Exceedance in the Construction Period

Environmental Issues	Monitoring Parameters	Exceedances		
		Action Level	Limit Level	Total
Air Quality	1-Hour TSP	0	0	0
	24-Hour TSP	0	0	0
Construction Noise	Leq_{30min} Daytime	31	0	31
	Leq_{5min} Evening	1	95	96
	Leq_{5min} Night	6	15	21
Water Quality (Marine Water)	DO	3	17	20
	Turbidity	0	0	0
	SS	19	16	35

ENVIRONMENTAL COMPLAINT, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES09 Throughout the Construction Period, a total of 55 environmental complaints were lodged under the EM&A Programme and investigations had performed by ET by auditing the mitigation measures implemented by the Contractor. After investigation, 16 out of 55 complaints were considered as project related. The Contractor was strongly advised to implement and enhance the relevant mitigation measures. Site check was conducted by ET to check the environmental performance after the situation has been rectified.

ES10 No environmental summons and prosecutions was received in both contracts during Construction Period.

ES11 Throughout the Construction Phase, 661 sessions of site inspection has been carried out by ET to evaluate the site environmental performance of both Contracts. No non-compliance was recorded. Minor deficiencies were in general rectified within specific deadlines. The environmental performance of the Project was therefore considered satisfactory.

ES12 Precision of the prediction of the EIA on the adverse air quality, noise and water quality impacts as generated from the construction of the Project is acceptable. The monitoring performed during the Construction Period is effective for generating data with the necessary statistical power to categorically identify or confirm the presence or absence of the predicted environmental impacts attributable to the works under the Project.

ES13 The mitigation measures stipulated in Implementation Schedule for Environmental Mitigation Measures included air quality, noise and water quality are effective and shall be strictly implemented and observed throughout the construction period in future of others construction projects.

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1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 Civil Engineering and Development Department (hereafter referred as "CEDD") is the Project Proponent and the Permit Holder of the Project Cross Bay Link, Tseung Kwan O (hereinafter referred as "the Project") which is a Designated Project to be implemented under Environmental Permit number EP-459/2013 (hereinafter referred as "the EP-459/2013" or "the EP").

1.1.2 AUES was awarded the CEDD Contract Agreement No. EDO/04/2018 - Environmental Team for Cross Bay Link, Tseung Kwan O (hereinafter called "the Service Contract"). The Services under the Service Contract is to provide environmental monitoring and audit (EM&A) services for the Works Contracts pursuant to the requirement of Environmental Team (ET) under the Approved EM&A Manual to ensure that the environmental performance of the Works Contracts comply with the requirement specified in the EM&A Manual and EIA Report of Agreement No. CE 43/2008 (HY) Cross Bay Link, Tseung Kwan O - Investigation and other relevant statutory requirements.

1.1.3 To facilitate management, the proposed Works of ***Cross Bay Link, Tseung Kwan O*** (hereinafter called "the Project') was divided into two Civil Engineering and Development Department (CEDD) Works contracts included *Contract 1 (Contract No. NE/2017/07)* and *Contract 2 (Contract No. NE/2017/08).* The details of each contract Works are summarized below and the delineation of each contract is shown in ***Appendix A***.

Contract 1 (Contract No. NE/2017/07)

(i) 400m section of marine viaducts of steel deck sections including the Eternal Arch Bridge;
(ii) 600m section of marine viaducts of concrete deck sections;
(iii) An E&M Plantroom and associated building services; and
(iv) E&M provisions.

Contract 2 (Contract No. NE/2017/08)

(i) Elevated deck structures along Road D9;
(ii) A 210m section of cycle track and footpath ramp bridge;
(iii) A 630m section of noise semi-enclosure covering the entire length of Road D9, and;
(iv) Lift, staircase, modification of existing seawall along Road D9, landscaping and miscellaneous works.

1.1.4 The date for commencement of Contract 1 is ***3rd December 2018*** while the date for commencement of Contract 2 is ***17th January 2019***.

1.1.5 As part of the EM&A programme, baseline monitoring shall be undertaken before the Project construction work commencement to determine the ambient environmental condition. The baseline air quality, background noise and water quality monitoring has been carried out between ***21st September 2018*** and ***13th November 2018*** at the designated and interim locations. The baseline monitoring report under the EP-459/2013 has been compiled by the ET and verified by Independent Environmental Checker (hereinafter the "IEC') prior submitted to EPD on ***19th November 2018*** for endorsement.

1.1.6 Since all the Work Contracts under the Project have been completed and it is confirmed that all construction activities that have the potential to result in a significant environmental impact were completed, a proposal was prepared and submitted to EPD to terminate the Construction Phase EM&A program for the Project. The proposal was approved by EPD on ***15th April 2025*** and the construction phase EM&A Programme was terminated on ***30th April 2025***.

1.1.7 This is the Final EM&A Report of Construction Phase for Contract 1 and 2 (hereinafter 'the Construction Period'), summarizing the monitoring results and inspection findings during the construction period from ***3rd December 2018*** to ***30th April 2025***.

1.2 REPORT STRUCTURE

1.2.1 The Final EM&A Report is structured into the following sections:-

Section 1 *Introduction*
Section 2 *Project Organization and Construction Progress*
Section 3 *Summary of Impact Monitoring Requirements*
Section 4 *Air Quality Monitoring*
Section 5 *Construction Noise Monitoring*
Section 6 *Water Quality Monitoring*
Section 7 *Waste Management*
Section 8 *Site Inspections*
Section 9 *Landfill Gas Monitoring*
Section 10 *Environmental Complaints and Non-Compliance*
Section 11 *Implementation Status of Mitigation Measures*
Section 12 *Conclusions and Recommendations*

2 PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS AND SUBMISSION

2.1 PROJECT ORGANIZATION

2.1.1 The project organization is shown in ***Appendix B***. The responsibilities of respective parties are:

The Project Consultant

2.1.2 The Project Consultant (hereinafter "the Consultant") is responsible for overseeing the construction works and for ensuring that the works are undertaken by the Contractor in accordance with the specification and contract requirements. The duties and responsibilities of the Consultant with respect to EM&A are:

- Monitor the Contractors' compliance with contract specifications, including the implementation and operation of the environmental mitigation measures and their effectiveness
- Monitor Contractors', ET's and IEC's compliance with the requirements in the Environmental Permit (EP) and EM&A Manual
- Facilitate ET's implementation of the EM&A programme
- Participate in joint site inspection by the ET and IEC
- Oversee the implementation of the agreed Event / Action Plan in the event of any exceedance
- Adhere to the procedures for carrying out complaint investigation

The Contractor(s) of Works Contract(s)

2.1.3 There will be one contractor for each individual works contract. The Contractor(s) should report to the Consultant. The duties and responsibilities of the Contractor are:

- Comply with the relevant contract conditions and specifications on environmental protection
- Participate in the site inspections by the ET and IEC, and undertake any corrective actions
- Provide information / advice to the ET regarding works programme and activities which may contribute to the generation of adverse environmental impacts
- Submit proposals on mitigation measures in case of exceedances of Action and Limit levels in accordance with the Event / Action Plans
- Implement measures to reduce impact where Action and Limit levels are exceeded
- Adhere to the procedures for carrying out complaint investigation

Environmental Team (ET)

2.1.4 ET shall not be in any way an associated body of the Contractor(s) and employed by the Permit Holder (i.e., CEDD) to conduct the EM&A programme. The ET should be managed by the ET Leader. The ET Leader shall be a person who has at least 7 years' experience in EM&A and has relevant professional qualifications. Suitable qualified staff should be included in the ET, and resources for the implementation of the EM&A programme should be allocated in time under the Contract(s), to enable fulfillment of the Project's EM&A requirements as specified in the EM&A Manual during construction of the Project. ET shall report to the Project Proponent and the duties shall include:

- Conduct baseline monitoring, impact monitoring and post-construction monitoring and the associated in-situ and laboratory tests to monitor various environmental parameters as required in the EM&A Manual and the EP
- Analyze the environmental monitoring and audit data, review the success of EM&A programme and the adequacy of mitigation measures implemented, confirm the validity of the EIA predictions and identify any adverse environmental impacts arising
- Carry out regular site inspection to investigate and audit the Contractors' site practice, equipment/plant and work methodologies with respect to pollution control and environmental mitigation, and effect proactive action to pre-empt problems
- Monitor compliance with conditions in the EP, environmental protection, pollution

prevention and control regulations and contract specifications
- Audit environmental conditions on site
- Report on the environmental monitoring and audit results to EPD, the Consultant, the IEC and Contractor(s) or their delegated representatives
- Recommend suitable mitigation measures to the Contractor in the case of exceedance of Action and Limit levels in accordance with the Event and Action Plans
- Liaise with the IEC on all environmental performance matters and timely submit all relevant EM&A proforma for approval by IEC
- Advise the Contractor(s) on environmental improvement, awareness, enhancement measures etc., on site
- Adhere to the procedures for carrying out complaint investigation
- Set up a dedicated website where the project information, all environmental monitoring and audit data and reports described in Condition 5.2 of the EP, and all finalized submissions and plans required under the EP are to be placed for public inspection
- Upload the environmental monitoring results to the dedicated website in accordance with requirements of the EP and EM&A Manual
- To carry out the Operational Phase Landfill Gas monitoring during effluent drainage system maintenance for one year

Independent Environmental Checker (IEC)

2.1.5 IEC will be employed for this Project. The Independent Environmental Checker (IEC) should not be in any way an associated body of the Contractor(s) or the ET for the Project. The IEC should be employed by the Permit Holder (i.e., CEDD) prior to the commencement of the construction of the Project. The IEC should have at least 7 years' experience in EM&A and have relevant professional qualifications. The duty of IEC should be:

- Provide proactive advice to the Project Consultant and the Project Proponent on EM&A matters related to the project, independent from the management of construction works, but empowered to audit the environmental performance of construction
- Review and audit all aspects of the EM&A programme implemented by the ET
- Review and verify the monitoring data and all submissions in connection with the EP and EM&A Manual submitted by the ET
- Arrange and conduct regular, at least monthly site inspections of the works during construction phase, and ad hoc inspections if significant environmental problems are identified
- Check compliance with the agreed Event / Action Plan in the event of any exceedance
- Check compliance with the procedures for carrying out complaint investigation
- Check the effectiveness of corrective measures
- Feedback audit results to ET by signing off relevant EM&A proforma
- Check that the mitigation measures are effectively implemented
- Report the works conducted, the findings, recommendation and improvement of the site inspections, after reviewing ET's and Contractor's works, and advices to the Project Consultant and Project Proponent on a monthly basis.

2.2 MAJOR CONSTRUCTION ACTIVITIES

2.2.1 The commencement of Contract 1 is on ***3rd December 2018***. The major construction activities undertaken throughout the Construction Period included:

Contract 1 (Contract No: NE/2017/07)
- Site Clearance Work at Works Area A
- Site Office Setup at Works Area A
- Pre-drilling works at Portion II
- Piling works at Portion II
- Concrete Work at Portion V & Portion II
- Structure Steelwork at Portion V
- Metal work at Works Area A

- Precast Pier and box girder installation at Portion II
- Stage Concrete for pile caps at portion II
- Welding of steel bracket for precast shell installation at Portion II
- Preparation of precast shell fabrication at Portion II
- Precast shell erection and fabrication at Portion II
- ABWF works, E&M Work and External Work at Portion V Plant Room Building
- Load-out and Transportation of Steel Main Bridge
- Load-out and Transportation of Floating-in of Steel Bridge Side Span
- Fabrication of bottom deck panels, top deck panels and diaphragm panels at Portion II
- Structure works for E&M Building

2.2.2 The commencement of Contract 2 is on ***17th January 2019***. The major construction activities undertaken throughout the Construction Period included:

Contract 2 (Contract No. NE/2017/08)

- Site Clearance Work at Portion III and VI
- Initial Survey at Portion III and VI
- UU Detection Work at Portion III and VI
- Fencing Erection Work at Portion II and VI
- Trial Pit and Pre-drill Work at Portion VI
- Bored Pile Work at Portion IV & VI
- Sheet Pile Work at Portion VI
- Excavation Work at Portion VI
- Wheel Washing Facilities Construction at Portion VI
- RC construction for U-trough(Portion III)
- Seawall modification
- ELS & manhole construction at SMH012 &SMH011,lift shaft
- Noise barrier installation(Portion VI)
- Backfilling (Portion VI)
- Drainage Installation Work (Portion III)
- Footpath and cycle track paving work

2.3 SUMMARY OF ENVIRONMENTAL SUBMISSIONS

2.3.1 The required documents list below shall be to submit to EPD for retention:

Table 2-1 Documents Submission under Environmental Permit Requirement

EP condition	Submission to EPD	Requirement	Situation
1.11	Commencement date of construction of the Project	no later than 1 month prior to the commencement of construction of the Project	• Contract 1 notified EPD on 19 Oct 2018 • Contract 2 notified EPD on 12 Dec 2018
2.3	The date of setting up the Community Liaison Group (CLG), the membership, the terms of reference and the contact details	At least 1 month before the commencement of construction of the Project	• CLG setting has submitted to EPD on 9 Oct 2018
2.4	Management Organization of Main Construction Companies	No later than 2 weeks before the commencement of construction of the Project	• Management Organization of Contract 1 was submitted to EPD on 2 October 2018 • Management Organization of Contract 2 was submitted to EPD on 12 December 2018
2.5	Waste Management Plan (WMP)	No later than 1 month before commencement of construction of the Project	• WMP of Contract 1 was submitted to EPD in 11 October 2018 • WMP of Contract 2 was submitted to EPD in 14

EP condition	Submission to EPD	Requirement	Situation
			December 2018
2.6	Landscape Mitigation Plan (LSMP)	No later than 1 month before commencement of construction of the Project	• LSMP was submitted on 1 Nov 2018
2.7	Detailed Qualitative Landfill Gas Hazards Assessment (QLGHA)	No later than 1 month before commencement of construction of the Project	• QLGHA of the Project was submitted to EPD on 1 November 2018

2.3.2 Upon completed baseline monitoring, a Baseline Monitoring Report was verified by IEC on 19 November 2018 and submitted to EPD on that day for endorsement.

2.3.3 The notification of Project dedicated website to EPD was made on 9 January 2019 (http://www.envcbltko.hk/).

3 SUMMARY OF ENVIRONMENTAL MONITORING PROGRAMMES AND REQUIREMENTS

3.1 GENERAL

3.1.1 The Environmental Monitoring and Audit Programmes and requirements are set out in the Approved EM&A manual. Environmental issues such as air quality, construction noise and water quality were identified as the key issues during the construction phase of the Project. A summary of EM&A programmes and requirements are presented in the sub-sections below.

3.2 MONITORING PARAMETERS

3.2.1 Monitoring parameters of air quality, noise and water quality are summarized in ***Table 3-1***.

Table 3-1 Summary of EM&A Requirements

Environmental Issue	Parameters
Air Quality	• 1-hour TSP by Real-Time Portable Dust Meter; and • 24-hour TSP by High Volume Air Sampler
Noise	• Leq (30min) in six consecutive Leq(5min) between 07:00-19:00 on normal weekdays • Supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.
Water Quality	• In-situ measurement – Dissolved Oxygen (DO) concentration (mg/L) & saturation (%), pH, Salinity (mg/L), Temperature (ºC) and Turbidity (NTU); and • Laboratory analysis – SS (mg/L)

3.3 MONITORING LOCATIONS

Air Quality and Construction Noise

3.3.1 According to the Approved EM&A Manual Section 5.4 and Section 6.3, three (3) representative air sensitive receivers (ASR) and four (4) representative noise sensitive receivers were designated as monitoring stations. The designated air quality and noise monitoring locations are listed in ***Table 3-2*** and ***Table 3-3,*** and illustrated in ***Appendix C***.

Table 3-2 Designated Air Quality Monitoring Location recommended in EM&A Manual

ID	Location in the EM&A Manual	Currently Situation
AM1	Tung Wah Group of Hospitals Aided Primary School & Secondary School	Not yet construct
AM2	Lohas Park Stage 2 (Planned Development in Area 86)	Available for resident occupation in February 2021
AM3	Lohas Park Stage 3 (Planned Development in Area 86)	Available for resident occupation in April 2024

Table 3-3 Designated Construction Noise Monitoring Location recommended by EM&A Manual

ID	Location	Currently Situation
CNMS-1	Lohas Park Stage 1(Planned Development in Area 86, Package 4) (Southeast facade)	Available for resident occupation in November 2019
CNMS-2	Lohas Park Stage 1 (Planned Development in Area 86, Package 6) (Southeast facade)	Available for resident occupation in February 2021
CNMS-3	Lohas Park Stage 3 (Planned Development in Area 86, Package 11) (West facade)	Available for resident occupation in April 2024
CNMS-4	Tung Wah Group of Hospitals Aided Primary School & Secondary School (Southwest facade)	Not yet construct

3.3.2 As observed and confirmed by ET and IEC during the joint site visit on 29th August 2018, the designated air quality and noise monitoring locations are under construction or yet to construct. It is considered that these designated locations are not appropriate to perform air quality and noise monitoring. In this regard, alternative locations were proposed as interim arrangement to carry out air quality and noise monitoring before occupation of the designated monitoring location. A letter enclosed with the alternative location proposal and IEC verification (Our Ref: TCS00975/18/300/L0038) was sent to EPD on 19th October 2018 and the proposal was agreed by EPD. Therefore, air quality and construction noise impact monitoring would be performed at the agreed alternative locations until the designated sensitive receivers occupied and granted the premises.

3.3.3 Construction noise monitoring for Lohas Park Phase 4 was commenced in November 2019 while 1-Hour TSP air quality and construction noise monitoring for Lohas Park Phase 6 were commenced in February 2021 regarding the handover of residential units to purchasers. Since power supply is not available from Lohas Park Phase 6 and is only available near the site office after Cross Bay Link opened in December 2022, an interim alternative monitoring location AM2b was proposed for the 24-Hour TSP monitoring of Lohas Park Phase 6 due to the limitation on the power supply for the HVS.

3.3.4 Upon the handover of residential units of Lohas Park Phase 10 to purchasers, access permission for 1-Hour & 24-Hour TSP air quality and construction noise monitoring were requested. 1-Hour TSP air quality and construction noise monitoring for Lohas Park Phase 10 were commenced on 8 April 2024 upon approved by the Property Management Office of Lohas Park Phase 10 while installation of HVS for 24-Hour TSP monitoring was rejected by Property Management Office of Lohas Park Phase 10.

3.3.5 The designated and interim alternative monitoring location for impact air quality and noise monitoring in the Construction Period are summarized in Table 3-4 and illustrated in ***Appendix C.***

Table 3-4 Designated and interim alternative location for air quality and noise monitoring in Construction Period

Location ID	Monitoring Parameter	Location
AM2	1-Hour TSP Air Quality	Lohas Park Phase 6
AM2b	24-Hour TSP Air Quality	Near Lohas Park Phase 6
AM3	1-Hour TSP Air Quality	Lohas Park Phase 10
AM4	1-Hour TSP Air Quality	Podium of Lohas Park Phase 2A (Le Prestige)
AM5	24-Hour TSP Air Quality	Boundary of Site Office near Junction of Wan Po Road and Wan O Road
CNMS-1	Noise (L_{eq}, L_{10} & L_{90})	Podium of Lohas Park Package 4
CNMS-2	Noise (L_{eq}, L_{10} & L_{90})	Lohas Park Package 6
CNMS-3	Noise (L_{eq}, L_{10} & L_{90})	Lohas Park Phase 10
CNMS-5	Noise (L_{eq}, L_{10} & L_{90})	Podium of Lohas Park Phase 2A (Le Prestige)

Remark: Since 24-Hour TSP Air Quality monitoring is not granted at AM4 Lohas Park Phase 2A, the 24-Hour TSP monitoring was therefore proposed at AM5 which is located at the boundary of the project site office.

Water Quality

3.3.6 According to Table 7.1 of the approved EM&A Manual Section 7.4, two Control Stations (C3 & C4), six (6) sensitive receivers (CC1, CC2, CC3, CC4, CC13 & SWI1) and one (1) Gradient station (I1) are recommended to perform water quality monitoring. Details and coordinate of these water quality monitoring stations are described in ***Table 3-5*** and the locations is shown in ***Appendix C.***

Table 3-5 Location of Water Quality Monitoring Station

Station	Coordinates		Description
	Easting	Northing	
CC1	843201	816416	**Sensitive Receiver** – Coral Sites at Chiu Keng Wan
CC2	844076	817091	**Sensitive Receiver** – Coral Sites at Junk Bay

Station	Coordinates		Description
	Easting	Northing	
CC3	844606	817941	**Sensitive Receiver** – Coral Sites at Junk Island
CC4	845444	815595	**Sensitive Receiver** – Coral Sites at Fat Tong Chau West
CC13	844200	817495	**Sensitive Receiver** – Coral Sites at Junk Bay near Chiu Keng Wan
SWI1	845512	817442	**Sensitive Receiver** – Tseung Kwan O Salt Water Intake
C3	843821	816211	**Control Station** (Ebb Tide) – within Junk Bay
C4	844621	815770	**Control Station** (Flood Tide) – within Junk Bay
I1	844602	817675	**Gradient Station** – in between Lam Tin Tunnel (LTT) and CBL

3.4 MONITORING FREQUENCY AND PERIOD

3.4.1 To according with the approved *EM&A Manual*, impact monitoring requirements are presented as follows.

Air Quality Monitoring

3.4.2 Air quality impact monitoring frequency is as follows:

- Once every 6 days of 24-hour TSP and 3 times of 1-hour TSP monitoring; during course of works throughout the construction period

Construction Noise Monitoring

3.4.3 Construction noise monitoring frequency is as follows:

- One set of $Leq_{(30min)}$ measurements in a weekly basis between 07:00 and 19:00 hours on normal weekdays during course of works as throughout the construction period
- If construction works are extended to include works during the hours of 1900-0700, additional weekly impact monitoring shall be carried out during evening and night-time works. Applicable permits under the NCO shall be obtained by the Contractor.

Water Quality (Marine Water) Monitoring

3.4.4 Marine water impact monitoring frequency is as follows:

- Three days a week, at mid ebb and mid flood tides during course of pile excavation works for the bridge pier foundations underway. Moreover, the intervals between 2 consecutive sets of monitoring day shall not be less than 36 hours.

3.5 MONITORING EQUIPMENT

Air Quality Monitoring

3.5.1 The 24-hour and 1-hour TSP levels shall be measured by following the standard high volume sampling method as set out in the *Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50),* and Appendix *B*. If the ET proposes to use a direct reading dust meter to measure 1-hour TSP levels, it shall submit sufficient information to the IEC to prove that the instrument is capable of achieving a comparable results to the HVS. The instrument should be calibrated regularly, and the 1-hour sampling shall be determined on yearly basis by the HVS to check the validity and accuracy of the results measured by direct reading method. The filter paper of 24-hour TSP measurement shall be determined by HOKLAS accredited laboratory. The equipment used for air quality monitoring is listed in ***Table 3-6***.

Table 3-6 Air Quality Monitoring Equipment

Equipment		Model
24-hour TSP	High Volume Air Sampler	TISCH High Volume Air Sampler, HVS Model TE-5170
	Calibration Kit	TISCH Model TE-5025A
1- hour TSP	Portable Dust Meter	Sibata LD-5R Laser Dust Monitor or Sibata LD-3B Laser Dust Monitor

Noise Monitoring

3.5.2 Sound level meter in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. The sound level meter shall be checked using an acoustic calibrator. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in ms^{-1}. Noise equipment will be used for impact monitoring is listed in ***Table 3-7***.

Table 3-7 Construction Noise Monitoring Equipment

Equipment	Model
Integrating Sound Level Meter	B&K Type 2238 or Rion NL-31 or Rion NL-52 or Rion NL-52A
Calibrator	B&K Type 4231 or Rion NC-74 or Rion NC-75
Portable Wind Speed Indicator	Anemometer AZ Instrument 8908

Water Quality Monitoring

3.5.3 For water quality monitoring, the equipment should fulfill the requirement under the Approved *EM&A Manual Section 7.2*. The requirement is summarized below:

- ***Dissolved Oxygen and Temperature Measuring Equipment*** – The instrument should be a portable, weatherproof dissolved oxygen measuring instrument completed with cable, sensor, comprehensive operation manuals, and should be operable from a DC power source. It should be capable of measuring: dissolved oxygen levels in the range of 0-20 mg/L and 0-200% saturation; and a temperature of 0-45 degrees Celsius. It should have a membrane electrode with automatic temperature compensation complete with a cable of not less than 35 m in length. Sufficient stocks of spare electrodes and cable should be available for replacement where necessary.
- ***Turbidity Measurement Equipment*** – The instrument shall be a portable, weatherproof turbidity-measuring instrument complete with comprehensive operation manual. The equipment shall use a DC power source. It shall have a photoelectric sensor capable of measuring turbidity between 0-1000 NTU.
- ***Salinity Measurement Instrument*** – A portable salinometer capable of measuring salinity in the range of 0-40 ppt should be provided for measuring salinity of the water at each monitoring location.
- ***Water Depth Detector*** – A portable, battery-operated echo sounder should be used for the determination of water depth at each designated monitoring station. A detector affixed to the bottom of the works boat, if the same vessel is to be used throughout the monitoring programme, is preferred.
- ***Positioning Device*** – hand-held or boat-fixed type digital Global Positioning System (GPS) with way point bearing indication or other equipment instrument of similar accuracy, should be provided and used during water quality monitoring to ensure the monitoring vessel is at the correct location before taking measurements.
- ***Water Sampling Equipment*** – A water sampler, consisting of a transparent PVC or glass cylinder of not less than two liters, which can be effectively sealed with cups at both ends, should be used. The water sampler should have a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler is at the selected water depth.

3.5.4 Equipment used for water quality impact monitoring is listed in ***Table 3-8***.

Table 3-8 Water Monitoring Equipment

Equipment	Model
A Digital Global Positioning System	GPS12 Garmin
Water Depth Detector	Eagle Sonar CUDA 300
Water Sampler	A 2-litre transparent PVC cylinder with latex cups at both ends
Thermometer & DO meter	YSI ProDSS Digital Sampling System Water Quality Meter
pH meter	
Turbidimeter	
Salinometer	

Equipment	Model
Sample Container	High density polythene bottles (provided by laboratory)
Storage Container	'Willow' 33-litter plastic cool box with Ice pad

3.6 MONITORING PROCEDURES

Air Quality

1-hour TSP

3.6.1 The 1-hour TSP monitor was a brand named "*Sibata LD-3 Laser Dust monitor Particle Mass Profiler & Counter*" which is a portable, battery-operated laser photometer. The 1-hour TSP meter provides a real time 1-hour TSP measurement based on 90° light scattering. The 1-hour TSP monitor consists of the following:

(a.) A pump to draw sample aerosol through the optic chamber where TSP is measured;

(b.) A sheath air system to isolate the aerosol in the chamber to keep the optics clean for maximum reliability; and

(c.) A built-in data logger compatible with Windows based program to facilitate data collection, analysis and reporting.

24-hour TSP

3.6.2 The equipment used for 24-hour TSP measurement is TISCH, Model TE-5170 TSP High Volume Air Sampler, which complied with *EPA Code of Federal Regulation, Appendix B to Part 50*. The High Volume Air Sampler (HVS) consists of the following:

(a.) An anodized aluminum shelter;

(b.) A 8"x10" stainless steel filter holder;

(c.) A blower motor assembly;

(d.) A continuous flow/pressure recorder;

(e.) A motor speed-voltage control/elapsed time indicator;

(f.) A 7-day mechanical timer, and

(g.) A power supply of 220v/50 Hz

3.6.3 For HVS for 24-hour TSP monitoring, the HVS is mounted in a metallic cage with a top for protection and also it is sat on the existing ground or the roof of building. The flow rate of the HVS between 0.6m^3/min and 1.7m^3/min will be properly set in accordance with the manufacturer's instruction to within the range recommended in *EPA Code of Federal Regulation, Appendix B to Part 50*. Glass Fiber Filter 8" x 10" of TE-653 will be used for 24-Hour TSP monitoring and would be supplied by laboratory. The general procedures of sampling are described as below:-

- A horizontal platform with appropriate support to secure the samples against gusty wind should be provided;
- No two samplers should be placed less than 2 meters apart;
- The distance between the sampler and an obstacle, such as building, must be at least twice the height that the obstacle protrudes above the sample;
- A minimum of 2 meters of separation from any supporting structure, measured horizontally is required;
- Before placing any filter media at the HVS, the power supply will be checked to ensure the sampler work properly;
- The filter paper will be set to align on the screen of HVS to ensure that the gasket formed an air tight seal on the outer edges of the filter. Then filter holder frame will be tightened to the filter hold with swing bolts. The holding pressure should be sufficient to avoid air leakage at the edge.
- The mechanical timer will be set for a sampling period of 24 hours (00:00 mid-night to 00:00 mid-night next day). Information will be recorded on the field data sheet, which would be included the sampling data, starting time, the weather condition at current and the filter paper ID with the initial weight;
- After sampling, the filter paper will be collected and transfer from the filter holder of the HVS to a sealed envelope and sent to a local HOKLAS accredited laboratory for

quantifying.

3.6.4 All the sampled 24-hour TSP filters will be kept in normal air conditioned room conditions, i.e. 70% HR (Relative Humidity) and 25ºC, for six months prior to disposal.

3.6.5 The HVS used for 24-hour TSP monitoring will be calibrated in two months interval for in accordance with the manufacturer's instruction using the NIST-certified standard calibrator (Tisch Calibration Kit Model TE-5025A) to establish a relationship between the follow recorder meter reading in cfm (cubic feet per minute) and the standard flow rate, Qstd, in m^3/min. Motor brushes of HVS will be regularly replaced. The calibration certificates of the air quality monitoring equipment used for the impact monitoring and the HOKLAS accredited certificate of laboratory was provided in Appendix G.

Noise Monitoring

3.6.6 As referred to in the Technical Memorandum (TM) issued under the NCO, sound level meters in compliance with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications shall be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be 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.

3.6.7 All noise measurements will be performed with the meter set to FAST response and on the A-weighted equivalent continuous sound pressure level (Leq). $Leq_{(30\ min)}$ in six consecutive $Leq_{(5\ min)}$ measurements will be used as the monitoring parameter for the time period between 07:00-19:00 hours on weekdays throughout the construction period.

3.6.8 The sound level meter will be mounted on a tripod at a height of 1.2 m and placed at the assessment point and oriented such that the microphone is pointed to the site with the microphone facing perpendicular to the line of sight. The windshield will be fitted for all measurements. Where a measurement is to be carried out at a building, the assessment point would normally be at a position 1 m from the exterior of the building façade. Where a measurement is to be made for noise being received at a place other than a building, the assessment point would be at a position 1.2 m above the ground in a free-field situation, i.e. at least 3.5 m away from reflective surfaces such as adjacent buildings or walls.

3.6.9 Immediately prior to and following each noise measurement the accuracy of the sound level meter will be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements will be accepted as valid only if the calibration level from before and after the noise measurement agrees to within 1.0 dB.

3.6.10 Noise measurements will not be made in fog, rain, wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed will be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

3.6.11 The sound level meter and calibrator are calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme at yearly basis. The calibration certificates of noise monitoring equipment used for the impact monitoring was provided in Appendix G.

Marine Water Quality

3.6.12 Marine water quality monitoring would be conducted at all designated locations in accordance with Table 7.1 of the approved EM&A Manual. The procedures of water sampling, in-situ measurement and chemical analysis are described as below:

- A Global Positioning System (GPS) will be used to ensure that the correct location was selected prior to sample collection. A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station.
- The marine water sampler will be lowered into the water body at a predetermined depth. The

trigger system of the sampler is activated with a messenger and opening ends of the sampler are closed accordingly then the sample of water is collected.

- During the sampling, the sampling container will be rinsed to use a portion of the marine water sample before the water sample is transferred to the container. Upon sampling completion, the container will be sealed with a screw cap.
- Before the sampling process, general information such as the date and time of sampling, weather condition and tidal condition as well as the personnel responsible for the monitoring will be recorded on the monitoring field data sheet.
- In-situ measurement including water temperature, turbidity, dissolved oxygen, salinity, pH and water depth will be recorded at the identified monitoring station and depth. At each station, marine water samples will be collected at three depths: 1m below water surface, 1m above sea bottom and at mid-depth when the water depth exceeds 6m. Samples at 1m below water surface and 1m above sea bottom will be collected when the water depth is between 3m and 6m. And sample at mid-depth will be taken when the water depth is below 3m.
- For the in-situ measurement, two consecutive measurements of sampling depth, temperature, dissolved oxygen, salinity, turbidity and pH concentration will be measured at the sea. The YSI ProDSS Multifunctional Meter will be retrieved out of the water after the first measurement and then re-deployed for the second measurement. Where the difference in the value between the first and second readings of each set is more than 25% of the value of the first reading, the reading is discarded and further readings is taken.
- Marine water sample will be collected by using a water sampler. The high-density polythene bottles will be filled after the water sample collected from the sea. Before the water sample being fills into the sampling bottles, the sampling bottles will be pre-rinsed with the same water sample. The sampling bottles will then be packed in cool-boxes (cooled at $4^{O}C$ without being frozen), and delivered to HOKLAS accredited laboratory for the chemical analysis as followed APHA *Standard Methods for the Examination of Water and Wastewater* 19ed 2540D, unless otherwise specified.

3.6.13 Before each round of monitoring, the dissolved oxygen probe will be calibrated by wet bulb method; a zero check in distilled water will be performed with the turbidity and salinity probes. The turbidity probe also will be checked with a standard solution of known NTU and known value of the pH standard solution were used to check the accuracy of pH value before each monitoring day. Moreover, all in-situ measurement equipment used marine water monitoring will be calibrated at three months interval.

Laboratory Analysis

3.6.14 All water samples included the duplicate samples, was tested with chemical analysis as specified in the EM&A Manual by a HOKALS accredited laboratory - ALS Technichem (HK) Pty Ltd. The chemicals analysis method and reporting limit show ***Table 3-9***.

Table 3-9 Testing Method and Reporting Limit of the Chemical Analysis

Parameter	ALS Method Code	In-house Method Reference (1)	Reporting Limit
Total Suspended Solids	EA025	APHA 2540D	1 mg/L

Note:

1. The exact method shall depend on the laboratory accredited method. APHA = Standard Methods for the Examination of Water and Wastewater by the American Public Health Association.

3.6.15 The determination works will start within 24 hours after collection of the water samples or within the holding time as advised by the laboratory.

Meteorological Information

3.6.16 The meteorological information including wind direction, wind speed, humidity and temperature etc. of impact monitoring is extracted from the closest Tseung Kwan O Hong Kong Observatory Station. Moreover, the data of rainfall and air pressure would be extracted from King's Park Station.

3.6.17 For marine water quality monitoring, tidal information would be referred to tide gauge at Tai Miu Wan.

3.7 DETERMINATION OF ACTION/LIMIT (A/L) LEVELS

3.7.1 The baseline results form the basis for determining the environmental acceptance criteria for the impact monitoring. A summary of the Action/Limit (A/L) Levels for air quality, construction noise and water quality are shown in ***Tables 3-10***, ***3-11*** and ***3-12*** respectively.

Table 3-10 Action & Limit Levels of Air Quality (1-Hour & 24-Hr TSP)

Monitoring Station	Action Level (μg /m³)		Limit Level (μg/m³)	
	1-Hour TSP	24-Hr TSP	1-Hour TSP	24-Hr TSP
AM2	278	NA	500	NA
AM2b	NA	190	NA	260
AM3	278	NA	500	NA
AM4	278	NA	500	NA
AM5	NA	190	NA	260
Note: 1-Hour & 24-Hr TSP of Action Level = (Average Baseline Results × 1.3 + Limit level)/2				

Table 3-11 Action and Limit Levels for Construction Noise, dB (A)

Monitoring Location	Action Level	Limit Level
CNMS-1 **CNMS-2** **CNMS-3** **CNMS-5**	**Time Period: 0700-1900 hours on normal weekdays (Leq30min)**	
	When one or more documented complaints are received	***75*** dB(A)
	Time Period: 1900-2300 hours on all days (Leq15min)	
	When one or more documented complaints are received	***55*** dB(A)

Remarks:

1. *Construction noise monitoring will be resumed at the designated locations CNMS-2, CNMS-3 and CNMS4 once they are available and permission are granted;*
2. *The designated locations CNMS-2 and CNMS-3 are located at residential building which are still under construction, Limit Level of 75dB(A) will be adopted until they are occupied;*
3. *The designated location CNMS-4 is located at planned school and still not yet to construction. When the school occupied and operated, Limit Level of 70dB(A) should be adopted and should be reduced to 65dB(A) during examination period; and*
4. *If construction works are required during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority shall be followed.*

Table 3-12 Action and Limit Levels for Water Quality

Monitoring Station	Depth Average of SS (mg/L)			
	Action Level		Limit Level	
CC1	7.8	**OR** 120% of upstream control station at the same tide of the same day (Control Station C3 at Ebb tide and Control Station C4 at Flood tide), whichever is higher	9.3	**OR** 130% of upstream control station at the same tide of the same day (Control Station C3 at Ebb tide and Control Station C4 at Flood tide) , whichever is higher
CC2	9.0		9.2	
CC3	8.2		9.0	
CC4	13.8		15.4	
CC13	8.9		10.3	
SWI1	8 mg/L		10 mg/L	

Monitoring Location	Dissolved Oxygen (mg/L)			
	Depth Average of Surface and Mid-depth		Bottom	
	Action Level	Limit Level	Action Level	Limit Level
CC1	5.8	5.7	5.3	5.2
CC2	5.8	5.7	5.3	5.1
CC3	5.5	5.4	4.9	4.7
CC4	5.7	5.7	5.5	5.4
CC13	5.6	5.5	5.3	5.2
SWI1	5.4	4.8	5.1	5.0

Monitoring Location	Depth Average of Turbidity (NTU)			
	Action Level		Limit Level	
CC1	5.8	**OR** 120% of upstream control station at the same tide of the same day (Control Station C3 at Ebb tide and Control Station C4 at Flood tide) , whichever is higher	6.0	**OR** 130% of upstream control station at the same tide of the same day (Control Station C3 at Ebb tide and Control Station C4 at Flood tide) , whichever is higher
CC2	4.6		5.5	
CC3	4.8		5.4	
CC4	6.1		7.1	
CC13	6.0		6.3	
SWI1	6.1		7.1	

3.7.2 Should non-compliance of the environmental quality criteria occurs, remedial actions will be triggered according to the Event and Action Plan which presented in ***Appendix D.***

3.8 DATA MANAGEMENT AND DATA QA/QC CONTROL

3.8.1 All monitoring data will be handled by the ET's in-house data recording and management system. The monitoring data recorded in the equipment will be downloaded directly from the equipment at the end of each monitoring day. The downloaded monitoring data will input into a computerized database properly maintained by the ET. The laboratory results will be input directly into the computerized database and checked by personnel other than those who input the data.

3.8.2 For monitoring parameters that require laboratory analysis, the local laboratory shall follow the QA/QC requirements as set out under the HOKLAS scheme for the relevant laboratory tests.

4 AIR QUALITY MONITORING

4.1 GENERAL

4.1.1 Total Suspended Particulate (TSP) levels monitoring and audit should be performed by the ET to ensure any deteriorating air quality could be readily detected and timely actions taken to rectify the situation. 1-hour TSP or 24-hour TSP should be measured to show the impacts of construction dust on air quality.

4.2 RESULTS OF AIR QUALITY MONITORING

4.2.1 Throughout the Construction Period, a total of ***2265*** sessions of 1-hour TSP and ***657*** sessions of 24-hour TSP air quality monitoring were carried out at designated monitoring locations. The monitoring results are summarized in ***Tables 4-1*** to ***4-2***, and the relevant graphical plots are shown in ***Appendix E.*** Breaches of air quality A/L levels and statistical analysis of compliance for air quality monitoring results are summarized in ***Table 4-3.*** Meteorological data during the Construction Period are shown in ***Appendix G.***

Table 4-1 Summary of 1-hour TSP Monitoring results

Monitoring Location	ASR ID in EIA	Predicted Maximum Mitigated 1-hour TSP Concentration in EIA (µg/m^3)	1-hour TSP Concentration (µg/m^3) Average (range)	Monitoring Period	Number of Sessions
AM2	A13	475	69 (19 – 137)	4 Feb 2021 to 28 Apr 2025	819
AM3	A16	412	51 (10 – 126)	8 Apr 2024 to 28 Apr 2025	204
AM4	A1	255	69 (18 – 124)	4 Dec 2018 to 28 Apr 2025	1242

Table 4-2 Summary of 24-hour TSP Monitoring results

Monitoring Location	ASR ID in EIA	Predicted Maximum Mitigated 24-hour TSP Concentration in EIA (µg/m^3)	24-hour TSP Concentration (µg/m^3) Average (range)	Monitoring Period	Number of Sessions
AM2[(1)]	A13	124	69 (13 – 186)	13 Jul 2021 to 29 Apr 2025	243
AM5[(2)]	A1	98	91 (13 – 188)	3 Dec 2018 to 29 Apr 2025	414

[(1)]AM2 includes the data of both alternative location AM2a and relocated AM2b
[(2)]Since there is no ASR in EIA for the alternative location AM5, the predicted maximum mitigated 24-hour TSP concentration of ASR A1 which is the closest ASR is referenced for comparison.

Table 4-3 Summary of Breaches of Air Quality A/L Levels

Monitoring Parameters	Action Level	Limit Level	Status
1-hour TSP	0	0	No NOE of Air quality exceedance was issued
24-hour TSP	0	0	

4.3 CONCLUSION AND RECOMMENDATIONS

Conclusions

4.3.1 According to the EIA, with implementation of the recommended mitigation measures as well as the relevant control requirements as stipulated in the Air Pollution Control (Construction Dust) Regulation, no adverse residual impacts are predicted at all the ASRs during the construction

phase.

4.3.2 The weather throughout the Construction Period was typical Hong Kong climate including rainy season (Apr to Oct) and dry season (Nov to Mar next year). The major dust sources in the Construction Period are construction activities by the Project, as well as traffic emission from Wan Po Road and Wan O Road.

4.3.3 According to the monitoring results, it was concluded that all the 1-hour TSP and 24-hour TSP monitoring results at the designated monitoring location throughout the Construction Period were below the Action/Limit Levels. No exceedances were recorded during the monitoring. Neither NOE nor the associated remedial actions were required for air quality during the Construction Period. Under the construction dust suppression measures as provided by the Contractor, the impact monitoring results were generally fulfilled of the environmental quality criteria of the parameter and comparable to EIA.

4.3.4 The predicted TSP concentration level with provided mitigation measures during the construction phase at the designated monitoring locations based on Section 5.5.6 and Table 5.9 of the EIA report are shown in ***Table 4-1 and 4-2*** respectively. Based on the monitoring results, it is shown that the average 1-hour and 24-hour TSP concentrations recorded at the monitoring locations are below the predicted TSP concentration in EIA. Other factor such as adverse weather conditions and influence of continental airstream with severe air pollution would affect the measured TSP concentration and cause high fluctuation during the Construction Period.

4.3.5 The air quality monitoring performed during the Construction Period are effective for generating data with the necessary statistical power to categorically identify or confirm the presence or absence of the predicted environmental impacts attributable to the works under the Project. The construction dust suppression measures as recommended in the Implementation Schedule for Environmental Mitigation Measures (ISEMM) is also proven effective and adequate.

Recommendations

4.3.6 The air quality mitigation measures stipulated in ISEMM should be strictly observed throughout the construction period in future of others construction projects.

5 CONSTRUCTION NOISE MONITORING

5.1 GENERAL

5.1.1 The construction noise level in terms of A-weighed equivalent continuous sound pressure level (Leq) measured at all designated monitoring locations should be carried out to ensure that any deteriorating construction noise could be readily detected and timely action taken to rectify the situation throughout the Construction Period.

5.2 RESULTS OF NOISE MONITORING

5.2.1 Throughout the Construction Period, a total of **902** sessions of daytime noise monitoring were conducted at designated monitoring locations: CNMS-1, CNMS-2, CNMS-3, and interim alternative monitoring location CNMS-5 respectively. During the Construction Period, noise monitoring were not performed under fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s of weather condition.

5.2.2 A total of **118** additional evening time noise monitoring and **12** additional night time noise monitoring were also performed at monitoring locations CNMS-1, CNMS-2, and CNMS-5 during the Construction Period. The noise monitoring results throughout the Construction Period are summarized in ***Table 5-1*** to ***Table 5-3***, and the relevant graphical plots are shown in ***Appendix E***

Table 5-1 Summary of Daytime Construction Noise Monitoring Results

Monitoring Location	NSR ID in EIA	Predicted Mitigated Noise Level dB(A) in EIA	Leq, 30min (dB(A)) (Range)	Monitoring Period	Number of Sessions
CNMS-1	R12	73	51.7 – 74.2	8 Nov 2019 to 28 Apr 2025	288
CNMS-2	R14	74	49.2 – 74.6	4 Feb 2021 to 28 Apr 2025	222
CNMS-3	R27	73	53.2 – 67.7	8 Apr 2024 to 28 Apr 2025	56
CNMS-5	R2	63	54.3 – 72.6	4 Dec 2018 to 28 Apr 2025	336

Table 5-2 Summary of Additional Evening Time Construction Noise Monitoring Results

Monitoring Location	Leq, 5min (dB(A)) (Range)	Monitoring Period	Number of Sessions
CNMS-1	49.7 – 61.2	14 Nov 2019 to 30 Dec 2021	41
CNMS-2	44.6 – 52.5	18 Jun 2021 to 30 Dec 2021	4
CNMS-5	58.5 – 64.0	15 Mar 2019 to 30 Dec 2021	73

Table 5-3 Summary of Additional Night Time Construction Noise Monitoring Results

Monitoring Location	Leq, 5min (dB(A)) (Range)	Monitoring Period	Number of Sessions
CNMS-1	49.6 – 54.3	18 Jun 2021 to 14 Dec 2021	4
CNMS-2	47.9 – 51.4	18 Jun 2021 to 14 Dec 2021	4
CNMS-5	55.9 – 57.1	18 Jun 2021 to 14 Dec 2021	4

5.2.3 Throughout the Construction Period, a total of 38 noise complaints were received (which trigger an Action Level), and 110 Limit Level exceedance were recorded. NOEs were issued to relevant parties upon confirmation of the monitoring result. Investigation had been conducted by ET and the investigation results were shown in corresponding Monthly EM&A Reports. Breaches of construction noise A/L levels and statistical analysis of compliance for construction noise monitoring results are summarized in ***Table 5-4.***

Table 5-4 Summary of Breaches of Construction Noise A/L Levels

Monitoring Parameters	Action Level	Limit Level	Project related exceedance	Status
Leq (30min) Daytime	31	0	15	Investigation for all the exceedances and noise complaints and had been conducted according to the Event and Action Plan in the EM&A Manual and presented in the relevant monthly EM&A reports. All the environmental complaint received during construction phase has been resolved.
Leq (5min) Evening Time	1	95	0	
Leq (5min) Night Time	6	15	0	

5.2.4 According to the EIA, the noise impact associated with unmitigated construction activities for the proposed Project works would cause exceedance of the daytime construction noise criterion at the nearby NSRs during the normal working hours. Therefore, good site practices and mitigation measures including the use of quiet plant and working methods and erection of movable noise barriers to alleviate the noise impact. With the good site practices and mitigation measures in place, no residual impacts are predicted at all the NSRs.

5.2.5 According to the EIA report Section 6.6.5 and Table 6.9, the predicted construction noise level with provided mitigation measures during the construction phase at four residential monitoring locations are 67 dB(A), 74 dB(A), 73 dB(A), and 63 dB(A) respectively. In comparison with the EIA prediction of construction noise level, the range of the measured impact noise levels throughout the construction phase at monitoring stations CNMS-1, CNMS-2, and CNMS-3 were below the predicted level. However, results showed that CNMS-5 has a higher range of measured noise levels (54.3 – 72.6 dB (A)) compared to the predicted level, which might be due to external noise sources such as traffic noises during the monitoring sessions.

5.2.6 In accordance with the investigation results, 15 out of 38 Action Level exceedances were considered project-related. Upon receipt of the complaint, the Contractor took immediate action to implement appropriate noise mitigation measures to further reducing the noise impact. A joint site inspection was also carried out to verify the implementation of the associated mitigation measures, and these were considered effective. With regard to the evening and night-time action level exceedances, the investigation results demonstrated that these were not related to the project. Nevertheless, the Contractor was reminded to strictly implement the noise mitigation measures as far as practicable to reduce to noise impact to the public.

5.2.7 Regarding the Limit Level exceedances of the monitoring, no Limit Level exceedance was recorded in daytime construction noise monitoring. However, a total of 110 Limit Level exceedances were recorded and evening and night-time construction noise monitoring. According to the investigation results, the exceedances recorded were considered as project unrelated. Based on the graphical plot of the monitoring result, there are trends of narrow down of monitoring exceedances due to construction activities and the return of ambient environmental conditions in comparison with the baseline data.

5.2.8 It is considered that the construction noise monitoring performed during the Construction Period are effective for generating data with the necessary statistical power to categorically identify or confirm the presence or absence of the predicted environmental impacts attributable to the works under the Project.

5.2.9 $L_{eq(30min)}$ monitoring results registered consistent compliance of the parameter with environmental quality criteria throughout the Construction Period, indicating that the prediction of EIA prediction on the adverse noise nuisance to be generated from the construction of the Project is in

general acceptable and the recommended environmental mitigation measures as stipulated in ISEMM are also adequate.

Recommendations

5.2.10 The construction noise mitigation measures stipulated in ISEMM shall be strictly observed throughout the construction period in future of others construction projects.

6 WATER QUALITY MONITORING

6.1 GENERAL

6.1.1 The EIA Report has assessed the water quality impacts associated with the Project. According to the EIA Report, the water quality impact could be minimized with the implementation of mitigation measures. The water quality monitoring shall be necessary to undertake during the construction phase. Moreover, regular site inspections and audits undertaken to ensure that runoff/wastewater control and the recommended mitigation measures were properly implemented.

6.1.2 According to the approved EM&A Manual Section 7.6.1, the impact marine water quality monitoring work shall be carried out during the CBL piling and pile excavation works (marine construction activity) of the Project. Impact marine water quality monitoring was commenced in December 2018 when CBL piling and pile excavation works started.

6.2 RESULTS OF WATER MONITORING

6.2.1 According to Table 7.1 of the approved EM&A Manual Section 7.4, two Control Stations (C3 & C4), six (6) sensitive receivers (CC1, CC2, CC3, CC4, CC13 & SWI1) and one (1) Gradient station (I1) are recommended to perform water quality monitoring.

6.2.2 A total of **216** sampling days were performed for marine water monitoring at nine designated locations. Monitoring results of 3 key parameters: Dissolved oxygen (DO), turbidity, and suspended solids are summarized in ***Tables 6-1*** to ***6-2:***

Table 6-1 Summary of Dissolved Oxygen, Turbidity and Suspended Solids of the Water Quality Monitoring Results at Mid-Ebb Tide in the Construction Period

Station ID	Dissolved Oxygen average (mg/L) (range)		Turbidity (NTU) average (range)	Suspended solid (mg/L) average (range)	Monitoring Period
	Surface & Mid Layer	Bottom Layer			
CC1	7.04 (5.07 – 10.18)	6.72 (4.44 –9.26)	1.37 (0.06 – 3.86)	3.50 (1.00 – 10.43)	3 Dec 2018 to 29 Apr 2020
CC2	6.99 (5.18 – 9.40)	6.6 (4.47 – 8.73)	1.63 (0.32 – 4.40)	3.58 (1.00 – 9.10)	3 Dec 2018 to 29 Apr 2020
CC3	6.97 (5.37 – 11.34)	6.47 (4.57 – 8.36)	1.73 (0.41 – 4.42)	3.66 (1.00 – 12.07)	3 Dec 2018 to 29 Apr 2020
CC4	6.94 (5.29 – 9.61)	NA	1.53 (0.17 – 4.69)	3.89 (1.00 – 18.05)	3 Dec 2018 to 29 Apr 2020
CC13	7 (5.21 – 9.94)	6.69 (4.47 – 9.33)	1.39 (0.15 – 4.18)	3.71 (1.00 – 12.25)	3 Dec 2018 to 29 Apr 2020
SWI1	6.99 (5.37 – 10.44)	6.86 (4.86 – 9.53)	1.40 (0.16 – 4.79)	3.86 (1.00 – 15.43)	3 Dec 2018 to 29 Apr 2020
C3	6.88 (4.62 – 9.13)	6.59 (4.34 – 8.64)	1.68 (0.11 – 4.05)	3.78 (1.00 – 10.92)	3 Dec 2018 to 29 Apr 2020
C4	6.89 (4.77 – 9.00)	6.63 (4.33 – 8.83)	1.61 (0.20 – 5.07)	3.55 (1.00 – 11.03)	3 Dec 2018 to 29 Apr 2020

Remark: No Dissolved Oxygen (Bottom) monitoring data available for CC4 due to the water depth measured at CC4 during the monitoring days were less than 3 meters.

Table 6-2 Summary of Dissolved Oxygen, Turbidity and Suspended Solids of the Water Quality Monitoring Results at Mid-Flood Tide in the Construction Period

Station ID	Dissolved Oxygen average (mg/L) (range)		Turbidity (NTU) average (range)	Suspended solid (mg/L) average (range)	Monitoring Period
	Surface & Mid Layer	Bottom Layer			
CC1	7.04 (5.42 – 9.47)	6.71 (4.76 – 9.36)	1.42 (0.07 – 4.00)	3.59 (1.00 – 10.55)	3 Dec 2018 to 29 Apr 2020
CC2	6.98 (5.13 – 9.26)	6.60 (4.49 – 8.58)	1.61 (0.26 – 4.59)	3.64 (1.00 – 11.88)	3 Dec 2018 to 29 Apr 2020
CC3	6.95 (5.35 – 9.61)	6.45 (4.64 – 9.03)	1.72 (0.31 – 4.30)	3.54 (1.00 – 13.77)	3 Dec 2018 to 29 Apr 2020
CC4	6.95 (5.30 – 9.59)	NA	1.59 (0.04 – 6.06)	3.88 (1.00 – 14.15)	3 Dec 2018 to 29 Apr 2020
CC13	7.00 (5.49 – 10.31)	6.69 (4.81 – 9.11)	1.47 (0.36 – 5.25)	3.89 (1.00 – 15.42)	3 Dec 2018 to 29 Apr 2020
SWI1	7.04 (5.44 –10.60)	6.85 (4.84 – 10.10)	1.40 (0.14 – 5.20)	3.85 (1.00 – 14.58)	3 Dec 2018 to 29 Apr 2020
C3	6.91 (5.01 – 9.59)	6.59 (4.43 – 8.57)	1.66 (0.25 – 5.73)	3.61 (1.00 – 10.42)	3 Dec 2018 to 29 Apr 2020
C4	6.92 (5.18 – 9.42)	6.63 (4.30 – 8.75)	1.65 (0.35 – 3.80)	3.63 (1.00 – 10.60)	3 Dec 2018 to 29 Apr 2020

Remark: No Dissolved Oxygen (Bottom) monitoring data available for CC4 due to the water depth measured at CC4 during the monitoring days were less than 3 meters.

6.2.3 Throughout the Construction Period, a total of ***22*** Action Level and ***33*** Limit Level exceedances were recorded. NOEs were issued to relevant parties upon confirmation of the monitoring result. Investigation had been conducted by ET and the investigation result shown in corresponding Monthly EM&A Reports. Breaches of water quality A/L levels and statistical analysis of compliance for water quality results are summarized in ***Table 6-3.***

Table 6-3 Summary of Breaches of Water Quality A/L Levels

Monitoring Parameters	Action Level	Limit Level	Project related exceedance	Status
DO	3	17	0	Investigation for all the exceedances had been conducted according to the Event and Action Plan in the EM&A Manual and presented in the relevant monthly EM&A reports.
Turbidity	0	0	0	
SS	19	16	0	

6.2.4 Investigation for all the exceedances had been conducted in accordance with the Event and Action Plan in the EM&A Manual. According to the investigation findings, the exceedances were concluded as project unrelated as the water quality mitigation measures were properly implemented without any abnormal and turbid discharge. Other factors such as seasonal changes, rainfall and tidal conditions may contribute to the exceedances resulted in the monitoring. Both the findings and the conclusion has presented in the relevant monthly EM&A report. Although the exceedances recorded are concluded as project unrelated, both Contractors are reminded to pay special attention on water quality mitigation measures and should fully implement the measures recommended in the EM&A Manual, in particular to prevent construction site runoff and other pollutants from flowing to local sewage system and coral sites. .

6.2.5 All the environmental complaint due to water quality issues as received during construction phase has resolved.

6.3 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

6.3.1 The graphical plot of DO, Turbidity and SS monitoring result shown that ambient environmental conditions in comparison with baseline data has been slowly resume due to construction activities narrow down.

6.3.2 Throughout the construction period, water quality monitoring recorded that most parameters consistently met environmental quality standards. This indicates that the projection of the impact of the EIA on the construction of the project is acceptable. Also, the recommended environmental mitigation measures prescribed by the ISEMM are also adequate.

Recommendations

6.3.3 The water quality mitigation measures stipulated in ISEMM shall be strictly observed throughout the construction period in future of others construction projects which near with watercourse

7 WASTE MANAGEMENT

7.1 GENERAL WASTE MANAGEMENT

7.1.1 Waste management would be carried out by an on-site Environmental Officer or an Environmental Supervisor from time to time.

7.2 RECORDS OF WASTE QUANTITIES

7.2.1 All types of waste arising from the construction work are classified into the following:

- Construction & Demolition (C&D) Material;
- Chemical Waste; and
- General Refuse

7.2.2 The quantities of waste for disposal in the Construction Period by mean of Waste Flow Table are presented in ***Appendix F***. The Contractor was reminded that, whenever possible, materials were reused on-site as far as practicable. Summary of total waste generated from construction phase of the Project is shown in ***Table 7-1*** and ***Table 7-2.***

Table 7-1 Summary of Quantities of Inert C&D Materials

Type of Waste	Quantity		Total ('000 m^3)	Disposal Location
	Contract 1	Contract 2		
C&D Materials (Inert) ('000 m^3)	17.886	69.964	87.85	-
Reused in this Contract (Inert) ('000m^3)	0	0.358	0.358	-
Reused in other Projects (Inert) ('000m^3)	0	0	0	-
Disposal as Public Fill (Inert) ('000m^3)	18.162	68.707	86.869	TKO-137
Imported Fill (Inert) ('000 m^3)	0.626	13.111	13.737	-

Table 7-2 Summary of Quantities of C&D Wastes

Type of Waste	Quantity		Total	Disposal Location
	Contract 1	Contract 2		
Recycled Metal ('000 kg)	0	8.917	8.917	Collected by licensed collector
Recycled Paper / Cardboard Packing ('000 kg)	9.309	0.995	10.304	Collected by paper recycling company
Recycled Plastic ('000 kg)	0	0.215	0.215	Collected by licensed collector
Chemical Wastes ('000 kg)	0.132	0.015	0.147	Collected by licensed collector
General Refuses ('000 m^3)	17.414	8.328	25.742	NENT

7.3 EFFECTIVENESS OF SOLID AND LIQUID WASTE MANAGEMENT

7.3.1 Waste management was the contractor's responsibility to ensure that all wastes produced during the construction phase are handled, stored and disposed of in accordance with good waste management practices and EPD's regulations and requirements. The Waste Management Plan was developed by the Contractor to include the recommended mitigation measures in the construction phase.

7.3.2 During construction phase, regular site inspection as part of the EM&A procedures were carried out to determine if wastes are being managed in accordance with approved procedures and the Waste Management Plan. Different aspects of waste management including waste generation, storage, recycling, treatment, transport and disposal had included in the programme. Waste Flow Table implemented by the Project has properly recorded the total qualities of wastes generated and disposal arrangement, they were general in line with the EIA Report.

7.3.3 With the implementation of the recommended mitigation measures for the handling, transportation and disposal of the identified waste arising, residual impacts are not observed for construction phases. It is deemed that the solid and liquid waste management is effective and under control.

8 SITE INSPECTION

8.1 REQUIREMENTS

8.1.1 According to the approved EM&A Manual, the environmental site inspection shall be formulation by ET Leader. Weekly environmental site inspections should carry out to confirm the environmental performance.

8.2 FINDINGS / DEFICIENCIES DURING CONSTRUCTION PERIOD

8.2.1 Throughout the Construction Period, weekly joint site inspection has been carried out by supervisor, Contractors, IEC, and ET to evaluate site environmental performance. No non-compliance was recorded and minor deficiencies were in general rectified within the specified deadlines. The environmental performance of the two Contracts as under the Project was therefore considered satisfactory. The summary of site inspection are shown in ***Table 8-1***.

Table 8-1 Summary of Site Inspection

Date	Number of Sessions	Inspection Period
Contract 1	334	29 August 2018 to 30 April 2025
Contract 2	327	21 November 2018 to 30 April 2025

9 LANDFILL GAS MONITORING

9.1 GENERAL REQUIREMENT

9.1.1 Pursuant to Section 13 of the Project's EM&A Manual, landfill gas monitoring shall perform during excavation work within the 250m Consultation Zone of Tseung Kwan O Stage II & III Landfill. For landfill gas monitoring requirements, pre entry and routine measurement shall be undertaken in accordance with the *Factories and Industrial Undertaking (Confined Spaces) Regulation*.

9.1.2 According to Environmental Mitigation Implementation Schedule (EMIS) S14.7.6, portable monitoring equipment can be used to conduct landfill gas monitoring. Moreover, the frequency and areas to be monitored should be set down prior to commencement of the works either by the Safety Officer or by an appropriately qualified person.

9.2 LIMIT LEVELS AND EVENT AND ACTION PLAN

9.2.1 In event of the trigger levels specified in Table 14.6 of the EIA report being exceeded, a person, such as the Safety Officer, shall be nominated, with deputies, to be responsible for dealing with any emergency which may occur due to LFG. In an emergency situation the nominated person, or his deputies, shall have the necessary authority and shall ensure that the confined space is evacuated and the necessary works implemented for reducing the concentrations of gas. The Limit levels and relevant Action Plans for landfill gas detected in utilities and any on-site areas following construction is listed in ***Table 9-1***.

Table 9-1 Actions in the Event of Landfill Gas Being Detected in Excavations

Parameter	Limit Level	Actions
Methane	>10% LEL (i.e. >0.5% by volume)	• Post "No Smoking" signs • Prohibit hot works • Ventilate to restore methane to <10% LEL
	>20% LEL (i.e. >1% by volume)	• Stop excavation works • Evacuate personnel/prohibit entry • Increase ventilation to restore methane to <10% LEL
Carbon dioxide	>0.5%	• Ventilate to restore carbon dioxide to <0.5%
	>1.5%	• Stop excavation works • Evacuate personnel/prohibit entry • Increase ventilation to restore carbon dioxide to <0.5%
Oxygen	<19%	Ventilation to restore oxygen >19%
	<18%	• Stop excavation works • Evacuate personnel/prohibit entry • Increase ventilation to restore oxygen to >19%

9.2.2 In the event of the trigger levels specified in **Table 9-1** being exceeded, the Safety Officer shall be responsible for dealing with any emergency which may occur due to landfill gas.

9.3 LANDFILL GAS MONITORING

9.3.1 During the Construction Period, a total of ***968*** days of landfill gas monitoring was conducted by the Safety Officer or an approved and qualified person at the zone Wan O Road which excavation work of Contract 2 was carried out. The results of landfill gas measurement are summarized in ***Table 9-2***.

Table 9-2 Summary of Landfill Gas Measurement Results

Landfill Gas Parameter	Year	Detectable at LMR		Action Level	Limit Level
		Min	Max		
Methane	2019	0.1%	0.1%	>10% LEL (>0.5% v/v)	>20% LEL (>1% v/v)
	2020	0.1%	0.1%		
	2021	0%	0%		
	2022	0%	0%		
	2023	0%	0%		
Oxygen	2019	20.8%	21.1%	<19%	<18%
	2020	20%	22%		
	2021	20.6%	20.8%		
	2022	20.3%	21.1%		
	2023	20.3%	20.7%		
Carbon Dioxide	2019	0.1%	0.2%	>0.5%	>1.5%
	2020	0.1%	0.2%		
	2021	0%	0%		
	2022	0%	0%		
	2023	0%	0%		

9.3.2 According to the measurement results, it is shown that slightly methane and carbon dioxide concentration was detected at the zone Wan O Road where the excavation work was carried out during the period. Oxygen concentration during the excavation work period was over 19.0%

9.3.3 No exceedance was triggered and therefore no corrective action was required accordingly in the excavation work period. Database of the landfill gas monitoring results can be referred to the corresponding monthly EM&A Reports.

10 ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

10.1 ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTION

10.1.1 Throughout the Construction Period, a total of 55 environmental complaints were lodged under the EM&A Programme. ET had performed investigations by auditing the mitigation measures implemented by the Contractor. Following the investigations, 16 out of 55 complaints were considered as project related complaint. The Contractors were advised to implement and enhance the relevant mitigation measures. Site check was conducted by ET to check the environmental performance after the situation has been rectified.

10.1.2 Neither environmental summons nor prosecutions were received for the Project throughout the Construction Period. The statistical summary table of environmental complaint is presented in ***Tables 10-1, 10-2*** and ***10-3***. A summary of complaint log is shown on ***Appendix I***.

Table 10-1 Statistical Summary of Environmental Complaints

Contract No	Contract Period	Environmental Complaint Statistics	
		Cumulative Complaint	Project related complaint
Contract 1	3 Dec 2018 – 30 Apr 2025	33	11
Contract 2	17 Jan 2019 – 30 Apr 2025	26	9

Table 10-2 Statistical Summary of Environmental Summons

Contract No	Contract Period	Environmental Summons Statistics	
		Cumulative Summons	Summons Nature
Contract 1	3 Dec 2018 – 30 Apr 2025	0	NA
Contract 2	17 Jan 2019 – 30 Apr 2025	0	NA

Table 10-3 Statistical Summary of Environmental Prosecution

Contract No	Contract Period	Environmental Prosecutions Statistics	
		Cumulative Prosecutions	Prosecutions
Contract 1	3 Dec 2018 – 30 Apr 2025	0	NA
Contract 2	17 Jan 2019 – 30 Apr 2025	0	NA

11 IMPLEMENTATION STATUS OF MITIGATION MEASURES

11.1 GENERAL REQUIREMENTS

11.1.1 The environmental mitigation measures that recommended in the Implementation Schedule for Environmental Mitigation Measures (ISEMM) in the approved EM&A Manual covered the issues of dust, noise, water and waste and they are summarized presented in ***Appendix H.***

11.1.2 The Contractors had been implementing the required environmental mitigation measures according to the Environmental Monitoring and Audit Manual subject to the site condition. Environmental mitigation measures generally implemented by the Contractors in the Construction Period are summarized in ***Table 11-1.***

Table 11-1 Environmental Mitigation Measures in the Construction Period.

Issues	Environmental Mitigation Measures
Construction Noise	• Regularly to maintain all plants, so only the good condition plants were used on-site ; • If possible, all mobile plants onsite operation has located far from NSRs; • When machines and plants (such as trucks) were not in using, it was switched off; • Wherever possible, plant was prevented oriented directly the nearby NSRs; • Provided quiet powered mechanical equipment to use onsite; • Weekly noise monitoring was conducted to ensure construction noise meet the criteria.
Air Quality	• Stockpile of dusty material was covered entirely with impervious sheeting or sprayed with water so as to maintain the entire surface wet; • The construction plants regularly maintained to avoid the emissions of black smoke; • The construction plants switched off when it not in use; • Water spraying on haul road and dry site area was provided regularly; • Where a vehicle leaving the works site is carrying a load of dusty materials, the load has covered entirely with clean impervious sheeting; and • Before any vehicle leaving the works site, wheel watering has been performed.
Water Quality	• Debris and refuse generated on-site collected daily; • Oils and fuels were stored in designated areas; • The chemical waste storage as sealed area provided; • Site hoarding with sealed foot were provided surrounding the boundary of working site to prevent wastewater or site surface water runoff get into public areas; and • Portable chemical toilets were provided on-site. A licensed contractor was regularly disposal and maintenance of these facilities. • Silt curtain was installed and maintained in accordance with EP condition
Waste and Chemical Management	• Excavated material reused on site as far as possible to minimize off-site disposal. • Scrap metals or abandoned equipment should be recycled if possible; • Waste arising kept to a minimum and be handled, transported and disposed of in a suitable manner; • Disposal of C&D wastes to any designated public filling facility and/or landfill followed a trip ticket system; and • Chemical waste handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes.
General	• The site is generally kept tidy and clean. • Mosquito control is performed to prevent mosquito breeding on site.

11.2 NOISE MITIGATION MEASURE DURING OPERATION OF THE PROJECT

11.2.1 According to Environmental Permit EP-459/2013 Condition 3.4, noise mitigation measures such as low noise surfacing and semi-enclosure noise barrier shall be implemented at CBL main bridge and Road D9 to mitigate traffic noise impact arising from the operation of Project. The details of the mitigation measures are shown in Table 11-2. All the locations and dimensions of the required mitigation measures are complied with Table 1 and Figure 2 of the EP.

Table 11-2 Noise Mitigation Measures during Operation of the Project

No.	Required Mitigation Measures	Actual Mitigation Measures Implemented
N1	Approx. 300m long low noise surfacing	400m long low noise surfacing
N2	Approx. 960m long low noise surfacing	1060m long low noise surfacing
N3	Approx. 220m long 6m height + 17m width semi-enclosure	220m long 6.6m height + 17m width semi-enclosure
N4	Approx. 245m long 6m height + 10.5m width semi-enclosure	245m long 6.3m height + 10.7m width semi-enclosure
N5	Approx. 22m long 6m height +13.2m width semi-enclosure	22m long 6.3m height + 13.7m width semi-enclosure
N6	Approx. 33m long 6m height + 17.4m width semi-enclosure	33m long 6.3m height + 17.4m width semi-enclosure
N7	Approx. 90m long 6m height + 13.5m width semi-enclosure	90m long 6.3m height + 13.7m width semi-enclosure
N8	Approx. 55m long low noise surfacing	55m long low noise surfacing

12 CONCLUSIONS AND RECOMMENDATIONS

12.1 CONCLUSIONS

12.1.1 This is the Final EM&A Report for Construction Phase for Contracts 1 and 2, summarizing the monitoring results and inspection findings during the construction period from ***3rd December 2018*** to ***30th April 2025***.

12.1.2 Throughout the Construction Period, 1-hour TSP and 24-hour TSP were conducted based on the EM&A requirement. Both 1-hour TSP and 24-hour TSP monitoring results throughout the Construction Period were below the Action /Limit Levels.

12.1.3 Throughout the Construction Period, a total of 38 Action Level and 110 Limit Level exceedances were recorded at the designated construction noise monitoring stations. NOEs were issued to the corresponding parties upon confirmation of the monitoring result, and subsequent investigations for the causes of exceedances were conducted by the ET. Based on the investigation results, 15 out of 38 Action Level exceedances were considered as project related. Upon receipt of the complaint, the Contractor had taken immediate action to implement relevant noise mitigation measures to further minimize the noise impact. Although there were 110 Limit Level exceedances recorded throughout the construction period, they were considered as project unrelated. However, Contractors were reminded to strictly implement the noise mitigation measures as far as practicable to reduce to noise impact to the public

12.1.4 Throughout the Construction Period, a total of 22 Action Level and 33 Limit Level exceedances were recorded at the water quality monitoring stations for the parameters of Dissolved Oxygen, Turbidity, and Suspended Solids. NOEs were issued to the relevant parties upon confirmation of the monitoring result, and subsequent investigations for the causes of exceedances were conducted by the ET. Although the investigation results of the exceedances are project unrelated, both Contractors are reminded to pay special attention water quality mitigation measures and should fully implement the measures recommended in the EM&A Manual.

12.1.5 Throughout the Construction Period, a total of 968 days of landfill gas monitoring was conducted by the Safety Officer or an approved and qualified person at the zone Wan O Road which excavation work of Contract 2 was carried out. No exceedance was triggered and therefore no corrective action was required accordingly in the excavation period.

12.1.6 Throughout the Construction Period, a total of 334 sessions of site inspections were conducted for Contract 1, and 327 sessions for Contract 2 were conducted by the ET to evaluate the environmental performance of both contracts. No non-compliance was recorded on both contracts, and minor deficiencies were generally rectified within the special deadlines. Therefore, the environmental performance of both contracts under the project was considered satisfactory.

12.1.7 An Independent Environmental Inspector (IEC) joined monthly site inspection with the Representative Engineer (RE), the Contractors and ET. A total of 76 audits were performed for Contract 1 and 74 for Contract 2 throughout the Construction Period. No non-compliance issues were identified; however, minor deficiencies were noted and were generally rectified within the specified deadlines. This collaborative effort contributed to maintaining effective environmental oversight and compliance for both contracts.

12.1.8 Throughout the Construction Period, a total of 55 environmental complaints were lodged under the EM&A Programme. ET had carried out investigations by auditing the mitigation measures implemented by the Contractor. After investigation, 16 out of 55 complaints were considered as project related. The Contractor was strongly advised to implement and enhance the relevant mitigation measures. Site check was conducted by ET to check the environmental performance after the situation has been rectified.

12.1.9 Throughout the Construction Period, no environmental summons or prosecutions were received for the project.

12.1.10 To conclude, monitoring results of air quality, construction noise, and water quality in general indicated satisfactory environmental performance of the Project. The environmental mitigation measures as recommended in the ISEMM are also proven effective and adequate.

12.2 RECOMMENDATIONS

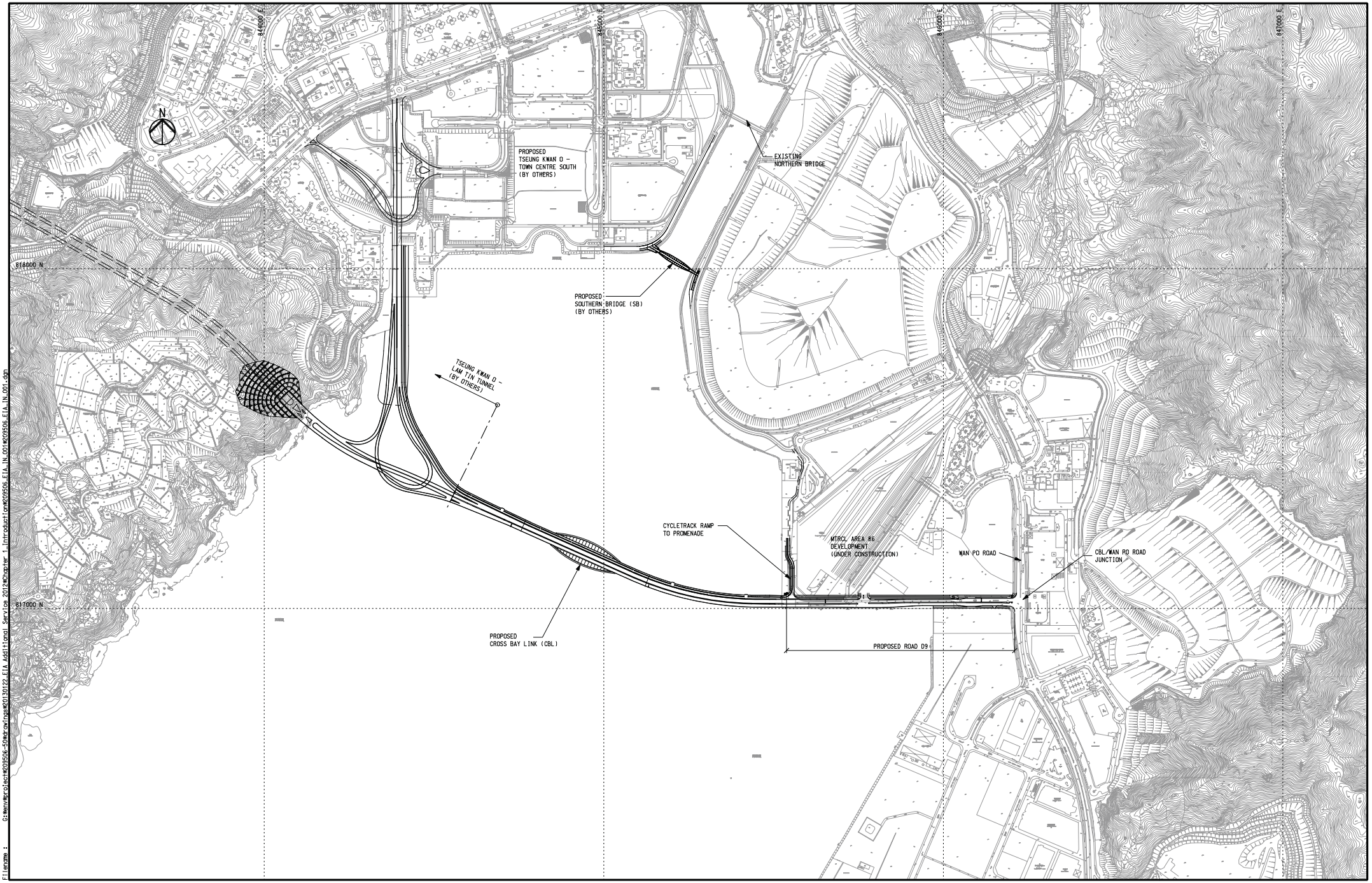
12.2.1 Precision of the prediction of the EIA on the adverse air quality, noise, and water quality impacts as generated from the construction of the Project is acceptable. The monitoring performed during the Construction Period is effective for generating data with the necessary statistical power to categorically identify or confirm the presence and absence of the predicted environmental impacts attributable to the works under the Project.

12.2.2 The mitigation measures stipulated in ISEMM included air quality, noise, and water quality are effective and shall be strictly implemented and observed throughout the construction period in future of other construction projects to ensure ongoing environmental protection and compliance.

END

Appendix A

Project Layout Plan



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土木工程拓展署 Civil Engineering and Development Department	ARUP Ove Arup & Partners Hong Kong Limited

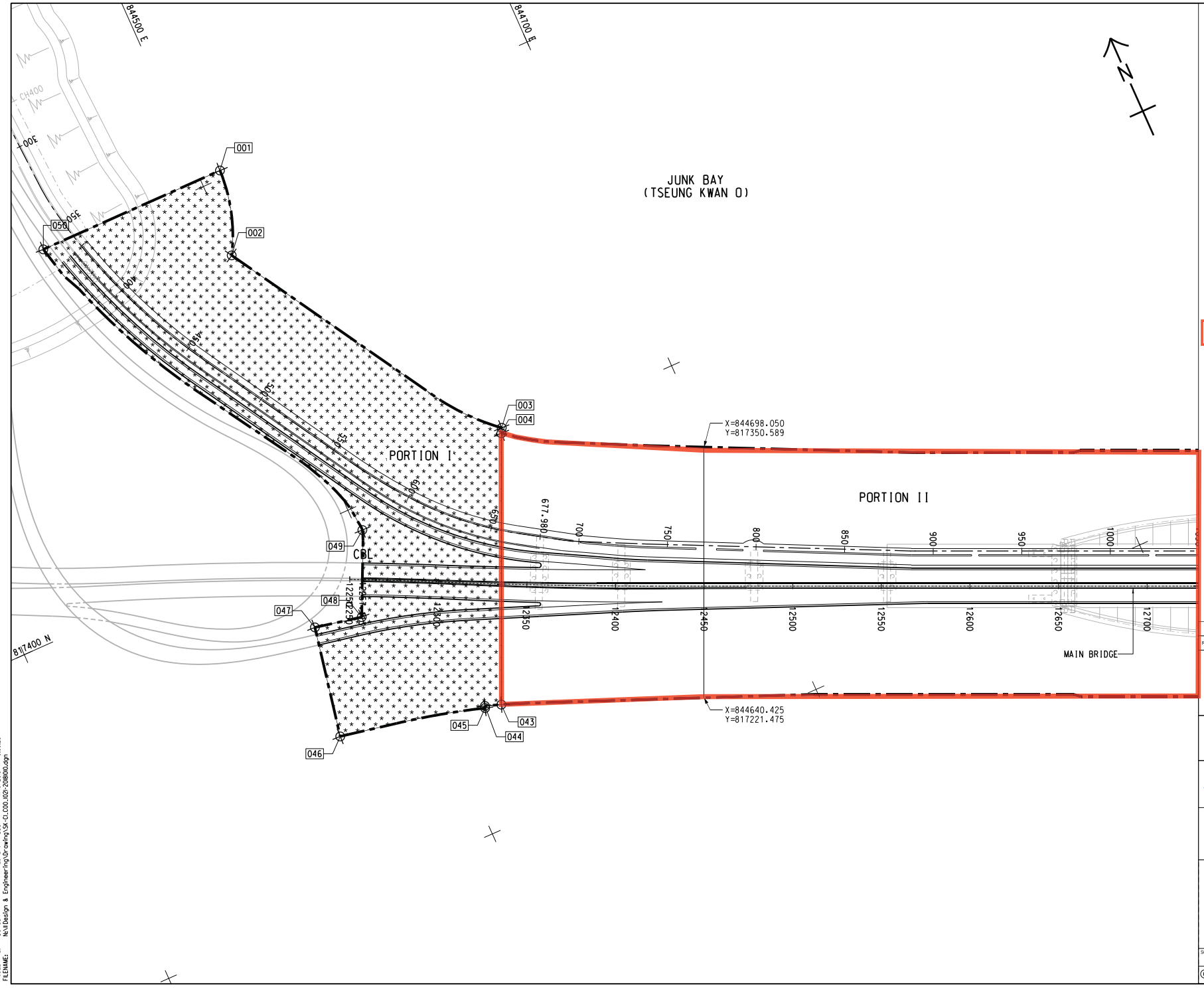
Job Title
Agreement No. CE 43/2008(HY)
Cross Bay Link, Tseung Kwan O – Investigation

Drawing Title
GENERAL LAYOUT PLAN

Rev.	Description	Date
B	SECOND ISSUE	01/13
A	FIRST ISSUE	07/11

Drawn	GL	Date	01/13
Checked	JP	Approved	ST
Scale	1:5000 on A1 & 1:10000 on A3		
Status	FINAL	Rev.	B

Drawing No.
209506/EIA/IN/001



NOTES:

1. ALL SETTING OUT POINTS SHOWN ON THIS SET OF DRAWINGS ARE FOR REFERENCE ONLY. THE EXACT LIMIT OF SITE BOUNDARY SHALL BE VERIFIED AND DETERMINED BY THE CONTRACTOR ON SITE.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 60329339/C1/C00/1022 AND 1023.

LEGEND:

- SITE BOUNDARY
- PORTION I
- PORTION II
- PORTION III
- PORTION IV
- PORTION V
- PORTION VI
- PORTION VII
- WORKS AREA A
- WORKS AREA B

Works area under Contract 1

Rev	Amendment	By	Chk.	App.	Date
A	FIRST ISSUE	HK	KN	AC	19/09/18

PROJECT MANAGER:

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

SUPERVISOR:

AECOM

CONTRACTOR:

中國路橋工程有限責任公司 China Road and Bridge Corp.

CONTRACT NO. AND TITLE:

Contract No. NE/2017/07

CROSS BAY LINK, TSEUNG KWAN O - MAIN BRIDGE AND ASSOCIATED WORKS

DRAWING TITLE:

SCALE @ A1 1 : 1000

DRAWING NO:

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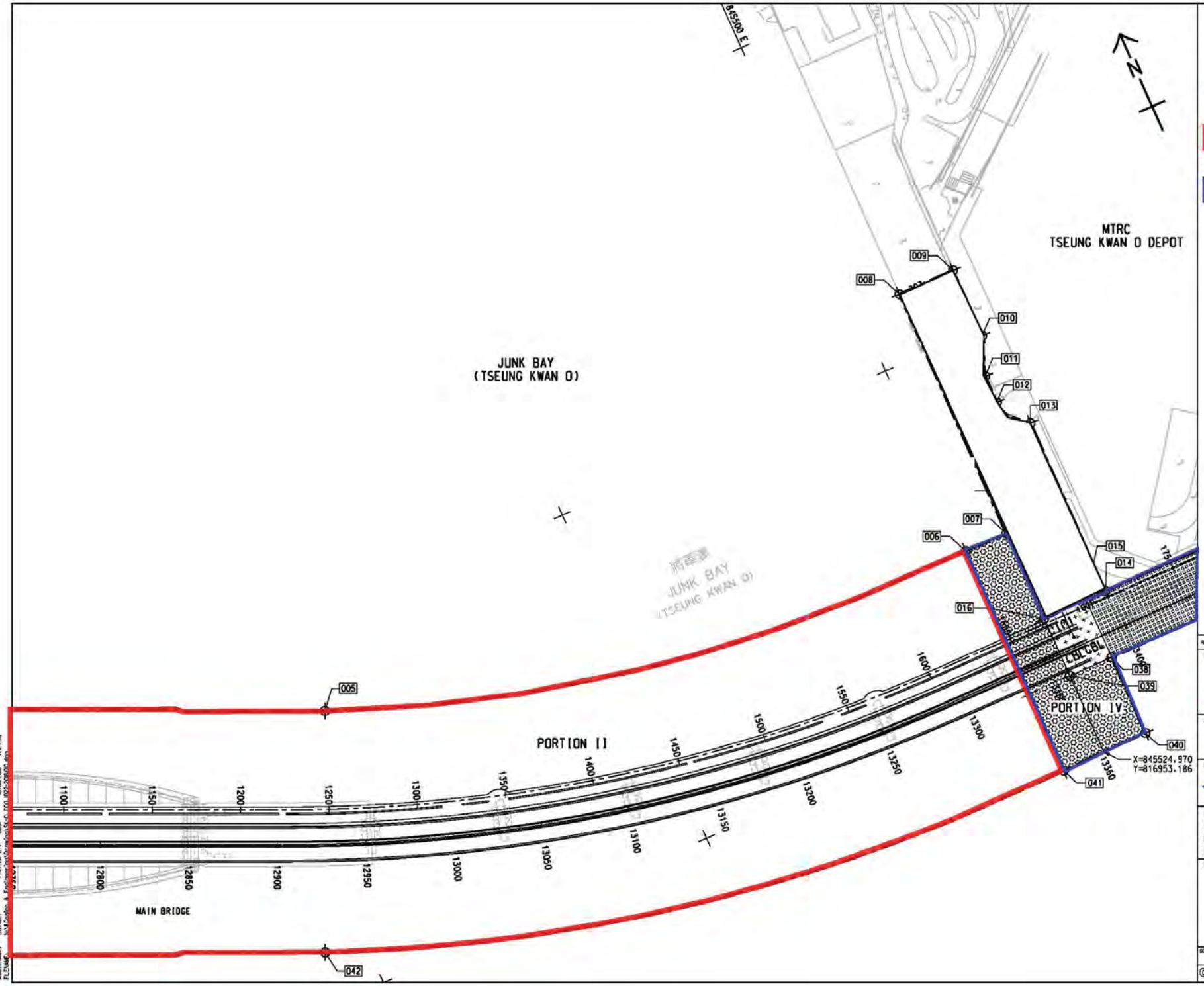


NOTE:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 603293391/C1/C00/1021 AND 1023.

LEGEND:

Works area under Contract 1

Works area under Contract 2

No.	Amendment	By	Chk.	App.	Date

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

PROJECT MANAGER:

SUPERVISOR: AECOM

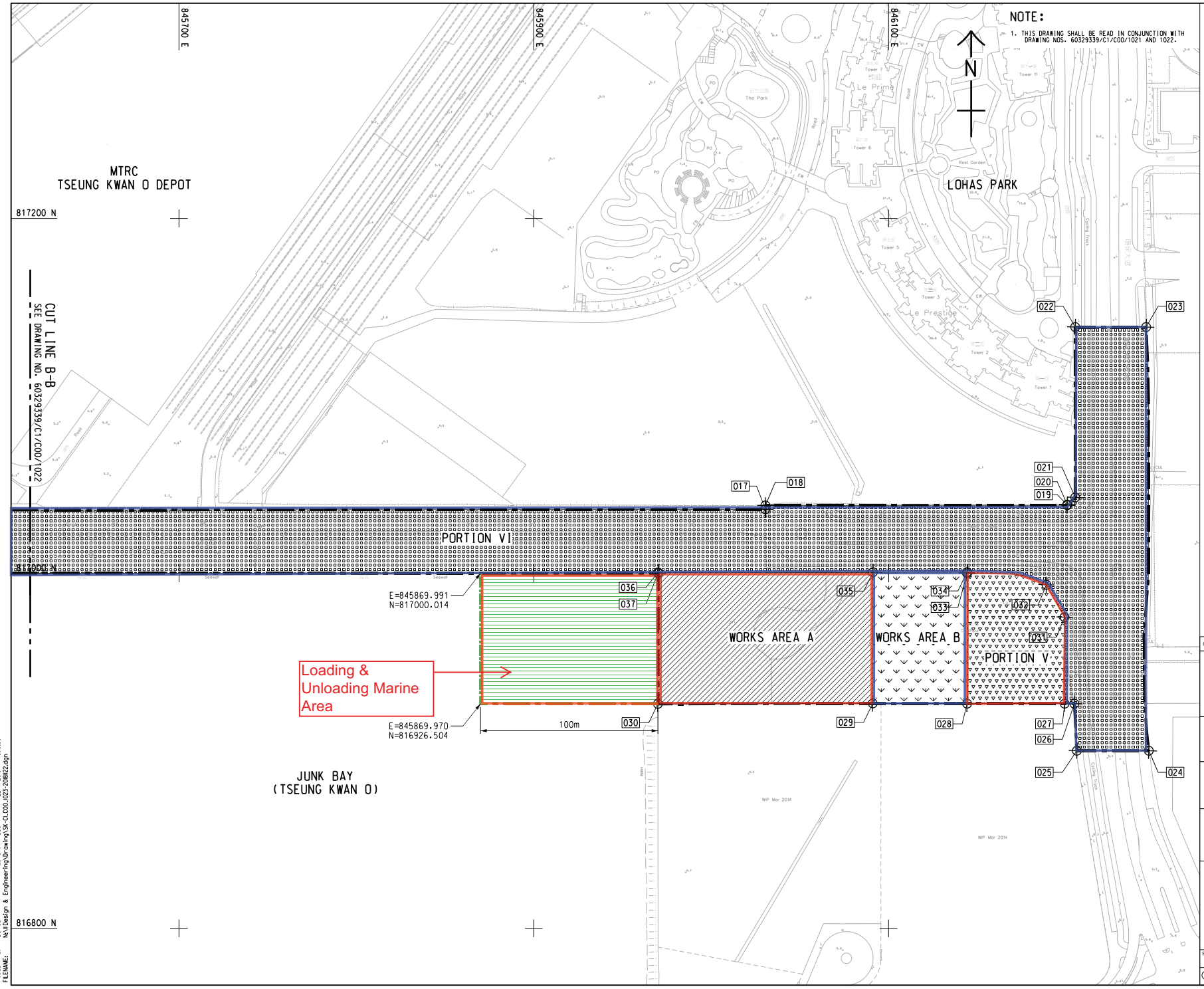
CONTRACTOR: RB 中國路橋工程有限責任公司 China Road and Bridge Corp.

CONTRACT NO. AND TITLE:
Contract No. NE/2017/07
CROSS BAY LINK, TSEUNG KWAN O - MAIN BRIDGE AND ASSOCIATED WORKS

DRAWING TITLE:

SCALE @ A3

DRAWING NO:



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Rev	Amendment	By	Chk.	Appr.	Date

PROJECT MANAGER:

PROJECT MANAGER:

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

SUPERVISOR:

AECOM

CONTRACTOR:

RB 中國路橋工程有限責任公司 China Road and Bridge Corp.

CONTRACT NO. AND TITLE:

Contract No. NE/2017/07
CROSS BAY LINK, TSEUNG KWAN O - MAIN BRIDGE AND ASSOCIATED WORKS

DRAWING TITLE:

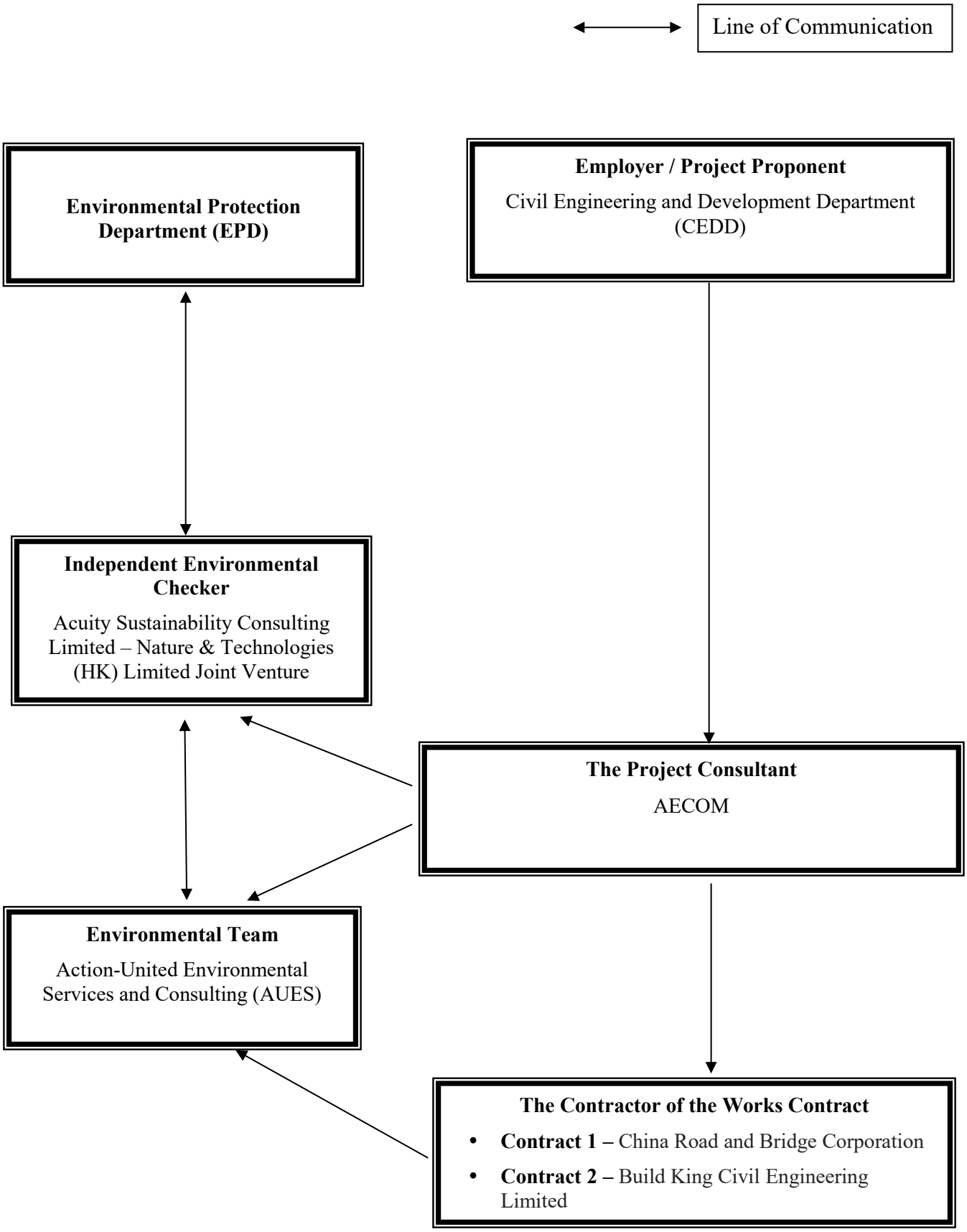
SCALE @ A1

DRAWING NO:

Appendix B

Project Organization Chart &
Contact Details of Key Personnel for the Project

Project Organization Structure



Contact Details of Key Personnel for the Project

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Project Proponent	CK Lam	2301 1398	2714 5174
CEDD	Project Proponent	Sheri Leung	2301 1398	2714 5174
ASC – N&T JV	Independent Environmental Checker (IEC)	Kevin Li	2698 6833	2698 9383
ASC – N&T JV	IEC Team Member	Toby Wan	2698 6833	2698 9383
AUES	Environmental Team Leader	T. W. Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Ben Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Martin Li	2959 6059	2959 6079
CRBC	Site Agent	Raymond Suen	9779 8871	2283 1689
CRBC	Environmental Officer	Joe Wong	6182 0351	2283 1689
Build King	Site Agent	Stephen Leung	9071 7657	NA
Build King	Environmental Officer	Louisa Fung	9271 5370	NA

Legend:

CEDD (Employer) – Civil Engineering and Development Department

AECOM (Project Consultant) – AECOM Asia Co. Ltd.

ASC – N&T JV (IEC) – Acuity Sustainability Consulting Limited – Nature & Technologies (HK) Limited Joint Venture

AUES (ET) – Action-United Environmental Services & Consulting

CRBC (the Main Contractor of the Works Contract 1) – China Road and Bridge Corporation

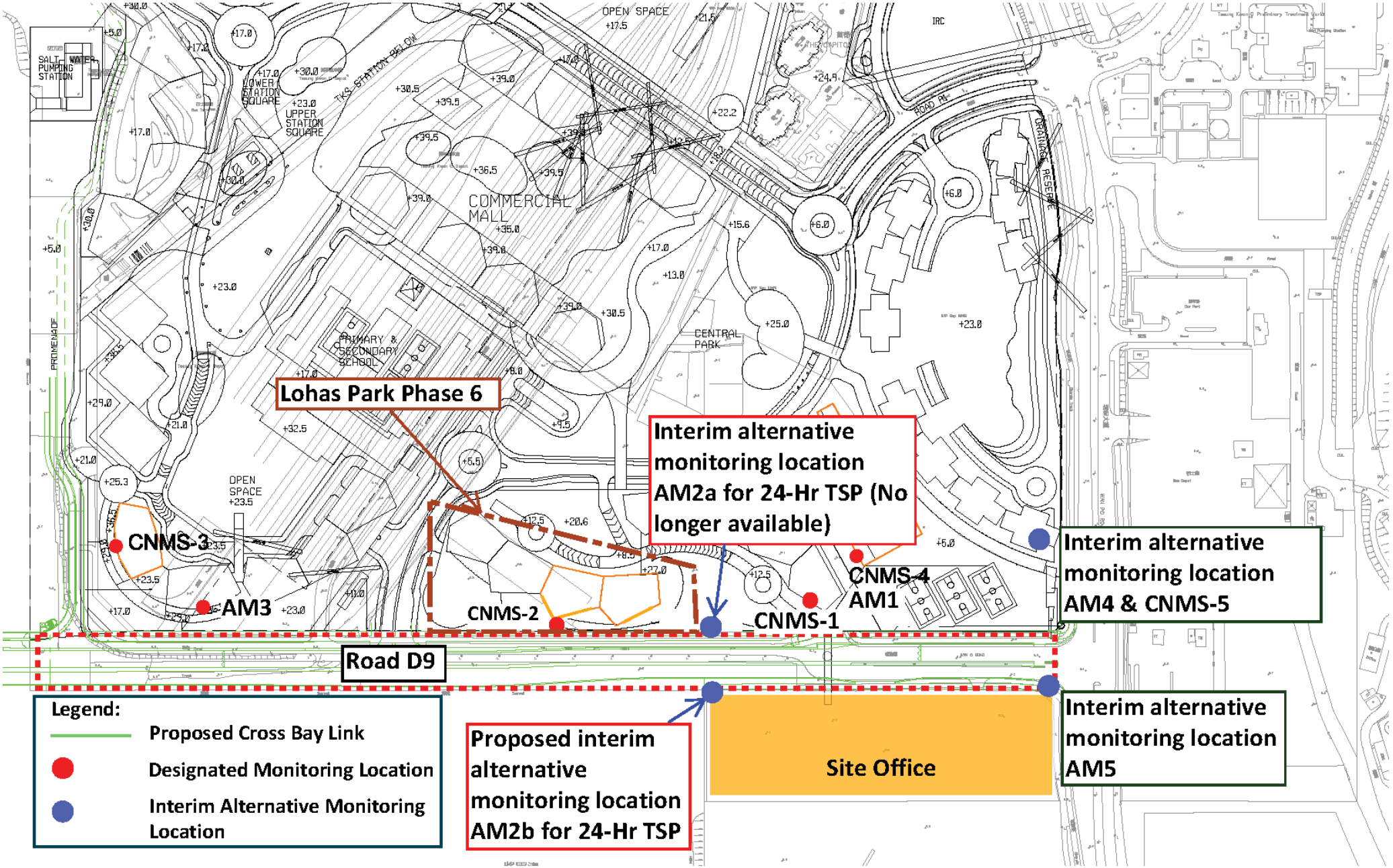
Build King (the Main Contractor of the Works Contract 2) - Build King Civil Engineering Limited

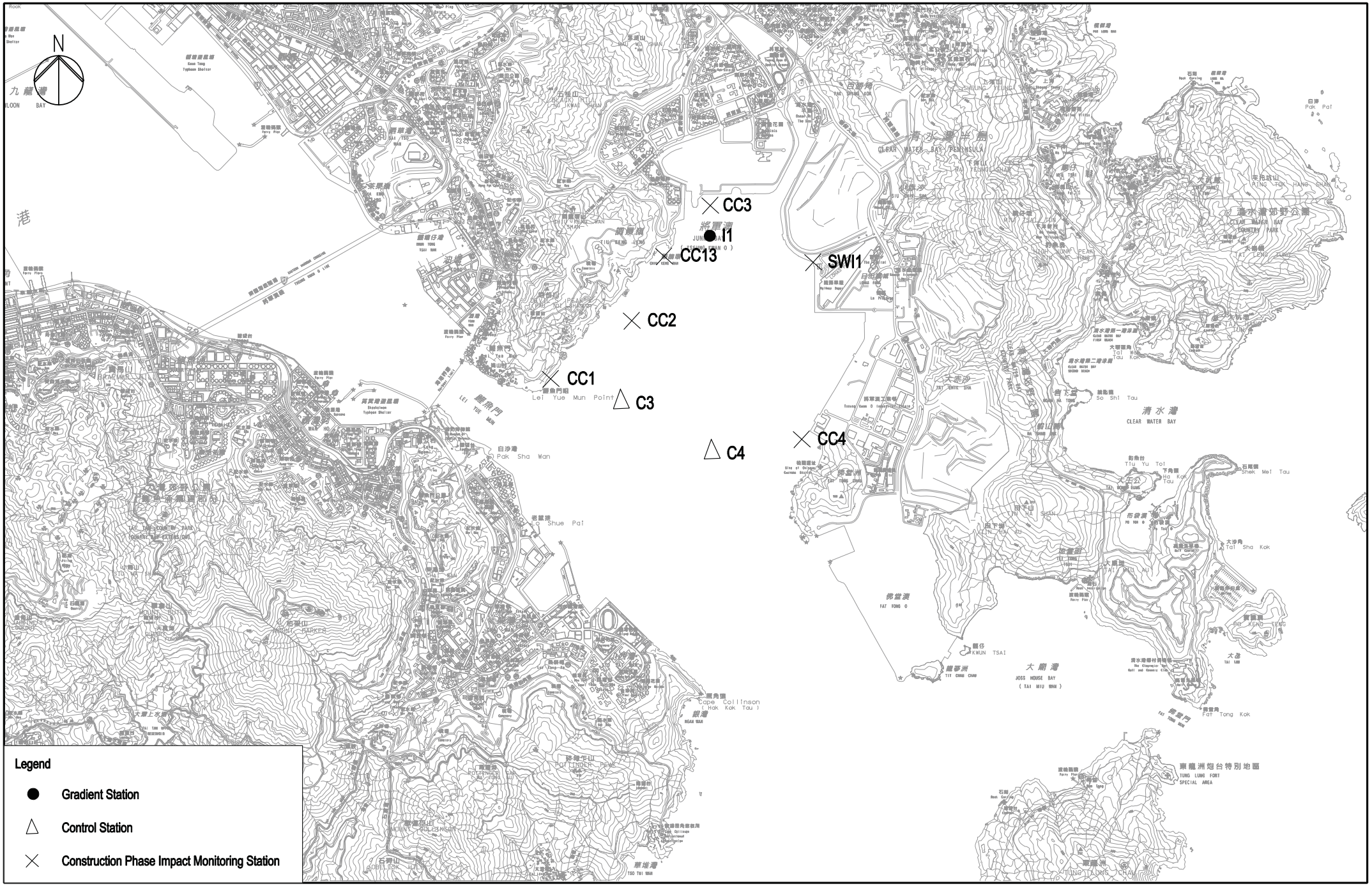
Appendix C

Monitoring Location
(Air Quality, Noise and Water Quality)

CEDD Contract Agreement No. EDO/04/2018 -
Environmental Team for Cross Bay Link, Tseung Kwan O
Designated and Interim Alternative Air Quality and Noise Monitoring Location

AUES





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

ARUP Ove Arup & Partners Hong Kong Limited

Job Title

Agreement No. CE 43/2008(HY)
Cross Bay Link, Tseung Kwan O - Investigation

Drawing Title

Locations of Water Quality Monitoring Stations

Rev.	Description	Date
C	THIRD ISSUE	03/13
B	SECOND ISSUE	01/13
A	FIRST ISSUE	03/11

Drawn	GL	Date	03/13
Checked	JP	Approved	ST
Scale	1:30000 (A3)		

Drawing No. 209506/EMA/WQ/001

Status FINAL Rev. C

Appendix D

Event and Action Plan

EVENT	ACTION			
	Environmental Team (ET)	**Independent Environmental Checker (IEC)**	**Project Consultant**	**Contractor**
ACTION LEVEL				
Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and Project Consultant; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and Project Consultant; 3. Advise the Project Consultant 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 Project Consultant; 8. If exceedance stops, cease additional monitoring.	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.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial actions to IEC within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.

EVENT	ACTION			
	Environmental Team (ET)	**Independent Environmental Checker (IEC)**	**Project Consultant**	**Contractor**
LIMIT LEVEL				
Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform Project Consultant, Contractor, IEC 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 Project Consultant informed of the results.	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 Project Consultant on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; 4. Amend proposal if appropriate.

EVENT	ACTION			
	Environmental Team (ET)	**Independent Environmental Checker (IEC)**	**Project Consultant**	**Contractor**
LIMIT LEVEL				
Exceedance for two or more consecutive samples	1. Notify IEC, Project Consultant, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and Project Consultant to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and Project Consultant informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst Project Consultant, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the Project Consultant accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; 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.	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 Project Consultant until the exceedance is abated.

EVENT	ACTION			
	Environmental Team (ET)	**Independent Environmental Checker (IEC)**	**Project Consultant**	**Contractor**
Action Level	1. Notify IEC and contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, Project Consultant and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the Project Consultant accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented	1. Submit noise mitigation proposals to IEC; 2. Implement noise mitigation proposals.
Limit Level	1. Identify source; 2. Inform IEC, Project Consultant, 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, Project Consultant and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and Project Consultant informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst Project Consultant, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the Project Consultant accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance 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.	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 Project Consultant until the exceedance is abated.

EVENT	ACTION			
	Environmental Team (ET)	**Independent Environmental Checker (IEC)**	**Project Consultant**	**Contractor**
Action level being exceeded by one sampling day at water sensitive receiver(s)	1. Identify the source(s) of impact by comparing the results with those collected at the gradient stations and the control stations as appropriate; 2. If exceedance is found to be caused by the marine works, repeat *in-situ* measurement to confirm findings; 3. Inform IEC and contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. If exceedance occurs at WSD salt water intake, inform WSD; 6. Discuss mitigation measures with IEC and Contractor; 7. Repeat measurement on next day of exceedance.	1. Discuss mitigation measures with ET and Contractor; 2. Review proposal on mitigation measures submitted by Contractor and advise the Project Consultant accordingly; 3. Assess the effectiveness of the implemented mitigation measures.	1. Discuss proposed mitigation measures with IEC; 2. Make agreement on the mitigation proposal.	1. Inform the Project Consultant and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Amend working methods if appropriate; 5. Discuss with ET and IEC and propose mitigation measures to IEC and Project Consultant; 6. Implement the agree mitigation measures.
Action level being exceeded by two or more consecutive sampling days at water sensitive receiver(s)	1. Identify the source(s) of impact by comparing the results with those collected at the gradient stations and the control stations as appropriate; 2. If exceedance is found to be caused by the marine works, repeat *in-situ* measurement to confirm findings; 3. Inform IEC and contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, and Contractor; 6. Ensure mitigation measures are	1. Discuss mitigation measures with ET and Contractor; 2. Review proposal on mitigation measures submitted by Contractor and advise the Project Consultant accordingly; 3. Assess the effectiveness of the implemented mitigation measures.	1. Discuss proposed mitigation measures with IEC; 2. Make agreement on the mitigation proposal; 3. Assess the effectiveness of the implemented mitigation measures.	1. Inform the Project Consultant and confirm notification of the noncompliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Discuss with ET, IEC and Project Consultant and propose mitigation measures to IEC and Project Consultant within 3 working

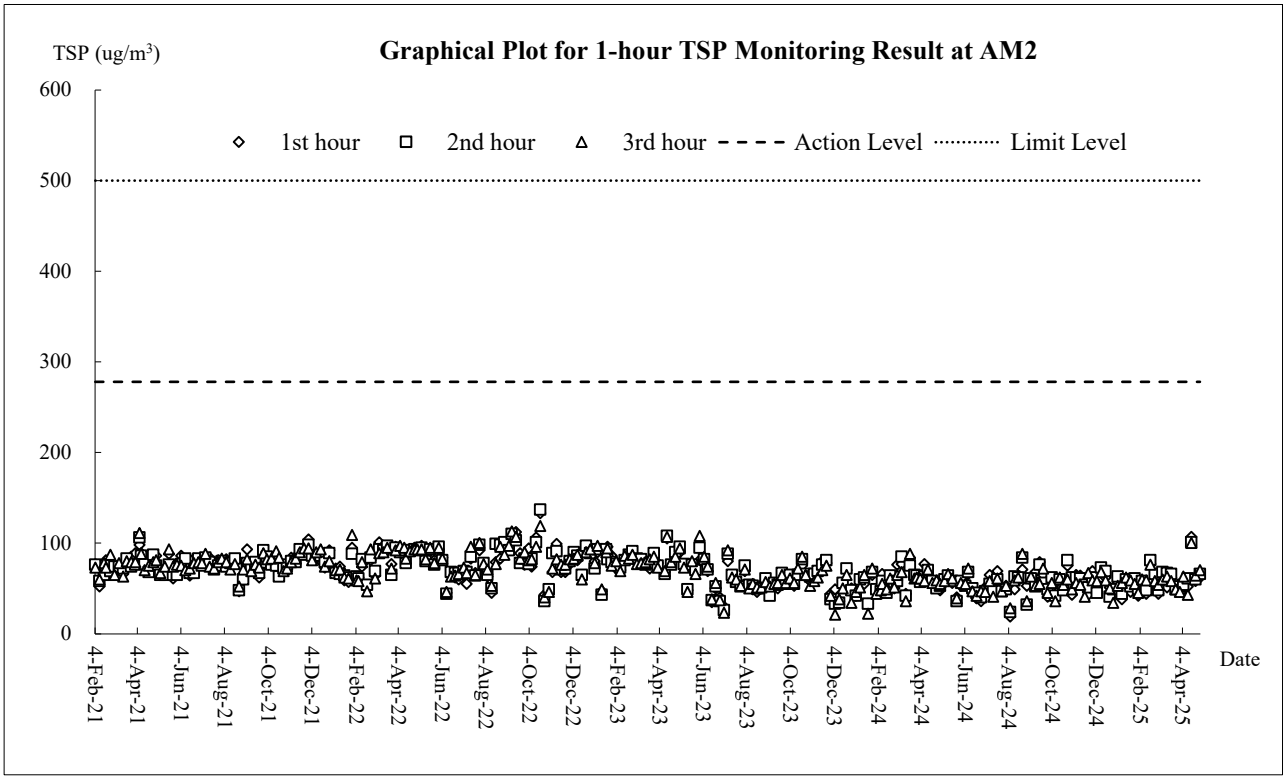
EVENT	ACTION			
	Environmental Team (ET)	Independent Environmental Checker (IEC)	Project Consultant	Contractor
	implemented; 7. Prepare to increase the monitoring frequency to daily; 8. If exceedance occurs at WSD salt water intake, inform WSD; 9. Repeat measurement on next day of exceedance.			days; 5. Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day at water sensitive receiver(s)	1. Identify the source(s) of impact by comparing the results with those collected at the gradient stations and the control stations as appropriate; 2. If exceedance is found to be caused by the marine works, repeat *in-situ* measurement to confirm findings; 3. Inform IEC, contractor and EPD 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. If exceedance occurs at WSD salt water intake, inform WSD. 8. ET should contact AFCD if the limit level is exceeded by one sampling day or two or more consecutive sampling days at water sensitive receiver(s).	1.Discuss mitigation measures with ET and Contractor; 2. Review proposal on mitigation measures submitted by Contractor and advise the Project Consultant accordingly; 3. Assess the effectiveness of the implemented mitigation measures.	1. Discuss proposed mitigation measures with IEC, ET and Contractor; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures.	1. Inform the Project Consultant and confirm notification of the noncompliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Discuss with ET, IEC and Project Consultant and submit proposal of mitigation measures to IEC and Project Consultant within 3 working days of notification; 5. Implement the agreed mitigation measures.
Limit level being exceeded by two or more	1. Identify the source(s) of impact by comparing the results with those collected at the gradient stations and the	1. Discuss mitigation measures with ET and Contractor;	1. Discuss proposed mitigation measures with IEC, ET and Contractor;	1. Inform the Project Consultant and confirm notification of the

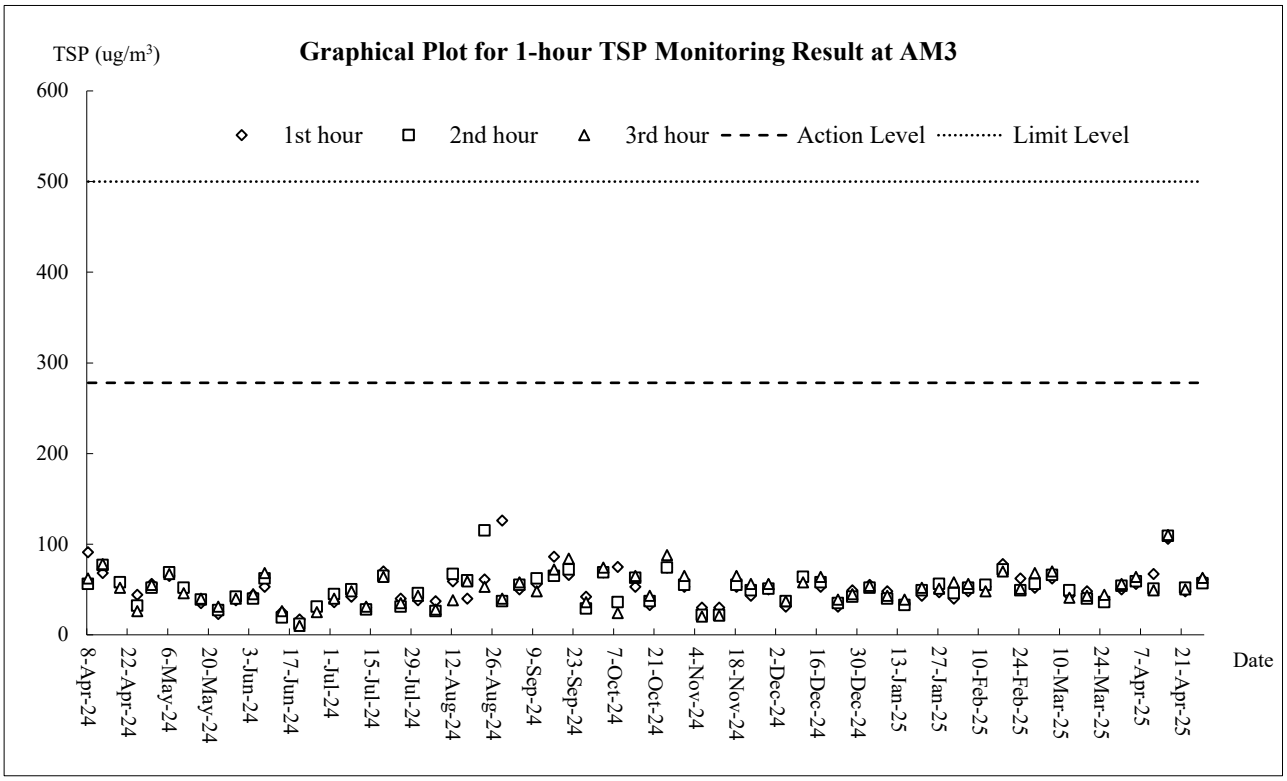
EVENT	ACTION			
	Environmental Team (ET)	Independent Environmental Checker (IEC)	Project Consultant	Contractor
consecutive sampling days at water sensitive receiver(s)	control stations as appropriate; 2. If exceedance is found to be caused by the marine works, repeat *in-situ* measurement to confirm findings; 3. Inform IEC, contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, and Contractor; 6. Ensure mitigation measures are implemented; 7. Prepare to increase the monitoring frequency to daily; 8. If exceedance occurs at WSD salt water intake, inform WSD; 9. Repeat measurement on next day of exceedance.	2. Review proposal on mitigation measures submitted by Contractor and advise the Project Consultant accordingly; 3. Assess the effectiveness of the implemented mitigation measures.	2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures; 5. 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.	noncompliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Discuss with ET, IEC and Project Consultant and submit proposal of mitigation measures to IEC and Project Consultant within 3 working days of notification; 5. Implement the agreed mitigation measures; 6. As directed by the Engineer, to slow down or to stop all or part of the construction activities.

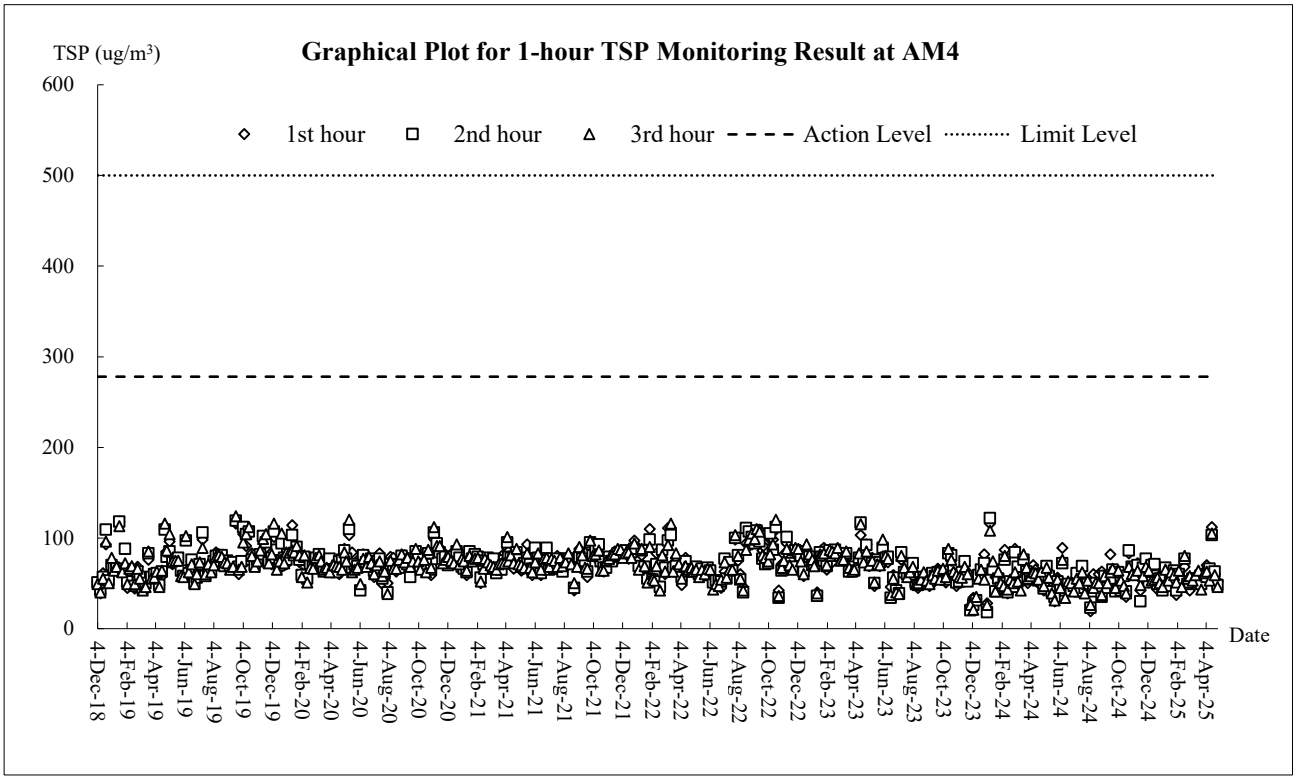
Appendix E

Graphical Plots of Monitoring Results

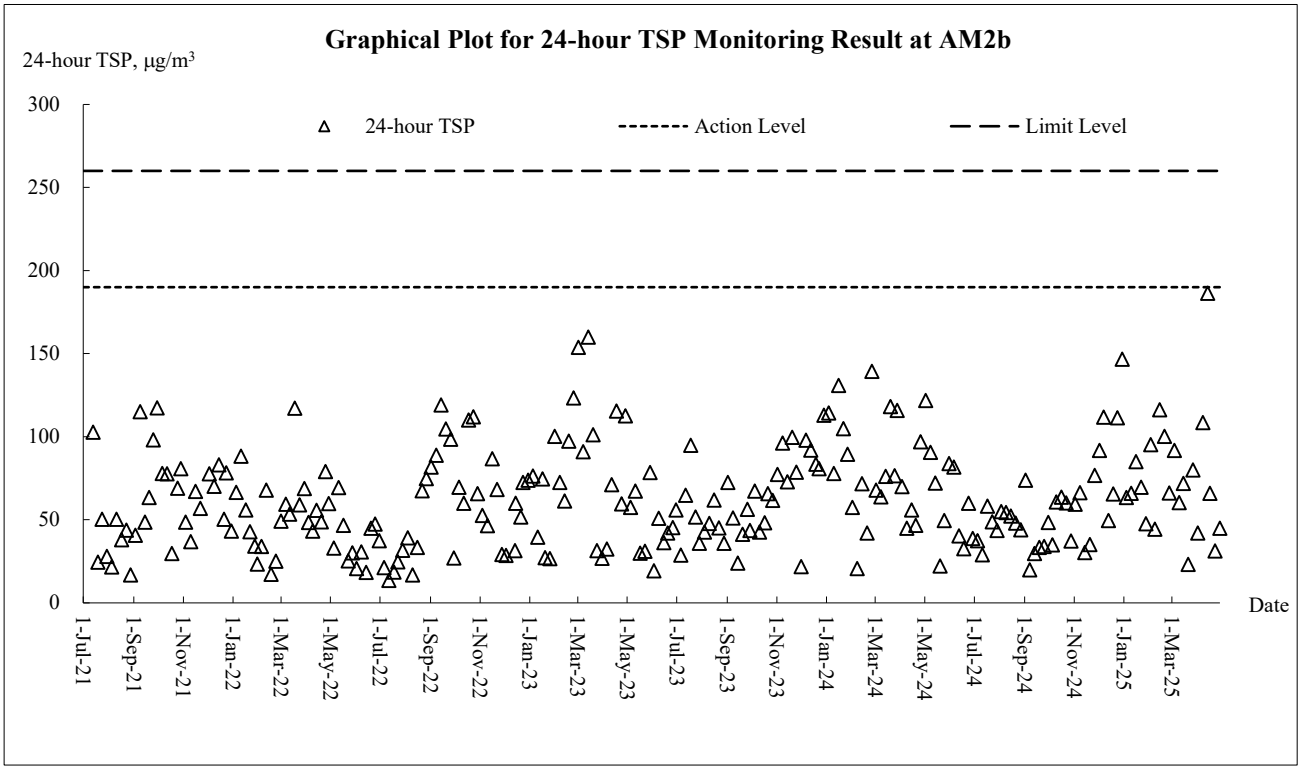
Air Quality – 1 Hour TSP






Graphical Plot for 1-hour TSP Monitoring Result at AM4
TSP (ug/m³)
1st hour
2nd hour
3rd hour
Action Level
Limit Level
600
500
400
300
200
100
0
Date
4-Dec-18
4-Feb-19
4-Apr-19
4-Jun-19
4-Aug-19
4-Oct-19
4-Dec-19
4-Feb-20
4-Apr-20
4-Jun-20
4-Aug-20
4-Oct-20
4-Dec-20
4-Feb-21
4-Apr-21
4-Jun-21
4-Aug-21
4-Oct-21
4-Dec-21
4-Feb-22
4-Apr-22
4-Jun-22
4-Aug-22
4-Oct-22
4-Dec-22
4-Feb-23
4-Apr-23
4-Jun-23
4-Aug-23
4-Oct-23
4-Dec-23
4-Feb-24
4-Apr-24
4-Jun-24
4-Aug-24
4-Oct-24
4-Dec-24
4-Feb-25
4-Apr-25

24-Hour TSP


Graphical Plot for 24-hour TSP Monitoring Result at AM2b
24-hour TSP, µg/m³
24-hour TSP
Action Level
Limit Level
300
250
200
150
100
50
0
Date
1-Jul-21
1-Sep-21
1-Nov-21
1-Jan-22
1-Mar-22
1-May-22
1-Jul-22
1-Sep-22
1-Nov-22
1-Jan-23
1-Mar-23
1-May-23
1-Jul-23
1-Sep-23
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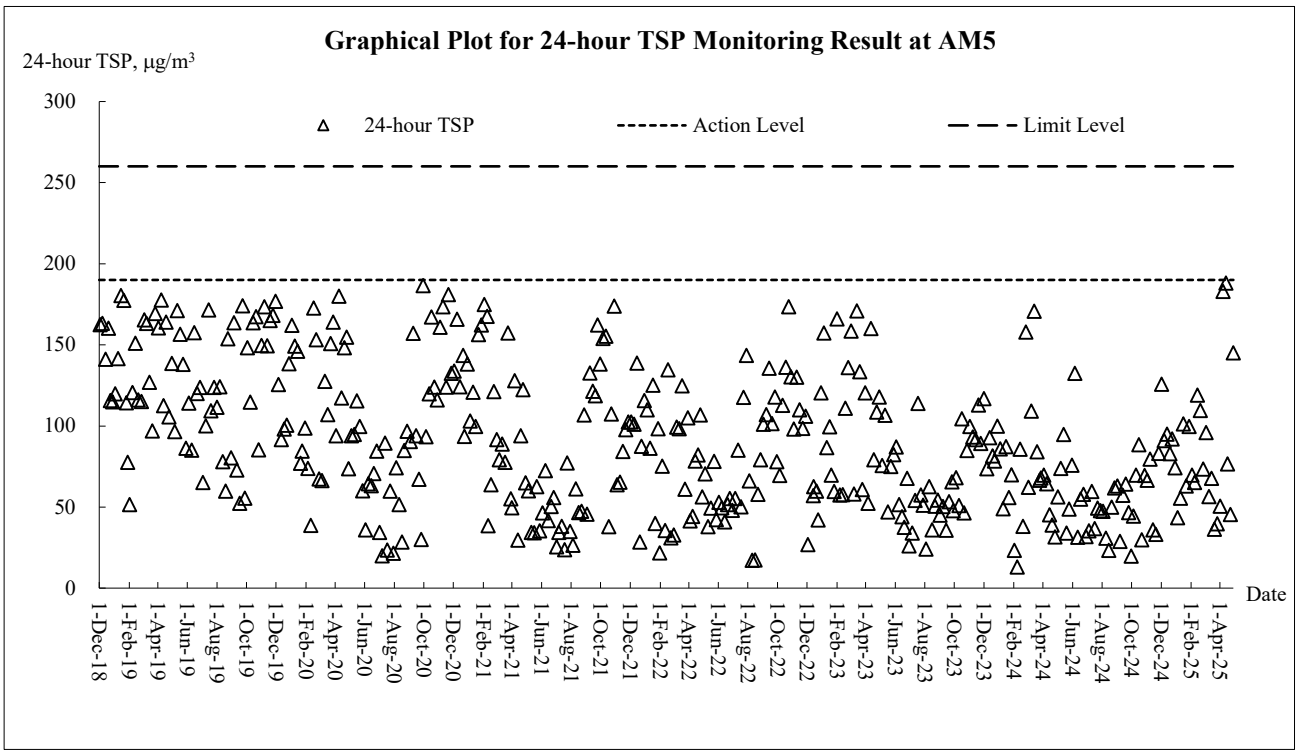
1-Nov-24
1-Jan-25
1-Mar-25


Graphical Plot for 24-hour TSP Monitoring Result at AM5
24-hour TSP, µg/m³
24-hour TSP
Action Level
Limit Level
300
250
200
150
100
50
0
Date
1-Dec-18
1-Feb-19
1-Apr-19
1-Jun-19
1-Aug-19
1-Oct-19
1-Dec-19
1-Feb-20
1-Apr-20
1-Jun-20
1-Aug-20
1-Oct-20
1-Dec-20
1-Feb-21
1-Apr-21
1-Jun-21
1-Aug-21
1-Oct-21
1-Dec-21
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1-Jun-22
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1-Dec-23
1-Feb-24
1-Apr-24
1-Jun-24
1-Aug-24
1-Oct-24
1-Dec-24
1-Feb-25
1-Apr-25

Annotations:

- Major land-based activities being carried out on-site during the construction period included:
  - Excavation work
  - Sheet pilling work
  - Pre-drilling works
  - Bored Pile works
  - Concrete Work
  - Structure Steelwork
  - Drainage installation work
  - Footing construction
  - RC works
  - Fencing Erection Work
  - Seawall modification work
  - Footpath and cycle track paving work

- 1-hour TSP monitoring were conducted at monitoring stations i) AM2: from 4 February 2021 to 28 April 2025; ii) AM3: from 8 April 2024 to 28 April 2025; iii) AM4: 4 December 2018 to 28 April 2025.

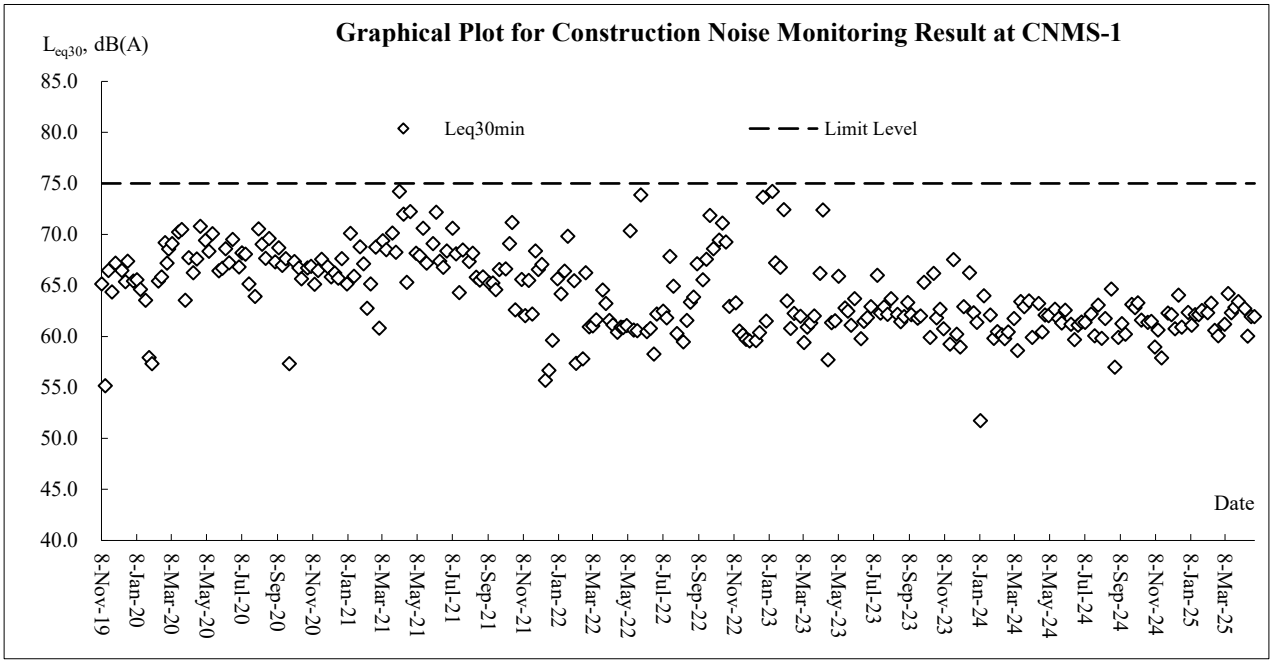
- 24-hour TSP monitoring were conducted at monitoring stations i) AM2b: from 13 July 2021 to 29 April 2025; ii) AM5: from 3 December 2018 to 29 April 2025.

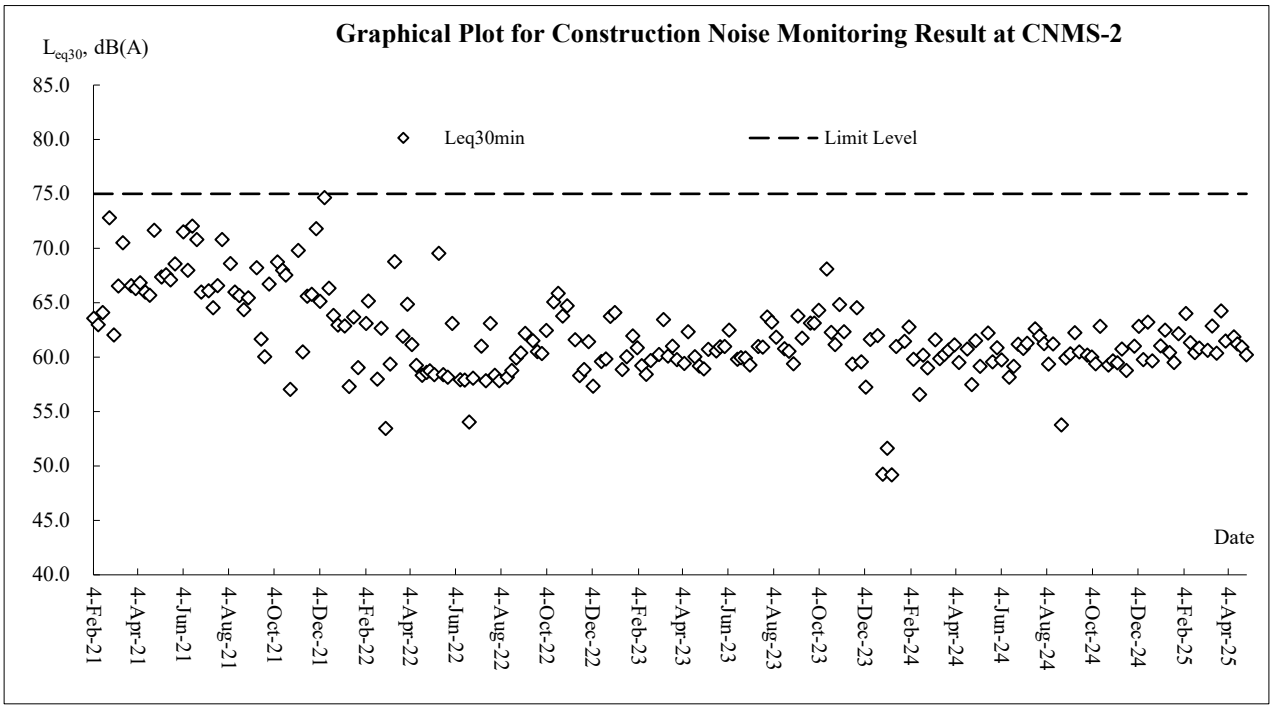
- The graphical plots of both 1-hour and 24-hour TSP monitoring show trends on return of ambient environmental conditions upon completion of construction works.

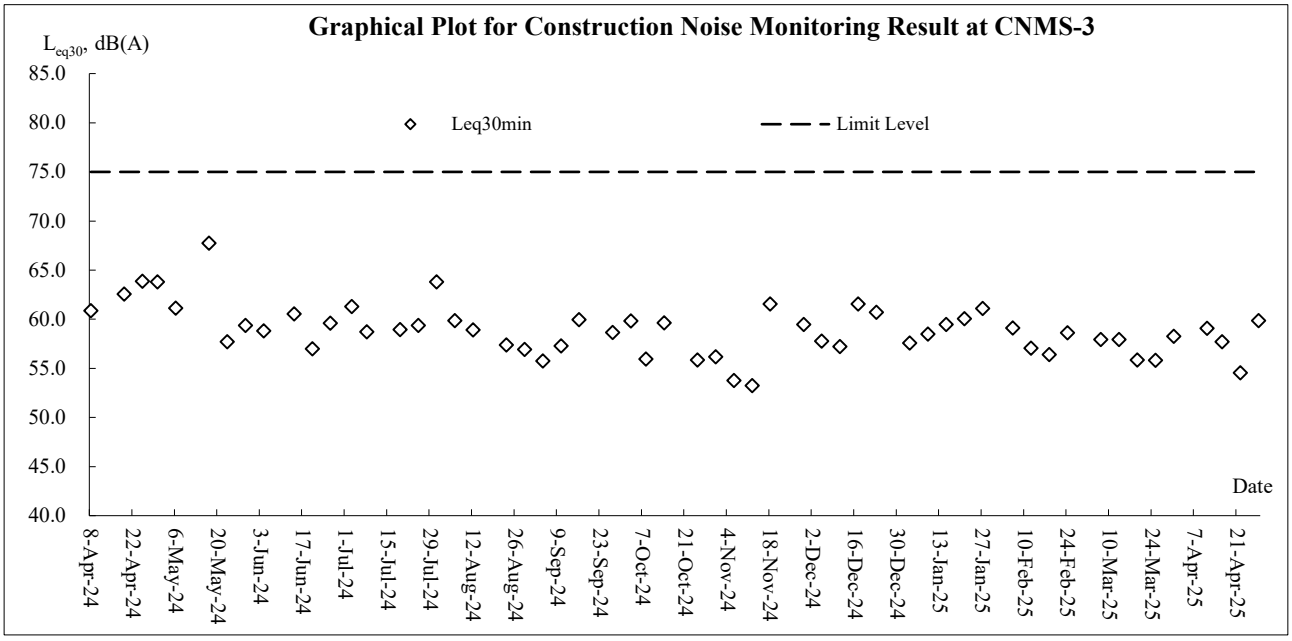
- Weather conditions during the monitoring period ranged from sunny to rainy. Detailed meteorological conditions can be referred to the corresponding Monthly EM&A Reports for the reporting period.

- No special phenomena and/or other factors which might affect the monitoring results were observed and recorded during the monitoring period.

Construction Noise – Daytime






Graphical Plot for Construction Noise Monitoring Result at CNMS-3
L_{eq30}, dB(A)
85.0
80.0
75.0
70.0
65.0
60.0
55.0
50.0
45.0
40.0
Leq30min
Limit Level
Date
8-Apr-24
22-Apr-24
6-May-24
20-May-24
3-Jun-24
17-Jun-24
1-Jul-24
15-Jul-24
29-Jul-24
12-Aug-24
26-Aug-24
9-Sep-24
23-Sep-24
7-Oct-24
21-Oct-24
4-Nov-24
18-Nov-24
2-Dec-24
16-Dec-24
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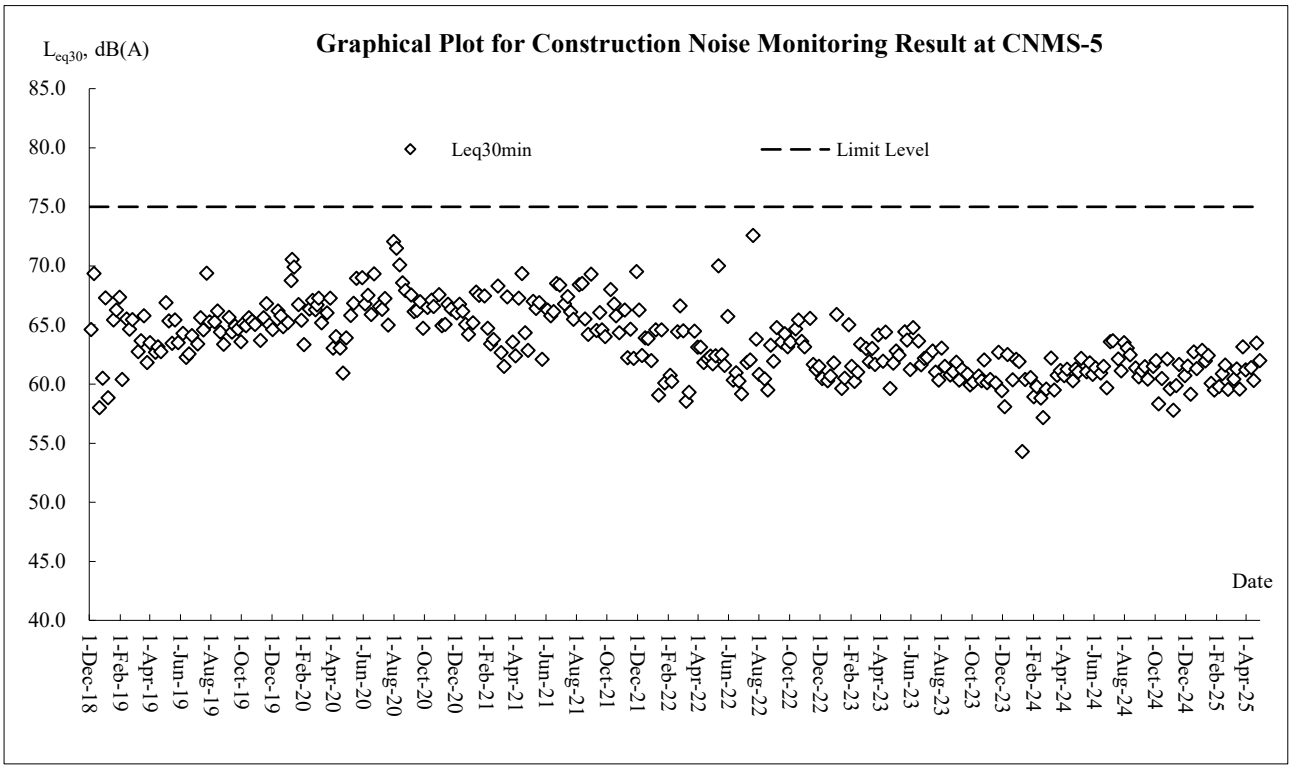
24-Mar-25
7-Apr-25
21-Apr-25


Graphical Plot for Construction Noise Monitoring Result at CNMS-5
L_{eq30}, dB(A)
85.0
80.0
75.0
70.0
65.0
60.0
55.0
50.0
45.0
40.0
Leq30min
Limit Level
Date
1-Dec-18
1-Feb-19
1-Apr-19
1-Jun-19
1-Aug-19
1-Oct-19
1-Dec-19
1-Feb-20
1-Apr-20
1-Jun-20
1-Aug-20
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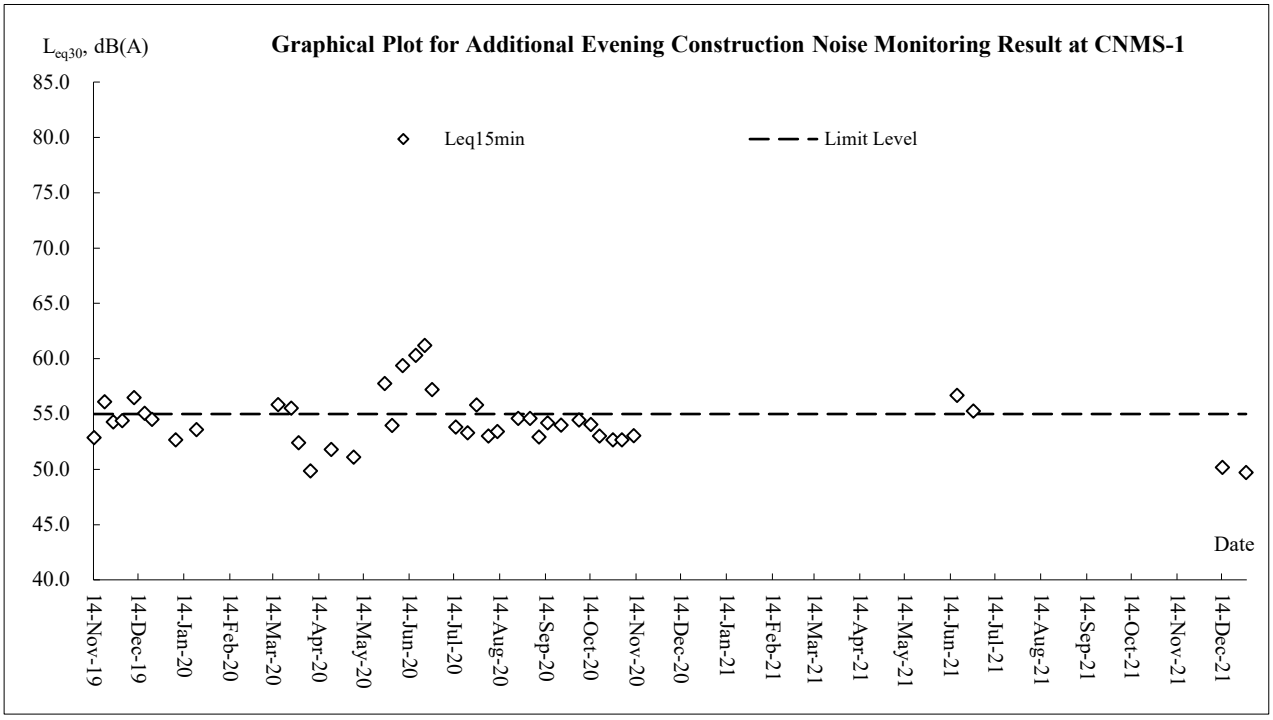
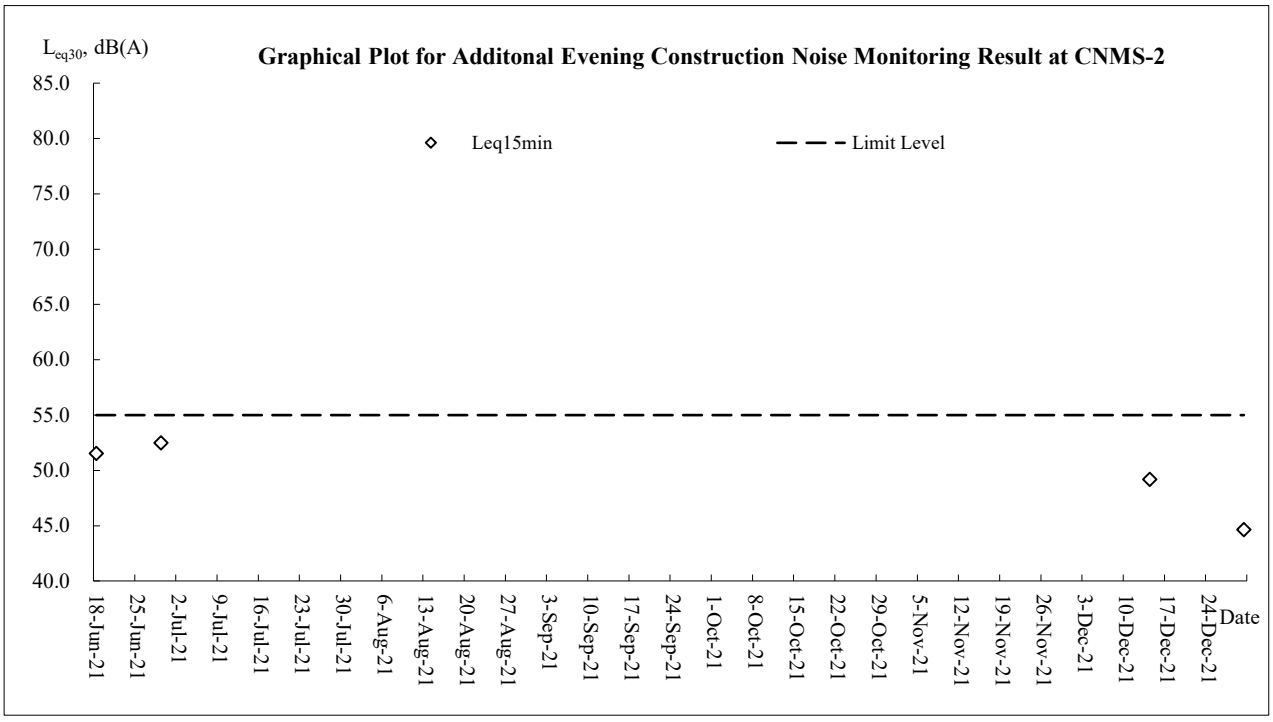
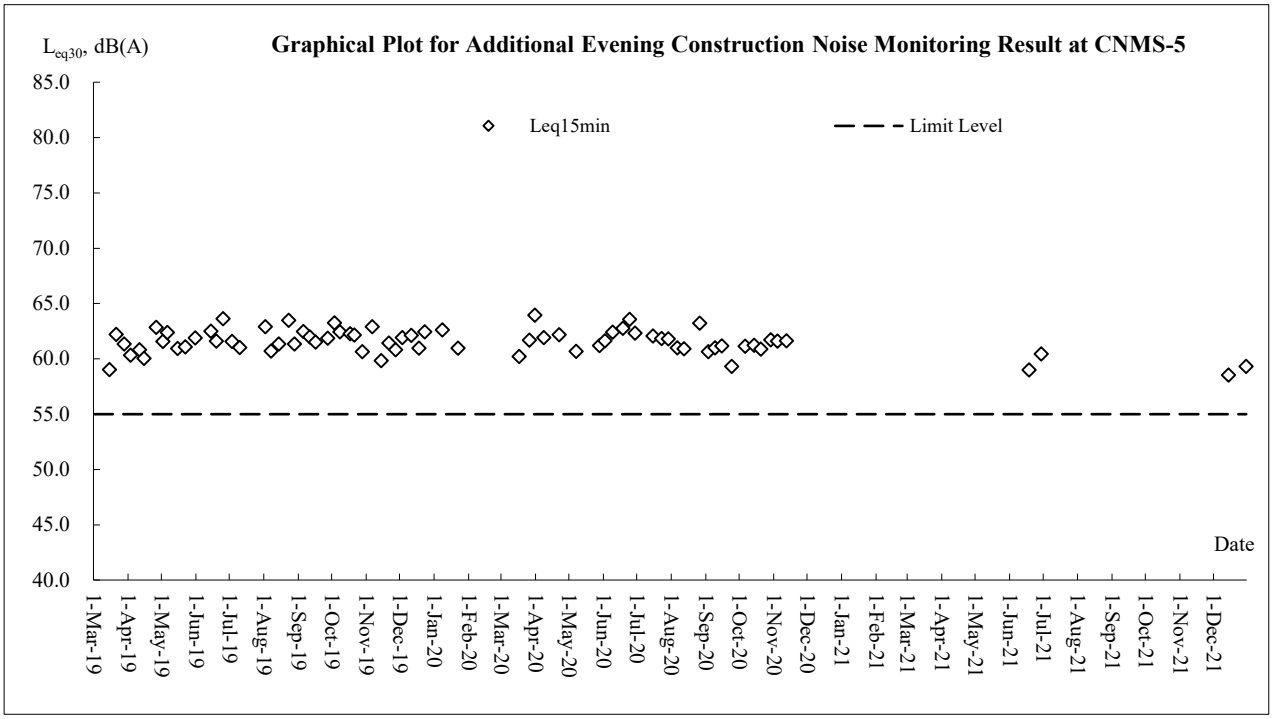
1-Feb-25
1-Apr-25

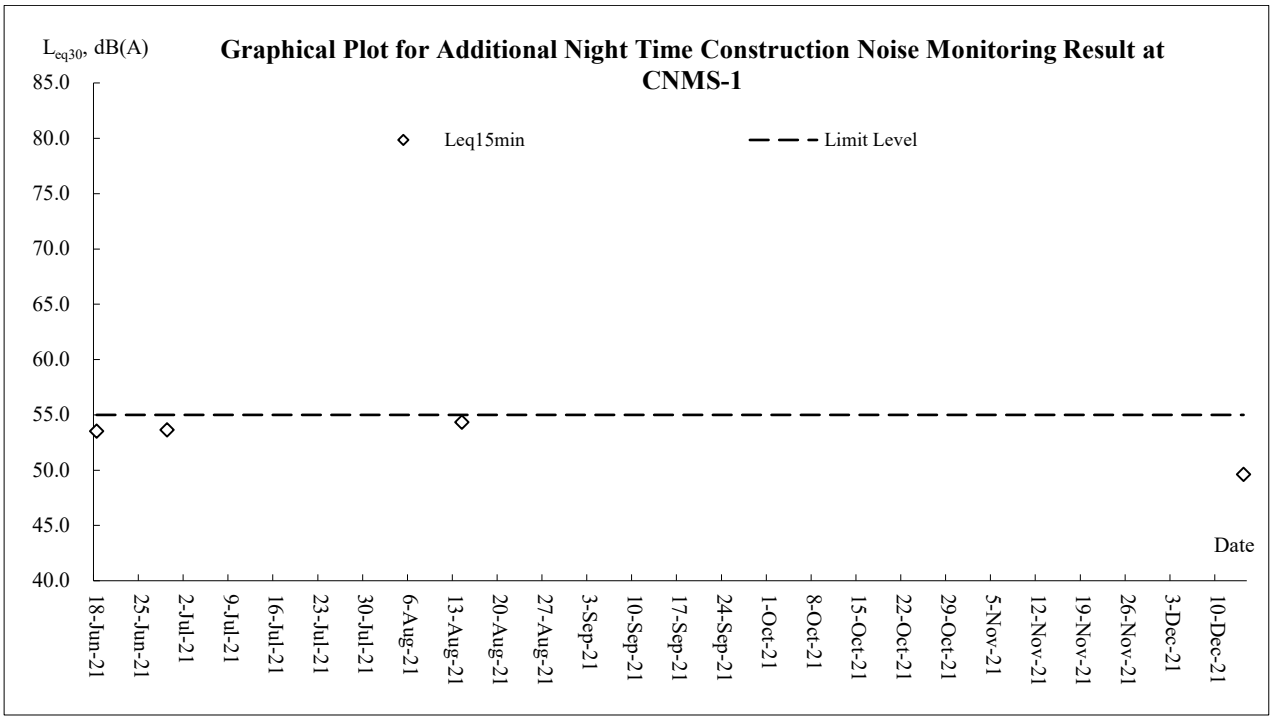
Additional Noise Monitoring – Evening Time

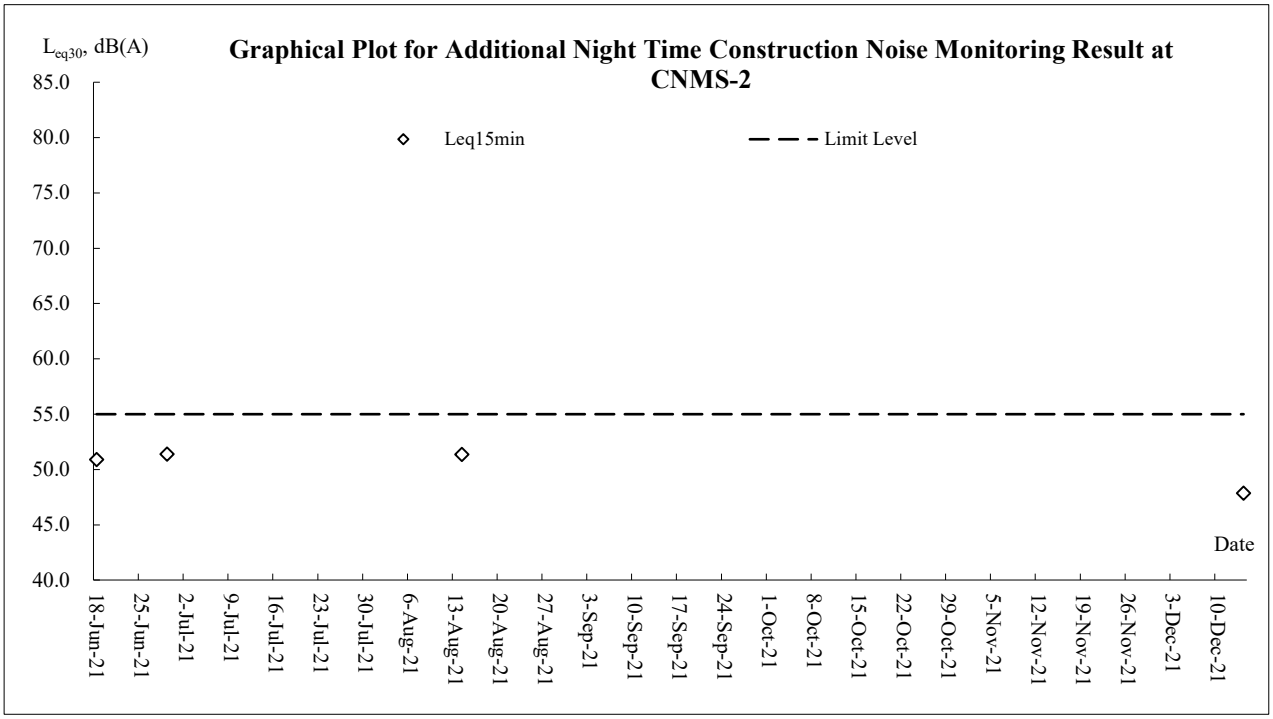






Additional Noise Monitoring – Night Time




Graphical Plot for Additional Night Time Construction Noise Monitoring Result at CNMS-2
L_{eq30}, dB(A)
Leq15min
Limit Level
85.0
80.0
75.0
70.0
65.0
60.0
55.0
50.0
45.0
40.0
Date
18-Jun-21
25-Jun-21
2-Jul-21
9-Jul-21
16-Jul-21
23-Jul-21
30-Jul-21
6-Aug-21
13-Aug-21
20-Aug-21
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3-Sep-21
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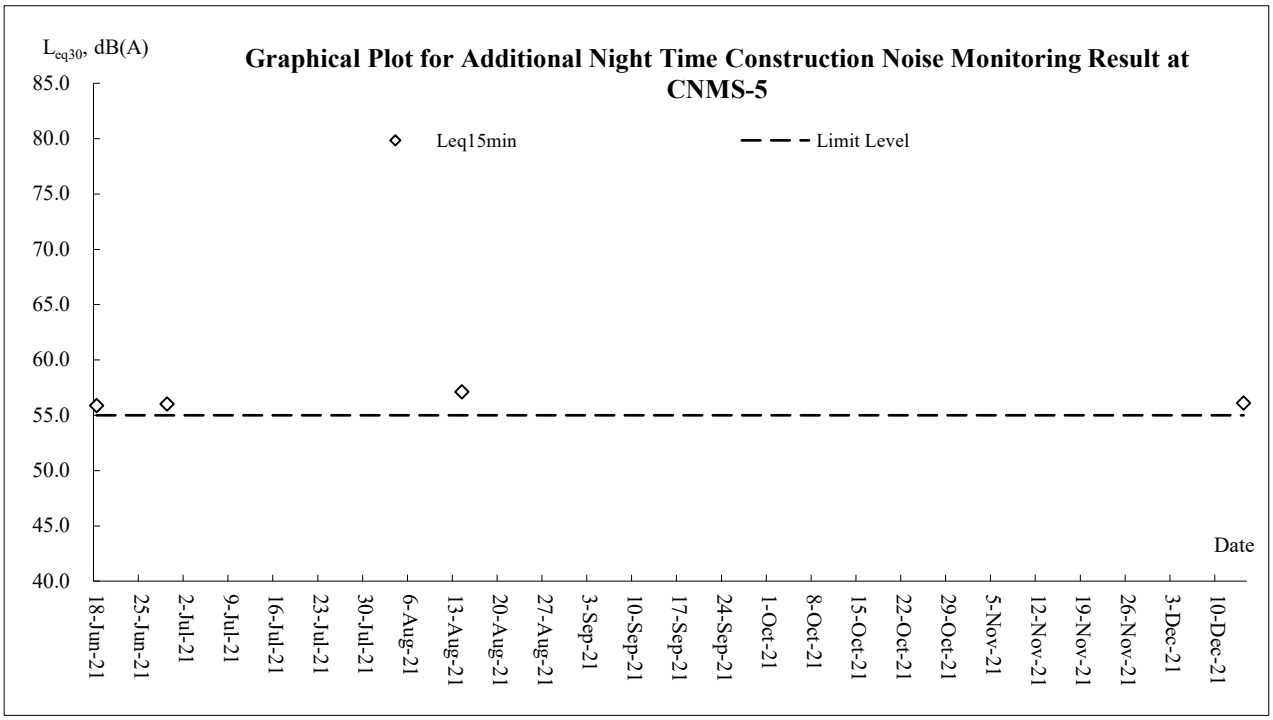
10-Dec-21


Graphical Plot for Additional Night Time Construction Noise Monitoring Result at CNMS-5
L_{eq30}, dB(A)
Leq15min
Limit Level
85.0
80.0
75.0
70.0
65.0
60.0
55.0
50.0
45.0
40.0
Date
18-Jun-21
25-Jun-21
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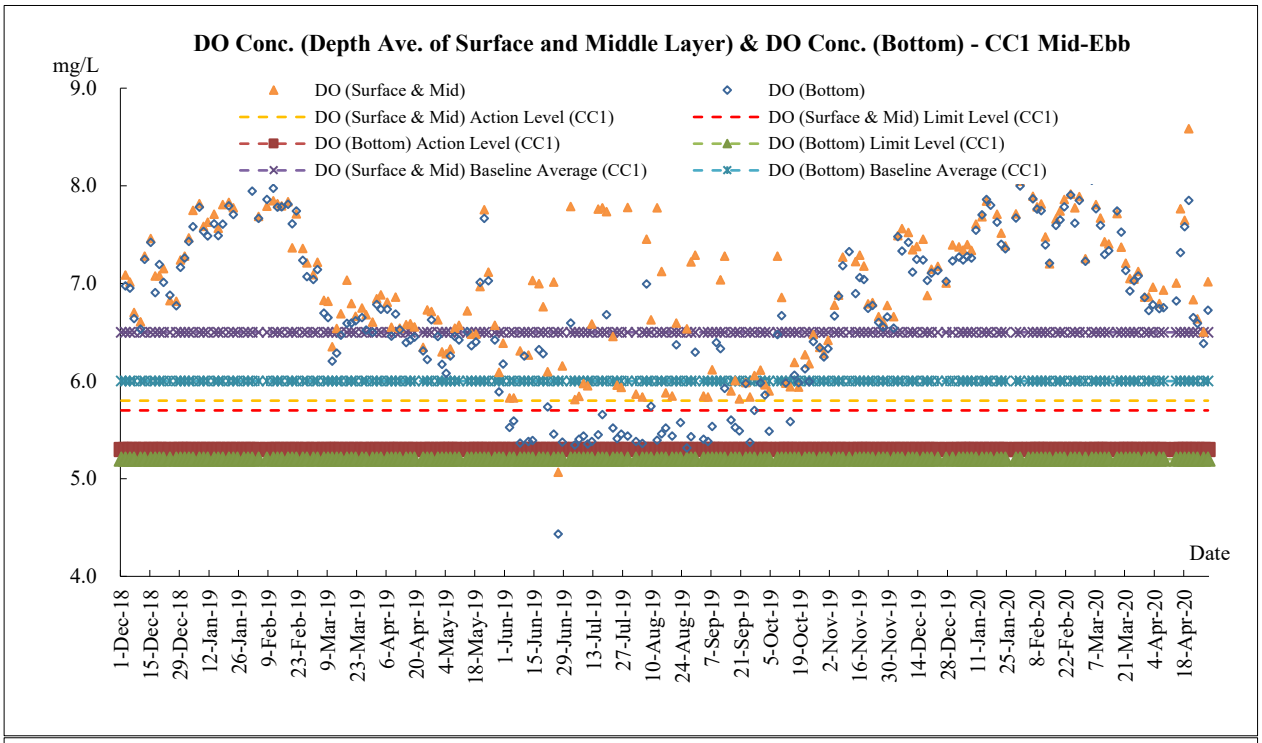
3-Sep-21
10-Sep-21
17-Sep-21
24-Sep-21
1-Oct-21
8-Oct-21
15-Oct-21
22-Oct-21
29-Oct-21
5-Nov-21
12-Nov-21
19-Nov-21
26-Nov-21
3-Dec-21
10-Dec-21

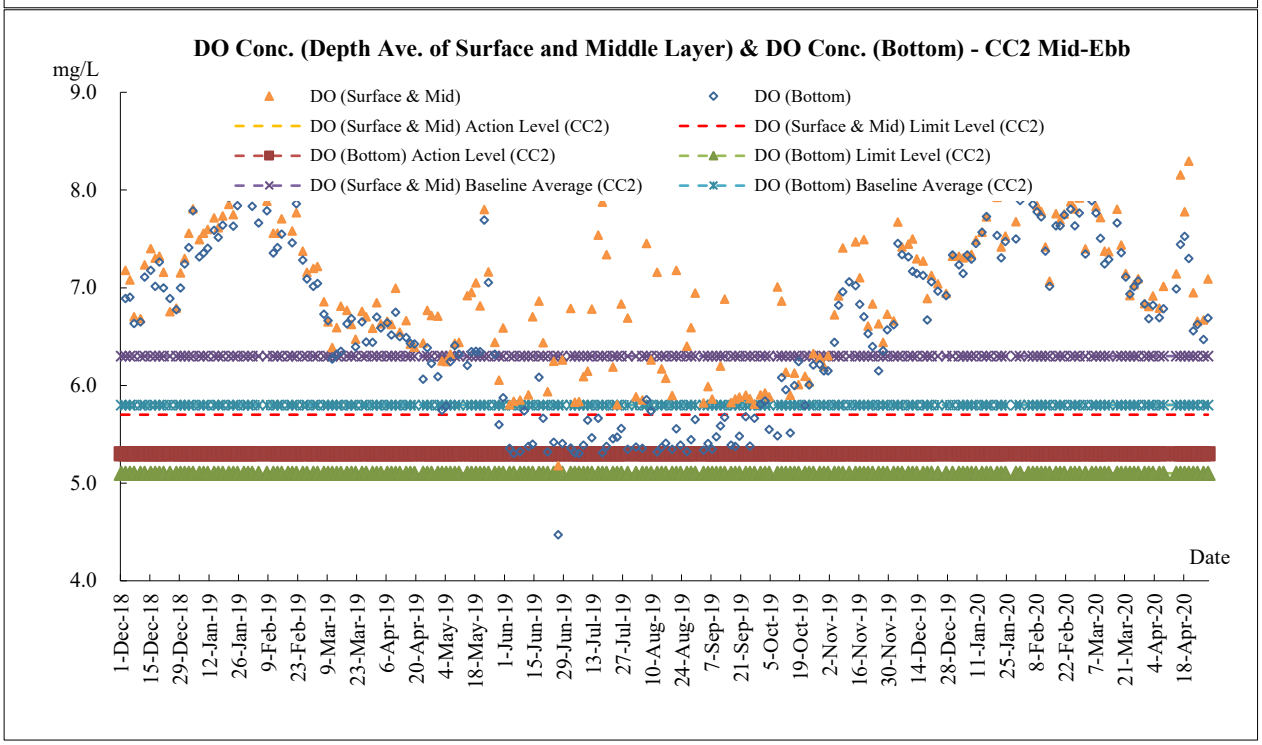
Annotations:

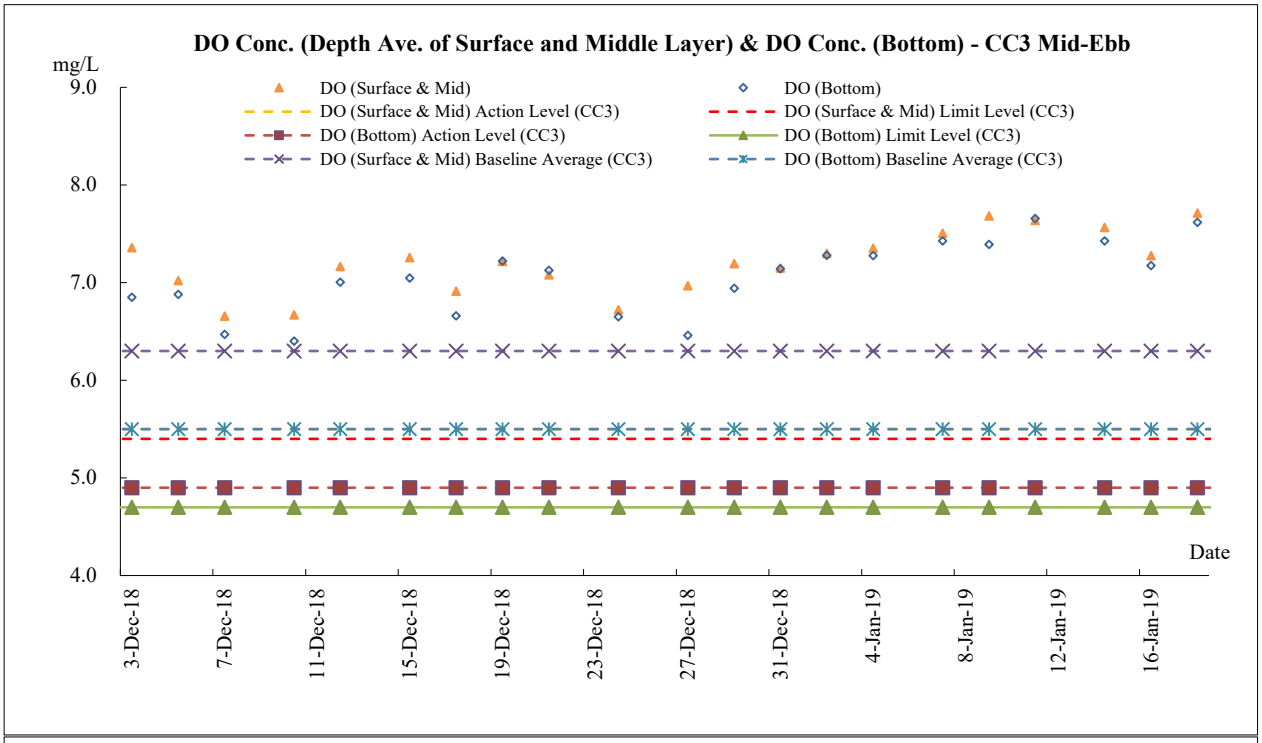
- Major land-based activities being carried out on-site during the construction period included:
  - Excavation work
  - Sheet pilling work
  - Pre-drilling works
  - Bored Pile works
  - Concrete Work
  - Structure Steelwork
  - Drainage installation work
  - Footing construction
  - RC works
  - Fencing Erection Work
  - Seawall modification work
  - Footpath and cycle track paving work

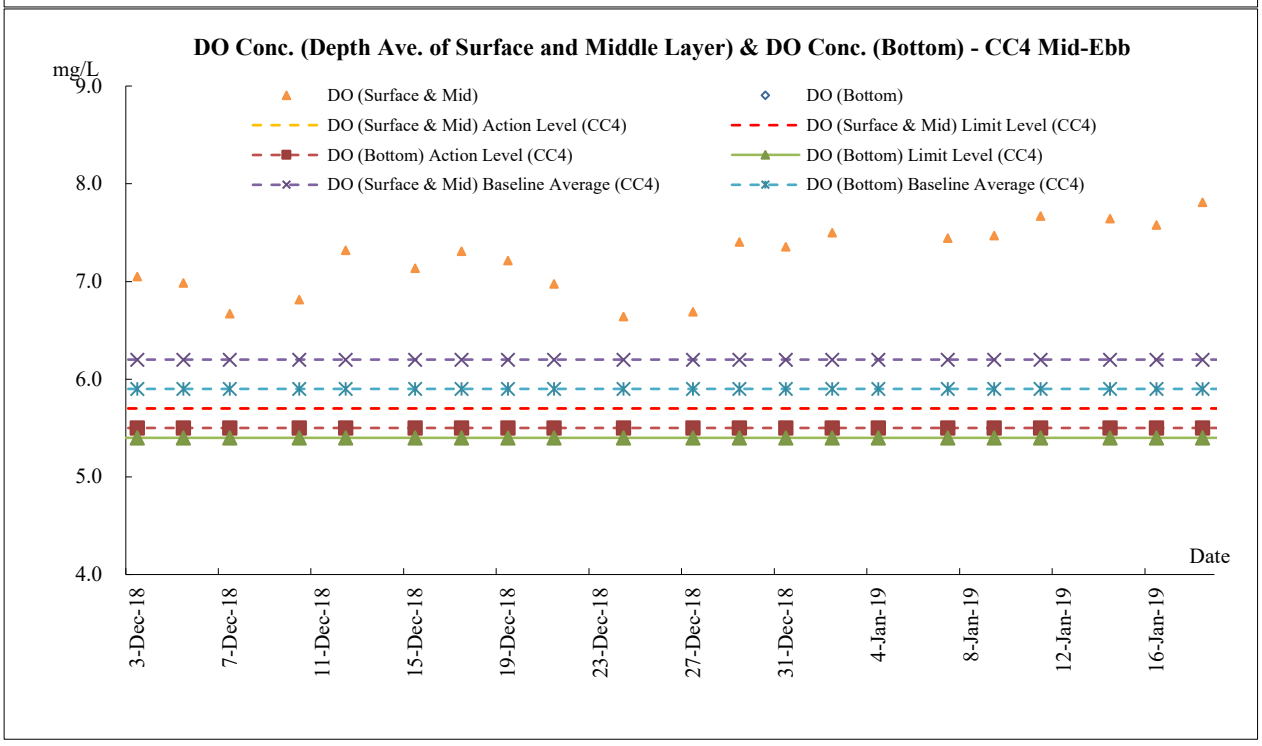
- Daytime construction noise monitoring were conducted at monitoring stations i) CNMS-1: from 8 November 2019 to 28 April 2025; ii) CNMS-2: from 4 February 2025 to 28 April 2025; iii) CNMS-3: 8 April 2024 to 28 April 2025; iv) CNMS-5: from 4 December 2018 to 28 April 2025.
- Additional evening noise monitoring were conducted at monitoring stations i) CNMS-1: from 14 November 2019 to 30 December 2021; ii) CNMS-2: from 14 November 2019 to 30 December 2021; iii) CNMS-5: from 4 December 2018 to 28 April 2025.
- Additional night time noise monitoring were conducted at monitoring stations CNMS-1, CNMS-2, and CNMS-5, all from 18 June 2021 to 14 December 2021.
- The graphical plots of construction noise monitoring show trends on return of ambient environmental conditions upon completion of construction works.
- Weather conditions during the monitoring period ranged from sunny to rainy. Detailed meteorological conditions can be referred to the corresponding Monthly EM&A Reports for the reporting period.
- External noise sources like traffic noise were observed during the monitoring period, which might affect the monitoring results recorded.

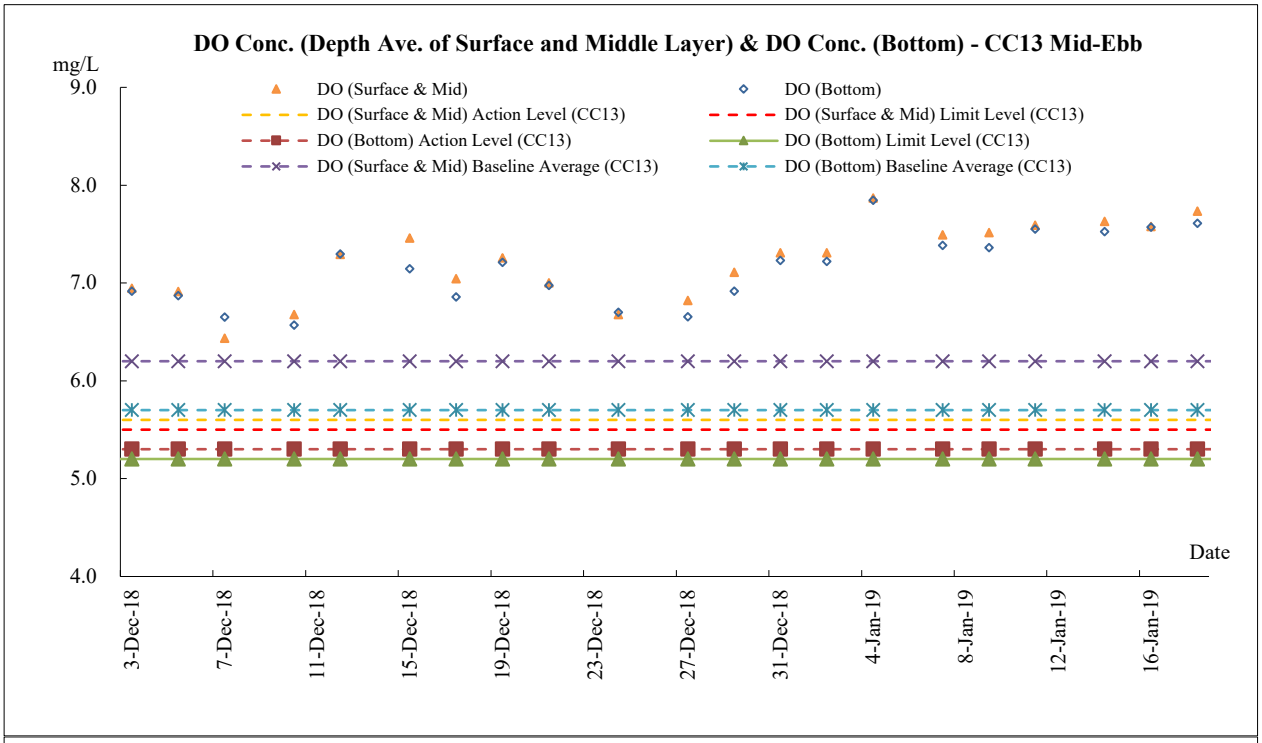
Water Quality Monitoring – Mid-Ebb Tide

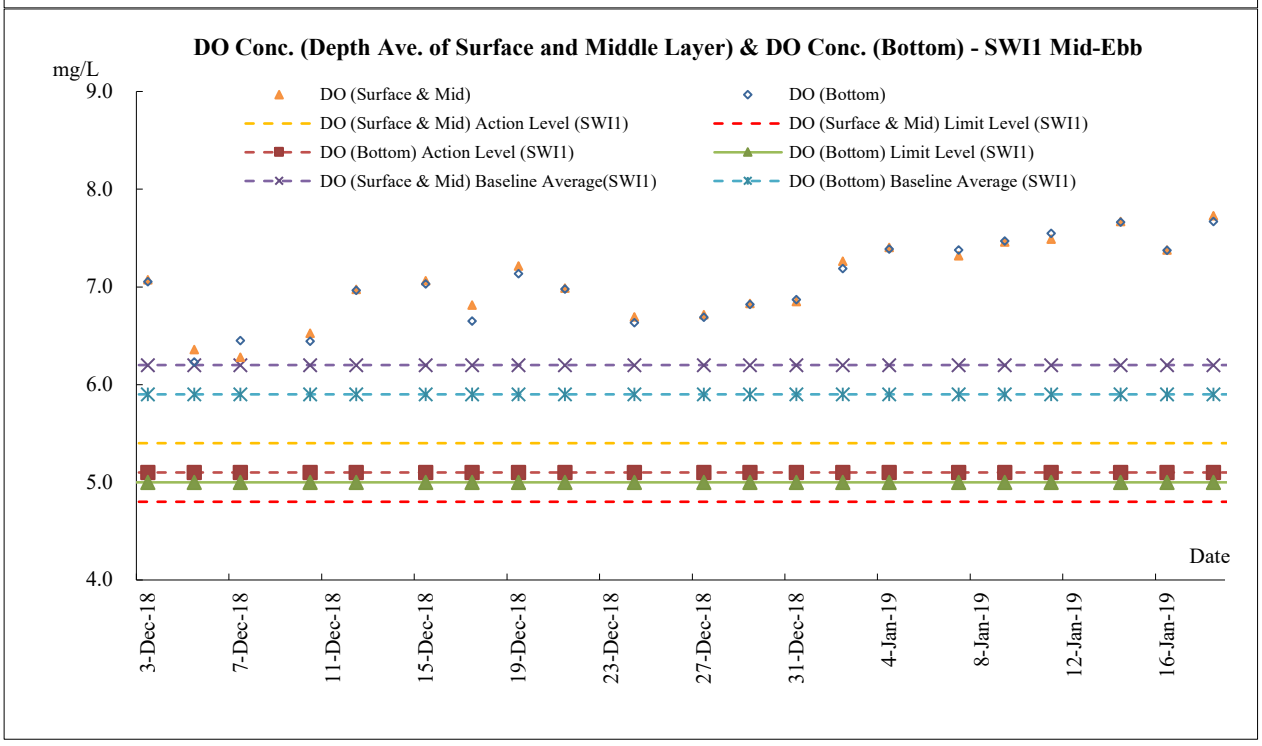





DO Conc. (Depth Ave. of Surface and Middle Layer) & DO Conc. (Bottom) - CC3 Mid-Ebb
mg/L
9.0
8.0
7.0
6.0
5.0
4.0
DO (Surface & Mid)
DO (Bottom)
DO (Surface & Mid) Action Level (CC3)
DO (Surface & Mid) Limit Level (CC3)
DO (Bottom) Action Level (CC3)
DO (Bottom) Limit Level (CC3)
DO (Surface & Mid) Baseline Average (CC3)
DO (Bottom) Baseline Average (CC3)
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


DO Conc. (Depth Ave. of Surface and Middle Layer) & DO Conc. (Bottom) - CC4 Mid-Ebb
mg/L
9.0
8.0
7.0
6.0
5.0
4.0
DO (Surface & Mid)
DO (Bottom)
DO (Surface & Mid) Action Level (CC4)
DO (Surface & Mid) Limit Level (CC4)
DO (Bottom) Action Level (CC4)
DO (Bottom) Limit Level (CC4)
DO (Surface & Mid) Baseline Average (CC4)
DO (Bottom) Baseline Average (CC4)
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


DO Conc. (Depth Ave. of Surface and Middle Layer) & DO Conc. (Bottom) - CC13 Mid-Ebb
mg/L
9.0
8.0
7.0
6.0
5.0
4.0
DO (Surface & Mid)
DO (Bottom)
DO (Surface & Mid) Action Level (CC13)
DO (Surface & Mid) Limit Level (CC13)
DO (Bottom) Action Level (CC13)
DO (Bottom) Limit Level (CC13)
DO (Surface & Mid) Baseline Average (CC13)
DO (Bottom) Baseline Average (CC13)
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


DO Conc. (Depth Ave. of Surface and Middle Layer) & DO Conc. (Bottom) - SWI1 Mid-Ebb
mg/L
9.0
8.0
7.0
6.0
5.0
4.0
DO (Surface & Mid)
DO (Bottom)
DO (Surface & Mid) Action Level (SWI1)
DO (Surface & Mid) Limit Level (SWI1)
DO (Bottom) Action Level (SWI1)
DO (Bottom) Limit Level (SWI1)
DO (Surface & Mid) Baseline Average(SWI1)
DO (Bottom) Baseline Average (SWI1)
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
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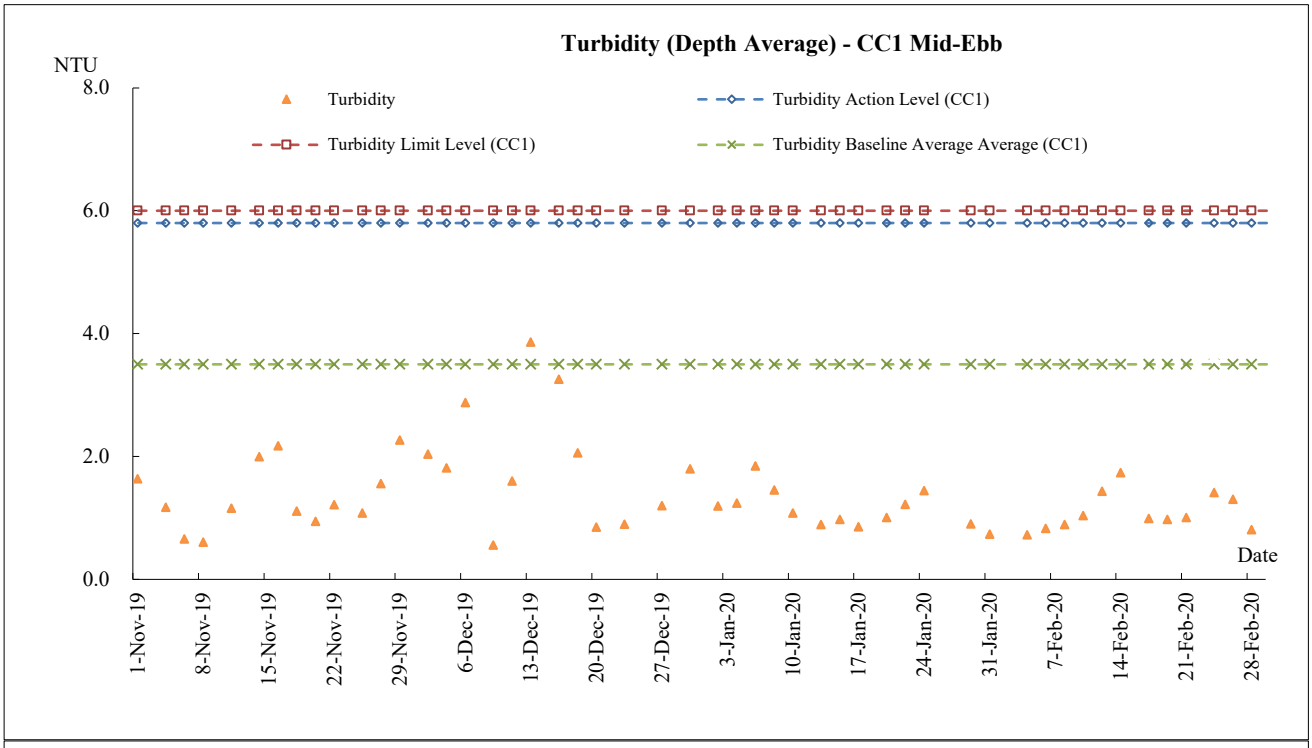
8-Jan-19
12-Jan-19
16-Jan-19


Turbidity (Depth Average) - CC1 Mid-Ebb
NTU
8.0
6.0
4.0
2.0
0.0
Turbidity
Turbidity Action Level (CC1)
Turbidity Limit Level (CC1)
Turbidity Baseline Average Average (CC1)
Date
1-Nov-19
8-Nov-19
15-Nov-19
22-Nov-19
29-Nov-19
6-Dec-19
13-Dec-19
20-Dec-19
27-Dec-19
3-Jan-20
10-Jan-20
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31-Jan-20
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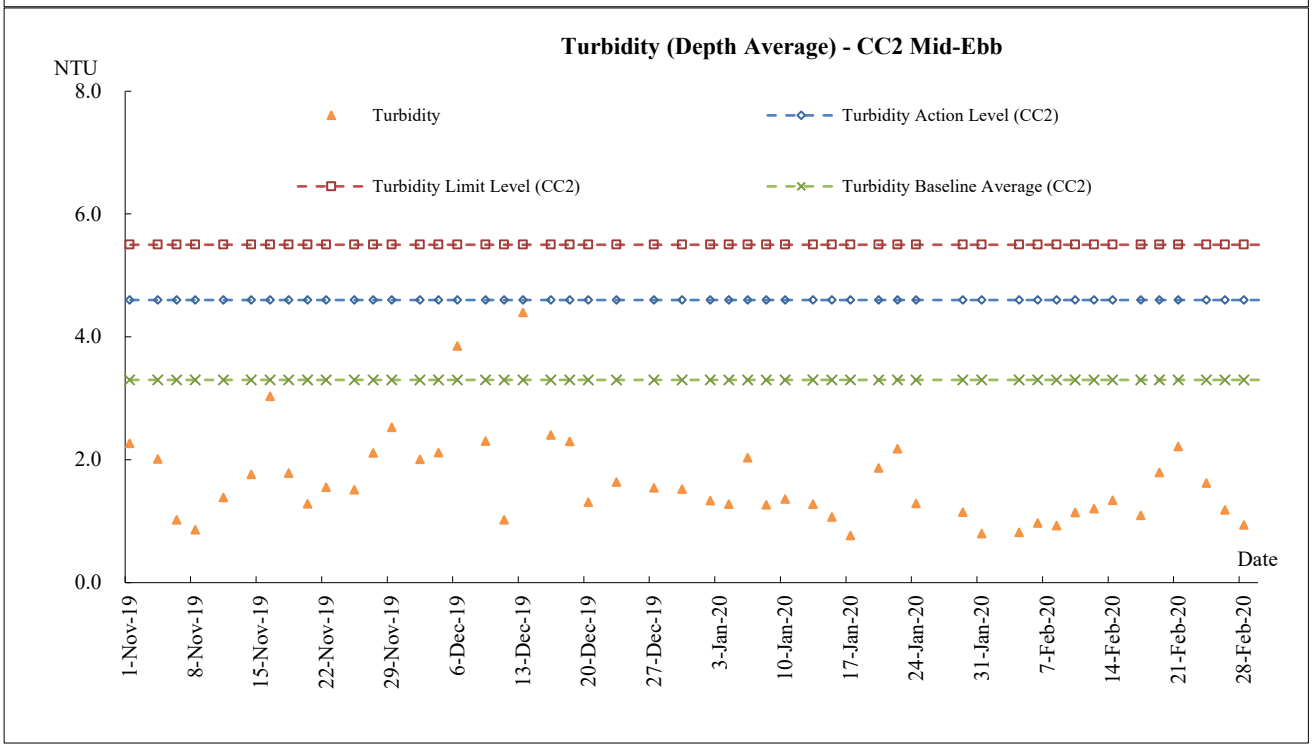
14-Feb-20
21-Feb-20
28-Feb-20


Turbidity (Depth Average) - CC2 Mid-Ebb
NTU
8.0
6.0
4.0
2.0
0.0
Turbidity
Turbidity Action Level (CC2)
Turbidity Limit Level (CC2)
Turbidity Baseline Average (CC2)
Date
1-Nov-19
8-Nov-19
15-Nov-19
22-Nov-19
29-Nov-19
6-Dec-19
13-Dec-19
20-Dec-19
27-Dec-19
3-Jan-20
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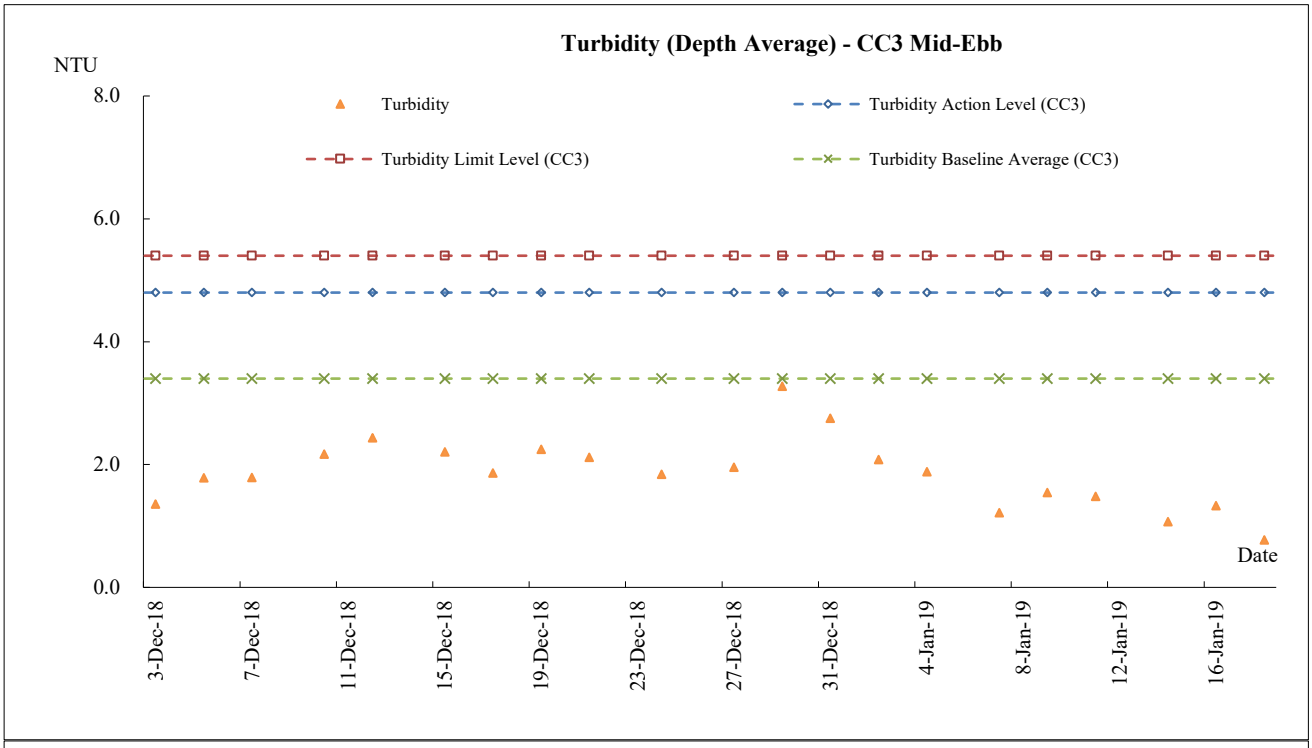
17-Jan-20
24-Jan-20
31-Jan-20
7-Feb-20
14-Feb-20
21-Feb-20
28-Feb-20


Turbidity (Depth Average) - CC3 Mid-Ebb
NTU
8.0
6.0
4.0
2.0
0.0
Turbidity
Turbidity Action Level (CC3)
Turbidity Limit Level (CC3)
Turbidity Baseline Average (CC3)
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
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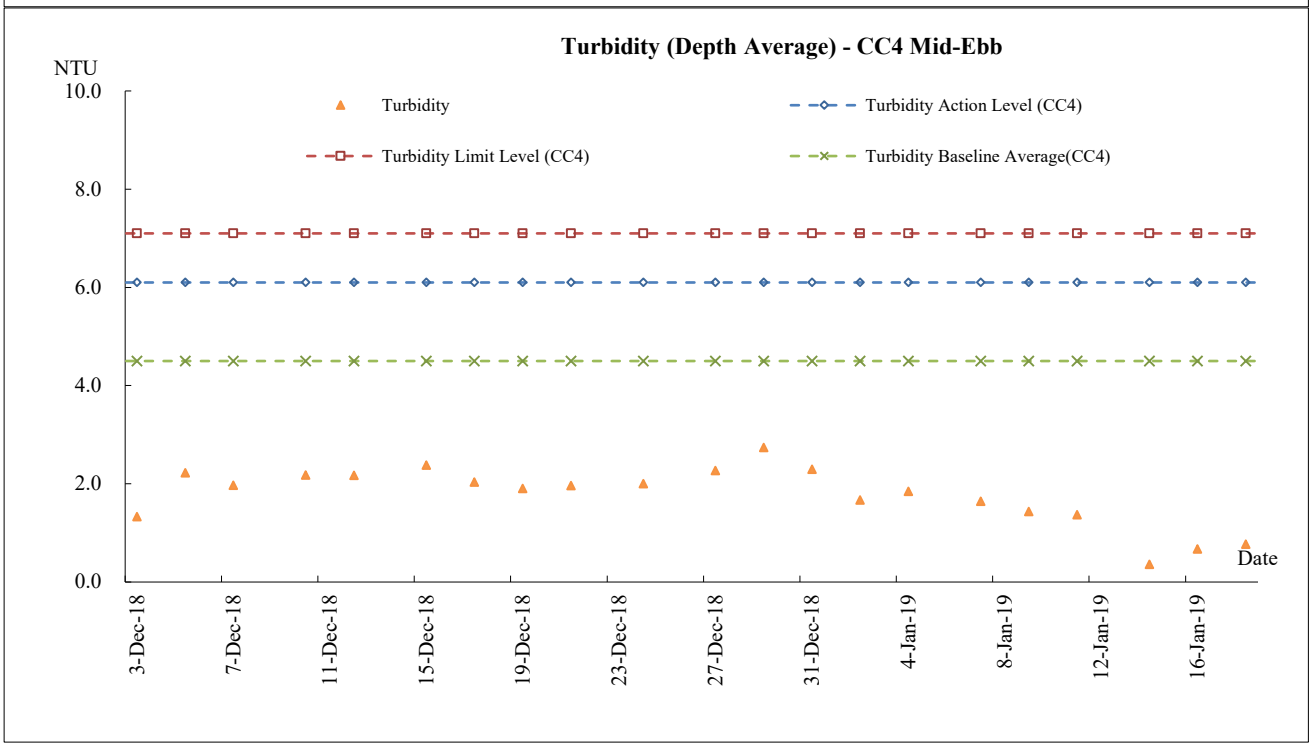
12-Jan-19
16-Jan-19


Turbidity (Depth Average) - CC4 Mid-Ebb
NTU
10.0
8.0
6.0
4.0
2.0
0.0
Turbidity
Turbidity Action Level (CC4)
Turbidity Limit Level (CC4)
Turbidity Baseline Average(CC4)
Date
3-Dec-18
7-Dec-18
11-Dec-18
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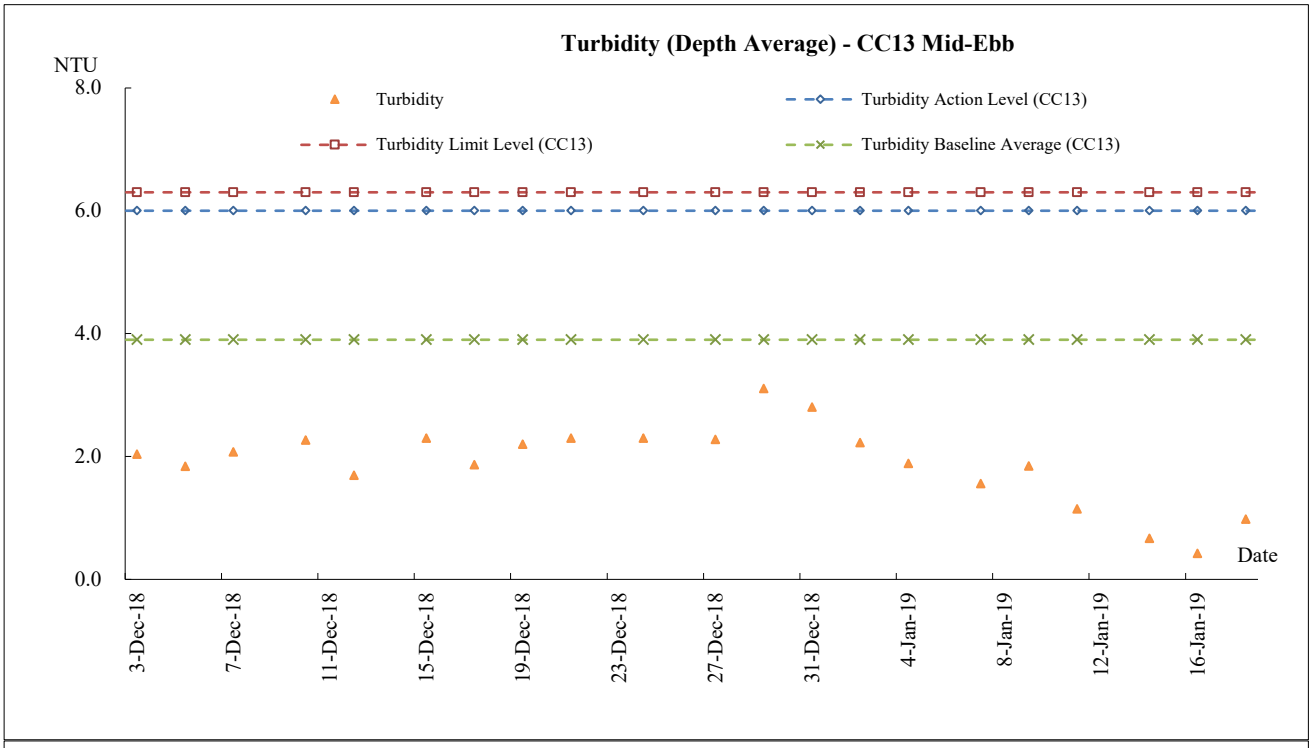
12-Jan-19
16-Jan-19


Turbidity (Depth Average) - CC13 Mid-Ebb
NTU
8.0
6.0
4.0
2.0
0.0
Turbidity
Turbidity Action Level (CC13)
Turbidity Limit Level (CC13)
Turbidity Baseline Average (CC13)
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
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23-Dec-18
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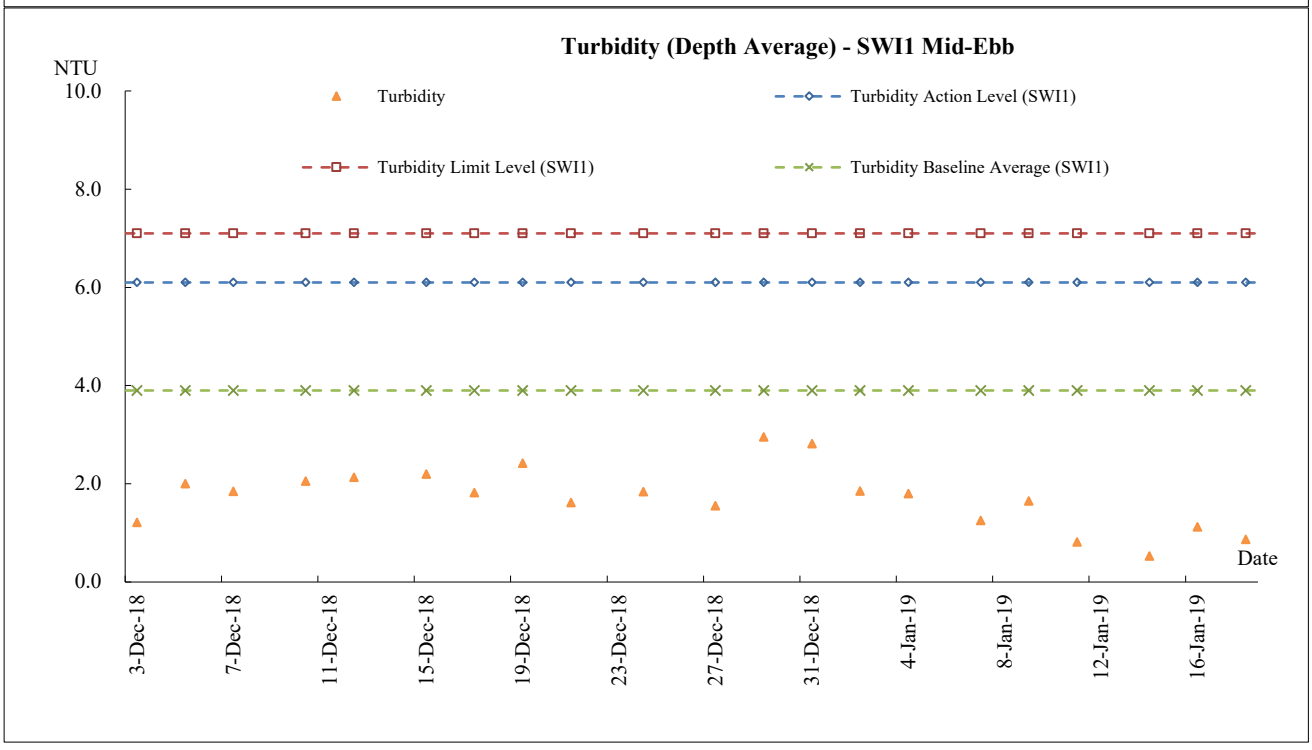
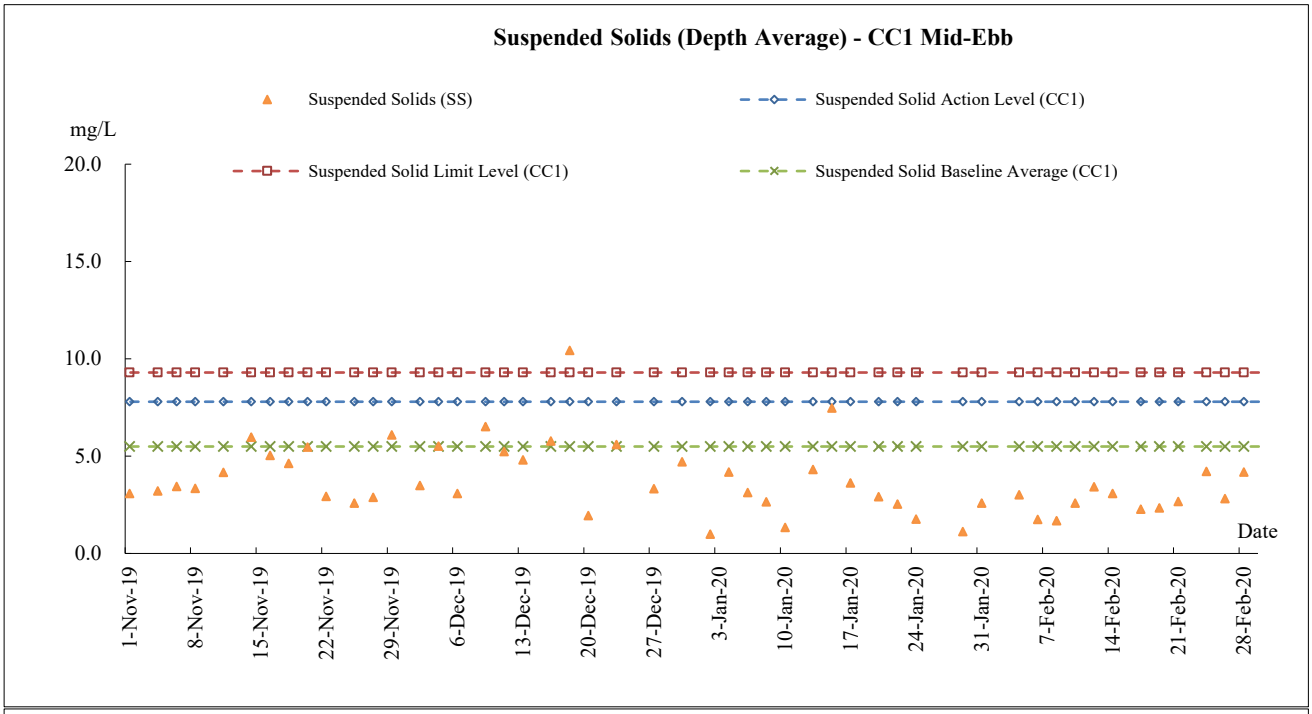
16-Jan-19


Turbidity (Depth Average) - SWI1 Mid-Ebb
NTU
10.0
8.0
6.0
4.0
2.0
0.0
Turbidity
Turbidity Action Level (SWI1)
Turbidity Limit Level (SWI1)
Turbidity Baseline Average (SWI1)
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


Suspended Solids (Depth Average) - CC1 Mid-Ebb
Suspended Solids (SS)
Suspended Solid Action Level (CC1)
Suspended Solid Limit Level (CC1)
Suspended Solid Baseline Average (CC1)
mg/L
20.0
15.0
10.0
5.0
0.0
Date
1-Nov-19
8-Nov-19
15-Nov-19
22-Nov-19
29-Nov-19
6-Dec-19
13-Dec-19
20-Dec-19
27-Dec-19
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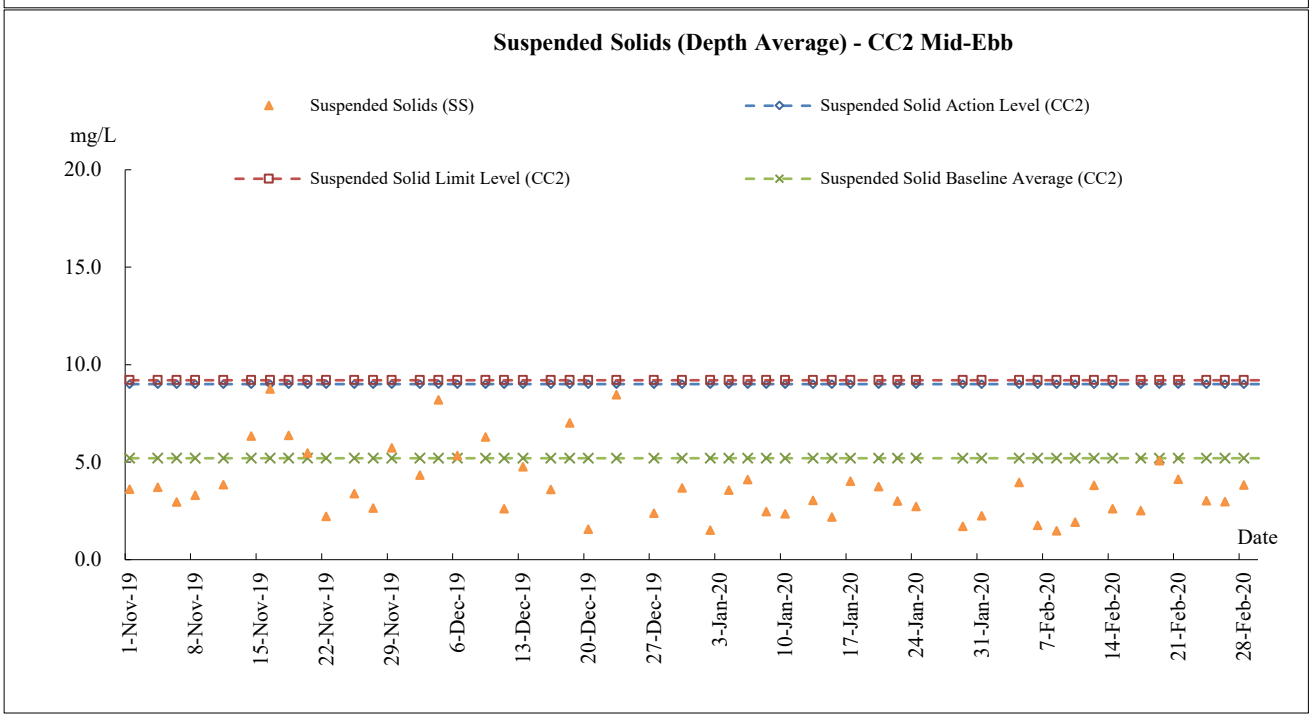
28-Feb-20


Suspended Solids (Depth Average) - CC2 Mid-Ebb
Suspended Solids (SS)
Suspended Solid Action Level (CC2)
Suspended Solid Limit Level (CC2)
Suspended Solid Baseline Average (CC2)
mg/L
20.0
15.0
10.0
5.0
0.0
Date
1-Nov-19
8-Nov-19
15-Nov-19
22-Nov-19
29-Nov-19
6-Dec-19
13-Dec-19
20-Dec-19
27-Dec-19
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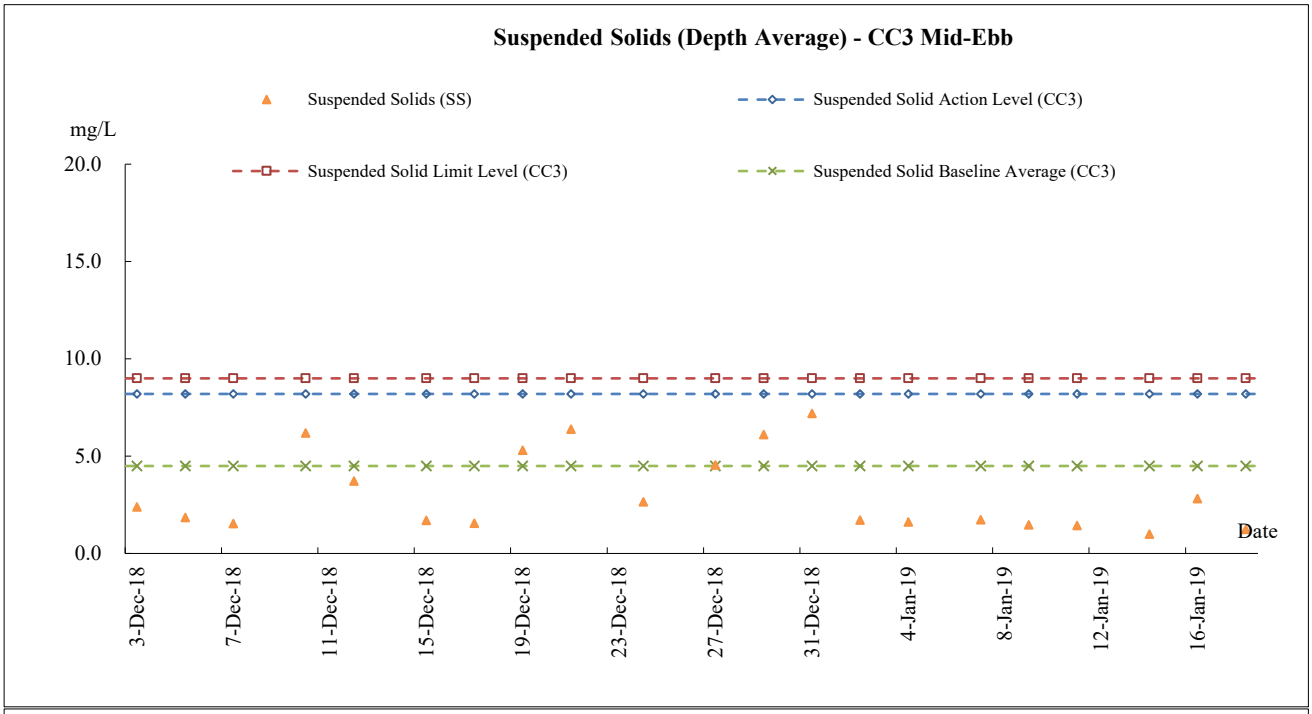
Suspended Solids (Depth Average) - CC3 Mid-Ebb
Suspended Solids (SS)
Suspended Solid Action Level (CC3)
mg/L
Suspended Solid Limit Level (CC3)
Suspended Solid Baseline Average (CC3)
20.0
15.0
10.0
5.0
0.0
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
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23-Dec-18
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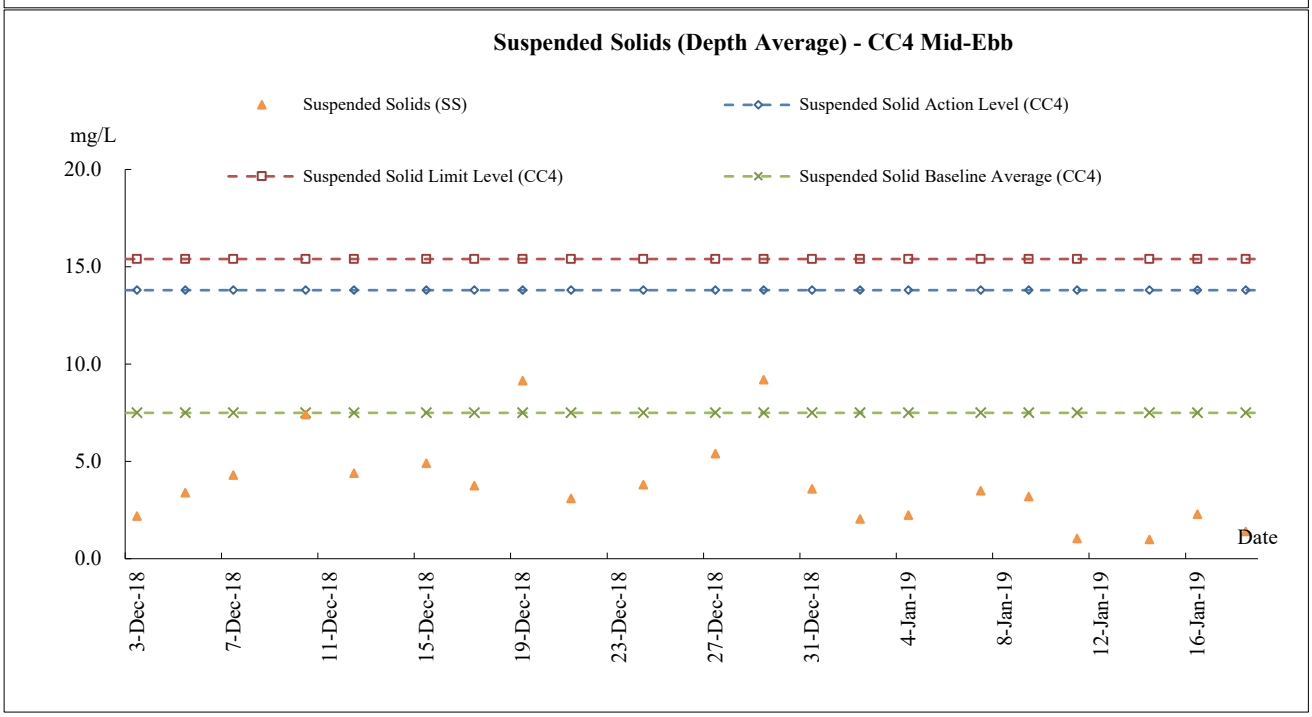
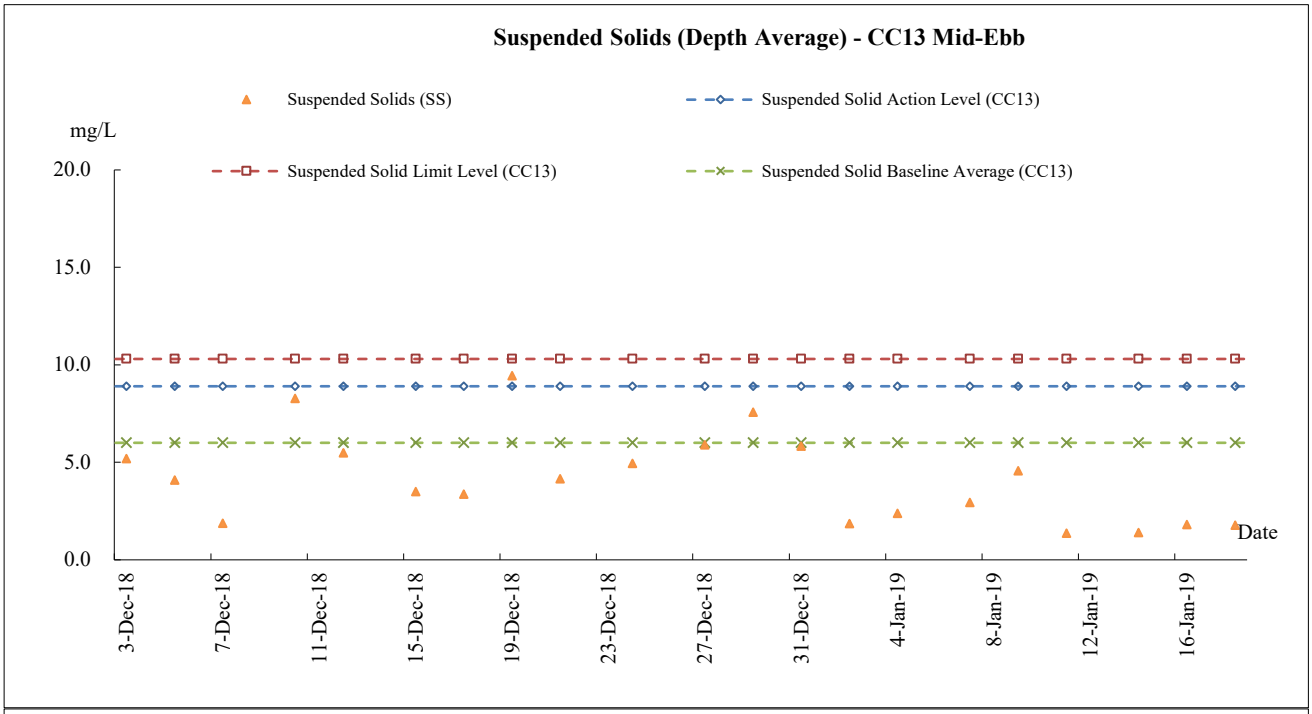
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


Suspended Solids (Depth Average) - CC4 Mid-Ebb
Suspended Solids (SS)
Suspended Solid Action Level (CC4)
mg/L
Suspended Solid Limit Level (CC4)
Suspended Solid Baseline Average (CC4)
20.0
15.0
10.0
5.0
0.0
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


Suspended Solids (Depth Average) - CC13 Mid-Ebb
Suspended Solids (SS)
Suspended Solid Action Level (CC13)
mg/L
Suspended Solid Limit Level (CC13)
Suspended Solid Baseline Average (CC13)
20.0
15.0
10.0
5.0
0.0
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
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23-Dec-18
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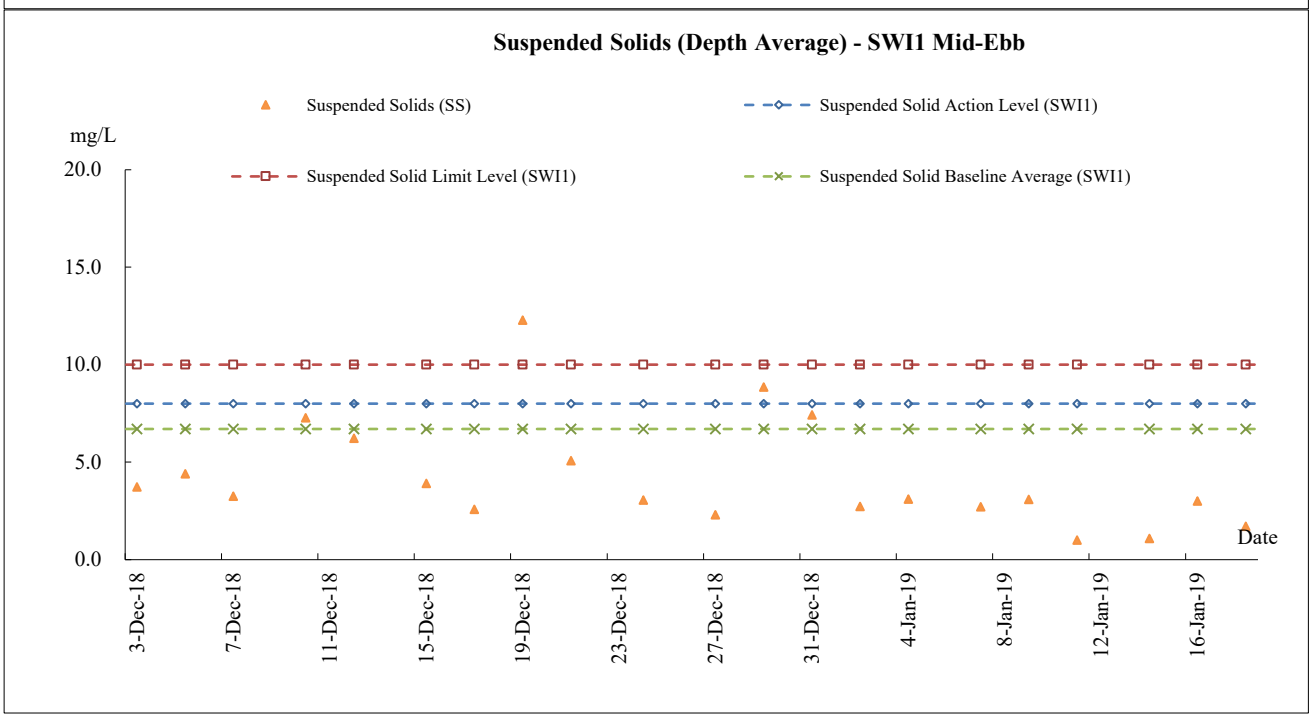
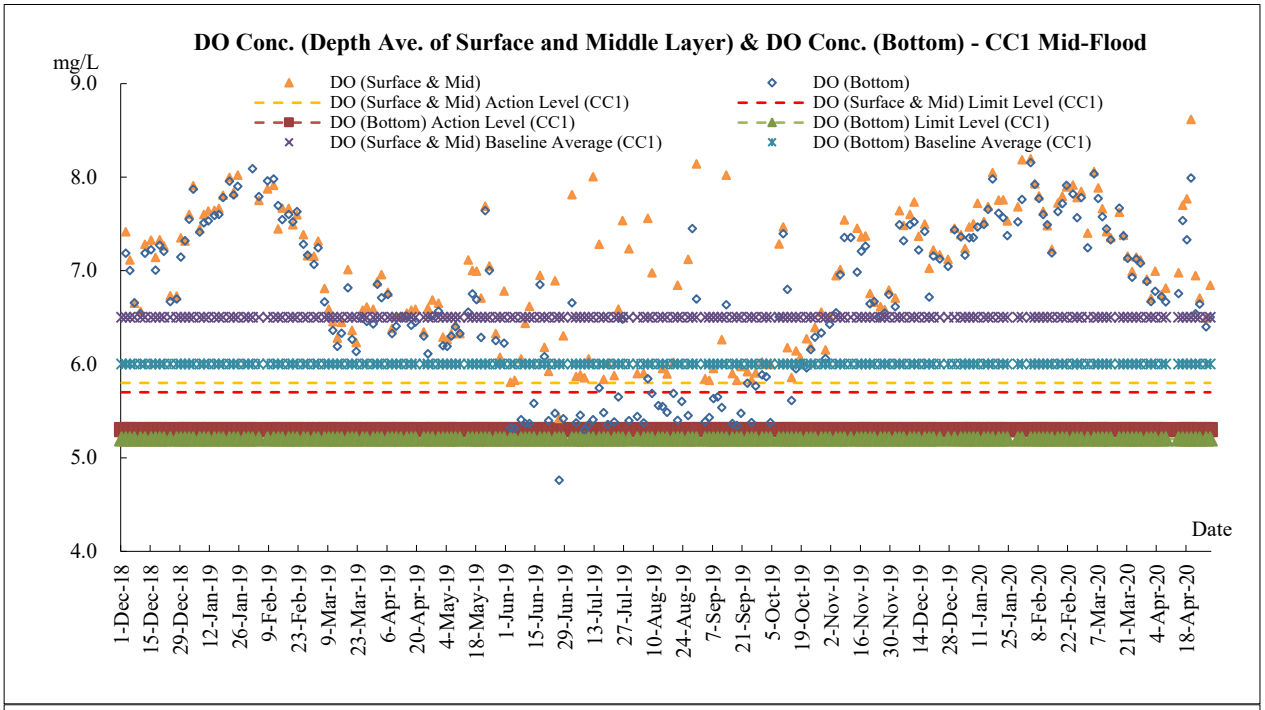
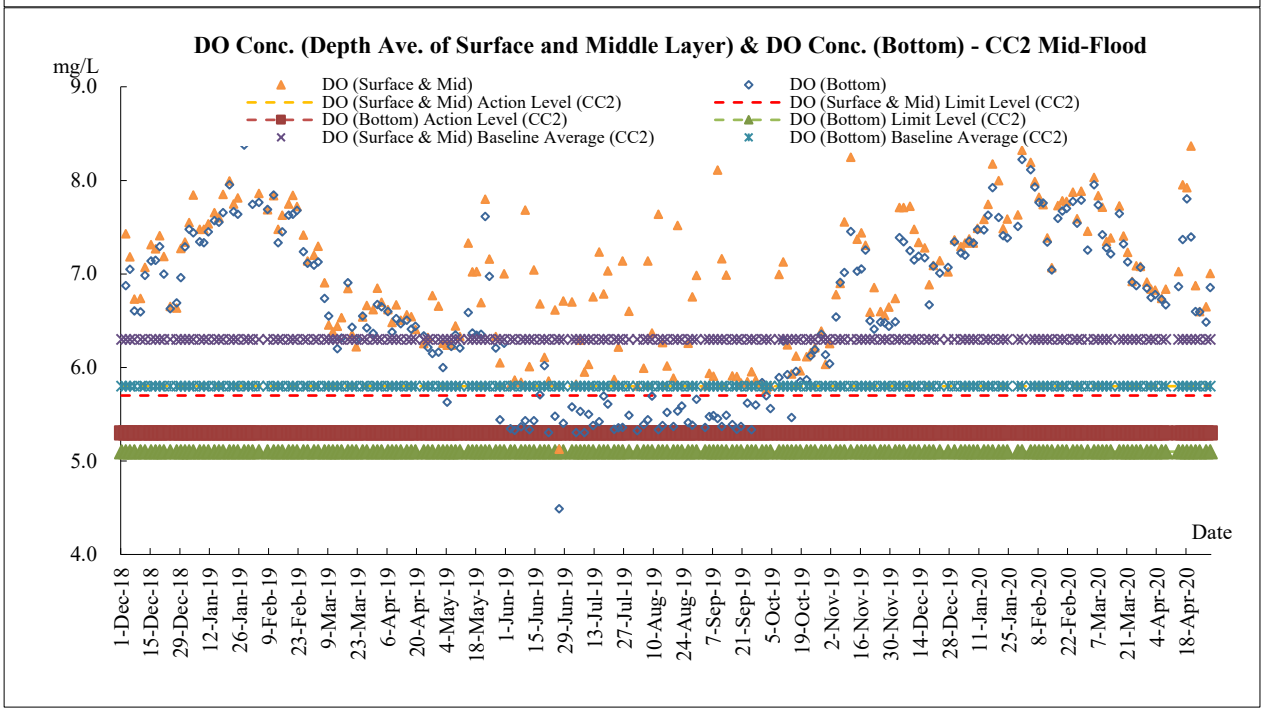
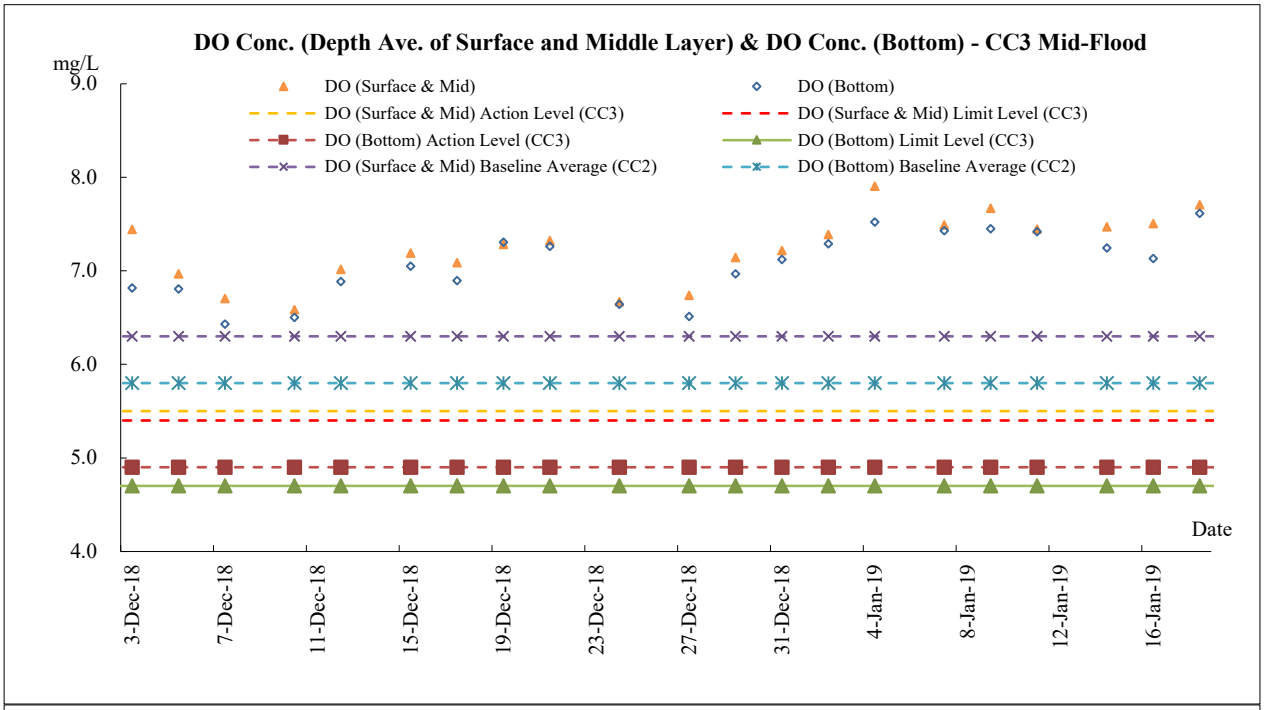
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


Suspended Solids (Depth Average) - SWI1 Mid-Ebb
Suspended Solids (SS)
Suspended Solid Action Level (SWI1)
mg/L
Suspended Solid Limit Level (SWI1)
Suspended Solid Baseline Average (SWI1)
20.0
15.0
10.0
5.0
0.0
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19

Mid-Flood Tide






DO Conc. (Depth Ave. of Surface and Middle Layer) & DO Conc. (Bottom) - CC3 Mid-Flood
mg/L
9.0
8.0
7.0
6.0
5.0
4.0
DO (Surface & Mid)
DO (Bottom)
DO (Surface & Mid) Action Level (CC3)
DO (Surface & Mid) Limit Level (CC3)
DO (Bottom) Action Level (CC3)
DO (Bottom) Limit Level (CC3)
DO (Surface & Mid) Baseline Average (CC2)
DO (Bottom) Baseline Average (CC2)
Date
3-Dec-18
7-Dec-18
11-Dec-18
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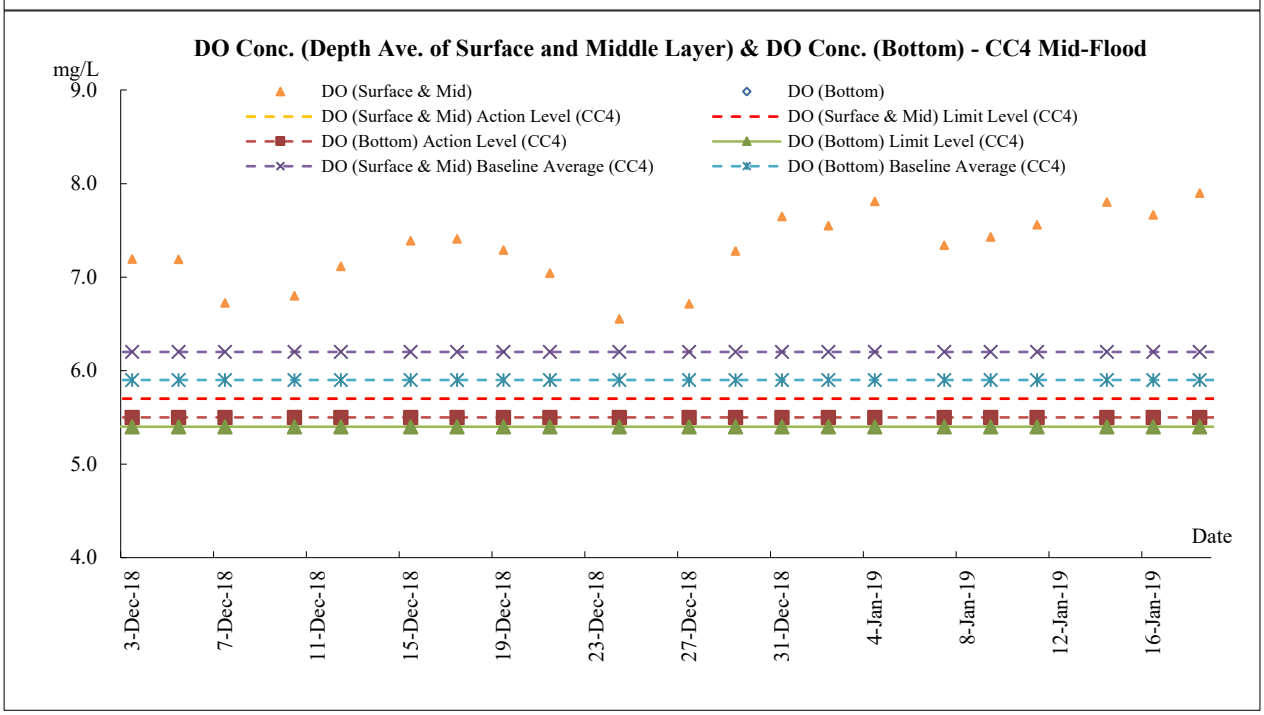
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


DO Conc. (Depth Ave. of Surface and Middle Layer) & DO Conc. (Bottom) - CC4 Mid-Flood
mg/L
9.0
8.0
7.0
6.0
5.0
4.0
DO (Surface & Mid)
DO (Bottom)
DO (Surface & Mid) Action Level (CC4)
DO (Surface & Mid) Limit Level (CC4)
DO (Bottom) Action Level (CC4)
DO (Bottom) Limit Level (CC4)
DO (Surface & Mid) Baseline Average (CC4)
DO (Bottom) Baseline Average (CC4)
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
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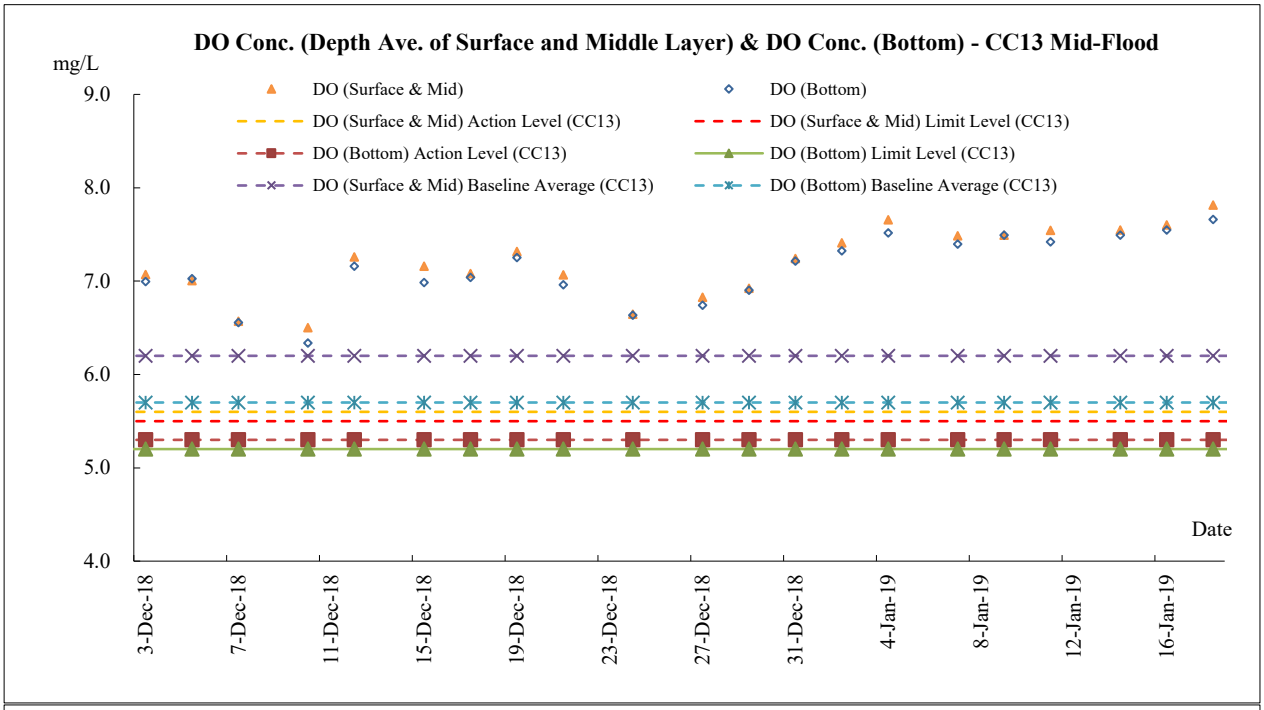
8-Jan-19
12-Jan-19
16-Jan-19


DO Conc. (Depth Ave. of Surface and Middle Layer) & DO Conc. (Bottom) - CC13 Mid-Flood
mg/L
DO (Surface & Mid)
DO (Bottom)
DO (Surface & Mid) Action Level (CC13)
DO (Surface & Mid) Limit Level (CC13)
DO (Bottom) Action Level (CC13)
DO (Bottom) Limit Level (CC13)
DO (Surface & Mid) Baseline Average (CC13)
DO (Bottom) Baseline Average (CC13)
9.0
8.0
7.0
6.0
5.0
4.0
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
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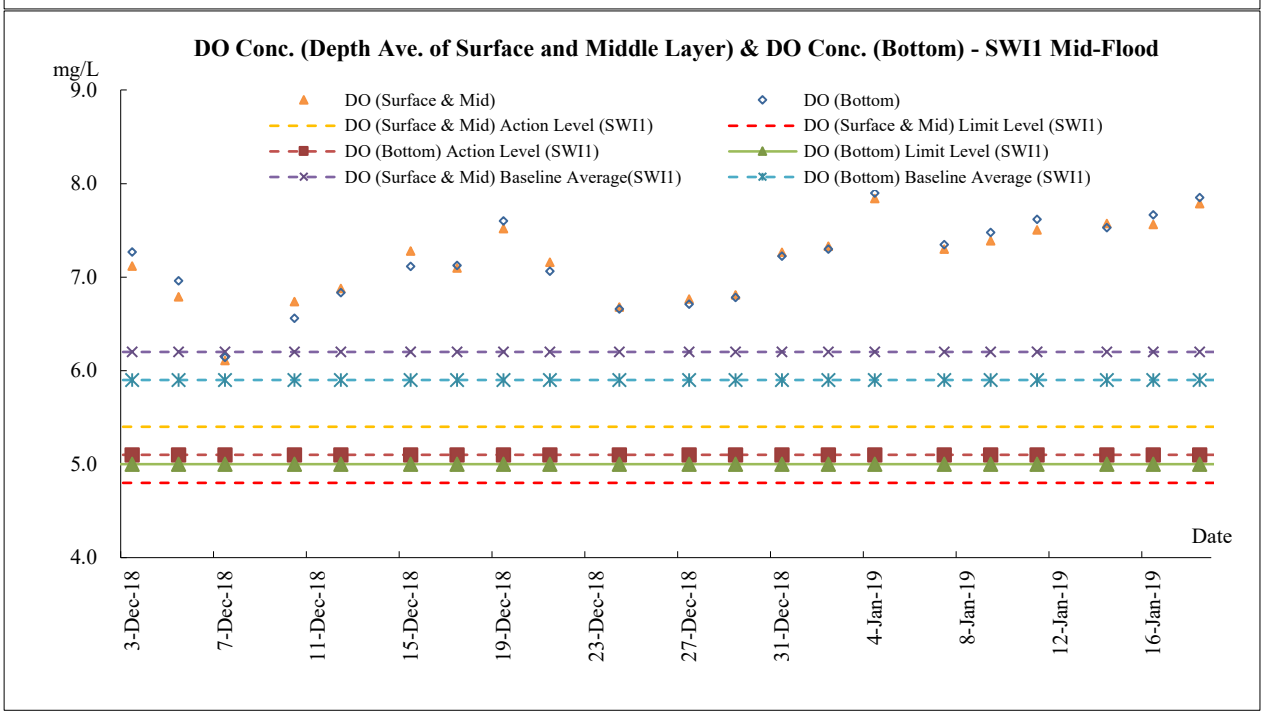
16-Jan-19


DO Conc. (Depth Ave. of Surface and Middle Layer) & DO Conc. (Bottom) - SWI1 Mid-Flood
mg/L
DO (Surface & Mid)
DO (Bottom)
DO (Surface & Mid) Action Level (SWI1)
DO (Surface & Mid) Limit Level (SWI1)
DO (Bottom) Action Level (SWI1)
DO (Bottom) Limit Level (SWI1)
DO (Surface & Mid) Baseline Average(SWI1)
DO (Bottom) Baseline Average (SWI1)
9.0
8.0
7.0
6.0
5.0
4.0
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
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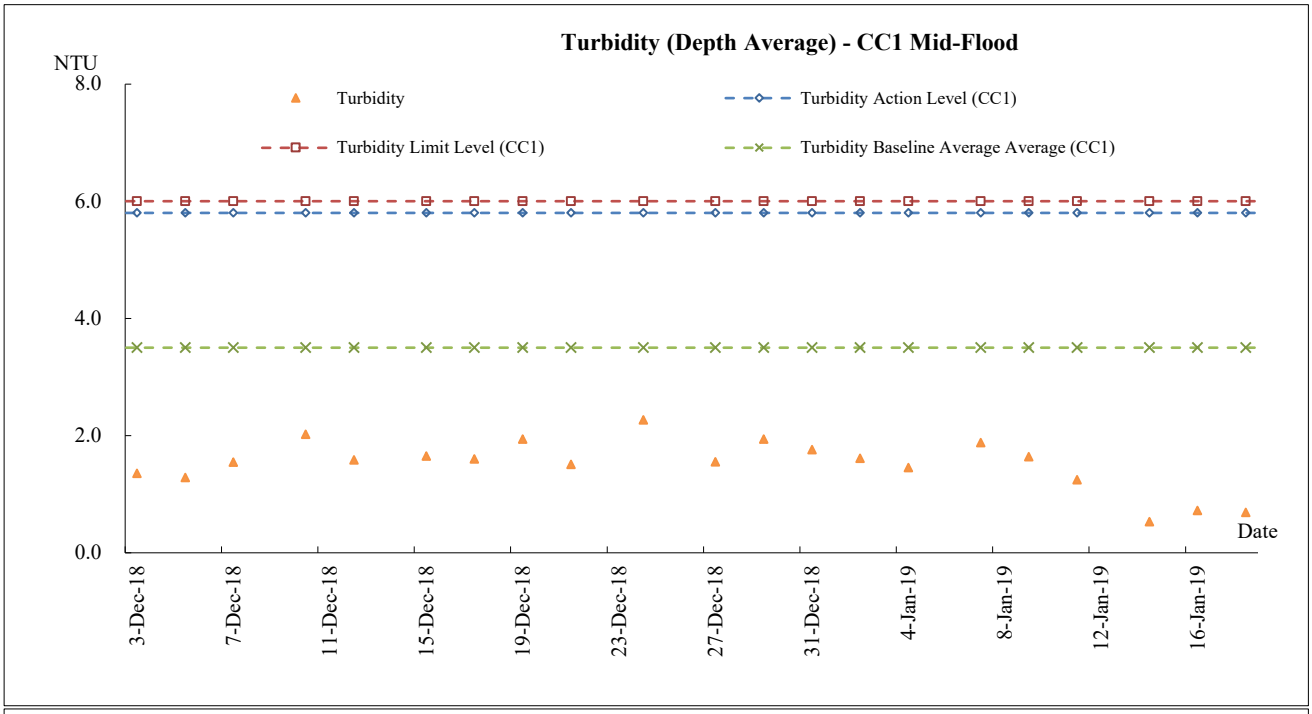
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


Turbidity (Depth Average) - CC1 Mid-Flood
NTU
8.0
6.0
4.0
2.0
0.0
Turbidity
Turbidity Action Level (CC1)
Turbidity Limit Level (CC1)
Turbidity Baseline Average Average (CC1)
Date
3-Dec-18
7-Dec-18
11-Dec-18
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8-Jan-19
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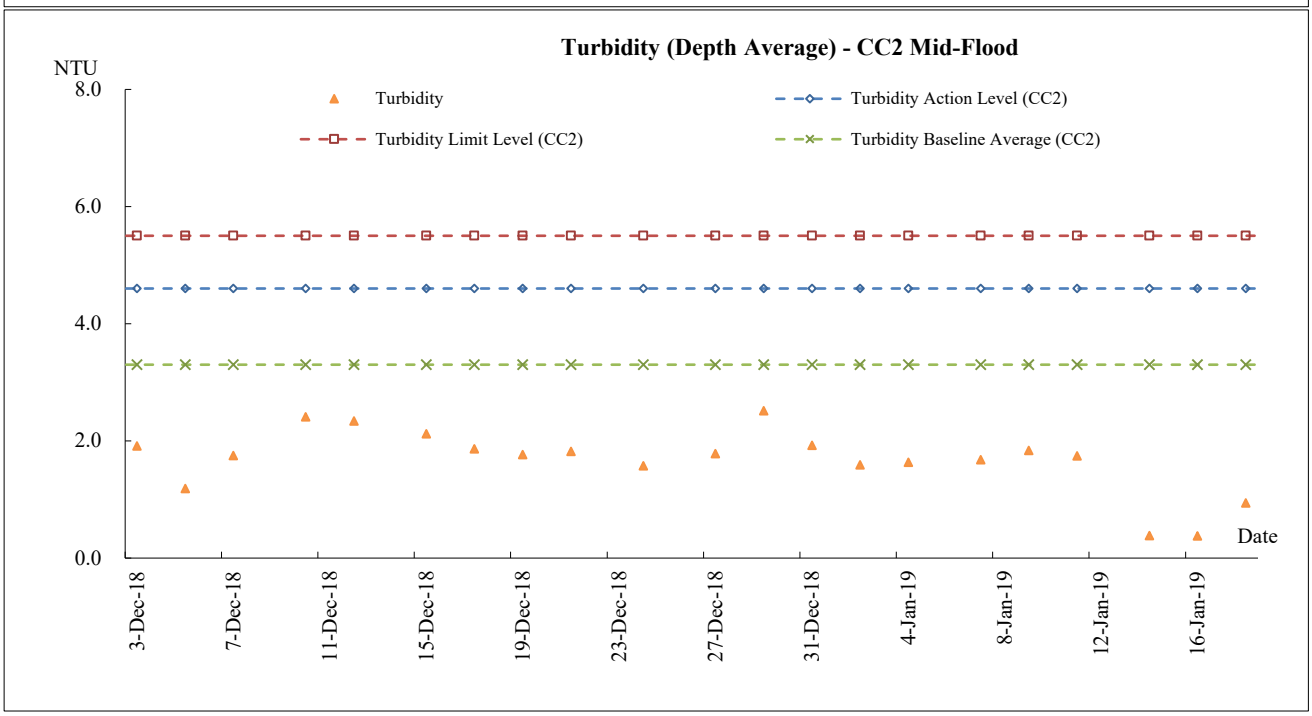
16-Jan-19


Turbidity (Depth Average) - CC2 Mid-Flood
NTU
8.0
6.0
4.0
2.0
0.0
Turbidity
Turbidity Action Level (CC2)
Turbidity Limit Level (CC2)
Turbidity Baseline Average (CC2)
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
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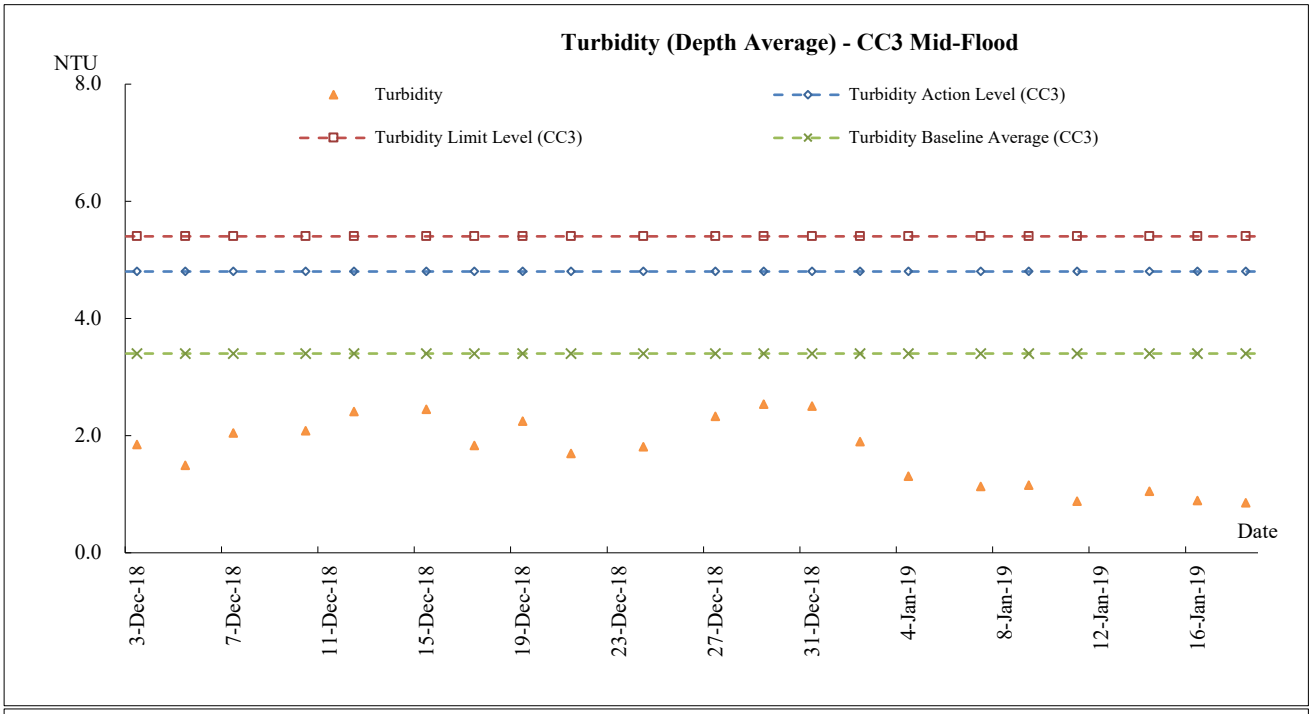
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


Turbidity (Depth Average) - CC3 Mid-Flood
NTU
8.0
6.0
4.0
2.0
0.0
Turbidity
Turbidity Action Level (CC3)
Turbidity Limit Level (CC3)
Turbidity Baseline Average (CC3)
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
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4-Jan-19
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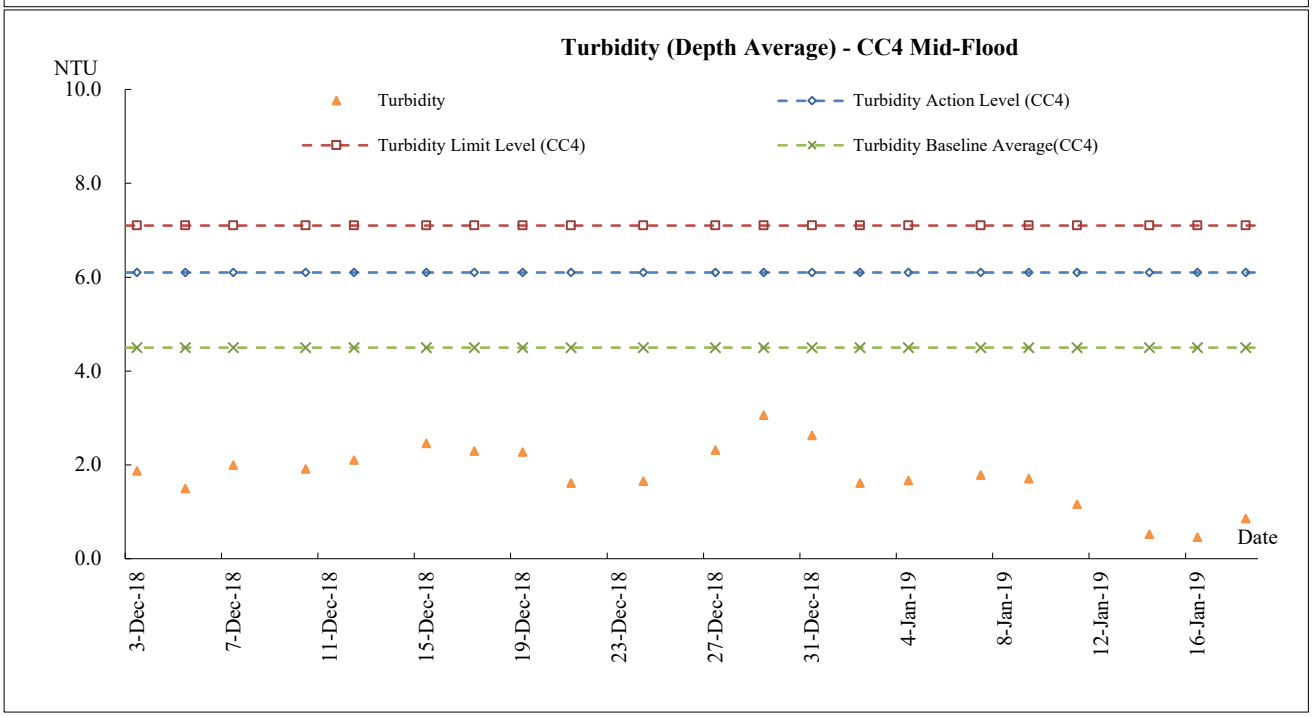
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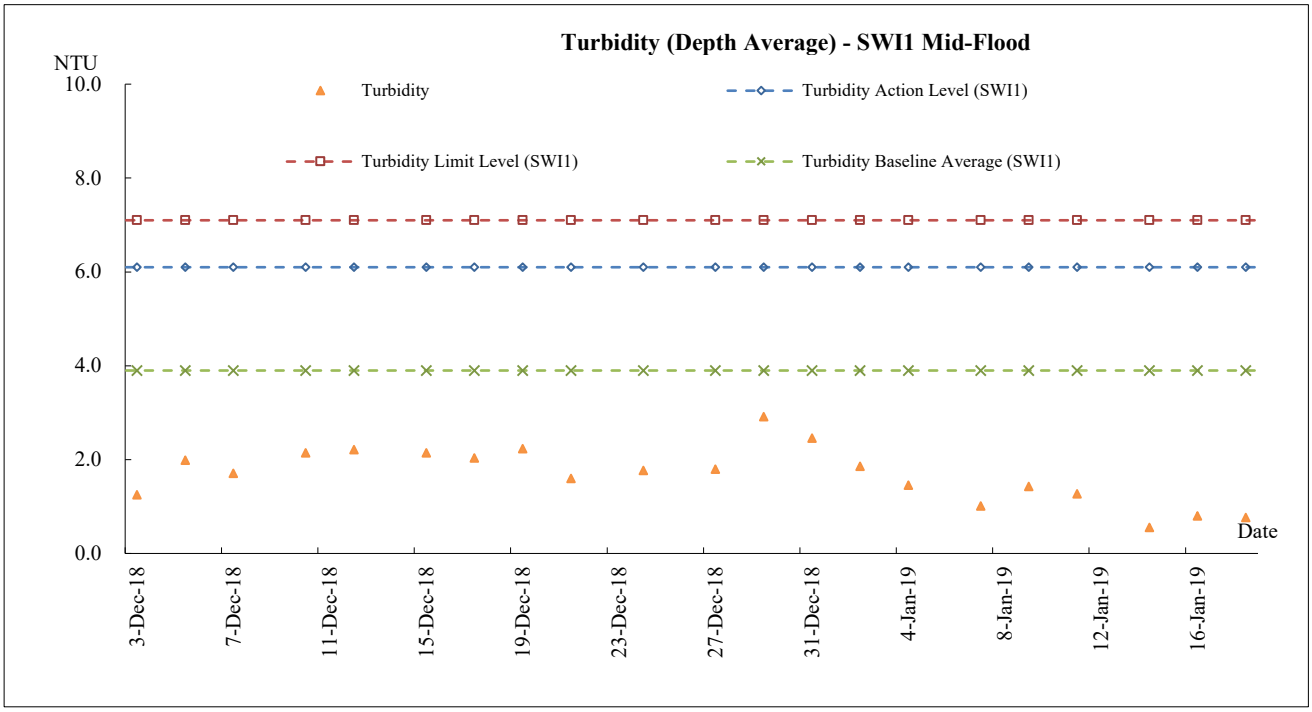
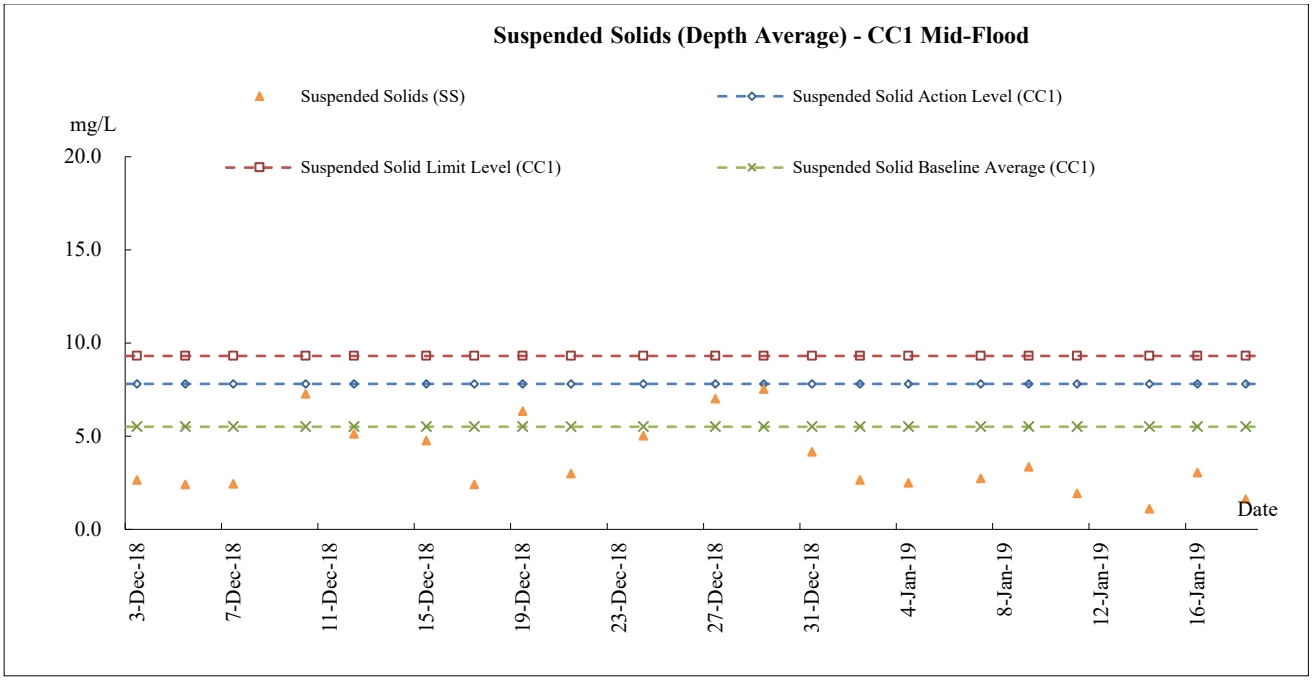
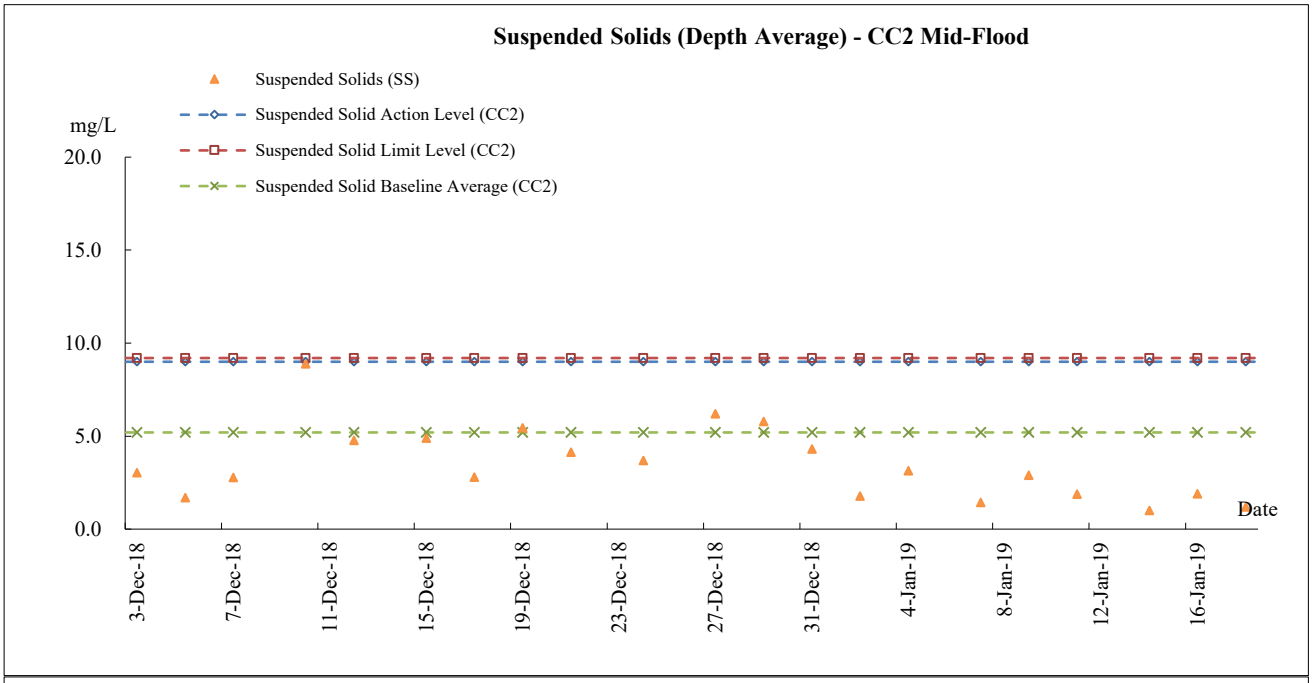
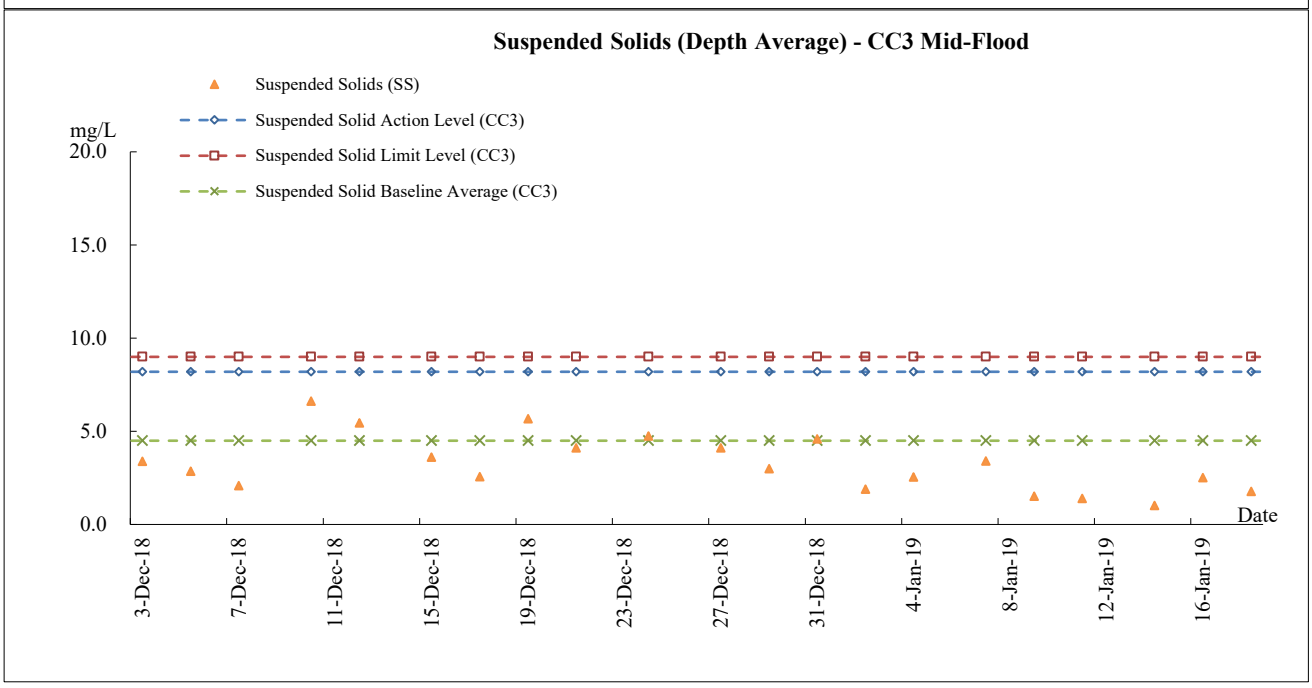
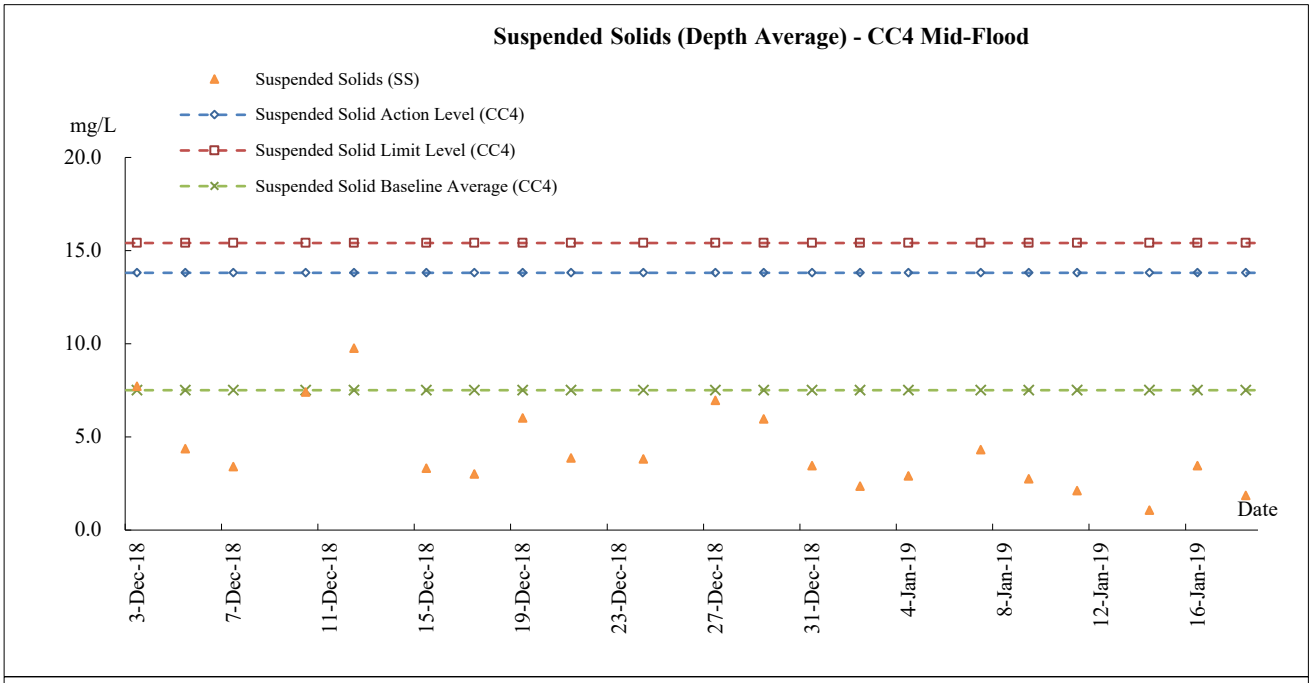
NTU
10.0
8.0
6.0
4.0
2.0
0.0
Turbidity
Turbidity Action Level (CC4)
Turbidity Limit Level (CC4)
Turbidity Baseline Average(CC4)
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19

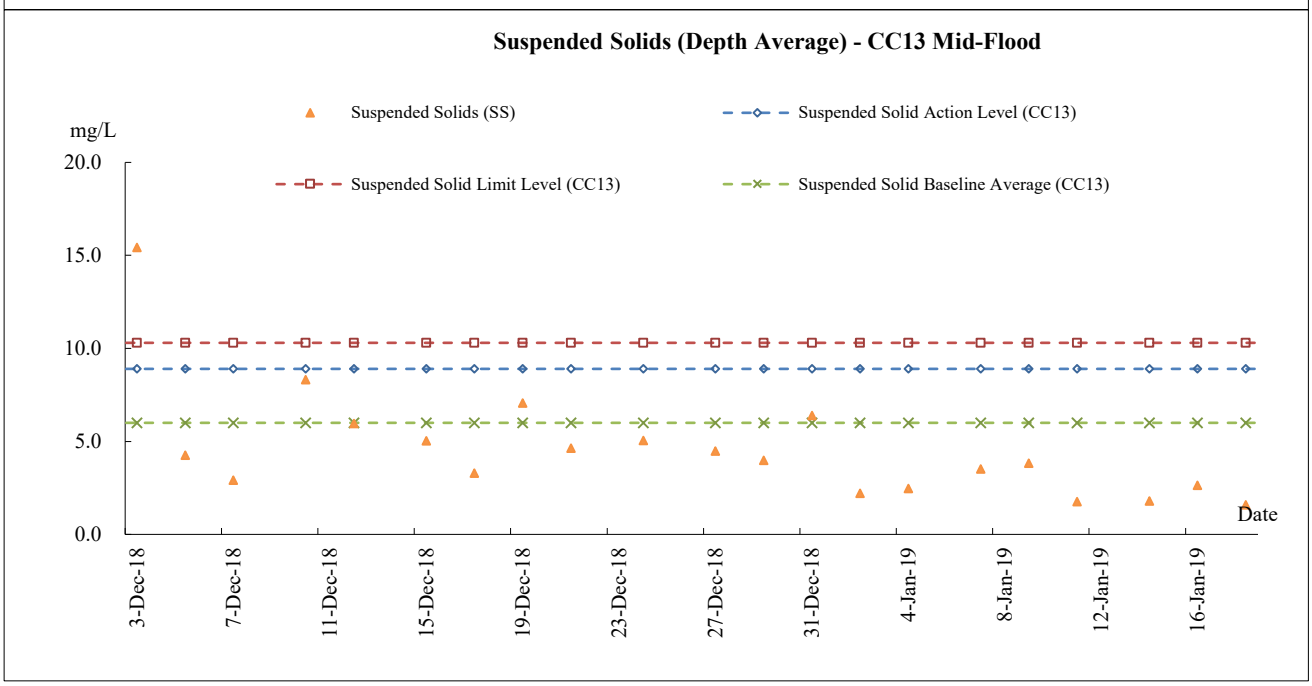

Turbidity (Depth Average) - SWI1 Mid-Flood
NTU
Turbidity
Turbidity Action Level (SWI1)
Turbidity Limit Level (SWI1)
Turbidity Baseline Average (SWI1)
10.0
8.0
6.0
4.0
2.0
0.0
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19

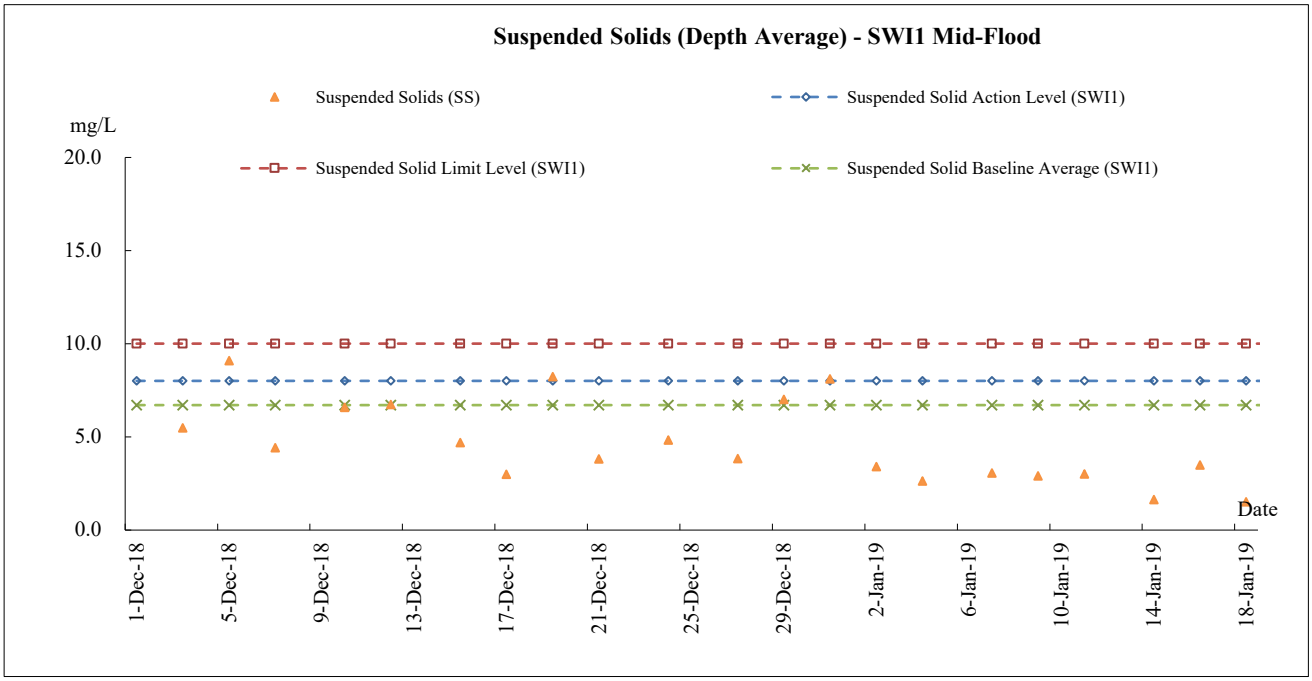

Suspended Solids (Depth Average) - CC1 Mid-Flood
Suspended Solids (SS)
Suspended Solid Action Level (CC1)
mg/L
Suspended Solid Limit Level (CC1)
Suspended Solid Baseline Average (CC1)
20.0
15.0
10.0
5.0
0.0
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


Suspended Solids (Depth Average) - CC2 Mid-Flood
Suspended Solids (SS)
Suspended Solid Action Level (CC2)
Suspended Solid Limit Level (CC2)
Suspended Solid Baseline Average (CC2)
mg/L
20.0
15.0
10.0
5.0
0.0
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


Suspended Solids (Depth Average) - CC3 Mid-Flood
Suspended Solids (SS)
Suspended Solid Action Level (CC3)
Suspended Solid Limit Level (CC3)
Suspended Solid Baseline Average (CC3)
mg/L
20.0
15.0
10.0
5.0
0.0
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


Suspended Solids (Depth Average) - CC4 Mid-Flood
Suspended Solids (SS)
Suspended Solid Action Level (CC4)
Suspended Solid Limit Level (CC4)
Suspended Solid Baseline Average (CC4)
mg/L
20.0
15.0
10.0
5.0
0.0
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19


Suspended Solids (Depth Average) - CC13 Mid-Flood
Suspended Solids (SS)
Suspended Solid Action Level (CC13)
Suspended Solid Limit Level (CC13)
Suspended Solid Baseline Average (CC13)
mg/L
20.0
15.0
10.0
5.0
0.0
Date
3-Dec-18
7-Dec-18
11-Dec-18
15-Dec-18
19-Dec-18
23-Dec-18
27-Dec-18
31-Dec-18
4-Jan-19
8-Jan-19
12-Jan-19
16-Jan-19



Annotations:

- Major marine-based activities being carried out on site during the construction period include:
  - Pre-drilling works
  - Piling works
  - Concrete Work
  - Precast Pier and box girder installation
  - Stage Concrete for pile caps
  - Load-out and Transportation of Steel Main Bridge
  - Load-out and Transportation of Floating-in of Steel Bridge Side Span
  - Precast shell erection and fabrication
  - Welding of steel bracket for precast shell installation
  - Fabrication of bottom deck panels, top deck panels and diaphragm panels
- Water quality monitoring were conducted at eight monitoring stations: Two Control Stations (C3 & C4), six (6) sensitive receivers (CC1, CC2, CC3, CC4, CC13 & SWI1) and one (1) Gradient station (I1), from 3 December 2018 to 29 April 2020.
- The graphical plots of dissolved oxygen, turbidity, and suspended solid show trends on return of ambient environmental conditions upon completion of construction works.
- Weather conditions during the monitoring period ranged from sunny to rainy. Detailed meteorological conditions can be referred to the corresponding Monthly EM&A Reports for the reporting period.
- Other factors including rainfall and seasonal variations might affect the monitoring results recorded during the monitoring period.

Appendix F

Waste Flow Table

Contract 1

Monthly Summary Waste Flow Table for 2018 (year)

Name of Person completing the record: Kanny Cho (EO)

Project : Cross Bay Link, TKO, Main Bridge and Associated Works

Contract No.: NE/2017/07

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 (see Note 3)	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 '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan											
Feb											
Mar											
Apr											
May											
Jun											
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.837
Sep	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.305
Oct	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.065	0.000	0.000	0.008
Nov	0.000	0.000	0.000	0.000	0.000	0.320	0.000	0.000	0.000	0.000	0.009
Dec	0.000	0.000	0.000	0.000	0.276	0.000	0.000	0.000	0.000	0.000	0.004
Total	0.000	0.000	0.000	0.000	0.276	0.320	0.000	0.065	0.000	0.000	1.164

Note:

1. For non-inert portion of C&D material, assume the density of 1 m^3 general refuse is equal to 200 kg.
2. For inert portion of C&D material, assume 6 m^3 per each full-filled dump truck.

Monthly Summary Waste Flow Table for 2019 (year)

Name of Person completing the record: Calvin So (EO)

Project : Cross Bay Link, TKO, Main Bridge and Associated Works Contract No.: NE/2017/07

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 (see Note 3)	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 '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	0.845	0.000	0.000	0.000	0.845	0.000	0.000	0.023	0.000	0.000	0.077
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.000	0.000	0.036
Mar	0.042	0.000	0.000	0.000	0.042	0.000	0.000	0.029	0.000	0.000	0.081
Apr	1.760	0.000	0.000	0.000	1.760	0.000	0.000	0.509	0.000	0.000	0.012
May	1.026	0.000	0.000	0.000	1.026	0.000	0.000	0.094	0.000	0.000	0.030
Jun	0.354	0.000	0.000	0.000	0.354	0.000	0.000	0.087	0.000	0.000	0.050
Sub-total	4.027	0.000	0.000	0.000	4.027	0.000	0.000	0.774	0.000	0.000	0.286
Jul	1.122	0.000	0.000	0.000	1.122	0.000	0.000	0.060	0.000	0.000	0.095
Aug	1.290	0.000	0.000	0.000	1.290	0.000	0.000	0.075	0.000	0.000	0.058
Sep	0.762	0.000	0.000	0.000	0.762	0.000	0.000	0.085	0.000	0.000	0.054
Oct	1.002	0.000	0.000	0.000	1.002	0.000	0.000	0.080	0.000	0.000	0.106
Nov	0.744	0.000	0.000	0.000	0.744	0.000	0.000	0.092	0.000	0.000	0.075
Dec	1.104	0.000	0.000	0.000	1.104	0.000	0.000	0.100	0.000	0.000	0.154
Total	10.051	0.000	0.000	0.000	10.051	0.000	0.000	1.266	0.000	0.000	0.828

Note:

1. For non-inert portion of C&D material, assume the density of 1 m^3 general refuse is equal to 200 kg.
2. For inert portion of C&D material, assume 6 m^3 per each full-filled dump truck.
3. All values are round off to the third decimal places.

Monthly Summary Waste Flow Table for 2020 (year)

Name of Person completing the record: Calvin So (EO)

Project : Cross Bay Link, TKO, Main Bridge and Associated Works

Contract No.: NE/2017/07

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 (see Note 3)	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 '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	1.020	0.000	0.000	0.000	1.020	0.000	0.000	0.088	0.000	0.000	0.100
Feb	0.102	0.000	0.000	0.000	0.102	0.000	0.000	0.095	0.000	0.000	0.073
Mar	0.018	0.000	0.000	0.000	0.018	0.000	0.000	0.073	0.000	0.000	0.092
Apr	0.060	0.000	0.000	0.000	0.060	0.000	0.000	0.090	0.000	0.000	0.133
May	0.180	0.000	0.000	0.000	0.180	0.000	0.000	0.092	0.000	0.000	0.048
Jun	0.006	0.000	0.000	0.000	0.006	0.000	0.000	0.095	0.000	0.000	0.053
Sub-total	1.386	0.000	0.000	0.000	1.386	0.000	0.000	0.533	0.000	0.000	0.499
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.101	0.000	0.000	0.080
Aug	0.054	0.000	0.000	0.000	0.054	0.000	0.000	0.091	0.000	0.000	0.098
Sep	0.264	0.000	0.000	0.000	0.264	0.000	0.000	0.121	0.000	0.000	0.173
Oct	0.624	0.000	0.000	0.000	0.624	0.000	0.000	0.096	0.000	0.000	0.229
Nov	0.462	0.000	0.000	0.000	0.462	0.000	0.000	0.089	0.000	0.000	0.228
Dec	0.312	0.000	0.000	0.000	0.312	0.306	0.000	0.110	0.000	0.000	0.173
Total	3.102	0.000	0.000	0.000	3.102	0.306	0.000	1.141	0.000	0.000	1.479

Note:

1. For non-inert portion of C&D material, assume the density of 1 m^3 general refuse is equal to 200 kg.
2. For inert portion of C&D material, assume 6 m^3 per each full-filled dump truck.
3. All values are round off to the third decimal places.

Monthly Summary Waste Flow Table for 2021 (year)

Name of Person completing the record: Calvin So (EO)

Project : Cross Bay Link, TKO, Main Bridge and Associated Works

Contract No.: NE/2017/07

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 (see Note 3)	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 '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	0.132	0.000	0.000	0.000	0.132	0.000	0.000	0.113	0.000	0.000	0.399
Feb	0.108	0.000	0.000	0.000	0.108	0.000	0.000	0.186	0.000	0.000	0.351
Mar	0.060	0.000	0.000	0.000	0.060	0.000	0.000	0.099	0.000	0.000	0.512
Apr	0.018	0.000	0.000	0.000	0.018	0.000	0.000	0.121	0.000	0.000	0.283
May	0.576	0.000	0.000	0.000	0.576	0.000	0.000	0.103	0.000	0.000	0.278
Jun	1.170	0.000	0.000	0.000	1.170	0.000	0.000	0.210	0.000	0.000	0.437
Sub-total	2.064	0.000	0.000	0.000	2.064	0.000	0.000	0.832	0.000	0.000	2.259
Jul	0.060	0.000	0.000	0.000	0.060	0.000	0.000	0.155	0.000	0.000	0.204
Aug	0.018	0.000	0.000	0.000	0.018	0.000	0.000	0.170	0.000	0.000	0.157
Sep	0.066	0.000	0.000	0.000	0.066	0.000	0.000	0.141	0.000	0.000	0.284
Oct	0.036	0.000	0.000	0.000	0.036	0.000	0.000	0.151	0.000	0.000	0.211
Nov	0.498	0.000	0.000	0.000	0.498	0.000	0.000	0.160	0.000	0.000	0.343
Dec	0.006	0.000	0.000	0.000	0.006	0.000	0.000	0.154	0.000	0.000	0.181
Total	2.748	0.000	0.000	0.000	2.748	0.000	0.000	1.763	0.000	0.000	3.639

Note:

1. For non-inert portion of C&D material, assume the density of 1 m^3 general refuse is equal to 200 kg.
2. For inert portion of C&D material, assume 6 m^3 per each full-filled dump truck.
3. All values are round off to the third decimal places.

Monthly Summary Waste Flow Table for 2022 (year)

Name of Person completing the record: Sedo Sze (EO)

Project : Cross Bay Link, TKO, Main Bridge and Associated Works

Contract No.: NE/2017/07

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 (see Note 3)	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 '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	0.162	0.000	0.000	0.000	0.162	0.000	0.000	0.171	0.000	0.000	0.768
Feb	0.066	0.000	0.000	0.000	0.066	0.000	0.000	0.210	0.000	0.000	0.513
Mar	0.306	0.000	0.000	0.000	0.306	0.000	0.000	0.163	0.000	0.000	0.750
Apr	0.126	0.000	0.000	0.000	0.126	0.000	0.000	0.182	0.000	0.000	0.552
May	0.054	0.000	0.000	0.000	0.054	0.000	0.000	0.194	0.000	0.000	0.600
Jun	0.306	0.000	0.000	0.000	0.306	0.000	0.000	0.158	0.000	0.000	0.439
Sub-total	1.020	0.000	0.000	0.000	1.020	0.000	0.000	1.078	0.000	0.000	3.623
Jul	0.102	0.000	0.000	0.000	0.102	0.000	0.000	0.204	0.000	0.000	0.422
Aug	0.246	0.000	0.000	0.000	0.246	0.000	0.000	0.168	0.000	0.000	0.784
Sep	0.096	0.000	0.000	0.000	0.096	0.000	0.000	0.195	0.000	0.000	1.450
Oct	0.012	0.000	0.000	0.000	0.012	0.000	0.000	0.150	0.000	0.000	1.011
Nov	0.090	0.000	0.000	0.000	0.090	0.000	0.000	0.210	0.000	0.132	1.037
Dec	0.006	0.000	0.000	0.000	0.006	0.000	0.000	0.152	0.000	0.000	0.642
Total	1.572	0.000	0.000	0.000	1.572	0.000	0.000	2.157	0.000	0.132	8.969

Note:

1. For non-inert portion of C&D material, assume the density of 1 m^3 general refuse is equal to 200 kg.
2. For inert portion of C&D material, assume 6 m^3 per each full-filled dump truck.
3. All values are round off to the third decimal places.

Monthly Summary Waste Flow Table for 2023 (year)

Name of Person completing the record: Janice Poon (ES)

Project : Cross Bay Link, TKO, Main Bridge and Associated Works

Contract No.: NE/2017/07

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 (see Note 3)	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 '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	0.018	0.000	0.000	0.000	0.018	0.000	0.000	0.160	0.000	0.000	0.148
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.210	0.000	0.000	0.052
Mar	0.006	0.000	0.000	0.000	0.006	0.000	0.000	0.215	0.000	0.000	0.243
Apr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.192	0.000	0.000	0.063
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.205	0.000	0.000	0.033
Jun	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.220	0.000	0.000	0.025
Sub-total	0.024	0.000	0.000	0.000	0.024	0.000	0.000	1.202	0.000	0.000	0.563
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.210	0.000	0.000	0.109
Aug	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.000	0.000	0.157
Sep	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.170	0.000	0.000	0.067
Oct	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.215	0.000	0.000	0.067
Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.000	0.000	0.043
Dec	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.210	0.000	0.000	0.013
Total	0.024	0.000	0.000	0.000	0.024	0.000	0.000	2.457	0.000	0.000	1.019

Note:

1. For non-inert portion of C&D material, assume the density of 1 m^3 general refuse is equal to 200 kg.
2. For inert portion of C&D material, assume 6 m^3 per each full-filled dump truck.
3. All values are round off to the third decimal places.

Monthly Summary Waste Flow Table for 2024 (year)

Name of Person completing the record: Joe Wong (EO)

Project : Cross Bay Link, TKO, Main Bridge and Associated Works Contract No.: NE/2017/07

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 (see Note 3)	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 '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	0.138	0.000	0.000	0.000	0.138	0.000	0.000	0.230	0.000	0.000	0.076
Feb	0.078	0.000	0.000	0.000	0.078	0.000	0.000	0.000	0.000	0.000	0.031
Mar	0.108	0.000	0.000	0.000	0.108	0.000	0.000	0.000	0.000	0.000	0.011
Apr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
Jun	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sub-total	0.324	0.000	0.000	0.000	0.324	0.000	0.000	0.230	0.000	0.000	0.141
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019
Aug	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021
Sep	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021
Oct	0.006	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.058
Nov	0.006	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.020
Dec	0.012	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.011
Total	0.348	0.000	0.000	0.000	0.348	0.000	0.000	0.230	0.000	0.000	0.291

Note:

1. For non-inert portion of C&D material, assume the density of 1 m^3 general refuse is equal to 200 kg.
2. For inert portion of C&D material, assume 6 m^3 per each full-filled dump truck.
3. All values are round off to the third decimal places.

Monthly Summary Waste Flow Table for 2025 (year)

Name of Person completing the record: Joe Wong (EO)

Project : Cross Bay Link, TKO, Main Bridge and Associated Works Contract No.: NE/2017/07

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 (see Note 3)	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 '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.230	0.000	0.000	0.021
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr	0.041	0.000	0.000	0.000	0.041	0.000	0.000	0.000	0.000	0.000	0.004
May											
Jun											
Sub-total	0.041	0.000	0.000	0.000	0.041	0.000	0.000	0.230	0.000	0.000	0.025
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	0.041	0.000	0.000	0.000	0.041	0.000	0.000	0.230	0.000	0.000	0.025

Note:

1. For non-inert portion of C&D material, assume the density of 1 m^3 general refuse is equal to 200 kg.
2. For inert portion of C&D material, assume 6 m^3 per each full-filled dump truck.
3. All values are round off to the third decimal places.

Contract 2

Monthly Summary Waste Flow Table for 2019 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	0.358	0.000	0.358	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.357
Feb	0.022	0.000	0.000	0.000	0.022	0.000	0.000	0.000	0.000	0.000	0.728
Mar	0.106	0.000	0.000	0.000	0.106	0.000	0.000	0.000	0.000	0.000	0.229
Apr	3.013	0.000	0.000	0.000	3.013	0.000	0.000	0.000	0.000	0.000	0.013
May	3.621	0.000	0.000	0.000	3.621	0.000	0.000	0.000	0.000	0.000	0.022
June	1.127	0.000	0.000	0.000	1.127	0.000	0.000	0.000	0.000	0.000	0.019
SUB-TOTAL	8.247	0.000	0.358	0.000	7.889	0.000	0.000	0.000	0.000	0.000	1.368
Jul	2.468	0.000	0.000	0.000	1.879	0.589	0.000	0.000	0.000	0.000	0.031
Aug	4.401	0.000	0.000	0.000	4.262	0.140	0.000	0.000	0.000	0.000	0.004
Sep	1.912	0.000	0.000	0.046	1.866	0.000	0.000	0.000	0.000	0.000	0.009
Oct	4.384	0.000	0.000	0.000	4.384	0.000	0.000	0.000	0.000	0.000	0.007
Nov	2.351	0.000	0.000	0.000	2.351	0.000	8.870	0.000	0.000	0.000	0.004
Dec	0.700	0.000	0.000	0.000	0.700	0.000	0.000	0.000	0.000	0.000	0.012
TOTAL	24.463	0.000	0.358	0.046	23.331	0.728	8.870	0.000	0.000	0.000	1.436

Note: Conversion to 1000m^3 for general refuse is weight in 1000kg multiply by 0.002

Conversion to 1000m^3 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

Assume the loaded volume of a dump truck for internal inert waste transfer is 17.9 m^3

Monthly Summary Waste Flow Table for 2020 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	1.374	0.000	0.000	0.000	1.374	0.000	0.000	0.000	0.000	0.000	0.019
Feb	1.750	0.000	0.000	0.000	1.750	0.000	0.000	0.000	0.000	0.000	0.004
Mar	3.422	0.000	0.000	0.000	3.422	0.000	0.000	0.000	0.000	0.000	0.013
Apr	6.641	0.000	0.000	0.000	6.641	0.000	0.000	0.000	0.000	0.000	0.035
May	2.256	0.000	0.000	0.000	2.256	0.000	0.000	0.000	0.000	0.000	0.052
June	0.397	0.000	0.000	0.000	0.397	0.000	0.000	0.000	0.000	0.000	0.019
SUB-TOTAL	15.841	0.000	0.000	0.000	15.841	0.000	0.000	0.000	0.000	0.000	0.141
Jul	0.563	0.000	0.000	0.000	0.563	1.425	0.000	0.000	0.000	0.000	0.018
Aug	0.604	0.000	0.000	0.000	0.604	1.024	0.000	0.000	0.000	0.000	0.022
Sep	0.547	0.000	0.000	0.000	0.547	0.672	0.000	0.045	0.010	0.000	0.040
Oct	1.448	0.000	0.000	0.000	1.448	0.802	0.005	0.050	0.015	0.015	0.026
Nov	2.152	0.000	0.000	0.000	2.152	0.570	0.003	0.050	0.005	0.000	0.008
Dec	1.103	0.000	0.000	0.000	1.103	0.436	0.005	0.080	0.010	0.000	0.025
TOTAL	22.258	0.000	0.000	0.000	22.258	4.929	0.013	0.225	0.040	0.015	0.280

Remark: Total quantity of inert C&D materials generated from July to November 2020 were updated.

Note: Conversion to 1000m^3 for general refuse is weight in 1000kg multiply by 0.002

Conversion to 1000m^3 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

Assume the loaded volume of a dump truck for internal inert waste transfer is 17.9 m^3

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	1.685	0.000	0.000	0.000	1.685	0.744	0.005	0.050	0.020	0.000	0.032
Feb	0.244	0.000	0.000	0.000	0.244	0.307	0.005	0.050	0.020	0.000	0.011
Mar	2.449	0.000	0.000	0.000	2.449	0.000	0.006	0.070	0.030	0.000	0.026
Apr	2.634	0.000	0.000	0.000	2.634	0.000	0.006	0.050	0.020	0.000	0.026
May	0.390	0.000	0.000	0.000	0.390	0.000	0.003	0.100	0.020	0.000	0.044
June	0.287	0.000	0.000	0.000	0.287	0.000	0.002	0.150	0.030	0.000	0.009
SUB-TOTAL	7.689	0.000	0.000	0.000	7.689	1.051	0.027	0.470	0.140	0.000	0.147
Jul	0.180	0.000	0.000	0.000	0.180	0.000	0.002	0.150	0.030	0.000	0.019
Aug	0.284	0.000	0.000	0.000	0.284	0.000	0.005	0.100	0.005	0.000	0.035
Sep	0.310	0.000	0.000	0.000	0.310	0.000	0.000	0.050	0.000	0.000	0.036
Oct	0.256	0.000	0.000	0.000	0.256	0.000	0.000	0.000	0.000	0.000	0.023
Nov	2.079	0.000	0.000	0.000	2.079	0.000	0.000	0.000	0.000	0.000	0.046
Dec	1.837	0.000	0.000	0.000	1.712	0.125	0.000	0.000	0.000	0.000	0.056
TOTAL	12.634	0.000	0.000	0.000	12.509	1.176	0.034	0.770	0.175	0.000	0.362

Note: Conversion to 1000m^3 for general refuse is weight in 1000kg multiply by 0.002

Conversion to 1000m^3 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

Assume the loaded volume of a dump truck for internal inert waste transfer is 17.9 m^3

Monthly Summary Waste Flow Table for 2022 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	2.835	0.000	0.000	0.000	2.835	0.530	0.000	0.000	0.000	0.000	0.160
Feb	0.199	0.000	0.000	0.000	0.199	1.049	0.000	0.000	0.000	0.000	0.048
Mar	0.298	0.000	0.000	0.000	0.298	0.780	0.000	0.000	0.000	0.000	0.072
Apr	0.348	0.000	0.000	0.000	0.348	0.567	0.000	0.000	0.000	0.000	0.067
May	0.251	0.000	0.000	0.000	0.251	0.422	0.000	0.000	0.000	0.000	0.110
June	1.642	0.000	0.000	0.000	1.642	0.468	0.000	0.000	0.000	0.000	0.052
SUB-TOTAL	5.573	0.000	0.000	0.000	5.573	3.816	0.000	0.000	0.000	0.000	0.509
Jul	0.965	0.000	0.000	0.000	0.965	1.590	0.000	0.000	0.000	0.000	0.070
Aug	0.692	0.000	0.000	0.000	0.692	0.453	0.000	0.000	0.000	0.000	0.070
Sep	0.649	0.000	0.000	0.000	0.649	0.358	0.000	0.000	0.000	0.000	0.143
Oct	1.053	0.000	0.000	0.000	1.053	0.061	0.000	0.000	0.000	0.000	0.076
Nov	0.517	0.000	0.000	0.000	0.517	0.000	0.000	0.000	0.000	0.000	0.173
Dec	0.819	0.000	0.000	0.000	0.819	0.000	0.000	0.000	0.000	0.000	0.130
TOTAL	10.268	0.000	0.000	0.000	10.268	6.278	0.000	0.000	0.000	0.000	1.172

Note: Conversion to 1000m^3 for general refuse is weight in 1000kg multiply by 0.002

Conversion to 1000m^3 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

Assume the loaded volume of a dump truck for internal inert waste transfer is 17.9 m^3

Monthly Summary Waste Flow Table for 2023 Year

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity	Hard Rock and	Reused in the	Reused in other	Disposal as Public	Imported Fill	Metals	Paper / Cardboard	Plastics	Chemical Waste	Other, e.g. general
	[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	0.265	0.000	0.000	0.000	0.265	0.000	0.000	0.000	0.000	0.000	0.014
Feb	0.009	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.008
Mar	0.014	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.020
Apr	0.015	0.000	0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000
May	0.014	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.006
June	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.012
SUB-TOTAL	0.319	0.000	0.000	0.000	0.319	0.000	0.000	0.000	0.000	0.000	0.060
Jul	0.008	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.017
Aug	0.014	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.015
Sep	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.032
Oct	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015
Dec	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.341	0.000	0.000	0.000	0.341	0.000	0.000	0.000	0.000	0.000	0.139

Note: Conversion to 1000m^3 for general refuse is weight in 1000kg multiply by 0.002

Conversion to 1000m^3 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

Assume the loaded volume of a dump truck for internal inert waste transfer is 17.9 m^3

Monthly Summary Waste Flow Table for 2024 Year

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity [in '000m^3]	Hard Rock and [in '000m^3]	Reused in the [in '000m^3]	Reused in other [in '000m^3]	Disposal as Public [in '000m^3]	Imported Fill [in '000m^3]	Metals [in '000kg]	Paper / [in '000kg]	Plastics [in '000kg]	Chemical Waste [in '000kg]	Other, e.g. [in '000m^3]
Jan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015
Mar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
Apr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009
June	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUB-TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
Sep	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dec	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.890
TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.934

Note: Conversion to 1000m^3 for general refuse is weight in 1000kg multiply by 0.002

Conversion to 1000m^3 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

Assume the loaded volume of a dump truck for internal inert waste transfer is 17.9 m^3

Monthly Summary Waste Flow Table for 2025 Year

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity [in '000m^3]	Hard Rock and [in '000m^3]	Reused in the [in '000m^3]	Reused in other [in '000m^3]	Disposal as [in '000m^3]	Imported Fill [in '000m^3]	Metals [in '000kg]	Paper / [in '000kg]	Plastics [in '000kg]	Chemical Waste [in '000kg]	Other, e.g. [in '000m^3]
Jan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May											
June											
SUB-TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005

Note: **Conversion to 1000m^3 for general refuse is weight in 1000kg multiply by 0.002**
Conversion to 1000m^3 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
Assume the loaded volume of a dump truck for internal inert waste transfer is 17.9 m^3

Appendix G

Meteorological Data

Extract of Monthly Data – Tseung Kwan O Station

2018

Month	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
	Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)					
1	26.7	18.4	15.3	12.9	6.6	11	78	75.0	10	6.5
2	26	18.5	15.2	12.3	5.2	10.6	75	8.0	60	5.2
3	27.9	23.5	19.4	16.6	9.3	15.5	80	18.0	20	5.1
4	29.4	26	22.4	19.8	14.1	19	83	22.5	60	4.5
5	36.8	31.6	27.5	24.4	20.9	23.5	80	114.5	190	5.6
6	34.8	31	27.8	25.4	23.5	24.7	84	536.5	190	5.9
7	35	31.7	28.4	26	24.6	25.4	85	296.5	190	5.9
8	34.4	31.1	27.8	25.7	23.8	25.6	89	579	190	4.5
9	35.2	31.2	27.1	24.4	22.3	23.7	83	310	190	6.0
10	31.1	27.9	24.2	21.3	17.6	18.3	73	58.5	60	6.0
11	29.8	25.2	22.1	20.1	15.2	18.4	81	76.0	60	6.6
12	29.4	21.6	18.2	16	9.4	14.2	79	26.5	60	6.1

2019

Month	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
	Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)					
1	26.9	20.8	17.2	14.6	9.2	13.2	79	5.0	60	5.4
2	27.3	22.1	19.1	17.2	13.3	17	88	67.0	60	5.9
3	28.3	22.5	20	17.9	14.4	17.8	88	208	10	5.7
4	32.6	27	23.8#	21.7	18.3	21.3#	87#	181.5#	190#	5.1#
5	33.0#	26.7#	24.9#	22.9#	18.6#	22.7#	88#	249.0#	020#	5.9#
6	34	31.4	28.1	25.7	22.9	25.5	86	492	190	5.0
7	34.8	32	28.7	26.3	24.4	25.8	85	446.5	190	5.5
8	36.3	32.2	28.4	25.7	22.7	24.6	81	435.5	190	5.6
9	35	31.8	27.6	24.6	22.2	22	74	193	020#	5.7#
10	34.8	29.4	25.5	22.7	18.2	20.1	73	180.5	60	5.8
11	30.4	26.4	21.9	18.8	15.1	15.4	68	0.0	60	6.1
12	28.3	22.1	18	15.1	10.9	11.0#	67#	17.0	60	6.2

#data incomplete

2020

Month	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
	Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)					
1	27.1	21	17.5	15.2	9.3	12.5	74	19.5	60	6.2
2	28.7	20.8	17.4	15.1	8.9	12.9	76	66.0	60	5.6
3	30.4	22.8	20.2	18.4	14.9	17	83	69.0	10	5.0
4	31.4	24.5	20.8	18.1	14	16.1	77	91.5	60	5.0
5	34.5	29.9	26.8	24.5	20.5	23.6	83	433	190	4.6
6	34	32.2	28.8	26.5	23.4	24.7	79	420	190	5.9
7	35.9	33.5	29.7	27.1	24.9	24.9	76	89.5	190	6.1
8	35.5	31.7	28.1	25.4	23.6	24.8	83	449	190	4.5
9	34.9	31.6	28.3	26.3	24.8	24.8	81	698.5	120	3.7
10	32.3	29.1	25.7	23.3	20.7	18.7	66	79.5	60	7.2
11	32.6	27.1	23	20.6	16.3	17	70	4.0	60	5.3
12	27	21.5	17.5	14.6	6.8	11.3	69	0.5	60	5.2

2021

Month	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
	Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)					
1	26.9	19.8	15.3	12.2	6.7	7.2	61	0.0	60	5.0
2	27.7	23.2	18.6	15.4	12.8	14.3	78	52.5#	060#	4.8#
3	30.6#	24.2#	21.3#	19.2#	15.1#	17.7#	81#	9.0	020#	5.1#
4	33	26.1	23.2	21.3	19.2	19.8	82	50.5	60	5.4
5	34.4	32.1	28.3	25.6	21.3	24.4	80	137.5	190	5.2
6	33.2	30.6	27.7	25.7	23.2	24.8#	83#	526.5	190	3.6
7	36.1	32.2	28.8	26.4	23.9	25.9	85	660.5	190	0.6
8	34.5	31.5	27.9	25.8	22.1	25.3	87	352	190#	0.2#
9	35.3	32.3	28.4	25.9	23.7	25.2	84	236.5	140#	5.5#
10	33.4	28.1	24.9	22.6	16.8	21.1	80	564	70	7.9
11	32	25.6	21.1	18.3	13.5	14.7	69	1.0	70	5.4
12	26.8	22.1	18.2#	15.2	9.6	11.8#	69#	24.0	70	6.0

#data incomplete

2022

Month	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
	Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)					
1	25.6	20.7	17.6	15.4	12.6	14.1	81	9.0	30	5.5
2	22.3	17.9	15	12.9	7.5	12.2	84	186	80	6.2
3	29.8	25	21	18.3	13	17.7	83	104.5	20	5.7
4	32	26.9	23.1	20.4	13.3	18.9	79	14.0	80	6.1
5	32.2	27.3	24.6	22.6	16.4	21.8	86	546	30	6.1
6	34.9	31.1	28.3	26.3	23.9	25.7	86	430.5	200	6.3
7	36.8	33.4	29.8	27.1	24	26.1	82	200	200	6.9
8	35.3	32.3	28.4	26	24.5	26	87	556.5	130	5.6
9	36.8	32.9	28.4	25.3	23.6	23.4	76	213	30	5.9
10	32.7	29.5	25.2	22.2	16.3	19	70	34.0	70	7.7
11	30.1	25.4	22.5	20.6	17	20.5	89	199.5	30	6.6
12	25.1	20.1	15.6	12.5	7.8	9.7	70	28.5	80	6.6

2023

Month	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
	Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)					
1	26.4	19.9	16.2	13.4	7.1	10.6	72	17.0	70	6.3
2	29.6	21.7	18	15.7	11.4	13.8	78	8.5	30	6.3
3	28.2	23.7	20.2	17.6	12.9	16.6	82	97.0	30	6.0
4	32	25.4	22.9	20.8	17.1	20.7	88	90.5	30	6.3
5	35.6	28.9	25.9	23.8	19.7	23.4	87	151.5	210	6.2
6	34.5	31.8	28.4	26.2	24.2	26.2	89	493.5	210	5.5
7	37.7	33.4	29.4	26.6	25.5	25.9	82	147	200	6.8
8	35	32.8	28.8	26.4	24.8	26.1	86	204.5	210	5.7
9	35.4	31.2	27.8	25.8	24.1	25.4	87	939.5	30	7.0
10	34.7	29	25.6	23.4	20.8	22.1	82	603	30	7.8
11	31.8	26.6	22.3	19.3	14.5	17.6	76	5.0	70	6.6
12	30.1	22.5	18.4	15.3	7.5	13.5	75	2.0	80	6.2

2024

Month	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
	Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)					
1	27	21	17.1	14.3	5.8	12.6	76	7.5	80	6.7
2	28.3	21.8	18.6	16.3	9.8	15.9	85	7.0	80	5.8
3	31.8	23.5	20.3	17.9	9.3	17.2	83	33.5	70	6.5
4	32.4	28.2	25.4	23.2	20.3	23.5	90	357	210	6.2
5	32.2	27.8	25.2	23.5	21.7	22.8	88	711	40	6.9
6	33.9	30.7	27.9	25.8	22.3	26	90	368.5#	210	6.4
7	35.2	32.3	29.1	26.9	25.2	26.5	86	435	210	6.8
8	36.7	32.9	29	26.4	24.9	26.2	86	217	210	5.6
9	35.4	32.4	28.2	25.5	22.5	25.6	87	514.5	30	6.0
10	35.4	30.4	26.3	23.6	20.3	20.6	72	54.5	70	7.6
11	31.4	26.1	22.1	19.6	12.7	17.6	77	216	70	7.1
12	27.8	22.3	17.7	14.5	10	10.6	65	0.0	70	6.6

#data incomplete

2025

Month	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
	Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)					
1	24.1	20.7	16.1	13	9.1	8.9	65	14.5	30	6.8
2	27.5	19.9	16.6	14.1	9.9	12.5	78	32.0	70	6.8
3	29.9	23.2	19	15.9	11.3	15.3	81	52.5	80	5.6
4	32.7	26.5	22.5	19.4	12	18.6	81	91.0	200	6.0

Appendix H

Implementation Schedule for Environmental Mitigation Measures

EIA Ref	Environmental Protection Measures/ Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to Address	Location/ Timing	Implementation		Requirements and/or Standards to be Achieved
				Agent	Stage	
Dust Impact (Contraction Phase)						
S5.5.5.1	Regular watering under good site practice shall be adopted. In accordance with the "Control of Open Fugitive Dust Sources" (USEPA AP-42), watering once per hour on exposed worksites and haul road is recommended to achieve dust removal efficiency of 91.7%.	Good construction site practices to control the dust impact on the nearby sensitive receivers to within the relevant criteria	All construction sites	Contractor	Construction stage	• APCO (Cap. 311); and • Air Pollution Control (Construction Dust) Regulation
S5.5.5.3	The following dust suppression measures shall also be incorporated by the Contractor to control the dust nuisance throughout the construction phase: • Any excavated or stockpiled dusty material shall be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; • Any dusty materials remaining after a stockpile is removed shall be wetted with water and cleared from the surface of roads; • A stockpile of dusty material shall not extend beyond the pedestrian barriers, fencing or traffic cones; • The load of dusty materials on a vehicle leaving a construction site shall be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; • Where practicable, vehicle washing facilities with high pressure water jet shall be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point shall be paved with concrete, bituminous materials or hardcores; • When there are open excavation and reinstatement works, hoarding of not less than 2.4m high shall be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period; • The portion of any road leading to the construction site that is within 30m of a vehicle entrance or exit shall be kept clear	Good construction site practices to control the dust impact on the nearby sensitive receivers to within the relevant criteria	All construction sites	Contractor	Construction stage	• APCO (Cap. 311); and • Air Pollution Control (Construction Dust) Regulation

EIA Ref	Environmental Protection Measures/ Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to Address	Location/ Timing	Implementation		Requirements and/or Standards to be Achieved
				Agent	Stage	
	of dusty materials; • Surfaces where any pneumatic or power driven drilling, cutting, polishing or other mechanical breaking operation takes place shall be sprayed with water or a dust suppression chemical continuously; • Any area that involves demolition activities shall be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; • Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting shall be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; • Any skip hoist for material transport shall be totally enclosed by impervious sheeting; • Exposed earth shall be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.					
S5.5.5.4	For the barging facilities at the site compound, the following good site practice is required: • All road surfaces within the barging facilities shall be paved. • Vehicles should pass through designated wheel wash facilities. • Continuous water spray shall be installed at the loading point.	Good construction site practices to control the dust impact on the nearby sensitive receivers to within the relevant criteria	Site compound	Contractor	Construction stage	• APCO (Cap. 311); and • Air Pollution Control (Construction Dust) Regulation
S5.5.5.5	An audit and monitoring programme during the construction phase should be implemented by the Contractor to ensure that the construction dust impacts are controlled to within the HKAQO. Detailed requirements for the audit and monitoring programmes are given separately in the EM&A manual.	Monitor the 1-Hour and 24-Hr TSP levels at the representative dust monitoring stations to ensure compliance with relevant criteria throughout the construction period	Selected representative dust monitoring station (**Drawing no. 209506/EMA/ AIR/001**)	Contractor	Construction stage	• APCO (Cap. 311); and • Air Pollution Control (Construction Dust) Regulation
Noise Impact (Contraction Phase)						

EIA Ref	Environmental Protection Measures/ Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to Address	Location/ Timing	Implementation		Requirements and/or Standards to be Achieved
				Agent	Stage	
S6.6.4.3	Good site practice and noise management techniques: • Only well-maintained plant shall be operated on-site and the plant shall be serviced regularly during the construction programme; • Machines and plant (such as trucks, cranes) that are in intermittent use shall be shut down between work periods or throttled down to a minimum; • Plant known to emit noise strongly in one direction, where possible, shall be orientated so that the noise is directed away from nearby NSRs; • Silencers or mufflers on construction equipment shall be properly fitted and maintained during the construction works; • Mobile plant shall be sited as far away from NSRs as possible and practicable; and • Material stockpiles, site office and other structures shall be effectively utilised, where practicable, to screen noise from on-site construction activities.	To minimize construction noise impact arising from the Project on the affected NSRs	All construction sites	Contractor	Construction stage	• Annex 5, TM-EIAO
S6.6.4.5-6	Use of quiet powered mechanical equipment and working methods	Reduce noise levels of plant items	All construction sites	Contractor	Construction stage	• Annex 5, TM-EIAO
S6.6.4.7	Install site hoarding at the site boundaries between noisy construction activities and NSRs	Reduce the construction noise levels at low-level zone of NSRs through partial screening	All construction sites	Contractor	Construction stage	• Annex 5, TM-EIAO
S6.6.4.8-11	Use of temporary or movable noise barriers and full enclosure for relatively fixed plant source	Screen the noisy plant items to be used at all construction sites	For plant items listed in Table 6.7 and Appendix 6.1 of the EIA report at all construction sites	Contractor	Construction stage	• Annex 5, TM-EIAO
	Implement a noise monitoring programme under the EM&A manual	Monitor the construction noise levels at the selected representative locations	Selected representative noise monitoring stations (**Drawing no. 209506/EMA/NS/001** & **209506/EMA/NS/002**)	Contractor	Construction stage	• Annex 5, TM-EIAO
S6.7.3.1	Partial enclosures along Road D9 and application of low noise surfacing material along CBL and Road D9	To minimize road traffic noise impact arising from the CBL and Road D9 on the affected NSRs	CBL and Road D9 (**Drawing no. 209506/EMA/NS/003**)	CEDD/ Contractor	During operational stage	• Annex 5, TM-EIAO

EIA Ref	Environmental Protection Measures/ Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to Address	Location/ Timing	Implementation		Requirements and/or Standards to be Achieved
				Agent	Stage	
Water Quality Impact (Contraction Phase)						
S8.6.4.3	Marine Piling and Pile Excavation Works Marine piling and pile excavation works shall be undertaken in such a manner as to minimize re-suspension of sediments. Standard good practice measures shall be implemented, including the following requirements: • All marine piling and pile excavation works shall be conducted within a floating single silt curtain. • Mechanical closed grabs (with a size of5m3) shall be designed and maintained to avoid spillage and should seal tightly while being lifted. • Barges shall have tight fitting seals to their bottom openings to prevent leakage of material. • Any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes. • Loading of barges shall be controlled to prevent splashing of dredged material to the surrounding water. Barges shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation. • 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. • All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash. • The works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site.	To control potential impacts from marine piling and pile excavation works	During marine piling and pile excavation works	Contractor	Construction stage	• TM-EIAO; and • WPCO
S8.6.4.4	Construction Site Runoff In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures, where appropriate, shall include the following: • The design of efficient silt removal facilities shall be based on the guidelines in Appendix A1 of ProPECC PN 1/94. The	Control potential water quality impacts from construction site run-off	All construction sites	Contractor	Construction stage	• TM-EIAO; and • WPCO

EIA Ref	Environmental Protection Measures/ Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to Address	Location/ Timing	Implementation		Requirements and/or Standards to be Achieved
				Agent	Stage	
	detailed design of the sand/silt traps shall be undertaken by the contractor prior to the commencement of construction; • Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m3 shall be covered with tarpaulin or similar fabric during rainstorms. Measures shall be taken to prevent the washing away of construction materials, soil, silt or debris into any marine water bodies; • All vehicles and plant shall 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 sited wheel washing facilities shall be provided at every construction site exit where practicable. Wash-water shall 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 wheel-wash bay to the public road shall be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains; • Construction solid waste, debris and rubbish on site shall be collected, handled and disposed of properly to avoid water quality impacts; • All fuel tanks and storage areas shall be provided with locks and sited 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 water sensitive receivers nearby; and • Regular environmental audit on the construction site shall be carried out in order to prevent any malpractices. Notices shall be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the meander, wetlands and fish ponds.					
S8.6.4.6	Sewage from workforce • Portable chemical toilets and sewage holding tanks shall be provided for handling the construction sewage generated by the workforce; • A licensed contractor shall be employed to provide appropriate and adequate portable toilets and be responsible	Control potential water quality impacts from sewage	All construction sites	Contractor	Construction stage	• TM-EIAO; and • WPCO

EIA Ref	Environmental Protection Measures/ Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to Address	Location/ Timing	Implementation		Requirements and/or Standards to be Achieved
				Agent	Stage	
	for appropriate disposal and maintenance.					
	Monitoring Implement a marine water quality monitoring programme under the EM&A on level of suspended solids (SS) / turbidity and dissolved oxygen (DO) shall be carried out.	Control potential water quality impacts from marine piling and pile excavation works	Selected monitoring stations (**Drawing no. 209506/EMA/WQ/001**)	Contractor	Construction station	• TM-EIAO; and • WPCO
S8.7.3.2	**Operational phase – Runoff from road surface** Proper drainage systems with silt traps and oil interceptors shall be installed, maintained and cleaned at regular intervals.	Control potential water quality impacts from road surface runoff	CBL and Road D9	Contractor	Construction and operational stage	• TM-EIAO; and • WPCO
Waste Management (Contraction Phase)						
S9.5.2	**Good Site Practices** Recommendations for good site practices: • Nomination of an approved personnel to be responsible for the implementation of good site practices, arrangements for collection and effective deposal to an appropriate facility of all wastes generated at the site; • Training of site personnel in proper waste management and chemical handling procedures; • Provision of sufficient waste disposal points and regular collection for disposal; • Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre; • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; and • Implementation of a recording system for the amount of wastes generated/recycled and disposal sites.	Good site practices which ensure waste generated during construction phase is properly managed	All construction sites	Contractor	Construction stage	• Waste Disposal Ordinance (Cap. 54); • ETWB TCW No. 19/2005

EIA Ref	Environmental Protection Measures/ Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to Address	Location/ Timing	Implementation		Requirements and/or Standards to be Achieved
				Agent	Stage	
S9.5.4	**Waste Reduction Measures** Recommendations for achieving waste reduction include: • On-site reuse of any material excavated as far as practicable; • Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of material and their proper disposal; • Collection of aluminum cans and waste paper by individual collectors during construction should be encouraged. Separately labelled recycling bins should also be provided to segregate these wastes from other general refuse by the workforce; • Recycling of any unused chemicals and those with remaining functional capacity as far as possible; • Prevention of the potential damage or contamination to the construction materials though proper storage and good site practices; • Planning and stocking of construction materials should be made carefully to minimize amount of waste generated avoid unnecessary generation of waste; and • Training on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling should be provided to workers.	To reduce amount of waste generated during construction phase	All construction sites	Contractor	Construction stage	• Waste Disposal Ordinance (Cap. 54); • ETWB TCW No. 19/2005
S9.5.5-6	**Storage, Collection and Transportation of Waste** Recommendations for proper storage include: • Waste such as soil should be handled and stored well to ensure secure containment; • Stockpiling area should be provided with covers and water spraying system to prevent materials from being washed away and to reduce wind-blown litter; and • Different locations should be designated to stockpile each material to enhance reuse. With respect to the collection and transportation of waste from the construction works, the following is recommended: • Remove waste in a timely manner; • Employ trucks with cover or enclosed containers for waste transportations; • Obtain relevant waste disposal permits from the appropriate	To reduce the environmental implications of improper storage	All construction sites	Contractor	Construction stage	• Waste Disposal Ordinance (Cap. 54); • ETWB TCW No. 19/2005

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	authorities; and • Disposal of waste should be done at licensed waste disposal facilities.					
S9.5.8-11	**C&D Materials** The following mitigation measures shall be implemented in handling the waste: • Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement; • Carry out on-site sorting; • Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; • Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified; • Disposal of the C&D materials onto any sensitive locations such as agricultural lands, etc. should be avoided. The Contractor shall propose the final disposal sites to the Project Proponent and get its approval before implementation; • Standard formwork or pre-fabrication order to minimise the arising of C&D materials. The use of more durable formwork or plastic facing for the construction works should be considered. Metal hoarding should be used to enhance the possibility of recycling. The purchasing of construction materials will be carefully planned in order to avoid over ordering and wastage; and • The Contractor should recycle as much of the C&D materials as possible on-site. Public fill and C&D waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites should be considered for such segregation and storage.	Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal	All construction sites	Contractor	Construction stage	• Waste Disposal Ordinance (Cap. 54); • ETWB TCW No. 19/2005 • ETWB TCW No. 06/2010
S9.5.13	**Excavated Marine Sediments** During transportation and disposal of the excavated marine sediments, the following measures shall be taken to minimize potential environmental impacts: • Bottom opening of barges should be fitted with tight fitting	To minimize potential impacts on water quality	All construction sites where applicable	Contractor	Construction stage	• ETWBTC (Works) No. 34/2002

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	seals to prevent leakage of material. Excess material should be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved; • Monitoring of the barge loading should be conducted to ensure that loss of material does not take place during transportation; • Transport barges or vessels should be equipped with automatic self-monitoring devices as specified by the DEP; and • Barges should not be filled to a level that would cause the overflow of materials or sediment-laden water during loading or transportation.					
S9.5.14-17	For those processes which generate chemical waste, the Contractor shall identify any alternatives that generate reduced quantities or even no chemical waste, or less dangerous types of chemical waste. If chemical waste is produced at the construction site, the Contractor is required to register with EPD as chemical waste producers. Chemical waste shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows. Containers used for storage of chemical wastes shall: • Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; • Have a capacity of less than 450 L unless the specification have been approved by EPD; and • Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations. The storage area for chemical wastes shall: • Be clearly labelled and used solely for the storage of chemical wastes; • Be enclosed on at least 3 sides; • Have an impermeable floor and bunding of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in the area, whichever is greatest;	To ensure proper management of chemical waste	All construction sites	Contractor	Construction stage	• Waste Disposal (Chemical Waste) (General) Regulation; • Code of Practice on the Packaging, Labelling and Storage of Chemical Waste

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	• Have adequate ventilation; • Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste, if necessary); and • Be arranged so that incompatible materials are adequately separated. Disposal of chemical waste shall: • Be via a licensed waste collector; and • Be to a facility licensed to receive chemical waste, such as the CWTC which also offers a chemical waste collection service and can supply the necessary storage containers; or • Be to a re-user of the waste, under approval from EPD.					
S9.5.18	**Sewage** An adequate number of portable toilets shall be provided for the on-site construction workers. Any waste shall be transferred to a sewage treatment works by a licensed collector.	Proper handling of sewage from worker to avoid odour, pest and litter impacts	All construction sites	Contractor	Construction stage	• Waste Disposal Ordinance (Cap. 54)
S9.5.19	**General Refuse** General refuse generated on-site shall be stored in enclosed bins or compaction units separately from construction and chemical wastes. Recycling bins shall also be provided to encourage recycling. A reputable waste collector shall be employed by the Contractor to remove general refuse from the site on a daily basis separately from the construction and chemical wastes. Burning of refuse on construction sites is prohibited by law.	Minimize production of general refuse and avoid odour, pest and litter impacts	All construction sites	Contractor	Construction stage	• Waste Disposal Ordinance (Cap. 54)
S10.7.2.4	Good Site Practices – The integrity and effectiveness of all silt curtains shall be regularly inspected. Effluent monitoring should be incorporated to make sure that the discharged effluent from construction sites meets the relevant effluent discharge guidelines.	To minimize potential impacts on water quality and protect marine communities within Junk Bay	All construction sites	Contractor	Construction stage	• TM-EIAO; and • WPCO
S10.7.2.5	Site runoff control – For works on land, standard site runoff control measures will be established and strictly enforced to ensure that discharge of contaminated or silt-laden runoff into marine waters is minimized.	To minimize potential impacts on water quality and protect marine communities within Junk Bay	All construction sites	Contractor	Construction stage	• TM-EIAO; and • WPCO
S10.9.1.1	The marine water quality monitoring programme recommended in Chapter 8 of this EIA report and this EMIS would also serve to protect the marine communities inside Junk Bay.	To minimize potential impacts on water quality and protect marine	Selected monitoring stations (**Drawing no. 209506/EMA/WQ/001**)	Contractor	Construction stage	• TM-EIAO; and • WPCO

EIA Ref	Environmental Protection Measures/ Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to Address	Location/ Timing	Implementation		Requirements and/or Standards to be Achieved
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		communities within Junk Bay				
S11.6.2.2	Good Site Practices: – The integrity and effectiveness of all silt curtains should be regularly inspected. Effluent monitoring shall be incorporated to make sure that the discharged effluent from construction sites meets the relevant effluent discharge guidelines.	To minimize potential impacts on water quality and protect fishery resources	All construction sites	Contractor	Construction stage	• TM-EIAO; and • WPCO
S11.6.2.3	Site runoff control - For works on land, standard site runoff control measures will be established and strictly enforced to ensure that discharge of contaminated or silt-laden runoff is minimized.	To minimize potential impacts on water quality and protect fishery resources	All construction sites	Contractor	Construction stage	• TM-EIAO; and • WPCO
S11.8.1.1	The marine water quality monitoring programme recommended in Chapter 8 of this EIA report and this EMIS would also serve to protect the fishery resources.	To minimize potential impacts on water quality and protect fishery resources	Selected monitoring stations (**Drawing no. 209506/EMA/WQ/001**)	Contractor	Construction stage	• TM-EIAO; and • WPCO
Landscape and Visual						
S13.8.1.2	The following mitigation measures should be implemented in the construction stage • CM1 – The construction area and contractor's temporary works areas should be minimized to avoid impacts on adjacent landscape. • CM2 – Reduction of construction period to practical minimum. • CM3 – Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where the soil material meets acceptable criteria and where practical. The Contract Specification shall include storage and reuse of topsoil as appropriate. • CM4 – Existing trees on boundary of the Project Area shall be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, 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).	Minimize effects of landscape and visual impacts	Work site/during construction	Funded and implemented by CEDD	Construction stage	

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	• CM5 – Trees unavoidably affected by the works shall be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, if applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. • CM6 – Advance screen planting to proposed roads and associated structures. • CM7 – hydroseeding or sheeting of soil stockpiles with visually unobtrusive material (in earth tone). • CM8 – Screening of construction works by hoardings/noise barriers around works area in visually unobtrusive colours, to screen Works. • CM9 – Control night-time lighting and glare by hooding all lights. • CM10 – Ensure no run-off into water body adjacent to the Project Area. • CM11 – Avoidance of excessive height and bulk of buildings and structures					
S13.8.1.2	OM1 – Compensatory tree planting for all felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Felling Application process under ETWBTC 3/2006.	Minimize effects of landscape and visual impacts	Within the site boundary of the proposed works	Funded and implemented by CEDD. Maintained by CEDD and LCSD.	Design, construction and operational stages	
S13.8.1.2	The following mitigation measures should be implemented in the operational stage: • OM2 – A continuous belt of screen planting along the roads. Planting of the belt of trees shall be carried out as advance works ahead of other site formation and building works. • OM3 – Maximise soft landscape of the site, where space permits, roadside berms /slope treatment works should be created. • OM4 – During detailed design, refine structure layout to create a planting strips along the roads to enhance greenery. • OM5 – Use appropriate (visually unobtrusive and	Minimize effects of landscape and visual impacts	CBL and Road D9/during construction and operation	Funded and implemented by CEDD. Maintained by CEDD and LCSD.	Design, construction and operational stages	

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	non-reflective) building materials and colours, and aesthetic design in built structures. • OM6 – Streetscape elements (e.g. paving, signage, street furniture, lighting etc.) shall be sensitively designed in a manner that responds to the local context, and minimizes potential negative landscape and visual impacts. Lighting units should be directional and minimize unnecessary light spill. • OM7 – Avoidance of excessive height and bulk of buildings and structures					
Landfill Gas						
S14.7.5	Precautionary measures The following guidance has been extracted from the EPD's Landfill Gas Hazard Assessment Guidance Note Guidance to ensure a robust and comprehensive set of measures to protect workers are provided. • During all works, safety procedures shall be implemented to minimize the risks of fires and explosions, asphyxiation of workers (especially in confined space) and toxicity effects resulting from contact with contaminated soils and groundwater. • Safety officers who are specifically trained with regard to LFG and leachate related hazards and the appropriate actions to take in adverse circumstances shall be present on all worksites throughout the works. • All personnel who work on site and all visitors to the site shall be made aware of the possibility of ignition of gas in the vicinity of the works, the possible presence of contaminated water and the need to avoid physical contact with it. • Those staff who work in, or have responsibility for "at risk" areas, including all excavation workers, supervisors and engineers working within the consultation zone, shall receive appropriate training on working in areas susceptible to LFG hazards. • Enhanced personal hygiene practices including washing thoroughly after working and eating only in "clean" areas shall be adopted where contact may have been made with any groundwater which is thought to be contaminated with	Health and safety of the workers	Construction sites within 250m Consultation Zone (**Drawing no. 209506/EMA/LFG/001**)	Contractor	Construction stage	• Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97)

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	leachate. • Ground level construction plant shall be fitted with vertical exhausts at least 0.6m above ground level and with spark arrestors. • During piping assembly or ducting construction, all valves/seals shall be closed immediately after installation. As construction progresses, all valves/seals should be closed as installed to prevent the migration of gases through the pipeline/conduit. All piping /ducting shall be capped at the end of each working day. • Mobile offices, equipment stores, mess rooms etc. shall be located on an area which has been proven to be gas free (by survey with portable gas detectors) and ongoing monitoring shall be carried out to ensure that these areas remain gas free. Alternatively, such buildings shall be raised clear of the ground. If buildings are raised clear of the ground, the minimum, clear separation distance (as measured from the highest point on the ground surface to the underside of the lowest floor joist) shall be 500mm. However, in this case, it is highly recommended that all the site offices, equipment stores and mess rooms should be located outside the 250m Consultation Zone. • Smoking and naked flames shall be prohibited within confined spaces. “No Smoking” and “No Naked Flame” notices in Chinese and English shall be posted prominently around the construction site. Safety notices shall be posted warning of the potential hazards. • Welding, flame-cutting or other hot works may only be carried out in confined spaces when controlled by a “permit to work” procedure, properly authorized by the Safety Office. The permit to work procedure shall set down clearly the requirements for continuous monitoring of methane, carbon dioxide and oxygen throughout the period during which the hot works are in progress. The procedure shall also require the presence of an appropriately qualified person who shall be responsible for reviewing the gas measurements as they are made, and who shall have executive responsibility for suspending the work in the event of					

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	unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise shall be permitted to carry out hot works in confined areas. • During the construction works, adequate fire extinguishers and breathing apparatus sets shall be made available on site and appropriate training given in their use.					
S14.7.6	**Landfill gas monitoring** The following monitoring shall be undertaken when construction works are carried out in confined space within the 250m Consultation Zone: • The works area shall be monitored for methane, carbon dioxide and oxygen using appropriately calibrated portable gas detection equipment. The monitoring requirements and procedures specified in Paragraphs 8.23 to 8.28 of EPD's Guidance Note shall be followed. The monitoring frequency and areas to be monitored shall be set down prior to commencement of the works. Depending on the results of the measurements, actions required will vary. As a minimum these shall encompass the actions specified in Table 14.6 of the EIA report. • When portable monitoring equipment is used, the frequency and areas to be monitored should be set down prior to commencement of the works either by the Safety Officer or by an appropriately qualified person. • All measurements shall be made with the monitoring tube located not more than 10mm from the surface. • A standard form, detailing the location, time of monitoring and equipment used together with the gas concentrations measured, shall be used when undertaking manual monitoring to ensure that all relevant data are recorded. • If methane (flammable gas) or carbon dioxide concentrations are in excess of the trigger levels or that of oxygen is below the level specified in the Emergency Management in the following section, then evacuation shall be initiated.	Health and safety of the workers	Confined space of construction sites within 250m Consultation Zone	Contractor	Construction stage	• Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97)
S14.7.8-9	**Emergency management** In the event of the trigger levels specified in Table 14.6 of the EIA report being exceeded, a person, such as the Safety	Health and safety of the workers	Confined space of construction sites within 250m Consultation Zone	Contractor	Construction stage	• Landfill Gas Hazard Assessment

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	Officer, shall be nominated, with deputies, to be responsible for dealing with any emergency which may occur due to LFG. In an emergency situation the nominated person, or his deputies, shall have the necessary authority and shall ensure that the confined space is evacuated and the necessary works implemented for reducing the concentrations of gas.					Guidance Note (EPD/TR8/97)
S14.7.16	**Protection measures – Operational phase** • An assumed presence of landfill gas shall be adopted at all times by maintenance workers; • all maintenance workers inspecting any manhole shall be fully trained in the issue of LFG hazard; • any manhole which is large enough to permit to access to personnel shall be subject to entry safety procedure; • Code of Practice on Safety and Health at Work in Confined Spaces shall be followed to ensures compliance with the Factories and Industrial Undertakings (Confined Spaces) Regulations of the Factories and Industrial Undertakings Ordinance; • a strictly regulated "work permit procedure" shall be implemented and the relevant safety procedures must be rigidly followed; and • Adequate communication with maintenance staff shall be maintained with respect to LFG.	Health and safety of the workers	Utility maintenance areas within 250m Consultation Zone/during operational period	Utility companies	Operational stage	• Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97); and • Code of Practice on Safety and Health at Work in Confined Space
S14.7.17	**General recommended precautionary & protection measures – Operational phase** LGF surveillance exercise shall be undertaken by the utility companies at the utility manholes/inspection chambers. The surveillance exercise shall be undertaken for the duration of the site occupancy, or until such time that EPD agree that surveillance is no longer required and this shall be based on all the available monitoring data for methane, carbon dioxide and oxygen.	Health and safety of the workers	Utility maintenance areas within 250m Consultation Zone/during operational period	Utility companies	Operational stage	• Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97); and • Code of Practice on Safety and Health at Work in Confined Space

Appendix I

Complaint Log

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Contract Related	Follow up action
1	Not provided	14-Mar-19	Junk Bay	Unwilling to disclose	Marine Water	EPD	N08/RE/0000 7432-19	The complainant said muddy water and mud was discharged from work barges under CBL between 7:00 - 10pm. The complainant said he observed the act during his recent fishing activities in the nearby area.	Contract 1 (NE/2017/07)	According to ET's investigation, Contractor of Contract 1 (CRBC) had provided proper water mitigation measures to minimize the water impact of marine piling work to the nearby waterbody. No abnormal and turbid water discharged from site was observed and no exceedance was recorded from the marine water impact quality monitoring. Nevertheless, the Contractor of Contract 1 was reminded to strictly implement all the water mitigation measures as stated in EP and EM&A Manual and ET will keep closely inspect the site condition in subsequent weekly site inspection. .
2	4-Jan-20	9-Jan-20	Wan O Road	Unwilling to disclose	Noise	CEDD	NA	The Complainant complained about the noise nuisance generated by road breaking work at Wan O Road	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 - NE/2017/08 (Build King), road breaking work was commenced at Wan O Road on 4 January 2020 morning. The work involved one road breaker to conduct the breaking activity which generate noise impact. Noise mitigation measure such as wrapped the head of the breaker with acoustic material was implemented on the day of complaint received to minimize the impact to resident nearby. Movable noise barrier was provided on site, but it was not adopted due to miscommunication of workers. Upon received the complaint on 4 January 2020, Build King has immediately adopted the movable noise barrier for road breaking work as noise mitigation measure to minimize the noise impact.
3	15-Jan-20	15-Jan-20	Wan O Road	Unwilling to disclose	Noise	CEDD	NA	The Complainant complained about the noise nuisance generated by road breaking work at Wan O Road	Contract 2 (NE/2017/08)	As advised by the Contractor, the movable noise barrier was not immediately adopted after relocation of the road breaker on 15 January 2020. Upon received the complaint, the Contractor has immediately adopted the noise barrier as noise mitigation measure for the road breaking work to minimize the noise impact. In addition, the Contractor has issued a warning letter to the relevant subcontractor for poor environmental performance and requested their worker to strictly implement the use of movable noise barrier. In order to prevent the incident happens again, ET also advised that the Contractor should dedicate a worker to ensure the noise barrier is implemented prior to road breaking activities.
4	25-Feb-20	26-Feb-20	Works Area A	Unwilling to disclose	Noise	CEDD	NA	The Complainant complained about the noise nuisance caused by hammering/chiseling works at Works Area A	Contract 1 (NE/2017/07)	As advised by the Contractor of Contract 1 - NE/2017/07 (CRBC), hammering/chiseling works for drilling platform maintenance was conducted at Works Area A on 25 February 2020 morning and no Powered Mechanical Equipment (PME) was involved. Upon received the complaint, CRBC has stopped the relevant work immediately. In order to minimize the noise nuisance caused by the hammering work, CRBC decided to relocate the hammering work from Works Area A to the marine working area which is far away from the residential areas. CEDD replied the complainant on 25 February 2020 and the complainant was satisfied with the proposed mitigation measure.
5	15-Mar-20	18-Mar-20	Junk Bay	Unwilling to disclose	Noise	EPD	NA	The Complainant complained about the construction noise from Junk Bay	Contract 1 (NE/2017/07)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), their workers reported for duty around 08:00 on 15 March 2020. The workers were standby on a flat top barge in which a precast unit was temporarily stored and waited for the mobilization of crane barge to carry out lifting operation of the precast unit. No hammering work nor other noisy work activity was carried out on the flat top barge in the complaint period. In addition, no Powered Mechanical Equipment (PME) was used until the crane barge was mobilized for lifting operations between 15:00 and 19:00. RSS checked their own records and confirmed that there was no operation of PME in Junk Bay before 09:00 on 15 March 2020. The complaint was considered not related to the Project since there is no operation of PME during the complaint period.
6	2-Apr-20	7-Apr-20	Lohas Park Station Exit A and TKO Salt Water Pumping Station	Unwilling to disclose	Construction Dust	CEDD	NA	The Complainant complained about the dump truck tracking mud on the road adjacent to Lohas Park Station Exit A and TKO Salt Water Pumping Station at approximately 09:50 that morning.	Contract 2 (NE/2017/08)	Joint site inspection among the Supervisor, the Contractor, ET and IEC was also carried out on 8 April 2020 to inspect the environmental performance of the construction site. Proper wheel washing facilities was provided at the site entrance near the Lohas Park Station Exit A and all the vehicle were properly washed prior leaving the site. No tracking mud was observed at the complaint location during the site inspection. As advised by RSS, it is confirmed by MTRCL that the complaint location was under MTRCL management and the tracking mud issue was followed up by MTRCL.
7	20-Apr-20	6-May-20	Junk Bay	Lui Man Kwong, Member of Sai Kung District Council	Noise	CEDD	TKO-MK-200421-(R)-1289	The Complainant complained about the noise nuisance generated by construction works from Junk Bay on 20 April 2020 around 6 a.m. to 7 a.m.	Contract 1 (NE/2017/07)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), there was no marine work carried out at Junk Bay from 06:00 to 07:00 on 20 April 2020 as their workers reported for duty after 08:00 on that day. RSS checked their own records and confirmed that there was no marine work was carried out at Junk Bay before 08:00 on 20 April 2020.
8	5-May-20	6-May-20	General	Unwilling to disclose	Construction Dust, Noise, Wastewater	CEDD	NA	The Complainant complained about the noisenuisance generated by evening works, the wastewater generated from site are not well treated, and the dust generation caused by the construction work.	Contract 1 (NE/2017/07) Contract 2 (NE/2017/08)	During the regular joint site inspection among the Supervisor, the Contractor and ET carried out in the past few weeks, it was observed that construction dust and wastewater mitigation measures were implemented properly in both Contracts of the Project. In addition, according to the evening noise monitoring conducted in the past month, the evening noise measurement results were found within the range of the baseline noise monitoring results, which implies that the construction noise from evening works was insignificant. It is considered the complaint is not project related.
9	23-Jul-20	23-Jul-20	Junk Bay	Resident of Ocean Shores	Light Nuisance	CEDD	NA	The Complainant complained about the light nuisance caused by the 4000 tone crane barge during the evening on 22 July 2020.	Contract 1 (NE/2017/07)	According to the works schedule of Contract 1, no marine work was conducted on 22 July 2020 evening. The Contractor of Contract 1 (CRBC) advised that the illumination (e.g. flashlight, headlight) on the crane barge is required for safety reason - to keep the barge being visible and to avoid collision by other marine vessel. In order to minimize the light nuisance to the public, it is agreed by CRBC that the illumination on the crane barge will be kept to a minimum in the evening. It is considered the complaint is not project related.

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Contract Related	Follow up action
10	28-Jul-20	28-Jul-20	Wan O Road	Resident of Lohas Park Phase 4	Noise	CEDD	NA	The complainant complained about the noise nuisance caused by breaking work at Wan O Road at approximately 10:00am on 28 July 2020.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 – NE/201708 (Build King), breaking work was carried out at Wan O Road at the complaint period and movable noise barrier as noise mitigation measure was implemented during the road breaking work. Noise monitoring was conducted by Build King on 30 July 2020 during the breaking work, the monitoring result did not exceeded the limit level 75dB(A) which revealed that the construction noise received at representative NSR were within acceptable level. Noise monitoring was also conducted by ET on 31 July 2020 and no limit level exceedance was record. It is considered the complaint is related to the Project. However, noise mitigation measure was implemented by Build King during the complaint period.
11	23-Jul-20	13-Aug-20	Junk Bay	Resident of Ocean Shores	Noise	EPD	NA	The Complainant complained about the noise nuisance caused by the 4000 tone crane barge during the restricted hours on 23 July 2020.	Contract 1 (NE/2017/07)	According to the works schedule of Contract 1, no marine work was conducted between 22 July 2020 19:00 and 23 July 2020 08:00. RSS checked their own records and confirmed that there was no marine work carried out at Junk Bay between 22 July 2020 19:00 and 23 July 2020 08:00. It is considered the complaint is not related to the Project since no marine work was carried out by CRBC during the reporting period
12	24-Aug-20	26-Aug-20	Junk Bay	Ocean Shores Owner's Committee Chairman Chan Kai Wai	Noise	CEDD	NA	The Complainant complained about the operation of derrick barge at Junk Bay on Sunday	Contract 1 (NE/2017/07)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), working platform setup work was carried out at pier W4 on 23 August 2020. One derrick barge was used for lifting work between 09:00 - 11:30. During the working platform setting up work, only lifting of platform material was carried out by the derrick barge at V-pier W4. Bolt and nut tightening work for the working platform was then carried out by the workers at pier W4. No hammering work was carried out on 23 August 2020. According to the issued Construction Noise Permit (CNP) GW-RE0438-20, derrick barge (group A, D, E of the PME listed in condition 3a of the CNP) is allowed to be operated on general holiday (including Sunday) 09:00 – 20:00. The operation of the derrick barge on 23 August 2020 was within the permitted hours. It is considered the complaint is related to the Project. However, the Contractor did not breach the requirement stated in the issued CNP with the use of one derrick barge on Sunday and no noise nuisance should be generated by the bolt and nut tightening work performed on 23 August 2020.
13	24-Aug-20	26-Aug-20	Junk Bay	Mr Lee	Noise	CEDD	NA	The Complainant complained about the noise nusiance generated by hammering works on the derrick barge at Junk Bay on Sunday. He also enquiry whether the Construction Noise Permit will be displayed at the site entrance.	Contract 1 (NE/2017/07)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), working platform setup work was carried out at pier W4 on 23 August 2020. One derrick barge was used for lifting work between 09:00 - 11:30. During the working platform setting up work, only lifting of platform material was carried out by the derrick barge at V-pier W4. Bolt and nut tightening work for the working platform was then carried out by the workers at pier W4. No hammering work was carried out on 23 August 2020. According to the issued Construction Noise Permit (CNP) GW-RE0438-20, derrick barge (group A, D, E of the PME listed in condition 3a of the CNP) is allowed to be operated on general holiday (including Sunday) 09:00 – 20:00. The operation of the derrick barge on 23 August 2020 was within the permitted hours. In addition, the issued CNP was displayed at the site entrance at Wan O Road for public inspection. It is considered the complaint is not related to the Project since no hammering work was carried out during the complaint period
14	14-Sep-20	15-Sep-20	Junk Bay	Unwilling to disclose	Water Quality	1823	NA	The Complainant complained about the suspected pollutant spilled at Junk Bay from the roro barge of the Project	Contract 1 (NE/2017/07) Contract 2 (NE/2017/08)	RSS noted the presence of the pollutant on 12 September 2020 at around 11:35 a.m. Trace of pollutant discharge was also found from the box culvert near the complaint location. Catch pits at the site office and at Wan O Road were checked once the pollutant was spotted on 12 September 2020. The catch pits were found clean and no pollutant discharge was found. In addition, no pollutant was observed during the operation of the roro barge. Joint site inspection among the Site Supervisor, the Contractors and ET was carried out on 16 September 2020. No marine pollutant was spotted at the complaint location and from the box culvert. In addition, discharge points of Contract 2 at Wan O Road were inspected and no trace pollutant discharge was observed. The IR revealed that the complaint is not related to the Project since the source of pollutants in the box culvert should be outside the site area of the Project, and there is no trace of pollutant discharged from the construction site and the roro barge.
15	20-Sep-20	21-Sep-20	Junk Bay	Unwilling to disclose	Noise	CEDD	NA	The Complainant complained about the noise nuisance generated from the construction work conducted on 20 September 2020 at Junk Bay	Contract 1 (NE/2017/07)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), concrete disposal and tidy up work were carried out at pier W1 on 20 September 2020. One derrick barge was used for lifting of concrete debris and formwork at pier W1. No concrete breaking was carried out on 20 September 2020 morning and no electric breaker and backhoe was used. According to the issued Construction Noise Permit (CNP) GW-RE0438-20, derrick barge (group A, D and E of the PME listed in condition 3a of the CNP) is allowed to be operated on general holiday (including Sunday) 09:00 – 20:00. The operation of the derrick barge on 20 September 2020 was within the permitted hours. In the view of the works carried out on 20 September 2020, the operation of derrick barge is considered as the only noise source from Cross Bay Link Project and the noise impact should not be significant to the surrounding NSRs since the pier W1 is located far away (over 900m away to Ocean Shores). Investigation indicated that the complaint is unlikely related to the Project since the noise generated from the derrick barge should be insignificant as the marine work area is located far away from the surrounding NSRs.

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16	18-Oct-20	27-Oct-20	Work Area A	Unwilling to disclose	Noise	EPD	NA	The Complainant complained about the noise nusiance generated by Power Mechanical Equipment such as bar bender and cutter at Works Area A (Working Area 2 of the CNP) at around 09:00 and 17:30 on 18 October 2020 (Sunday)	Contract 1 (NE/2017/07)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), stainless steel rebar cutting work with the use of grinder was performed at the complaint location by two workers without notification to CBRC and RSS on 18 October 2020 at around 09:00 hours. The rebar cutting work was spotted by RSS at around 09:15 hours and was stopped immediately. No rebar cutting work was believed to be carried out at 17:30 hours as these two workers were off-duty at 17:00 hours. According to the issued CNP GW-RE0819-20, the use of grinder is not allowed to be operated at working area 2 during restricted hours. A permit to work system had been implemented to ensure Contractor and RSS were notified in advance of any construction work during restricted hours, but the information may not have been properly delivered to frontline staff. After the incident was happened, a series of follow-up action were implemented by CRBC to ensure no prohibited construction work would be performed during restricted hours. The IR revealed that the complaint is related to the Project since stainless steel rebar cutting work was performed with the use of grinder in the complaint period. However, this should be a single incident and CRBC has carried out follow-up action to prevent the incident to be happened again.
17	27-Nov-20	27-Nov-20	D9 Road	Unwilling to disclose	Noise	1823	NA	The Complainant complained about the noise nuisance and the mosquito issue generated from the construction site at D9 Road.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 (Build King), pre-bored socketed H-piling work was carried out at Wan O Road near Lohas Park Phase 4 while no construction work was carried out at Wan O Road near Lohas Park Phase 2A on 27 November 2020.Noise mitigation measure such as erecting noise barrier was properly implemented by the Contractor during operation of pre-bored socket H-piling work near Lohas Park Phase 4. According to the recent noise monitoring event held at Lohas Park Phase 4 during the operation of the pre-bored socket H-piling work, the obtained monitoring result Leq30min is well below the noise criteria 75 db(A). This implies that the noise impact generated from the pre-bored socketed H-piling work should be acceptable at Lohas Park Phase 4. The IR revealed that the complaint is related to the Project. However, noise mitigation measure was implemented properly by the Contractor and no exceedance of noise monitoring result was recorded during the operation of the piling work. Nevertheless, the Contractor was reminded to implement the noise mitigation measures as far as practicable to reduce noise impact to the public.
18	24-Dec-20	24-Dec-20	Wan O Road	SKDC member Mr. CHEUNG Mei Hung	Noise	EPD	NA	The complainant complained the construction works near Lohas Park Phase 4 started at 9am on weekdays and cause noise nuisance to the resident. He urge the Contractor to schedule noisy construction activities such as breaking and piling works to be carried out after 10am on weekdays and enhance the noise mitigation measures with a view to minimise the noise nuisance to the nearby residents.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Build King), pre-bored socketed H-piling (PBSH) work was carried out at Wan O Road in early December 2020 and was completed on 11 December 2020. No noisy construction activities such as breaking and piling work was carried out at the complaint location after the completion of PBSH work on 11 December 2020. In the view of minimizing the noise nuisance to the nearby residents, the Contractor will schedule the coming noisy construction work such as sheet piling works after 10 am on Saturday. However, in order to catch up with the construction progress, the noisy construction work will be scheduled after 9 am on weekdays (i.e. Monday to Friday). The IR revealed that the complaint is not related to the Project since no noisy construction work was carried out during the complaint period. Nevertheless, the Contractor was reminded to implement the noise mitigation measures as far as practicable to reduce noise impact to the public.
19	18-Jan-21	27-Jan-21	Wan O Road	SKDC member Mr. CHEUNG Mei Hung	Noise	EPD	NA	The complainant complained the construction works near Lohas Park Phase 4 cause noise nuisance to the resident. He urge the Contractor to start the noisy construction activities as late as possible on each working day and enhance the noise mitigation measures to minimise the noise nuisance to the nearby residents. He would also like to know when the noisy construction activities will be finished.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Build King), sheet piling work was carried out near Lohas Park Phase 4 at Wan O Road in January 2021. The sheet piling work was scheduled after 9am on weekdays (i.e. Monday to Friday) and after 10 am on Saturday in order to minimize the noise nuisance to the nearby residents. The sheet piling work at Wan O Road is expected to be finished at the end of February 2021. In addition, noise mitigation measures such as movable noise barrier and the use of QPME were implemented properly. The IR revealed that the complaint is related to the Project. However, noise mitigation measure was implemented properly by the Contractor and no exceedance of noise monitoring result was recorded during the operation of the piling work. Nevertheless, the Contractor was reminded to implement the noise mitigation measures as far as practicable to reduce noise impact to the public.

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20	26-Feb-21	26-Feb-21	Wan O Road	Unwilling to disclose	Noise	CEDD	NA	The Complainant complained about the construction works near Lohas Park Phase 6 which cause noise nuisance to the resident.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Build King), concrete breaking work for seawall modification was carried out near Lohas Park Phase 6 at Road D9 during the complaint period. Noise mitigation measure such as erecting noise barrier was properly implemented by the Contractor during concrete breaking work work near Lohas Park Phase 6. According to the recent noise monitoring event held at Lohas Park Phase 4 during concrete breaking work, the obtained monitoring result Leq30min is well below the noise criteria 75 db(A). This implies that the noise impact generated from the concrete breaking work should be acceptable at Lohas Park Phase 6. The IR revealed that the complaint is related to the Project. However, noise mitigation measure was implemented properly by the Contractor and no exceedance of noise monitoring result was recorded during the operation of the breaking work. Nevertheless, the Contractor was reminded to implement the noise mitigation measures as far as practicable to reduce noise impact to the public.
21	17-Mar-21	17-Mar-21	Road D9	Resident of Lohas Park	Dust	CEDD	NA	The Complainant complained about dust problem at construction site which cause nuisance to Lohas Park Resident	Contract 1 (NE/2017/07) Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 1 - Contract No. NE/2017/07 (CRBC), no land base construction work was carried out near Road D9 during the complaint period. As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Build King), excavation and lateral support (ELS) work was carried out near Lohas Park Phase 2A and excavation work was carried out near Lohas Park Phase 6 during the complaint period. Dust mitigation measure such as water spraying at work areea and installed water sprinkler system were properly implemented. The IR revealed that the complaint is related to the Project. However, dust mitigation measure was implemented properly by the Contractor and no exceedance of dust monitoring result was recorded during the comaplaint period. Nevertheless, the Contractor was reminded to implement the dust mitigation measures as far as practicable to reduce dust impact to the public.
22	10-Mar-21	18-Mar-21	Work Area A	Resident of Lohas Park 6	Noise	EPD	NA	The Complainant complained about the noise nuisance generated by hammering work at Works Area A between 07:00 and 07:30 on 10 March 2021.	Contract 1 (NE/2017/07)	According to the works schedule of Contract 1, no construction work was conducted at Works Area A on 10 March 2021 between 07:00 and 08:00. 3. RSS checked their own records and confirmed that there was no construction work carried out at Works Area A on 10 March 2021 between 07:00 and 08:00. The IR revealed that the complaint is not related to the Project since no construction work was carried out during the complaint period. Nevertheless, the Contractor was reminded to implement the noise mitigation measures as far as practicable to reduce noise impact to the public.
23	16-Mar-21	22-Mar-21	Junk Bay	Sai Kung District Council Member Mr. Lai Wai Tong	Noise	CEDD	NA	The complainant complained about the operation of working barge at Junk Bay at around 7 am in the morning which cause noise nuisance to nearby residents. He hope that the marine work can be started after 08:30 in order to reduce the nuisance to the residents.	Contract 1 (NE/2017/07)	According to the works schedule of Contract 1, all the marine work conducted between 15 and 20 March 2021 was commenced after 08:00 in the morning. No marine work was conducted between 07:00 and 08:00 from 15 to 20 March 2021. RSS checked their own records and confirmed that there was no marine work carried out between 07:00 and 08:00 from 15 to 20 March 2021. The IR revealed that the complaint is not related to the Project since no marine work was conducted during the complaint period. Nevertheless, the Contractor was reminded to implement the noise mitigation measures as far as practicable to reduce noise impact to the public.
24	18-Mar-21	22-Mar-21	Junk Bay	Ocean Shores Owner's Committee Chairman Chan Kai Wai	Noise	CEDD	NA	The complainant complained about the operation of working barge at Junk Bay at around 7 am on 21 February 2021 in the morning which cause noise nuisance to nearby residents.	Contract 1 (NE/2017/07)	According to the works schedule of Contract 1, no marine work was conducted between 07:00 and 08:00 on 21 February 2021.In addition, all the marine works conducted recently around the complaint period (i.e. between 17 and 24 February 2021) were commenced after 08:00 in the morning. RSS checked their own records and confirmed that there was no marine work carried out between 07:00 and 08:00 on 21 February 2021, and from 17 to 24 February 2021. The IR revealed that the complaint is not related to the Project since no marine work was conducted during the complaint period. Nevertheless, the Contractor was reminded to implement the noise mitigation measures as far as practicable to reduce noise impact to the public.
25	21-Mar-21	26-Mar-21	Junk Bay	Unwilling to disclose	Noise	1823	NA	The complainant complained about the operation of marine work on 21 March 2021 Sunday.	Contract 1 (NE/2017/07)	According to the works schedule of Contract 1, no marine work was conducted on 21 March 2021. RSS checked their own records and confirmed that there was no marine work carried out on 21 March 2021. The IR revealed that the complaint is not related to the Project since no marine work was conducted during the complaint period. Nevertheless, the Contractor was reminded to implement the noise mitigation measures as far as practicable to reduce noise impact to the public.

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26	12-Apr-21	16-Apr-21	Junk Bay	Unwilling to disclose	Water Quality	1823	NA	The Complainant complained about the marine water pollution caused by the Project.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Build King), backfilling work was carried out at Portion III and formwork erection work was carried out at Portion VII on 12 April 2021 near the complaint location (Photo 1 and 2). No concreting works was carried out on 12 April 2021 at Portion III and VII. According to the photo record provided by the complainant, no construction work which might potentially produce sewage/muddy water was observed at that location. In addition, it is observed the site surface at Portion III and Portion VII was dry on 12 April 2021 and no trace of surface runoff/wastewater direct discharge from site was observed. The IR revealed that the complaint is not related to the Project since no sewage/muddy water would be generated by the construction work carried out at Portion III and Portion VII on 12 April 2021 and no trace of surface runoff/wastewater direct discharge was observed.
27	29-Apr-21	4-May-21	Work Area B	Unwilling to disclose	Noise	EPD	Complaint NCF-N08/RE/0001 0399-21	The Complainant complained about the noise nuisance caused by the operation of an automatic rebar cutting machine. The Complainant would also like to know whether a noise impact assessment was done for the machine operation and the consequent follow-up action.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Build King), the automatic rebar cutting machine is located at Works Area B and will be operated when rebar cutting work is required. In order to assess the noise impact of the automatic rebar cutting machine, the Contractor has conducted noise monitoring during operation of the machine and the measured noise level did not exceed 75 dB (A) noise criteria. In addition, the Contractor has erected noise barrier for the machine operation at Works Area B as noise mitigation measure to reduce the noise impact to the nearby resident. Although the IR revealed that the complaint is related to the Project, the Contractor has provided noise mitigation measure for the operation of automatic rebar cutting machine and no noise exceedance was recorded.
28	11-Jun-21	11-Jun-21	Wan O Road	Resident of Wings at Sea	Noise	ER	NA	The Complainant complained about the noise nuisance caused by the construction vehicles on 6 June 2021 at around 00:40 and 11 June 2021 at around 00:19.	Contract 1 (NE/2017/07) Contract 2 (NE/2017/08)	No construction activity was carried out during the restricted hours on 6 and 11 June 2021. However, there were two vehicles entered Contract 2 site area at Wan O Road for parking without permission during the complaint period. In order to avoid similar incident in the future, the Contractor of Contract 2 has provided the following measures:As provided a specific tool box talk to the security company and his on-site guards regarding the site entering procedure for both people and vehicles especially during restricted hours. A warning letter was issued to the security company and sub-contractor to prevent the reoccurrence of this incident in future. Instructed security guards and sub-contractors not to arrange their vehicle entering the site during restricted hours. The IR rereveled that complaint is related to Contract 2 of the Project. Upon received the complaint, the Contractor of Contract 2 has provided follow-up action to prevent the reoccurrence of this incident in future. Nevertheless, the Contractor was reminded to avoid any unnecessary activity during restricted hour in order to reduce noise impact to the public.
29	30-Jun-21	30-Jun-21	Junk Bay	Chan Kai Wai, Chairman of Ocean Shores	Noise	1823	NA	The Complainant complained about the operation of work barge at Junk Bay on Sunday 27 June 2021 at around 9:00.	Contract 1 (NE/2017/07)	Relocation of crane barge at Junk Bay from W5 to E7 which is within the working area 2 and 3 of the issued CNP with the use of tug boat was carried out on 27 June 2021 after 09:00. No PME operated before 09:00 on 27 June 2021. According to the issued CNP GW-RE0575-21, tug boat is allowed to operate in working area 2 and 3 between 0900 – 2200 hours during general holiday (including Sunday). During the relocation of crane barge by tug boat, there is no other operation at the working areas and on the crane barge which requires PME and may create noise nuisance during the complaint period. It is confirmed by RSS that only one group of powered mechanical equipment stated in the issued Construction Noise Permit (CNP) GW-RE0575-21 was used by CRBC during the crane barge relocation work and it was complied with the requirement under the CNP. The IR indicated that the complaint is related to Contract 1 of the Project. However, it is allowed to operate the tug boat on Sunday 0900 – 2200 hours according to the issued CNP and the Contractor has strictly followed the CNP requirement.
30	30-Jun-21	2-Jul-21	Road D9	Resident of Lohas Park Phase 6	Water Quality	1823	NA	The Complainant complained about the muddy water observed construction site at Road D9 waterfront at 26 June 2021.	Contract 2 (NE/2017/08)	Formwork erection and rebar fixing work were carried out at Portion VI near Lohas Park Phase 4 on 26 June 2021. WetSep were provided as water mitigation measures by the Contractor to treat any wastewater and surface runoff prior to discharge. Although no wastewater was generated from the formwork erection and rebar fixing work, surface runoff was generated due to rainy weather. According to Contractor's record, all the surface runoff was treated by the WetSep prior to discharge and the WetSep was functioning properly on 26 June 2021. During the weekly inspection by ET on 23 June 2021, muddy water was also observed in Junk Bay being discharged from the box culvert (Photo 3). No muddy water discharged from site was found during the inspection. The IR revealed that the complaint is not related to the Project since all the wastewater generated was treated prior to discharge and the source of the muddy water was unlikely from the Project. Nevertheless, the Contractor was reminded to strictly implement the water mitigation measures for any works relating to seawall modification as far as practicable to avoid any water quality impact to the surrounding environment.

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31	25-Jun-21	5-Jul-21	Junk Bay	Chan Kai Wai, Chairman of Ocean Shores	Light Pollution	1823	NA	The Complainant complained about the operation of work barge and light pollution on 25 June 2021 at 00:01.	Contract 1 (NE/2017/07)	No marine work was conducted on 24 June 2021 night time (23:00 – 07:00). The Contractor of Contract 1 (CRBC) advised that the illumination (e.g. flashlight, headlight) on the crane barge is required for safety reason - to keep the barge being visible and to avoid collision by other marine vessel. In order to minimize the light nuisance to the public, the Contractor has already kept the illumination on the crane barge to a minimum at night. The IR revealed that the complaint is related to the Project since the concern barge is belong to Contract 1 of the Project. However, no marine work was carried out at the complaint period and the illumination on the crane barge was kept to a minimum. Nevertheless, the Contractor were reminded to implement the environmental mitigation measures as far as practicable to reduce the environmental impact arise from the construction site.
32	11-Jul-21	14-Jul-21	Junk Bay	Unwilling to disclose	Noise	1823	NA	The Complainant complained about the operation of work barge at Junk Bay on Sunday 11 July 2021 at around 12:24 and queried whether construction noise permit was obtained.	Contract 1 (NE/2017/07)	Load test was carried out by a crane barge at Junk Bay at E2 which is within the working area 2 of the issued CNP. According to the issued CNP GW-RE0575-21, one crane barge is allowed to operate in working area 2 between 0900 – 2200 hours during general holiday (including Sunday). During the load test carried out by the crane barge, there is no other operation at the working area 2 which requires PME and may create noise nuisance during the complaint period. It is confirmed by RSS that only one group of powered mechanical equipment stated in the issued Construction Noise Permit (CNP) GW-RE0575-21 was used by CRBC during the load test and it was complied with the requirement under the CNP. The IR revealed that the complaint is related to Contract 1 of the Project. However, it is allowed to operate the crane barge on Sunday 0900 – 2200 hours according to the issued CNP and the Contractor has strictly followed the CNP requirement.
33	11-Jul-21	14-Jul-21	Junk Bay	Unwilling to disclose	Noise	1823	NA	The Complainant complained about the operation of work barge at Junk Bay on Sunday 11 July 2021 at around 12:18.	Contract 1 (NE/2017/07)	Load test was carried out by a crane barge at Junk Bay at E2 which is within the working area 2 of the issued CNP. According to the issued CNP GW-RE0575-21, one crane barge is allowed to operate in working area 2 between 0900 – 2200 hours during general holiday (including Sunday). During the load test carried out by the crane barge, there is no other operation at the working area 2 which requires PME and may create noise nuisance during the complaint period. It is confirmed by RSS that only one group of powered mechanical equipment stated in the issued Construction Noise Permit (CNP) GW-RE0575-21 was used by CRBC during the load test and it was complied with the requirement under the CNP. The IR revealed that the complaint is related to Contract 1 of the Project. However, it is allowed to operate the crane barge on Sunday 0900 – 2200 hours according to the issued CNP and the Contractor has strictly followed the CNP requirement.
34	11-Jul-21	15-Jul-21	Junk Bay	Unwilling to disclose	Noise	1823	NA	The Complainant complained about the operation of work barge at Junk Bay on Sunday 11 July 2021 at around 12:37 and queried whether construction noise permit was obtained.	Contract 1 (NE/2017/07)	Load test was carried out by a crane barge at Junk Bay at E2 which is within the working area 2 of the issued CNP. According to the issued CNP GW-RE0575-21, one crane barge is allowed to operate in working area 2 between 0900 – 2200 hours during general holiday (including Sunday). During the load test carried out by the crane barge, there is no other operation at the working area 2 which requires PME and may create noise nuisance during the complaint period. It is confirmed by RSS that only one group of powered mechanical equipment stated in the issued Construction Noise Permit (CNP) GW-RE0575-21 was used by CRBC during the load test and it was complied with the requirement under the CNP. The IR revealed that the complaint is related to Contract 1 of the Project. However, it is allowed to operate the crane barge on Sunday 0900 – 2200 hours according to the issued CNP and the Contractor has strictly followed the CNP requirement.
35	11-Jul-21	15-Jul-21	Junk Bay	Unwilling to disclose	Noise	EPD	NA	The Complainant complained about the operation of work barge at Junk Bay on Sunday 11 July 2021 at around 02:50 and queried whether construction noise permit was obtained.	Contract 1 (NE/2017/07)	No marine work was conducted on 11 July 2021 during the complaint period. The Contractor of Contract 1 (CRBC) advised that the illumination (e.g. flashlight, headlight) on the crane barge is required for safety reason - to keep the barge being visible and to avoid collision by other marine vessel. The IR revealed that the complaint is related to the Project since the concern barge is belong to Contract 1 of the Project. However, the complaint was considered not valid since no marine work was carried out at the complaint period. Nevertheless, the Contractor was reminded to strictly follow the requirement stated in the issued Construction Noise Permit if there is any construction work carried out in restricted hours.
36	16-Jul-21	20-Jul-21	Junk Bay	Unwilling to disclose	Noise	EPD	NA	The Complainant complained about the operation of work barge at Junk Bay on 16 July 2021 at around 01:00.	Contract 1 (NE/2017/07)	Welding work was conducted within the steel Arch Bridge in Junk Bay which is within the working area 3 of the issued CNP with the use of one welding machine and one generator during the complaint period. According to the issued CNP GW-RE0575-21, welding work is allowed to operate in working area 3 between 2300 – 0700 hours during any day. It is confirmed by RSS that only one group of powered mechanical equipment stated in the issued Construction Noise Permit (CNP) GW-RE0575-21 was used by CRBC during the welding work and it was complied with the requirement under the CNP. The IR revealed that the complaint is related to Contract 1 of the Project. However, it is allowed to operate the welding machine in working area 3 between 2300 – 0700 hours during any day according to the issued CNP and the Contractor has strictly followed the CNP requirement.

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37	30-Aug-21	3-Sep-21	Junk Bay	SKDC member Mr. Cheung Mei Hung	Water Quality	EPD	N08/RE/0002 0812-21	The Complainant complained about the polluting discharge suspected from the construction site of Cross Bay Link Project at about 18:00 28 August 2021 and about 10:00 on 29 August 2021	Contract 2 (NE/2017/08)	Formwork erection and rebar fixing work were carried out near Lohas Park Phase 6 on 28 August 2021 (Sat) (Photo 1) and no construction work was carried out on 29 August 2021 (Sun). No concreting work nor other construction works that may generate contaminated/muddy water was carried out near Lohas Park Phase 6 on 28 Aug 2021 (Sat) and on 29 August 2021 (Sun). According to the photo record provided by the complainant (Photo 2), no construction work which might potentially produce contaminated/muddy water and no trace of surface runoff/wastewater direct discharge from site was observed. The polluting discharged from the communal storm water drain should come from other sources. The IR revealed that the complaint is not due to the Project since no contaminated/muddy water would be generated by the construction work on 28 and 29 August 2021 and no trace of surface runoff/wastewater direct discharge was observed. Nevertheless, the Contractor was reminded to strictly implement the water mitigation measures on site as far as practicable to avoid any water quality impact to the surrounding environment.
38	9-Sep-21	10-Sep-21	D9 Road	Resident of Lohas Park	Noise	1823	NA	The Complainant complained about the noise nuisance generated from PME or generator at site area near D9 Road.	Contract 1 (NE/2017/07) Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC) and Contract 2 – Contract No. NE/2017/08 (Build King), no construction work was carried out, and no operation of PME and generator was performed at site area near Road D9 and at Works Area A during restricted hours in September 2021. RSS also confirmed that there is no construction work and no operation of PME during the abovementioned period at the complaint location. The IR revealed that the complaint is unlikely due to the Project since no construction work was carried out during restricted hours near Road D9 in September 2021. Nevertheless, the Contractor was reminded to strictly follow the requirement stated in the issued construction noise permit when construction work is required during restricted hours.
39	29-Dec-21	29-Dec-21	D9 Road	Unwilling to disclose	Noise	1823	NA	The Complainant complained about the frequency noise from the Project	Contract 1 (NE/2017/07)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), all the evening marine work carried out in December 2021 were finished by 22:00 each day. No construction work and no operation of PME was carried out during 22:00 – 00:30 in December 2021. It is also confirmed by RSS that there is no construction work and no operation of PME during the complaint period under the Project. The IR revealed that the complaint is unlikely due to the Project since no construction work was carried out during the complaint period. Nevertheless, the Contractor was reminded to strictly follow the requirement stated in the issued construction noise permit when construction work is required during restricted hours.
40	7-Feb-22	17-Feb-22	D9 Road	Unwilling to disclose	Water Quality	EPD	N08/RE/0000 3264-22	The Complainant complained about the muddy discharge at construction site of Cross Bay Link Project at 09:45 on 7 February 2022	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Build King), backfilling work was carried out near Lohas Park Phase 6 on 7 February 2022. No concreting work nor other construction works that may generate muddy water was carried out near Lohas Park Phase 6 on 7 February 2022. According to the photo record provided by the complainant, no muddy water was observed on site and no trace of surface runoff/wastewater direct discharge from site was observed. The muddy water discharged from the communal storm water drain should come from other sources. The IR revealed that the complaint is not due to the Project since no muddy water would be generated by the construction work on 7 February 2022 and no trace of surface runoff/wastewater direct discharge was observed. Nevertheless, the Contractor was reminded to strictly implement the water mitigation measures on site as far as practicable to avoid any water quality impact to the surrounding environment.
41	17-Mar-22	28-Apr-22	Junk Bay	Resident of Island Resort, Siu Sai Wan	Noise	EPD	H20/RS/0000 5292-22	The Complainant complained about the noise nuisance caused by work barge at Junk Bay on 17 March 2022 evening	Contract 1 (NE/2017/07)	A complaint was received by EPD regarding the noise nuisance caused by marine construction vessels on 17 March 2022 evening. As advised by the Contractor of Contract 1, no marine work and no operation of PME was carried out at Junk Bay on 17 March 2022 after 19:00. It is confirmed by RSS that there is no marine work and no operation of PME during the complaint period under the Project. EPD carried out investigation regarding the complaint and revealed that there was a noisy tug boat towing a barge at the Junk Bay toward Lei Yue Mun direction at around 00:00 on 15 April 2022. However, it is not sure if the tug boat is related to Cross Bay Link Project. Besides, as advised by the Contractor of Contract 1, no marine work and no operation of tug boat was carried out on 14 April 2022 after 19:00 under the Project. The Investigation conducted by the ET revealed that the complaint is not related to the Project since no construction work was carried out during the complaint period.
42	2-May-22	12-May-22	Junk Bay	Unwilling to disclose	Noise	1823	NA	The Complainant complained about the noise nuisance caused by construction work under CEDD Contract NE 201707 on 2 May 2022	Contract 1 (NE/2017/07)	A complaint was received by 1823 regarding the noise nuisance construction work under CEDD Contract NE/2017/07 on 2 May 2022 which is a public holiday. The complainant did not specified the concerned location. As advised by the Contractor of Contract 1 (CRBC), no land base and marine construction work, and no operation of PME was carried out on 2 May 2022 under the Project. It is also confirmed by RSS that there is no construction work and no operation of PME during the complaint period under the Project. The Investigation conducted by the ET revealed that the complaint is not related to the Project since no construction work was carried out during the complaint period.

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43	13-May-22	18-May-22	D9 Road	Unwilling to disclose	Water Quality	EPD	N08/RE/00009330-22	The Complainant complained about the suspected muddy water discharge to Junk Bay under CEDD Contract NE 2017/08 on 13 May 2022	Contract 2 (NE/2017/08)	A complaint was received by EPD regarding the muddy discharge suspected from the construction site under CEDD Contract No. NE 2017/08 on 13 May 2022. As advised by the Contractor of Contract 2 (Build King), cable shifting work at Wan O Road and general site cleaning work were carried out on 13 May 2022. No concreting work nor other construction works that may generate muddy water was carried out on 13 May 2022. As observed from the site photos taken on 13 May 2022, no trace of surface runoff/wastewater direct discharge from site was observed. In addition, muddy water was observed being discharged to Junk Bay from the box culvert during ET's site inspection on 11 May 2022 while no muddy water discharged from site was found during the inspection. The Investigation conducted by the ET revealed that the complaint is not related to the Project since no construction work was carried out during the complaint period.
44	10-Jun-22	15-Jun-22	Junk Bay	SKDC member Mr. CHEUNG Mei Hung	Water Quality	EPD	N08/RE/00011470-22	The Complainant complained about the suspected oil spillage into coastal water near Lohas Park and the Cross Bay Link Project on 10 June 2022	Contract 1 (NE/2017/07) Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), formwork erection, rebar fixing and concreting work were conducted at Portion 2 (Main Bridge) on 10 June 2022. As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Build King), general site cleaning work were carried out at Portion 3 and Portion 7 on 10 June 2022 which are located at the coastal area near the complaint location. According to the work activities held by Contract 1 and Contract 2 at the site areas near the complaint location on 10 June 2022, works involving chemical application should not be involved. As observed from the site photos taken on 10 June 2022, the site areas of both contracts were kept clean and no trace of chemical/oil spillage was observed. In addition, no trace of chemical/oil spillage was observed during ET's site inspection on 15 June 2022. The Investigation conducted by the ET revealed that the complaint is not related to the Project sincework activities involving chemical application was carried out on 10 June 2022 and no trace of chemical/oil spillage was observed.
45	18-Jul-22	18-Jul-22	Wan O Road	Unwilling to disclose	Noise	EPD	N08/RE/00014346-22	The Complainant complained about the noise nuisance generated from construction activities at Wan O Road from 10 a.m. to 6p.m. during weekdays.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Build King), road breaking work at Wan O Road was commenced on 15 July 2022. The work involved one road breaker to conduct the breaking activity which generate noticeable noise impact. Noise mitigation measure such as wrapped the head of the breaker with acoustic material was implemented and movable noise barrier was provided for the breaker to minimize the noise impact generated from the operation (Photo 1). In addition, the road breaking was operated intermittently to minimize the noise impact to nearby resident. The road breaking work should be last for two weeks according to the Contractor's tentative schedule. Upon received the complaint, Build King has requested again the sub-contractor to ensure the movable noise barrier is properly implemented during the course of road breaking work. The Investigation conducted by the ET revealed that the complaint is related to the Project. However, the Contractor has provided noise mitigation measure for the road breaking work and no noise limit level exceedance was recorded.
46	21-Jul-22	21-Jul-22	Junk Bay	SKDC member Mr. CHEUNG Mei Hung	Water Quality	EPD	NA	The Complainant complained about the suspected wastewater discharge into the coastal waters of Junk Bay near Lohas Park from the Project.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Build King), excavation work for cable duct diversion, formwork dismantling work and asphalt surface breaking work were conducted at Wan O Road on 21 July 2022. No construction work that may generate muddy water was carried out at Road D9 on 21 July 2022. According to AFCD's Hong Kong Red Tide Database, red tide was observed at Tathong Channel including Junk Bay and Tung Lung Chau Fish Culture Zone on 21 July 2022. The suspected wastewater discharge observed should be related to the red tide reported on 21 July 2022. The Investigation conducted by the ET revealed that the complaint is not related to the Project as no muddy water would be generated by the construction work on 21 July 2022 and red tide was reported by AFCD at the complaint location on 21 July 2022
47	12-Aug-22	15-Aug-22	Junk Bay	Resident of Lohas Park	Water Quality	CEDD	NA	The Complainant complained about the suspected wastewater discharge into the coastal waters of Junk Bay near Lohas Park from the Project.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Build King), cable duct installation and backfilling work were conducted at Wan O Road on 12 August 2022. No construction work that may generate muddy water was carried out at Road D9 on 12 August 2022. According to the site photos on 12 August 2022, no trace of surface runoff/wastewater direct discharged from site was observed at Road D9. In addition, as observed from the photo record provided by the complainant, the muddy water was discharged from the communal storm water drain rather than overflow of surface runoff from site. The muddy water should come from other sources. The Investigation conducted by the ET revealed that the complaint is unlikely due to the Project as no muddy water would be generated by the construction work on 12 August 2022 and no trace of surface runoff/wastewater direct discharge was observed

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48	17-Aug-22	22-Aug-22	Road D9	SKDC member Mr. CHEUNG Mei Hung	Water Quality	EPD	NA	The Complainant complained about the suspected spillage / leakage into the coastal waters of Junk Bay near Lohas Park and Road D9 construction site.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), no work was conducted on 17 August 2022 near the complaint location at Work Area A. Site inspection was conducted at Work Area A near the complaint location after the complaint was received. No chemical storage was observed but only material storage (boat buoy) was observed at the Work Area A near the complaint location. According to the site photo taken on 17 August 2022, no trace of surface runoff discharged to Junk Bay was observed. There is no record of chemical / oil spillage from the Contractors and RSS near works area A during the complaint period. In addition, a U-channel was built at the coastal area of Work Area A to prevent surface runoff discharge to Junk Bay. As an additional preventive measure, the Contractor provided an additional sandbag bund to ensure no surface runoff overflow from the drainage channel. As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Build King), silt curtain removal work was conducted on 17 August 2022 at the complaint location near Road D9. The black material shown in the photo provided by the complainant was the floating silt curtain after anchor of silt curtain was removed. The Investigation conducted by the ET revealed that the complaint is unlikely due to the Project since no trace of spillage was found near the complaint location and preventive measure of potential leakage was provided.
49	31-Aug-22	31-Aug-22	Road D9	Resident of Lohas Park (Sea to Sky)	Air Quality	CEDD	NA	The Complainant complained about the odour nuisance from the Project site area near Lohas Park Sea to Sky.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Build King), application of water proof membrane for Road D9 near Portion III and Portion VII was conducted on 31 August 2022 and it should be the source of the odour nuisance after investigation. Upon received the complaint, the Contractor has provided air blowers to increase the air movement at the work areas and reduce the odour impact from the application of water proof membrane. The Investigation conducted by the ET revealed that the complaint was related to the Project. The Contractor has taken mitigation measures upon received the complaint and will continue to implement mitigation measures during the application of water proof membrane.
50	20-Oct-22	21-Oct-22	Junk Bay	SKDC member Mr. CHEUNG Mei Hung	Noise	CEDD	NA	The Complainant complained about the low frequency noise from engines of vessels travelling or berthing on the sea at Tsueng Kwan O from 9pm to 8am.	Contract 1 (NE/2017/07)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), no marine construction work and no operation of marine vessel was carried out from 21:00 to 08:00 during the week of complaint received under the Project. It is also confirmed by RSS that there is no marine construction work and no operation of marine vessel during the complaint period under the Project. The Investigation conducted by the ET revealed that the complaint was unlikely due to the Project since no construction work and operation of marine vessel was carried out under the Project during the complaint period
51	27-Oct-22	27-Oct-22	Junk Bay	Resident of Lohas Park Sea to Sky	Noise	EPD	N08/RE/00023617-22	The Complainant complained about the noise nuisance generated from construction barges suspected from CBL project.	Contract 1 (NE/2017/07)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), lifting work were conducted at Pier E3 from 15:00 to 16:00 on 27 October 2022 (Photo 1) and no work barge was used for the rest of the day. One (1) construction barge was involved for the lifting work. According to the site photo taken on 27 October 2022, the lifting work was carried under the bridge and there should be no direct sight of the work barge from Lohas Park Sea to Sky. In addition, Pier E3 is about 350m far from Lohas Park Sea to Sky which the noise generated from the work barge should be insignificant. The Investigation conducted by the ET revealed that the complaint was unlikely due to the work barge of the Project since the lifting work was carried out under the bridge and the work location is far from the Lohas Park Sea to Sky.
52	9-Nov-22	11-Nov-22	Junk Bay	Security Guard of Lohas Park Sea to Sky	Noise	CEDD	NA	The Complainant complained about the high frequency noise suspected generated by the works carried out at the CBL mainbridge and elevated deck from 21:15 - 21:45 and 01:15 - 01:45.	Contract 1 (NE/2017/07) Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC) and the Contractor of Contract 2 – Contract No. NE/2017/08 (Buildking), no site work and no operation of Powered Mechanical Equipment (PME) was carried out at CBL main bridge and elevated deck from 21:15 - 21:45 and 01:15 - 01:45 from 7 to 9 November 2022. It is also confirmed by RSS that there is no site work and no operation of PME at main bridge and elevated deck during the complaint period under the Project. The Investigation conducted by the ET revealed that the complaint was unlikely due to the Project since there is no site work and no operation of PME carried out at the concerned location under the Project during the complaint period.

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53	17-Nov-22	18-Nov-22	Junk Bay	Unwilling to disclose	Light Pollution	CEDD	NA	The Complainant complained about the high frequency noise suspected generated by the works carried out at the CBL mainbridge from 21:15 - 21:45 and 01:15 - 01:45.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), the operational stage functional lights were under testing for the nighttime illumination effect of CBL from 14 – 18 November 2022 from 19:00 to 22:00. As confirmed by the Contractor and RSS, the operation stage functional light were not point towards the residential building during the testing period and will not point towards the residential building during operation stage. The Investigation conducted by the ET revealed that the complaint was related to the Project. However, the operational stage functional lights were turned off before 22:00 during the testing period to minimize any light pollution to surrounding residential building.
54	3-Dec-22	5-Dec-22	Road D9	Unwilling to disclose	Noise	EPD	N08/RE/0002 7613-22	The Complainant complained about the concerning construction noise suspected from Cross Bay Link project in particular at 5am on 2 December 2022.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Buildking), no work was carried out at 5am on 2 December 2022 at Road D9 near Wan Po Road and road surfacing work was started after 7 am during the week. The work schedule of Contract 2 during the concerned period on 2 December 2022 was confirmed by RSS. The Investigation conducted by the ET revealed that the complaint was not related to the Project as no work was carried out during the complaint period.
55	5-Dec-22	5-Dec-22	Road D9	Unwilling to disclose	Noise	EPD	N08/RE/0002 7756-22	The Complainant complained about the concerning construction noise suspected from Cross Bay Link project at 21:10 on 4 December 2022 (Sunday)	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 2 – Contract No. NE/2017/08 (Buildking), no excavator was used under the Project on 4 December 2022 and the concerned area was handed over to other Project. RSS also confirm the concerned area is out of site boundary of the Project. The Investigation conducted by the ET revealed that the complaint was not related to the Project as the concerned area is out of site boundary.