

Gammon Construction Limited

Central Kowloon Route
Works Contract HY/2014/07 –
Central Kowloon Route – Kai Tak West
Final EM&A Review Report

[February 2026]

	Name	Signature
Prepared & Checked:	Ho Pui Yin Kevin	
Reviewed, Approved & Certified:	Y. W. Fung	

Version: 0

Date: 13 February 2026

Disclaimer

This Environmental Monitoring and Audit Report is prepared for Gammon Construction Limited and is given for its sole benefit in relation to and pursuant to Contract HY/2014/07 and may not be disclosed to, quoted to or relied upon by any person other than Gammon Construction Limited without our prior written consent. No person (other than Gammon Construction Limited into whose possession a copy of this report comes may rely on this plan without our express written consent and Gammon Construction Limited may not rely on it for any purpose other than as described above.

AECOM Asia Co. Ltd.

12/F, Grand Central Plaza, Tower 2, 138 Shatin Rural Committee Road, Shatin, NT, Hong Kong
Tel: (852) 3922 9000 Fax: (852) 2317 7609 www.aecom.com



Environmental Permit No. EP-457/2013/D

Central Kowloon Route

Independent Environmental Checker Verification

Works Contract:

Kai Tak West (HY/2014/07)

Reference Document/Plan

Document/~~Plan~~ to be ~~Certified~~/ Verified: Final EM&A Review Report

Date of Report: 13 February 2026

Date received by IEC: 13 February 2026

Reference EP Condition

Environmental Permit Condition: 3.4

Submission of Monthly EM&A Report of the Project

3.4 Four hard copies and one electronic copy of monthly EM&A Report shall be submitted to the Director within 2 weeks after the end of each reporting month throughout the entire construction period. The EM&A Reports shall include a summary of all non-compliance. The submissions shall be certified by the ET Leader and verified by the IEC as complying with the requirements as set out in the EM&A Manual before submission to the Director. Additional copies of the submission shall be provided to the Director upon request by the Director.

IEC Verification

I hereby verify that the above referenced document/~~plan~~ complies with the above referenced condition of EP-457/2013/D and FEP-01/457/2013/C.

Ms Mandy To

Independent Environmental Checker

Date: 23 February 2026

Table of Contents	Page
EXECUTIVE SUMMARY	3
1 INTRODUCTION.....	5
1.1 Purpose of the Report	5
1.2 Report Structure.....	5
2 PROJECT INFORMATION.....	6
2.1 Background	6
2.2 Site Description.....	6
2.3 Construction Programme and Activities	7
2.4 Project Organization	8
3 ENVIRONMENTAL MONITORING REQUIREMENTS	9
3.1 Construction Dust Monitoring	9
3.2 Construction Noise Monitoring	12
3.3 Construction Water Monitoring	14
3.4 Landscape and Visual	16
4 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES.....	17
5 MONITORING RESULTS	23
5.1 Construction Dust Monitoring	23
5.2 Regular Construction Noise Monitoring.....	23
5.3 Construction Water Monitoring	24
5.4 Waste Management.....	25
5.5 Landscape and Visual	25
6 ENVIRONMENTAL SITE INSPECTION AND AUDIT	25
7 ENVIRONMENTAL NON-CONFORMANCE.....	26
7.1 Summary of Monitoring Exceedances.....	26
7.2 Summary of Environmental Non-Compliance	26
7.3 Summary of Environmental Complaints.....	26
7.4 Summary of Environmental Summon and Successful Prosecutions	26
8 REVIEW OF THE VALIDITY OF EIA PREDICTION AND IDENTIFICATION OF SHORTCOMINGS IN EIA RECOMMENDATIONS	27
9 COMMENTS	27
10 CONCLUSIONS AND RECOMMENDATIONS	28

List of Tables

Table 2.1	Construction Activities in the reporting period	7
Table 2.2	Contact Information of Key Personnel	8
Table 3.1	Air Quality Monitoring Equipment	9
Table 3.2	Location of Construction Dust Monitoring Station	9
Table 3.3	Noise Monitoring Parameters, Frequency and Duration	12
Table 3.4	Noise Monitoring Equipment for Regular Noise Monitoring	12
Table 3.5	Noise Monitoring Stations during Construction Phase	12
Table 3.6	Noise Monitoring Parameters, Frequency and Duration	13
Table 3.7	Water Quality Monitoring Equipment	14
Table 3.8	Impact Water Quality Monitoring Stations	15
Table 3.9	Water Quality Monitoring Parameters, Frequency and Duration	15
Table 4.1	Status of Required Submission under Environmental Permit	17
Table 5.1	Summary of 24-hour TSP Monitoring Result in the Reporting Period	23
Table 5.2	Summary of 1-hour TSP Monitoring Result in the Reporting Period	23
Table 5.3	Summary of Construction Noise Monitoring Results in the Reporting Period	23
Table 5.4	Summary of Impact Water Quality Monitoring Results	24
Table 5.4	Summary of Waste Flow the Reporting Period	25

List of Figures

Figure 1.1	Site Layout Plan
Figure 3.1	Location of Air Quality Monitoring Station
Figure 3.2	Locations of Noise Monitoring Station
Figure 3.3	Locations of Water Monitoring Station

List of Appendices

Appendix A	Project Organisation Structure
Appendix B	Summary of Action and Limit Levels
Appendix C	Event and Action Plan
Appendix D	Implementation Schedule of Environmental Mitigation Measures
Appendix E	Air Quality Monitoring Results and their Graphical Presentations
Appendix F	Noise Monitoring Results and their Graphical Presentations
Appendix G	Summary of Waste Flow Table
Appendix H	Cumulative Statistics on Complaints, Notification of Summons and Successful Prosecutions

EXECUTIVE SUMMARY

Central Kowloon Route – Kai Tak West (CKR-KTW; Contract No. HY/2014/07) (hereafter called “the Project”) covers part of the construction of the Central Kowloon Route (CKR).

The Project comprises the follow works:

- 50x30m access shaft with noise enclosure at Ma Tau Kok (MTK);
- 100m long cut-and-cover (C&C) tunnel at MTK;
- Demolition and re-provisioning of MTK Public Pier;
- 160m long underwater tunnel (UWT) (Stage 1);
- 210m long UWT (Stage 2);
- 60m long C&C tunnel at Kai Tak;
- 130m long depressed road and 200m long underpass at Kai Tak;
- 390m long underground tunnel ventilation audit at Kai Tak;
- Seawall demolition and construction of new landing steps; and
- Barging Point enclosure and conveyor system.

The EM&A programme commenced on 4 April 2018. The impact EM&A for the Project includes air quality and noise monitoring. The EM&A monitoring, including both construction dust monitoring (monitoring station E-A14a) and construction noise monitoring (monitoring station E-N12a and E-N21a) were conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D since 1 October 2025.

All construction works with environmental impact concerned have been completed in September 2025. The cessation of construction phase EM&A programme under the Project was proposed on 26 November 2025 and EPD expressed no objection to the proposed cessation after the visit on 10 December 2025 and approved letter was obtained on 23 December 2025. Hence, the construction phase EM&A programme of the Project was terminated as agreed.

This report documents the findings of EM&A works conducted in the period from 4 April 2018 to 23 December 2025. As informed by the Contractor, major activities undertaken in the construction phase were:

Locations	Site Activities
Kai Tak	Formation of site, Hoarding erection, Construction of site offices, Setup of excavated soil storage area, Predrill works, Pipe piling, Socket Hpile installation, Excavation and ELS installation, Base slab, wall, and roof slab construction at cut & cover, underpass, and depressed road, Casting tunnel, Falsework erection, Backfilling
Ma Tau Kok	Site investigation, Site clearance & tree felling, Installation of monitoring instruments, TTA enabling works & initial Temporary Traffic Management (TTM) implementation, Existing bus-shelter relocation / removal & provision of temporary shelters, Demolition of existing vehicular ramp & booth structure, Demolition of Kowloon City Public Pier, Temporary storm-drain diversion works, ipe-piling works for MTK C&C Tunnel / cut-and-cover, King-post construction, Double-sheet-pile wall construction, Decking, excavation & ELS installation, General tunnel / shaft excavation, Tunnel structure construction at MTK C&C Tunnel, MTK east wall & traffic deck construction, King-post removal post-structure completion, Defect rectification works at PTI & tunnel areas, Final TTM removal & permanent traffic switch-over
Kowloon Bay	Abandoned fuel pipeline removal, Gas pipeline removal, Dewatering well installation, Temporary reclamation at Stage 2 UWT, Seawall demolition and reinstatement, Removal of temporary marine platform, Pipe piling for Stage 2 UWT, King post and sheet pile removal at Stage 1 UWT, Excavation for Stage 1 UWT and Stage 2 UWT, Dredging of marine sediment, Base slab and roof slab construction, Tunnel structure and walkway construction, Backfilling at Stage 1 and Stage 2 UWT, Waterproofing application, Road drainage and paving at Stage 2 UWT, Road marking and stud installation, Pumping tests, Defect rectification at Kowloon City Public Pier
Barging Point	Site clearance, Site set-up, Barging point construction and operation, Demolition of Kai Tak Barging Point, Preparation works for taking over Kai Tak Barging Facility ¹

Remark:

1. Barging Point under FEP-01/436/2012/F was handed over from “Shatin to Central Link (Hung Hom – Admiralty Section) – Kai Tak Barging Facility” by MTR on 22 Dec 2020.

Breaches of Action and Limit Levels for Air Quality

All 24-hour TSP results were below the Action and Limit Levels at all monitoring locations in the reporting period.

All 1-hour TSP results were below the Action and Limit Levels at all monitoring locations in the reporting period.

The EM&A monitoring, construction dust monitoring (monitoring station E-A14a) was conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D from 1 October 2025. Details of the corresponding monitoring results, and wind data, could be referred to Sections 3 of the corresponding Monthly EM&A Report for Contract No. HY/2023/08.

Breaches of Action and Limit Levels for Noise

Forty-seven (47) Action Level exceedance was recorded Investigations for the exceedances were conducted and the results revealed that the recorded noise exceedances were not in relation to the construction works of the Project.

No exceedance of Limit Level of noise was recorded in the reporting period.

The EM&A monitoring, construction noise monitoring (monitoring station E-N12a and E-N21a) was conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D from 1 October 2025. Details of the corresponding monitoring results could be referred to Sections 3 of the corresponding Monthly EM&A Report for Contract No. HY/2023/08.

Breaches of Action and Limit Levels for Water

No Action level and Limit level exceedance were recorded at measured DO and Total PAHs in the reporting period.

Nine (9) Action Level and eleven (11) Limit level were recorded exceedances at measured turbidity level in the reporting period.

Twenty one (21) Action Level and twenty-nine (29) Limit Level exceedances were recorded at measured SS level in the reporting period.

One (1) Action Level and seventy-five (75) Limit Level exceedances were recorded at measured Copper Level in the reporting period.

Complaint, Notification of Summons and Successful Prosecution

Total of eighty (80) environmental complaints were received. The complaints regarding air, noise, waste and water impact, in which were mostly related to air and noise impacts. No environmental summon / prosecution was received since the commencement of construction works.

Summary of the Overall EM&A Programme

The EM&A programme were found to be effective in monitoring impacts arising from the Project. The findings of the environmental monitoring program suggest that no adverse impacts on sensitive receivers at the designated monitoring locations were brought about by the Project.

In conclusion the Project was environmentally acceptable in terms of air quality, noise and water quality impact.

1 INTRODUCTION

Gammon Construction Limited was commissioned by the Highways Department as the Civil Contractor for Works Contract HY/2014/07. AECOM Asia Company Limited (AECOM) was appointed by Gammon Construction Limited as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) programme during construction phase of the Project.

1.1 Purpose of the Report

- 1.1.1 This is the Final EM&A Review Report which summaries the impact monitoring results and audit findings for the Project during the reporting period from 4 April 2018 to 23 December 2025.

1.2 Report Structure

- 1.2.1 This monthly EM&A Report is organized as follows:

- Section 1: Introduction
- Section 2: Project Information
- Section 3: Environmental Monitoring Requirement
- Section 4: Implementation Status of Environmental Mitigation Measures
- Section 5: Monitoring Results
- Section 6: Environmental Site Inspection and Audit
- Section 7: Environmental Non-conformance
- Section 8: Review of the Validity of EIA Prediction
- Section 9: Comments
- Section 10: Conclusions and Recommendations

2 PROJECT INFORMATION

2.1 Background

- 2.1.1 CKR is a dual 3-lane trunk road across central Kowloon linking the West Kowloon in the west and the Kai Tak Development (KTD) in the east. The CKR will be about 4.7 km long with an underground tunnel section of about 3.9 km long, in particular, there will be an underwater tunnel of about 370 m long in Kowloon Bay to the north of the To Kwa Wan Typhoon Shelter. It will connect the West Kowloon Highway at Yau Ma Tei Interchange with the road network at Kowloon Bay and the future Trunk Road T2 at KTD which will connect to the future Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) and Cross Bay Link (CBL). CKR, Trunk Road T2 and TKO-LTT will form a strategic highway link, namely Route 6, connecting West Kowloon and Tseung Kwan O. In addition, 3 ventilation buildings, which will be located in Ya Ma Tei, Ho Man Tin and ex-Kai Tak airport area, are proposed to ensure acceptable air quality within the tunnel.
- 2.1.2 The Environmental Impact Assessment (EIA) Report for Central Kowloon Route (Register No.: AEIAR-171/2013) was approved on 11 July 2013 under the Environmental Impact Assessment Ordinance (EIAO). Following the approval of the EIA Report, an Environmental Permit (EP) for CKR was granted on 9 August 2013 (EP No.: EP- 457/2013) for the construction and operation. Variation of EP (VEP) was subsequently applied and the latest EP (EP No. EP-457/2013/D) was issued by the Director of Environmental Protection (DEP) on 15 June 2021. Further Environmental Permit (EP No. FEP-01/457/2013/C) for CKR – Kai Tak West was issued on 28 February 2018.
- 2.1.3 The construction of the CKR had been divided into different sections. This Work Contract HY/2014/07 – Kai Tak West (KTD) (“The Project”) will include a road which is a trunk road, including new roads, and major extensions or improvements to existing roads; a road fully enclosed by decking above and by structure on the sides for more than 100 m; and reclamation works (including associated dredging works) more than 1 ha in size and a boundary of which is less than 100 m from an existing residential area.
- 2.1.4 The site layout plan of the Project is shown in **Figure 1.1**.

2.2 Site Description

- 2.2.1 The major construction activities under this Project include:
- (a) construction of approximately 160m long cut-and-cover tunnel and 370m long underwater tunnel between the tunnel section at Ma Tau Kok and the depressed road of the CKR within Kai Tak Development;
 - (b) reconstruction of the seawall at Ma Tau Kok public pier, and the sloping seawall at the Former Kai Tak Airport Runway;
 - (c) construction of approximately 125m long depressed road and 200m long underpass of the CKR within Kai Tak Development;
 - (d) construction of approximately 360m long underground tunnel ventilation adit of the CKR;
 - (e) reconstruction of Kowloon City Ferry Pier Public Transport Interchange; and
 - (f) other associated works.

2.3 Construction Programme and Activities

2.3.1 All major construction works in the whole works area of the Project have been substantially completed in September 2025. Hence, the cessation of construction phase EM&A programme under the Project was proposed on 26 November 2025 and EPD expressed no objection to the proposed cessation after the visit on 10 December 2025 and approved letter was obtained on 23 December 2025.

2.3.2 The major construction activities undertaken in the reporting period are summarized in **Table 2.1**.

Table 2.1 Construction Activities in the reporting period

Locations	Site Activities
Kai Tak	Formation of site, Hoarding erection, Construction of site offices, Setup of excavated soil storage area, Predrill works, Pipe piling, Socket Hpile installation, Excavation and ELS installation, Base slab, wall, and roof slab construction at cut & cover, underpass, and depressed road, Casting tunnel, Falsework erection, Backfilling
Ma Tau Kok	Site investigation, Site clearance & tree felling, Installation of monitoring instruments, TTA enabling works & initial Temporary Traffic Management (TTM) implementation, Existing bus-shelter relocation / removal & provision of temporary shelters, Demolition of existing vehicular ramp & booth structure, Demolition of Kowloon City Public Pier, Temporary storm-drain diversion works, ipe-piling works for MTK C&C Tunnel / cut-and-cover, King-post construction, Double-sheet-pile wall construction, Decking, excavation & ELS installation, General tunnel / shaft excavation, Tunnel structure construction at MTK C&C Tunnel, MTK east wall & traffic deck construction, King-post removal post-structure completion, Defect rectification works at PTI & tunnel areas, Final TTM removal & permanent traffic switch-over
Kowloon Bay	Abandoned fuel pipeline removal, Gas pipeline removal, Dewatering well installation , Temporary reclamation at Stage 2 UWT, Seawall demolition and reinstatement, Removal of temporary marine platform, Pipe piling for Stage 2 UWT, King post and sheet pile removal at Stage 1 UWT, Excavation for Stage 1 UWT and Stage 2 UWT, Dredging of marine sediment, Base slab and roof slab construction, Tunnel structure and walkway construction, Backfilling at Stage 1 and Stage 2 UWT, Waterproofing application, Road drainage and paving at Stage 2 UWT, Road marking and stud installation, Pumping tests, Defect rectification at Kowloon City Public Pier
Barging Point	Site clearance, Site set-up, Barging point construction and operation, Demolition of Kai Tak Barging Point, Preparation works for taking over Kai Tak Barging Facility ¹

Remark:

1. Barging Point under FEP-01/436/2012/F was handed over from "Shatin to Central Link (Hung Hom – Admiralty Section) – Kai Tak Barging Facility" by MTR on 22 Dec 2020.

2.3.3 The construction programme could be referred to the respective monthly EM&A reports.

2.4 Project Organization

- 2.4.1 The project organization structure is shown in **Appendix A**. The key personnel contact names and numbers for the Project are summarized in **Table 2.2**.

Table 2.2 Contact Information of Key Personnel

Party	Role	Position	Name	Telephone	Fax
Arup-Mott MacDonald Joint Venture	Residential Engineer (ER)	Engineer's Representative	Mr. Patrick Lo	36195901	2268 3954
ERM	Independent Environmental Checker (IEC)	Independent Environmental Checker	Ms. Mandy To	2271 3113	3015 8052
Gammon	Contractor	Contracts Manager	Mr. Kin Fai Tam	2516 8823	2516 6260
		Environmental Manager	Ms. Michelle Tang	9267 8866	2516 6260
		Environmental Officer	Ms. Wing Lam	6603 0843	2516 6260
AECOM	Contractor's Environmental Team (ET)	ET Leader	Mr. Y. W. Fung	3856 5681	2317 7609

3 ENVIRONMENTAL MONITORING REQUIREMENTS

3.1 Construction Dust Monitoring

Monitoring Requirements

- 3.1.1 In accordance with the approved EM&A Manual, measurement of 24-hour and 1-hour Total Suspended Particulates (TSP) level at the designated air quality monitoring station is required. Impact 24-hour TSP monitoring should be carried out for at least once every 6 days, and 1-hour TSP monitoring should be done at least 3 times every 6 days while the highest dust impact is expected. The Action and Limit Levels of the air quality monitoring is provided in **Appendix B**.

Monitoring Equipment

- 3.1.2 24-hour TSP air quality monitoring was performed using High Volume Sampler (HVS) located at the designated monitoring station. The HVS meets all the requirements of the EM&A Manual.
- 3.1.3 A portable direct reading dust meter was used to carry out the 1-hour TSP monitoring.
- 3.1.4 Brand and model of the equipment is given in **Table 3.1**.

Table 3.1 Air Quality Monitoring Equipment

Equipment	Brand and Model
High Volume Sampler (24-hour TSP)	Tisch Total Suspended Particulate Mass Flow Controlled High Volume Air Sampler (Model No. TE-5170)
Calibration Kit (24-hour TSP)	TISCH Environmental Orifice (Model TE-5025A)
Portable direct reading dust meter (1-hour TSP)	Sibata Digital Dust Monitor (Model No. LD-3 & LD-3B)

- 3.1.5 The EM&A monitoring, construction dust monitoring (monitoring station E-A14a) was conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D since 1 October 2025. Details of the corresponding monitoring equipment could be referred to Sections 3 of the corresponding Monthly EM&A Report for Contract No. HY/2023/08.

Monitoring Locations

- 3.1.6 The monitoring station for construction dust monitoring pertinent to the Project has been identified based on the approved EM&A Manual for the Project. The location of the construction dust monitoring station is summarized in **Table 3.2** and shown in **Figure 3.1**.

Table 3.2 Location of Construction Dust Monitoring Station

Location	Monitoring Station	Description
E-A14a ^[1]	Block B of Merit Industrial Centre	Rooftop (13/F)

Note:

[1] The air monitoring station proposed in the EM&A Manual (i.e. Wyler Gardens with ID: E-A14) was not available for impact dust monitoring, therefore impact monitoring was conducted at E-A14a as an alternative which was agreed by the ER, IEC and EPD.

Monitoring Methodology

3.1.7 24-hour TSP Monitoring

- (a) The HVS was installed in the vicinity of the air sensitive receivers. The following criteria were considered in the installation of the HVS as far as practicable: -
- (i) A horizontal platform with appropriate support to secure the sampler against gusty wind was provided.

- (ii) Two samplers should not be placed less than 2m apart from each other;
 - (iii) The distance between the HVS and any obstacles, such as buildings, was at least twice the height that the obstacle protrudes above the HVS.
 - (iv) A minimum of 2 meters separation from walls, parapets and penthouse for rooftop sampler.
 - (v) A minimum of 2 meters separation from any supporting structure, measured horizontally is required.
 - (vi) No furnace or incinerator flues nearby.
 - (vii) Airflow around the sampler was unrestricted.
 - (viii) The sampler was located more than 20 meters from any dripline.
 - (ix) Any wire fence and gate, required to protect the sampler, did not obstruct the monitoring process.
 - (x) Permission was obtained to set up the samplers and access to the monitoring station.
 - (xi) A secured supply of electricity was obtained to operate the sampler.
- (b) Preparation of Filter Papers
- (i) Glass fibre filters, G810 were labelled and sufficient filters that were clean and without pinholes were selected.
 - (ii) All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ± 3 °C; the relative humidity (RH) was < 50% and not variable by more than $\pm 5\%$. A convenient working RH was 40%.
 - (iii) All filter papers were prepared and analysed by ALS Technichem (HK) Pty Ltd., which is a HOKLAS accredited laboratory and has comprehensive quality assurance and quality control programmes.
- (c) Field Monitoring
- (i) The power supply was checked to ensure the HVS works properly.
 - (ii) The filter holder and the area surrounding the filter were cleaned.
 - (iii) The filter holder was removed by loosening the four bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully.
 - (iv) The filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter.
 - (v) The swing bolts were fastened to hold the filter holder down to the frame. The pressure applied was sufficient to avoid air leakage at the edges.
 - (vi) Then the shelter lid was closed and was secured with the aluminium strip.
 - (vii) The HVS was warmed-up for about 5 minutes to establish run-temperature conditions.
 - (viii) A new flow rate record sheet was set into the flow recorder.
 - (ix) On site temperature and atmospheric pressure readings were taken and the flow rate of the HVS was checked and adjusted at around 1.3 m³/min, and complied with the range specified in the EM&A Manual (i.e. 0.6-1.7 m³/min).
 - (x) The programmable digital timer was set for a sampling period of 24 hrs, and the starting time, weather condition and the filter number were recorded.
 - (xi) The initial elapsed time was recorded.
 - (xii) At the end of sampling, on site temperature and atmospheric pressure readings were taken and the final flow rate of the HVS was checked and recorded.
 - (xiii) The final elapsed time was recorded.
 - (xiv) The sampled filter was removed carefully and folded in half length so that only surfaces with collected particulate matter were in contact.
 - (xv) It was then placed in a clean envelope and sealed.
 - (xvi) All monitoring information was recorded on a standard data sheet.
 - (xvii) Filters were then sent to ALS Technichem (HK) Pty Ltd. for analysis.
- (d) Maintenance and Calibration
- (i) The HVS and its accessories were maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply.

- (ii) HVSSs were calibrated using TE-5025A Calibration Kit upon installation and thereafter at bi-monthly intervals.
- (iii) Calibration certificate of the TE-5025A Calibration Kit and the HVSSs could be referred to the respective monthly EM&A reports.

3.1.8 1-hour TSP Monitoring

(a) Measuring Procedures

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

- (i) Turn the power on.
- (ii) Close the air collecting opening cover.
- (iii) Push the "TIME SETTING" switch to [BG]
- (iv) Push "START/STOP" switch to perform background measurement for 6 seconds.
- (v) Turn the knob at SENSI ADJ position to insert the light scattering plate.
- (vi) Leave the equipment for 1 minute upon "SPAN CHECK" is indicated in the display.
- (vii) Push "START/STOP" switch to perform automatic sensitivity adjustment. This measurement takes 1 minute.
- (viii) Pull out the knob and return it to MEASURE position.
- (ix) Push the "TIME SETTING" switch the time set in the display to 3 hours.
- (x) Lower down the air collection opening cover.
- (xi) Push "START/STOP" switch to start measurement.

(b) Maintenance and Calibration

- (i) Calibration certificate of the Sibata Digital Dust Monitors could be referred to the respective monthly EM&A reports.

3.1.9 The EM&A monitoring, construction dust monitoring (monitoring station E-A14a) was conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D since 1 October 2025. Details of the corresponding monitoring methodology could be referred to Sections 3 of the corresponding Monthly EM&A Report for Contract No. HY/2023/08.

Monitoring Schedule for the Reporting Period

3.1.10 EM&A works were carried out in accordance with the requirements stipulated in the approved EM&A Manuals. 24-hour TSP and 1-hour TSP air quality monitoring for the reporting period with respect to the construction programme could be referred to the respective monthly EM&A reports.

3.1.11 The EM&A monitoring, construction dust monitoring (monitoring station E-A14a) was conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D from 1 October 2025. Details of the corresponding monitoring schedule could be referred to Sections 3 of the corresponding Monthly EM&A Report for Contract No. HY/2023/08.

3.2 Construction Noise Monitoring

Monitoring Requirements

- 3.2.1 In accordance with the EM&A Manual, impact noise monitoring should be conducted for at least once a week during the construction phase of the Project. **Table 3.3** summarizes the monitoring parameters, frequency and duration of impact noise monitoring. The Action and Limit Levels of the noise monitoring is provided in **Appendix B**.

Table 3.3 Noise Monitoring Parameters, Frequency and Duration

Parameter and Duration	Frequency
30-mins measurement at each monitoring station between 0700 and 1900 on normal weekdays. L_{eq} , L_{10} and L_{90} would be recorded.	At least once per week

Monitoring Equipment

- 3.2.2 Noise monitoring was performed using sound level meter at each designated monitoring station. The sound level meters deployed comply with the International Electrotechnical Commission Publications (IEC) 651:1979 (Type 1) and 804:1985 (Type 1) specifications. Acoustic calibrator was deployed to check the sound level meters at a known sound pressure level. Brand and model of the equipment is given in **Table 3.4**.

Table 3.4 Noise Monitoring Equipment for Regular Noise Monitoring

Equipment	Brand and Model
Integrated Sound Level Meter	B&K (Model No. 2250, 2250L& 2270) Nti (Model No. XL2)
Acoustic Calibrator	MVI (Model No. CAL21) Rion (Model No. NC-74) B&K (Model No. 4231)

- 3.2.3 The EM&A monitoring, construction noise monitoring (monitoring station E-N12a and E-N21a) was conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D from 1 October 2025. Details of the corresponding equipment could be referred to Sections 3 of the corresponding Monthly EM&A Report for Contract No. HY/2023/08.

Monitoring Locations

- 3.2.4 The monitoring stations for construction noise monitoring pertinent to the Project have been identified based on the approved EM&A Manual for the Project. Locations of the noise monitoring stations are summarized in **Table 3.5** and shown in **Figure 3.2**.

Table 3.5 Noise Monitoring Stations during Construction Phase

Location	Monitoring Station	Description	Measurement
E-N12a ^[1]	19 Hing Yan Street	Rooftop (9/F)	Façade
E-N21a ^[1]	Block B of Merit Industrial Centre	Rooftop (13/F)	Free field ^[2]

Notes:

[1] The noise monitoring stations proposed in the EM&A Manual (i.e. Grand Waterfront Tower 3 with ID: E-N12 and Hang Chien Court Block J with ID: E-N21) were not available for impact noise monitoring, therefore impact monitoring was conducted at E-N12a and E-N21a as an alternative which was agreed by the ER, IEC and EPD.

[2] A correction of +3 dB(A) was made to the free field measurements.

Monitoring Parameters, Frequency and Duration

3.2.5 **Table 3.6** summarizes the monitoring parameters, frequency and duration of impact noise monitoring.

Table 3.6 Noise Monitoring Parameters, Frequency and Duration

Location	Parameter and Duration	Frequency
E-N12a and E-N21a	30-mins measurement at each monitoring station between 0700 and 1900 on normal weekdays. L _{eq} , L ₁₀ and L ₉₀ would be recorded.	At least once per week

3.2.6 The EM&A monitoring, construction noise monitoring (monitoring station E-N12a and E-N21a) was conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D since 1 October 2025. Details of the corresponding monitoring parameters, frequency and duration could be referred to Sections 3 of the corresponding Monthly EM&A Report for Contract No. HY/2023/08.

Monitoring Methodology

3.2.7 Monitoring Procedure

- (a) The sound level meter was set on a tripod at a height of 1.2 m above the ground.
- (b) Façade measurement was made at E-N12a.
- (c) Free field measurements was made at monitoring location E-N21a. A correction of +3 dB(A) shall be made to the free field measurements.
- (d) The battery condition was checked to ensure the correct functioning of the meter.
- (e) Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - (i) frequency weighting
 - (ii) time weighting: Fast
 - (iii) time measurement: L_{eq}(30-minutes) during non-restricted hours i.e. 0700 – 1900 on normal weekdays.
- (f) Prior to and after each noise measurement, the meter was calibrated using the acoustic calibrator for 94 dB(A) at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1 dB(A), the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.
- (g) During the monitoring period, the L_{eq}, L₁₀ and L₉₀ were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- (h) Noise measurement was paused during periods of high intrusive noise (e.g. dog barking, helicopter noise) if possible. Observations were recorded when intrusive noise was unavoidable.
- (i) Noise monitoring was cancelled in the presence of fog, rain, wind with a steady speed exceeding 5m/s, or wind with gusts exceeding 10m/s.

3.2.8 Maintenance and Calibration

- (a) The microphone head of the sound level meter was cleaned with soft cloth at regular intervals.
- (b) The meter and calibrator were sent to the supplier or HOKLAS laboratory to check and calibrate at yearly intervals.
- (c) Calibration certificates of the sound level meters and acoustic calibrators could be referred to the respective monthly EM&A reports.

3.2.9 The EM&A monitoring, construction noise monitoring (monitoring station E-N12a and E-N21a) was conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D since 1 October 2025. Details of the corresponding monitoring methodology

could be referred to Sections 3 of the corresponding Monthly EM&A Report for Contract No. HY/2023/08.

Monitoring Schedule for the Reporting Period

- 3.2.10 EM&A works were carried out in accordance with the requirements stipulated in the approved EM&A Manuals. Impact noise monitoring for the reporting period with respect to the construction programme could be referred to the respective monthly EM&A reports.
- 3.2.11 The EM&A monitoring, construction noise monitoring (monitoring station E-N12a and E-N21a) will be conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D from 1 October 2025. Details of the corresponding monitoring schedule could be referred to Sections 3 of the corresponding Monthly EM&A Report for Contract No. HY/2023/08.

3.3 Construction Water Monitoring

Monitoring Requirements

- 3.3.1 According to the Contractor information, intermittent dredging activity was carried out from November 2018 to January 2019.
- 3.3.2 In accordance with the approval EM&A Manual, the impact monitoring shall be conducted during dredging period. The monitoring shall normally be established by measuring the Dissolved Oxygen (DO), temperature, turbidity, pH, salinity, Suspended Solids (SS) and copper level and total PAHs at all designated locations. The Action and Limit Levels of the water quality monitoring is provided in **Appendix G**.
- 3.3.3 The measurement shall be taken at all designated monitoring stations including control stations, 3 days per week, at mid-flood and mid-ebb tides. Tidal range of individual flood and ebb tides should be not less than 0.5m. The interval between two sets of monitoring shall not be less than 36 hours.
- 3.3.4 All the monitoring shall be taken at 3 water depths, namely 1m below water surface, mid-depth station and 1m above sea bed, except where the water depth less than 6m, the mid-depth station may be omitted. Should the water depth be less than 3m, only the mid-depth station will be monitored.

Monitoring Equipment

- 3.3.5 The brand and model of water quality monitoring equipment is given in **Table 3.7**.

Table 3.7 Water Quality Monitoring Equipment

Equipment	Brand and Model	Detection Limit
Dissolved Oxygen Meter	YSI 6820	0 – 20 mg/L and 0-200% saturation
Water Temperature Meter		0-45 degree Celsius
Salinity Meter		0-40 parts per thousand (ppt)
Turbidimeter		0-1000 NTU
pH meter		pH 0.0 to 14.0
Water Sampler	Kahlsico Water Sampler	N.A
Echo Sounder	Eagle Cuda-168	N.A
Global Positioning System	JRC DGPS 224 Model JLR-4341 with J-NAV 500 Model NWZ4551	N.A

Monitoring Locations

- 3.3.6 In accordance with the Updated EM&A Manual, the water monitoring stations for baseline water quality monitoring is presented in **Table 3.8** and shown in **Figure 3.3**.

Table 3.8 Impact Water Quality Monitoring Stations

Type of Station	Station	Location	Easting	Northing
Water Quality Monitoring Station	IS1	Planned Kai Tak Cooling Water Intake (subject to its implementation)	839050	819377
	IS2	To Kwa Wan Typhoon Shelter	838450	819399
	IS3	Tai Wan Salt Water Intake	837948	818202
Control Station	C1	Control Station 1	837787	817712
	C2	Control Station 2	838237	818804
	C3	Control Station 3	839105	819019

Monitoring Parameters, Frequency and Duration

- 3.3.7 The monitoring parameters, frequency and duration of water quality monitoring are summarized in **Table 3.9**.

Table 3.9 Water Quality Monitoring Parameters, Frequency and Duration

Parameter	Frequency and Duration
Dissolved Oxygen, Temperature, Turbidity, pH value, Salinity, Suspended Solids, Copper and Total PAH	Three days per week, at mid-flood and mid-ebb tides

Monitoring Methodology

- 3.3.8 The water quality monitoring procedures are presented in the following:

- All monitoring equipment were checked and calibrated before use. Responses of sensors and electrodes were also checked with certified standard solutions before each use.
- The interval between 2 sets of monitoring was not less than 36 hours.
- Individual flood and ebb tides not less than 0.5m.
- At least 3 replicate in-situ measurements and water sampling were carried out in each sampling event.
- Measurements were taken at 3 water depths, namely 1m below water surface, mid-depth and 1m above sea bed, except where the water depth less than 6m, the mid-depth station may be omitted. Should the water depth be less than 3m, only the mid-depth station was monitored.
- Analysis of suspended solids was carried out by ALS Technichem (HK) Pty Ltd. Sufficient water samples were collected at the monitoring stations for carrying out the laboratory analysis. The analysis followed the standard methods as described in APHA Standard Methods for the Examination of Water and Wastewater, 19th Edition (APHA 2540D for SS).
- Analysis of copper was carried out by ALS Technichem (HK) Pty Ltd. Sufficient water samples were collected at the monitoring stations for carrying out the laboratory analysis. The analysis followed the standard methods as described in USEPA Method for inductively coupled plasma-mass spectrometry (ICP-MS), Revision 1 (ICP-MS USEPA 6020A for copper).
- Analysis of total polycyclic aromatic hydrocarbon (PAHs) was carried out by ALS Technichem (HK) Pty Ltd. Sufficient water samples were collected at the monitoring stations for carrying out the laboratory analysis. The analysis followed the standard methods as described in USEPA Methods for Gas Chromatography-Mass Spectrometry Detector, Revision 3, (GC-MSD USEPA 3510C, USEPA 3630C, USEPA 8270C for total PAHs).
- Water samples for suspended solids measurements were collected in high density polythene bottles, packed in ice (cooled to 4°C without being frozen), and delivered to a HOKLAS laboratory as soon as possible after collection.

- 3.3.9 All monitoring equipment were certified by a laboratory accredited under HOKLAS. Calibration certificates of all monitoring equipment could be referred to the respective monthly EM&A reports.

Monitoring Schedule for the Reporting Period

- 3.3.10 EM&A works were carried out in accordance with the requirements stipulated in the approved EM&A Manuals. Impact water monitoring for the reporting period with respect to the construction programme could be referred to the respective monthly EM&A reports.

3.4 Landscape and Visual

- 3.4.1 As per the EM&A Manuals, the landscape and visual mitigation measures shall be implemented and site inspections should be undertaken once every two weeks during the construction period. A summary of the implementation status is presented in **Section 6**.

4 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

- 4.1.1 The Contractor has implemented environmental mitigation measures and requirements as stated in the EIA Reports, the EP and EM&A Manuals. The implementation status of the environmental mitigation measures during the reporting period is summarized in **Appendix D**. Status of required submissions under the EP during the reporting period is summarised in **Table 4.1**.

Table 4.1 Status of Required Submission under Environmental Permit

EP Condition	Submission	Submission Date
Condition 3.4 of EP-457/2013/C and Condition 3.4 of FEP-01/457/2013/C	Monthly EM&A Report for April 2018	14 May 2018
	Monthly EM&A Report for May 2018	14 June 2018
	Monthly EM&A Report for June 2018	13 July 2018
	Monthly EM&A Report for July 2018	13 August 2018
	Monthly EM&A Report for August 2018	13 September 2018
	Monthly EM&A Report for September 2018	13 October 2018
	Water Quality Baseline Monitoring Report	10 October 2018
	Monthly EM&A Report for October 2018	13 November 2018
	Water Quality Baseline Monitoring Report (Version 1)	1 November 2018
	Revised Supplementary Contamination Assessment Report	22 November 2018
	Monthly EM&A Report for November 2018	14 December 2018
	Monthly EM&A Report for December 2018	14 January 2019
	Monthly EM&A Report for January 2019	14 February 2019
	Construction Noise Mitigation Measure Plan (Version D)	18 February 2019
	Monthly EM&A Report for February 2019	14 March 2019

EP Condition	Submission	Submission Date
Condition 3.4 of EP-457/2013/C and Condition 3.4 of FEP-01/457/2013/C	Monthly EM&A Report for March 2019	12 April 2019
	Monthly EM&A Report for April 2019	14 May 2019
	Monthly EM&A Report for May 2019	14 June 2019
	Monthly EM&A Report for June 2019	12 July 2019
	Monthly EM&A Report for July 2019	14 August 2019
	Monthly EM&A Report for August 2019	14 September 2019
	Monthly EM&A Report for September 2019	14 October 2019
	Monthly EM&A Report for October 2019	14 November 2019
	Monthly EM&A Report for November 2019	13 December 2019
	Monthly EM&A Report for December 2019	14 January 2020
	Monthly EM&A Report for January 2020	14 February 2020
	Monthly EM&A Report for February 2020	13 March 2020
	Monthly EM&A Report for March 2020	14 April 2020
	Monthly EM&A Report for April 2020	14 May 2020
	Monthly EM&A Report for May 2020	12 June 2020
	Monthly EM&A Report for June 2020	14 July 2020
	Monthly EM&A Report for July 2020	14 August 2020
	Monthly EM&A Report for August 2020	14 September 2020

EP Condition	Submission	Submission Date
Condition 3.4 of EP-457/2013/C and Condition 3.4 of FEP-01/457/2013/C	Monthly EM&A Report for September 2020	14 October 2020
	Monthly EM&A Report for October 2020	13 November 2020
	Monthly EM&A Report for November 2020	14 December 2020
	Monthly EM&A Report for December 2020	14 January 2021
	Monthly EM&A Report for January 2021	11 February 2021
	Monthly EM&A Report for February 2021	12 March 2021
	Monthly EM&A Report for March 2021	14 April 2021
	Monthly EM&A Report for April 2021	14 May 2021
	Monthly EM&A Report for May 2021	11 June 2021
Condition 3.4 of EP- 457/2013/C and EP-457/2013/D and Condition 3.4 of FEP-01/457/2013/C	Monthly EM&A Report for June 2021	14 July 2021
Condition 3.4 of EP-457/2013/D and Condition 3.4 of FEP-01/457/2013/C	Monthly EM&A Report for July 2021	13 August 2021
	Monthly EM&A Report for August 2021	14 September 2021
	Monthly EM&A Report for September 2021	13 October 2021
	Monthly EM&A Report for October 2021	12 November 2021
	Monthly EM&A Report for November 2021	14 December 2021
	Monthly EM&A Report for December 2021	14 January 2022
	Monthly EM&A Report for January 2022	14 February 2022

EP Condition	Submission	Submission Date
Condition 3.4 of EP-457/2013/D and Condition 3.4 of FEP-01/457/2013/C	Monthly EM&A Report for February 2022	14 March 2022
	Monthly EM&A Report for March 2022	14 April 2022
	Monthly EM&A Report for April 2022	13 May 2022
	Monthly EM&A Report for May 2022	14 June 2022
	Monthly EM&A Report for June 2022	14 July 2022
	Monthly EM&A Report for July 2022	12 August 2022
	Monthly EM&A Report for August 2022	14 September 2022
	Monthly EM&A Report for September 2022	14 October 2022
	Monthly EM&A Report for October 2022	14 November 2022
	Monthly EM&A Report for November 2022	14 December 2022
	Monthly EM&A Report for December 2022	14 January 2023
	Monthly EM&A Report for January 2023	14 February 2023
	Monthly EM&A Report for February 2023	14 March 2023
	Monthly EM&A Report for March 2023	14 April 2023
	Monthly EM&A Report for April 2023	12 May 2023
	Monthly EM&A Report for May 2023	14 June 2023
	Monthly EM&A Report for June 2023	14 July 2023
	Monthly EM&A Report for July 2023	14 August 2023

EP Condition	Submission	Submission Date
Condition 3.4 of EP-457/2013/D and Condition 3.4 of FEP-01/457/2013/C	Monthly EM&A Report for August 2023	14 September 2023
	Monthly EM&A Report for September 2023	13 October 2023
	Monthly EM&A Report for October 2023	14 November 2023
	Monthly EM&A Report for November 2023	14 December 2023
	Monthly EM&A Report for December 2023	12 January 2024
	Monthly EM&A Report for January 2024	14 February 2024
	Monthly EM&A Report for February 2024	14 March 2024
	Monthly EM&A Report for March 2024	12 April 2024
	Monthly EM&A Report for April 2024	14 May 2024
	Monthly EM&A Report for May 2024	14 June 2024
	Monthly EM&A Report for June 2024	12 July 2024
	Monthly EM&A Report for July 2024	14 August 2024
	Monthly EM&A Report for August 2024	13 September 2024
	Monthly EM&A Report for September 2024	14 October 2024
	Monthly EM&A Report for October 2024	14 November 2024
	Monthly EM&A Report for November 2024	13 December 2024
	Monthly EM&A Report for December 2024	14 January 2025
	Monthly EM&A Report for January 2025	14 February 2025

EP Condition	Submission	Submission Date
Condition 3.4 of EP-457/2013/D and Condition 3.4 of FEP-01/457/2013/C	Monthly EM&A Report for February 2025	14 March 2025
	Monthly EM&A Report for March 2025	14 April 2025
	Monthly EM&A Report for April 2025	14 May 2025
	Monthly EM&A Report for May 2025	13 June 2025
	Monthly EM&A Report for June 2025	14 July 2025
	Monthly EM&A Report for July 2025	14 August 2025
	Monthly EM&A Report for August 2025	12 September 2025
	Monthly EM&A Report for September 2025	14 October 2025
	Monthly EM&A Report for October 2025	14 November 2025
	Monthly EM&A Report for November 2025	12 December 2025
	Monthly EM&A Report for December 2025	14 January 2026

5 MONITORING RESULTS

5.1 Construction Dust Monitoring

- 5.1.1 The monitoring results for 24-hour TSP and 1-hour TSP are summarized in **Table 5.1** and **Table 5.2** respectively. The graphical plots are presented in **Appendix E**. Detailed air quality monitoring results and daily extract of meteorological observations could be referred to the respective monthly EM&A reports.

Table 5.1 Summary of 24-hour TSP Monitoring Result in the Reporting Period

ID	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
E-A14a	40.8	7.9 – 116.5	197.3	260

Table 5.2 Summary of 1-hour TSP Monitoring Result in the Reporting Period

ID	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
E-A14a	62.1	50.0 – 105.8	302.4	500

- 5.1.2 No Action and Limit Level exceedance was recorded for 24-hour TSP monitoring at the monitoring location in the reporting period.
- 5.1.3 No Action and Limit Level exceedance was recorded for 1-hour TSP monitoring at the monitoring location in the reporting period.
- 5.1.4 The event and action plan are annexed in **Appendix C**.
- 5.1.5 Major dust sources during the monitoring included construction dust and nearby traffic emission.
- 5.1.6 The EM&A monitoring, including both construction dust monitoring (monitoring station E-A14a) was conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D since 1 October 2025. Details of the corresponding monitoring results, and wind data, could be referred to Sections 3 of the corresponding Monthly EM&A Report for Contract No. HY/2023/08.

5.2 Regular Construction Noise Monitoring

- 5.2.1 The monitoring results for noise are summarized in **Table 5.3** and the graphical plots are presented in **Appendix E**. Detailed noise monitoring results could be referred to the respective monthly EM&A reports.

Table 5.3 Summary of Construction Noise Monitoring Results in the Reporting Period

ID	Range, dB(A), L_{eq} (30 mins)	Limit Level, dB(A), L_{eq} (30 mins)
E-N12a	54.2 – 74.7	75
E-N21a	55.6 – 74.1	75

- 5.2.2 Forty-seven (47) Action Level exceedance was recorded. Investigations for the exceedances were conducted and the results revealed that the recorded noise exceedances were not in relation to the construction works of the Project.
- 5.2.3 No Limit Level exceedance of noise was recorded at the monitoring station in the reporting period.

- 5.2.4 The event and action plan are annexed in **Appendix C**.
- 5.2.5 Major noise sources during the monitoring included construction noise from the Project site and nearby traffic noise.
- 5.2.6 The EM&A monitoring, construction noise monitoring (monitoring station E-N12a and E-N21a) was conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D since 1 October 2025. Details of the corresponding monitoring results could be referred to Sections 3 of the corresponding Monthly EM&A Report for Contract No. HY/2023/08.

5.3 Construction Water Monitoring

- 5.3.1 The impact water quality monitoring for 6 locations were carried out 3 days per week from November 2018 to January 2019. The impact monitoring data could be referred to the respective monthly EM&A reports.
- 5.3.2 The weather condition during the monitoring period were mainly sunny and fine and occasionally cloudy and rainy. No major pollution source and extreme weather, which might affect the results, was observed in the reporting period.
- 5.3.3 The impact water quality monitoring results in the monitoring period are summarized in **Table 5.4**. Detailed water quality monitoring results could be referred to the respective monthly EM&A reports.

Table 5.4 Summary of Impact Water Quality Monitoring Results

Locations		Parameters								
		Temperature (°C)	pH value	Dissolved Oxygen (mg/L)		Turbidity (NTU)	Salinity (ppt)	Suspended Solids (mg/L)	Copper (µg/L)	Total PAHs (µg/L)
				Surface & Middle	Bottom					
CS1	Avg.	18.33	8.17	6.87	6.8	2.4	32.87	2.98	5.36	1.6
	Min.	17.64	7.97	5.65	5.64	1.3	31.83	<0.5	<1.00	<1.60
	Max.	18.85	8.39	7.84	7.7	3.6	33.78	7.6	9	<1.60
CS2	Avg.	18.35	8.17	6.84	6.76	2.39	32.86	3.05	5.44	1.6
	Min.	17.64	7.98	5.67	5.66	1.2	31.84	0.5	<1.00	<1.60
	Max.	18.95	8.38	7.87	7.31	5.4	33.79	7.9	10	<1.60
CS3	Avg.	18.36	8.17	6.8	6.74	2.32	32.86	3.17	5.46	1.6
	Min.	17.62	7.98	5.54	5.51	1.1	31.84	0.8	<1.00	<1.60
	Max.	18.95	8.39	7.52	7.29	3.8	33.79	8.9	9	<1.60
IS1	Avg.	18.37	8.17	6.79	6.74	2.38	32.85	3.14	5.42	1.6
	Min.	17.62	7.98	5.55	5.53	1.4	31.84	0.7	<1.00	<1.60
	Max.	19.05	8.39	7.28	7.23	3.5	33.79	8.9	9	<1.60
IS2	Avg.	18.37	8.18	6.82	6.75	2.33	32.85	3.14	5.45	1.6
	Min.	17.62	7.98	5.57	5.59	1.2	31.84	0.6	1	<1.60
	Max.	19.06	8.42	7.46	7.25	3.4	33.79	9	9	<1.60
IS3	Avg.	18.34	8.17	6.85	6.79	2.4	32.86	2.92	5.47	1.6
	Min.	17.64	7.97	5.69	5.69	1.5	31.84	<0.5	<1.00	<1.60
	Max.	18.89	8.38	7.54	7.36	4	33.77	10	9	<1.60

- 5.3.4 Number of exceedances recorded in the reporting period at each impact station could be referred to the respective monthly EM&A reports.
- 5.3.5 The event and action plan is annexed in **Appendix C**.

5.4 Waste Management

- 5.4.1 C&D materials and wastes sorting were carried out on site. Receptacles were available for C&D wastes and general refuse collection.
- 5.4.2 As advised by the Contractor, the actual amount of different types of waste disposed or reused in the reporting period are summarized in **Table 5.4**. The waste flow table is annexed in **Appendix G**.

Table 5.5 Summary of Waste Flow the Reporting Period

Waste Type Disposed / Reused			Actual Amount
Inert C&D Materials	Disposed	Public fill disposed	662,363 m ³
	Reused in Other Projects		342,975 m ³
Non-inert C&D Materials	Recycled	Metal collected by recycling contractor	32,899,457 kg
		Paper collected by recycling contractor	8,852 kg
		Plastic collected by recycling contractor	9,981 kg
	Disposed	Chemical waste collected by licensed contractor	26, 200 kg
		General refuse disposed at landfill	9,161,260 kg

5.5 Landscape and Visual

- 5.5.1 Bi-weekly inspection of the implementation of landscape and visual mitigation measures were conducted. A summary of the site inspection in the reporting period could be referred to the respective monthly EM&A reports.
- 5.5.2 The event and action plan is annexed in **Appendix C**.

6 ENVIRONMENTAL SITE INSPECTION AND AUDIT

- 6.1.1 Site inspections were carried out on a weekly basis while joint site inspections were carried out on a monthly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Project and ensure that all mitigation measures were implemented timely and properly. Summary of the site inspections in the reporting period could be referred to the respective monthly EM&A reports.

7 ENVIRONMENTAL NON-CONFORMANCE

7.1 Summary of Monitoring Exceedances

- 7.1.1 All 24-hour TSP results were below the Action and Limit Levels at all monitoring locations in the reporting period.
- 7.1.2 All 1-hour TSP results were below the Action and Limit Levels at all monitoring locations in the reporting period.
- 7.1.3 Forty-seven (47) Action Level exceedance was recorded Investigations for the exceedances were conducted and the results revealed that the recorded noise exceedances were not in relation to the construction works of the Project.
- 7.1.4 No exceedance of Limit Level of noise was recorded in the reporting period.
- 7.1.5 The The EM&A monitoring, including both construction dust monitoring (monitoring station E-A14a) and construction noise monitoring (monitoring station E-N12a and E-N21a) was conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D since 1 October 2025. Details of the corresponding monitoring parameters, equipment, methodology, monitoring schedule wind data, results and the established Action and Limit Levels could be referred to Sections 3 of the corresponding Monthly EM&A Report for Contract No. HY/2023/08.
- 7.1.6 No Action level and Limit level exceedance were recorded at measured DO and Total PAHs of water monitoring in the reporting period.
- 7.1.7 Nine (9) Action Level and eleven (11) Limit level were recorded exceedances at measured turbidity level of water monitoring in the reporting period.
- 7.1.8 Twenty one (21) Action Level and twenty-nine (29) Limit Level exceedances were recorded at measured SS level of water monitoring in the reporting period.
- 7.1.9 One (1) Action Level and seventy-five (75) Limit Level exceedances were recorded at measured Copper Level of water monitoring in the reporting period.

7.2 Summary of Environmental Non-Compliance

- 7.2.1 No environmental non-compliance was recorded in the reporting period.

7.3 Summary of Environmental Complaints

- 7.3.1 Total of eighty (80) environmental complaints were received. The complaints regarding air, noise, waste and water impact, in which were mostly related to air and noise impacts. No environmental summon / prosecution was received since the commencement of construction works.

7.4 Summary of Environmental Summon and Successful Prosecutions

- 7.4.1 No environmental related prosecution or notification of summons was received in the reporting period. Cumulative statistics on notification of summons and successful prosecutions is provided in **Appendix H**.

8 REVIEW OF THE VALIDITY OF EIA PREDICTION AND IDENTIFICATION OF SHORTCOMINGS IN EIA RECOMMENDATIONS

- 8.1.1 Most of the air quality, all noise and water monitoring results in the reporting period were below the Action and Limit Levels. The result was in line with EIA prediction that with the implementation of mitigation measures and no shortcomings in EIA recommendations were identified.
- 8.1.2 During the reporting period, environmental mitigation measures and good site practices were implemented timely and properly. Environmental site inspections were carried out to monitor and audit the environmental performance and rectified where necessary.
- 8.1.3 The mitigation measures in EIA prediction and the approved EM&A manuals have been effectively implemented during the construction period.
- 8.1.4 The environmental monitoring methodology was considered well established as the monitoring results were found in line with EIA predictions.
- 8.1.5 With reviewing site inspection record related to landscape and visual, the Contractor implemented the landscape and visual mitigation measures correctly. The result was in line with EIA prediction that with the implementation of mitigation measures and no shortcomings in EIA recommendations were identified.
- 8.1.6 With reviewing waste flow record, the Contractor implemented the waste management mitigation measures correctly. The result was in line with EIA prediction that with the implementation of mitigation measures and no shortcomings in EIA recommendations were identified.

9 COMMENTS

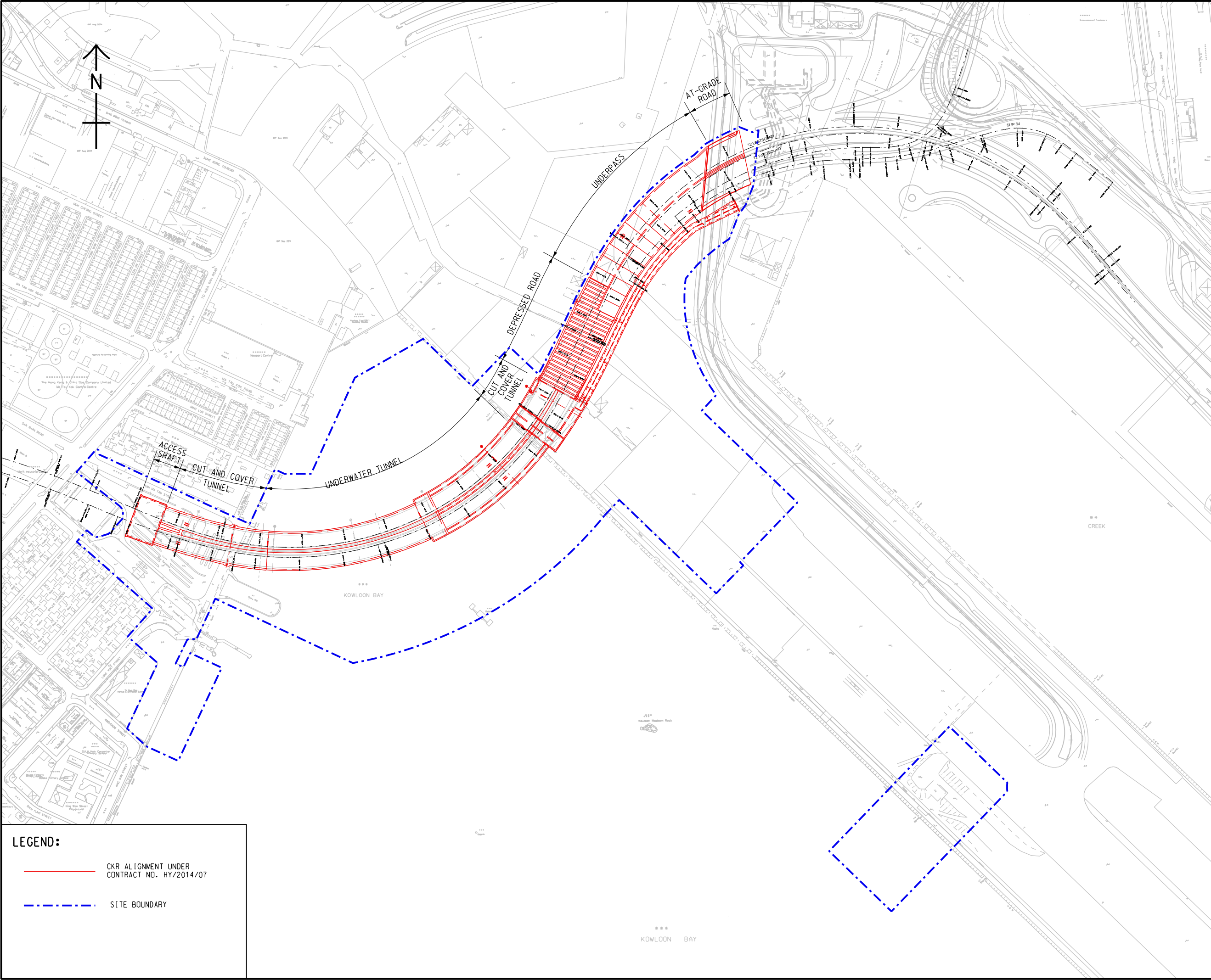
- 9.1.1 The air quality, noise and water monitoring were properly conducted in accordance with the approved EM&A Manuals. The monitoring events were sufficient to justify the respective environmental impacts on the nearby sensitive receivers.
- 9.1.2 The environmental monitoring results indicated that the construction activities with the implementation of mitigation measures in general complied with the relevant environmental requirements.
- 9.1.3 The mitigation measures in EIA prediction and the approved EM&A Manuals have been effectively implemented during the construction period.
- 9.1.4 The environmental monitoring methodology was considered well established as the monitoring results were found in line with EIA predictions.
- 9.1.5 It is concluded that the overall environmental performance of the project is satisfactory. The overall EM&A programme was conducted satisfactorily. All aspects of the EM&A programme were reviewed and audited independently and objectively. The requirements in the EM&A Manuals are fully complied with.

10 CONCLUSIONS AND RECOMMENDATIONS

- 10.1.1 All 24-hour TSP monitoring results complied with the Action / Limit Level at in the reporting period.
- 10.1.2 All 1-hour TSP results were below the Action and Limit Levels at all monitoring locations in the reporting period.
- 10.1.3 Forty-seven (47) Action Level exceedance was recorded Investigations for the exceedances were conducted and the results revealed that the recorded noise exceedances were not in relation to the construction works of the Project.
- 10.1.4 No Limit Level exceedance for noise was recorded at all monitoring stations in the reporting period.
- 10.1.5 1-hour TSP, 24-hour TSP and noise monitoring were carried out in the reporting period. The EM&A monitoring, including both construction dust monitoring (monitoring station E-A14a) and construction noise monitoring (monitoring station E-N12a and E-N21a) was conducted by Contract No. HY/2023/08 Central Kowloon Route – Remaining Works under EP-457/2013/D since 1 October 2025.
- 10.1.6 No Action level and Limit level exceedance were recorded at measured DO and Total PAHs of water monitoring in the reporting period.
- 10.1.7 Nine (9) Action Level and eleven (11) Limit level were recorded exceedances at measured turbidity level of water monitoring in the reporting period.
- 10.1.8 Twenty one (21) Action Level and twenty-nine (29) Limit Level exceedances were recorded at measured SS level of water monitoring in the reporting period.
- 10.1.9 One (1) Action Level and seventy-five (75) Limit Level exceedances were recorded at measured Copper Level of water monitoring in the reporting period.
- 10.1.10 Total of eighty (80) environmental complaints were received. The complaints regarding air, noise, waste and water impact, in which were mostly related to air and noise impacts. No environmental summon / prosecution was received since the commencement of construction works. All the complaints were settled, no further complaint was received after the implementation of the mitigation measures.
- 10.1.11 No environmental related notification of summons and successful prosecution were received in the reporting period.
- 10.1.12 All major construction works in the whole works area of the Project have been substantially completed in September 2025. Hence, the cessation of construction phase EM&A programme under the Project was proposed on 26 November 2025 and EPD expressed no objection to the proposed cessation after the visit on 10 December 2025 and approved letter was obtained on 23 December 2025.
- 10.1.13 The overall EM&A programme was conducted satisfactorily. All aspects of the EM&A programme were reviewed and audited independently and objectively. The requirements in the EM&A Manuals are fully complied with.
- 10.1.14 With the success of the overall EM&A programme, the deterioration of the environment caused by the Project was cost-effectively identified and necessary prompt effective mitigation measures were implemented to avoid any unacceptable impacts.

FIGURES

ISO A1 594mm x 841mm
Project Management Initials:
SDATES
PATH \$FILES



- LEGEND:**
- CKR ALIGNMENT UNDER CONTRACT NO. HY/2014/07
 - SITE BOUNDARY

AECOM

PROJECT
CONTRACT NO. HY/2014/07
CENTRAL KOWLOON ROUTE - KAI TAK WEST

CLIENT
GAMMON CONSTRUCTION LIMITED

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

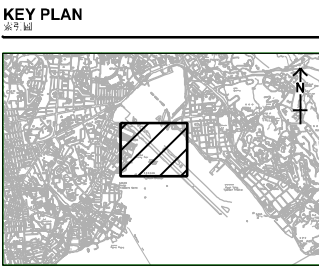
SUB-CONSULTANTS

ISSUE/REVISION			
I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE
A3 1 : 4000

DIMENSION UNIT
METRES

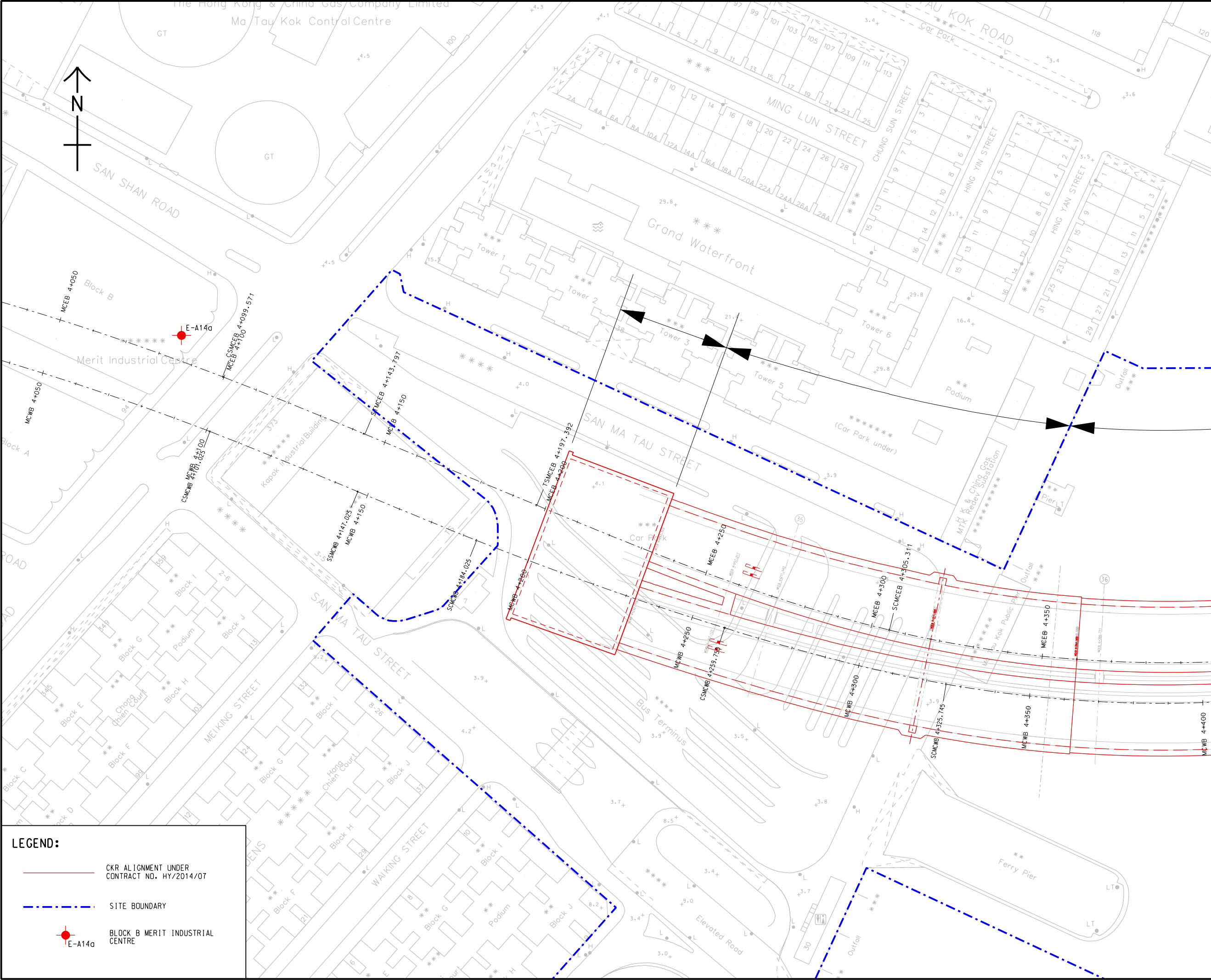


PROJECT NO.
AGREEMENT NO.

SHEET TITLE
SITE LAYOUT PLAN

SHEET NUMBER
FIGURE 1.1

ISO A1 594mm x 841mm
Project Management Initials: Designer: Checker: Approver:
PLOT BY: USERS
DATE: 2014/07/07
PATH: S1E3



LEGEND:

— CKR ALIGNMENT UNDER CONTRACT NO. HY/2014/07

- - - SITE BOUNDARY

● E-A140 BLOCK B MERIT INDUSTRIAL CENTRE

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as approved by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability, whatsoever, to any party, for loss or damage on this drawing without AECOM's express written consent. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
CONTRACT NO. HY/2014/07
CENTRAL KOWLOON ROUTE - KAI TAK WEST

CLIENT
GAMMON CONSTRUCTION LIMITED

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
AECOM Asia Company Ltd.

ISSUE/REVISION

IR	DATE	DESCRIPTION	CHK.

STATUS
NOT

SCALE
A3 1: 1000

DIMENSION UNIT
METRES (M)

KEY PLAN

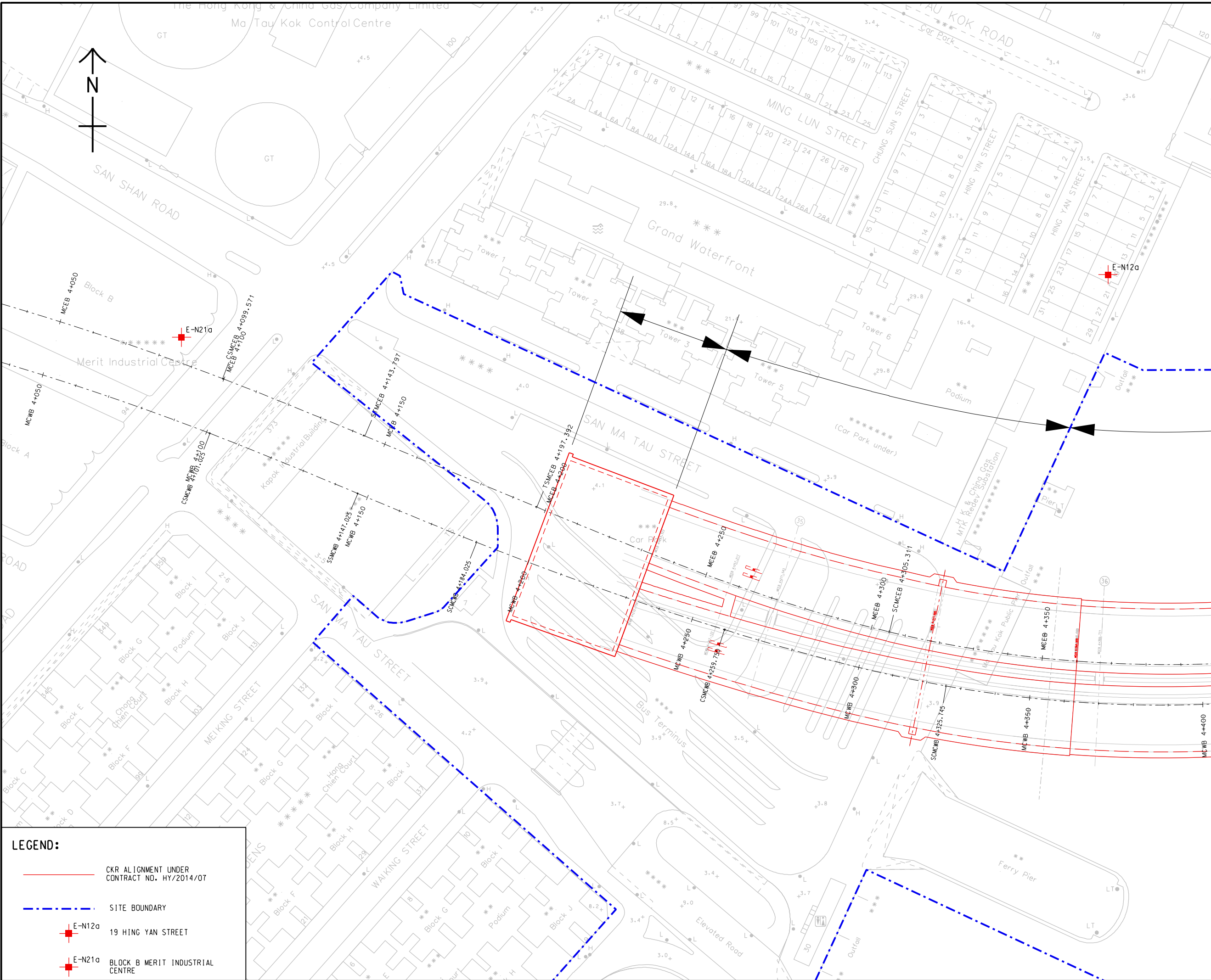
PROJECT NO.
A3 1: 1000

AGREEMENT NO.
A3 1: 1000

SHEET TITLE
LOCATION OF AIR QUALITY MONITORING STATION

SHEET NUMBER
FIGURE 3.1

ISO A1 594mm x 841mm
Project Management Initials:
Designer:
Check:
Approve:
SDATES
PLOT BY: USERS
PATH FILES



LEGEND:

- CKR ALIGNMENT UNDER CONTRACT NO. HY/2014/07
- - - SITE BOUNDARY
- E-N120 19 HING YAN STREET
- E-N210 BLOCK B MERIT INDUSTRIAL CENTRE

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as approved by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability, whatsoever, to any party, for loss or damage of any kind, arising from the use of this drawing without AECOM's express written consent. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT

CONTRACT NO.
HY/2014/07
CENTRAL KOWLOON
ROUTE -
KAI TAK WEST

CLIENT

GAMMON CONSTRUCTION LIMITED

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

IR	DATE	DESCRIPTION	CHK.

STATUS

SCALE

A3 1: 1000

DIMENSION UNIT

METRES

KEY PLAN



PROJECT NO.

AGREEMENT NO.

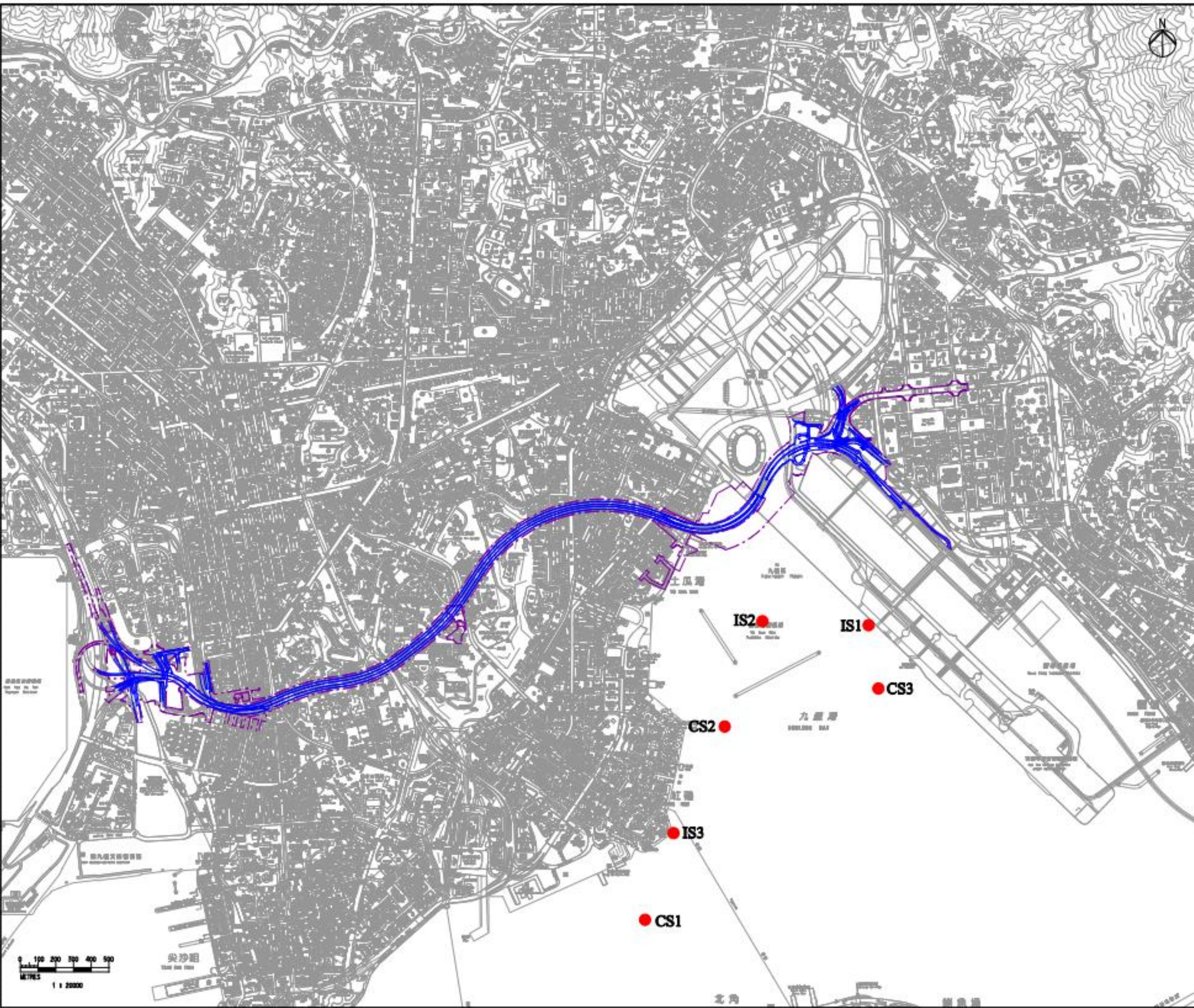
SHEET TITLE

LOCATION OF NOISE MONITORING
STATION

SHEET NUMBER

FIGURE 3.2

Printed by : 1/28/2013
Filename : G:\env\project\217722-70\13 Drawing Deliverables\15 EMBA Manual\06 Final Submission\Ch. 7\Figure 7.1.dgn



- Legend
- CKR Alignment
 - Works Limit
 - Water Quality Monitoring Stations for Baseline and Construction Phase Monitoring

E	FIFTH ISSUE	GL	01/13
D	FOURTH ISSUE	GL	12/12
C	THIRD ISSUE	GL	10/12
B	SECOND ISSUE	GL	09/12
A	FIRST ISSUE	KM	06/12
Rev	Description	By	Date

Consultant

ARUP **Mott MacDonald**

Project title

Agreement No. CB 43/2010 (HY)

Central Kowloon Route - Design and Construction

Drawing title

Location of Water Monitoring Stations for Baseline and Construction Phase Monitoring

Drawn	Date	Checked	Approved
GL	01/13	FC	ST
Scale	1:20000 ON A3	Status	PRELIMINARY

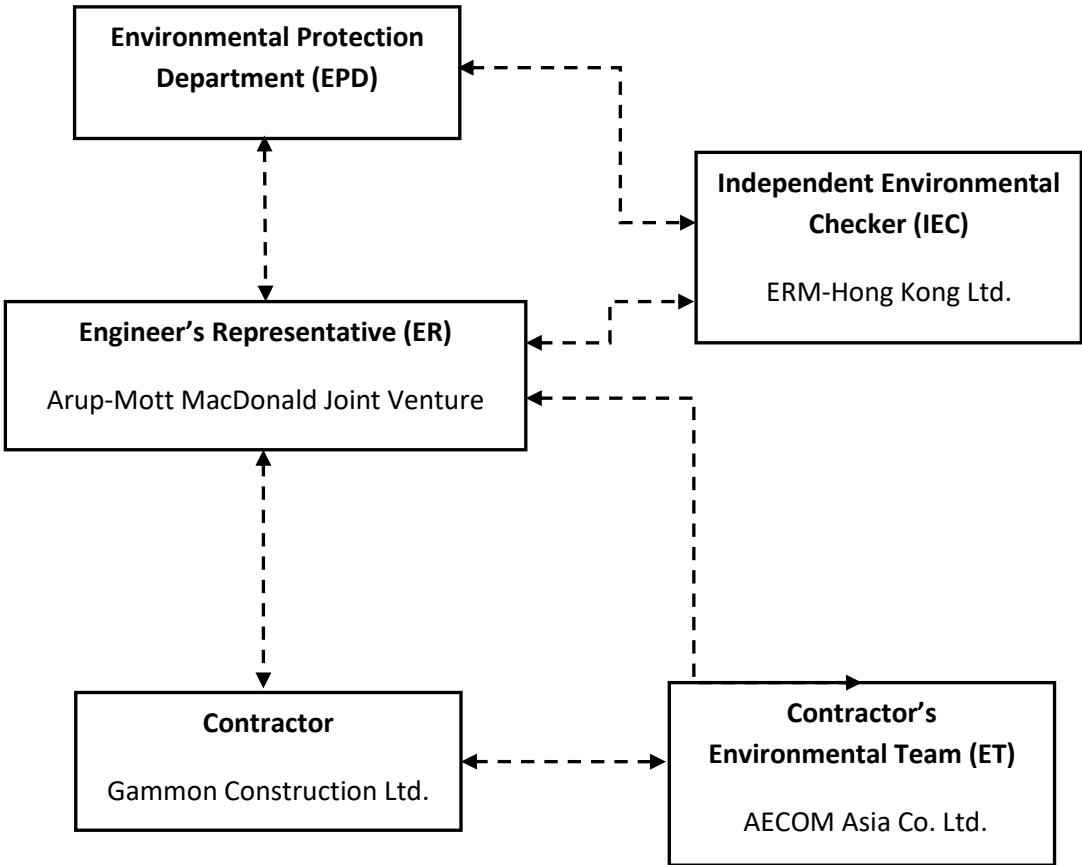
COPYRIGHT RESERVED

TRA **路政署**
HIGHWAYS DEPARTMENT
交通工程處
MAJOR WORKS PROJECT MANAGEMENT OFFICE

APPENDIX A

Project Organisation Structure

Appendix A Project Organization Structure



APPENDIX B

Summary of Action and Limit Levels

Appendix B – Summary of Action and Limit Levels

Table 1 Action and Limit Levels for 24-hour TSP

ID	Location	Action Level	Limit Level
E-A14a	Block B of Merit Industrial Centre	197.3 $\mu\text{g}/\text{m}^3$	260 $\mu\text{g}/\text{m}^3$

Table 2 Action and Limit Levels for 1-hour TSP

ID	Location	Action Level	Limit Level
E-A14a	Block B of Merit Industrial Centre	302.4 $\mu\text{g}/\text{m}^3$	500 $\mu\text{g}/\text{m}^3$

**Table 3 Action and Limit Levels for Construction Noise
(0700 – 1900 hrs of normal weekdays)**

ID	Location	Action Level	Limit Level
E-N12a	19 Hing Yan Street	When one documented complaint is received	75 dB(A)
E-N21a	Block B of Merit Industrial Centre	When one documented complaint is received	75 dB(A)

Table 4 Derived Action and Limit Levels for Water Quality

Parameters	Action Level	Limit Level
Dissolved Oxygen (DO) in mg/L ⁽¹⁾	<u>Surface & Middle:</u> 4.03 (5th percentile of baseline data for surface and middle layer) <u>Bottom:</u> 3.94 (5th percentile of baseline data for bottom layer)	<u>Surface & Middle:</u> 3.88 (1st percentile of baseline data for surface and middle layer) <u>Bottom:</u> 2.00
Suspended Solids (SS) in mg/L ⁽²⁾	13.80 (95th percentile of baseline data) or 120% of upstream control station's SS at the same tide of the same day	18.70 (99th percentile of baseline data) or 130% of upstream control station's SS at the same tide of the same day
Turbidity in NTU ⁽²⁾	7.00 (95th percentile of baseline data) or 120% of upstream control station's Turbidity at the same tide of the same day	8.40 (99th percentile of baseline data) or 130% of upstream control station's Turbidity at the same tide of the same day
Copper in µg/L ⁽²⁾	2.00 (95th percentile of baseline data) or 120% of upstream control station's nutrient level at the same tide of the same day	3.00 (99th percentile of baseline data) or 130% of upstream control station's nutrient level at the same tide of the same day or whichever is the less
Total PAH in µg/L ⁽²⁾	1.60 (95th percentile of baseline data) or 120% of upstream control station's nutrient level at the same tide of the same day	1.60 (99th percentile of baseline data) or 130% of upstream control station's nutrient level at the same tide of the same day or whichever is the less

Note: 1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.

2. For turbidity, SS, Copper and Total PAH, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

APPENDIX C

Event and Action Plan

Appendix C Event Action Plan

Event / Action Plan for Construction Dust Monitoring

EVENT	ACTION			
	ET	IEC	ER	Contractor
ACTION LEVEL				
Exceedance for one sample	1. Inform the Contractor, IEC and ER; 2. Discuss with the Contractor and IEC on the remedial measures required; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency	1. Check monitoring data submitted by the ET; 2. Check Contractor's working method; 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of exceedance in writing.	1. Identify source(s), investigate the causes of exceedance and propose remedial measures; 2. Implement remedial measures; 3. Amend working methods agreed with the ER as appropriate.
Exceedance for two or more consecutive samples	1. Inform the Contractor, IEC and ER; 2. Discuss with the ER, IEC and Contractor on the remedial measures required; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency to daily; 5. If exceedance continues, arrange meeting with the IEC, ER and Contractor; 6. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by the ET; 2. Check Contractor's working method; 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Review and agree on the remedial measures proposed by the Contractor; 3. Supervise Implementation of remedial measures.	1. Identify source and investigate the causes of exceedance; 2. Submit proposals for remedial measures to the ER with a copy to ET and IEC within three working days of notification; 3. Implement the agreed proposals; 4. Amend proposal as appropriate.

Appendix C Event Action Plan

EVENT	ACTION			
	ET	IEC	ER	Contractor
LIMIT LEVEL				
Exceedance for one sample	1. Inform the Contractor, IEC, EPD and ER; 2. Repeat measurement to confirm findings; 3. Increase monitoring frequency to daily; 4. Discuss with the ER, IEC and contractor on the remedial measures and assess the effectiveness.	1. Check monitoring data submitted by the ET; 2. Check the Contractor's working method; 3. Discuss with the ET, ER and Contractor on possible remedial measures; 4. Review and advise the ER and ET on the effectiveness of Contractor's remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Review and agree on the remedial measures proposed by the Contractor; 3. Supervise implementation of remedial measures.	1. Identify source(s) and investigate the causes of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to ER with a copy to ET and IEC within three working days of notification; 4. Implement the agreed proposals; 5. Amend proposal if appropriate.
Exceedance for two or more consecutive samples	1. Notify Contractor, IEC, EPD and ER ; 2. Repeat measurement to confirm findings; 3. Increase monitoring frequency to daily; 4. Carry out analysis of the Contractor's working procedures with the ER to determine possible mitigation to be implemented; 5. Arrange meeting with the IEC and ER to discuss the remedial measures to be taken; 6. Review the effectiveness of the Contractor's remedial measures and keep IEC, EPD and ER informed of the results; 7. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by the ET; 2. Check the Contractor's working method; 3. Discuss with ET, ER, and Contractor on the potential remedial measures; 4. Review and advise the ER and ET on the effectiveness of Contractor's remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 3. Supervise the implementation of remedial measures; 4. 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. Identify source(s) and investigate the causes of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to the ER with a copy to the IEC and ET within three working days of notification; 4. Implement the agreed proposals; 5. Revise and resubmit proposals if problem still not under control; 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Appendix C Event Action Plan

Event and Action Plan for Construction Noise Monitoring

EVENT	ACTION			
	ET	IEC	ER	Contractor
Exceedance of Action Level	1. Notify the Contractor, IEC and ER; 2. Discuss with the ER, IEC and Contractor on the remedial measures required; and 3. Increase monitoring frequency to check mitigation effectiveness.	1. Review the investigation results submitted by the contractor; and 2. Review and advise the ET and ER on the effectiveness of the remedial measures proposed by the Contractor.	1. Confirm receipt of notification of complaint in writing; 2. Review and agree on the remedial measures proposed by the Contractor; and 3. Supervise implementation of remedial measures.	1. Investigate the complaint and propose remedial measures; 2. Report the results of investigation to the IEC, ET and ER; 3. Submit noise mitigation proposals to the ER with copy to the IEC and ET within 3 working days of notification; and 4. Implement noise mitigation proposals.
Exceedance of Limit Level	1. Notify the Contractor, IEC, EPD and ER ; 2. Repeat measurement to confirm findings; 3. Increase monitoring frequency; 4. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 5. Arrange meeting with the IEC and ER to discuss the remedial measures to be taken; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Review the effectiveness of Contractor's remedial measures and keep IEC, EPD and ER informed of the results; and 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by the ET; 2. Check the Contractor's working method; 3. Discuss with the ER, ET and Contractor on the potential remedial measures; and 4. Review and advise the ET and ER on the effectiveness of the remedial measures proposed by the Contractor.	1. Confirm receipt of notification of exceedance in writing; 2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 3. Supervise the implementation of remedial measures; and 4. 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. Identify source and investigate the causes of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to the ER with copy to the IEC and ET within 3 working days of notification; 4. Implement the agreed proposals; 5. Revise and resubmit proposals if problem still not under control; and 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Appendix C Event Action Plan

Event and Action Plan for Continuous Noise Monitoring

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action/Limit Level	1. Identify source ; 2. Repeat measurement. If two consecutive measurements exceed Action/Limit Level, the exceedance is then confirmed; 3. If exceedance is confirmed, notify IEC, ER and Contractor; 4. Investigate the cause of exceedance and check Contractor's working procedures to determine possible mitigation to be implemented; 5. Discuss jointly with the IEC, ER and Contractor and formulate remedial measures; and 6. Assess effectiveness of Contractor's remedial actions and keep IEC and ER informed of the results.	1. Check monitoring data submitted by the Works Contract 1123 ET; 2. Check the Contractor's working method; 3. Discuss with the ER, Works Contract 1123 ET and Contractor on the potential remedial measures; and 4. Review and advise the Works Contract 1123 ET and ER on the effectiveness of the remedial measures proposed by the Contractor.	1. Confirm receipt of notification of exceedance in writing; 2. In consultation with the Works Contract 1123 ET and IEC, agree with the Contractor on the remedial measures to be implemented; 3. Ensure the proper implementation of remedial measures; and 4. 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. Identify source with the Works Contract 1123 ET; 2. If exceedance is confirmed, investigation the cause of exceedance and take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to the ER with copy to the IEC and ET of notification; 4. Implement the agreed proposals; 5. Liaise with ER to optimize the effectiveness of the agreed mitigation; 6. Revise and resubmit proposals if problem still not under control; and 7. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

APPENDIX D
Implementation Schedule of Environmental Mitigation
Measures

Appendix D – Environmental Mitigation Implementation Schedule

	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
Air Quality (Construction Phase)							
S4.3.10	D1	The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	V
S4.3.10	D2	Mitigation measures in form of regular watering under a good site practice should be adopted. Watering once per hour on exposed worksites and haul road should be conducted to achieve dust removal efficiencies of 91.7%. While the above watering frequencies are to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.3 L/m² to achieve the dust removal efficiency.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	V
S4.3.10	D3	- Proper watering of exposed spoil should be undertaken throughout the construction phase; - Any excavated or stockpile of dusty material should 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 should be wetted with water and cleared from the surface of roads; - A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones. - The load of dusty materials on a vehicle leaving a construction site should 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 should 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	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	V V V V V

	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
		point should be paved with concrete, bituminous materials or hardcores; - When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided and properly maintained 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 only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials; - Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously; - Any area that involves demolition activities should 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 should 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 should be totally enclosed by impervious sheeting; - Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides; - Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; - Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and - Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete 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.					V V V V V V V V V

	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
S4.3.10	D5	Implement regular dust monitoring under EM&A programme during the construction stage.	Monitoring of dust impact	Contractor	Selected representative dust monitoring station	Construction stage	V
Construction Noise (Airborne)							
S5.4.1	N1	Implement the following good site practices: - only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; - machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; - plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; - silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; - mobile plant should be sited as far away from NSRs as possible and practicable; - material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	Control construction airborne noise	Contractor	All construction sites	Construction stage	V V V V V V
S5.4.1	N2	Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level zone of NSRs through partial screening.	Contractor	All construction sites	Construction stage	V
S5.4.1	N3	Install movable noise barriers (typical design is wooden framed barrier with a small-cantilevered on a skid footing with 25mm thick internal sound absorptive lining), acoustic mat or full enclosure, screen the noisy plants including air compressors, generators and handheld breakers etc..	Screen the noisy plant items to be used at all construction sites	Contractor	All construction sites where practicable	Construction stage	V
S5.4.1	N4	Use "Quiet plants"	Reduce the noise levels of plant items	Contractor	All construction sites where practicable	Construction stage	V
S5.4.1	N5	Loading/unloading activities should be carried out inside the full enclosure of mucking out	Reduce the noise	Contractor	Mucking out	Construction	V

	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
		points	levels of loading/unloading activities		locations	stage	
S5.4.1	N6	Sequencing operation of construction plants where practicable.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction sites where practicable	Construction stage	V
S5.4.1	N7	Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected representative locations	Contractor	Selected representative noise monitoring station	Construction stage	V
S5.5.2	N8	Install temporary noise barriers along the works area at temporary Kowloon City Ferry Pier Public Transport Interchange	Reduce temporary PTI noise	Contractor	Kowloon City Ferry Pier	Different construction stages	V

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
Water Quality (Construction Phase)							
S6.9.1.1	W1	In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN1/94), construction phase mitigation measures shall include the following: <u>Construction Runoff</u> - At the start of site establishment (including the barging facilities), perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the contractor prior to the commencement of construction. - The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a site/sediment trap. The sediment/silt traps should be incorporated in the permanent drainage channels to enhance deposition rates. - The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/sand traps should be 5 minutes under maximum flow conditions. Sizes may vary depending upon the flow rate, but for a flow rate of 0.1 m³/s a sedimentation basin of 30m³ would be required and for a flow rate of 0.5 m³/s the basin would be 150 m³. The detailed design of the sand/silt traps shall be undertaken by the contractor prior to the commencement of construction. - All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. Exposed slope surfaces should be covered by tarpaulin or other means. - The overall slope of the site should be kept to a minimum to reduce the erosive potential of surface water flows, and all traffic areas and access roads protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during prolonged periods of inclement weather	To minimize water quality impact from construction site runoff and general construction activities	Contractor	All construction sites where practicable	Construction stage	V V V V

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
		and the reduction of surface sheet flows. ● All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas. ● Measures should be taken to minimize the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. ● Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. ● Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. ● Precautions be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are funneling in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes. ● All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. ● Oil interceptors should be provided in the drainage system downstream of any					V V V V V V V

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
		oil/fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain. - Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts. - All fuel tanks and storage areas should 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. - Adopt best management practices. - All the earth works involving should be conducted sequentially to limit the amount of construction runoff generated from exposed areas during the wet season (April to September) as far as practicable.					V V V V
S6.9.1.2	W2	<u>Tunnelling Works and Underground Works</u> - Cut-&-cover tunneling work should be conducted sequentially to limit the amount of construction runoff generated from exposed areas during the wet season (April to September) as far as practicable. - Uncontaminated discharge should pass through sedimentation tanks prior to off-site discharge - The wastewater with a high concentration of SS should be treated (e.g. by sedimentation tanks with sufficient retention time) before discharge. Oil interceptors would also be required to remove the oil, lubricants and grease from the wastewater. - Direct discharge of the bentonite slurry (as a result of D-wall and bored tunneling construction) is not allowed. It should be reconditioned and reused wherever practicable. Temporary storage locations (typically a properly closed warehouse) should be provided on site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC PN 1/94 should be adhered to in the handling and disposal of bentonite slurries.	To minimize construction water quality impact from tunneling works	Contractor	All tunneling portion	Construction stage	V V V V
S6.9.1.3	W3	<u>Sewage Effluent</u> Portable chemical toilets and sewage holding tanks are recommended for handling the construction sewage generated by the workforce. A licensed contractor should	To minimize water quality from sewage	Contractor	All construction sites where practicable	Construction stage	V

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
		be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	effluent				
S6.9.1.5	W4	<u>Groundwater from Potential Contaminated Area:</u> - No direct discharge of groundwater from contaminated areas should be adopted. - A discharge license under the WPCO through the Regional Office of EPD for groundwater results indicated that the groundwater to be generated from the excavation discharge should be applied. Prior to the excavation works within these potentially contaminated areas, the groundwater quality should be reviewed during the process of discharge license application. The compliance to the Technical Memorandum on Standards for Effluents Discharged into Drainage on Sewerage Systems, Inland and Coastal Waters (TM-DSS) and the existence of prohibited substance should be confirmed. If the review works would be contaminated, the contaminated groundwater should be either properly treated in compliance with the requirements of the TM-DSS or properly recharged into the ground. - If wastewater treatment is deployed, the wastewater treatment unit shall deploy suitable treatment process (e.g. oil interceptor / activated carbon) to reduce the pollution level to an acceptable standard and remove any prohibited substances (e.g. TPH) to undetectable range. All treated effluent from wastewater treatment plant shall meet the requirements as stated in TM-DSS and should be discharged into the foul sewers. - If groundwater recharging wells are deployed, recharging wells should be installed as appropriate for recharging the contaminated groundwater back into the ground. The recharging wells should be selected at places where the groundwater quality will not be affected by the recharge operation as indicated in the Section 2.3 of TM-DSS. The baseline groundwater quality shall be determined prior to the selection of the recharge wells, and submit a working plan (including the laboratory analytical results showing the quality of groundwater at the proposed recharge location(s) as well as the pollutant levels of groundwater to be recharged) to EPD for agreement. Pollution levels of groundwater to be recharged shall not be higher than pollutant levels of ambient groundwater at the recharge well. Prior to recharge, any prohibited substances such as TPH products should be removed as necessary by installing the petrol interceptor.	To minimize groundwater quality impact from contaminated area	Contractor	Excavation areas where contamination is found.	Construction stage	V V V V

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
S6.7.2.1	W5	<u>Temporary Reclamation</u> - During temporary reclamation, regular litter / rubbish clearance and avoidance of illegal discharges within the embayed marine water should be undertaken. - During temporary reclamation, the perimeter silt curtain should be deployed.	To minimize water quality impact from temporary reclamation	Contractor	Temporary Reclamation	Construction stage	V V
S6.9.1.6	W6	<u>Accidental spillage</u> In order to prevent accidental spillage of chemicals, the following is recommended: - All the tanks, containers, storage area should be bunded and the locations should be locked as far as possible from the sensitive watercourse and stormwater drains. - The Contractor should register as a chemical waste producer if chemical wastes would be generated. Storage of chemical waste arising from the construction activities should be stored with suitable labels and warnings. - Disposal of chemical wastes should be conducted in compliance with the requirements as stated in the Waste disposal (Chemical Waste) (General) Regulation.	To minimize water quality impact from accidental spillage	Contractor	All construction sites where practicable	Construction stage	V V V
S6.9.2.2	W7	<u>Dredging Works</u> The following good practice shall apply for the dredging works: - Install efficient silt curtains, i.e. at least 75% SS reduction, at the point of seawall dredging to control the dispersion of SS; - Implement water quality monitoring to ensure effective control of water pollution and recommend additional mitigation measures required; - The decent speed of grabs should be controlled to minimize the seabed impact and to reduce the volume of over-dredging; - All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; - The dredging rates by closed grab dredgers for temporary marine channel outside pipepile wall shall be less than 1,500 m³/day and 125 m³/hour (without concurrent dredging with T2 in dry season only) or 750 m³/day and 62.5 m³/hour for other	To minimize sediment suspension during dredging	Contractor	Kai Tak Barging Point during dredging works	Dredging period	N/A N/A N/A N/A N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
		conditions respectively. - Dredging works shall be only for the provision marine channel. No dredging work is required for temporary reclamation; and - The workfront of temporary reclamation shall be surrounded by cofferdams and the associated excavation and backfilling works for temporary reclamation shall have no contact with seawater.					N/A N/A
S6.9.2.2	W8	- While WSR 2 (Planned Kai Tak Cooling Water Intake). is a planned receiver, the project proponent shall liaise with the project proponent of District Cooling System (DCS) for Kai Tak Development on the implementation programme prior to wet season dredging. In case the DCS would be operated during the dredging period of CKR, additional silt screen to the cooling water intake shall be provided to WSR 2. The following specific mitigation measures shall apply for the dredging works: - In dry season, the dredging rate shall be less than 1500m³/day if no concurrent projects. - In all other scenario, the dredging rate shall be less than 750m³/day - Dredging works shall be only for the provision marine channel. No dredging work is required for temporary reclamation. - The workfront of temporary reclamation shall be surrounded by cofferdams and the associated excavation and backfilling works for temporary reclamation shall have no contact with seawater. - In case the DCS would be operated during the dredging period of CKR, silt screen shall be provided for WSR2.	To minimize sediment suspension during dredging if the District Cooling System for Kai Tak Development would be operated in the same period	Contractor	Kai Tak Barging Point during dredging works	Dredging period	N/A V V V N/A N/A
S6.9.2	W9	Handling of Dredged Sediment / Barging Operation: - All barges should be fitted with tight bottom seals to prevent leakage of materials during transport; - Barges or hoppers should not be filled to a level that will cause overflow of materials or polluted water during loading or transportation; - All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; and - Loading of barges and hoppers should be controlled to prevent splashing of material into the surrounding water.	To minimize and mitigate the water disturbance during dredged sediment handling/barging operation	Contractor	All land- based site and proposed Kwai Chung barging point	Construction stage	N/A V V V

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
		Mitigation measures for land-based activities as outlined above should be applied to minimise water quality impacts from site runoff and open stockpile spoils at the proposed barging facilities where appropriate.					N/A
S6.9	W10	Implement a marine water quality monitoring programme	Monitor marine water quality prior to and during dredging period	Contractor	At identified monitoring location	Prior to and during dredging period	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
Waste Management (Construction Waste)							
S7.4.1	WM1	<u>On-site sorting of C&D material</u> Geological assessment should be carried out by competent persons on site during excavation to identify materials which are not suitable to use as aggregate in structural concrete (e.g. volcanic rock, Aplite dyke rock, etc). Volcanic rock and Aplite dyke rock should be separated at the source sites as far as practicable and stored at designated stockpile areas preventing them from delivering to crushing facilities. The crushing plant operator should also be reminded to set up measures to prevent unsuitable rock from ended up at concrete batching plants and be turned into concrete for structural use. Details regarding control measures at source site and crushing facilities should be submitted by the Contractors for the Engineer to review and agree. In addition, site records should also be kept for the types of rock materials excavated and the traceability of delivery will be ensured with the implementation of Trip Ticket System and enforced by site supervisory staff as stipulated under DEVB TC(W) No. 6/2010 for tracking of the correct delivery to the rock crushing facilities for processing into aggregates. Alternative disposal option for the reuse of volcanic rock and Aplite Dyke rock, etc should also be explored.	Separation of unsuitable rock from ending up at concrete batching plants and be turned into concrete for structural use	Contractor	All construction sites	Construction stage	V
S7.5.1	WM2	<u>Construction and Demolition Material</u> - 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; - Adopt 'Selective Demolition' technique to demolish the existing structures and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible; - Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified; and - Implement an enhanced Waste Management Plan similar to ETWBTC (Works) No. 19/2005 – "Environmental Management on Construction Sites" to encourage on-site sorting of C&D materials and to minimize their generation during the course of construction.	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	Contractor	All construction sites	Construction stage	V V V V V
S7.5.1	WM3	<u>C&D Waste</u> Standard formwork or pre-fabrication should be used as far as practicable in order to	Good site practice to minimize the waste	Contractor	All construction	Construction stage	V

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
		minimise the arising of C&D materials. The use of more durable formwork or plastic facing for the construction works should be considered. Use of wooden hoardings should not be used, as in other projects. 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. 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.	generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal		sites		V
S7.5.1	WM5	<u>Land-based and Marine-based Sediment</u> - All construction plant and equipment shall be designed and maintained to minimize the risk of silt, sediments, contaminants or other pollutants being released into the water column or deposited in the locations other than designated location; - All vessels shall be sized such that adequate draft 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; - Before moving the vessels which are used for transporting dredged material, excess material shall be cleaned from the decks and exposed fittings of vessels and the excess materials shall never be dumped into the sea except at the approved locations; - Adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action. - The Contractors shall monitor all vessels transporting material to ensure that no dumping outside the approved location takes place. The Contractor shall keep and produce logs and other records to demonstrate compliance and that journeys are consistent with designated locations and copies of such records shall be submitted to the engineers; - The Contractors shall comply with the conditions in the dumping licence. - All bottom dumping vessels (Hopper barges) shall be fitted with tight fittings seals to their bottom openings to prevent leakage of material; - The material shall be placed into the disposal pit by bottom dumping; - Contaminated marine mud shall be transported by spit barge of not less than 750m³ capacity and capable of rapid opening and discharge at the disposal site;	To control pollution due to marine sediment	Contractor	Along CKR alignment	Construction Stage	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
		- Discharge shall be undertaken rapidly and the hoppers shall be closed immediately. Material adhering to the sides of the hopper shall not be washed out of the hopper and the hopper shall remain closed until the barge returns to the disposal site. - For Type 3 special disposal treatment, sealing of contaminant with geosynthetic containment before dropping into designated mud pit would be a possible arrangement. A geosynthetic containment method is a method whereby the sediments are sealed in geosynthetic containers and, the containers would be dropped into the designated contaminated mud pit where they would be covered by further mud disposal and later by the mud pit capping at the disposal site, thereby fulfilling the requirements for fully confined mud disposal.					
S7.5.1	WM6	<u>Chemical Waste</u> - Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. - Containers used for the storage of chemical wastes should 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 liters unless the specification has been approved by the EPD; and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation. - The storage area for chemical wastes should be clearly labelled and used solely for the storage of chemical waste; enclosed on at least 3 sides; have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20 % of the total volume of waste stored in that area, whichever is the greatest; have adequate ventilation; covered to prevent rainfall entering; and arranged so that incompatible materials are adequately separated. - Disposal of chemical waste should be via a licensed waste collector; be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre which also offers a chemical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD.	Control the chemical waste and ensure proper storage, handling and disposal.	Contractor	All construction sites	Construction stage	V V V V

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
S7.5.1	WM7	<u>General Refuse</u> - General refuse generated on-site should be stored in enclosed bins or compaction units separately from construction and chemical wastes. - A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimize odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law. - Aluminium cans are often recovered from the waste stream by individual collectors if they are segregated and made easily accessible. Separate labelled bins for their deposit should be provided if feasible. - Office wastes can be reduced through the recycling of paper if volumes are large enough to warrant collection. Participation in a local collection scheme should be considered by the Contractor.	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction stage	V V V V

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
Land Contamination							
S8.10, S8.12 & Appendix 8.4	LC1	Land contamination investigation works (including field works and laboratory testing at the Kowloon City Ferry Pier Public Transport Interchange (KCFP-PTI) and the To Kwa Wan Vehicle Examination Centre (TKW-VEC) were carried out from 14 April 2018 to 2 January 2019. In order to minimise the potentially adverse environmental impacts arising from the handling of potentially contaminated materials, the following environmental mitigation measures are proposed during the course of soil excavation, stockpiling and backfilling works: ● Excavation profiles must be properly designed and executed. ● Stockpiling site(s) shall be lined with impermeable sheeting and bunded. Stockpiles shall be fully covered by impermeable sheeting to reduce dust emission. ● Excavation and stockpiling should be carried out during dry season as far as possible to minimise potentially contaminated runoffs from the Concerned Soil. ● The truck transferring Concerned Soil shall be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the truck. ● Temporary fencing or warning ribbons will be provided to the boundary of excavation, slope crest and temporarily stockpiled areas. Where necessary, the exposed areas should be temporarily covered with impermeable sheeting during heavy rainstorm.	Minimize the potentially adverse environmental impacts arising from the handling of potentially contaminated materials	Contractor	EBH1, EBH2 and EBH3	Commencement of construction works at the Kowloon City Ferry Pier Public Transport Interchange (PTI) (for EBH1 & EBH2) and the works area adjacent to the To Kwa Wan Vehicle Examination Centre (for EBH3)	V V V V V

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
Landscape & Visual							
S10.10.1 Table 10.11	LV3	<u>Good Site Management</u> Large temporary stockpiles of excavated material shall be covered with unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance. Construction plant and building material shall be orderly and carefully stored in order to create a neat and tidy visual appearance.	Minimize visual impact	Contractor	Within Project Site	Construction Phase	V
S10.10.1 Table 10.11	LV4	<u>Screen Hoarding</u> Decorative screen hoarding should be erected to screen the public from the construction area. It should be designed to be compatible with the existing urban context.	Minimize visual impact	Contractor	Within Project Site	Construction Phase	V
S10.10.1 Table 10.11	LV5	<u>Lighting Control during Construction</u> All lighting in the construction site shall be carefully controlled to minimize light pollution and night-time glare to nearby residencies and GIC. The contractor shall consider other security measures, which shall minimize the visual impacts.	Minimize visual impact	Contractor	Within Project Site	Construction Phase	V
S10.10.1 Table 10.11	LV6	<u>Erosion Control</u> The potential for soil erosion shall be reduced by minimizing the extent of vegetation disturbance on site and by providing a protective cover over newly exposed soil.	Minimize landscape impact	Contractor	Within Project Site	Construction Phase	V
S10.10.1 Table 10.11	LV7	<u>Tree Protection & Preservation</u> Carefully protected during construction. Tree protection measures will be detailed at the Tree Removal Application stage and plans submitted to the relevant Government Department for approval in due course in accordance with ETWB TC no. 3/2006.	Minimize landscape and visual impact	Contractor	Within Project Site	Design and Construction Phase	V
S10.10.1 Table 10.11	LV9	<u>Compensatory Planting</u> For trees unavoidably affected by the Project that have to be removed, where practical transplantation will be chosen as the top priority method of removal but if this is not possible or practical compensatory planting will be provided for trees unavoidably felled. All felled trees shall be compensated for by planting trees 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. Compensatory tree planting may be incorporated into public open spaces and along roadside amenity areas affected by the construction works and therefore be part of the bigger wider planting plans. Onsite compensation planting is preferred but if necessary,	Minimize landscape and visual impact	Contractor	Within Project Site and designated off-site locations	Construction Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
		additional receptor sites outside the Works Area shall be agreed separately with Government during the Tree Felling Application process.					
S10.10.1 Table 10.11	LV10	<u>Screen Planting</u> Tall screen/buffer trees, shrubs and climbers should be planted, in so far as is possible, to soften and screen proposed structures such as roads and central strip, vertical edges and buildings and to enhance streetscape greening effect where appropriate. Indiscriminate use of trees for screening must be avoided and the principle of 'right tree for the right place' must be followed. This detail will be provided at the Detailed Design stage. This measure may additionally form part of the compensatory planting and will improve and create a pleasant pedestrian environment.	Minimize visual impact and also enhance landscape.	Contractor	Within Project Site	Construction Phase	N/A
S10.10.1 Table 10.11	LV11	<u>Green Roof</u> Roof greening will be established on ventilation and administration buildings to reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels.	Minimize landscape and visual impact	Contractor	Within Project Site	Construction Phase	N/A
S10.10.1 Table 10.11	LV12	<u>Reinstatement</u> All works areas, excavated areas and disturbed areas for tunnel construction and temporary road diversion or any other proposed works shall be reinstated to former conditions or better, with reasonable landscape treatment and to the satisfaction of the relevant Government departments. (Specific mitigation for disturbance to public open space is detailed separately under LV14)	Minimize landscape impact	Contractor	Within Project Site	Construction Phase	N/A
S10.10.1 Table 10.11	LV14	<u>Landscape enhancement</u> Implement a comprehensive landscape plan to maximize the greening opportunity and create a unique landscape for the project to blend in with the surrounding, including in re-provisioned areas. In particular: - landscape enhancement of re-provisioned Public Transport Interchange; - landscape deck on tunnel portals; - viaduct planters for trailer planting; - vertical greening of piers and walls with climbers or trailer planting; - roadside planting i.e. planting along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, and vertical greening may be considered part of Screen Planting). - Purpose-built maintenance access without temporary traffic arrangement must be	Minimize landscape and visual impact	Contractor	Along tunnel alignment	Construction phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
		provided and detailed design of landscape decks and planting, including details of maintenance access locations, will be sent to maintenance and management parties for endorsement and ensures these mitigation measures are feasible.					

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
Cultural Heritage Impact (Construction and Operational Phase)							
S11.4.4	CH1	The contractor should be alerted during the construction on the possibility of locating archaeological remains and as a precautionary measure, AMO shall be informed immediately in case of discovery of antiquities or supposed antiquities in the subject sites.	To preserve any cultural heritage items which may be removed and damaged by the excavation.	Contractor	During construction works for cut and cover tunnels	During the construction phase	N/A
S11.6 para 3	CH2	The dredging contractor should be alerted during the construction on the possibility of locating archaeological remains, such as cannon and AMO shall be informed immediately in case of discovery of antiquities or supposed antiquities in the subject areas.	To preserve any cultural heritage items which may be removed and damaged by the dredging.	Contractor	During construction of underwater tunnel (north of To Kwa Wan Typhoon Shelter)	During the construction phase	N/A
S12.6.1, Table 12.2	CH8	A monitoring system for settlement, vibration and tilting will be determined and implemented pending determination of the future grading. A monitoring proposal will be submitted to AMO before commencement of work if a historic building grade is accorded.	Protect the structure from damage from construction works	Contractor	Kowloon City Ferry Pier (CKR-13)	During the construction phase	N/A
S12.6.1, Table 12.2	CH9	No mitigation is required at present. If the public pier is granted Grade 1, Grade 2 or Grade 3 status, the mitigation will be revised to adhere to the requirements for protective measures for Graded Historic Buildings	To be determined	Contractor	Ma Tau Kok Public Pier (CKR-16)	During the construction phase	N/A
S12.6.1, Table 12.2	CH10	A monitoring system for settlement, vibration and tilting will be determined and implemented pending determination of the future grading. A monitoring proposal will be submitted to AMO before commencement of work if a historic building grade is accorded.	Protect the structure from damage from construction works	Contractor	The Kowloon City Vehicular Ferry Pier (CKR-17)	During the construction phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
EM&A Project							
S13.2	EM1	An Independent Environmental Checker needs to be employed as per the EM&A Manual.	Control Performance EM&A	Highways Department	All construction sites	Construction stage	V
S13.2 –13.4	EM2	1) An Environmental Team needs to be employed as per the EM&A Manual.	Perform environmental monitoring & auditing	Highways Department / Contractor	All construction sites	Construction stage	V
		2) Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures.					V
		3) An environmental impact monitoring needs to be implementing by the Environmental Team to ensure all the requirements given in the EM&A Manual are fully complied with.					V

Legends:

V = implemented;

X = not implemented;

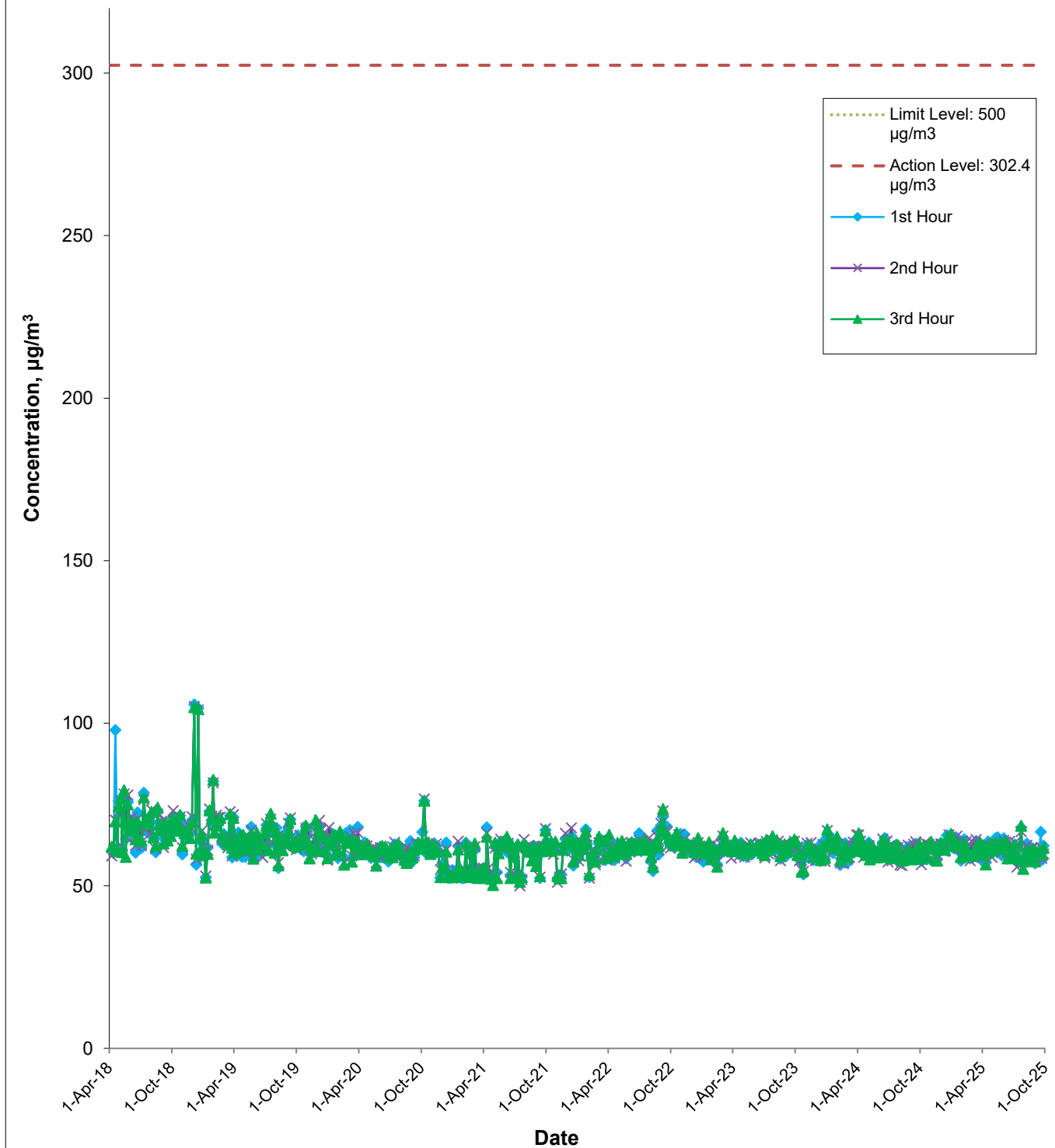
@ = partially implemented;

N/A = not applicable

APPENDIX E

Air Quality Monitoring Results and their Graphical Presentations

E-A14a



This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

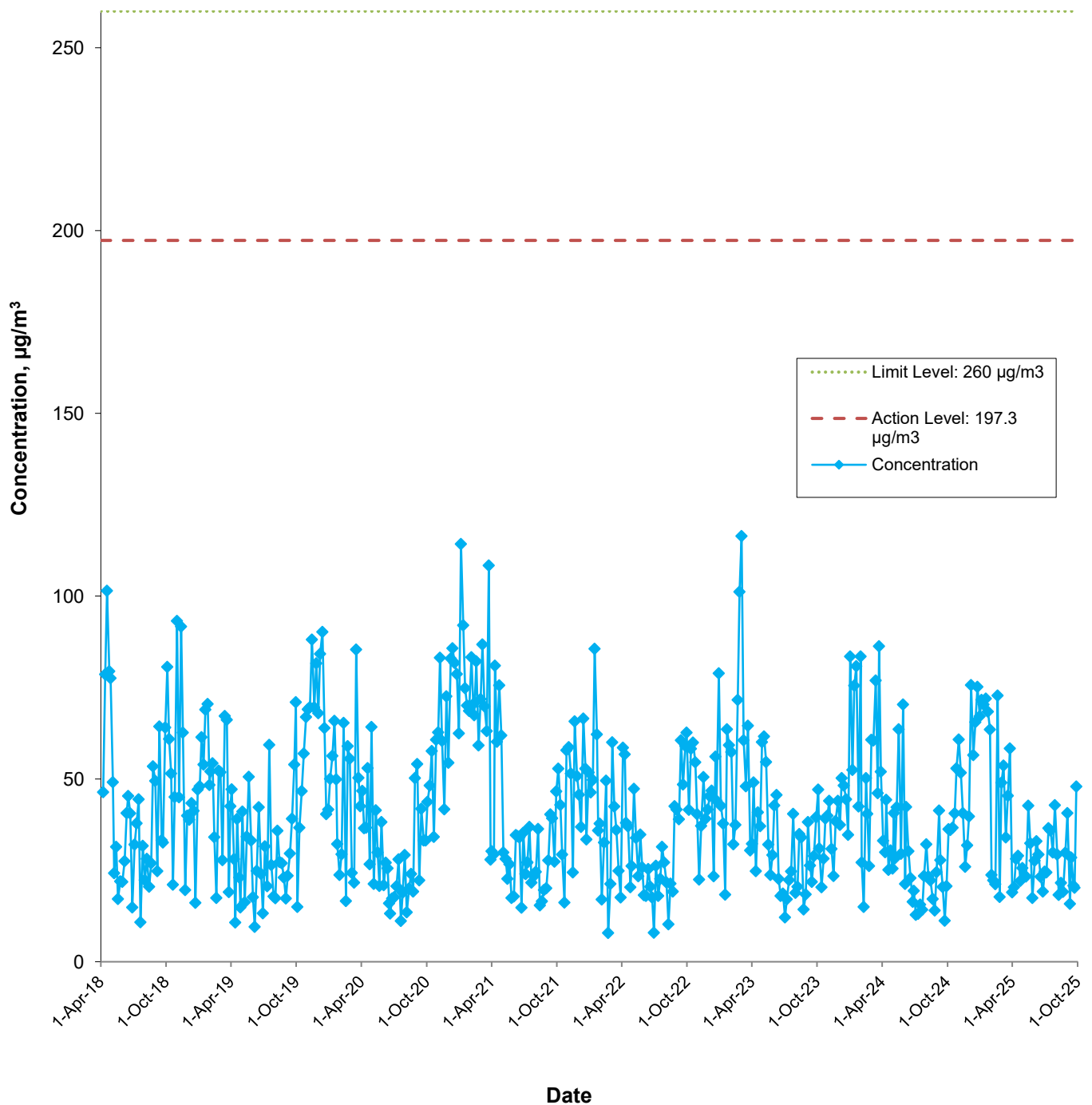
Central Kowloon Route - Kai Tak West (Contract No. HY/2014/07)

AECOM

Graphical Presentation of Impact 1-hour TSP
Monitoring Results

Appendix E

E-A14a



This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Central Kowloon Route - Kai Tak West (Contract No. HY/2014/07)

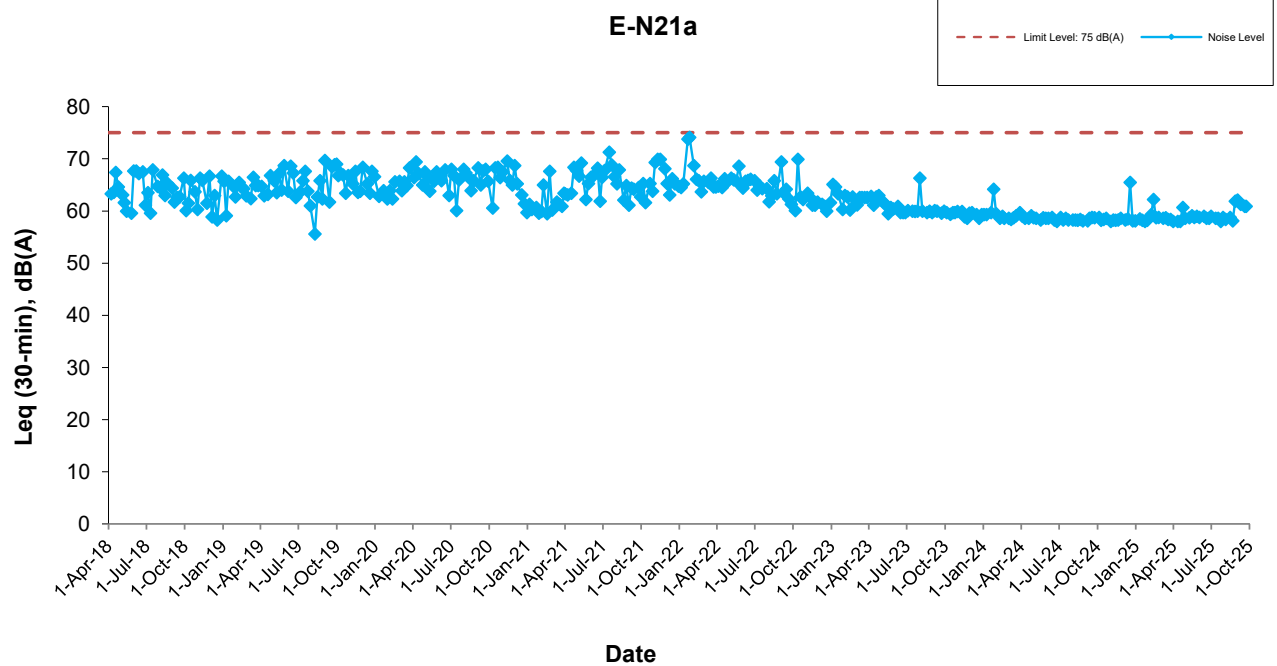
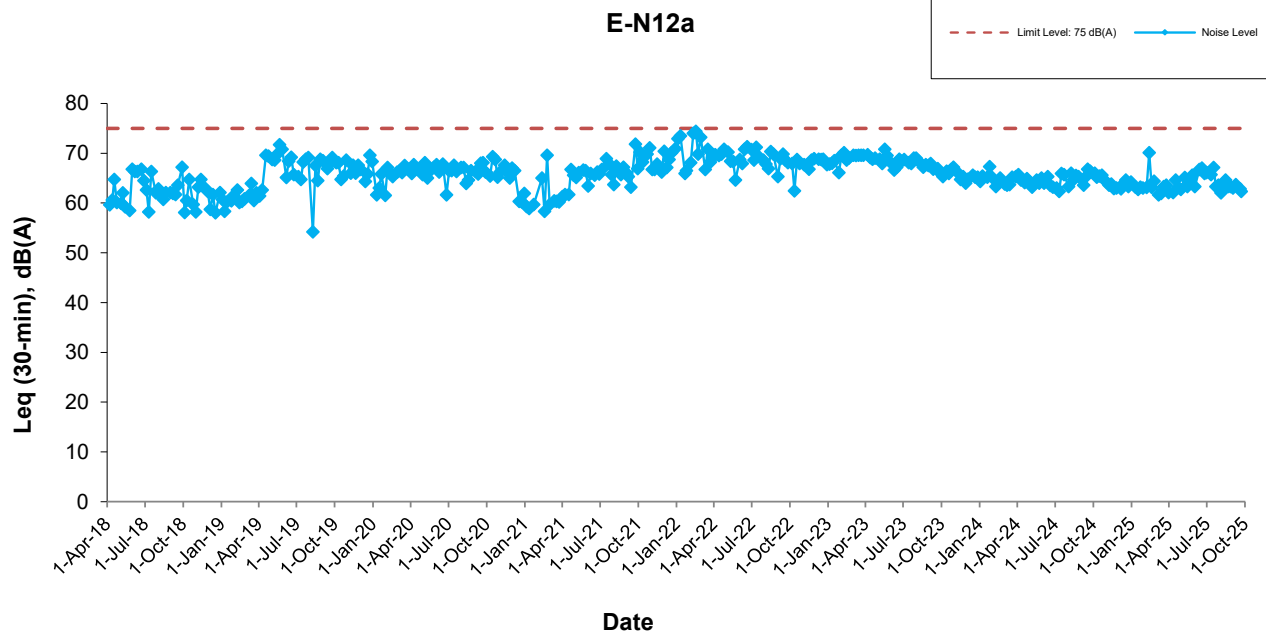
AECOM

Graphical Presentation of Impact 24-hour TSP Monitoring
Results

Appendix E

APPENDIX F

Noise Monitoring Results and their Graphical Presentations



This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Central Kowloon Route - Kai Tak West (Contract No. HY/2014/07)

AECOM

Graphical Presentation of Impact Noise Monitoring Results

Appendix F

APPENDIX G

Summary Waste Flow Table



Month	Actual Quantities of Inert C&D Materials Generated Monthly (Note 1)											Actual Quantities of Non-inert C&D Materials (i.e. C&D Wastes) Generated Monthly					Actual Quantities of Contaminated Soil Monthly		Actual Quantities of Land-based Sediment Monthly			Actual Quantities of Marine-based sediment Monthly		
	Generated					Disposed				Reused			Recycled			Disposed		Reused	Reused	Disposed		Disposed		
	Fill Material	Artificial Material			Total Quantity Generated	Disposed as Public Fills at TKO137	Disposed as Public Fills at TM38	Disposed as Public Fills at CWPFBP	Total Quantity Disposal	Reused in the Contract	Reused in Other Projects	Total Quantity Reused	Metals	Paper/ cardboard packaging (Note 3)	Plastics	Chemical Waste	General Refuse (Note 2)	Reused in the Contract	Reused in the Contract	Disposed at Designated Site		Disposed at Designated Site		
		Soil and Rock	Broken Concrete	Asphalt															Type 1 (Cat. L)	Type 1 (Cat. M _p)	Type 2 (Cat. M _i , Cat. H)	Type 1 (Cat. L, Cat. M _p)	Type 2 (Cat. M _i , Cat. H _p)	Type 3 (Cat. H _i)
Unit	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000Kg)	('000Kg)	('000Kg)	('000kg)	('000Kg)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)
Jan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Feb	0.008	0.000	0.015	0.000	0.023	0.000	0.023	0.000	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	37.620	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar	0.015	0.000	0.023	0.000	0.038	0.000	0.038	0.000	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.210	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr	0.091	0.000	0.000	0.000	0.091	0.000	0.091	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000	34.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May	0.336	0.040	0.063	0.029	0.468	0.000	0.468	0.000	0.468	0.000	0.000	0.000	0.000	0.000	0.000	5.000	27.650	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jun	0.456	0.107	0.000	0.019	0.582	0.000	0.582	0.000	0.582	0.000	0.000	0.000	66.990	0.000	0.000	0.000	40.830	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUB-TOTAL	0.906	0.147	0.101	0.047	1.201	0.000	1.201	0.000	1.201	0.000	0.000	0.000	66.990	0.000	0.000	5.000	152.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jul	1.302	0.220	0.032	0.074	1.628	0.000	1.628	0.000	1.628	0.000	0.000	0.000	27.280	0.000	0.004	0.000	18.990	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug	1.349	0.016	0.000	0.000	1.365	0.000	1.365	0.000	1.365	0.000	0.000	0.000	0.000	0.000	0.000	1.600	19.830	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sep	0.311	0.021	0.000	0.000	0.332	0.000	0.332	0.000	0.332	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30.810	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct	0.287	0.051	0.093	0.000	0.431	0.000	0.431	0.000	0.431	0.000	0.000	0.000	0.006	0.120	0.008	0.000	36.290	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov	1.619	0.000	0.122	0.000	1.741	0.000	0.849	0.000	0.849	0.000	0.893	0.893	0.000	0.000	0.000	0.000	14.060	0.000	0.000	0.000	0.000	0.450	0.000	0.000
Dec	0.515	0.008	0.061	0.000	0.584	0.000	0.205	0.000	0.205	0.000	0.379	0.379	0.008	0.000	0.005	0.000	11.390	0.000	0.000	0.000	0.000	0.000	1.967	0.000
TOTAL	6.289	0.462	0.408	0.121	7.282	0.000	6.010	0.000	6.010	0.000	1.272	1.272	94.284	0.120	0.017	6.600	283.760	0.000	0.000	0.000	0.000	0.000	2.417	0.000

Note: 1. Assume the density of fill is 2 ton/m3.
2. Refuse disposed to NENT landfill.



Month	Actual Quantities of Inert C&D Materials Generated Monthly (Note 1)												Actual Quantities of Non-inert C&D Materials (i.e. C&D Wastes) Generated Monthly					Actual Quantities of Contaminated Soil Monthly		Actual Quantities of Land-based Sediment Monthly		Actual Quantities of Marine-based sediment Monthly		
	Generated					Disposed				Reused			Recycled			Disposed		Reused	Reused	Disposed		Disposed		
	Fill Material	Artificial Material			Total Quantity Generated	Disposed as Public Fills at TKO137	Disposed as Public Fills at TM38	Disposed as Public Fills at CWPFBP	Total Quantity Disposal	Reused in the Contract	Reused in Other Projects	Total Quantity Reused	Metals	Paper/ cardboard packaging (Note 3)	Plastics	Chemical Waste	General Refuse (Note 2)	Reused in the Contract	Reused in the Contract	Disposed at Designated Site		Disposed at Designated Site		
		Soil and Rock	Broken Concrete	Asphalt															Building Derbis	Type 1 (Cat. L)	Type 1 (Cat. M _p)	Type 2 (Cat. M _i , Cat. H)	Type 1 (Cat. L, Cat. M _p)	Type 2 (Cat. M _i , Cat. H _p)
Unit	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000Kg)	('000Kg)	('000Kg)	('000kg)	('000Kg)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	
Jan	0.500	0.000	0.000	0.000	0.500	0.000	0.019	0.000	0.019	0.000	0.481	0.481	0.000	0.000	0.000	0.000	22.200	0.000	0.000	0.000	0.000	2.038	0.387	
Feb	0.200	0.000	0.000	0.000	0.200	0.000	0.008	0.000	0.008	0.000	0.192	0.192	0.000	0.330	0.000	2.000	15.290	0.000	0.000	0.000	0.000	0.000	0.000	
Mar	0.313	0.000	0.000	0.000	0.313	0.000	0.005	0.000	0.005	0.308	0.000	0.308	60.889	0.000	0.008	0.600	29.790	0.000	0.000	0.000	0.000	0.000	0.000	
Apr	0.183	0.000	0.000	0.000	0.183	0.000	0.000	0.000	0.000	0.183	0.000	0.183	0.000	0.267	0.000	1.000	37.380	0.000	0.000	0.000	0.000	0.000	0.000	
May	0.144	0.000	0.000	0.000	0.144	0.000	0.030	0.000	0.030	0.083	0.031	0.114	44.950	0.246	0.000	1.800	33.230	0.000	0.000	0.000	0.000	0.000	0.000	
Jun	4.578	0.000	0.000	0.000	4.578	0.000	0.000	0.000	0.000	0.003	4.576	4.578	0.013	0.010	0.014	1.400	31.000	0.000	0.000	0.000	0.000	0.000	0.000	
SUB-TOTAL	5.919	0.000	0.000	0.000	5.919	0.000	0.062	0.000	0.062	0.577	5.280	5.857	105.852	0.853	0.022	6.800	168.890	0.000	0.000	0.000	0.000	2.038	0.387	
Jul	20.253	0.000	0.000	0.000	20.253	0.000	0.010	0.000	0.010	4.626	15.617	20.243	49.150	0.298	0.000	1.400	75.240	0.000	0.000	0.000	0.000	0.000	0.000	
Aug	20.699	0.000	1.068	0.000	21.767	0.000	1.068	0.000	1.068	6.905	13.794	20.699	0.010	0.238	0.009	1.000	56.440	0.000	0.000	0.000	0.000	0.000	0.000	
Sep	32.291	0.000	1.340	0.000	33.631	0.000	1.340	0.000	1.340	6.899	25.392	32.291	13.470	0.163	0.000	1.600	39.580	0.000	0.000	0.000	0.000	1.465	0.000	
Oct	30.429	0.005	0.799	0.000	31.233	0.000	0.816	0.000	0.816	7.720	22.697	30.417	0.000	0.000	1.200	0.000	26.040	0.000	0.000	0.000	0.000	4.863	3.063	
Nov	39.497	0.005	0.454	0.000	39.956	0.000	0.459	0.000	0.459	0.972	38.525	39.497	0.011	0.153	0.027	0.000	21.790	0.000	0.000	0.000	0.000	5.090	1.527	
Dec	38.177	0.015	0.013	0.000	38.206	0.000	0.036	0.000	0.036	0.169	38.001	38.170	107.090	0.183	0.000	0.800	48.960	0.000	0.000	0.000	0.000	0.000	0.000	
TOTAL	187.265	0.025	3.674	0.000	190.964	0.000	3.791	0.000	3.791	27.869	159.305	187.174	275.583	1.888	1.259	11.600	436.940	0.000	0.000	0.000	0.000	13.456	4.977	

Note: 1. Assume the density of fill is 2 ton/m3.
2. Refuse disposed to NENT landfill.



Month	Actual Quantities of Inert C&D Materials Generated Monthly (Note 1)												Actual Quantities of Non-inert C&D Materials (i.e. C&D Wastes) Generated Monthly					Actual Quantities of Contaminated Soil Monthly		Actual Quantities of Land-based Sediment Monthly		Actual Quantities of Marine-based sediment Monthly		
	Generated					Disposed				Reused			Recycled			Disposed		Reused	Reused	Disposed		Disposed		
	Fill Material	Artificial Material			Total Quantity Generated	Disposed as Public Fills at TKO137	Disposed as Public Fills at TM38	Disposed as Public Fills at CWPFBP	Total Quantity Disposal	Reused in the Contract	Reused in Other Projects	Total Quantity Reused	Metals	Paper/ cardboard packaging (Note 3)	Plastics	Chemical Waste	General Refuse (Note 2)	Reused in the Contract	Reused in the Contract	Disposed at Designated Site		Disposed at Designated Site		
		Soil and Rock	Broken Concrete	Asphalt																Building Derbis	Type 1 (Cat. L)	Type 1 (Cat. M _p)	Type 2 (Cat. M _i , Cat. H)	Type 1 (Cat. L, Cat. M _p)
Unit	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000Kg)	('000Kg)	('000Kg)	('000kg)	('000Kg)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	
Jan	35.394	0.008	0.000	0.000	35.402	0.000	0.031	0.000	0.031	0.000	35.371	35.371	33.130	0.180	0.000	0.000	21.510	0.000	0.000	0.000	0.000	0.000	0.309	0.000
Feb	48.036	0.000	0.023	0.000	48.058	0.000	1.065	0.000	1.065	0.000	46.993	46.993	17.400	0.000	0.000	0.000	13.800	0.000	0.000	0.000	0.724	4.126	0.000	
Mar	40.020	0.008	0.000	0.000	40.029	5.760	0.024	0.000	5.784	0.000	34.245	34.245	62.920	0.214	0.000	0.000	33.740	0.000	0.000	0.000	6.496	8.543	0.000	
Apr	46.955	0.003	0.002	0.000	46.960	24.984	0.895	0.000	25.879	0.000	21.081	21.081	25.450	0.172	0.000	1.400	38.070	0.000	0.000	0.000	10.151	8.900	0.000	
May	46.664	0.007	0.074	0.000	46.745	35.045	5.697	0.000	40.742	0.000	6.003	6.003	15.410	0.109	0.000	0.000	36.930	0.000	0.000	0.000	6.134	1.051	0.000	
Jun	63.995	0.068	0.000	0.000	64.063	42.410	17.309	0.000	59.719	0.000	4.343	4.343	13.330	0.000	0.000	0.000	46.060	0.000	0.000	0.000	0.000	0.000	0.000	
SUB-TOTAL	281.064	0.094	0.099	0.000	281.257	108.200	25.020	0.000	133.220	0.000	148.037	148.037	167.640	0.675	0.000	1.400	190.110	0.000	0.000	0.000	23.505	22.929	0.000	
Jul	55.313	0.008	0.000	0.000	55.321	42.107	8.908	0.000	51.015	0.000	4.306	4.306	51.140	0.237	0.000	0.000	56.340	0.000	0.000	0.000	0.000	0.000	0.000	
Aug	30.427	0.011	0.000	0.000	30.438	27.996	0.517	0.000	28.512	0.593	1.333	1.926	60.160	0.000	0.000	0.000	48.120	0.000	0.000	0.000	0.000	0.000	0.000	
Sep	19.263	0.009	0.018	0.000	19.290	13.582	0.009	0.000	13.592	1.746	3.953	5.699	283.970	0.259	0.000	1.200	67.380	0.000	0.000	0.000	0.000	2.319	1.097	
Oct	1.786	0.045	0.031	0.000	1.862	0.303	0.000	0.000	0.303	0.163	1.397	1.560	60.330	0.199	0.000	0.000	82.250	0.000	0.000	0.000	2.401	3.835	0.000	
Nov	10.392	0.171	0.180	0.000	10.743	9.377	0.000	0.000	9.377	0.072	1.293	1.365	163.860	0.196	0.000	0.000	133.830	0.000	0.000	0.000	0.000	0.000	0.000	
Dec	1.073	0.045	0.045	0.000	1.163	0.251	0.000	0.000	0.251	0.741	0.171	0.912	385.450	0.000	0.000	0.000	178.810	0.000	0.000	0.000	0.000	0.000	0.000	
TOTAL	399.319	0.383	0.373	0.000	400.074	201.815	34.454	0.000	236.270	3.315	160.490	163.805	1172.550	1.566	0.000	2.600	756.840	0.000	0.000	0.000	25.906	29.083	1.097	

Note: 1. Assume the density of fill is 2 ton/m3.
2. Refuse disposed to NENT landfill.



Month	Actual Quantities of Inert C&D Materials Generated Monthly (Note 1)												Actual Quantities of Non-inert C&D Materials (i.e. C&D Wastes) Generated Monthly					Actual Quantities of Contaminated Soil Monthly		Actual Quantities of Land-based Sediment Monthly		Actual Quantities of Marine-based sediment Monthly		
	Generated					Disposed				Reused			Recycled			Disposed		Reused	Reused	Disposed		Disposed		
	Fill Material	Artificial Material			Total Quantity Generated	Disposed as Public Fills at TKO137	Disposed as Public Fills at TM38	Disposed as Public Fills at CWPFBP	Total Quantity Disposal	Reused in the Contract	Reused in Other Projects	Total Quantity Reused	Metals	Paper/ cardboard packaging (Note 3)	Plastics	Chemical Waste	General Refuse (Note 2)	Reused in the Contract	Reused in the Contract	Disposed at Designated Site		Disposed at Designated Site		
		Soil and Rock	Broken Concrete	Asphalt																Building Derbis	Type 1 (Cat. L)	Type 1 (Cat. M _p)	Type 2 (Cat. M _i , Cat. H)	Type 1 (Cat. L, Cat. M _p)
Unit	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000Kg)	('000Kg)	('000Kg)	('000kg)	('000Kg)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)
Jan	1.162	0.046	0.000	0.000	1.209	0.059	0.000	0.000	0.059	0.390	0.761	1.150	381.140	0.135	0.006	0.000	133.890	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Feb	1.702	0.000	0.000	0.000	1.702	0.225	0.000	0.000	0.225	0.775	0.702	1.477	136.100	0.222	0.009	1.200	134.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar	3.213	0.000	0.015	0.000	3.227	0.593	0.000	0.000	0.593	1.946	0.689	2.635	242.140	0.000	0.000	0.000	184.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr	3.366	0.008	0.030	0.000	3.403	0.312	0.000	0.000	0.312	2.283	0.809	3.091	487.190	0.131	0.000	0.000	153.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May	0.329	0.000	0.000	0.004	0.333	0.333	0.000	0.000	0.333	0.000	0.000	0.000	400.090	0.109	0.000	0.000	88.810	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jun	4.649	0.000	0.000	0.000	4.649	0.477	0.000	0.000	0.477	4.172	0.000	4.172	384.630	0.000	0.003	0.000	110.830	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUB-TOTAL	14.421	0.054	0.045	0.004	14.523	1.998	0.000	0.000	1.998	9.565	2.960	12.525	2031.290	0.597	0.018	1.200	805.620	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jul	9.676	0.000	0.000	0.000	9.676	0.236	0.000	0.000	0.236	9.440	0.000	9.440	333.690	0.153	0.000	0.000	158.440	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug	3.570	0.000	0.000	0.000	3.570	0.497	0.000	0.000	0.497	3.073	0.000	3.073	802.170	0.179	0.001	0.000	164.680	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sep	3.880	0.000	0.000	0.000	3.880	0.382	0.000	0.000	0.382	3.498	0.000	3.498	118.950	0.155	0.000	0.000	148.830	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct	13.514	0.000	0.000	0.000	13.514	10.037	0.000	0.000	10.037	3.476	0.000	3.476	511.610	0.000	0.000	0.000	115.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov	8.014	0.000	0.000	0.000	8.014	7.724	0.000	0.000	7.724	0.291	0.000	0.291	606.100	0.225	0.000	0.000	202.210	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dec	2.737	0.000	0.000	0.000	2.737	0.181	0.000	0.000	0.181	2.556	0.000	2.556	196.230	0.000	0.000	0.000	235.530	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	55.812	0.054	0.045	0.004	55.914	21.056	0.000	0.000	21.056	31.899	2.960	34.858	4600.040	1.309	0.019	1.200	1830.360	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Note: 1. Assume the density of fill is 2 ton/m3.
2. Refuse disposed to NENT landfill.



Month	Actual Quantities of Inert C&D Materials Generated Monthly (Note 1)												Actual Quantities of Non-inert C&D Materials (i.e. C&D Wastes) Generated Monthly					Actual Quantities of Contaminated Soil Monthly		Actual Quantities of Land-based Sediment Monthly		Actual Quantities of Marine-based sediment Monthly		
	Generated					Disposed				Reused			Recycled			Disposed		Reused	Reused	Disposed		Disposed		
	Fill Material	Artificial Material			Total Quantity Generated	Disposed as Public Fills at TKO137	Disposed as Public Fills at TM38	Disposed as Public Fills at CWPFBP	Total Quantity Disposal	Reused in the Contract	Reused in Other Projects	Total Quantity Reused	Metals	Paper/ cardboard packaging (Note 3)	Plastics	Chemical Waste	General Refuse (Note 2)	Reused in the Contract	Reused in the Contract	Disposed at Designated Site		Disposed at Designated Site		
		Soil and Rock	Broken Concrete	Asphalt																Building Derbis	Type 1 (Cat. L)	Type 1 (Cat. M _p)	Type 2 (Cat. M _i , Cat. H)	Type 1 (Cat. L, Cat. M _p)
Unit	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000Kg)	(’000Kg)	(’000Kg)	(’000kg)	(’000Kg)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)
Jan	13.644	0.000	0.000	0.000	13.644	10.923	0.000	0.000	10.923	2.721	0.000	2.721	31.330	0.000	0.000	0.000	218.570	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Feb	5.488	0.000	0.000	0.000	5.488	1.263	0.000	0.000	1.263	4.225	0.000	4.225	37.360	0.000	0.000	0.000	71.820	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar	1.270	0.000	0.000	0.000	1.270	0.000	0.000	0.000	0.000	1.270	0.000	1.270	25.180	0.128	0.000	0.000	131.380	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr	1.111	0.000	0.000	0.000	1.111	0.000	0.000	0.000	0.000	1.111	0.000	1.111	22.700	0.045	0.000	0.000	96.540	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May	9.355	0.000	0.000	0.000	9.355	6.505	0.000	0.000	6.505	2.849	0.000	2.849	0.000	0.246	0.000	0.000	108.430	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jun	16.870	0.000	0.000	0.000	16.870	13.432	0.000	0.000	13.432	3.437	0.000	3.437	21.280	0.218	0.000	0.000	56.880	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUB-TOTAL	47.737	0.000	0.000	0.000	47.737	32.123	0.000	0.000	32.123	15.614	0.000	15.614	137.850	0.637	0.000	0.000	683.620	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jul	4.396	0.000	0.000	0.000	4.396	3.557	0.000	0.000	3.557	0.839	0.000	0.839	6.840	0.000	0.000	2.400	73.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug	1.795	0.000	0.000	0.000	1.795	0.889	0.000	0.000	0.889	0.905	0.000	0.905	0.000	0.246	0.000	1.200	109.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sep	3.842	0.000	0.000	0.000	3.842	0.000	0.000	0.000	0.000	3.842	0.000	3.842	0.000	0.000	0.000	0.600	97.700	0.000	0.000	0.000	0.000	0.000	1.692	0.331
Oct	6.367	0.000	0.000	0.000	6.367	3.226	0.000	0.000	3.226	3.141	0.000	3.141	27.520	0.000	0.000	0.000	102.610	0.000	0.000	0.000	0.000	0.000	2.327	0.000
Nov	10.800	0.000	0.000	0.000	10.800	6.217	0.000	0.000	6.217	4.583	0.000	4.583	10.160	0.199	0.000	0.000	79.410	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dec	14.506	0.000	0.000	0.000	14.506	12.252	0.000	0.000	12.252	2.253	0.000	2.253	77.820	0.000	0.000	0.000	69.850	0.000	0.000	0.000	0.000	2.600	11.009	0.000
TOTAL	89.442	0.000	0.000	0.000	89.442	58.264	0.000	0.000	58.264	31.179	0.000	31.179	260.190	1.082	0.000	4.200	1215.590	0.000	0.000	0.000	0.000	2.600	15.028	0.331

Note: 1. Assume the density of fill is 2 ton/m3.
2. Refuse disposed to NENT landfill.



Month	Actual Quantities of Inert C&D Materials Generated Monthly (Note 1)												Actual Quantities of Non-inert C&D Materials (i.e. C&D Wastes) Generated Monthly					Actual Quantities of Contaminated Soil Monthly		Actual Quantities of Land-based Sediment Monthly		Actual Quantities of Marine-based sediment Monthly		
	Generated					Disposed				Reused			Recycled			Disposed		Reused	Reused	Disposed		Disposed		
	Fill Material	Artificial Material			Total Quantity Generated	Disposed as Public Fills at TKO137	Disposed as Public Fills at TM38	Disposed as Capping at East Sha Chau (Alluvium)	Total Quantity Disposal	Reused in the Contract	Reused in Other Projects	Total Quantity Reused	Metals	Paper/ cardboard packaging (Note 3)	Plastics	Chemical Waste	General Refuse (Note 2)	Reused in the Contract	Reused in the Contract	Disposed at Designated Site		Disposed at Designated Site		
		Soil and Rock	Broken Concrete	Asphalt																Building Derbis	Type 1 (Cat. L)	Type 1 (Cat. M _p)	Type 2 (Cat. M _i , Cat. H)	Type 1 (Cat. L, Cat. M _p)
Unit	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000Kg)	(’000Kg)	(’000Kg)	(’000kg)	(’000Kg)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)
Jan	7.733	0.000	0.000	0.000	7.733	7.733	0.000	0.000	7.733	0.000	0.000	0.000	0.000	0.000	0.000	0.000	84.540	0.000	0.000	0.000	0.000	8.633	5.057	0.000
Feb	19.451	0.000	0.000	0.000	19.451	19.377	0.074	0.000	19.451	0.000	0.000	0.000	0.000	0.375	0.000	0.000	74.640	0.000	0.000	0.000	0.000	8.237	12.033	0.000
Mar	49.565	0.000	0.000	0.000	49.565	49.565	0.000	0.000	49.565	0.000	0.000	0.000	0.000	0.000	0.000	0.000	85.500	0.000	0.000	0.000	0.000	0.000	7.931	0.000
Apr	40.345	0.000	0.000	0.000	40.345	30.209	0.000	5.986	36.195	0.000	4.150	4.150	94.380	0.000	0.000	0.000	91.870	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May	54.530	0.000	0.000	0.000	54.530	24.787	0.000	22.351	47.138	0.000	7.392	7.392	0.000	0.174	0.000	0.000	136.730	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jun	47.051	0.000	0.000	0.000	47.051	20.292	0.000	24.511	44.803	0.000	2.248	2.248	208.670	0.130	0.000	0.000	84.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUB-TOTAL	218.675	0.000	0.000	0.000	218.675	151.962	0.074	52.848	204.884	0.000	13.791	13.791	303.050	0.679	0.000	0.000	557.310	0.000	0.000	0.000	0.000	16.870	25.021	0.000
Jul	46.788	0.000	0.000	0.000	46.788	10.589	0.000	36.199	46.788	0.000	0.000	0.000	0.000	0.200	0.000	0.000	86.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug	16.430	0.000	0.000	0.000	16.430	2.237	0.000	14.193	16.430	0.000	0.000	0.000	0.000	0.064	0.000	0.000	80.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sep	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	123.050	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	0.000	0.000	0.158	0.000	0.000	136.300	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	0.000	0.000	0.000	0.000	0.000	129.100	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	0.000	0.000	0.000	0.000	0.000	0.000	153.130	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	281.892	0.000	0.000	0.000	281.892	164.787	0.074	103.240	268.101	0.000	13.791	13.791	303.050	1.101	0.000	0.000	1265.420	0.000	0.000	0.000	0.000	16.870	25.021	0.000

Note: 1. Assume the density of fill is 2 ton/m3.
2. Refuse disposed to NENT landfill.



Month	Actual Quantities of Inert C&D Materials Generated Monthly (Note 1)												Actual Quantities of Non-inert C&D Materials (i.e. C&D Wastes) Generated Monthly					Actual Quantities of Contaminated Soil Monthly		Actual Quantities of Land-based Sediment Monthly		Actual Quantities of Marine-based sediment Monthly		
	Generated					Disposed				Reused			Recycled			Disposed		Reused	Reused	Disposed		Disposed		
	Fill Material	Artificial Material			Total Quantity Generated	Disposed as Public Fills at TKO137	Disposed as Public Fills at TM38	Disposed as Capping at East Sha Chau (Alluvium)	Total Quantity Disposal	Reused in the Contract	Reused in Other Projects	Total Quantity Reused	Metals	Paper/ cardboard packaging (Note 3)	Plastics	Chemical Waste	General Refuse (Note 2)	Reused in the Contract	Reused in the Contract Type 1 (Cat. L)	Disposed at Designated Site		Disposed at Designated Site		
		Soil and Rock	Broken Concrete	Asphalt																Type 1 (Cat. M _p)	Type 2 (Cat. M _i , Cat. H)	Type 1 (Cat. L, Cat. M _p)	Type 2 (Cat. M _i , Cat. H, Cat. H _p)	Type 3 (Cat. H _i)
Unit	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000Kg)	(’000Kg)	(’000Kg)	(’000kg)	(’000Kg)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)	(’000m ³)
Jan	0.173	0.000	0.000	0.000	0.173	0.000	0.000	0.000	0.000	0.000	0.173	0.173	176.120	0.111	0.000	0.000	284.770	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Feb	0.601	0.000	0.000	0.000	0.601	0.000	0.000	0.000	0.000	0.000	0.601	0.601	201.580	0.199	0.000	0.000	120.660	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar	0.331	0.000	0.000	0.000	0.331	0.000	0.000	0.000	0.000	0.000	0.331	0.331	0.000	0.099	0.000	0.000	243.220	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr	0.659	0.000	0.000	0.000	0.659	0.000	0.000	0.000	0.000	0.000	0.659	0.659	117.880	0.000	0.056	0.000	234.550	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May	0.768	0.000	0.000	0.000	0.768	0.000	0.000	0.000	0.000	0.000	0.768	0.768	1581.250	0.000	0.000	0.000	448.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jun	2.313	0.000	0.000	0.000	2.313	0.000	0.000	0.000	0.000	2.136	0.177	2.313	2065.900	0.000	0.000	0.000	277.830	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUB-TOTAL	4.846	0.000	0.000	0.000	4.846	0.000	0.000	0.000	0.000	2.136	2.710	4.846	4142.730	0.409	0.056	0.000	1609.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jul	12.205	0.000	0.000	0.000	12.205	0.000	0.000	0.000	0.000	12.205	0.000	12.205	2525.620	0.289	0.000	0.000	226.440	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug	34.362	0.000	0.000	0.000	34.362	0.000	0.000	0.000	0.000	34.362	0.000	34.362	4257.690	0.000	0.000	0.000	182.680	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sep	31.485	0.000	0.000	0.000	31.485	0.000	0.000	0.000	0.000	31.485	0.000	31.485	2388.570	0.000	0.000	0.000	75.810	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct	13.223	0.000	0.000	0.000	13.223	0.000	0.000	0.000	0.000	13.223	0.000	13.223	1026.020	0.000	0.000	0.000	119.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov	2.516	0.000	0.000	0.000	2.516	0.000	0.000	0.000	0.000	1.992	0.525	2.516	1047.540	0.000	0.000	0.000	86.380	0.054	0.000	0.000	0.000	0.000	0.000	0.000
Dec	2.809	0.000	0.000	0.000	2.809	0.000	0.000	0.000	0.000	1.152	1.657	2.809	1449.870	0.131	0.000	0.000	99.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	101.446	0.000	0.000	0.000	101.446	0.000	0.000	0.000	0.000	96.554	4.891	101.446	16838.040	0.829	0.056	0.000	2398.670	0.054	0.000	0.000	0.000	0.000	0.000	0.000

Note:

1.

Assume the density of fill is 2 ton/m3.

2.

Refuse disposed to NENT landfill.

3.

The latest update shall prevail.



Monthly Summary Waste Flow Table for 2025 (Year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly (Note 1)												Actual Quantities of Non-inert C&D Materials (i.e. C&D Wastes) Generated Monthly					Actual Quantities of Contaminated Soil Monthly		Actual Quantities of Land-based Sediment Monthly		Actual Quantities of Marine-based sediment Monthly		
	Generated					Disposed				Reused			Recycled			Disposed		Reused	Reused	Disposed		Disposed		
	Fill Material	Artificial Material			Total Quantity Generated	Disposed as Public Fills at TKO137	Disposed as Public Fills at TM38	Disposed as Capping at East Sha Chau (Alluvium)	Total Quantity Disposal	Reused in the Contract	Reused in Other Projects	Total Quantity Reused	Metals	Paper/ cardboard packaging (Note 3)	Plastics	Chemical Waste	General Refuse (Note 2)	Reused in the Contract	Reused in the Contract	Disposed at Designated Site		Disposed at Designated Site		
		Soil and Rock	Broken Concrete	Asphalt																Building Derbis	Type 1 (Cat. L)	Type 1 (Cat. M _p)	Type 2 (Cat. M _i , Cat. H)	Type 1 (Cat. L, Cat. M _p)
Unit	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000Kg)	('000Kg)	('000Kg)	('000kg)	('000Kg)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)
Jan	0.266	0.000	0.000	0.000	0.266	0.000	0.000	0.000	0.000	0.000	0.266	0.266	1083.070	0.000	0.000	0.000	138.110	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Feb	0.705	0.000	0.000	0.000	0.705	0.535	0.000	0.000	0.535	0.170	0.000	0.170	1157.430	0.368	2.855	0.000	108.820	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar	13.330	0.000	0.000	0.000	13.330	0.127	10.960	0.000	11.087	2.243	0.000	2.243	1680.400	0.307	1.980	0.000	93.680	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr	14.507	0.000	0.000	0.000	14.507	0.000	14.507	0.000	14.507	0.000	0.000	0.000	1129.930	0.000	0.000	0.000	78.820	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May	12.782	0.000	0.000	0.000	12.782	0.000	12.782	0.000	12.782	0.000	0.000	0.000	1355.680	0.000	0.000	0.000	63.700	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jun	6.706	0.000	0.000	0.000	6.706	0.108	6.598	0.000	6.706	0.000	0.000	0.000	1023.680	0.000	0.000	0.000	46.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUB-TOTAL	48.297	0.000	0.000	0.000	48.297	0.769	44.848	0.000	45.617	2.414	0.266	2.679	7430.190	0.675	4.835	0.000	529.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jul	4.055	0.000	0.000	0.000	4.055	0.090	3.965	0.000	4.055	0.000	0.000	0.000	845.670	0.175	0.000	0.000	124.120	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug	3.485	0.000	0.000	0.000	3.485	0.844	2.641	0.000	3.485	0.000	0.000	0.000	717.910	0.000	0.000	0.000	31.720	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sep	12.143	0.000	0.000	0.000	12.143	12.143	0.000	0.000	12.143	0.000	0.000	0.000	361.950	0.000	3.795	0.000	87.980	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct	2.783	0.580	0.000	0.000	3.363	3.363	0.000	0.000	3.363	0.000	0.000	0.000	0.000	0.107	0.000	0.000	92.290	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov	0.029	0.154	0.000	0.000	0.183	0.183	0.000	0.000	0.183	0.000	0.000	0.000	0.000	0.000	0.000	0.000	67.650	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dec	0.004	0.023	0.000	0.000	0.027	0.027	0.000	0.000	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	40.760	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	70.795	0.757	0.000	0.000	71.552	17.419	51.454	0.000	68.873	2.414	0.266	2.679	9355.720	0.957	8.630	0.000	973.680	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Note:

1.

Assume the density of fill is 2 ton/m3.

2.

Refuse disposed to NENT landfill.

3.

The latest update shall prevail.

APPENDIX H

Cumulative Statistics on Complaints, Notification of Summons and Successful Prosecutions

Appendix H**Cumulative Statistics on Complaints, Notification of Summons and Successful Prosecutions**

	Date received	IR Case #	Impacts of complaints	Status	Total no. received since project commencement
Environmental complaints	11 May 2018	EC-001	Air	Closed	80
	26 June 2018	EC-002	Air (odour)		
	31 October 2018	EC-003	Air & Noise		
	01 November 2018	EC-004	Noise		
	05 November 2018	EC-005	Air		
	28 December 2018	EC-006	Air		
	24 December 2018	EC-007	Water		
	19 March 2019	EC-008	Water		
	27 March 2019	EC-009	Water		
	14 June 2019	EC-010	Water		
	23 July 2019	EC-011	Water		
	29 July 2019	EC-012	Air & Noise		
	27 September 2019	EC-013	Noise		
	10 October 2019	EC-014	Noise		
	24 September 2019	EC-015	Air & Noise		
	02 October 2019				
	09 October 2019				
	11 October 2019				
	16 October 2019	EC-016	Noise		
	18 October 2019	EC-017	Noise		
	21 October 2019	EC-018	Noise		
	05 December 2019	EC-019	Noise		
	09 January 2020	EC-020	Air (dust) & Noise		
	06 February 2020	EC-021	Air (dust)		
	08 February 2020	EC-022	Air (dust) & Noise		
	10 February 2020				
	14 April 2020	EC-023	Air (dust)		
16 May 2020	EC-024	Noise			
04 June 2020	EC-025	Air (odour)			
08 June 2020	EC-026	Noise			
06 April 2020	EC-027	Noise			

	Date received	IR Case #	Impacts of complaints	Status	Total no. received since project commencement
	17 July 2020	EC-028	Noise		
	15 July 2020	EC-029	Noise		
	04 May 2020	EC-030	Noise		
	08 August 2020	EC-031	Noise		
	13 August 2020				
	03 September 2020	EC-032	Noise		
	23 September 2020	EC-033	Air (odour) & Noise		
	24 September 2020				
	24 September 2020	EC-034	Noise		
	19 October 2020	EC-035	Noise		
	21 October 2020				
	23 October 2020				
	14 October 2020	EC-036	Noise		
	19 October 2020				
	01 October 2020	EC-037	Noise		
	14 October 2020				
	02 December 2020	EC-038	Air		
	02 December 2020	EC-039	Air & Noise		
	04 December 2020				
	30 April 2021	EC-040	Noise		
	18 September 2021	EC-041	Air (odour) & Noise		
	17 September 2021	EC-042	Noise		
	18 September 2021				
	05 October 2021	EC-043	Water		
	12 November 2021	EC-044	Air (dust)		
	22 November 2021	EC-045	Noise		
	17 December 2021	EC-046			
	29 December 2021	EC-047	Air, Light, Noise & Waste		
	07 February 2022	EC-048	Noise & Water		
	30 March 2022	EC-049	Noise		
	03 April 2022	EC-050	Air (dust)		
	04 April 2022	EC-051	Noise		
	14 April 2022	EC-052	Air (dust) &		

	Date received	IR Case #	Impacts of complaints	Status	Total no. received since project commencement
			Noise		
	08 June 2022	EC-053	Air (odour)		
	16 June 2022	EC-054	Air (dust) & Noise at KTBF-CT		
	21 September 2022	EC-055	Air (odour)		
	10 December 2022	EC-056	Noise		
	18 December 2022	EC-057	Noise		
	23 December 2022	EC-058	Air (dust)		
	29 December 2022				
	06 January 2023				
	08 January 2023	EC-059	Noise		
	19 January 2023	EC-060	Air (dust)		
	12 February 2023	EC-061	Air (dust)		
	13 February 2023	EC-062	Air (dust)		
	03 March 2023	EC-063	Air (dust)		
	11 March 2023	EC-064	Air (odour) & Noise		
	13 March 2023				
	01 April 2023	EC-065	Noise		
	12 March 2023	EC-066	Air (odour)		
	12 April 2023				
	23 May 2023	EC-067	Water		
	31 May 2023	EC-068	Air (dust)		
	03 October 2023	EC-069	Noise		
	04 January 2024	EC-070	Water		
	16 August 2024	EC-071	Air (dust)		
	20 September 2024	EC-072	Noise		
	21 September 2024	EC-073	Air (dust)		
	22 November 2024	EC-074	Air (odour)		
	08 February 2025	EC-075	Noise		
	08 May 2025	EC-076	Air (dust)		
	07 May 2025	EC-077	Noise		
	26 July 2025	EC-078	Noise		
	11 October 2025	EC-079	Noise		
	3 November 2025	EC-080	Air (dust)		

	Date received	IR Case #	Impacts of complaints	Status	Total no. received since project commencement
Notification of summons	--	--	--		0
Successful prosecutions	--	--	--		0

No environmental summons / prosecution was received since the commencement of construction works.
Detailed of complaints could be referred to the respective monthly EM&A reports.