

JOB No.: TCS01321/23

CEDD SERVICE CONTRACT No. EDO 12/2023

**ENVIRONMENTAL TEAM FOR DEVELOPMENT OF
ANDERSON ROAD QUARRY SITE – SITE FORMATION
AND ASSOCIATED INFRASTRUCTURE WORKS**

**MONTHLY ENVIRONMENTAL MONITORING AND AUDIT
REPORT (SEPTEMBER 2025)**

PREPARED FOR

**CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
(CEDD)**

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EXECUTIVE SUMMARY

- ES01 Action-United Environmental Services & Consulting (AUES) has been awarded the Civil Engineering and Development Department (CEDD) Service Contract No. EDO 8/2022 - Environmental Team for Development of Anderson Road Quarry Site – Site Formation and Associated Infrastructure Works (hereinafter called “the Service Contract”) on 15 September 2023. As notified by AECOM Asia Company Limited (Engineer’s Representative) subsequently, the commencement date of the Service Contract is on 22 September 2023 for the Contract Period of 22 months.
- ES02 The previous service contract nos. NTE/07/2016 and EDO 8/2022, covering the environmental monitoring and audit (EM&A) service for the Development of Anderson Quarry Site (ARQ) for Contracts 1, 2, 3, 4 and 5 was completed in September 2022 and September 2023 respectively.
- ES03 The Services under the Service Contract is to provide EM&A services for the Works Contracts pursuant to the requirement of Environmental Team (ET) under the EM&A manual to ensure that the environmental performance of the Works Contracts comply with the requirement specified in the EM&A Manual and EIA Report of Development of ARQ and other relevant statutory requirements.
- ES04 To facilitate the project management and implementation, the ARQ project involved five major infrastructure works CEDD contracts, the commencement date and anticipated completion date of the five works contracts are summarized in below table.

Contract	Commencement date	Anticipated completion date
NE/2016/01 (Contract 1)	December 2016	September 2023
NE/2016/05 (Contract 2)	March 2017	September 2023
NE/2017/03 (Contract 3)	May 2018	January 2025
ED/2020/02 (Contract 4)	July 2021	December 2025
ED/2019/02 (Contract 5)	March 2021	January 2025

- ES05 As notified by AECOM, the certificate of completion of the last section of the works have been issued for Contract 1 and Contract 2 on 30 June 2023 and 15 May 2023 respectively. Moreover, contract nos. NE/2017/03 (Contract 3) and ED/2019/02 (Contract 5), covering the environmental monitoring and audit (EM&A) service was completed in January 2025. In view of the completion of major construction works, the EM&A service for Contract 1 and Contract 2 under service contract no. EDO 8/2022 was ceased in late September 2023 and the relevant monitoring stations have been handover to current contract no. EDO 8/2022.
- ES06 This is the monthly EM&A report presenting the monitoring results and inspection findings for Contracts 4 for the period from **1 to 30 September 2025** (hereinafter ‘the Reporting Period’).

ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES

- ES07 Environmental monitoring activities under the EM&A programme in the Reporting Period are summarized in the following table.

Environmental Aspect	Environmental Monitoring Parameters / Inspection	Reporting Period	
		Number of Active Monitoring Locations	Total Occasions
Air Quality	1-hour TSP	7	105
	24-hour TSP	4	24
Construction Noise	L _{eq(30min)} Daytime for Contract NE/2016/01	8	40
	L _{eq(30min)} Daytime for Contract NE/2017/03	1	5

BREACH OF ACTION AND LIMIT (A/L) LEVELS

- ES08 No exceedance of air quality was recorded in the Reporting Period. For construction noise monitoring, no Limit Level exceedance was recorded and no noise complaint (which triggered Action Level) was received in the reporting period. The environmental exceedance, NOE issued and investigation of exceedance are summarized in the following table.

Environmental Aspect	Monitoring Parameters	Action Level	Limit Level	Event & Action	
				NOE Issued	Corrective Actions
Air Quality	1-hour TSP	0	0	0	NA
	24-hour TSP	0	0	0	NA
Construction Noise	$L_{eq(30min)}$ Daytime	0	0	0	NA

ENVIRONMENTAL COMPLAINT

- ES09 In the reporting period, no environmental complaint was received in the Reporting Period.

NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

- ES10 No environmental summons or successful prosecutions for the Project were recorded in the Reporting Period.

REPORTING CHANGE

- ES11 There is no reporting change in the Reporting Period.

SITE INSPECTION

- ES12 In this Reporting Period, joint site inspections to evaluate the site environmental performance for **Contract 4** were carried out by the RE, ET and Contractor on **3, 9, 18, 25 and 30 September 2025** in which IEC joined the site inspection with SSEMC on **25 September 2025**. No non-compliance was noted during the site inspection.

FUTURE KEY ISSUES

- ES13 The Contractor are reminded to pay special attention on water quality mitigation measures and should fully implement the measures as recommended in the EM&A Manual, in particular to prevent muddy water or other water pollutants from site surface overflow to public area should be properly maintained.
- ES14 Since construction site is highly visible to the resident at nearby estates, the Contractors should pay special attention on potential environmental impact generated by the site activities and adhere implement adequate air quality and noise mitigation measures as far as practicable to reduce the impact to the public.
- ES15 Construction noise is one of the key environmental issues during construction work of the Project. Noise mitigation measures such as using quiet plants and noise barriers shall be implemented where practicable according to the EM&A manual.
- ES16 In addition, the Contractors should ensure all effluent discharge shall be fulfilled the Technical Memorandum of Effluent Discharged into Drainage and Sewerage Systems, inland and Coastal Waters criteria or relevant discharge license requirement.

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1. INTRODUCTION

PROJECT BACKGROUND

- 1.1.1 Development of Anderson Road Quarry (ARQ) is to provide land and the associated infrastructures for the proposed land used at the existing ARQ Site at the North-eastern of East Kowloon according to the final Recommended Outline Development Plan (hereinafter named as the Project Works).
- 1.1.2 To facilitate the project management and implementation, the ARQ project involved five major infrastructure works CEDD contracts, the commencement date and anticipated completion date of the five works contracts are summarized in below table.

Contract	Commencement date	Anticipated completion date
NE/2016/01 (Contract 1)	December 2016	September 2023
NE/2016/05 (Contract 2)	March 2017	September 2023
NE/2017/03 (Contract 3)	May 2018	January 2025
ED/2020/02 (Contract 4)	July 2021	December 2025
ED/2019/02 (Contract 5)	March 2021	January 2025

- 1.1.3 Action-United Environmental Services & Consulting (AUES) has been awarded the Civil Engineering and Development Department (CEDD) Service Contract No. EDO 8/2022 - Environmental Team for Development of Anderson Road Quarry Site – Site Formation and Associated Infrastructure Works (hereinafter called “the Service Contract”) on 15 September 2023. As notifying by AECOM Asia Company Limited (Engineer’s Representative) subsequently, the commencement date of the Service Contract is on 22 September 2023 for the Contract Period of 22 months.
- 1.1.4 The Services under the Service Contract is to provide EM&A services for the Works Contracts pursuant to the requirement of Environmental Team (ET) under the EM&A manual to ensure that the environmental performance of the Works Contracts comply with the requirement specified in the EM&A Manual and Environmental Impact Assessment (EIA) Report of Development of Anderson Road Quarry and other relevant statutory requirements.
- 1.1.5 The previous service contract nos. NTE/07/2016 and EDO 8/2022, covering the EM&A services for the Development of ARQ site for Contracts 1, 2, 3, 4 and 5 was completed in September 2022 and September 2023 respectively.
- 1.1.6 As notified by AECOM, the certificate of completion of the last section of the works have been issued for Contract 1 and Contract 2 on 30 June 2023 and 15 May 2023 respectively. Moreover, contract nos. NE/2017/03 (Contract 3) and ED/2019/02 (Contract 5), covering the environmental monitoring and audit (EM&A) service was completed in January 2025. In view of the completion of major construction works, the EM&A service for Contract 1 and Contract 2 under service contract no. EDO 8/2022 was ceased in late September 2023 and the relevant monitoring stations have been handover to current contract no. EDO 8/2022.
- 1.1.7 According to the Approved EM&A Manual, air quality and noise monitoring are required to be monitored during the construction phase of the Project. As part of the EM&A program, baseline monitoring is required to determine the ambient environmental conditions. Baseline monitoring including air quality and noise conducted between *January* and *April 2019* at all designated monitoring locations were before construction work commencement. Furthermore, the Baseline Monitoring Report which verified by the Independent Environmental Checker (hereinafter referred as “the IEC”) has been submitted to Environmental Protection Department (EPD) on *9 May 2017* for endorsement.
- 1.1.8 This is the monthly EM&A report presenting the monitoring results and inspection findings for Contracts 4 for the period from **1 to 30 September 2025** (hereinafter ‘the Reporting Period’).

REPORT STRUCTURE

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

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

2. PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS

2.1 CONSTRUCTION CONTRACT PACKAGING

- 2.1.1 To facilitate the project management and implementation, the Project was divided by 5 works contracts as described in following. The details of each contract are summarized below and the delineation of each contract is shown in [Appendix A](#).

Contract 1 (Contract No. NE/2016/01)

- 2.1.2 Commencement date of Contract 1 was in late December 2016 and the major construction work was completed in June 2023. The major scope of work of Contract 1 is listed below:

- Formation of about 40 hectares (ha) of land platforms at the ARQ site and the associated geotechnical works;
- Road works including construction of approximately 3-kilometer long vehicular roads, footpaths, cycle tracks, an approximately 130-meter long underpass at the southern end and a public transport terminus at the northern end at the ARQ site;
- Provision of and improvement to water supply, drainage and sewerage systems as well as landscaping works; and
- Construction of proposed subway structures and lift tower structures of pedestrian connectivity facilities.

Contract 2 (Contract No. NE/2016/05)

- 2.1.3 Commencement date of Contract 2 was in March 2017 and the major construction work was completed in May 2023. The major Scope of Work of the Contract 2 is listed below:

- (i) Construction of the following pedestrian connectivity facilities with covered elevated walkways, covered at grad walkways, escalators, lift towers with associated staircase and lifts:-
 - (a) Linking Hiu Kwong street with Hiu Ming Street (E1)
 - (b) Linking the proposed “Footbridge Link at Sau Ming Road” with Hiu Ming Street (E2, C1 and E3)
 - (c) Linking the proposed bus-to-bus interchange at Tseung Kwan O Tunnel Toll Plaza with Lin Tak Road (E12)
- (ii) Construction of bus-to-bus interchange (BBI) at Tseung Kwan O Tunnel Toll Plaza;
- (iii) Associated landscape works

Contract 3 (Contract No. NE/2017/03)

- 2.1.4 The commencement date of Contract 3 was in May 2018 and the tentative completion date in September 2023. The major Scope of Work of the Contract 3 is listed below:

- (i) Site formation and road works in the following sections:-
 - (a) at junction of Clear Water Bay Road (CWBR) and On Sau Road constructed under the Development at Anderson Road (DAR) project including the provision of U-turn facility and noise mitigation measures (RIW1);
 - (b) at New Clear Water Bay Road (NCWBR) near Shun Lee Tsuen Road including the road widening works at NCWBR, modification of existing subway structure and provision of noise mitigation measures (RIW2); and
 - (c) at the junction of Lin Tak Road and Sau Mau Ping Road, construction of flyover above Tseung Kwan O Road, provision of loading and unloading bays along Lin Tak Road and noise mitigation measures (RIW3).
- (ii) Construction of the following pedestrian connectivity facilities with covered elevated walkways, escalators and lift towers with associated staircases and lifts:-
 - (a) linking Anderson Road Quarry site with the DAR Site (except the works covered under Contract 1) (System A and System B);
 - (b) linking Hiu Ming Street with Hiu Yuk Path (E8); and

- (c) linking the proposed bus-bus interchange at Tseung Kwan O Tunnel Toll Plaza with Sau Mau Ping Road (E11).
- (iii) Associated landscape works.

Contract 4 (Contract No. ED/2020/02)

- 2.1.5 The commencement date of Contract 4 is in July 2021 and tentative completion date in December 2023. The major Scope of Work of the Contract 4 is listed below:
- Hard landscaping and other ancillary works (e.g. paver footpath, planter walls, benches, lighting etc.)
 - Soft landscaping works; landscape deck, emergency vehicular access, access road:
 - Park lighting system;
 - Electrical and mechanical engineering works for underground water treatment facilities and pumping system for Artificial Flood Attenuation Lake; and
 - Potential slope enhancement requested by GEO.

Contract 5 (Contract No. ED/2019/02)

- 2.1.6 The commencement date of Contract 5 in March 2021 and tentative completion data in April 2024. The major Scope of Work of the Contract 5 is listed below:
- Construction pedestrian connectivity facility with covered elevated walkway, covered at grade walkway and escalators linking Sau Mau Ping Road with the existing covered elevated walkway to Po Tat Estate (E5);
 - Construction a pedestrian connectivity facility with covered elevated walkway, covered at grade walkway and escalators linking Sau Mau Ping South Estate with the existing covered walkway to Sau Mau Ping Road (E6);
 - Construction a pedestrian connectivity facility with covered elevated walkway, elevated walkway, lift tower with associated staircase and lifts linking Hiu Kwong Street with podium of Sau Ming House, Sau Mau Ping Estate, provision of at grade staircase (E7)'
 - Construction a pedestrian connectivity facility with covered elevated walkway, lift tower with associated staircase and lifts linking podium of Po Tat Estate to Sau Mau Ping Road (E10); and
 - Ancillary works including electrical and mechanical, slope stabilization, drainage, utilities and landscaping works.

2.2 PROJECT ORGANIZATION

- 2.2.1 The project organization and contact details for Contracts 4 are shown in [Appendix B](#).

2.3 CONSTRUCTION PROGRESS

- 2.3.1 The 3-month rolling construction programme for Contracts 4 are shown in [Appendix C](#). The major construction activities conducted in the Reporting Period are summarized in below.

Contract 4 (ED/2020/02)

- Excavation work for Drainage Works at Portion 1a, 2a, 6, 8 & 12
- Drainage works at Portion 1a, 2a, 6, 8, 9 & 12
- Construction of E&M works at Portion 1a, 2a, 6, 8 & 12
- Construction of Planter at Portion 6, 8, 12
- Construction of hard landscape at Portion 6, 8, 12
- Construction of slab planter on elevated walkway at Portion 13b
- Backfilling works for B3 & B4 at Portion 13b
- Sewerage and Road works at G2-Site at Portion 13b
- Installation of rock mesh at Portion 10
- Repair works at Portion 10 and Portion 17

- Construction of Footpath at Portion 9
- Watermain works at Portion 13b
- Planting works at Portion 2a, 2b, 6, 8 and 12
- Scaffolding erection works for the buildings at Portion 2a
- Building works at Portion 2a

2.3.2 Summary of the relevant permits, licenses, and/or notifications on environmental protection for the Project of contracts 3, 4 and 5 are presented in **Tables 2-1**.

Table 2-1 Status of Environmental Licenses and Permits of the Contract 4

Item	Description	License/Permit Status			
		Permit no./ account no./ Ref. no.	Valid Period		Status
			From	To	
1	Form NA – Notification pursuant to Air Pollution Control (Construction Dust) Regulation	EPD ref. no. 470496	19-Aug-21	NA	Valid
2	Waste Disposal Regulation – Billing Account for Disposal of Construction Waste	Account no. 7041336	6-Sep-21	NA	Valid
3	Chemical Waste Producer Registration	Registration no. WPN 5213-296-C1206-12	14-Sep-21	End of project	Valid
4	Water Pollution Control Ordinance – Discharge License	WT00043000-2003	30-Jan-23	31-Jan-28	Valid

3. SUMMARY OF IMPACT MONITORING REQUIREMENTS

3.1 GENERAL

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

3.1.2 A summary of construction phase EM&A requirements are presented in the sub-sections below.

3.2 MONITORING PARAMETERS

3.2.1 The EM&A program of construction phase monitoring shall cover the following environmental issues:

- Air quality; and
- Construction noise

3.2.2 A summary of the monitoring parameters is presented in *Table 3-1*.

Table 3-1 Summary of EM&A Requirements

Environmental Issue	Parameters
Air Quality	• 1-hour TSP by Real-Time Portable Dust Meter; and • 24-hour TSP by High Volume Air Sampler
Noise	• Leq(30min) in normal working days (Monday to Saturday) 07:00-19:00 except public holiday • Supplementary information for data auditing, statistical results such as L₁₀ and L₉₀ shall also be obtained for reference.

3.3 MONITORING LOCATIONS

3.3.1 According to the EM&A Manual Section 4.6, seven (7) most representative and affected air sensitive receivers (ASR) were selected as air monitoring stations (AQM). During site visit at the subject site before the baseline monitoring, it was noted that some planned ASRs identified in the EM&A Manual are still under construction/ has not yet constructed and there were no suitable location to set up the high volume sampler to carry out the baseline 24-hour TSP monitoring. Therefore, a proposed change for the baseline monitoring programme was submitted and agreed by EPD before the baseline monitoring. The impact air quality monitoring locations are listed in *Table 3-2* and illustrated in *Appendix D*.

Table 3-2 Impact Monitoring Stations – Air Quality

ID	ASR ID in EIA	Location in the EM&A Manual	Identified Location during Site Visit	Status
AMS-1	ACYC-01	Chi Yum Ching She	Ground of Chi Yum Ching facing the project site	Replaced by AMS-1a
AMS-1a (*)	ACYC-01	Tan Shan Village No. 5 - 6	Ground of Tan Shan Village No. 5 - 6 facing the project site	Active
AMS-2 (#)	DARB-13	Block 8, Site B	Ground of Fung Tai House of On Tai Estate	Active
AMS-3 (:)	DARC-16	Planned Clinic and Community Centre, Site C2	Ground of Planned Clinic and Community Centre facing Anderson Road (Ancillary Facilities Building)	Active
AMS-4 (:)	DARC-26	Planned School, Site C2 ^{Note 1}	Ground of Active	Active
AMS-5	DARE-06	Block 5, DAR Site E	Main roof of Oi Tat House of On Tat Estate facing the project site	Active
AMS-6	DARE-17	Block 9, Site E	Main roof of Hau Tat House of	Active

ID	ASR ID in EIA	Location in the EM&A Manual	Identified Location during Site Visit	Status
			On Tat Estate facing the project site	
AMS-7	AMYT-04	Ma Yau Tong Village	Balcony at 2 nd floor of Village House Anderson Road No. 1 facing the project site	Active

Note 1: The ASR is under construction.

(#) AMS-2 was activated on 26 November 2018 since Fung Tai House became an air sensitive receiver. 1-hour TSP monitoring was commenced on 26 November 2018 while installation of HVS for 24-hour TSP was pending approval from Housing Authority.

() 24-hour TSP monitoring at AMS1 was abandoned since May 2019 due to lack of power supply and the landlord was unreachable. The alternation location of AMS1a was activated on 15 June 2019 for 1-hour and 24-hour TSP monitoring. The proposal was agreed by EPD on 9 Aug 2019.*

(-) AMS-3 was effective on 3 December 2019 and AMS-4 was effective on 4 January 2023

Construction Noise

- 3.3.2 According to the EM&A Manual Section 5.5, three (3) most representative and affected noise sensitive receivers (NSR) were selected as monitoring stations. As recommended by the RE and agreed by IEC, one (1) additional noise monitoring location is proposed to add in Oi Tat House of On Tat Estate (hereafter “NMS-4”) to oversee the possible noise impact pose to the resident in On Tat Estate, which is an existing NSR close to the major works activities. Moreover, review of impact monitoring location was proposed to IEC in view of the current site condition and it was agreed by all parties. The details of noise monitoring location are listed in **Table 3-3** and illustrated in **Appendix D**.

Table 3-3 Impact Monitoring Stations – Construction Noise

ID	NSR ID in EIA	Location	Status
NMS-1(:)	Site C2 – School 05 ^{Note 1}	Ground of Maryknoll Secondary School	Active
NMS-2(:)	Site E – School	Rooftop of S.K.H. St. John’s Tsang Shiu Tim Primary School, where 1m from the exterior of the building facing the project site	Active
NMS-3(:)	Site C2 – R102–	Ground of Ancillary Facilities Building facing the project site	Active
NMS-4*	Oi Tat House	1m from the exterior of ground floor façade of Oi Tat House of On Tat Estate facing the project site	Suspended
NMS-4a#	Oi Tat House	Rooftop of Oi Tat House where 1m from the exterior of Oi Tat House facing the project site	Active
NMS-5#	Hau Tat House	22/F, refuge floor of Hau Tat House where 1m from the exterior of Hau Tat House facing the project site.	Active
NMS-6~	Yung Tai House of On Tai Estate	Rooftop of Yung Tai House where 1m from the exterior of the building facing the project site)	Active
NMS-7~	Chi Tai House of On Tai Estate	Rooftop of Chi Tai House where 1m from the exterior of the building facing the project site	Active
NMS-8^	No. 3-4 Ma Yau Tong Village	1m from the exterior of the building façade and facing the construction site	Active

ID	NSR ID in EIA	Location	Status
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Note 1: Construction of the NSR is not yet commenced.

- (*) *Additional noise monitoring location was recommended by RE and agreed by IEC. It was temporary suspended and the monitoring location is relocated to NMS4a with effective on 15 Nov 2017.*
- (:) *NMS-2 was effective on 15 November 2019, NMS-3 was effective on 3 December 2019 and NMS-1 was effective on 4 January 2023.*
- (#) *Review of noise monitoring locations was proposed by ET and NMS-5 was effective on 15 November 2017.*
- (^) *Review of noise monitoring locations was proposed by ET and NMS-6 and NMS-7 were effective on 28 Feb 2018.*
- (^) *Review of noise monitoring locations was proposed by ET and NMS-8 was effective on 18 April 2018. Noise monitoring at NMS-8 was started on 3 May 2018 upon commencement of construction at relevant section.*

Addition Construction Noise Monitoring Location

- 3.3.3 A Work Instruction was issued from AECOM to AUES in November 2018 for installing three additional noise monitoring stations under Contract 3. According to the Work Instruction, one noise monitoring station was proposed to install at System A Area and two station monitoring points were proposed to install at E8 Area. The noise monitoring locations are shown in **Table 3-4** below and illustrated in **Appendix D**.

Table 3-4 Additional Impact Monitoring Stations – Construction Noise

ID	Location	Description
CN1*	Holm Glad College	Ground floor of Holm Glad College, where 1m from the exterior of the building facing E8
CN2*	Leung Shek Chee College	Ground floor of Leung Shek Chee College, where 1m from the exterior of the building facing E8
CN3	Oi Tat House of On Tat Estate	Ground floor of Oi Tat House of On Tat Estate, where 1m from the exterior of the building facing System A

Note 1: Construction of the NSR is not yet commenced.

- (*) *Additional noise monitoring location was terminated by RE as the construction work at E8 was completed in September 2022. The last monitoring for CN1&CN2 was on 15 September 2022.*

3.4 MONITORING FREQUENCY AND PERIOD

- 3.4.1 The requirements of impact monitoring in the approved *EM&A Manual* and presented as follows.

Air Quality Monitoring

- 3.4.2 Frequency of impact air quality monitoring is as follows:

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

Noise Monitoring

- 3.4.3 Noise monitoring will be to conduct at the all available designated monitoring stations. The monitoring frequency shall depend on the scale of the construction activities. The following is an initial guide on the regular monitoring frequency for each station on a weekly basis when noise generating activities are underway:

- one set of $Leq_{(30min)}$ measurements between 07:00 and 19:00 hours on normal weekdays

3.5 MONITORING EQUIPMENT

Air Quality Monitoring

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

- 3.5.2 All equipment to be used for air quality monitoring is listed in **Table 3-5**.

Table 3-5 Air Quality Monitoring Equipment

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

Noise Monitoring

- 3.5.3 Sound level meter in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. The sound level meter shall be checked using an acoustic calibrator. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in ms-1.

- 3.5.4 Noise equipment as perform for construction phase monitoring is listed in **Table 3-6**.

Table 3-6 Construction Noise Monitoring Equipment

Equipment	Model
Integrating Sound Level Meter	Brüel & Kjær 2238, Rion NL-31, Rion NL-52
Calibrator	Brüel & Kjær 4231, NC-73, NC-75
Portable Wind Speed Indicator	Anemometer AZ Instrument 8908

3.6 MONITORING METHODOLOGY

1-hour TSP

- 3.6.1 The 1-hour TSP monitor was a brand named “Sibata LD-3 Laser Dust monitor Particle Mass Profiler & Counter” which is a portable, battery-operated laser photometer. The 1-hour TSP meter provides a real time 1-hour TSP measurement based on 90° light scattering. The 1-hour TSP monitor consists of the following:
- (a.) A pump to draw sample aerosol through the optic chamber where TSP is measured;
 - (b.) A sheath air system to isolate the aerosol in the chamber to keep the optics clean for maximum reliability; and
 - (c.) A built-in data logger compatible with Windows based program to facilitate data collection, analysis and reporting.
- 3.6.2 The 1-hour TSP meter to be used will be within the valid period, calibrated by the manufacturer prior to purchasing. Zero response of the instrument will be checked before and after each monitoring event.

24-hour TSP

- 3.6.3 The equipment used for 24-hour TSP measurement is Thermo Andersen Model GS2310 TSP

high volume air sampling system, which complied with *EPA Code of Federal Regulation, Appendix B to Part 50*. The High Volume Air Sampler (HVS) consists of the following:

- (a.) An anodized aluminum shelter;
- (b.) A 8"x10" stainless steel filter holder;
- (c.) A blower motor assembly;
- (d.) A continuous flow/pressure recorder;
- (e.) A motor speed-voltage control/elapsed time indicator;
- (f.) A 7-day mechanical timer, and
- (g.) A power supply of 220v/50 Hz

3.6.4 For HVS for 24-hour TSP monitoring, the HVS is mounted in a metallic cage with a top for protection and also it is sat on the existing ground or the roof of building. The flow rate of the HVS between 0.6m³/min and 1.7m³/min will be properly set in accordance with the manufacturer's instruction to within the range recommended in *EPA Code of Federal Regulation, Appendix B to Part 50*. Glass Fiber Filter 8" x 10" of TE-653 will be used for 24-Hour TSP monitoring and would be supplied by laboratory. The general procedures of sampling are described as below:-

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

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

3.6.6 The HVS used for 24-hour TSP monitoring will be calibrated before the commencement for sampling, and after in two months interval for 1 point checking of maintenance and six months interval for five points calibrate in accordance with the manufacturer's instruction using the NIST-certified standard calibrator (Tisch Calibration Kit Model TE-5025A) to establish a relationship between the follow recorder meter reading in cfm (cubic feet per minute) and the standard flow rate, Qstd, in m³/min. Motor brushes of HVS will be regularly replaced of about five hundred hours per time. The calibration certificates of all monitoring equipment used for the impact monitoring program in the Reporting Period and the HOKLAS accredited certificate of laboratory are attached in [Appendix E](#).

Noise Monitoring

3.6.7 As referred to in the Technical Memorandum (TM) issued under the NCO, sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979

(Type 1) and 804:1985 (Type 1) specifications shall be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration levels from before and after the noise measurement agree to within 1.0 dB.

- 3.6.8 All noise measurements will be performed with the meter set to FAST response and on the A-weighted equivalent continuous sound pressure level (Leq). Leq_(30 min) in six consecutive Leq_(5 min) measurements will be used as the monitoring parameter for the time period between 07:00-19:00 hours on weekdays throughout the construction period.
- 3.6.9 The sound level meter will be mounted on a tripod at a height of 1.2 m and placed at the assessment point and oriented such that the microphone is pointed to the site with the microphone facing perpendicular to the line of sight. The windshield will be fitted for all measurements. Where a measurement is to be carried out at a building, the assessment point would normally be at a position 1 m from the exterior of the building façade. Where a measurement is to be made for noise being received at a place other than a building, the assessment point would be at a position 1.2 m above the ground in a free-field situation, i.e. at least 3.5 m away from reflective surfaces such as adjacent buildings or walls.
- 3.6.10 Immediately prior to and following each noise measurement the accuracy of the sound level meter will be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements will be accepted as valid only if the calibration level from before and after the noise measurement agrees to within 1.0 dB.
- 3.6.11 Noise measurements will not be made in fog, rain, wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed will be checked with a portable wind speed meter capable of measuring the wind speed in m/s.
- 3.6.12 The sound level meter and calibrator are calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme at yearly basis. The calibration certificates of all monitoring equipment used for the impact monitoring program in the Reporting Period is attached in [Appendix E](#).

Meteorological Information

- 3.6.13 The meteorological information including wind direction, wind speed, humidity, rainfall, air pressure and temperature etc. during baseline monitoring is extracted from the closest Hong Kong Observatory Station. To obtain the most appropriate meteorological information where available, the data of temperature is extracted from the Kwun Tong Observatory Station; the data of wind speed and wind direction are extracted from Kai Tak Observatory Station and the data of humidity is extracted from King's Park Station.

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

- 3.7.1 The baseline results form the basis for determining the environmental acceptance criteria for the impact monitoring. According to the approved Environmental Monitoring and Audit Manual, the air quality, construction noise were set up, namely Action and Limit levels are listed in **Tables 3-7 and 3-8**.

Table 3-7 Action and Limit Levels for Air Quality Monitoring

Monitoring Station	Action Level ($\mu\text{g}/\text{m}^3$)		Limit Level ($\mu\text{g}/\text{m}^3$)	
	1-hour TSP	24-hour TSP	1-hour TSP	24-hour TSP
AMS-1	313	154	500	260
AMS-1a(*)	313	154	500	260
AMS-2	319	165	500	260
AMS-3	319	165	500	260
AMS-4	315	165	500	260

Monitoring Station	Action Level ($\mu\text{g}/\text{m}^3$)		Limit Level ($\mu\text{g}/\text{m}^3$)	
	1-hour TSP	24-hour TSP	1-hour TSP	24-hour TSP
AMS-5	299	166	500	260
AMS-6	303	168	500	260
AMS-7	307	156	500	260

(*) 24-hour TSP monitoring at AMS1 was abandoned since May 2019 due to lack of power supply and the landlord was unreachable. The alternation location of AMS1a was activated on 15 June 2019 for 1-hour and 24-hour TSP monitoring. The proposal was agreed by EPD on 9 Aug 2019.

Table 3-8 Action and Limit Levels for Construction Noise

Monitoring Location	Action Level	Limit Level in dB(A)
	Time Period: 0700-1900 hours on normal weekdays	
NMS-1	When one or more documented complaints are received	70 dB(A) ^{Note 1} / 65 dB(A) ^{Note 1}
NMS-2(@)		
NMS-3(:)		75 dB(A)
NMS-4*		75 dB(A)
NMS-4a#		75 dB(A)
NMS-5#		75 dB(A)
NMS-6~		75 dB(A)
NMS-7~		75 dB(A)
NMS-8^		75 dB(A)
CN1+		70 dB(A) ^{Note 1} / 65 dB(A) ^{Note 1}
CN2+		70 dB(A) ^{Note 1} / 65 dB(A) ^{Note 1}
CN3+		75 dB(A)

Note 1: Noise Limit Levels for school is 70dB(A) and should be reduced to 65dB(A) during examination period.

Note: If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.

Remark: (*) Additional noise monitoring location was recommended by RE and agreed by IEC. It was temporary suspended and the monitoring location is relocated to NMS4a with effective on 15 Nov 2017.

(@) NMS-2 was effective on 15 November 2019.

(:) NMS-3 was effective on 3 December 2019

(#) Review of noise monitoring locations was proposed by ET and NMS-5 was effective on 15 Nov 2017.

(~) Review of noise monitoring locations was proposed by ET and NMS-6 and NMS-7 were effective on 28 Feb 2018.

(^) Review of noise monitoring locations was proposed by ET and NMS-8 was effective on 18 April 2018. Noise monitoring at NMS-8 was started on 3 May 2018 upon commencement of construction at relevant section.

(+) Additional noise monitoring locations as instructed by AECOM which effective in Dec 18.

- 3.7.2 Should non-compliance of the environmental quality criteria occurs, remedial actions will be triggered according to the Event and Action Plan which presented in [Appendix F](#).

3.8 DATA MANAGEMENT AND DATA QA/QC CONTROL

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

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

4 AIR QUALITY MONITORING

4.1 GENERAL

4.1.1 In the Reporting Period, air quality monitoring was performed at the active designated monitoring locations AMS-1a, AMS-2, AMS-3, AMS-4, AMS-5, AMS-6 and AMS-7. Since installation of HVS for 24-hour TSP at AMS-2, AMS-3 and AMS-4 were pending approval from relevant departments, only 1-hour TSP monitoring was conducted at AMS-2, AMS-3 and AMS-4. Liaise with the Maryknoll Secondary School of AMS-4 for installation of monitoring equipment at rooftop is in progress.

4.1.2 The air quality monitoring schedule is presented in *Appendix G* and the monitoring results are summarized in the following sub-sections.

4.2 RESULTS OF AIR QUALITY MONITORING

4.2.1 In the Reporting Period, a total of **126** events of 1-hour TSP monitoring and **20** events of 24-hours TSP were carried out and the monitoring results are summarized in *Tables 4-1 to 4-5*. The detailed 24-hour TSP monitoring data are presented in *Appendix H* and the relevant graphical plots are shown in *Appendix I*.

Table 4-1 Summary of 24-hour and 1-hour TSP Monitoring Results (AMS-1a)

Date	24-hour TSP ($\mu\text{g}/\text{m}^3$)	1-hour TSP ($\mu\text{g}/\text{m}^3$)				
		Date	Start Time	1 st reading	2 nd reading	3 rd reading
2-Sep-25	17	5-Sep-25	14:08	52	59	47
8-Sep-25	25	11-Sep-25	14:00	52	62	66
13-Sep-25	16	17-Sep-25	9:00	57	61	59
19-Sep-25	15	25-Sep-25	9:05	53	49	45
25-Sep-25	33	29-Sep-25	9:00	49	51	53
30-Sep-25	17	--	--	--	--	--
Average (Range)	20 (15 – 33)	Average (Range)		54 (45 – 66)		

Table 4-2 Summary of 1-hour TSP Monitoring Results (AMS-2)

1-hour TSP ($\mu\text{g}/\text{m}^3$)				
Date	Start Time	1 st reading	2 nd reading	3 rd reading
5-Sep-25	9:17	49	57	62
11-Sep-25	8:55	52	56	64
17-Sep-25	9:30	61	54	58
25-Sep-25	9:35	56	62	58
29-Sep-25	9:30	66	62	62
Average (Range)		59 (49 – 66)		

Table 4-3 Summary of 1-hour TSP Monitoring Results (AMS-3)

1-hour TSP ($\mu\text{g}/\text{m}^3$)				
Date	Start Time	1 st reading	2 nd reading	3 rd reading
5-Sep-25	9:03	46	43	39
11-Sep-25	9:42	50	56	60
17-Sep-25	13:00	58	55	58
25-Sep-25	13:05	52	58	56
29-Sep-25	13:00	52	56	54
Average (Range)		53 (39 – 60)		

Table 4-4 Summary of 1-hour TSP Monitoring Results (AMS-4)

1-hour TSP ($\mu\text{g}/\text{m}^3$)				
Date	Start Time	1 st reading	2 nd reading	3 rd reading
5-Sep-25	13:00	67	70	72
11-Sep-25	13:00	72	68	66
17-Sep-25	13:10	68	66	62
25-Sep-25	9:00	56	52	56
29-Sep-25	8:25	63	67	62
Average (Range)		64 (52 – 72)		

Table 4-5 Summary of 24-hour and 1-hour TSP Monitoring Results (AMS-5)

Date	24-hour TSP ($\mu\text{g}/\text{m}^3$)	1-hour TSP ($\mu\text{g}/\text{m}^3$)				
		Date	Start Time	1 st reading	2 nd reading	3 rd reading
2-Sep-25	17	5-Sep-25	10:30	68	62	64
8-Sep-25	24	11-Sep-25	9:00	58	62	60
13-Sep-25	17	17-Sep-25	9:10	62	56	60
19-Sep-25	23	25-Sep-25	9:15	57	54	59
25-Sep-25	16	29-Sep-25	9:50	68	62	64
30-Sep-25	17	--	--	--	--	--
Average (Range)	19 (16 – 24)	Average (Range)		61 (54 – 68)		

Table 4-6 Summary of 24-hour and 1-hour TSP Monitoring Results (AMS-6)

Date	24-hour TSP ($\mu\text{g}/\text{m}^3$)	1-hour TSP ($\mu\text{g}/\text{m}^3$)				
		Date	Start Time	1 st reading	2 nd reading	3 rd reading
2-Sep-25	36	5-Sep-25	9:15	60	66	61
8-Sep-25	22	11-Sep-25	9:40	61	58	56
13-Sep-25	19	17-Sep-25	9:50	56	60	64
19-Sep-25	20	25-Sep-25	13:10	53	49	50
25-Sep-25	21	29-Sep-25	10:10	63	60	68
30-Sep-25	32	--	--	--	--	--
Average (Range)	25 (19 – 36)	Average (Range)		59 (49 – 68)		

Table 4-7 Summary of 24-hour and 1-hour TSP Monitoring Results (AMS-7)

Date	24-hour TSP ($\mu\text{g}/\text{m}^3$)	1-hour TSP ($\mu\text{g}/\text{m}^3$)				
		Date	Start Time	1 st reading	2 nd reading	3 rd reading
2-Sep-25	13	5-Sep-25	13:02	64	60	63
8-Sep-25	24	11-Sep-25	13:00	60	65	68
13-Sep-25	23	17-Sep-25	14:00	62	58	64
19-Sep-25	16	25-Sep-25	14:05	50	48	52
25-Sep-25	32	29-Sep-25	14:35	62	58	64
30-Sep-25	23	--	--	--	--	--
Average (Range)	22 (13 – 32)	Average (Range)		60 (48 – 68)		

- 4.2.2 As shown in *Tables 4-1 to 4-7*, all the 1-hour TSP and 24-hour TSP monitoring results in the Reporting Period were below the Action and Limit Levels. No Notification of Exceedance (NOE) was issued in this Reporting Period.
- 4.2.3 The meteorological data during the impact monitoring days are summarized in *Appendix J*.

5 CONSTRUCTION NOISE MONITORING

5.1 GENERAL

- 5.1.1 In the Reporting Period, noise monitoring was performed at designated monitoring locations NMS1, NMS2 and NMS3 and the additional monitoring locations NMS4a, NMS5, NMS6, NMS7 and NMS8.
- 5.1.2 In addition, a Work Instruction was issued from AECOM to AUES in November 2018 for installing three additional noise monitoring stations, i.e., CN1, CN2 and CN3 for Contract 3. Impact noise monitoring was performed at the three additional noise monitoring locations since December 2018. Additional noise monitoring location was terminated by RE as the construction work at E8 was completed in September 2022. The last monitoring for CN1 & CN2 was on 15 September 2022.
- 5.1.3 The noise monitoring schedule is presented in *Appendix G* and the monitoring results are summarized in the following sub-sections.

5.2 NOISE MONITORING RESULTS IN REPORTING MONTH

- 5.2.1 In the Reporting Period, a total of **40** events noise measurements were carried out at the designated locations under Contract 1. The noise monitoring results at the designated locations are summarized in *Tables 5-1*. The detailed noise monitoring data are presented in *Appendix H* and the relevant graphical plots are shown in *Appendix I*.

Table 5-1 Summary of Construction Noise Monitoring Results for Contract 1

Construction Noise Level ($L_{eq30min}$), dB(A)								
Date	NMS1	NMS2	NMS3	NMS4a	NMS5	NMS6	NMS7	NMS8
5-Sep-25	66	62	59	61	63	66	63	60
11-Sep-25	70	61	59	61	59	69	63	63
17-Sep-25	69	65	63	66	63	64	65	64
25-Sep-25	67	67	61	63	60	62	62	66
29-Sep-25	69	63	60	63	63	63	61	63
Limit Level	70 dB(A) / 65 dB(A)^{Note 1}		75 dB(A)					

Note 1: Noise Limit Levels for school is 70dB(A) and should be reduced to 65dB(A) during examination period

- 5.2.2 For the additional noise monitoring under Contract 3, a total of **5** events noise measurements were performed for the Contract. The noise monitoring results are summarized in *Tables 5-2*. The detailed noise monitoring data are presented in *Appendix H* and the relevant graphical plots are shown in *Appendix I*.

Table 5-2 Summary of Construction Noise Monitoring Results for Contract 3

Construction Noise Level ($L_{eq30min}$), dB(A)	
Date	CN3
5-Sep-25	59
11-Sep-25	60
17-Sep-25	63
25-Sep-25	64
29-Sep-25	64
Limit Level	75 dB(A)

Note 1: Noise Limit Levels for school is 70dB(A) and should be reduced to 65dB(A) during examination period.

- 5.2.3 As shown in *Tables 5-1 and 5-2*, no Limit Level exceedance was recorded in this Reporting Period. No noise complaint (which triggered Action level exceedance) was received under the Project.

6 WASTE MANAGEMENT**6.1 GENERAL WASTE MANAGEMENT**

6.1.1 Waste management was carried out by an on-site Environmental Officer or an Environmental Supervisor from time to time.

6.2 RECORDS OF WASTE QUANTITIES

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

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

6.2.2 The quantities of waste for disposal in this Reporting Period are summarized in *Tables 6-1* and *6-2* and the Monthly Summary Waste Flow Table is shown in *Appendix K*. Whenever possible, materials were reused on-site as far as practicable.

Table 6-1 Summary of Quantities of Inert C&D Materials

Type of Waste	Contract 4	
	Quantity	Disposal Location
Total generated Inert C&D Materials ('000m ³) (#)	2.944	-
Hard Rock and Large Broken Concrete ('000m ³)	0	-
Reused in this Contract (Inert) ('000m ³)	0	-
Reused in other Projects (Inert) ('000m ³)	0	-
Disposal as Public Fill (Inert) ('000m ³)	2.944	TKO 137

Remark (#): The total generated inert C&D materials will not take account for the hard rock and large broken concrete.

() Approved alternative disposal ground.*

Table 6-2 Summary of Quantities of C&D Wastes

Type of Waste	Contract 4	
	Quantity	Disposal Location
Recycled Metal ('000kg)	0	-
Recycled Paper / Cardboard Packing ('000kg)	0	-
Recycled Plastic ('000kg)	0	-
Chemical Wastes ('000kg)	0	-
General Refuses ('000m ³)	0.367	-

7 SITE INSPECTION**7.1 REQUIREMENTS**

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

7.2 FINDINGS / DEFICIENCIES DURING THE REPORTING MONTH**Contract 4**

- 7.2.1 In the Reporting Period, joint site inspections for Contract 4 to evaluate site environmental performance were carried out by the RE, ET and the Contractor on **3, 9, 18, 25 and 30 September 2025** in which IEC joined the site inspection with SSEMC on **25 September 2025**. No non-compliance was noted. The findings / deficiencies of **Contract 4** that observed during the weekly site inspection are listed in **Table 7-1**.

Table 7-1 Site Observations of Contract 4

Date	Findings / Deficiencies	Follow-Up Status
3 September 2025	Standing water was found at drip tray which should be removed to prevent oil from overflow.	Standing water was removed to prevent oil leakage from overflow.
9 September 2025	No environmental issue was observed during site inspection.	NA
18 September 2025	No environmental issue was observed during site inspection.	NA
25 September 2025	Contractor was reminded to stored chemical container on drip tray to prevent leakage.	Reminder only.
30 September 2025	No environmental issue was observed during site inspection.	NA

8 ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE**8.1 ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTION**

8.1.1 In the Reporting Period, no environmental complaint was received. Besides, no summons and prosecution under the EM&A Programme was lodged for the project.

8.1.2 The complaint log is shown in [Appendix M](#).

8.1.3 The statistical summary table of environmental complaint, summons and prosecution is presented in **Tables 8-1, 8-2 and 8-3**.

Table 8-1 Statistical Summary of Environmental Complaints

Reporting Period	Contract no.	Environmental Complaint Statistics		
		Frequency	Cumulative	Complaint Nature
27 Sep 2021 – 31 August 2025	4	0	11	NA
1 – 30 September 2025	1	0	70	NA
	2	0	10	NA
	3	0	9	NA
	4	0	13	NA
	5	0	0	NA

Table 8-2 Statistical Summary of Environmental Summons

Reporting Period	Contract no.	Environmental Summons Statistics		
		Frequency	Cumulative	Summons Nature
27 Sep 2021 – 31 August 2025	4	0	0	NA
1 – 30 September 2025	1	0	0	NA
	2	0	0	NA
	3	0	0	NA
	4	0	0	NA
	5	0	0	NA

Table 8-3 Statistical Summary of Environmental Prosecution

Reporting Period	Contract no.	Environmental Prosecution Statistics		
		Frequency	Cumulative	Prosecution Nature
27 Sep 2021 – 31 August 2025	4	0	0	NA
1 – 30 September 2025	1	0	0	NA
	2	0	0	NA
	3	0	0	NA
	4	0	0	NA
	5	0	0	NA

9 IMPLEMENTATION STATUS OF MITIGATION MEASURES

9.1 GENERAL REQUIREMENTS

- 9.1.1 The environmental mitigation measures that recommended in the Implementation Schedule for Environmental Mitigation Measures (ISEMM) in the approved EM&A Manual covered the issues of dust, noise, water and waste and they are summarized presented in [Appendix L](#).
- 9.1.2 All contracts under the Project shall be implementing the required environmental mitigation measures according to the approved EM&A Manual as subject to the site condition. Environmental mitigation measures generally implemented in this Reporting Period are summarized in **Table 9-1**.

Table 9-1 Environmental Mitigation Measures

Issues	Environmental Mitigation Measures
Water Quality	- Wastewater to be treated by filtration system; such as, silt curtain or sedimentation tank before discharge. - Replace silt curtain materials if necessary
Air Quality	- Maintain damp / wet surface on access road - Keep slow speed in the sites - All vehicles must use wheel washing facility before off site - All vehicles must use wheel washing facility before off site - Sprayed water during breaking works
Noise	- Restrain operation time of plants from 07:00 to 19:00 on any working day except for Public Holiday and Sunday. - Keep good maintenance of plants - Place noisy plants away from residence or school - Provide noise barriers or hoarding to enclose the noisy plants or works - Shut down the plants when not in used.
Waste and Chemical Management	- On-site sorting prior to disposal - Follow requirements and procedures of the “Trip-ticket System” - Predict required quantity of concrete accurately - Collect the unused fresh concrete at designated locations in the sites for subsequent disposal
General	The site was generally kept tidy and clean.

9.2 TENTATIVE CONSTRUCTION ACTIVITIES IN THE COMING MONTH

Contract 4 (ED/2020/02)

- Excavation work for Drainage Works at Portion 1a, 2a, 6 ,8 & 12
- Drainage works at Portion 1a, 2a, 6 ,8, 9 & 12
- Construction of E&M works at Portion 1a, 2a, 6, 8, 12
- Construction of Planter at Portion 6, 8, 12
- Construction of hard landscape at Portion 6, 8, 12
- Construction of slab planter on elevated walkway at Portion 13b
- Backfilling works for B3 & B4 at Portion 13b
- Sewerage and Road works at G2-Site at Portion 13b
- Installation of rock mesh at Portion 10
- Repair works at Portion 10 and Portion 17
- Construction of Footpath at Portion 9
- Watermain works at Portion 13b
- Planting works at Portion 2a, 2b, 6, 8 and 12
- Scaffolding erection works for the buildings at Portion 2a
- Building works at Portion 2a

9.3 KEY ISSUES FOR THE COMING MONTH

- 9.3.1 Key issues to be considered in the coming month include:
- Implementation of dust suppression measures at all times;
 - Potential wastewater quality impact due to surface runoff;
 - Potential fugitive dust quality impact due from the dry/loose/exposure soil surface/dusty material;
 - Disposal of empty engine oil containers within site area;
 - Ensure dust suppression measures are implemented properly;
 - Sediment catch-pits and silt removal facilities should be regularly maintained;
 - Management of chemical wastes;
 - Discharge of site effluent to the nearby wetland, stockpiling or disposal of materials, and any dredging or construction area at this area are prohibited;
 - Follow-up of improvement on general waste management issues; and
 - Implementation of construction noise preventative control measures
- 9.3.2 The Contractor should fully implement air quality mitigation measures to reduce construction dust emission as far as practicable. Furthermore, since construction site is highly visible to the resident at nearby estates, noise mitigation measures such as using of quiet plants should be implemented in accordance with the EM&A requirement.
- 9.3.3 During wet season, the Contractors should pay special attention on water quality mitigation measures and fully implement according to the ISEMM of the EM&A Manual, in particular to prevent muddy water or other water pollutants from site surface overflow to public area should be properly maintained. The implementation of water quality mitigation measures conducted by the Contractor is shown in [Appendix N](#).

10 CONCLUSIONS AND RECOMMENDATIONS

10.1 CONCLUSIONS

- 10.1.1 This is 102nd monthly EM&A report presenting the monitoring results and inspection findings for the Reporting Period from 1 to 30 September 2025.
- 10.1.2 The previous service contractor nos. NTE/07/2016 and EDO 8/2022, covering the EM&A service for the Development ARQ for Contracts 1, 2, 3, 4 and 5 was completed in September 2022 and September 2023 respectively. In view of the completion of major construction works, the EM&A service for Contract 1 and Contract 2 under service contract no. EDO 8/2022 was ceased in late September 2023 and the relevant monitoring stations have been handover to current contract no. EDO 8/2022.
- 10.1.3 No 24-hour and 1-hour TSP monitoring and noise monitoring results that triggered the Action or Limit Levels were recorded. No NOEs or the associated corrective actions were therefore issued. Moreover, no noise complaints (which triggered Action Level) were received for the Project.
- 10.1.4 In the Reporting Period, no environmental complaint was received in Reporting Period.
- 10.1.5 No notification of summons or successful prosecution was received under the Project.
- 10.1.6 During the Reporting Period, weekly joint site inspection by the RE, ET with the relevant Main-contractor was carried out for Contracts 4 in accordance with the EM&A Manual stipulation whereas IEC performed monthly site inspection for both contracts. No non-compliance observed during the site inspection.

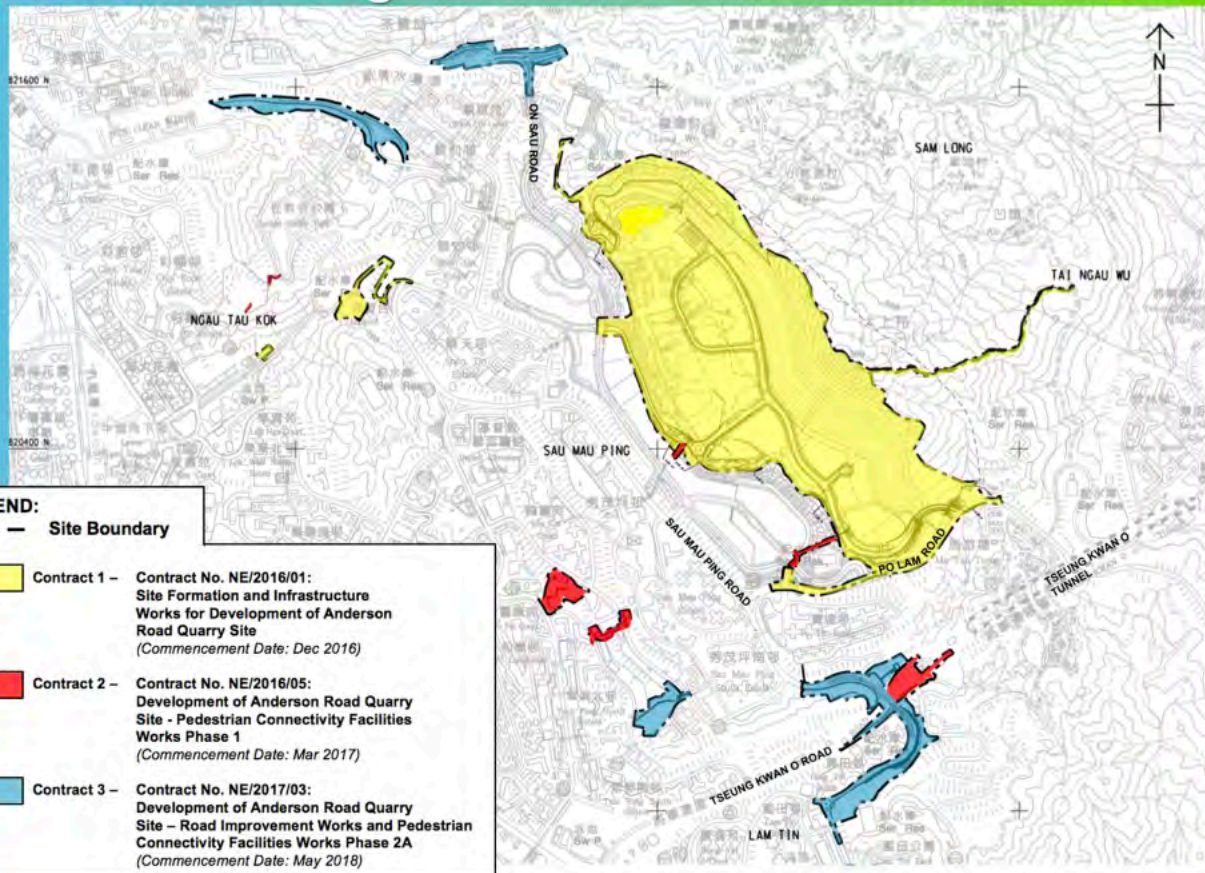
10.2 RECOMMENDATIONS

- 10.2.1 The Contractors are reminded to pay special attention on water quality mitigation measures and should fully implement the measures as recommended in the EM&A Manual, in particular to prevent muddy water or other water pollutants from site surface overflow to public area should be properly maintained.
- 10.2.2 Since construction site is highly visible to the resident at nearby estates, the Contractors should pay special attention on potential environmental impact generated by the site activities and adhere implement adequate air quality and noise mitigation measures as far as practicable to reduce the impact to the public.
- 10.2.3 Construction noise is one of the key environmental issues during construction work of the Project. Noise mitigation measures such as using quiet plants and noise barriers shall be implemented where practicable according to the EM&A manual.
- 10.2.4 In addition, the Contractors should ensure all effluent discharge shall be fulfilled the Technical Memorandum of Effluent Discharged into Drainage and Sewerage Systems, inland and Coastal Waters criteria or relevant discharge license requirement.
- 10.2.5 Mosquito control measures should be continued to prevent mosquito breeding on site

Appendix A

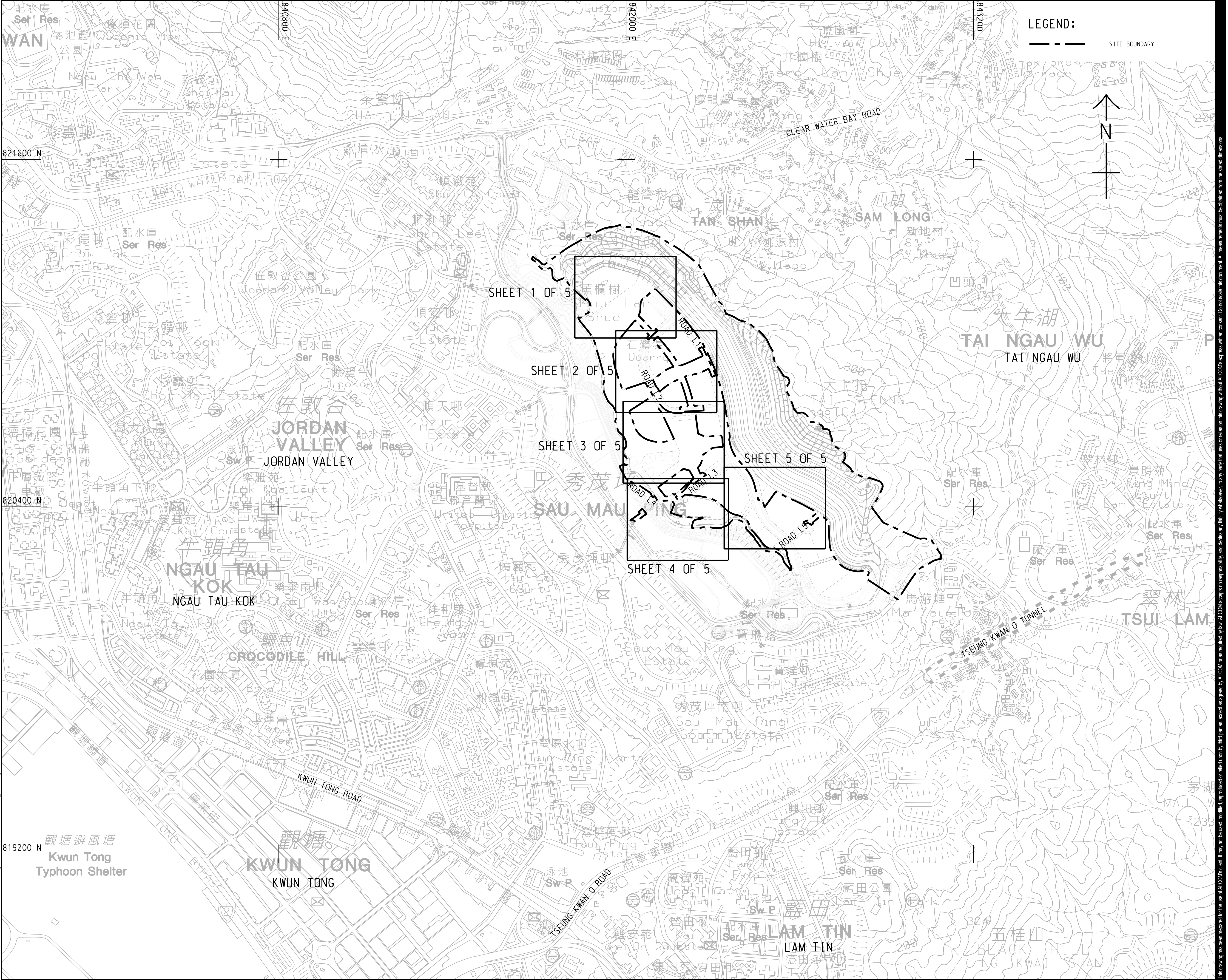
Layout plan of the Project

Contract Packages



Layout plan of Contract 4 (ED/2020/02)

Plot File by: YangRO 31/12/2021
PATH P:\PROJECTS\60328348\Drawing\CONTRACT\LS1000\LS_1000.dgn
Project Management Initials: Designer: DKMW Checked: AWYC Approved: HKT
ISO A1 594mm x 841mm



LEGEND:
--- SITE BOUNDARY



AECOM

PROJECT
項目
**DEVELOPMENT OF
ANDERSON ROAD
QUARRY SITE - INVESTIGATION,
DESIGN AND CONSTRUCTION**

CONTRACT TITLE
DEVELOPMENT OF ANDERSON ROAD
QUARRY SITE - INFRASTRUCTURE,
GREENING AND LANDSCAPE WORKS

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

CONSULTANT
工程顧問公司
AECOM Asia Company Ltd.
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SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION			
修訂			
-	MAR. 21	TENDER DRAWING	Y.C.
I/R	DATE	DESCRIPTION	CHK.
修訂	日期	內容摘要	校核

STATUS
階段

SCALE
比例
A1 1 : 6000

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號
60328348

CONTRACT NO.
合約編號
ED/2020/02

SHEET TITLE
圖紙名稱

KEY PLAN

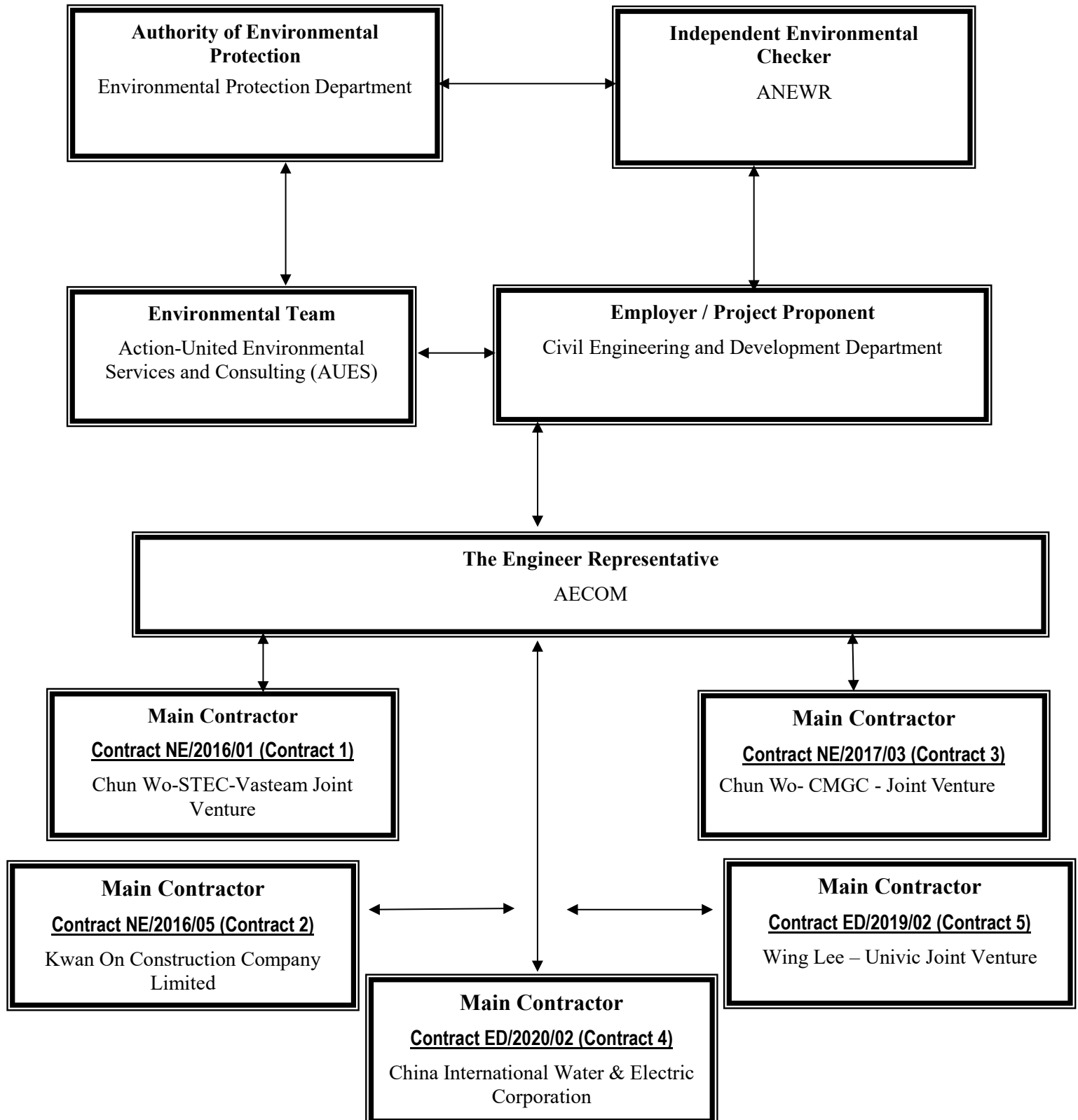
SHEET NUMBER
圖紙編號
60328348/LS/1000

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Appendix B

Project Organization Structure

Project Organization Structure



Contact Details of Key Personnel for Contract 4 –ED/2020/02

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Engineer	Mr Leung Chi Foon	3842 7087	2739 0076
AECOM	Senior Resident Engineer	Eddie Wong	5192 0965	2473 3221
AECOM	Resident Engineer	Samson Lam	5692 6545	2473 3221
ANWR	Independent Environmental Checker	James Choi	2618 2836	3007 8648
CIWEC	Project Director	Kevin, Chan Ka Shing	6159 9750	2508 0987
CIWEC	Site Agent	John Dan	9463 3062	2508 0987
CIWEC	Environmental Officer	Man Chun Ning	6299 8850	2508 0987
CIWEC	Environmental Supervisor	Chan Ben Sun, Benson	6695 5417	2508 0987
AUES	Environmental Team Leader	T. W. Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Nicola Hon	2959 6059	2959 6079
AUES	Environmental Consultant	Ben Tam	2959 6059	2959 6079

Legend:*CEDD (Employer) – Civil Engineering and Development Department**AECOM (Engineer) – AECOM Asia Co. Ltd.**CIWEC (Main Contractor) –China International Water & Electric Corporation**ANWR (IEC) –ANewR Consulting Limited**AUES (ET) – Action-United Environmental Services & Consulting*

Appendix C

Construction Programme (a) Contract 4 (ED/2020/02)

Contract 4 (ED/2020/02)

ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025							
1	<New Summary Task>	1567 days	Fri 30/7/21	Wed 12/11/25		1	11	21	1	11	21	1	11	21					
2	<New Summary Task>	1950 days	Fri 30/7/21	Mon 25/1/27															
3	Contract Period	1950 days	Fri 30/7/21	Mon 25/1/27															
4	Contract Starting Date [Contract Award Date 21 Jul 2021]	0 days	Fri 30/7/21	Fri 30/7/21															
5	Contract Duration	1248 days	Fri 30/7/21	Sat 28/12/24	4SS														
6	Original Completion Date	0 days	Sat 28/12/24	Sat 28/12/24	5														
7	Potential EOT due to CEs and Inclement weather	319 days	Sun 29/12/24	Wed 12/11/25	6														
8	Anticipated Completion of the Whole of the Works	0 days	Mon 25/1/27	Mon 25/1/27	27FF,7														
9	Section of Works and Relevant Portions of Work	2002 days	Fri 30/7/21	Fri 26/3/27															
10	Section of Works 1 - Portions 1a, 2a & 2b	1554 days	Mon 30/8/21	Sun 30/11/25															
11	Original Completion Date	0 days	Wed 13/12/23	Wed 13/12/23	4FS+867 days														
12	Portion 1a	1312 days	Fri 29/4/22	Sun 30/11/25															
13	Access date	0 days	Fri 29/4/22	Fri 29/4/22	4FS+273 days														
14	Construction Duration	563 days	Fri 29/4/22	Sun 12/11/23	13SS														
15	Potential EOT due to Inclement weather and CEs	335 days	Mon 13/11/23	Sat 12/10/24	14														
16	Anticipated Completion Date	144 days	Thu 10/7/25	Sun 30/11/25															
17	Portion 2a	1554 days	Mon 30/8/21	Sun 30/11/25															
18	Access date	0 days	Mon 30/8/21	Mon 30/8/21	4FS+31 days														
19	Construction Duration	836 days	Mon 30/8/21	Wed 13/12/23	18SS														
20	Potential EOT due to Inclement weather and CEs	335 days	Thu 14/12/23	Tue 12/11/24	19														
21	Anticipated Completion Date	89 days	Wed 3/9/25	Sun 30/11/25															
22	Portion 2b	1448 days	Tue 14/12/21	Sun 30/11/25															
23	Access date	0 days	Tue 14/12/21	Tue 14/12/21	4FS+137 days														
24	Construction Duration	730 days	Tue 14/12/21	Wed 13/12/23	23SS														
25	Potential EOT due to Inclement weather and CEs	292 days	Thu 14/12/23	Mon 30/9/24	24														
26	Anticipated Completion Date	130 days	Thu 24/7/25	Sun 30/11/25															
27	Section of Works 1A - Establishment Works for all Landscape Softworks in Section 1 of the Works	718 days	Thu 12/12/24	Mon 25/1/27															
28	Original Completion Date	0 days	Thu 12/12/24	Thu 12/12/24	11FS+365 days														
29	Commencement of Establishment Work	0 days	Mon 1/12/25	Mon 1/12/25	30SS														
30	Establishment Work Duration	365 days	Mon 1/12/25	Mon 25/1/27	16,21,26														
31	Anticipated Completion Date	0 days	Mon 25/1/27	Mon 25/1/27	30FF														
32	Section of Works 2 - Portion 8	1583 days	Fri 30/7/21	Fri 28/11/25															
33	Original Completion Date	0 days	Sat 29/7/23	Sat 29/7/23															
34	Access date	0 days	Fri 30/7/21	Fri 30/7/21	4														
35	Construction Duration	730 days	Fri 30/7/21	Sat 29/7/23	34														
36	Potential EOT due to Inclement weather and CEs up to Jan 2023	385 days	Sun 30/7/23	Sat 17/8/24	35														
37	Anticipated Completion Date	0 days	Fri 28/11/25	Fri 28/11/25	403FF,36														
38	Section of Works 2A - Establishment Works for all Landscape Softworks in Section 2 of the Works	705 days	Mon 23/12/24	Fri 22/1/27															
39	Original Completion Date	0 days	Mon 23/12/24	Mon 23/12/24															
40	Commencement of Establishment Work	0 days	Sat 29/11/25	Sat 29/11/25	41SS														
41	Establishment Work Duration	365 days	Sat 29/11/25	Fri 22/1/27	37														
42	Anticipated Completion Date	0 days	Fri 22/1/27	Fri 22/1/27	41FF														
43	Section of Works 3 - Portions 1b, 3, 4, 5	763 days	Fri 30/7/21	Thu 31/8/23															
44	Original Completion Date	0 days	Tue 30/5/23	Tue 30/5/23	4FS+669 days														
45	Portion 1b	276 days	Tue 29/11/22	Thu 31/8/23															
46	Access date	0 days	Tue 29/11/22	Tue 29/11/22	4FS+487 days														
47	Construction Duration	183 days	Tue 29/11/22	Tue 30/5/23	46														
48	Potential EOT due to Inclement weather and CEs	93 days	Wed 31/5/23	Thu 31/8/23	47														
49	Anticipated Completion Date	0 days	Thu 31/8/23	Thu 31/8/23	582FF,48														
50	Portion 3	702 days	Wed 29/9/21	Thu 31/8/23															
51	Access date	0 days	Wed 29/9/21	Wed 29/9/21	4FS+61 days														
52	Construction Duration	609 days	Wed 29/9/21	Tue 30/5/23	51														
53	Potential EOT due to Inclement weather and CEs	93 days	Wed 31/5/23	Thu 31/8/23	52														
54	Anticipated Completion Date	0 days	Thu 31/8/23	Thu 31/8/23	594FF,53														
55	Portion 4	763 days	Fri 30/7/21	Thu 31/8/23															
56	Access date	0 days	Fri 30/7/21	Fri 30/7/21	4														
57	Construction Duration	670 days	Fri 30/7/21	Tue 30/5/23	56														
58	Potential EOT due to Inclement weather and CEs	93 days	Wed 31/5/23	Thu 31/8/23	57														
59	Anticipated Completion Date	0 days	Thu 31/8/23	Thu 31/8/23	605FF,58														
60	Portion 5	551 days	Sun 27/2/22	Thu 31/8/23															
61	Access date	0 days	Sun 27/2/22	Sun 27/2/22	4														
62	Construction Duration	458 days	Sun 27/2/22	Tue 30/5/23	61														

Task

Critical Task

Milestone

Summary

Based on Revised Programme dated 30 September 2025

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ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
63	Potential EOT due to Inclement weather and CEs	93 days	Wed 31/5/23	Thu 31/8/23	62	1	11	21	1	11	21	1	11	21
64	Anticipated Completion Date	0 days	Thu 31/8/23	Thu 31/8/23	609FF,63									
65	Section of Works 3A - Establishment Works for all Landscape Softworks in Section 3 of the Works	365 days	Fri 1/9/23	Fri 30/8/24										
66	Original Completion Date	0 days	Tue 28/5/24	Tue 28/5/24	44FS+365 days									
67	Commencement of Establishment Work	0 days	Fri 1/9/23	Fri 1/9/23	68SS									
68	Establishment Work Duration	365 days	Fri 1/9/23	Fri 30/8/24	54,49,59,64									
69	Anticipated Completion Date	0 days	Fri 30/8/24	Fri 30/8/24	68FF									
70	Section of Works 4 - Portions 6, 12	1637 days	Fri 30/7/21	Sat 24/1/26										
71	Original Completion Date	0 days	Tue 13/6/23	Tue 13/6/23	4FS+683 days									
72	Portion 6	1366 days	Sat 29/1/22	Sat 25/10/25										
73	Access date	0 days	Sat 29/1/22	Sat 29/1/22	4FS+183 days									
74	Construction Duration	501 days	Sat 29/1/22	Tue 13/6/23	73									
75	Potential EOT due to Inclement weather and CEs	471 days	Wed 14/6/23	Thu 26/9/24	74									
76	Anticipated Completion Date	0 days	Sat 25/10/25	Sat 25/10/25	618FF,75									
77	Portion 12	1637 days	Fri 30/7/21	Sat 24/1/26										
78	Access date	0 days	Fri 30/7/21	Fri 30/7/21	4									
79	Construction Duration	684 days	Fri 30/7/21	Tue 13/6/23	78									
80	Potential EOT due to Inclement weather and CEs	471 days	Wed 14/6/23	Thu 26/9/24	79									
81	Anticipated Completion Date	0 days	Sat 24/1/26	Sat 24/1/26										
82	Section of Works 4A - Establishment Works for all Landscape Softworks in Section 4 of the Works	953 days	Wed 12/6/24	Fri 26/3/27										
87	Section of Works 5A - Portions 9, 10	1579 days	Fri 30/7/21	Mon 24/11/25										
88	Original Completion Date	0 days	Wed 28/6/23	Wed 28/6/23	4FS+698 days									
89	Porion 9	1518 days	Wed 29/9/21	Mon 24/11/25										
90	Access date	0 days	Wed 29/9/21	Wed 29/9/21	4FS+61 days									
91	Construction Duration	638 days	Wed 29/9/21	Wed 28/6/23	90									
92	Potential EOT due to Inclement weather and CEs	460 days	Thu 29/6/23	Mon 30/9/24	91									
93	Anticipated Completion Date	0 days	Mon 24/11/25	Mon 24/11/25	92,779FF									
94	Portion 10	1524 days	Fri 30/7/21	Tue 30/9/25										
95	Access date for Portion	0 days	Fri 30/7/21	Fri 30/7/21	4									
96	Construction Duration for Portion	699 days	Fri 30/7/21	Wed 28/6/23	95									
97	Potential EOT due to Inclement weather and CEs	460 days	Thu 29/6/23	Mon 30/9/24	96									
98	Anticipated Completion Date	0 days	Tue 30/9/25	Tue 30/9/25	828FF,97									
99	Section of Works 5A1 - Establishment Works for all Landscape Softworks in Section 5A of the Works	881 days	Wed 26/6/24	Mon 18/1/27										
100	Original Completion Date	0 days	Wed 26/6/24	Wed 26/6/24	88FS+365 days									
101	Commencement of Establishment Work	0 days	Tue 25/11/25	Tue 25/11/25	102SS									
102	Establishment Work Duration	365 days	Tue 25/11/25	Mon 18/1/27	93,98									
103	Anticipated Completion Date	0 days	Mon 18/1/27	Mon 18/1/27	102FF									
104	Section of Works 5B - Portion 11	1367 days	Sun 27/2/22	Mon 24/11/25										
105	Original Completion Date	0 days	Tue 27/6/23	Tue 27/6/23	4FS+697 days									
106	Access date	0 days	Sun 27/2/22	Sun 27/2/22	4FS+211 days									
107	Construction Duration	487 days	Sun 27/2/22	Wed 28/6/23	106SS									
108	Potential EOT due to Inclement weather and CEs	460 days	Thu 29/6/23	Mon 30/9/24	107									
109	Anticipated Completion Date	0 days	Mon 24/11/25	Mon 24/11/25	108,919FF									
110	Section of Works 6 - Portion 7	494 days	Tue 29/11/22	Fri 5/4/24										
111	Original Completion Date	0 days	Tue 28/11/23	Tue 28/11/23	4FS+851 days									
112	Access date	0 days	Tue 29/11/22	Tue 29/11/22	4FS+487 days									
113	Construction Duration	365 days	Tue 29/11/22	Tue 28/11/23	112									
114	Deferred possession (CE 067)	90 days	Wed 29/11/23	Mon 26/2/24	113									
115	Anticipated Completion Date	0 days	Fri 5/4/24	Fri 5/4/24	928FF,114									
116	Section of Works 6A - Establishment Works for all Landscape Softworks in Section 6 of the Works	365 days	Sat 6/4/24	Sat 5/4/25										
117	Original Completion Date	0 days	Wed 27/11/24	Wed 27/11/24	111FS+365 days									
118	Commencement of Establishment Work	0 days	Sat 6/4/24	Sat 6/4/24	119SS									
119	Establishment Work Duration	365 days	Sat 6/4/24	Sat 5/4/25	115									
120	Anticipated Completion Date	0 days	Sat 5/4/25	Sat 5/4/25	119FF									
121	Section of Works 7A - Portions 13a, 14 (DELETED)	669 days	Fri 30/7/21	Mon 29/5/23										
122	Access date for Portion 13a	0 days	Sat 29/1/22	Sat 29/1/22	4									
123	Construction Duration for Portion 13a	486 days	Sat 29/1/22	Mon 29/5/23	122									
124	Completion of Works in Portion 13a	0 days	Mon 29/5/23	Mon 29/5/23	123,959									
125	Access date for Portion 14	0 days	Fri 30/7/21	Fri 30/7/21	4									
126	Construction Duration for Portion 14	669 days	Fri 30/7/21	Mon 29/5/23	125									
127	Completion of Works in Portion 14	0 days	Mon 29/5/23	Mon 29/5/23	126,971,970									

Task

Critical TaskMilestone

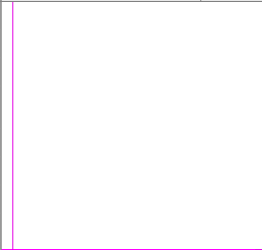
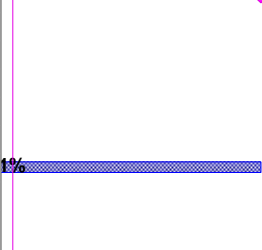
Summary

Based on Revised Programme dated 30 September 2025

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ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
						1	11	21	1	11	21	1	11	21
128	Section of Works 7AI - Establishment Works for all Landscape Softworks in Section 7A of the Works (DELETED)	365 days	Mon 29/5/23	Tue 28/5/24										
129	Commencement of Establishment Work for Section 7A	0 days	Mon 29/5/23	Mon 29/5/23	127									
130	Establishment Work Duration for Section 7A	365 days	Tue 30/5/23	Tue 28/5/24	129									
131	Completion of Works in Section 7A	0 days	Tue 28/5/24	Tue 28/5/24	130,976									
132	Section of Works 7B - Portions 13b, 15	1419 days	Sat 26/2/22	Fri 16/1/26										
133	Original Completion Date	0 days	Thu 28/12/23	Thu 28/12/23	4FS+882 days									
134	Portion 13b	1419 days	Sat 26/2/22	Fri 16/1/26										
135	Access date	0 days	Sat 26/2/22	Sat 26/2/22	4FS+211 days									
136	Construction Duration	671 days	Sun 27/2/22	Fri 29/12/23										
137	Potential EOT due to Inclement weather and CEs up to Jan 2023	300 days	Sat 30/12/23	Thu 24/10/24	136									
138	Anticipated Completion Date	0 days	Fri 16/1/26	Fri 16/1/26										
139	Portion 15	1418 days	Sun 27/2/22	Fri 16/1/26										
140	Access date	0 days	Sun 27/2/22	Sun 27/2/22	4									
141	Construction Duration	671 days	Sun 27/2/22	Fri 29/12/23	140									
142	Potential EOT due to Inclement weather and CEs	300 days	Sat 30/12/23	Thu 24/10/24	141									
143	Anticipated Completion Date	0 days	Fri 16/1/26	Fri 16/1/26										
144	Section of Works 7BI - Establishment Works for all Landscape Softworks in Section 7B of the Works	748 days	Fri 27/12/24	Thu 18/3/27										
145	Original Completion Date	0 days	Fri 27/12/24	Fri 27/12/24	133FS+365 days									
146	Commencement of Establishment Work	0 days	Sat 17/1/26	Sat 17/1/26	147SS									
147	Establishment Work Duration	365 days	Sat 17/1/26	Thu 18/3/27	138,143									
148	Anticipated Completion Date	0 days	Thu 18/3/27	Thu 18/3/27	147FF									
149	Section of Works 8 - Portion 16	564 days	Thu 16/6/22	Sun 31/12/23										
150	Original Completion Date	0 days	Wed 28/6/23	Wed 28/6/23	4FS+698 days									
151	Access date	0 days	Thu 16/6/22	Thu 16/6/22	4FS+321 days									
152	Construction Duration	378 days	Thu 16/6/22	Wed 28/6/23	151									
153	Potential EOT due to Inclement weather and CEs	186 days	Thu 29/6/23	Sun 31/12/23	152									
154	Anticipated Completion Date	0 days	Sun 31/12/23	Sun 31/12/23	153,1171FF									
155	Section of Works 8A - Establishment Works for all Landscape Softworks in Section 8 of the Works	365 days	Mon 1/1/24	Mon 30/12/24										
156	Original Completion Date	0 days	Thu 27/6/24	Thu 27/6/24	150FS+365 days									
157	Commencement of Establishment Work	0 days	Mon 1/1/24	Mon 1/1/24	158SS									
158	Establishment Work Duration	365 days	Mon 1/1/24	Mon 30/12/24	154									
159	Anticipated Completion Date	0 days	Mon 30/12/24	Mon 30/12/24	158FF									
160	Section of Works 9 - Portion 17	1282 days	Sun 27/2/22	Sun 31/8/25										
161	Original Completion Date	0 days	Fri 29/12/23	Fri 29/12/23	4FS+882 days									
162	Access date	0 days	Sun 27/2/22	Sun 27/2/22	4FS+212 days									
163	Construction Duration	671 days	Sun 27/2/22	Fri 29/12/23	162									
164	Potential EOT due to Inclement weather and CEs	306 days	Sat 30/12/23	Wed 30/10/24	163									
165	Anticipated Completion Date	0 days	Sun 31/8/25	Sun 31/8/25	164,1187FF									
166	Section of Works 9A - Establishment Works for all Landscape Softworks in Section 9 of the Works	611 days	Sat 28/12/24	Sat 10/10/26										
167	Original Completion Date	0 days	Sat 28/12/24	Sat 28/12/24	161FS+365 days									
168	Commencement of Establishment Work	0 days	Sun 31/8/25	Sun 31/8/25	165SS									
169	Establishment Work Duration	365 days	Mon 1/9/25	Sat 10/10/26	165									
170	Anticipated Completion Date	0 days	Sun 31/8/25	Sun 31/8/25	165FF									
171	Section of Works 10 - All Tree Protection and Preservation Works	1202 days	Fri 30/7/21	Tue 12/11/24										
172	Original Completion Date	0 days	Thu 28/12/23	Thu 28/12/23	133FF									
173	Commencement of All Tree Protection and Preservation Work	0 days	Fri 30/7/21	Fri 30/7/21	4									
174	All Tree Protection and Preservation Work	883 days	Fri 30/7/21	Fri 29/12/23	173									
175	Potential EOT due to Inclement weather and CE	319 days	Sat 30/12/23	Tue 12/11/24	174									
176	Completion of All Tree Protection and Preservation Work	0 days	Tue 12/11/24	Tue 12/11/24	175,1264FF									
177	Preliminaries	1567 days	Fri 30/7/21	Wed 12/11/25										
178	Establishment of Commercial/Organization	370 days	Fri 30/7/21	Wed 3/8/22										
179	Inform Contractor of the name and delegated authorities of the PMD (ER)	7 days	Fri 30/7/21	Thu 5/8/21	4									
180	Confirmation and arrangement of the method of payment	7 days	Fri 30/7/21	Thu 5/8/21	4									
181	Issue forms to CIC& PCFB	14 days	Fri 30/7/21	Thu 12/8/21	4									
182	Submission of MPF form to MPFSA	7 days	Fri 30/7/21	Thu 5/8/21	4									
183	Notification to Labour Department/Marine Department of the commencement date and other details of the contract	7 days	Fri 30/7/21	Thu 5/8/21	4									
184	Submission of Summary Details of Contract to the Departmental Safety and Environmental	21 days	Fri 30/7/21	Thu 19/8/21	4									
185	Nominate a Labour Officer	7 days	Fri 30/7/21	Thu 5/8/21	4									
186	Set up Site Liaison Group (SLG)	7 days	Fri 30/7/21	Thu 5/8/21	4									
187	Professional video production company and a competent video director	7 days	Fri 30/7/21	Thu 5/8/21	4									

ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
188	Surveyor, Key People	7 days	Fri 30/7/21	Thu 5/8/21	4	1	11	21	1	11	21	1	11	21
189	Traffic Consultant, Traffic Engineer	7 days	Fri 30/7/21	Thu 5/8/21	4									
190	Particulars of Independent service provider for Digital Works Supervision Syst	7 days	Fri 30/7/21	Thu 5/8/21	4									
191	Contractor's Management Team	14 days	Fri 30/7/21	Thu 12/8/21	4									
192	BIM team	14 days	Fri 30/7/21	Thu 12/8/21	4									
193	Competent member of the sites supervisory staff to oversee and supervise tree works related to arboricultural operations and preservation of trees within	21 days	Fri 30/7/21	Thu 19/8/21	4									
194	Content of Contract Webpage (Monthly update afterwards)	21 days	Fri 30/7/21	Thu 19/8/21	4									
195	Particulars of the assigned person (competent member with arboriculture knowledge of the site supervisory for tree preservation)	21 days	Fri 30/7/21	Thu 19/8/21	4									
196	Details of Geotechnical monitoring team	21 days	Fri 30/7/21	Thu 19/8/21	4									
197	Design of the CRE Site Office certified by an accepted ICE	30 days	Fri 30/7/21	Sat 28/8/21	4									
198	Design Architect	30 days	Fri 30/7/21	Sat 28/8/21	4									
199	Specially required staff	30 days	Fri 30/7/21	Sat 28/8/21	4									
200	Public Relation Officer	30 days	Fri 30/7/21	Sat 28/8/21	4									
201	Site Safety Committee (SSC) Meeting (monthly afterwards)	30 days	Fri 30/7/21	Sat 28/8/21	4									
202	Meeting of the SSMC (monthly afterwards)	30 days	Fri 30/7/21	Sat 28/8/21	4									
203	Professional Indemnity Insurance in respect of Contractor's Design	60 days	Fri 30/7/21	Mon 27/9/21	4									
204	Proposed gasket material for waterworks	60 days	Fri 30/7/21	Mon 27/9/21	4									
205	7 days advance notice of the date on which workers begin to wear Site uniform; Provide uniforms within 5 days after the design is accepted by PM	60 days	Fri 30/7/21	Mon 27/9/21	4									
206	2 Engineering Graduates & 3 Technician apprentices	90 days	Fri 30/7/21	Wed 27/10/21	4									
207	Commissioning of DWSS	90 days	Fri 30/7/21	Wed 27/10/21	4									
208	Agree on the content and presentation of the dashboard of DWSS	90 days	Fri 30/7/21	Wed 27/10/21	4									
209	Monthly collaboration and information exchange of BIM	90 days	Fri 30/7/21	Wed 27/10/21	4									
210	Combined Services Drawing (CSD) and CBWD generated from BIM model	90 days	Fri 30/7/21	Wed 27/10/21	4									
211	Video script for Project Video Film	180 days	Fri 30/7/21	Tue 25/1/22	4									
212	Employment of Construction Industry Council's Graduates (min. 4 graduates)	180 days	Fri 30/7/21	Tue 25/1/22	4									
213	Nomination of Treatment process specialist, Design Engineer, and Independent Checking Engineer (ICE)	34 days	Fri 1/7/22	Wed 3/8/22										
214	Plan & Proposals	60 days	Fri 30/7/21	Mon 27/9/21										
215	Preparation and submission of Noise Mitigation Plan (3 hard copies, 2 electronic copies)	30 days	Fri 30/7/21	Sat 28/8/21	4									
216	Preparation and submission of Waste Management Plan (WMP)	30 days	Fri 30/7/21	Sat 28/8/21	4									
217	Preparation and submission of Draft Construction Health and Safety Plan (3 copies)	7 days	Fri 30/7/21	Thu 5/8/21	4									
218	Preparation and submission of Quality Policy statement and quality plan	7 days	Fri 30/7/21	Thu 5/8/21	4									
219	Preparation and submission of Draft Environmental Management Plan (EMP) 3 copies	4 days	Fri 30/7/21	Mon 2/8/21	4									
220	Tender requirements for suppliers of Plant and Materials, Equipment and Insurance Proposal	14 days	Fri 30/7/21	Thu 12/8/21	4									
221	Preparation of Proposal for arrangement for placement of storage compartments/ drinking water facilities/ toilet/ hand-wash facilities/ showering/ rubbishbin/ working shelter on Site	14 days	Fri 30/7/21	Thu 12/8/21	4									
222	Preparation Proposal for security system	14 days	Fri 30/7/21	Thu 12/8/21	4									
223	Preparation and submission of DWSS proposal	21 days	Fri 30/7/21	Thu 19/8/21	4									
224	Preparation and submission of Subcontractor Management Plan (SMP)	21 days	Fri 30/7/21	Thu 19/8/21	4									
225	Preparation and submission of Construction Health and Safety Plan (6 copies)	30 days	Fri 30/7/21	Sat 28/8/21	4									
226	Weather protection scheme	30 days	Fri 30/7/21	Sat 28/8/21	4									
227	Proposal of COBie information requirements	30 days	Fri 30/7/21	Sat 28/8/21	4									
228	Preparation and submission of Final Environmental Management Plan (EMP) 3 copies	30 days	Fri 30/7/21	Sat 28/8/21	4									
229	Preparation of Proposed Plans for submission of each Release of construction and Project Video Films	30 days	Fri 30/7/21	Sat 28/8/21	4									
230	Preparation and submission of Site Traffic Safety Management Plan (STSMP), (monthly update)	60 days	Fri 30/7/21	Mon 27/9/21	4									
231	Preparation and submission of Site Management Plan for TTS	60 days	Fri 30/7/21	Mon 27/9/21	4									
232	Preparation and submission of BIM Execution Plan accordance with the PSA 1.14D	60 days	Fri 30/7/21	Mon 27/9/21	4									
233	Public Relation (PR) Company, PR plan	60 days	Fri 30/7/21	Mon 27/9/21	4									
234	Preparation and submission of Temporary drainage management plan	7 days	Fri 30/7/21	Thu 5/8/21	4									
235	Procurements of Major Materials	411 days	Thu 16/3/23	Mon 29/4/24										
236	Procurement & material submission of bearing for elevated walkway	45 days	Thu 16/3/23	Sat 29/4/23										
237	Design, manufacturing and FAT of bearing for elevated walkway	115 days	Sun 30/4/23	Tue 22/8/23	236									
238	Deliveries and site inspection of bearing for elevated walkway etc.	15 days	Wed 23/8/23	Wed 6/9/23	237									
239	Procurement & material submission of movement joint for elevated walkway	45 days	Thu 16/3/23	Sat 29/4/23										
240	Design, manufacturing and FAT of movement joint for elevated walkway	115 days	Sun 30/4/23	Tue 22/8/23	239									
241	Deliveries and site inspection of movement joint for elevated walkway etc.	15 days	Wed 23/8/23	Wed 6/9/23	240									
242	Procurement of Raise Planter Type A&B	60 days	Mon 1/1/24	Thu 29/2/24										
243	Manufacturing, FAT & delivery of Raise Planter Type A&B	60 days	Fri 1/3/24	Mon 29/4/24	242									

ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
						1	11	21	1	11	21	1	11	21
244	Procurement of Balustrade Wall BW1-2	60 days	Mon 1/1/24	Thu 29/2/24										
245	Manufacturing, FAT & delivery of Balustrade Wall BW1-2	60 days	Fri 1/3/24	Mon 29/4/24	244									
246	Procurement of Children Play Areas & water play area Park Facilities	60 days	Mon 1/1/24	Thu 29/2/24										
247	Design, Manufacturing, FAT & delivery of Children Play Areas & water play area Park Facilities	60 days	Fri 1/3/24	Mon 29/4/24	246									
248	Procurement of Adult fitness Area Park Facilities	60 days	Mon 1/1/24	Thu 29/2/24										
249	Design Manufacturing, FAT & delivery of Adult fitness Area Park Facilities	60 days	Fri 1/3/24	Mon 29/4/24	248									
250	Procurement of Elderly fitness Area Park Facilities	60 days	Mon 1/1/24	Thu 29/2/24										
251	Design, Manufacturing, FAT & delivery of Elderly fitness Area Park Facilities	60 days	Fri 1/3/24	Mon 29/4/24	250									
252	Programme	1537 days	Fri 30/7/21	Mon 13/10/25										
253	Preparation & Submission of First Works Program	6 days	Fri 30/7/21	Wed 4/8/21	4									
254	Preparation & Submission of Three Months Rolling Program	14 days	Fri 30/7/21	Thu 12/8/21	4									
255	Program Review and Acceptance of First Program	14 days	Thu 5/8/21	Wed 18/8/21	253									
256	Preparation and Submission of Detailed Works Program	60 days	Thu 19/8/21	Sun 17/10/21	255,254									
257	Program Review and Acceptance of Works Program	14 days	Mon 18/10/21	Sun 31/10/21	256									
258	Implementation of Programme Management and Monthly Reporting	1443 days	Mon 1/11/21	Mon 13/10/25	257									
259	Permit and Licences	60 days	Fri 30/7/21	Mon 27/9/21										
260	Detailed construction sequences with associated traffic diversion schemes and obtain endorsement in principle from the relevant authorities and the	30 days	Fri 30/7/21	Sat 28/8/21	4									
261	Risk Assessment for slope works	7 days	Fri 30/7/21	Thu 5/8/21	4									
262	Welfare facilities for workers in accordance with requirements in PS Clause 1.	7 days	Fri 30/7/21	Thu 5/8/21	4									
263	UU detection equipment brand/model	7 days	Fri 30/7/21	Thu 5/8/21	4									
264	Certified calibration certificates	7 days	Fri 30/7/21	Thu 5/8/21	4									
265	Contract Computer Facilities, Electronic Document Management System, Site Record Information System, Digital Works Supervision System and other	6 days	Fri 30/7/21	Wed 4/8/21	4									
266	Name of the designated bank and all related arrangement details for payment of wages to all the Site Workers	6 days	Fri 30/7/21	Wed 4/8/21	4									
267	Site Cleanliness and Tidiness	7 days	Fri 30/7/21	Thu 5/8/21	4									
268	3 sets of coloured record photos in SR size (recording existing building/ street furniture.....)	7 days	Fri 30/7/21	Thu 5/8/21	4									
269	Contract Cars	7 days	Fri 30/7/21	Thu 5/8/21	4									
270	Design of uniform for site workers	7 days	Fri 30/7/21	Thu 5/8/21	4									
271	Survey Equipment for Initial survey	7 days	Fri 30/7/21	Thu 5/8/21	4									
272	Inclinometer access tubes - suppliers, material specification and samples of the tubes and couplings	14 days	Fri 30/7/21	Thu 12/8/21	4									
273	Payment of Wages System for Site Workers	14 days	Fri 30/7/21	Thu 12/8/21	4									
274	Tree survey record	14 days	Fri 30/7/21	Thu 12/8/21	4									
275	Supply of Survey Equipment for PM use	30 days	Fri 30/7/21	Sat 28/8/21	4									
276	Complete setting up and begin to operate the Security System	60 days	Fri 30/7/21	Mon 27/9/21	4									
277	Initial Survey	60 days	Fri 30/7/21	Mon 27/9/21	4									
278	Assessment for the risk resulting from working in hot weather	60 days	Fri 30/7/21	Mon 27/9/21	4									
279	Contractor's Design	1034 days	Fri 1/7/22	Tue 29/4/25										
280	Architectural & Structural	183 days	Fri 1/7/22	Fri 30/12/22										
281	Prepare & Submission	31 days	Fri 1/7/22	Sun 31/7/22	4									
282	Internal Review & Submission	15 days	Mon 1/8/22	Mon 15/8/22	281									
283	PM Review & AIP	16 days	Tue 16/8/22	Wed 31/8/22	282									
284	Re-submission	30 days	Thu 1/9/22	Fri 30/9/22	283									
285	Design Checker Review & Endorsement	7 days	Sat 1/10/22	Fri 7/10/22	284									
286	DDA Submission (circulation to Government Authorities)	8 days	Sat 8/10/22	Sat 15/10/22	285									
287	Time risk allowance for DDA processing	7 days	Sun 16/10/22	Sat 22/10/22	286									
288	Vetting Process and Approval by Government Authorities and PM	69 days	Sun 23/10/22	Fri 30/12/22	287									
289	Park lighting, irrigation system, smart system etc.	341 days	Mon 14/11/22	Fri 20/10/23										
290	Covered walkway	180 days	Fri 1/11/24	Tue 29/4/25										
291	Prepare	30 days	Wed 6/11/24	Thu 5/12/24										
292	Internal review, ICE, CSD and submission	60 days	Fri 6/12/24	Mon 3/2/25	291									
293	AIP	30 days	Tue 4/2/25	Wed 5/3/25	292									
294	Contractor's Design [Enhancement on Architectural Design & Associated Works]	1036 days	Fri 14/1/22	Thu 14/11/24										
295	Engagement of Design Architectural Firm (CE 005)	0 days	Fri 14/1/22	Fri 14/1/22										
296	Enhancement on Architectual Design & Associated Works at Portions 1a, 2a and 2b (Quarry Lake) (CE 070)	0 days	Tue 4/4/23	Tue 4/4/23	295									
297	AIP and approvals	275 days	Fri 1/7/22	Sat 1/4/23										
298	Schematic Landscape Master Plan (LMP), Design AIP, GBP approval	153 days	Fri 1/7/22	Wed 30/11/22	295									
299	Production of AIP Drawings	92 days	Sat 31/12/22	Sat 1/4/23	298									
300	DSD's AIP approval	0 days	Sat 1/4/23	Sat 1/4/23	299									
301	Detailed Design Submission Schedule	473 days	Mon 31/7/23	Thu 14/11/24										
302	Statutory submission	92 days	Wed 30/8/23	Thu 30/11/23	300									

ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
						1	11	21	1	11	21	1	11	21
303	FSD submission for GBP	0 days	Thu 30/11/23	Thu 30/11/23										
304	WWO542 document	0 days	Wed 30/8/23	Wed 30/8/23										
305	Civil	46 days	Wed 30/8/23	Sun 15/10/23	300									
306	Underground rain water drainage	0 days	Sun 15/10/23	Sun 15/10/23										
307	Underground watermain	0 days	Wed 30/8/23	Wed 30/8/23										
308	Undergroud sewerage	0 days	Sat 30/9/23	Sat 30/9/23										
309	Irrigation	0 days	Wed 30/8/23	Wed 30/8/23										
310	Landscape and Miscellaneous	101 days	Mon 21/8/23	Thu 30/11/23	300									
311	Landscape	56 days	Mon 21/8/23	Sun 15/10/23										
312	Smart weir system	0 days	Mon 30/10/23	Mon 30/10/23										
313	Flood warning system	0 days	Thu 30/11/23	Thu 30/11/23										
314	Building	473 days	Mon 31/7/23	Thu 14/11/24										
315	A1: Lavatories	473 days	Mon 31/7/23	Thu 14/11/24										
316	Architecture	32 days	Mon 31/7/23	Thu 31/8/23										
317	Structure	150 days	Sat 7/10/23	Mon 4/3/24										
318	E& M	316 days	Thu 4/1/24	Thu 14/11/24										
319	A2: Management Office Building	458 days	Tue 15/8/23	Thu 14/11/24										
320	Architecture	17 days	Tue 15/8/23	Thu 31/8/23										
321	Structure	220 days	Sat 14/10/23	Mon 20/5/24										
322	E& M	214 days	Mon 15/4/24	Thu 14/11/24										
323	B1: Multi-Purpose Building	458 days	Tue 15/8/23	Thu 14/11/24										
324	Architecture	17 days	Tue 15/8/23	Thu 31/8/23										
325	Structure	224 days	Sat 28/10/23	Fri 7/6/24										
326	E& M	251 days	Sat 9/3/24	Thu 14/11/24										
327	B2: TX Room/Lavatories	458 days	Tue 15/8/23	Thu 14/11/24										
328	Architecture	29 days	Tue 15/8/23	Tue 12/9/23										
329	Structure	199 days	Thu 21/12/23	Sat 6/7/24										
330	E& M	263 days	Mon 26/2/24	Thu 14/11/24										
331	C2: Water Treatment Plant Room	458 days	Tue 15/8/23	Thu 14/11/24										
332	Architecture	17 days	Tue 15/8/23	Thu 31/8/23										
333	Structure	271 days	Sat 7/10/23	Wed 3/7/24										
334	E& M	196 days	Fri 3/5/24	Thu 14/11/24										
335	Schedule of Accommodation (SoA) Submission	141 days	Sun 2/4/23	Mon 21/8/23	300									
336	Stage 1	56 days	Sun 2/4/23	Sat 27/5/23										
337	Agree SoA with DSD	14 days	Sun 2/4/23	Sat 15/4/23										
338	Workshop	8 days	Sun 16/4/23	Sun 23/4/23	337									
339	GPA submission and approval	34 days	Mon 24/4/23	Sat 27/5/23	338									
340	Stage 2	63 days	Mon 19/6/23	Mon 21/8/23	339									
341	Submission	0 days	Mon 19/6/23	Mon 19/6/23										
342	approval	0 days	Mon 21/8/23	Mon 21/8/23	341									
343	DSD's VCAB submission	183 days	Fri 7/4/23	Fri 6/10/23										
344	Stage 1 - AIP	28 days	Fri 7/4/23	Thu 4/5/23										
345	Submission and presentation	8 days	Fri 7/4/23	Fri 14/4/23										
346	Approval	20 days	Sat 15/4/23	Thu 4/5/23	345									
347	Stage 2 - Detailed design	67 days	Tue 1/8/23	Fri 6/10/23	346									
348	Submission and presentation	0 days	Tue 1/8/23	Tue 1/8/23										
349	VCAB meeting	0 days	Thu 7/9/23	Thu 7/9/23	348									
350	Approval	30 days	Thu 7/9/23	Fri 6/10/23	349									
351	Sub-letting (Cost Trimming Scheme)	211 days	Wed 1/3/23	Wed 27/9/23										
352	Drawings for cost estimation	30 days	Wed 1/3/23	Thu 30/3/23	300FS-32 days									
353	Tender approval	11 days	Fri 31/3/23	Mon 10/4/23	352									
354	Tender addendum	8 days	Mon 17/4/23	Mon 24/4/23	353									
355	Sub-letting Period	25 days	Tue 4/4/23	Fri 28/4/23	354FS-21 days									
356	Tender Assessment & approval	12 days	Sat 29/4/23	Wed 10/5/23	355									
357	PMI preparation	58 days	Thu 11/5/23	Fri 7/7/23	356									
358	Recost trimming by DSD	21 days	Sat 8/7/23	Fri 28/7/23	357									
359	Resubmission of detailed design	30 days	Tue 8/8/23	Wed 6/9/23	358									
360	Retendering	21 days	Thu 7/9/23	Wed 27/9/23	359									
361	Material submission	181 days	Thu 28/9/23	Tue 26/3/24	360									
362	Method Statements & Temporary Works	792 days	Fri 30/7/21	Fri 29/9/23										
363	Preparation & submission of generic method statement for site formation work	60 days	Tue 1/11/22	Fri 30/12/22										
364	Preparation & submission of generic method statement for earth slope works	60 days	Tue 1/11/22	Fri 30/12/22										
365	Preparation & submission of generic method statement for retaining wall construction	60 days	Wed 1/6/22	Sat 30/7/22										

ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
						1	11	21	1	11	21	1	11	21
427	U channel and catchpit	242 days	Fri 1/11/24	Mon 30/6/25										
428	Play area formation	75 days	Wed 6/11/24	Sun 19/1/25										
429	Play area slab	21 days	Mon 7/7/25	Sun 27/7/25	435									
430	Installation, Inspection/certification of play area equipment	14 days	Sun 21/9/25	Sat 4/10/25	442									
431	Planters RP6	33 days	Mon 17/2/25	Fri 21/3/25										
432	Planters RP5	26 days	Mon 10/3/25	Fri 4/4/25										
433	Planters RP3	21 days	Sat 26/4/25	Fri 16/5/25										
434	Planters RP2	21 days	Sat 3/5/25	Fri 23/5/25										
435	Planters RP1	21 days	Mon 16/6/25	Sun 6/7/25										
436	Planters RP4	34 days	Mon 19/5/25	Sat 21/6/25										
437	Soil replacement	90 days	Mon 16/6/25	Sat 13/9/25	434									
438	Irrigation system	79 days	Fri 25/7/25	Sat 11/10/25										
439	Edge and pavement	28 days	Sun 14/9/25	Sat 11/10/25										
440	Fininshing to planter wall, seat wall and panter kerb	14 days	Sun 28/9/25	Sat 18/10/25	439									
441	Soft landscaping works	28 days	Thu 18/9/25	Wed 15/10/25										
442	Lighting System	58 days	Fri 25/7/25	Sat 20/9/25										
443	Cable Duct, pillar box, cable drawpit & lamp post footing	14 days	Fri 25/7/25	Thu 7/8/25	427									
444	Installation of Lamp post	44 days	Fri 8/8/25	Sat 20/9/25	443									
445	Wing C	849 days	Thu 3/8/23	Fri 28/11/25										
446	Catchpit (Stage 1)	211 days	Thu 3/8/23	Thu 29/2/24										
447	Catchpit (Stage 2)	21 days	Fri 25/7/25	Thu 14/8/25										
448	(awaiting for R2-6)	107 days	Mon 10/3/25	Tue 24/6/25										
449	U Channel (Stage 1)	37 days	Wed 25/6/25	Thu 31/7/25	448									
450	U Channel (Stage 2)	30 days	Fri 29/8/25	Sat 27/9/25	449									
451	Lighting System	116 days	Wed 2/7/25	Sat 25/10/25										
452	Cable Duct, pillar box, cable drawpit & lamp post footing (Stage 1)	38 days	Wed 2/7/25	Fri 8/8/25	448									
453	Cable Duct, pillar box, cable drawpit & lamp post footing (Stage 2)	56 days	Sun 31/8/25	Sat 25/10/25	452									
454	Installation of Lamp post	14 days	Mon 22/9/25	Sun 5/10/25										
455	Planter (RP 9)	40 days	Mon 16/9/24	Fri 25/10/24										
456	Planter (RP7)	19 days	Mon 10/2/25	Fri 28/2/25										
457	Planter (RP8)	48 days	Mon 1/9/25	Sat 18/10/25										
458	Soil replacement (RP8)	3 days	Sun 19/10/25	Tue 21/10/25	457									
459	Child Play Area Slab (CP4 & CP5)	21 days	Wed 22/10/25	Tue 11/11/25	458									
460	Procurement of safety mat for play area	76 days	Mon 16/9/24	Sat 30/11/24	459									
461	Installation, Inspection/certification of play area equipment	7 days	Wed 12/11/25	Tue 18/11/25	459									
462	Installation of safety mat for play area	3 days	Wed 19/11/25	Fri 21/11/25	461									
463	Seat	3 days	Wed 12/11/25	Fri 14/11/25	459									
464	Planter (RP10)	7 days	Sat 15/11/25	Fri 21/11/25	463									
465	Soil replacement (RP10)	7 days	Sat 22/11/25	Fri 28/11/25	464									
466	Irrigation system	35 days	Mon 8/9/25	Sun 12/10/25										
467	Edge and pavemen t(Stage 1-MOE)	48 days	Sun 13/7/25	Fri 29/8/25										
468	Edge and pavemen t(Stage 2)	7 days	Wed 19/11/25	Tue 25/11/25	461									
469	Soft landscaping works	14 days	Mon 3/11/25	Sun 16/11/25										
470	Fininshing to planter wall, seat wall and planter kerb	34 days	Mon 20/10/25	Sat 22/11/25										
471	Wing B	1515 days	Thu 2/9/21	Sat 25/10/25										
472	Shelter (1 nos)	1415 days	Thu 2/9/21	Thu 17/7/25										
473	Submission of design	60 days	Tue 26/3/24	Fri 24/5/24										
474	Approval of design	21 days	Thu 11/7/24	Wed 31/7/24	473									
475	Construction of footing	45 days	Thu 15/8/24	Sat 28/9/24	474									
476	Fabrication of superstructure	252 days	Fri 1/11/24	Thu 10/7/25										
477	Construction of superstructure	7 days	Fri 11/7/25	Thu 17/7/25	476									
478	Shelter roof	7 days	Thu 2/9/21	Wed 8/9/21										
479	U channel and Catchpit (Stage 1)	211 days	Wed 3/1/24	Wed 31/7/24	446SS,447SS									
480	U channel and Catchpit (Stage 2)	163 days	Fri 1/11/24	Sat 12/4/25										
481	Lighting system (Stage 1)	386 days	Mon 10/6/24	Mon 30/6/25										
482	Cable Duct, pillar box, cable pit & lamp post footing	97 days	Mon 10/6/24	Sat 14/9/24										
483	Installation of lamp post	100 days	Wed 19/3/25	Mon 30/6/25	419									
484	Hard Lanscape (Stage 1)	412 days	Mon 2/9/24	Sat 18/10/25										
485	Staircase B2 & B3	28 days	Mon 2/9/24	Sun 29/9/24										
486	Edge	45 days	Mon 16/9/24	Wed 30/10/24										
487	Soil replacement	142 days	Mon 14/10/24	Sat 8/3/25	486									
488	Irrigation system	30 days	Tue 7/1/25	Wed 5/2/25	486									
489	Seat (PMI)	44 days	Fri 1/11/24	Sat 14/12/24										

ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
						1	11	21	1	11	21	1	11	21
490	Staircase B5 & B6	41 days	Wed 9/10/24	Mon 18/11/24										
491	Staircase B4 (PMI)	18 days	Fri 1/11/24	Mon 18/11/24										
492	pavement	104 days	Mon 10/3/25	Sat 21/6/25										
493	Finshing to planter wall, seat wall and planter kerb	195 days	Mon 7/4/25	Sat 18/10/25				18/10						
494	Open tender for play area equipment	41 days	Mon 2/9/24	Thu 31/10/24										
495	Design Submission for play area equipment	30 days	Mon 14/10/24	Tue 12/11/24	494									
496	Procurement of safety mat and equipment for play area	122 days	Mon 30/12/24	Wed 30/4/25	495									
497	Play area slab	70 days	Sat 15/3/25	Fri 23/5/25	495			18/10						
498	Installation, Inspection/certification of for play equipment	77 days	Mon 23/6/25	Sat 18/10/25				18/10						
499	Soft landscaping works	191 days	Mon 24/3/25	Tue 30/9/25				30/9						
500	Hard Lanscape (Stage 2)	359 days	Fri 1/11/24	Sat 25/10/25										
501	Irrigation system	14 days	Fri 1/11/24	Thu 14/11/24										
502	Staircase B1	28 days	Mon 6/1/25	Sun 2/2/25	501									
503	Edge	148 days	Mon 3/2/25	Mon 30/6/25	502									
504	Soil replacement	7 days	Mon 17/2/25	Fri 28/3/25	503									
505	pavement	86 days	Fri 18/7/25	Sat 11/10/25	477			11/10						
506	Fiinshing to planter wall, seat wall and planter kerb	28 days	Sun 28/9/25	Sat 25/10/25					25/10					
507	Soft landscaping works	14 days	Mon 11/8/25	Sun 24/8/25										
508	Hard Lanscape (Stage 3 Intersection area)	359 days	Fri 1/11/24	Sat 25/10/25										
509	Shelter (1 nos)	289 days	Fri 1/11/24	Sat 16/8/25										
510	Construction of footing	14 days	Mon 16/6/25	Sun 29/6/25										
511	Fabrication of superstructure	252 days	Fri 1/11/24	Thu 10/7/25										
512	Construction of superstructure	37 days	Fri 11/7/25	Sat 16/8/25	511									
513	Dwarf Wall DW26	28 days	Mon 17/3/25	Sun 13/4/25										
514	Staircase B7	14 days	Thu 2/1/25	Wed 15/1/25										
515	Edge	14 days	Mon 24/3/25	Sun 6/4/25	514									
516	Soil replacement	7 days	Mon 7/4/25	Sun 13/4/25	515									
517	Irrigation system	14 days	Mon 14/4/25	Sun 27/4/25	516									
518	pavement	14 days	Mon 28/4/25	Sun 11/5/25	517									
519	Fiinshing to planter wall, seat wall and planter kerb	167 days	Mon 12/5/25	Sat 25/10/25					25/10					
520	Soft landscaping works	49 days	Sun 6/7/25	Sat 23/8/25	518									
521	Wing D	1521 days	Thu 2/9/21	Fri 31/10/25										
522	Shelter (2 nos)	1452 days	Thu 2/9/21	Sat 23/8/25										
523	Construction of footing	28 days	Mon 2/9/24	Sun 29/9/24										
524	Fabrication of superstructure	45 days	Fri 1/11/24	Sun 15/12/24										
525	Construction of superstructure	90 days	Mon 26/5/25	Sat 23/8/25										
526	Shelter roof	7 days	Thu 2/9/21	Wed 8/9/21										
527	U channel and Catchpit (Stage 1, near Site E-1)	46 days	Tue 30/1/24	Fri 15/3/24										
528	U channel and Catchpit (Stage 2)	221 days	Fri 1/11/24	Mon 9/6/25										
529	Dwarf Wall DW24 & DW25	28 days	Mon 2/9/24	Mon 30/9/24										
530	Lighting system	425 days	Tue 2/7/24	Sat 30/8/25										
531	Cable Duct	125 days	Tue 2/7/24	Sun 3/11/24										
532	cable pit	125 days	Tue 2/7/24	Sun 3/11/24										
533	Cable Duct (Intersection area)	22 days	Sat 9/8/25	Sat 30/8/25										
534	cable pit (Intersection Area)	22 days	Sat 9/8/25	Sat 30/8/25										
535	Lamp post footing	125 days	Tue 2/7/24	Sun 3/11/24										
536	Installation of lamp post	112 days	Sun 4/5/25	Sat 23/8/25										
537	Pillar Box	60 days	Mon 2/12/24	Thu 30/1/25										
538	Irrigation system	45 days	Mon 2/12/24	Wed 15/1/25										
539	Retainning Wall	671 days	Tue 30/8/22	Sun 30/6/24										
558	Staircase D1	30 days	Tue 2/7/24	Wed 31/7/24										
559	Staircase D2 & D3	30 days	Wed 2/10/24	Thu 31/10/24										
560	Planter(community garden)	166 days	Mon 4/11/24	Fri 18/4/25										
561	Edge	75 days	Mon 4/11/24	Fri 17/1/25										
562	Planter/Seat	80 days	Thu 2/1/25	Sat 22/3/25										
563	Soil replacement	67.5 days	Fri 3/1/25	Mon 24/3/25	562									
564	irrigation	108 days	Mon 13/1/25	Wed 30/4/25										
565	pavement	251 days	Mon 10/2/25	Sat 18/10/25				18/10						
566	Finishing to planter wall, seat wall and planter kerb	215 days	Tue 25/3/25	Sat 25/10/25					25/10					
567	Tree Plaza	34 days	Mon 8/9/25	Sat 11/10/25				11/10						
568	Soft landscaping works	195 days	Mon 14/4/25	Sat 25/10/25					25/10					
569	Railing/fence and signage	25.68 days	Mon 14/7/25	Fri 31/10/25	568					31/10				
570	Store room	262 days	Fri 3/1/25	Sun 21/9/25										

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ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
571	Store room design	72 days	Fri 31/1/25	Sat 15/3/25		1	11	21	1	11	21	1	11	21
572	Store room foundation	7 days	Mon 16/6/25	Sun 22/6/25										
573	Store room installation	12 days	Mon 28/7/25	Fri 8/8/25	572									
574	Store room E & M	7 days	Mon 15/9/25	Sun 21/9/25										
575	Energization	5 days	Sun 26/10/25	Thu 30/10/25										
576	CLP ducting and energization	5 days	Sun 26/10/25	Thu 30/10/25	453									
577	Section of Works 2A - Establishment Works for all Landscape Softworks in Section 2 of the Works	365 days	Sat 1/11/25	Mon 21/12/26										
578	Commencement of Establishment Work for Section 2	0 days	Sat 1/11/25	Sat 1/11/25	521FF+1 day									
579	Establishment Work Duration for Section 2	365 days	Sat 1/11/25	Mon 21/12/26	578SS-1 day									
580	Completion of Works in Section 2	0 days	Mon 21/12/26	Mon 21/12/26	579									
581	Section of Works 3 - Portions 1b, 3, 4, 5	763 days	Fri 30/7/21	Thu 31/8/23										
582	Portion 1b	276 days	Tue 29/11/22	Thu 31/8/23										
583	Provision of site access [487 days after starting date as per Contract]	7 days	Tue 29/11/22	Mon 5/12/22	46SS									
584	Mobilization& Site Clearance	14 days	Tue 6/12/22	Mon 19/12/22	583									
585	Time Risk Allowance	7 days	Tue 20/12/22	Mon 26/12/22	584									
586	PMI 066	50 days	Thu 13/7/23	Thu 31/8/23										
587	Sewerage pipes and manholes	50 days	Thu 13/7/23	Thu 31/8/23	585									
588	Greywater pipes and manholes	50 days	Thu 13/7/23	Thu 31/8/23	587SS									
589	Laying of 75mm thick milled asphalt chips	7 days	Fri 25/8/23	Thu 31/8/23	588FF									
590	Lighting	163 days	Wed 22/3/23	Thu 31/8/23										
591	Application for electricity power supply	83 days	Wed 22/3/23	Mon 12/6/23										
592	Lighting design	140 days	Wed 22/3/23	Tue 8/8/23	591SS									
593	Installation including ducting, draw pit and lighting	23 days	Wed 9/8/23	Thu 31/8/23	592,588FF									
594	Portion 3	702 days	Wed 29/9/21	Thu 31/8/23										
595	Access date	0 days	Wed 29/9/21	Wed 29/9/21	51SS									
596	Deferred possession (CE 004 & 006)	61 days	Wed 29/9/21	Sun 28/11/21										
597	Provision of site access	7 days	Mon 29/11/21	Sun 5/12/21	596									
598	Mobilization& Site Clearance	14 days	Mon 6/12/21	Sun 19/12/21	597									
599	Preparation& submission of MS, Temp works, associated plans & docs	52 days	Mon 20/12/21	Wed 9/2/22	598									
600	Engineer AIP of MS, Temp works, plans& associated docs	21 days	Thu 10/2/22	Wed 2/3/22	599									
601	Installation of chain link fencing	92 days	Thu 1/6/23	Thu 31/8/23	600									
602	Soft landscaping works - hydroseeding	30 days	Wed 2/8/23	Thu 31/8/23										
603	GI works (PMI 006)	7 days	Mon 3/10/22	Sun 9/10/22										
604	Additional drainage works (PMI 075)	30 days	Wed 2/8/23	Thu 31/8/23	601FF,602FF									
605	Portion 4	763 days	Fri 30/7/21	Thu 31/8/23										
606	Provision of site access [on starting date as per Contract]	7 days	Fri 30/7/21	Thu 5/8/21	56SS									
607	Soft landscaping works - hydroseeding	30 days	Wed 2/8/23	Thu 31/8/23	602FF,611FF									
608	GI works (PMI 006)	10 days	Mon 10/10/22	Wed 19/10/22	603									
609	Portion 5	551 days	Sun 27/2/22	Thu 31/8/23										
610	Provision of site access [212 days after starting date as per Contract]	7 days	Sun 27/2/22	Sat 5/3/22	61SS									
611	Soft landscaping works - hydroseeding	30 days	Wed 2/8/23	Thu 31/8/23										
612	Installation of chain link fencing	31 days	Tue 1/8/23	Thu 31/8/23	611FF									
613	Section of Works 3A - Establishment Works for all Landscape Softworks in Section 3 of the Works	365 days	Fri 1/9/23	Fri 30/8/24										
617	Section of Works 4 - Portions 6, 12	1994 days?	Fri 30/7/21	Wed 17/3/27										
618	Portion 6	1366 days?	Sat 29/1/22	Sat 25/10/25										
619	Provision of site access [183 days after starting date as per Contract]	0 days	Sat 29/1/22	Sat 29/1/22	73SS									
620	Deferred possession	81 days	Sat 29/1/22	Tue 19/4/22	619									
621	Mobilization& Site Clearance	14 days	Wed 20/4/22	Tue 3/5/22	620									
622	Issuance of site sketch for retaining wall (Letter C10/500/400739)	0 days	Wed 14/9/22	Wed 14/9/22	621									
623	Drainage works under PMQP 004	0 days	Fri 14/10/22	Fri 14/10/22	621									
624	Application for electricity power supply	421 days	Mon 14/11/22	Mon 8/1/24	415SS									
625	Design Change of Layout (PMI-085)	1 day	Wed 5/7/23	Wed 5/7/23										
626	Park Lighting Design	612 days	Mon 14/11/22	Wed 17/7/24	624SS									
627	Approval of lighting design by LCSD	30 days	Thu 18/7/24	Fri 16/8/24	626									
628	Time Risk Allowance	14 days	Fri 14/10/22	Thu 27/10/22	627									
629	Retaining wall RWA20	618 days	Tue 2/5/23	Wed 8/1/25										
630	Excavation	112 days	Tue 2/5/23	Mon 21/8/23										
631	Blinding layer	110 days	Tue 9/5/23	Sat 26/8/23	630SS+7 days									
632	Base slab (21 bays)	169 days	Tue 16/5/23	Tue 31/10/23	631SS+7 days									
633	Wall stem (21 bays)	136 days	Mon 3/7/23	Wed 15/11/23	632SS+10 days									
634	Additional Sewage System (PMI 086)	170 days	Thu 30/11/23	Fri 17/5/24	633									
635	PMI for Grey Water	30 days	Sat 18/5/24	Sun 16/6/24	634									

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ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
						1	11	21	1	11	21	1	11	21
636	pipe laying and drainage structure (Stage 1)	183 days	Wed 31/1/24	Wed 31/7/24										
637	pipe laying and drainage structure (Stage 2)	7 days	Thu 2/1/25	Wed 8/1/25										
638	Backfilling (15 layers)	117 days	Tue 16/4/24	Sat 10/8/24										
639	Retaining wall RWA19	382 days?	Fri 1/12/23	Mon 16/12/24										
640	Blinding layer (1-13)	45 days	Fri 1/12/23	Sun 14/1/24										
641	Base slab (1-13)	50 days	Mon 18/12/23	Mon 5/2/24	640SS+5 days									
642	Wall stem (1-13)	59 days	Tue 2/1/24	Thu 29/2/24	641SS+9 days									
643	pipe laying and drainage structure	30 days	Thu 1/8/24	Fri 30/8/24										
644	Backfilling (1-11)	69 days	Mon 2/9/24	Sat 9/11/24										
645	Blinding layer (14-18)	28 days	Sat 4/5/24	Fri 31/5/24										
646	Base slab (14-18)	28 days	Sun 5/5/24	Sat 1/6/24										
647	Wall stem (14-18)	45 days	Thu 9/5/24	Sat 22/6/24										
648	Pipe Laying and Drainage Structure (12-18)	148 days?	Mon 22/7/24	Mon 16/12/24										
649	Backfilling (12-18)	71 days	Mon 2/9/24	Mon 11/11/24										
650	Railing for RWA 19 & 20	177 days	Fri 2/5/25	Sat 25/10/25										
651	U channel & catchpit (1-11)	113 days	Mon 10/6/24	Mon 30/9/24										
652	U channel & catchpit (12-18)	232 days	Sat 2/11/24	Sat 21/6/25										
653	edging (1-11)	144 days	Mon 10/6/24	Thu 31/10/24										
654	edging (12-18)	6 days	Mon 18/11/24	Sat 23/11/24										
655	pavement	222 days	Mon 9/9/24	Sat 19/7/25										
656	Finsihing	230 days	Mon 10/3/25	Sat 25/10/25	654									
657	Soft landscaping works (Stage 1)	24 days	Mon 2/9/24	Wed 25/9/24										
658	Soft landscaping works (Stage 2)	100 days	Mon 23/6/25	Tue 30/9/25										
659	CCTV inspection, testing and commissioning	21 days	Thu 2/10/25	Wed 22/10/25										
660	Irrigation system Submission	716 days	Tue 16/5/23	Wed 30/4/25										
661	Contractor's design	79 days	Tue 16/5/23	Wed 2/8/23										
662	Approval of WWO542	40 days	Wed 1/11/23	Sun 10/12/23	661									
663	Approval of Form WWO 046	32 days	Mon 11/12/23	Thu 11/1/24	662									
664	Approval of WWO542 (amendment)	30 days	Mon 30/12/24	Tue 28/1/25										
665	Approval of Form WWO 046 (amendment)	30 days	Wed 29/1/25	Thu 27/2/25	664									
666	Irrigation system	163 days	Mon 8/7/24	Wed 30/4/25										
667	Lighting system	486 days	Mon 24/6/24	Wed 22/10/25										
668	Cable Duct, pillar box, cable pit & lamp post footing	311 days	Mon 24/6/24	Wed 30/4/25										
669	Cable wiring & accessories	83 days	Mon 17/2/25	Sat 10/5/25										
670	Installation of lamp post	82 days	Sun 11/5/25	Thu 31/7/25	669									
671	Testing and Commissioning of lighting	21 days	Thu 2/10/25	Wed 22/10/25										
672	Portion 12	1637 days?	Fri 30/7/21	Sat 24/1/26										
673	Provision of site access [on starting date as per Contract]	7 days	Fri 30/7/21	Thu 5/8/21										
674	Mobilization& Site Clearance	14 days	Fri 6/8/21	Thu 19/8/21										
675	Preparation& submission of MS, Temp works, associated plans & docs	52 days	Fri 20/8/21	Sun 10/10/21										
676	Engineer's AIP of MS, Temp works, plans& associated docs	22 days	Mon 11/10/21	Mon 1/11/21										
677	Additional GI at Portion 12 (PMI 005)	15 days	Wed 1/6/22	Wed 15/6/22										
678	Drainage pipe and manhole	379 days	Tue 2/11/21	Tue 15/11/22										
679	Excavation	364 days	Tue 2/11/21	Mon 31/10/22										
680	Pipe laying and manhole consrtruction including backfilling	245 days	Wed 16/3/22	Tue 15/11/22										
681	Dwaf wall construction (Stage 1)	105 days	Wed 16/11/22	Tue 28/2/23										
682	Awaiting for revision of design by PM due to interface	97 days	Wed 1/3/23	Mon 5/6/23										
683	Staircase	796 days?	Tue 15/8/23	Sat 18/10/25										
684	Footing (S1-10)	231 days	Tue 15/8/23	Mon 1/4/24										
685	Slab & Vertical Wall (S1-10)	258 days	Mon 28/8/23	Sat 11/5/24										
686	Wing Wall	70 days?	Sun 12/5/24	Sat 20/7/24										
687	Seat and railing (precast)	412 days	Mon 2/9/24	Sat 18/10/25										
688	Footing (S12-16)	141 days	Mon 13/5/24	Mon 30/9/24										
689	Footing (S11)	14 days	Mon 7/10/24	Sun 20/10/24										
690	Slab & Vertical & Wing Wall (S12-15)	123 days	Fri 31/5/24	Mon 30/9/24										
691	Slab & Vertical & Wing Wall (S11)	48 days	Mon 21/10/24	Sat 7/12/24	689									
692	Slab & Vertical & Wing Wall (S16)	33 days	Tue 15/4/25	Sat 17/5/25										
693	Dwafft wall (resumption) - Stage 2	286 days	Mon 4/3/24	Sat 14/12/24										
694	Confirmation of recess cover for u channel	1 day	Thu 25/4/24	Thu 25/4/24										
695	U channel & catchpit (Stage 1-S1-16)	239 days	Mon 15/7/24	Mon 10/3/25										
696	Edging (Stage1)	265 days	Mon 26/8/24	Sat 17/5/25										
697	Paving (Stage1)	136 days	Sun 18/5/25	Tue 30/9/25	696									
698	U channel & catchpit (Stage 2- Civic Plaza)	59 days	Fri 18/4/25	Sun 16/11/25	709									

Task

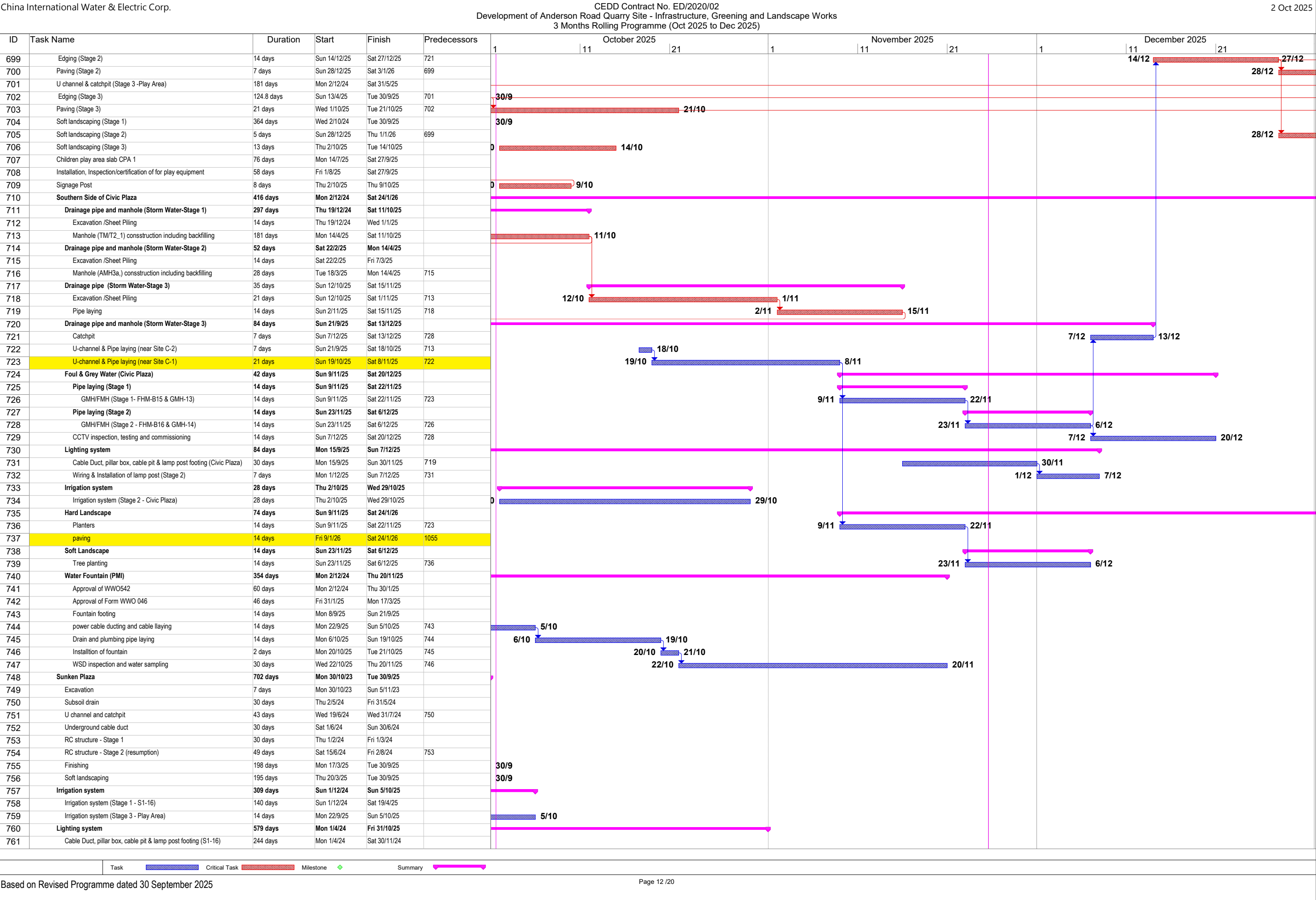
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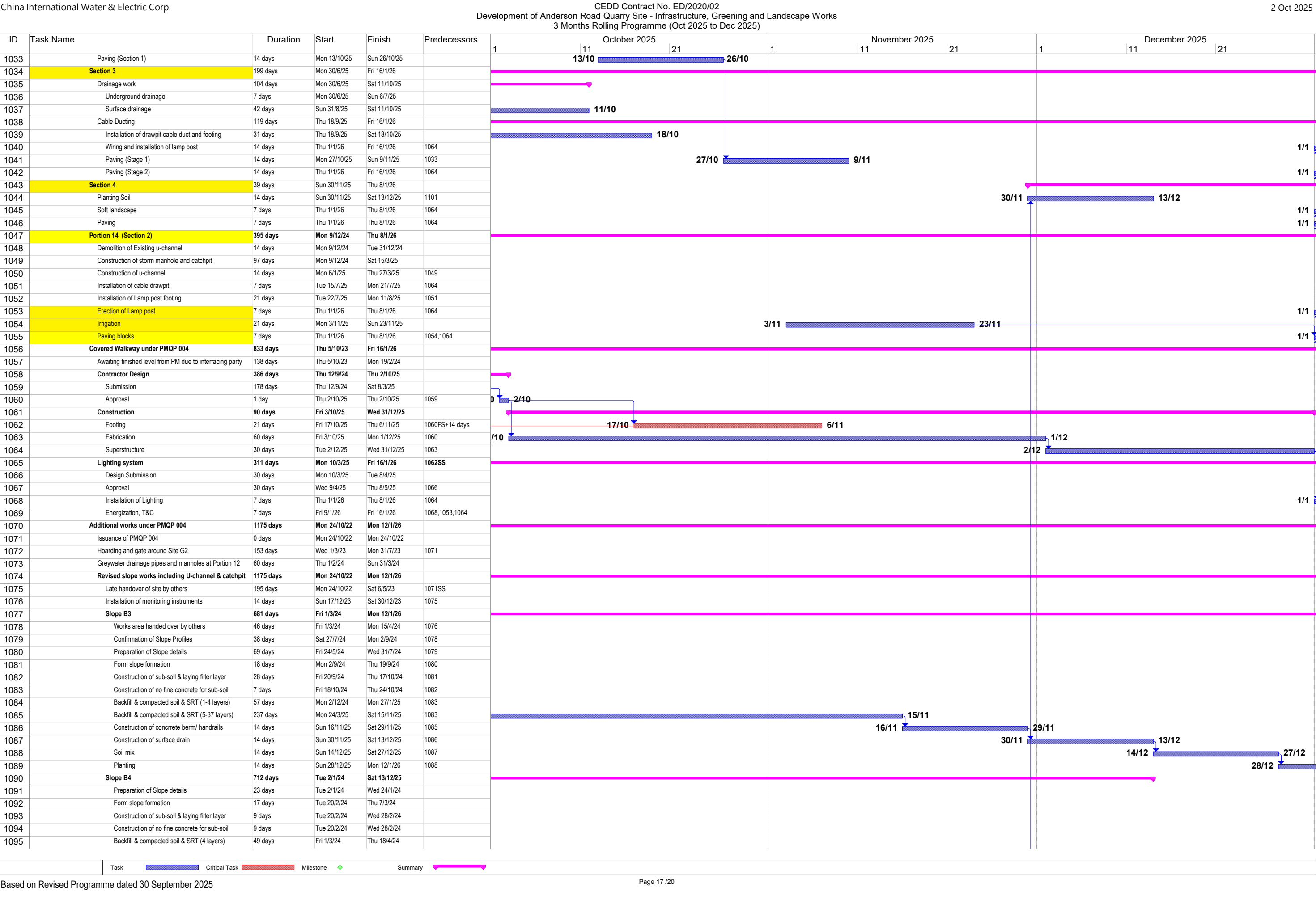


ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
						1	11	21	1	11	21	1	11	21
762	Installation of lamp post (Stage 1)	14 days	Fri 1/8/25	Thu 14/8/25										
763	Cable Duct, pillar box, cable pit & lamp post footing (CPA)	118 days	Mon 23/6/25	Sat 18/10/25				18/10						
764	Installation of lamp post (Stage 3)	22 days	Mon 21/7/25	Mon 11/8/25										
765	Cable wiring & accessories	195 days	Mon 14/4/25	Sat 25/10/25				25/10						
766	Testing and Commissioning of lighting	6 days	Sun 26/10/25	Fri 31/10/25	765			26/10			31/10			
767	Railing	398 days?	Mon 16/9/24	Sat 18/10/25										
768	Design Submission	46 days?	Mon 16/9/24	Thu 31/10/24										
769	Mockup	60 days	Tue 19/11/24	Fri 17/1/25	768									
770	Fabrication	258 days	Sat 18/1/25	Thu 2/10/25	769			2/10						
771	Installation	69 days	Mon 11/8/25	Sat 18/10/25				18/10						
772	Energization	385 days	Mon 7/10/24	Sun 26/10/25										
773	Pillar Box	75 days	Mon 7/10/24	Fri 20/12/24										
774	CLP ducting and energization	14 days	Mon 13/10/25	Sun 26/10/25				13/10			26/10			
775	Section of Works 4A - Establishment Works for all Landscape Softworks in Section 4 of the Works	1994 days?	Fri 30/7/21	Wed 17/3/27										
776	Commencement of Establishment Work for Section 4	0 days	Mon 5/1/26	Mon 5/1/26	651FS+1 day,695FS+1 d									
777	Establishment Work Duration for Section 4	365 days	Mon 5/1/26	Fri 5/3/27	776SS-1 day									
778	Completion of Works in Section 4	0 days	Fri 5/3/27	Fri 5/3/27	777									
779	Section of Works 5A - Portions 9, 10	1579 days?	Fri 30/7/21	Mon 24/11/25										
780	Portion 9 [Sitting Out Area C & R2-1 Footpath]	1518 days?	Wed 29/9/21	Mon 24/11/25										
781	Provision of site access [61 days after starting date as per Contract]	8 days	Wed 29/9/21	Wed 6/10/21	90SS									
782	Mobilization& Site Clearance	15 days	Thu 7/10/21	Thu 21/10/21	781									
783	Preparation& submission of MS, Temp works, associated plans & documents	75 days	Tue 1/2/22	Sat 16/4/22	782									
784	Engineer AIP of MS, Temp works, plans& associated docs	60 days	Sun 17/4/22	Wed 15/6/22	783									
785	Construction of U channel and catchpit	256 days	Thu 16/6/22	Sun 26/2/23	784,787FS-65 days,788F									
786	Time Risk Allowance	15 days	Mon 27/2/23	Mon 13/3/23	785									
787	Modification of existing surface drain at slope toe (PMI 032)	0 days	Fri 19/8/22	Fri 19/8/22										
788	Modification of existing surface drain at slope toe (PMI 050)	0 days	Wed 28/9/22	Wed 28/9/22	787									
789	Interface RS-1 and return of Site	574 days	Tue 14/3/23	Mon 7/10/24										
790	Resumption of modification of existing drain at slope toe (late return from RS-1)	60 days	Mon 14/10/24	Thu 12/12/24	789									
791	Backfilling and compaction of road materials	74 days	Fri 13/12/24	Mon 24/2/25	790									
792	Installation of E1 kerbs	124 days	Tue 25/2/25	Sat 28/6/25	791									
793	Construction of porous pavement footpath	145 days	Mon 17/3/25	Fri 8/8/25										
794	TTA Approval (Bicycle Lane)	1 day?	Mon 13/10/25	Mon 13/10/25				13/10						
795	Construction of porous pavement footpath (Stage 2 to bicycle lane)	14 days	Tue 14/10/25	Mon 27/10/25	794			14/10			27/10			
796	Installation of street furniture, traffic signs, bollards and road marking	14 days	Tue 28/10/25	Mon 10/11/25	795			28/10			10/11			
797	Landscaping works	7 days	Tue 28/10/25	Mon 3/11/25	795			28/10			3/11			
798	Modification of existing kerb to drop kerb	7 days	Sun 15/6/25	Sat 28/6/25	797									
799	Lighting system (Footpath)	413 days	Tue 8/10/24	Mon 24/11/25										
800	Cable Duct, pillar box, cable pit & lamp post footing	137 days	Tue 8/10/24	Fri 21/2/25	789									
801	Cable wiring & accessories	14 days	Tue 14/10/25	Mon 27/10/25	794			14/10			27/10			
802	Installation of lamp post (by HWY)	14 days	Tue 28/10/25	Mon 10/11/25	801			28/10			10/11			
803	Testing and Commissioning of lighting	14 days	Tue 11/11/25	Mon 24/11/25	802						11/11			24/11
804	Sitting Out Area (DOS)	900 days	Tue 16/5/23	Fri 31/10/25										
805	Site Access Blocked by Shui On	48 days	Mon 24/2/25	Sat 12/4/25										
806	Implementation of TTA for site access	2 days	Mon 12/5/25	Tue 13/5/25	805									
807	Site Formation	28 days	Sun 15/6/25	Sat 12/7/25	806									
808	U channel and catchpit	14 days	Sun 13/7/25	Sat 26/7/25	807									
809	Kerb (E27)	7 days	Sun 27/7/25	Sat 2/8/25	808									
810	Drainage layer & sub soil drain	7 days	Sun 3/8/25	Sat 9/8/25	809									
811	Soil replacement	7 days	Sun 21/9/25	Sat 27/9/25	810									
812	Concrete Seat	7 days	Sun 28/9/25	Sat 4/10/25	811			4/10						
813	Subbase and paving	7 days	Sun 5/10/25	Sat 11/10/25	812			5/10			11/10			
814	Moveable Planter	7 days	Sun 12/10/25	Sat 18/10/25	813			12/10			18/10			
815	Irrigation system (DOS)	900 days	Tue 16/5/23	Fri 31/10/25										
816	Contractor's design	79 days	Tue 16/5/23	Wed 2/8/23										
817	Approval of WWO542	40 days	Mon 18/12/23	Fri 26/1/24	816									
818	Approval of Form WWO 046	32 days	Sat 27/1/24	Tue 27/2/24	817									
819	Irrigation system	7 days	Sun 12/10/25	Sat 18/10/25	813			12/10			18/10			
820	Testing	7 days	Sun 19/10/25	Sat 25/10/25	819						19/10			25/10
821	Reinstatement of cycling track and road marking	6 days	Sun 26/10/25	Fri 31/10/25	820						26/10			31/10
822	Lighting system (Park Light- DOS)	581 days	Thu 28/3/24	Wed 29/10/25										
823	Design and fabrication for lamp post holding down bolt	94 days	Thu 28/3/24	Sat 29/6/24										

ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
824	Cable Duct, pillar box, cable pit & lamp post footing	14 days	Mon 23/6/25	Sun 6/7/25		1	11	21	1	11	21	1	11	21
825	Cable wiring & accessories	14 days	Thu 2/10/25	Wed 15/10/25		0			15/10					
826	Installation of lamp post	7 days	Thu 16/10/25	Wed 22/10/25	807,805,825	16/10			22/10					
827	CLP ducting and energization	7 days	Thu 23/10/25	Wed 29/10/25	826	23/10			29/10					
828	Portion 10	1524 days	Fri 30/7/21	Tue 30/9/25										
829	Provision of site access [on starting date as per Contract]	7 days	Fri 30/7/21	Thu 5/8/21	95SS									
830	Slope inspection & assessment work	50 days	Fri 6/8/21	Fri 24/9/21	829									
831	Mobilization, access arrangements, logistic plan & Site Clearance	52 days	Sat 25/9/21	Mon 15/11/21	830									
832	Preparation & submission of MS, Temp works, associated plans & d	37 days	Tue 16/11/21	Wed 22/12/21	831									
833	Time Risk Allowance	16 days	Thu 23/12/21	Fri 7/1/22	832									
834	Main access blocked by C1at hiking trail	181 days	Mon 3/7/23	Sat 30/12/23										
835	Engineer's AIP of MS, Temp.works, plans & associated docs	21 days	Sat 8/1/22	Fri 28/1/22	833									
836	Demolition and removal of disused water pipe and sprinkler system	160 days	Sat 29/1/22	Thu 7/7/22	835									
837	Repair of cracks at drainage channel and concrete berm	884 days	Thu 1/9/22	Fri 31/1/25	836									
838	Reinstatement of joint sealant at drainage channel	899 days	Fri 16/9/22	Sun 2/3/25	836									
839	Installation of display sign for slope registration	31 days	Sun 31/8/25	Tue 30/9/25		30/9								
840	Slope Works at Feature No. 11NE-D/C947 (420m)	568 days	Sun 31/12/23	Sun 20/7/25										
841	Removal of damaged wire mesh and installation of wire mesh (Stage 1 at +330 mPD)	30 days	Sun 31/12/23	Mon 29/1/24	834									
842	Installation of wire mesh (Stage 2 at +330mPD)	30 days	Tue 15/10/24	Wed 13/11/24										
843	Filling of void with cement soil	7 days	Tue 18/2/25	Mon 24/2/25	878									
844	Reinstatement of concrete berm	14 days	Mon 24/3/25	Sun 6/4/25	843									
845	Installation of hand railings	7 days	Sat 21/9/24	Fri 27/9/24	844									
846	Repainting of handrailing	19 days	Wed 2/7/25	Sun 20/7/25										
847	Slope Works at Feature No. 11NE-D/C976 (185m)	298 days	Sat 21/9/24	Tue 15/7/25										
848	Construction of concrete berm	21 days	Sat 21/9/24	Fri 11/10/24	844									
849	Installation of hand railings	7 days	Sat 12/10/24	Fri 18/10/24	848									
850	Repainting of existing steel maintenance staircase	7 days	Wed 2/7/25	Tue 8/7/25										
851	Removal of existing handrailing and steel landing plates and re-construction	7 days	Wed 9/7/25	Tue 15/7/25	850									
852	Construction of wire mesh	73 days	Thu 2/1/25	Sat 15/3/25										
853	Slope Works at Feature No. 11NE-D/C977 (300m)	409 days	Sun 26/5/24	Tue 8/7/25										
854	Construction of wire mesh	28 days	Sat 1/2/25	Sat 29/3/25	852									
855	Construction of concrete berm	14 days	Sat 12/10/24	Fri 25/10/24	848									
856	Construction of handrailing	7 days	Sun 26/5/24	Sat 1/6/24										
857	Repair drainage channel	7 days	Wed 2/7/25	Tue 8/7/25										
858	Slope Works at Feature No. 11NE-D/C986 (190m)	432 days	Fri 3/5/24	Tue 8/7/25										
859	Filling of void with cement soil	7 days	Wed 2/7/25	Tue 8/7/25										
860	Construction of concrete berm	14 days	Fri 3/5/24	Thu 16/5/24										
861	Installation of hand railings	6 days	Fri 26/7/24	Wed 31/7/24										
862	Construction of wire mesh	55 days	Mon 20/1/25	Sat 15/3/25										
863	Slope Works at Feature No. 11NE-D/C1026 (60m)	441 days	Fri 18/8/23	Thu 31/10/24										
864	Filling of void with cement soil	30 days	Wed 1/11/23	Thu 30/11/23										
865	Installation of non-biodegradable erosion control mat	30 days	Fri 1/12/23	Sat 30/12/23	864									
866	Hydroseeding	30 days	Wed 2/10/24	Thu 31/10/24										
867	Repainting of handrailing	90 days	Fri 18/8/23	Wed 15/11/23										

ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
						1	11	21	1	11	21	1	11	21
886	Installation of hand railings	7 days	Fri 14/6/24	Thu 20/6/24	885									
887	Slope Works at Feature No. 11NE-D/C1003 (265m)	28 days	Fri 14/6/24	Thu 11/7/24										
888	Removal of disused pipes	21 days	Fri 14/6/24	Thu 4/7/24	885									
889	Installation of hand railings	7 days	Fri 5/7/24	Thu 11/7/24	888									
890	Slope Works at Feature No. 11NE-D/FR657 (63m)	169 days	Thu 25/1/24	Thu 11/7/24										
891	Filling of void with cement soil	7 days	Fri 5/7/24	Thu 11/7/24	888									
892	Repainting of handrailing	140 days	Thu 25/1/24	Wed 12/6/24										
893	Slope Works at Feature No. 11NE-D/C1006 (60m)	57 days	Thu 1/2/24	Thu 28/3/24										
894	Construction of concrete berm (~30m)	28 days	Thu 1/2/24	Wed 28/2/24										
895	Installation of hand railings (~30m)	14 days	Thu 29/2/24	Wed 13/3/24	894									
896	Repainting of handrailing	14 days	Thu 14/3/24	Wed 27/3/24	895									
897	Slope Works at Feature No. 11NE-D/C980 (55m)	104 days	Thu 29/2/24	Tue 11/6/24										
898	Construction of concrete berm	14 days	Thu 29/2/24	Wed 13/3/24	894									
899	Installation of hand railings	7 days	Thu 14/3/24	Wed 20/3/24	898									
900	Repainting of handrailing	90 days	Thu 14/3/24	Tue 11/6/24										
901	Slope Works at Feature No. 11NE-D/C174 (70m)	14 days	Thu 14/3/24	Wed 27/3/24										
902	Reinstatement of sprayed concrete	14 days	Thu 14/3/24	Wed 27/3/24	898									
903	Slope Works at Feature No. 11NE-D/C688 (167m)	28 days	Wed 31/1/24	Tue 27/2/24										
904	Construction of tree rings x9	28 days	Wed 31/1/24	Tue 27/2/24										
905	Reinstatement of sprayed concrete	7 days	Thu 17/8/23	Wed 23/8/23										
906	Slope Works at Feature No. 11NE-D/C978 (350m)	1441 days	Fri 30/7/21	Wed 9/7/25										
907	Construction of concrete berm	8 days	Fri 30/7/21	Fri 6/8/21										
908	Installation of hand railings	8 days	Fri 30/7/21	Fri 6/8/21										
909	Repairing of existing steel maintenance staircase	8 days	Wed 2/7/25	Wed 9/7/25										
910	Slope Works at Feature No. 11NE-D/C1004 (375m)	14 days	Wed 2/7/25	Tue 15/7/25										
911	Repainting of handrailing	14 days	Wed 2/7/25	Tue 15/7/25										
912	Slope Works at Feature No. 11NE-D/C998 (409m)	760 days	Mon 14/2/22	Thu 14/3/24										
913	Construction of concrete maintenance staircase	19 days	Mon 14/2/22	Fri 4/3/22										
914	Handrailing	14 days	Fri 1/3/24	Thu 14/3/24										
915	Section of Works 5AI - Establishment Works for all Landscape Softworks in Section 5A of the Works	1994 days?	Fri 30/7/21	Wed 17/3/27										
916	Commencement of Establishment Work for Section 5A	0 days	Wed 1/10/25	Wed 1/10/25	828FF+1 day									
917	Establishment Work Duration for Section 5A	365 days	Wed 1/10/25	Sat 14/11/26	916SS-1 day									
918	Completion of Works in Section 5A	0 days	Sat 14/11/26	Sat 14/11/26	917									
919	Section of Works 5B - Portion 11	1367 days	Sun 27/2/22	Mon 24/11/25										
920	Portion 11	1367 days	Sun 27/2/22	Mon 24/11/25										
921	Provision of site access [212 days after starting date as per Contract]	0 days	Sun 27/2/22	Sun 27/2/22										
922	Portion 9 delay (Handover site to other Contractor)	231.47 days	Tue 14/3/23	Sat 31/8/24										
923	Provision of site access and stockpile area for works at Portion 9	1 day	Mon 7/10/24	Mon 7/10/24	803									
924	TTA	1 day	Mon 13/10/25	Mon 13/10/25										
925	UU works	21 days	Tue 14/10/25	Mon 3/11/25	924									
926	Kerb and Finishing	7 days	Tue 18/11/25	Mon 24/11/25	925,803FF									
927	Section of Works 6 - Portion 7	494 days	Tue 29/11/22	Fri 5/4/24										
928	Portion 7	494 days	Tue 29/11/22	Fri 5/4/24										
929	Access date [487 days after starting date as per Contract]	0 days	Tue 29/11/22	Tue 29/11/22	112SS									
930	Deferred possession (PMI 58)	90 days	Tue 29/11/22	Sun 26/2/23	929									
931	Provision of site access	7 days	Mon 27/2/23	Sun 5/3/23	930									
932	Mobilization& Site Clearance	60 days	Mon 6/3/23	Thu 4/5/23	931									
933	Time Risk Allowance	15 days	Fri 5/5/23	Fri 19/5/23	932									
934	Excavation/backfilling and compaction of material	30 days	Fri 1/12/23	Sat 30/12/23	932,933									
935	Construction of U-channels with cover and catchpits	30 days	Sun 31/12/23	Mon 29/1/24	934									
936	Road Paving work and associates street furniture	15 days	Tue 19/3/24	Fri 5/4/24										
937	Soft landscaping works	10 days	Wed 20/3/24	Fri 29/3/24										
938	Irrigation system	196 days	Sat 16/9/23	Fri 29/3/24										
939	Contractor's design	45 days	Sat 16/9/23	Mon 30/10/23										
940	Approval of WWO542	30 days	Wed 1/11/23	Thu 30/11/23	939									
941	Approval of Form WWO 046	21 days	Fri 1/12/23	Thu 21/12/23	940									
942	Underground water supply for irrigation	10 days	Fri 22/12/23	Sun 31/12/23	941									
943	Irrigation system	10 days	Fri 1/3/24	Sun 10/3/24										
944	Modification of Manhole and catchpits	12 days	Mon 18/3/24	Fri 29/3/24										
945	Section of Works 6A - Establishment Works for all Landscape Softworks in Section 6 of the Works	858 days	Tue 29/11/22	Fri 4/4/25										
946	Commencement of Establishment Work for Section 6	0 days	Tue 29/11/22	Tue 29/11/22										
947	Completion of Works in Section 6	0 days	Fri 5/4/24	Fri 5/4/24	946									

Task		Critical Task	Milestone	Summary



ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
						1	11	21	1	11	21	1	11	21
1096	Inclement weather	156 days	Fri 19/4/24	Sat 21/9/24	1095									
1097	Backfill & compacted soil & SRT (5-9 layers)	90 days	Mon 28/10/24	Sat 25/1/25	1096									
1098	Backfill & compacted soil & SRT (10-18layers) -resur	62 days	Thu 27/3/25	Tue 27/5/25	1096									
1099	Construction of concrete berm	41 days	Mon 30/6/25	Sat 9/8/25	1098									
1100	Backfill & compacted soil & SRT (19-33layers) -resur	97 days	Mon 11/8/25	Sat 15/11/25	1099									
1101	Construction of surface drain	14 days	Sun 16/11/25	Sat 29/11/25	1100									
1102	Hard Landscape	14 days	Sun 30/11/25	Sat 13/12/25	1101									
1103	Revised access road including roundabout, drainage, sewerage and water mains	1135 days	Mon 14/11/22	Mon 22/12/25										
1104	Drainage	184 days	Wed 1/3/23	Thu 31/8/23										
1105	manholes connection for drainage	184 days	Wed 1/3/23	Thu 31/8/23										
1106	sewerage (Stage 1)	184 days	Wed 1/3/23	Thu 31/8/23										
1107	sewerage (Stage 2 -connect to G2-B4)	30 days	Mon 13/1/25	Tue 11/2/25										
1108	Concrete pavement at roundabout (Stage 1)	61 days	Thu 1/6/23	Mon 31/7/23										
1109	Concrete pavement at roundabout run-in (Stage 2)	14 days	Mon 26/5/25	Sun 8/6/25	1125									
1110	footpath	1135 days	Mon 14/11/22	Mon 22/12/25										
1111	Implementation of TTA	1 day	Mon 12/12/22	Mon 12/12/22	1071									
1112	UU detection	7 days	Tue 13/12/22	Mon 19/12/22	1111									
1113	Trial pit	14 days	Tue 20/12/22	Mon 2/1/23	1112									
1114	HYD condition letter and WSD's approval	60 days	Mon 8/7/24	Mon 30/9/24										
1115	Change design by Highways Department Lighting	67 days	Fri 29/9/23	Mon 4/12/23	1114									
1116	TTA design review and revise	50 days	Tue 5/12/23	Tue 23/1/24	1115									
1117	Implementation of TTA	1 day	Wed 24/1/24	Wed 24/1/24	1116									
1118	UU detection	3 days	Thu 25/1/24	Sat 27/1/24	1117									
1119	Trial pit	7 days	Sun 28/1/24	Sat 3/2/24	1118									
1120	Completion of handover of existing watermain to WSD, subject to C1(Since commencement of G2)	0 days	Fri 1/3/24	Fri 1/3/24	1119									
1121	G-2 Interface issue	199 days	Sat 2/3/24	Mon 16/9/24	1120									
1122	Watermain along new footpath at Slope B4	62 days	Mon 24/3/25	Sat 24/5/25										
1123	UU protection, relocation of hydrant	41 days	Mon 19/5/25	Sat 28/6/25										
1124	Cable for relocation of lamp post	27 days	Mon 17/3/25	Sat 12/4/25	1107									
1125	Relocation of Lamp post (Subject o HyD)	13 days	Mon 22/9/25	Sat 4/10/25	1124									
1126	Installation of site UU lead in (by others) - Stage 1 (Telecom ,CLP, gas)	60 days	Mon 25/11/24	Thu 23/1/25										
1127	Installation of site UU lead in (by others) - Stage 2 (Telecom ,CLP, gas)	30 days	Mon 30/6/25	Tue 29/7/25										
1128	Installation of site UU lead in (by others) - Stage 3 (CLP	14 days	Tue 9/12/25	Mon 22/12/25	1159									
1129	New Lamp Post (Highways)	14 days	Thu 9/10/25	Wed 22/10/25										
1130	paving	14 days	Thu 23/10/25	Wed 5/11/25	1129									
1131	Park Lighting system (DOS)	1095 days	Mon 14/11/22	Wed 12/11/25										
1132	Application for electricity power supply	421 days	Mon 14/11/22	Mon 8/1/24	624SS									
1133	Design Change of Layout (PMI-085)	1 day	Mon 8/1/24	Mon 8/1/24	625SS									
1134	Park Lighting Design	612 days	Mon 14/11/22	Wed 17/7/24	626SS									
1135	LCSD's approval of lighting system	30 days	Thu 18/7/24	Fri 16/8/24	627SS									
1136	Installation including ducting and draw pit	30 days	Sun 27/7/25	Mon 25/8/25	1135,1024									
1137	Installation of lighting	30 days	Mon 22/9/25	Tue 21/10/25	1136									
1138	Energization	15 days	Wed 22/10/25	Wed 5/11/25	1137									
1139	Testing and Commissioning	7 days	Thu 6/11/25	Wed 12/11/25	1138									
1140	Portion 15- Sewerage Works	574 days	Mon 3/6/24	Sun 28/12/25										
1141	Pipe pile wall	514 days	Mon 3/6/24	Wed 29/10/25										
1142	Temp Work re-design due to unforeseen ground condition	141 days	Mon 3/6/24	Mon 21/10/24										
1143	Implementation of TTA	2 days	Mon 21/10/24	Tue 22/10/24										
1144	UU Detection	1 day	Wed 23/10/24	Wed 23/10/24	1143									
1145	Trial pit	7 days	Thu 24/10/24	Wed 30/10/24	1144									
1146	Pipe Pile Installation	14 days	Sun 3/11/24	Sat 16/11/24	1145									
1147	Excavation	56 days	Sun 17/11/24	Sat 11/1/25	1146									
1148	Sewerage manhole (G2-B4) and HDPE pipe	45 days	Mon 24/3/25	Wed 7/5/25	1147									
1149	Backfill	66 days	Thu 8/5/25	Sat 12/7/25	1148									
1150	roadwork reinstatement	7 days	Thu 23/10/25	Wed 29/10/25	1129									
1151	Watermain pipe works (uphill of On Kin Road)	49 days	Sun 25/5/25	Sat 12/7/25	1122									
1152	Watermain downhill of On Kin Road	60 days	Thu 30/10/25	Sun 28/12/25										
1153	Implementation of TTA	2 days	Thu 30/10/25	Fri 31/10/25	1150									
1154	UU Detection	2 days	Sat 1/11/25	Sun 2/11/25	1153									
1155	Trial pit	7 days	Mon 3/11/25	Sun 9/11/25	1154									
1156	Watermain pipe works	21 days	Mon 10/11/25	Sun 30/11/25	1155									

ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
						1	11	21	1	11	21	1	11	21
1157	WSD connection	14 days	Mon 11/12/25	Sun 14/12/25	1156									
1158	Backfill	7 days	Mon 15/12/25	Sun 21/12/25	1157									
1159	roadwork reinstatement	7 days	Mon 22/12/25	Sun 28/12/25	1158									
1160	Irrigation system	699 days	Fri 19/5/23	Wed 16/4/25										
1161	Contractor's design	76 days	Fri 19/5/23	Wed 2/8/23										
1162	Approval of WWO542	30 days	Thu 3/8/23	Fri 1/9/23	1161									
1163	Approval of Form WWO 046	21 days	Sat 2/9/23	Fri 22/9/23	1162									
1164	Underground water supply for irrigation	60 days	Sat 23/9/23	Tue 21/11/23										
1165	Irrigation system	45 days	Mon 3/3/25	Wed 16/4/25										
1166	Section of Works 7BI - Establishment Works for all Landscape Softworks in Section 7B of the Works	1994 days?	Fri 30/7/21	Wed 17/3/27										
1167	Commencement of Establishment Work for Section 7B	0 days	Fri 16/1/26	Fri 16/1/26	983									
1168	Establishment Work Duration for Section 7B	365 days	Fri 16/1/26	Wed 17/3/27	1167SS-1 day									
1169	Completion of Works in Section 7B	0 days	Wed 17/3/27	Wed 17/3/27	1168									
1170	Section of Works 8 - Portion 16	556 days	Thu 16/6/22	Sat 23/12/23										
1171	Portion 16	556 days	Thu 16/6/22	Sat 23/12/23										
1172	Site access date [321 days after starting date as per Contract]	0 days	Thu 16/6/22	Thu 16/6/22	151SS									
1173	Time Risk Allowance	24 days	Thu 16/6/22	Sat 9/7/22	1172									
1174	Late handover of site by others	350 days	Thu 16/6/22	Wed 31/5/23	1173									
1175	Mobilization& Site Clearance	4 days	Thu 1/6/23	Sun 4/6/23	1174									
1176	Removal of existing rock slope	45 days	Mon 5/6/23	Wed 19/7/23	1175									
1177	Construction of fill slope A7	90 days	Thu 20/7/23	Tue 17/10/23	1176									
1178	Construction of fill slope A8	80 days	Sun 30/7/23	Tue 17/10/23	1177FF									
1179	Construction of slope surface drainage system	45 days	Wed 18/10/23	Fri 1/12/23	1177									
1180	Hydroseeding	22 days	Sat 2/12/23	Sat 23/12/23	1179									
1181	Chain link fence	30 days	Fri 24/11/23	Sat 23/12/23	1179FF									
1182	Thrust boring of additional pipe from S201D to MHT1	78 days	Mon 2/10/23	Mon 18/12/23										
1183	Section of Works 8A - Establishment Works for all Landscape Softworks in Section 8 of the Works	365 days	Fri 27/9/24	Fri 26/9/25										
1184	Commencement of Establishment Work for Section 8	0 days	Fri 27/9/24	Fri 27/9/24	1185SS									
1185	Establishment Work Duration for Section 8	365 days	Fri 27/9/24	Fri 26/9/25	1180									
1186	Completion of Works in Section 8	0 days	Fri 26/9/25	Fri 26/9/25	1185FF									
1187	Section of Works 9 - Portion 17	1494 days	Fri 30/7/21	Sun 31/8/25										
1188	Portion 17	1494 days	Fri 30/7/21	Sun 31/8/25										
1189	Provision of site access [212 days after starting date as per Contract]	0 days	Sun 27/2/22	Sun 27/2/22	162SS									
1190	Deferred possession	30 days	Sun 27/2/22	Mon 28/3/22	1189									
1191	Slope inspection & assessment work & Tree Survey	23 days	Tue 29/3/22	Wed 20/4/22	1190									
1192	Mobilization, access & Site Clearance	15 days	Thu 21/4/22	Thu 5/5/22	1191									
1193	Time Risk Allowance	14 days	Fri 6/5/22	Thu 19/5/22	1191,1192									
1194	Access blocked by C1 at hiking trail	181 days	Mon 3/7/23	Sat 30/12/23										
1195	Demolition and removal of disused water pipe and sprinkler sy	50 days	Fri 20/5/22	Fri 8/7/22	1193									
1196	Repair of cracks at drainage channel and concrete berm	777 days	Sat 14/1/23	Fri 28/2/25	1195									
1197	Reinstatemnt of joint sealant at drainage channel	776 days	Sun 15/1/23	Fri 28/2/25										
1198	Installation of display sign for slope registration	60 days	Tue 31/12/24	Fri 28/2/25										
1199	Reinstatement of eroded soil berm due to inclement weather (PMI 117)	128 days	Thu 7/9/23	Fri 12/1/24										
1200	Slope Works at Feature No. 11NE-D/C948 (310m)	352 days	Sun 31/12/23	Mon 16/12/24										
1201	Construction of concrete berm	14 days	Thu 25/7/24	Wed 7/8/24	1253									
1202	Repainting of existing steel maintenance staircase	7 days	Tue 10/12/24	Mon 16/12/24	1201									
1203	Construction of wire mesh	352 days	Sun 31/12/23	Mon 16/12/24	1194									
1204	Slope Works at Feature No. 11NE-D/C949 (603m)	1154 days	Fri 30/7/21	Wed 25/9/24										
1205	Construction of concrete berm	14 days	Fri 30/7/21	Thu 12/8/21										
1206	Installation of hand railings	7 days	Fri 13/8/21	Thu 19/8/21	1205									
1207	Construction of wire mesh	30 days	Tue 27/8/24	Wed 25/9/24	1203,1206									
1208	Slope Works at Feature No. 11NE-D/C981 (390m)	1170 days	Fri 13/8/21	Fri 25/10/24										
1209	Construction of concrete berm	14 days	Fri 13/8/21	Thu 26/8/21	1205									
1210	Installation of hand railings	7 days	Fri 27/8/21	Thu 2/9/21	1209									
1211	Construction of wire mesh	30 days	Thu 26/9/24	Fri 25/10/24	1207									
1212	Slope Works at Feature No. 11NE-B/C1013 (340m)	1186 days	Fri 27/8/21	Sun 24/11/24										
1213	Construction of wire mesh	30 days	Sat 26/10/24	Sun 24/11/24	1211									
1214	Construction of concrete berm	14 days	Fri 27/8/21	Thu 9/9/21	1209									
1215	Installation of hand railings	7 days	Fri 10/9/21	Thu 16/9/21	1214									
1216	Construction of concrete maintenance staircase with hand	33 days	Mon 19/2/24	Fri 22/3/24										
1217	Slope Works at Feature No. 11NE-B/C902 (360m)	326 days	Wed 24/1/24	Sat 14/12/24										

ID	Task Name	Duration	Start	Finish	Predecessors	October 2025			November 2025			December 2025		
1218	Filling of void with concrete	20 days	Mon 25/11/24	Sat 14/12/24		1	11	21	1	11	21	1	11	21
1219	Construction of concrete berm	14 days	Wed 24/1/24	Tue 6/2/24										
1220	Installation of hand railings	7 days	Wed 7/2/24	Tue 13/2/24										
1221	Repainting of existing steel maintenance staircase	14 days	Thu 28/3/24	Wed 10/4/24										
1222	Slope Works at Feature No. 11NE-B/C224 (40m)	14 days	Wed 16/10/24	Tue 29/10/24										
1223	Reinstatement of sprayed concrete	14 days	Wed 16/10/24	Tue 29/10/24										
1224	Slope Works at Feature No. 11NE-B/C225 (60m)	183 days	Wed 30/10/24	Wed 30/4/25										
1225	Reinstatement of sprayed concrete	14 days	Wed 30/10/24	Tue 12/11/24	1223									
1226	Reinstatement of damaged granite stone planter wall and granoite stone facing	73 days	Mon 17/2/25	Wed 30/4/25										
1227	Make good and provide cover for existing damaged U-channel	108 days	Mon 13/1/25	Wed 30/4/25										
1228	Slope Works at Feature No. 11NE-B/C1014 (90m)	14 days	Wed 13/11/24	Tue 26/11/24										
1229	Remove water pump & electric box	14 days	Wed 13/11/24	Tue 26/11/24	1225									
1230	Slope Works at Feature No. 11NE-B/C901 (290m)	518 days	Fri 2/6/23	Thu 31/10/24										
1231	Installation of non-biodegradable erosion control mat	90 days	Fri 2/6/23	Wed 30/8/23										
1232	Hydroseeding	30 days	Wed 2/10/24	Thu 31/10/24										
1233	Installation of hand railings	36 days	Thu 7/9/23	Thu 12/10/23										
1234	Repainting of handrailing	20 days	Sun 22/10/23	Fri 10/11/23										
1235	Filling of void with concrete	37 days	Tue 2/1/24	Wed 7/2/24										
1236	Reinstatement of concrete berm	14 days	Thu 6/6/24	Wed 19/6/24	1235									
1237	Construction of lockable gate	7 days	Thu 20/6/24	Wed 26/6/24	1236									
1238	Slope Works at Feature No. 11NE-B/C900 (335m)	892 days	Sat 9/7/22	Mon 16/12/24										
1239	Installation of non-biodegradable erosion control mat	78 days	Sun 12/2/23	Sun 30/4/23										
1240	Hydroseeding	30 days	Fri 1/11/24	Sat 30/11/24										
1241	Installation of hand railings	60 days	Sat 9/7/22	Tue 6/9/22										
1242	Reinstatement of concrete berm	7 days	Thu 20/6/24	Wed 26/6/24	1236									
1243	Repainting of handrailing	30 days	Wed 10/5/23	Thu 8/6/23										
1244	Construction of Wire mesh	15 days	Mon 2/12/24	Mon 16/12/24										
1245	Slope Works at Feature No. 11NE-B/C899 (280m)	388 days	Mon 19/6/23	Wed 10/7/24										
1246	Filling of voids with concrete	7 days	Thu 27/6/24	Wed 3/7/24	1242									
1247	Construction of concrete berm	7 days	Thu 4/7/24	Wed 10/7/24	1246									
1248	Installation of hand railings	60 days	Mon 19/6/23	Thu 17/8/23										
1249	Repainting of handrailing	30 days	Thu 6/7/23	Fri 4/8/23										
1250	Slope Works at Feature No. 11NE-D/C872 (250m)	892 days	Sat 9/7/22	Mon 16/12/24										
1251	Installation of hand railings	60 days	Sat 9/7/22	Tue 6/9/22										
1252	Repainting of handrailing	30 days	Sun 2/4/23	Mon 1/5/23										
1253	Reinstatement of concrete berm	7 days	Tue 10/12/24	Mon 16/12/24	1254									
1254	Filling of void with concrete	7 days	Tue 3/12/24	Mon 9/12/24	1247									
1255	Slope Works at Feature No. 11NE-C/900 (Stage 2)	45 days	Thu 2/1/25	Sat 15/2/25										
1256	Installation of non-biodegradable erosion control mat	45 days	Thu 2/1/25	Sat 15/2/25										
1257	Slope Works at Feature No. 11NE-B/C903	30 days	Mon 2/12/24	Tue 31/12/24										
1258	Installation of non-biodegradable erosion control mat	30 days	Mon 2/12/24	Tue 31/12/24										
1259	Defects Rectification Works	29 days	Sun 3/8/25	Sun 31/8/25										
1260	Section of Works 9A - Establishment Works for all Landscape Softworks in Section 9 of the Works	365 days	Fri 28/2/25	Mon 9/3/26										
1261	Commencement of Establishment Work for Section 9	0 days	Fri 28/2/25	Fri 28/2/25										
1262	Establishment Work Duration for Section 9	365 days	Fri 28/2/25	Mon 9/3/26	1261									
1263	Completion of Works in Section 9	0 days	Mon 9/3/26	Mon 9/3/26	1262									
1264	Section of Works 10 - All Tree Protection and Preservation Works	1202 days?	Fri 30/7/21	Tue 12/11/24										
1265	Commencement of All Tree Protection and Preservation Work	0 days	Fri 30/7/21	Fri 30/7/21										
1266	All Tree Protection and Preservation Work	1202 days	Fri 30/7/21	Tue 12/11/24										
1267	Completion of All Tree Protection and Preservation Work	0 days	Tue 12/11/24	Tue 12/11/24	1266									

Appendix D

Monitoring Locations for Impact Monitoring

**Monitoring Locations
for
Contract 1 (NE/2016/01)**

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.
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HVS in AMS-1 for 24-Hour TSP



- Legend
- Study Area
 - 500m Assessment Area
 - Dust Monitoring Locations



B	SECOND ISSUE	GL	03/14
A	FIRST ISSUE	GL	10/13
Rev	Description	By	Date

Consultant
ARUP

Contract No. and Title
Agreement No. CE 18/2012(CE)
**Development of
Anderson Road Quarry -
Investigation**

Drawing title
**Locations of Construction
Dust Monitoring
(Sheet 1 of 3)**

Drawing no.	227724/E/1045	Rev.	B
Drawn	Date	Checked	Approved
GL	03/14	TC	ST
Scale	1:5000	Status	PRELIMINARY

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NMS-7 (Chi Tai House of On Tai Estate)

Building layout is assumed for assessment purpose

NMS-6 (Yung Tai House of On Tai Estate)

Building layout is assumed for assessment purpose

NMS-3 (Site C2 - R102)

NMS-1 (Site C2 + School 05)

NMS-5 (Hau Tat House of On Tat Estate)

NMS-4 / NMS-4a (On Tat House of On Tat Estate)

Building layout is assumed for assessment purpose

NMS-2 (Site E - School)
(Site E - School)

Legend

- Study Area
- Construction Noise Monitoring Location
- Construction and Operational Road Traffic Noise Monitoring Location
- Review Noise monitoring Location

C	THIRD ISSUE	GL	05/14
B	SECOND ISSUE	GL	03/14
A	FIRST ISSUE	GL	10/13
Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Agreement No. CE 18/2012(CE)

Development of
Anderson Road Quarry -
Investigation

Drawing title

Locations of Noise
Monitoring

Drawing no. 227724/E/2400 Rev. C

Drawn	Date	Checked	Approved
GL	05/14	TC	ST
Scale	1:5000	Status	PRELIMINARY

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- Legend
- Study Area
 - 500m Assessment Area
 - Dust Monitoring Locations



HVS in AMS-5 for 24-Hour TSP



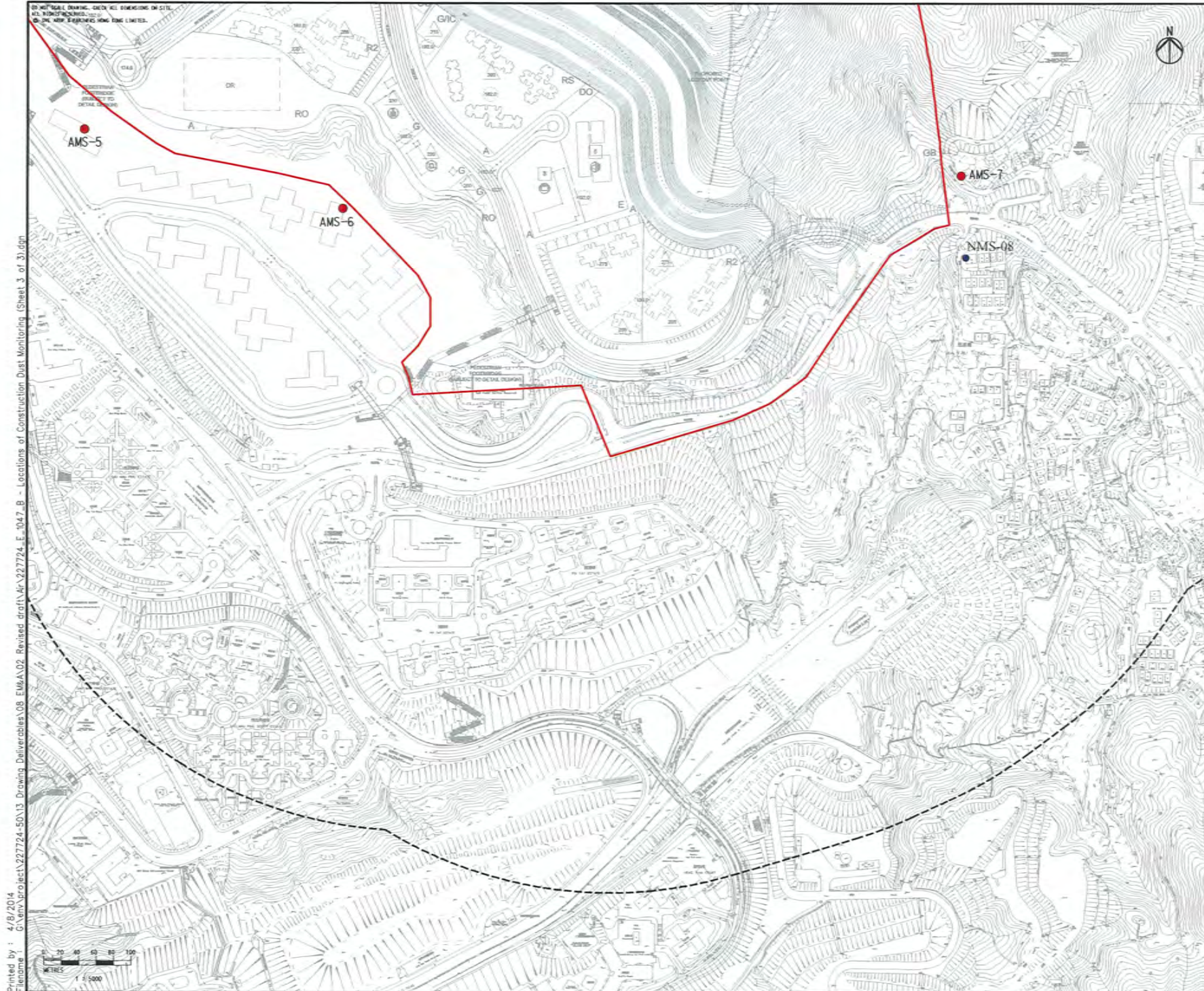
HVS in AMS-6 for 24-Hour TSP



B	SECOND ISSUE	GL	03/14
A	FIRST ISSUE	GL	10/13
Rev	Description	By	Date
Consultant			
ARUP			
Contract No. and Title			
Agreement No. CE 18/2012(CE)			
Development of Anderson Road Quarry - Investigation			
Drawing title			
Locations of Construction Dust Monitoring (Sheet 2 of 3)			
Drawing no.		Rev.	
227724/E/1046		B	
Drawn	Date	Checked	Approved
GL	03/14	TC	ST
Scale	1:5000	ma3	PRELIMINARY
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- Legend**
- Study Area
 - 500m Assessment Area
 - Dust Monitoring Locations
 - Noise Monitoring Location

B	SECOND ISSUE	GL	03/14
A	FIRST ISSUE	GL	10/13
Rev	Description	By	Date

Consultant

Contract No. and Title

Agreement No. CE 18/2012(CE)

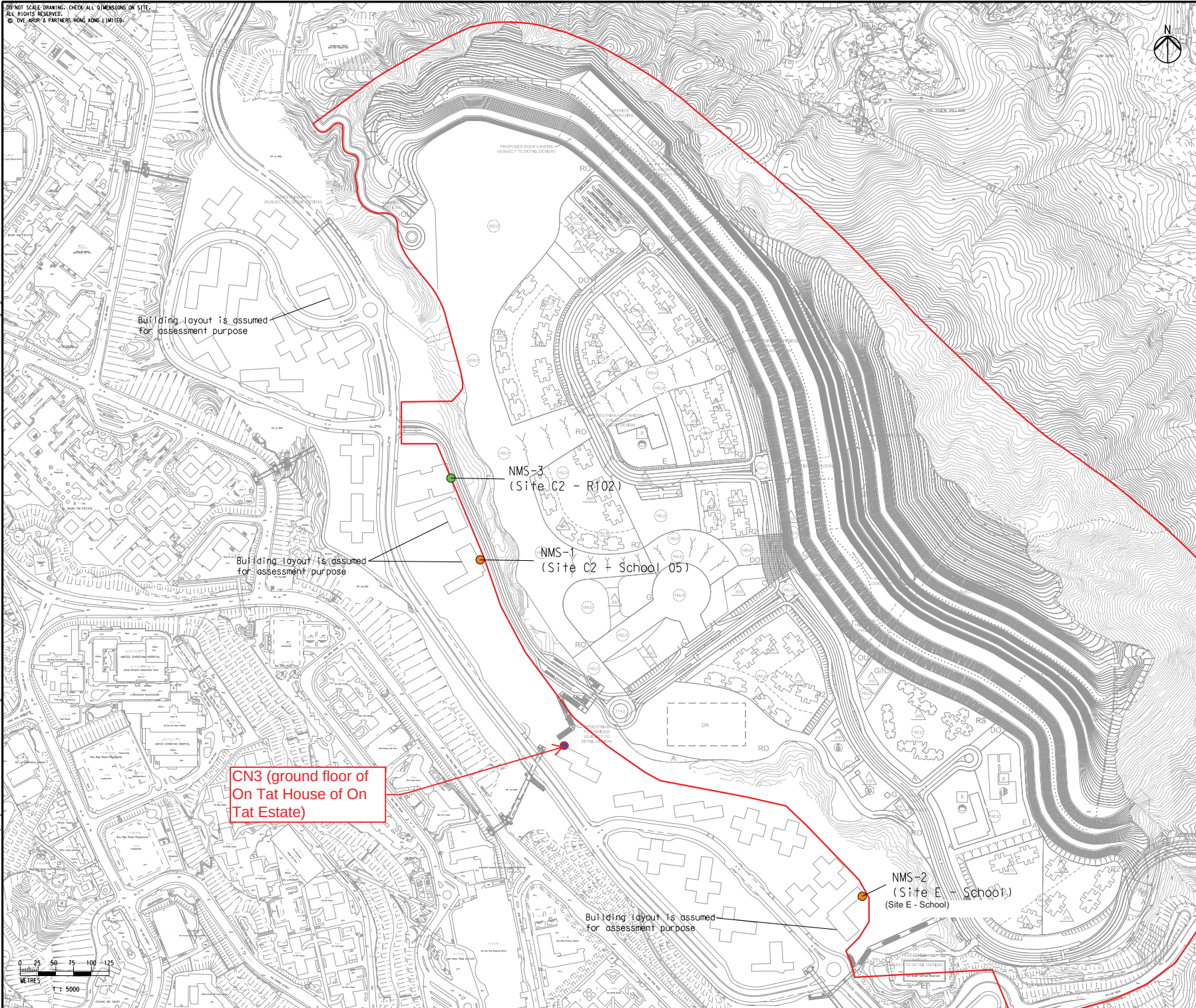
Development of
Anderson Road Quarry -
Investigation

Drawing Title
Locations of Construction Dust
and Noise Monitoring

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**Monitoring Locations
for
Contract 3 (NE/2017/03)**

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Legend

- Study Area
- Construction Noise Monitoring Location
- Construction and Operational Road Traffic Noise Monitoring Location
- Noise monitoring Location

C	THIRD ISSUE	GL	05/14
B	SECOND ISSUE	GL	03/14
A	FIRST ISSUE	GL	10/13
Rev	Description	By	Date

Consultant

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Contract No. and Title

Agreement No. CE 18/2012(CE)

Development of
Anderson Road Quarry -
Investigation

Drawing title

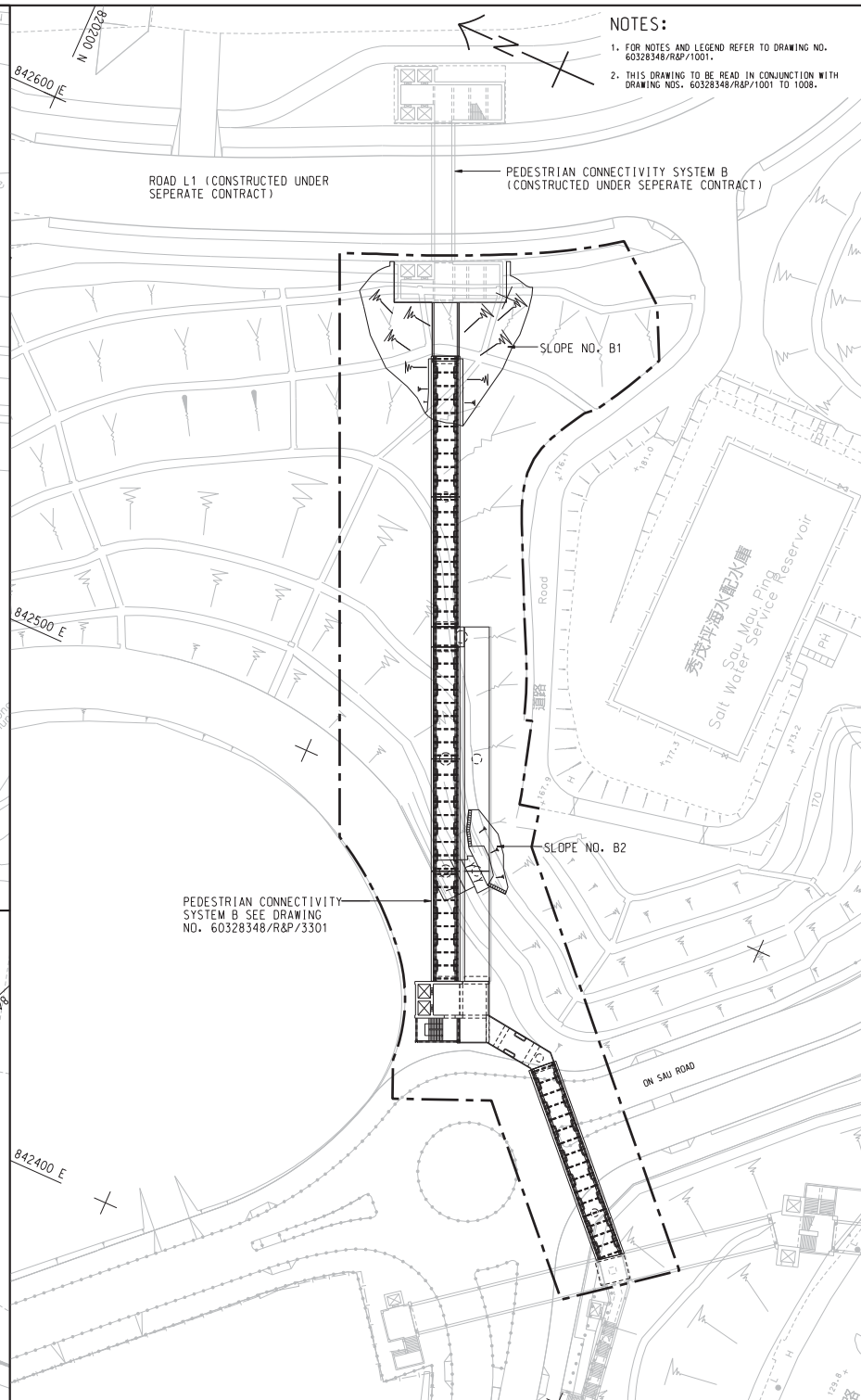
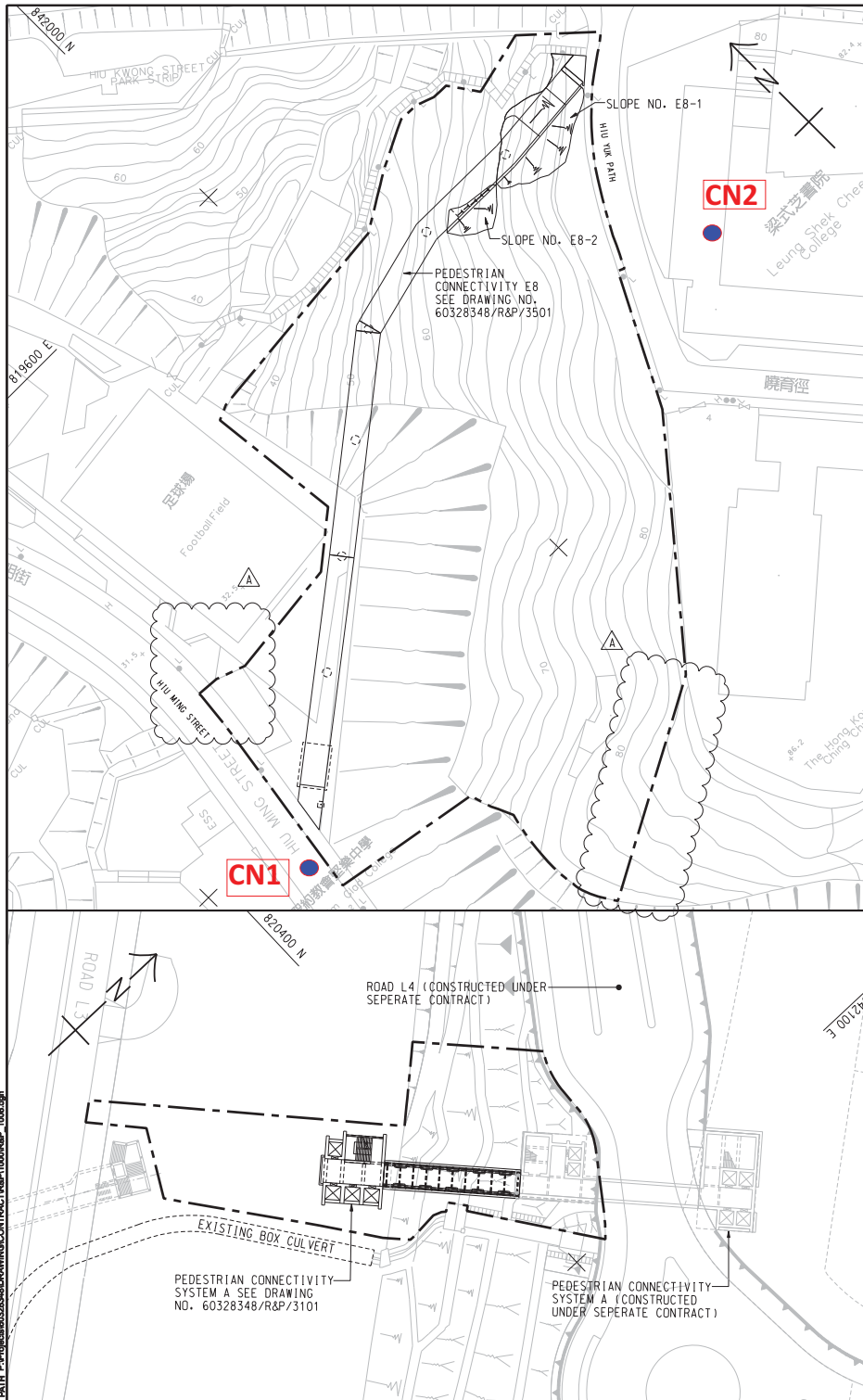
Locations of Noise
Monitoring

Drawing no. 227724/E/2400		Rev. C	
Drawn GL	Date 05/14	Checked TC	Approved ST
Scale 1:5000	RA3	Status PRELIMINARY	

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NOTES:
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60328348/R&P/1001.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60328348/R&P/1001 TO 1008.

AECOM

PROJECT
DEVELOPMENT OF ANDERSON ROAD QUARRY SITE - INVESTIGATION, DESIGN AND CONSTRUCTION

CONTRACT TITLE
DEVELOPMENT OF ANDERSON ROAD QUARRY SITE - ROAD IMPROVEMENT WORKS AND PEDESTRIAN CONNECTIVITY FACILITIES WORKS PHASE 2A

CLIENT
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Civil Engineering and Development Department

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PRELIMINARY

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
A	NOV. 17	TENDER ADDENDUM NO. 1	AWYC
-	OCT. 17	TENDER DRAWING	AWYC

STATUS

SCALE
A1 1: 500
METRES

DIMENSION UNIT
公尺

KEY PLAN
A1 1: 60000

PROJECT NO.
60328348

CONTRACT NO.
NE/2017/03

SHEET TITLE
GENERAL LAYOUT

SHEET NUMBER
60328348/R&P/1008A

SHEET 6 OF 8

Appendix E

Calibration Certificate of Monitoring Equipment and HOKLAS-accreditation Certificate of the Testing Laboratory

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Tan Shan Village No. 5 - 6				Date of Calibration: 30-Aug-25			
Location ID : AMS1a				Next Calibration Date: 30-Oct-25			
Model:TISCH High Volume Air Sampler TE-5170				Technician: Martin			
CONDITIONS							
Sea Level Pressure (hPa)		1013.6		Corrected Pressure (mm Hg)		760.2	
Temperature (°C)		30.0		Temperature (K)		303	
CALIBRATION ORIFICE							
Make->		TISCH		Qstd Slope ->		2.10574	
Model->		TE-5025A		Qstd Intercept ->		-0.03782	
Serial # ->		1941					
CALIBRATION							
Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.2	6.2	12.4	1.677	50	49.59	Slope = 41.2877 Intercept = -19.5310 Corr. coeff. = 0.9975
13	5.3	5.3	10.6	1.551	46	45.62	
10	3.8	3.8	7.6	1.316	34	33.72	
7	2.6	2.6	5.2	1.092	25	24.80	
5	1.6	1.6	3.2	0.861	17	16.86	
Calculations : $Q_{std} = 1/m[\sqrt{H2O(Pa/P_{std})(T_{std}/Ta)}]-b]$ $IC = I[\sqrt{Pa/P_{std})(T_{std}/Ta)}]$ Qstd = standard flow rate IC = corrected chart responses I = actual chart response m = calibrator Qstd slope b = calibrator Qstd intercept Ta = actual temperature during calibration (deg K) Pstd = actual pressure during calibration (mm Hg) For subsequent calculation of sampler flow: $1/m((I)[\sqrt{298/Tav}(Pav/760)]-b)$ m = sampler slope b = sampler intercept I = chart response Tav = daily average temperature Pav = daily average pressure							

FLOW RATE CHART

Standard Flow Rate (m3/min)	Actual chart response (IC)
0.861	16.86
1.092	24.80
1.316	33.72
1.551	45.62
1.677	49.59

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Oi Tat House Date of Calibration: 30-Aug-25
 Location ID : AMS 5 Next Calibration Date: 30-Oct-25
 Model: TISCH High Volume Air Sampler TE-5170 Technician: Martin

CONDITIONS

Sea Level Pressure (hPa)	1013.6	Corrected Pressure (mm Hg)	760.2
Temperature (°C)	30.0	Temperature (K)	303

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10574
Model->	TE-5025A	Qstd Intercept ->	-0.03782
Serial # ->	1941		

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.3	6.3	12.6	1.690	52	51.58	Slope = 41.6929 Intercept = -18.8764 Corr. coeff. = 0.9977
13	5.1	5.1	10.2	1.522	46	45.62	
10	3.9	3.9	7.8	1.333	36	35.71	
7	2.6	2.6	5.2	1.092	26	25.79	
5	1.6	1.6	3.2	0.861	18	17.85	

Calculations :

$$Q_{std} = 1/m[\sqrt{H2O(Pa/P_{std})(T_{std}/T_a)} - b]$$

$$IC = I[\sqrt{Pa/P_{std}}(T_{std}/T_a)]$$

Qstd = standard flow rate

IC = corrected chart responses

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$$1/m((I) [\sqrt{298/T_{av}}(P_{av}/760)] - b)$$

m = sampler slope

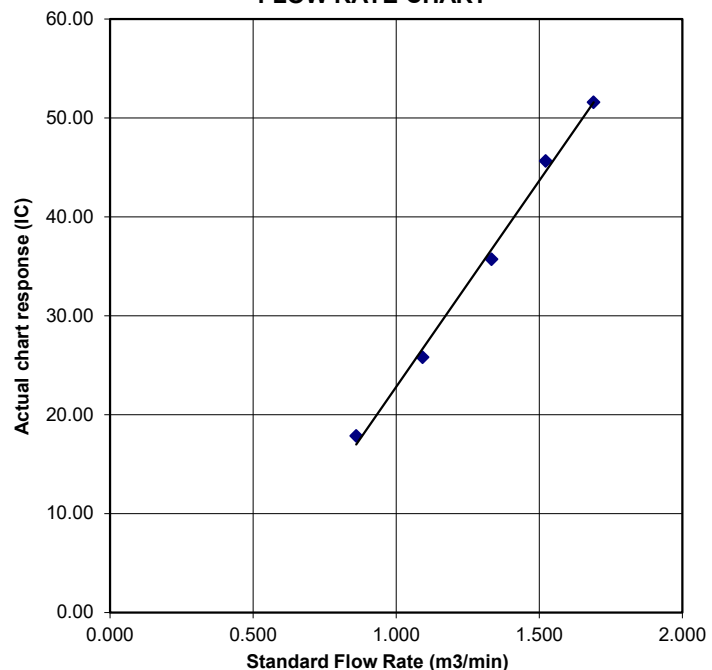
b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

FLOW RATE CHART



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Hau Tat House Date of Calibration: 30-Aug-25
 Location ID : AMS 6 Next Calibration Date: 30-Oct-25
 Model: TISCH High Volume Air Sampler TE-5170 Technician: Martin

CONDITIONS

Sea Level Pressure (hPa)	1013.6	Corrected Pressure (mm Hg)	760.2
Temperature (°C)	30.0	Temperature (K)	303

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10574
Model->	TE-5025A	Qstd Intercept ->	-0.03782
Serial # ->	1941		

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.4	6.4	12.8	1.703	52	51.58	Slope = 40.3569 Intercept = -16.9000 Corr. coeff. = 0.9998
13	5.3	5.3	10.6	1.551	48	46.00	
10	3.7	3.7	7.4	1.299	36	35.71	
7	2.7	2.7	5.4	1.113	28	27.77	
5	1.6	1.6	3.2	0.861	18	17.85	

Calculations :

$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate

IC = corrected chart responses

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$$1/m((I) [\text{Sqrt}(298/Tav)(Pav/760)]-b)$$

m = sampler slope

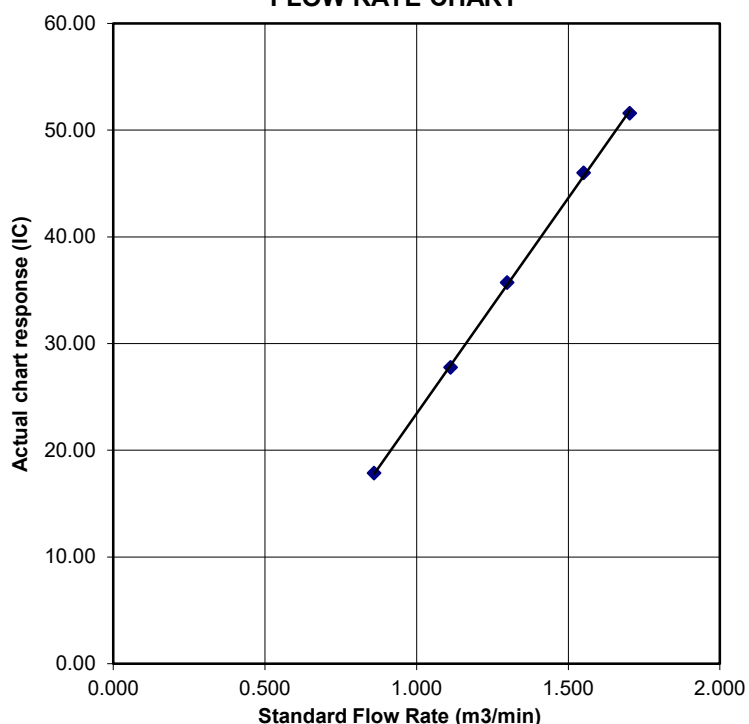
b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

FLOW RATE CHART



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Ma Yau Tong Village

Date of Calibration: 30-Aug-25

Location ID : AMS 7

Next Calibration Date: 30-Oct-25

Model: TISCH High Volume Air Sampler TE-5170

Technician: Martin

CONDITIONS

Sea Level Pressure (hPa)

1013.6

Corrected Pressure (mm Hg)

760.2

Temperature (°C)

30.0

Temperature (K)

303

CALIBRATION ORIFICE

Make-> TISCH

Qstd Slope ->

2.10574

Model-> TE-5025A

Qstd Intercept ->

-0.03782

Serial # -> 1941

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.5	6.5	13	1.716	52	51.58	Slope = 40.0895
13	5.4	5.4	10.8	1.566	48	47.61	Intercept = -16.4237
10	3.8	3.8	7.6	1.316	36	35.71	Corr. coeff. = 0.9981
7	2.6	2.6	5.2	1.092	28	27.77	
5	1.6	1.6	3.2	0.861	18	17.85	

Calculations :

$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate

IC = corrected chart responses

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)]-b)$$

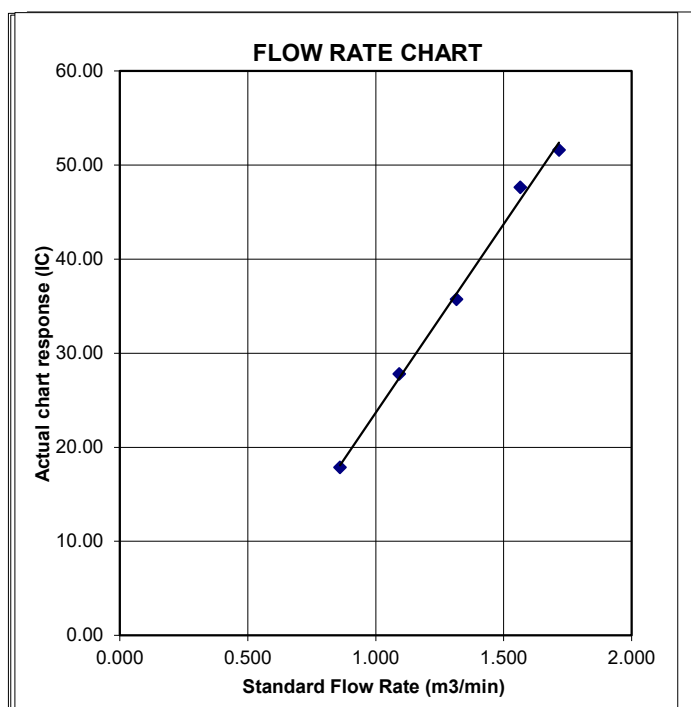
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



Certificate of Calibration

Calibration Certification Information

Cal. Date:	December 16, 2024	Rootsmeter S/N:	438320	Ta:	293 °K
Operator:	Jim Tisch	Pa:	749.0 mm Hg		
Calibration Model #:	TE-5025A	Calibrator S/N:	4064		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4600	3.2	2.00
2	3	4	1	1.0300	6.4	4.00
3	5	6	1	0.9220	8.0	5.00
4	7	8	1	0.8770	8.8	5.50
5	9	10	1	0.7250	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (y-axis)
0.9981	0.6836	1.4159	0.9957	0.6820	0.8845
0.9938	0.9649	2.0024	0.9915	0.9626	1.2509
0.9917	1.0756	2.2388	0.9893	1.0730	1.3985
0.9906	1.1296	2.3480	0.9883	1.1269	1.4668
0.9853	1.3590	2.8318	0.9829	1.3557	1.7690
QSTD	m=	2.09671	QA	m=	1.31292
	b=	-0.01852		b=	-0.01157
	r=	0.99999		r=	0.99999

Calculations

Vstd=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime
For subsequent flow rate calculations:			
Qstd=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$	Qa=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$

Standard Conditions

Tstd:	298.15 °K
Pstd:	760 mm Hg

Key

ΔH:	calibrator manometer reading (in H2O)
ΔP:	rootsmeter manometer reading (mm Hg)
Ta:	actual absolute temperature (°K)
Pa:	actual barometric pressure (mm Hg)
b:	intercept
m:	slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: HK2437857
CLIENT	: ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING		
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T.	SUB-BATCH	: 1
		DATE RECEIVED	: 16-SEP-2024
		DATE OF ISSUE	: 24-SEP-2024
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ----

General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.
- Calibration was subcontracted to and analysed by Action United Environmental Services & Consulting.

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories

Position

Richard Fung

Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the **ALS Laboratory Group**

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Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK2437857
SUB-BATCH : 1
CLIENT : ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING
PROJECT : ----



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2437857-001	S/N: 467389 (EQ125)	AIR	16-Sep-2024	S/N: 467389 (EQ125)

----- END OF REPORT -----

Equipment Verification Report (TSP)

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-5R
Serial No. 467389
Equipment Ref: EQ125

Standard Equipment:

Standard Equipment: Higher Volume Sampler (TSP)
Location & Location ID: AUES office (calibration room)
Equipment Ref: HVS 018
Last Calibration Date: 15 August 2024

Equipment Verification Results:

Verification Date: 3 September 2024

Date	Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
3-Sep-24	2hr00mins	09:26 ~ 11:26	30.2	1006.1	24.3	2216	18.5
3-Sep-24	2hr00mins	11:37 ~ 13:37	30.2	1006.1	42.3	3932	32.8
3-Sep-24	2hr00mins	12:49 ~ 14:49	30.2	1006.1	45.5	4413	36.8

Sensitivity Adjustment Scale Setting (Before Calibration) 704 (CPM)

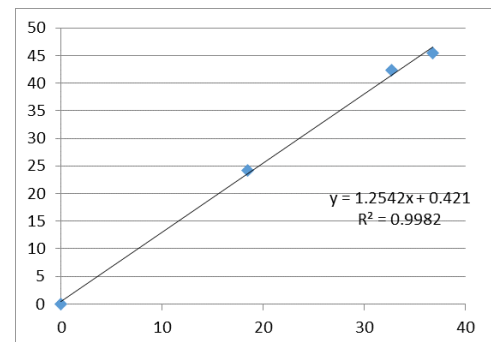
Sensitivity Adjustment Scale Setting (After Calibration) 705 (CPM)

Linear Regression of Y or X

Slope (K-factor): 1.2542 (µg/m³)/CPM

Correlation Coefficient (R) 0.9991

Date of Issue 10 September 2024



Remarks:

- Strong** Correlation ($R > 0.8$)
- Factor 1.2542 (µg/m³)/CPM should be apply for TSP monitoring

*If $R < 0.5$, repair or re-verification is required for the equipment

Operator : Martin Li Signature : [Signature] Date : 10 September 2024

QC Reviewer : Ben Tam Signature : [Signature] Date : 10 September 2024

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industrial Building, Kwai Chung Date of Calibration: 15-Aug-24
 Location ID : Calibration Room - TISCH Higher Volume Sampler (Model TE-5170) S/N:1260 Next Calibration Date: 15-Nov-24

CONDITIONS

Sea Level Pressure (hPa)	1005.2	Corrected Pressure (mm Hg)	753.9
Temperature (°C)	27.7	Temperature (K)	301

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.13163
Model->	5025A	Qstd Intercept ->	-0.03523
Calibration Date->	15-Dec-23	Expiry Date->	15-Dec-24

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.4	6.4	12.8	1.681	46	45.61	Slope = 31.2876 Intercept = -7.3464 Corr. coeff. = 0.9981
13	5.2	5.2	10.4	1.517	40	39.66	
10	4	4	8.0	1.332	35	34.70	
8	2.5	2.5	5.0	1.057	25	24.79	
5	1.6	1.6	3.2	0.849	20	19.83	

Calculations :

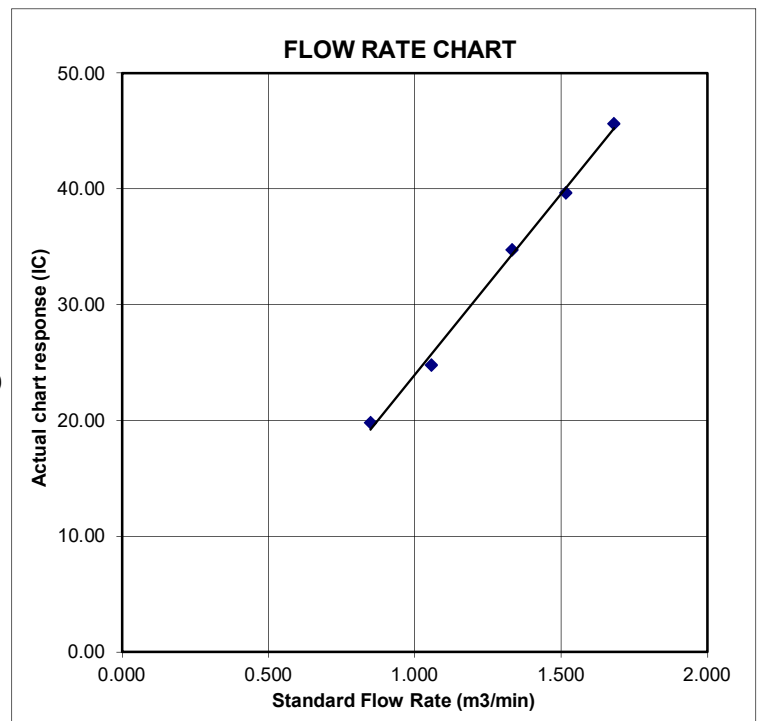
$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$
 $IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$

Qstd = standard flow rate
 IC = corrected chart responses
 I = actual chart response
 m = calibrator Qstd slope
 b = calibrator Qstd intercept
 Ta = actual temperature during calibration (deg K)
 Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)]-b)$

m = sampler slope
 b = sampler intercept
 I = chart response
 Tav = daily average temperature
 Pav = daily average pressure





RECALIBRATION

DUE DATE:

December 15, 2024

Certificate of Calibration

Calibration Certification Information

Cal. Date: December 15, 2023 Rootsmeter S/N: 438320 Ta: 295 °K
Operator: Jim Tisch Pa: 748.5 mm Hg
Calibration Model #: TE-5025A Calibrator S/N: **1941**

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4590	3.2	2.00
2	3	4	1	1.0360	6.4	4.00
3	5	6	1	0.9260	8.0	5.00
4	7	8	1	0.8840	8.9	5.50
5	9	10	1	0.7290	12.9	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H (Ta/Pa)}$ (y-axis)
0.9907	0.6790	1.4106	0.9957	0.6825	0.8878
0.9864	0.9522	1.9949	0.9914	0.9570	1.2556
0.9843	1.0630	2.2304	0.9893	1.0684	1.4037
0.9831	1.1121	2.3393	0.9881	1.1178	1.4723
0.9778	1.3413	2.8213	0.9828	1.3481	1.7756
QSTD	m=	2.13163	QA	m=	1.33479
	b=	-0.03523		b=	-0.02217
	r=	0.99999		r=	0.99999

Calculations

Vstd= $\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va= $\Delta Vol((Pa-\Delta P)/Pa)$
Qstd= $Vstd/\Delta Time$	Qa= $Va/\Delta Time$
For subsequent flow rate calculations:	
Qstd= $1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$	Qa= $1/m \left(\left(\sqrt{\Delta H (Ta/Pa)} \right) - b \right)$

Standard Conditions

Tstd: 298.15 °K
Pstd: 760 mm Hg

Key

ΔH: calibrator manometer reading (in H2O)
ΔP: rootsmeter manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: HK2540548
CLIENT	: ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING		
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T.	SUB-BATCH	: 1
		DATE RECEIVED	: 17-SEP-2025
		DATE OF ISSUE	: 22-SEP-2025
PROJECT	: Not Specified	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Calibration was subcontracted to and analysed by Action United Environmental Services & Consulting.
- No sample is received in this Work Order. The report presents non-laboratory testing data only.

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories

Position

Richard Fung

Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the **ALS Laboratory Group**

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Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK2540548
SUB-BATCH : 1
CLIENT : ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING
PROJECT : Not Specified



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2540548-001	S/N: 467389	AIR	17-Sep-2025	S/N: 467389

----- END OF REPORT -----

Equipment Verification Report (TSP)

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-5R
Serial No. 467389
Equipment Ref: EQ125

Standard Equipment:

Standard Equipment: Higher Volume Sampler (TSP)
Location & Location ID: Ha Pak Nai
Equipment Ref: HVS 023
Last Calibration Date: 16 August 2025

Equipment Verification Results:

Verification Date: 3 September 2025

Date	Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
3-Sep-25	1hr00min	11:18 ~ 12:18	30.5	1008.2	90.9	4773	79.6
3-Sep-25	1hr00min	12:23 ~ 13:23	30.5	1008.2	49.7	2326	38.8
3-Sep-25	1hr00min	13:28 ~ 14:28	30.5	1008.2	128.5	5868	97.8

Sensitivity Adjustment Scale Setting (Before Calibration) 704 (CPM)

Sensitivity Adjustment Scale Setting (After Calibration) 705 (CPM)

Linear Regression of Y or X

Slope (K-factor): 1.2561 (µg/m³)/CPM

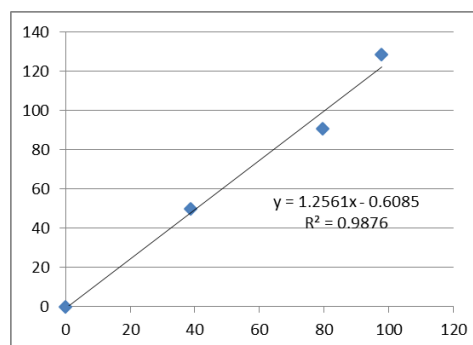
Correlation Coefficient (R) 0.9938

Date of Issue 10 September 2025

Remarks:

- Strong** Correlation ($R > 0.8$)
- Factor 1.2561 (µg/m³)/CPM should be apply for TSP monitoring

*If $R < 0.5$, repair or re-verification is required for the equipment



Operator : Gary Ng Signature : [Signature] Date : 10 September 2025

QC Reviewer : Ben Tam Signature : [Signature] Date : 10 September 2025

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Ha Pak Nai Date of Calibration: 16-Aug-25
 Location ID : AM(D)3 Next Calibration Date: 16-Oct-25
 Model: TISCH High Volume Air Sampler TE-5170

CONDITIONS

Sea Level Pressure (hPa)	1008.5	Corrected Pressure (mm Hg)	756.375
Temperature (°C)	29.3	Temperature (K)	302

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.09671
Model->	5025A	Qstd Intercept ->	-0.01852
Calibration Date->	16-Dec-24	Expiry Date->	16-Dec-25

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.4	6.4	12.8	1.699	54	53.10	Slope = 26.8673 Intercept = 7.0086 Corr. coeff. = 0.9983
13	5.2	5.2	10.4	1.532	49	48.19	
10	3.8	3.8	7.6	1.311	42	41.30	
8	2.6	2.6	5.2	1.086	37	36.39	
5	1.5	1.5	3.0	0.827	30	29.50	

Calculations :

$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

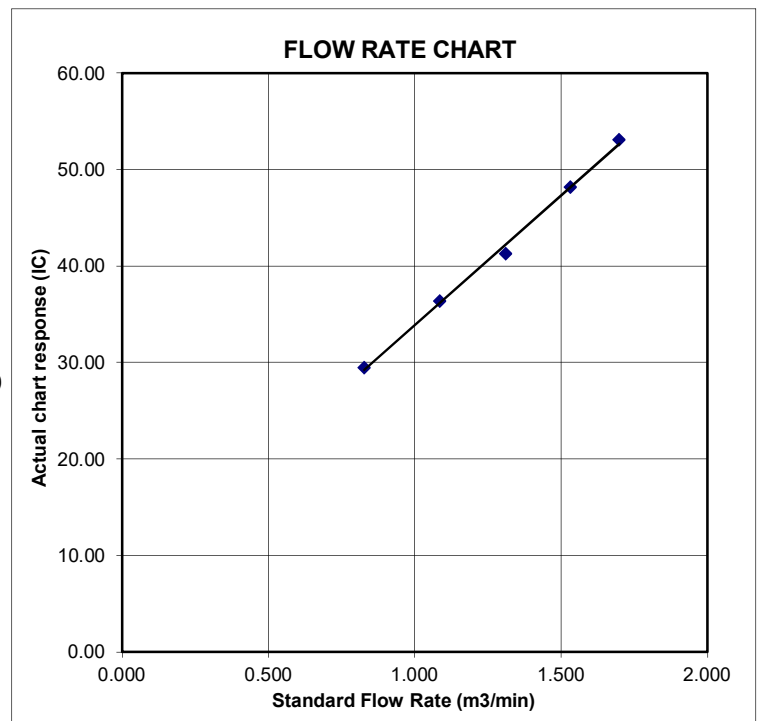
$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate
 IC = corrected chart responses
 I = actual chart response
 m = calibrator Qstd slope
 b = calibrator Qstd intercept
 Ta = actual temperature during calibration (deg K)
 Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$$1/m((I) [\text{Sqrt}(298/Tav)(Pav/760)]-b)$$

m = sampler slope
 b = sampler intercept
 I = chart response
 Tav = daily average temperature
 Pav = daily average pressure





Certificate of Calibration

Calibration Certification Information

Cal. Date: December 16, 2024 Rootsometer S/N: 438320 Ta: 293 °K
Operator: Jim Tisch Pa: 749.0 mm Hg
Calibration Model #: TE-5025A Calibrator S/N: 4064

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4600	3.2	2.00
2	3	4	1	1.0300	6.4	4.00
3	5	6	1	0.9220	8.0	5.00
4	7	8	1	0.8770	8.8	5.50
5	9	10	1	0.7250	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (y-axis)
0.9981	0.6836	1.4159	0.9957	0.6820	0.8845
0.9938	0.9649	2.0024	0.9915	0.9626	1.2509
0.9917	1.0756	2.2388	0.9893	1.0730	1.3985
0.9906	1.1296	2.3480	0.9883	1.1269	1.4668
0.9853	1.3590	2.8318	0.9829	1.3557	1.7690
QSTD	m=	2.09671	QA	m=	1.31292
	b=	-0.01852		b=	-0.01157
	r=	0.99999		r=	0.99999

Calculations

Vstd=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime
For subsequent flow rate calculations:			
Qstd=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$	Qa=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$

Standard Conditions

Tstd: 298.15 °K
Pstd: 760 mm Hg

Key

ΔH: calibrator manometer reading (in H2O)
ΔP: rootsometer manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: HK2437858
CLIENT	: ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING		
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T.	SUB-BATCH	: 1
		DATE RECEIVED	: 16-SEP-2024
		DATE OF ISSUE	: 24-SEP-2024
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ----

General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.
- Calibration was subcontracted to and analysed by Action United Environmental Services & Consulting.

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories

Position

Richard Fung

Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the **ALS Laboratory Group**

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Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK2437858
SUB-BATCH : 1
CLIENT : ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING
PROJECT : ----



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2437858-001	S/N: 467390 (EQ126)	AIR	16-Sep-2024	S/N: 467390 (EQ126)

----- END OF REPORT -----

Equipment Verification Report (TSP)

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-5R
Serial No. 467390
Equipment Ref: EQ126

Standard Equipment:

Standard Equipment: Higher Volume Sampler (TSP)
Location & Location ID: AUES office (calibration room)
Equipment Ref: HVS 018
Last Calibration Date: 15 August 2024

Equipment Verification Results:

Verification Date: 3 September 2024

Date	Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
3-Sep-24	2hr00mins	09:26 ~ 11:26	30.2	1006.1	24.3	2225	18.5
3-Sep-24	2hr00mins	11:37 ~ 13:37	30.2	1006.1	42.3	4033	33.6
3-Sep-24	2hr00mins	12:49 ~ 14:49	30.2	1006.1	45.5	4455	37.1

Sensitivity Adjustment Scale Setting (Before Calibration) 613 (CPM)

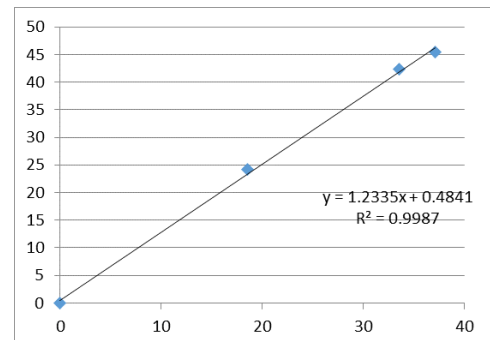
Sensitivity Adjustment Scale Setting (After Calibration) 612 (CPM)

Linear Regression of Y or X

Slope (K-factor): 1.2335 (µg/m³)/CPM

Correlation Coefficient (R) 0.9993

Date of Issue 10 September 2024



Remarks:

- Strong** Correlation ($R > 0.8$)
- Factor 1.2335 (µg/m³)/CPM should be apply for TSP monitoring

*If $R < 0.5$, repair or re-verification is required for the equipment

Operator : Martin Li Signature : [Signature] Date : 10 September 2024

QC Reviewer : Ben Tam Signature : [Signature] Date : 10 September 2024

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industrial Building, Kwai Chung Date of Calibration: 15-Aug-24
 Location ID : Calibration Room - TISCH Higher Volume Sampler (Model TE-5170) S/N:1260 Next Calibration Date: 15-Nov-24

CONDITIONS

Sea Level Pressure (hPa)	1005.2	Corrected Pressure (mm Hg)	753.9
Temperature (°C)	27.7	Temperature (K)	301

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.13163
Model->	5025A	Qstd Intercept ->	-0.03523
Calibration Date->	15-Dec-23	Expiry Date->	15-Dec-24

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.4	6.4	12.8	1.681	46	45.61	Slope = 31.2876 Intercept = -7.3464 Corr. coeff. = 0.9981
13	5.2	5.2	10.4	1.517	40	39.66	
10	4	4	8.0	1.332	35	34.70	
8	2.5	2.5	5.0	1.057	25	24.79	
5	1.6	1.6	3.2	0.849	20	19.83	

Calculations :

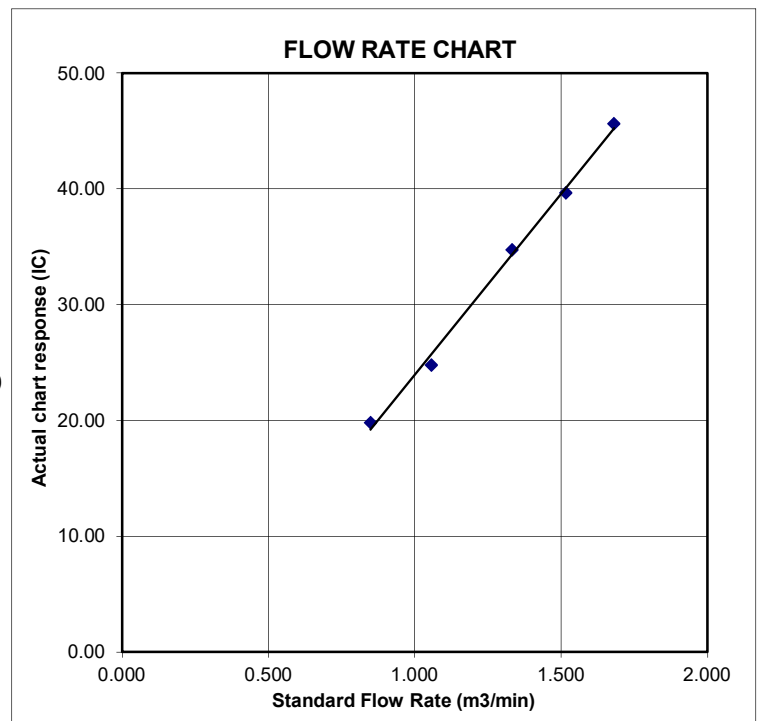
$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$
 $IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$

Qstd = standard flow rate
 IC = corrected chart responses
 I = actual chart response
 m = calibrator Qstd slope
 b = calibrator Qstd intercept
 Ta = actual temperature during calibration (deg K)
 Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$1/m((I) [\text{Sqrt}(298/Tav)(Pav/760)]-b)$

m = sampler slope
 b = sampler intercept
 I = chart response
 Tav = daily average temperature
 Pav = daily average pressure





RECALIBRATION

DUE DATE:

December 15, 2024

Certificate of Calibration

Calibration Certification Information

Cal. Date: December 15, 2023 Rootsmeter S/N: 438320 Ta: 295 °K
Operator: Jim Tisch Pa: 748.5 mm Hg
Calibration Model #: TE-5025A Calibrator S/N: 1941

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4590	3.2	2.00
2	3	4	1	1.0360	6.4	4.00
3	5	6	1	0.9260	8.0	5.00
4	7	8	1	0.8840	8.9	5.50
5	9	10	1	0.7290	12.9	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (y-axis)
0.9907	0.6790	1.4106	0.9957	0.6825	0.8878
0.9864	0.9522	1.9949	0.9914	0.9570	1.2556
0.9843	1.0630	2.2304	0.9893	1.0684	1.4037
0.9831	1.1121	2.3393	0.9881	1.1178	1.4723
0.9778	1.3413	2.8213	0.9828	1.3481	1.7756
QSTD	m=	2.13163	QA	m=	1.33479
	b=	-0.03523		b=	-0.02217
	r=	0.99999		r=	0.99999

Calculations

Vstd =	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va =	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd =	$Vstd/\Delta Time$	Qa =	$Va/\Delta Time$
For subsequent flow rate calculations:			
Qstd = $1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$		Qa = $1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$	

Standard Conditions

Tstd: 298.15 °K
Pstd: 760 mm Hg

Key

ΔH: calibrator manometer reading (in H2O)
ΔP: rootsmeter manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: HK2540549
CLIENT	: ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING		
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T.	SUB-BATCH	: 1
		DATE RECEIVED	: 17-SEP-2025
		DATE OF ISSUE	: 22-SEP-2025
PROJECT	: Not Specified	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- No sample is received in this Work Order. The report presents non-laboratory testing data only.
- Calibration was subcontracted to and analysed by Action United Environmental Services & Consulting.

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories

Position

Richard Fung

Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the **ALS Laboratory Group**

11/F, Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong
Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK2540549
SUB-BATCH : 1
CLIENT : ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING
PROJECT : Not Specified



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2540549-001	S/N: 467390	AIR	17-Sep-2025	S/N: 467390

----- END OF REPORT -----

Equipment Verification Report (TSP)

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-5R
Serial No. 467390
Equipment Ref: EQ126

Standard Equipment:

Standard Equipment: Higher Volume Sampler (TSP)
Location & Location ID: Ha Pak Nai
Equipment Ref: HVS 023
Last Calibration Date: 16 August 2025

Equipment Verification Results:

Verification Date: 3 September 2025

Date	Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
3-Sep-25	1hr00min	11:18 ~ 12:18	30.5	1008.2	90.9	4612	76.9
3-Sep-25	1hr00min	12:23 ~ 13:23	30.5	1008.2	49.7	2582	43.0
3-Sep-25	1hr00min	13:28 ~ 14:28	30.5	1008.2	128.5	5886	98.1

Sensitivity Adjustment Scale Setting (Before Calibration) 613 (CPM)

Sensitivity Adjustment Scale Setting (After Calibration) 612 (CPM)

Linear Regression of Y or X

Slope (K-factor): 1.2837 (µg/m³)/CPM

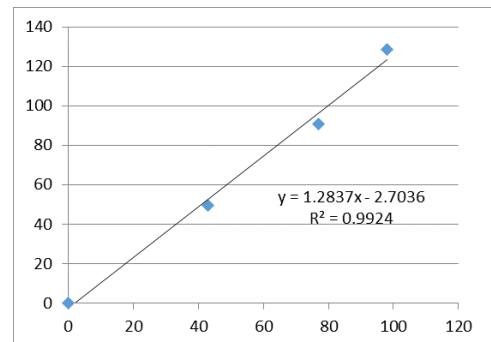
Correlation Coefficient (R) 0.9962

Date of Issue 10 September 2025

Remarks:

- Strong** Correlation ($R > 0.8$)
- Factor 1.2837 (µg/m³)/CPM should be apply for TSP monitoring

*If $R < 0.5$, repair or re-verification is required for the equipment



Operator : Gary Ng Signature : [Signature] Date : 10 September 2025

QC Reviewer : Ben Tam Signature : [Signature] Date : 10 September 2025

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Ha Pak Nai Date of Calibration: 16-Aug-25
 Location ID : AM(D)3 Next Calibration Date: 16-Oct-25
 Model: TISCH High Volume Air Sampler TE-5170

CONDITIONS

Sea Level Pressure (hPa)	1008.5	Corrected Pressure (mm Hg)	756.375
Temperature (°C)	29.3	Temperature (K)	302

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.09671
Model->	5025A	Qstd Intercept ->	-0.01852
Calibration Date->	16-Dec-24	Expiry Date->	16-Dec-25

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.4	6.4	12.8	1.699	54	53.10	Slope = 26.8673 Intercept = 7.0086 Corr. coeff. = 0.9983
13	5.2	5.2	10.4	1.532	49	48.19	
10	3.8	3.8	7.6	1.311	42	41.30	
8	2.6	2.6	5.2	1.086	37	36.39	
5	1.5	1.5	3.0	0.827	30	29.50	

Calculations :

$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

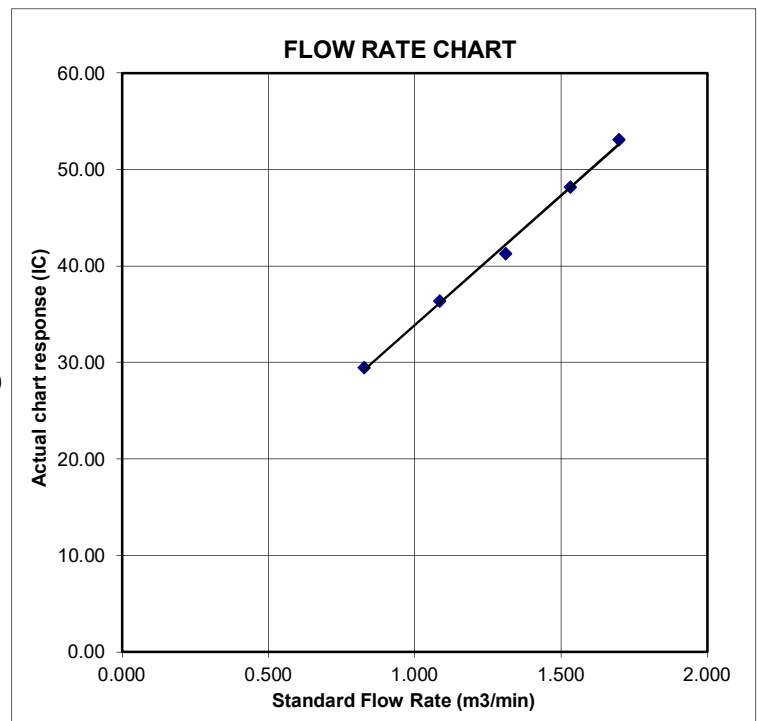
$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate
 IC = corrected chart responses
 I = actual chart response
 m = calibrator Qstd slope
 b = calibrator Qstd intercept
 Ta = actual temperature during calibration (deg K)
 Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$$1/m((I) [\text{Sqrt}(298/Tav)(Pav/760)]-b)$$

m = sampler slope
 b = sampler intercept
 I = chart response
 Tav = daily average temperature
 Pav = daily average pressure





Certificate of Calibration

Calibration Certification Information

Cal. Date: December 16, 2024 Roots-meter S/N: 438320 Ta: 293 °K
Operator: Jim Tisch Pa: 749.0 mm Hg
Calibration Model #: TE-5025A Calibrator S/N: 4064

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4600	3.2	2.00
2	3	4	1	1.0300	6.4	4.00
3	5	6	1	0.9220	8.0	5.00
4	7	8	1	0.8770	8.8	5.50
5	9	10	1	0.7250	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (y-axis)
0.9981	0.6836	1.4159	0.9957	0.6820	0.8845
0.9938	0.9649	2.0024	0.9915	0.9626	1.2509
0.9917	1.0756	2.2388	0.9893	1.0730	1.3985
0.9906	1.1296	2.3480	0.9883	1.1269	1.4668
0.9853	1.3590	2.8318	0.9829	1.3557	1.7690
QSTD	m=	2.09671	QA	m=	1.31292
	b=	-0.01852		b=	-0.01157
	r=	0.99999		r=	0.99999

Calculations

Vstd=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime
For subsequent flow rate calculations:			
Qstd=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$	Qa=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$

Standard Conditions

Tstd: 298.15 °K
Pstd: 760 mm Hg

Key

ΔH: calibrator manometer reading (in H2O)
ΔP: roots-meter manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: HK2437859
CLIENT	: ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING		
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T.	SUB-BATCH	: 1
		DATE RECEIVED	: 16-SEP-2024
		DATE OF ISSUE	: 24-SEP-2024
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ----

General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Calibration was subcontracted to and analysed by Action United Environmental Services & Consulting.
- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories

Position

Richard Fung

Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the **ALS Laboratory Group**

11/F. Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong
Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK2437859

SUB-BATCH : 1

CLIENT : ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING

PROJECT : ----



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2437859-001	S/N: 467391 (EQ127)	AIR	16-Sep-2024	S/N: 467391 (EQ127)

----- END OF REPORT -----

Equipment Verification Report (TSP)

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-5R
Serial No. 467391
Equipment Ref: EQ127

Standard Equipment:

Standard Equipment: Higher Volume Sampler (TSP)
Location & Location ID: AUES office (calibration room)
Equipment Ref: HVS 018
Last Calibration Date: 15 August 2024

Equipment Verification Results:

Verification Date: 3 September 2024

Date	Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
3-Sep-24	2hr00mins	09:26 ~ 11:26	30.2	1006.1	24.3	2221	18.5
3-Sep-24	2hr00mins	11:37 ~ 13:37	30.2	1006.1	42.3	3972	33.1
3-Sep-24	2hr00mins	12:49 ~ 14:49	30.2	1006.1	45.5	4481	37.3

Sensitivity Adjustment Scale Setting (Before Calibration) 665 (CPM)

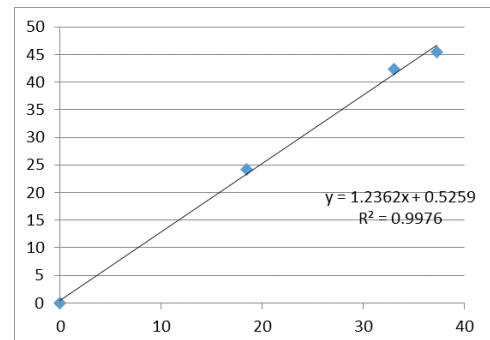
Sensitivity Adjustment Scale Setting (After Calibration) 665 (CPM)

Linear Regression of Y or X

Slope (K-factor): 1.2362 (µg/m³)/CPM

Correlation Coefficient (R) 0.9987

Date of Issue 10 September 2024



Remarks:

- Strong** Correlation ($R > 0.8$)
- Factor 1.2362 (µg/m³)/CPM should be apply for TSP monitoring

*If $R < 0.5$, repair or re-verification is required for the equipment

Operator : Martin Li Signature : [Signature] Date : 10 September 2024

QC Reviewer : Ben Tam Signature : [Signature] Date : 10 September 2024

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industrial Building, Kwai Chung Date of Calibration: 15-Aug-24
 Location ID : Calibration Room - TISCH Higher Volume Sampler (Model TE-5170) S/N:1260 Next Calibration Date: 15-Nov-24

CONDITIONS

Sea Level Pressure (hPa)	1005.2	Corrected Pressure (mm Hg)	753.9
Temperature (°C)	27.7	Temperature (K)	301

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.13163
Model->	5025A	Qstd Intercept ->	-0.03523
Calibration Date->	15-Dec-23	Expiry Date->	15-Dec-24

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.4	6.4	12.8	1.681	46	45.61	Slope = 31.2876 Intercept = -7.3464 Corr. coeff. = 0.9981
13	5.2	5.2	10.4	1.517	40	39.66	
10	4	4	8.0	1.332	35	34.70	
8	2.5	2.5	5.0	1.057	25	24.79	
5	1.6	1.6	3.2	0.849	20	19.83	

Calculations :

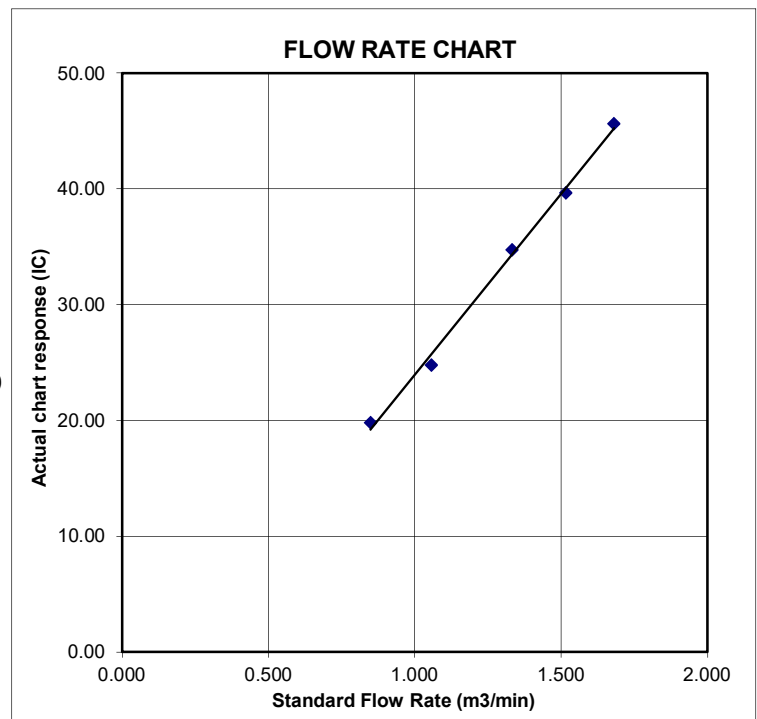
$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$
 $IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$

Qstd = standard flow rate
 IC = corrected chart responses
 I = actual chart response
 m = calibrator Qstd slope
 b = calibrator Qstd intercept
 Ta = actual temperature during calibration (deg K)
 Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)]-b)$

m = sampler slope
 b = sampler intercept
 I = chart response
 Tav = daily average temperature
 Pav = daily average pressure





RECALIBRATION

DUE DATE:

December 15, 2024

Certificate of Calibration

Calibration Certification Information

Cal. Date: December 15, 2023 Rootsmeter S/N: 438320 Ta: 295 °K
Operator: Jim Tisch Pa: 748.5 mm Hg
Calibration Model #: TE-5025A Calibrator S/N: **1941**

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4590	3.2	2.00
2	3	4	1	1.0360	6.4	4.00
3	5	6	1	0.9260	8.0	5.00
4	7	8	1	0.8840	8.9	5.50
5	9	10	1	0.7290	12.9	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (y-axis)
0.9907	0.6790	1.4106	0.9957	0.6825	0.8878
0.9864	0.9522	1.9949	0.9914	0.9570	1.2556
0.9843	1.0630	2.2304	0.9893	1.0684	1.4037
0.9831	1.1121	2.3393	0.9881	1.1178	1.4723
0.9778	1.3413	2.8213	0.9828	1.3481	1.7756
QSTD	m=	2.13163	QA	m=	1.33479
	b=	-0.03523		b=	-0.02217
	r=	0.99999		r=	0.99999

Calculations

Vstd=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd=	$Vstd/\Delta Time$	Qa=	$Va/\Delta Time$
For subsequent flow rate calculations:			
Qstd= $1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$		Qa= $1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$	

Standard Conditions

Tstd: 298.15 °K
Pstd: 760 mm Hg

Key

ΔH: calibrator manometer reading (in H2O)
ΔP: rootsmeter manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: HK2540550
CLIENT	: ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING		
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T.	SUB-BATCH	: 1
		DATE RECEIVED	: 17-SEP-2025
		DATE OF ISSUE	: 22-SEP-2025
PROJECT	: Not Specified	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Calibration was subcontracted to and analysed by Action United Environmental Services & Consulting.
- No sample is received in this Work Order. The report presents non-laboratory testing data only.

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories

Position

Richard Fung

Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the **ALS Laboratory Group**

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Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK2540550
SUB-BATCH : 1
CLIENT : ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING
PROJECT : Not Specified



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2540550-001	S/N: 467391	AIR	17-Sep-2025	S/N: 467391

----- END OF REPORT -----

Equipment Verification Report (TSP)

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-5R
Serial No. 467391
Equipment Ref: EQ127

Standard Equipment:

Standard Equipment: Higher Volume Sampler (TSP)
Location & Location ID: Ha Pak Nai
Equipment Ref: HVS 023
Last Calibration Date: 16 August 2025

Equipment Verification Results:

Verification Date: 3 September 2025

Date	Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
3-Sep-25	1hr00min	11:18 ~ 12:18	30.5	1008.2	90.9	4540	75.7
3-Sep-25	1hr00min	12:23 ~ 13:23	30.5	1008.2	49.7	2230	37.2
3-Sep-25	1hr00min	13:28 ~ 14:28	30.5	1008.2	128.5	5990	99.8

Sensitivity Adjustment Scale Setting (Before Calibration) 665 (CPM)

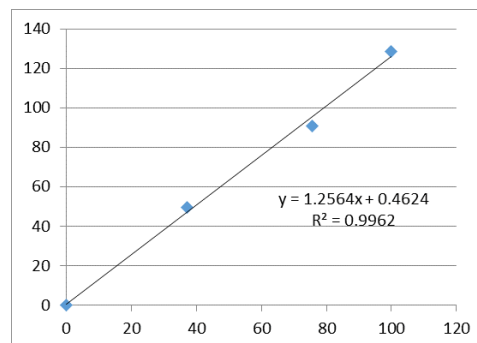
Sensitivity Adjustment Scale Setting (After Calibration) 665 (CPM)

Linear Regression of Y or X

Slope (K-factor): 1.2564 (µg/m³)/CPM

Correlation Coefficient (R) 0.9981

Date of Issue 10 September 2025



Remarks:

- Strong** Correlation ($R > 0.8$)
- Factor 1.2564 (µg/m³)/CPM should be apply for TSP monitoring

*If $R < 0.5$, repair or re-verification is required for the equipment

Operator : Gary Ng Signature : [Signature] Date : 10 September 2025

QC Reviewer : Ben Tam Signature : [Signature] Date : 10 September 2025

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Ha Pak Nai Date of Calibration: 16-Aug-25
 Location ID : AM(D)3 Next Calibration Date: 16-Oct-25
 Model: TISCH High Volume Air Sampler TE-5170

CONDITIONS

Sea Level Pressure (hPa)	1008.5	Corrected Pressure (mm Hg)	756.375
Temperature (°C)	29.3	Temperature (K)	302

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.09671
Model->	5025A	Qstd Intercept ->	-0.01852
Calibration Date->	16-Dec-24	Expiry Date->	16-Dec-25

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.4	6.4	12.8	1.699	54	53.10	Slope = 26.8673 Intercept = 7.0086 Corr. coeff. = 0.9983
13	5.2	5.2	10.4	1.532	49	48.19	
10	3.8	3.8	7.6	1.311	42	41.30	
8	2.6	2.6	5.2	1.086	37	36.39	
5	1.5	1.5	3.0	0.827	30	29.50	

Calculations :

$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

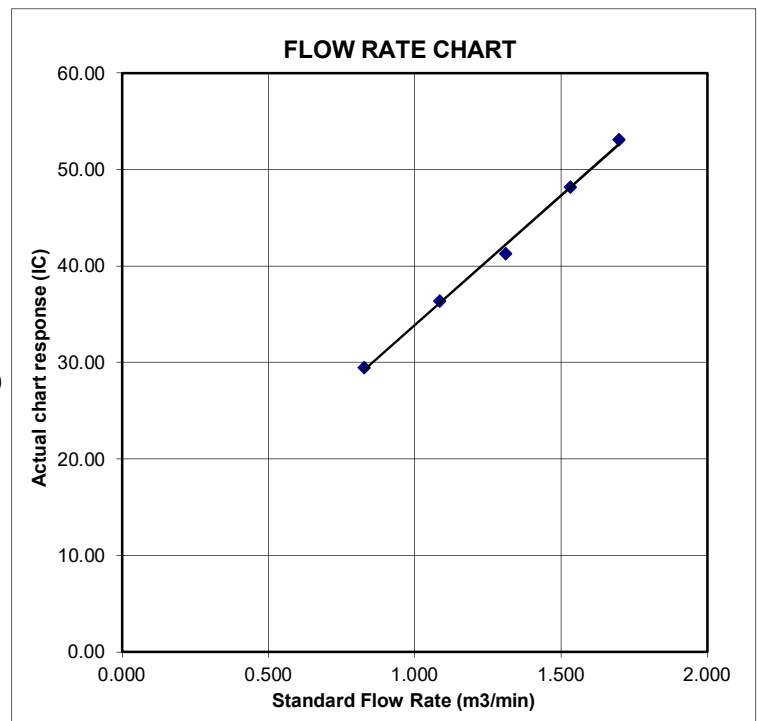
$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate
 IC = corrected chart responses
 I = actual chart response
 m = calibrator Qstd slope
 b = calibrator Qstd intercept
 Ta = actual temperature during calibration (deg K)
 Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$$1/m((I) [\text{Sqrt}(298/Tav)(Pav/760)]-b)$$

m = sampler slope
 b = sampler intercept
 I = chart response
 Tav = daily average temperature
 Pav = daily average pressure





Certificate of Calibration

Calibration Certification Information

Cal. Date: December 16, 2024 Roots-meter S/N: 438320 Ta: 293 °K
Operator: Jim Tisch Pa: 749.0 mm Hg
Calibration Model #: TE-5025A Calibrator S/N: 4064

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4600	3.2	2.00
2	3	4	1	1.0300	6.4	4.00
3	5	6	1	0.9220	8.0	5.00
4	7	8	1	0.8770	8.8	5.50
5	9	10	1	0.7250	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (y-axis)
0.9981	0.6836	1.4159	0.9957	0.6820	0.8845
0.9938	0.9649	2.0024	0.9915	0.9626	1.2509
0.9917	1.0756	2.2388	0.9893	1.0730	1.3985
0.9906	1.1296	2.3480	0.9883	1.1269	1.4668
0.9853	1.3590	2.8318	0.9829	1.3557	1.7690
QSTD	m=	2.09671	QA	m=	1.31292
	b=	-0.01852		b=	-0.01157
	r=	0.99999		r=	0.99999

Calculations

Vstd=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime
For subsequent flow rate calculations:			
Qstd=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$	Qa=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$

Standard Conditions

Tstd: 298.15 °K
Pstd: 760 mm Hg

Key

ΔH: calibrator manometer reading (in H2O)
ΔP: roots-meter manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: HK2437860
CLIENT	: ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING		
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T.	SUB-BATCH	: 1
		DATE RECEIVED	: 16-SEP-2024
		DATE OF ISSUE	: 24-SEP-2024
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ----

General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.
- Calibration was subcontracted to and analysed by Action United Environmental Services & Consulting.

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories

Position

Richard Fung

Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the **ALS Laboratory Group**

11/F. Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong
Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK2437860
SUB-BATCH : 1
CLIENT : ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING
PROJECT : ----



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2437860-001	S/N: 467392 (EQ128)	AIR	16-Sep-2024	S/N: 467392 (EQ128)

----- END OF REPORT -----

Equipment Verification Report (TSP)

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-5R
Serial No. 467392
Equipment Ref: EQ128

Standard Equipment:

Standard Equipment: Higher Volume Sampler (TSP)
Location & Location ID: AUES office (calibration room)
Equipment Ref: HVS 018
Last Calibration Date: 15 August 2024

Equipment Verification Results:

Verification Date: 3 September 2024

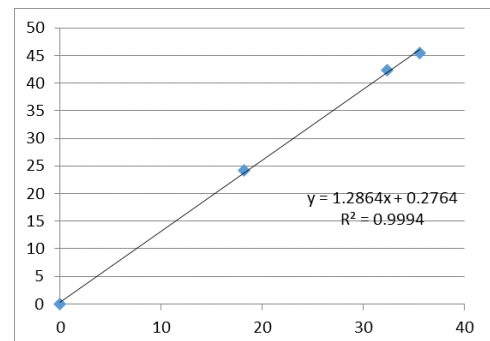
Date	Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
3-Sep-24	2hr00mins	09:26 ~ 11:26	30.2	1006.1	24.3	2190	18.3
3-Sep-24	2hr00mins	11:37 ~ 13:37	30.2	1006.1	42.3	3887	32.4
3-Sep-24	2hr00mins	12:49 ~ 14:49	30.2	1006.1	45.5	4273	35.6

Sensitivity Adjustment Scale Setting (Before Calibration) 715 (CPM)

Sensitivity Adjustment Scale Setting (After Calibration) 714 (CPM)

Linear Regression of Y or X

Slope (K-factor): 1.2864g/m³)/CPM
Correlation Coefficient (R) 0.9997
Date of Issue 10 September 2024



Remarks:

- Strong** Correlation ($R > 0.8$)
- Factor 1.2864g/m³)/CPM should be apply for TSP monitoring

*If $R < 0.5$, repair or re-verification is required for the equipment

Operator : Martin Li Signature : [Signature] Date : 10 September 2024

QC Reviewer : Ben Tam Signature : [Signature] Date : 10 September 2024

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration: 15-Aug-24
Location ID :	Calibration Room - TISCH Higher Volume Sampler (Model TE-5170) S/N:1260	Next Calibration Date: 15-Nov-24

CONDITIONS

Sea Level Pressure (hPa)	1005.2	Corrected Pressure (mm Hg)	753.9
Temperature (°C)	27.7	Temperature (K)	301

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.13163
Model->	5025A	Qstd Intercept ->	-0.03523
Calibration Date->	15-Dec-23	Expiry Date->	15-Dec-24

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.4	6.4	12.8	1.681	46	45.61	Slope = 31.2876 Intercept = -7.3464 Corr. coeff. = 0.9981
13	5.2	5.2	10.4	1.517	40	39.66	
10	4	4	8.0	1.332	35	34.70	
8	2.5	2.5	5.0	1.057	25	24.79	
5	1.6	1.6	3.2	0.849	20	19.83	

Calculations :

$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

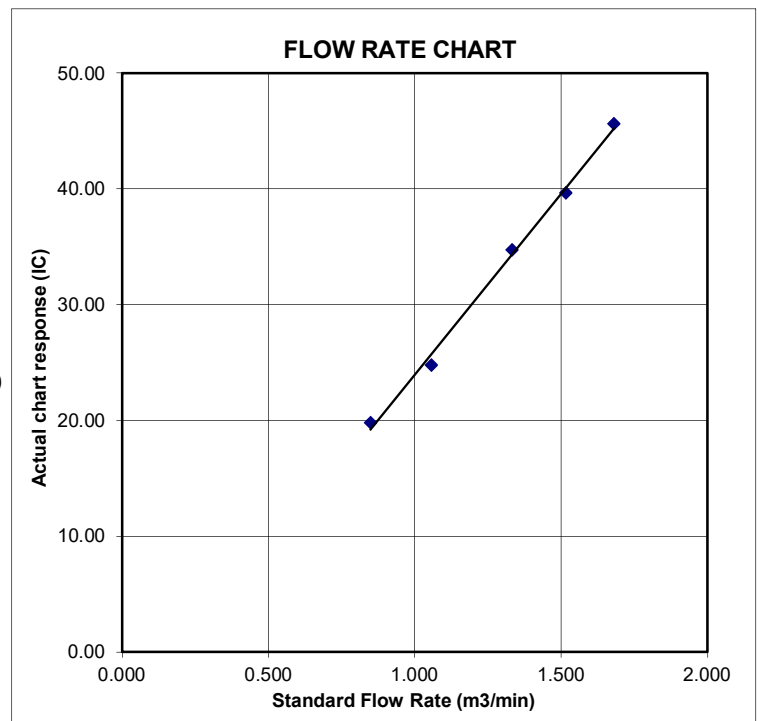
$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate
 IC = corrected chart responses
 I = actual chart response
 m = calibrator Qstd slope
 b = calibrator Qstd intercept
 Ta = actual temperature during calibration (deg K)
 Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$$1/m((I) [\text{Sqrt}(298/Tav)(Pav/760)]-b)$$

m = sampler slope
 b = sampler intercept
 I = chart response
 Tav = daily average temperature
 Pav = daily average pressure





RECALIBRATION

DUE DATE:

December 15, 2024

Certificate of Calibration

Calibration Certification Information

Cal. Date: December 15, 2023 Rootsmeter S/N: 438320 Ta: 295 °K
Operator: Jim Tisch Pa: 748.5 mm Hg
Calibration Model #: TE-5025A Calibrator S/N: 1941

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4590	3.2	2.00
2	3	4	1	1.0360	6.4	4.00
3	5	6	1	0.9260	8.0	5.00
4	7	8	1	0.8840	8.9	5.50
5	9	10	1	0.7290	12.9	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H (Ta/Pa)}$ (y-axis)
0.9907	0.6790	1.4106	0.9957	0.6825	0.8878
0.9864	0.9522	1.9949	0.9914	0.9570	1.2556
0.9843	1.0630	2.2304	0.9893	1.0684	1.4037
0.9831	1.1121	2.3393	0.9881	1.1178	1.4723
0.9778	1.3413	2.8213	0.9828	1.3481	1.7756
QSTD	m=	2.13163	QA	m=	1.33479
	b=	-0.03523		b=	-0.02217
	r=	0.99999		r=	0.99999

Calculations

Vstd=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd=	$Vstd/\Delta Time$	Qa=	$Va/\Delta Time$
For subsequent flow rate calculations:			
Qstd= $1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$		Qa= $1/m \left(\left(\sqrt{\Delta H (Ta/Pa)} \right) - b \right)$	

Standard Conditions

Tstd: 298.15 °K
Pstd: 760 mm Hg

Key

ΔH: calibrator manometer reading (in H2O)
ΔP: rootsmeter manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: HK2540542
CLIENT	: ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING		
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T.	SUB-BATCH	: 1
		DATE RECEIVED	: 17-SEP-2025
		DATE OF ISSUE	: 22-SEP-2025
PROJECT	: Not Specified	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Calibration was subcontracted to and analysed by Action United Environmental Services & Consulting.
- No sample is received in this Work Order. The report presents non-laboratory testing data only.

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories

Position

Richard Fung

Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the **ALS Laboratory Group**

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Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK2540542
SUB-BATCH : 1
CLIENT : ACTION-UNITED ENVIRONMENTAL SERVICES & CONSULTING
PROJECT : Not Specified



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2540542-001	S/N: 467392	AIR	17-Sep-2025	S/N: 467392

----- END OF REPORT -----

Equipment Verification Report (TSP)

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-5R
Serial No. 467392
Equipment Ref: EQ128

Standard Equipment:

Standard Equipment: Higher Volume Sampler (TSP)
Location & Location ID: Ha Pak Nai
Equipment Ref: HVS 023
Last Calibration Date: 16 August 2025

Equipment Verification Results:

Verification Date: 3 September 2025

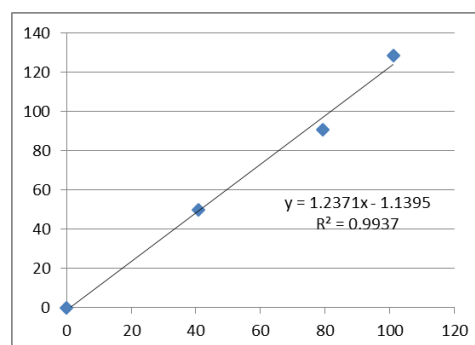
Date	Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
3-Sep-25	1hr00min	11:18 ~ 12:18	30.5	1008.2	90.9	4752	79.2
3-Sep-25	1hr00min	12:23 ~ 13:23	30.5	1008.2	49.7	2453	40.9
3-Sep-25	1hr00min	13:28 ~ 14:28	30.5	1008.2	128.5	6065	101.1

Sensitivity Adjustment Scale Setting (Before Calibration) 715 (CPM)

Sensitivity Adjustment Scale Setting (After Calibration) 714 (CPM)

Linear Regression of Y or X

Slope (K-factor): 1.2371(μg/m³)/CPM
Correlation Coefficient (R) 0.9968
Date of Issue 10 September 2025



Remarks:

- Strong** Correlation ($R > 0.8$)
- Factor 1.2371(μg/m³)/CPM should be apply for TSP monitoring

*If $R < 0.5$, repair or re-verification is required for the equipment

Operator : Gary Ng Signature : [Signature] Date : 10 September 2025

QC Reviewer : Ben Tam Signature : [Signature] Date : 10 September 2025

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Ha Pak Nai Date of Calibration: 16-Aug-25
 Location ID : AM(D)3 Next Calibration Date: 16-Oct-25
 Model: TISCH High Volume Air Sampler TE-5170

CONDITIONS

Sea Level Pressure (hPa)	1008.5	Corrected Pressure (mm Hg)	756.375
Temperature (°C)	29.3	Temperature (K)	302

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.09671
Model->	5025A	Qstd Intercept ->	-0.01852
Calibration Date->	16-Dec-24	Expiry Date->	16-Dec-25

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.4	6.4	12.8	1.699	54	53.10	Slope = 26.8673 Intercept = 7.0086 Corr. coeff. = 0.9983
13	5.2	5.2	10.4	1.532	49	48.19	
10	3.8	3.8	7.6	1.311	42	41.30	
8	2.6	2.6	5.2	1.086	37	36.39	
5	1.5	1.5	3.0	0.827	30	29.50	

Calculations :

$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

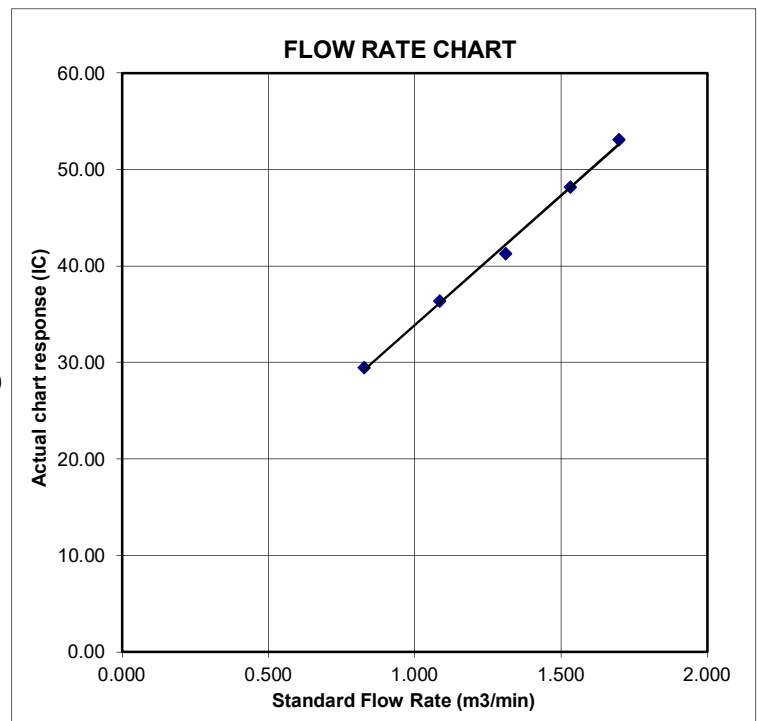
$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate
 IC = corrected chart responses
 I = actual chart response
 m = calibrator Qstd slope
 b = calibrator Qstd intercept
 Ta = actual temperature during calibration (deg K)
 Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)]-b)$$

m = sampler slope
 b = sampler intercept
 I = chart response
 Tav = daily average temperature
 Pav = daily average pressure





Certificate of Calibration

Calibration Certification Information

Cal. Date: December 16, 2024 Rootsometer S/N: 438320 Ta: 293 °K
Operator: Jim Tisch Pa: 749.0 mm Hg
Calibration Model #: TE-5025A Calibrator S/N: 4064

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4600	3.2	2.00
2	3	4	1	1.0300	6.4	4.00
3	5	6	1	0.9220	8.0	5.00
4	7	8	1	0.8770	8.8	5.50
5	9	10	1	0.7250	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (y-axis)
0.9981	0.6836	1.4159	0.9957	0.6820	0.8845
0.9938	0.9649	2.0024	0.9915	0.9626	1.2509
0.9917	1.0756	2.2388	0.9893	1.0730	1.3985
0.9906	1.1296	2.3480	0.9883	1.1269	1.4668
0.9853	1.3590	2.8318	0.9829	1.3557	1.7690
QSTD	m=	2.09671	QA	m=	1.31292
	b=	-0.01852		b=	-0.01157
	r=	0.99999		r=	0.99999

Calculations

Vstd=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime
For subsequent flow rate calculations:			
Qstd=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$	Qa=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$

Standard Conditions

Tstd: 298.15 °K
Pstd: 760 mm Hg

Key

ΔH: calibrator manometer reading (in H2O)
ΔP: rootsometer manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



Calibration Certificate

Certificate No. 411103

Page 1 of 4 Pages

Customer : Action-Untlod Environmental Services & consulting

Address : Unit A, 20/F, Gold King Industrial Building, 35-41 Tai Lin Pai Road, Kwai Chung, New Territories, Hong Kong

Order No. : Q44140

Date of receipt : 25-Oct-24

Item Tested

Description : Sound Level Meter

Manufacturer : B&K

I.D. : EQ0215

Model : 2238

Serial No. : 2285722

Test Conditions

Date of Test : 8-Nov-24

Supply Voltage : --

Ambient Temperature : $(23 \pm 3)^{\circ}\text{C}$

Relative Humidity : $(50 \pm 25) \%$

Test Specifications

Calibration check.

The UUT has an indication that it conforms to IEC 61672 Class 1.

Ref. Document/Procedure: Z01, IEC 61672-1:2002.

Test Results

All results were within the IEC 61672 Class 1 specification or Tolerance.(where applicable)

The results are shown in the attached page(s).

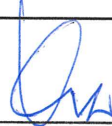
Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017	Multi-Function Generator	C211339	SCL-HKSAR
S240	Sound Level Calibrator	405380	NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.
The test results apply to the above Unit-Under-Test only

Calibrated by : 
Elva Chong

Approved by : 
Kin Wong



Calibration Certificate

Certificate No. 411103

Page 2 of 4 Pages

All tests were performed on the UUT's Reference Level Range: 54.0-134.0 dB, unless specified otherwise.

Results :

Acoustical signal test

1. Indication at the Calibration Check Frequency (1kHz)

UUT Setting		Applied Value (dB)	UUT Reading (dB)
Weight.	Response		After Adjust.*
A	F	94.0	93.8
	S		93.8
C	F		93.8
L			93.8

*Adjustment using the customer's sound calibrator was performed immediately before test.

Tolerance : ± 1.0 dB

Uncertainty : ± 0.1 dB

Self-generated noise (Microphone Installed, most sensitive range) : 23.7 dBA

Electrical signal tests

2. Frequency weightings (A ,F)

Frequency	Attenuation (dB)	IEC 61672-1 Class 1 Spec.
31.5 Hz	-39.5	- 39.4 dB, ± 1.5 dB
63 Hz	-26.2	- 26.2 dB, ± 1.0 dB
125 Hz	-16.2	- 16.1 dB, ± 1.0 dB
250 Hz	-8.7	- 8.6 dB, ± 1.0 dB
500 Hz	-3.3	- 3.2 dB, ± 1.0 dB
1 kHz	0.0 (Ref)	0 dB, ± 0.7 dB
2 kHz	+1.2	+ 1.2 dB, ± 1.0 dB
4 kHz	+0.9	+ 1.0 dB, ± 1.0 dB
8 kHz	-1.3	- 1.1 dB, + 1.5 dB ~ -2.5 dB
16 kHz	-6.8	- 6.6 dB, + 2.5 dB ~ - 16.0 dB

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 411103

Page 3 of 4 Pages

3. Frequency & Time weightings

3.1 Frequency Weighting (1kHz)

UUT Setting		Anticipated Value (dB)	UUT Reading (dB)	IEC 61672-1 Class 1 Spec.
Time Weight.	Freq. Weight.			
F	A	94.0	94.0 (Ref.)	--
	C		94.0	± 0.2 dB
	L		94.0	

Uncertainty : ± 0.1 dB

3.2 Time Weighting (1kHz)

UUT Setting		Anticipated Value (dB)	UUT Reading (dB)	IEC 61672-1 Class 1 Spec.
Time Weight.	Freq. Weight.			
F	A	94.0	94.0 (Ref.)	--
S			94.0	± 0.1 dB
eq			93.9	

Uncertainty : ± 0.1 dB

5. Level Linearity on the Reference Level Range (8 kHz, A, F)

Anticipated Value (dB)	UUT Reading (dB)	IEC 61672-1 Class 1 Spec.
124.0	123.8	± 0.8 dB
114.0	113.9	
104.0	103.9	
94.0	94.0 (Ref.)	
84.0	84.0	
74.0	74.0	
64.0	64.1	
54.0	54.2	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 411103

Page 4 of 4 Pages

6. Level Linearity including the level range control (1 kHz, A, F)

UUT Range (dB)	Anticipated Value (dB)	UUT Reading (dB)	IEC 61672-1 Class 1 Spec.
14.0-94.0	94.0	93.8	± 0.8 dB
24.0-104.0		94.0	
34.0-114.0		94.0	
44.0-124.0		94.0	
54.0-134.0		94.0 (Ref.)	
64.0-144.0		94.1	

Uncertainty : ± 0.1 dB

Remarks : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure: 1 008 hPa.

4. Microphone model: 4188, S/N: 2812706.

----- END -----

Certificate of Calibration

for

Description: *Sound Level Meter*
Manufacturer: *RION*
Type No.: *NL-52 (Serial No.: 00921191)*
Microphone: *RION UC-59 (Serial No.: 12910)*
Preamplifier: *NH-25 (Serial No.: 32609)*

Submitted by:

Customer: *Action-United Environmental Services & Consulting*
Address: *Unit A, 20/F, Gold King Industrial Building*
35-41 Tai Lin Pai Road, Kwai Chung,
New Territories, Hong Kong

Upon receipt for calibration, the instrument was found to be:

☒ **Within (31.5Hz – 8kHz)**

☐ **Outside**

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 16 December 2024

Date of calibration: 20 December 2024

Date of NEXT calibration: 19 December 2025

Calibrated by: _____
Calibration Technician

Date of issue: 20 December 2024

Certified by: _____
Mr. Ng Yan Wa
Laboratory Manager



Certificate No.: APJ24-111-CC001

Page 1 of 4

1. Calibration Precaution:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

2. Calibration Conditions:

Air Temperature: 23.3 °C
Air Pressure: 1005 hPa
Relative Humidity: 25.1 %

3. Calibration Equipment:

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)				Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting		Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast		94	1000	94.0	±0.4

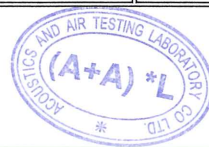
Linearity

Setting of Unit-under-test (UUT)				Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting		Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast		94	1000	94.0	Ref
				104		104.0	±0.3
				114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)				Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting		Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast		94	1000	94.0	Ref
		Slow				94.0	±0.3

Certificate No.: APJ24-111-CC001



Page 2 of 4

Frequency Response

Linear Response

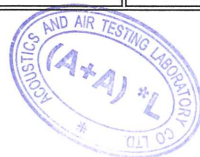
Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dB	SPL	94	31.5	94.0	±2.0
				63	94.2	±1.5
				125	94.1	±1.5
				250	94.1	±1.4
				500	94.1	±1.4
				1000	94.0	Ref
				2000	93.6	±1.6
				4000	92.8	±1.6
				8000	91.0	+2.1; -3.1

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SPL	94	31.5	54.7	-39.4 ±2.0
				63	68.0	-26.2 ±1.5
				125	78.0	-16.1 ±1.5
				250	85.4	-8.6 ±1.4
				500	90.8	-3.2 ±1.4
				1000	94.0	Ref
				2000	94.8	+1.2 ±1.6
				4000	93.8	+1.0 ±1.6
				8000	90.1	-1.1 ±2.1; -3.1

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBC	SPL	94	31.5	91.0	-3.0 ±2.0
				63	93.3	-0.8 ±1.5
				125	93.9	-0.2 ±1.5
				250	94.1	-0.0 ±1.4
				500	94.1	-0.0 ±1.4
				1000	94.0	Ref
				2000	93.5	-0.2 ±1.6
				4000	92.0	-0.8 ±1.6
				8000	88.1	-3.0 ±2.1; -3.1



Certificate No.: APJ24-111-CC001

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5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.15
	63 Hz	± 0.10
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
	8000 Hz	± 0.10
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)*L shall not be liable for any loss or damage resulting from the use of the equipment.



Certificate of Calibration

for

Description: Sound Level Meter
Manufacturer: RION
Type No.: NL-31 (Serial No.: 00410247)
Microphone: UC-53A (Serial No.: 322738)
Preamplifier: NH-21 (Serial No.: 36853)

Submitted by:

Customer: Action-United Environmental Services & Consulting
Address: Unit A, 20/F, Gold King Industrial Building
35-41 Tai Lin Pai Road, Kwai Chung,
New Territories, Hong Kong

Upon receipt for calibration, the instrument was found to be:

☒ Within (31.5Hz – 8kHz)
☐ Outside
the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 23 April 2025

Date of calibration: 28 April 2025

Date of NEXT calibration: 27 April 2026

Calibrated by: _____
Calibration Technician

Certified by: _____
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 28 April 2025

Certificate No.: APJ25-008-CC004



Page 1 of 4

1. Calibration Precaution:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

2. Calibration Conditions:

Air Temperature: 23.2 °C
Air Pressure: 1006 hPa
Relative Humidity: 50.8 %

3. Calibration Equipment:

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-120	dBA SPL	Fast	94	1000	94.0	±0.4

Linearity

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-120	dBA SPL	Fast	94	1000	94.0	Ref
			104		104.0	±0.3
			114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-120	dBA SPL	Fast	94	1000	94.0	Ref
		Slow			94.0	±0.3

Certificate No.: APJ25-008-CC004



Page 2 of 4

Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-120	dB	SPL	94	31.5	94.1	±2.0
				63	94.2	±1.5
				125	94.1	±1.5
				250	94.1	±1.4
				500	94.1	±1.4
				1000	94.0	Ref
				2000	93.9	±1.6
				4000	93.4	±1.6
				8000	92.0	+2.1; -3.1

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-120	dBA	SPL	94	31.5	54.9	-39.4±2.0
				63	68.1	-26.2±1.5
				125	78.0	-16.1±1.5
				250	85.4	-8.6±1.4
				500	90.8	-3.2±1.4
				1000	94.0	Ref
				2000	95.0	+1.2±1.6
				4000	94.4	+1.0±1.6
				8000	91.0	-1.1+2.1; -3.1

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-120	dBC	SPL	94	31.5	91.2	-3.0±2.0
				63	93.4	-0.8±1.5
				125	94.0	-0.2±1.5
				250	94.1	-0.0±1.4
				500	95.1	-0.0±1.4
				1000	94.0	Ref
				2000	93.7	-0.2±1.6
				4000	92.6	-0.8±1.6
				8000	89.1	-3.0 +2.1; -3.1



5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.10
	63 Hz	± 0.10
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
	8000 Hz	± 0.10
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)*L shall not be liable for any loss or damage resulting from the use of the equipment.

Certificate No.: APJ25-008-CC004



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Calibration Certificate

Certificate No. 411106

Page 1 of 2 Pages

Customer : Action-Unltod Environmental Services & consulting

Address : Unit A, 20/F, Gold King Industrial Building, 35-41 Tai Lin Pai Road, Kwai Chung, New Territories, Hong Kong

Order No. : Q44140

Date of receipt : 25-Oct-24

Item Tested

Description : Sound Calibrator

Manufacturer : B&K

Model : Type 4231

I.D. : EQ082

Serial No. : 2713428

Test Conditions

Date of Test : 8-Nov-24

Supply Voltage : --

Ambient Temperature : $(23 \pm 3)^{\circ}\text{C}$

Relative Humidity : $(50 \pm 25) \%$

Test Specifications

Calibration check.

The UUT has an indication that it conforms to IEC 60942:2017 Class 1.

Ref. Document/Procedure : F21, Z02, IEC 60942:2017.

Test Results

All results were within the IEC 60942 Class 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S240	Sound Level Calibrator	405380	NIM-PRC & SCL-HKSAR
S014	Spectrum Analyzer	405219	NIM-PRC & SCL-HKSAR
S041	Universal Counter	402289	SCL-HKSAR
S206	Sound Level Meter	405379	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.
The test results apply to the above Unit-Under-Test only

Calibrated by : 
Elva Chong

Approved by : 
Kin Wong

This Certificate is issued by:

Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8646

Date: 8-Nov-24



Calibration Certificate

Certificate No. 411106

Page 2 of 2 Pages

Results :

1. Generated Sound Pressure Level

UUT Nominal Value (dB)	Measured Value (dB)	IEC 60942 Class 1 Spec.
94.0	94.1	± 0.4 dB
114.0	114.0	

Uncertainty : ± 0.2 dB

2. Short-term Level Fluctuation : 0.0 dB

IEC 60942 Class 1 Spec. : ± 0.1 dB

Uncertainty : ± 0.05 dB

3. Frequency

UUT Nominal Value (kHz)	Measured Value (kHz)	IEC 60942 Class 1 Spec.
1	1.000	± 1 %

Uncertainty : ± 3.6 x 10⁻⁶

4. Total Distortion + Noise : < 0.2 %

IEC 60942 Class 1 Spec. : < 3.0 %

Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 1 008 hPa.

----- END -----



Calibration Certificate

Certificate No. **411107**

Page 1 of 2 Pages

Customer : Action-Unltod Environmental Services & consulting

Address : Unit A, 20/F, Gold King Industrial Building, 35-41 Tai Lin Pai Road, Kwai Chung, New Territories, Hong Kong

Order No. : Q44140

Date of receipt : 25-Oct-24

Item Tested

Description : Sound Level Calibrator

Manufacturer : Rion

Model : NC-73

I.D. : EQ085

Serial No. : 10655561

Test Conditions

Date of Test : 8-Nov-24

Ambient Temperature : $(23 \pm 3)^{\circ}\text{C}$

Supply Voltage : --

Relative Humidity : $(50 \pm 25) \%$

Test Specifications

Calibration check.

Ref. Document/Procedure : F21, Z02, IEC 60942:2017.

Test Results

The results are shown in the attached page(s).

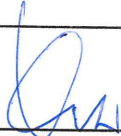
Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S014	Spectrum Analyzer	405219	NIM-PRC & SCL-HKSAR
S240	Sound Level Calibrator	405380	NIM-PRC & SCL-HKSAR
S041	Universal Counter	402289	SCL-HKSAR
S206	Sound Level Meter	405379	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.
The test results apply to the above Unit-Under-Test only

Calibrated by : 
Elva Chong

Approved by : 
Kin Wong

This Certificate is issued by:

Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8646

Date: 8-Nov-24



Calibration Certificate

Certificate No. 411107

Page 2 of 2 Pages

Results :

1. Generated Sound Pressure Level

UUT Nominal Value (dB)	Measured Value (dB)	Tolerance (Ref: IEC 60942 Class 2 Spec.)
94.0	94.1	± 0.4 dB

Uncertainty : ± 0.2 dB

2. Short-term Level Fluctuation : 0.0 dB

Tolerance (Ref: IEC 60942 Class 2 Spec.) : ± 0.15 dB

Uncertainty : ± 0.05 dB

3. Frequency

UUT Nominal Value (kHz)	Measured Value (kHz)	Tolerance (Ref: IEC 60942 Class 2 Spec.)
1	*0.952	± 1.7 %

Uncertainty : $\pm 3.6 \times 10^{-6}$

4. Total Distortion + Noise : < 0.1 %

Tolerance (Ref: IEC 60942 Class 2 Spec.) : < 3.0 %

Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 1 008 hPa.

4. *Out of Tolerance.

----- END -----

Certificate of Calibration

for

Description: **Sound Level Calibrator**

Manufacturer: **RION**

Type No.: **NC-75**

Serial No.: **34680623**

Submitted by:

Customer: **Action-United Environmental Services & Consulting**

Address: **Unit A, 20/F, Gold King Industrial Building**

35-41 Tai Lin Pai Road, Kwai Chung,

New Territories, Hong Kong

Upon receipt for calibration, the instrument was found to be:

☒ **Within**

☐ **Outside**

the allowable tolerance.

The test equipments used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 23 April 2025

Date of calibration: 28 April 2025

Date of NEXT calibration: 27 April 2026

Calibrated by: 
Calibration Technician

Certified by: 
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 28 April 2025

Certificate No.: APJ25-008-CC005



Page 1 of 2

1. Calibration Precautions:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

2. Calibration Specifications:

Calibration check

3. Calibration Conditions:

Air Temperature: 23.2 °C
Air Pressure: 1006 hPa
Relative Humidity: 50.8 %

4. Calibration Equipment:

Test Equipment	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV240109	HOKLAS

5. Calibration Results**5.1 Sound Pressure Level**

Nominal value dB	Accept lower level dB	Accept upper level dB	Measured value dB
94.0	93.6	94.4	94.0

6. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 60942 Class 1.

Note:

The values given in this certification only related to the values measured at the time of the calibration.



Certificate No.: APJ25-008-CC005

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Appendix F

Event and Action Plan

Event / Action Plan for construction dust

Event	Action			
	ET	IEC	ER	Contractor
Action Level exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC, ER and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Rectify any unacceptable practice and implement remedial measures; and 3. Amend working methods agreed with ER if appropriate.
Action Level exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC, ER and Contractor; 3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; and 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 3. Implement the agreed proposals; and 4. Amend proposal if appropriate.
Limit Level exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor, IEC and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; and 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise the ER and ET on the effectiveness of the proposed remedial measures; and 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; and 5. Amend proposal if appropriate.
Limit Level exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 5. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise and ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; 5. 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.

Event and Action Plan for Construction Noise

Event	Action			
	ET	IEC	ER	Contractor
Action Level Exceedance	1. Notify IEC, ER and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; and 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; and 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; and 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to IEC and ER; and 2. Implement noise mitigation proposals.
Limit Level Exceedance	1. Identify source; 2. Inform IEC, ER, EPD and Contractor; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; and 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Appendix G

Impact Monitoring Schedule

Impact Monitoring Schedule for the Reporting Period

Date		NOISE MONITORING (0700 – 1900)	AIR QUALITY MONITORING	
			1-HOUR TSP	24-HOUR TSP
Mon	1-Sep-25			
Tue	2-Sep-25			✓
Wed	3-Sep-25			
Thu	4-Sep-25			
Fri	5-Sep-25	✓	✓	
Sat	6-Sep-25			
Sun	7-Sep-25			
Mon	8-Sep-25			✓
Tue	9-Sep-25			
Wed	10-Sep-25			
Thu	11-Sep-25	✓	✓	
Fri	12-Sep-25			
Sat	13-Sep-25			✓
Sun	14-Sep-25			
Mon	15-Sep-25			
Tue	16-Sep-25			
Wed	17-Sep-25	✓	✓	
Thu	18-Sep-25			
Fri	19-Sep-25			✓
Sat	20-Sep-25			
Sun	21-Sep-25			
Mon	22-Sep-25			
Tue	23-Sep-25			
Wed	24-Sep-25			
Thu	25-Sep-25	✓	✓	✓
Fri	26-Sep-25			
Sat	27-Sep-25			
Sun	28-Sep-25			
Mon	29-Sep-25	✓	✓	
Tue	30-Sep-25			✓

✓	Monitoring Day
	Sunday or Public Holiday

Impact Monitoring Schedule for next Reporting Period

Date		NOISE MONITORING (0700 – 1900)	AIR QUALITY MONITORING	
			1-HOUR TSP	24-HOUR TSP
Wed	1-Oct-25			
Thu	2-Oct-25			
Fri	3-Oct-25			
Sat	4-Oct-25		✓	
Sun	5-Oct-25			
Mon	6-Oct-25			✓
Tue	7-Oct-25			
Wed	8-Oct-25			
Thu	9-Oct-25			
Fri	10-Oct-25	✓	✓	
Sat	11-Oct-25			✓
Sun	12-Oct-25			
Mon	13-Oct-25			
Tue	14-Oct-25			
Wed	15-Oct-25			
Thu	16-Oct-25	✓	✓	
Fri	17-Oct-25			✓
Sat	18-Oct-25			
Sun	19-Oct-25			
Mon	20-Oct-25			
Tue	21-Oct-25			
Wed	22-Oct-25	✓	✓	
Thu	23-Oct-25			✓
Fri	24-Oct-25			
Sat	25-Oct-25			
Sun	26-Oct-25			
Mon	27-Oct-25	✓	✓	
Tue	28-Oct-25			✓
Wed	29-Oct-25			
Thu	30-Oct-25			
Fri	31-Oct-25			

✓	Monitoring Day
	Sunday or Public Holiday

Appendix H

Database of Monitoring Result

24-HOUR TSP MONITORING RESULT DATABASE

24-hour TSP Monitoring Data for AMS1a															
DATE	SAMPLE NUMBER	ELAPSED TIME			CHART READING			AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WEIGHT (g)		DUST WEIGHT COLLECTED	24-hr TSP (µg/m ³)
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(°C)	(hPa)	(m ³ /min)	(std m ³)	INITIAL	FINAL	(g)	
2-Sep-25	21828	29495.96	29519.96	1440.00	41	41	41	33.7	1008.2	1.45	2087	2.6086	2.6442	0.0356	17
8-Sep-25	21866	29519.96	29543.96	1440.00	41	41	41	28.6	1005.4	1.46	2097	2.6701	2.722	0.0519	25
13-Sep-25	21784	29543.96	29567.96	1440.00	41	41	41	33.9	1011.7	1.45	2089	2.5736	2.606	0.0324	16
19-Sep-25	21785	29567.96	29591.96	1440.00	41	41	41	28.5	1005.9	1.46	2098	2.5849	2.6159	0.031	15
25-Sep-25	21827	29591.96	29615.96	1440.00	41	41	41	27.8	1008.1	1.46	2101	2.6172	2.6858	0.0686	33
30-Sep-25	21479	29615.96	29639.96	1440.00	41	41	41	32.5	1012.5	1.45	2093	2.7536	2.7891	0.0355	17
24-hour TSP Monitoring Data for AMS-5															
DATE	SAMPLE NUMBER	ELAPSED TIME			CHART READING			AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WEIGHT (g)		DUST WEIGHT COLLECTED	24-hr TSP (µg/m ³)
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(°C)	(hPa)	(m ³ /min)	(std m ³)	INITIAL	FINAL	(g)	
2-Sep-25	21831	17541.09	17565.09	1440.00	39	39	39.0	33.7	1008.2	1.37	1976	2.6302	2.6638	0.0336	17
8-Sep-25	21783	17565.09	17589.09	1440.00	39	39	39.0	27.4	1005.4	1.38	1988	2.5760	2.6232	0.0472	24
13-Sep-25	21127	17589.09	17613.09	1440.00	39	39	39.0	33.9	1011.7	1.37	1978	2.8213	2.8542	0.0329	17
19-Sep-25	21824	17613.09	17637.09	1440.00	39	39	39.0	28.5	1005.9	1.38	1986	2.6153	2.6599	0.0446	22
25-Sep-25	21922	17637.09	17661.09	1440.00	39	39	39.0	27.8	1008.1	1.38	1989	2.6069	2.6391	0.0322	16
30-Sep-25	21924	17661.09	17685.09	1440.00	39	39	39.0	32.5	1012.5	1.38	1982	2.5903	2.6230	0.0327	17
24-hour TSP Monitoring Data for AMS-6															
DATE	SAMPLE NUMBER	ELAPSED TIME			CHART READING			AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WEIGHT (g)		DUST WEIGHT COLLECTED	24-hr TSP (µg/m ³)
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(°C)	(hPa)	(m ³ /min)	(std m ³)	INITIAL	FINAL	(g)	
2-Sep-25	21829	22608.10	22632.10	1440.00	42	42	42.0	30.3	1008.2	1.45	2085	2.6157	2.6900	0.0743	36
8-Sep-25	21128	22632.10	22656.10	1440.00	42	42	42.0	28.6	1005.2	1.45	2087	2.8164	2.8632	0.0468	22
13-Sep-25	21787	22656.10	22680.10	1440.00	42	42	42.0	33.9	1011.7	1.44	2079	2.5875	2.6280	0.0405	19
19-Sep-25	21908	22680.10	22704.10	1440.00	42	42	42.0	28.5	1005.9	1.45	2087	2.5904	2.6331	0.0427	20
25-Sep-25	21926	22704.10	22728.10	1440.00	42	42	42.0	27.8	1008.1	1.45	2091	2.6000	2.6440	0.0440	21
30-Sep-25	21825	22728.10	22752.10	1440.00	42	42	42.0	32.5	1012.5	1.45	2083	2.6177	2.6848	0.0671	32

24-hour TSP Monitoring Data for AMS-7															
DATE	SAMPLE NUMBER	ELAPSED TIME			CHART READING			AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WEIGHT (g)		DUST WEIGHT COLLECTED	24-hr TSP (µg/m ³)
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(°C)	(hPa)	(m ³ /min)	(std m ³)	INITIAL	FINAL	(g)	
2-Sep-25	21478	17411.32	17435.32	1440.00	41	41	41.0	33.7	1008.2	1.42	2038	2.7656	2.7911	0.0255	13
8-Sep-25	21875	17435.32	17459.32	1440.00	41	41	41.0	28.6	1005.4	1.42	2048	2.6575	2.7068	0.0493	24
13-Sep-25	21876	17459.32	17483.32	1440.00	41	41	41.0	33.9	1011.7	1.42	2040	2.6552	2.7025	0.0473	23
19-Sep-25	21786	17483.32	17507.32	1440.00	41	41	41.0	28.5	1005.9	1.42	2049	2.5772	2.6106	0.0334	16
25-Sep-25	21826	17507.32	17531.32	1440.00	41	41	41.0	27.8	1008.1	1.42	2052	2.6160	2.6810	0.0650	32
30-Sep-25	21480	17531.32	17555.32	1440.00	41	41	41.0	32.5	1012.5	1.42	2044	2.7436	2.7897	0.0461	23

NOISE MONITORING RESULT DATABASE FOR CONTRACT 1

Noise Measurement Results (dB) of NMS1																					
Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30 min, dB(A)	Limit Level dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
5-Sep-25	11:30	63.4	66.9	57.0	65.7	69.9	58.4	66.0	67.7	57.8	66.5	70.2	53.3	67.4	70.3	60.1	67.6	70.6	60.2	66	70
11-Sep-25	13:00	66.8	70.8	60.3	65.9	70.0	61.1	71.6	75.8	66.4	71.4	77.2	63.5	70.1	75.7	63.0	72.8	77.9	67.2	70	70
17-Sep-25	13:10	70.4	73.3	62.7	68.5	71.9	62.2	69.2	72.0	60.8	70.3	73.2	64.9	69.6	72.1	63.3	68.4	71.2	62.4	69	70
25-Sep-25	9:30	65.2	69.9	52.6	65.4	70.1	53.0	69.2	73.0	56.9	64.6	57.4	52.8	67.3	71.4	56.5	68.7	73.0	56.5	67	70
29-Sep-25	8:30	70.2	76.1	57.5	69.5	73.1	59.2	68	70.2	57.3	65.4	68.6	58.3	69	72.9	59.6	68	71.5	57.8	69	70

Noise Measurement Results (dB) of NMS2																					
Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30 min, dB(A)	Limit Level dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
5-Sep-25	9:10	61.1	63.5	58.0	64.7	67.5	61.0	62.1	65.7	58.0	61.8	64.3	58.4	60.9	62.4	54.4	62.2	64.8	56.5	62	70
11-Sep-25	10:30	61.8	64.3	56.1	59.5	62.7	56.7	59.3	62.2	55.8	60.9	63.1	54.9	62.0	64.3	55.3	60.4	63.7	55.5	61	70
17-Sep-25	10:40	65.9	66.5	62.1	64.6	67.3	63.0	66.3	68.7	64.5	65.7	68.8	62.5	64.8	67.2	63.3	63.4	66.6	62.8	65	70
25-Sep-25	13:10	65.8	67.8	61.5	68.3	69.1	61.8	65.9	67.8	62.5	66.2	68.9	62.0	65.6	68.2	59.0	68.8	72.9	61.6	67	70
29-Sep-25	10:30	63.1	65.4	60.1	62.8	65.4	59.3	63.4	65.6	60.4	61.5	62.2	60.9	63.1	63.4	60.1	62.8	65.4	59.3	63	70

Noise Measurement Results (dB) of NMS3																					
Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)	Limit Level dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
5-Sep-25	11:18	58.8	61.9	54.1	59.2	62.0	54.0	58.5	60.7	53.9	59.5	62.7	54.9	58.5	61.1	53.7	59.1	61.9	54.6	59	75
11-Sep-25	10:40	59.3	63.9	53.8	56.8	59.2	53.2	57.6	60.8	53.7	61.9	66.6	53.6	57.8	60.5	53.5	56.2	58.5	52.5	59	75
17-Sep-25	10:20	64.5	68.3	59.6	60.7	62.1	59.0	62.1	63.7	59.5	61.0	62.5	59.2	64.6	68.0	59.6	65.5	69.4	59.7	63	75
25-Sep-25	13:05	60.4	63.8	56.0	61.9	63.6	57.2	60.5	62.7	55.3	62.3	64.7	54.6	61.6	63.3	55.8	60.9	62.5	54.0	61	75
29-Sep-25	13:00	60.7	62.1	59.3	61.5	62.8	59.7	61.2	63.5	59.9	59.0	60.2	56.8	58.7	60.7	57.3	59.4	60.1	58.4	60	75

Noise Measurement Results (dB) of NMS4a																					
Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min in, dB(A)	Limit Level dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
5-Sep-25	10:30	61.6	64.5	53.8	60.5	64.3	53.8	62.5	65.9	54.1	60.6	63.4	55.0	62.0	64.5	53.0	61.2	64.4	53.6	61	75
11-Sep-25	9:00	61.3	64.7	52.8	59.5	63.3	54.6	62.7	65.9	54.0	59.9	62.5	53.7	60.2	64.5	52.6	59.7	62.8	52.3	61	75
17-Sep-25	9:10	65.7	67.5	62.2	66.2	68.6	64.1	65.8	67.4	62.5	64.9	66.7	63.3	65.0	67.3	62.5	67.4	69.6	64.7	66	75
25-Sep-25	10:40	70.8	74.9	61.1	56.5	61.1	51.6	52.9	54.4	51.4	52.9	53.8	51.8	53.0	54.3	51.6	54.0	55.0	52.4	63	75
29-Sep-25	9:05	62.3	63.5	60.8	62	63.6	60.2	63.7	64.6	60.6	62.7	64.5	61.6	61.8	62.9	61.6	64.1	66.9	60.7	63	75

Noise Measurement Results (dB) of NMS5																					
Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)	Limit Level dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
5-Sep-25	9:50	64.3	65.7	62.0	63.9	65.1	61.8	62.9	65.2	59.0	63.4	65.4	58.1	59.8	61.1	58.3	60.0	61.7	58.1	63	75
11-Sep-25	9:50	60.3	61.8	58.4	58.5	60.4	58.2	59.6	60.7	57.3	58.9	60.5	57.5	58.2	60.0	57.0	59.1	60.9	57.2	59	75
17-Sep-25	10:00	63.8	65.6	61.7	64.0	66.4	62.2	63.9	65.4	61.3	62.6	64.8	60.2	61.3	63.7	60.4	62.4	63.8	60.6	63	75
25-Sep-25	11:20	59.3	60.6	57.7	60.5	62.1	58.4	60.6	61.6	58.6	59.8	60.7	57.3	59.8	61.2	58.3	58.9	60.4	57.4	60	75
29-Sep-25	9:45	64.1	65.9	61.8	63.0	64.2	61.6	63.6	64.6	61.7	62.7	63.9	61.6	62.6	63.6	61.4	60.8	62.9	57.6	63	75

Noise Measurement Results (dB) of NMS6																					
Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)	Limit Level dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
5-Sep-25	10:19	65.1	67.9	62.1	66.4	68.3	63.0	65.8	68.5	62.1	65.6	68.9	62.0	66.2	69.0	62.5	67.3	70.5	62.9	66	75
11-Sep-25	10:05	67.5	70.0	63.1	68.6	71.9	62.9	67.1	69.6	62.0	69.8	73.1	61.7	68.0	71.4	59.5	70.7	74.3	62.7	69	75
17-Sep-25	9:45	65.1	68.8	56.7	63.8	67.6	57.2	63.2	66.4	57.4	61.6	64.7	57.7	64.6	68.0	58.0	62.4	65.5	58.9	64	75
25-Sep-25	10:35	60.7	64.4	59.2	60.5	63.0	56.1	61.8	64.3	57.5	63.5	65.6	58.5	63.7	65.9	59.0	61.3	63.7	57.8	62	75
29-Sep-25	10:30	63.9	67.6	61.4	62.7	65.3	60.1	65.3	68.8	63.6	61.5	66.9	62.7	63.2	66.5	61.8	62.6	65.7	61.4	63	75

Noise Measurement Results (dB) of NMS7																					
Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)	Limit Level dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
5-Sep-25	9:32	60.8	64.0	54.1	61.2	64.5	54.8	63.0	64.6	55.2	63.2	65.9	56.0	62.8	65.3	56.7	63.4	67.2	57.1	63	75
11-Sep-25	9:10	65.0	65.2	59.8	61.2	62.8	58.9	63.2	65.6	60.1	65.6	69.3	61.2	58.0	60.1	54.2	60.8	63.1	57.1	63	75
17-Sep-25	9:00	66.3	68.3	63.9	65.9	67.6	63.1	65.0	66.5	63.2	65.8	67.1	64.1	64.7	66.2	62.9	64.7	66.1	62.5	65	75
25-Sep-25	9:50	63.9	66.4	53.6	62.2	65.8	54.3	60.9	64.4	55.0	60.6	64.4	54.2	63.8	66.9	56.7	61.7	64.6	57.1	62	75
29-Sep-25	9:45	61.1	63.8	53.4	59.8	62.3	53.7	60.3	63.5	54.0	59.5	62.9	52.2	60.7	63.2	54.1	61.6	64.3	54.5	61	75

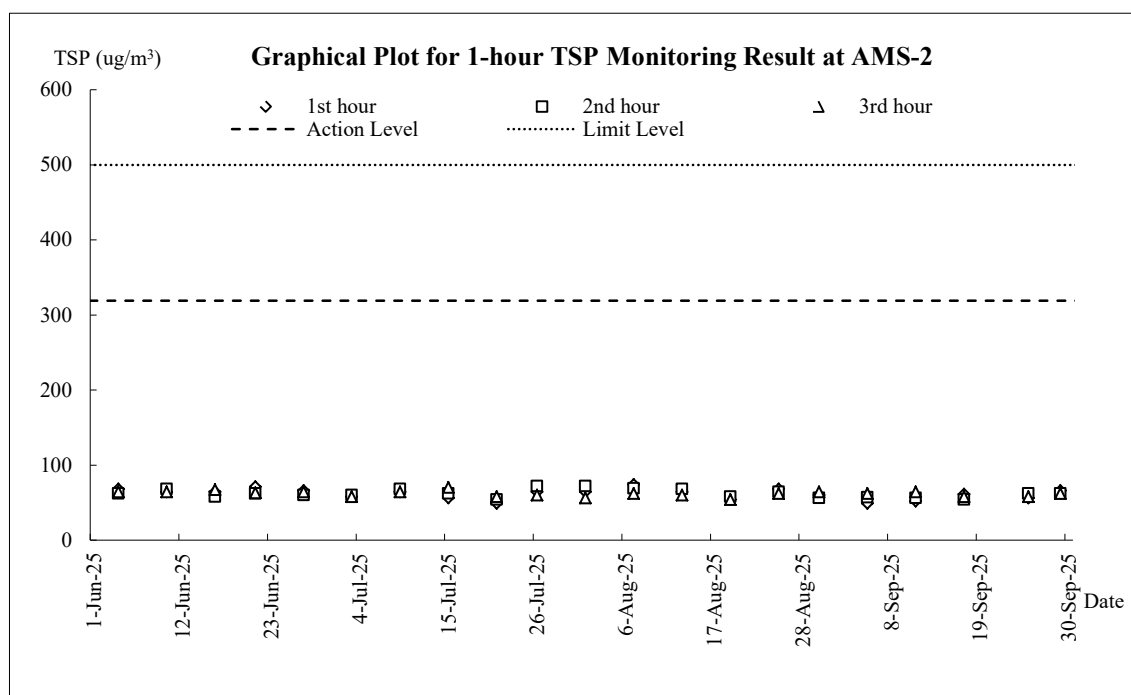
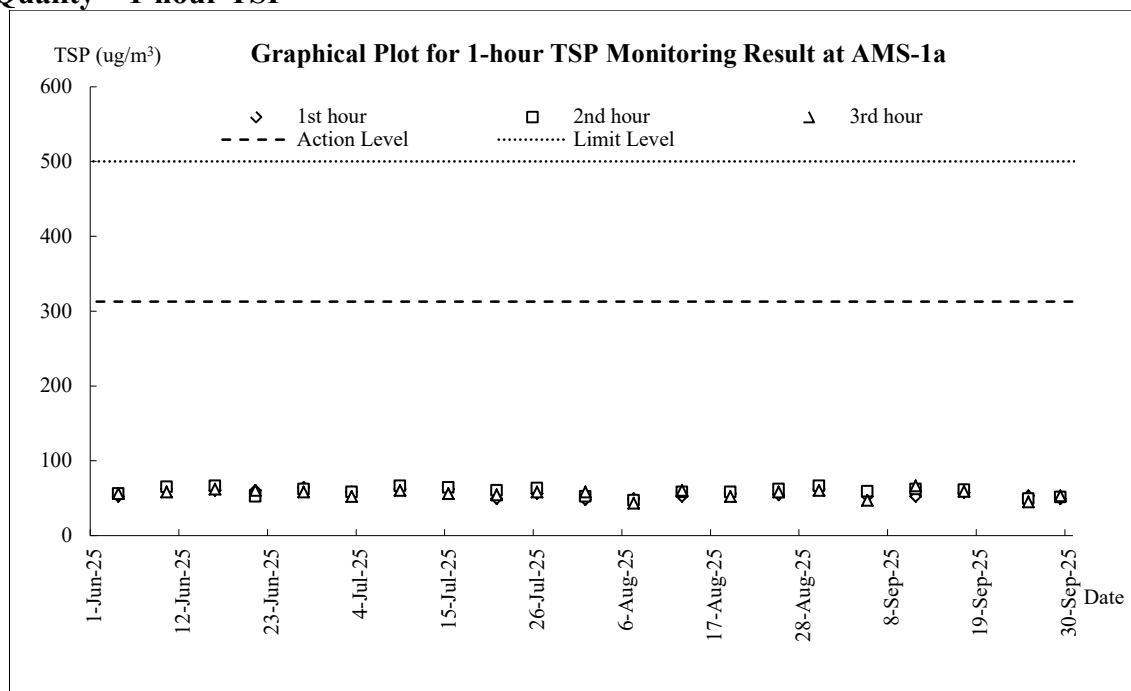
Noise Measurement Results (dB) of NMS8																					
Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)	Limit Level dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
5-Sep-25	13:12	59.0	61.2	50.0	59.4	62.5	51.7	58.5	60.9	50.2	61.0	63.3	50.7	58.9	62.1	50.5	62.3	64.0	51.5	60	75
11-Sep-25	11:20	60.6	65.2	60.3	61.2	64.7	57.8	67.0	70.7	56.9	63.9	62.1	51.7	56.8	63.7	53.0	61.7	65.4	54.3	63	75
17-Sep-25	11:15	65.5	69.3	60.6	61.7	63.1	60.0	63.1	64.7	60.5	62.0	63.5	60.2	65.6	69.0	60.6	66.5	70.4	60.7	64	75
25-Sep-25	14:20	66.3	68.5	60.8	65.6	69.0	60.1	67.5	70.8	61.6	65.2	69.8	60.7	66.7	70.9	61.5	65.6	69.7	60.2	66	75
29-Sep-25	14:45	62.8	64.6	57.1	63.7	65.3	58.0	61.9	63.7	55.6	63.3	65.9	56.2	61.5	64.0	55.9	62.6	64.4	55.1	63	75

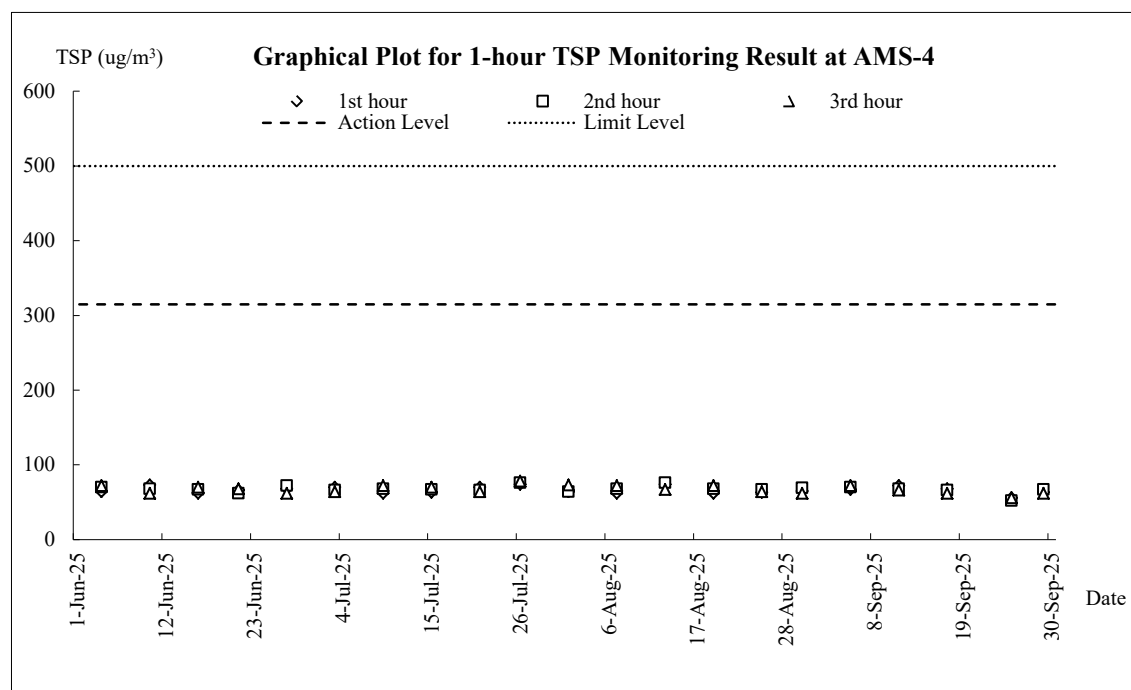
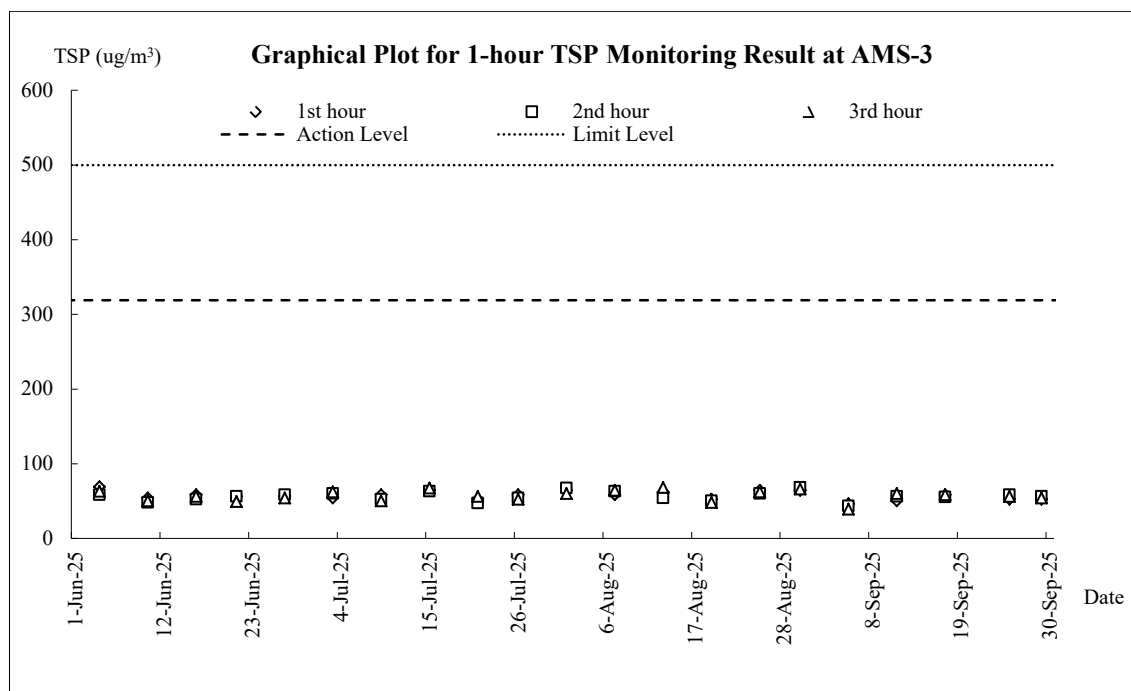
NOISE MONITORING RESULT DATABASE FOR CONTRACT 3

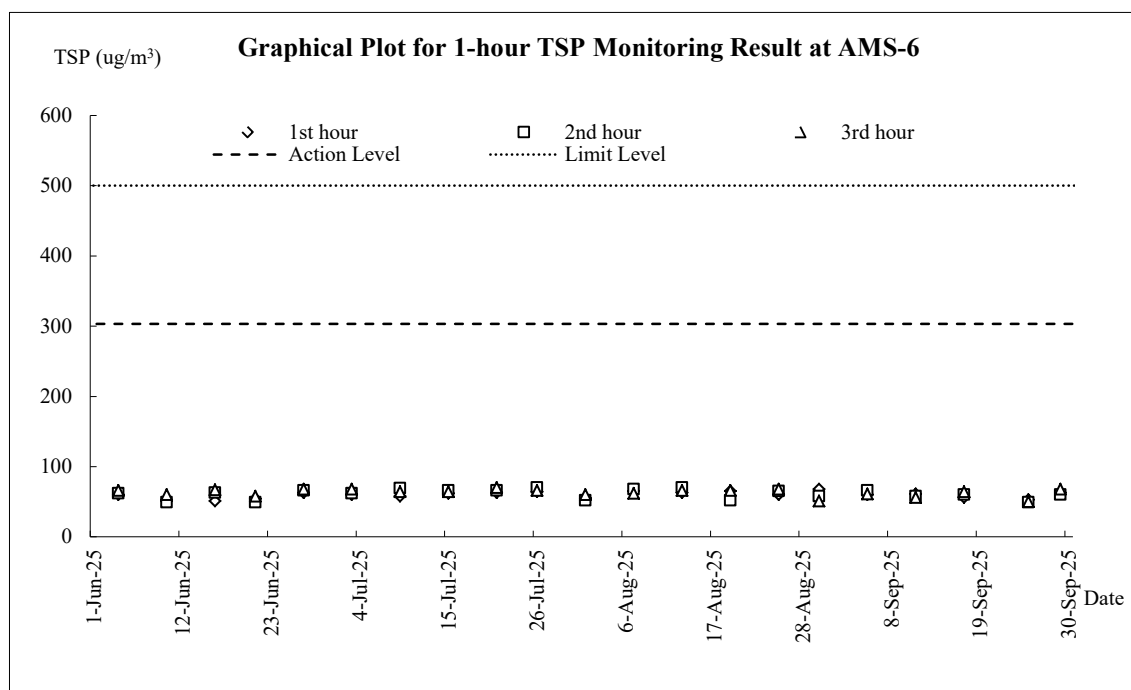
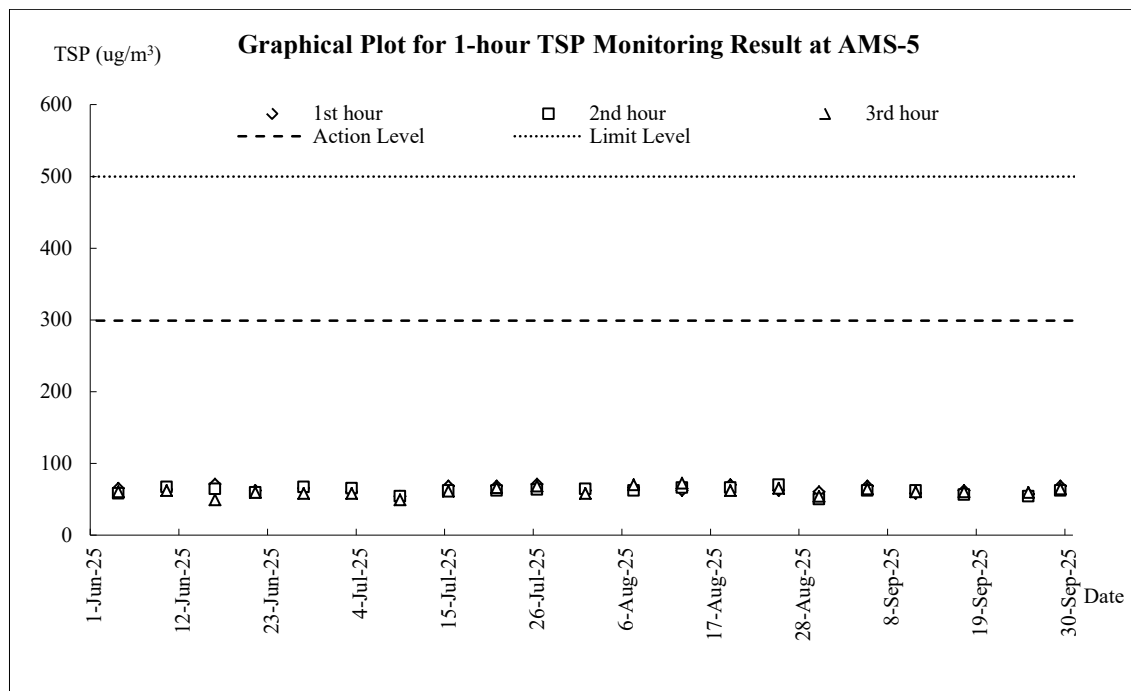
Noise Measurement Results (dB) of CN3																					
Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)	Limit Level dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
5-Sep-25	11:05	59.4	62.3	55.0	59.3	62.0	55.6	58.9	61.4	55.5	61.3	64.3	57.1	58.1	59.6	56.1	57.4	58.8	55.5	59	75
11-Sep-25	11:20	61.4	64.5	55.7	59.2	62.6	53.1	60.5	63.9	53.0	61.3	65.2	53.3	60.5	64.7	52.8	59.3	62.3	53.6	60	75
17-Sep-25	9:40	60.4	63.6	54.8	62.4	65.6	56.3	62.0	64.3	58.8	63.9	65.8	61.2	64.0	65.8	62.2	64.2	66.0	62.5	63	75
25-Sep-25	11:20	63.7	65.8	60.3	64.8	66.9	62.1	63.4	65.9	61.0	64.0	66.3	60.2	64.6	67.0	58.6	63.3	66.6	58.9	64	75
29-Sep-25	13:40	64.7	66.8	62.5	63.2	64.6	61.9	64.0	66.1	62.2	64.3	66.5	62.4	63.9	65.8	62.5	65.0	67.7	63.0	64	75

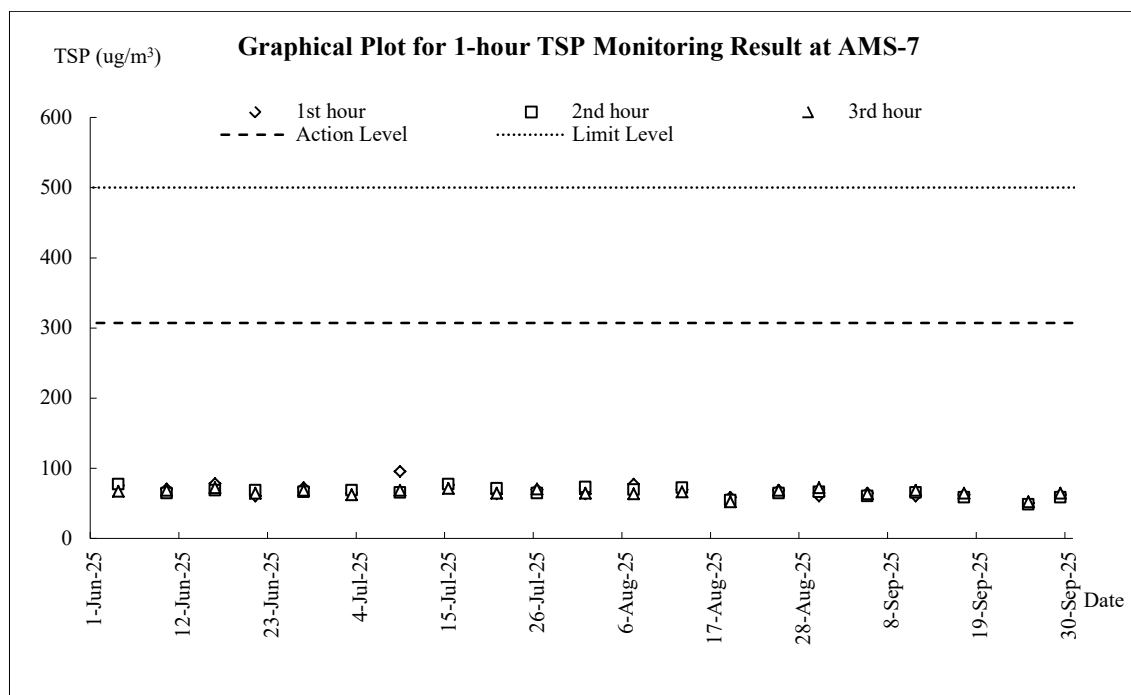
Appendix I

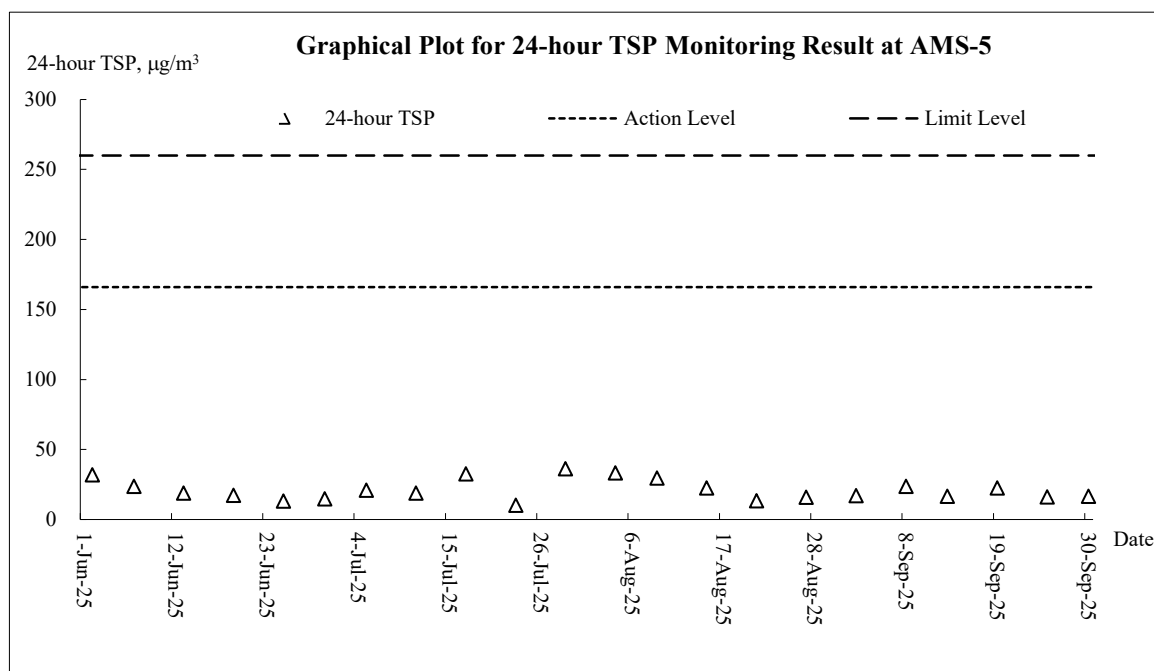
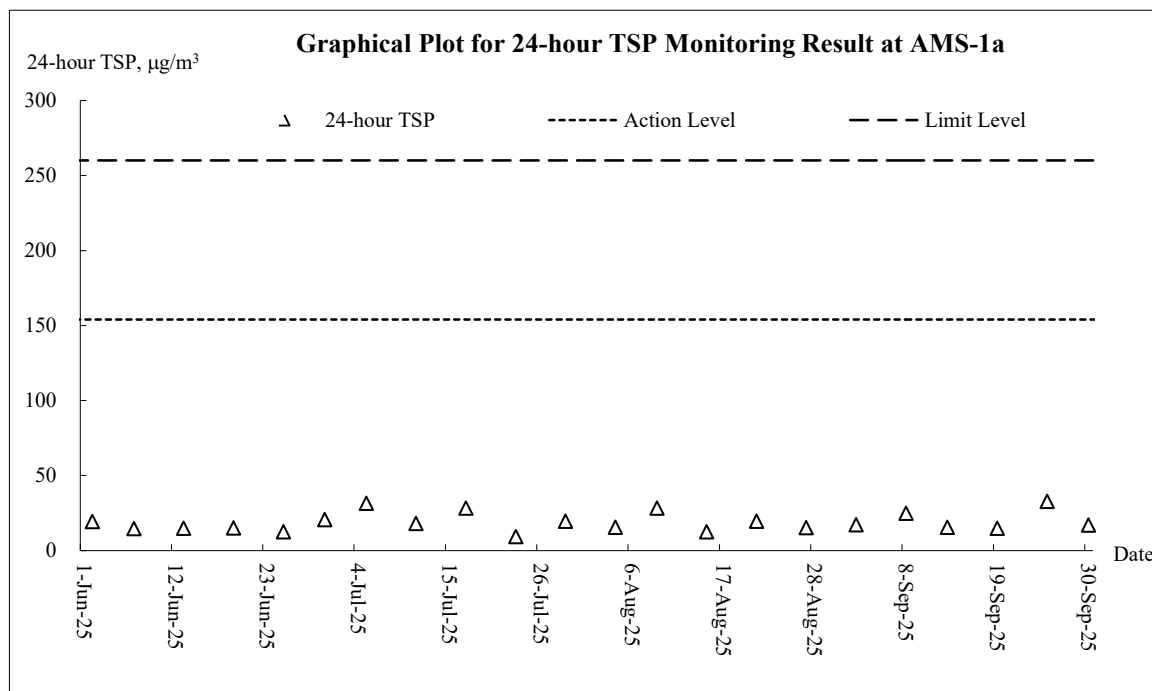
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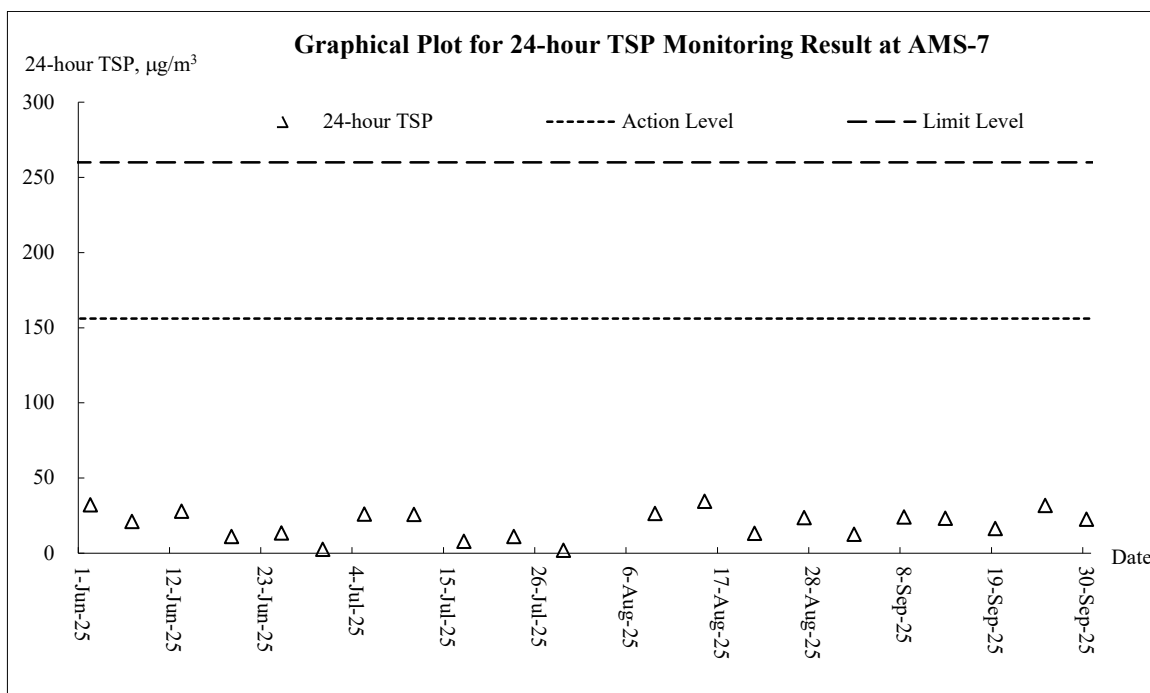
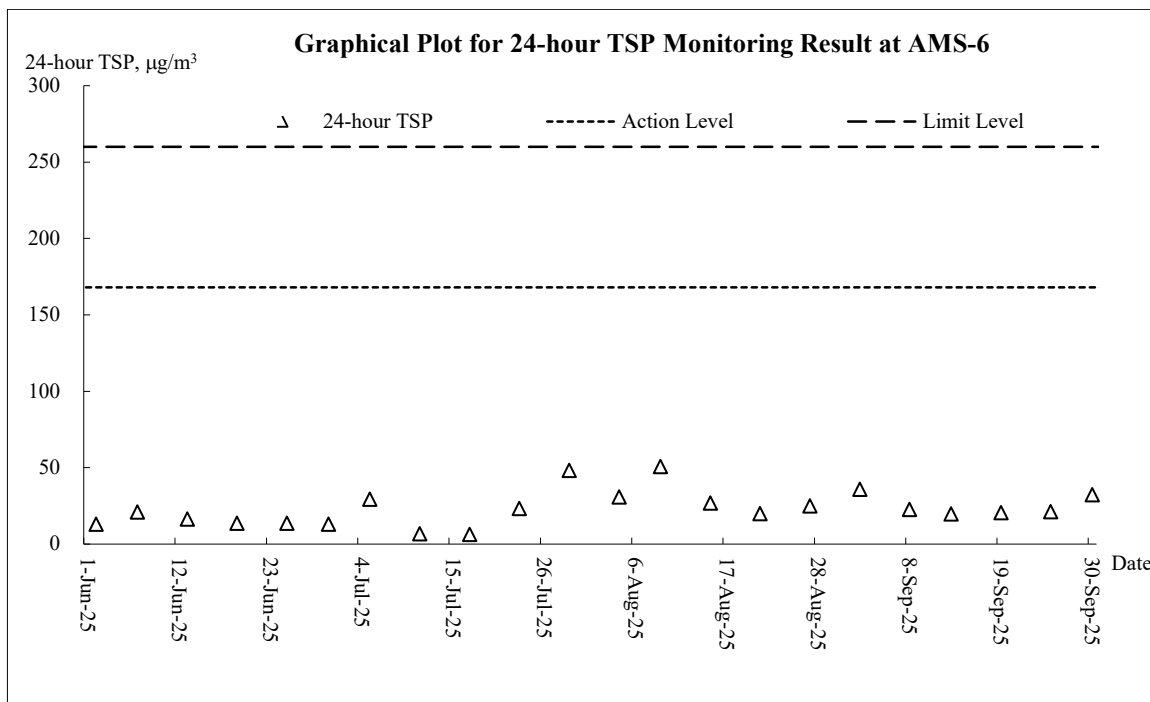
Air Quality – 1-hour TSP

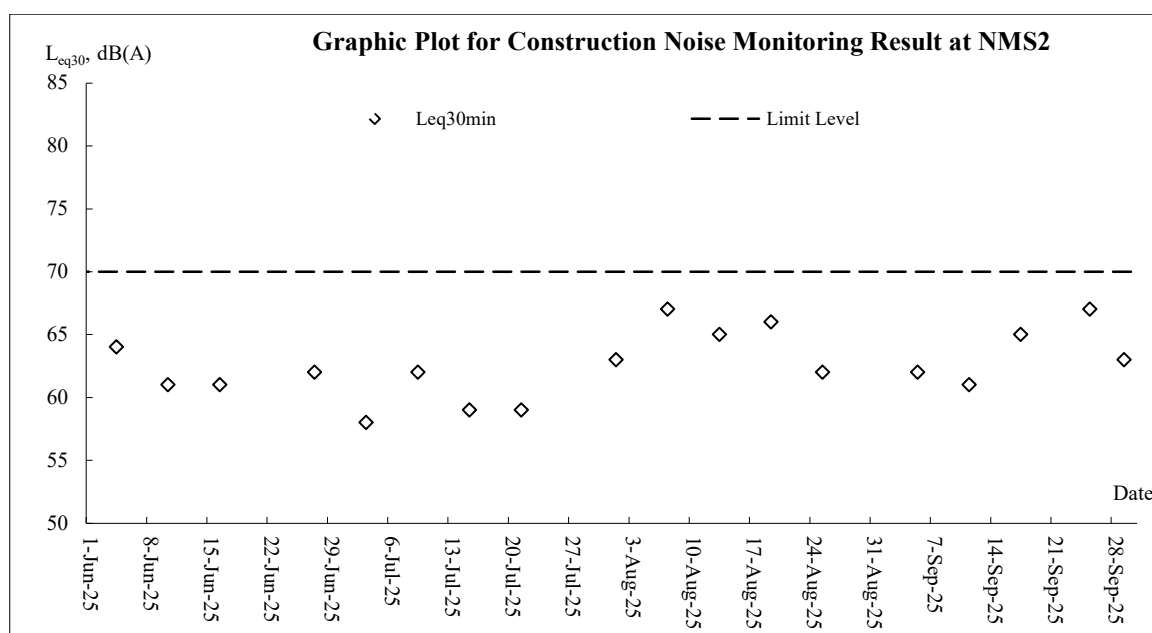
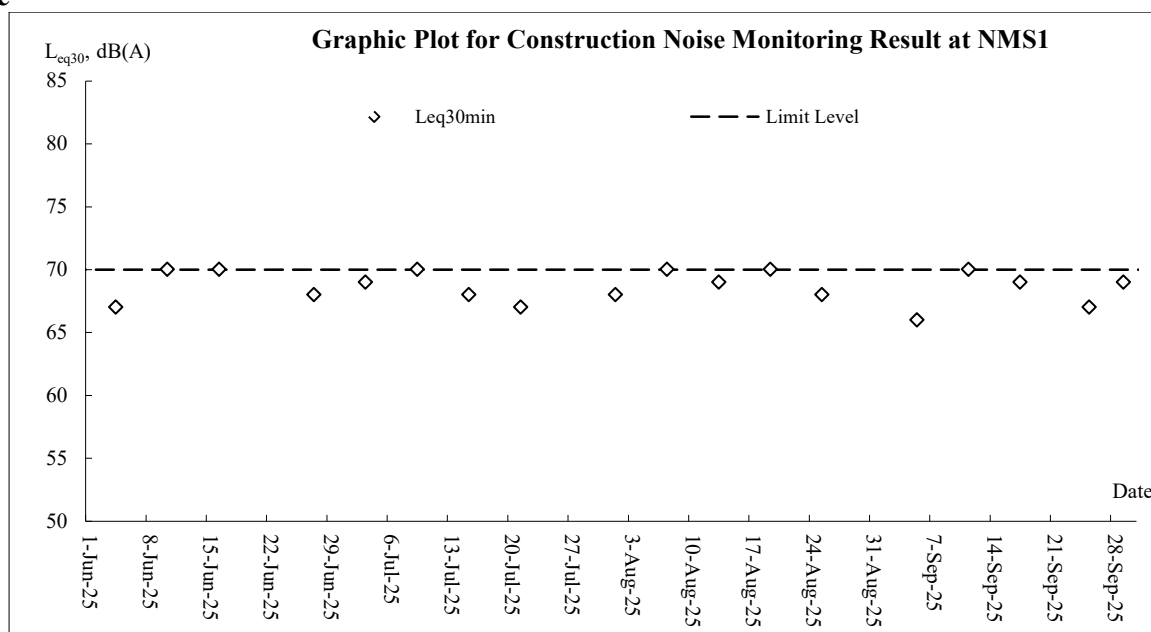


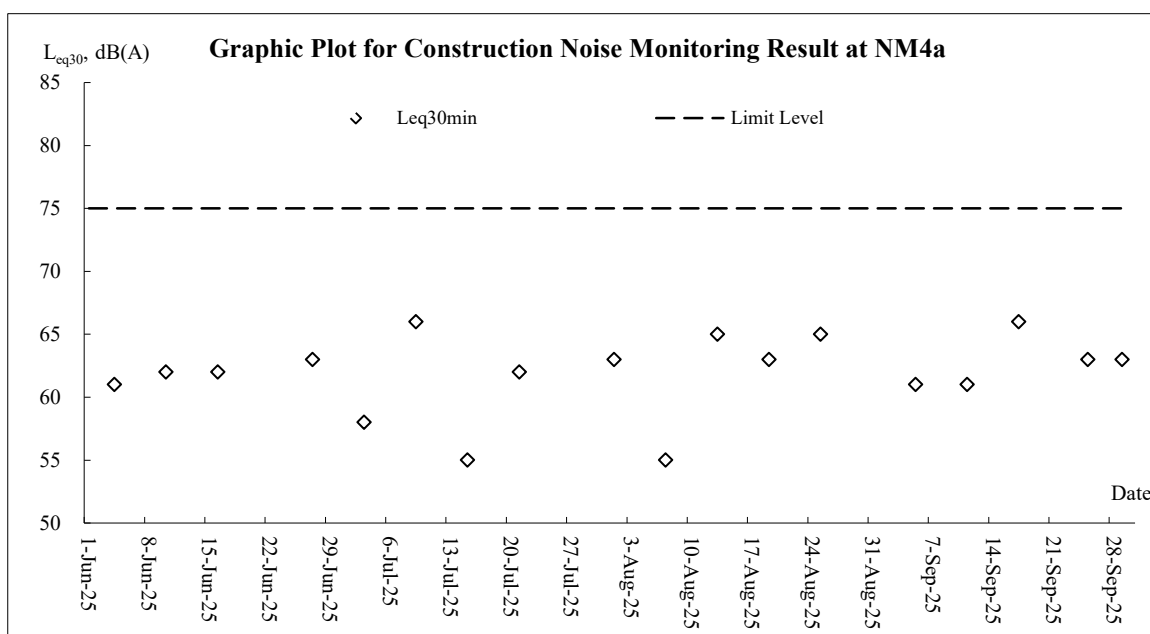
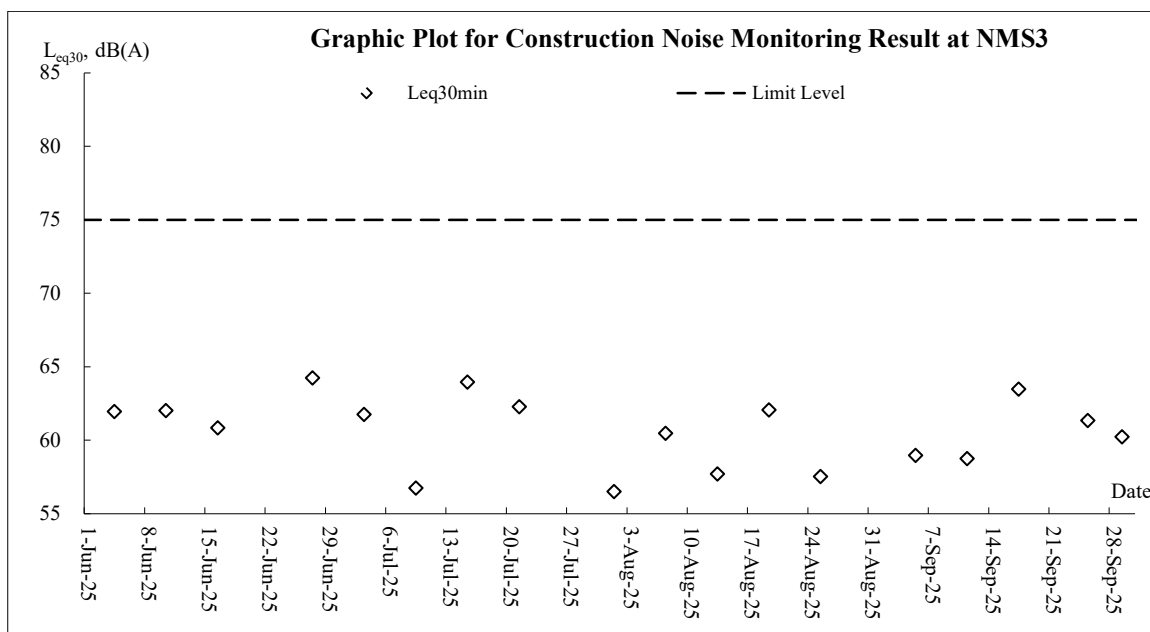


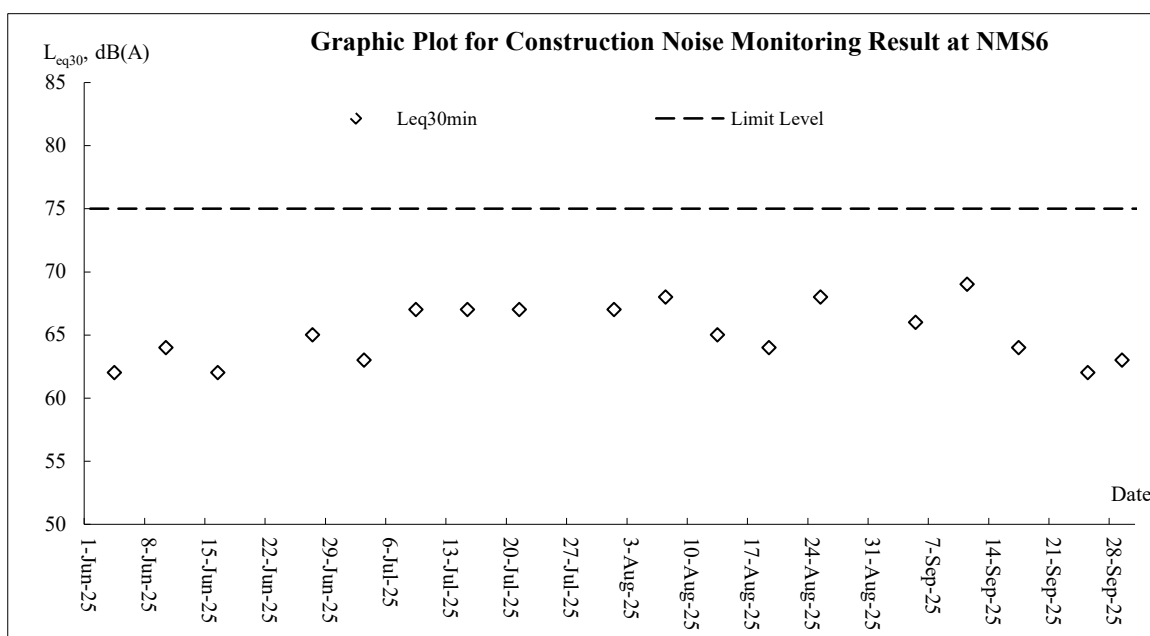
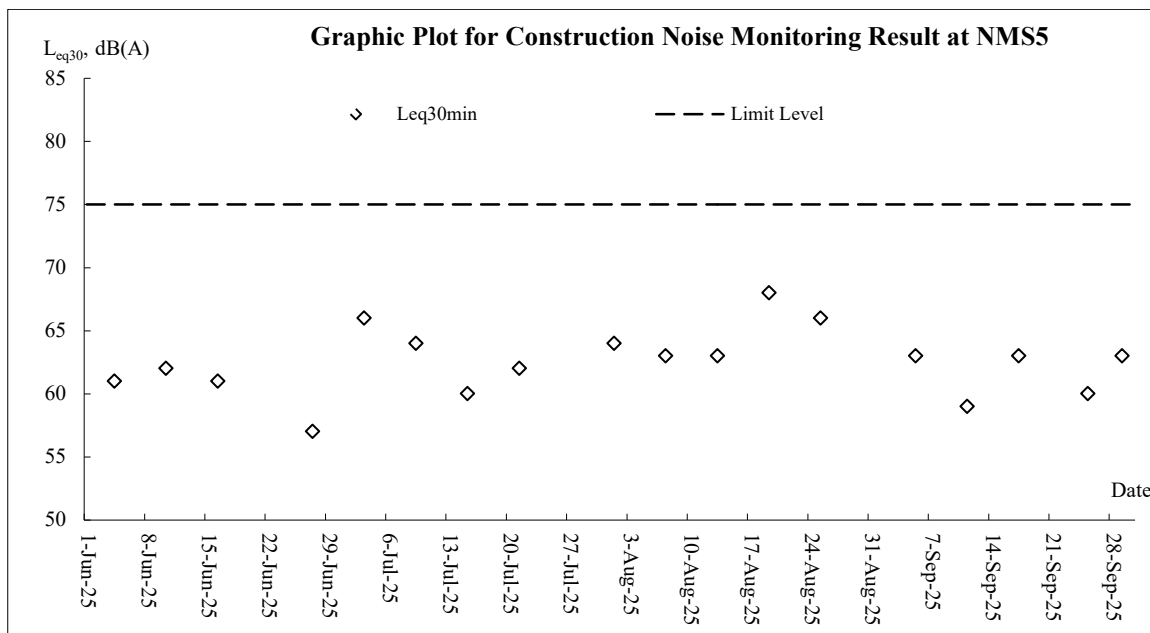


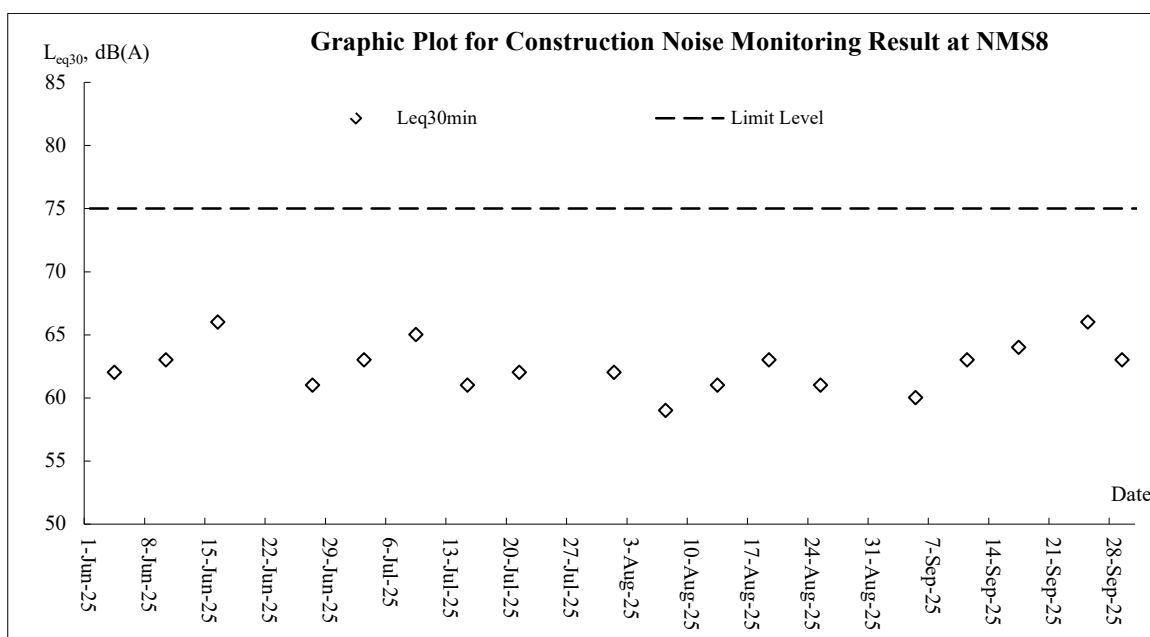
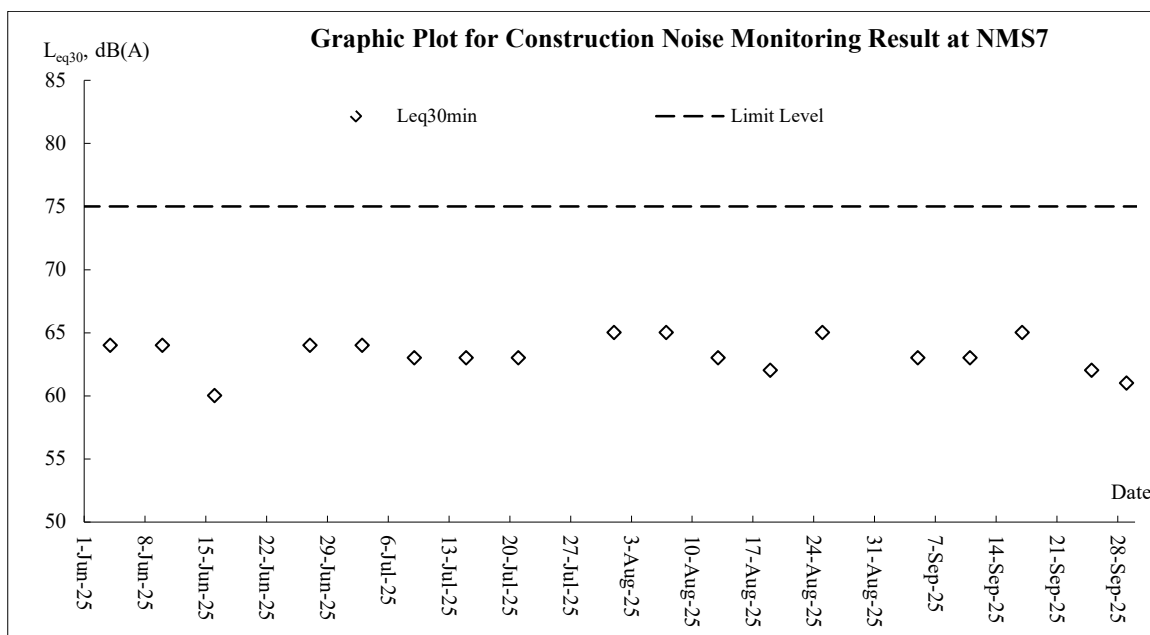
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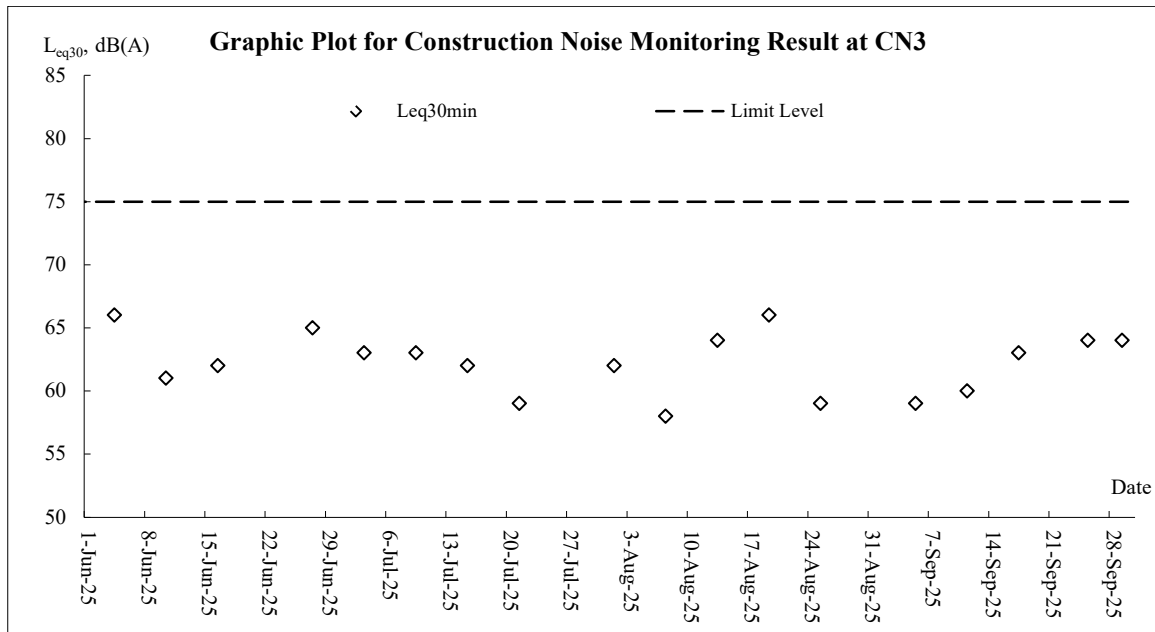


Noise









Appendix J

Meteorological Data

Date		Weather	Total Rainfall (mm)	Kwun Tong Station	Kai Tak Station		King's Park Station
				Mean Air Temp. (°C)	Wind Speed (km/h)	Wind Direction	Mean Relative Humidity (%)
1-Sep-25	Mon	Sunny periods and one or two showers.	0	29.7	12	SE	73
2-Sep-25	Tue	Very hot. Light winds.	0.1	29.5	12.5	SE	76.5
3-Sep-25	Wed	Mainly fine. Very hot	0	30.4	12.5	SE	73.2
4-Sep-25	Thu	Mainly fine. Very hot	0	30.6	14	SE	75.5
5-Sep-25	Fri	Very hot. Light winds.	0	30.9	12	SE	69.5
6-Sep-25	Sat	Mainly fine. Very hot	0	30.6	18.7	SE	75
7-Sep-25	Sun	Cloudy with squally showers and thunderstorms.	0	30.6	25.5	E	86
8-Sep-25	Mon	Strong southerly winds	85.6	25.9	36.5	S/SE	88.7
9-Sep-25	Tue	Mainly cloudy with a few showers.	13.1	28.1	11.2	S	85.7
10-Sep-25	Wed	Mainly cloudy. A few showers and isolated thunderstorms	0.1	29	10.7	SE	78.7
11-Sep-25	Thu	Mainly fine. Very hot in the afternoon. Light winds.	0	29.3	Mainten ance	Maintenan ce	80.5
12-Sep-25	Fri	Fine and very hot	0	29.8	11.2	SE	71.5
13-Sep-25	Sat	Mainly cloudy with sunny intervals, a few showers	0	29.8	11.5	SE	67.5
14-Sep-25	Sun	Hot . Light to moderate easterly winds.	0	29.5	10	SE	73
15-Sep-25	Mon	Sunny periods and a few showers.	Trace	29.6	13.2	E/SE	78.1
16-Sep-25	Tue	Very hot. Moderate easterly winds.	0.5	28.8	13.2	E	78.7
17-Sep-25	Wed	Sunny periods and a few showers.	18.1	28.4	16.5	E/SE	78.7
18-Sep-25	Thu	Mainly cloudy with a few squally showers and thunderstorms.	1.4	28.9	13.2	E/SE	73.7
19-Sep-25	Fri	Strong north to northwesterly winds.	0.4	27.2	20	NW	74
20-Sep-25	Sat	Mainly cloudy with a few squally showers and thunderstorms.	98.4	26.1	9.5	W/NW	85
21-Sep-25	Sun	Mainly cloudy with a few showers.	81.6	26.1	11.2	E	92.5
22-Sep-25	Mon	Mainly cloudy with a few showers.	0	29.7	8.2	W/NW	70
23-Sep-25	Tue	Strong northerly winds.	10.2	28.3	23.5	N/NW	76
24-Sep-25	Wed	occasionally strong offshore and on high ground	170.1	25.7	43.7	E/SE	90.7
25-Sep-25	Thu	Mainly cloudy with occasional squally showers and thunderstorms.	1.7	27.1	29.5	E/SE	86.5
26-Sep-25	Fri	Sunny intervals and one or two showers.	0	29.4	17.5	E/SE	72.2
27-Sep-25	Sat	Moderate to fresh easterly winds	Trace	29.5	18	E/SE	71.2
28-Sep-25	Sun	Sunny periods. Isolated showers	0.7	29.2	20.5	E/SE	75.7
29-Sep-25	Mon	Hot. Moderate east to southeasterly winds.	0	29.2	17.5	SE	78.2
30-Sep-25	Tue	Mainly fine. Very hot. Light winds.	0	29.8	9.2	SE	72

Appendix K

Waste Flow Table

Contract No.: ED/2020/02**Monthly Summary Waste Flow Table for 2025**

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity of Materials Generated	Hard Rock, Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000 m ³)	(in '000 m ³)	(in '000 m ³)	(in '000 m ³)	(in '000 m ³)**	(in '000 m ³)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 m ³)*
Jan	3.641	0.000	0.000	0.000	3.641	0.000	0.000	0.000	0.000	0.000	0.065
Feb	1.533	0.000	0.000	0.000	1.533	0.000	0.000	0.000	0.000	0.000	0.071
Mar	1.216	0.000	0.000	0.000	1.216	0.000	0.000	0.000	0.000	0.000	0.099
Apr	1.028	0.000	0.000	0.000	1.028	0.000	0.000	0.000	0.000	0.000	0.045
May	2.226	0.000	0.000	0.000	2.226	0.000	0.000	0.000	0.000	0.000	0.056
June	3.303	0.000	0.000	0.000	3.303	0.000	0.000	0.000	0.000	0.000	0.068
July	2.145	0.000	0.000	0.000	2.145	0.000	0.000	0.000	0.000	0.000	0.181
Aug	3.925	0.000	0.000	0.000	3.925	0.000	0.000	0.000	0.000	0.000	0.032
Sep	2.944	0.000	0.000	0.000	2.944	0.000	0.000	0.000	0.000	0.000	0.367
Oct											
Nov											
Dec											
Total	21.960	0.000	0.000	0.000	21.960	0.000	0.000	0.000	0.000	0.000	0.984

Notes: * Conversion factor for general refuse, 1 tonne = 2m³** Conversion factor for general fill, 2 tonne = 1m³

Estimation for next month

Appendix L

Implementation Schedule for Environmental Mitigation Measures

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
Dust Impact (Contraction Phase)									
S4.7.2 to S4.7.5	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 is proposed to achieve dust removal efficiency 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 1.75 L/m ² to achieve the respective dust removal efficiencies.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	V	V	V	V	V
S4.7.6	The Contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction ion Dust) Regulation.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	V	V	V	V	V
S4.7.6	Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance 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 wet ted 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 ion 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 sect ion between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; - When there are open excavation and reinstatement	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	@	@	@	@	@

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
	works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction ion period. • The port ion of any road leading only to construction ion 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 fit ted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; and • Exposed earth should be properly treated by compact ion, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen,								

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
	shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.								
S4.7.7	Implement regular dust monitoring under EM&A programme during the Construction phase.	Control construction airborne noise	Selected Representative dust monitoring station	All construction sites where practicable	V	N/A	V	N/A	N/A
Noise Impact (Contraction Phase)									
S5.6.9	Implement the following good site management practices: - only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction ion 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 direct ion, where possible, be orientated so that the noise is directed away from nearby NSRs; - silencers or mufflers on construction ion equipment should be properly fit ted and maintained during the construction ion works; - mobile plant should be sited as far away from NSRs as possible and practicable; and - 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 ion airborne noise	Contractor	All construction sites where practicable	@	V	V	@	@
S5.6.11 to S5.6.13	Use of “Quiet” Plant and Working Methods.	Reduce the noise levels of plant items	Contractor	All construction sites where practicable	V	N/A	N/A	N/A	N/A
S5.6.14	Install temporary site hoarding (approx 2.5m high) 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 ion noise levels at low-level zone of NSRs through partial screening.	Contractor	All construction sites where practicable	V	V	V	V	V
S5.6.15 to S5.6.18	Install movable noise barriers, full enclosure and acoustic mat, screen the noisy plants including air compressor and generator.	Screen the noisy plant items to be used at all construction sites	Contractor	All construction ion sites where practicable	V	V	N/A	V	N/A
S5.6.19	Sequencing operation of construction plants equipment.	Operate sequentially	Contractor	All construction	V	V	N/A	N/A	N/A

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
		within the same work site to reduce the construction airborne noise		ion sites where practicable					
S5.6.34	Implement temporary noise barrier along Road L4.	Further reduce the construction ion airborne noise	Contractor	Road L4 of ARQ	N/A	N/A	N/A	N/A	N/A
S5.6.35	Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected representative locations	Contractor	Selected Representative Noise monitoring stations	V	N/A	V	N/A	N/A
B		Water Quality Impact (Contraction Phase)							
S6.6.3	<u>Construction Runoff</u> In accordance with the Practice Note for Professional Persons on Construction ion Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), best management practices should be implemented as far as practicable as below: - At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works. 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. - Diversion of natural stormwater should be provided as far as possible. The design of temporary on-site drainage should prevent runoff going through site surface, construction machinery and equipment in order to avoid or minimize polluted runoff. Sediment at ion tanks with sufficient capacity, constructed from preformed individual cells of approximately 6 to 8 m³ capacities, are recommended as a general mitigation measure which can be used for set t ling surface runoff prior to disposal. The system capacity shall be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped.	Control construction runoff	Contractor	All construction sites	@	@	@	@	V

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
	- 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 silt /sediment trap. The silt /sediment 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. The detailed design of the sand/silt traps should be undertaken by the contractor prior to the commencement of construction. - Construction works should be programmed to minimize surface excavation works during the rainy seasons (April to September). All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means. - 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 minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, it 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. - All open stockpiles of construction materials (for example, aggregates, sand and fill material) of should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to								

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
	prevent the washing away of construction ion 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 ion materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. - Precautions to be taken at any time of year when rainstorms are likely, act ions to be taken when a rainstorm is imminent or forecasted, and act ions to be taken during or after rainstorms are summarized in Appendix A2 of <i>ProPECC PN 1/94</i>. Particular attention should be paid to the control of silty surface runoff during storm events. - All vehicles and plant should be cleaned before leaving a construction ion 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 ion 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 sect ion of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient back all toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and rains. - Oil interceptors should be provided in the drainage system downstream of any 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 ion solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts.								

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
	- 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. - Regular environmental audit on the construction site should be carried out in order to prevent any malpractices. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the rivers.								
S6.6.6 and 6.6.7	<u>Sewage from Workforce</u> - Portable chemical toilets should be provided for handling the construction sewage generated by the workforce. Assume that the capacity of the chemical toilets would be 0.4m³ and suck up twice a day under normal practices, around 45 chemical toilets would be required for the whole site at peak hour. And it should be noted that under normal construction periods, less chemical toilets would be needed. In addition, the total number of the chemical toilets would be subject to later detailed design, the capacity of the chemical toilets, and contractor's site practices. Nevertheless, a licensed contractor should be employed to provide appropriate and adequate portable toilets to cater around 37.5 m³/day sewage and be responsible for appropriate disposal and maintenance. Since portable chemical toilets will be provided, no adverse water quality impact from the workforce sewage is anticipated. - Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on the construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause	Handling of site sewage	Contractor	All construction sites	V	V	V	V	V

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
	water quality impact after undertaking all required measure								
S6.6.8 and 6.6.9	<u>Accidental Spillage</u> To prevent accidental spillage of chemicals, proper storage and handling facilities should be provided. All the tanks, containers and storage area should be bunded and the locations should be locked as far as possible from the sensitive watercourse and storm drains. The Contractor is required to register as a chemical waste producer if chemical wastes would be generated from the construction ion activities. Storage of chemical waste arising from the construction ion activities should be well managed with suitable labels and warnings while disposal of those chemical wastes should be comply with the requirement states in Waste Disposal Ordinance (Cap 354) as well as Waste Disposal (Chemical Waste) (General) Regulations.	Prevention of accidental spillage	Contractor	All construction sites	@	V	V	V	V
S6.6.11- S6.6.14	<u>Groundwater from Contaminated Area</u> The Contractor should apply for a discharge licence under the WPCO through the Regional Office of EPD for groundwater discharge. Prior to the excavation works within these potentially contaminated areas, the groundwater quality should be reviewed during the process of discharge license application. The compliancy to the TM-DSS and the existence of prohibited substance should be confirmed after further SI. If the review results indicated that the groundwater to be generated from the excavation works would be contaminated, the contaminated groundwater should be either properly treated in compliance with TMDSS 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. Petroleum Carbon Ranges (PCRs)). All treated effluent from wastewater treatment plant shall meet the requirements as stated in TM-DSS and should be	Minimize contaminated groundwater impacts	Contractor	All construction sites	N/A	N/A	N/A	N/A	N/A

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
	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 PCRs should be removed as necessary by installing the petrol interceptor.								
Waste Management (Contraction Phase)									
S8.5.2	<u>Good Site Practice</u> The following good site practices are recommended throughout the construction activities: • nomination of an approved personnel, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; • training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling; • provision of sufficient waste disposal points and regular collection for disposal; • appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;	Minimize waste generation during construction	Contractor	All construction sites	V	@	V	@	V
S8.5.2 (6)	The contractor should submit a Waste Management Plan	Minimize waste	Contractor	All construction	V	V	V	V	V

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
	(WMP) as part of the Environmental Management Plan (EMP) in accordance with the <i>ETWB TC(W) No. 19/2005</i> for construction ion phase. The EMP should be submit ted to the Engineer for approval. Mitigation measures proposed in the EIA Report and the EM&A Manual should be adopted.	generation during construction		sites					
S8.5.3	<u>Waste Reduction Measures</u> Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve reduction: - segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling o materials and their proper disposal; - proper storage and site practices to minimize the potential for damage and contamination of construction ion materials; - plan and stock construction ion materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste; - sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable port ions (i.e. soil, broken concrete, metal etc.); - provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.	Reduce waste generation	Contractor	All construction sites where practicable	V	V	V	V	V
S8.5.5	<u>Storage of Waste</u> The following recommendation should be implemented to minimize the impacts: - waste such as soil should be handled and stored well to ensure secure containment ; - stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; - different locations should be designated to stockpile each material to enhance reuse;	Minimize waste impacts from storage	Contractor Contractor	All construction sites	V	V	V	V	V
S8.5.6	<u>Collection and Transportation of Waste</u> The following recommendation should be implemented to minimize the impacts:	Minimize waste impacts from storage	Contractor	All construction sites	V	@	V	@	@

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
	- remove waste in timely manner; - employ the trucks with cover or enclosed containers for waste - transportation; - obtain relevant waste disposal permits from the appropriate authorities; and - disposal of waste should be done at licensed waste disposal facilities.								
S8.5.8	<u>Excavated and C&D Material</u> Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at public filling areas or reclamation sites. The following mitigation measures should be implemented in handling the excavated and C&D materials: - maintain temporary stockpiles and reuse excavated fill material for backfilling; - carry out on-site sorting; - make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; - implement a recording system for the amount of waste generated, recycled and disposed of for checking; The recommended C&D materials handling should include: - On-site sorting of C&D materials - Reuse of C&D materials - Use of Standard Formwork and Planning of Construction Materials purchasing - Provision of wheel wash facilities	Minimize waste impacts from excavated and C&D materials	Contractor	All construction sites	V	V	V	V	V
S8.5.15	<u>Contaminated Soil</u> As a precaution, it is recommended that standard good site practice should be implemented during the construction phase to minimize any potential exposure to contaminated soils or groundwater. The details of mitigation measures to minimize the potential environmental implications arising from the handling of contaminated materials refer to Land Contamination Section.	Remediate contaminated soil	Contractor	All construction sites where applicable	V	V	N/A	N/A	N/A
S8.5.17	<u>Chemical Waste</u>	Control the chemical	Contractor	All construction	V	V	V	V	V

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
	If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producer. Chemical wastes should be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	waste and ensure proper storage, handling and disposal.		sites					
S8.5.18	<u>General Waste</u> - General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. - Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean. - A reputable waste collector should be employed to remove general refuse on a daily basis.	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	@	V	V	V	@
S8.5.19	<u>Sewage</u> - The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities. - Regularly collection by licensed collectors should be arranged to minimize potential environmental impacts.	Minimize production of sewage impacts	Contractor	All construction sites	V	V	V	V	V
Ecology (Contraction Phase)									
S. 10.7.2 to 10.7.6	Re-provision of Wooded Area for ecological function at the future Quarry Park.	Compensate for the loss of three woodland patches of a total area of about 1.13ha.	Contractor/ Detailed Design Consultant (qualified botanist / horticulturist / Certified Arborist to supervise the planting).	Northern part of the proposed Quarry Park.	N/A	N/A	N/A	N/A	N/A

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
.10.7.10	Construction phase in situ mitigation measures to minimize impacts on hydrological condition and water quality of hillside watercourses include: • Temporary sewerage and drainage will be designed and installed to collect wastewater and prevent it from entering nearby watercourses; • Proper locations well away from nearby watercourses will be used for temporary storage of materials (i.e. equipment, fill materials, chemicals and fuel) and temporary stockpile of construction debris and spoil, and these will be identified before commencement of works; • To prevent muddy water entering nearby watercourses, work sites close to nearby watercourses will be isolated, using such items as sandbags or silt curtains with lead edge at bottom and properly supported props. Other protective measures will also be taken to ensure that no pollution or siltation occurs to the water gathering grounds of the works site; • Stockpiling of construction materials, if necessary, will be properly covered and located away from nearby watercourses; • Erection of temporary geotextile silt fences will be carried out around earth-moving works to trap any sediments and prevent them from entering watercourses; • Construction debris and spoil will be covered and/or properly disposed as soon as possible to avoid being washed into nearby watercourses; • Exposed soil will be covered as quickly as possible following formation works, followed, where appropriate, by covering with biodegradable geotextile blanket for erosion control purposes; • Where appropriate, earth-bundling will be carried out of areas where soils have been disturbed or where vegetation has been cleared, to ensure that surface runoff will not move soils off-site; • Construction effluent, site run-off and sewage will be properly collected and/or treated. Wastewater from any construction site will be	Minimize impacts on Hydrological condition and water quality of hillside watercourses.	Contractor	All construction sites	V	N/A	V	V	N/A

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
	minimised via the following in descending order: reuse, recycling and treatment ; • Proper locations for discharge out lets of wastewater treatment facilities well away from sensitive receivers will be identified and used; • Silt traps will be installed at points where drainage from the site enters local watercourses; • Appropriate sanitary facilities for on-site workers will be provided; • The site boundary will be clearly marked and any works beyond the boundary strictly prohibited, and • Regular water monitoring and site audit will be carried out at suitable points. If the monitoring and audit results show that pollution occurs, adequate measures including temporary cessation of works will be considered.								
S.10.7.11	Implement an emergency contingency plan during the construction phase and the plan will include, but not be limited to, the following: • Potential emergency situations; • Chemicals or hazardous materials used on-site (and their location); • Emergency response team; • Emergency response procedures; • List of emergency telephone hot lines; • Locations and types of emergency response equipment , and • Training plan and testing for effectiveness.	Minimize impacts on Hydrological condition and water quality of hillside watercourses.	Contractor	All construction sites	N/A	N/A	N/A	N/A	N/A
Landscape and visual (Contraction Phase)									
S11.14.23, Table 11.9, CM1 [4]	All existing trees to be retained shall be carefully protected during construction.	Avoid disturbance and protection of the existing trees	Detailed Design Consultant /	The whole area where applicable	V	V	@	V	@
S11.14.23, Table 11.9, CM2 [3]	Tree Transplantation - Should removal of trees be unavoidable due to construction impacts, trees will be transplanted or felled. Detailed transplanting proposal will be submit ted to relevant government departments for approval in accordance with <u>LAO GN No. 7/2007</u> , <u>ETWB TCW No. 29/2004</u> and <u>10/2013</u> . Final locations of transplanted trees shall be agreed prior to commencement of the work.	Minimize landscape impact and retention of landscape resources	Detailed Design Consultant /	Onsite where possible. Otherwise consider offsite locations	*	N/A	N/A	V	V

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
S11.14.23, Table 11.9, CM3 [4]	Control of operation night -time glare with well-planned lighting operation system to minimize potential glare impact to adjacent VSRs	Minimize glare impact to adjacent VSRs	Contractor/ CEDD	The whole project area where applicable	V	V	@	V	N/A
S11.14.23, Table 11.9, CM [4]	Erection of decorative screen hoarding.	Minimize visual impact	Contractor/ CEDD	The whole project area where applicable	N/A	N/A	N/A	N/A	N/A
S11.14.23, Table 11.9, CM5 [2]	Minimise disturbance and limitation of run-off – temporary structures and construction works should be planned with care to minimize disturbance to adjacent landscape, vegetation, natural stream habitats.	Minimize visual impact	Contractor/ CEDD	The whole project area where applicable	V	V	V	V	N/A

Legend: V = implemented; x = not implemented; @ = partially implemented; * = pending to be implemented; N/A = not applicable

Appendix M

Complaint Log

Appendix M1**Cumulative Complaint and Summons/ prosecution**

Reporting Month	Number of Complaints in Reporting Month	Number of Summons/ Prosecution in Reporting Month
March 2017	1	0
April 2017	0	0
May 2017	0	0
June 2017	2	0
July 2017	3	0
August 2017	3	0
September 2017	4	0
October 2017	2	0
November 2017	3	0
December 2017	3	0
January 2018	1	0
February 2018	4	0
March 2018	0	0
April 2018	2	0
May 2018	1	0
June 2018	1	0
July 2018	0	0
August 2018	1	0
September 2018	1	0
October 2018	1	0
November 2018	3	0
December 2018	2	0
January 2019	2	0
February 2019	3	0
March 2019	1	0
April 2019	0	0
May 2019	0	0
June 2019	1	0
July 2019	1	0
August 2019	1	0
September 2019	0	0
October 2019	1	0
November 2019	4	0
December 2019	0	0
January 2020	0	0
February 2020	0	0
March 2020	4	0
April 2020	1	0
May 2020	1	0
June 2020	1	0
July 2020	0	0
August 2020	0	0
September 2020	0	0
October 2020	0	0
November 2020	1	0
December 2020	2	0
January 2021	1	0
February 2021	0	0
March 2021	2	0

April 2021	1	0
May 2021	0	0
June 2021	1	0
July 2021	1	0
August 2021	0	0
September 2021	2	0
October 2021	0	0
November 2021	0	0
December 2021	0	0
January 2022	0	0
February 2022	0	0
March 2022	1	0
April 2022	1	0
May 2022	3	0
June 2022	2	0
July 2022	0	0
August 2022	2	0
September 2022	1	0
October 2022	1	0
November 2022	0	0
December 2022	0	0
January 2023	0	0
February 2023	0	0
March 2023	0	0
April 2023	0	0
May 2023	1	0
June 2023	0	0
July 2023	1	0
August 2023	0	0
September 2023	0	0
October 2023	0	0
November 2023	0	0
December 2023	0	0
January 2024	1	0
February 2024	0	0
March 2024	0	0
April 2024	1	0
May 2024	2	0
June 2024	0	0
July 2024	0	0
August 2024	0	0
September 2024	1	0
October 2024	0	0
November 2024	0	0
December 2024	1	0
January 2025	1	0
February 2025	1	0
March 2025	0	0
April 2025	0	0
May 2025	0	0

June 2025	0	0
July 2025	0	0
August 2025	0	0
September 2025	0	0
Overall Total	91	0

Appendix M2 Complaint Log

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
1	23-Mar-17	8-Jun-17	On Tat Estate	Resident of On Tat Estate	Construction noise	SPRO hotline	NA	A resident living in On Tat House reported that some night works with noise and flashing caused nuisance to nearby resident after 11:00 pm on 23 March 2017.	According the incident report conducted by the CWSTVJV, demobilization of crawler crane was undertaken on 23 March 2017 11pm and it is TD requirement to carry out demobilization of heavy machine at nighttime. It is considered this complaint was a single incident and would not be happened again in future.	no comment by IEC on 11 Oct 2017	TCS00864/16/300/F0087
2	28-Jul-17	28-Jul-17	38/F of Yin Tat House (賢達樓), On Tat Estate	Resident of On Tat Estate	Construction noise	SPRO hotline	NA	Mr. Hsu received a complaint from a resident living in the flat on 38/F of Yin Tat House (賢達樓), On Tat Estate. The resident complained about the noise level of our works during daytime.	Noise monitoring by Contractor was conducted in Yin Tat House, On Tat Estate, at around 2 pm on 28-Jul-2017. Another noise monitoring was carried out by ET (AUES) and representatives of AECOM and JV in the presence of the complainant in her flat at 10 am on 1-Aug-2017 and was witnessed by Mr. Hsu. No exceedance of noise was recorded. The complainant was satisfied about the monitoring results.	no comment by IEC on 9 Aug 2017	TCS00864/16/300/F0060
3	29-Aug-17	29-Aug-17	Shing Tat House 24/F	Resident of On Tat Estate	Construction noise	SPRO hotline	NA	Mr. Hsu Yau Wai (Tel no.9519 5663) reported that he received complaint from a resident (Ms Cheng) living at Shing Tat House 24/F Room 22 about the noise generated from our site this week. The noise heard was mainly rock breaking noise from our site.	Noise monitoring was carried out by ET (AUES) and representatives of AECOM and JV in the presence of the complainant in her flat at 3pm on 30-Aug-2017. No exceedance of noise was recorded. The complainant was satisfied about the monitoring results.	no comment by IEC on 8 Sep 2017	TCS00864/16/300/F0081

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
4	21-Jun-17	29-Aug-17	Tat Yan House, Po Tat Estate	Resident of Po Tat Estate	Construction noise	EPD	EPD (ref.N08/RE/00019373-17)	day time construction noise of breakers (8am to 6pm)	Since these two complaints were forwarded by CEDD to ET on 31 August 2017 which way after the complaint dates. Investigation would be conducted based on the site information by the Contractor of Contract 1 - NE/2016/01 (CWSTVJV) as well as the observation during weekly site inspection carried out ET during June 2017. In our investigation, CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident and the working hour 08:00 to 18:00 did not breach any legal requirement. To eliminate the inconvenience caused to the nearby resident CWSTVJV was advised to further enhance the noise mitigation measures as appropriately.	no comment by IEC on 3 Nov 2017	TCS00864/16/300/F0093
5	22-Jun-17	29-Aug-17	Tat Yan House, Po Tat Estate	Resident of Po Tat Estate	Dust & Construction noise	EPD	EPD (ref. N08/RE/00019428-17)	Day time construction noise of breakers (8AM to 6PM). Requested to delay the operating hour of breakers to 10AM or 11AM			TCS00864/16/300/F0093
6	15-Jul-17	29-Aug-17	Tat Yi House, Po Tat Estate	Resident of Po Tat Estate	Construction noise	EPD	EPD (ref.N08/RE/00022479-17)	Construction noise	CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident and the working hour 08:00 to 18:00 did not breach any legal requirement. To eliminate the inconvenience caused to the nearby resident, CWSTVJV was advised to further enhance the noise mitigation measures as appropriately.	no comment by IEC on 3 Nov 2017	TCS00864/16/300/F0094
7	28-Jul-17	29-Aug-17	Anderson Road	unknown	Dust	EPD	EPD (ref.N08/RE/00023986-17)	Poor control on dust emission at Anderson Road Construction Site	CWSTVJV has implemented dust mitigation measures to eliminate the inconvenience caused to the nearby resident and status of the implementation of dust mitigation measures was considered effective based on the site observation.	no comment by IEC on 15 Nov 2017	TCS00864/16/300/F0097

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
8	2-Aug-17	29-Aug-17	Chun Tat House, On Tat Estate	Resident of On Tat Estate	Construction noise	EPD	EPD (ref.N08/RE/00024557-17)	Day time construction noise of breakers (8AM to 6PM)	CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. According to the impact noise monitoring result obtained in August 2017, there were no breaches of EM&A requirement. However, to eliminate the inconvenience caused to the nearby resident, CWSTVJV should further enhance the noise mitigation measures as appropriately. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 15 Nov 2017	TCS00864/16/300/F0098
9	19-Sep-17	19-Sep-17	Sau Mau Ping Estate Sau Nga House	Resident of Sau Mau Ping Estate	Construction noise	SPRO hotline	NA	The complainant is living at Sau Mau Ping Estate Sau Nga House (秀雅樓) 38/F. He complained about the noise nuisance recently from August to September especially during night time after 12:00 am, even in Saturdays and Sundays. The noise nuisance caused a great disturbance to him. He made a request to conduct investigation about the source of the noise during night time.	ET has conducted an ad-hoc noise measurement for Leq (30min) on the rooftop of 秀雅樓 and 秀義樓 in the afternoon of 22 September 2017. (Photo 1 & 2) During the course of noise measurement, construction activities such as excavation and breaking were conducted in the Quarry Site. The measurement results taken at both 秀雅樓 and 秀義樓 were 63dB(A) which below the Limit Level under the EM&A Programme.	no comment by IEC on 18 Oct 2017	TCS00864/16/300/F0088

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
10	21-Sep-17	13-Oct-17	Sau Mau Ping Estate Sau Nga House and Sau Yee House	Resident of Sau Mau Ping Estate	Construction noise	EPD	EPD (ref.N08/RE/0003 1074-17)	On 21 September 2017, the same complaint further reported that the noise can be heard at both Sau Yee House and Sau Nga House even in daytime and he strongly requested the Contractor to follow up the case immediately.	ET has conducted an ad-hoc noise measurement for Leq (30min) on the rooftop of 秀雅樓 and 秀義樓 in the afternoon of 22 September 2017. (Photo 1 & 2) During the course of noise measurement, construction activities such as excavation and breaking were conducted in the Quarry Site. The measurement results taken at both 秀雅樓 and 秀義樓 were 63dB(A) which below the Limit Level under the EM&A Programme.		TCS00864/16/300/F0088
11	27-Sep-17	13-Oct-17	Chun Tat House, Tat Estate	Resident of On Tat Estate	Construction noise	EPD	EPD (ref.N08/RE/0002 9489-17)	The complainant questioned why there were 6 to 7 breakers operating in the morning but only 1 operating in the afternoon. He requested to shift the operation of the breakers to afternoon.	CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. According to the impact noise monitoring result obtained in September and October 2017, there were no breaches of EM&A requirement. However, to eliminate the inconvenience caused to the nearby resident, CWSTVJV should properly maintain the noise mitigation measures as appropriate. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 30 Nov 2017	TCS00864/16/300/F0106
12	3-Oct-17	13-Oct-17	Chun Tat House, Tat Estate	Resident of On Tat Estate	Construction noise	EPD	EPD (ref. N08/RE/0003240 7-17)	Day time construction noise, the complainant requested using less breaker at one time, erecting taller noise barrier to cover the equipment. In addition, the complainant would like to know the construction schedule whether there will be more breaking activities in near future			TCS00864/16/300/F0106
13	25-Oct-17	26-Oct-17	Tat Kwai House, Po Tat Estate	Resident of Po Tat	Dust	EPD	NA	投訴安達臣道地盤的泥車落泥，令他達貴樓的住所受到大塵影響，要求跟進	Investigation revealed that CWSTVJV has implemented dust mitigation measures to eliminate the inconvenience caused to the	no comment by IEC on	TCS00864/16/300/F0100

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
				Estate				及回覆	nearby resident. Nevertheless, based on the observation during site inspection on 31 October 2017, CWSTVJV was advised to enhance the dust mitigation measures particularly during dry season.	15 Nov 2017	
14	6-Nov-17	7-Nov-17	Chun Tat House, On Tat Estate	Resident of On Tat Estate	Noise	EPD	NA	安達邨俊達樓居民投訴石礦場地盤又再於早上 07:45 開始傳出機器不停採石的噪音(幾乎每日在 08:00-19:00 進行工程),已持續一年,他全家人受到滋擾。	Ad-hoc noise measurement was conducted by ET at rooftop of Chun Tat House in the morning of 20 November 2017 and measurement result was below the Limit Level under the EM&A Programme. CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 30 Nov 2017	TCS00864/16/300/F016/09
15	13-Nov-17	14-Nov-17	Chi Tai House, On Tai Estate	Mr. Lam Wai	light pollution and noise	SPRO hotline	NA	1. 智泰樓面向安達臣地盤方向,有照射燈深夜時分仍然常開,影響居民正常睡眠質素,照成一定的精神壓力。 2. 隔音布未固定,大風吹過發出極大的聲浪	To ease the concern by the complaint, CWSTVJV has adjusted the lights to the orientation pointing the ground and that to minimise the nuisance. For the maintenance of noise barrier, CWSTVJV has immediately fixed the noise barrier nearest to On Tai Estate and prolonged the cover area of the noise barrier to reduce the noise impact to the public.	no comment by IEC on 24 Nov 2017	TCS00864/16/300/F016/04

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
16	1-Nov-17	14-Nov-17	Shing Tat House, Tat Estate	Resident of Po Tat Estate	Noise	EPD	NA	居住於安達邨誠達樓高層的投訴人投訴由早上八時半至下午六時聽到搵鐵噪音。	As advised by the Contractor, the works that most likely induced the iron hammering noise to Shing Tat House shall be the rock breaking works to the hard rock of the Southeastern side of the Underground Stormwater Retention Tank. CWSTVJV had already deployed the acoustic mat as noise barrier at the site boundary near Shing Tat House. To enhance the noise mitigation measures, CWSTVJV deployed an acoustic mat as noise barrier for the breaking work in order to reduce construction noise affecting the upper floor of On Tat Estate. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 13 Dec 2017	TCS00864/16/300/F0110
17	25-Aug-17	26-Oct-17	Sau Mau House, Yee Sau Ping Estate	Resident of Sau Mau Ping Estate	Construction Noise	EPD	EPD (ref.N08/RE/00027738-17)	Night time construction noise of hammering (around 12AM)	As advised by CWSTVJV, there was a CNP (GW-RE0763-17) in force for the subject site for operation of generator and electric submersible water pump for the wastewater treatment plant and it is considered that abovementioned PMEs should not generate significant noise. Moreover, it is confirmed by CWSTVJV and checked against the site diary that no construction activities were carried out after 19:00 at the subject site. Therefore, the complaint about noise nuisance during night time should not be related to the Project.	no comment by IEC on 14 Dec 2017	TCS00864/16/300/F0114

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
18	12-Sep-17	26-Oct-17	Chun House, Tat Estate	Resident of On Tat Estate	Construction Noise	EPD	EPD (ref. N08/RE/0002948-9-17)	Day time construction noise of breakers (8AM to 5PM)	Noise mitigation measures were implemented to reduce the noise impact to the nearby resident. According to the impact noise monitoring result in September 2017, there were no breaches of EM&A requirement. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 10 Jan 2018	TCS00864/16/300/F0117
19	15-Dec-17	21-Dec-17	Sau House	Resident of Sau Mau Ping Estate	Construction Noise	EPD	NA	Resident of Sau Yee House complained suspected construction noise from Anderson Construction Site at restricted hour (7pm to 7am).	It is confirmed by CWSTVJV and checked against the site diary that no construction activities were carried out after 19:00 at the subject site. Therefore, the complaint about noise nuisance during night time should not be related to the Project.	no comment by IEC on 10 Jan 2018	TCS00864/16/300/F0118
20	20-Dec-17	21-Dec-17	On Estate	Resident of On Tat Estate	Dust	EPD	NA	Resident of On Tat Estate complained that the traffic of construction vehicles generated dust problem and arouse air pollution to On Tat Estate. 投訴安達臣道信和地盤水車已經壞了十多天，一直無灑水，四周非常大塵。投訴人住於安達邨，投訴安達臣道石礦場有大地盤，地盤大車工作時間不停出入揚起沙塵，吹到安達邨，影響空氣環境，要求部門到場視察。	CWSTVJV has implemented dust mitigation measures to eliminate the inconvenience caused to the nearby resident. It is considered that the complaint was an isolated case due to malfunction of water tanker and CWSTVJV has promptly rectified the deficiency. As advised by CWSTVJV, another water tanker will be deployed in mid-January 2018 to enhance the dust suppression measures throughout the construction site.	no comment by IEC on 25 Jan 2018	TCS00864/16/300/F0121
21	28-Dec-17	10-Jan-18	Sau House	Resident of Sau	Construction Noise	CE's office	NA	日間及凌晨均聽到轟隆聲的噪音及震動，懷疑是由	ET has conducted an ad-hoc noise measurement for Leq (30min) in the	no comment	TCS00864/16/300/F0129

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				Mau Ping Estate				附近工程引起* Thomas 先生表示居於秀茂坪邨秀義樓，指附近的安達臣道一個由土木工程拓展署管轄的石礦場不時於非允許時段(即晚上七時後至翌日早上)發出疑似打地基的轟轟聲巨響，最近一次就是今早(28/12)凌晨五時多再次聽到石礦場傳來聲響，將 Thomas 先生吵醒，懷疑有人刻意在無人監管下施工，更表示曾向環保署及土木工程署作出投訴，但環保署表示巡查後無發現在非允許時段有工程進行，而土木工程署則表示晚上七時後不會再進行工程。Thomas 指石礦場經常在晚上八至十二時，或凌晨時份發出巨響，對附近居民已造成很大的滋擾，要求相關部門儘快作出跟進及回覆。	complainant's flat in the monitoring of 17 January 2018. It was noted that the complainant's flat is not in direct line of sight to the Anderson Road Quarry Site. The measurement noise result was below the Limit Level under the EM&A Programme. Moreover, it is confirmed by CWSTVJV and checked against the site diary that no construction activities were carried out during restricted hour at the subject site. Therefore, the complaint about noise nuisance during restricted hour should not be related to the Project.	by IEC on 8 Feb 2018	
22	15-Jan-18	15-Jan-18	Chun House Tat	Resident of Chun Tat House of On Tat	Construction Noise	SPRO mobile	NA	She is irritated by the construction noise of breaking rock for a long time and strongly requested to know exactly when will be the completion date of the	CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. According to the impact noise monitoring result obtained in January 2018, there were no breaches of EM&A requirement. However, to eliminate the inconvenience caused to	no comment by IEC on 8 Feb 2018	TCS00864/16/300/F0130

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				Estate, 40/F				breaking rock part of works opposite to Chun Tat House. She said we should do more on the mitigation measures because our site is very close to the residents nearby.	the nearby resident, CWSTVJV should properly maintain the noise mitigation measures as appropriate. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.		
23	1-Feb-18	2-Feb-18	Chi Tai House of On Tai Estate	Resident of On Tai Estate (referred by Mr. Lam Wai)	Construction Noise	SPRO hotline	NA	"智泰對出，白天噪音過大，可否加裝隔音板？高層受影響"	the Environmental Team has conducted an ad-hoc noise measurement for Leq(30min) at the corridor of 22/F of Chi Tai House on 2 February 2018 facing the construction site. The measurement noise result was 65dB(A) which below the Limit Level under the EM&A Programme. In our investigation, CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. According to the impact noise monitoring result obtained in January 2018, there were no breaches of EM&A requirement.	no comment by IEC on 22 Feb 2018	TCS00864/16/300/F0137
24	1-Feb-18	2-Feb-18	Shing Tat House of On Tat Estate	Resident of Shing Tat House (referred by Mr. Hsu Yau Wai)	Construction Noise	SPRO hotline	NA	Mr. Hsu reported that some disturbing noise was heard after 6:00 pm from the site near Shing Tat House of On Tat Estate.	AECOM has liaised with Mr. Hsu on 2 February 2018 for the complaint matter and he reported to AECOM that the noise was generated until 7:00 pm on 1 February 2018. 3. As advised by Contractor of Contract 1, breaking works at USRT area which opposite to Shing Tat House was only carried out from 8:00 to 18:00. However, rock breaking at System A was extended to 19:00 on 1 February 2018. As noise mitigation measures, noise barriers were erected for the works area.	no comment by IEC on 28 Feb 2018	TCS00864/16/300/F0140

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									Further to the complaint case, CWSTVJV would seek for other quiet work method such as using drilling machine to reduce noise level and speed up the rock breaking process, so that to reduce the noise intensity level and the duration of exposure.		
25	28-Feb-18	28-Feb-18	Shing Tat House of On Tat Estate	Resident of Shing Tat House	Construction Noise	EPD	NA	安達邨誠達樓居民, 投訴人是返夜班, 一年半以來長期受對出地盤日間掙石仔噪音滋擾, 由於單位與地盤太近, 堅持環保署跟進及回覆如何處理及減低噪音, 他亦要求知道何日完工.	Breaking works at Underground Stormwater Retention Tank area which opposite to Shing Tat House was carried out from 8:00 to 18:00. The Contractor has implemented noise mitigation measures to reduce the noise impact to the nearby resident. It was advised that the rock breaking works shall tentatively be completed by end of April and it is believed that the noise impact should be minimized. Since the works were carried out within the non-restricted hours and noise monitoring noise were within acceptable level, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 19 Mar 2018	TCS00864/16/300/F0143
26	11-Apr-18	12-Apr-18	Him Tat House of On Tat Estate	Resident of Him Tat House	Construction Noise	SPRO mobile	NA	Mr. Hui Yau Wai reported that the noise irritation was becoming more severe recently and asked about the completion date of the works close to Him Tat House. The resident suspected that the noise comes from piling works nearby.	In our investigation, since construction noise was generating from other construction site next to Him Tat House, it is considered that the complaint is due to cumulative noise generated by both construction sites. However, CWSTVJV should properly provide the noise mitigation measures at works area in System B to minimize the noise impact to the resident nearby. As advised by CWSTVJV on 20 April 2018, noise barrier	no comment by IEC on 7 May 2018	TCS00864/16/300/F0160b

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									was being erected at works area in System B as noise mitigation measures. According to the site photo, it is considered that the coverage of noise barrier is not sufficient and CWSTVJV should enhance the measure as far as practicable. The implementation of noise mitigation measures will be kept in view in subsequent site inspection.		
27	25-Apr-18	7-May-18	Junction of Hiu Kwong Street and Hiu Ming Street	A school but name of school not disclosed	Construction Noise	EPD	NA	This case is considered as an enquiry and no investigation is required under the EM&A Programme.			
28	18-May-18	24-May-18	Anderson Road Quarry Site	Undisclosed	Construction Noise	EPD	NA	投訴人指安達臣道石礦場地盤(NE/2016/01)在入夜19:00 後仍見到有長臂喉工程車在運作，及持續產生大噪音及閃燈，非常擾民。	As advised by CWSTVJV and confirmed by RE/AECOM, there were no construction activities carried out after 19:00 and concreting was completed before 19:00. It is concluded that the retracting process is not a general construction work using Powered Mechanical Equipment and complaint was an isolated case due to misunderstanding of the site operation. To prevent similar incidents in future, CWSTVJV has recommended several mitigation measures.	no comment by IEC on 30 July 2018	TCS00864/16/300/F0174b
29	25-Jun-18	19-Jul-18	Pedestrian Connectively E8 under Contract 3	Kwun Tong DC member Ms.	Waste Management	CEDD	NA	A public complaint was referred from CEDD on 4 July 2018 regarding accumulation of dead leaves and branches found	CW-CMGC-JV has immediately clear the dead leaves and maintain the site cleanliness. Since the construction work has not yet commenced and the dead leaves and overgrown branches were not	no comment by IEC on 24 Sep 2018	TCS00864/16/300/F0189b

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				So Lai-chun				at slope (GLA-TNK 2458) near Hiu Yuk Path on 25 June 2018. The complainant requested the relevant department to clear the leaves and branch asap	related project works, it is considered that the complaint is not valid the project.		
30	22-Aug-18	29-Aug-18	Hong Wah Court	Resident of Hong Wah Court	Construction Noise	1823 Hotline	NA	吳先生於 2018 年 8 月 22 日致電 1823 熱線投訴, 指馬游塘區堆填區往將軍澳方向行車入口因配合項目需要而進行移除山坡工程, 但其鑽地鑿石的噪音嚴重影響藍田康雅苑*居民, 要求有關部門跟進。*註:投訴人於 2018 年 8 月 27 日更正指受影響屋苑應為藍田康華苑。	to reduce the inconvenience caused to the nearby resident, Kwan On should properly maintain the noise mitigation measures as appropriate, such as maintain good site practice including intermittent use of machine and plant and Sequencing operation of construction plant equipment. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 7 Sep 2018	TCS00864/16/300/F0196a
31	28-Aug-18	31-Jul-18	Anderson Road Quarry Site	Undisclosed	Construction Noise	EPD	NA	安達邨誠達樓後面地盤, 2 月 26 日晚, 晚上 7 時後, 還在落石屎, 相片拍攝時間大概晚上 9 時半, 一直至晚上十一時五十分還有工程車在地盤行駛。影響居民休息。	According to the site diary which countersigned by RE, there was no concreting work carried out after 18:00 and the construction activities conducted during restricted hours with valid CNP were completed at 23:00. It is considered that the complaint was not valid to the Project. Nevertheless, CWSTVJV was reminded that in case of any work activities need to be carried out during restricted hours, CWSTVJV should strictly follow the requirements specified in the valid CNP.	no comment by IEC on 10 Oct 2018	TCS00864/16/300/F0197a

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32	6-Sep-18	7-Sep-18	Tsui Yeung House	Resident of Tsui Yeung House	Construction Noise	Verbal	NA	Mr. CHENG Keung-fung complained that the contractor has conducted the noisy works such as rock excavation beyond the normal hours.	Kwan On has implemented noise mitigation measures to reduce the noise impact to the nearby resident. As advised by Kwan On, the rock breaking works shall tentatively be completed by end of December 2018 and the mitigation measures will implemented continuously during slope construction work and the slope construction will be carried out within the working hours at Portion 2. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 22 Oct 2018	TCS00864/16/300/F0201
33	24-Oct-18	25-Oct-18	E3	Kwun Tong DC member Ms. So Lai-chun	Construction Noise	Whatsapp Message	NA	KTDC member, Ms. Ann So, complaining the noise of the breaker at E3	As advised by the Contractor, the acoustic material wrapped on the breaker was worn-out on 24 October 2018 and replacement of new acoustic materials has been installed on the breaker immediately on 25 October 2018. The rock breaking works shall tentatively be completed to the road level in the middle of November 2018 and the mitigation measures will implemented continuously during slope construction work and the slope construction will be carried out within the working hours at Portion 2. It is considered the complaint was an isolate case.	no comment by IEC on 23 Nov 2018	TCS00864/16/300/F0209a
34	12-Nov-18	13-Nov-18	Anderson Road Quarry Site	Resident of Ching Tat House (referred)	Construction Noise	SPRO Hotline	NA	Mr. Hui reported that he received complaint from a resident living in Ching Tat House about noise nuisance recently. Mr. Hui asked if project team can	The SPRO contacted Mr. Hui and explained to him about the purpose and benefits of the tunnel to the residents nearby and the expected date of completion of the tunnel will be earlier than 2020. Moreover, the noise mitigation measures	no comment by IEC on 12 Dec 2018	TCS00864/16/300/F022a

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				by Mr. Hui Yau Wai)				arrange some noise monitoring to check the noise level at the concerned flat or the same level at Ching Tat House.	had implemented to reduce the noise level effectively and the work progress will be closely updated to nearby stakeholders to enhance communication. Mr. Hui satisfied with the reply from SPRO and he agreed that the proposed noise monitoring in Ching Tat House was not needed. Since the works were conducted within approved normal hours with implementation of noise mitigation measures, there were no breaches of legislative requirement.		
35	14-Nov-18	14-Nov-18	Anderson Road Quarry Site	Undisclosed	Light and Noise	EPD	NA	凌晨 1 時，地盤仍有大光燈正射民居和機器移動聲音，影響附近居民睡眠及違反環保條例。	CWSTVJV immediately adjusted the angle and brightness of the lighting to minimize the nuisance to the resident nearby. In response to the complaint, CWSTVJV immediately carried out remedial action to minimize the nuisance to the public. It was considered that complaint for noise generated by machine moving was an isolated case. CWSTVJV was reminded to closely monitor the plant use and sequence of night work and do not to violate CNP conditions.	no comment by IEC on 3 Jan 2019	TCS00864/16/300/F02 23a
36	13-Nov-18	14-Nov-18	Anderson Road Quarry Site	Undisclosed	Noise and dust	1823	NA	Complainant requested to postpone the starting time of construction work at project site and also to solve the problem of construction noise and dust.	In our investigation, acoustic barrier and site hoarding were in place along the works area. No noticeable noise and dust impact was observed during the site inspection. As advised by CWSTVJV, the normal working hour of the construction site is 8am to 6pm and there were no violation of the relevant regulations. The senior public relation officer contacted the complainant Ms. Ma on 26 November 2018 to explain the site situation and she	no comment by IEC on 18 Feb 2019	TCS00864/16/300/F02 24

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									was satisfied with the reply. Investigation Report has been completed by ET without comment from IEC.		
37	9-Dec-18	12-Dec-18	Anderson Road Quarry Site	Undisclosed	Construction noise	1823	2-4927907305	1823 has referred a case to CEDD on 10 December 2018, which the complainant complained that construction noise was generated from project site on Sunday and was affecting the resident at Hau Tat House, On Tat Estate. The complainant requested follow up action from related department as soon as possible.	In our investigation based on the information provided by CWSTVJV, there was no site activities undertaken at site access road as concerned by the complainant. The construction work carried out on Sunday was fully compliance with the CNP requirement. In response to the complaint, CWSTVJV was reminded to closely monitor the plant use and sequence of night work and do not to violate CNP conditions.	no comment by IEC on 10 Jan 2019	TCS00864/16/300/F0230a
38	19-Dec-18	27-Dec-18	Anderson Road Quarry Site	Undisclosed	Construction noise	1823	2-4948074127	1823 has referred a case to CEDD on 27 December 2018, which the complainant complained that noise barriers near the round-about at On Sau Road were not enough, and construction noise generated from the project site was affecting the resident at Ming Tai House, On Tai Estate. The complainant requested follow up actions from related department as soon as possible.	Joint site inspection was carried out on 3 January 2019 the status of implemented mitigation measures provided by CWSTVJV was inspected. It was observed that noise mitigation measures including temporary noise barrier, acoustic mat and wrapped by acoustic materials are implemented on site. However, CWSTVJV was advised to extend the coverage of noise barrier as far as practicable and fully enclose the concerned works area which has been completed on 15 January 2019. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 31 Jan 2019	TCS00864/16/300/F0237a

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39	24-Jan-19	29-Jan-19	Anderson Road Quarry Site	Undisclosed	wastewater	Referred from DSD	NA	DSD has referred a case to CEDD on 24 January 2019 regarding suspended illegal discharge of cementitious slurry from construction site of Development of ARQ Site to nearby Public Stormwater Drainage System.	In our investigation, the concerned catchpit and U-channel mainly received the runoff from Po Lam Road as well as the discharge from the Anderson Road Quarry Site. It is suspected that the mud and silt found on the downstream has been accumulated over time particularly by rainstorm as well as routine discharge from construction site. As remedial action, CWSTVJV immediately clean the affected area where accessible. Nevertheless, in order to protect the watercourse at downstream of the construction site, CWSTVJV has some enhancement measures.	no comment by IEC on 29 Mar 2019	TCS00864/16/300/F02 48a
40	30-Jan-19	30-Jan-19	Anderson Road Quarry Site	Undisclosed	noise	SPRO hotline	NA	A public complaint was received by SPRO hotline on 30 January 2019 regarding the construction noise near Ma Yau Tong Village and requested to add noise barrier as soon as possible.	In our investigation, CWSTVJV had provided the noise mitigation measures to minimize the noise impact to the resident nearby. The impact monitoring result obtained at Ma Yau Tong Village revealed that the construction noise were within acceptable level. Since the works were conducted within approved normal hours with implementation of noise and dust mitigation measures, there were no breaches of legislative requirement.	no comment by IEC on 15 Mar 2019	TCS00864/16/300/F02 49a
41	15-Feb-19	25-Feb-19	Anderson Road Quarry Site	Undisclosed	noise	1823	2-494807 4127	1823 has referred a case to CEDD on 15 February 2019, which the complainant complained about the construction noise generated from the CEDD site near 法源寺 (Ma Yau Tong Village). The complainant requested	In response to the complainant, CWSTVJV has proposed alternative quiet work method to alleviate the noise impact to the public. They will schedule the noisy activities to be carried out after 10am as far as practicable to minimize the impact to resident nearby, given that not affecting the site progress. Moreover, the coverage of acoustic barriers will be extended in view	no comment by IEC on 29 Mar 2019	TCS00864/16/300/F02 51a

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								for the details of works and the completion date, the complainant also requested CEDD to use other construction methods in order to re	of the works programme.		
42	21-Feb-19	25-Feb-19	Anderson Road Quarry Site	Undisclosed	noise	EPD	NA	The resident from Sau Hong House complained that the noise from the Anderson Road Quarry construction site has gotten worse. In addition, sometimes even after midnight there are noise coming from the site. With the echo produces from the environment, this is not helping at all. Really a big disturbance to the residence in the area. The complainant suspecting the sound proof measure has lessen as time goes. Follow action is requested.	In our investigation, CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. However, to eliminate the inconvenience caused to the nearby resident, CWSTVJV should properly maintain the noise mitigation measures as appropriate, such as maintain good site practices such as intermittent use of machine and plant and Sequencing operation of construction plant equipment. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 28 Mar 2019	TCS00864/16/300/F0250

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43	21-Feb-19	26-Feb-19	Anderson Road Quarry Site	Undisclosed	noise	received by DEVB and referred to CEDD	NA	A public complaint was received by DEVB and referred to CEDD on 25 February 2019 regarding on the noise generated from the construction works of the Anderson Road Quarry Site affecting a local resident residing at the Anderson Road Squatter Area	Additional acoustic mat has been erected in front of the Squatter Area to minimize the noise impact. Noise mitigation measures such as acoustic barriers erected along the works area and breaker head wrapped with acoustic material were implemented continually. Alternative quiet work method was adopted such as drilling the hard rock before the breaking work to reduce the breaking duration. In our investigation, CWSTVJV had enhanced the noise mitigation measures to ease the complainant's concerns. CWSTVJV will continually implement the noise mitigation measures to reduce to noise impact to the public.	no comment by IEC on 29 Mar 2019	TCS00864/16/300/F0252a
44	1-Mar-19	26-Feb-19	E3 of Contract 2	Undisclosed	noise	CEDD	NA	A complaint is forwarded by CEDD which was received by KTDC member Mr CHENG Keung Fung from the residents of Tsui Yeung House(翠楊樓) about the noise nuisance generated and the working time up to 7:00 pm from the rock excavation of E3 lift tower. Follow up action is requested.	The representative of the engineering team explained to Mr. Cheng about the project's details and concerned site was being constructed for the future pedestrian connection facilities. The related stone drilling process is expected to be completed in mid-April to end of April 2019. Mr. Cheng was satisfied with the rapid response from CEDD and the engineering team. In our investigation, Kwan On has implemented noise mitigation measures to reduce the noise impact to the nearby resident. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 6 May 2019	TCS00864/16/300/F0264

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45	16-Jun-19	18-Jun-19	Anderson Road Quarry Site	Undisclosed	noise	EPD	NA	EPD referred a case to CEDD on 17 June 2019 regarding the construction noise heard at On Tat Estate on Sunday.	The Contractor explained that general cleaning by water jet was carried out in the construction site on the concerned day. Since the work did not involve the use of Powered Mechanical Equipment (PME), it would not violate the noise control ordinance. The Investigation report is underway by ET.	no comment by IEC on 21 August 2019	TCS00864/16/300/F03 01a
46	12-Jul-19	15-Jul-19	Anderson Road Quarry Site	Undisclosed	dust	EPD	NA	On 12 July 2019, a complaint was received by EPD regarding the dust impact to the residents at Po Tat Estate and On Tat Estate due to the dust emission at Anderson Road Quarry site.	In our investigation, CWSTVJV has implemented dust mitigation measures to eliminate the inconvenience caused to the nearby resident and status of implementation of dust mitigation measures was considered effective based on the site observation. Moreover, there was mostly rainy day throughout June and July 2019 in typical rainy season in Hong Kong and the dust impact was considered not significant in addition to the dust mitigation measures implemented provided by the Contractor. Nevertheless, the ET will closely monitor the environmental performance and dust mitigation measures in subsequent site inspection. The IR is under reviewed by IEC.	no comment by IEC on 12 August 2019	TCS00864/16/300/F02 92b

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47	6-Aug-19	14-Aug-19	Work Area Portion 2 E3 (Slope of Hiu Ming Street opposite of Tsui Yeung House)	翠屏(北)邨物業服務辦事處	Noise	1823	NA	A public complaint was received by 1823 on 6 August 2019 relating to the noise generated from construction work at the lift tower site (Slope E3) at Hui Ming Street from the residents of Tsui Yeung House. The complainant expressed that the construction works has been undertaken for 2 years and generated construction noise from 8am every day, which causing serious nuisance to the nearby residents.	In our investigation, Kwan On has implemented noise mitigation measures to reduce the noise impact to the nearby resident. Nevertheless, since the construction site is close to the residential area, adequate noise mitigation measures shall be provided to reduce to noise nuisance to the public. It is concluded that the complaint was valid to the contract. As the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance.	no comment by IEC on 16 Sep 2019	TCS00864/16/300/F03 10a
48	15-Oct-19	18-Oct-19	Work Area Portion 6 (Tseung Kwan O Tunnel Bus-Bus Interchange Pedestrian Connectivity Facilities E12)	Mr. Ng	Noise	1823	NA	A public complaint was received by 1823 on 15 October 2019 relating to the noise generated from construction work at Tseung Kwan O Tunnel Bus to Bus Interchange Pedestrian Connectivity Facilities E12. The complainant expressed that the construction noise was generated from breaking work at 8:20 am without noise mitigation measure, which causing nuisance to the nearby residents.	In our investigation, Kwan On has implemented noise mitigation measures to reduce the noise impact to the nearby resident. Nevertheless, since the construction site is close to the residential area, adequate noise mitigation measures shall be provided to reduce to noise nuisance to the public. As the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance. Kwan On was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme.	no comment by IEC on 13 Nov 2019	TCS00864/16/300/F03 26a

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49	5-Nov-19	11-Nov-19	Work Area Portion 2&3 (lift tower construction work at Hiu Kwong Street)	NA	Noise	EPD	NA	A public complaint was received by EPD relating to the noise generated from breaking work of lift tower construction work at Hiu Kwong Street (Portion 2&3).	In our investigation, Kwan On has implemented noise mitigation measures to reduce the noise impact to the nearby resident. Nevertheless, since the construction site is close to the residential area, adequate noise mitigation measures shall be provided to reduce to noise nuisance to the public. As the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance. Kwan On was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme.	no comment by IEC on 27 Dec 2019	TCS00864/16/300/F0332a
50	7-Nov-19	11-Nov-19	Work Area Portion 6	Mr. Cheng	Noise	EPD	NA	寶達邨居民鄭先生，表示將軍澳隧道出口工程，日間噪音嚴重，8:30-17:00，幾部幾同時開動，而且無防音欄，之前是有，現要求環保署向對方反映改善	In our investigation, Kwan On has implemented noise mitigation measures to reduce the noise impact to the nearby resident. Nevertheless, since the construction site is close to the residential area, adequate noise mitigation measures shall be provided to reduce to noise nuisance to the public. As the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance. Kwan On was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme.	no comment by IEC on 27 Dec 2019	TCS00864/16/300/F0333a

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51	10-Nov-19	12-Nov-19	Underpass	Undisclosed	Noise	EPD	NA	On 10 November 2019 投訴人為馬游塘村居民，自本年初寶琳路開展掘隧道工程，每天噪音不斷，由 8 至 6，由於欠缺遮擋，聲音直向 4 至 22 號村屋，將來通車，相信噪音不只 8-6，現懇請環保署為本村居民正式評估，並向政府提出村民困擾，考慮盡快設置隔音屏。 On 11 November 2019 寶琳路近馬游塘村開掘隧道的工程地盤每日 8am-6pm 發出噪音，欠缺遮擋，聲音影響馬游塘村 4-22 號村屋。希望政府部門 1.調查地盤有否違規 2.實施減音措施以減低對附近居民的滋擾	In our investigation, CWSTVJV had implemented the noise mitigation measures to reduce to noise impact to the public. Since the works were conducted within approved normal hours with implementation of noise mitigation measures, there were no violation of legislative requirement. For the complainant's concern on the operation noise after commencement of the project, it is out of the scope of the EM&A programme and the relevant department will follow up the concern.	no comment by IEC on 30 Dec 2019	TCS00864/16/300/F0337

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52	11-Nov-19	20-Nov-19	Construction site near on Tai Estate Ancillary Facilities Building on On Sau Road	Mr. Wong (resident of Yung Tai House of On Tai Estate)	Noise	1823	ref. 2-597630 3183	黃先生投訴安秀道安泰邨服務設施大樓附近掘路工程已持續數年還未完成，並投訴其經常發出噪音滋擾，要求部門跟進。 On 22 November 2019, the project hotline received a call from the same complainant reported on the noise nuisance near On Sau Road and On Yan Street. He suggested to speed up the noise making works by intensely concentrate the excavation works during day time. No intermittence is suggested in order to speed up the works and to avoid waste of manpower.	In our investigation, CWSTVJV had implemented the noise mitigation measures to reduce to noise impact to the public. However, in response to the complaint, the Contractor was advised to enhance the performance of the temporary noise barriers such as increase the coverage of the noise barrier. Since the works were conducted within normal working hours with implementation of noise mitigation measures, there were no breaches of legislative requirement.	no comment by IEC on 27 Dec 2019	TCS00864/16/300/F03 38a
53	5-Mar-20	6-Mar-20	Tunnel work of Anderson Road Quarry Site (the Underpass)	Resident of On Tat Estate	Noise	EPD	NA	本人是安達邨居民，隧道工程在安達臣的工程，施工至今嘈音間中改善，最近又有嘈音出現，仲係重低音，希望能加裝隔音設備，工程不知何時將嘈音減至最低。 1. A public complaint was received by EPD on 5 March 2020 regarding the construction noise generated from the tunnel work of the subject site. The complainant	In our investigation, CWSTVJV had implemented the noise mitigation measures to reduce to noise impact to the public. In response to the complaint, CWSTVJV had immediately installed a layer of acoustic mat at boundary of System A. Since the works were conducted within approved normal hours with implementation of noise mitigation measures, there were no violation of legislative requirement.	no comment by IEC on 1 Apr 2020	TCS00864/16/300/F03 57a

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								mentioned that the noise from construction was improved before but it became serious recently.			
54	4-Mar-20	17-Mar-20	Near Hiu Ming Street Playground (E8)	Undisclosed	Noise	1823	ref. 3-628323 7171	投訴人投訴有關秀茂坪邨秀安樓附近有兩個地盤，地盤由星期一至五，每天早上約 9AM-5 PM 持續不斷發出強烈的嘈音，投訴人表示地盤是在曉明街藍球場旁邊的位置(投訴人未能告知確實街號)，因此要求部門盡快回覆及告知有關情況。 A public complaint was received by 1823 on 4 March 2020 regarding the construction noise. The complainant mentioned that there were two construction sites near Hiu Ming Street Playground generated construction noise continuously during 9AM to 5PM on weekdays.	In our investigation, CW-CMGCJV had implemented the noise mitigation measures for the works at upper section of E8 near Hiu Yuk Path and no noise impact was observed and anticipated in Hiu Ming Street based on the site activities and our inspection record. It is considered that the complaint is likely related to another construction site located near Hiu Ming Street Playground and not caused by the works under the Project. Since the works were conducted within approved normal hours with implementation of noise mitigation measures, there were no violation of legislative requirement.	no comment by IEC on 15 Apr 2020	TCS00864/16/300/F03 59a

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55	23-Mar-20	23-Mar-20	Near Lin Tak Road (E11)	Undisclosed	Water Quality	Project hotline	NA	藍田居民梁先生反映在將軍澳道往連德道天橋的大彎位，其中有一個車輛出入口每日早上八時左右不時有泥水從地盤流出路面，估計泥水是清洗工程車輛所致，令梁先生的車輛每次駛經時被濺濕及弄污，請問有何措施改善問題？ A public complaint was received by project hotline on 23 March 2020 regarding overflow of muddy water from the construction site. The complainant mentioned that muddy water came out from site entrance, which spotted on his car, at 8am every morning.	In our investigation, the wheel washing facilities at site exit of E11 is one of the dust quality mitigation measures conducted by CW-CMGCJV and corresponding measure was implemented to prevent overflow of wastewater out of the site. In our recent site inspection, no outflow of muddy water from the site was observed and the condition of concerned Lin Tak Road was satisfactory. It is considered that the complaint was unlikely due to the project.	no comment by IEC on 15 Apr 2020	TCS00864/16/300/F0360a
56	17-Mar-20	19-Mar-20	Anderson Road Quarry Site	Resident of Yan Tat House	Noise	Project hotline	NA	許有為區議員接獲安達邨仁達樓 2613 室居民反映，安達臣道石礦場發展用地工程噪音持續兩年，要求工程團隊下周派員到有關單位視察，並採取可行的噪音緩解措施。許有為區議員要求陪同視察。 A public complaint was received by hotline on 17 March 2020 regarding the construction noise	In our investigation, CW-CMGCJV has implemented noise mitigation measures to reduce the noise impact and nuisance to the public. However, to eliminate the inconvenience caused to the nearby residents, CW-CMGCJV was advised to further adopt good practices on mitigating construction noise to reduce the noise impact to the nearby residents. 5. Since the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance.	no comment by IEC on 11 May 2020	TCS00864/16/300/F0361a

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								generated from the Anderson Road Quarry Site. The complainant mentioned that the construction noise generated from the Anderson Road Quarry Site had been continued for two years.	Nevertheless, as the construction site is close to the residential area, CW-CMGCVJ was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme.		
57	1-Apr-20	20-Apr-20	Work Area Portion 2	Undisclosed	Noise	1823	NA	觀塘秀茂坪紀念公園傍及曉明街的地盤，共兩個地盤，是地政總署管轄的。投訴人表示已被工程噪音滋擾了兩年多；另外投訴人得知完工時間要到2021年，投訴人不明白為何工程頭尾要3年多時間。要求地政總署直接以電郵回覆工程長的原因及有沒有措施解決地盤發出的噪音。A public complaint was received by 1823 on 1 April 2020 and subsequently transmitted to Environmental Team (ET) on 20 April 2020, regarding the noise nuisance generated from the construction site in Hui Ming Street. The complainant concerned about the slow progress and implementation of	In our investigation, Kwan On has implemented noise mitigation measures to reduce the noise impact to the nearby resident. Nevertheless, since the construction site is close to the residential area, adequate noise mitigation measures shall be provided to reduce to noise nuisance to the public. It is concluded that the complaint was valid to the contract. However, as the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance. Kwan On was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme.	no comment by IEC on 7 May 2020	TCS00864/16/300/F0366a

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								noise mitigation measures to alleviate the noise impact arising from the construction work.			
58	11-May-20	12-May-20	Work Area Portion 2	Undisclosed	Noise	Project hotline	NA	陳先生住於翠楊樓 17 樓，投訴對面鑽石工程產生噪音對母親健康構成影響，現查詢完工日期、噪音監控標準及措施。 A public complaint was received by Project Hotline on 11 May 2020 regarding the noise generated from rock breaking work from a construction site opposite to Tsui Yeung House, which affecting his mother's health. The complainant enquired about the completion date of construction work, construction noise level standard and implementation of noise mitigation measures on site.	In our investigation, Kwan On has enhanced the noise mitigation measures to reduce the noise impact to the nearby resident. Based on the noise measurement result, the construction noise was reduced to acceptable level after the additional noise mitigation measures in place. Nevertheless, Kwan On was reminded to continually implement the noise mitigation measures as far as practicable in the remaining work. The performance of noise mitigation measures will keep in view by ET in subsequent site inspection	no comment by IEC on 28 May 2020	TCS00864/16/300/F0370a

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59	18-Jun-20	23-Jun-20	Anderson Road Quarry Site, System B	Undisclosed	Noise	EPD	NA	A public complaint was received by EPD on 18 June 2020 regarding the noise generated from rock breaking by machinery before 7pm from construction site near Hau Tat House. The complainant understood that the Contractor could carry out construction works, other than percussive piling, before 7pm under the CNP and hoped that the Contractor could arrange the noisy construction works to be carried out before 6pm. According to the information provided by the complainant, it is suspected complaint location would be Anderson Road Quarry Site, System B.	In our investigation, the Contractor has implemented noise mitigation measures to reduce the noise impact and nuisance to the public. Since the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance. Nevertheless, as the construction site is close to the residential area, the Contractor was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme	no comment by IEC on 17 July 2020	TCS00864/16/300/F0391a
59#	23-Jul-20	24-Jul-20	Anderson Road Quarry Site near On Tat Estate	Undisclosed	Noise	EPD	NA	A public complaint was received by EPD on 23 July 2020 regarding the construction noise generated from the use of PME at Anderson Road Quarry Site near On Tat Estate at 6:30am (restricted hours). He/ she requested	In our investigation, CWSTVJV had restricted the use of PME before 7am. There was no construction work and use of PME during the restricted hours. Since the works were conducted within approved normal hours with implementation of noise mitigation measures, there were no violation of legislative requirement. Nevertheless, as the construction site is	no comment by IEC on 25 August 2020	TCS00864/16/300/F0401

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								relevant department to follow up.	close to the residential area, CWSTVJV was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme		
60	14-Nov-20	18-Nov-20	Near Hiu Ming Street Playground (E8)	Undisclosed	Noise	1823	NA	A public complaint was received by 1823 on 14 November 2020 regarding the construction noise. The complainant mentioned that there was piling works at Hiu Ming Street Playground, generating huge noise during 9AM to 10AM on 14 November 2020. He/she requested relevant department to follow up	In our investigation, there was no noise impact was observed and anticipated in Hiu Ming Street based on the site activities and our inspection record. Since the works were conducted within approved normal hours with implementation of noise mitigation measures, there were no violation of legislative requirement	no comment by IEC on 4 January 2021	TCS00864/16/300/F0424
61	4-Dec-20	7-Dec-20	Opposite to On Tai Estate – lower portion of Road L4	Undisclosed	Dust	EPD	NA	A public complaint was received by EPD on 4 December 2020 regarding the dust impact. The complainant mentioned that the construction site opposite to On Tai Estate had dust emission problem due to lack of water spraying. He/she requested relevant department to follow up	In our investigation, CWSTVJV has implemented dust mitigation measures to eliminate the inconvenience caused to the nearby resident. In view of the potential traffic dust impact and implementation of dust mitigation measures, it is considered that the complaint was not valid to the Project	no comment by IEC on 4 January 2021	TCS00864/16/300/F0434
62	3-Dec-20	7-Dec-20	Ma Yau Tong Village (East Portal)	Undisclosed	Noise and dust	1823 & EPD	3-6574141017	A public complaint was received by 1823 and EPD on 14 November 2020	In our investigation, CWSTVJV had provided the dust and noise mitigation measures to minimize the dust and noise	no comment by IEC on	TCS00864/16/300/F0435

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								regarding the construction dust and noise impact arising from the project. There were acoustic mats erected on the slope of East Portal, however, the complainant enquired about effectiveness of the noise barriers with dozens of 15 cm "X"-shaped cuts. Moreover, there was lack of water sprinkling on the site and fugitive dust was blowing to the village	impact to the resident nearby. To response the concern from the complainant, as enhancement noise measure, the Contractor extended the noise barrier to encircle noisy activity. Since the works were conducted within approved normal hours with implementation of noise and dust mitigation measures, there were no breaches of legislative requirement	4 January 2021	
63	7-Jan-21	7-Jan-21	System B	Resident of Yan Tat House	Noise	Project hotline	NA	A public complaint was referred by district Councillor Mr. HSU Yau-wai and received by project hotline on 7 January 2021 regarding the construction noise. The complainant mentioned that the construction site next to SKH St. John's Tsang Shiu Tim Primary School generated noise problem and she requested relevant department to follow up.	In our investigation, the Contractor has implemented noise mitigation measures to reduce the noise impact and nuisance to the public.6. Since the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance. Nevertheless, as the construction site is close to the residential area, the Contractor was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme.	no comment by IEC on 19 July 2021	TCS00864/16/300/F0441

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64	18-Mar-21	18-Mar-21	Anderson Road Quarry Site (between On Tat Estate and On Tai Estate)	Undisclosed	Noise	1823 & EPD	NA	A public complaint was received by 1823 and referred by EPD on 18 March 2021 regarding the construction noise generated from construction works at Anderson Road Quarry Site between On Tat Estate and On Tai Estate. The complainant expressed that construction works of the site started from 6:45am everyday which causing noise disturbance to the nearby resident and he/ she requested relevant department to follow up	In our investigation, CWSTVJV had restricted the use of PME before 7am. There was no construction work and use of PME during the restricted hours and there should not be any non-compliance of Noise Control Ordinance. Nevertheless, as the construction site is close to the residential area, CWSTVJV was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme	no comment by IEC on 1 April 2021	TCS00864/16/300/F0454
65	1-Apr-21	1-Apr-21	Construction site near SKH St. John's Tsang Shiu Tim Primary School (System B under Contract 3)	Undisclosed	Noise	EPD	NA	A complaint was received by EPD and referred to CEDD on 1 April 2021 regarding the construction noise. The complainant mentioned that piling work was conducted at construction site near SKH St. John's Tsang Shiu Tim Primary School in recent week which generated noise problem. Moreover, there were no noise mitigation measures provided in the construction site	In our investigation, the Contractor has implemented noise mitigation measures to reduce the noise impact and nuisance to the public. Since the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance. Moreover, the Contractor has adopted noise mitigation measures to minimise noise impact to the public. Since the construction site is close to the residential area, the Contractor was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme	no comment by IEC on 19 July 2021	TCS00864/16/300/F0458a

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66	28-Mar-21	30-Mar-21	Anderson Road Quarry Site (between On Tat Estate and On Tai Estate)	Resident of Tai Fung House of On Tai Estate	Noise	EPD	K13/RE/00007086-21	A public complaint was received by EPD on 28 March 2021 regarding the construction noise generated from construction works at Anderson Road Quarry Site until 9pm on Monday to Saturday. Moreover, the complaint concerned about the construction noise heard on 28 March 2021 which was a Sunday.	In our investigation, CWSTVJV had followed that CNP for work during restricted hour and there should not be any non-compliance of Noise Control Ordinance. Nevertheless, some site areas had been handed over to other contract and construction noise generated from others is not controlled by the project. As a reminder, CWSTVJV should implement the mitigation measures as far as practicable as recommended in the EM&A Programme.	no comment by IEC on 22 April 2021	TCS00864/16/300/F0459
67	11-Jun-21	11-Jun-21	Anderson Road Quarry Site	Resident of Chi Tat House, On Tai Estate	Noise	EPD	EPD Ref.: 13208-21	A public complaint was received by EPD on 11 June 2021 and complained about noise nuisance from multiple construction sites on Anderson Road Quarry Site. The complainant stated that there were noise nuisances from different construction sites from 0800 am to 1800 pm from Monday to Saturday without adequate noise mitigation measures. On 17 June 2021, the complainant added that the noise was generated from rock breaking works in front of Chi Tai House (not from the housing sites near the Tai Sheung Tok slope)	6. In our investigation, CWSTVJV had implemented the noise mitigation measures to reduce to noise impact to the public. In response to the complaint, CWSTVJV had immediately installed a layer of acoustic barrier at boundary of concern works area. Since the works were conducted within approved normal hours with implementation of noise mitigation measures, there were no violation of legislative requirement.	no comment by IEC on 19 July 2021	TCS00864/16/300/F0478a

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								and no mitigation measure was implemented for the rock breaking works.			
68	20&21/June/21	23-Jul-21	Anderson Road Quarry Site	DSD	Water Quality	EPD	EPD Ref.: 13208-21	EPD received complaints from DSD on 20 and 21 July 2021 concerning about discharge of muddy water as found on Po Lam Road and at the drainage facility near Tin Hau temple.	In our investigation, CWSTVJV had implemented the water quality mitigation measures to minimise the impact arising from the construction site. In view of the site condition and inclement weather condition on the complaint days, it is considered that the complaints raised by DSD were unlikely due to the C1 Project. Nevertheless, CWSTVJV was advised to closely monitor the discharge quality to avoid non-compliance of water quality happened in the construction site. Moreover, to cope with the adverse weather condition in wet season, CWSTVJV should regularly review the drainage plan as needed.	no comment by IEC on 6 August 2021	TCS00864/16/300/F04 85b
69	14&16/Sep/21	15-Sep-21	Anderson Road Quarry Site	DSD	Water Quality	EPD	NA	EPD received complaints from DSD on 14 Sep 2021 and 16 Sep 2021 concerning about discharge of muddy water as found at the catchpit SCH4003250 near Po Lam Road and catchpit SSH4001400 near Po Tat Tin Hau Temple.	In our investigation, CWSTVJV had implemented the water quality mitigation measures to minimise the impact arising from the construction site. However, there were incidents of seepage of silty water at Q2 and Q3 and rectified actions were undertaken immediately. Having investigated, the incidents were considered very short term and would not generate large amount of muddy water. In view of the inclement weather condition and there were other major sources, it is considered that the complaints raised by DSD were not fully contributed by C1 Project. Nevertheless, CWSTVJV was advised to	no comment by IEC on 6 October 2021	

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									closely monitor the discharge quality to avoid non-compliance of water quality happened in the construction site. Moreover, to cope with the adverse weather condition in wet season, CWSTVJV should regularly review the drainage plan as needed.		
70	23/Sep/21	29-Sep-21	Anderson Road Quarry Site	CEDD & EPD	Noise	CEDD & EPD	NA	A public complaint was referred by 1823 to both CEDD and EPD on 23 September 2021. The complainant stated that the construction works at Anderson Road Quarry Site started before 7am, which generated construction noise and affecting the upper floor resident of On Tat Estate. EPD have contacted the complainant and clarify that the concerned about construction dust and daytime construction noise after 7am.	Our investigation revealed that there was no construction works under the Project undertaken during the concerned period by the complainant, and there were other concurrent contracts on Anderson Road Quarry Site and the contribution noise may be related to others. Therefore, it is considered that the noise complaint was unlikely to be related to the works under the Project. Nevertheless, CWSTVJV was reminded to properly maintain the noise mitigation measures as far as practicable considering the construction site is relatively close to residential area.	No comment by IEC on 15 November 2021	
71	30/Mar/22	12/Apr/22	Anderson Road Quarry Site	DSD	Water Quality	DSD	NA	EPD received complaint from DSD on 28 March 2022 concerning about siltation and discharge of muddy water observed at the public drainage system	In our investigation, the Contractor had implemented the water quality mitigation measures to minimise the impact arising from the construction site. Based on the investigation findings, it is considered that the complaint was likely caused by the	No comment by IEC on 19 April 2022	TCS00864/16/300/F0540

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								at catchpit SSH4001400 near Tin Hau Temple and the site discharge points at Po Lam Road on 28 March 2022	interfacing contractors under rainy days and not due to the works under the Project.		
72	14/Apr/22	25/Apr/22	Anderson Road Quarry Site	DSD	Water Quality	DSD	NA	DSD carried out site inspection at site discharge point at Po Lam Road on 12 April 2022 and observed discharge of muddy water at public drainage system. The case was then referred to CEDD and EPD to investigate the source of the muddy water discharge.	In our investigation, the Contractor had implemented the water quality mitigation measures to minimise the impact arising from the construction site. Based on the investigation findings, it is considered that the complaint was likely caused by the interfacing contractors and not due to the works under the Project.	No comment by IEC on 16 May 2022	TCS00864/16/300/F0541
73	11/May/2022	25/May/2022	Anderson Road Quarry Site	DSD	Water Quality	DSD	NA	EPD received complaint from DSD on 11 May 2022 concerning about muddy water observed entering Tsui Ping River, with similar situation observed at Tin Hau Temple and Po Lam Road.	Based on the above findings and successive heavy rainstorm on 11 to 13 May 2022, it is considered the muddy water found in the concerned catchpit SSH4001400 near Tin Hau Temple and Po Lam Road on 11 to 13 May 2022 were likely caused by impact of rainstorm and partially contributed by the interfacing contractors at Sites R2-9 & R2-10.	No comment by IEC on 13 June 2022	TCS00864/16/300/F559
74	17/May/2022	30/May/2022	Anderson Road Quarry Site	DSD	Water Quality	DSD	NA	EPD received complaint from DSD on 14 and 16 May 2022 concerning about muddy water observed entering Tsui Ping River.	Heavy rain led to large amount of storm runoff from roads and landscape into the public drainage system, which deteriorated the water quality in the drainage system. Besides, there were several construction sites at upstream of Tsui Ping River. It is considered that complaint mainly related to the interfacing contractor(s) and unlikely to	No comment by IEC on 13 June 2022	TCS00864/16/300/F562a

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									have been caused by the project.		
75	27/May/2022	9/Jun/2022	Anderson Road Quarry Site	DSD	Water Quality	DSD	NA	EPD received complaint from DSD on 27 May 2022 concerning about muddy water observed entering Tsui Ping River, with similar situation observed at Tin Hau Temple and Po Lam Road.	Heavy rain led to large amount of storm runoff from roads and landscape into the public drainage system, which deteriorated the water quality in the drainage system. Besides, there were several construction sites at upstream of Tsui Ping River. It is considered that complaint mainly related to the interfacing contractor(s) and unlikely to have been caused by the project.	No comment by IEC on 13 June 2022	TCS00864/16/300/F563
76	6, 7, 8/Jun/2022	7, 8, 9/Jun/2022	Anderson Road Quarry Site	DSD	Water Quality	DSD	NA	On 6 June 2022, DSD informed that dirty water with bad odour was observed entering Tsui Ping River this morning at the upstream near junction of Kai Lim Road and Tsui Ping Road. The situation has persisted over 50 mins. Furthermore, muddy water was observed entering Tsui Ping River, with similar situation at Tin Hau Temple and Po Lam Road (山渠) on 6, 7 and 8 June 2022.	As a matter of fact, heavy rain led to large amount of storm runoff from roads and landscape into the public drainage system, which deteriorated the water quality in the drainage system. Besides, there were several construction sites at upstream of Tsui Ping River. It is considered that complaint mainly related to the interfacing contractor(s) and unlikely to have been caused by the project.	Sent to EPD on 21 June 2022	TCS00864/16/300/F565
77	14/Jun/2022	15/Jun/2022	Anderson Road Quarry Site	DSD	Water Quality	DSD	NA	DSD concerning muddy water discharge found at Tin Hau Temple and Po Lam Road on 14 June pm.	As a matter of fact, heavy rain led to large amount of storm runoff from roads and landscape into the public drainage system, which deteriorated the water quality in the drainage system. Besides, there were several construction sites at upstream of Tsui Ping River. It is considered that	Sent to EPD on 29 June 2022	TCS00864/16/300/F566

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
									complaint mainly related to the interfacing contractor(s) and unlikely to have been caused by the project.		
78	8/Aug/2022	8/Aug/2022	Anderson Road Quarry Site	DSD	Water Quality	DSD	NA	DSD advised EPD that muddy water was observed entering Tsui Ping River in the morning of 8 August 2022, with similar situation at Tin Hau Temple and Po Lam Road	As a matter of fact, heavy rain led to large amount of storm runoff from roads and landscape into the public drainage system, which deteriorated the water quality in the drainage system. No muddy water discharge was evident in the morning or afternoon of 8 August 2022. It is therefore considered that the muddy water discharge observed by DSD in the morning of 8 August 2022 was unlikely to have been caused by the ARQ contracts of C1 or C4.	No comment by IEC on 19 September 2022	TCS00864/16/300/F580
79	12/Aug/2022	12/Aug/2022	Anderson Road Quarry Site	DSD	Water Quality	DSD	NA	DSD advised EPD that muddy water was observed entering Tsui Ping River in the morning of 12 August 2022, with similar situation at Tin Hau Temple and Po Lam Road (山渠).	As a matter of fact, heavy rain led to large amount of storm runoff from roads and landscape into the public drainage system, which deteriorated the water quality in the drainage system. No muddy water discharge was evident in the morning of 12 August 2022. It is therefore considered that the muddy water discharge observed by DSD in the morning of 12 August 2022 was unlikely to have been caused by the ARQ contracts of C1 or C4.	No comment by IEC on 19 September 2022	TCS00864/16/300/F581
80	29&30/Sep/2022	29/Sep/2022 & 3 Oct 2022	Anderson Road Quarry (ARQ) Site	DSD	Water Quality	DSD	NA	DSD's complaint was made to EPD who requested CEDD in the same respective mornings to handle and investigate in	As a matter of fact, heavy rain led to large amount of storm runoff from roads and landscape into the public drainage system, which deteriorated the water quality in the drainage system. No muddy water	Sent to EPD on 18 October 2022	TCS00864/16/300/F593

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
								accordance with the procedure in EM&A Manual.	discharge from ARQ Site was evident in the morning of 29 and 30 September 2022. It is therefore considered that the muddy water discharge observed by DSD in the morning of 29 and 30 September was unlikely to have been caused by the ARQ contracts of C1 or C4. During wet season, the Contractor was strongly reminded to implement adequate water quality mitigation measures to minimise the impact arising from the construction site. The Contractor should closely monitor the discharge quality from the Site to avoid non-compliance. The ET will pay special attention on water quality mitigation measures implementation on site through regular site inspection, and give advice on remedial action when necessary. Incidentally, it is noted that Site R2-9 has kept discharging muddy water to downstream manhole D310. Record photos of the manhole dated 6, 7 and 8 October 2022 are enclosed for reference.		
81	18/Oct/2022	20/Oct/2022	Anderson Road Quarry (ARQ) Site	DSD	Dust Quality	Referred by 1823 to EPD	NA	A public complaint was referred by 1823 to EPD on 18 October 2022, regarding the dust problem generated from the construction site in Anderson Road near On Tai Estate due to typhoon signal no. 3. EPD	In our investigation, both the Contractors had implemented dust mitigation measures to reduce to potential impact to the public. However, in particular during dry season, Contract 4 was reminded to enhance the dust suppressive measures as far as practicable. As there were no air monitoring results exceeding the limit level, it is considered that the dust	Sent to EPD on 3 November 2022	TCS00864/16/300/F596

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
								contacted the complainant who was a resident of Shing Tai House, On Tai Estate. The complainant expressed concern about the construction dust generated from Anderson Road Quarry (ARQ) site and requested the site to step up dust suppression measures.	mitigation measures implemented were effective in suppressing the fugitive dust. Nevertheless, as the construction site is close to the residential area, both the Contractors were reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme.		
82	17/May/2023	19/May/2023	Anderson Road Quarry (ARQ) Site	DSD	Water Quality	DSD	NA	EPD received complaint from DSD concerning muddy water was observed entering Tsui Ping River from the upstream in the afternoon of 17th May 2023, with similar situation at Po Lam Road (山渠)。 The case was then referred from EPD to CEDD for follow-up. Environmental Team (ET) initiated the handing procedure in accordance with the Environmental Monitoring & Audit Manual to investigate whether it is related to the Project of Development of Anderson Road Quarry (ARQ) Site.	As a matter of fact, the heavy rains led to large amount of storm runoff from roads and landscape into the public drainage system, which deteriorated the water quality in the drainage system. There was no evident muddy water discharge from ARQ Site in the afternoon of 17th May 2023. Therefore, it is considered unlikely that the muddy water discharge observed by DSD in the afternoon of 17 May 2023 was caused by the ARQ contracts of Contract 1 or Contract 4. During the wet season, the Contractor was strongly reminded to implement adequate water quality mitigation measures to minimise the impact arising from the construction site. The Contractor should closely monitor the quality if the discharge from the Site to avoid non-compliance. The ET will pay special attention to the implementation of water quality mitigation measures on site through regular site	Sent to EPD on 29 May 2023	TCS00864/16/300/F643

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
									inspections, and provide advice on remedial action when necessary.		
83	4 July 2023	4 July 2023	Anderson Road Quarry (ARQ) Site	DSD	Water Quality	DSD	NA	EPD received complaint from DSD concerning muddy water was observed entering Tsui Ping River from the upstream in the morning of 4 July 2023, with similar situation at Po Lam Road (山渠).	As a matter of fact, the heavy rains led to large amount of storm runoff from roads and landscape into the public drainage system, which deteriorated the water quality in the drainage system. There was no evident muddy water discharge from ARQ Site in the morning of 4 July 2023. Therefore, it is considered unlikely that the muddy water discharge observed by DSD in the morning of 4 July 2023 was caused by the ARQ contracts of Contract 1 or Contract 4. During the wet season, the Contractor was strongly reminded to implement adequate water quality mitigation measures to minimise the impact arising from the construction site. The Contractor should closely monitor the quality of the discharge from the Site to avoid non-compliance. The ET will pay special attention to the implementation of water quality mitigation measures on site through regular site inspections, and provide advice on remedial action when necessary.	Sent to EPD on 18 July 2023	TCS00864/16/300/F653
84	19 Jan 2024	23 Jan 2024	On Kin Road, Anderson Road Quarry	KTDC member Mr. Hsu Yau-wai	Noise Quality	EPD	NA	A public complaint was received by EPD Regional Office (East) on 19 January 2024 regarding the construction noise generated from construction works at On	As advised by the RE of Contract 4, under CEDD Contract No. ED/2020/02, the Contractor was required to lift 9 precast beams of an elevated walkway. The works was carried out over for four consecutive nights starting from 16 January 2024 and has already completed. The Contractor	Sent to EPD on 29 January 2024	TCS00864/16/300/F684a

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
								Kin Road, Anderson Road Quarry (CEDD Contract No. ED/2020/02) at night from 10pm to 6am.	possessed a valid Construction Noise Permit (CNP) (GW-RE0030-24) from 15 to 24 January 2024. The Contractor also confirmed that lift beams work was undertaken on On Kin Road between 16 to 20 January 2024. These works were conducted from 23:00 to 02:00 and involve the use of a crane as the only PEM, which complied with the relevant CNP (GW-RE0030-24). To mitigation noise impact on the public during nighttime, a series of acoustic mats were erected around the work area.		
85	23 and 26 Apr 2024	23 and 26 Apr 2024	Anderson Road Quarry (ARQ) Site	DSD	Water Quality	EPD	NA	EPD received complaint from DSD concerning muddy water was observed entering Tsui Ping River from the upstream on 23 and 26 April 2024, with similar situation at the catchpit at Tin Hau Temple.	Joint site inspection among the RSS, Contractor of Contract 4 and ET was carried out on weekly basis to audit the environmental performance. The implementation of mitigation measures were summarized below:- (a) The wastewater treatment facilities were implemented and properly functioned. (b) To minimize the generation of muddy water, the exposed areas were covered either with an impervious sheet or through hydroseeding. (c) Sump pits were constructed at the lowest point of the work area to store continuous rainfall, which helps prevent overload of wastewater treatment facilities were and ensures wastewater was properly treated	Sent to EPD on 6 May 2024	TCS00864/16/300/F698a

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
									before discharge to the designated discharge points.		
86	6 May 2024	6 May 2024	Anderson Road Quarry (ARQ) Site	DSD	Water Quality	EPD	NA	EPD received complaint from DSD concerning muddy water was observed entering Tsui Ping River from the upstream on 6 May 2024, with similar situation at the catchpit at Tin Hau Temple.	Joint site inspection among the RSS, Contractor of Contract 4 and ET was carried out on weekly basis to audit the environmental performance. The implementation of mitigation measures were summarized below: - The wastewater treatment facilities were implemented and properly functioned. - To minimize the generation of muddy water, the exposed areas were covered either with an impervious sheet or through hydroseeding. - Sump pits were constructed at the lowest point of the work area to store continuous rainfall, which helps prevent overload of wastewater treatment facilities were and ensures wastewater was properly treated before discharge to the designated discharge points.	Sent to EPD on 20 May 2024	TCS00864/16/300/F701a
87	20 May 2024	20 May 2024	Anderson Road Quarry (ARQ) Site	DSD	Water Quality	EPD	NA	EPD received complaint from DSD concerning muddy water was observed discharge from upstream of Tsui Ping River and at Tin Hau Temple in the morning of 20 May 2024.	Joint site inspection among the RSS, Contractor of Contract 4 and ET was carried out on weekly basis to audit the environmental performance. The implementation of mitigation measures were summarized below: - The wastewater treatment facilities were implemented and properly	Sent to EPD on 30 May 2024	TCS00864/16/300/F0702a

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
									functioned. - To minimize the generation of muddy water, the exposed areas were covered either with an impervious sheet or through hydroseeding. - Sump pits were constructed at the lowest point of the work area to store continuous rainfall, which helps prevent overload of wastewater treatment facilities were and ensures wastewater was properly treated before discharge to the designated discharge points.		
88	9 September 2024	10 September 2024	Anderson Road Quarry (ARQ) Site	DSD	Water Quality	EPD	NA	EPD received complaint from DSD concerning muddy water was observed entering Tsui Ping River (TPR) from the upstream at Tin Hau Temple in the morning of 9 September 2024.	Joint site inspection among the RSS, Contractor of Contract 4 and ET was carried out on weekly basis to audit the environmental performance. The implementation of mitigation measures were summarized below:- (a) The wastewater treatment facilities were implemented and properly functioned. (b) To minimize the generation of muddy water, the exposed areas were covered either with an impervious sheet or through hydroseeding. (c) Sump pits were constructed at the lowest point of the work area to store continuous rainfall, which helps prevent overload of	Sent to EPD on 23 September 2024	TCS00864/16/300/F0718a

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
									wastewater treatment facilities and ensures wastewater was properly treated before discharge to the designated discharge points.		
89	15 and 18 December 2024	20 December 2024	Anderson Road Quarry (ARQ) Site	Public	Dust and Muddy Water	EPD	NA	成條街道沙塵滾滾和大量泥水流出地盤，直接流到外面雨水渠。大型地盤車輛，泥頭車無洗車設施離開地盤，成條街道沙塵，經常吹到成條街沙塵滾滾，建築物料沒有掩蓋，經常吹到成條街沙塵滾滾，掘挖機操作時未有做好防塵措施，導致塵土飛揚。地盤工人沖刷泥頭車灰塵及泥土到雨水渠。 A public complaint was referred by EPD on 19 December 2024, regarding the dust and muddy water arising from the project. The complainant mentioned that the muddy water runoff from site and discharge of muddy water observed at the public drainage system. Moreover, sandy stockpile was not covered properly and lack of dust mitigation measures when the	As confirmed by the Contractor of Contract 3 – NE/2017/03, no major construction activities was carried out in Site E3, but transportation of stockpiles and materials for storage in Site E3. Site inspection was carried out by the Contractor, the observation during site inspection on 15 and 18 December 2024 are summarised as follow. (a) As dust mitigation measures, sandy stockpile was covered and water spraying was provided to reduce dust impact. (b) Vehicular access roads under Contract 3 were hard paved on haul road at exit point and sprayed continuously by water bowser to minimize generation of fugitive dust. (c) Vehicle wheel and body washing was provided before leaving site and facilities were constructed to collect wastewater from wheel washing to prevent muddy water runoff from site. (d) Mechanical cover for dump truck used to reduce dust impact.	Sent to EPD on 30 December 2024	TCS00864/16/300/F0730a

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
								excavator was operation and fugitive dust was blowing to the street.			
90	22 January 2025	23 January 2025	Anderson Road Quarry (ARQ) Site	DSD	Muddy Water	EPD	NA	Muddy water was observed from the upstream drainage systems collecting discharged from the development sites of ARQ. EPD received complaint from DSD concerning muddy water discharge was observed from the upstream drainage systems collecting discharges from the development sites of ARQ on 22 January 2025. As the muddy water would finally enter Tsui Ping River (TPR) and causes pollution problem to TPR.	As advised by the RSS and the Contractor of Contract 1, the majority of the Contract 1 area has been handed over to other contracts on ARQ Site (such as building contract). Each of these interfacing contractors should have been granted a licence for discharge under the Water Pollution Control Ordinance. The discharge points of ARQ Site were located at Q2 and catchpit at Po Lam Road. The remaining area under Contract 1 were some hard paved roads within the ARQ Site. There were no water quality impact anticipated for Contract 1 from the remaining works. Joint site inspection among the RSS, Contractor of Contract 4 and ET was carried out on weekly basis to audit the environmental performance. The implementation of mitigation measures were summarized below:- (a) The wastewater treatment facilities were implemented and properly functioned. (b) To minimize the generation of muddy water, the exposed areas were covered either with a tarpaulin sheet or through hydroseeding. (c) Temporary water storage areas	Sent to EPD on 10 February 2025	TCS00864/16/300/F0738a

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
									were constructed at the lowest point of the work area to store continuous rainfall, which helps prevent overload of wastewater treatment facilities and ensures wastewater was properly treated before discharge to the designated discharge points.		
91	27 and 28 February 2025	28 February and 1 March 2025	Anderson Road Quarry (ARQ) Site	DSD	Water Quality	EPD	NA	During DSD's site inspection at ARQ Site Underground Stormwater Retention (USTR) Tank on 27 Feb 2025, continuous inflow of muddy water, construction debris and cementitious material into the tank was observed. Additionally, discharge of tar from the upstream drainage systems at ARQ sites into the tank was also observed during DSD's site inspection on 28 Feb 2025.	As advised by the RSS, the majority of the Contract 1 area has been handed over to other contracts on ARQ Site (such as building contract). Each of these interfacing contractors should have been granted a license for discharge under the Water Pollution Control Ordinance. The remaining work under Contract 1 includes recent road resurfacing. However, based on the work nature and lack of rainfall in recent weeks, the release of cementitious material, muddy water and tar into the USRT were not anticipated. Joint site inspection among the RSS, Contractor of Contract 4 and ET was carried out on weekly basis to audit the environmental performance. The implementation of mitigation measures were summarized below:- (d) The wastewater treatment facilities were implemented and properly functioned. (e) To minimize the generation of muddy water, the exposed areas were covered either with a	Sent to EPD on 5 March 2025	TCS00864/16/300/F0742b

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
									tarpaulin sheet or through hydroseeding. (f) The haul road under Contract 4 was hard-paved to minimize the generation of muddy water, and no muddy runoff from the site was observed.		

Appendix N

Implementation Status for Water Quality Mitigation Measures

Water Quality Mitigation Measure



Q1. Wastewater treatment facility 30 cu.m Sedimentation Tank + AquaSed of 15 cu.m per hour + WETSEP



Q1. Wastewater treatment facility 30 cu.m Sedimentation Tank + AquaSed of 15 cu.m per hour + WETSEP