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 (FEBRUARY 2024)

PREPARED FOR
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT (CEDD)

Date	Reference No.	Prepared By	Certified By
19 March 2024	TCS01321/23/600/R0691v2		
		Nicola Hon (Environmental Consultant)	Tam Tak Wing (Environmental Team Leader)

Version	Date	Remarks
1	14 March 2024	First submission
2	19 March 2024	Amended As Per IEC' comment

ANEWR

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

Your reference:

Our reference: HKCEDD10/50/109588

Date: 22 March 2024

Attention: Mr Lee Ming Keung

BY POST

Dear Sirs

Agreement No.: NTE 08/2016
Independent Environmental Checker for Development of
Anderson Road Quarry Site – Site Formation and Associated Infrastructure Works
Monthly Environmental Monitoring and Audit Report (February 2024)

We refer to the emails of 18 and 19 March 2024 from Action-United Environmental Services and Consulting attaching a Monthly Environmental Monitoring and Audit Report (February 2024) for the captioned project.

We have no further comment and hereby verify the captioned report.

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

Yours faithfully
ANEWR CONSULTING LIMITED

James Choi
Independent Environmental Checker

CPSJ/LCCR/ICHC/lsmt

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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 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.

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 Anderosn 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	December 2024
ED/2020/02 (Contract 4)	July 2021	March 2025
ED/2019/02 (Contract 5)	March 2021	September 2024

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. 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 3, 4 and 5 for the period from **1 to 29 February 2024** (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**	**126**
	24-hour TSP	**4**	**20**
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	Investigation	Corrective Actions
Air Quality	1-hour TSP	0	0	0	NA	NA
	24-hour TSP	0	0	0	NA	NA
Construction Noise	$L_{eq(30min)}$ Daytime	0	0	0	NA	NA

ENVIRONMENTAL COMPLAINT

ES09 In the reporting period, no environmental complaint was recorded 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 3*** were carried out by the RE, ET and Contractor on **2, 9, 16 and 23 February 2024** in which IEC joined the site inspection with SSEMC on **16 February 2024.** No non-compliance was noted during the site inspection.

ES13 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 **7, 16, 23 and 28 February 2024** in which IEC joined the site inspection with SSEMC on **23 February 2024.** No non-compliance was noted during the site inspection.

ES14 In this Reporting Period, joint site inspections to evaluate the site environmental performance for ***Contract 5*** were carried out by the RE, ET and Contractor on **1, 5, 16, 21 and 29 February 2024** in which IEC joined the site inspection on **21 February 2024.** No non-compliance was noted during the site inspection.

FUTURE KEY ISSUES

ES15 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.

ES16 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.

ES17 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.

ES18 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	December 2024
ED/2020/02 (Contract 4)	July 2021	March 2025
ED/2019/02 (Contract 5)	March 2021	September 2024

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. 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 3, 4 and 5 for the period from **1 to 29 February 2024** (hereinafter 'the Reporting Period').

REPORT STRUCTURE

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

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

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 an 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, life towers with associate 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 3, 4 and 5 are shown in ***Appendix B***.

2.3 CONSTRUCTION PROGRESS

2.3.1 The 3-month rolling construction programme for Contracts 3, 4 and 5 are shown in ***Appendix C***. The major construction activities conducted in the Reporting Period are summarized in below.

Contract 3 (NE/2017/03)

Pedestrian Connectivity Facilities Systems B (PC-SYB)

- RC works at SyB-LT1 & ST1 is in-progress.
- Welding works for footbridge steel frame erection
- E&M works at SyB-LT1
- ABWF works at SyB-FB2
- E&M works at SyB-FB2
- Install lifts at SyB-LT1
- Install escalators & steel roof erection at System B Escalator pit E4 to E6
- Works for watermain diversion near PC1 is in-progress.

Contract 4 (ED/2020/02)

- Excavation work for Drainage Works at Portion 2a, 6, 8, 9 & 12
- Drainage works at Portion 2a, 6, 8, 9 & 12
- Construction of building structure at portion 1a, 1b
- Construction of Retaining Wall and staircase at Portion 6, 8, 12
- Construction of Planter 8, 12
- Preparation works for Construction of bridge at Portion 13b
- Modification works at RWA10 and RWA9 at Portion 13b
- Construction of precast beam for elevated walkway
- Road works at G2-Site at Portion 13b
- Construction of U-channel at Portion 16
- Slope works at G2-Site B4 Slope at Portion 13b
- Construction of concrete berm at Portion 10 and Portion 17
- Installation of rock mesh at Portion 10 and Portion 17
- Repair works at Portion 10 and Portion 17

Contract 5 (ED/2019/02)

Portion 1
- Steel Frame Installation
- Catch Pit, Kerb and U-Channel Construction & No-Fine Laying

Portion 2
- Installation of Corrugated Sheet
- E&M installation (Lighting)

Portion 3
- Rebar, Scaffolding & Formwork Fixing for 4th Pour

Portion 4
- Concreting for E10-Lift Tower 12th Pour

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, 2-2 and 2-3***.

Table 2-1 Status of Environmental Licenses and Permits of the Contract 3

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. 434186	31-May-18	NA	Valid
2	Chemical Waste Producer Registration	**For Area R1W3 (E11)** Registration no. WPN : 5213-294-C4239-04	6-Aug-18	End of Project	Valid
		For Area System A Registration no. WPN: 5213-293-C4239-05	6-Aug-18	End of Project	Valid
		For Area System B Registration no. WPN 5213-294-C4239-03	6-Aug-18	End of Project	Valid
		For Area E8 Registration no. WPN	6-Aug-18	End of Project	Valid

Item	Description	License/Permit Status			
		Permit no./ account no./ Ref. no.	Valid Period		Status
			From	To	
		5213-292-C4239-06			
3	Water Pollution Control Ordinance – Discharge License	**For Area R1W3 (E11)** WT10002261-2023	31-Jan-24	31-Jan-29	Valid
		For Area System B WT00033229-2019	24-Jun-19	30-Jun-24	Valid
		For Area E8 WT00033224-2019	21-Mar-19	31-Mar-24	Valid
4	Waste Disposal Regulation – Billing Account for Disposal of Construction Waste	Account no.7031075	20-Jun-18	End of project	Valid

Table 2-2 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

Table 2-3 Status of Environmental Licenses and Permits of the Contract 5

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. 466255	NA	NA	Valid
2	Chemical Waste Producer Registration	Registration no. WPN 5298-293-W3611-01	12-May-21	End of project	Valid

Item	Description	License/Permit Status			
		Permit no./ account no./ Ref. no.	Valid Period		Status
			From	To	
3	Water Pollution Control Ordinance – Discharge License	WT00039694-2021	16-Nov-21	30-Nov-26	Valid
		WT00040919-2022	5-May-22	31-May-27	Valid
		WT00041457-2022	30-June-22	30-June-27	Valid
		WT00040670-2022	28-Mar-22	31-Mar-27	Valid
4	Waste Disposal Regulation – Billing Account for Disposal of Construction Waste	Account no. 7040359	3-May-21	NA	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 L_{10} and L_{90} 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 2nd 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

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	NL-31, NL-52
Calibrator	NC-73, NC-74
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^{o} 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 0.6m^3/min and 1.7m^3/min will be properly set in accordance with the manufacturer's instruction to within the range recommended in *EPA Code of Federal Regulation, Appendix B to Part 50*. Glass Fiber Filter 8" x 10" of TE-653 will be used for 24-Hour TSP monitoring and would be supplied by laboratory. The general procedures of sampling are described as below:-

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

3.6.5 All the sampled 24-hour TSP filters will be kept in normal air conditioned room conditions, i.e. 70% HR (Relative Humidity) and 25^{o}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 m^3/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 d 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 (μg /m^3)		Limit Level (μg/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 (μg /m^3)		Limit Level (μg/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 Maryknool 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 (μg/m³)	1-hour TSP (μg/m³)				
		Date	Start Time	1st reading	2nd reading	3rd reading
2-Feb-24	35	1-Feb-24	9:30	58	59	57
8-Feb-24	23	7-Feb-24	9:30	55	60	57
14-Feb-24	44	9-Feb-24	13:40	52	55	56
20-Feb-24	22	15-Feb-24	14:20	65	60	69
26-Feb-24	21	21-Feb-24	13:00	39	42	58
--	--	27-Feb-24	9:00	55	58	52
Average (Range)	**29 (21 – 44)**	Average (Range)		**56 (39 – 69)**		

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

1-hour TSP (μg/m³)				
Date	**Start Time**	**1st reading**	**2nd reading**	**3rd reading**
1-Feb-24	8:00	120	138	128
7-Feb-24	9:00	57	60	67
9-Feb-24	9:00	62	59	66
15-Feb-24	9:10	55	62	69
21-Feb-24	14:00	89	83	75
27-Feb-24	10:15	67	66	63
Average (Range)		**77 (55 – 138)**		

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

1-hour TSP (μg/m³)				
Date	**Start Time**	**1st reading**	**2nd reading**	**3rd reading**
1-Feb-24	13:10	86	82	84
7-Feb-24	13:30	57	59	60
9-Feb-24	9:20	55	62	65
15-Feb-24	9:00	72	65	66
21-Feb-24	10:50	42	58	48
27-Feb-24	13:00	64	65	71
Average (Range)		**65 (42 – 86)**		

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

1-hour TSP (μg/m³)				
Date	**Start Time**	**1st reading**	**2nd reading**	**3rd reading**
1-Feb-24	13:00	55	59	61
7-Feb-24	13:05	54	51	55
9-Feb-24	13:00	49	55	56
15-Feb-24	13:10	66	64	67
21-Feb-24	13:00	63	67	62
27-Feb-24	10:00	67	61	69
Average (Range)		**60 (49 – 69)**		

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

Date	**24-hour TSP (μg/m³)**	**1-hour TSP (μg/m³)**				
		Date	**Start Time**	**1st reading**	**2nd reading**	**3rd reading**
2-Feb-24	26	1-Feb-24	9:00	50	52	55
8-Feb-24	14	7-Feb-24	9:05	48	50	46
14-Feb-24	8	9-Feb-24	9:00	50	56	53
20-Feb-24	29	15-Feb-24	9:10	62	65	68
26-Feb-24	76	21-Feb-24	9:00	59	63	60
--	--	27-Feb-24	8:45	69	62	61
Average (Range)	**30 (8 – 76)**	Average (Range)		**57 (46 – 69)**		

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

Date	**24-hour TSP (μg/m³)**	**1-hour TSP (μg/m³)**				
		Date	**Start Time**	**1st reading**	**2nd reading**	**3rd reading**
2-Feb-24	21	1-Feb-24	9:40	53	56	60
8-Feb-24	3	7-Feb-24	9:45	52	54	50
14-Feb-24	28	9-Feb-24	9:20	46	49	51
20-Feb-24	17	15-Feb-24	9:50	65	68	64
26-Feb-24	43	21-Feb-24	10:30	57	61	59
--	--	27-Feb-24	13:00	62	69	68
Average (Range)	**22 (3 – 43)**	Average (Range)		**58 (46 – 69)**		

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

Date	**24-hour TSP (μg/m³)**	**1-hour TSP (μg/m³)**				
		Date	**Start Time**	**1st reading**	**2nd reading**	**3rd reading**
2-Feb-24	73	1-Feb-24	13:30	51	43	40
8-Feb-24	27	7-Feb-24	11:00	52	50	47
14-Feb-24	31	9-Feb-24	13:00	60	63	64
20-Feb-24	33	15-Feb-24	13:00	75	70	77
26-Feb-24	51	21-Feb-24	9:00	79	69	61
--	--	27-Feb-24	14:15	60	59	62
Average (Range)	**43 (27 – 73)**	Average (Range)		**60 (40 – 79)**		

4.2.2 As shown in ***Tables 4-1 to 4-6***, 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**
1-Feb-24	71	55	69	61	56	67	64	62
7-Feb-24	71	54	70	66	56	71	64	73
15-Feb-24	69	65	56	60	63	53	63	60
21-Feb-24	71	58	57	64	60	56	57	58
27-Feb-24	71	59	65	62	65	60	64	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 As shown in above table, the noise measurement result at NMS1 on 1, 7, 21 and 27 February 2024 was 71, 71, 71 and 71 dB(A), which exceeded the Limit Level. The baseline noise level measured at NMS1 was 69.0 dB(A), and baseline noise correction should be applied to the impact monitoring result, where exceedance occurred. With reference to the baseline, the corrected construction noise level at NMS1 on 1, 7, 21 and 27 February 2024 is 66.7, 66.7, 66.7 and 66.7 dB(A), which fall within the Limit Level.

5.2.3 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**
1-Feb-24	63
7-Feb-24	59
15-Feb-24	59
21-Feb-24	68

Construction Noise Level ($L_{eq30min}$), dB(A)	
Date	**CN3**
27-Feb-24	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.

5.2.4 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 3		Contract 4		Contract 5	
	Quantity	Disposal Location	Quantity	Disposal Location	Quantity	Disposal Location
Total generated Inert C&D Materials ('000m^3) (#)	1.356	-	0.281	-	0.026	-
Hard Rock and Large Broken Concrete ('000m^3)	0	-	0	-	0.024	-
Reused in this Contract (Inert) ('000m^3)	0	-	0	-	0.002	-
Reused in other Projects (Inert) ('000m^3)	0.241	-	0	-	0	-
Disposal as Public Fill (Inert) ('000m^3)	1.115	TKO 137	0.281	TKO 137	0.024	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 3		Contract 4		Contract 5	
	Quantity	Disposal Location	Quantity	Disposal Location	Quantity	Disposal Location
Recycled Metal ('000kg)	0.001	Licensed collector	0	-	0	-
Recycled Paper / Cardboard Packing ('000kg)	0.090	Licensed collector	0	-	0	-
Recycled Plastic ('000kg)	0.004	Licensed collector	0	-	0	-
Chemical Wastes ('000kg)	0	-	0	-	0	-
General Refuses ('000m^3)	0.024	SENT	0.048	-	0.084	SENT

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 3

7.2.1 In the Reporting Period, joint site inspections for Contract 3 to evaluate site environmental performance were carried out by the RE, ET and the Contractor on **2, 9, 16 and 23 February 2024** in which IEC joined the site inspection with SSEMC on **16 February 2024**. No non-compliance was noted. The findings / deficiencies of ***Contract 3*** that observed during the weekly site inspection are listed in ***Table 7-1.***

Table 7-1 Site Observations of Contract 3

Date	Findings / Deficiencies	Follow-Up Status
2 February 2024	• No environmental issue was observed during site inspection.	• NA
9 February 2024	• The Contractor was reminded to remove stagnant water regularly. • The Contractor was reminded to cover opened cement bags with tarpaulin sheet.	• Reminder only. • Reminder only.
16 February 2024	• No environmental issue was observed during site inspection.	• NA
23 February 2024	• No environmental issue was observed during site inspection.	• NA

Contract 4

7.2.2 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 **7, 16, 23 and 28 February 2024** in which IEC joined the site inspection with SSEMC on **23 February 2024**. No non-compliance was noted. The findings / deficiencies of ***Contract 4*** that observed during the weekly site inspection are listed in ***Table 7-2.***

Table 7-2 Site Observations of Contract 4

Date	Findings / Deficiencies	Follow-Up Status
7 February 2024	• The Contractor should cover the sandy stockpile to prevent muddy water run out of site. • The Contractor was reminded to remove stagnant water after rainy.	• The sandy stockpile was covered. • Reminder only.
16 February 2024	• The Contractor should remove or place the chemical container inside drip tray. (Portion 1B)	• The chemical container was removed.
23 February 2024	• The Contractor was reminded to cover slope to reduce dust impact.	• Reminder only.
28 February 2024	• The Contractor should remove or place the chemical container inside drip tray. (Portion 12) • The Contractor was reminded to spray water at haul road regularly/	• The chemical container was removed. • Reminder only.

Contract 5

7.2.3 In the Reporting Period, joint site inspections for Contract 5 to evaluate site environmental performance were carried out by the RE, ET and the Contractor on **1, 5, 16, 21 and 29 February 2024** in which IEC joined the site inspection on **21 February 2024**. No non-compliance was noted. The findings / deficiencies of ***Contract 5*** that observed during the weekly site inspection are listed in ***Table 7-3.***

Table 7-3 Site Observations of Contract 5

Date	Findings / Deficiencies	Follow-Up Status
1 February 2024	• The Contractor should provide mitigation measure to prevent water leakage from the pipe. (E10) • The Contractor was reminded to remove stagnant water on the ground.	• Leakage from the water pipe was fixed. • Reminder only.
5 February 2024	• The Contractor was reminded to remove general refuse regularly.	• Reminder only.
16 February 2024	• The Contractor was reminded to cover sandy stockpile with tarpaulin sheet properly. • The Contractor was reminded to clear oil stain.	• Reminder only. • Reminder only.
21 February 2024	• The Contractor was reminded to remove refuse regularly. • The Contractor was reminded to spray water regularly to reduce dust impact.	• Reminder only. • Reminder only.
29 February 2024	• Chemical container should be removed or place inside drip tray. (E7) • The Contractor was reminded to enhance house-keeping.	• The chemical container was removed. • Reminder only.

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
31 May 2018 – 31 Jan 2024	3	0	**8**	NA
27 Sep 2021 – 31 Jan 2024	4	0	**7**	NA
30 Mar 2021 – 31 Jan 2024	5	0	**0**	NA
1 – 29 February 2024	1	0	**65**	NA
	2	0	**10**	NA
	3	0	**8**	NA
	4	0	**7**	NA
	5	0	**0**	NA

Table 8-2 Statistical Summary of Environmental Summons

Reporting Period	Contract no.	Environmental Summons Statistics		
		Frequency	Cumulative	Summons Nature
31 May 2018 – 31 Jan 2024	3	0	0	NA
27 Sep 2021 – 31 Jan 2024	4	0	0	NA
30 Mar 2021 – 31 Jan 2024	5	0	0	NA
1 – 29 February 2024	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
31 May 2018 – 31 Jan 2024	3	0	0	NA
27 Sep 2021 – 31 Jan 2024	4	0	0	NA
30 Mar 2021 – 31 Jan 2024	5	0	0	NA
1 – 29 February 2024	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 3 (NE/2017/03)

Pedestrian Connectivity Facility System B (PC-SYB)

- RC works at SyB-LT1 & ST1 is in-progress.
- Welding works for footbridge steel frame erection
- E&M works at SyB-LT1
- ABWF works at SyB-FB2
- E&M works at SyB-FB2
- Install lifts at SyB-LT1
- Install escalators & steel roof erection at System B Escalator pit E4 to E6
- Works for watermain diversion near PC1 is in-progress.

Contract 4 (ED/2020/02)

- Excavation work for Drainage Works at Portion 2a, 6 ,8, 9 & 12
- Drainage works at Portion 2a, 6 ,8, 9 & 12
- Construction of building structure at Portion 1a,1b
- Construction of Retaining Wall and staircase at Portion 6,8,12
- Construction of Planter at Portion 8,12

- Preparation works for Construction of bridge at Portion 13b
- Modification works at RWA10 and RWA9 at Portion 13b
- Construction of precast beam for elevated walkway
- Road works at G2-Site at Portion 13b
- Slope works at G2-Site B4 Slope at Portion 13b
- Construction of concrete berm at Portion 10 and Portion 17
- Installation of rock mesh at Portion 10 and Portion 17
- Repair works at Portion 10 and Portion 17

Contract 5 (ED/2019/02)

Portion 1
- Installation of corrugated sheet
- Installation of escalator electrical installation
- Commence removal of scaffolding

Portion 2
- Installation of corrugated sheet and gutter
- Removal of scaffolding and commence installation of escalator part
- Energization of pillar box

Portion 3
- Construction of E7 Lift Tower (4th Pour)
- Construction of Pier E7-P1 (4th Pour)
- Substantially completed welding of segments

Portion 4
- Concreting of E10 (12th Pour)
- Cast construction of E10-F2

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 During dry season, 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 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 **83rd** monthly EM&A report presenting the monitoring results and inspection findings for the Reporting Period from **1** to **29 February 2024**.

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 or 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.

10.1.4 In the Reporting Period, no exceedance was recorded and no Notification of Exceedance was issued. Moreover, no noise complaints (which triggered Action Level) were received for the Project.

10.1.5 In the Reporting Period, no environmental complaint was received in this reporting period.

10.1.6 No notification of summons or successful prosecution was received under the Project.

10.1.7 During the Reporting Period, weekly joint site inspection by the RE, ET with the relevant Main-contractor was carried out for Contracts 3, 4 and 5 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.

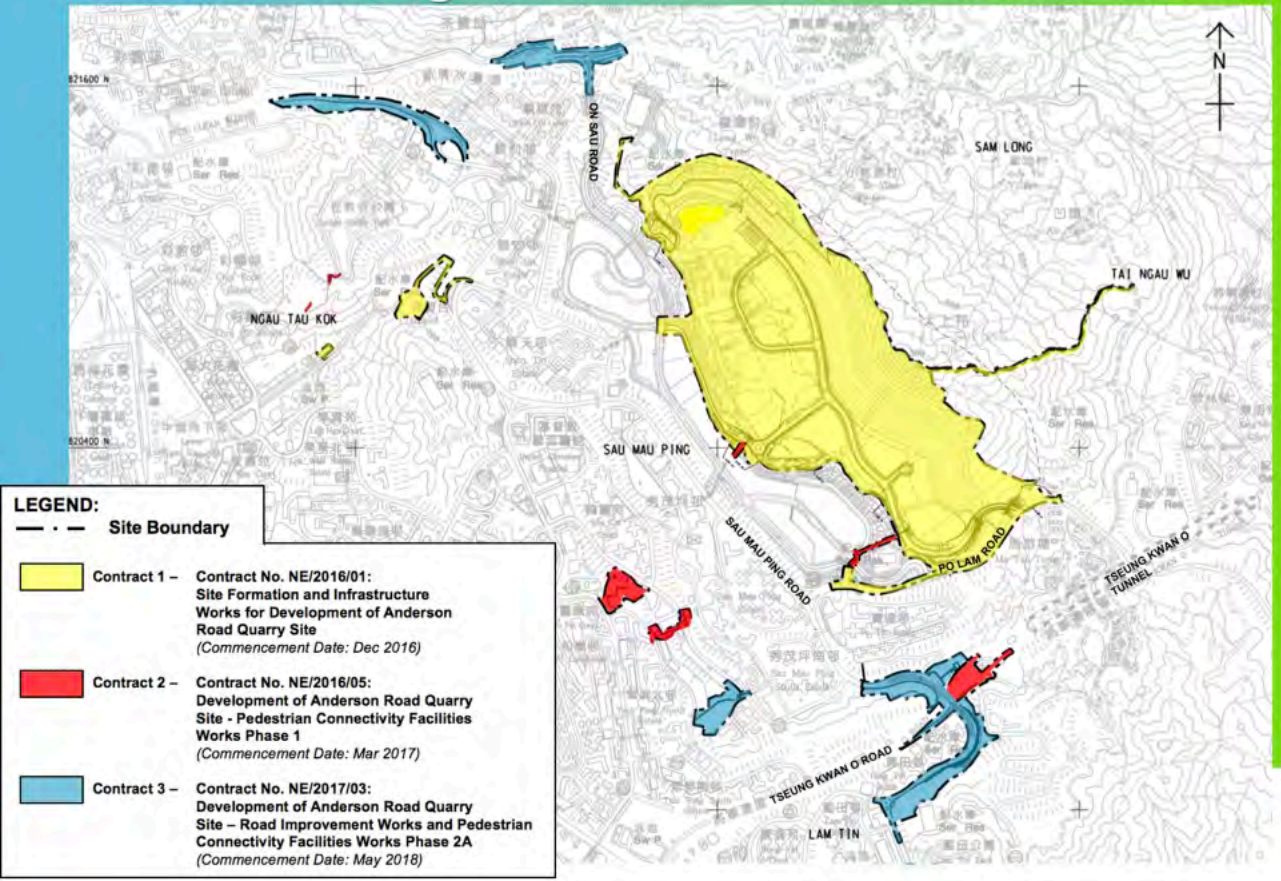
10.2.4 In addition, the Contractors should ensure all effluent discharge shall be fulfilled the Technical Memorandum of Effluent Discharged into Drainage and Sewerage Systems, inland and Coastal Waters criteria or relevant discharge license requirement.

10.2.5 Mosquito control measures should be continued to prevent mosquito breeding on site.

Appendix A

Layout plan of the Project

Contract Packages



LEGEND:

— · — **Site Boundary**

Contract 1 – **Contract No. NE/2016/01:**
Site Formation and Infrastructure Works for Development of Anderson Road Quarry Site
(Commencement Date: Dec 2016)

Contract 2 – **Contract No. NE/2016/05:**
Development of Anderson Road Quarry Site - Pedestrian Connectivity Facilities Works Phase 1
(Commencement Date: Mar 2017)

Contract 3 – **Contract No. NE/2017/03:**
Development of Anderson Road Quarry Site – Road Improvement Works and Pedestrian Connectivity Facilities Works Phase 2A
(Commencement Date: May 2018)

Layout plan of Contract 3 (NE/2017/03) (Non-Designated Area)

圖示 A VIEW A

圖示 B VIEW B

圖則名稱 Drawing Title

行人連繫設施(巴士轉乘站、E11及E12) - 平面圖及構思圖

Pedestrian Connectivity Facilities (Bus-to-Bus Interchange, E11 and E12) - Layout Plan and Artist's Impression

項目編號 Item No.
765CL

比例 Scale

圖則編號 Drawing No.
附件五 Appendix 5

辦事處 Office
新界東拓展處
NEW TERRITORIES EAST DEVELOPMENT OFFICE

土木工程拓展署
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Project Management Initials: | Designer: | CCYT Checked: | AWYC Approved: HKT | ISO A1 594mm x 841mm

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.

842000 N
819600 E
820400 N
820200 N
842600 E
842100 E
842500 E
842400 E

SLOPE NO. E8-1
SLOPE NO. E8-2
PEDESTRIAN CONNECTIVITY E8 SEE DRAWING NO. 60328348/R&P/3501
HIU YUK PATH
HIU MING STREET
HIU KWONG STREET PARK STRIP
梁式芝書院 Leung Shek Chee College
曉育徑
足球場 Football Field
The Hong Kong Ching Chung Hau Po Woon Primary School
ROAD L4 (CONSTRUCTED UNDER SEPERATE CONTRACT)
EXISTING BOX CULVERT
PEDESTRIAN CONNECTIVITY SYSTEM A SEE DRAWING NO. 60328348/R&P/3101
PEDESTRIAN CONNECTIVITY SYSTEM A (CONSTRUCTED UNDER SEPERATE CONTRACT)
ROAD L1 (CONSTRUCTED UNDER SEPERATE CONTRACT)
PEDESTRIAN CONNECTIVITY SYSTEM B (CONSTRUCTED UNDER SEPERATE CONTRACT)
SLOPE NO. B1
SLOPE NO. B2
PEDESTRIAN CONNECTIVITY SYSTEM B SEE DRAWING NO. 60328348/R&P/3301
ON SAU ROAD
秀茂坪淨水配水庫 Sau Mau Ping Salt Water Service Reservoir

Plot File by: WUMT 2017/11/9
PATH P:\Projects\60328348\DRAWING\CONTRACT\R&P\1000\R&P_1008.dgn

AECOM

PROJECT 項目

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 業主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT 工程顧問公司

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SUB-CONSULTANTS 分判工程顧問公司

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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
			yc
A	NOV. 17	TENDER ADDENDUM NO. 1	AWYC
-	OCT. 17	TENDER DRAWING	AWYC

STATUS 階段

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DIMENSION UNIT 尺寸單位
METRES

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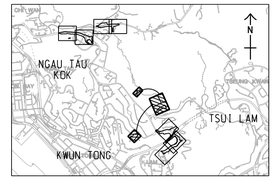

PROJECT NO. 項目編號
60328348

CONTRACT NO. 合約編號
NE/2017/03

SHEET TITLE 圖紙名稱
GENERAL LAYOUT

SHEET 8 OF 8

SHEET NUMBER 圖紙編號
60328348/R&P/1008A

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

Project Management Initials: Designer: DKMW Checked: AWYC Approved: HKT ISO A1 594mm x 841mm

840800 E | 842000 E | 843200 E

821600 N

820400 N

819200 N

LEGEND:

SITE BOUNDARY

SHEET 1 OF 5

SHEET 2 OF 5

SHEET 3 OF 5

SHEET 4 OF 5

SHEET 5 OF 5

ROAD L1

ROAD L2

ROAD L3

ROAD L4

ROAD L5

CLEAR WATER BAY ROAD

TSEUNG KWAN O TUNNEL

TSEUNG KWAN O ROAD

KWUN TONG ROAD

KWUN TONG BYPASS

N

WAN

NGAU TAU KOK

NGAU TAU KOK

CROCODILE HILL

JORDAN VALLEY

KWUN TONG

KWUN TONG

TAN SHAN

SAM LONG

TAI NGAU WU

TAI NGAU WU

SAU MAU PING

LAM TIN

LAM TIN

TSUI LAM

觀塘避風塘

Kwun Tong Typhoon Shelter

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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
客戶

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CEDD Civil Engineering and Development Department

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-	MAR. 21	TENDER DRAWING	AWYC

STATUS
階段

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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

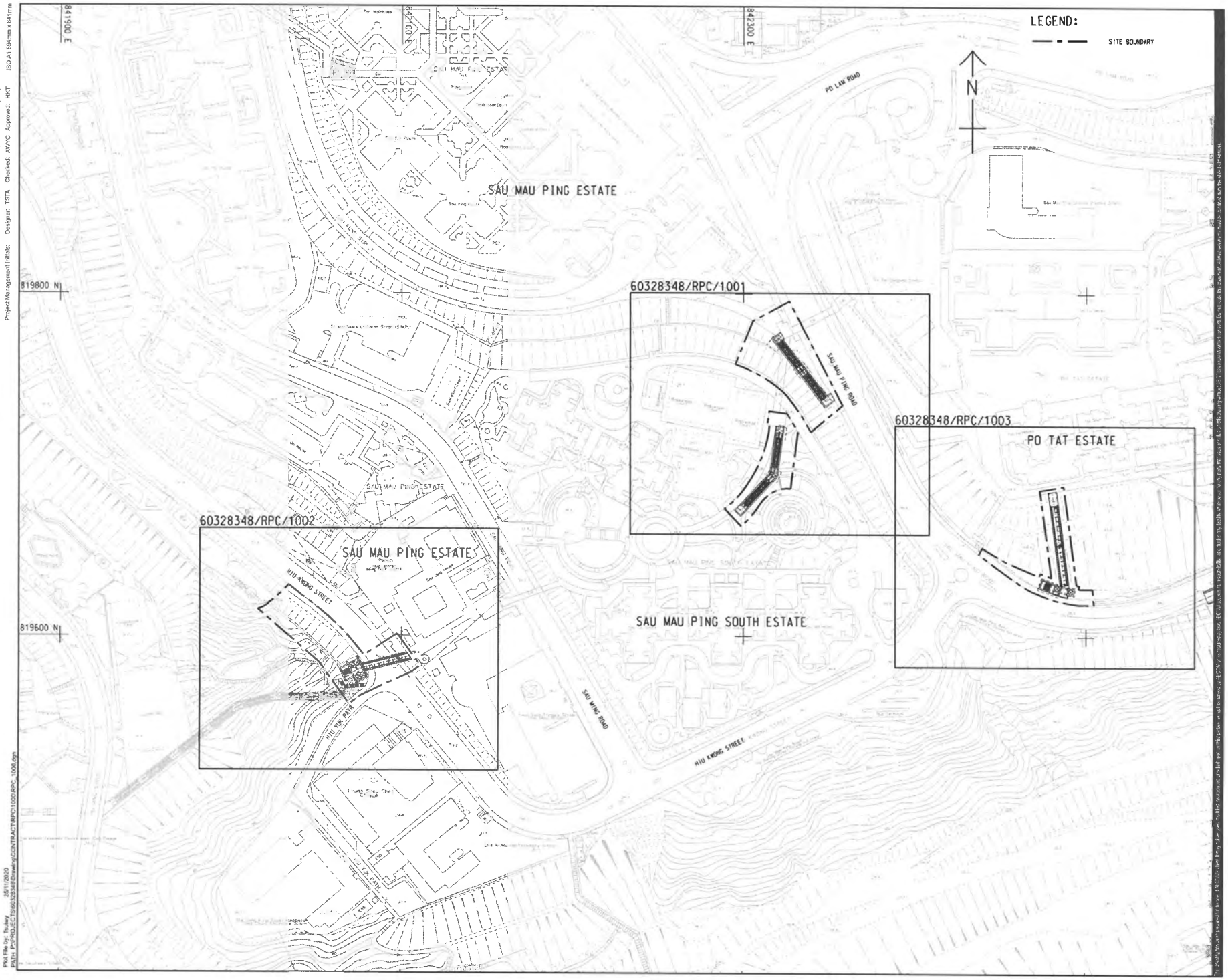
SHEET TITLE
圖紙名稱

KEY PLAN

SHEET NUMBER
圖紙編號

60328348/LS/1000

Layout plan of Contract 5 (ED/2019/02)



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

CONTRACT TITLE
DEVELOPMENT OF ANDERSON ROAD QUARRY SITE - REMAINING PEDESTRIAN CONNECTIVITY FACILITIES WORKS

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-	NOV. 20	TENDER DRAWING	AWYC

STATUS

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DIMENSION UNIT
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KEY PLAN

PROJECT NO.
60328348

CONTRACT NO.
ED/2019/02

SHEET TITLE
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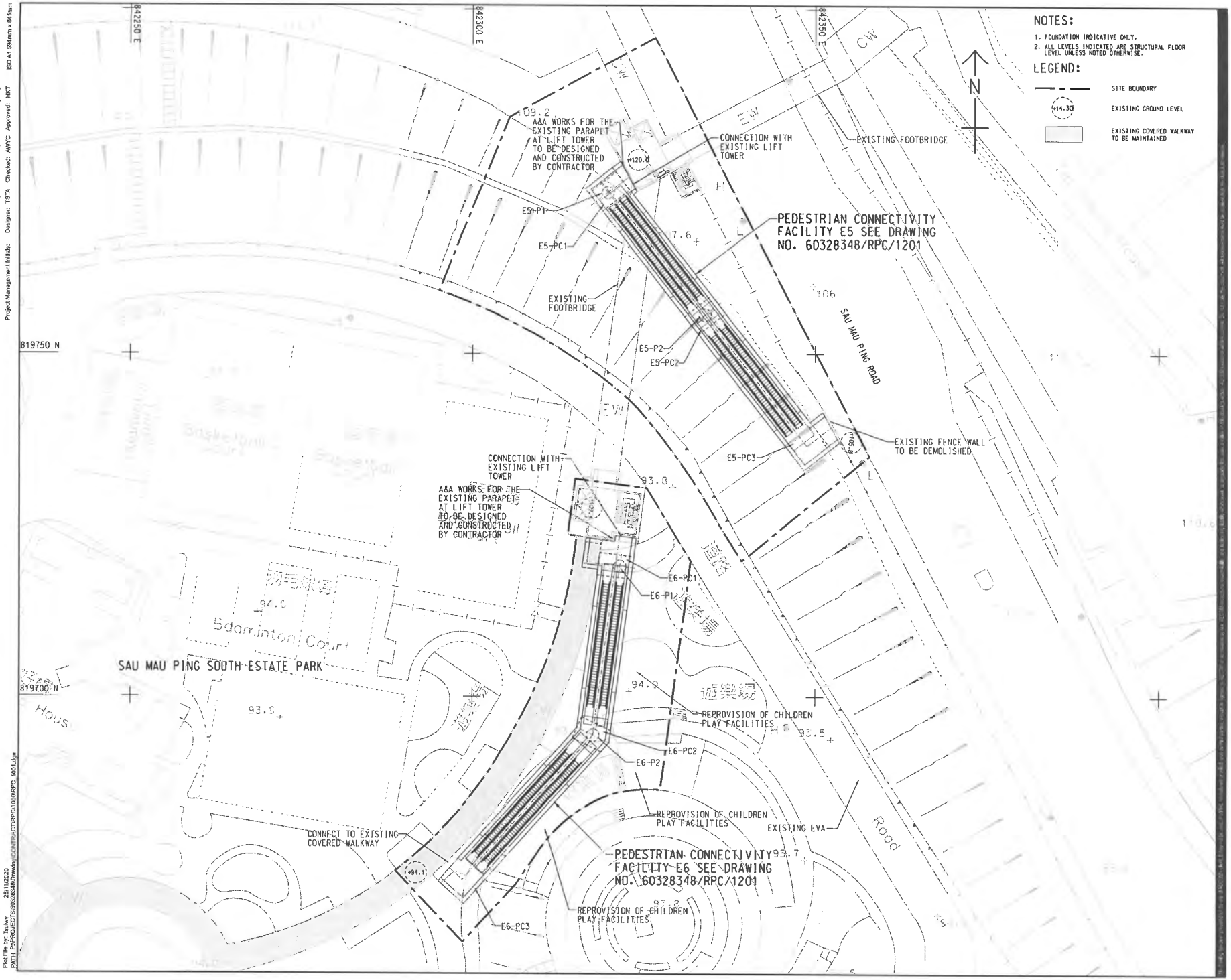

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PROJECT

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

CONTRACT TITLE
DEVELOPMENT OF ANDERSON ROAD QUARRY SITE - REMAINING PEDESTRIAN CONNECTIVITY FACILITIES WORKS

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STATUS

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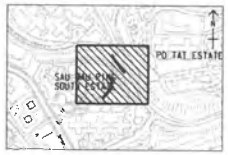
DIMENSION UNIT METRES

KEY PLAN A1 1 : 5000



PROJECT NO. 60328348

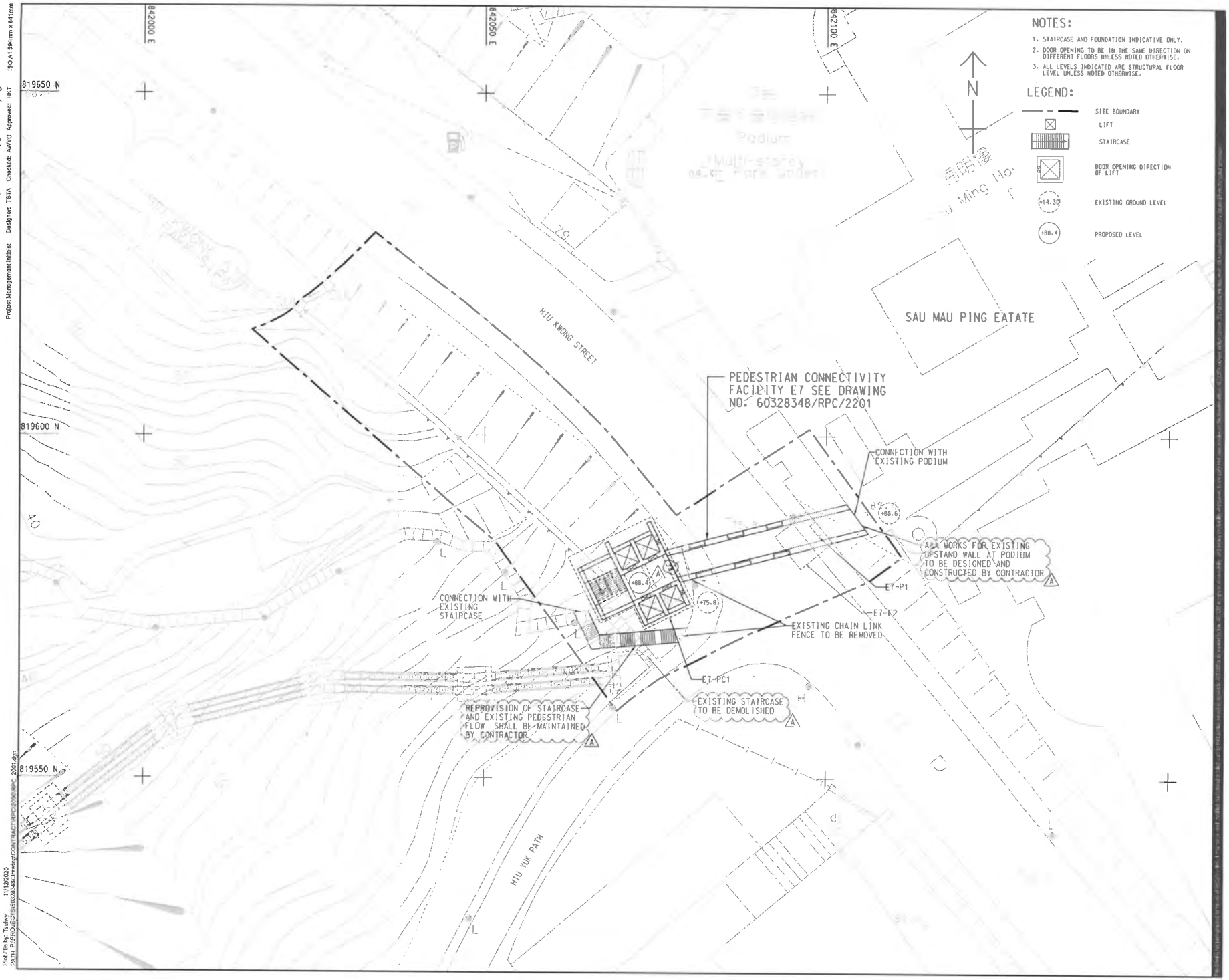
CONTRACT NO. ED/2019/02

SHEET TITLE

GENERAL LAYOUT - E5 & E6

SHEET NUMBER

60328348/RPC/1001



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

CONTRACT TITLE
DEVELOPMENT OF ANDERSON ROAD QUARRY SITE - REMAINING PEDESTRIAN CONNECTIVITY FACILITIES WORKS

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STATUS

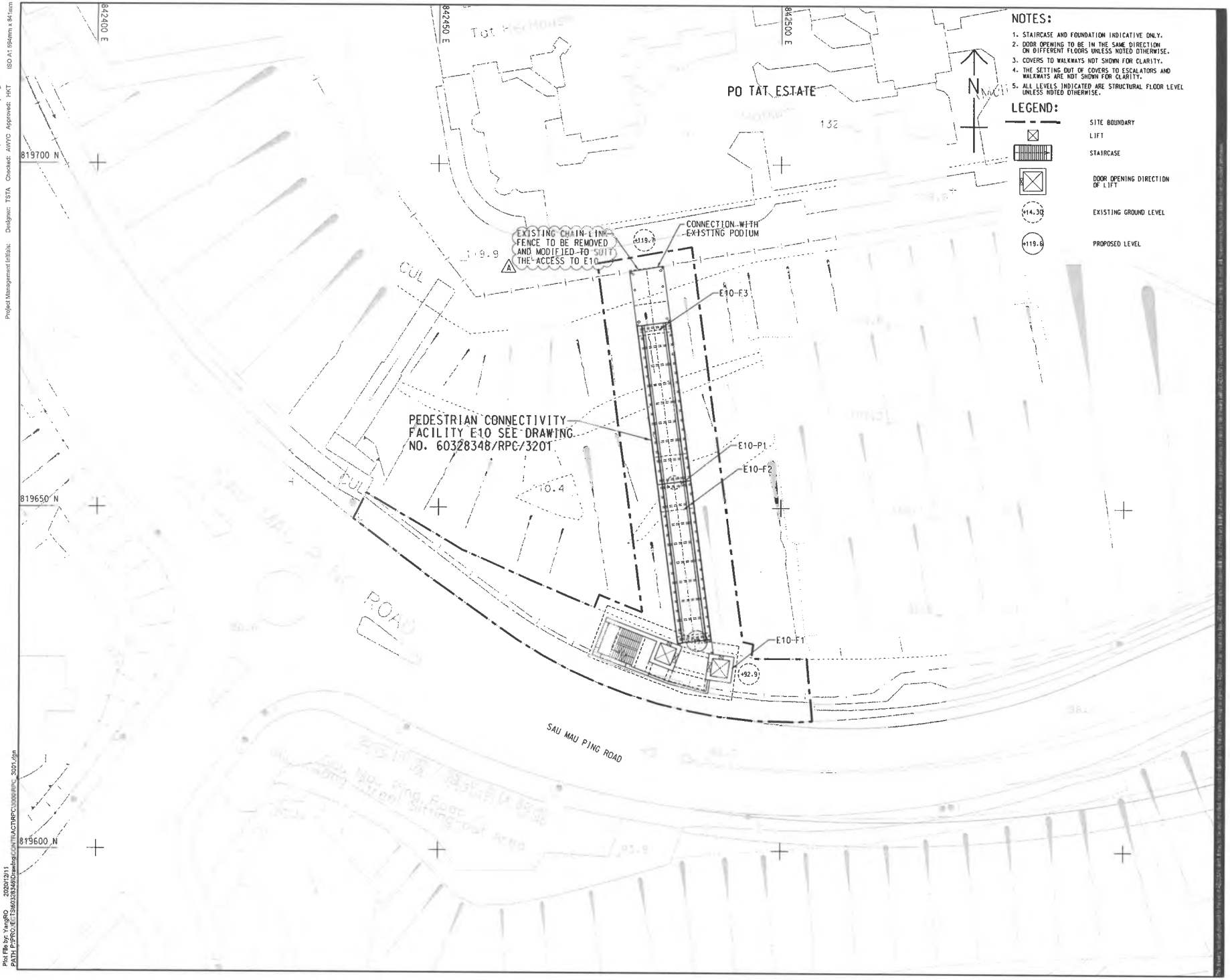
SCALE: A1 1 : 250
DIMENSION UNIT: METRES

KEY PLAN A1 1 : 5000

PROJECT NO.: 60328348
CONTRACT NO.: ED/2019/02

SHEET TITLE
GENERAL LAYOUT - E7

SHEET NUMBER
60328348/RPC/2001A



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

CONTRACT TITLE
DEVELOPMENT OF ANDERSON ROAD QUARRY SITE - REMAINING PEDESTRIAN CONNECTIVITY FACILITIES WORKS

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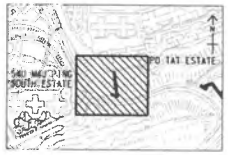


PROJECT NO.: 60328348
CONTRACT NO.: ED/2019/02

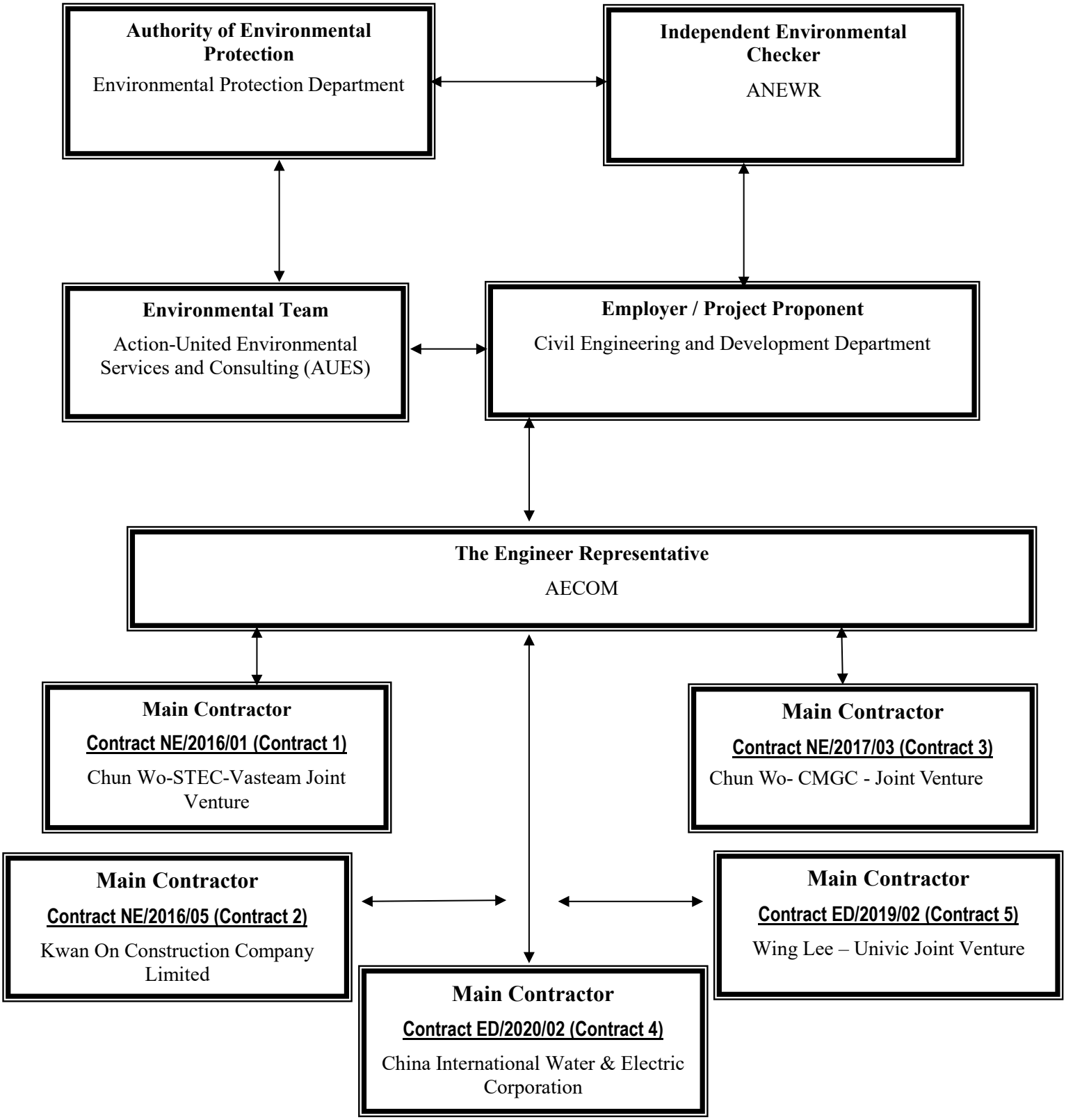
SHEET TITLE
GENERAL LAYOUT - E10

SHEET NUMBER
60328348/RPC/3001A

Appendix B

Project Organization Structure

Project Organization Structure



Contact Details of Key Personnel for Contract 3 –NE/2017/03

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Engineer	Mr Leung Chi Foon	3842 7087	2739 0076
AECOM	Chief Resident Engineer	Lee, Yu Ching Paul	5723 6880	2473 3221
AECOM	Senior Resident Engineer	Brad Chan	5506 0068	2473 3221
ANEWR	Independent Environmental Checker	James Choi	2618 2836	3007 8648
CW – CMGC - JV	Construction Manager	Lau Kwai Ming	9845 4251	3965 9900
CW – CMGC - JV	Site Agent	Leung, Tak Yu	9026 3897	3965 9900
CW – CMGC - JV	Environmental Officer	Ken Chu	9774 0154	3965 9900
CW – CMGC - JV	Environmental Supervisor	Zero Choi	5300 3643	3965 9900
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.

CW – CMGC - JV (Main Contractor) – Chun Wo- CMGC - Joint Venture

ANEWR (IEC) –ANewR Consulting Limited

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

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	Chief Resident Engineer	Lee, Yu Ching Paul	5723 6880	2473 3221
AECOM	Senior Resident Engineer	Li, Ling Tommy	9389 8792	2473 3221
ANEWR	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	James Au	6331 5842	2508 0987
CIWEC	Environmental Supervisor	Chloe Ching	6728 2805	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

ANEWR (IEC) –ANewR Consulting Limited

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

Contact Details of Key Personnel for Contract 5 –ED/2019/02

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Engineer	Mr Leung Chi Foon	3842 7087	2739 0076
AECOM	Chief Resident Engineer	Lee, Yu Ching Paul	9824 7016	2473 3221
AECOM	Senior Resident Engineer	Bill Hon	5599 1486	2473 3221
ANEWR	Independent Environmental Checker	James Choi	2618 2836	3007 8648
WL-UJV	Construction Manager	PH Ho	9464 1392	2983 6640
WL-UJV	Site Agent	Lee Chi Wai	9255 7014	2983 6640
WL-UJV	Environmental Officer	Guo Liming	5723 9883	2983 6640
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.

WL –UJV (Main Contractor) – Wing Lee – Univic Joint Venture

ANEWR (IEC) –ANewR Consulting Limited

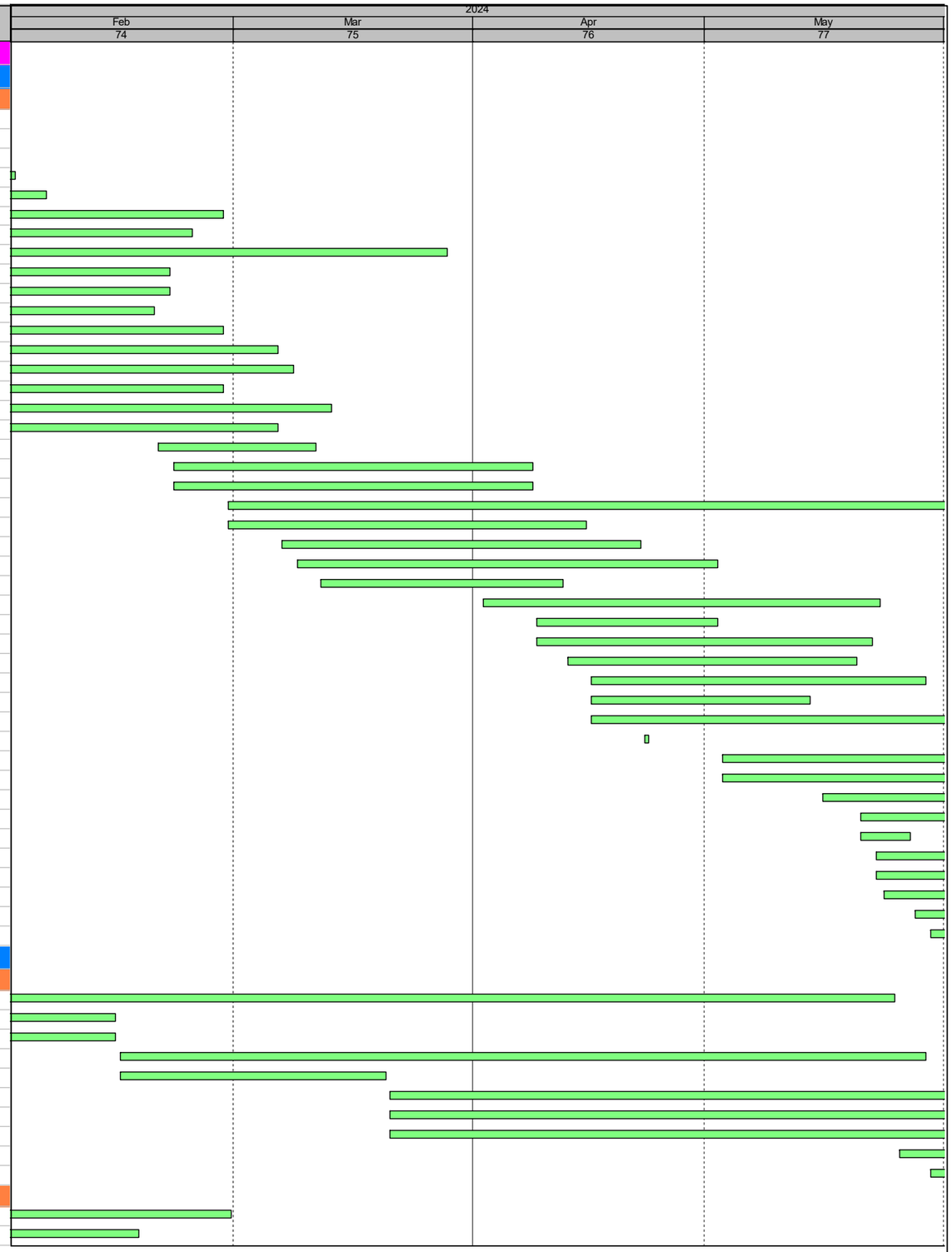
AUES (ET) – Action-United Environmental Services & Consulting

Appendix C

Construction Programme
(a) Contract 3 (NE/2017/03)
(b) Contract 4 (ED/2020/02)
(c) Contract 5 (ED/2019/02)

Contract 3 (NE/2017/03)

Activity ID	Activity Name	Duration	Start	Finish
NE2017/03 - ARQ PHASE 2A - Monthly Programme Update (202401)-1 _240221		1761	21-Jun-21 A	11-Sep-26
Road Improvement Works Location 1 (RIW1)		528	21-Jun-21 A	15-Oct-24
Construction Works		528	21-Jun-21 A	15-Oct-24
CON12110	Drainage, utilities works & backfilling (RWC2 type 4, 6, 7, 8)	60	21-Jun-21 A	19-Jul-24
CON12130	Road works (RWC2 type 4, 6, 7, 8)	60	26-Jul-21 A	23-Aug-24
CON12134	Install stone facing for wall (RWC2 type 4, 6, 7, 8)	72	02-Aug-21 A	15-Oct-24
CON10432	Construct RW footing (RWC2 type 4 [bay 45 to bay 38])	42	01-Jun-23 A	01-Feb-24
CON10434	Construct RW wall (RWC2 type 4 [bay 45 to bay 38])	42	08-Jul-23 A	05-Feb-24
CON10452A	ELS to retaining wall footing (RWC2 type 3a Bay 37 to Bay 31)	72	30-Nov-23 A	28-Feb-24
CON10756	Construct RW wall (RWC2 type 3, stage 1), 1 team	72	30-Nov-23 A	24-Feb-24
CON10770	Install sheet pile & ELS to RW pile cap (RWC2 type 3, stage 2), 1 team	72	02-Jan-24 A	28-Mar-24
CON12556	Install pillar box (KS27 east side)	36	08-Jan-24 A	21-Feb-24
CON10614	Install sheet pile (RWC2 bay6 to bay14)	36	08-Jan-24 A	21-Feb-24
CON11694	Drainage works under FE1-PC6b & FE1-PC7b	30	12-Jan-24 A	19-Feb-24
CON11328D	Subletting works - socketed H-pile at CT5	36	15-Jan-24 A	28-Feb-24
CON12489	Install pillar box (KS27 west side)	42	15-Jan-24 A	06-Mar-24
CON11530	Construct piling foundation on CT6 Type 1 (18nos, 2d/no, 1 team) + 2d for 1st	38	22-Jan-24	08-Mar-24
CON10390	Construct pile cap (RWC2 type 5 [bay 46])	30	22-Jan-24	28-Feb-24
CON12488	Install lift (KS27 west side)	42	22-Jan-24	13-Mar-24
CON12554	Install lift (KS27 east side)	36	22-Jan-24	06-Mar-24
CON115743	Construct NB RC footing (FE1-F6b to FE1-F7b, 30m, 1.0m/d, 1 team)	18	20-Feb-24	11-Mar-24
CON125561	Backfilling works & hard-landscaping works (KS27 east side)	36	22-Feb-24	08-Apr-24
CON10616	Install sheet pile (RWC2 bay6 to bay14)	36	22-Feb-24	08-Apr-24
CON11330	Construct CT5 piling foundation (15nos, 6d/no, 1 team + setup)	90	29-Feb-24	20-Jun-24
CON10430	Construct RW wall (RWC2 type 5 [bay 46])	36	29-Feb-24	15-Apr-24
CON124891	Backfilling works & hard-landscaping works (KS27 west side)	36	07-Mar-24	22-Apr-24
CON11532	Construct piling foundation on CT6 Type 2 (21nos, 2d/no, 1 team)	42	09-Mar-24	02-May-24
CON115763	Construct NB RC wall (FE1-F6b to FE1-F7b, 30m, 0.85m/d, 1 team)	24	12-Mar-24	12-Apr-24
CON10790	Construct RW pile cap / footing (RWC2 type 3, stage 2), 1 team	42	02-Apr-24	23-May-24
CON12570	T&C to lift, submit LE5 and EMSD inspection (KS27 east side)	20	09-Apr-24	02-May-24
CON10652	Construct RW footing (RWC2 bay6 to bay14)	36	09-Apr-24	22-May-24
CON11710	Drainage, utilities works, backfilling & road paving (FE1-F4b to FE1-F7b & FE1-	30	13-Apr-24	20-May-24
CON12210	Drainage, utilities works & backfilling (RWC2 type 5)	36	16-Apr-24	29-May-24
CON10412	Construct RW footing (RWC2 type 6 [bay 48 to bay 47])	24	16-Apr-24	14-May-24
CON10512	Construct RW footing (RWC2 type 3a Bay 37 to Bay 31)	84	16-Apr-24	26-Jul-24
CON12492	T&C to lift, submit LE5 and EMSD inspection (KS27 west side)	1	23-Apr-24	23-Apr-24
CON12590	T&C and Statutory Inspection _KS27	30	03-May-24	07-Jun-24
CON115321	(NCE036) Additional duration for Great Depth Condition on Rockhead Level fc	28	03-May-24	05-Jun-24
CON10414	Construct RW wall (RWC2 type 6 [bay 48 to bay 47])	24	16-May-24	13-Jun-24
CON11730	Erect steel column (FE1-F4b to FE1-F7b & FE1-PC1b)	90	21-May-24	04-Sep-24
CON11770	Traffic diversion (FE1 "b" side & CT6)	6	21-May-24	27-May-24
CON10654	Construct RW wall (RWC2 type 2)	48	23-May-24	19-Jul-24
CON10514	Construct RW footing (RWC2 type 3a Bay 37 to Bay 31)	84	23-May-24	30-Aug-24
CON10810	Construct RW wall (RWC2 type 3, stage 2), 1 team	60	24-May-24	03-Aug-24
CON11772	Utilities detection	18	28-May-24	18-Jun-24
CON12230	Road works (RWC2 type 5)	36	30-May-24	12-Jul-24
Road Improvement Works Location 2 (RIW2)		436	26-Nov-23 A	28-Feb-25
Construction Works in Slope C3 (Portion B)		187	26-Nov-23 A	22-Jun-24
CON20250	Fabrication of NB steel post - central median along new clean water bay road t	182	26-Nov-23 A	25-May-24
CON21116A	(NCE255) Design review to drainage works at Portion B	30	04-Dec-23 A	14-Feb-24
CON20310	Acoustic panels along slope side delivery	28	18-Jan-24 A	14-Feb-24
CON20330	Fabrication of NB Acoustic panels - central median near junction at on sau roa	105	15-Feb-24	29-May-24
CON21116B	(NCE255) Road works at new U-turn bay (Remaining part)	30	15-Feb-24	20-Mar-24
CON21150	Construct hard landscape works at Portion B (Part 1)	60	21-Mar-24	05-Jun-24
CON21170	Construct hard landscape works at Portion B (Part 2)	60	21-Mar-24	05-Jun-24
CON21190	Construct hard landscape works at Portion B (Part 3)	60	21-Mar-24	05-Jun-24
CON20270	Steel post along new clean water bay road to kowloon delivery	24	26-May-24	18-Jun-24
CON20350	Acoustic panels near on sau road left turn to kowloon side delivery	24	30-May-24	22-Jun-24
Construction Noise Semi-Enclosure SE2 (Portion C)		348	15-Dec-23 A	28-Feb-25
CON21730	Construct NB RC L-shaped wall (SE2 Bay4 to Bay12; L=110m)	60	15-Dec-23 A	29-Feb-24
CON22030	Excavate & install lateral support for UU (SE2 Bay13 to Bay21; L=85m, 1 team	42	27-Dec-23 A	17-Feb-24



Actual Work
Remaining Work
Milestone

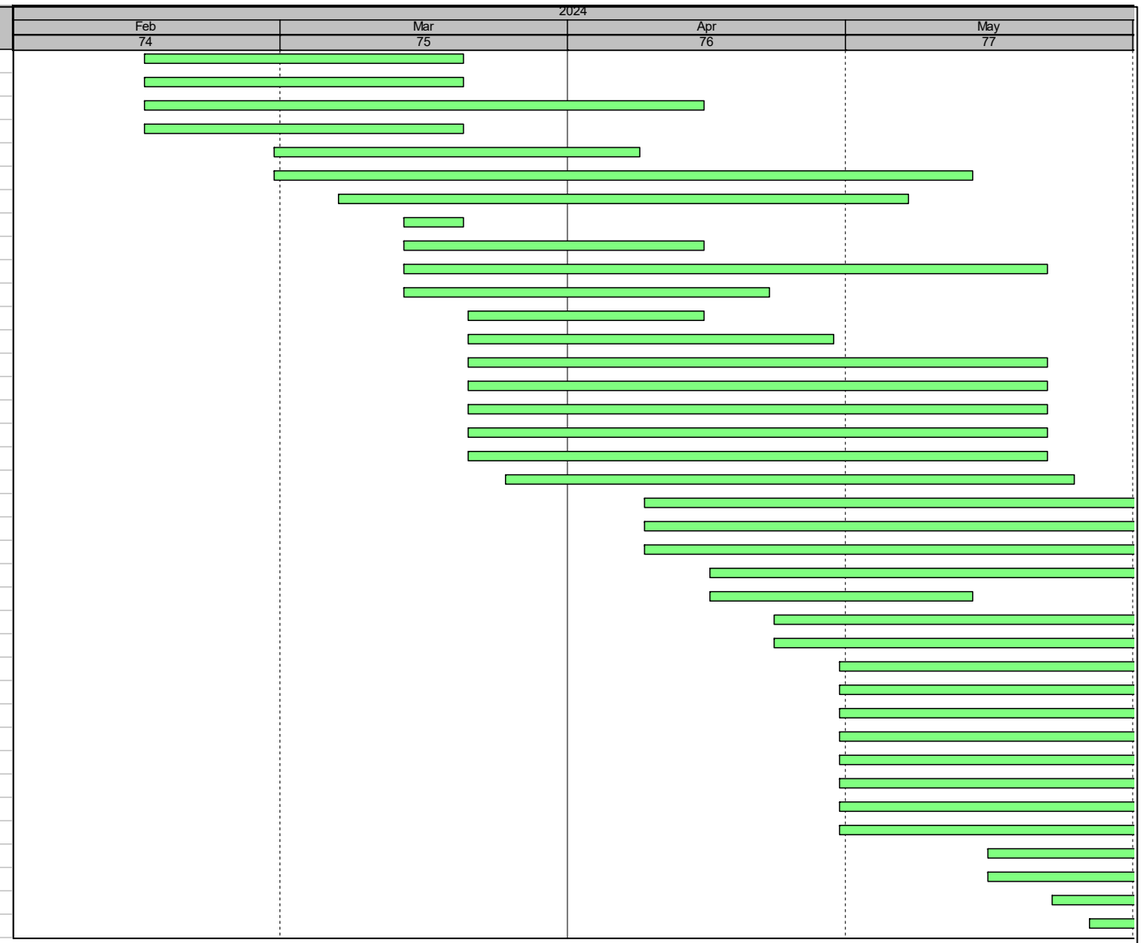
NE/2017/03 Development of Anderson Road Quarry Site - Investigation Design & Construction
Development of Anderson Road Quarry Site Road - Improvement Works & Pedestrian Connectivity Facilities Works Phase 2A
3-Month Rolling Programme

Activity ID	Activity Name	Duration	Start	Finish
CON22050	Construct NB footing (SE2 Bay13 to Bay21; L=85m)	54	25-Jan-24	03-Apr-24
CON21750	Backfilling, construct road drainage & road paving (CT4, SE2 Bay4 to Bay12; L	60	28-Feb-24	13-May-24
CON22070	Construct NB RC L-shaped wall (SE2 Bay13 to Bay21; L=85m)	54	04-Mar-24	10-May-24
CON22590	Road lighting, irrigation system & utilities works	240	11-May-24	28-Feb-25
CON22090	Backfilling, construct road drainage & road paving (SE2 Bay13 to Bay21; L=85	54	11-May-24	16-Jul-24
CON22570	Slope implovement Works (pit-by-pit method) (CT4 & SE2 fount part, 250nos p	120	11-May-24	03-Oct-24
CON22610	Application for power supply & energization (RIW2)	156	11-May-24	15-Nov-24
Road Improvement Works Location 3 (RIW3)		1428	19-Jul-21 A	11-Sep-26
Construction Works		1428	19-Jul-21 A	11-Sep-26
CON31130	(NCE215) (CE595) Cut slope works (CH115 to CH200) (L=85m, 13007m3, 1(	1300	19-Jul-21 A	15-Oct-25
CON31212	Rock slope mapping (Stage 2)	180	03-Oct-22 A	21-Feb-24
CON31170	Soil nail works & further construct RWD3 (11NE-D/F246, stage 2)	150	21-Oct-22 A	07-Feb-24
CON31710	Construct footing, pier & pier head F1-4	144	20-Dec-22 A	12-Apr-24
CON31214	PM review & acceptance and slope stabilization measures (Stage 2)	180	20-Jan-23 A	04-Jul-24
CON32810	Road works (RWD2 remaining)	42	05-Jun-23 A	03-Feb-24
CON31290	Reinstatment works & fill no-fine concrete works	90	09-Jun-23 A	15-Mar-24
CON30673	TTA application at SMPR for fresh watermain connection A & B	60	26-Aug-23 A	27-Jan-24
CON31550	Cut slope & construct soil nails (55nos 10m depth, 3.5d/no, 3 teams) (Slope D4	60	30-Aug-23 A	03-Feb-24
CON30510	Road works (RWD1 Bay8 to Bay14a)	42	04-Sep-23 A	05-Feb-24
CON305073	(NCE281) Gasmain laying alown RWD1 (RWD1 Bay8 to Bay14a) (By Towngas	42	03-Nov-23 A	22-Jan-24
CON324387	ELS works at (NB SE1 Bay6 to Bay1 & VB1)	18	11-Nov-23 A	27-Jan-24
CON32440	Construct type 2 NB footing (SE1 bay6 to bay1 & VB1)	12	18-Dec-23 A	03-Feb-24
CON30688	(NCE281) Gasmain laying alown RWD1 (RWD1 Bay7 to Bay1) (By Towngas)	42	22-Dec-23 A	15-Feb-24
CON30570	Drainage & utilities works (Type 4 RW)	42	15-Jan-24 A	06-Mar-24
CON30674	Construct fresh watermain connection A & B	60	29-Jan-24	15-Apr-24
CON30610	Road works (Type 4 RW)	42	05-Feb-24	27-Mar-24
CON32444	Construct SE1 bay6 to bay1 & VB1 (lower-pour) retaining wall	12	05-Feb-24	21-Feb-24
CON31554	Construct U-channel, stairway and slope surface works	42	05-Feb-24	27-Mar-24
CON31190	Erect working platform for soil nail works (Slope D3, stage 2)	42	08-Feb-24	03-Apr-24
CON32448	Construct SE1 & VB1 (upper-pour) retaining wall	12	22-Feb-24	06-Mar-24
CON31552	Cut slope works (Slope D3) (CH430 to CH330) (L=100m, 7500m3, 10m3/d)	750	02-Mar-24	11-Sep-26
CON32432	Backfilling to watermain's level (NB SE1 Bay1 to Bay6)	24	07-Mar-24	08-Apr-24
CON324481	Construct type 2 NB footing (SE1 bay8 & VB1)	12	07-Mar-24	20-Mar-24
CON324483	Construct SE1 bay8 (lower-pour) retaining wall	12	21-Mar-24	08-Apr-24
CON31570	Utilities works & drainage works (Slope D4)	60	28-Mar-24	13-Jun-24
CON31210	Soil nail works (11NE-D/C190, stage 2)	135	05-Apr-24	13-Sep-24
CON30666	Lay twin DN600 watermain at RW RWD1a Bay1 - Bay5 (FW CH200 to CH25(	18	09-Apr-24	29-Apr-24
CON30664	Lay twin DN600 watermain at SE1 Bay1 - Bay6 (FW CH100 to CH140)	18	09-Apr-24	29-Apr-24
CON324485	Construct SE1 bay8 (upper-pour) retaining wall	12	09-Apr-24	22-Apr-24
CON31990	Construct bridge deck #33~#43 by form traveller @pier F1-4, 5 pairs	140	13-Apr-24	28-Sep-24
CON30676	Trial pit / inspection pit excavation for slat watermain D lower connection	12	16-Apr-24	29-Apr-24
CON324487	Backfill SE1 bay8	30	23-Apr-24	29-May-24
CON30550	Road works (RWD1 Bay1 to Bay7)	24	30-Apr-24	29-May-24
CON30678	Construct slat watermain D lower connection	36	30-Apr-24	13-Jun-24
CON31590	Road works (Slope D4)	60	08-May-24	19-Jul-24
CON30170	Slope works & fill no-fine concrete at slope D1 (Level 1/4, 400m3)	72	30-May-24	23-Aug-24
Pedestrian Connectivity Facility System B (SYB)		165	23-Dec-23 A	23-Jul-24
Construction Works		165	23-Dec-23 A	23-Jul-24
CON52252	Erect footbridge steel frame PC8 to PC7 (P8 to P7) (temporary erection)	42	23-Dec-23 A	03-Feb-24
CON51186	Submission works for ABWF works at System B	30	30-Dec-23 A	03-Feb-24
CON51870	PM Review & acceptance works submission for reinstatement works near SyB	18	09-Jan-24 A	29-Jan-24
CON51890	Reinstatement works near SyB-Abt (Slope B1 Partial)	30	15-Jan-24 A	29-Feb-24
CON52570	Construct escalator pit LT1 to P3 (E1 & E2)	48	22-Jan-24	20-Mar-24
CON52590	Install steel roof (steel frame) P4 to P7	18	22-Jan-24	14-Feb-24
CON51994	Construct pier SYB-P1 pier head	36	22-Jan-24	06-Mar-24
CON51190	ABWF works @SYB-LT1	18	05-Feb-24	28-Feb-24
CON52250	Erect footbridge steel frame PC8 to PC7 (P8 to P7)	6	05-Feb-24	14-Feb-24
CON52248	Erect footbridge steel frame SYB-A1 to PC8 (A1 to P8) (temporary erection)	30	05-Feb-24	13-Mar-24
CON52610	Install steel roof (steel frame) P3 to P4	18	15-Feb-24	06-Mar-24
CON52390	Construct deck slab, planter wall and roofing PC8 to PC7 (P8 to P7)	30	15-Feb-24	20-Mar-24
CON52410	Construct deck slab, planter wall and roofing PC7 to PC6 (P7 to P6)	30	15-Feb-24	20-Mar-24

Actual Work
Remaining Work
Milestone

NE/2017/03 Development of Anderson Road Quarry Site - Investigation Design & Construction
Development of Anderson Road Quarry Site Road - Improvement Works & Pedestrian Connectivity Facilities Works Phase 2A
3-Month Rolling Programme

Activity ID	Activity Name	Duration	Start	Finish
CON52470	Construct deck slab, planter wall and roofing PC6 to PC4 (P6 to P5)	30	15-Feb-24	20-Mar-24
CON52490	Construct deck slab, planter wall and roofing PC4 to PC3 (P5 to LT1)	30	15-Feb-24	20-Mar-24
CON52790	ABWF works @ escalator pit P7 to P4	48	15-Feb-24	15-Apr-24
CON52450	Construct deck slab, planter wall and roofing PC1 to ex. footbridge (P1)	30	15-Feb-24	20-Mar-24
CON51490	E&M works @SYB-LT1	30	29-Feb-24	08-Apr-24
CON51192	ABWF works @SYB-LT1 (other than lift shart area)	60	29-Feb-24	14-May-24
CON52810	ABWF works @ escalator pit P4 to P3	48	07-Mar-24	07-May-24
CON52230	Erect footbridge steel frame SYB-A1 to PC8 (A1 to P8) (final fixed)	6	14-Mar-24	20-Mar-24
CON52290	Erect footbridge steel frame PC2 to PC1 (P2 to P1)	24	14-Mar-24	15-Apr-24
CON53090	E&M works @ escalator pit P7 to P4	54	14-Mar-24	22-May-24
CON52172	Construct superstructure SYB-LT1 (remaining works, support of escalator)	30	14-Mar-24	22-Apr-24
CON52630	Install steel roof (steel frame) LT1 to P3	18	21-Mar-24	15-Apr-24
CON52370	Construct deck slab, planter wall and roofing SYB-A1 to PC8 (A1 to P8)	30	21-Mar-24	29-Apr-24
CON52670	ABWF works @ steel frame footbridge P8 to P7	48	21-Mar-24	22-May-24
CON52690	ABWF works @ steel frame footbridge P7 to P6	48	21-Mar-24	22-May-24
CON52710	ABWF works @ steel frame footbridge P6 to P5	48	21-Mar-24	22-May-24
CON52730	ABWF works @ steel frame footbridge P5 to LT1	48	21-Mar-24	22-May-24
CON52770	ABWF works @ steel frame footbridge P1 to connect ex. footbridge	48	21-Mar-24	22-May-24
CON52174	Construct R.C. desk P2 to LT1	48	25-Mar-24	25-May-24
CON52870	Install lifts SYB-LT1A & SYB-LT1B	72	09-Apr-24	05-Jul-24
CON53150	E&M works @ escalator pit P4 to P3	54	09-Apr-24	13-Jun-24
CON51492	E&M works @SYB-LT1 (other than lift shaft area)	48	09-Apr-24	05-Jun-24
CON52830	ABWF works @ escalator pit P3 to LT1	48	16-Apr-24	13-Jun-24
CON52310	Erect footbridge steel frame PC1 to existing footbridge (P1)	24	16-Apr-24	14-May-24
CON53410	Install steel works at LT1 / ST1	72	23-Apr-24	19-Jul-24
CON53430	Install hand railing at ST1	72	23-Apr-24	19-Jul-24
CON51810	Construct underground drainage pipe	36	30-Apr-24	13-Jun-24
CON52650	ABWF works @ steel frame footbridge A1 to P8	48	30-Apr-24	27-Jun-24
CON53010	E&M works @ steel frame footbridge P8 to P7	48	30-Apr-24	27-Jun-24
CON53050	E&M works @ steel frame footbridge P7 to P6	48	30-Apr-24	27-Jun-24
CON53110	E&M works @ steel frame footbridge P6 to P5	48	30-Apr-24	27-Jun-24
CON53170	E&M works @ steel frame footbridge P5 to LT1	48	30-Apr-24	27-Jun-24
CON53130	E&M works @ steel frame footbridge P1 to connect ex. footbridge	48	30-Apr-24	27-Jun-24
CON52510	Construct above ground drainage pipe	60	30-Apr-24	12-Jul-24
CON53190	E&M works @ escalator pit P3 to LT1	54	16-May-24	19-Jul-24
CON52430	Construct deck slab, planter wall and roofing PC2 to PC1 (P2 to P1)	30	16-May-24	20-Jun-24
CON52910	Install escalators SYB-ES05 & SYB-ES06 (P4 to P7)	48	23-May-24	19-Jul-24
CON52210	Install steel roof P2 to LT1	48	27-May-24	23-Jul-24



Actual Work
Remaining Work
Milestone

NE/2017/03 Development of Anderson Road Quarry Site - Investigation Design & Construction
Development of Anderson Road Quarry Site Road - Improvement Works & Pedestrian Connectivity Facilities Works Phase 2A
3-Month Rolling Programme

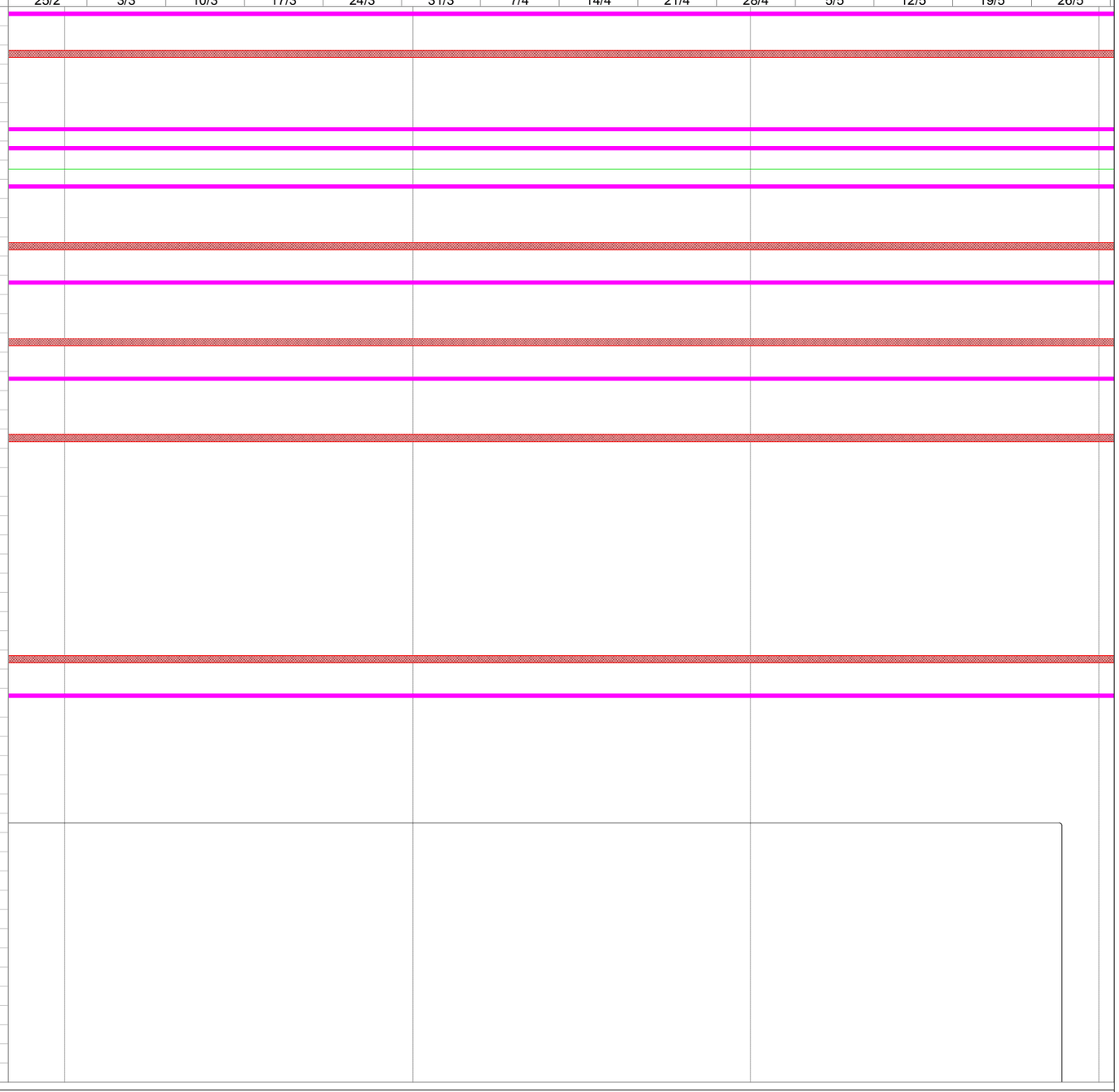
Contract 4 (ED/2020/02)

China International Water & Electric Corp.

CEDD Contract No. ED/2020/02
Development of Anderson Road Quarry Site - Infrastructure, Greening and Landscape Works
3 Months Rolling Programme (February to April 2024)

Updated on 1 Feb 2024

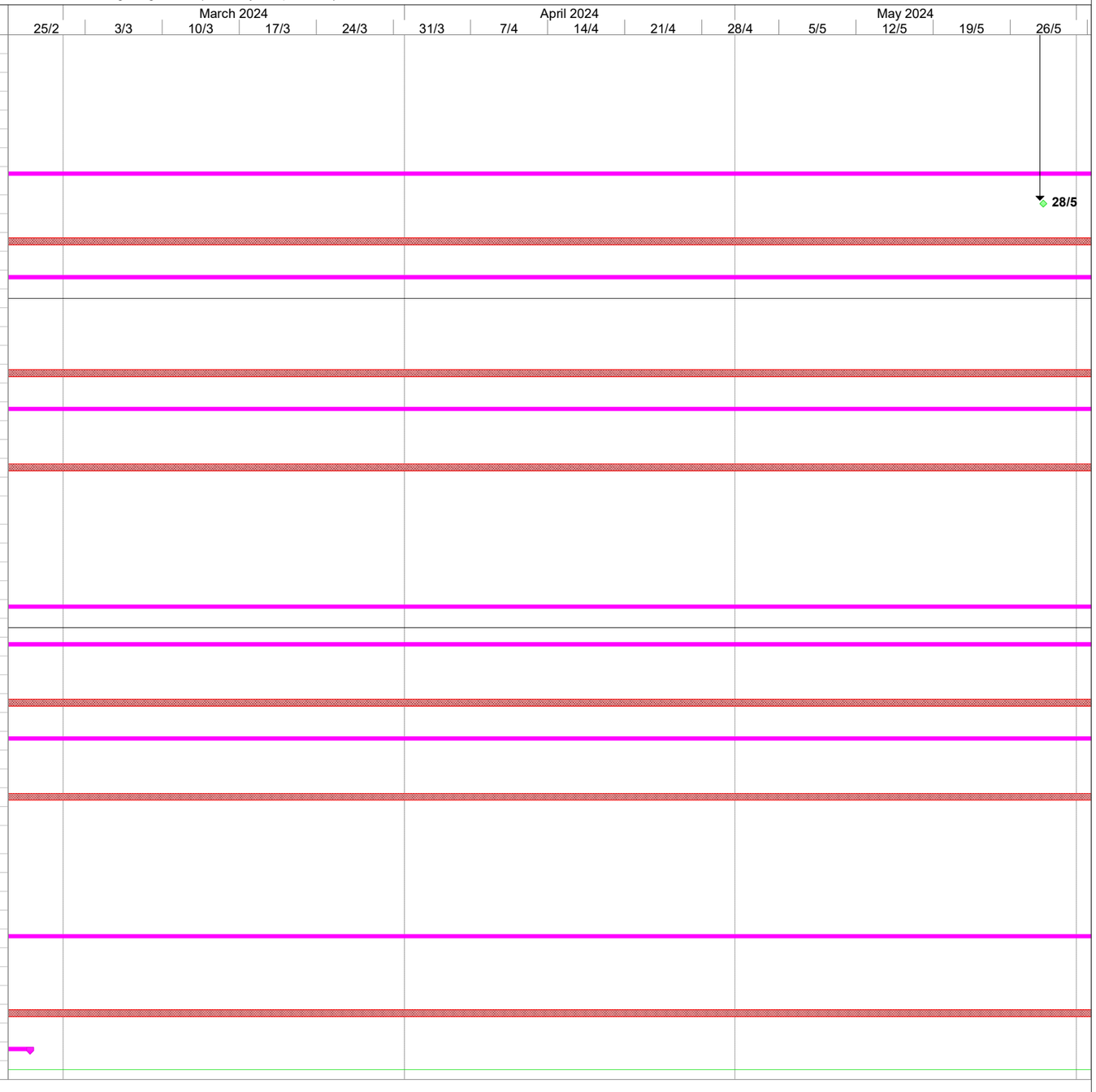
ID	Task Name	Duration	Start	Finish	Predecessors
1	**Contract Period**	**1567 days**	**Fri 30/7/21**	**Wed 12/11/25**	
2	Contract Starting Date [Contract Award Date 21 Jul 2021]	0 days	Fri 30/7/21	Fri 30/7/21	
3	Contract Duration	1248 days	Fri 30/7/21	Sat 28/12/24	2SS
4	Original Completion Date	0 days	Sat 28/12/24	Sat 28/12/24	3
5	Potential EOT due to CEs and Inclement weather	319 days	Sun 29/12/24	Wed 12/11/25	4
6	Anticipated Completion of the Whole of the Works	0 days	Wed 12/11/25	Wed 12/11/25	25FF,5
7	**Section of Works and Relevant Portions of Work**	**1567 days**	**Fri 30/7/21**	**Wed 12/11/25**	
8	**Section of Works 1 - Portions 1a, 2a & 2b**	**1171 days**	**Mon 30/8/21**	**Tue 12/11/24**	
9	Original Completion Date	0 days	Wed 13/12/23	Wed 13/12/23	2FS+867 days
10	**Portion 1a**	**929 days**	**Fri 29/4/22**	**Tue 12/11/24**	
11	Access date	0 days	Fri 29/4/22	Fri 29/4/22	2FS+273 days
12	Construction Duration	563 days	Fri 29/4/22	Sun 12/11/23	11SS
13	Potential EOT due to Inclement weather and CEs	335 days	Mon 13/11/23	Sat 12/10/24	12
14	Anticipated Completion Date	0 days	Tue 12/11/24	Tue 12/11/24	404FF,13
15	**Portion 2a**	**1171 days**	**Mon 30/8/21**	**Tue 12/11/24**	
16	Access date	0 days	Mon 30/8/21	Mon 30/8/21	2FS+31 days
17	Construction Duration	836 days	Mon 30/8/21	Wed 13/12/23	16SS
18	Potential EOT due to Inclement weather and CEs	335 days	Thu 14/12/23	Tue 12/11/24	17
19	Anticipated Completion Date	0 days	Tue 12/11/24	Tue 12/11/24	439FF
20	**Portion 2b**	**1065 days**	**Tue 14/12/21**	**Tue 12/11/24**	
21	Access date	0 days	Tue 14/12/21	Tue 14/12/21	2FS+137 days
22	Construction Duration	730 days	Tue 14/12/21	Wed 13/12/23	21SS
23	Potential EOT due to Inclement weather and CEs	292 days	Thu 14/12/23	Mon 30/9/24	22
24	Anticipated Completion Date	0 days	Tue 12/11/24	Tue 12/11/24	511FF,23
25	**Section of Works 1A - Establishment Works for all Landscape Softworks in Section 1 of the Works**	**365 days**	**Wed 13/11/24**	**Wed 12/11/25**	
26	Original Completion Date	0 days	Thu 12/12/24	Thu 12/12/24	9FS+365 days
27	Commencement of Establishment Work	0 days	Wed 13/11/24	Wed 13/11/24	28SS
28	Establishment Work Duration	365 days	Wed 13/11/24	Wed 12/11/25	14,19,24
29	Anticipated Completion Date	0 days	Wed 12/11/25	Wed 12/11/25	28FF
30	**Section of Works 2 - Portion 8**	**1115 days**	**Fri 30/7/21**	**Sat 17/8/24**	
31	Original Completion Date	0 days	Sat 29/7/23	Sat 29/7/23	
32	Access date	0 days	Fri 30/7/21	Fri 30/7/21	2
33	Construction Duration	730 days	Fri 30/7/21	Sat 29/7/23	32
34	Potential EOT due to Inclement weather and CEs up to Jan 2023	385 days	Sun 30/7/23	Sat 17/8/24	33
35	Anticipated Completion Date	0 days	Sat 17/8/24	Sat 17/8/24	545FF,34
36	**Section of Works 2A - Establishment Works for all Landscape Softworks in Section 2 of the Works**	**1480 days**	**Fri 30/7/21**	**Sun 17/8/25**	
37	Original Completion Date	0 days	Fri 30/7/21	Fri 30/7/21	
38	Commencement of Establishment Work	0 days	Sun 18/8/24	Sun 18/8/24	39SS
39	Establishment Work Duration	365 days	Sun 18/8/24	Sun 17/8/25	35
40	Anticipated Completion Date	0 days	Sun 17/8/25	Sun 17/8/25	39FF
41	**Section of Works 3 - Portions 1b, 3, 4, 5**	**763 days**	**Fri 30/7/21**	**Thu 31/8/23**	
42	Original Completion Date	0 days	Tue 30/5/23	Tue 30/5/23	2FS+669 days
43	**Portion 1b**	**276 days**	**Tue 29/11/22**	**Thu 31/8/23**	
44	Access date	0 days	Tue 29/11/22	Tue 29/11/22	2FS+487 days
45	Construction Duration	183 days	Tue 29/11/22	Tue 30/5/23	44
46	Potential EOT due to Inclement weather and CEs	93 days	Wed 31/5/23	Thu 31/8/23	45
47	Anticipated Completion Date	0 days	Thu 31/8/23	Thu 31/8/23	668FF,46
48	**Portion 3**	**702 days**	**Wed 29/9/21**	**Thu 31/8/23**	
49	Access date	0 days	Wed 29/9/21	Wed 29/9/21	2FS+61 days
50	Construction Duration	609 days	Wed 29/9/21	Tue 30/5/23	49
51	Potential EOT due to Inclement weather and CEs	93 days	Wed 31/5/23	Thu 31/8/23	50
52	Anticipated Completion Date	0 days	Thu 31/8/23	Thu 31/8/23	680FF,51
53	**Portion 4**	**763 days**	**Fri 30/7/21**	**Thu 31/8/23**	
54	Access date	0 days	Fri 30/7/21	Fri 30/7/21	2
55	Construction Duration	670 days	Fri 30/7/21	Tue 30/5/23	54



Task | Critical Task | Milestone | Summary | Progress

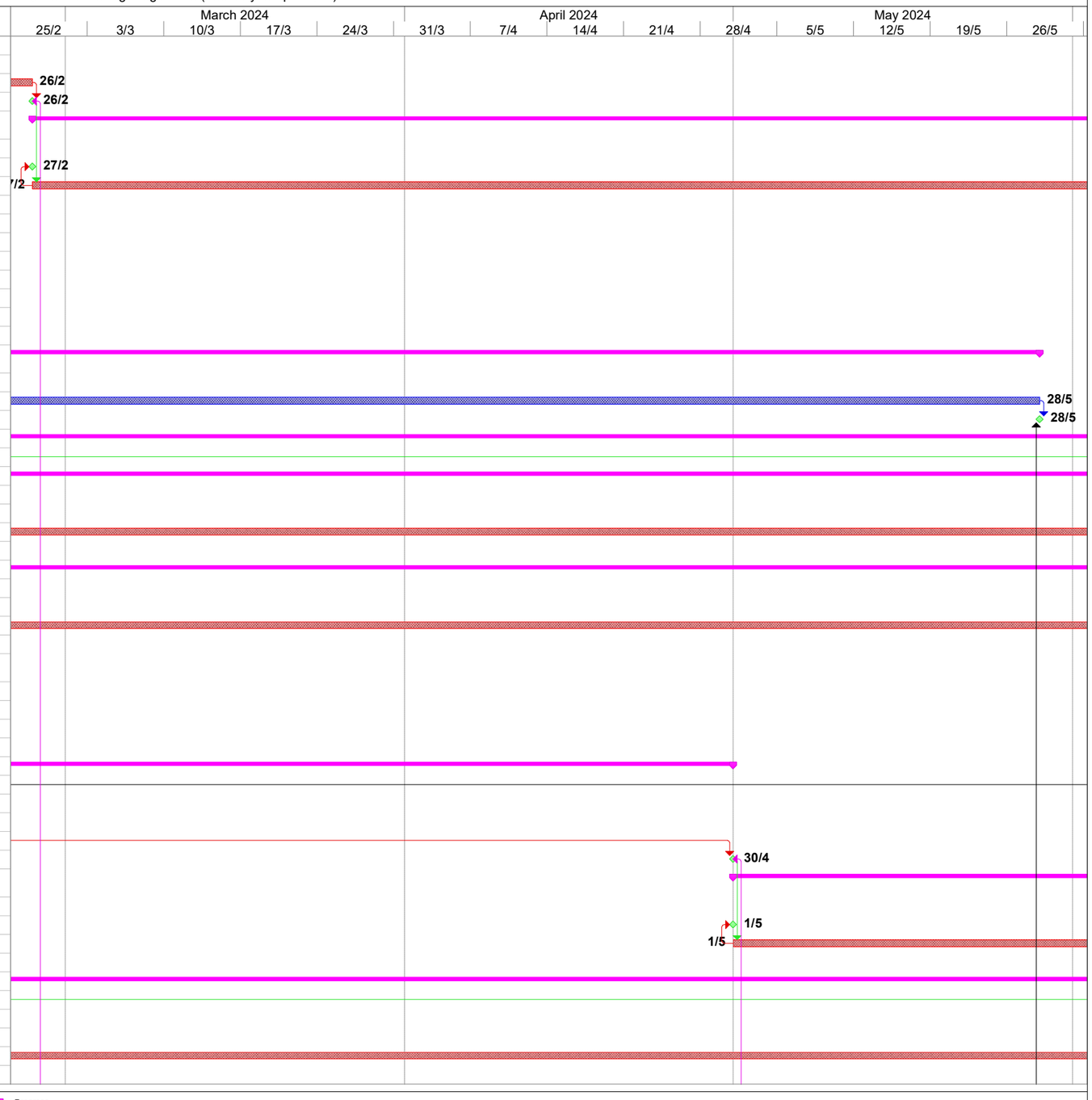
Based on Revised Programme dated 26 Jan 2024

ID	Task Name	Duration	Start	Finish	Predecessors
56	Potential EOT due to Inclement weather and CEs	93 days	Wed 31/5/23	Thu 31/8/23	55
57	Anticipated Completion Date	0 days	Thu 31/8/23	Thu 31/8/23	691FF,56
58	**Portion 5**	**551 days**	**Sun 27/2/22**	**Thu 31/8/23**	
59	Access date	0 days	Sun 27/2/22	Sun 27/2/22	2
60	Construction Duration	458 days	Sun 27/2/22	Tue 30/5/23	59
61	Potential EOT due to Inclement weather and CEs	93 days	Wed 31/5/23	Thu 31/8/23	60
62	Anticipated Completion Date	0 days	Thu 31/8/23	Thu 31/8/23	695FF,61
63	**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**	
64	Original Completion Date	0 days	Tue 28/5/24	Tue 28/5/24	42FS+365 days
65	Commencement of Establishment Work	0 days	Fri 1/9/23	Fri 1/9/23	66SS
66	Establishment Work Duration	365 days	Fri 1/9/23	Fri 30/8/24	52,47,57,62
67	Anticipated Completion Date	0 days	Fri 30/8/24	Fri 30/8/24	66FF
68	**Section of Works 4 - Portions 6, 12**	**1155 days**	**Fri 30/7/21**	**Thu 26/9/24**	
69	Original Completion Date	0 days	Tue 13/6/23	Tue 13/6/23	2FS+683 days
70	**Portion 6**	**972 days**	**Sat 29/1/22**	**Thu 26/9/24**	
71	Access date	0 days	Sat 29/1/22	Sat 29/1/22	2FS+183 days
72	Construction Duration	501 days	Sat 29/1/22	Tue 13/6/23	71
73	Potential EOT due to Inclement weather and CEs	471 days	Wed 14/6/23	Thu 26/9/24	72
74	Anticipated Completion Date	0 days	Thu 26/9/24	Thu 26/9/24	704FF,73
75	**Portion 12**	**1155 days**	**Fri 30/7/21**	**Thu 26/9/24**	
76	Access date	0 days	Fri 30/7/21	Fri 30/7/21	2
77	Construction Duration	684 days	Fri 30/7/21	Tue 13/6/23	76
78	Potential EOT due to Inclement weather and CEs	471 days	Wed 14/6/23	Thu 26/9/24	77
79	Anticipated Completion Date	0 days	Thu 26/9/24	Thu 26/9/24	78,703FF
80	**Section of Works 4A - Establishment Works for all Landscape Softworks in Section 4 of the Works**	**471 days**	**Wed 12/6/24**	**Fri 26/9/25**	
81	Original Completion Date	0 days	Wed 12/6/24	Wed 12/6/24	69FS+365 days
82	Commencement of Establishment Work	0 days	Fri 27/9/24	Fri 27/9/24	83SS
83	Establishment Work Duration	365 days	Fri 27/9/24	Fri 26/9/25	74,79
84	Anticipated Completion Date	0 days	Fri 26/9/25	Fri 26/9/25	83FF
85	**Section of Works 5A - Portions 9, 10**	**1159 days**	**Fri 30/7/21**	**Mon 30/9/24**	
86	Original Completion Date	0 days	Wed 28/6/23	Wed 28/6/23	2FS+698 days
87	**Porion 9**	**1098 days**	**Wed 29/9/21**	**Mon 30/9/24**	
88	Access date	0 days	Wed 29/9/21	Wed 29/9/21	2FS+61 days
89	Construction Duration	638 days	Wed 29/9/21	Wed 28/6/23	88
90	Potential EOT due to Inclement weather and CEs	460 days	Thu 29/6/23	Mon 30/9/24	89
91	Anticipated Completion Date	0 days	Mon 30/9/24	Mon 30/9/24	90,809FF
92	**Portion 10**	**1159 days**	**Fri 30/7/21**	**Mon 30/9/24**	
93	Access date for Portion	0 days	Fri 30/7/21	Fri 30/7/21	2
94	Construction Duration for Portion	699 days	Fri 30/7/21	Wed 28/6/23	93
95	Potential EOT due to Inclement weather and CEs	460 days	Thu 29/6/23	Mon 30/9/24	94
96	Anticipated Completion Date	0 days	Mon 30/9/24	Mon 30/9/24	844FF,95
97	**Section of Works 5Al - Establishment Works for all Landscape Softworks in Section 5A of the Works**	**461 days**	**Wed 26/6/24**	**Tue 30/9/25**	
98	Original Completion Date	0 days	Wed 26/6/24	Wed 26/6/24	86FS+365 days
99	Commencement of Establishment Work	0 days	Tue 1/10/24	Tue 1/10/24	100SS
100	Establishment Work Duration	365 days	Tue 1/10/24	Tue 30/9/25	91,96
101	Anticipated Completion Date	0 days	Tue 30/9/25	Tue 30/9/25	100FF
102	**Section of Works 5B - Portion 11**	**947 days**	**Sun 27/2/22**	**Mon 30/9/24**	
103	Original Completion Date	0 days	Tue 27/6/23	Tue 27/6/23	2FS+697 days
104	Access date	0 days	Sun 27/2/22	Sun 27/2/22	2FS+211 days
105	Construction Duration	487 days	Sun 27/2/22	Wed 28/6/23	104SS
106	Potential EOT due to Inclement weather and CEs	460 days	Thu 29/6/23	Mon 30/9/24	105
107	Anticipated Completion Date	0 days	Mon 30/9/24	Mon 30/9/24	106,938FF
108	**Section of Works 6 - Portion 7**	**455 days**	**Tue 29/11/22**	**Mon 26/2/24**	
109	Original Completion Date	0 days	Tue 28/11/23	Tue 28/11/23	2FS+851 days



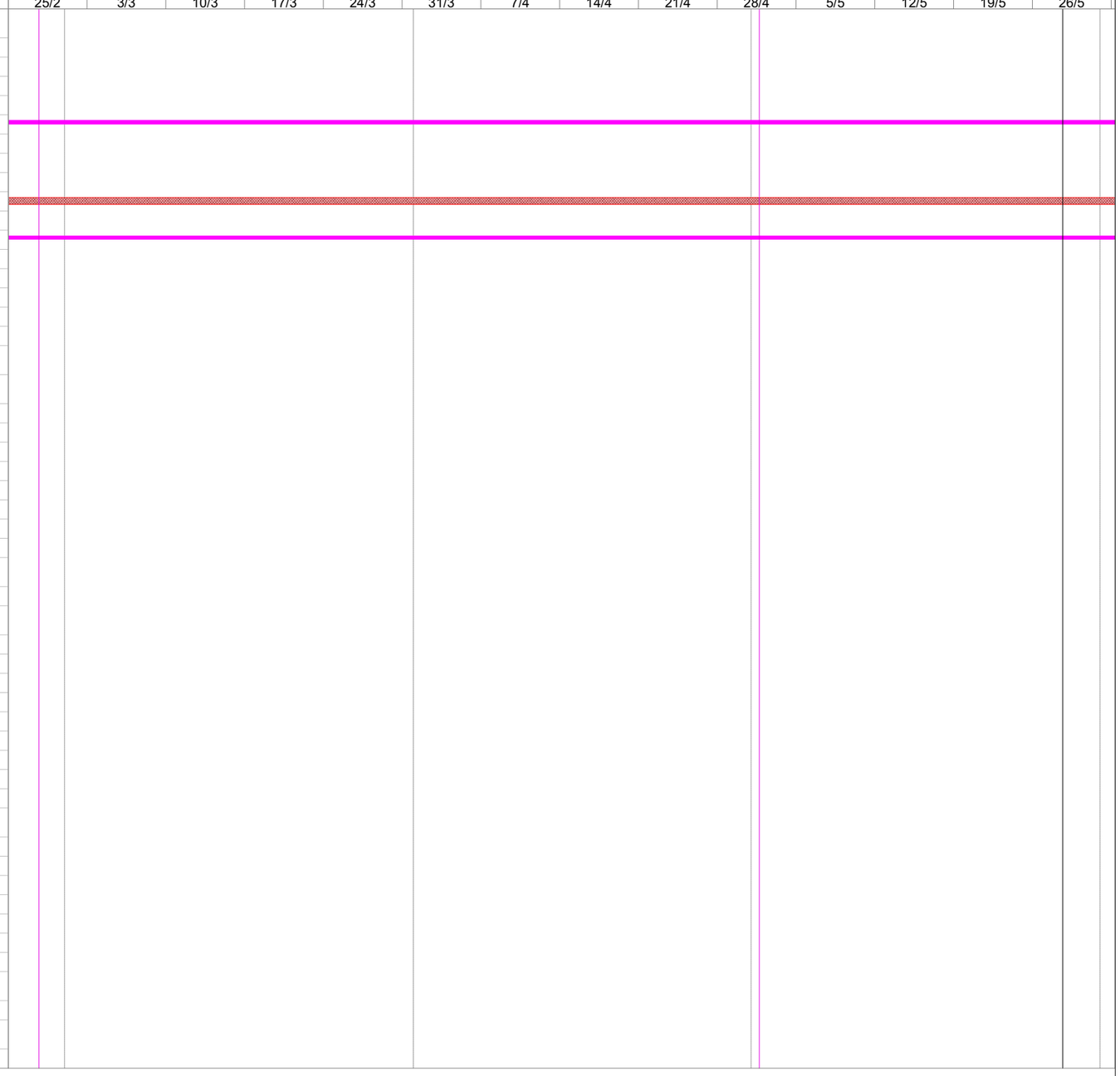
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
110	Access date	0 days	Tue 29/11/22	Tue 29/11/22	2FS+487 days
111	Construction Duration	365 days	Tue 29/11/22	Tue 28/11/23	110
112	Deferred possession (CE 067)	90 days	Wed 29/11/23	Mon 26/2/24	111
113	Anticipated Completion Date	0 days	Mon 26/2/24	Mon 26/2/24	945FF,112
114	**Section of Works 6A - Establishment Works for all Landscape Softworks in Section 6 of the Works**	**365 days**	**Tue 27/2/24**	**Tue 25/2/25**	
115	Original Completion Date	0 days	Wed 27/11/24	Wed 27/11/24	109FS+365 days
116	Commencement of Establishment Work	0 days	Tue 27/2/24	Tue 27/2/24	117SS
117	Establishment Work Duration	365 days	Tue 27/2/24	Tue 25/2/25	113
118	Anticipated Completion Date	0 days	Tue 25/2/25	Tue 25/2/25	117FF
119	**Section of Works 7A - Portions 13a, 14 (DELETED)**	**669 days**	**Fri 30/7/21**	**Mon 29/5/23**	
120	Access date for Portion 13a	0 days	Sat 29/1/22	Sat 29/1/22	2
121	Construction Duration for Portion 13a	486 days	Sat 29/1/22	Mon 29/5/23	120
122	Completion of Works in Portion 13a	0 days	Mon 29/5/23	Mon 29/5/23	121,975
123	Access date for Portion 14	0 days	Fri 30/7/21	Fri 30/7/21	2
124	Construction Duration for Portion 14	669 days	Fri 30/7/21	Mon 29/5/23	123
125	Completion of Works in Portion 14	0 days	Mon 29/5/23	Mon 29/5/23	124,987,986
126	**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**	
127	Commencement of Establishment Work for Section 7A	0 days	Mon 29/5/23	Mon 29/5/23	125
128	Establishment Work Duration for Section 7A	365 days	Tue 30/5/23	Tue 28/5/24	127
129	Completion of Works in Section 7A	0 days	Tue 28/5/24	Tue 28/5/24	128,992
130	**Section of Works 7B - Portions 13b, 15**	**972 days**	**Sat 26/2/22**	**Thu 24/10/24**	
131	Original Completion Date	0 days	Fri 29/12/23	Fri 29/12/23	2FS+882 days
132	**Portion 13b**	**972 days**	**Sat 26/2/22**	**Thu 24/10/24**	
133	Access date	0 days	Sat 26/2/22	Sat 26/2/22	2FS+211 days
134	Construction Duration	671 days	Sun 27/2/22	Fri 29/12/23	
135	Potential EOT due to Inclement weather and CEs up to Jan 2023	300 days	Sat 30/12/23	Thu 24/10/24	134
136	Anticipated Completion Date	0 days	Thu 24/10/24	Thu 24/10/24	993FF
137	**Portion 15**	**971 days**	**Sun 27/2/22**	**Thu 24/10/24**	
138	Access date	0 days	Sun 27/2/22	Sun 27/2/22	2
139	Construction Duration	671 days	Sun 27/2/22	Fri 29/12/23	138
140	Potential EOT due to Inclement weather and CEs	300 days	Sat 30/12/23	Thu 24/10/24	139
141	Anticipated Completion Date	0 days	Thu 24/10/24	Thu 24/10/24	993FF
142	**Section of Works 7BI - Establishment Works for all Landscape Softworks in Section 7B of the Works**	**365 days**	**Fri 25/10/24**	**Fri 24/10/25**	
143	Original Completion Date	0 days	Fri 27/12/24	Fri 27/12/24	131FS+365 days
144	Commencement of Establishment Work	0 days	Fri 25/10/24	Fri 25/10/24	145SS
145	Establishment Work Duration	365 days	Fri 25/10/24	Fri 24/10/25	136,141
146	Anticipated Completion Date	0 days	Fri 24/10/25	Fri 24/10/25	145FF
147	**Section of Works 8 - Portion 16**	**685 days**	**Thu 16/6/22**	**Tue 30/4/24**	
148	Original Completion Date	0 days	Wed 28/6/23	Wed 28/6/23	2FS+698 days
149	Access date	0 days	Thu 16/6/22	Thu 16/6/22	2FS+321 days
150	Construction Duration	378 days	Thu 16/6/22	Wed 28/6/23	149
151	Potential EOT due to Inclement weather and CEs	186 days	Thu 29/6/23	Sun 31/12/23	150
152	Anticipated Completion Date	0 days	Tue 30/4/24	Tue 30/4/24	151,1104FF
153	**Section of Works 8A - Establishment Works for all Landscape Softworks in Section 8 of the Works**	**365 days**	**Wed 1/5/24**	**Wed 30/4/25**	
154	Original Completion Date	0 days	Thu 27/6/24	Thu 27/6/24	148FS+365 days
155	Commencement of Establishment Work	0 days	Wed 1/5/24	Wed 1/5/24	156SS
156	Establishment Work Duration	365 days	Wed 1/5/24	Wed 30/4/25	152
157	Anticipated Completion Date	0 days	Wed 30/4/25	Wed 30/4/25	156FF
158	**Section of Works 9 - Portion 17**	**977 days**	**Sun 27/2/22**	**Wed 30/10/24**	
159	Original Completion Date	0 days	Fri 29/12/23	Fri 29/12/23	2FS+882 days
160	Access date	0 days	Sun 27/2/22	Sun 27/2/22	2FS+212 days
161	Construction Duration	671 days	Sun 27/2/22	Fri 29/12/23	160
162	Potential EOT due to Inclement weather and CEs	306 days	Sat 30/12/23	Wed 30/10/24	161
163	Anticipated Completion Date	0 days	Wed 30/10/24	Wed 30/10/24	162,1122FF



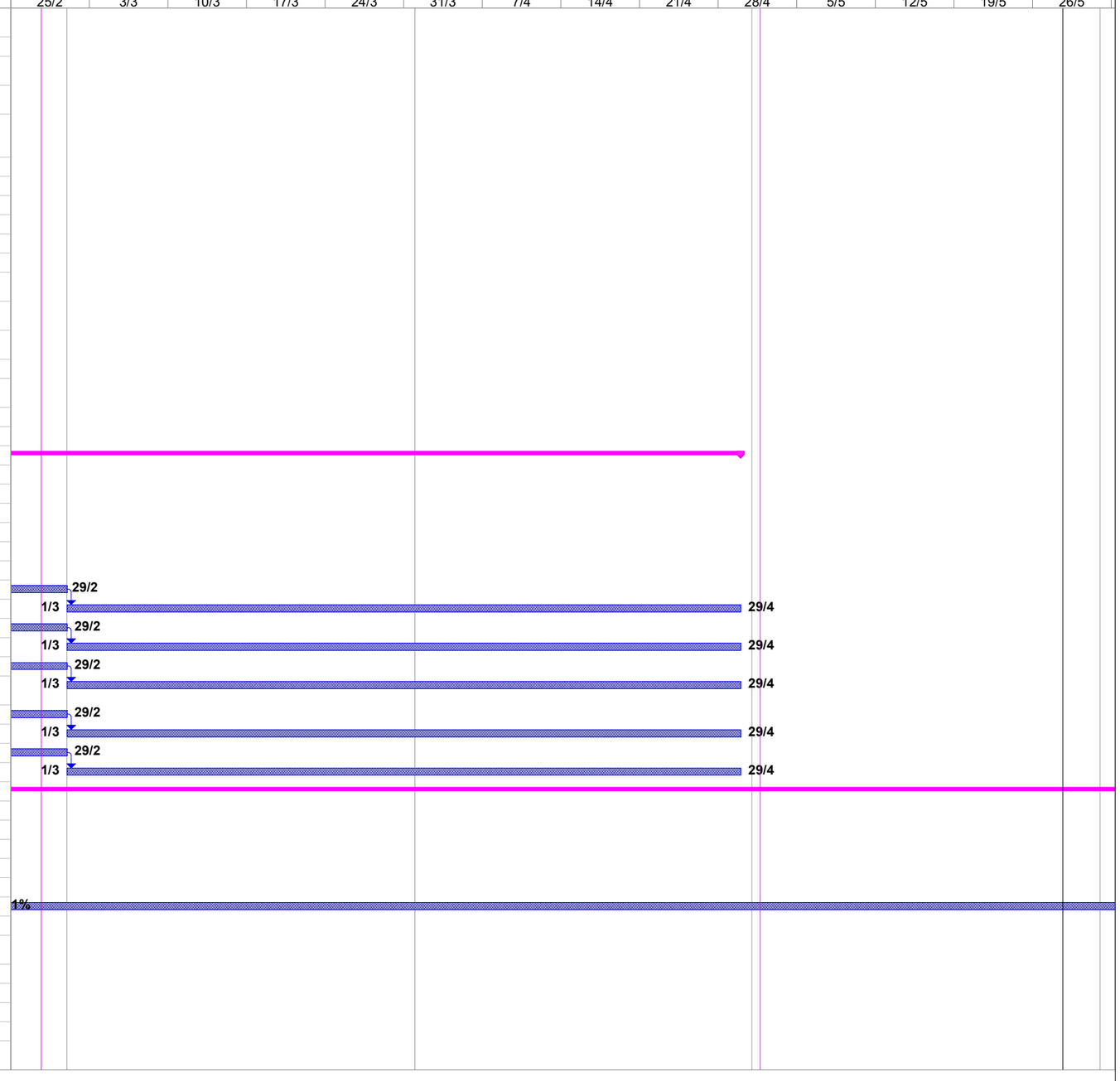
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
164	**Section of Works 9A - Establishment Works for all Landscape Softworks in Section 9 of the Works**	**365 days**	**Wed 30/10/24**	**Thu 30/10/25**	
165	Original Completion Date	0 days	Sat 28/12/24	Sat 28/12/24	159FS+365 days
166	Commencement of Establishment Work	0 days	Wed 30/10/24	Wed 30/10/24	163SS
167	Establishment Work Duration	365 days	Thu 31/10/24	Thu 30/10/25	163
168	Anticipated Completion Date	0 days	Wed 30/10/24	Wed 30/10/24	163FF
169	**Section of Works 10 - All Tree Protection and Preservation Works**	**1202 days**	**Fri 30/7/21**	**Tue 12/11/24**	
170	Original Completion Date	0 days	Fri 29/12/23	Fri 29/12/23	131FF
171	Commencement of All Tree Protection and Preservation Work	0 days	Fri 30/7/21	Fri 30/7/21	2
172	All Tree Protection and Preservation Work	883 days	Fri 30/7/21	Fri 29/12/23	171
173	Potential EOT due to Inclement weather and CE	319 days	Sat 30/12/23	Tue 12/11/24	172
174	Completion of All Tree Protection and Preservation Work	0 days	Tue 12/11/24	Tue 12/11/24	173,1202FF
175	**Preliminaries**	**1567 days**	**Fri 30/7/21**	**Wed 12/11/25**	
176	**Establishment of Commercial/Organization**	**370 days**	**Fri 30/7/21**	**Wed 3/8/22**	
177	Inform Contractor of the name and delegated authorities of the PMD (ER)	7 days	Fri 30/7/21	Thu 5/8/21	2
178	Confirmation and arrangement of the method of payment	7 days	Fri 30/7/21	Thu 5/8/21	2
179	Issue forms to CIC& PCFB	14 days	Fri 30/7/21	Thu 12/8/21	2
180	Submission of MPF form to MPFSA	7 days	Fri 30/7/21	Thu 5/8/21	2
181	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	2
182	Submission of Summary Details of Contract to the Departmental Safety and Environmental	21 days	Fri 30/7/21	Thu 19/8/21	2
183	Nominate a Labour Officer	7 days	Fri 30/7/21	Thu 5/8/21	2
184	Set up Site Liaison Group (SLG)	7 days	Fri 30/7/21	Thu 5/8/21	2
185	Professional video production company and a competent video director	7 days	Fri 30/7/21	Thu 5/8/21	2
186	Surveyor, Key People	7 days	Fri 30/7/21	Thu 5/8/21	2
187	Traffic Consultant, Traffic Engineer	7 days	Fri 30/7/21	Thu 5/8/21	2
188	Particulars of Independent service provider for Digital Works Supervision Syst	7 days	Fri 30/7/21	Thu 5/8/21	2
189	Contractor's Management Team	14 days	Fri 30/7/21	Thu 12/8/21	2
190	BIM team	14 days	Fri 30/7/21	Thu 12/8/21	2
191	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	2
192	Content of Contract Webpage (Monthly update afterwards)	21 days	Fri 30/7/21	Thu 19/8/21	2
193	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	2
194	Details of Geotechnical monitoring team	21 days	Fri 30/7/21	Thu 19/8/21	2
195	Design of the CRE Site Office certified by an accepted ICE	30 days	Fri 30/7/21	Sat 28/8/21	2
196	Design Architect	30 days	Fri 30/7/21	Sat 28/8/21	2
197	Specially required staff	30 days	Fri 30/7/21	Sat 28/8/21	2
198	Public Relation Officer	30 days	Fri 30/7/21	Sat 28/8/21	2
199	Site Safety Committee (SSC) Meeting (monthly afterwards)	30 days	Fri 30/7/21	Sat 28/8/21	2
200	Meeting of the SSMC (monthly afterwards)	30 days	Fri 30/7/21	Sat 28/8/21	2
201	Professional Indemnity Insurance in respect of Contractor's Design	60 days	Fri 30/7/21	Mon 27/9/21	2
202	Proposed gasket material for waterworks	60 days	Fri 30/7/21	Mon 27/9/21	2
203	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	2
204	2 Engineering Graduates & 3 Technician apprentices	90 days	Fri 30/7/21	Wed 27/10/21	2
205	Commissioning of DWSS	90 days	Fri 30/7/21	Wed 27/10/21	2
206	Agree on the content and presentation of the dashboard of DWSS	90 days	Fri 30/7/21	Wed 27/10/21	2
207	Monthly collaboration and information exchange of BIM	90 days	Fri 30/7/21	Wed 27/10/21	2
208	Combined Services Drawing (CSD) and CBWD generated from BIM model	90 days	Fri 30/7/21	Wed 27/10/21	2
209	Video script for Project Video Film	180 days	Fri 30/7/21	Tue 25/1/22	2
210	Employment of Construction Industry Council's Graduates (min. 4 graduates)	180 days	Fri 30/7/21	Tue 25/1/22	2
211	Nomination of Treatment process specialist, Design Engineer, and Independent Checking Engineer (ICE)	34 days	Fri 1/7/22	Wed 3/8/22	
212	**Plan & Proposals**	**60 days**	**Fri 30/7/21**	**Mon 27/9/21**	
213	Preparation and submission of Noise Mitigation Plan (3 hard copies, 2 electronic copies)	30 days	Fri 30/7/21	Sat 28/8/21	2
214	Preparation and submission of Waste Management Plan (WMP)	30 days	Fri 30/7/21	Sat 28/8/21	2



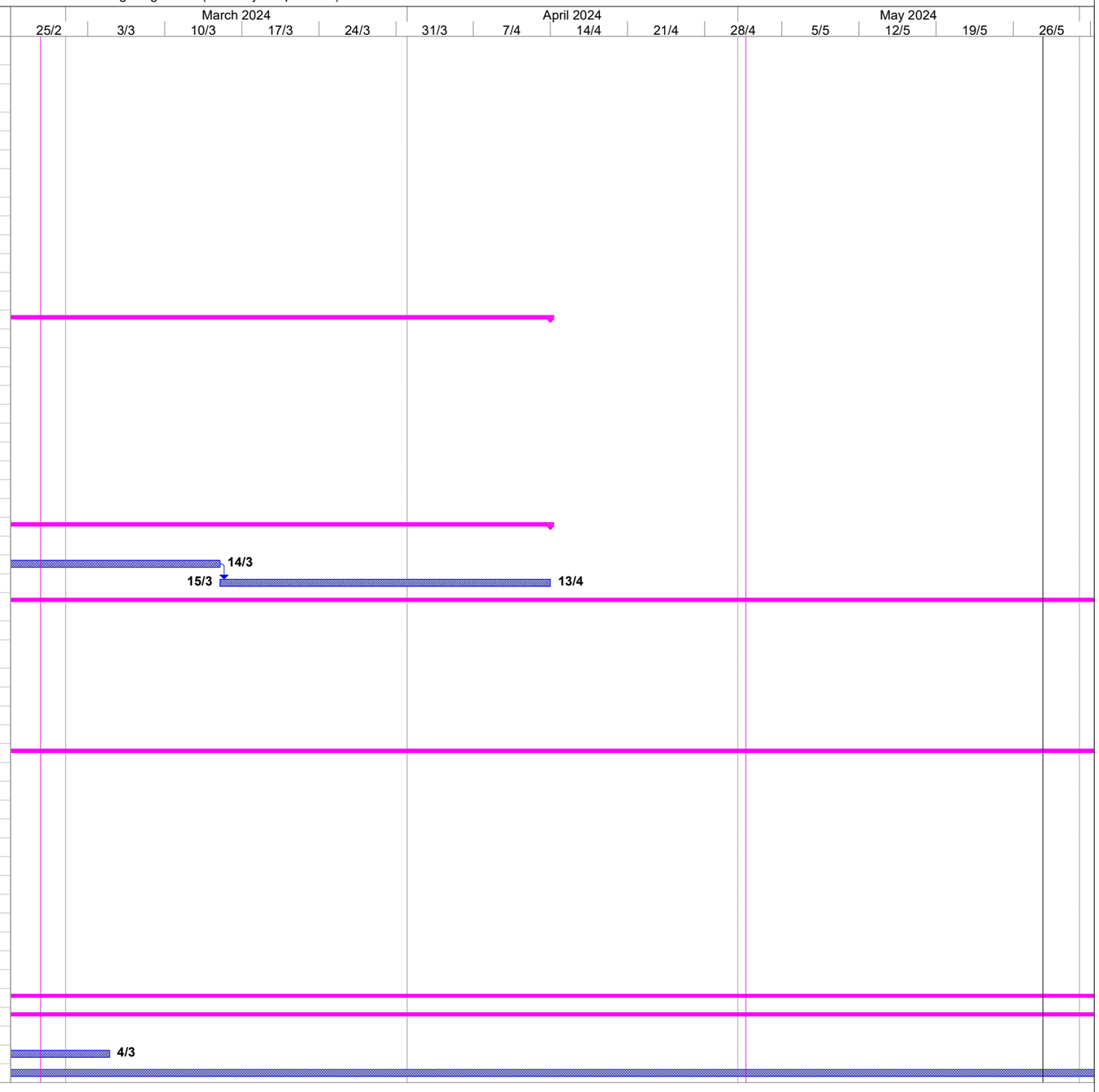
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
215	Preparation and submission of Draft Construction Health and Safety Plan (3 copies)	7 days	Fri 30/7/21	Thu 5/8/21	2
216	Preparation and submission of Quality Policy statement and quality plan	7 days	Fri 30/7/21	Thu 5/8/21	2
217	Preparation and submission of Draft Environmental Management Plan (EMP) 3 copies	4 days	Fri 30/7/21	Mon 2/8/21	2
218	Tender requirements for suppliers of Plant and Materials, Equipment and Insurance Proposal	14 days	Fri 30/7/21	Thu 12/8/21	2
219	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	2
220	Preparation Proposal for security system	14 days	Fri 30/7/21	Thu 12/8/21	2
221	Preparation and submission of DWSS proposal	21 days	Fri 30/7/21	Thu 19/8/21	2
222	Preparation and submission of Subcontractor Management Plan (SMP)	21 days	Fri 30/7/21	Thu 19/8/21	2
223	Preparation and submission of Construction Health and Safety Plan (6 copies	30 days	Fri 30/7/21	Sat 28/8/21	2
224	Weather protection scheme	30 days	Fri 30/7/21	Sat 28/8/21	2
225	Proposal of COBie information requirements	30 days	Fri 30/7/21	Sat 28/8/21	2
226	Preparation and submission of Final Environmental Management Plan (EMP) 3 copies	30 days	Fri 30/7/21	Sat 28/8/21	2
227	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	2
228	Preparation and submission of Site Traffic Safety Management Plan (STSMP), (monthly update)	60 days	Fri 30/7/21	Mon 27/9/21	2
229	Preparation and submission of Site Management Plan for TTS	60 days	Fri 30/7/21	Mon 27/9/21	2
230	Preparation and submission of BIM Execution Plan accordance with the PSA 1.14D	60 days	Fri 30/7/21	Mon 27/9/21	2
231	Public Relation (PR) Company, PR plan	60 days	Fri 30/7/21	Mon 27/9/21	2
232	Preparation and submission of Temporary drainage management plan	7 days	Fri 30/7/21	Thu 5/8/21	2
233	**Procurements of Major Materials**	**411 days**	**Thu 16/3/23**	**Mon 29/4/24**	
234	Procurement & material submission of bearing for elevated walkway	45 days	Thu 16/3/23	Sat 29/4/23	
235	Design, manufacturing and FAT of bearing for elevated walkway	115 days	Sun 30/4/23	Tue 22/8/23	234
236	Deliveries and site inspection of bearing for elevated walkway etc.	15 days	Wed 23/8/23	Wed 6/9/23	235
237	Procurement & material submission of movement joinst for elevated walkway	45 days	Thu 16/3/23	Sat 29/4/23	
238	Design, manufacturing and FAT of movement joinst for elevated walkway	115 days	Sun 30/4/23	Tue 22/8/23	237
239	Deliveries and site inspection of movement joinst for elevated walkway etc.	15 days	Wed 23/8/23	Wed 6/9/23	238
240	Procurement of Raise Planter Type A&B	60 days	Mon 1/1/24	Thu 29/2/24	
241	Manufacturing, FAT & delivery of Raise Planter Type A&B	60 days	Fri 1/3/24	Mon 29/4/24	240
242	Procurement of Balustrade Wall BW1-2	60 days	Mon 1/1/24	Thu 29/2/24	
243	Manufacturing, FAT & delivery of Balustrade Wall BW1-2	60 days	Fri 1/3/24	Mon 29/4/24	242
244	Procurement of Children Play Areas & water play area Park Facilities	60 days	Mon 1/1/24	Thu 29/2/24	
245	Design, Manufacturing, FAT & delivery of Children Play Areas & water play area Park Facilities	60 days	Fri 1/3/24	Mon 29/4/24	244
246	Procurement of Adult fitness Area Park Facilities	60 days	Mon 1/1/24	Thu 29/2/24	
247	Design Manufacturing, FAT & delivery of Adult fitness Area Park Facilities	60 days	Fri 1/3/24	Mon 29/4/24	246
248	Procurement of Elderly fitness Area Park Facilities	60 days	Mon 1/1/24	Thu 29/2/24	
249	Design, Manufacturing, FAT & delivery of Elderly fitness Area Park Facilities	60 days	Fri 1/3/24	Mon 29/4/24	248
250	**Programme**	**1537 days**	**Fri 30/7/21**	**Mon 13/10/25**	
251	Preparation & Submission of First Works Program	6 days	Fri 30/7/21	Wed 4/8/21	2
252	Preparation & Submission of Three Months Rolling Program	14 days	Fri 30/7/21	Thu 12/8/21	2
253	Program Review and Acceptance of First Program	14 days	Thu 5/8/21	Wed 18/8/21	251
254	Preparation and Submission of Detailed Works Program	60 days	Thu 19/8/21	Sun 17/10/21	253,252
255	Program Review and Acceptance of Works Program	14 days	Mon 18/10/21	Sun 31/10/21	254
256	Implementation of Programme Management and Monthly Reporting	1443 days	Mon 1/11/21	Mon 13/10/25	255
257	**Permit and Licences**	**60 days**	**Fri 30/7/21**	**Mon 27/9/21**	
258	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	2
259	Risk Assessment for slope works	7 days	Fri 30/7/21	Thu 5/8/21	2
260	Welfare facilities for workers in accordance with requirements in PS Clause 1.	7 days	Fri 30/7/21	Thu 5/8/21	2
261	UU detection equipment brand/model	7 days	Fri 30/7/21	Thu 5/8/21	2
262	Certified calibration certificates	7 days	Fri 30/7/21	Thu 5/8/21	2
263	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	2



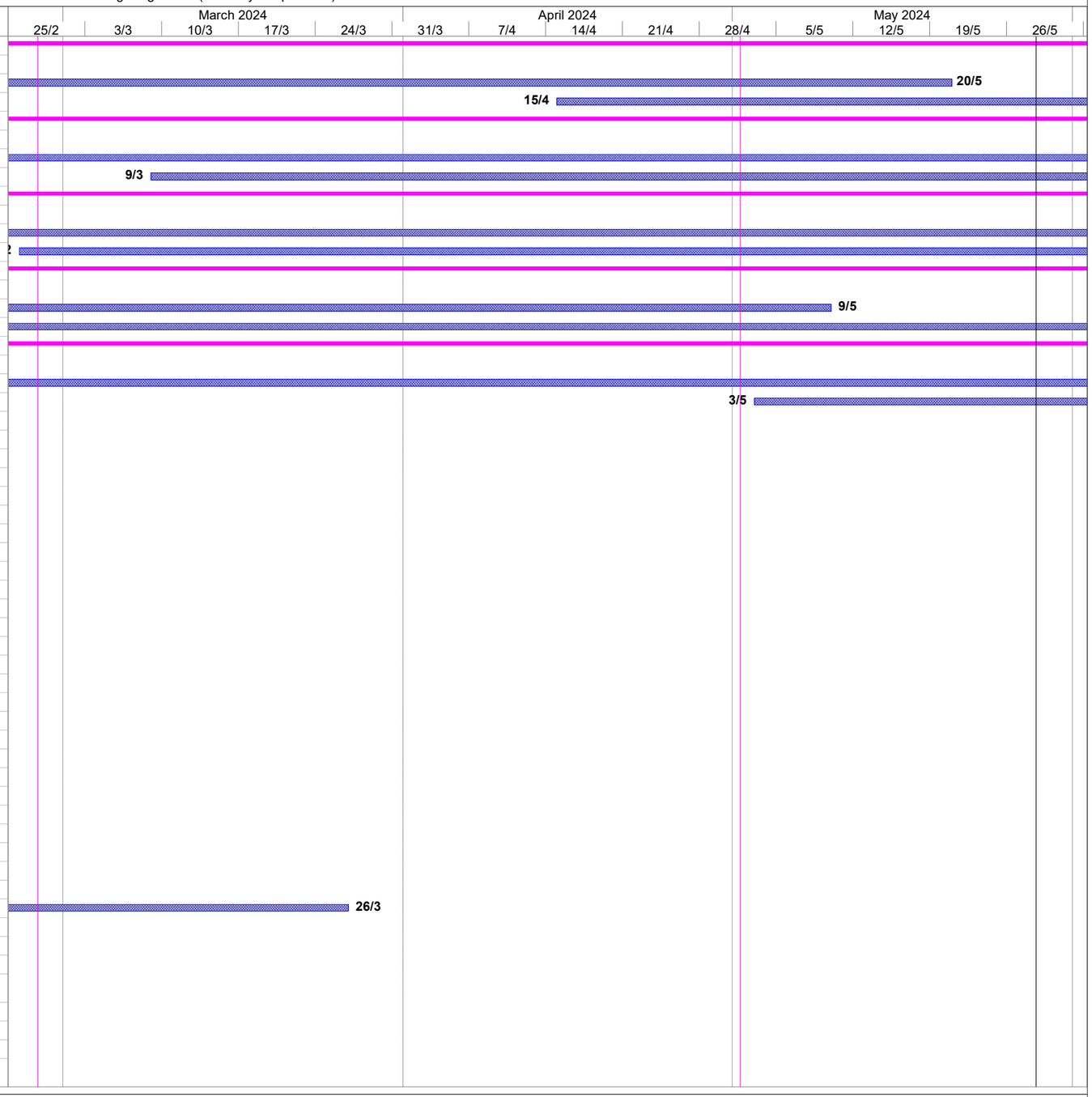
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
264	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	2
265	Site Cleanliness and Tidiness	7 days	Fri 30/7/21	Thu 5/8/21	2
266	3 sets of coloured record photos in SR size (recording existing building/ street furniture……)	7 days	Fri 30/7/21	Thu 5/8/21	2
267	Contract Cars	7 days	Fri 30/7/21	Thu 5/8/21	2
268	Design of uniform for site workers	7 days	Fri 30/7/21	Thu 5/8/21	2
269	Survey Equipment for Initial survey	7 days	Fri 30/7/21	Thu 5/8/21	2
270	Inclinometer access tubes - suppliers, material specification and samples of the tubes and couplings	14 days	Fri 30/7/21	Thu 12/8/21	2
271	Payment of Wages System for Site Workers	14 days	Fri 30/7/21	Thu 12/8/21	2
272	Tree survey record	14 days	Fri 30/7/21	Thu 12/8/21	2
273	Supply of Survey Equipment for PM use	30 days	Fri 30/7/21	Sat 28/8/21	2
274	Complete setting up and begin to operate the Security System	60 days	Fri 30/7/21	Mon 27/9/21	2
275	Initial Survey	60 days	Fri 30/7/21	Mon 27/9/21	2
276	Assessment for the risk resulting from working in hot weather	60 days	Fri 30/7/21	Mon 27/9/21	2
277	**Contractor's Design**	**653 days**	**Fri 1/7/22**	**Sat 13/4/24**	
278	**Architectural & Structural**	**183 days**	**Fri 1/7/22**	**Fri 30/12/22**	
279	Prepare & Submission	31 days	Fri 1/7/22	Sun 31/7/22	2
280	Internal Review & Submission	15 days	Mon 1/8/22	Mon 15/8/22	279
281	PM Review & AIP	16 days	Tue 16/8/22	Wed 31/8/22	280
282	Re-submission	30 days	Thu 1/9/22	Fri 30/9/22	281
283	Design Checker Review & Endorsement	7 days	Sat 1/10/22	Fri 7/10/22	282
284	DDA Submission (circulation to Government Authorities)	8 days	Sat 8/10/22	Sat 15/10/22	283
285	Time risk allowance for DDA processing	7 days	Sun 16/10/22	Sat 22/10/22	284
286	Vetting Process and Approval by Government Authorities and PM	69 days	Sun 23/10/22	Fri 30/12/22	285
287	Park lighting, irrigation system, smart system etc.	341 days	Mon 14/11/22	Fri 20/10/23	
288	**Covered walkway**	**150 days**	**Thu 16/11/23**	**Sat 13/4/24**	
289	Prepare	90 days	Thu 16/11/23	Tue 13/2/24	2
290	Internal review, ICE, CSD and submission	30 days	Wed 14/2/24	Thu 14/3/24	289
291	AIP	30 days	Fri 15/3/24	Sat 13/4/24	290
292	**Contractor's Design [Enhancement on Architectural Design & Associated Works]**	**1036 days**	**Fri 14/1/22**	**Thu 14/11/24**	
293	Engagement of Design Architectural Firm (CE 005)	0 days	Fri 14/1/22	Fri 14/1/22	
294	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	293
295	**AIP and approvals**	**275 days**	**Fri 1/7/22**	**Sat 1/4/23**	
296	Schematic Landscape Master Plan (LMP), Design AIP, GBP approval	153 days	Fri 1/7/22	Wed 30/11/22	293
297	Production of AIP Drawings	92 days	Sat 31/12/22	Sat 1/4/23	296
298	DSD's AIP approval	0 days	Sat 1/4/23	Sat 1/4/23	297
299	**Detailed Design Submission Schedule**	**473 days**	**Mon 31/7/23**	**Thu 14/11/24**	
300	**Statutory submission**	**92 days**	**Wed 30/8/23**	**Thu 30/11/23**	**298**
301	FSD submission for GBP	0 days	Thu 30/11/23	Thu 30/11/23	
302	WWO542 documment	0 days	Wed 30/8/23	Wed 30/8/23	
303	**Civil**	**46 days**	**Wed 30/8/23**	**Sun 15/10/23**	**298**
304	Underground rain water drainage	0 days	Sun 15/10/23	Sun 15/10/23	
305	Underground watermain	0 days	Wed 30/8/23	Wed 30/8/23	
306	Undergroud sewerage	0 days	Sat 30/9/23	Sat 30/9/23	
307	Irrigation	0 days	Wed 30/8/23	Wed 30/8/23	
308	**Landscape and Miscellaneous**	**101 days**	**Mon 21/8/23**	**Thu 30/11/23**	**298**
309	Landscape	56 days	Mon 21/8/23	Sun 15/10/23	
310	Smart weir system	0 days	Mon 30/10/23	Mon 30/10/23	
311	Flood warning system	0 days	Thu 30/11/23	Thu 30/11/23	
312	**Building**	**473 days**	**Mon 31/7/23**	**Thu 14/11/24**	
313	**A1: Lavatories**	**473 days**	**Mon 31/7/23**	**Thu 14/11/24**	
314	Architecture	32 days	Mon 31/7/23	Thu 31/8/23	
315	Structure	150 days	Sat 7/10/23	Mon 4/3/24	
316	E& M	316 days	Thu 4/1/24	Thu 14/11/24	



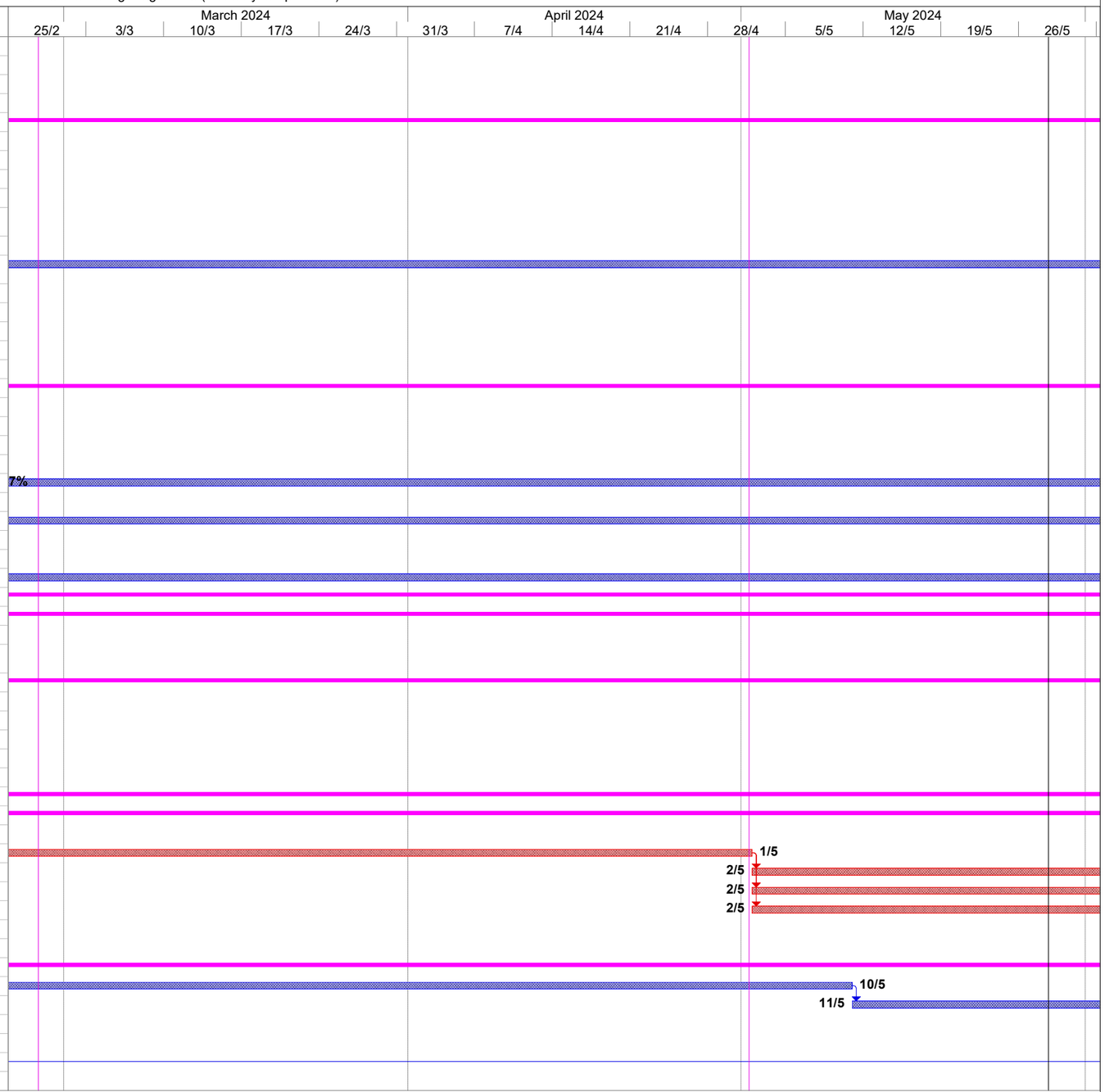
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
317	**A2: Management Office Building**	**458 days**	**Tue 15/8/23**	**Thu 14/11/24**	
318	Architecture	17 days	Tue 15/8/23	Thu 31/8/23	
319	Structure	220 days	Sat 14/10/23	Mon 20/5/24	
320	E& M	214 days	Mon 15/4/24	Thu 14/11/24	
321	**B1: Multi-Purpose Building**	**458 days**	**Tue 15/8/23**	**Thu 14/11/24**	
322	Architecture	17 days	Tue 15/8/23	Thu 31/8/23	
323	Structure	224 days	Sat 28/10/23	Fri 7/6/24	
324	E& M	251 days	Sat 9/3/24	Thu 14/11/24	
325	**B2: TX Room/Lavatories**	**458 days**	**Tue 15/8/23**	**Thu 14/11/24**	
326	Architecture	29 days	Tue 15/8/23	Tue 12/9/23	
327	Structure	199 days	Thu 21/12/23	Sat 6/7/24	
328	E& M	263 days	Mon 26/2/24	Thu 14/11/24	
329	**C1: Storeroom/Lavatories**	**473 days**	**Mon 31/7/23**	**Thu 14/11/24**	
330	Architecture	32 days	Mon 31/7/23	Thu 31/8/23	
331	Structure	269 days	Tue 15/8/23	Thu 9/5/24	
332	E& M	280 days	Fri 9/2/24	Thu 14/11/24	
333	**C2: Water Treatment Plant Room**	**458 days**	**Tue 15/8/23**	**Thu 14/11/24**	
334	Architecture	17 days	Tue 15/8/23	Thu 31/8/23	
335	Structure	271 days	Sat 7/10/23	Wed 3/7/24	
336	E& M	196 days	Fri 3/5/24	Thu 14/11/24	
337	**Schedule of Accommodation (SoA) Submission**	**141 days**	**Sun 2/4/23**	**Mon 21/8/23**	**298**
338	**Stage 1**	**56 days**	**Sun 2/4/23**	**Sat 27/5/23**	
339	Agree SoA with DSD	14 days	Sun 2/4/23	Sat 15/4/23	
340	Workshop	8 days	Sun 16/4/23	Sun 23/4/23	339
341	GPA submission and approval	34 days	Mon 24/4/23	Sat 27/5/23	340
342	**Stage 2**	**63 days**	**Mon 19/6/23**	**Mon 21/8/23**	**341**
343	Submission	0 days	Mon 19/6/23	Mon 19/6/23	
344	approval	0 days	Mon 21/8/23	Mon 21/8/23	343
345	**DSD's VCAB submission**	**183 days**	**Fri 7/4/23**	**Fri 6/10/23**	
346	**Stage 1 - AIP**	**28 days**	**Fri 7/4/23**	**Thu 4/5/23**	
347	Submission and presentation	8 days	Fri 7/4/23	Fri 14/4/23	
348	Approval	20 days	Sat 15/4/23	Thu 4/5/23	347
349	**Stage 2 - Detailed design**	**67 days**	**Tue 1/8/23**	**Fri 6/10/23**	**348**
350	Submission and presentation	0 days	Tue 1/8/23	Tue 1/8/23	
351	VCAB meeting	0 days	Thu 7/9/23	Thu 7/9/23	350
352	Approval	30 days	Thu 7/9/23	Fri 6/10/23	351
353	**Sub-letting (Cost Trimming Scheme)**	**211 days**	**Wed 1/3/23**	**Wed 27/9/23**	
354	Drawings for cost estimation	30 days	Wed 1/3/23	Thu 30/3/23	298FS-32 days
355	Tender approval	11 days	Fri 31/3/23	Mon 10/4/23	354
356	Tender addendum	8 days	Mon 17/4/23	Mon 24/4/23	355
357	Sub-letting Period	25 days	Tue 4/4/23	Fri 28/4/23	356FS-21 days
358	Tender Assessment & approval	12 days	Sat 29/4/23	Wed 10/5/23	357
359	PMI preparation	58 days	Thu 11/5/23	Fri 7/7/23	358
360	Recost trimming by DSD	21 days	Sat 8/7/23	Fri 28/7/23	359
361	Resubmission of detailed design	30 days	Tue 8/8/23	Wed 6/9/23	360
362	Retendering	21 days	Thu 7/9/23	Wed 27/9/23	361
363	Material submission	181 days	Thu 28/9/23	Tue 26/3/24	362
364	**Method Statements & Temporary Works**	**792 days**	**Fri 30/7/21**	**Fri 29/9/23**	
365	Prepartion & submission of generic method statement for site formation work	60 days	Tue 1/11/22	Fri 30/12/22	
366	Preparation & submission of generic method statement for earth slope works	60 days	Tue 1/11/22	Fri 30/12/22	
367	Preparation & submission of generic method statement for retaining wall construction	60 days	Wed 1/6/22	Sat 30/7/22	
368	Preparation & submission of generic method statement for G.I works	60 days	Fri 30/7/21	Mon 27/9/21	
369	Preparation & Submission of generic method statement for drainage works	60 days	Fri 30/7/21	Mon 27/9/21	
370	Preparation and submission of generic method statement of road works	60 days	Tue 1/11/22	Fri 30/12/22	
371	Preparation & submission of generic method statement of elevated walkway construciton	60 days	Thu 1/6/23	Sun 30/7/23	



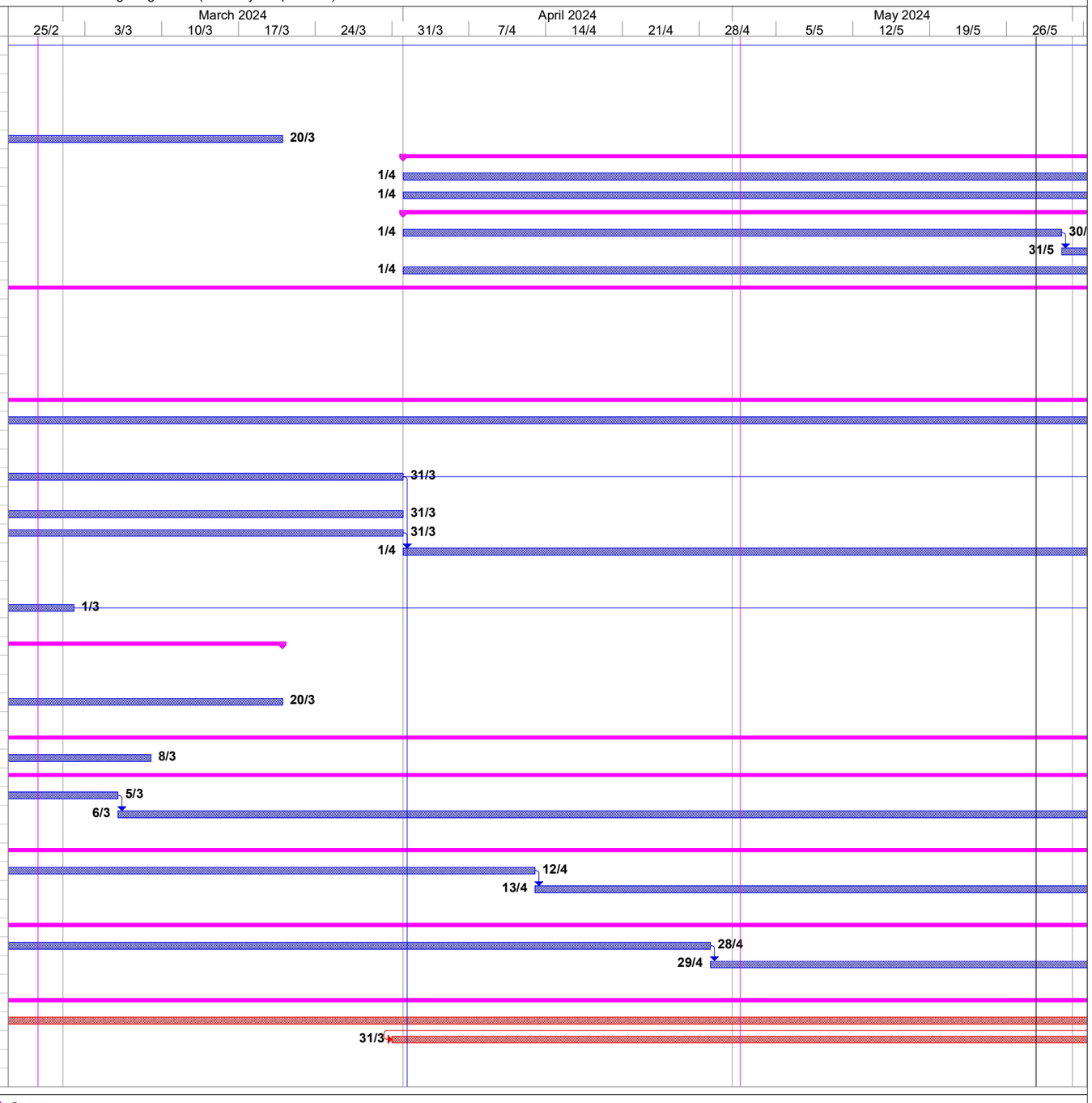
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
372	Temporary Work for cut/fill slope works	60 days	Tue 1/11/22	Fri 30/12/22	
373	Temporary Work for retaining wall construction	60 days	Wed 1/6/22	Sat 30/7/22	
374	Temporary Work for elevated walkway construction	60 days	Tue 1/8/23	Fri 29/9/23	
375	Temporary Work for road and drainage works	60 days	Fri 30/7/21	Mon 27/9/21	
376	**BIM Deliverable**	**1567 days**	**Fri 30/7/21**	**Wed 12/11/25**	
377	Submission of COBie Information Requirements for Asset Management	30 days	Fri 30/7/21	Sat 28/8/21	
378	Submission of BIM Execution Plan in accordance with the PS Appendix 1.14D	60 days	Fri 30/7/21	Mon 27/9/21	
379	Submission of Combined Services Drawings	90 days	Fri 30/7/21	Wed 27/10/21	
380	Submission of proposal for BIM training plan	90 days	Fri 30/7/21	Wed 27/10/21	
381	Nomination of staff or subcontractor to attend BIM skill training courses under the pre approved list of the CITF managed by the CIC	120 days	Fri 30/7/21	Fri 26/11/21	
382	Collaboration and Model Sharing	60 days	Thu 28/10/21	Sun 26/12/21	378FS+30 days
383	Monthly Coordination meeting& Submission of monthly BIM progress reports & Submission of 4D Simulation	1417 days	Mon 27/12/21	Wed 12/11/25	382
384	Submission of COBie data deliverables	30 days	Sun 14/9/25	Mon 13/10/25	383FS-60 days
385	Submission of a Fully Coordinated BIM Model with field verified in LOD 500	30 days	Thu 2/10/25	Fri 31/10/25	383FS-42 days
386	Submission of O&M Manuals, Product Catalogues and Operating Data	30 days	Thu 2/10/25	Fri 31/10/25	383FS-42 days
387	Submission of As-built drawings	30 days	Thu 2/10/25	Fri 31/10/25	383FS-42 days
388	Submission of Asset Data	30 days	Thu 2/10/25	Fri 31/10/25	383FS-42 days
389	**Work Area**	**1572 days**	**Fri 30/7/21**	**Mon 17/11/25**	
390	CRE Site Office Design & ICE Endorsement	30 days	Fri 30/7/21	Sat 28/8/21	
391	CRE Site office Design Review and Acceptance	30 days	Sun 29/8/21	Mon 27/9/21	390
392	CRE Site office Construction Works	90 days	Tue 28/9/21	Sun 26/12/21	391
393	Completion of CRE Site office Construction Works	0 days	Mon 24/1/22	Mon 24/1/22	392
394	CRE Site office Mobilization & Maintenance	1394 days	Mon 24/1/22	Mon 17/11/25	392,393
395	Access for Works Area	0 days	Fri 30/7/21	Fri 30/7/21	
396	Maintenance Duration for Works Area	1566 days	Sat 31/7/21	Wed 12/11/25	395FS+1 day
397	Vacate / Handover Works Area	0 days	Wed 12/11/25	Wed 12/11/25	
398	Setting up Contractor's Project office	90 days	Tue 28/9/21	Sun 26/12/21	2
399	Contractor Site office Maintenance	1389 days	Mon 24/1/22	Wed 12/11/25	398
400	**Construction Works**	**1567 days**	**Fri 30/7/21**	**Wed 12/11/25**	
401	**Section of Works 1 - Portions 1a, 2a, 2b**	**1202 days**	**Fri 30/7/21**	**Tue 12/11/24**	
402	Engagement of Design Architectural Firm (CE 005)	0 days	Fri 14/1/22	Fri 14/1/22	
403	Enhancement on Architectual Design & Associated Works at Portions 1a, 2a and 2b (Quarry Lake) (CE 070)	0 days	Fri 30/7/21	Fri 30/7/21	
404	**Portion 1a**	**929 days**	**Fri 29/4/22**	**Tue 12/11/24**	
405	Provision of site access [273 days after starting date as per Contract]	0 days	Fri 29/4/22	Fri 29/4/22	11SS
406	Preparation& submission of MS, Temp works, associated plans & docs	210 days	Wed 1/2/23	Tue 29/8/23	402,405
407	Engineer's AIP of MS, Temp works, plans & associated docs	210 days	Wed 1/3/23	Tue 26/9/23	406SS+28 days
408	Mobilization & Site Clearance	14 days	Fri 14/4/23	Thu 27/4/23	405
409	Time Risk Allowance	14 days	Fri 28/4/23	Thu 11/5/23	408
410	**Urban Forest**	**602 days**	**Wed 22/3/23**	**Tue 12/11/24**	
411	**North Portion (Sloping)**	**602 days**	**Wed 22/3/23**	**Tue 12/11/24**	
412	Watermain	63 days	Fri 1/12/23	Thu 1/2/24	
413	Site formation	90 days	Fri 2/2/24	Wed 1/5/24	412
414	Soil replacement & bioswale system	135 days	Thu 2/5/24	Fri 13/9/24	413
415	Landscape wall and seat	135 days	Thu 2/5/24	Fri 13/9/24	413
416	U channel, edge and pavement	135 days	Thu 2/5/24	Fri 13/9/24	413
417	Tree transplanting from nursery	60 days	Sat 14/9/24	Tue 12/11/24	418FF
418	Soft landscaping works	60 days	Sat 14/9/24	Tue 12/11/24	414,415,416,438
419	**Boardwalk**	**145 days**	**Thu 1/2/24**	**Mon 24/6/24**	
420	Structure	100 days	Thu 1/2/24	Fri 10/5/24	
421	Finishes	45 days	Sat 11/5/24	Mon 24/6/24	420
422	Application for electricity power supply	224 days	Wed 22/3/23	Tue 31/10/23	
423	Lighting design	210 days	Wed 22/3/23	Tue 17/10/23	422SS
424	Underground cable ducts	90 days	Wed 18/10/23	Mon 15/1/24	423
425	Application for water supply	138 days	Mon 26/6/23	Fri 10/11/23	



Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
426	Underground water supply for irrigation	90 days	Sat 11/11/23	Thu 8/2/24	425
427	Lighting system	92 days	Thu 1/8/24	Thu 31/10/24	424
428	Irrigation system	92 days	Thu 1/8/24	Thu 31/10/24	426
429	Approval of WWO542	30 days	Wed 1/11/23	Thu 30/11/23	
430	Approval of WWO 046	21 days	Fri 1/12/23	Thu 21/12/23	429
431	Underground water supply for irrigation	90 days	Fri 22/12/23	Wed 20/3/24	430SS+4 days
432	**South Portion**	**150 days**	**Mon 1/4/24**	**Wed 28/8/24**	
433	Shelter	100 days	Mon 1/4/24	Tue 9/7/24	
434	Construction of wetland	150 days	Mon 1/4/24	Wed 28/8/24	
435	**Boardwalk**	**90 days**	**Mon 1/4/24**	**Sat 29/6/24**	
436	Structure	60 days	Mon 1/4/24	Thu 30/5/24	
437	Finishes	30 days	Fri 31/5/24	Sat 29/6/24	436
438	U channel, edge and pavement	122 days	Mon 1/4/24	Wed 31/7/24	
439	**Portion 2a**	**1171 days**	**Mon 30/8/21**	**Tue 12/11/24**	
440	Provision of site access [31 days after starting date as per Contract]	8 days	Mon 30/8/21	Mon 6/9/21	16SS
441	Mobilization & Site Clearance	14 days	Tue 7/9/21	Mon 20/9/21	440
442	Preparation & submission of MS, Temp.works, associated plans & docs	210 days	Wed 1/2/23	Tue 29/8/23	402
443	Engineer's AIP of MS, Temp works, plans & associated docs	210 days	Wed 1/3/23	Tue 26/9/23	442SS+28 days
444	Time Risk Allowance	24 days	Tue 21/9/21	Thu 14/10/21	441
445	**Lake side**	**590 days**	**Wed 22/3/23**	**Thu 31/10/24**	
446	Pool edge, paving and finishing	150 days	Thu 1/2/24	Sat 29/6/24	
447	Application for electricity power supply	210 days	Wed 22/3/23	Tue 17/10/23	
448	Lighting design	150 days	Wed 22/3/23	Fri 18/8/23	447SS
449	Underground cable ducts	60 days	Thu 1/2/24	Sun 31/3/24	448
450	Application for water supply	128 days	Mon 26/6/23	Tue 31/10/23	
451	Underground water supply for irrigation	60 days	Thu 1/2/24	Sun 31/3/24	450
452	Drainage pipes	60 days	Thu 1/2/24	Sun 31/3/24	
453	Emergency vehicular access	136 days	Mon 1/4/24	Wed 14/8/24	452
454	Outstanding works by NE/2016/01	91 days	Fri 1/9/23	Thu 30/11/23	
455	Subsoil drains and backfilling by C1	30 days	Fri 1/12/23	Sat 30/12/23	454
456	Bioswale near slope	92 days	Fri 1/12/23	Fri 1/3/24	454
457	Lighting system	61 days	Thu 1/8/24	Mon 30/9/24	449
458	**Irrigation system**	**141 days**	**Wed 1/11/23**	**Wed 20/3/24**	
459	Approval of WWO542	30 days	Wed 1/11/23	Thu 30/11/23	450,429SS
460	Approval of WWO 046	21 days	Fri 1/12/23	Thu 21/12/23	459
461	Underground water supply for irrigation	90 days	Fri 22/12/23	Wed 20/3/24	460SS+4 days
462	Soft landscaping works	92 days	Thu 1/8/24	Thu 31/10/24	456
463	**Buildings**	**463 days**	**Tue 8/8/23**	**Tue 12/11/24**	
464	Detailed designing	214 days	Tue 8/8/23	Fri 8/3/24	361SS
465	**A1: Lavatories**	**403 days**	**Sat 7/10/23**	**Tue 12/11/24**	
466	Structural works	151 days	Sat 7/10/23	Tue 5/3/24	352
467	Finishing and E&M works/Fire services	150 days	Wed 6/3/24	Fri 2/8/24	466
468	T& C	28 days	Wed 16/10/24	Tue 12/11/24	467,482SS
469	**A2: Management Office Building**	**403 days**	**Sat 7/10/23**	**Tue 12/11/24**	
470	Structural works	189 days	Sat 7/10/23	Fri 12/4/24	352
471	Finishing and E&M works/Fire services	150 days	Sat 13/4/24	Mon 9/9/24	470
472	T& C	28 days	Wed 16/10/24	Tue 12/11/24	471,482SS
473	**B1: Multi-Purpose Building**	**389 days**	**Sat 21/10/23**	**Tue 12/11/24**	
474	Structural works	191 days	Sat 21/10/23	Sun 28/4/24	352
475	Finishing and E&M works/Fire services	135 days	Mon 29/4/24	Tue 10/9/24	474
476	T& C	28 days	Wed 16/10/24	Tue 12/11/24	475,482SS
477	**B2: TX Room/Lavatories**	**375 days**	**Sat 4/11/23**	**Tue 12/11/24**	
478	Structural works	219 days	Sat 4/11/23	Sun 9/6/24	352
479	Finishing and E&M works/Fire services	113 days	Sun 31/3/24	Sun 21/7/24	478FS-71 days
480	Hand-over of Transformer Room	10 days	Mon 22/7/24	Wed 31/7/24	479
481	CLP installation and energisation	76 days	Thu 1/8/24	Tue 15/10/24	480



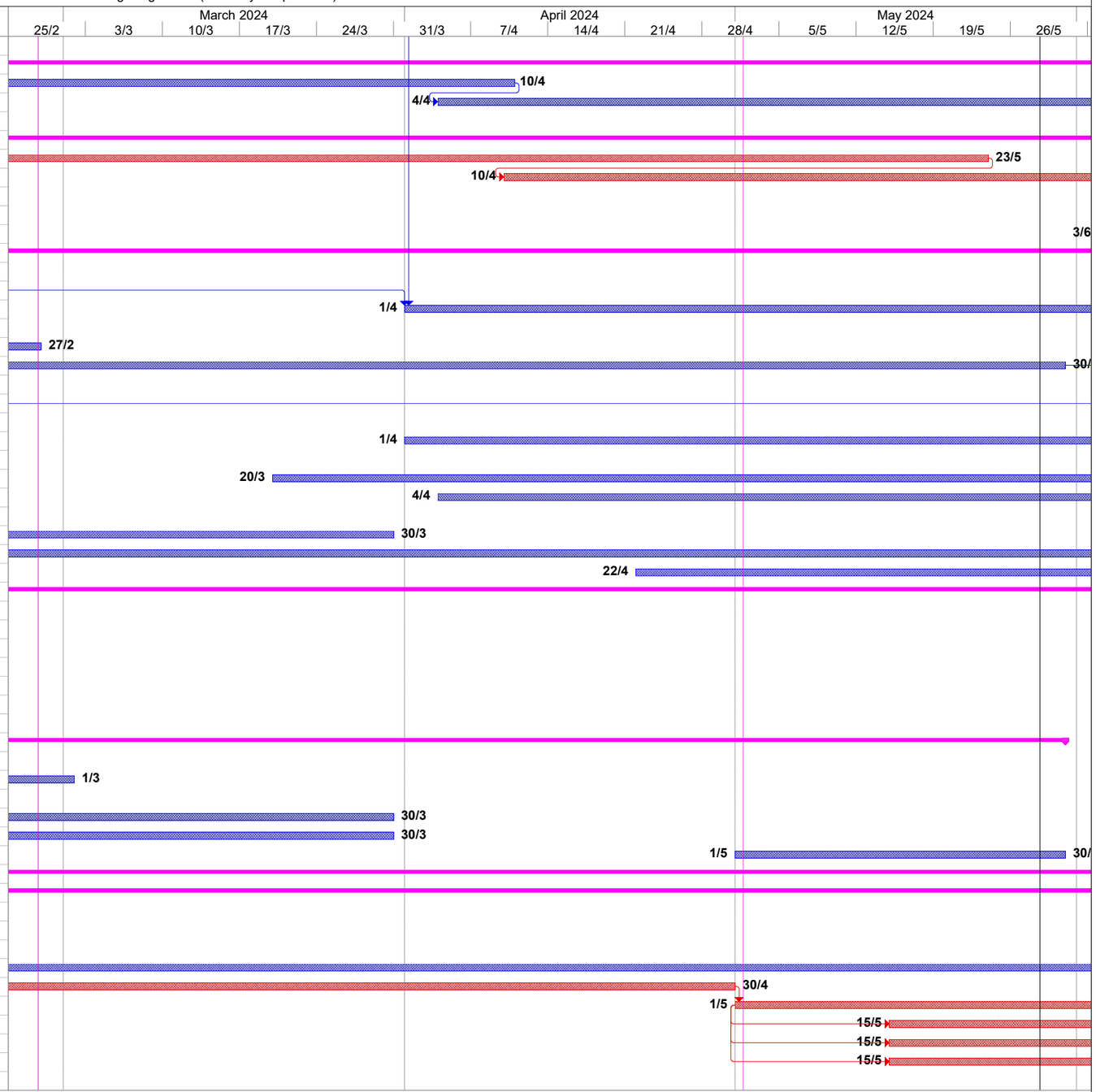
Task | Critical Task | Milestone | Summary | Progress

China International Water & Electric Corp.

CEDD Contract No. ED/2020/02
Development of Anderson Road Quarry Site - Infrastructure, Greening and Landscape Works
3 Months Rolling Programme (February to April 2024)

Updated on 1 Feb 2024

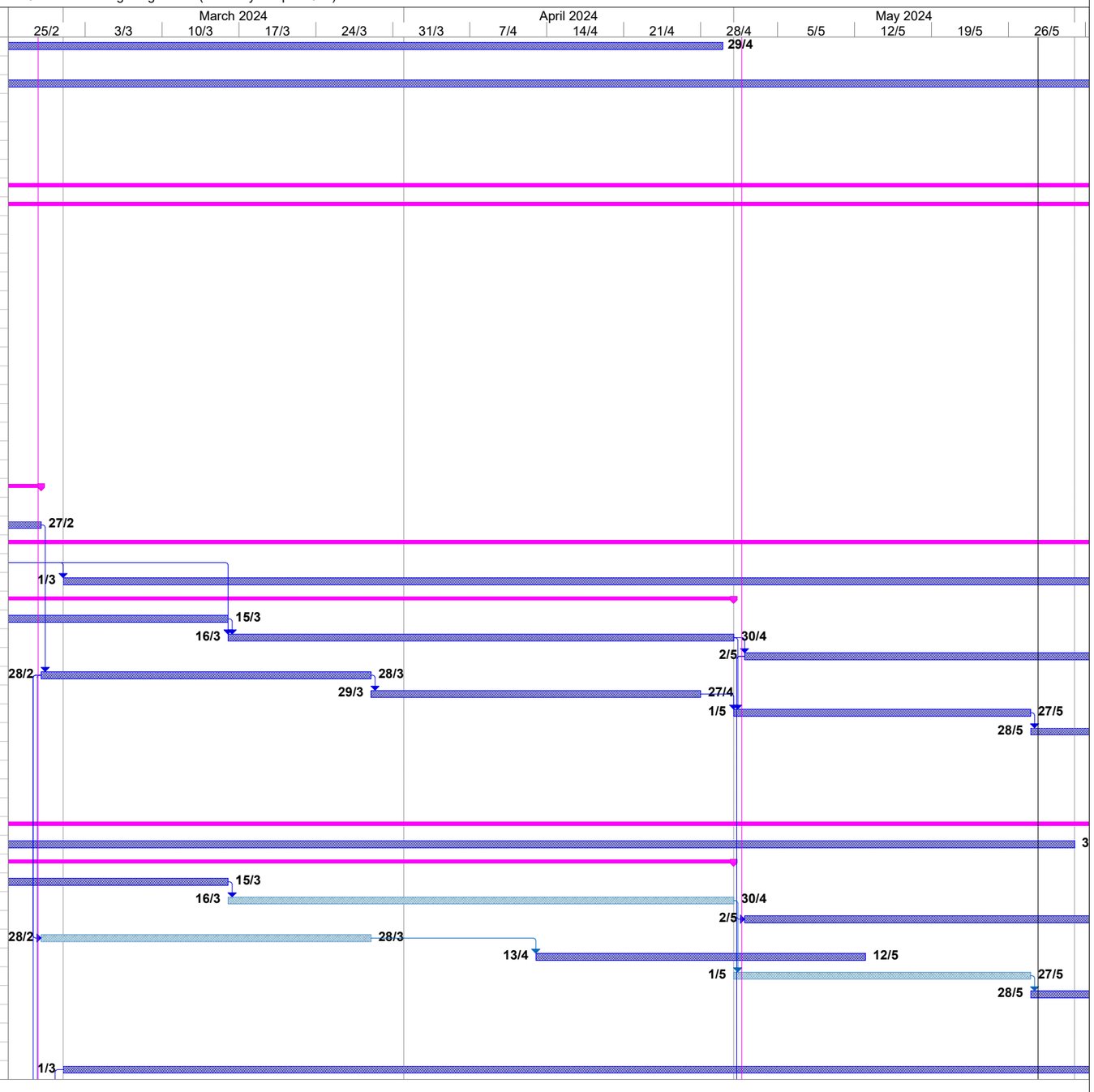
ID	Task Name	Duration	Start	Finish	Predecessors
482	T& C	28 days	Wed 16/10/24	Tue 12/11/24	481
483	**C1: Storeroom/Lavatories**	**340 days**	**Sat 9/12/23**	**Tue 12/11/24**	
484	Structural works	124 days	Sat 9/12/23	Wed 10/4/24	352
485	Finishing and E&M works/Fire services	150 days	Thu 4/4/24	Sat 31/8/24	484FS-7 days
486	T& C	28 days	Wed 16/10/24	Tue 12/11/24	485,482SS
487	**C2: Water Treatment Plant Room**	**403 days**	**Sat 7/10/23**	**Tue 12/11/24**	
488	Modification to existing structure	230 days	Sat 7/10/23	Thu 23/5/24	352
489	Structural works	132 days	Wed 10/4/24	Mon 19/8/24	488FS-44 days
490	Finishing work, E&M installation & Fire service and T & C	102 days	Sat 6/7/24	Tue 15/10/24	489FS-45 days
491	Final T&C with permanent supply	28 days	Wed 16/10/24	Tue 12/11/24	490,481
492	Water play installation at A2	90 days	Mon 3/6/24	Sat 31/8/24	
493	**External works**	**590 days**	**Wed 22/3/23**	**Thu 31/10/24**	
494	Application for electricity power supply	224 days	Wed 22/3/23	Tue 31/10/23	422SS
495	Lighting design (1/12/2023)	285 days	Wed 22/3/23	Sun 31/12/23	494SS
496	Underground cable ducts	121 days	Mon 1/4/24	Tue 30/7/24	449,495
497	Approval of WWO542	40 days	Mon 18/12/23	Fri 26/1/24	429SS
498	Approval of WWO 046	32 days	Sat 27/1/24	Tue 27/2/24	497
499	Underground water supply for irrigation	121 days	Wed 31/1/24	Thu 30/5/24	498SS+4 days
500	Irrigation system	61 days	Thu 1/8/24	Mon 30/9/24	
501	Approval of ighting systtem by LCSD	30 days	Sun 1/10/23	Mon 30/10/23	
502	Lighting system	61 days	Thu 1/8/24	Mon 30/9/24	501
503	Drainage pipes	121 days	Mon 1/4/24	Tue 30/7/24	
504	Road, pavement and other features	92 days	Wed 31/7/24	Wed 30/10/24	496,499,503
505	Shelters and Planter seats	132 days	Wed 20/3/24	Mon 29/7/24	
506	Stoplog, smart weir and overflow chamber	105 days	Thu 4/4/24	Wed 17/7/24	
507	Soft landscaping	92 days	Thu 1/8/24	Thu 31/10/24	
508	PMI - Additional drainage pipe for Quarry Park (Early Start)	121 days	Fri 1/12/23	Sat 30/3/24	
509	Preparation of O&M Manual	150 days	Thu 1/2/24	Sat 29/6/24	
510	As-built drg/model	180 days	Mon 22/4/24	Fri 18/10/24	
511	**Portion 2b**	**1065 days**	**Tue 14/12/21**	**Tue 12/11/24**	
512	Provision of site access [137 days after starting date as per Contract]	7 days	Tue 14/12/21	Mon 20/12/21	21SS
513	Mobilization & Site Clearance	16 days	Tue 21/12/21	Wed 5/1/22	512
514	Preparation & submission of MS, Temp works, associated plans & docs	240 days	Wed 5/1/22	Thu 1/9/22	513
515	Engineer's AIP of MS, Temp., works, plans & associated docs	240 days	Wed 2/2/22	Thu 29/9/22	514SS+28 days
516	Time Risk Allowance	15 days	Fri 30/9/22	Fri 14/10/22	515
517	Water leakage test within the lake by others	42 days	Thu 20/10/22	Wed 30/11/22	520
518	Completion of rectification works for leakage test within lake by others	77 days	Tue 3/10/23	Mon 18/12/23	530
519	**Artificial Lake Island**	**669 days**	**Mon 1/8/22**	**Thu 30/5/24**	
520	Gabion wall	80 days	Mon 1/8/22	Wed 19/10/22	515FS-60 days
521	Reconstruction of Gabion wall and stone facing rectification by C1	31 days	Wed 31/1/24	Fri 1/3/24	518
522	Placement of boulder (Stage 1)	151 days	Thu 1/12/22	Sun 30/4/23	518
523	Relaying of boulder (actual start subject to C1)	60 days	Wed 31/1/24	Sat 30/3/24	521SS
524	Soil replacement (Stage 2) (actual start subject to C1)	60 days	Wed 31/1/24	Sat 30/3/24	521SS
525	Soft landscaping	30 days	Wed 1/5/24	Thu 30/5/24	
526	**Artificial lake**	**774 days**	**Sat 1/10/22**	**Tue 12/11/24**	
527	**Granite stone facing**	**624 days**	**Sat 1/10/22**	**Sat 15/6/24**	
528	Mock up	15 days	Sat 1/10/22	Sat 15/10/22	
529	Late delivery of granite stone due to COVID 19	0 days	Mon 5/12/22	Mon 5/12/22	528
530	Installation (Phase 1)	162 days	Mon 5/12/22	Mon 15/5/23	529,517
531	Resumption of installation (Phase 2) (actual start subject to C1)	180 days	Tue 19/12/23	Sat 15/6/24	518
532	Construction of viewing steps (actual start subject to C1)	121 days	Mon 1/1/24	Tue 30/4/24	531SS+8 days
533	Finishing for viewing decks A & B and viewing steps	106 days	Wed 1/5/24	Wed 14/8/24	532
534	Protective pavement behind floating bridge	92 days	Wed 15/5/24	Wed 14/8/24	533SS+14 days
535	CNC walls	92 days	Wed 15/5/24	Wed 14/8/24	533SS+14 days
536	Soil replacement/Eco bag for Riparian Zones A, B & C	122 days	Wed 15/5/24	Fri 13/9/24	533SS+14 days
537	Planting works for Riparian zone A, B & C	60 days	Sat 14/9/24	Tue 12/11/24	536



Task | Critical Task | Milestone | Summary | Progress

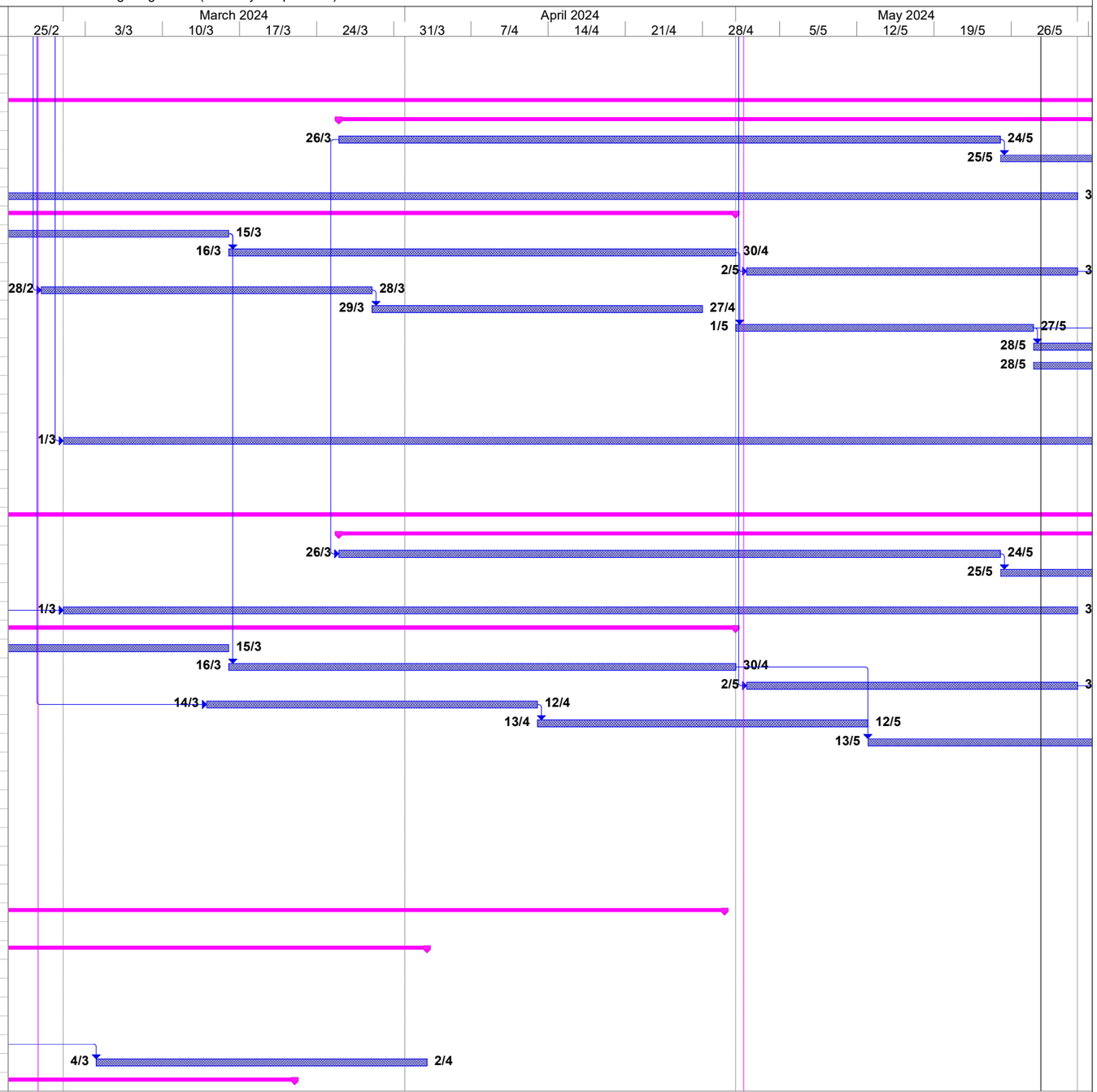
Based on Revised Programme dated 26 Jan 2024

ID	Task Name	Duration	Start	Finish	Predecessors
538	Boulder placement (400 nos.) (actual start subject to C1)	90 days	Wed 31/1/24	Mon 29/4/24	518
539	Sloping Lawn	92 days	Mon 1/7/24	Mon 30/9/24	540
540	Nursery for Plantings	447 days	Tue 11/4/23	Sun 30/6/24	
541	**Section of Works 1A - Establishment Works for all Landscape Softworks in Section 1 of the Works**	**365 days**	**Wed 13/11/24**	**Wed 12/11/25**	
542	Commencement of Establishment Work for Section 1	0 days	Wed 13/11/24	Wed 13/11/24	491FS+1 day
543	Establishment Work Duration for Section 1	365 days	Wed 13/11/24	Wed 12/11/25	542SS-1 day
544	Completion of Works in Section 1	0 days	Wed 12/11/25	Wed 12/11/25	543
545	**Section of Works 2 - Portion 8**	**1115 days**	**Fri 30/7/21**	**Sat 17/8/24**	
546	**Portion 8**	**1115 days**	**Fri 30/7/21**	**Sat 17/8/24**	
547	Provision of site access [on starting date as per Contract]	7 days	Fri 30/7/21	Thu 5/8/21	32SS
548	Mobilization& Site Clearance	14 days	Fri 6/8/21	Thu 19/8/21	547
549	Preparation & submission of MS, Temp works, associated plans & docs	52 days	Fri 20/8/21	Sun 10/10/21	548
550	Engineer's AIP of MS, Temp works, plans& associated docs	22 days	Mon 11/10/21	Mon 1/11/21	549
551	**Drainage pipe and manhole**	**350 days**	**Tue 2/11/21**	**Mon 17/10/22**	
552	Excavation	350 days	Tue 2/11/21	Mon 17/10/22	550
553	Pipe laying and manhole construction including backfilling	295 days	Tue 7/12/21	Tue 27/9/22	552SS+35 days
554	Excavation for planter	20 days	Wed 28/9/22	Mon 17/10/22	553
555	Awaiting for revision of design by PM	219 days	Tue 18/10/22	Wed 24/5/23	554
556	Time Risk Allowance	14 days	Tue 18/10/22	Mon 31/10/22	554
557	Application for electricity power supply	421 days	Mon 14/11/22	Mon 8/1/24	
558	Lighting design	321 days	Mon 14/11/22	Sat 30/9/23	557SS
559	Approval of lighting design by LCSD	100 days	Sun 1/10/23	Mon 8/1/24	558
560	Testing and commissioning of lighting	30 days	Sun 16/6/24	Mon 15/7/24	570,584,605,627
561	**Irrigation system**	**72 days**	**Mon 18/12/23**	**Tue 27/2/24**	
562	Approval of WWO542	40 days	Mon 18/12/23	Fri 26/1/24	429SS
563	Approval of Form WWO 046	32 days	Sat 27/1/24	Tue 27/2/24	
564	**Wing A**	352 days	Fri 1/9/23	Sat 17/8/24	
565	Awaiting completion of C1 remedial works (postponed to 29 Feb 2024)	167 days	Fri 1/9/23	Wed 14/2/24	
566	U channel and catchpit	107 days	Fri 1/3/24	Sat 15/6/24	565
567	**Underground cable ducts and draw pits**	**113 days**	**Tue 9/1/24**	**Tue 30/4/24**	
568	Design and fabrication for lamp post holding down bolt	67 days	Tue 9/1/24	Fri 15/3/24	559
569	Construction of lamp post footing	46 days	Sat 16/3/24	Tue 30/4/24	568,565
570	Lighting system	45 days	Thu 2/5/24	Sat 15/6/24	569
571	Underground water supply for irrigation - Submission	30 days	Wed 28/2/24	Thu 28/3/24	563
572	Irrigation system	30 days	Fri 29/3/24	Sat 27/4/24	571
573	Soil replacement	27 days	Wed 1/5/24	Mon 27/5/24	569,572FS-12 days
574	Planter	27 days	Tue 28/5/24	Sun 23/6/24	573
575	Seat	27 days	Mon 24/6/24	Sat 20/7/24	574
576	Edge and pavement	28 days	Sun 21/7/24	Sat 17/8/24	575
577	Terrazzo fininshing to panter wall, seat wall and panter kerb	28 days	Sun 21/7/24	Sat 17/8/24	575
578	Soft landscaping works	40 days	Tue 9/7/24	Sat 17/8/24	576FF
579	**Wing C**	**289 days**	**Fri 3/11/23**	**Sat 17/8/24**	
580	U channel and Catchpit	211 days	Fri 3/11/23	Fri 31/5/24	
581	**Underground cable ducts and draw pits**	**113 days**	**Tue 9/1/24**	**Tue 30/4/24**	
582	Design and fabrication for lamp post holding down bolt	67 days	Tue 9/1/24	Fri 15/3/24	568SS
583	Construction of lamp post footing	46 days	Sat 16/3/24	Tue 30/4/24	582
584	Lighting system	45 days	Thu 2/5/24	Sat 15/6/24	570SS
585	Underground water supply for irrigation - Submission	30 days	Wed 28/2/24	Thu 28/3/24	571SS
586	Irrigation system	30 days	Sat 13/4/24	Sun 12/5/24	585
587	Soil replacement	27 days	Wed 1/5/24	Mon 27/5/24	583
588	Planter	27 days	Tue 28/5/24	Sun 23/6/24	587
589	Seat	27 days	Mon 24/6/24	Sat 20/7/24	588
590	Edge and pavement	28 days	Sun 21/7/24	Sat 17/8/24	589
591	Terrazzo fininshing to panter wall, seat wall and panter kerb	28 days	Sun 21/7/24	Sat 17/8/24	590FF
592	Procurement of safety mat for play area	120 days	Fri 1/3/24	Fri 28/6/24	



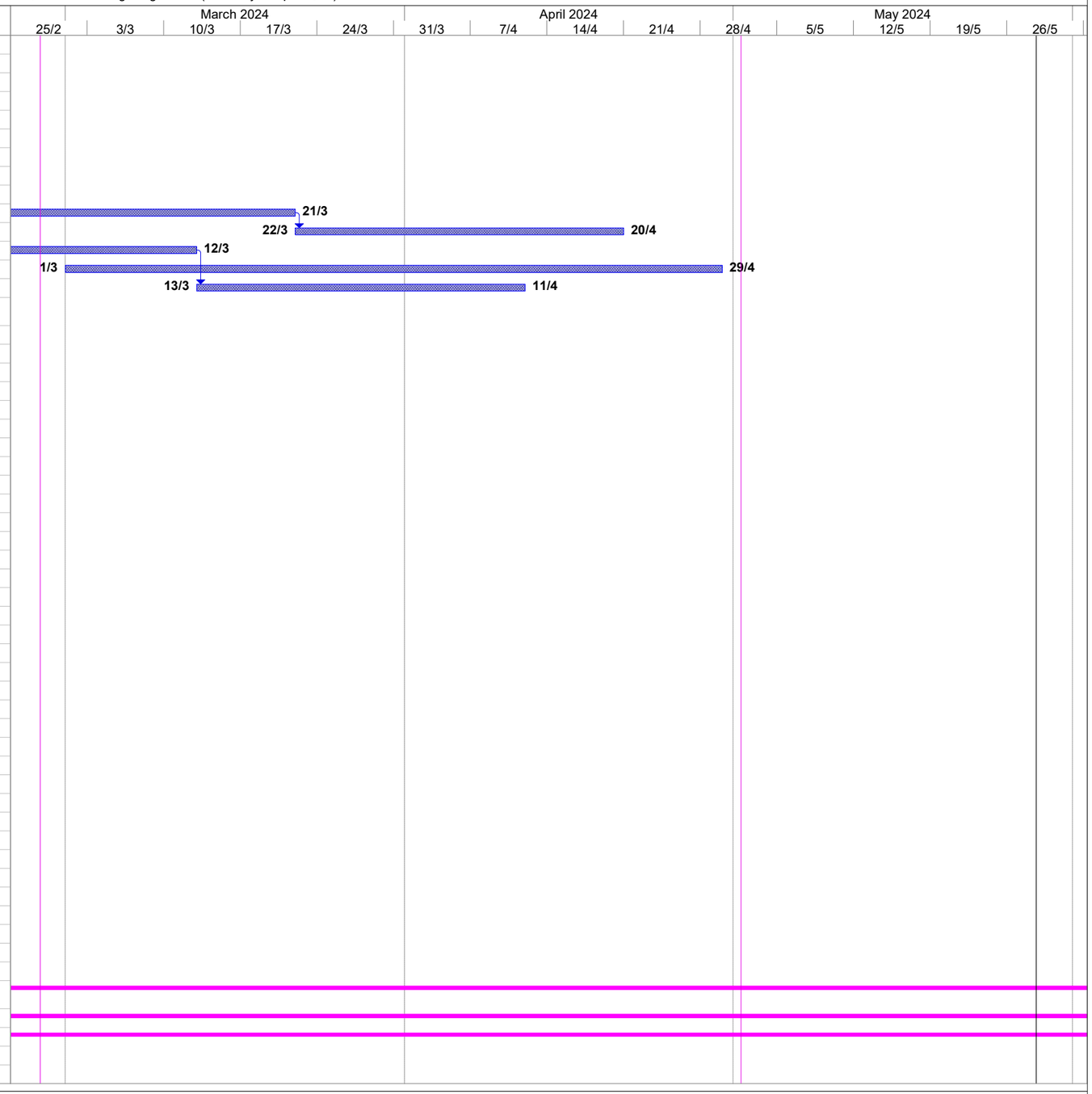
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
593	Installation of safety mat for play area	30 days	Sat 29/6/24	Sun 28/7/24	592
594	Inspection/certification of for play equipment	20 days	Mon 29/7/24	Sat 17/8/24	593
595	Soft landscaping works	45 days	Thu 4/7/24	Sat 17/8/24	578FF
596	**Wing B**	**289 days**	**Fri 3/11/23**	**Sat 17/8/24**	
597	**Shelter (4 nos)**	**141 days**	**Tue 26/3/24**	**Tue 13/8/24**	
598	Submission of design	60 days	Tue 26/3/24	Fri 24/5/24	
599	Approval of design	21 days	Sat 25/5/24	Fri 14/6/24	598
600	Construction	60 days	Sat 15/6/24	Tue 13/8/24	599,608
601	U channel and Catchpit	211 days	Fri 3/11/23	Fri 31/5/24	580SS
602	**Underground cable ducts and draw pits**	**113 days**	**Tue 9/1/24**	**Tue 30/4/24**	
603	Design and fabrication for lamp post holding down bolt	67 days	Tue 9/1/24	Fri 15/3/24	568SS
604	Construction of lamp post footing	46 days	Sat 16/3/24	Tue 30/4/24	603
605	Lighting system	30 days	Thu 2/5/24	Fri 31/5/24	570SS
606	Underground water supply for irrigation - Submission	30 days	Wed 28/2/24	Thu 28/3/24	571SS
607	Irrigation system	30 days	Fri 29/3/24	Sat 27/4/24	606
608	Soil replacement	27 days	Wed 1/5/24	Mon 27/5/24	604
609	Planter	27 days	Tue 28/5/24	Sun 23/6/24	608
610	Ramp	27 days	Tue 28/5/24	Sun 23/6/24	609FF
611	Seat	27 days	Mon 24/6/24	Sat 20/7/24	609
612	Edge and pavement	28 days	Sun 21/7/24	Sat 17/8/24	611
613	Terrazzo fininshing to panter wall, seat wall and panter kerb	30 days	Fri 19/7/24	Sat 17/8/24	612FF
614	Procurement of safety mat for play area	120 days	Fri 1/3/24	Fri 28/6/24	592SS
615	Installation of safety mat for play area	30 days	Sat 29/6/24	Sun 28/7/24	614
616	Inspection/certification of for play equipment	20 days	Mon 29/7/24	Sat 17/8/24	615
617	Soft landscaping works	45 days	Thu 4/7/24	Sat 17/8/24	578FF
618	**Wing D**	**719 days**	**Tue 30/8/22**	**Sat 17/8/24**	
619	**Shelter (1 nos)**	141 days	Tue 26/3/24	Tue 13/8/24	
620	Submission of design	60 days	Tue 26/3/24	Fri 24/5/24	598SS
621	Approval of design	21 days	Sat 25/5/24	Fri 14/6/24	620
622	Construction	60 days	Sat 15/6/24	Tue 13/8/24	621
623	U channel and Catchpit	92 days	Fri 1/3/24	Fri 31/5/24	580SS
624	**Underground cable ducts and draw pits**	**113 days**	**Tue 9/1/24**	**Tue 30/4/24**	
625	Design and fabrication for lamp post holding down bolt	67 days	Tue 9/1/24	Fri 15/3/24	568SS
626	Construction of lamp post footing	46 days	Sat 16/3/24	Tue 30/4/24	603
627	Lighting system	30 days	Thu 2/5/24	Fri 31/5/24	570SS
628	Underground water supply for irrigation - Submission	30 days	Thu 14/3/24	Fri 12/4/24	571SS
629	Irrigation system	30 days	Sat 13/4/24	Sun 12/5/24	628
630	Soil replacement	27 days	Mon 13/5/24	Sat 8/6/24	626
631	Planter	27 days	Mon 10/6/24	Sat 6/7/24	630
632	Ramp	27 days	Mon 10/6/24	Sat 6/7/24	631FF
633	Staircase	27 days	Mon 8/7/24	Sat 3/8/24	631FF
634	Dwarf walls (PMI 1080)	21 days	Mon 8/7/24	Sun 28/7/24	631FF
635	Seat	21 days	Mon 8/7/24	Sun 28/7/24	
636	Edge and pavement	20 days	Mon 29/7/24	Sat 17/8/24	635
637	Terrazzo fininshing to panter wall, seat wall and panter kerb	30 days	Fri 19/7/24	Sat 17/8/24	
638	Soft landscaping works	45 days	Thu 4/7/24	Sat 17/8/24	578FF
639	**Retainning Wall**	**609 days**	**Tue 30/8/22**	**Mon 29/4/24**	
640	Issuance of site sketch for retaining wall (Letter M45/420/400708)	0 days	Tue 30/8/22	Tue 30/8/22	
641	**Stage 1 (RWA 21, CH15 to CH51.5)**	**541 days**	**Mon 10/10/22**	**Tue 2/4/24**	
642	Excavation	60 days	Mon 10/10/22	Thu 8/12/22	640
643	Blinding layer	60 days	Tue 1/11/22	Fri 30/12/22	642SS+22 days
644	Base slab	60 days	Fri 11/11/22	Mon 9/1/23	643SS+10 days
645	Wall stem	60 days	Fri 25/11/22	Mon 23/1/23	644SS+14 days
646	Backfilling	55 days	Tue 24/1/23	Sun 19/3/23	645
647	Finishing works for retaining wall	30 days	Mon 4/3/24	Tue 2/4/24	646
648	**Stage 2 (Remaining portion)**	**368 days**	**Mon 20/3/23**	**Thu 21/3/24**	



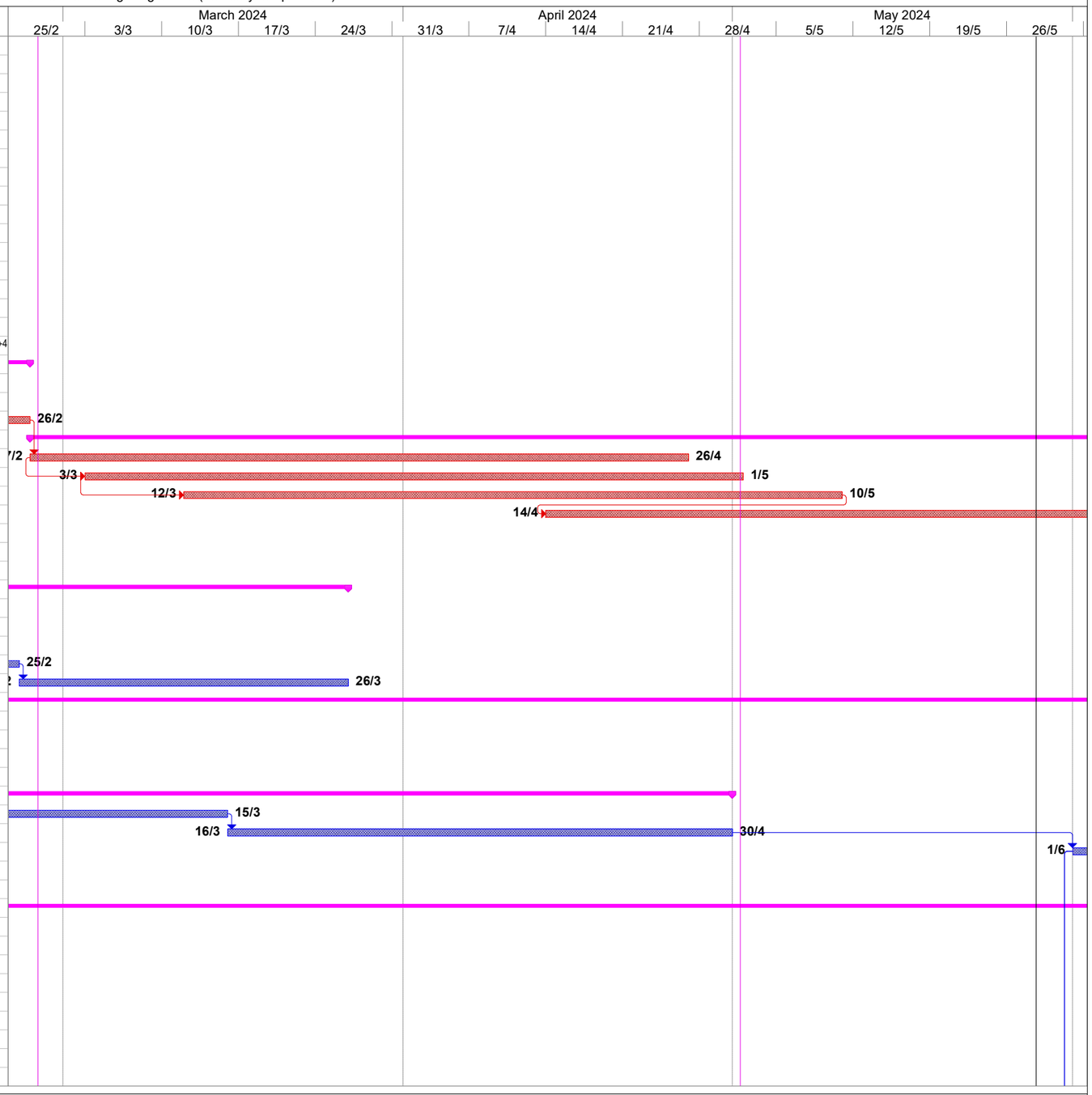
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
649	Revision of wall details by PM due to interface	150 days	Mon 20/3/23	Wed 16/8/23	646
650	Tendering	30 days	Thu 17/8/23	Fri 15/9/23	649
651	Final revised design received on 29 Sept 2023	0 days	Fri 29/9/23	Fri 29/9/23	650
652	Checking of revised drawings and setting out works	30 days	Fri 29/9/23	Sat 28/10/23	651
653	Excavation	21 days	Sun 29/10/23	Sat 18/11/23	652
654	Blinding layer	21 days	Sun 5/11/23	Sat 25/11/23	653SS+7 days
655	Base slab (3 bays)	21 days	Sun 12/11/23	Sat 2/12/23	654SS+7 days
656	Wall stem (3 bays)	10 days	Sun 3/12/23	Tue 12/12/23	655
657	Backfilling (10 layer)	70 days	Wed 13/12/23	Tue 20/2/24	656
658	Filling slope	30 days	Wed 21/2/24	Thu 21/3/24	657
659	Finishing works	30 days	Fri 22/3/24	Sat 20/4/24	658
660	RC staicase at retaining wall	21 days	Wed 21/2/24	Tue 12/3/24	657
661	Store room and planters for community garden (under PMI)	60 days	Fri 1/3/24	Mon 29/4/24	
662	Railing/fence and sinage	30 days	Wed 13/3/24	Thu 11/4/24	660
663	**Section of Works 2A - Establishment Works for all Landscape Softworks in Section 2 of the Works**	**365 days**	**Sun 18/8/24**	**Sun 17/8/25**	
664	Commencement of Establishment Work for Section 2	0 days	Sun 18/8/24	Sun 18/8/24	618FF+1 day
665	Establishment Work Duration for Section 2	365 days	Sun 18/8/24	Sun 17/8/25	664SS-1 day
666	Completion of Works in Section 2	0 days	Sun 17/8/25	Sun 17/8/25	665
667	**Section of Works 3 - Portions 1b, 3, 4, 5**	**763 days**	**Fri 30/7/21**	**Thu 31/8/23**	
668	**Portion 1b**	**276 days**	**Tue 29/11/22**	**Thu 31/8/23**	
669	Provision of site access [487 days after starting date as per Contract]	7 days	Tue 29/11/22	Mon 5/12/22	44SS
670	Mobilization& Site Clearance	14 days	Tue 6/12/22	Mon 19/12/22	669
671	Time Risk Allowance	7 days	Tue 20/12/22	Mon 26/12/22	670
672	PMI 066	**50 days**	**Thu 13/7/23**	**Thu 31/8/23**	
673	Sewerage pipes and manholes	50 days	Thu 13/7/23	Thu 31/8/23	671
674	Greywater pipes and manholes	50 days	Thu 13/7/23	Thu 31/8/23	673SS
675	Laying of 75mm thick milled asphalt chips	7 days	Fri 25/8/23	Thu 31/8/23	674FF
676	**Lighting**	**163 days**	**Wed 22/3/23**	**Thu 31/8/23**	
677	Application for electricity power supply	83 days	Wed 22/3/23	Mon 12/6/23	
678	Lighting design	140 days	Wed 22/3/23	Tue 8/8/23	677SS
679	Installation including ducting, draw pit and lighting	23 days	Wed 9/8/23	Thu 31/8/23	678,674FF
680	**Portion 3**	**702 days**	**Wed 29/9/21**	**Thu 31/8/23**	
681	Access date	0 days	Wed 29/9/21	Wed 29/9/21	49SS
682	Deferred possession (CE 004 & 006)	61 days	Wed 29/9/21	Sun 28/11/21	
683	Provision of site access	7 days	Mon 29/11/21	Sun 5/12/21	682
684	Mobilization& Site Clearance	14 days	Mon 6/12/21	Sun 19/12/21	683
685	Preparation& submission of MS, Temp works, associated plans & docs	52 days	Mon 20/12/21	Wed 9/2/22	684
686	Engineer AIP of MS, Temp works, plans& associated docs	21 days	Thu 10/2/22	Wed 2/3/22	685
687	Installation of chain link fencing	92 days	Thu 1/6/23	Thu 31/8/23	686
688	Soft landscaping works - hydroseeding	30 days	Wed 2/8/23	Thu 31/8/23	
689	GI works (PMI 006)	7 days	Mon 3/10/22	Sun 9/10/22	
690	Additional drainage works (PMI 075)	30 days	Wed 2/8/23	Thu 31/8/23	687FF,688FF
691	**Portion 4**	**763 days**	**Fri 30/7/21**	**Thu 31/8/23**	
692	Provision of site access [on starting date as per Contract]	7 days	Fri 30/7/21	Thu 5/8/21	54SS
693	Soft landscaping works - hydroseeding	30 days	Wed 2/8/23	Thu 31/8/23	688FF,697FF
694	GI works (PMI 006)	10 days	Mon 10/10/22	Wed 19/10/22	689
695	**Portion 5**	**551 days**	**Sun 27/2/22**	**Thu 31/8/23**	
696	Provision of site access [212 days after starting date as per Contract]	7 days	Sun 27/2/22	Sat 5/3/22	59SS
697	Soft landscaping works - hydroseeding	30 days	Wed 2/8/23	Thu 31/8/23	
698	Installation of chain link fencing	31 days	Tue 1/8/23	Thu 31/8/23	697FF
699	**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**	
703	**Section of Works 4 - Portions 6, 12**	**1155 days**	**Fri 30/7/21**	**Thu 26/9/24**	
704	**Portion 6**	**972 days**	**Sat 29/1/22**	**Thu 26/9/24**	
705	Provision of site access [183 days after starting date as per Contract]	0 days	Sat 29/1/22	Sat 29/1/22	71SS
706	Deferred possession	81 days	Sat 29/1/22	Tue 19/4/22	705



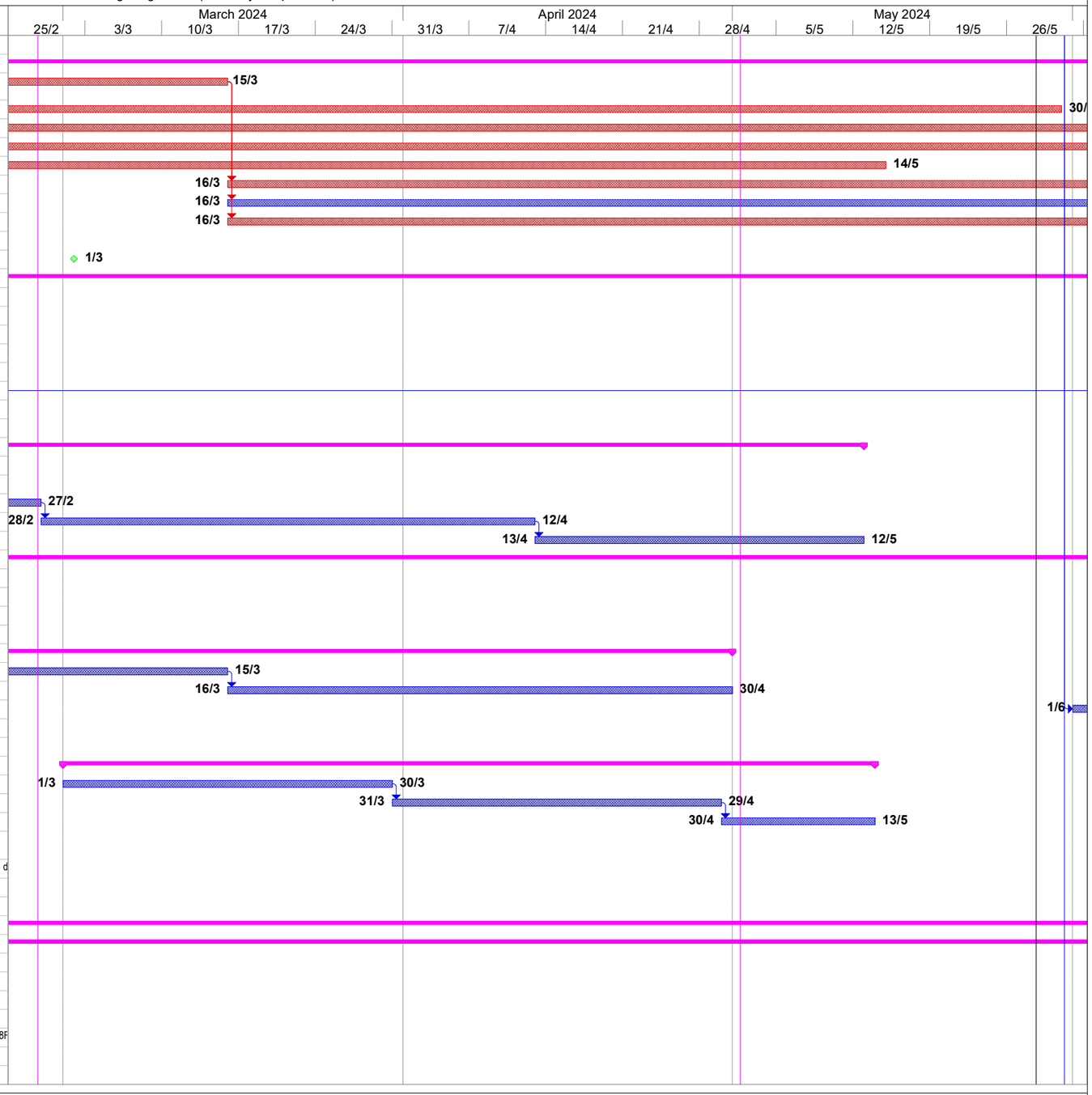
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
707	Mobilization& Site Clearance	14 days	Wed 20/4/22	Tue 3/5/22	706
708	Issuance of site sketch for retaining wall (Letter C10/500/400739)	0 days	Wed 14/9/22	Wed 14/9/22	707
709	Drainage works under PMQP 004	0 days	Fri 14/10/22	Fri 14/10/22	707
710	Time Risk Allowance	14 days	Fri 14/10/22	Thu 27/10/22	709
711	**Drainage pipe and manhole below the base slab of retaining wall**	**246 days**	**Mon 19/12/22**	**Mon 21/8/23**	
712	Excavation	235 days	Mon 19/12/22	Thu 10/8/23	709
713	Pipe laying and manhole	170 days	Wed 1/3/23	Thu 17/8/23	712FS-153 days
714	CCTV inspection, testing and commissioning	3 days	Wed 16/8/23	Fri 18/8/23	713FF+1 day
715	Backfilling	112 days	Mon 1/5/23	Mon 21/8/23	714FF+3 days
716	**Retaining wall RWA20**	**274 days**	**Tue 2/5/23**	**Tue 30/1/24**	
717	Excavation	112 days	Tue 2/5/23	Mon 21/8/23	715FF
718	Blinding layer	110 days	Tue 9/5/23	Sat 26/8/23	717SS+7 days
719	Base slab (21 bays)	169 days	Tue 16/5/23	Tue 31/10/23	718SS+7 days
720	Wall stem (21 bays)	136 days	Mon 3/7/23	Wed 15/11/23	719SS+10 days
721	Additional Sewage System (PMI 086)	30 days	Thu 30/11/23	Fri 29/12/23	720
722	PMI for Grey Water	30 days	Sat 30/12/23	Sun 28/1/24	721
723	Backfilling (15 layers)	115 days	Sun 8/10/23	Tue 30/1/24	720FS-39 days,273FF+4
724	**Drainage pipe and manhole above the base slab of retaining wall**	**27 days**	**Wed 31/1/24**	**Mon 26/2/24**	
725	Pipe laying and manhole	14 days	Wed 31/1/24	Tue 13/2/24	723
726	CCTV inspection, testing and commissioning	3 days	Wed 14/2/24	Fri 16/2/24	725
727	Backfilling	10 days	Sat 17/2/24	Mon 26/2/24	726
728	**Retaining wall RWA19**	**137 days**	**Tue 27/2/24**	**Fri 12/7/24**	
729	Blinding layer	60 days	Tue 27/2/24	Fri 26/4/24	727
730	Base slab	60 days	Sun 3/3/24	Wed 1/5/24	729SS+5 days
731	Wall stem	60 days	Tue 12/3/24	Fri 10/5/24	730SS+9 days
732	Backfilling	90 days	Sun 14/4/24	Fri 12/7/24	731FS-27 days
733	Railing	45 days	Sat 13/7/24	Mon 26/8/24	732
734	U channel & catchpit, edging and pavement	91 days	Fri 28/6/24	Thu 26/9/24	732FS-15 days
735	Soft landscaping works	45 days	Tue 13/8/24	Thu 26/9/24	734FF
736	**Irrigation system**	**316 days**	**Tue 16/5/23**	**Tue 26/3/24**	
737	Contractor's design	79 days	Tue 16/5/23	Wed 2/8/23	
738	Approval of WWO542	40 days	Wed 1/11/23	Sun 10/12/23	429SS,737
739	Approval of Form WWO 046	32 days	Mon 11/12/23	Thu 11/1/24	738
740	Underground water supply for irrigation - Submission	45 days	Fri 12/1/24	Sun 25/2/24	739
741	Irrigation system	30 days	Mon 26/2/24	Tue 26/3/24	740
742	**Lighting system**	**685 days**	**Fri 30/9/22**	**Wed 14/8/24**	
743	Contractor's design	45 days	Fri 30/9/22	Sun 13/11/22	
744	Application for electricity power supply	352 days	Mon 14/11/22	Tue 31/10/23	743
745	Lighting design	300 days	Mon 14/11/22	Sat 9/9/23	743
746	LCSD's approval of lighting system	121 days	Sun 10/9/23	Mon 8/1/24	745
747	**Underground cable ducts and draw pits**	**113 days**	**Tue 9/1/24**	**Tue 30/4/24**	**746**
748	Design and fabrication for lamp post holding down bolt	67 days	Tue 9/1/24	Fri 15/3/24	
749	Construction of lamp post footing	46 days	Sat 16/3/24	Tue 30/4/24	748
750	Lighting system	45 days	Sat 1/6/24	Mon 15/7/24	749
751	Energization	15 days	Tue 16/7/24	Tue 30/7/24	750
752	Testing and Commissioning of lighting	15 days	Wed 31/7/24	Wed 14/8/24	751
753	**Portion 12**	**1155 days**	**Fri 30/7/21**	**Thu 26/9/24**	
754	Provision of site access [on starting date as per Contract]	7 days	Fri 30/7/21	Thu 5/8/21	76SS
755	Mobilization& Site Clearance	14 days	Fri 6/8/21	Thu 19/8/21	754
756	Preparation& submission of MS, Temp works, associated plans & docs	52 days	Fri 20/8/21	Sun 10/10/21	755
757	Engineer's AIP of MS, Temp works, plans& associated docs	22 days	Mon 11/10/21	Mon 1/11/21	756
758	Additional GI at Portion 12 (PMI 005)	15 days	Wed 1/6/22	Wed 15/6/22	
759	**Drainage pipe and manhole**	**379 days**	**Tue 2/11/21**	**Tue 15/11/22**	
760	Excavation	364 days	Tue 2/11/21	Mon 31/10/22	757
761	Pipe laying and manhole consstruction including backfilling	245 days	Wed 16/3/22	Tue 15/11/22	760FS-230 days
762	Draft wall construction	105 days	Wed 16/11/22	Tue 28/2/23	761



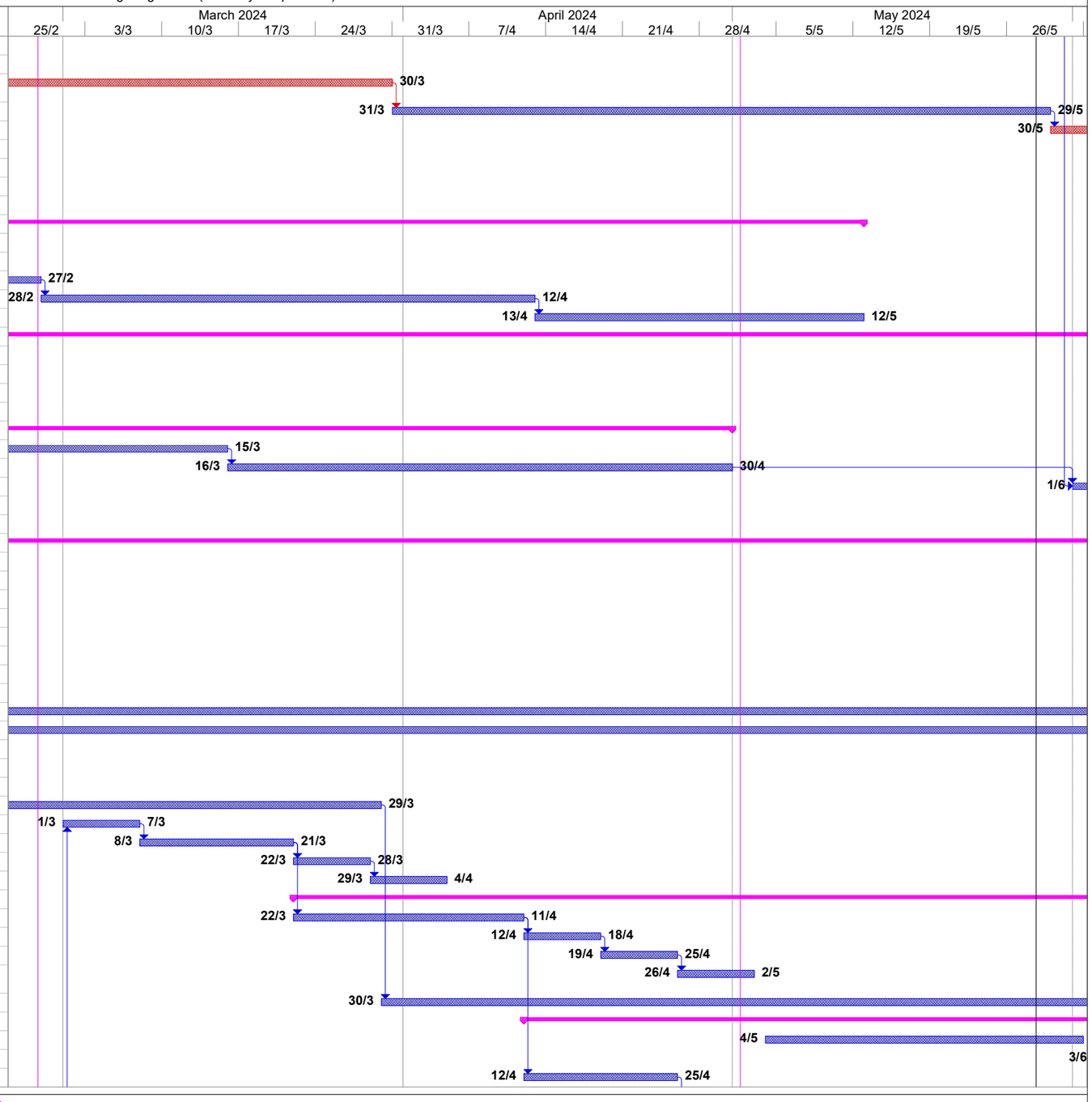
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
763	Awaiting for revision of design by PM due to interface	97 days	Wed 1/3/23	Mon 5/6/23	762
764	**Staircase**	**388 days**	**Tue 6/6/23**	**Thu 27/6/24**	
765	Allowance for site access and sorting of excavated material stockpile	284 days	Tue 6/6/23	Fri 15/3/24	763
766	Footing	290 days	Tue 15/8/23	Thu 30/5/24	765SS+70 days
767	Vertical wall	305 days	Tue 15/8/23	Fri 14/6/24	765SS+70 days
768	Wing wall	277 days	Mon 25/9/23	Thu 27/6/24	765SS+111 days
769	Steps	152 days	Fri 15/12/23	Tue 14/5/24	765SS+192 days
770	Seat and railing	195 days	Sat 16/3/24	Thu 26/9/24	765
771	Dwaft wall (resumption)	150 days	Sat 16/3/24	Mon 12/8/24	765
772	U channel & catchpit, edging and pavement	195 days	Sat 16/3/24	Thu 26/9/24	765
773	Soft landscaping	60 days	Mon 29/7/24	Thu 26/9/24	772FF
774	Additional temporary toilet for LCSD DELETE	0 days	Fri 1/3/24	Fri 1/3/24	
775	**Sunken Plaza**	**1056 days**	**Sat 6/11/21**	**Thu 26/9/24**	
776	Excavation	7 days	Sat 6/11/21	Fri 12/11/21	
777	Subsoil drain	7 days	Sat 13/11/21	Fri 19/11/21	776
778	U channel and catchpit	10 days	Sat 20/11/21	Mon 29/11/21	777
779	Underground cable duct	7 days	Tue 30/11/21	Mon 6/12/21	778
780	RC structure	90 days	Wed 7/12/22	Mon 6/3/23	779
781	Seat	60 days	Tue 7/3/23	Fri 5/5/23	780
782	Hard landscaping	45 days	Tue 18/6/24	Thu 1/8/24	781
783	Soft landscaping	30 days	Wed 28/8/24	Thu 26/9/24	782,773FF
784	**Irrigation system**	**363 days**	**Tue 16/5/23**	**Sun 12/5/24**	
785	Contractor's design	79 days	Tue 16/5/23	Wed 2/8/23	
786	Approval of WWO542	40 days	Mon 18/12/23	Fri 26/1/24	785
787	Approval of Form WWO 046	32 days	Sat 27/1/24	Tue 27/2/24	786
788	Underground water supply for irrigation - Submission	45 days	Wed 28/2/24	Fri 12/4/24	787
789	Irrigation system	30 days	Sat 13/4/24	Sun 12/5/24	788
790	**Lighting system**	**685 days**	**Fri 30/9/22**	**Wed 14/8/24**	
791	Contractor's design	45 days	Fri 30/9/22	Sun 13/11/22	743SS
792	Application for electricity power supply	352 days	Mon 14/11/22	Tue 31/10/23	791
793	Lighting design	300 days	Mon 14/11/22	Sat 9/9/23	791
794	LCSD's approval of lighting of ighting system	121 days	Sun 10/9/23	Mon 8/1/24	793
795	**Underground cable ducts and draw pits**	**113 days**	**Tue 9/1/24**	**Tue 30/4/24**	
796	Design and fabrication for lamp post holding down bolt	67 days	Tue 9/1/24	Fri 15/3/24	794
797	Construction of lamp post footing	46 days	Sat 16/3/24	Tue 30/4/24	796
798	Lighting system	45 days	Sat 1/6/24	Mon 15/7/24	750SS
799	Energization	15 days	Tue 16/7/24	Tue 30/7/24	798
800	Testing and Commissioning of lighting	15 days	Wed 31/7/24	Wed 14/8/24	799
801	**Watermain**	**74 days**	**Fri 1/3/24**	**Mon 13/5/24**	
802	Pipe laying	30 days	Fri 1/3/24	Sat 30/3/24	
803	Water connection	30 days	Sun 31/3/24	Mon 29/4/24	802
804	Testing and commissioning	14 days	Tue 30/4/24	Mon 13/5/24	803
805	**Section of Works 4A - Establishment Works for all Landscape Softworks in Section 4 of the Works**	**365 days**	**Fri 27/9/24**	**Fri 26/9/25**	
806	Commencement of Establishment Work for Section 4	0 days	Fri 27/9/24	Fri 27/9/24	734FS+1 day,772FS+1 d
807	Establishment Work Duration for Section 4	365 days	Fri 27/9/24	Fri 26/9/25	806SS-1 day
808	Completion of Works in Section 4	0 days	Fri 26/9/25	Fri 26/9/25	807
809	**Section of Works 5A - Portions 9, 10**	**1159 days**	**Fri 30/7/21**	**Mon 30/9/24**	
810	**Portion 9 [Sitting Out Area C & R2-1 Footpath]**	**1098 days**	**Wed 29/9/21**	**Mon 30/9/24**	
811	Provision of site access [61 days after starting date as per Contract]	8 days	Wed 29/9/21	Wed 6/10/21	88SS
812	Mobilization& Site Clearance	15 days	Thu 7/10/21	Thu 21/10/21	811
813	Preparation& submission of MS, Temp works, associated plans & docs	75 days	Tue 1/2/22	Sat 16/4/22	812
814	Engineer AIP of MS, Temp works, plans& associated docs	60 days	Sun 17/4/22	Wed 15/6/22	813
815	Construction of U channel and catchpit	256 days	Thu 16/6/22	Sun 26/2/23	814,817FS-65 days,818F
816	Time Risk Allowance	15 days	Mon 27/2/23	Mon 13/3/23	815
817	Modification of existing surface drain at slope toe (PMI 032)	0 days	Fri 19/8/22	Fri 19/8/22	



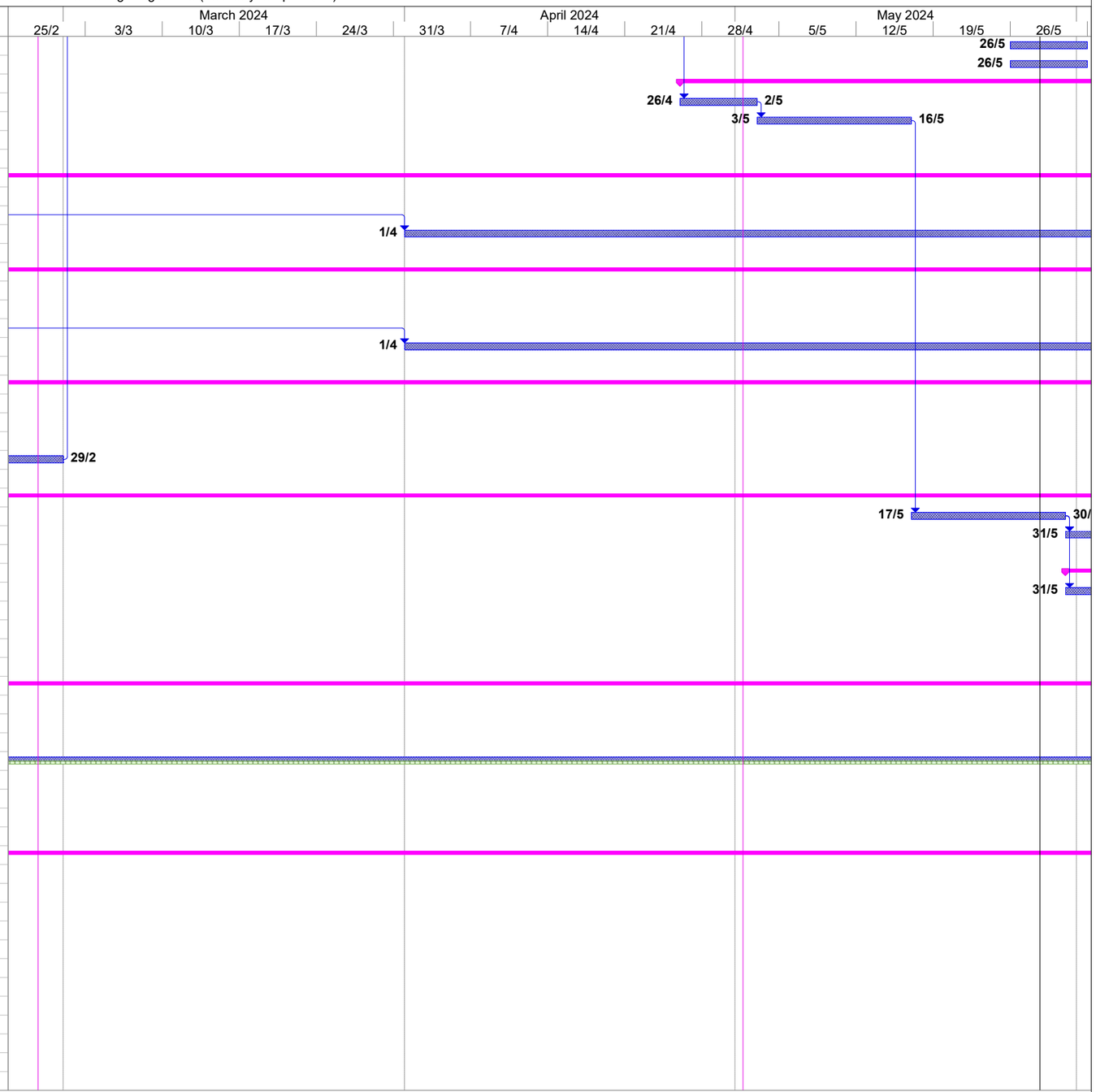
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
818	Modification of existing surface drain at slope toe (PMI 050)	0 days	Wed 28/9/22	Wed 28/9/22	817
819	Interface RS-1 and return od Site	293 days	Tue 14/3/23	Sun 31/12/23	816
820	Resumption of modification of existing drain at slope toe (late return from RS-1)	90 days	Mon 1/1/24	Sat 30/3/24	819
821	Design and construction for a rain shelter (under PMI)	60 days	Sun 31/3/24	Wed 29/5/24	820
822	Backfilling and compaction of road materials	30 days	Thu 30/5/24	Fri 28/6/24	821
823	Installation of E1 kerbs	30 days	Sat 29/6/24	Sun 28/7/24	822
824	Construction of porous pavement footpath	30 days	Mon 29/7/24	Tue 27/8/24	823
825	Installation of street furniture, traffic signs, bollards and road markings	34 days	Wed 28/8/24	Mon 30/9/24	824
826	Landscaping works	54 days	Thu 8/8/24	Mon 30/9/24	823FS+10 days,825FF
827	**Irrigation system**	**363 days**	**Tue 16/5/23**	**Sun 12/5/24**	
828	Contractor's design	79 days	Tue 16/5/23	Wed 2/8/23	
829	Approval of WWO542	40 days	Mon 18/12/23	Fri 26/1/24	828
830	Approval of Form WWO 046	32 days	Sat 27/1/24	Tue 27/2/24	829
831	Underground water supply for irrigation - Submission	45 days	Wed 28/2/24	Fri 12/4/24	830
832	Irrigation system	30 days	Sat 13/4/24	Sun 12/5/24	831
833	**Lighting system**	**685 days**	**Fri 30/9/22**	**Wed 14/8/24**	
834	Contractor's design	45 days	Fri 30/9/22	Sun 13/11/22	
835	Application for electricity power supply	352 days	Mon 14/11/22	Tue 31/10/23	834
836	Lighting design	300 days	Mon 14/11/22	Sat 9/9/23	
837	LCSD's approval of lighting of ighting system	31 days	Sun 1/10/23	Tue 31/10/23	836
838	**Underground cable ducts and draw pits**	**113 days**	**Tue 9/1/24**	**Tue 30/4/24**	**837**
839	Design and fabrication for lamp post holding down bolt	67 days	Tue 9/1/24	Fri 15/3/24	
840	Construction of lamp post footing	46 days	Sat 16/3/24	Tue 30/4/24	839
841	Lighting system	45 days	Sat 1/6/24	Mon 15/7/24	840,750SS
842	Energization	15 days	Tue 16/7/24	Tue 30/7/24	841
843	Testing and Commissioning of lighting	15 days	Wed 31/7/24	Wed 14/8/24	842
844	**Portion 10**	**1159 days**	**Fri 30/7/21**	**Mon 30/9/24**	
845	Provision of site access [on starting date as per Contract]	7 days	Fri 30/7/21	Thu 5/8/21	93SS
846	Slope inspection & assessment work	50 days	Fri 6/8/21	Fri 24/9/21	845
847	Mobilization, access arrangements, logistic plan & Site Clearance	52 days	Sat 25/9/21	Mon 15/11/21	846
848	Preparation & submission of MS, Temp works, associated plans & docs	37 days	Tue 16/11/21	Wed 22/12/21	847
849	Time Risk Allowance	16 days	Thu 23/12/21	Fri 7/1/22	848
850	Main access blocked by C1at hiking trail	181 days	Mon 3/7/23	Sat 30/12/23	
851	Engineer's AIP of MS, Temp.works, plans & associated docs	21 days	Sat 8/1/22	Fri 28/1/22	849
852	Demolition and removal of disused water pipe and sprinkler system	160 days	Sat 29/1/22	Thu 7/7/22	851
853	Repair of cracks at drainage channel and concrete berm	700 days	Thu 1/9/22	Wed 31/7/24	852
854	Reinstatement of joint sealant at drainage channel	700 days	Fri 16/9/22	Thu 15/8/24	852
855	Installation of display sign for slope registration	59 days	Fri 30/7/21	Sun 26/9/21	
856	**Slope Works at Feature No. 11NE-D/C947 (420m)**	**96 days**	**Sun 31/12/23**	**Thu 4/4/24**	
857	Removal of damaged wire mesh	30 days	Sun 31/12/23	Mon 29/1/24	850
858	Construction of new wire mesh	60 days	Tue 30/1/24	Fri 29/3/24	857
859	Filling of void with cement soil	7 days	Fri 1/3/24	Thu 7/3/24	895
860	Reinstatement of concrete berm	14 days	Fri 8/3/24	Thu 21/3/24	859
861	Installation of hand railings	7 days	Fri 22/3/24	Thu 28/3/24	860
862	Repainting of handrailing	7 days	Fri 29/3/24	Thu 4/4/24	861
863	**Slope Works at Feature No. 11NE-D/C976 (185m)**	**73 days**	**Fri 22/3/24**	**Sun 2/6/24**	
864	Construction of concrete berm	21 days	Fri 22/3/24	Thu 11/4/24	860
865	Installation of hand railings	7 days	Fri 12/4/24	Thu 18/4/24	864
866	Repainting of existing steel maintenance staircase	7 days	Fri 19/4/24	Thu 25/4/24	865
867	Removal of existing handrailing and steel landing plates and re-construction	7 days	Fri 26/4/24	Thu 2/5/24	866
868	Construction of wire mesh	65 days	Sat 30/3/24	Sun 2/6/24	858
869	**Slope Works at Feature No. 11NE-D/C977 (300m)**	**142 days**	**Fri 12/4/24**	**Sat 31/8/24**	
870	Construction of 450 mm U-channel (~175m)	29 days	Sat 4/5/24	Sat 1/6/24	
871	Construction of wire mesh	90 days	Mon 3/6/24	Sat 31/8/24	868
872	Construction of concrete berm	14 days	Fri 12/4/24	Thu 25/4/24	864



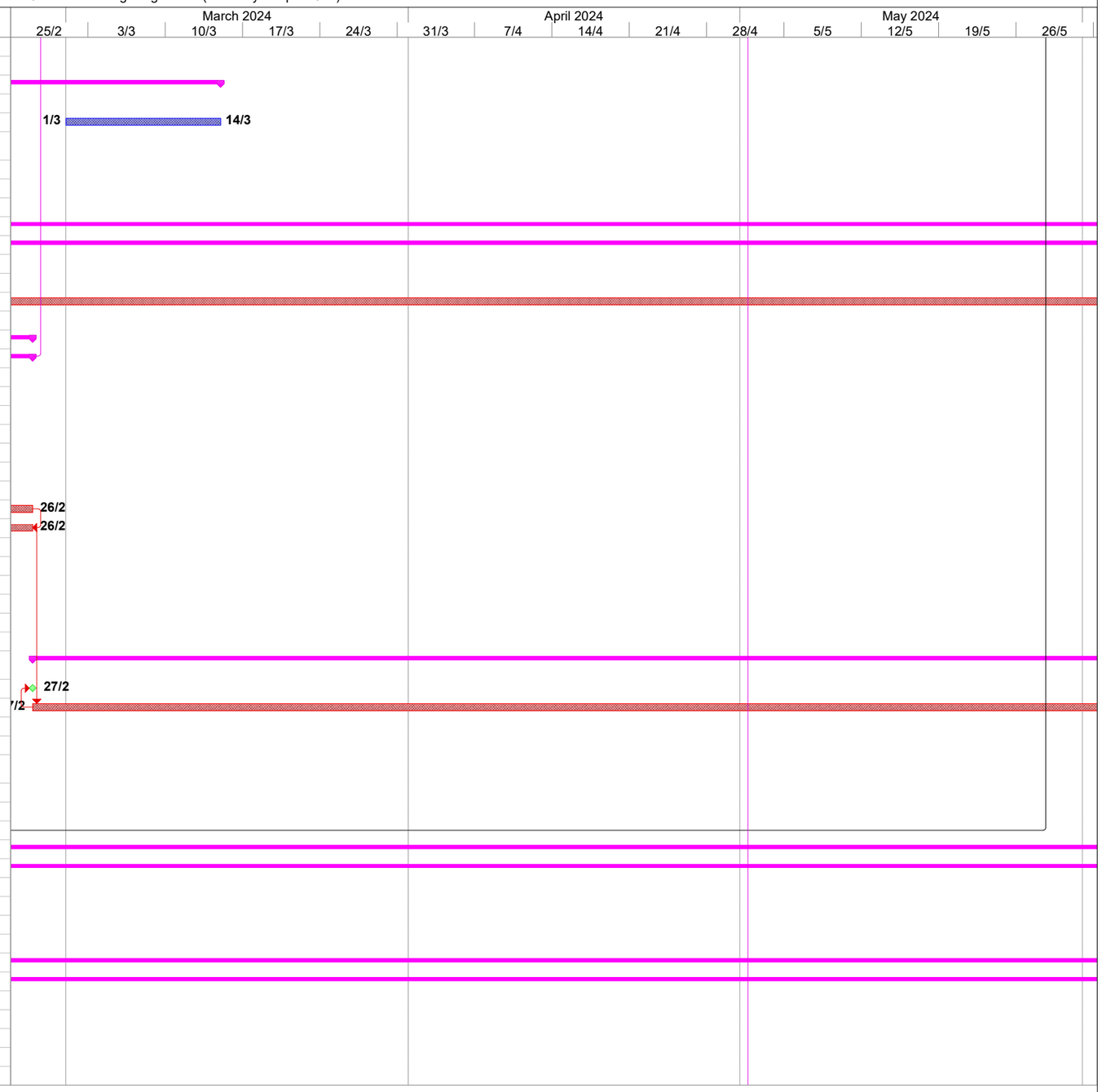
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
873	Construction of handrailing	7 days	Sun 26/5/24	Sat 1/6/24	
874	Repainting of handrailing	7 days	Sun 26/5/24	Sat 1/6/24	
875	**Slope Works at Feature No. 11NE-D/C986 (190m)**	**158 days**	**Fri 26/4/24**	**Mon 30/9/24**	
876	Filling of void with cement soil	7 days	Fri 26/4/24	Thu 2/5/24	872
877	Construction of concrete berm	14 days	Fri 3/5/24	Thu 16/5/24	876
878	Installation of hand railings	6 days	Fri 26/7/24	Wed 31/7/24	
879	Construction of wire mesh	30 days	Sun 1/9/24	Mon 30/9/24	871
880	**Slope Works at Feature No. 11NE-D/C1026 (60m)**	**318 days**	**Fri 18/8/23**	**Sun 30/6/24**	
881	Filling of void with cement soil	30 days	Wed 1/11/23	Thu 30/11/23	
882	Installation of non-biodegradable erosion control mat	30 days	Fri 1/12/23	Sat 30/12/23	881
883	Hydroseeding	91 days	Mon 1/4/24	Sun 30/6/24	882
884	Repainting of handrailing	90 days	Fri 18/8/23	Wed 15/11/23	
885	**Slope Works at Feature No. 11NE-D/C987 (90m)**	**724 days**	**Fri 8/7/22**	**Sun 30/6/24**	
886	Construction of concrete berm	30 days	Mon 1/1/24	Tue 30/1/24	881
887	Installation of hand railings	7 days	Thu 8/2/24	Wed 14/2/24	886
888	Installation of non-biodegradable erosion control mat	30 days	Fri 8/7/22	Sat 6/8/22	852
889	Hydroseeding	91 days	Mon 1/4/24	Sun 30/6/24	888
890	Repainting of handrailing	90 days	Fri 18/8/23	Wed 15/11/23	
891	**Slope Works at Feature No. 11NE-D/C871 (260m)**	**816 days**	**Fri 8/7/22**	**Mon 30/9/24**	
892	Construction of lockable gate	14 days	Tue 17/9/24	Mon 30/9/24	
893	Removal of existing damaged hand railings	14 days	Wed 10/5/23	Tue 23/5/23	
894	Installation of hand railings	60 days	Fri 8/7/22	Mon 5/9/22	
895	Reinstatement of concrete berm	30 days	Wed 31/1/24	Thu 29/2/24	886
896	Repainting of handrailing	90 days	Fri 18/8/23	Wed 15/11/23	
897	**Slope Works at Feature No. 11NE-D/C979 (45m)**	**294 days**	**Fri 18/8/23**	**Thu 6/6/24**	
898	Construction of concrete berm	14 days	Fri 17/5/24	Thu 30/5/24	877
899	Installation of hand railings	7 days	Fri 31/5/24	Thu 6/6/24	898
900	Repainting of handrailing	90 days	Fri 18/8/23	Wed 15/11/23	
901	**Slope Works at Feature No. 11NE-D/C988 (370m)**	**21 days**	**Fri 31/5/24**	**Thu 20/6/24**	
902	Construction of concrete berm	14 days	Fri 31/5/24	Thu 13/6/24	898
903	Installation of hand railings	7 days	Fri 14/6/24	Thu 20/6/24	902
904	**Slope Works at Feature No. 11NE-D/C1003 (265m)**	**28 days**	**Fri 14/6/24**	**Thu 11/7/24**	
905	Construction of concrete berm	21 days	Fri 14/6/24	Thu 4/7/24	902
906	Installation of hand railings	7 days	Fri 5/7/24	Thu 11/7/24	905
907	**Slope Works at Feature No. 11NE-D/FR657 (63m)**	**190 days**	**Thu 25/1/24**	**Thu 1/8/24**	
908	Filling of void with cement soil	7 days	Fri 5/7/24	Thu 11/7/24	905
909	Construction of concrete berm	14 days	Fri 12/7/24	Thu 25/7/24	908
910	Installation of hand railings	7 days	Fri 26/7/24	Thu 1/8/24	909
911	Repainting of handrailing	140 days	Thu 25/1/24	Wed 12/6/24	909FF
912	**Slope Works at Feature No. 11NE-D/C1006 (60m)**	**47 days**	**Fri 26/7/24**	**Tue 10/9/24**	
913	Construction of concrete berm (~30m)	14 days	Fri 26/7/24	Thu 8/8/24	909
914	Installation of hand railings (~30m)	7 days	Fri 9/8/24	Thu 15/8/24	913
915	Repainting of handrailing	7 days	Wed 4/9/24	Tue 10/9/24	
916	**Slope Works at Feature No. 11NE-D/C980 (55m)**	**378 days**	**Fri 18/8/23**	**Thu 29/8/24**	
917	Construction of concrete berm	14 days	Fri 9/8/24	Thu 22/8/24	913
918	Installation of hand railings	7 days	Fri 23/8/24	Thu 29/8/24	917
919	Repainting of handrailing	90 days	Fri 18/8/23	Wed 15/11/23	
920	**Slope Works at Feature No. 11NE-D/C174 (70m)**	**14 days**	**Fri 23/8/24**	**Thu 5/9/24**	
921	Reinstatement of sprayed concrete	14 days	Fri 23/8/24	Thu 5/9/24	917
922	**Slope Works at Feature No. 11NE-D/C688 (167m)**	**7 days**	**Fri 6/9/24**	**Thu 12/9/24**	
923	Constructiion of tree rings x9	7 days	Fri 6/9/24	Thu 12/9/24	924FF
924	Reinstatement of sprayed concrete	7 days	Fri 6/9/24	Thu 12/9/24	921
925	**Slope Works at Feature No. 11NE-D/C978 (350m)**	**16 days**	**Fri 13/9/24**	**Sat 28/9/24**	
926	Construction of concrete berm	8 days	Fri 13/9/24	Fri 20/9/24	924
927	Installation of hand railings	8 days	Sat 21/9/24	Sat 28/9/24	926
928	Repairing of existing steel maintenance staircase	8 days	Mon 16/9/24	Mon 23/9/24	926FF



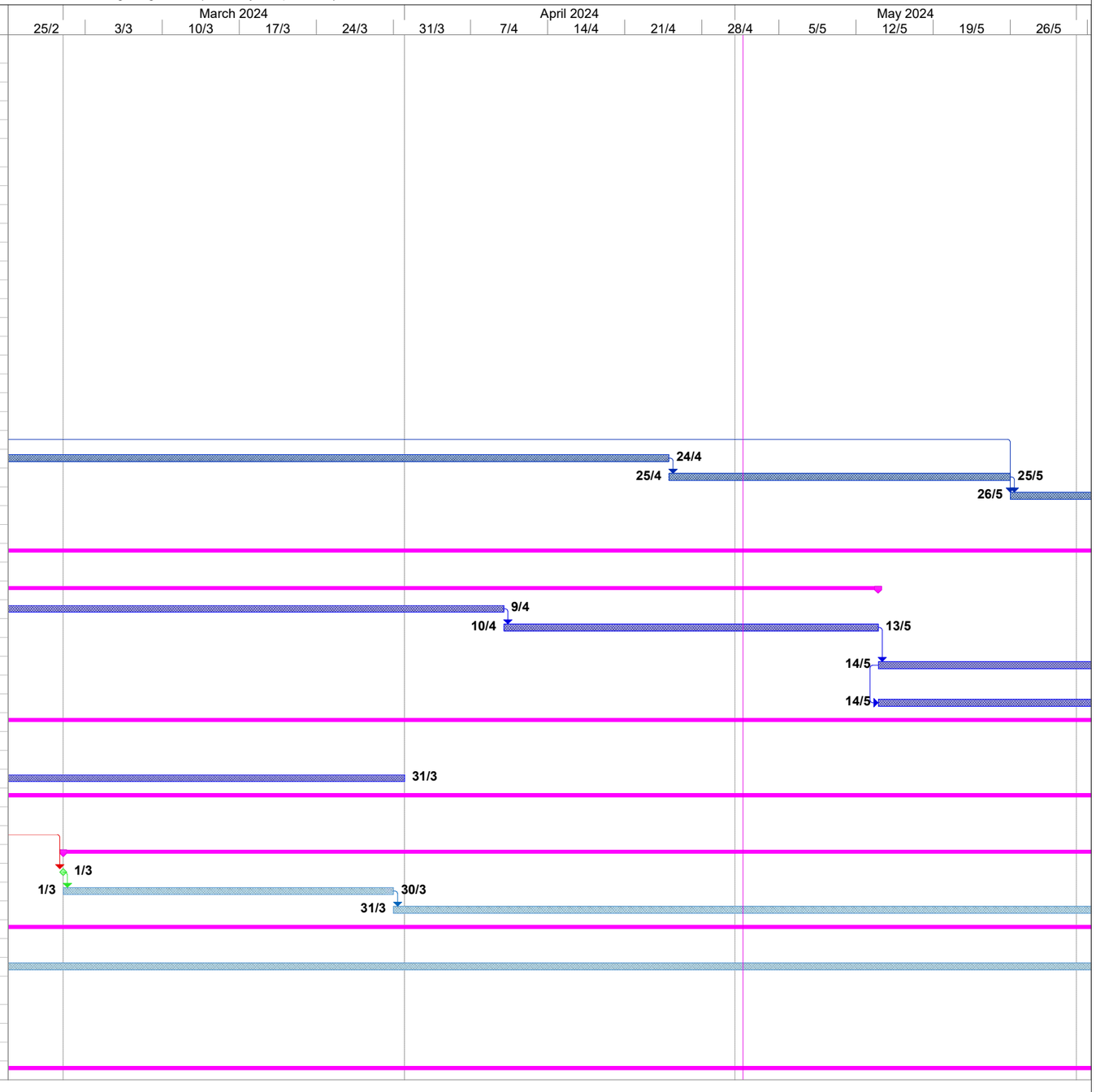
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
929	**Slope Works at Feature No. 11NE-D/C1004 (375m)**	**7 days**	**Tue 24/9/24**	**Mon 30/9/24**	
930	Repainting of handrailing	7 days	Tue 24/9/24	Mon 30/9/24	928
931	**Slope Works at Feature No. 11NE-D/C998 (409m)**	**760 days**	**Mon 14/2/22**	**Thu 14/3/24**	
932	Construction of concrete maintenance staircase	19 days	Mon 14/2/22	Fri 4/3/22	
933	Handrailing	14 days	Fri 1/3/24	Thu 14/3/24	
934	**Section of Works 5AI - Establishment Works for all Landscape Softworks in Section 5A of the Works**	**365 days**	**Tue 1/10/24**	**Tue 30/9/25**	
935	Commencement of Establishment Work for Section 5A	0 days	Tue 1/10/24	Tue 1/10/24	844FF+1 day
936	Establishment Work Duration for Section 5A	365 days	Tue 1/10/24	Tue 30/9/25	935SS-1 day
937	Completion of Works in Section 5A	0 days	Tue 30/9/25	Tue 30/9/25	936
938	**Section of Works 5B - Portion 11**	**947 days**	**Sun 27/2/22**	**Mon 30/9/24**	
939	Portion 11	947 days	**Sun 27/2/22**	**Mon 30/9/24**	
940	Provision of site access [212 days after starting date as per Contract]	0 days	Sun 27/2/22	Sun 27/2/22	104SS
941	Portion 9 delay (Handover site to other Contractor)	293 days	Tue 14/3/23	Sun 31/12/23	940,819SS
942	Provision of site access and stockpile area for works at Portion 9	274 days	Mon 1/1/24	Mon 30/9/24	941,820SS
943	Road marking & miscellaneous work	30 days	Sun 1/9/24	Mon 30/9/24	826FF,942FF
944	**Section of Works 6 - Portion 7**	**455 days**	**Tue 29/11/22**	**Mon 26/2/24**	
945	**Portion 7**	**455 days**	**Tue 29/11/22**	**Mon 26/2/24**	
946	Access date [487 days after starting date as per Contract]	0 days	Tue 29/11/22	Tue 29/11/22	110SS
947	Deferred possession (PMI 58)	90 days	Tue 29/11/22	Sun 26/2/23	946
948	Provision of site access	7 days	Mon 27/2/23	Sun 5/3/23	947
949	Mobilization& Site Clearance	60 days	Mon 6/3/23	Thu 4/5/23	948
950	Time Risk Allowance	15 days	Fri 5/5/23	Fri 19/5/23	949
951	Excavation/backfilling and compaction of material	30 days	Fri 1/12/23	Sat 30/12/23	949,950
952	Construction of U-channels with cover and catchpits	30 days	Sun 31/12/23	Mon 29/1/24	951
953	Road Paving work and asscociates street furniture	28 days	Tue 30/1/24	Mon 26/2/24	952
954	Soft landscaping works	30 days	Sun 28/1/24	Mon 26/2/24	953FF
955	**Irrigation system**	**144 days**	**Sat 16/9/23**	**Tue 6/2/24**	
956	Contractor's design	45 days	Sat 16/9/23	Mon 30/10/23	
957	Approval of WWO542	30 days	Wed 1/11/23	Thu 30/11/23	956
958	Approval of Form WWO 046	21 days	Fri 1/12/23	Thu 21/12/23	957
959	Underground water supply for irrigation	10 days	Fri 22/12/23	Sun 31/12/23	958
960	Irrigation system	10 days	Sun 28/1/24	Tue 6/2/24	954SS
961	**Section of Works 6A - Establishment Works for all Landscape Softworks in Section 6 of the Works**	**365 days**	**Tue 27/2/24**	**Tue 25/2/25**	
962	Commencement of Establishment Work for Section 6	0 days	Tue 27/2/24	Tue 27/2/24	963SS
963	Establishment Work Duration for Section 6	365 days	Tue 27/2/24	Tue 25/2/25	954
964	Completion of Works in Section 6	0 days	Tue 25/2/25	Tue 25/2/25	963FF
965	**Section of Works 7A - Portions 13a, 14 (DELETED)**	**479 days**	**Fri 30/7/21**	**Sun 20/11/22**	
989	**Section of Works 7AI - Establishment Works for all Landscape Softworks in Section 7A of the Works (DELETED)**	**365 days**	**Fri 30/7/21**	**Fri 29/7/22**	
990	Commencement of Establishment Work for Section 7A	0 days	Fri 30/7/21	Fri 30/7/21	
991	Establishment Work Duration for Section 7A	365 days	Fri 30/7/21	Fri 29/7/22	
992	Completion of Works in Section 7A	0 days	Fri 29/7/22	Fri 29/7/22	991
993	**Section of Works 7B - Portions 13b, 15**	**972 days**	**Sat 26/2/22**	**Thu 24/10/24**	
994	Portion 13b & 15	972 days	**Sat 26/2/22**	**Thu 24/10/24**	
995	Provision of site access [212 days after starting date as per Contract]	7 days	Sun 27/2/22	Sat 5/3/22	133
996	Deferred possession	52 days	Sat 26/2/22	Mon 18/4/22	133SS
997	Mobilization& Site Clearance	21 days	Tue 19/4/22	Mon 9/5/22	996
998	Time Risk Allowance	15 days	Tue 10/5/22	Tue 24/5/22	997,367
999	**Portion 13b**	**884 days**	**Wed 25/5/22**	**Thu 24/10/24**	**998**
1000	**Elevated walkway**	**884 days**	**Wed 25/5/22**	**Thu 24/10/24**	
1001	Modification of existing retaining wall RWA10 (PMI 033)	60 days	Wed 25/5/22	Sat 23/7/22	997,367
1002	**Modification of existing retaining wall RWA9 & 10**	**447 days**	**Sun 24/7/22**	**Fri 13/10/23**	**997,367,998,1001**
1003	**Wall RWA10**	**447 days**	**Sun 24/7/22**	**Fri 13/10/23**	
1004	Excavation	100 days	Sun 24/7/22	Mon 31/10/22	1001
1005	Cutting away existing coping by wire sawing machine	75 days	Tue 1/11/22	Sat 14/1/23	1004



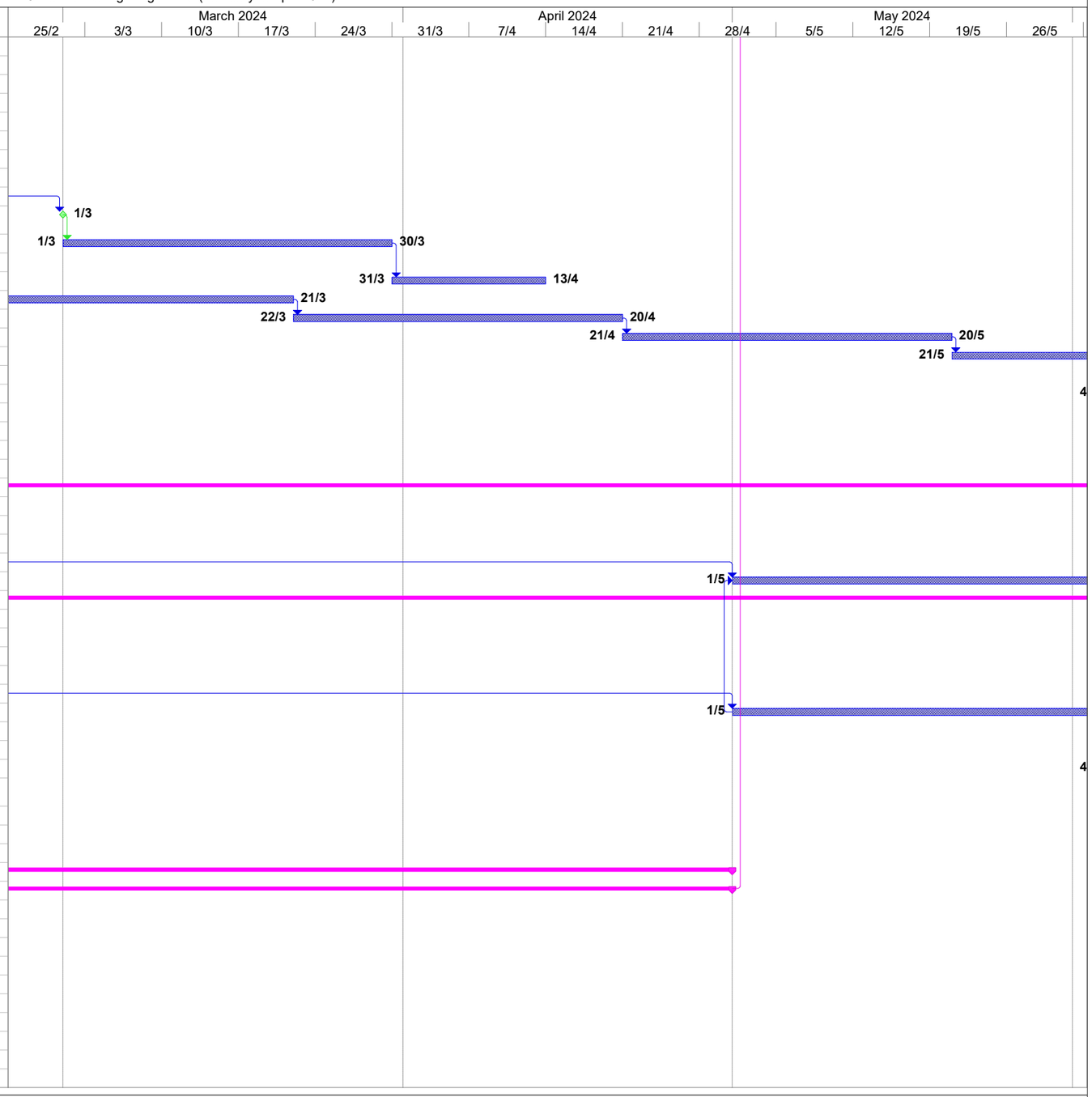
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
1006	Hacking away existing wall stem by hydraulic breaker (existing vertical bar to be retained for further connection)	45 days	Sun 15/1/23	Tue 28/2/23	1005
1007	Construction of new RC wall stem	86 days	Mon 17/7/23	Tue 10/10/23	1006
1008	Backfilling	4 days	Tue 10/10/23	Fri 13/10/23	
1009	**Wall RWA9**	**165 days**	**Thu 16/3/23**	**Sun 27/8/23**	
1010	Excavation	15 days	Thu 16/3/23	Thu 30/3/23	1006FS+15 days
1011	Hacking away existing wall stem by hydraulic breaker (existing vertical bar to be retained for further connection)	60 days	Fri 31/3/23	Mon 29/5/23	1010
1012	Construction of new RC wall stem	75 days	Sat 10/6/23	Wed 23/8/23	1011
1013	Backfilling	4 days	Thu 24/8/23	Sun 27/8/23	1012
1014	**Bearing**	**252 days**	**Thu 16/3/23**	**Wed 22/11/23**	
1015	Material submission for appproval	30 days	Thu 16/3/23	Fri 14/4/23	
1016	Fabrication	106 days	Sat 15/4/23	Sat 29/7/23	1015
1017	Testing	29 days	Sun 30/7/23	Sun 27/8/23	1016
1018	Installation	7 days	Wed 1/11/23	Tue 7/11/23	1017,1008,1013
1019	Grouting to bearing bases and curing	15 days	Wed 8/11/23	Wed 22/11/23	1018
1020	**Precast beams**	**247 days**	**Wed 7/6/23**	**Thu 8/2/24**	
1021	Submission for approval	78 days	Wed 7/6/23	Wed 23/8/23	
1022	Fabrication	58 days	Wed 4/10/23	Thu 30/11/23	1021
1023	Post-tensioning and grouting	59 days	Tue 31/10/23	Thu 28/12/23	1022FS-31 days
1024	Capping ends	3 days	Fri 29/12/23	Sun 31/12/23	1023
1025	Installation	10 days	Mon 15/1/24	Wed 24/1/24	1024,1019
1026	Grouting to bearing tops and curing	15 days	Thu 25/1/24	Thu 8/2/24	1025
1027	Fabrication of permanent formwork	76 days	Fri 9/2/24	Wed 24/4/24	1026
1028	Installation of permanent formwork	31 days	Thu 25/4/24	Sat 25/5/24	1027
1029	Casting of in-situ tie beams	26 days	Sun 26/5/24	Thu 20/6/24	1026,1028
1030	Casting of in-situ topping slab	16 days	Fri 21/6/24	Sat 6/7/24	1029
1031	Finishing and landscaping works	110 days	Sun 7/7/24	Thu 24/10/24	1029,1030
1032	**Covered Walkway under PMQP 004**	**386 days**	**Thu 5/10/23**	**Thu 24/10/24**	
1033	Awaiting finished level from PM due to interfacing party	138 days	Thu 5/10/23	Mon 19/2/24	
1034	**Contractor Design**	**84 days**	**Tue 20/2/24**	**Mon 13/5/24**	
1035	Submission	50 days	Tue 20/2/24	Tue 9/4/24	1033
1036	Approval	34 days	Wed 10/4/24	Mon 13/5/24	1035
1037	**Construction**	**164 days**	**Tue 14/5/24**	**Thu 24/10/24**	
1038	Footing	44 days	Tue 14/5/24	Wed 26/6/24	1036
1039	Superstructure	120 days	Thu 27/6/24	Thu 24/10/24	1038
1040	Lighting system	60 days	Tue 14/5/24	Fri 12/7/24	1038SS
1041	**Additional works under PMQP 004**	**732 days**	**Mon 24/10/22**	**Thu 24/10/24**	
1042	Issuance of PMQP 004	0 days	Mon 24/10/22	Mon 24/10/22	
1043	Hoarding and gate around Site G2	153 days	Wed 1/3/23	Mon 31/7/23	1042
1044	Greywater drainage pipes and manholes at Portion 12	60 days	Thu 1/2/24	Sun 31/3/24	
1045	**Revised slope works including U-channel & catchpit**	**732 days**	**Mon 24/10/22**	**Thu 24/10/24**	
1046	Late handover of site by others	195 days	Mon 24/10/22	Sat 6/5/23	1042SS
1047	Installation of monitoring instruments	14 days	Sun 17/12/23	Sat 30/12/23	1046
1048	**Slope B3**	**238 days**	**Fri 1/3/24**	**Thu 24/10/24**	
1049	Works area handed over by others	0 days	Fri 1/3/24	Fri 1/3/24	1047
1050	Excavatoin of slope B3	30 days	Fri 1/3/24	Sat 30/3/24	1049
1051	Construction of slope B3	208 days	Sun 31/3/24	Thu 24/10/24	1050
1052	**Slope B4**	**274 days**	**Tue 2/1/24**	**Tue 1/10/24**	
1053	Excavatoin of slope B4	40 days	Tue 2/1/24	Sat 10/2/24	
1054	Construction of slope B4	234 days	Sun 11/2/24	Tue 1/10/24	1053
1055	**Revised access road including roundabout, drainage, sewerage and water mains**	**184 days**	**Wed 1/3/23**	**Thu 31/8/23**	
1056	Drainage, sewerage and water mains	184 days	Wed 1/3/23	Thu 31/8/23	
1057	Concrete pavement at roundabout	61 days	Thu 1/6/23	Mon 31/7/23	1056FS-71 days
1058	Watermains connection, sewerage pipes and manholes connection	683 days	Mon 12/12/22	Thu 24/10/24	
1059	**footpath**	**540 days**	**Mon 12/12/22**	**Mon 3/6/24**	



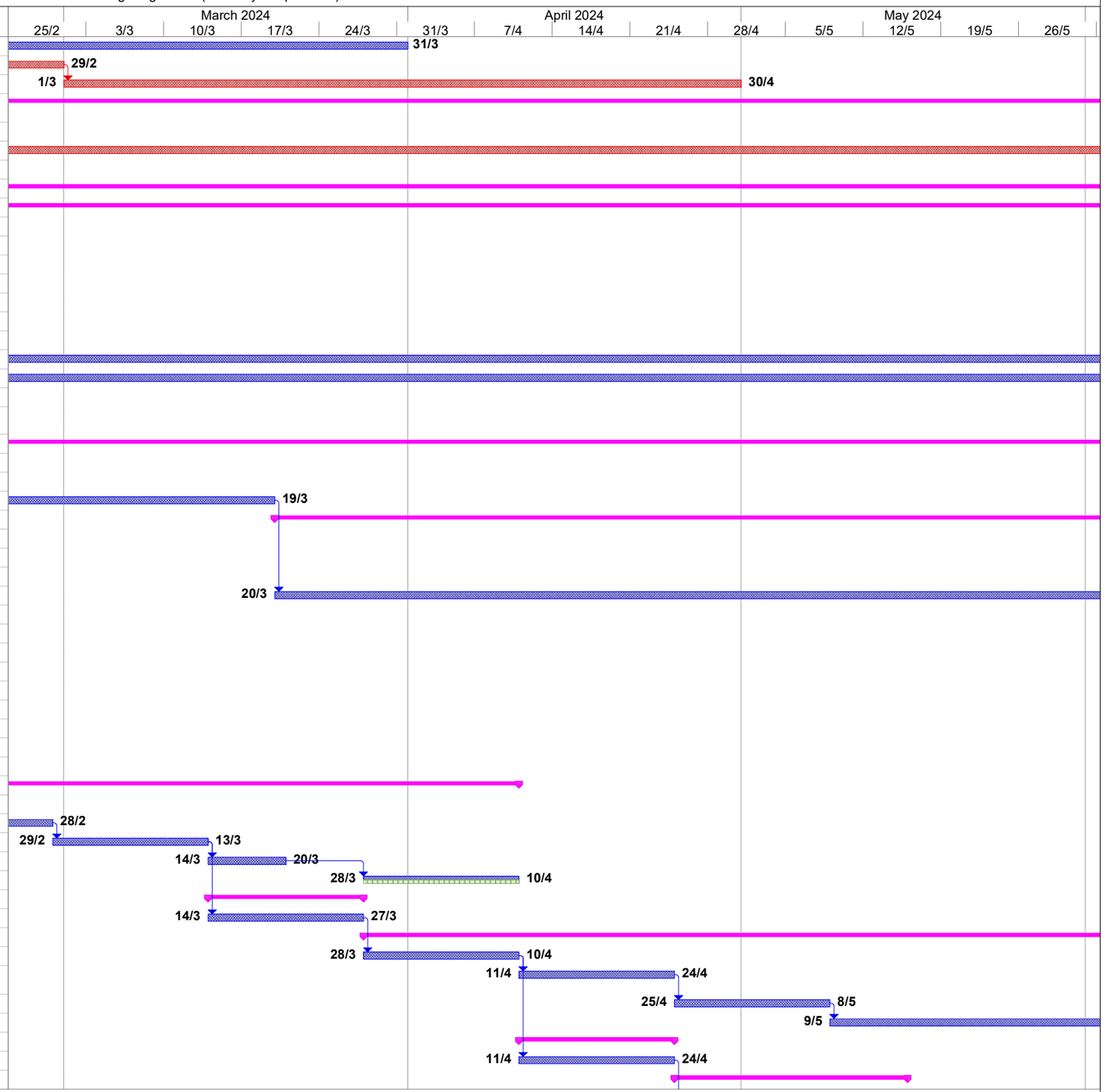
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
1060	Implementation of TTA	1 day	Mon 12/12/22	Mon 12/12/22	1042
1061	UU detection	7 days	Tue 13/12/22	Mon 19/12/22	1060
1062	Trial pit	14 days	Tue 20/12/22	Mon 2/1/23	1061
1063	HYD condition letter and WSD's approval	90 days	Sat 1/7/23	Thu 28/9/23	
1064	Change design by Highways Department Lighting	67 days	Fri 29/9/23	Mon 4/12/23	1063
1065	TTA design review and revise	50 days	Tue 5/12/23	Tue 23/1/24	1064
1066	Implementation of TTA	1 day	Wed 24/1/24	Wed 24/1/24	1065
1067	UU detection	3 days	Thu 25/1/24	Sat 27/1/24	1066
1068	Trial pit	7 days	Sun 28/1/24	Sat 3/2/24	1067
1069	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	1068
1070	UU protection, relocation of hydrant	30 days	Fri 1/3/24	Sat 30/3/24	1069
1071	Cable for relocation of lamp post (Stage 1)	14 days	Sun 4/2/24	Sat 17/2/24	1068
1072	Cable for relocation of lamp post (Stage 2)	14 days	Sun 31/3/24	Sat 13/4/24	1070
1073	Relocation of Lamp post	30 days	Wed 21/2/24	Thu 21/3/24	
1074	UU installation	30 days	Fri 22/3/24	Sat 20/4/24	1073
1075	Construction of waternain, sewerage pipe and manhole	30 days	Sun 21/4/24	Mon 20/5/24	1074
1076	Reinstatement	14 days	Tue 21/5/24	Mon 3/6/24	1075
1077	**Portion 15**	**143 days**	**Tue 4/6/24**	**Thu 24/10/24**	
1078	Implementation of TTA	1 day	Tue 4/6/24	Tue 4/6/24	1076
1079	UU Detection	7 days	Wed 5/6/24	Tue 11/6/24	1078
1080	Trial pit	14 days	Wed 12/6/24	Tue 25/6/24	1079
1081	Construction	90 days	Wed 26/6/24	Mon 23/9/24	1080
1082	Reinstatement	31 days	Tue 24/9/24	Thu 24/10/24	1081
1083	**Irrigation system**	**393 days**	**Fri 19/5/23**	**Fri 14/6/24**	
1084	Contractor's design	76 days	Fri 19/5/23	Wed 2/8/23	
1085	Approval of WWO542	30 days	Thu 3/8/23	Fri 1/9/23	1084
1086	Approval of Form WWO 046	21 days	Sat 2/9/23	Fri 22/9/23	1085
1087	Underground water supply for irrigation	60 days	Sat 23/9/23	Tue 21/11/23	1086
1088	Irrigation system	45 days	Wed 1/5/24	Fri 14/6/24	1095SS,1087
1089	**Lighting system**	**669 days**	**Fri 30/9/22**	**Mon 29/7/24**	
1090	Contractor's design	45 days	Fri 30/9/22	Sun 13/11/22	
1091	Application for electricity power supply	362 days	Mon 14/11/22	Fri 10/11/23	1090
1092	Lighting design	300 days	Mon 14/11/22	Sat 9/9/23	
1093	LCSD's approval of lighting of ighting system	31 days	Sun 1/10/23	Tue 31/10/23	1092
1094	Installation including ducting and draw pit	90 days	Wed 1/11/23	Mon 29/1/24	1093
1095	Installation of lighting	60 days	Wed 1/5/24	Sat 29/6/24	1094
1096	Energization	15 days	Sun 30/6/24	Sun 14/7/24	1095
1097	Testing and Commissioning	15 days	Mon 15/7/24	Mon 29/7/24	1096
1098	Soil placement, woodland greening work and soft landscape works	120 days	Tue 4/6/24	Tue 1/10/24	1054FF
1099	**Section of Works 7BI - Establishment Works for all Landscape Softworks in Section 7B of the Works**	**365 days**	**Fri 25/10/24**	**Fri 24/10/25**	
1100	Commencement of Establishment Work for Section 7B	0 days	Fri 25/10/24	Fri 25/10/24	1082FS+1 day
1101	Establishment Work Duration for Section 7B	365 days	Fri 25/10/24	Fri 24/10/25	1100SS-1 day
1102	Completion of Works in Section 7B	0 days	Fri 24/10/25	Fri 24/10/25	1101
1103	**Section of Works 8 - Portion 16**	**685 days**	**Thu 16/6/22**	**Tue 30/4/24**	
1104	Portion 16	685 days	**Thu 16/6/22**	**Tue 30/4/24**	
1105	Site access date [321 days after starting date as per Contract]	0 days	Thu 16/6/22	Thu 16/6/22	149SS
1106	Time Risk Allowance	24 days	Thu 16/6/22	Sat 9/7/22	1105
1107	Late handover of site by others	350 days	Thu 16/6/22	Wed 31/5/23	1106
1108	Mobilization& Site Clearance	4 days	Thu 1/6/23	Sun 4/6/23	1107
1109	Removal of existing rock slope	45 days	Mon 5/6/23	Wed 19/7/23	1108
1110	Construction of fill slope A7	90 days	Thu 20/7/23	Tue 17/10/23	1109
1111	Construction of fill slope A8	80 days	Sun 30/7/23	Tue 17/10/23	1110FF
1112	Construction of slope surface drainage system	45 days	Wed 18/10/23	Fri 1/12/23	1110
1113	Hydroseeding	30 days	Sat 2/12/23	Sun 31/12/23	1112
1114	Chain link fence	30 days	Sat 2/12/23	Sun 31/12/23	1112FF



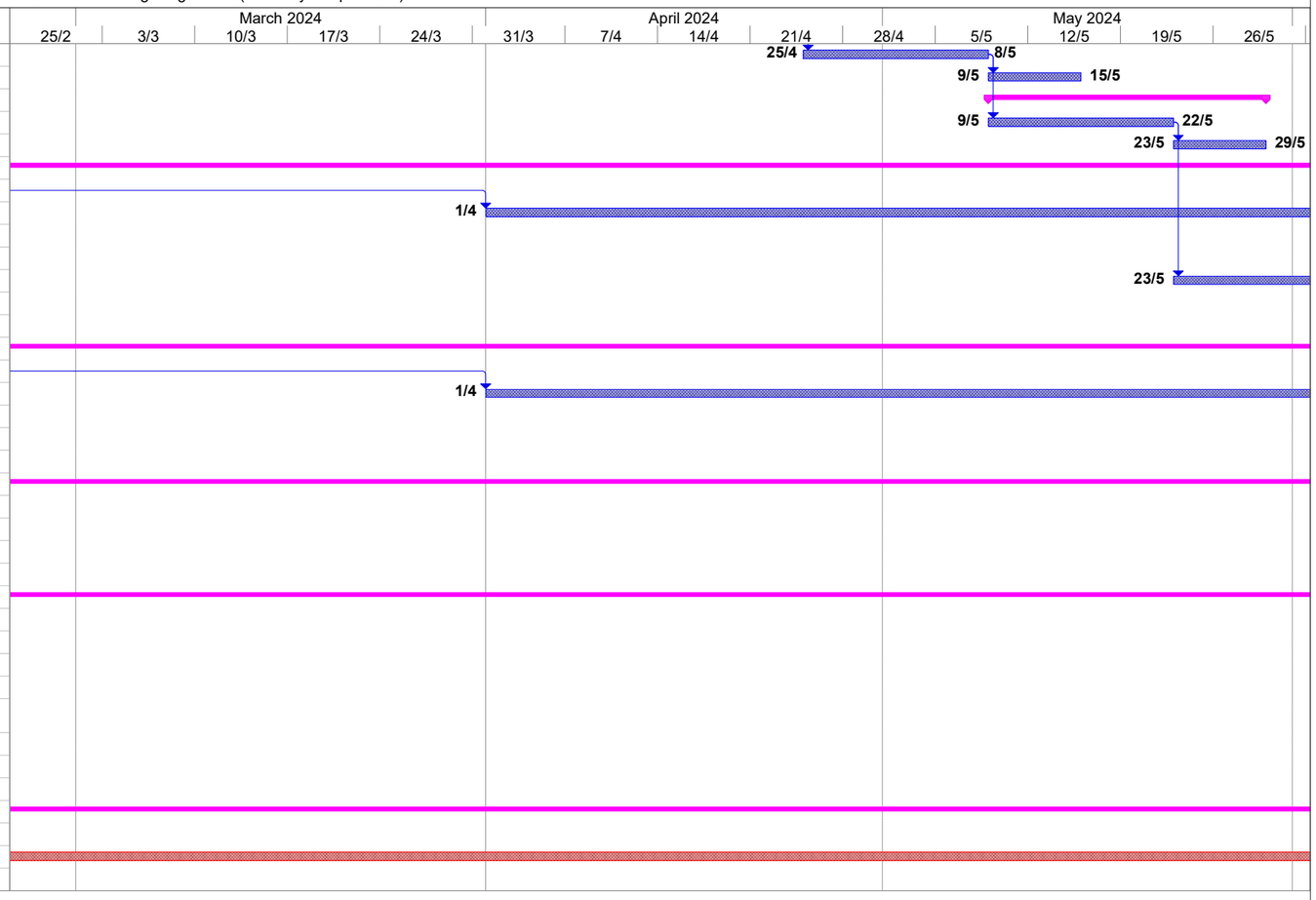
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
1115	Thrust boring of additional pipe from S201D to MHT1	179 days	Thu 5/10/23	Sun 31/3/24	
1116	Construction of staircase at Slope A6 and concrete pavement (under PMI)	32 days	Mon 29/1/24	Thu 29/2/24	1113
1117	Additional stormwater drainage pipe (PMN 092)	61 days	Fri 1/3/24	Tue 30/4/24	1116
1118	**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**	
1119	Commencement of Establishment Work for Section 8	0 days	Mon 1/1/24	Mon 1/1/24	1120SS
1120	Establishment Work Duration for Section 8	365 days	Mon 1/1/24	Mon 30/12/24	1113
1121	Completion of Works in Section 8	0 days	Mon 30/12/24	Mon 30/12/24	1120FF
1122	**Section of Works 9 - Portion 17**	**977 days**	**Sun 27/2/22**	**Wed 30/10/24**	
1123	**Portion 17**	**977 days**	**Sun 27/2/22**	**Wed 30/10/24**	
1124	Provision of site access [212 days after starting date as per Contract]	0 days	Sun 27/2/22	Sun 27/2/22	160SS
1125	Deferred possession	30 days	Sun 27/2/22	Mon 28/3/22	1124
1126	Slope inspection & assessment work & Tree Survey	23 days	Tue 29/3/22	Wed 20/4/22	1125
1127	Mobilization, access & Site Clearance	15 days	Thu 21/4/22	Thu 5/5/22	1126
1128	Time Risk Allowance	14 days	Fri 6/5/22	Thu 19/5/22	1126,1127
1129	Access blocked by C1 at hiking trail	181 days	Mon 3/7/23	Sat 30/12/23	
1130	Demolition and removal of disused water pipe and sprinkler system	50 days	Fri 20/5/22	Fri 8/7/22	1128
1131	Repair of cracks at drainage channel and concrete berm	777 days	Thu 1/9/22	Wed 16/10/24	1130
1132	Reinstatemnt of joint sealant at drainage channel	776 days	Fri 16/9/22	Wed 30/10/24	
1133	Installation of display sign for slope registration	60 days	Tue 2/7/24	Fri 30/8/24	
1134	Reinstatement of eroded soil berm due to inclement weather (PMI 117)	128 days	Thu 7/9/23	Fri 12/1/24	
1135	**Slope Works at Feature No. 11NE-D/C948 (310m)**	**228 days**	**Sun 31/12/23**	**Wed 14/8/24**	
1136	Construction of concrete berm	14 days	Thu 25/7/24	Wed 7/8/24	1197
1137	Repainting of existing steel maintenance staircase	7 days	Thu 8/8/24	Wed 14/8/24	1136
1138	Construction of wire mesh	80 days	Sun 31/12/23	Tue 19/3/24	1129
1139	**Slope Works at Feature No. 11NE-D/C949 (603m)**	**176 days**	**Wed 20/3/24**	**Wed 11/9/24**	
1140	Filling of voids with concrete	14 days	Thu 8/8/24	Wed 21/8/24	1136
1141	Construction of concrete berm	14 days	Thu 22/8/24	Wed 4/9/24	1140
1142	Installation of hand railings	7 days	Thu 5/9/24	Wed 11/9/24	1141
1143	Construction of wire mesh	80 days	Wed 20/3/24	Fri 7/6/24	1138
1144	**Slope Works at Feature No. 11NE-D/C981 (390m)**	**110 days**	**Sat 8/6/24**	**Wed 25/9/24**	
1145	Construction of concrete berm	14 days	Thu 5/9/24	Wed 18/9/24	1141
1146	Installation of hand railings	7 days	Thu 19/9/24	Wed 25/9/24	1145
1147	Construction of wire mesh	80 days	Sat 8/6/24	Mon 26/8/24	1143
1148	**Slope Works at Feature No. 11NE-B/C1013 (340m)**	**65 days**	**Tue 27/8/24**	**Wed 30/10/24**	
1149	Construction of wire mesh	65 days	Tue 27/8/24	Wed 30/10/24	1147
1150	Construction of concrete berm	14 days	Thu 19/9/24	Wed 2/10/24	1145
1151	Installation of hand railings	7 days	Thu 3/10/24	Wed 9/10/24	1150
1152	Construction of concrete maintenance staircase with hand railings	28 days	Thu 3/10/24	Wed 30/10/24	1150
1153	**Slope Works at Feature No. 11NE-B/C902 (360m)**	**70 days**	**Thu 1/2/24**	**Wed 10/4/24**	
1154	Filling of void with cement soil	14 days	Thu 1/2/24	Wed 14/2/24	
1155	Filling of void with concrete	14 days	Thu 15/2/24	Wed 28/2/24	1154
1156	Construction of concrete berm	14 days	Thu 29/2/24	Wed 13/3/24	1155
1157	Installation of hand railings	7 days	Thu 14/3/24	Wed 20/3/24	1156
1158	Repainting of existing steel maintenance staircase	14 days	Thu 28/3/24	Wed 10/4/24	1157
1159	**Slope Works at Feature No. 11NE-B/C224 (40m)**	14 days	Thu 14/3/24	Wed 27/3/24	
1160	Reinstatement of sprayed concrete	14 days	Thu 14/3/24	Wed 27/3/24	1156
1161	**Slope Works at Feature No. 11NE-B/C225 (60m)**	102 days	Thu 28/3/24	Sun 7/7/24	
1162	Reinstatement of sprayed concrete	14 days	Thu 28/3/24	Wed 10/4/24	1160
1163	Reinstatement of damaged granite stone planter wall and granoite stone facing	14 days	Thu 11/4/24	Wed 24/4/24	1162
1164	Demolition and removal of existing damaged U-channel	14 days	Thu 25/4/24	Wed 8/5/24	1163
1165	Construction of 225 mm U channel (60m)	60 days	Thu 9/5/24	Sun 7/7/24	1164
1166	**Slope Works at Feature No. 11NE-B/C1014 (90m)**	**14 days**	**Thu 11/4/24**	**Wed 24/4/24**	
1167	Repair/Construction of concrete berm	14 days	Thu 11/4/24	Wed 24/4/24	1162
1168	**Slope Works at Feature No. 11NE-D/C983 (215m)**	**21 days**	**Thu 25/4/24**	**Wed 15/5/24**	



Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
1169	Construction of concrete berm	14 days	Thu 25/4/24	Wed 8/5/24	1167
1170	Installation of hand railings	7 days	Thu 9/5/24	Wed 15/5/24	1169
1171	**Slope Works at Feature No. 11NE-D/C982 (230m)**	**21 days**	**Thu 9/5/24**	**Wed 29/5/24**	
1172	Repair/Construction of concrete berm	14 days	Thu 9/5/24	Wed 22/5/24	1169
1173	Installation of hand railings	7 days	Thu 23/5/24	Wed 29/5/24	1172
1174	**Slope Works at Feature No. 11NE-B/C901 (290m)**	**391 days**	**Fri 2/6/23**	**Wed 26/6/24**	
1175	Installation of non-biodegradable erosion control mat	90 days	Fri 2/6/23	Wed 30/8/23	
1176	Hydroseeding	70 days	Mon 1/4/24	Sun 9/6/24	1175
1177	Installation of hand railings	36 days	Thu 7/9/23	Thu 12/10/23	
1178	Repainting of handrailing	20 days	Sun 22/10/23	Fri 10/11/23	
1179	Filling of void with concrete	14 days	Thu 23/5/24	Wed 5/6/24	1172
1180	Reinstatement of concrete berm	14 days	Thu 6/6/24	Wed 19/6/24	1179
1181	Construction of lockable gate	7 days	Thu 20/6/24	Wed 26/6/24	1180
1182	**Slope Works at Feature No. 11NE-B/C900 (335m)**	**723 days**	**Sat 9/7/22**	**Sun 30/6/24**	
1183	Installation of non-biodegradable erosion control mat	78 days	Sun 12/2/23	Sun 30/4/23	
1184	Hydroseeding	91 days	Mon 1/4/24	Sun 30/6/24	1183
1185	Installation of hand railings	60 days	Sat 9/7/22	Tue 6/9/22	
1186	Reinstatement of concrete berm	7 days	Thu 20/6/24	Wed 26/6/24	1180
1187	Repainting of handrailing	30 days	Wed 10/5/23	Thu 8/6/23	
1188	**Slope Works at Feature No. 11NE-B/C899 (280m)**	**388 days**	**Mon 19/6/23**	**Wed 10/7/24**	
1189	Filling of voids with concrete	7 days	Thu 27/6/24	Wed 3/7/24	1186
1190	Construction of concrete berm	7 days	Thu 4/7/24	Wed 10/7/24	1189
1191	Installation of hand railings	60 days	Mon 19/6/23	Thu 17/8/23	
1192	Repainting of handrailing	30 days	Thu 6/7/23	Fri 4/8/23	
1193	**Slope Works at Feature No. 11NE-D/C872 (250m)**	**747 days**	**Sat 9/7/22**	**Wed 24/7/24**	
1194	Installation of hand railings	60 days	Sat 9/7/22	Tue 6/9/22	
1195	Repainting of handrailing	30 days	Sun 2/4/23	Mon 1/5/23	
1196	Filling of void with concrete	7 days	Thu 11/7/24	Wed 17/7/24	1190
1197	Reinstatement of concrete berm	7 days	Thu 18/7/24	Wed 24/7/24	1196
1198	**Section of Works 9A - Establishment Works for all Landscape Softworks in Section 9 of the Works**	**365 days**	**Thu 31/10/24**	**Thu 30/10/25**	
1199	Commencement of Establishment Work for Section 9	0 days	Thu 31/10/24	Thu 31/10/24	1200SS
1200	Establishment Work Duration for Section 9	365 days	Thu 31/10/24	Thu 30/10/25	1149
1201	Completion of Works in Section 9	0 days	Thu 30/10/25	Thu 30/10/25	1200FF
1202	**Section of Works 10 - All Tree Protection and Preservation Works**	**1202 days**	**Fri 30/7/21**	**Tue 12/11/24**	
1203	Commencement of All Tree Protection and Preservation Work	0 days	Fri 30/7/21	Fri 30/7/21	
1204	All Tree Protection and Preservation Work	1202 days	Fri 30/7/21	Tue 12/11/24	1203
1205	Completion of All Tree Protection and Preservation Work	0 days	Tue 12/11/24	Tue 12/11/24	1204

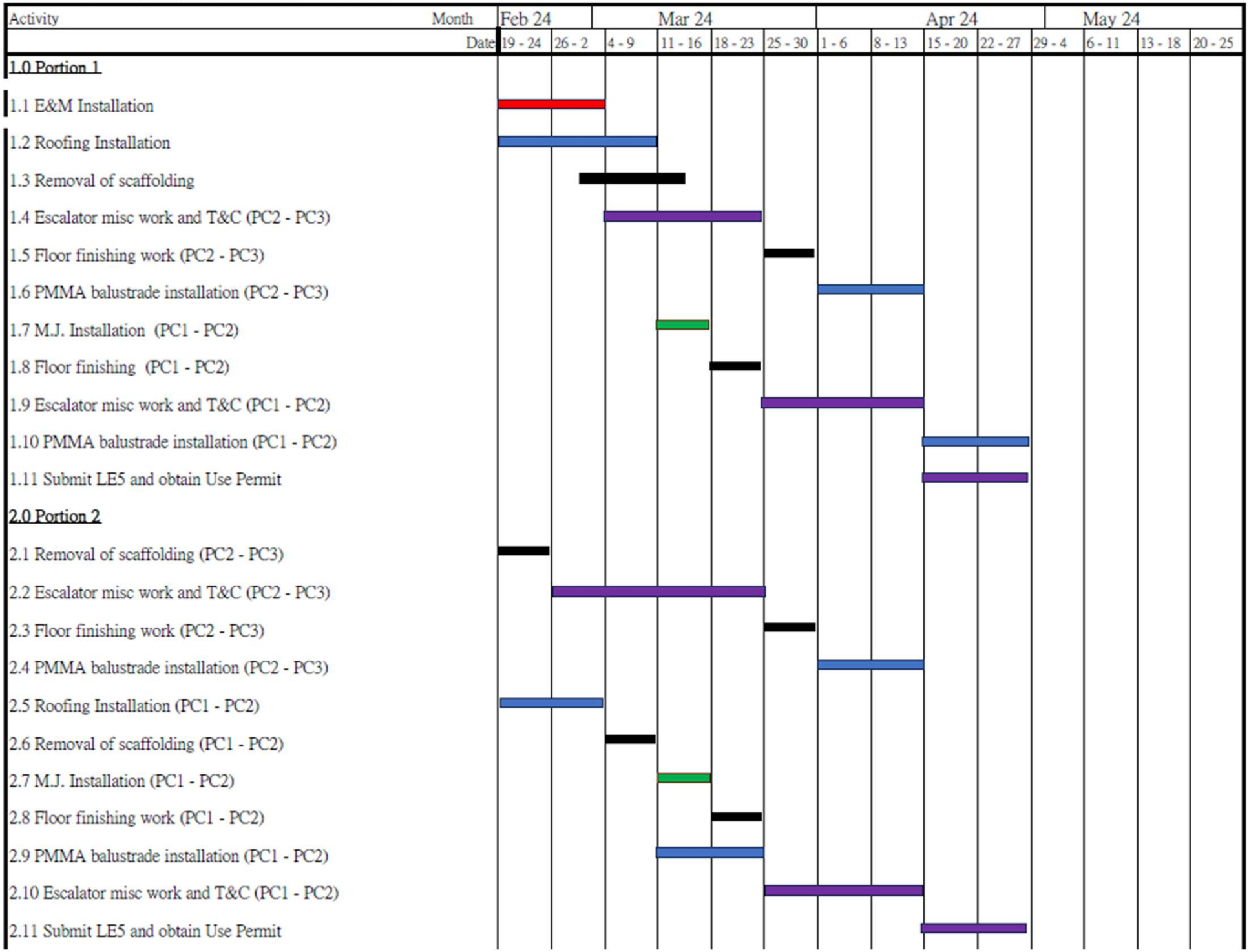


Task | Critical Task | Milestone | Summary | Progress

Contract 5 (NE/2019/02)

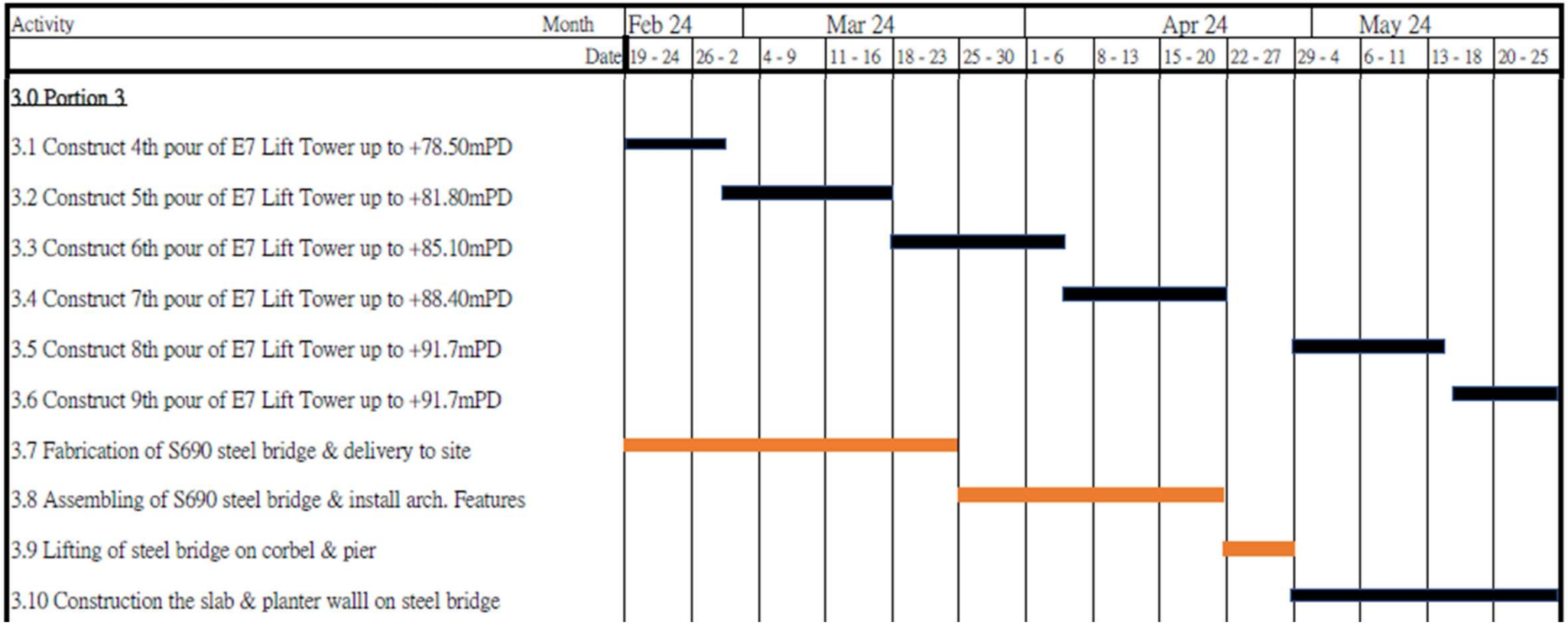
Major Activities in Coming 3 Months

3 Months Rolling Programme (Feb 24 - May 24)



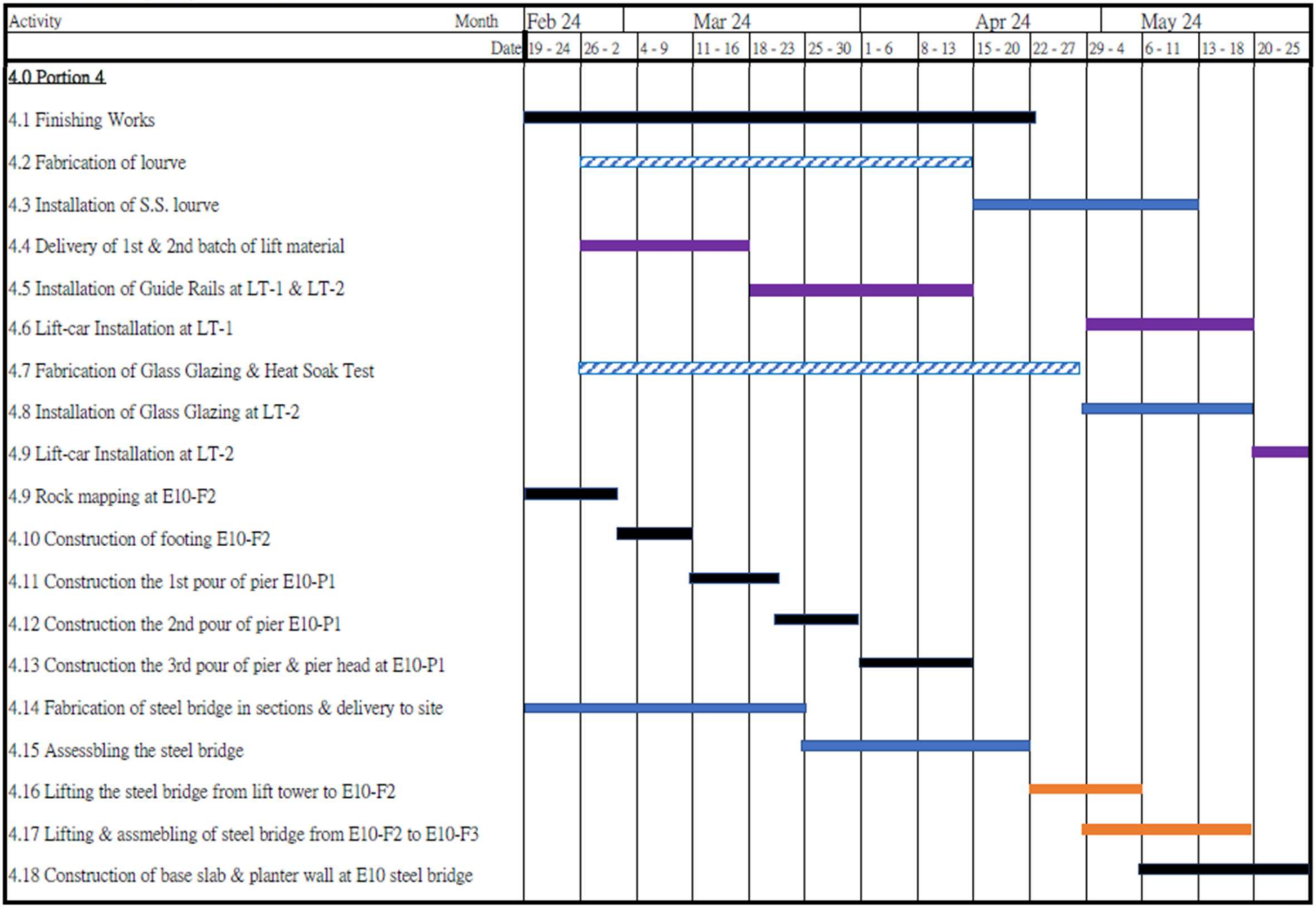
Major Activities in Coming 3 Months

3 Months Rolling Programme (Feb 24 - May 24)



Major Activities in Coming 3 Months

3 Months Rolling Programme (Feb 24 - May 24)



Appendix D

Monitoring Locations for Impact Monitoring

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

HVS in AMS-1 for 24-Hour TSP

AMS-1

AMS-1a

AMS-2

AMS-3

Legend

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

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

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.		Rev.
227724/E/1045		B
Drawn: GL	Date: 03/14	Checked: TC / Approved: ST
Scale: 1:5000 @A3	Status: PRELIMINARY	

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

0 25 50 75 100 125
METRES
1 : 5000

Printed by : 4/8/2014
Filename : G:\env\project\227724-50\13 Drawing Deliverables\08 EM&A\02 Revised draft\Air\227724_E_1045_B - Locations of Construction Dust Monitoring (Sheet 1 of 3).dgn

AMS-3

AMS-4

AMS-5

AMS-6

HVS in AMS-5 for 24-Hour TSP

HVS in AMS-6 for 24-Hour TSP

Legend

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

N

0 25 50 75 100 125
METRES
1 : 5000

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

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 @A3

Status: PRELIMINARY

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

Printed by : 4/8/2014
Filename : G:\env\project\227724-50\13 Drawing Deliverables\08 EM&A\02 Revised draft\Air\227724_E_1046_B - Locations of Construction Dust Monitoring (Sheet 2 of 3).dgn

HVS in AMS-1 for 24-Hour TSP

AMS-1

AMS-1a

AMS-2

AMS-3

Legend

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

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

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.		Rev.
227724/E/1045		B
Drawn: GL	Date: 03/14	Checked: TC / Approved: ST
Scale: 1:5000 @A3	Status: PRELIMINARY	

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

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METRES
1 : 5000

Printed by : 4/8/2014
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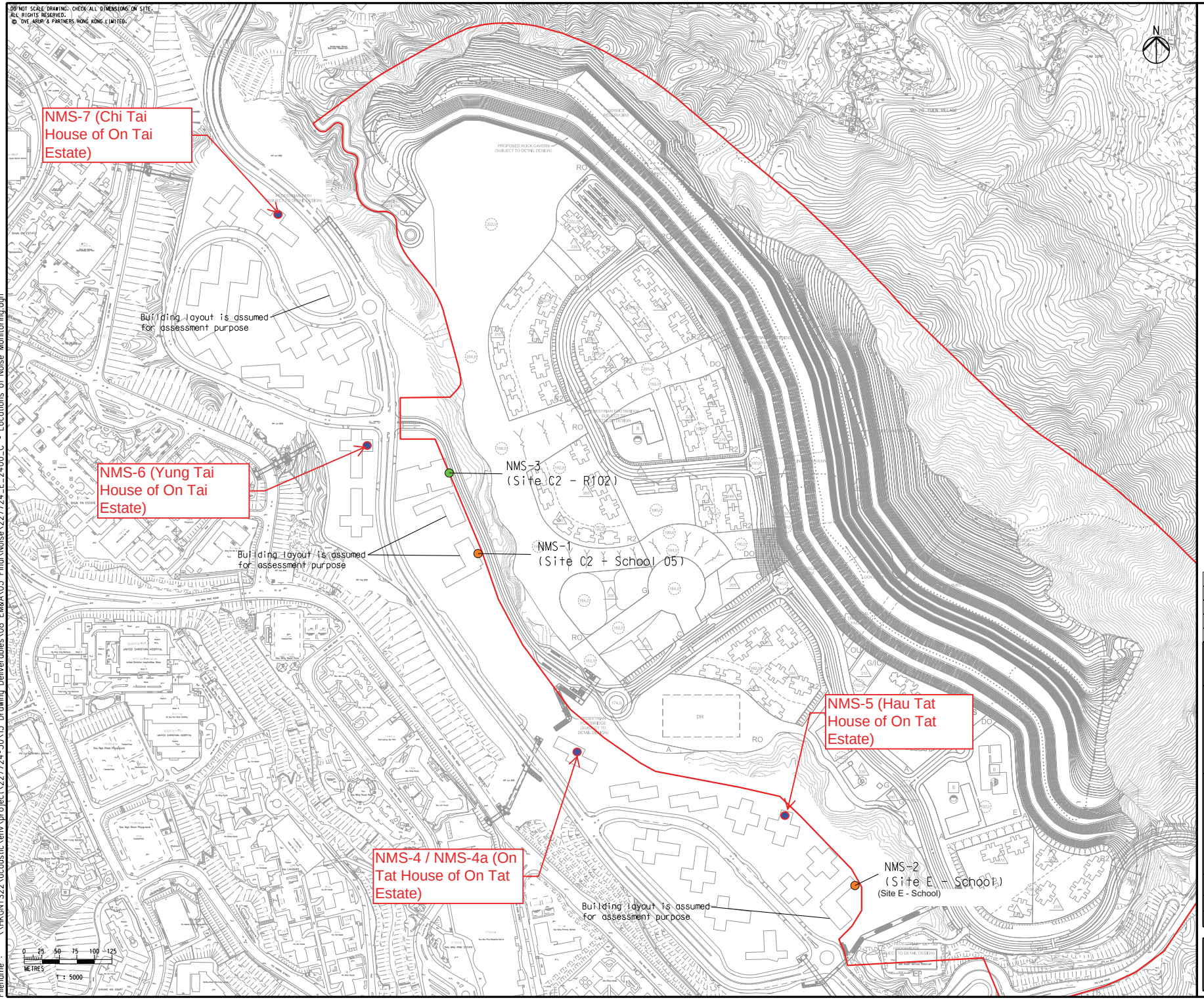


Legend

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

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

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.	Rev.
227724/E/2400	C

Drawn	Date	Checked	Approved
GL	05/14	TC	ST

Scale: 1:5000 @A3

Status: PRELIMINARY

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

Printed by : 6/3/2014
Filename : \\HKGNTS22\acoustic\env\project\227724-50\13 Drawing Deliverables\08 EM&A\03 Final\Noise\227724_E_2400_C - Locations of Noise Monitoring.dgn

AMS-3

AMS-4

AMS-5

AMS-6

HVS in AMS-5 for 24-Hour TSP

HVS in AMS-6 for 24-Hour TSP

Legend

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

N

0 25 50 75 100 125
METRES
1 : 5000

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

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

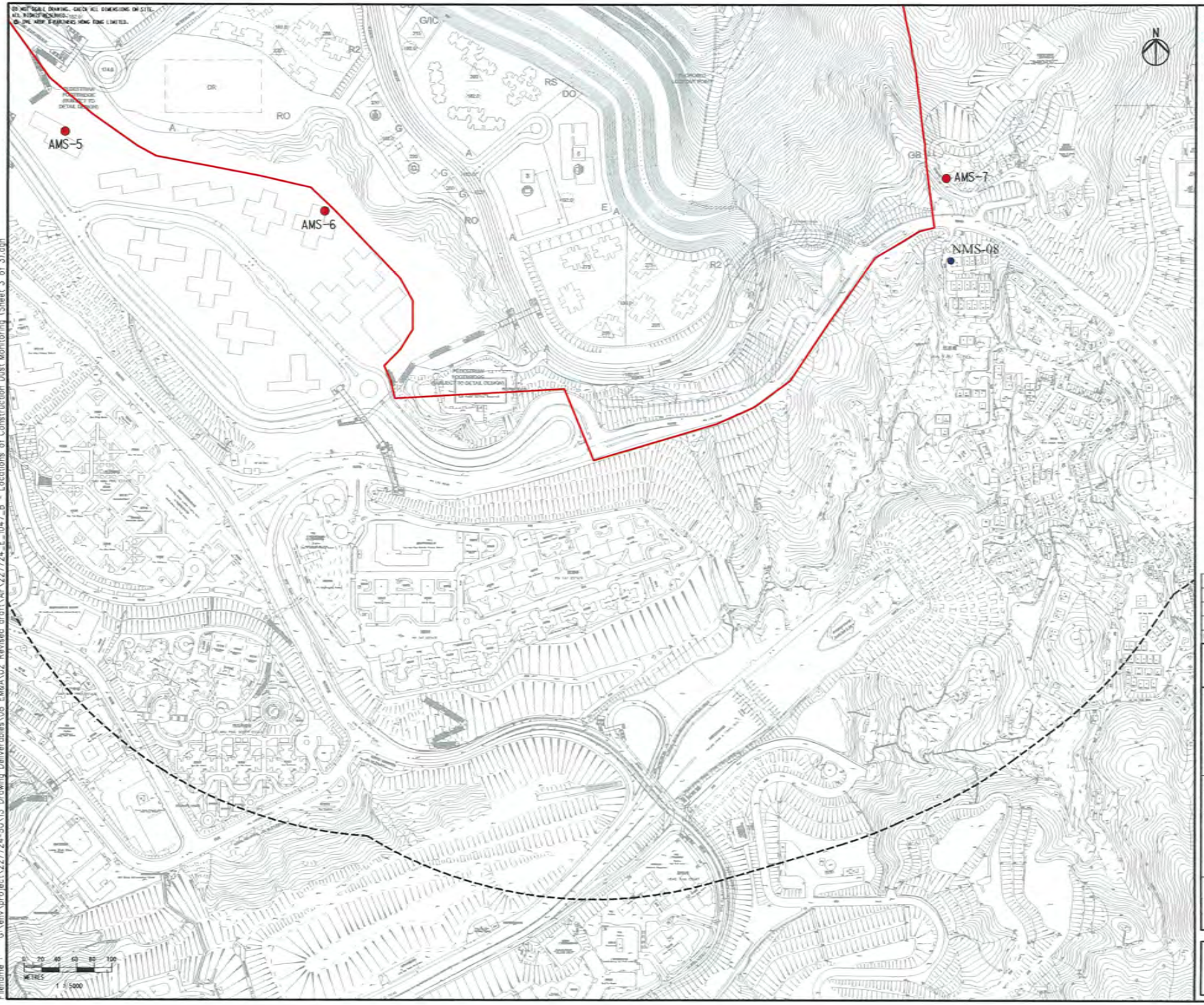
Drawn	Date	Checked	Approved
GL	03/14	TC	ST

Scale: 1:5000 @A3

Status: PRELIMINARY

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

Printed by : 4/8/2014
Filename : G:\env\project\227724-50\13 Drawing Deliverables\08 EM&A\02 Revised draft\Air\227724_E_1046_B - Locations of Construction Dust Monitoring (Sheet 2 of 3).dgn



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

Consultant

Contract No. and Title

Agreement No. CE 18/2012(CE)

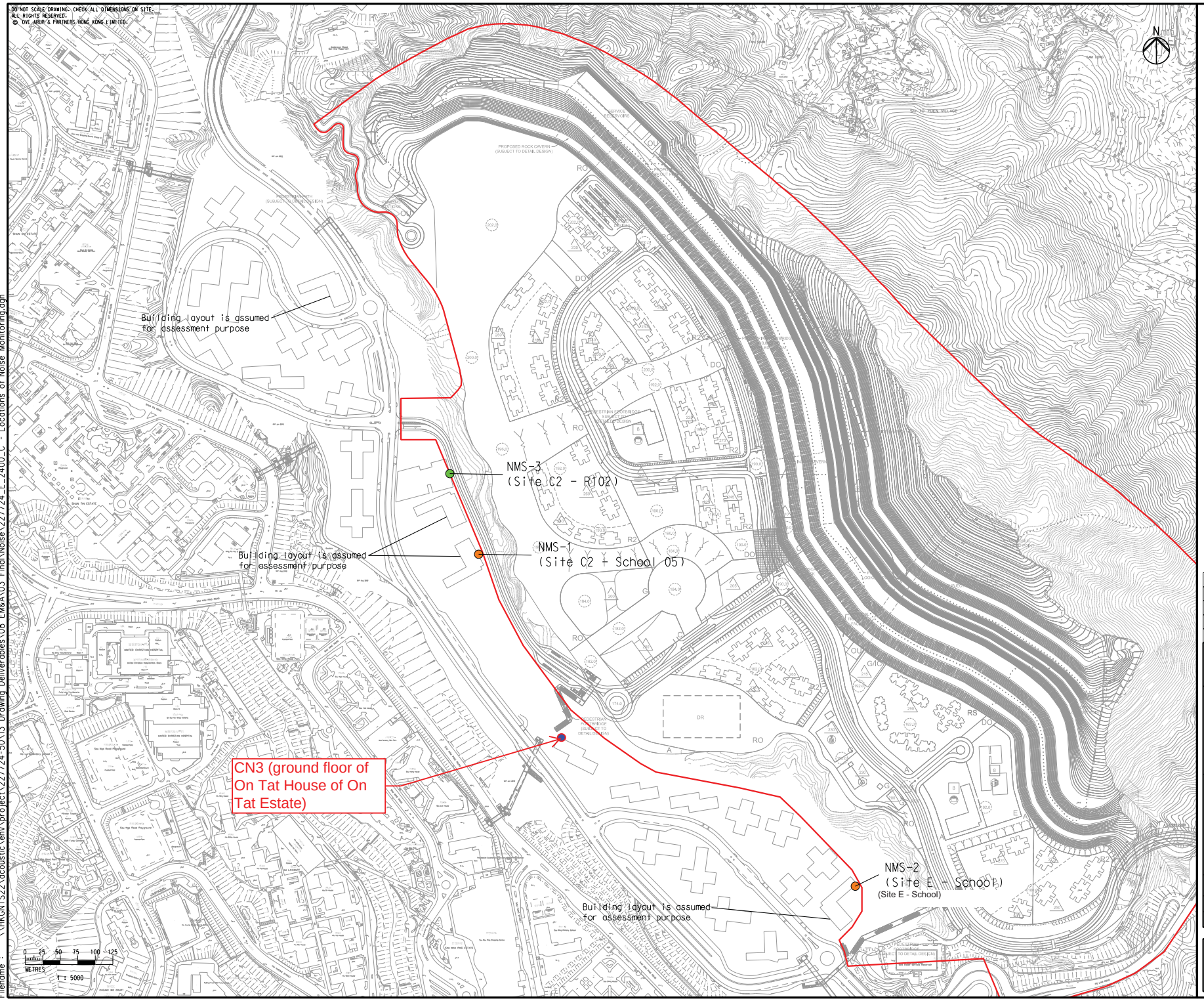
Development of Anderson Road Quarry - Investigation

Drawing title

Locations of Construction Dust and Noise Monitoring

Printed by : 4/8/2014
Filename : G:\env\project\227724-50\13 Drawing Deliverables\08 EM&A\02 Revised draft\Air\227724_E_1047_B - Locations of Construction Dust Monitoring (Sheet 3 of 3).dgn

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



Legend

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

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

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.	Rev.
227724/E/2400	C

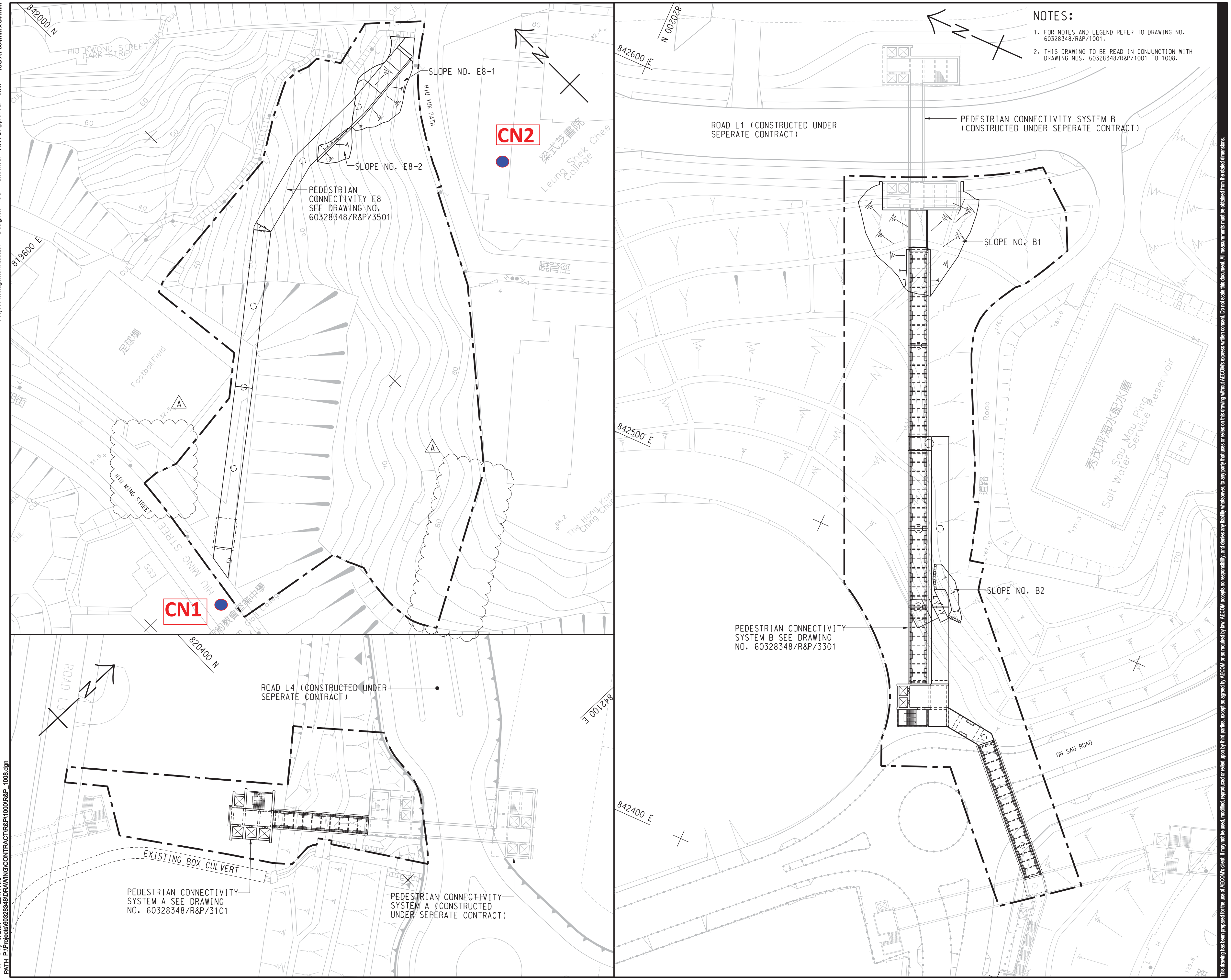
Drawn	Date	Checked	Approved
GL	05/14	TC	ST

Scale: 1:5000 @A3

Status: PRELIMINARY

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

Printed by : 6/3/2014
Filename : \\HKGNTS22\acoustic\env\project\227724-50\13 Drawing Deliverables\08 EM&A\03 Final Noise\227724_E_2400_C - Locations of Noise Monitoring.dgn



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

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

● noise monitoring location

ISSUE/REVISION

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

STATUS

SCALE A1 1:500

DIMENSION UNIT METRES

KEY PLAN A1 1:60000

PROJECT NO. 60328348

CONTRACT NO. NE/2017/03

SHEET TITLE GENERAL LAYOUT

SHEET 8 OF 8

SHEET NUMBER 60328348/R&P/1008A

Project Management Initials: Designer: CCYT Checked: AWYC Approved: HKT ISO A1 594mm x 841mm

Plot File by: WUMT 2017/11/9
PATH P:\Projects\60328348\DRAWINGS\CONTRACT\R&P\1000\R&P_1008.dgn

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:	28-Dec-23
Location ID : AMS1a		Next Calibration Date:	28-Feb-24
Model:TISCH High Volume Air Sampler TE-5170		Technician:	Martin

CONDITIONS

Sea Level Pressure (hPa)	1024	Corrected Pressure (mm Hg)	768
Temperature (°C)	17.8	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	TE-5025A	Qstd Intercept ->	-0.03782
Serial # ->	4064		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.0	6.0	12	1.689	49	49.86	Slope = 38.7563
13	5.2	5.2	10.4	1.573	44	44.78	Intercept = -16.4287
10	4.3	4.3	8.6	1.432	37	37.65	Corr. coeff. = 0.9974
7	2.7	2.7	5.4	1.139	27	27.48	
5	1.7	1.7	3.4	0.907	19	19.33	

Calculations :

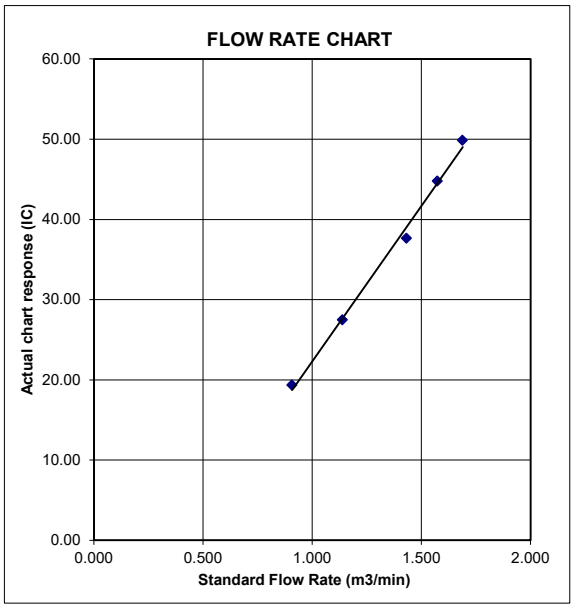
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
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



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Oi Tat House	Date of Calibration:	28-Dec-23
Location ID :	AMS 5	Next Calibration Date:	28-Feb-24
Model:TISCH High Volume Air Sampler TE-5170		Technician:	Martin

CONDITIONS

Sea Level Pressure (hPa)	1024	Corrected Pressure (mm Hg)	768
Temperature (°C)	17.8	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	TE-5025A	Qstd Intercept ->	-0.03782
Serial # ->	4064		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.3	6.3	12.6	1.730	54	54.95	Slope = 46.2931
13	5.2	5.2	10.4	1.573	46	46.81	Intercept = -25.6418
10	4.2	4.2	8.4	1.416	38	38.67	Corr. coeff. = 0.9950
7	2.6	2.6	5.2	1.118	28	28.49	
5	1.8	1.8	3.6	0.933	16	16.28	

Calculations :

Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]

IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate

IC = corrected chart respones

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)

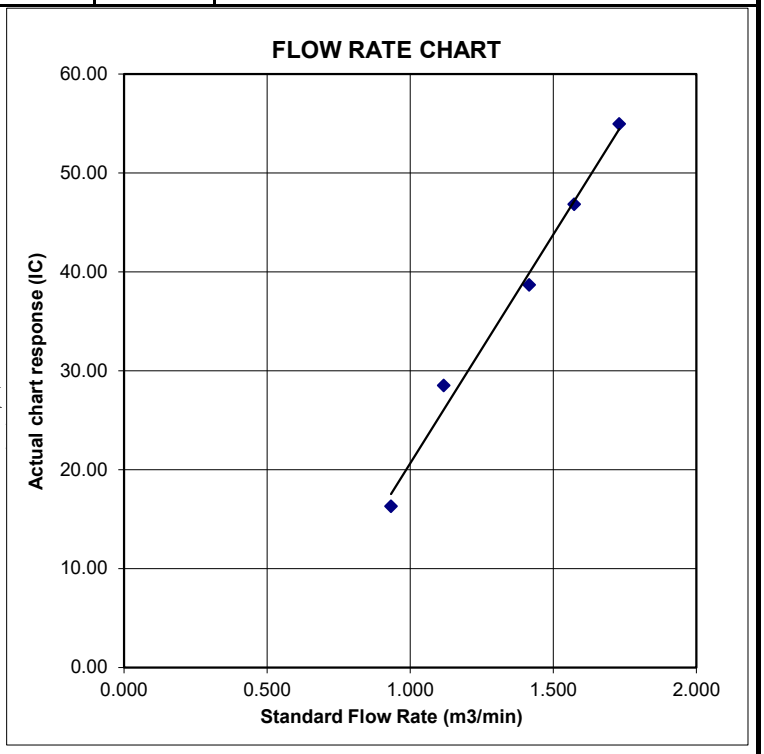
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Hau Tat House	Date of Calibration:	28-Dec-23
Location ID :	AMS 6	Next Calibration Date:	28-Feb-24
Model:TISCH High Volume Air Sampler TE-5170		Technician:	Martin

CONDITIONS

Sea Level Pressure (hPa)	1024	Corrected Pressure (mm Hg)	768
Temperature (°C)	17.8	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	TE-5025A	Qstd Intercept ->	-0.03782
Serial # ->	4064		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.2	6.2	12.4	1.716	53	53.93	Slope = 44.8604
13	5.3	5.3	10.6	1.588	45	46.00	Intercept = -23.8774
10	3.6	3.6	7.2	1.312	35	35.62	Corr. coeff. = 0.9985
7	2.4	2.4	4.8	1.075	24	24.42	
5	1.5	1.5	3	0.853	14	14.25	

Calculations :

Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]

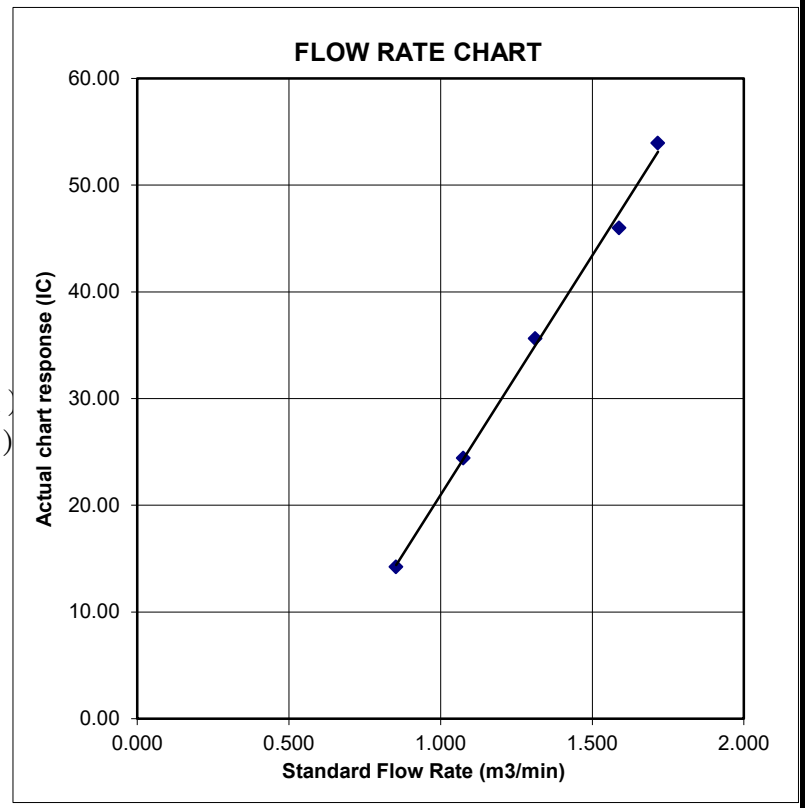
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
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



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Ma Yau Tong Village	Date of Calibration:	28-Dec-23
Location ID :	AMS 7	Next Calibration Date:	28-Feb-24
Model:TISCH High Volume Air Sampler TE-5170		Technician:	Martin

CONDITIONS

Sea Level Pressure (hPa)	1024	Corrected Pressure (mm Hg)	768
Temperature (°C)	17.8	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	TE-5025A	Qstd Intercept ->	-0.03782
Serial # ->	4064		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.3	6.3	12.6	1.730	54	54.95	Slope = 43.0263
13	5.2	5.2	10.4	1.573	47	47.83	Intercept = -20.3066
10	4.2	4.2	8.4	1.416	38	38.67	Corr. coeff. = 0.9968
7	2.9	2.9	5.8	1.180	30	30.53	
5	1.7	1.7	3.4	0.907	19	19.33	

Calculations :

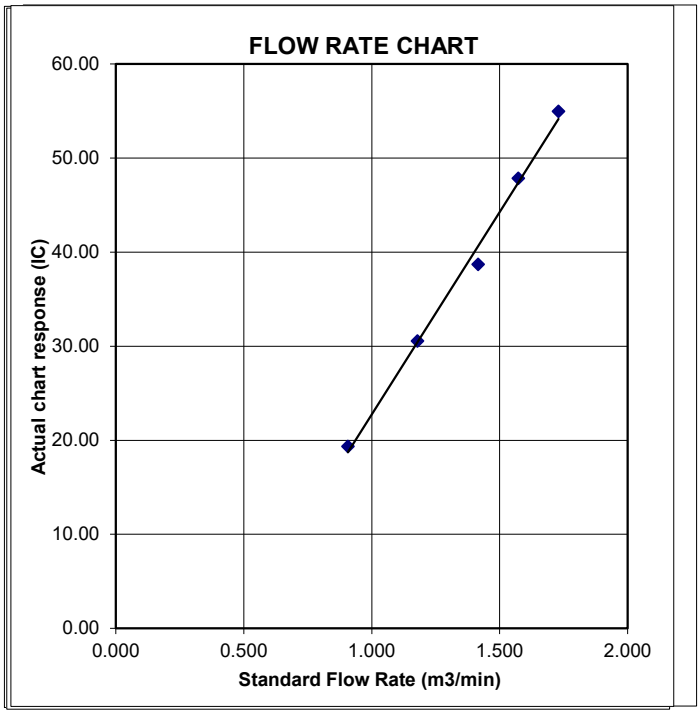
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
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



ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: **HK2311530**
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	: 23-MAR-2023
		DATE OF ISSUE	: 30-MAR-2023
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.**
- **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.**
- **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 : HK2311530
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.
HK2311530-001	S/N: 3Y6502	AIR	23-Mar-2023	S/N: 3Y6502

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	3Y6502
Equipment Ref:	EQ113

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018 & HVS 019
Last Calibration Date:	27 February 2023 & 10 January 2023

Equipment Verification Results:

Verification Date: 6 & 9 March 2023

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)
6-Mar-23	2hr01mins	09:35 ~ 11:36	20	1022.4	82.5	4537	37.6
6-Mar-23	2hr01mins	11:43 ~ 13:44	20	1022.4	29.5	2117	17.5
6-Mar-23	2hr11mins	13:45 ~ 15:56	20	1022.4	30.4	2306	17.6
9-Mar-23*	61mins	11:03 ~ 12:04	22.5	1017.7	144	4408	72.7
9-Mar-23*	61mins	12:06 ~ 13:07	22.5	1017.7	116	3761	61.5

(*) Suspended particle was added into calibration room of HVS019 for high concentration test.

Sensitivity Adjustment Scale Setting (Before Calibration) 655 (CPM)

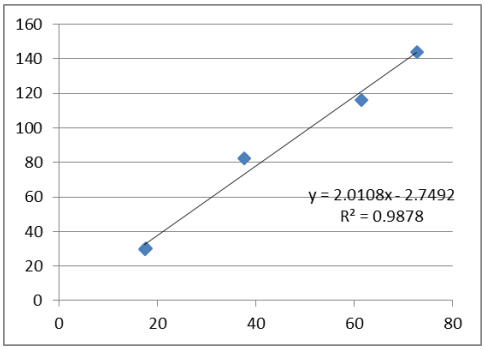
Sensitivity Adjustment Scale Setting (After Calibration) 660 (CPM)

Linear Regression of Y or X

Slope (K-factor): 2.0108 (µg/m^3)/CPM

Correlation Coefficient (R) 0.9939

Date of Issue 20 March 2023



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 2.0108 (µg/m^3)/CPM should be apply for TSP monitoring

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

Operator : Fai So Signature : Date : 20 March 2023

QC Reviewer : Ben Tam Signature : Date : 20 March 2023

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	27-Feb-23
Location ID :	Calibration Room(HVS 018)	Next Calibration Date:	27-May-23

CONDITIONS

Sea Level Pressure (hPa)	1024	Corrected Pressure (mm Hg)	768
Temperature (°C)	17.8	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	5025A	Qstd Intercept ->	-0.03782
Calibration Date->	15-Dec-22	Expiry Date->	15-Dec-23

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6	6	12.0	1.689	55	55.97	Slope = 32.9819
13	4.8	4.8	9.6	1.512	48	48.85	Intercept = 0.0741
10	3.7	3.7	7.4	1.330	44	44.78	Corr. coeff. = 0.9968
8	2.6	2.6	5.2	1.118	37	37.65	
5	1.6	1.6	3.2	0.881	28	28.49	

Calculations :

Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]

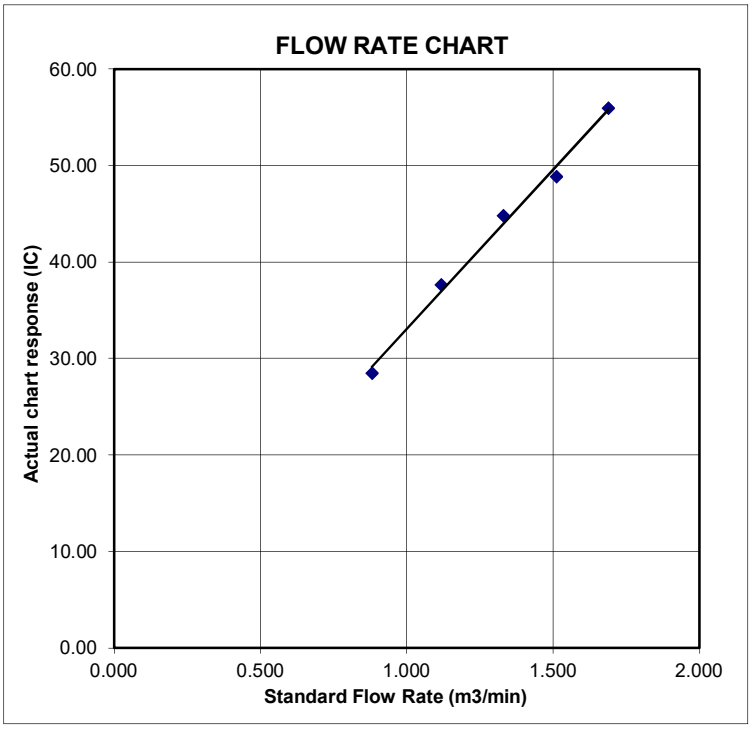
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
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



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	10-Jan-23
Location ID :	Calibration Room(HVS 019)	Next Calibration Date:	9-Apr-23

CONDITIONS

Sea Level Pressure (hPa)	1018.8	Corrected Pressure (mm Hg)	764.1
Temperature (°C)	18.2	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	5025A	Qstd Intercept ->	-0.03782
Calibration Date->	15-Dec-22	Expiry Date->	15-Dec-23

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6	6	12.0	1.683	55	55.79	Slope = 31.4802
13	4.9	4.9	9.8	1.523	48	48.69	Intercept = 1.9499
10	3.9	3.9	7.8	1.361	44	44.63	Corr. coeff. = 0.9967
8	2.4	2.4	4.8	1.071	36	36.52	
5	1.5	1.5	3.0	0.851	28	28.40	

Calculations :

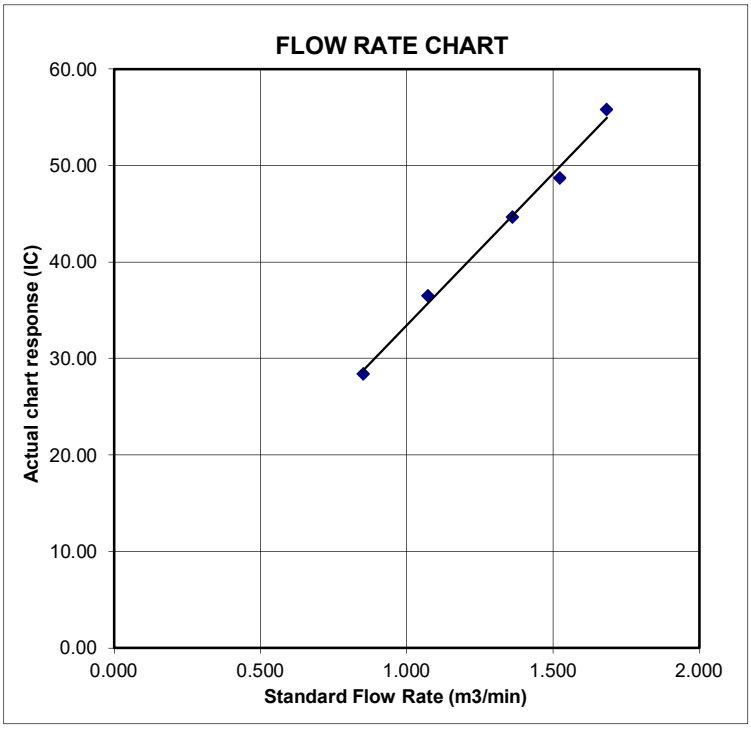
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
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



TISCH Environmental

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)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (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=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/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= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

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

Tisch Environmental, Inc.
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Village of Cleves, OH 45002

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FAX: (513)467-9009

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: HK2311531
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	: 23-MAR-2023
		DATE OF ISSUE	: 30-MAR-2023
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.**
- **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.**
- **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 : HK2311531
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.
HK2311531-001	S/N: 456658	AIR	23-Mar-2023	S/N: 456658

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	456658
Equipment Ref:	EQ115

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018 & HVS 019
Last Calibration Date:	27 February 2023 & 10 January 2023

Equipment Verification Results:

Verification Date: 6 & 9 March 2023

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)
6-Mar-23	2hr01mins	09:35 ~ 11:36	20	1022.4	82.5	4485	37.2
6-Mar-23	2hr01mins	11:43 ~ 13:44	20	1022.4	29.5	2128	17.6
6-Mar-23	2hr11mins	13:45 ~ 15:56	20	1022.4	30.4	2267	17.3
9-Mar-23*	61mins	11:03 ~ 12:04	22.5	1017.7	144	4263	70.3
9-Mar-23*	61mins	12:06 ~ 13:07	22.5	1017.7	116	3667	59.9

(*) Suspended particle was added into calibration room of HVS019 for high concentration test.

Sensitivity Adjustment Scale Setting (Before Calibration) 702 (CPM)

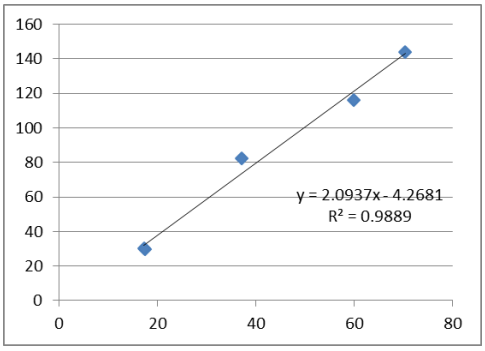
Sensitivity Adjustment Scale Setting (After Calibration) 708 (CPM)

Linear Regression of Y or X

Slope (K-factor): 2.0937 (µg/m^3)/CPM

Correlation Coefficient (R) 0.9944

Date of Issue 20 March 2023



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 2.0937 (µg/m^3)/CPM should be apply for TSP monitoring

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

Operator : Fai So Signature : Date : 20 March 2023

QC Reviewer : Ben Tam Signature : Date : 20 March 2023

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	27-Feb-23
Location ID :	Calibration Room(HVS 018)	Next Calibration Date:	27-May-23

CONDITIONS

Sea Level Pressure (hPa)	1024	Corrected Pressure (mm Hg)	768
Temperature (°C)	17.8	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	5025A	Qstd Intercept ->	-0.03782
Calibration Date->	15-Dec-22	Expiry Date->	15-Dec-23

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6	6	12.0	1.689	55	55.97	Slope = 32.9819
13	4.8	4.8	9.6	1.512	48	48.85	Intercept = 0.0741
10	3.7	3.7	7.4	1.330	44	44.78	Corr. coeff. = 0.9968
8	2.6	2.6	5.2	1.118	37	37.65	
5	1.6	1.6	3.2	0.881	28	28.49	

Calculations :

Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]

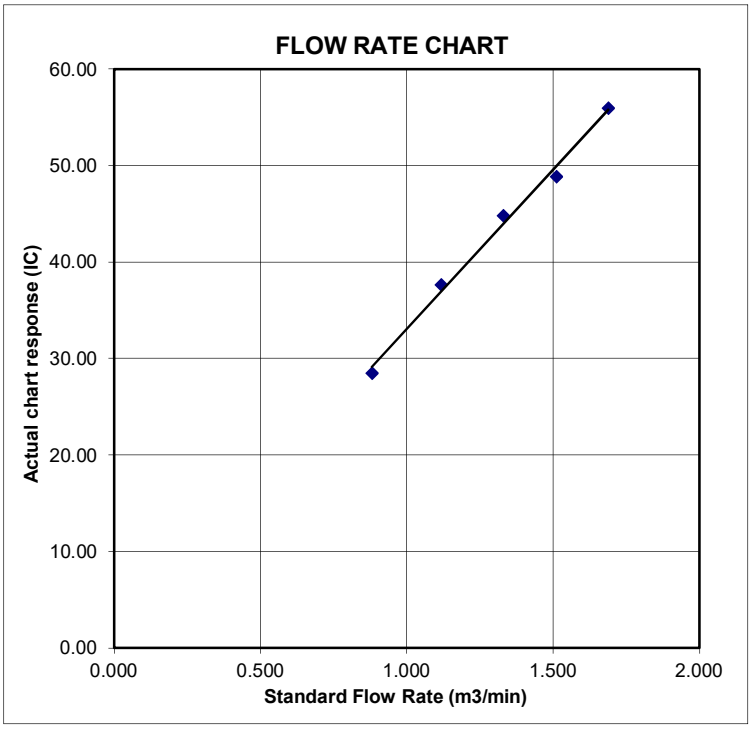
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
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



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	10-Jan-23
Location ID :	Calibration Room(HVS 019)	Next Calibration Date:	9-Apr-23

CONDITIONS

Sea Level Pressure (hPa)	1018.8	Corrected Pressure (mm Hg)	764.1
Temperature (°C)	18.2	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	5025A	Qstd Intercept ->	-0.03782
Calibration Date->	15-Dec-22	Expiry Date->	15-Dec-23

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6	6	12.0	1.683	55	55.79	Slope = 31.4802
13	4.9	4.9	9.8	1.523	48	48.69	Intercept = 1.9499
10	3.9	3.9	7.8	1.361	44	44.63	Corr. coeff. = 0.9967
8	2.4	2.4	4.8	1.071	36	36.52	
5	1.5	1.5	3.0	0.851	28	28.40	

Calculations :

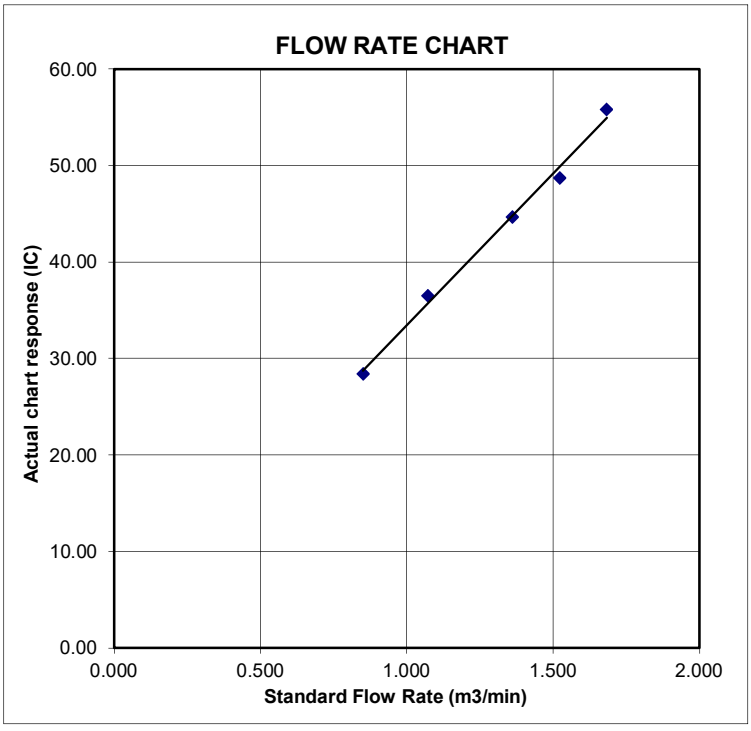
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
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



TISCH Environmental

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)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (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=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/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= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

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

Tisch Environmental, Inc.
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FAX: (513)467-9009

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: **HK2311532**
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	: 23-MAR-2023
		DATE OF ISSUE	: 30-MAR-2023
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.**
- **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.**
- **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	: HK2311532
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.
HK2311532-001	S/N: 456659	AIR	23-Mar-2023	S/N: 456659

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	456659
Equipment Ref:	EQ116

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018 & HVS 019
Last Calibration Date:	27 February 2023 & 10 January 2023

Equipment Verification Results:

Verification Date: 6 & 9 March 2023

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)
6-Mar-23	2hr01mins	09:35 ~ 11:36	20	1022.4	82.5	4624	38.3
6-Mar-23	2hr01mins	11:43 ~ 13:44	20	1022.4	29.5	2204	18.2
6-Mar-23	2hr11mins	13:45 ~ 15:56	20	1022.4	30.4	2457	18.8
9-Mar-23*	61mins	11:03 ~ 12:04	22.5	1017.7	144	4357	71.9
9-Mar-23*	61mins	12:06 ~ 13:07	22.5	1017.7	116	3881	63.4

(*) Suspended particle was added into calibration room of HVS019 for high concentration test.

Sensitivity Adjustment Scale Setting (Before Calibration) 726 (CPM)

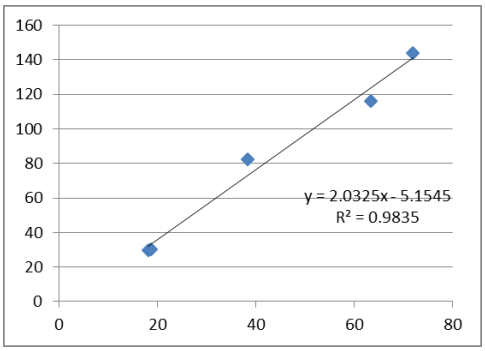
Sensitivity Adjustment Scale Setting (After Calibration) 729 (CPM)

Linear Regression of Y or X

Slope (K-factor): 2.0325 (µg/m^3)/CPM

Correlation Coefficient (R) 0.9917

Date of Issue 20 March 2023



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 2.0325 (µg/m^3)/CPM should be apply for TSP monitoring

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

Operator : Fai So Signature : Date : 20 March 2023

QC Reviewer : Ben Tam Signature : Date : 20 March 2023

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	27-Feb-23
Location ID :	Calibration Room(HVS 018)	Next Calibration Date:	27-May-23

CONDITIONS

Sea Level Pressure (hPa)	1024	Corrected Pressure (mm Hg)	768
Temperature (°C)	17.8	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	5025A	Qstd Intercept ->	-0.03782
Calibration Date->	15-Dec-22	Expiry Date->	15-Dec-23

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6	6	12.0	1.689	55	55.97	Slope = 32.9819
13	4.8	4.8	9.6	1.512	48	48.85	Intercept = 0.0741
10	3.7	3.7	7.4	1.330	44	44.78	Corr. coeff. = 0.9968
8	2.6	2.6	5.2	1.118	37	37.65	
5	1.6	1.6	3.2	0.881	28	28.49	

Calculations :

Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]

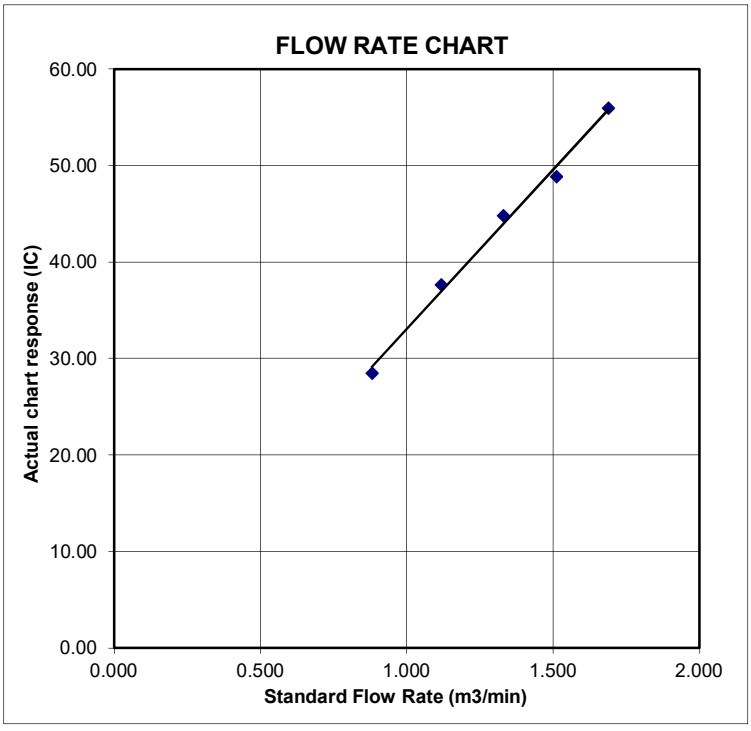
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
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



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	10-Jan-23
Location ID :	Calibration Room(HVS 019)	Next Calibration Date:	9-Apr-23

CONDITIONS

Sea Level Pressure (hPa)	1018.8	Corrected Pressure (mm Hg)	764.1
Temperature (°C)	18.2	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	5025A	Qstd Intercept ->	-0.03782
Calibration Date->	15-Dec-22	Expiry Date->	15-Dec-23

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6	6	12.0	1.683	55	55.79	Slope = 31.4802
13	4.9	4.9	9.8	1.523	48	48.69	Intercept = 1.9499
10	3.9	3.9	7.8	1.361	44	44.63	Corr. coeff. = 0.9967
8	2.4	2.4	4.8	1.071	36	36.52	
5	1.5	1.5	3.0	0.851	28	28.40	

Calculations :

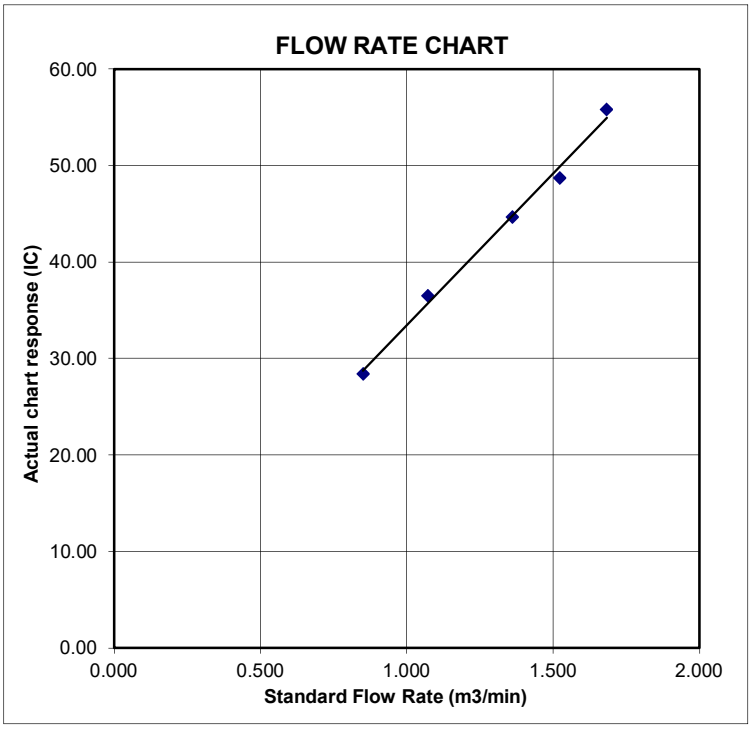
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
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



TISCH Environmental

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)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (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=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/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= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

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

Tisch Environmental, Inc.
145 South Miami Avenue
Village of Cleves, OH 45002

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TOLL FREE: (877)263-7610
FAX: (513)467-9009

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: **HK2311533**
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	: 23-MAR-2023
		DATE OF ISSUE	: 30-MAR-2023
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.**
- **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.**
- **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	: HK2311533
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.
HK2311533-001	S/N: 456660	AIR	23-Mar-2023	S/N: 456660

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	456660
Equipment Ref:	EQ117

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018 & HVS 019
Last Calibration Date:	27 February 2023 & 10 January 2023

Equipment Verification Results:

Verification Date: 6 & 9 March 2023

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)
6-Mar-23	2hr01mins	09:35 ~ 11:36	20	1022.4	82.5	4511	37.4
6-Mar-23	2hr01mins	11:43 ~ 13:44	20	1022.4	29.5	2003	16.5
6-Mar-23	2hr11mins	13:45 ~ 15:56	20	1022.4	30.4	2351	18.0
9-Mar-23*	61mins	11:03 ~ 12:04	22.5	1017.7	144	4277	70.6
9-Mar-23*	61mins	12:06 ~ 13:07	22.5	1017.7	116	3792	62.0

(*) Suspended particle was added into calibration room of HVS019 for high concentration test.

Sensitivity Adjustment Scale Setting (Before Calibration) 615 (CPM)

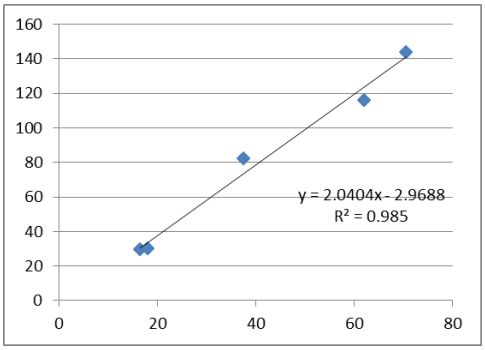
Sensitivity Adjustment Scale Setting (After Calibration) 608 (CPM)

Linear Regression of Y or X

Slope (K-factor): 2.0404 (µg/m^3)/CPM

Correlation Coefficient (R) 0.9925

Date of Issue 20 March 2023



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 2.0404 (µg/m^3)/CPM should be apply for TSP monitoring

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

Operator : Fai So Signature : Date : 20 March 2023

QC Reviewer : Ben Tam Signature : Date : 20 March 2023

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	27-Feb-23
Location ID :	Calibration Room(HVS 018)	Next Calibration Date:	27-May-23

CONDITIONS

Sea Level Pressure (hPa)	1024	Corrected Pressure (mm Hg)	768
Temperature (°C)	17.8	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	5025A	Qstd Intercept ->	-0.03782
Calibration Date->	15-Dec-22	Expiry Date->	15-Dec-23

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6	6	12.0	1.689	55	55.97	Slope = 32.9819
13	4.8	4.8	9.6	1.512	48	48.85	Intercept = 0.0741
10	3.7	3.7	7.4	1.330	44	44.78	Corr. coeff. = 0.9968
8	2.6	2.6	5.2	1.118	37	37.65	
5	1.6	1.6	3.2	0.881	28	28.49	

Calculations :

Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]

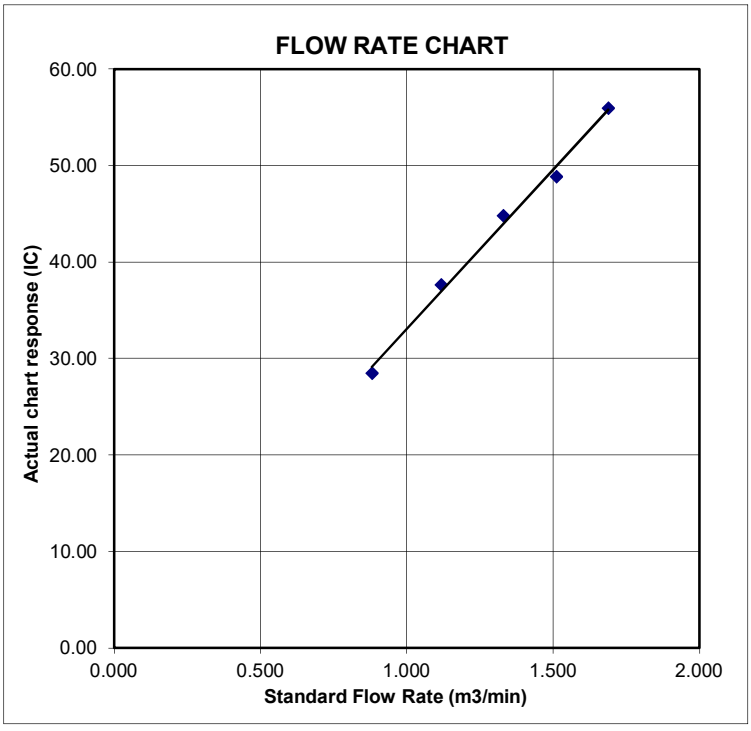
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
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



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	10-Jan-23
Location ID :	Calibration Room(HVS 019)	Next Calibration Date:	9-Apr-23

CONDITIONS

Sea Level Pressure (hPa)	1018.8	Corrected Pressure (mm Hg)	764.1
Temperature (°C)	18.2	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	5025A	Qstd Intercept ->	-0.03782
Calibration Date->	15-Dec-22	Expiry Date->	15-Dec-23

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6	6	12.0	1.683	55	55.79	Slope = 31.4802
13	4.9	4.9	9.8	1.523	48	48.69	Intercept = 1.9499
10	3.9	3.9	7.8	1.361	44	44.63	Corr. coeff. = 0.9967
8	2.4	2.4	4.8	1.071	36	36.52	
5	1.5	1.5	3.0	0.851	28	28.40	

Calculations :

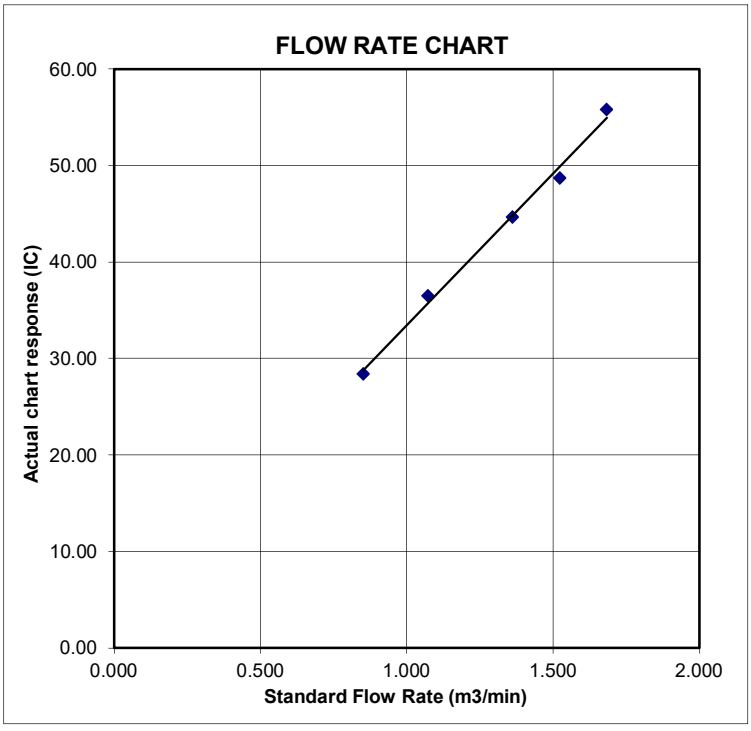
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
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



TISCH Environmental

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)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (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=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/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= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

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

Tisch Environmental, Inc.
145 South Miami Avenue
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www.tisch-env.com
TOLL FREE: (877)263-7610
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輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C231630
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC23-0436) Date of Receipt / 收件日期 : 28 February 2023

Description / 儀器名稱 : Sound Level Meter (EQ018)
Manufacturer / 製造商 : Rion
Model No. / 型號 : NL-52
Serial No. / 編號 : 00809405
Supplied By / 委託者 : Action-United Environmental Services and Consulting
Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C
Line Voltage / 電壓 : ---
Relative Humidity / 相對濕度 : (50 ± 25)%

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 21 March 2023

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed specified limits.
These limits refer to manufacturer's published tolerances as requested by the customer.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試 : K C Lee, Engineer

Certified By 核證 : H C Chan, Engineer

Date of Issue 簽發日期 : 21 March 2023

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 - 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
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Certificate No. : C231630
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1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration was performed before the test.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C230306
CL281	Multifunction Acoustic Calibrator	AV210017

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	L_A	A	Fast	94.00	1	93.9	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 130	L_A	A	Fast	94.00	1	93.9 (Ref.)
				104.00		104.0
				114.00		113.9

IEC 61672 Class 1 Limit : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	L_A	A	Fast	94.00	1	93.9	Ref.
			Slow			93.9	± 0.3

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 - 校正及檢測實驗所
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Certificate of Calibration
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Certificate No. : C231630
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6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	L_A	A	Fast	94.00	63 Hz	67.1	-26.2 ± 1.5
					125 Hz	77.7	-16.1 ± 1.5
					250 Hz	85.2	-8.6 ± 1.4
					500 Hz	90.7	-3.2 ± 1.4
					1 kHz	93.9	Ref.
					2 kHz	95.2	+1.2 ± 1.6
					4 kHz	94.9	+1.0 ± 1.6
					8 kHz	92.9	-1.1 (+2.1 ; -3.1)
					16 kHz	86.0	-6.6 (+3.5 ; -17.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	L_C	C	Fast	94.00	63 Hz	93.1	-0.8 ± 1.5
					125 Hz	93.7	-0.2 ± 1.5
					250 Hz	93.9	0.0 ± 1.4
					500 Hz	94.0	0.0 ± 1.4
					1 kHz	93.9	Ref.
					2 kHz	93.8	-0.2 ± 1.6
					4 kHz	93.1	-0.8 ± 1.6
					8 kHz	91.0	-3.0 (+2.1 ; -3.1)
					16 kHz	84.0	-8.5 (+3.5 ; -17.0)

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
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c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C231630
證書編號

Remarks : - UUT Microphone Model No. : UC-59 & S/N : 16463

- Mfr's Limit : IEC 61672 Class 1

- Uncertainties of Applied Value :

94 dB	: 63 Hz - 125 Hz	: ± 0.35 dB
	250 Hz - 500 Hz	: ± 0.30 dB
	1 kHz	: ± 0.20 dB
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	16 kHz	: ± 0.70 dB
104 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
114 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
Only the original copy or the laboratory's certified true copy is valid.

The values given in this 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 environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 - 校正及檢測實驗所
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輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C231631
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC23-0436) Date of Receipt / 收件日期 : 28 February 2023

Description / 儀器名稱 : Sound Level Meter (EQ067)
Manufacturer / 製造商 : Rion
Model No. / 型號 : NL-31
Serial No. / 編號 : 00410221
Supplied By / 委託者 : Action-United Environmental Services and Consulting
Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (50 ± 25)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 21 March 2023

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed specified limits.
These limits refer to manufacturer's published tolerances as requested by the customer.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試 : K C Lee, Engineer

Certified By 核證 : H C Chan, Engineer

Date of Issue 簽發日期 : 21 March 2023

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
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Certificate No. : C231631
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration was performed before the test.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C230360
CL281	Multifunction Acoustic Calibrator	AV210017

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L_A	A	Fast	94.00	1	93.6	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 120	L_A	A	Fast	94.00	1	93.6 (Ref.)
				104.00		103.6
				114.00		113.6

IEC 61672 Class 1 Limit : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L_A	A	Fast	94.00	1	93.6	Ref.
			Slow			93.6	± 0.3

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證書編號

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_A	A	Fast	94.00	63 Hz	67.3	-26.2 ± 1.5
					125 Hz	77.4	-16.1 ± 1.5
					250 Hz	84.9	-8.6 ± 1.4
					500 Hz	90.3	-3.2 ± 1.4
					1 kHz	93.6	Ref.
					2 kHz	94.8	+1.2 ± 1.6
					4 kHz	94.7	+1.0 ± 1.6
					8 kHz	92.6	-1.1 (+2.1 ; -3.1)
					16 kHz	87.2	-6.6 (+3.5 ; -17.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_C	C	Fast	94.00	63 Hz	92.6	-0.8 ± 1.5
					125 Hz	93.3	-0.2 ± 1.5
					250 Hz	93.5	0.0 ± 1.4
					500 Hz	93.6	0.0 ± 1.4
					1 kHz	93.6	Ref.
					2 kHz	93.5	-0.2 ± 1.6
					4 kHz	92.9	-0.8 ± 1.6
					8 kHz	90.7	-3.0 (+2.1 ; -3.1)
					16 kHz	85.3	-8.5 (+3.5 ; -17.0)

Sun Creation Engineering Limited – Calibration & Testing Laboratory
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輝創工程有限公司 - 校正及檢測實驗所
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Certificate of Calibration
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Certificate No. : C231631
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Remarks : - UUT Microphone Model No. : UC-53A & S/N : 322551

- Mfr's Limit : IEC 61672 Class 1

- Uncertainties of Applied Value :

94 dB	: 63 Hz - 125 Hz	:	± 0.35 dB
	250 Hz - 500 Hz	:	± 0.30 dB
	1 kHz	:	± 0.20 dB
	2 kHz - 4 kHz	:	± 0.35 dB
	8 kHz	:	± 0.45 dB
	16 kHz	:	± 0.70 dB
104 dB	: 1 kHz	:	± 0.10 dB (Ref. 94 dB)
114 dB	: 1 kHz	:	± 0.10 dB (Ref. 94 dB)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
Only the original copy or the laboratory's certified true copy is valid.

The values given in this 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 environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
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輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C235367
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC23-1813) Date of Receipt / 收件日期 : 31 August 2023

Description / 儀器名稱 : Sound Level Calibrator (EQ085)
Manufacturer / 製造商 : Rion
Model No. / 型號 : NC-73
Serial No. / 編號 : 10655561
Supplied By / 委託者 : Action-United Environmental Services and Consulting
Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (50 ± 25)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 13 September 2023

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed specified limits.
These limits refer to manufacturer's published or user's specified tolerances as requested by the customer.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Hottinger Brüel & Kjær Calibration Laboratory, Denmark
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試 : K C Lee
Engineer

Certified By 核證 : K K Wong
Engineer

Date of Issue 簽發日期 : 17 September 2023

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 - 校正及檢測實驗所
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輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C235367
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C233799
CL281	Multifunction Acoustic Calibrator	CDK2302738
TST150A	Measuring Amplifier	C221750

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	94.00	± 0.5	± 0.20

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	User's Spec.	Uncertainty of Measured Value (Hz)
1	0.951	1 kHz ± 6 %	± 1

Remarks : - The user's specified acceptance criteria (user's spec.) is a customer pre-defined operating tolerance of the UUT, suitable for one's own intended use.

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
Only the original copy or the laboratory's certified true copy is valid.

The values given in this 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 environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
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Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C236946
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC23-2369) Date of Receipt / 收件日期 : 23 November 2023

Description / 儀器名稱 : Sound Calibrator (EQ086)
Manufacturer / 製造商 : Rion
Model No. / 型號 : NC-74
Serial No. / 編號 : 34657230
Supplied By / 委託者 : Action-United Environmental Services and Consulting
Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (50 ± 25)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 3 December 2023

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed specified limits.
These limits refer to manufacturer's published tolerances as requested by the customer.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Hottinger Brüel & Kjær Calibration Laboratory, Denmark
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試 : H T Wong, Assistant Engineer

Certified By 核證 : K C Lee, Engineer

Date of Issue 簽發日期 : 4 December 2023

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
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Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C236946
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C233799
CL281	Multifunction Acoustic Calibrator	CDK2302738
TST150A	Measuring Amplifier	C221750

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Limit (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	94.10	± 0.3	± 0.20

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Limit	Uncertainty of Measured Value (Hz)
1	1.002	1 kHz ± 1 %	± 1

Remark : The uncertainties are for a confidence probability of not less than 95 %.

Note :
Only the original copy or the laboratory's certified true copy is valid.

The values given in this 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 environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

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輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C236948
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC23-2369) Date of Receipt / 收件日期 : 23 November 2023

Description / 儀器名稱 : Sound Calibrator (EQ087)
Manufacturer / 製造商 : Rion
Model No. / 型號 : NC-74
Serial No. / 編號 : 34657231
Supplied By / 委託者 : Action-United Environmental Services and Consulting
Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (50 ± 25)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 3 December 2023

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed specified limits.
These limits refer to manufacturer's published tolerances as requested by the customer.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Hottinger Brüel & Kjær Calibration Laboratory, Denmark
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試 : H T Wong, Assistant Engineer

Certified By 核證 : K C Lee, Engineer

Date of Issue 簽發日期 : 4 December 2023

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 - 校正及檢測實驗所
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輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C236948
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C233799
CL281	Multifunction Acoustic Calibrator	CDK2302738
TST150A	Measuring Amplifier	C221750

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Limit (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	94.10	± 0.3	± 0.20

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Limit	Uncertainty of Measured Value (Hz)
1	1.001	1 kHz ± 1 %	± 1

Remark : The uncertainties are for a confidence probability of not less than 95 %.

Note :
Only the original copy or the laboratory's certified true copy is valid.

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TISCH Environmental

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)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (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=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/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= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

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

Tisch Environmental, Inc.
145 South Miami Avenue
Village of Cleves, OH 45002

www.tisch-env.com
TOLL FREE: (877)263-7610
FAX: (513)467-9009

Hong Kong Accreditation Service
香港認可處

Certificate of Accreditation
認可證書

This is to certify that
特此證明

ALS TECHNICHEM (HK) PTY LIMITED

11/F, Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, New Territories, Hong Kong
香港新界葵涌永業街1-3號忠信針織中心11樓

is accredited by the Hong Kong Accreditation Service (HKAS) to ISO/IEC 17025:2017
for performing specific laboratory activities as listed in the scope of accreditation within the test category of
獲香港認可處根據ISO/IEC 17025:2017認可
進行載於認可範圍內下述測試類別中的指定實驗所活動

Environmental Testing
環境測試

This accreditation to ISO/IEC 17025:2017 demonstrates technical competence for a defined scope and the implementation of a management system relevant to laboratory operation (see joint IAF-ILAC-ISO Communiqué).
此項 ISO/IEC 17025:2017 的認可資格證明此實驗所具備指定範疇內所須的技術能力並實施一套與實驗所運作相關的管理體系(見國際認可論壇、國際實驗所認可合作組織及國際標準化組織的聯合公報)。

The common seal of HKAS is affixed hereto by the authority of the HKAS Executive
現經香港認可處執行機關授權在此蓋上香港認可處的印章

SHUM Wai-leung, Executive Administrator
執行幹事 沈偉良
Issue Date : 28 February 2020
簽發日期：二零二零年二月二十八日

Registration Number : HOKLAS 066
註冊號碼：

Date of First Registration : 15 September 1995
首次註冊日期：一九九五年九月十五日

This certificate is issued subject to the terms and conditions laid down by HKAS
本證書按照香港認可處訂立的條款及條件發出

L001934

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
Thu	1-Feb-24	✓	✓	
Fri	2-Feb-24			✓
Sat	3-Feb-24			
Sun	4-Feb-24			
Mon	5-Feb-24			
Tue	6-Feb-24			
Wed	7-Feb-24	✓	✓	
Thu	8-Feb-24			✓
Fri	9-Feb-24		✓	
Sat	10-Feb-24			
Sun	11-Feb-24			
Mon	12-Feb-24			
Tue	13-Feb-24			
Wed	14-Feb-24			✓
Thu	15-Feb-24	✓	✓	
Fri	16-Feb-24			
Sat	17-Feb-24			
Sun	18-Feb-24			
Mon	19-Feb-24			
Tue	20-Feb-24			✓
Wed	21-Feb-24	✓	✓	
Thu	22-Feb-24			
Fri	23-Feb-24			
Sat	24-Feb-24			
Sun	25-Feb-24			
Mon	26-Feb-24			✓
Tue	27-Feb-24	✓	✓	
Wed	28-Feb-24			
Thu	29-Feb-24			

✓	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
Fri	1-Mar-24			
Sat	2-Mar-24			✓
Sun	3-Mar-24			
Mon	4-Mar-24	✓	✓	
Tue	5-Mar-24			
Wed	6-Mar-24			
Thu	7-Mar-24			
Fri	8-Mar-24			✓
Sat	9-Mar-24		✓	
Sun	10-Mar-24			
Mon	11-Mar-24			
Tue	12-Mar-24			
Wed	13-Mar-24			
Thu	14-Mar-24			✓
Fri	15-Mar-24	✓	✓	
Sat	16-Mar-24			
Sun	17-Mar-24			
Mon	18-Mar-24			
Tue	19-Mar-24			
Wed	20-Mar-24			✓
Thu	21-Mar-24	✓	✓	
Fri	22-Mar-24			
Sat	23-Mar-24			
Sun	24-Mar-24			
Mon	25-Mar-24			✓
Tue	26-Mar-24			
Wed	27-Mar-24	✓	✓	
Thu	28-Mar-24			✓
Fri	29-Mar-24			
Sat	30-Mar-24			
Sun	31-Mar-24			

✓	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
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(℃)	(hPa)	(m^3/min)	(std m^3)	INITIAL	FINAL	(g)	(μg/m^3)
2-Feb-24	29939	27047.96	27071.96	1440	41	41	41	21.7	1017.6	1.49	2146	2.7759	2.852	0.0761	35
8-Feb-24	20099	27071.96	27095.96	1440	41	41	41	13	1018.8	1.51	2170	2.7695	2.8186	0.0491	23
14-Feb-24	20102	27095.96	27119.96	1440	41	41	41	21	1020.2	1.49	2149	2.779	2.8726	0.0936	44
20-Feb-24	20103	27119.96	27143.96	1440	41	41	41	18	1021.7	1.50	2158	2.7626	2.8103	0.0477	22
26-Feb-24	20200	27143.96	27167.96	1440	41	41	41	19	1022	1.50	2156	2.7789	2.8235	0.0446	21

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
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(℃)	(hPa)	(m^3/min)	(std m^3)	INITIAL	FINAL	(g)	(μg/m^3)
2-Feb-24	20005	15117.03	15141.03	1440.00	39	39	39.0	21.7	1017.6	1.40	2020	2.7800	2.8316	0.0516	26
8-Feb-24	20007	15141.03	15165.03	1440.00	39	39	39.0	13	1018.8	1.42	2039	2.7912	2.8193	0.0281	14
14-Feb-24	20009	15165.03	15189.03	1440.00	39	39	39.0	21	1020.2	1.40	2023	2.7947	2.8116	0.0169	8
20-Feb-24	20012	15189.03	15213.03	1440.00	39	39	39.0	23.9	1014.7	1.40	2014	2.7966	2.8541	0.0575	29
26-Feb-24	20133	15213.03	15237.03	1440.00	39	39	39.0	18.2	1021.1	1.41	2030	2.7674	2.9219	0.1545	76

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
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(℃)	(hPa)	(m^3/min)	(std m^3)	INITIAL	FINAL	(g)	(μg/m^3)
2-Feb-24	20006	20204.10	20228.10	1440.00	40	40	40.0	21.7	1017.6	1.43	2060	2.8113	2.8550	0.0437	21
8-Feb-24	20008	20228.10	20252.10	1440.00	40	40	40.0	13	1018.8	1.44	2081	2.7996	2.8068	0.0072	3
14-Feb-24	20010	20252.10	20276.10	1440.00	40	40	40.0	21	1020.2	1.43	2064	2.8036	2.8606	0.0570	28
20-Feb-24	20011	20276.10	20300.10	1440.00	40	40	40.0	23.9	1014.7	1.43	2054	2.7859	2.8206	0.0347	17
26-Feb-24	20134	20300.10	20324.10	1440.00	40	40	40.0	18.2	1021.1	1.44	2070	2.7566	2.8448	0.0882	43

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
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(℃)	(hPa)	(m^3/min)	(std m^3)	INITIAL	FINAL	(g)	(μg/m^3)
2-Feb-24	29938	14987.32	15011.32	1440.00	41	41	41.0	21.7	1017.6	1.43	2104	2.7678	2.9219	0.1541	73
8-Feb-24	20109	15011.32	15035.32	1440.00	41	41	41.0	13	1018.8	1.45	2056	2.7596	2.8153	0.0557	27
14-Feb-24	20101	15035.32	15059.32	1440.00	41	41	41.0	21	1020.2	1.43	2066	2.7634	2.8266	0.0632	31
20-Feb-24	20201	15059.32	15083.32	1440.00	41	41	41.0	23.9	1014.7	1.43	2073	2.7793	2.8473	0.0680	33
26-Feb-24	20202	15083.32	15107.32	1440.00	41	41	41.0	18.2	1021.1	1.44	2059	2.7743	2.8800	0.1057	51

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)		
1-Feb-24	13:00	70.6	75.1	60.8	71.2	76.1	61.9	70.0	73.6	61.4	68.2	71.9	59.2	71.7	77.2	58.9	72.7	77.7	57.2	71	70
7-Feb-24	13:05	71.2	75.8	56.3	70.3	75.0	58.7	70.7	75.1	56.8	72.4	77.0	55.8	69.9	74.1	58.8	69.8	73.2	59.9	71	70
15-Feb-24	13:10	66.7	72.4	52.3	70.2	75.2	57.3	70.0	74.8	51.9	68.1	72.4	53.9	67.0	71.5	52.7	68.1	71.8	54.6	69	70
21-Feb-24	13:00	67.7	72.7	54.1	69.9	75	59	73.7	77.7	62.3	70	74.9	56.6	71	74.8	58.8	68.5	72.5	58.7	71	70
27-Feb-24	9:03	70.9	75	58.3	70.4	75.2	58.8	71.2	75.1	62.2	72.3	76.2	63	71.3	75.2	62.3	70.8	74.7	64.1	71	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)		
1-Feb-24	10:30	50.9	52.3	49.5	55.6	56.3	50.0	55.0	55.7	54.2	55.4	56.3	54.5	56.2	57.3	55.1	55.9	56.9	54.8	55	70
7-Feb-24	10:35	52.5	55.1	49.2	51.0	52.0	50.0	53.8	56.6	49.9	51.1	52.0	49.5	58.3	53.1	49.4	51.8	52.7	49.2	54	70
15-Feb-24	10:40	62.8	63.6	61.9	63.9	65.2	62.5	64.1	65.0	63.1	65.8	66.9	63.9	65.8	66.8	63.5	65.6	66.8	64.1	65	70
21-Feb-24	10:30	57.8	59.1	56.2	57.8	59	56.4	57.5	58.7	56	57.6	58.7	56.2	57.5	58.9	56.1	57.2	58.4	55.8	58	70
27-Feb-24	10:19	58.9	60.6	56.1	58.8	61	56.5	62.6	63.1	56.8	57.3	58.6	55.7	57.7	59.3	55.3	57.3	58.7	55.5	59	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)		
1-Feb-24	14:30	76.7	80.5	59.7	59.3	61.6	56.0	58.5	61.0	55.8	58.8	60.8	55.5	58.4	60.7	55.3	59.4	61.4	56.8	69	75
7-Feb-24	11:00	67.5	70.1	55.8	61.0	62.4	55.3	61.5	64.9	56.7	61.4	64.6	57.6	76.5	69.3	49.3	60.1	57.2	43.8	70	75
15-Feb-24	11:20	54.2	55.7	49.5	54.6	55.9	49.7	58.5	57.9	50.2	56.7	60.3	50.1	55.5	59.3	51.1	56.4	59.2	52.7	56	75
21-Feb-24	13:00	59.2	60.1	53.0	58.7	62.3	53.8	57.1	60.6	53.0	54.8	57.6	51.2	56.1	59.0	52.7	57.3	60.2	53.3	57	75
27-Feb-24	8:30	66.4	69.3	62.7	65.6	67.9	62.3	66.1	68.7	60.2	62.8	65.3	53.1	64.8	68.0	59.8	61.3	65.1	53.7	65	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, 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)		
1-Feb-24	9:00	60.9	61.9	60.0	60.8	61.8	59.7	60.8	61.7	59.5	61.2	62.0	60.2	61.2	62.8	60.5	60.7	61.9	59.3	61	75
7-Feb-24	9:05	65.5	67.3	63.6	67.5	69.6	64.6	66.0	67.5	64.2	65.1	66.0	64.0	66.8	67.1	64.1	65.6	67.0	62.2	66	75
15-Feb-24	9:10	59.8	62.4	56.5	61.6	63.0	57.3	58.6	59.6	56.4	57.6	58.4	56.1	60.0	60.4	57.2	60.3	60.9	57.7	60	75
21-Feb-24	9:00	63.1	65	61	65.9	68.6	61.4	64.8	67.1	61.5	64.5	66.6	62.1	63.6	65	62	64.3	65.9	62.4	64	75

27-Feb-24	11:20	61.3	63.1	59.1	60.7	62.4	58.7	61.4	62.8	59.2	61.9	63.5	60	62.7	64.5	60.4	62.5	63.8	60.3	62	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)		
1-Feb-24	9:50	56.1	57.5	54.5	56.6	57.6	54.9	56.7	58.1	55.0	56.6	57.8	55.1	56.0	57.5	50.6	55.9	56.9	54.8	56	75
7-Feb-24	9:55	56.4	57.9	54.9	56.1	56.9	54.6	57.0	58.1	55.7	56.0	57.0	55.1	55.9	56.8	54.6	57.3	58.9	55.3	56	75
15-Feb-24	10:00	61.9	64.2	57.8	62.6	63.6	61.5	62.1	62.9	61.1	63.3	64.1	62.3	64.0	64.5	62.6	64.0	65.0	63.0	63	75
21-Feb-24	9:50	60.5	62.4	58.2	60.3	61.1	59.3	60	61.4	58.2	59.1	60	58	59.2	60.1	58.1	58.6	59.7	57.4	60	75
27-Feb-24	13:10	65.8	67.6	63.2	65.3	67.2	63.7	64.9	67.4	63.3	64.6	66.5	62.2	63.5	64.9	61.8	64.4	65.8	62.1.	65	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)		
1-Feb-24	15:30	72.1	72.6	54.7	64.6	66.3	61.7	63.4	65.6	60.4	57.7	59.8	53.5	63.9	67.3	55.3	66.3	67.6	63.4	67	75
7-Feb-24	8:45	77.1	81.0	54.5	64.4	65.5	53.8	72.7	67.9	58.6	64.6	67.0	61.2	64.0	66.3	60.6	64.2	65.9	61.4	71	75
15-Feb-24	10:40	53.2	54.0	51.3	53.3	54.7	51.0	54.8	55.3	51.0	52.5	53.7	51.2	53.0	54.4	50.3	53.5	54.4	50.1	53	75
21-Feb-24	10:45	56.5	58.9	53.1	56	57.9	53.1	55.2	57.6	51.6	54.4	56.5	51.5	57	58.9	53.8	57.7	58.5	55	56	75
27-Feb-24	9:20	61.5	64.2	57.9	59.8	61.6	57.3	60.2	62	57.5	60.2	62.4	56.9	59.1	61.5	55.8	60.1	62.1	57	60	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)		
1-Feb-24	16:20	62.5	62.7	43.4	63.4	65.4	60.0	64.7	66.5	62.0	66.6	69.0	62.5	63.0	66.1	57.5	51.7	53.3	49.4	64	75
7-Feb-24	9:30	63.4	66.8	54.9	65.2	67.6	62.3	63.2	65.7	59.9	61.8	64.5	54.6	56.3	58.1	54.2	66.1	69.0	52.9	64	75
15-Feb-24	9:58	62.2	64.8	55.8	61.9	63.7	58.2	62.1	63.8	57.2	63.7	67.5	57.5	63.7	68.5	53.8	61.2	64.2	55.5	63	75
21-Feb-24	10:00	58.6	61.5	53.4	56.1	58.3	53.2	56.2	58.8	51.9	59.8	57.3	51	54.5	55.9	52.2	54.4	56.2	51.8	57	75
27-Feb-24	10:15	64.3	66.7	60.4	64.3	66.3	60.2	64	66.2	61	65.9	68.5	62.1	64	66.3	60.8	63.4	65.1	60.7	64	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)		
1-Feb-24	13:18	62.8	65.6	56.5	65.0	66.5	58.5	63.0	66.1	54.2	59.5	62.5	50.7	61.4	61.3	51.5	57.4	60.3	51.0	62	75
7-Feb-24	8:30	59.7	62.6	50.8	59.3	62.3	54.2	81.1	61.8	52.1	57.5	60.4	52.1	57.7	61.1	50.9	57.1	60.3	50.8	73	75
15-Feb-24	13:25	60.9	64.2	53.3	60.7	63.6	53.2	57.9	60.7	51.7	61.1	64.3	56.9	59.0	63.8	51.7	57.9	61.7	52.1	60	75

21-Feb-24	9:00	62.9	66.6	53.2	54.6	57.2	48.6	53.2	55.6	48.1	54.1	55.9	47.6	57.7	58	51.2	53	55.6	49.6	58	75
27-Feb-24	11:00	62.7	62.8	53.9	61	62.9	54.3	65.3	69.1	53.3	65.2	68.4	54.8	60.3	62.6	55.3	62.3	64	54	63	75

NOISE MONITORING RESULT DATABASE FOR CONTRACT 3

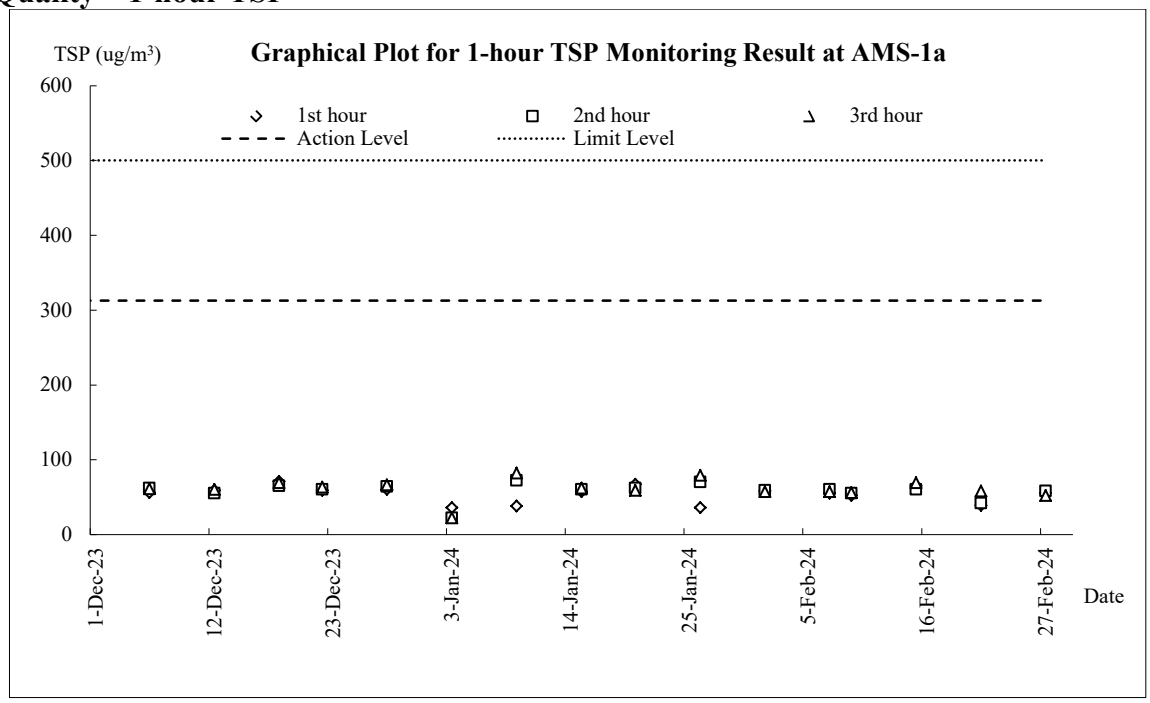
Noise Measurement Results (dB) of CN3

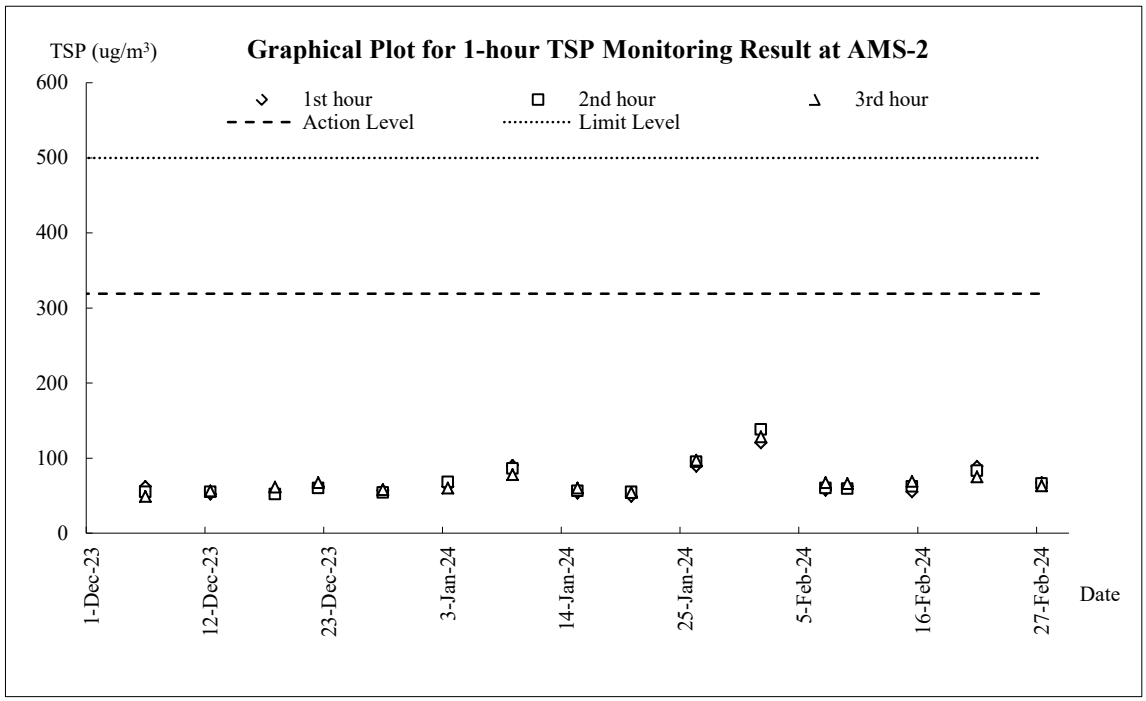
Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)	Limit Level dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
1-Feb-24	11:20	62.9	65.4	60.1	62.6	64.4	60.6	62.6	64.0	61.3	62.2	63.5	60.9	64.0	67.0	59.7	61.1	62.9	59.3	63	75
7-Feb-24	11:25	59.4	63.2	53.6	60.5	64.2	54.7	58.6	62.7	52.0	60.4	62.8	56.0	58.0	60.8	52.7	55.3	56.6	52.0	59	75
15-Feb-24	11:30	58.8	62.9	49.7	61.9	66.3	50.8	56.1	59.2	49.0	58.6	62.6	46.6	58.7	62.6	47.9	57.9	61.0	47.4	59	75
21-Feb-24	11:20	65.2	66.4	63.9	69.4	73.7	63.9	69.3	73.5	64.3	67.4	69.6	64.3	66.8	69.9	64	66.5	70.2	63.9	68	75
27-Feb-24	9:39	65	66.8	62.3	64	66.2	61.1	64.5	66.7	60.9	63.8	66.3	54.9	63.1	65.7	57.2	64	66.5	60.2	64	75

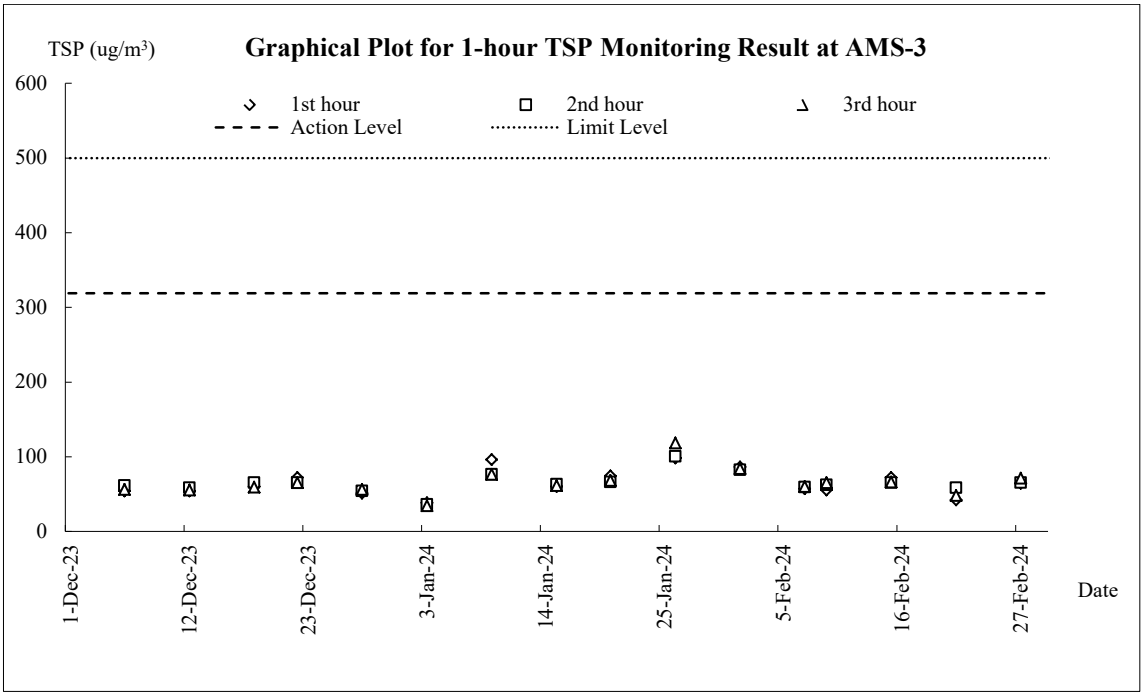
Appendix I

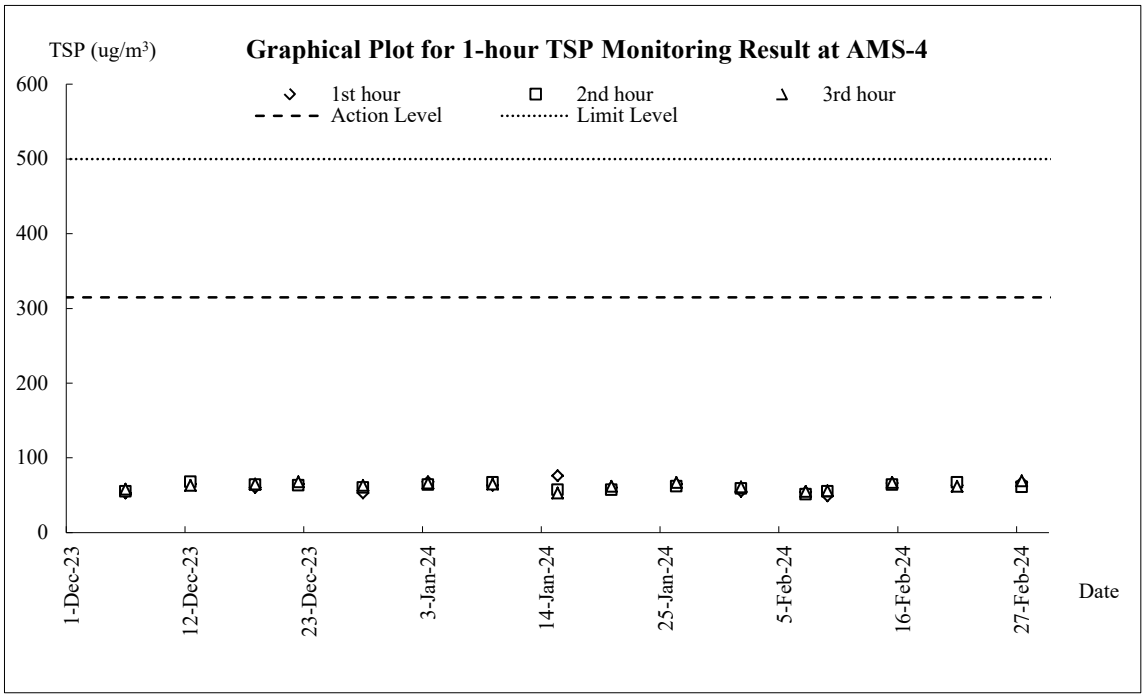
Graphical Plots for Monitoring Result

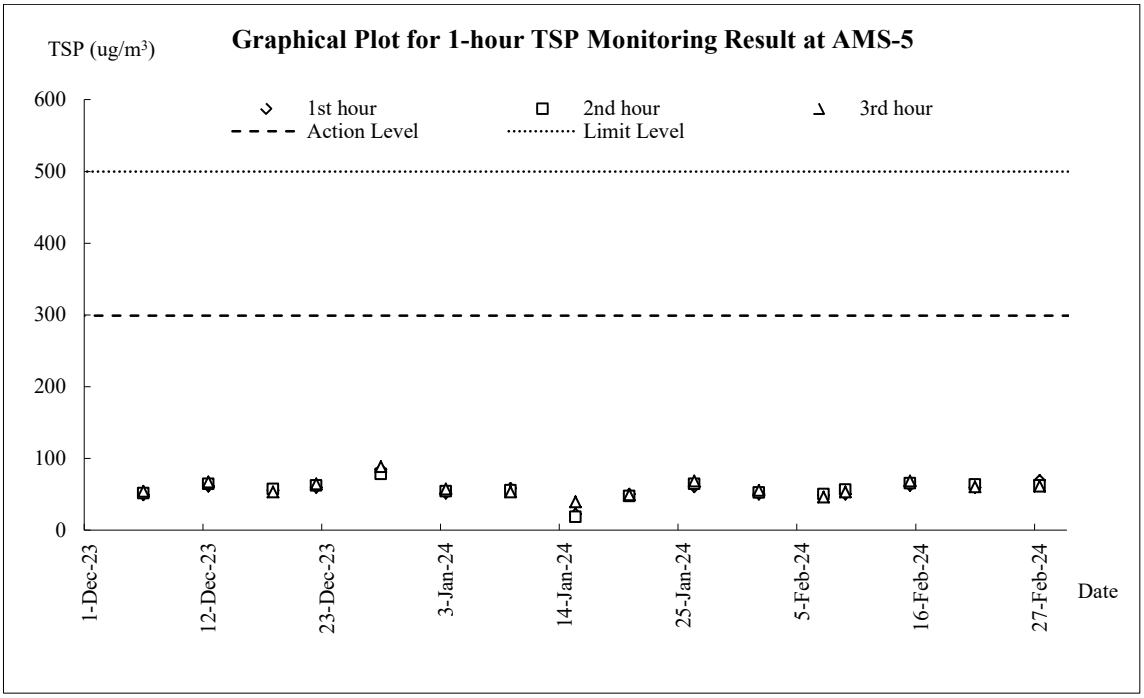
Air Quality – 1-hour TSP

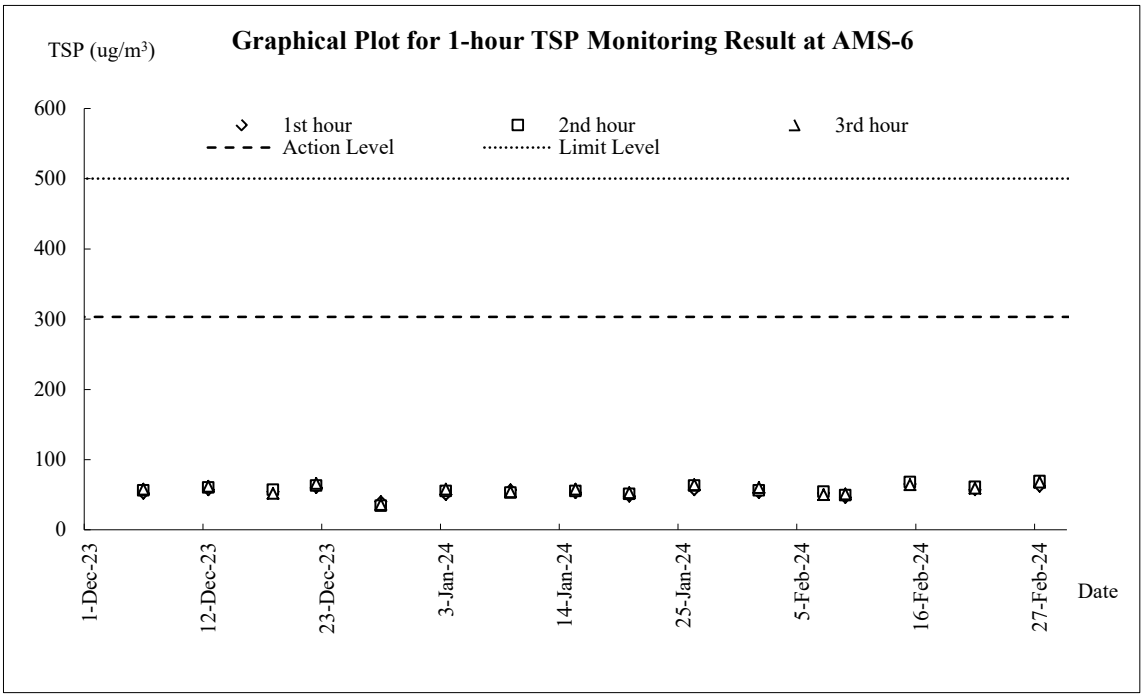


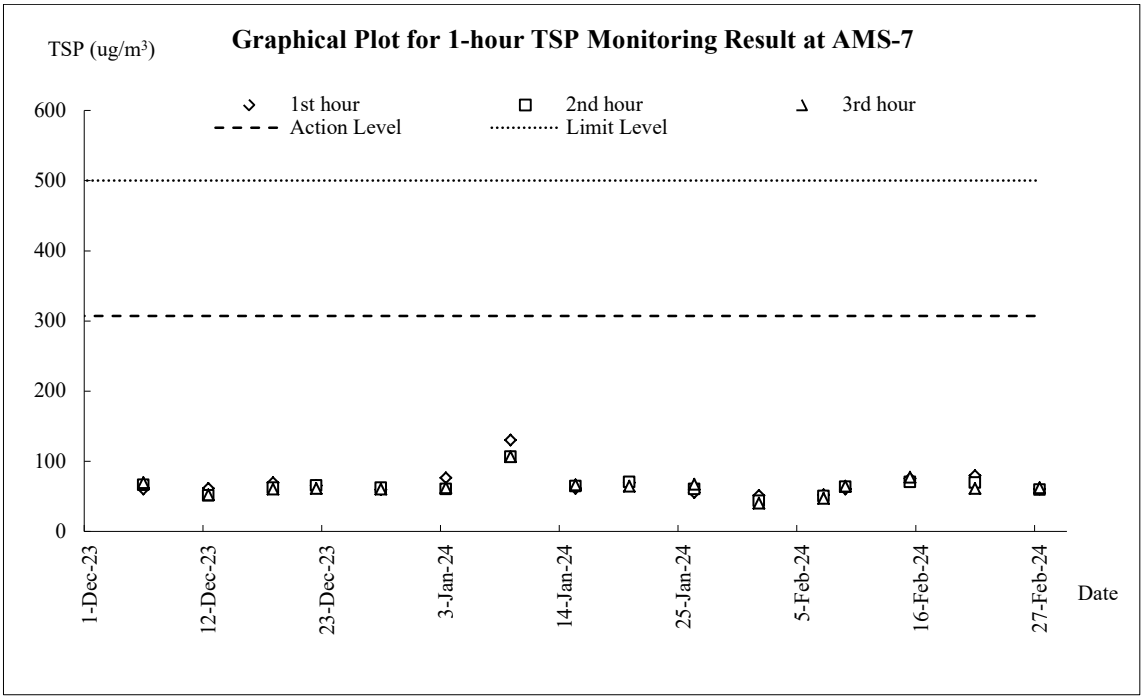



TSP (ug/m³)
Graphical Plot for 1-hour TSP Monitoring Result at AMS-3
1st hour
2nd hour
3rd hour
Action Level
Limit Level
600
500
400
300
200
100
0
1-Dec-23
12-Dec-23
23-Dec-23
3-Jan-24
14-Jan-24
25-Jan-24
5-Feb-24
16-Feb-24
27-Feb-24
Date

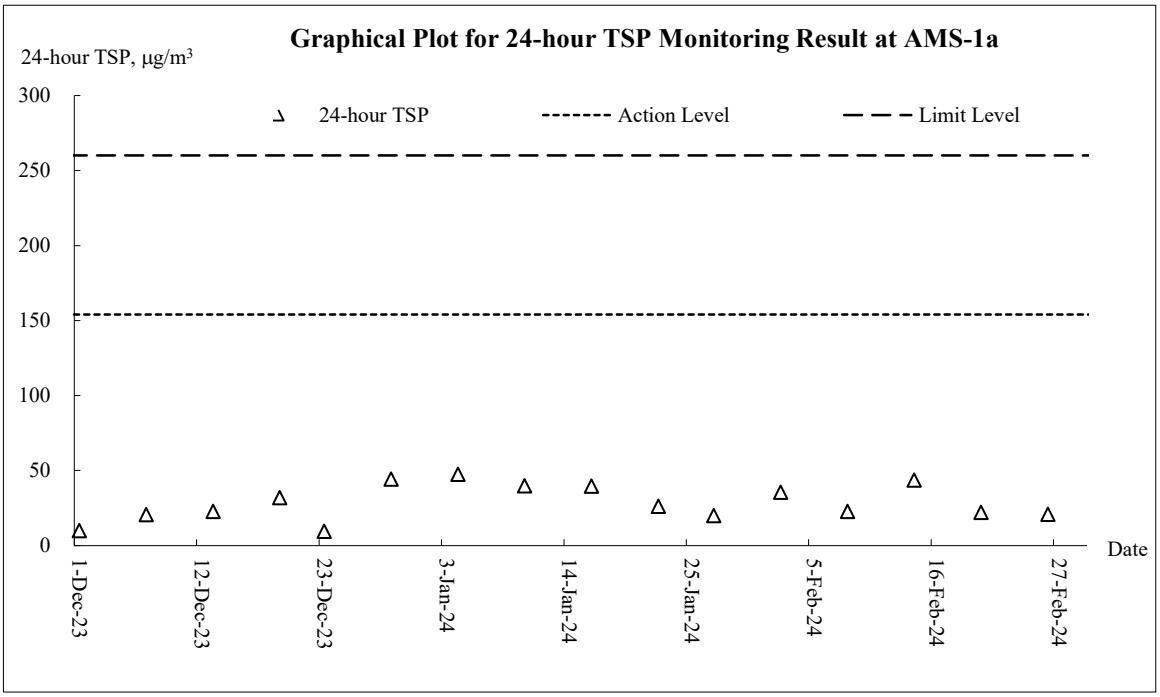

TSP (ug/m³)
Graphical Plot for 1-hour TSP Monitoring Result at AMS-4
1st hour
2nd hour
3rd hour
Action Level
Limit Level
600
500
400
300
200
100
0
1-Dec-23
12-Dec-23
23-Dec-23
3-Jan-24
14-Jan-24
25-Jan-24
5-Feb-24
16-Feb-24
27-Feb-24
Date

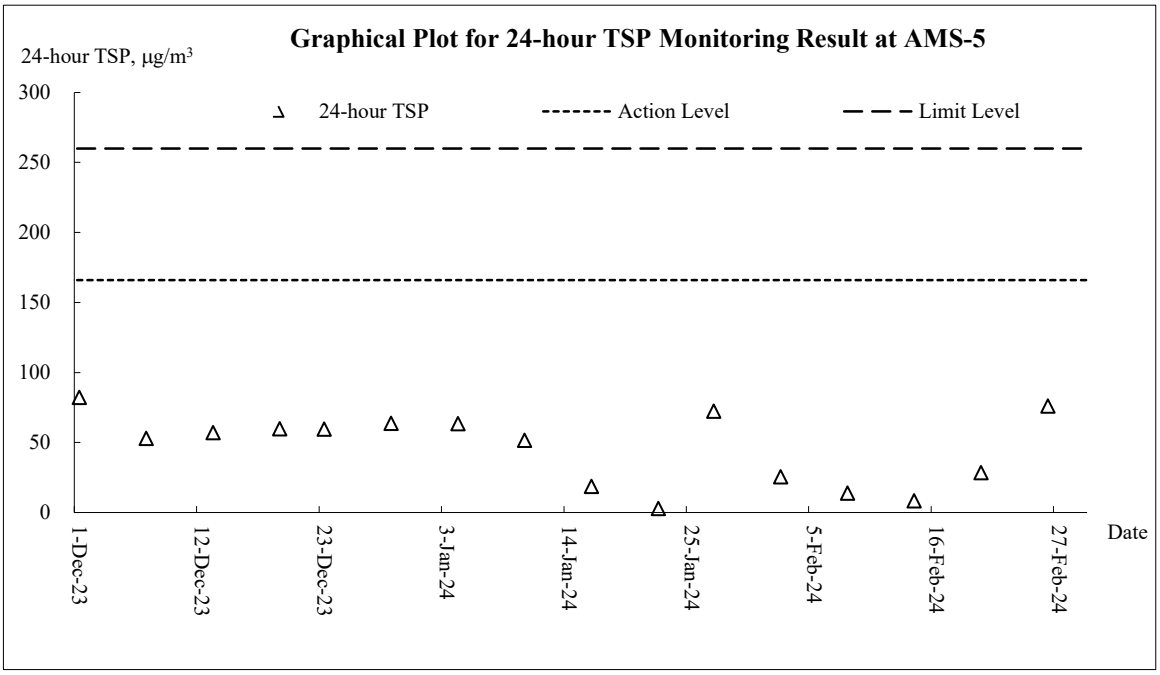

Graphical Plot for 1-hour TSP Monitoring Result at AMS-5
TSP (ug/m³)
1st hour
2nd hour
3rd hour
Action Level
Limit Level
600
500
400
300
200
100
0
1-Dec-23
12-Dec-23
23-Dec-23
3-Jan-24
14-Jan-24
25-Jan-24
5-Feb-24
16-Feb-24
27-Feb-24
Date

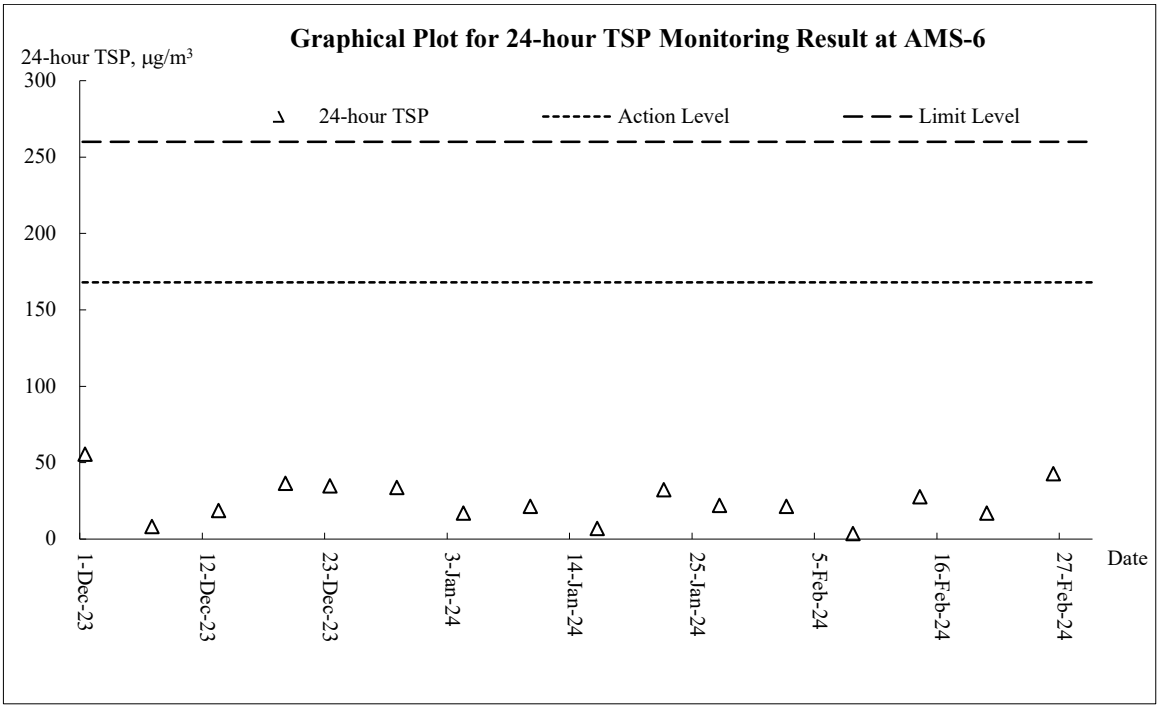

Graphical Plot for 1-hour TSP Monitoring Result at AMS-6
TSP (ug/m³)
1st hour
2nd hour
3rd hour
Action Level
Limit Level
600
500
400
300
200
100
0
1-Dec-23
12-Dec-23
23-Dec-23
3-Jan-24
14-Jan-24
25-Jan-24
5-Feb-24
16-Feb-24
27-Feb-24
Date

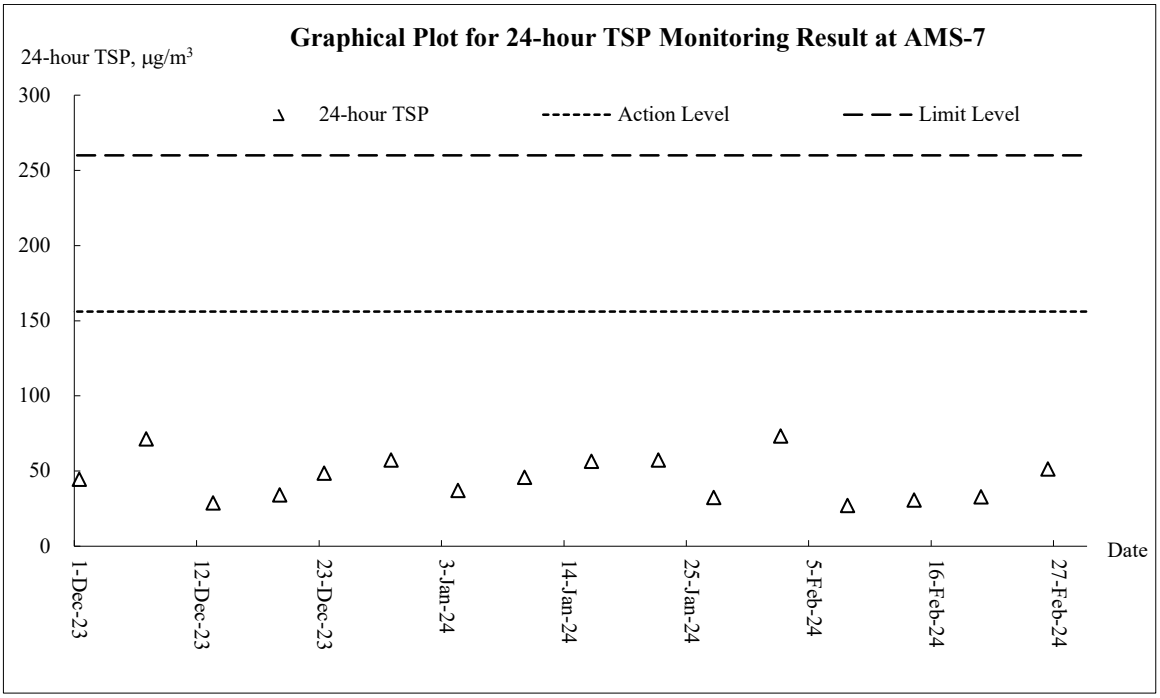

Graphical Plot for 1-hour TSP Monitoring Result at AMS-7
TSP (ug/m3)
1st hour
2nd hour
3rd hour
Action Level
Limit Level
600
500
400
300
200
100
0
1-Dec-23
12-Dec-23
23-Dec-23
3-Jan-24
14-Jan-24
25-Jan-24
5-Feb-24
16-Feb-24
27-Feb-24
Date

Air Quality – 24-hour TSP

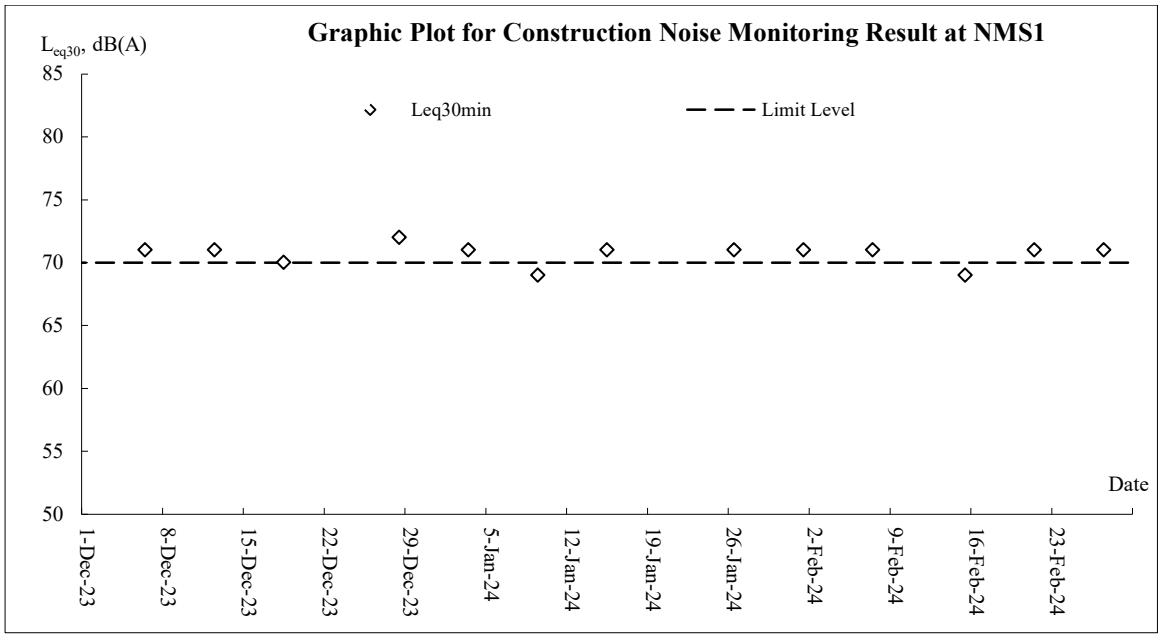


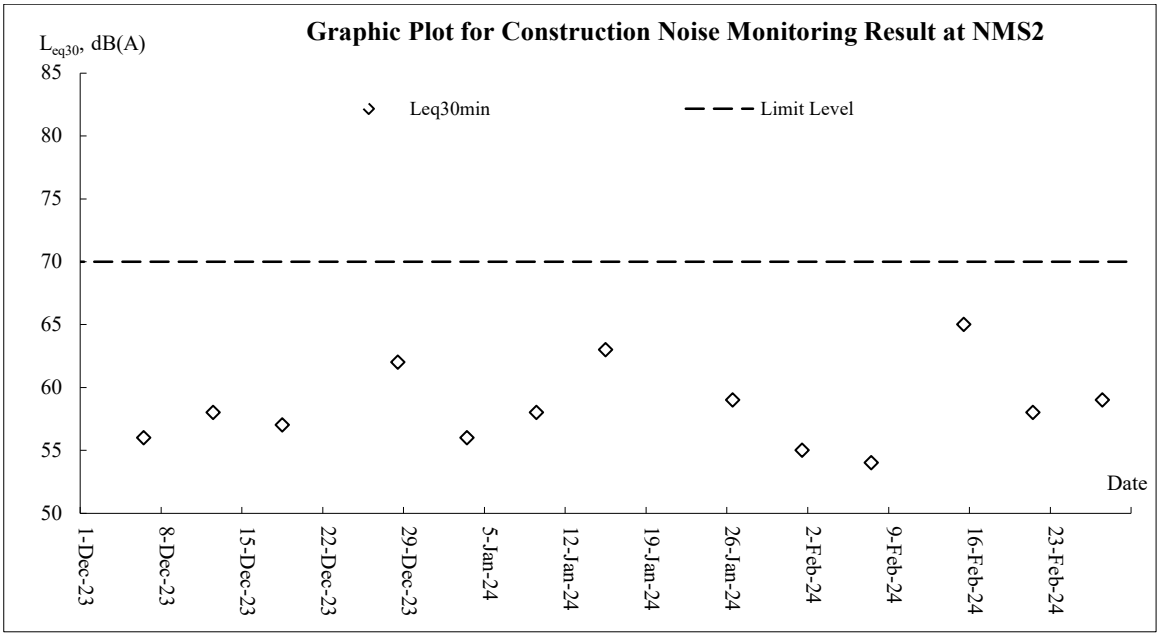


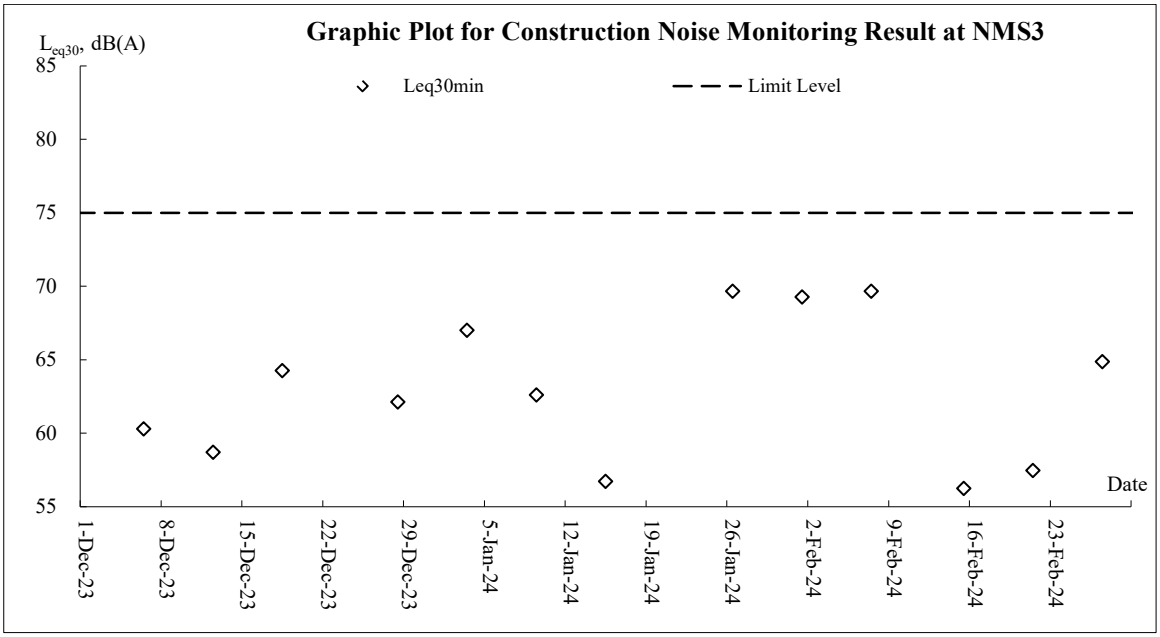

Graphical Plot for 24-hour TSP Monitoring Result at AMS-6
24-hour TSP, μg/m³
300
250
200
150
100
50
0
24-hour TSP
Action Level
Limit Level
1-Dec-23
12-Dec-23
23-Dec-23
3-Jan-24
14-Jan-24
25-Jan-24
5-Feb-24
16-Feb-24
27-Feb-24
Date

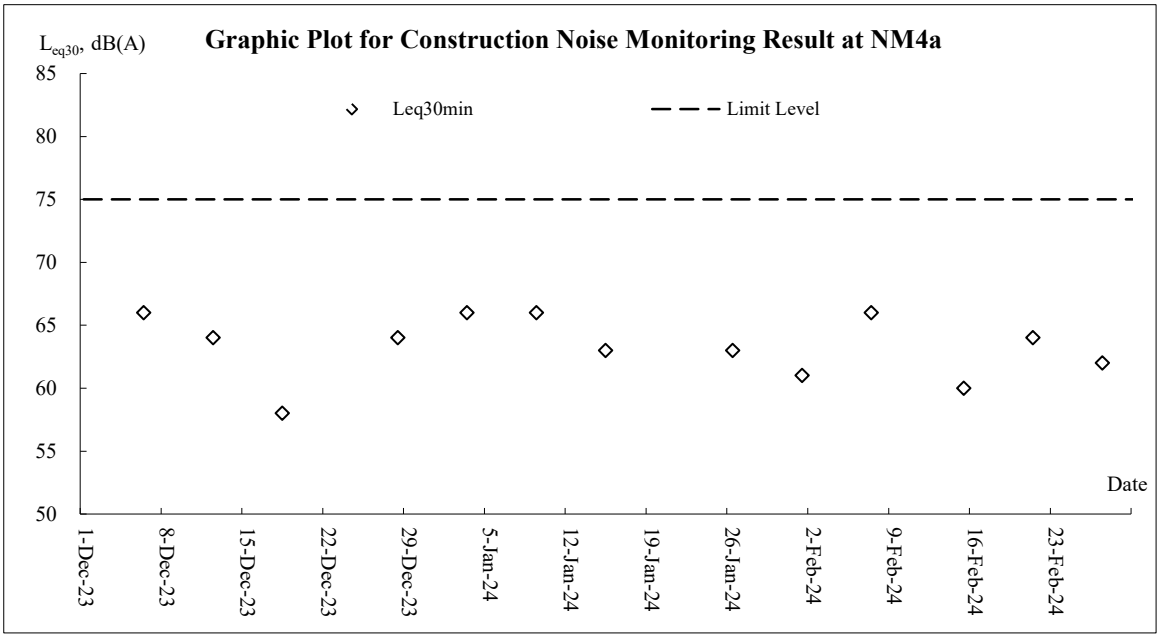

Graphical Plot for 24-hour TSP Monitoring Result at AMS-7
24-hour TSP, μg/m³
300
250
200
150
100
50
0
24-hour TSP
Action Level
Limit Level
1-Dec-23
12-Dec-23
23-Dec-23
3-Jan-24
14-Jan-24
25-Jan-24
5-Feb-24
16-Feb-24
27-Feb-24
Date

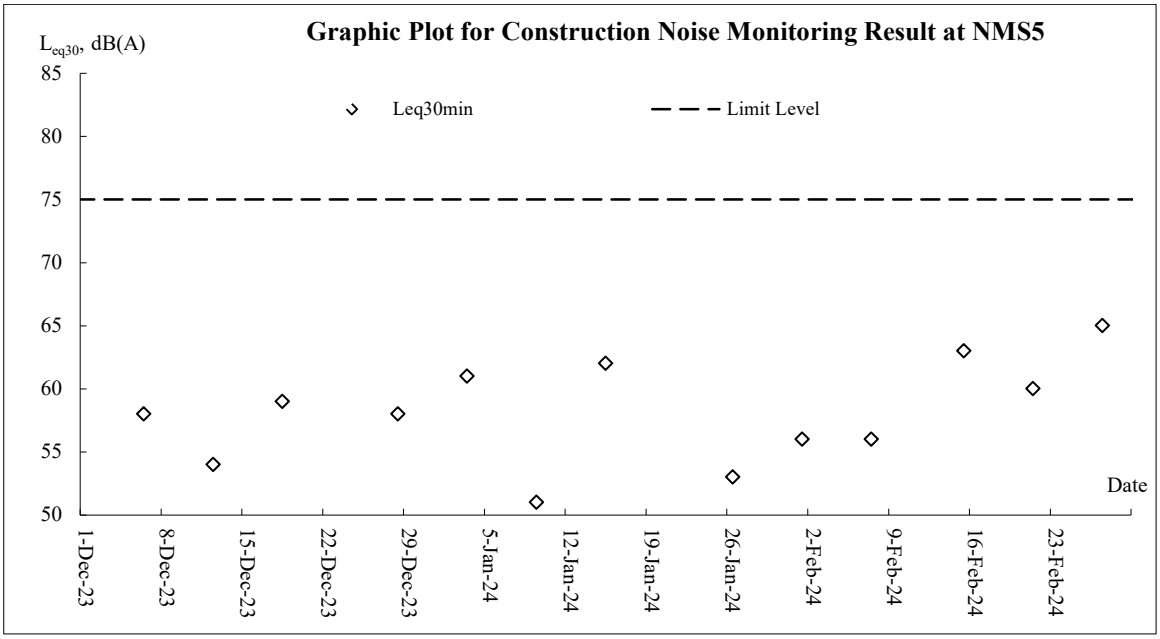
Noise

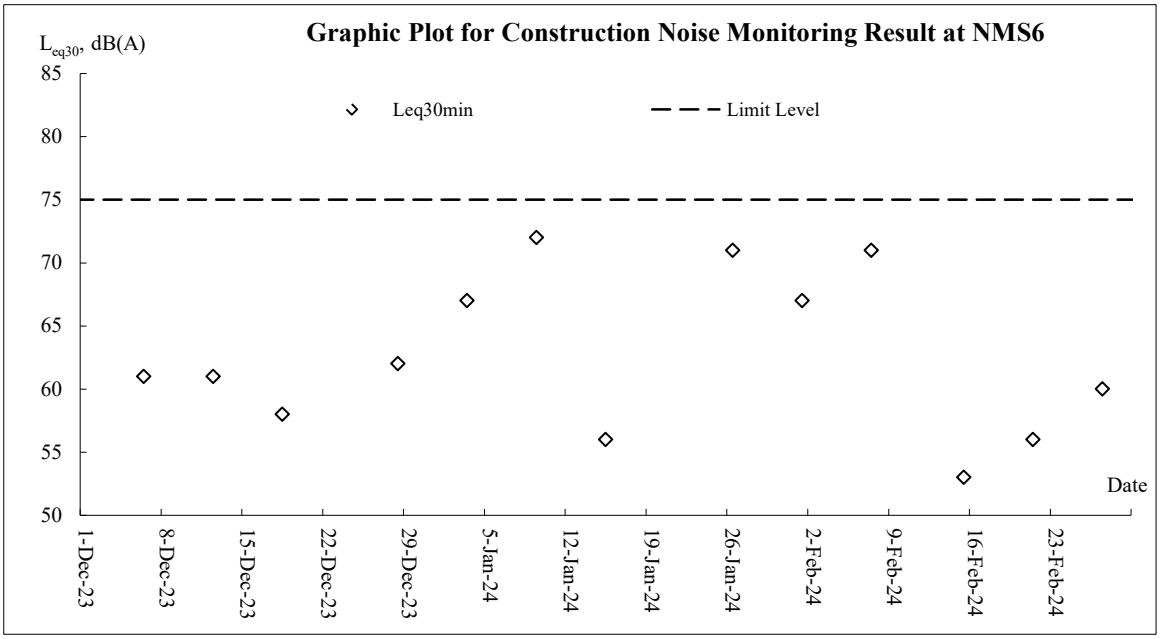

Graphic Plot for Construction Noise Monitoring Result at NMS1
L_{eq30}, dB(A)
Leq30min
Limit Level
85
80
75
70
65
60
55
50
Date
1-Dec-23
8-Dec-23
15-Dec-23
22-Dec-23
29-Dec-23
5-Jan-24
12-Jan-24
19-Jan-24
26-Jan-24
2-Feb-24
9-Feb-24
16-Feb-24
23-Feb-24

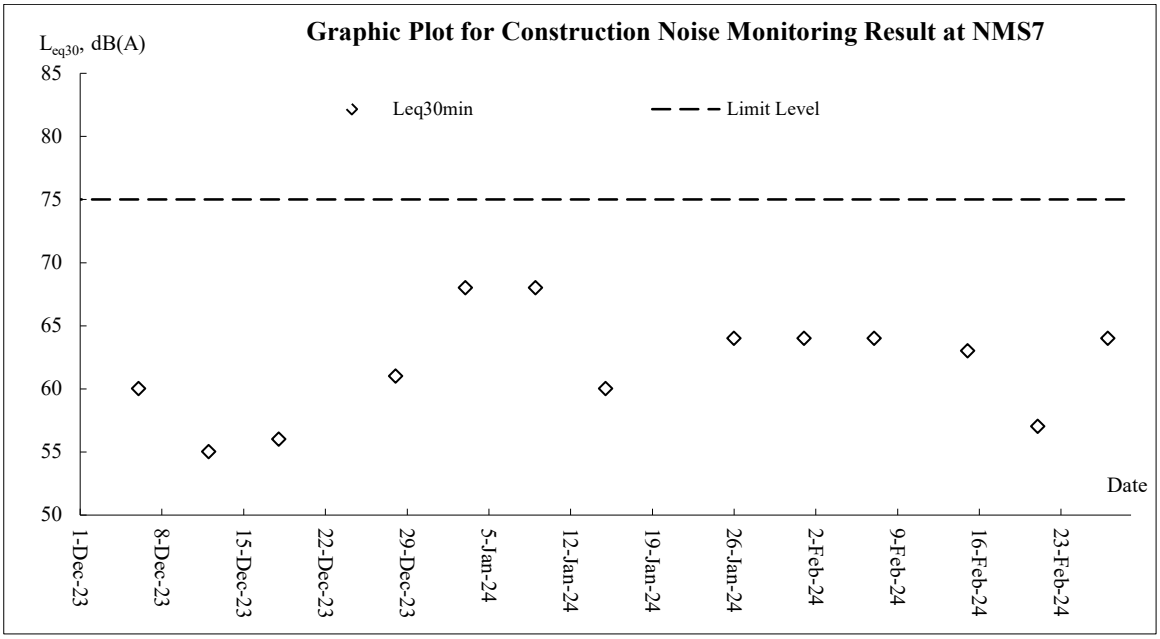

Graphic Plot for Construction Noise Monitoring Result at NMS2
L_{eq30}, dB(A)
Leq30min
Limit Level
85
80
75
70
65
60
55
50
Date
1-Dec-23
8-Dec-23
15-Dec-23
22-Dec-23
29-Dec-23
5-Jan-24
12-Jan-24
19-Jan-24
26-Jan-24
2-Feb-24
9-Feb-24
16-Feb-24
23-Feb-24

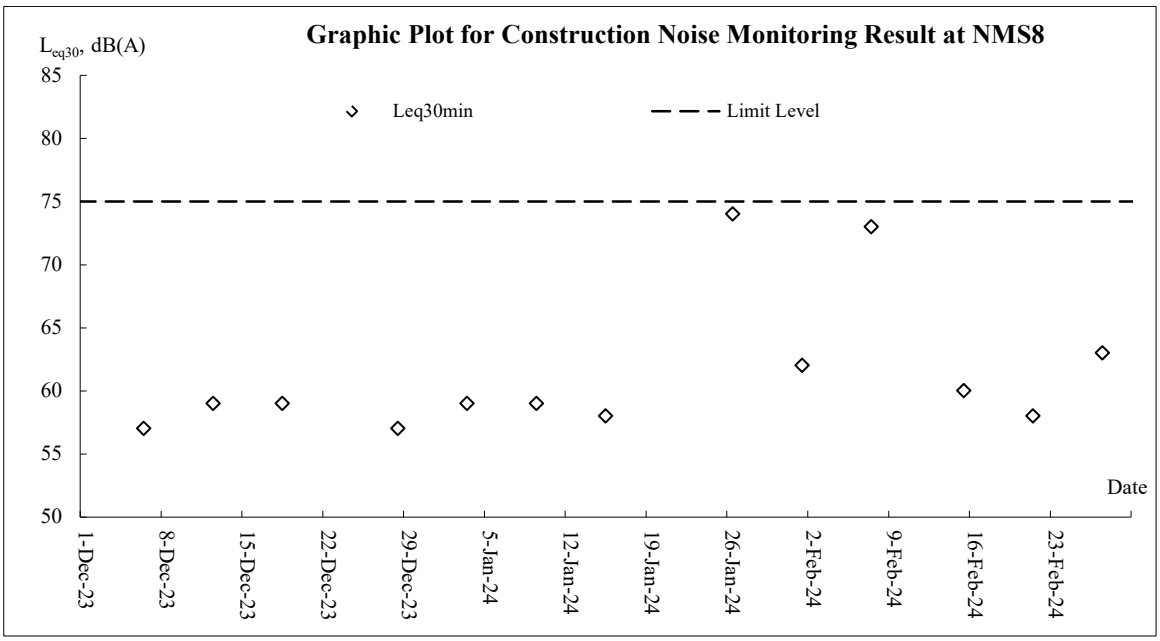

Graphic Plot for Construction Noise Monitoring Result at NMS3
L_{eq30}, dB(A)
Leq30min
Limit Level
85
80
75
70
65
60
55
Date
1-Dec-23
8-Dec-23
15-Dec-23
22-Dec-23
29-Dec-23
5-Jan-24
12-Jan-24
19-Jan-24
26-Jan-24
2-Feb-24
9-Feb-24
16-Feb-24
23-Feb-24

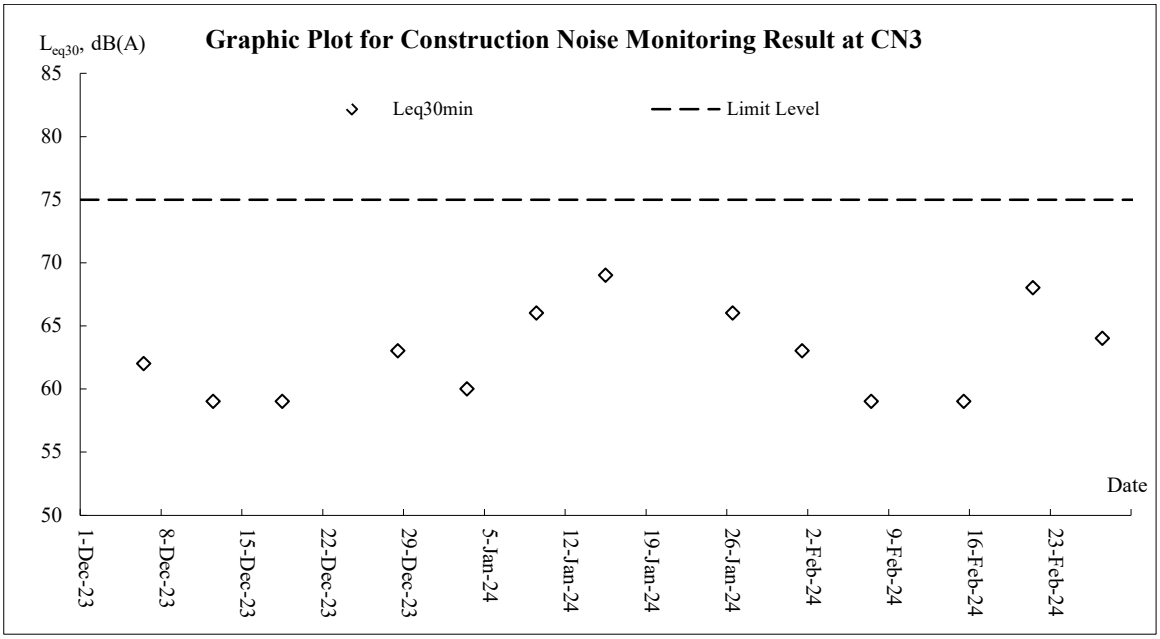

Graphic Plot for Construction Noise Monitoring Result at NM4a
L_{eq30}, dB(A)
Leq30min
Limit Level
85
80
75
70
65
60
55
50
Date
1-Dec-23
8-Dec-23
15-Dec-23
22-Dec-23
29-Dec-23
5-Jan-24
12-Jan-24
19-Jan-24
26-Jan-24
2-Feb-24
9-Feb-24
16-Feb-24
23-Feb-24


Graphic Plot for Construction Noise Monitoring Result at NMS5
L_{eq30}, dB(A)
Leq30min
Limit Level
85
80
75
70
65
60
55
50
Date
1-Dec-23
8-Dec-23
15-Dec-23
22-Dec-23
29-Dec-23
5-Jan-24
12-Jan-24
19-Jan-24
26-Jan-24
2-Feb-24
9-Feb-24
16-Feb-24
23-Feb-24


Graphic Plot for Construction Noise Monitoring Result at NMS6
L_{eq30}, dB(A)
Leq30min
Limit Level
85
80
75
70
65
60
55
50
Date
1-Dec-23
8-Dec-23
15-Dec-23
22-Dec-23
29-Dec-23
5-Jan-24
12-Jan-24
19-Jan-24
26-Jan-24
2-Feb-24
9-Feb-24
16-Feb-24
23-Feb-24


Graphic Plot for Construction Noise Monitoring Result at NMS7
L_{eq30}, dB(A)
Leq30min
Limit Level
85
80
75
70
65
60
55
50
Date
1-Dec-23
8-Dec-23
15-Dec-23
22-Dec-23
29-Dec-23
5-Jan-24
12-Jan-24
19-Jan-24
26-Jan-24
2-Feb-24
9-Feb-24
16-Feb-24
23-Feb-24


Graphic Plot for Construction Noise Monitoring Result at NMS8
L_{eq30}, dB(A)
Leq30min
Limit Level
85
80
75
70
65
60
55
50
Date
1-Dec-23
8-Dec-23
15-Dec-23
22-Dec-23
29-Dec-23
5-Jan-24
12-Jan-24
19-Jan-24
26-Jan-24
2-Feb-24
9-Feb-24
16-Feb-24
23-Feb-24


Graphic Plot for Construction Noise Monitoring Result at CN3
L_{eq30}, dB(A)
Leq30min
Limit Level
85
80
75
70
65
60
55
50
Date
1-Dec-23
8-Dec-23
15-Dec-23
22-Dec-23
29-Dec-23
5-Jan-24
12-Jan-24
19-Jan-24
26-Jan-24
2-Feb-24
9-Feb-24
16-Feb-24
23-Feb-24

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-Feb-24	Thu	Warm in the afternoon. Light winds.	0.2	22.2	8.7	S/SE	86.5
2-Feb-24	Fri	Sunny periods. Coastal fog patches in the morning.	Trace	Maintenance	11.2	S/SE	81.7
3-Feb-24	Sat	occasionally fresh with one or two light rain patches later.	Trace	19.1	12.5	SE	83.2
4-Feb-24	Sun	Moderate northeasterly winds.	Trace	19.7	8.7	SE	92.2
5-Feb-24	Mon	Mainly cloudy with one or two rain patches and coastal fog.	Trace	20.4	6.7	E/SE	84.2
6-Feb-24	Tue	Mainly cloudy with one or two rain patches tonight	0.6	17.7	17	E/SE	82.5
7-Feb-24	Wed	Cloudy with a few rain patches.	Trace	15.4	9.2	E/SE	92.2
8-Feb-24	Thu	It will be cold. Cloudy with a few rain patches.	2.2	12.1	9.2	N/NW	85.2
9-Feb-24	Fri	Mainly cloudy with one or two light rain patches.	0.6	12.5	9	N/NW	77.5
10-Feb-24	Sat	It will be cold.Moderate north to northeasterly winds.	0.5	14.2	7.5	N/NW	68
11-Feb-24	Sun	It will be cold. Cloudy with a few rain patches.	0	17.2	8.7	SE	53.5
12-Feb-24	Mon	Rather warm during the day. Light winds.	0	17.8	9.8	SE	67
13-Feb-24	Tue	Light to moderate easterly winds.	0	18.8	11	SE	65.7
14-Feb-24	Wed	Mainly fine. Warm during the day.	0	21.4	9	S/SE	74.5
15-Feb-24	Thu	Light to moderate easterly winds.	0	Maintenance	7	W/SW	68.5
16-Feb-24	Fri	Mainly fine. Warm during the day.	Trace	19.8	11.2	E/SE	72
17-Feb-24	Sat	Light to moderate southeasterly winds.	Trace	18.2	11.2	E/SE	80
18-Feb-24	Sun	Sunny intervals in the afternoon.	0	22.1	10	S/SE	84
19-Feb-24	Mon	Mainly cloudy. Foggy in the morning and at night.	0	22.5	8.7	S/SE	85.7
20-Feb-24	Tue	Sunny periods. Warm during the day.	0	24.1	10	SE	85
21-Feb-24	Wed	Coastal fog and one or two light rain patches at night.	0	24.5	9.5	SE	77.5
22-Feb-24	Thu	Foggy with one or two rain patches in the morning and at night.	0	23.8	10.2	S/SE	84.5
23-Feb-24	Fri	Slightly cooler and mainly cloudy with one or two light rain patches.	Trace	19.7	10.7	SE	87.5
24-Feb-24	Sat	Light to moderate east to southeasterly winds.	Trace	18.5	9.2	NW	73
25-Feb-24	Sun	Mainly cloudy. Bright periods in the afternoon.	0	18.7	6.2	W/SW	67.2
26-Feb-24	Mon	Cool with one or two light rain patches tonight.	Trace	17.6	9.2	E/SE	73.7
27-Feb-24	Tue	Mainly cloudy. Sunny intervals in the afternoon.	Trace	16	12	E/SE	71
28-Feb-24	Wed	Mainly cloudy. Moderate to fresh easterly winds.	Trace	17.2	15.5	E/SE	82.5
29-Feb-24	Thu	Mainly cloudy. Bright periods in the afternoon.	Trace	16.9	12.2	SE	85

Appendix K

Waste Flow Table

Contract No.: NE/2017/03

Development of Anderson Road Quarry Site – Road Improvement Works and Pedestrian Connectivity Facilities Works Phase 2A

Monthly Summary Waste Flow Table for 2024 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract (see Note 6)	Reused in other Projects (see Note 6)	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste (see Note 5)	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan	2.305	0.000	0.000	0.401	1.904	0.000	0.000	0.000	0.000	0.000	0.030
Feb	1.356	0.000	0.000	0.241	1.115	0.000	0.001	0.090	0.004	0.000	0.024
Mar											
Apr											
May											
Jun											
Sub-total											
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Notes:

(1) The performance targets are given in PS Clause 1.129 (4).

(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material and waste will be collected by recycler for recycling.

(4) Use the conversion factor, density of general refuse (1 t/m^3) and inert C&D materials (2 t/m^3).

(5) Use the conversion factor for chemical waste (0.88kg/L).

(6) Assume a dump truck delivers 7.5 m^3 material in 1 trip.

Contract No.: ED/2020/02 **APPENDIX 2**

Monthly Summary Waste Flow Table for 2024

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	0.765	0.000	0.000	0.000	0.765	0.000	0.000	0.000	0.000	0.000	0.007
Feb	0.281	0.000	0.000	0.000	0.281	0.000	0.000	0.000	0.000	0.000	0.048
Mar	**#0.281**	0.000	0.000	0.000	**#0.281**	0.000	0.000	0.000	0.000	0.000	**#0.048**
Apr											
May											
June											
July											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	**1.046**	**0.000**	**0.000**	**0.000**	**1.046**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.055**

Notes: * Conversion factor for general refuse, 1 tonne = $2m^3$

** Conversion factor for general fill, 2 tonne = $1m^3$

Estimation for next month

Name of Department : CEDD Contract No. : ED/2019/02

Monthly Summary Waste Flow Table for 2024 (year)

Month	Annual Quantities of Inert C&D Materials Generated Monthly						Annual Quantities of C&D Materials Generated Monthly				
	Total Quantity Generated	Hard Rock & Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemicals 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	0.076	0.074	0.002	0	0.074	0	0	0	0	0	0.069
Feb	0.026	0.024	0.002	0	0.024	0	0	0	0	0	0.084
Mar	---	---	---	---	---	---	---	---	---	---	---
Apr	---	---	---	---	---	---	---	---	---	---	---
May	---	---	---	---	---	---	---	---	---	---	---
June	---	---	---	---	---	---	---	---	---	---	---
Sub-total	0.102	0.098	0.004	0	0.098	0	0	0	0	0	0.153
July	---	---	---	---	---	---	---	---	---	---	---
Aug	---	---	---	---	---	---	---	---	---	---	---
Sept	---	---	---	---	---	---	---	---	---	---	---
Oct	---	---	---	---	---	---	---	---	---	---	---
Nov	---	---	---	---	---	---	---	---	---	---	---
Dec	---	---	---	---	---	---	---	---	---	---	---
Total	0.102	0.098	0.004	0	0.098	0	0	0	0	0	0.153

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

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	Construction Runoff In accordance with the Practice Note for Professional Persons on Construction ion Site Drainage, Environmental Protect ion 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 m^3 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 protect ion 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 t rap. The silt /sediment t raps should be incorporated in the permanent drainage channels to enhance deposit ion 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 ion. • 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 sect ions 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 ion 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 ***ProPECC PN 1/94***. 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 bun ds 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. Not ices 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 ion phase of the Project . Regular environmental audit on the construction ion 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 an d 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 Sect ion 2.3 of TM-DSS. The baseline groundwater quality shall be determined prior to the select ion 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 ion activities: • nomination of an approved personnel, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collect ion 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 collect ion 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	女	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 ***ETWB TC(W) No. 19/2005*** 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	Excavated and C&D Material 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	Contaminated Soil 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	Chemical Waste	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 ion 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 Cent re, 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 collect ion 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 collect ion 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 bot tom 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 format ion works, followed, where appropriate, by covering with biodegradable geotextile blanket for erosion control purposes; • Where appropriate, earth-bunding 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 ion effluent, site run-off and sewage will be probably collected and/or treated. Wastewater from any construction ion 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 project 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 **LAO GN No. 7/2007**, ***ETWB TCW No. 29/2004*** and ***10/2013***. 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
Overall Total	**84**	**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	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
								site.			
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 construciton 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/0001942 8-17)	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	no comment by IEC on 3 Nov 2017	TCS00864/16/300/F0094

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
									eliminate the inconvenience caused to the nearby resident, CWSTVJV was advised to further enhance the noise mitigation measures as appropriately.		
7	28-Jul-17	29-Aug-17	Anderson Road	unknown	Dust	EPD	EPD (ref.N08/RE/0002 3986-17)	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
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/0002 4557-17)	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

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
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
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/00031074-17)	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

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
11	27-Sep-17	13-Oct-17	Chun Tat House, On Tat Estate	Resident of On Tat Estate	Construction noise	EPD	EPD (ref.N08/RE/00029489-17)	The complainant questioned why there were 6 to 7 breakers operating in the monring 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/F01106
12	3-Oct-17	13-Oct-17	Chun Tat House, On Tat Estate	Resident of On Tat Estate	Construction noise	EPD	EPD (ref. N08/RE/00032407-17)	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/F01106
13	25-Oct-17	26-Oct-17	Tat Kwai House, Po Tat Estate	Resident of Po Tat Estate	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，要求跟進及回覆	Investigation revealed that CWSTVJV has implemented dust mitigation measures to eliminate the inconvenience caused to the 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.	no comment by IEC on 15 Nov 2017	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
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 開始傳出機器不停掾石的噪音(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/F0109
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/F0104

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, On 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掘鐵噪音。	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 Yee House, Sau Mau 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 Tat House, On Tat Estate	Resident of On Tat Estate	Construction Noise	EPD	EPD (ref. N08/RE/00029489-17)	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/F01117
19	15-Dec-17	21-Dec-17	Sau Yee 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/F01118
20	20-Dec-17	21-Dec-17	On Tat 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	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

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
								到場視察。			
21	28-Dec-17	10-Jan-18	Sau Yee House	Resident of Sau Mau Ping Estate	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	ET has conducted an ad-hoc noise measurement for Leq (30min) in the 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. Moroever, 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.	no comment by IEC on 8 Feb 2018	TCS00864/16/300/F0129

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
								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。			
22	15-Jan-18	15-Jan-18	Chun Tat House	Resident of Chun Tat House of On Tat Estate, 40/F	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 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.	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 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 8 Feb 2018	TCS00864/16/300/F0130
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	no comment by IEC on 22 Feb 2018	TCS00864/16/300/F0137

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
									2018, there were no breaches of EM&A requirement.		
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. 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.	no comment by IEC on 28 Feb 2018	TCS00864/16/300/F0140

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
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掾石仔噪音滋擾, 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 believe 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 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	no comment by IEC on 7 May 2018	TCS00864/16/300/F0160b

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									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

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29	25-Jun-18	19-Jul-18	Pedestrian Connectively E8 under Contract 3	Kwun Tong DC member Ms. So Lai-chun	Waste Management	CEDD	NA	A public complaint was referred from CEDD on 4 July 2018 regarding accumulation of dead leaves and branches found 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	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 related project works, it is considered that the complaint is not valid the project.	no comment by IEC on 24 Sep 2018	TCS00864/16/300/F0189b
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

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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
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

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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 ChingTat House(referredby Mr. Hui Yau Wai)	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 arrange some noise monitoring to check the noise level at the concerned flat or the same level at Ching Tat House.	The SPRO contacted Mr. Hiu 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 had implemented to reduce the noise level effectively and the work progress will be closely updated to nearby stakeholders to enhance communication. Mr. Hiu 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.	no comment by IEC on 12 Dec 2018	TCS00864/16/300/F0222a

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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 immediate 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/F0223a
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 was satisfied with the reply. Investigation Report has been completed by ET without comment from IEC.	no comment by IEC on 18 Feb 2019	TCS00864/16/300/F0224

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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 protection the watercourse at downstream of the construction site, CWSTVJV has some enhancement measures.	no comment by IEC on 29 Mar 2019	TCS00864/16/300/F0248a
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/F0249a
41	15-Feb-19	25-Feb-19	Anderson Road Quarry Site	Undisclosed	noise	1823	2-49480 74127	1823 has referred a case to CEDD on 15 February 2019, which the complainant complained about the construction	In response to the complainant, CWSTVJV has proposed alterative quiet work method to alleviate the noise impact to the public. They will schedule the noisy activities to be carried	no comment by IEC on 29 Mar 2019	TCS00864/16/300/F0251a

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								noise generated from the CEDD site near 法源寺 (Ma Yau Tong Village). The complainant requested for the details of works and the completion date, the complainant also requested CEDD to use other construction methods in order to re	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 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.erway by ET.	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. Alterative 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	no comment by IEC on 6 May 2019	TCS00864/16/300/F0264

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									breach the Noise Control Ordinance.		
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/F0301a
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	no comment by IEC on 12 August 2019	TCS00864/16/300/F0292b

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									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.		
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/F0310a

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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/F0326a
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

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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
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，自本年初寶林路開展掘隧道工程，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	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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								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			
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. 2-5976303183	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	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/F0338a

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								intermittence is suggested in order to speed up the works and to avoid waste of manpower.			
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 mentioned that the noise from construction was improved before but it became serious recently.	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/F0357a

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54	4-Mar-20	17-Mar-20	Near Hiu Ming Street Playground (E8)	Undisclosed	Noise	1823	ref. 3-62832 37171	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-5PM 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/F0359a
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	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	no comment by IEC on 15 Apr 2020	TCS00864/16/300/F0360a

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								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.	concerned Lin Tak Road was satisfactory. It is considered that the complaint was unlikely due to the project.		
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 generated from the Anderson Road Quarry Site. The complainant mentioned that 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. Nevertheless, as the construction site is close to the residential area, CW-CMGCJV was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme.	no comment by IEC on 11 May 2020	TCS00864/16/300/F0361a

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								generated from the Anderson Road Quarry Site had been continued for two years.			
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	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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								and implementation of 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	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	no comment by IEC on 25 August 2020	TCS00864/16/300/F0401

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								(restricted hours). He/ she requested relevant department to follow up.	legislative requirement. 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		
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/F04 24
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/F04 34
62	3-Dec-20	7-Dec-20	Ma Yau Tong	Undisclosed	Noise and dust	1823 & EPD	3-65741 41017	A public complaint was received by 1823 and	In our investigation, CWSTVJV had provided the dust and noise mitigation	no comment	TCS00864/ 16/300/F04

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			Village (East Portal)					EPD on 14 November 2020 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	measures to minimize the dust and noise 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	by IEC on 4 January 2021	35
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	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	no comment by IEC on 19 July 2021	TCS00864/ 16/300/F0458a

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								provided in the construction site	measures as far as practicable as recommended in the EM&A Programme		
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	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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								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) 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/F0485b
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	In our investigation, CWSTVJV had implemented the water quality mitigation measures to minimise the impact arising	no comment by IEC on	

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								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.	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 byC1 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.	6 October 2021	
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	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,	No comment by IEC on 15 November 2021	

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								resident of On Tat Estate. EPD have contacted the complainant and clarify that the concerned about construction dust and daytime construction noise after 7am.	CWSTVJV was reminded to properly maintain the noise mitigation measures as far as practicable considering the construction site is relatively close to residential area.		
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 at catchpit SSH4001400 near Tin Hau Temple and the site discharge points at Po Lam Road on 28 March 2022	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 under rainy days and not due to the works under the Project.	No comment by IEC on 19 April 2022	TCS00864/16/300/F0540
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/	25/May/	Anderson	DSD	Water	DSD	NA	EPD received complaint	Based on the above findings and	No	TCS00864/

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	2022	2022	Road Quarry Site		Quality			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.	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.	comment by IEC on 13 June 2022	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 have been caused by the project.	No comment by IEC on 13 June 2022	TCS00864/16/300/F562a
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	As a matter of fact, heavy rain led to large amount of storm runoff from roads and landscape into the public drainage system,	Sent to EPD on 21 June 2022	TCS00864/16/300/F565

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								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.	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.		
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 complaint mainly related to the interfacing contractor(s) and unlikely to have been caused by the project.	Sent to EPD on 29 June 2022	TCS00864/16/300/F566
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	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.	No comment by IEC on 19 September 2022	TCS00864/16/300/F580

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								Road	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.		
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 accordance with the procedure in EM&A Manual.	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 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.	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
									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 contacted the complainant who was a resident of Shing Tai House, On Tai Estate. The complainant	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 mitigation measures implemented were effective in suppressing the fugitive dust. Nevertheless, as the construction site is close to the residential area, both the	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
								expressed concern about the construction dust generated from Anderson Road Quarry (ARQ) site and requested the site to step up dust suppression measures.	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 inspections, and	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
									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).	The case was then referred from EPD to CEDD for follow-up. Environmental Team (ET) initiated the handling 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 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	Sent to EPD on 18 July 2023	TCS00864/16/300/F653

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
									remedial action when necessary.		
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 Kin Road, Anderson Road Quarry (CEDD Contract No. ED/2020/02) at night from 10pm to 6am.	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 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.	Sent to EPD on 29 January 2024	TCS00864/16/300/F684a

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