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 (MAY 2024)

PREPARED FOR
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT (CEDD)

Date	Reference No.	Prepared By	Certified By
19 June 2024	TCS01321/23/600/R0705v2	Nicola Hon (Environmental Consultant)	Tam Tak Wing (Environmental Team Leader)

Version	Date	Remarks
1	14 June 2024	First submission
2	19 June 2024	Amended as per IEC's comments

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: HKCEDD10/50/109852

Date: 19 June 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 (May 2024)

We refer to the emails of 17 and 19 June 2024 from Action-United Environmental Services and Consulting attaching a Monthly Environmental Monitoring and Audit Report (May 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/csym

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ISO 9001 : 2015
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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 31 May 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**	**105**
	24-hour TSP	**4**	**24**
Construction Noise	$L_{eq(30min)}$ Daytime for Contract NE/2016/01	**8**	**32**
	$L_{eq(30min)}$ Daytime for Contract NE/2017/03	**1**	**4**

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, two (2) environmental complaints were 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 **3, 10, 17, 24 and 31 May 2024** in which IEC joined the site inspection with SSEMC on **10 May 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 **3, 8, 14, 24 and 31 May 2024** in which IEC joined the site inspection with SSEMC on **14 May 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 **2, 9, 16, 22 and 30 May 2024** in which IEC joined the site inspection on **22 May 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 31 May 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

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, 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
- Construct drainage on slope surface
- MJ Installation

Portion 2
- S. S. side cheque plates
- Drainage work on ground

Portion 3
- Construction of E7 Lift Tower
- Footbridge erection
- Cast RC Slab on footbridge

Portion 4
- E&M Installation in pillar box
- Erect footbridge (Pier head-abutment)
- Erect footbridge (Lift Tower-Pier head)
- Installation E10 Lift Tower

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

Item	Description	License/Permit Status			
		Permit no./ account no./ Ref. no.	Valid Period		Status
			From	To	
		For Area System B Registration no. WPN 5213-294-C4239-03	6-Aug-18	End of Project	Valid
		For Area E8 Registration no. WPN 5213-292-C4239-06	6-Aug-18	End of Project	Valid
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
4	Waste Disposal Regulation – Billing Account for Disposal of Construction Waste	Account no.7031075	20-Jun-18	End of project	Valid
5	Construction Noise Permit	GW-RE0532-24	4-May-24	30-Jun-24	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

Item	Description	License/Permit Status			
		Permit no./ account no./ Ref. no.	Valid Period		Status
			From	To	
2	Chemical Waste Producer Registration	Registration no. WPN 5298-293-W3611-01	12-May-21	End of project	Valid
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
5	Construction Noise Permit	GW-RE0484-24	20-Apr-24	19-May-24	Valid
		GW-RE0485-24	28-Apr-24	26-May-24	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.

(ˆ) 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	Bruel & Kjaer 2238, Rion 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 ***105*** events of 1-hour TSP monitoring and ***24*** 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-May-24	14	4-May-24	8:30	34	32	40
8-May-24	24	10-May-24	8:00	55	62	52
14-May-24	17	16-May-24	13:00	36	39	46
20-May-24	15	22-May-24	13:00	37	41	33
25-May-24	9	28-May-24	14:30	49	55	54
31-May-24	15	--	--	--	--	--
Average (Range)	**16 (9 – 24)**	Average (Range)		**44 (32 – 62)**		

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**
4-May-24	9:00	86	92	78
10-May-24	13:30	62	70	59
16-May-24	10:15	52	46	60
22-May-24	8:00	62	51	60
28-May-24	8:46	65	67	67
Average (Range)		**65 (46 – 92)**		

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**
4-May-24	13:00	48	57	61
10-May-24	8:30	40	31	37
16-May-24	13:45	54	58	68
22-May-24	13:30	37	37	30
28-May-24	8:32	52	50	59
Average (Range)		**48 (30 – 68)**		

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
4-May-24	13:00	48	51	49
10-May-24	13:00	65	67	63
16-May-24	13:05	62	66	64
22-May-24	13:10	58	60	61
28-May-24	13:00	63	69	62
Average (Range)		**61 (48 – 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-May-24	22	4-May-24	9:00	53	55	50
8-May-24	32	10-May-24	9:00	59	56	54
14-May-24	52	16-May-24	9:05	58	61	56
20-May-24	20	22-May-24	9:10	53	58	55
25-May-24	15	28-May-24	8:15	47	53	51
31-May-24	20	--	--	--	--	--
Average (Range)	**27 (15 – 52)**	Average (Range)		**55 (47 – 61)**		

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-May-24	15	4-May-24	9:20	54	56	52
8-May-24	26	10-May-24	9:40	57	52	55
14-May-24	31	16-May-24	9:45	57	60	63
20-May-24	25	22-May-24	9:50	54	51	56
25-May-24	19	28-May-24	8:00	51	45	49
31-May-24	18					
Average (Range)	**22 (15 – 31)**	Average (Range)		**54 (45 – 63)**		

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-May-24	10	4-May-24	12:30	70	58	53
8-May-24	47	10-May-24	13:00	46	42	50
14-May-24	54	16-May-24	9:45	58	62	70
20-May-24	32	22-May-24	8:30	53	46	43
25-May-24	14	28-May-24	13:20	68	75	61
31-May-24	15	--	--	--	--	--
Average (Range)	**29 (10 – 54)**	Average (Range)		**57 (42 – 75)**		

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 **32** 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**
10-May-24	72	58	64	66	66	58	63	63
16-May-24	72	62	63	64	66	65	60	63
22-May-24	71	62	65	64	64	70	65	70
28-May-24	71	58	61	66	59	55	58	59
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

**NMS2 examination time: 30 – 31 May 2024*

5.2.2 As shown in above table, the noise measurement result at NMS1 on 10, 16, 22 and 28 May 2024 was 72, 72, 71 and 71dB(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 10, 16, 22 and 28 May 2024 is 69, 69, 66.7 and 66.7dB(A), which fall within the Limit Level.

5.2.3 For the additional noise monitoring under Contract 3, a total of **4** 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**
10-May-24	62
16-May-24	61
22-May-24	61
28-May-24	60
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) (#)	1.361	-	0	-	0.004	-
Hard Rock and Large Broken Concrete ('000m^3)	0	-	0	-	0.003	-
Reused in this Contract (Inert) ('000m^3)	0	-	0	-	0.001	-
Reused in other Projects (Inert) ('000m^3)	0	-	0	-	0	-
Disposal as Public Fill (Inert) ('000m^3)	1.361	TKO 137	0	TKO 137	0.003	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	Licensed collector	0	-	0	-
Recycled Paper / Cardboard Packing ('000kg)	0	Licensed collector	0	-	0	-
Recycled Plastic ('000kg)	0	Licensed collector	0	-	0	-
Chemical Wastes ('000kg)	0	-	0	-	0	-
General Refuses ('000m^3)	0.051	SENT	0.077	-	0.066	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 **3, 10, 17, 24 and 31 May 2024** in which IEC joined the site inspection with SSEMC on **10 May 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
3 May 2024	• No environmental issue was observed during site inspection.	• NA
10 May 2024	• The Contractor was reminded to remove stagnant water regularly.	• Reminder only.
17 May 2024	• No environmental issue was observed during site inspection.	• NA
24 May 2024	• The Contractor was reminded to enhance house-keeping. • The Contractor was reminded to remove stagnant water regularly. • The Contractor was reminded to remove or place chemical containers inside drip tray.	• Reminder only. • Reminder only. • Reminder only.
31 May 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 **3, 8, 14, 24 and 31 May 2024** in which IEC joined the site inspection with SSEMC on **14 May 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
3 May 2024	• The Contractor was reminded to stagnant water regularly after rain. • The Contractor was reminded to enhance house-keeping.	• Reminder only. • Reminder only.
8 May 2024	• The Contractor was reminded to remove the waste in drainage channel to prevent blockage. • The Contractor was reminded to clear stagnant water regularly.	• Reminder only. • Reminder only.
14 May 2024	• The Contractor was reminded to remove stagnant water regularly after rain. • The Contractor was reminded to cover sandy stockpile properly.	• Reminder only. • Reminder only.

Date	Findings / Deficiencies	Follow-Up Status
24 May 2024	• The Contractor should remove or place chemical container inside drip tray. (Portion 12) • The Contractor was reminded to remove stagnant water regularly. • The Contractor was reminded to ensure NRMM labels are place on each required machine.	• Chemical container was removed to designated storage area. • Reminder only. • Reminder only.
31 May 2024	• The Contractor should remove stagnant water inside drip tray. (Portion 12) • The Contractor should cover slope with tarpaulin sheet. (Portion 12) • The Contractor was reminded to remove stagnant water regularly. • The Contractor was reminded to provide mitigation measure to prevent oil leakage from breaker.	• The stagnant water was removed. • The slope was covered properly. • Reminder only. • 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 **2, 9, 16, 22 and 30 May 2024** in which IEC joined the site inspection on **22 May 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
2 May 2024	• The Contractor was reminded to clear stagnant water inside drip tray. • The Contractor was reminded to cover cement bag storage with tarpaulin sheet.	• Reminder only. • Reminder only.
9 May 2024	• The Contractor was reminded to remove the waste to enhance good house-keeping.	• Reminder only.
16 May 2024	• Chemical container should be removed or placed inside drip tray. (E10)	• Chemical container was placed to drip tray.
22 May 2024	• No environmental issue was observed during site inspection.	• NA
30 May 2024	• No environmental issue was observed during site inspection.	• NA

8 ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

8.1 ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTION

8.1.1 In the Reporting Period, two (2) environmental complaints were 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 – 30 April 2024	3	0	**8**	NA
27 Sep 2021 – 30 April 2024	4	0	**8**	NA
30 Mar 2021 – 30 April 2024	5	0	**0**	NA
1 – 31 May 2024	1	2	**67**	Water Quality
	2	0	**10**	NA
	3	0	**8**	NA
	4	2	**10**	Water Quality
	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 – 30 April 2024	3	0	0	NA
27 Sep 2021 – 30 April 2024	4	0	0	NA
30 Mar 2021 – 30 April 2024	5	0	0	NA
1 – 31 May 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 – 30 April 2024	3	0	0	NA
27 Sep 2021 – 30 April 2024	4	0	0	NA
30 Mar 2021 – 30 April 2024	5	0	0	NA
1 – 31 May 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

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, 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
- Construct drainage on slope surface
- MJ Installation

Portion 2
- S. S. side cheque plates
- Drainage work on ground

Portion 3
- Construction of E7 Lift Tower
- Footbridge erection
- Cast RC Slab on footbridge

Portion 4
- E&M Installation in pillar box
- Erect footbridge (Pier head-abutment)
- Erect footbridge (Lift Tower-Pier head)
- Installation E10 Lift Tower

9.3 KEY ISSUES FOR THE COMING MONTH

9.3.1 Key issues to be considered in the coming month include:
- Implementation of dust suppression measures at all times;
- Potential wastewater quality impact due to surface runoff;
- Potential fugitive dust quality impact due from the dry/loose/exposure soil surface/dusty material;
- Disposal of empty engine oil containers within site area;
- Ensure dust suppression measures are implemented properly;
- Sediment catch-pits and silt removal facilities should be regularly maintained;
- Management of chemical wastes;
- Discharge of site effluent to the nearby wetland, stockpiling or disposal of materials, and any dredging or construction area at this area are prohibited;
- Follow-up of improvement on general waste management issues; and
- Implementation of construction noise preventative control measures

9.3.2 The Contractor should fully implement air quality mitigation measures to reduce construction dust emission as far as practicable. Furthermore, since construction site is highly visible to the resident at nearby estates, noise mitigation measures such as using of quiet plants should be implemented in accordance with the EM&A requirement.

9.3.3 During wet season, the Contractors should pay special attention on water quality mitigation measures and fully implement according to the ISEMM of the EM&A Manual, in particular to prevent muddy water or other water pollutants from site surface overflow to public area should be properly maintained. The implementation of water quality mitigation measures conducted by the Contractor is shown in *Appendix N.*

10 CONCLUSIONS AND RECOMMENDATIONS

10.1 CONCLUSIONS

10.1.1 This is **86th** monthly EM&A report presenting the monitoring results and inspection findings for the Reporting Period from **1** to **31 May 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, two (2) environmental complaints were 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.

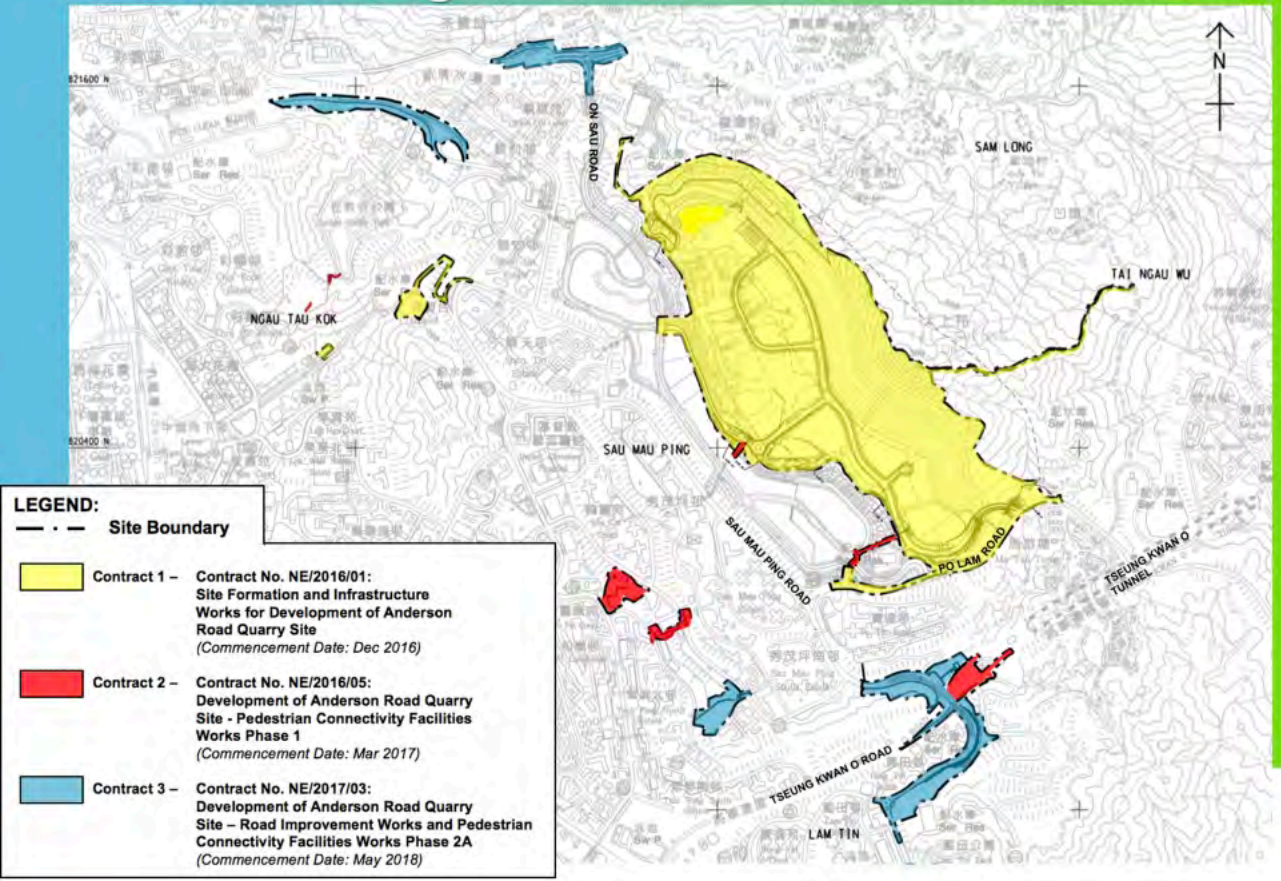
10.2.4 In addition, the Contractors should ensure all effluent discharge shall be fulfilled the Technical Memorandum of Effluent Discharged into Drainage and Sewerage Systems, inland and Coastal Waters criteria or relevant discharge license requirement.

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
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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 - 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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			yc
A	NOV. 17	TENDER ADDENDUM NO. 1	AWYC
-	OCT. 17	TENDER DRAWING	AWYC

STATUS 階段

SCALE 比例
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DIMENSION UNIT 尺寸單位
METRES

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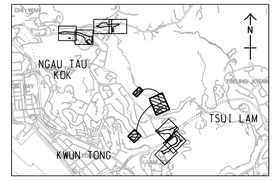


PROJECT NO. 項目編號
60328348

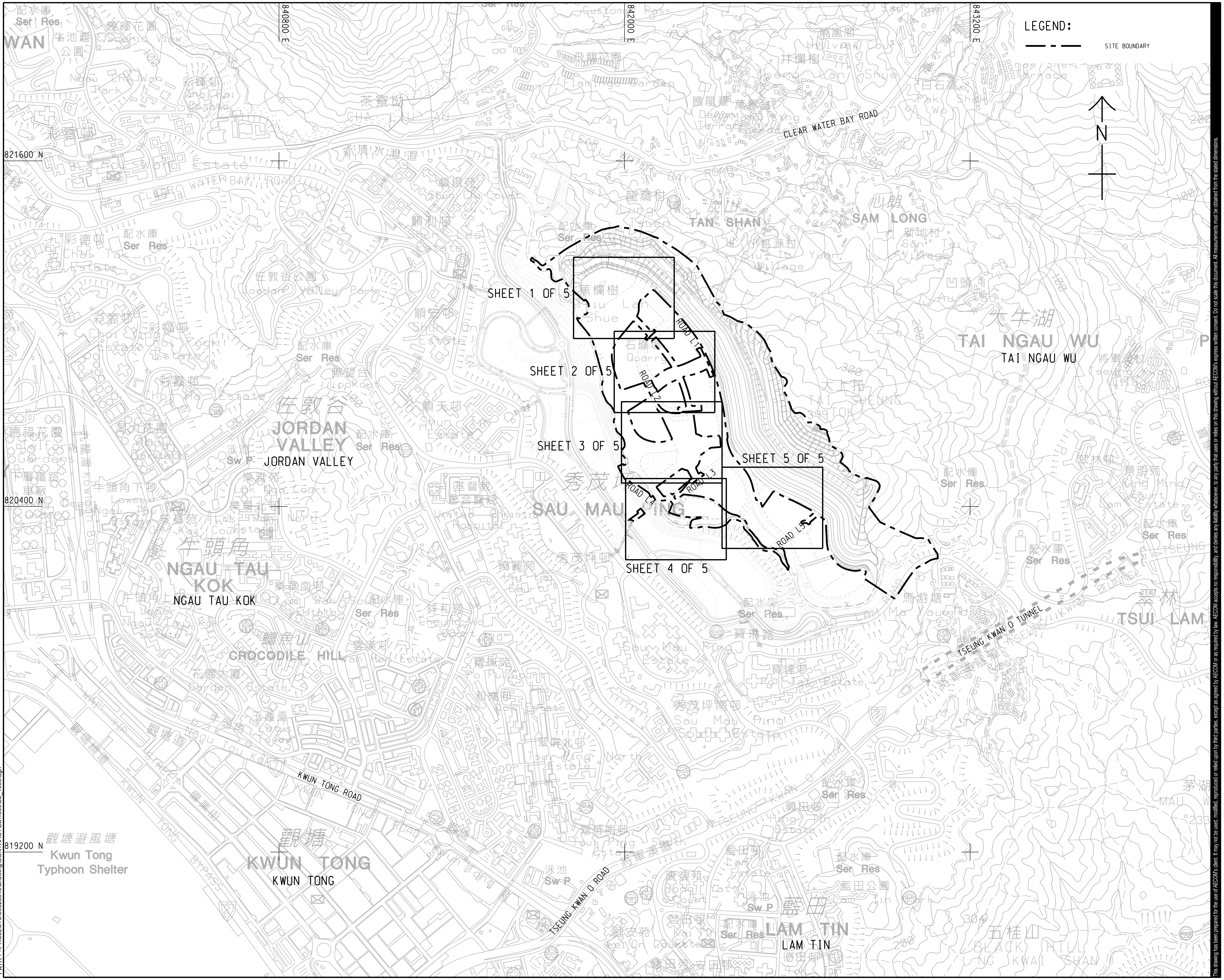
CONTRACT NO. 合約編號
NE/2017/03

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)



ISO A1 594mm x 841mm

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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

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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

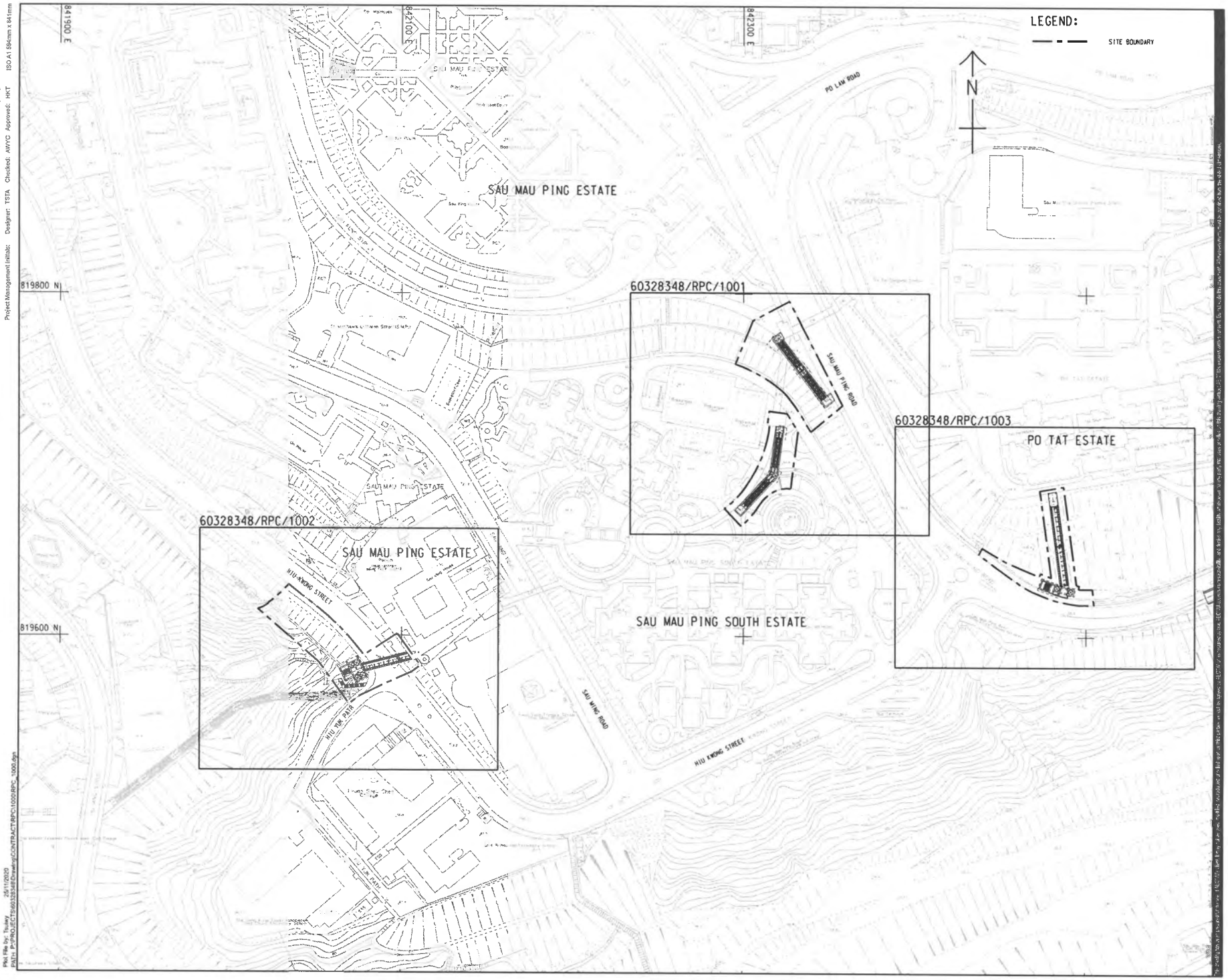
SHEET TITLE 圖紙名稱

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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SCALE
A1 1 : 1000

DIMENSION UNIT
METRES

KEY PLAN

PROJECT NO.
60328348

CONTRACT NO.
ED/2019/02

SHEET TITLE
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SHEET NUMBER
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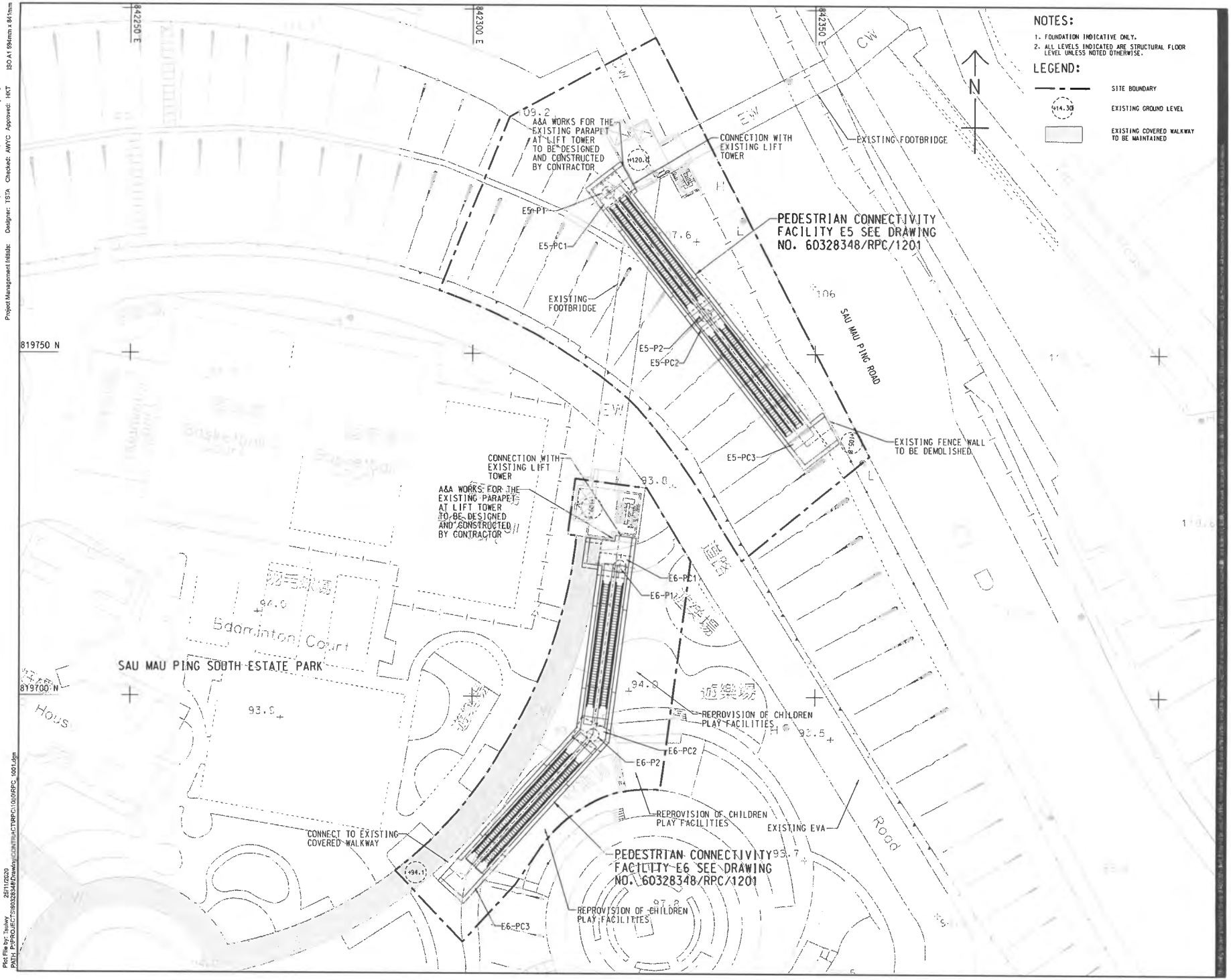

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PROJECT

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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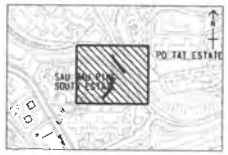


PROJECT NO. 60328348

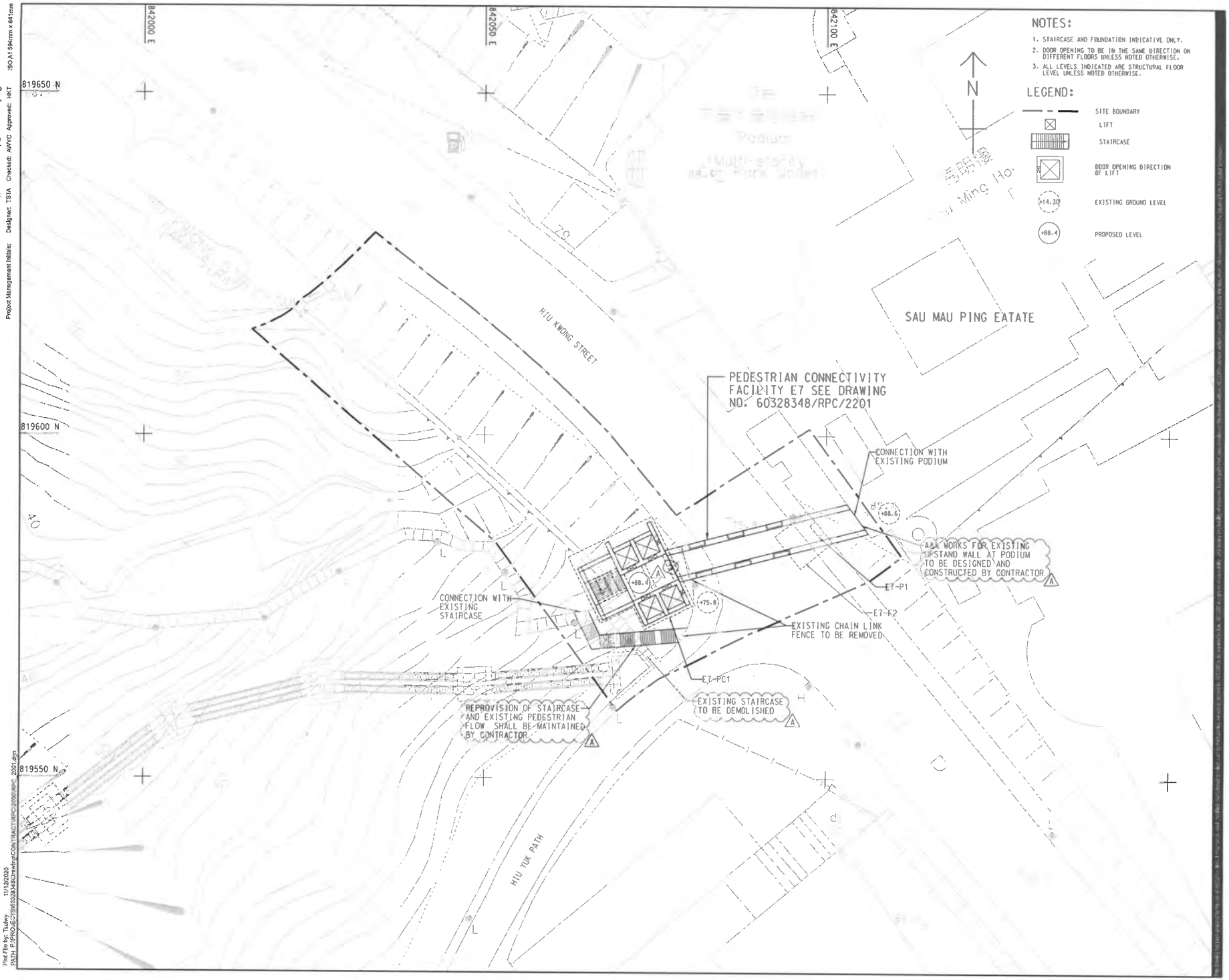
CONTRACT NO. ED/2019/02

SHEET TITLE

GENERAL LAYOUT - E5 & E6

SHEET NUMBER

60328348/RPC/1001



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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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STATUS

SCALE: A1 1 : 250
DIMENSION UNIT: METRES

KEY PLAN A1 1 : 5000

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CONTRACT NO.: ED/2019/02

SHEET TITLE
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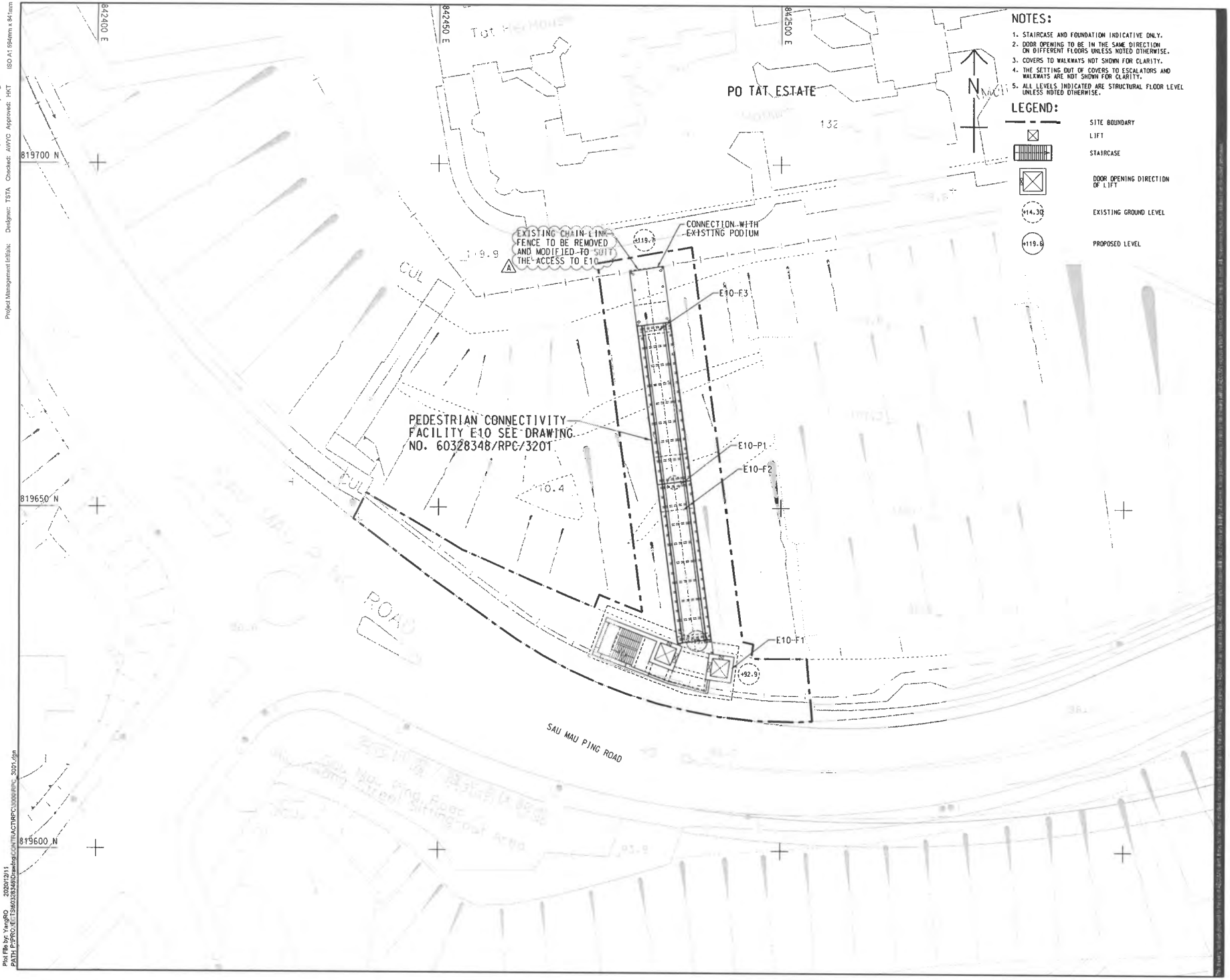
SHEET NUMBER
60328348/RPC/2001A



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

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STATUS

SCALE: A1 1 : 250
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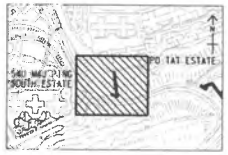
KEY PLAN A1 1 : 5000



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

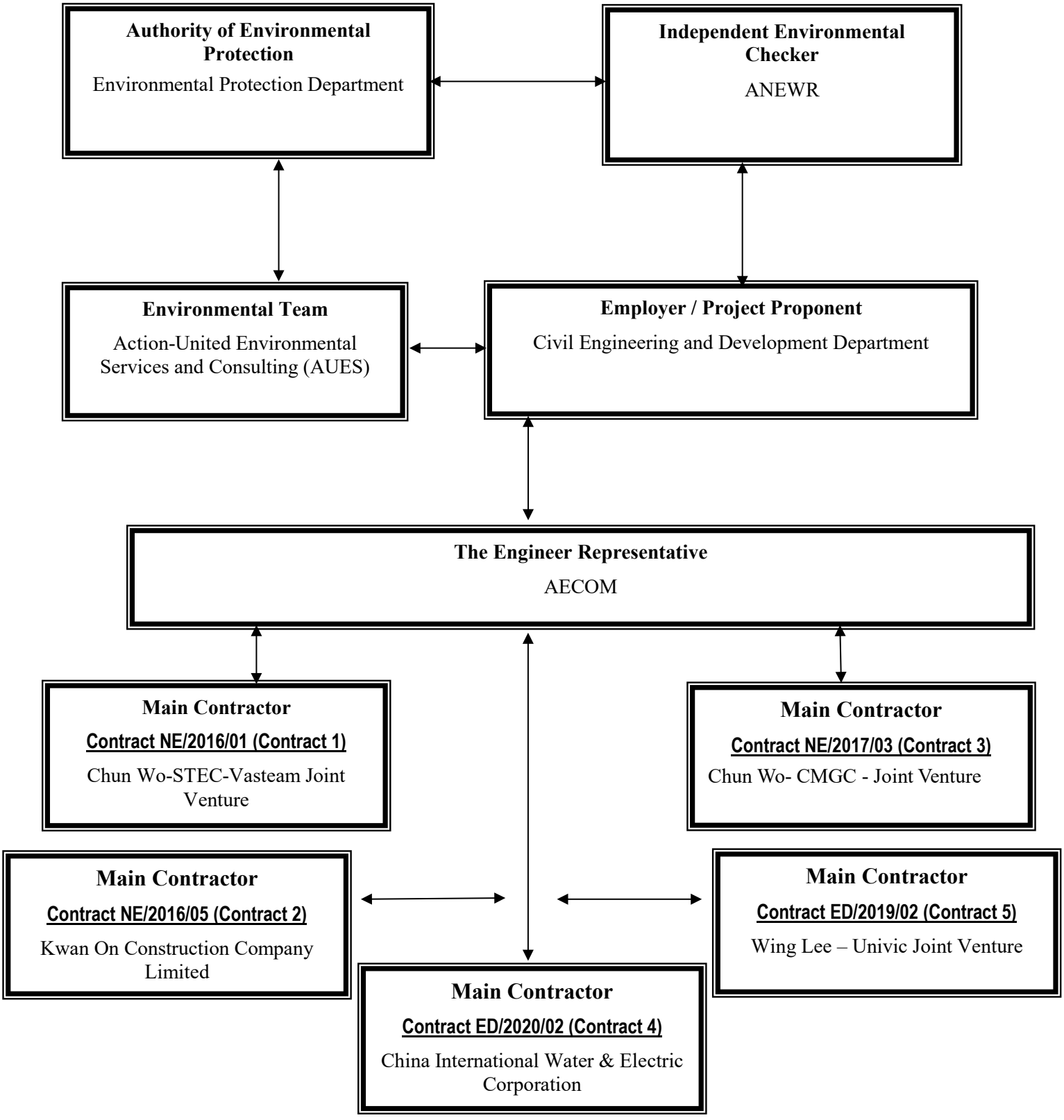
SHEET TITLE
GENERAL LAYOUT - E10

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	Deputy Environmental Officer	Zero Choi	5300 3643	3965 9900
CW – CMGC - JV	Environmental Supervisor	William Ching	NA	3965 9900
CW – CMGC - JV	Environmental Supervisor	Hubert Lau	NA	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	Man Chun Ning	6299 8850	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

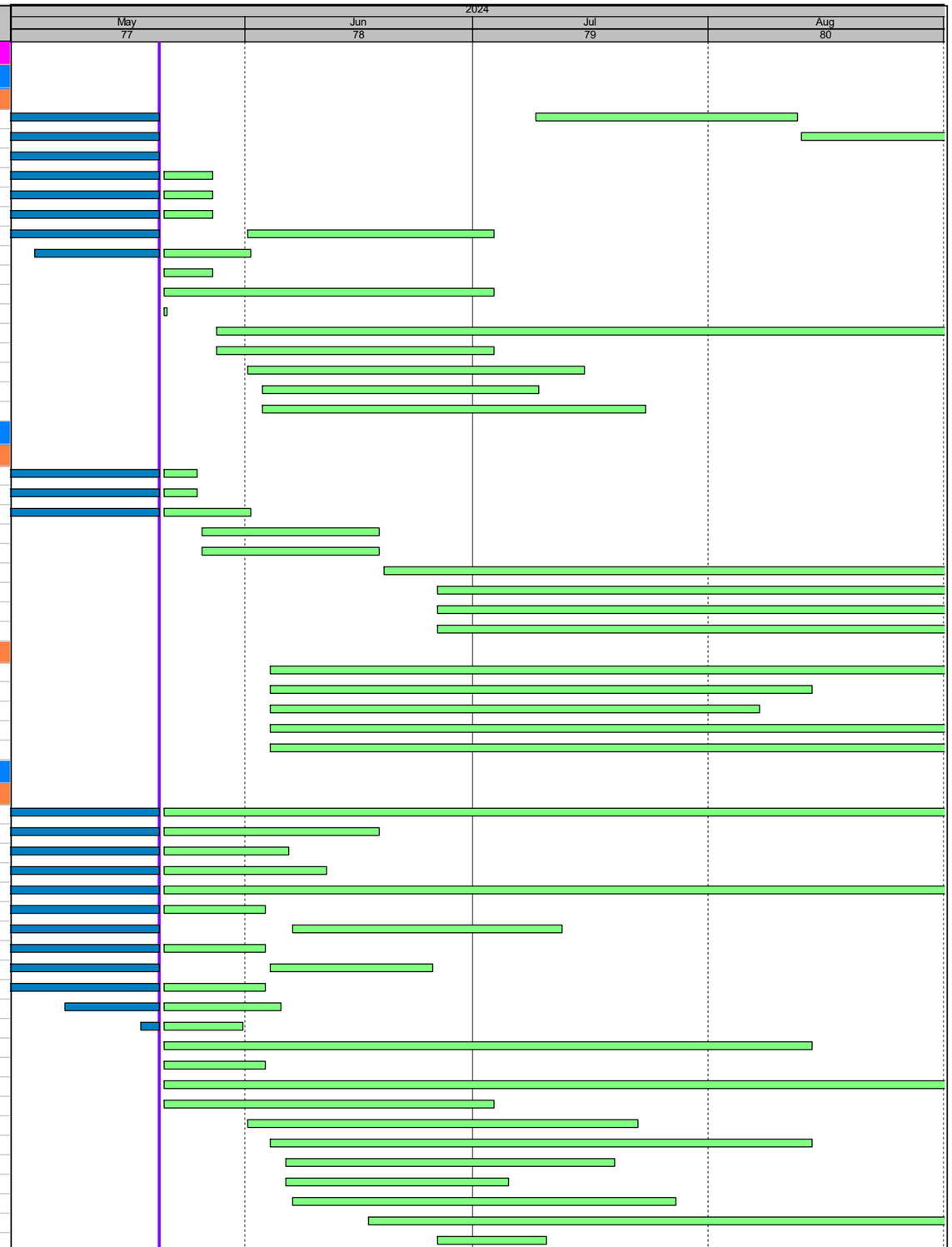
AUES (ET) – Action-United Environmental Services & Consulting

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)

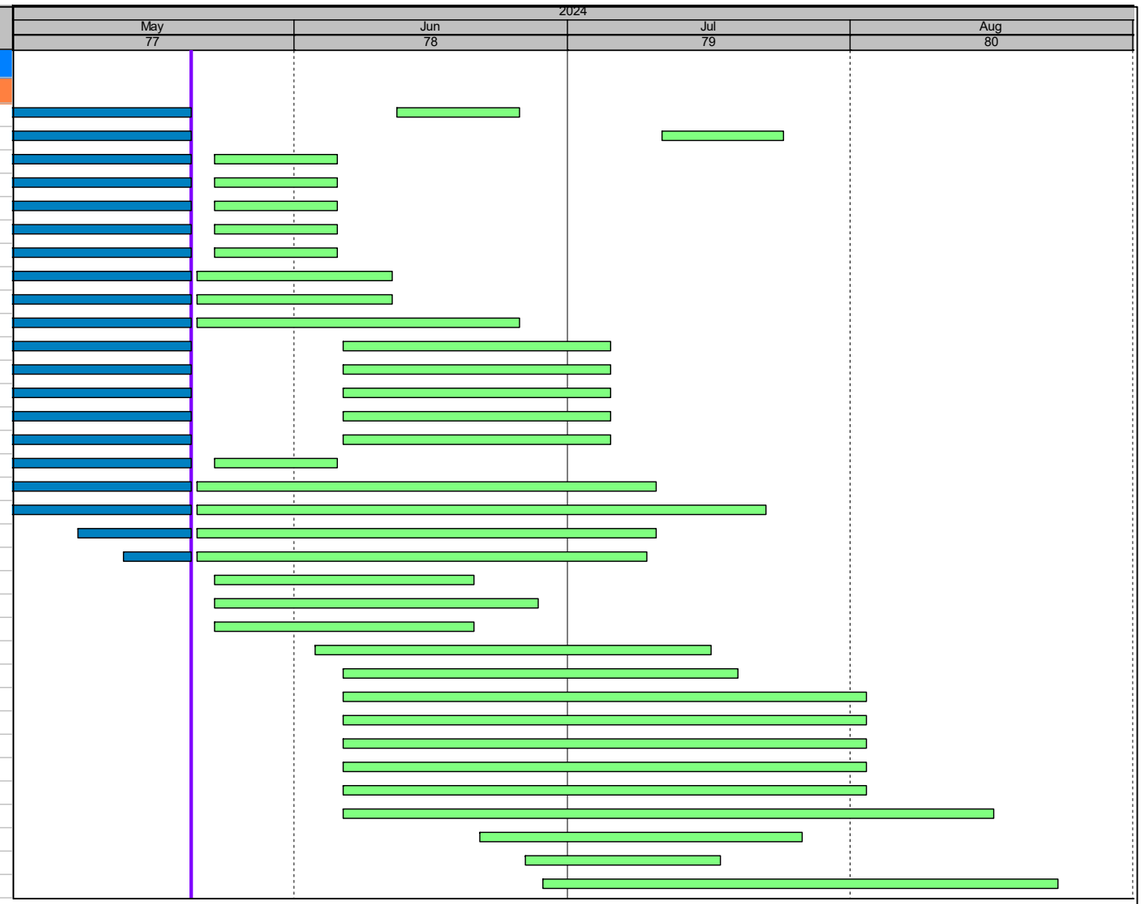
Activity ID	Activity Name	Duration	Start	Finish
NE2017/03 - ARQ PHASE 2A - Monthly Programme Update (202405)-0 _240603		1837	21-Jun-2021 A	26-Nov-2026
Road Improvement Works Location 1 (RIW1)		647	21-Jun-2021 A	28-Jan-2025
Construction Works		647	21-Jun-2021 A	28-Jan-2025
CON12110	Drainage, utilities works & backfilling (RWC2 type 4, 6, 7, 8)	60	21-Jun-2021 A	12-Aug-2024
CON12130	Road works (RWC2 type 4, 6, 7, 8)	60	26-Jul-2021 A	16-Sep-2024
CON12134	Install stone facing for wall (RWC2 type 4, 6, 7, 8)	72	02-Aug-2021 A	07-Nov-2024
CON10770	Install sheet pile & ELS to RW pile cap (RWC2 type 3, stage 2), 1 team	72	02-Jan-2024 A	27-May-2024
CON11328D	Subletting works - socketed H-pile at CT5	36	15-Jan-2024 A	27-May-2024
CON10616	ELS works (RWC2 bay6 to bay14)	36	22-Feb-2024 A	27-May-2024
CON10790	Construct RW pile cap / footing (RWC2 type 3, stage 2), 1 team	42	02-Apr-2024 A	03-Jul-2024
CON115763	Construct NB RC wall (FE1-F6b to FE1-F7b, 30m, 0.85m/d, 1 team)	24	04-May-2024 A	01-Jun-2024
CON12570	T&C to lift, submit LE5 and EMSD inspection (KS27 east side)	6	21-May-2024	27-May-2024
CON10430	Construct RW wall (RWC2 type 5 [bay 46])	36	21-May-2024	03-Jul-2024
CON12492	T&C to lift, submit LE5 and EMSD inspection (KS27 west side)	1	21-May-2024	21-May-2024
CON11330	Construct CT5 piling foundation (15nos, 6d/no, 1 team + setup)	203	28-May-2024	28-Jan-2025
CON12590	T&C and Statutory Inspection _KS27	30	28-May-2024	03-Jul-2024
CON10652	Construct RW footing (RWC2 bay6 to bay14)	36	01-Jun-2024	15-Jul-2024
CON11710	Drainage, utilities works, backfilling & road paving (FE1-F4b to FE1-F7b & FE1-	30	03-Jun-2024	09-Jul-2024
CON11532	Construct piling foundation on CT6 Type 2 (21nos, 2d/no, 1 team)	42	03-Jun-2024	23-Jul-2024
Road Improvement Works Location 2 (RIW2)		453	26-Nov-2023 A	22-Mar-2025
Construction Works in Slope C3 (Portion B)		358	26-Nov-2023 A	17-Dec-2024
CON20250	Fabrication of NB steel post - central median along new clean water bay road t	182	26-Nov-2023 A	25-May-2024
CON20330	Fabrication of NB Acoustic panels - central median near junction at on sau roa	105	15-Feb-2024 A	25-May-2024
CON21116B	(NCE255) Road works at new U-turn bay (Remaining part)	30	28-Feb-2024 A	01-Jun-2024
CON20270	Steel post along new clean water bay road delivery	24	26-May-2024	18-Jun-2024
CON20350	Acoustic panels near on sau road left turn to kowloon side delivery	24	26-May-2024	18-Jun-2024
CON20370	Fabrication of NB Acoustic panels - central median along new clean water bay	182	19-Jun-2024	17-Dec-2024
CON21150	Construct hard landscape works at Portion B (Part 1)	60	26-Jun-2024	04-Sep-2024
CON21170	Construct hard landscape works at Portion B (Part 2)	60	26-Jun-2024	04-Sep-2024
CON21190	Construct hard landscape works at Portion B (Part 3)	60	26-Jun-2024	04-Sep-2024
Construction Noise Semi-Enclosure SE2 (Portion C)		240	04-Jun-2024	22-Mar-2025
CON22590	Road lighting, irrigation system & utilities works	240	04-Jun-2024	22-Mar-2025
CON21750	Backfilling, construct road drainage & road paving (CT4, SE2 Bay4 to Bay12; I	60	04-Jun-2024	14-Aug-2024
CON22090	Backfilling, construct road drainage & road paving (SE2 Bay13 to Bay21; L=85	54	04-Jun-2024	07-Aug-2024
CON22570	Slope implovement Works (pit-by-pit method) (CT4 & SE2 fount part, 250nos p	120	04-Jun-2024	26-Oct-2024
CON22610	Application for power supply & energization (RIW2)	156	04-Jun-2024	07-Dec-2024
Road Improvement Works Location 3 (RIW3)		1490	19-Jul-2021 A	26-Nov-2026
Construction Works		1490	19-Jul-2021 A	26-Nov-2026
CON31130	(NCE215) (CE595) Cut slope works (CH115 to CH200) (L=85m, 13007m3, 1(	1300	19-Jul-2021 A	15-Oct-2025
CON31212	Rock slope mapping (Stage 2)	180	03-Oct-2022 A	18-Jun-2024
CON31170	Soil nail works & further construct RWD3 (11NE-D/F246, stage 2)	150	21-Oct-2022 A	06-Jun-2024
CON31710	Construct footing, pier & pier head F1-4	144	20-Dec-2022 A	11-Jun-2024
CON31214	PM review & acceptance and slope stabilization measures (Stage 2)	180	20-Jan-2023 A	26-Sep-2024
CON32810	Road works (RWD2 remaining)	42	05-Jun-2023 A	03-Jun-2024
CON31290	Reinstatment works & fill no-fine concrete works	90	09-Jun-2023 A	12-Jul-2024
CON324387	ELS works at (NB SE1 Bay6 to Bay1 & VB1)	18	11-Nov-2023 A	03-Jun-2024
CON32440	Construct type 2 NB footing (SE1 bay6 to bay1 & VB1)	12	18-Dec-2023 A	25-Jun-2024
CON306731	JV prepare, WSD review & approval Water Quality Assessment for Fresh Wat	60	29-Dec-2023 A	03-Jun-2024
CON31666	Construct trial pit at Cap F1-1	24	08-May-2024 A	05-Jun-2024
CON315515	Construct trial nail TN1 (Slope D4)	12	18-May-2024 A	31-May-2024
CON30170	Slope works & fill no-fine concrete at slope D1 (Level 1/4, 400m3)	72	21-May-2024	14-Aug-2024
CON30430A	Plate load test for retaining wall RWD1 type 4 (Bay 15 to Bay 16)	12	21-May-2024	03-Jun-2024
CON31552	Cut slope works (Slope D3) (CH430 to CH330) (L=100m, 7500m3, 10m3/d)	750	21-May-2024	26-Nov-2026
CON31648	Predrill at Cap F1-2	36	21-May-2024	03-Jul-2024
CON315517	Construct soil nail (37no) (Slope D4)	42	01-Jun-2024	22-Jul-2024
CON30674	Construct fresh watermain connection A & B	60	04-Jun-2024	14-Aug-2024
CON31668	Predrill at Cap F1-1	36	06-Jun-2024	19-Jul-2024
CON31686	Construct trial pit at Cap Abt-A / NB CT2	24	06-Jun-2024	05-Jul-2024
CON31190	Erect working platform for soil nail works (Slope D3, stage 2)	42	07-Jun-2024	27-Jul-2024
CON31990	Construct bridge deck #33~#43 by form traveller @pier F1-4, 5 pairs	140	17-Jun-2024	30-Nov-2024
CON32444	Construct SE1 bay6 to bay1 & VB1 (lower-pour) retaining wall	12	26-Jun-2024	10-Jul-2024



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
Pedestrian Connectivity Facility System B (SYB)		164	15-Feb-2024 A	23-Aug-2024
Construction Works		164	15-Feb-2024 A	23-Aug-2024
CON52910	Install escalators SYB-ES05 & SYB-ES06 (P4 to P7)	48	15-Feb-2024 A	25-Jun-2024
CON52930	Install escalators SYB-ES03 & SYB-ES04 (P3 to P4)	48	15-Feb-2024 A	24-Jul-2024
CON52390	Construct deck slab, planter wall and roofing PC8 to PC7 (P8 to P7)	30	15-Feb-2024 A	05-Jun-2024
CON52410	Construct deck slab, planter wall and roofing PC7 to PC6 (P7 to P6)	30	15-Feb-2024 A	05-Jun-2024
CON52470	Construct deck slab, planter wall and roofing PC6 to PC4 (P6 to P5)	30	15-Feb-2024 A	05-Jun-2024
CON52490	Construct deck slab, planter wall and roofing PC4 to PC3 (P5 to LT1)	30	15-Feb-2024 A	05-Jun-2024
CON52450	Construct deck slab, planter wall and roofing PC1 to ex. footbridge (P1)	30	15-Feb-2024 A	05-Jun-2024
CON52810	ABWF works @ escalator pit P4 to P3	48	21-Mar-2024 A	11-Jun-2024
CON53090	E&M works @ escalator pit P7 to P4	54	21-Mar-2024 A	11-Jun-2024
CON51192	ABWF works @SYB-LT1 (other than lift shart area)	60	28-Mar-2024 A	25-Jun-2024
CON52670	ABWF works @ steel frame footbridge P8 to P7	48	28-Mar-2024 A	05-Jul-2024
CON52690	ABWF works @ steel frame footbridge P7 to P6	48	28-Mar-2024 A	05-Jul-2024
CON52710	ABWF works @ steel frame footbridge P6 to P5	48	28-Mar-2024 A	05-Jul-2024
CON52730	ABWF works @ steel frame footbridge P5 to LT1	48	28-Mar-2024 A	05-Jul-2024
CON52770	ABWF works @ steel frame footbridge P1 to connect ex. footbridge	48	28-Mar-2024 A	05-Jul-2024
CON52570	Construct escalator pit LT1 to P3 (E1 & E2)	48	09-Apr-2024 A	05-Jun-2024
CON53150	E&M works @ escalator pit P4 to P3	54	23-Apr-2024 A	10-Jul-2024
CON52870	Install lifts SYB-LT1A & SYB-LT1B	72	25-Apr-2024 A	22-Jul-2024
CON51492	E&M works @SYB-LT1 (other than lift shaft area)	48	08-May-2024 A	10-Jul-2024
CON52210	Install steel roof P2 to LT1	48	13-May-2024 A	09-Jul-2024
CON52290	Erect footbridge steel frame PC2 to PC1 (P2 to P1)	24	23-May-2024	20-Jun-2024
CON52370	Construct deck slab, planter wall and roofing SYB-A1 to PC8 (A1 to P8)	30	23-May-2024	27-Jun-2024
CON52310	Erect footbridge steel frame PC1 to existing footbridge (P1)	24	23-May-2024	20-Jun-2024
CON52830	ABWF works @ escalator pit P3 to LT1	36	03-Jun-2024	16-Jul-2024
CON51810	Construct underground drainage pipe	36	06-Jun-2024	19-Jul-2024
CON53010	E&M works @ steel frame footbridge P8 to P7	48	06-Jun-2024	02-Aug-2024
CON53050	E&M works @ steel frame footbridge P7 to P6	48	06-Jun-2024	02-Aug-2024
CON53110	E&M works @ steel frame footbridge P6 to P5	48	06-Jun-2024	02-Aug-2024
CON53170	E&M works @ steel frame footbridge P5 to LT1	48	06-Jun-2024	02-Aug-2024
CON53130	E&M works @ steel frame footbridge P1 to connect ex. footbridge	48	06-Jun-2024	02-Aug-2024
CON52510	Construct above ground drainage pipe	60	06-Jun-2024	16-Aug-2024
CON52430	Construct deck slab, planter wall and roofing PC2 to PC1 (P2 to P1)	30	21-Jun-2024	26-Jul-2024
CON52912	Install escalators traffic signal system SYB-ES05 & SYB-ES06	18	26-Jun-2024	17-Jul-2024
CON52650	ABWF works @ steel frame footbridge A1 to P8	48	28-Jun-2024	23-Aug-2024



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

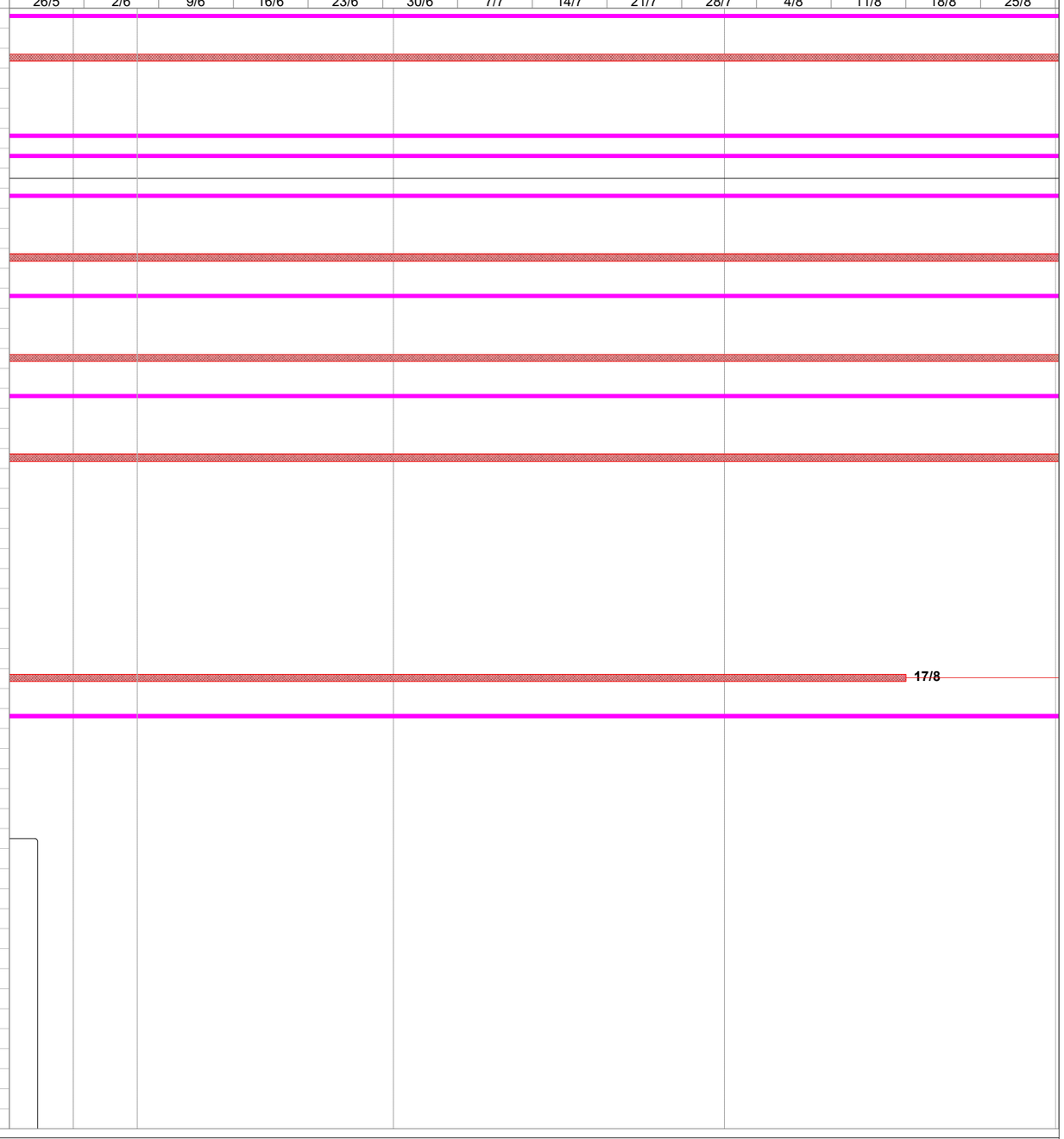
Contract 4 (ED/2020/02)

China International Water & Electric Corp.

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

1 June 2024

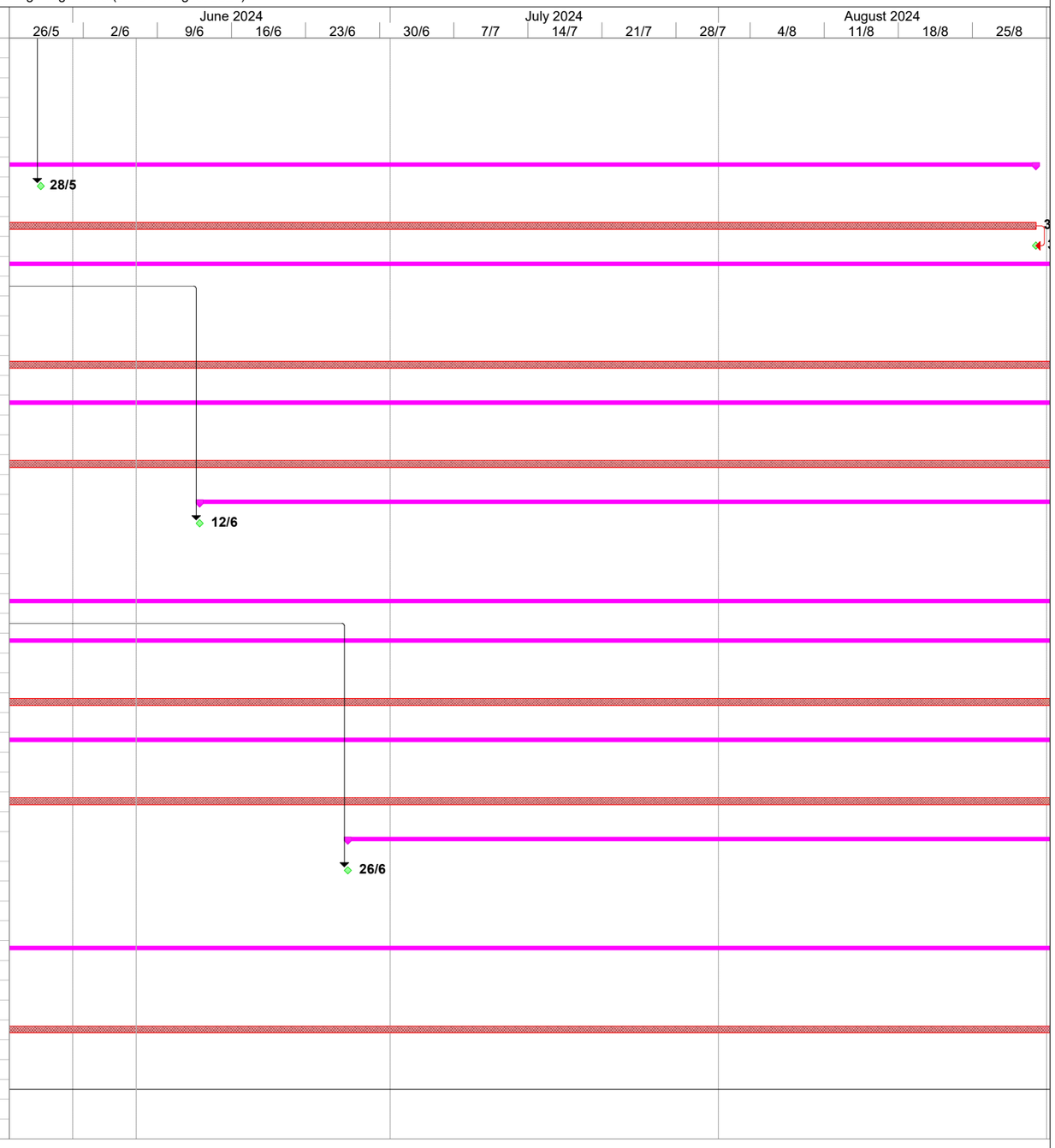
ID	Task Name	Duration	Start	Finish	Predecessors
1	**Contract Period**	**1567 days**	**Fri 30/7/21**	**Wed 12/11/25**	
2	Contract Starting Date [Contract Award Date 21 Jul 2021]	0 days	Fri 30/7/21	Fri 30/7/21	
3	Contract Duration	1248 days	Fri 30/7/21	Sat 28/12/24	2SS
4	Original Completion Date	0 days	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**	**1731 days**	**Fri 30/7/21**	**Thu 14/5/26**	
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	438FF
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	510FF,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**	**1251 days**	**Fri 30/7/21**	**Tue 31/12/24**	
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	Tue 31/12/24	Tue 31/12/24	544FF,34
36	**Section of Works 2A - Establishment Works for all Landscape Softworks in Section 2 of the Works**	**1616 days**	**Fri 30/7/21**	**Wed 31/12/25**	
37	Original Completion Date	0 days	Fri 30/7/21	Fri 30/7/21	
38	Commencement of Establishment Work	0 days	Wed 1/1/25	Wed 1/1/25	39SS
39	Establishment Work Duration	365 days	Wed 1/1/25	Wed 31/12/25	35
40	Anticipated Completion Date	0 days	Wed 31/12/25	Wed 31/12/25	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	685FF,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	697FF,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
56	Potential EOT due to Inclement weather and CEs	93 days	Wed 31/5/23	Thu 31/8/23	55



Task | Critical Task | Milestone | Summary | Progress

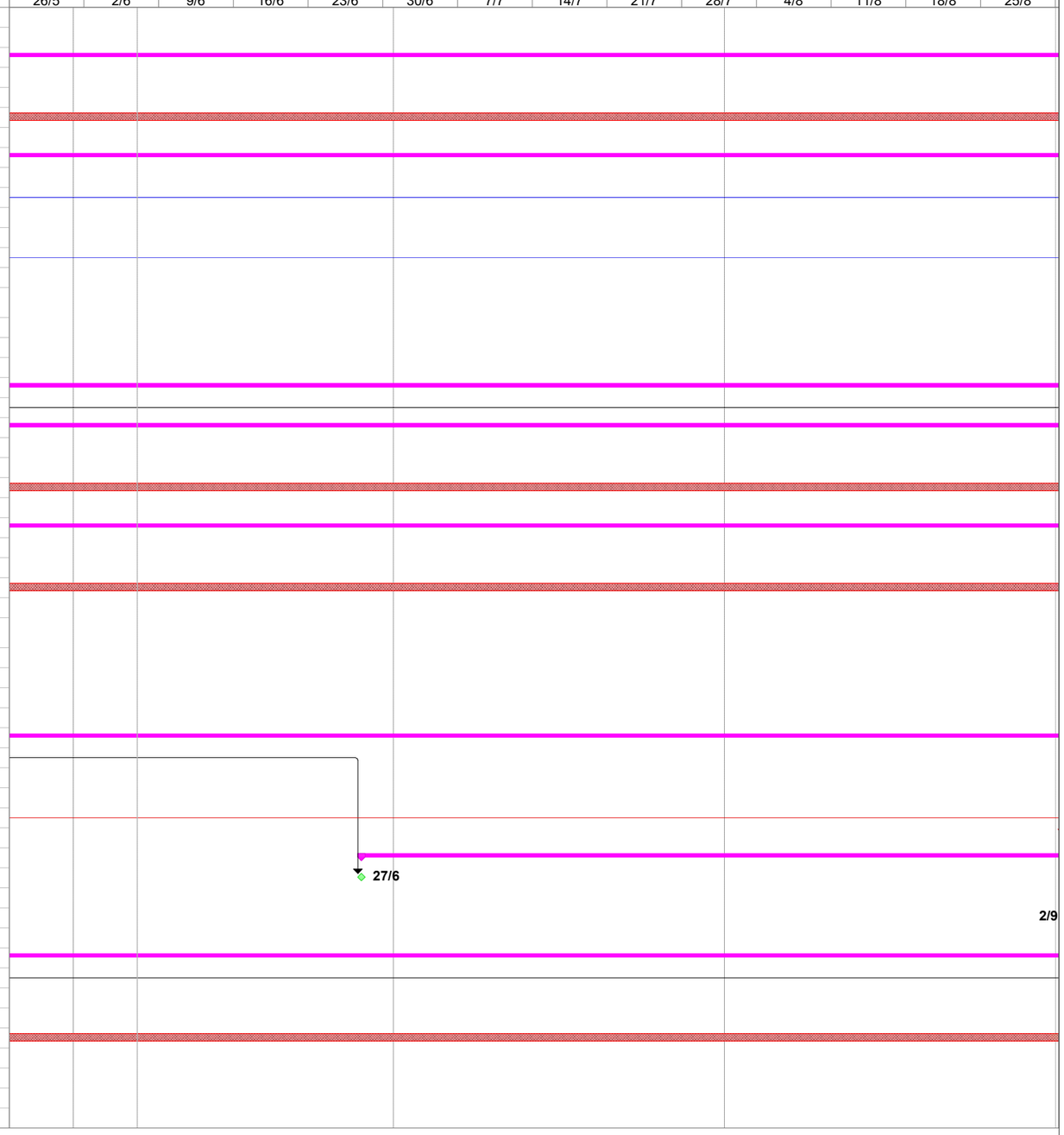
Based on Revised Programme dated 24 April 2024.

ID	Task Name	Duration	Start	Finish	Predecessors
57	Anticipated Completion Date	0 days	Thu 31/8/23	Thu 31/8/23	708FF,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	712FF,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	721FF,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	78,720FF
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**	**1308 days**	**Fri 30/7/21**	**Wed 26/2/25**	
86	Original Completion Date	0 days	Wed 28/6/23	Wed 28/6/23	2FS+698 days
87	**Porion 9**	**1247 days**	**Wed 29/9/21**	**Wed 26/2/25**	
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	Wed 26/2/25	Wed 26/2/25	90,807FF
92	**Portion 10**	**1205 days**	**Fri 30/7/21**	**Fri 15/11/24**	
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	Fri 15/11/24	Fri 15/11/24	837FF,95
97	**Section of Works 5AI - Establishment Works for all Landscape Softworks in Section 5A of the Works**	**610 days**	**Wed 26/6/24**	**Sat 7/3/26**	
98	Original Completion Date	0 days	Wed 26/6/24	Wed 26/6/24	86FS+365 days
99	Commencement of Establishment Work	0 days	Thu 27/2/25	Thu 27/2/25	100SS
100	Establishment Work Duration	365 days	Thu 27/2/25	Sat 7/3/26	91,96
101	Anticipated Completion Date	0 days	Sat 7/3/26	Sat 7/3/26	100FF
102	**Section of Works 5B - Portion 11**	**973 days**	**Sun 27/2/22**	**Sat 26/10/24**	
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	Sat 26/10/24	Sat 26/10/24	106,931FF
108	**Section of Works 6 - Portion 7**	**519 days**	**Tue 29/11/22**	**Tue 30/4/24**	
109	Original Completion Date	0 days	Tue 28/11/23	Tue 28/11/23	2FS+851 days
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



Task | Critical Task | Milestone | Summary | Progress

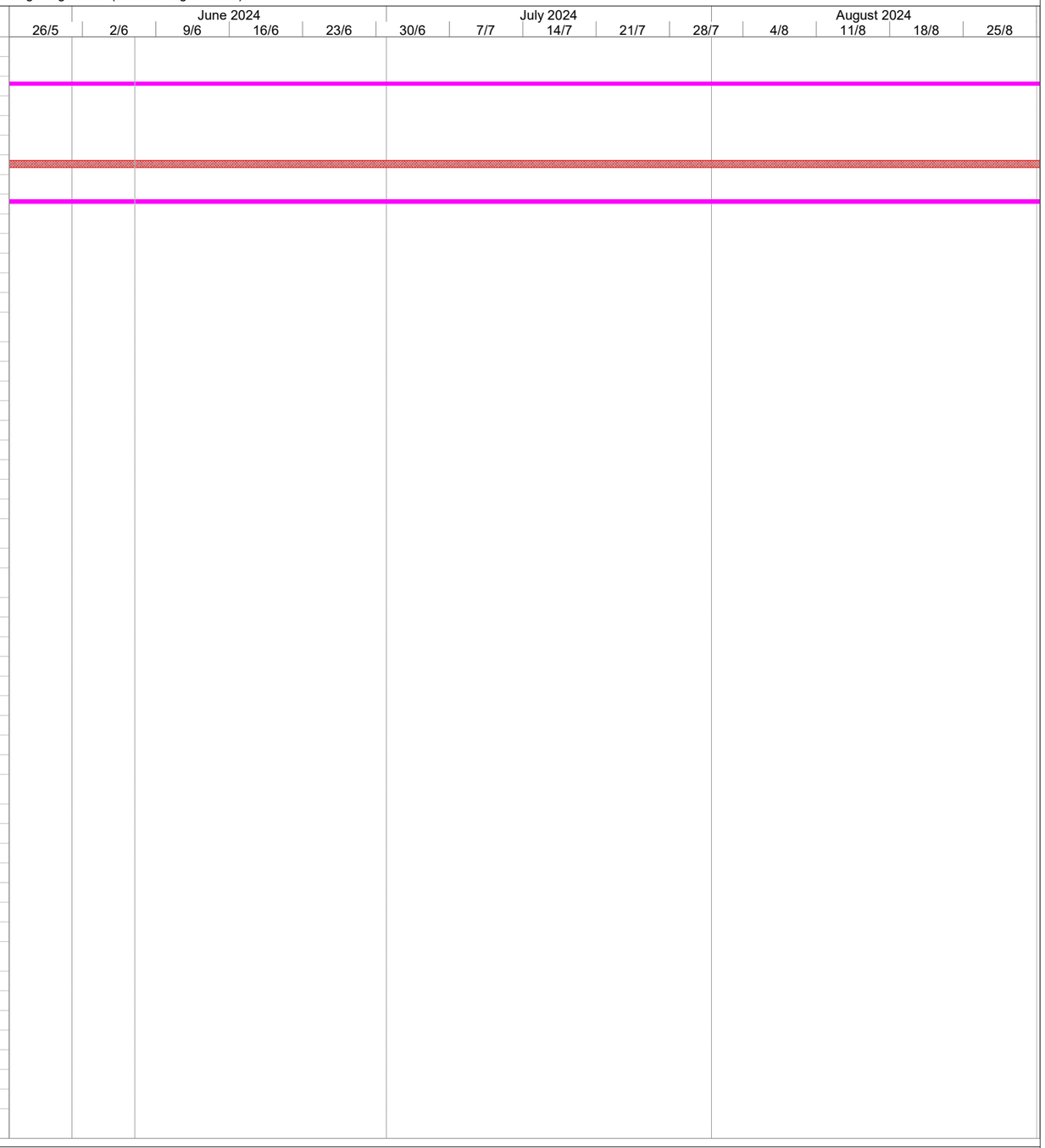
ID	Task Name	Duration	Start	Finish	Predecessors
112	Deferred possession (CE 067)	90 days	Wed 29/11/23	Mon 26/2/24	111
113	Anticipated Completion Date	0 days	Tue 30/4/24	Tue 30/4/24	938FF,112
114	**Section of Works 6A - Establishment Works for all Landscape Softworks in Section 6 of the Works**	**365 days**	**Wed 1/5/24**	**Wed 30/4/25**	
115	Original Completion Date	0 days	Wed 27/11/24	Wed 27/11/24	109FS+365 days
116	Commencement of Establishment Work	0 days	Wed 1/5/24	Wed 1/5/24	117SS
117	Establishment Work Duration	365 days	Wed 1/5/24	Wed 30/4/25	113
118	Anticipated Completion Date	0 days	Wed 30/4/25	Wed 30/4/25	117FF
119	**Section of Works 7A - Portions 13a, 14 (DELETED)**	**1264 days**	**Fri 30/7/21**	**Mon 13/1/25**	
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	Sun 8/12/24	Sun 8/12/24	121,968
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 13/1/25	Mon 13/1/25	124,980,979
126	**Section of Works 7AI - Establishment Works for all Landscape Softworks in Section 7A of the Works (DELETED)**	**365 days**	**Mon 13/1/25**	**Thu 15/1/26**	
127	Commencement of Establishment Work for Section 7A	0 days	Mon 13/1/25	Mon 13/1/25	125
128	Establishment Work Duration for Section 7A	365 days	Tue 14/1/25	Thu 15/1/26	127
129	Completion of Works in Section 7A	0 days	Thu 15/1/26	Thu 15/1/26	128,985
130	**Section of Works 7B - Portions 13b, 15**	**1155 days**	**Sat 26/2/22**	**Fri 25/4/25**	
131	Original Completion Date	0 days	Fri 29/12/23	Fri 29/12/23	2FS+882 days
132	**Portion 13b**	**1155 days**	**Sat 26/2/22**	**Fri 25/4/25**	
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	Fri 25/4/25	Fri 25/4/25	986FF
137	**Portion 15**	**1154 days**	**Sun 27/2/22**	**Fri 25/4/25**	
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	Fri 25/4/25	Fri 25/4/25	986FF
142	**Section of Works 7BI - Establishment Works for all Landscape Softworks in Section 7B of the Works**	**484 days**	**Fri 27/12/24**	**Thu 14/5/26**	
143	Original Completion Date	0 days	Fri 27/12/24	Fri 27/12/24	131FS+365 days
144	Commencement of Establishment Work	0 days	Sat 26/4/25	Sat 26/4/25	145SS
145	Establishment Work Duration	365 days	Sat 26/4/25	Thu 14/5/26	136,141
146	Anticipated Completion Date	0 days	Thu 14/5/26	Thu 14/5/26	145FF
147	**Section of Works 8 - Portion 16**	**809 days**	**Thu 16/6/22**	**Sun 1/9/24**	
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	Sun 1/9/24	Sun 1/9/24	151,1110FF
153	**Section of Works 8A - Establishment Works for all Landscape Softworks in Section 8 of the Works**	**431 days**	**Thu 27/6/24**	**Mon 1/9/25**	
154	Original Completion Date	0 days	Thu 27/6/24	Thu 27/6/24	148FS+365 days
155	Commencement of Establishment Work	0 days	Mon 2/9/24	Mon 2/9/24	156SS
156	Establishment Work Duration	365 days	Mon 2/9/24	Mon 1/9/25	152
157	Anticipated Completion Date	0 days	Mon 1/9/25	Mon 1/9/25	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	162,1128FF
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



Task | Critical Task | Milestone | Summary | Progress

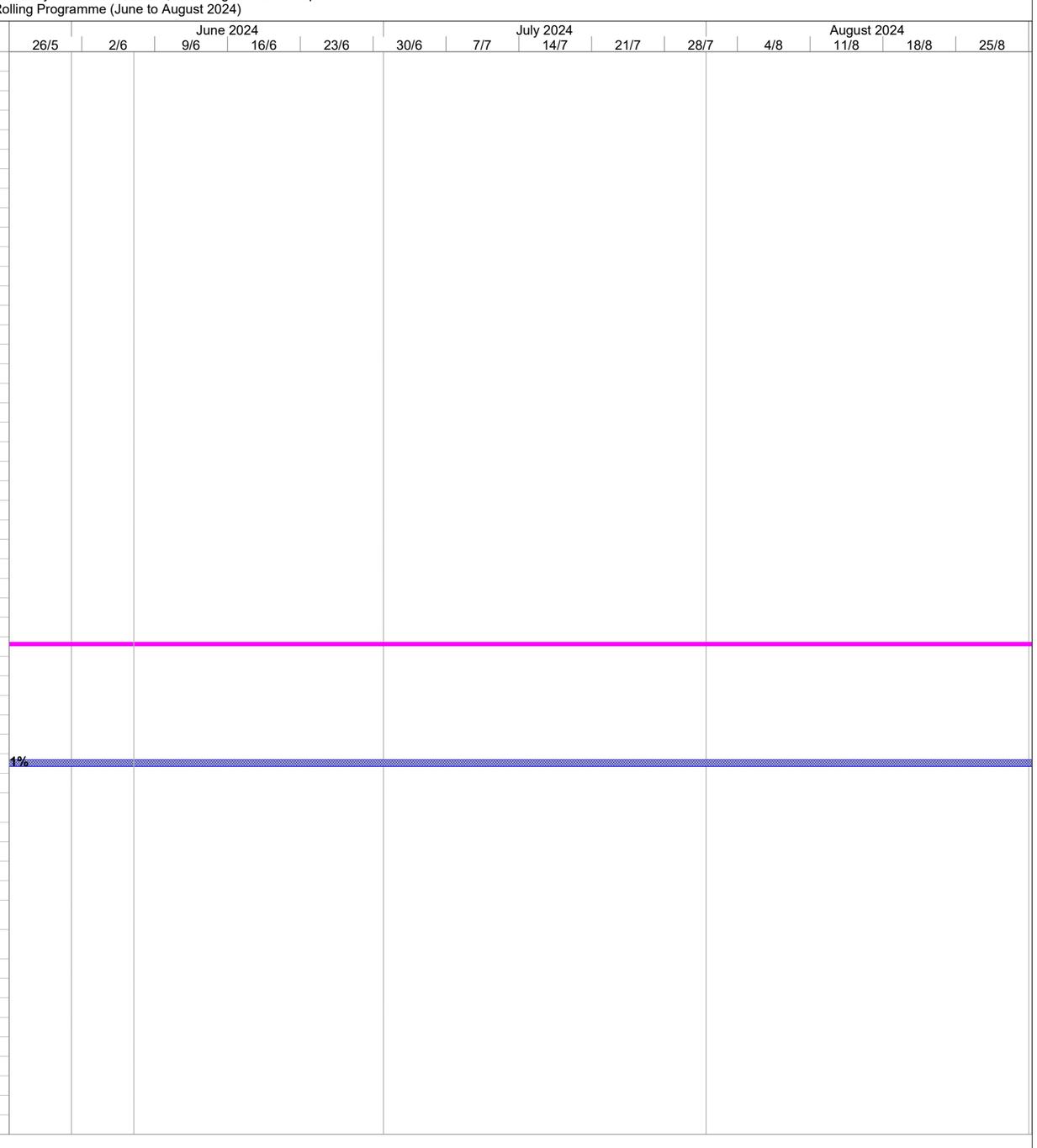
Based on Revised Programme dated 24 April 2024.

ID	Task Name	Duration	Start	Finish	Predecessors
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	173,1208FF
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 System	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 the Site	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
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



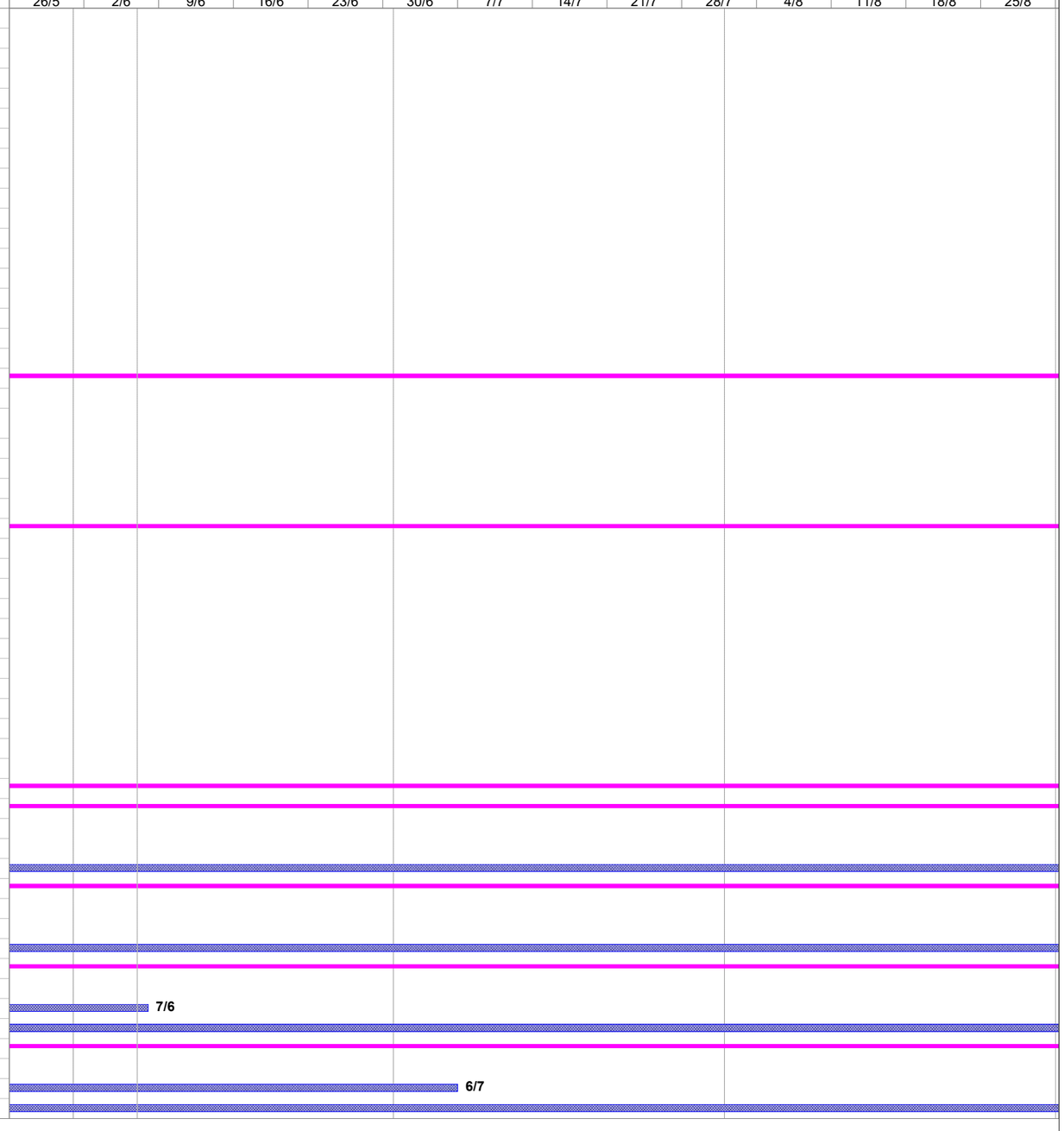
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
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 Supervisor	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 1.69B	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 software	6 days	Fri 30/7/21	Wed 4/8/21	2
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



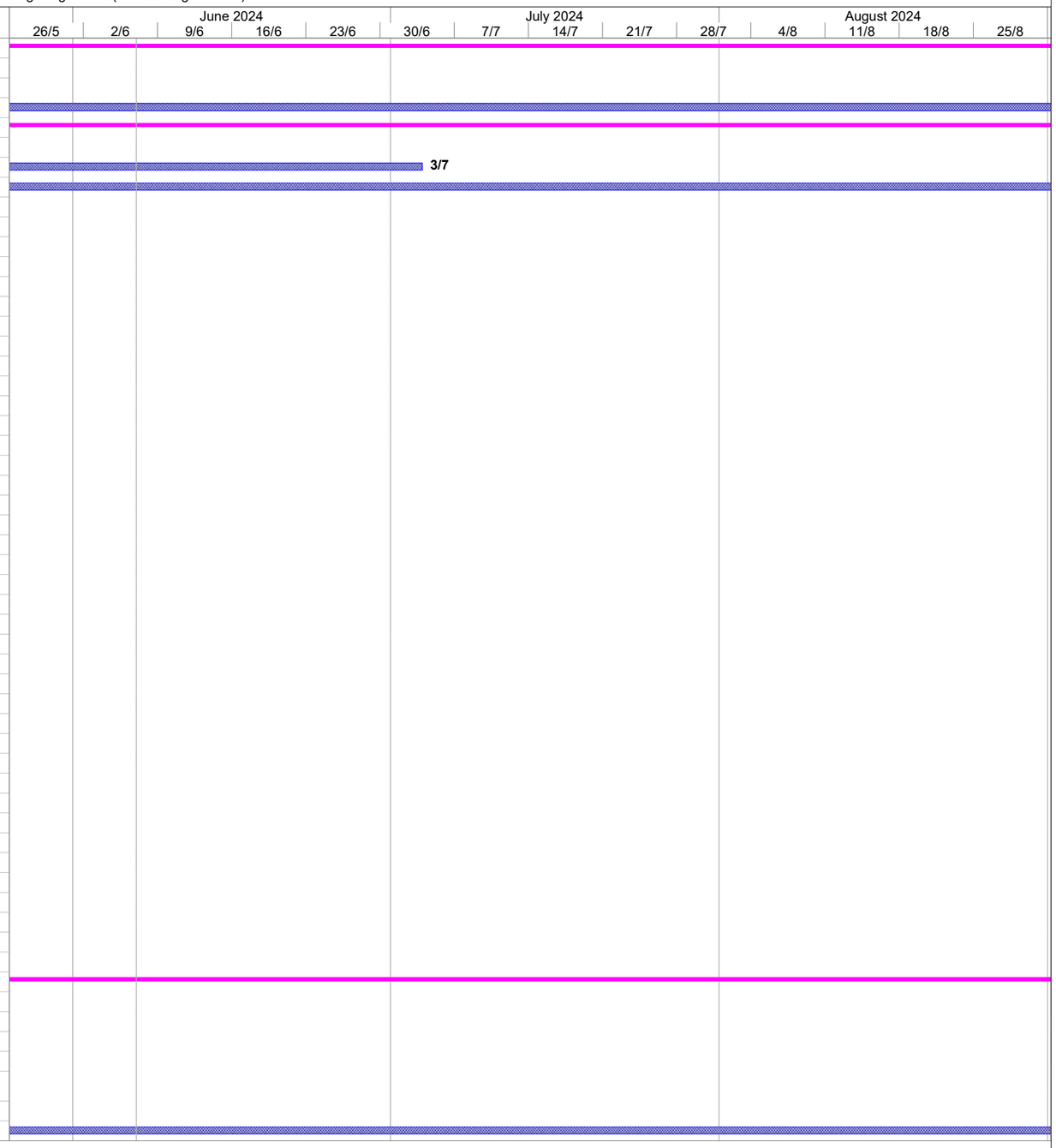
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
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	
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	



Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
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	
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 Simula	1417 days	Mon 27/12/21	Wed 12/11/25	382



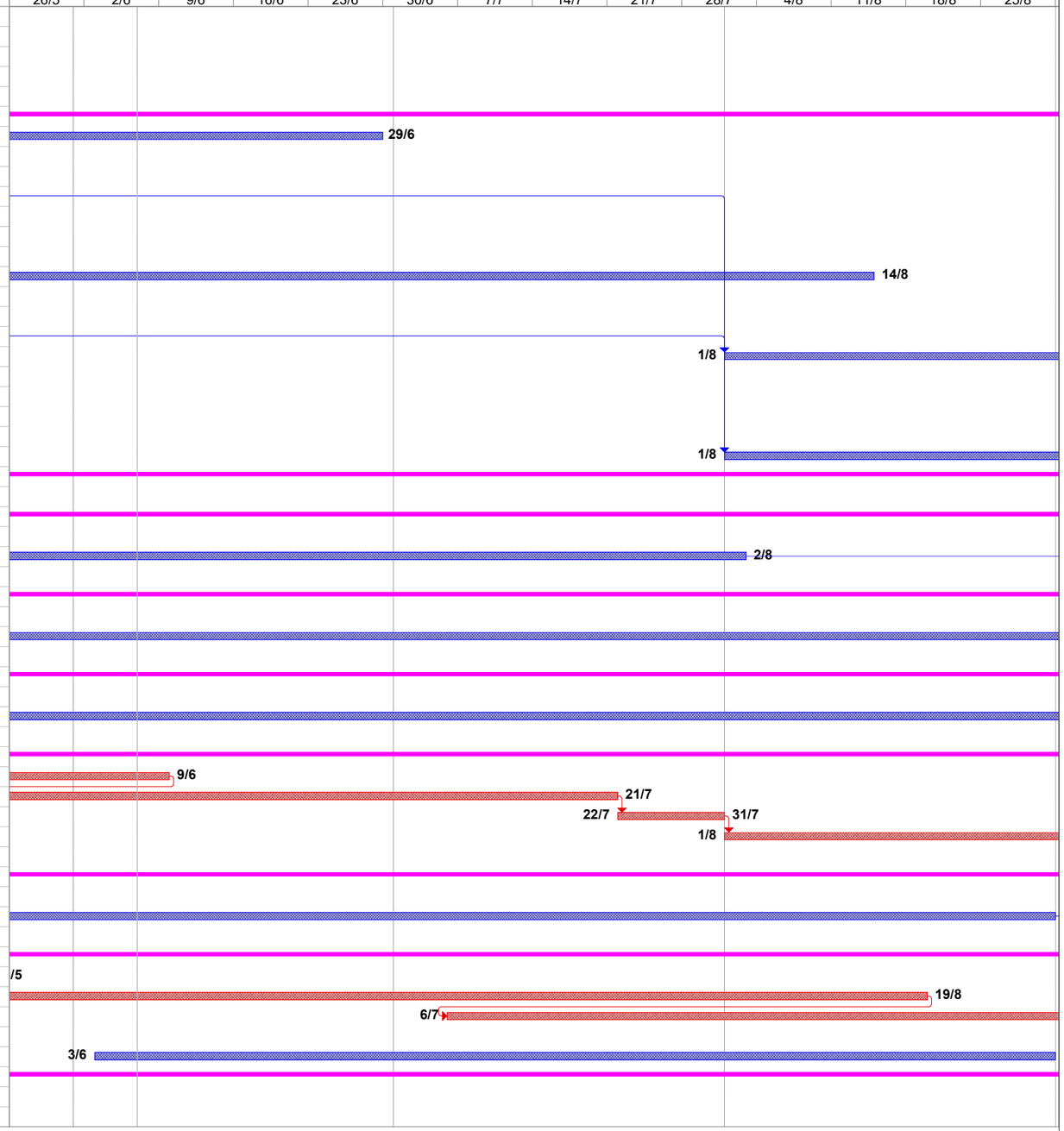
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
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**	**1619 days?**	**Fri 30/7/21**	**Sat 3/1/26**	
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	414,415,416,437
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	
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	Construction of wetland	150 days	Mon 1/4/24	Wed 28/8/24	
434	**Boardwalk**	**90 days**	**Mon 1/4/24**	**Sat 29/6/24**	
435	Structure	60 days	Mon 1/4/24	Thu 30/5/24	
436	Finishes	30 days	Fri 31/5/24	Sat 29/6/24	435
437	U channel, edge and pavement	122 days	Mon 1/4/24	Wed 31/7/24	
438	**Portion 2a**	**1171 days**	**Mon 30/8/21**	**Tue 12/11/24**	

Task | Critical Task | Milestone | Summary | Progress

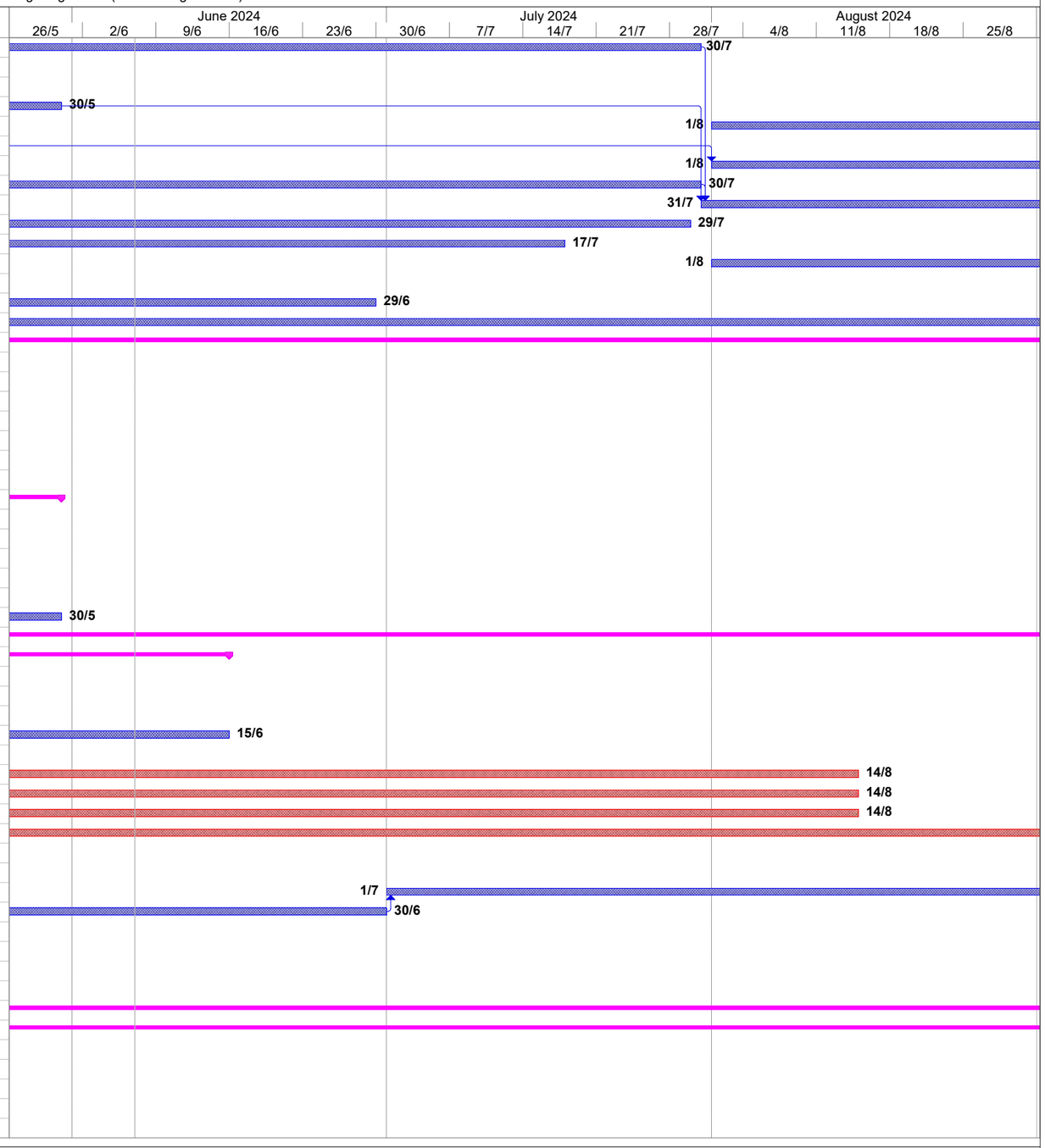
Based on Revised Programme dated 24 April 2024.

ID	Task Name	Duration	Start	Finish	Predecessors
439	Provision of site access [31 days after starting date as per Contract]	8 days	Mon 30/8/21	Mon 6/9/21	16SS
440	Mobilization & Site Clearance	14 days	Tue 7/9/21	Mon 20/9/21	439
441	Preparation & submission of MS, Temp.works, associated plans & docs	210 days	Wed 1/2/23	Tue 29/8/23	402
442	Engineer's AIP of MS, Temp works, plans & associated docs	210 days	Wed 1/3/23	Tue 26/9/23	441SS+28 days
443	Time Risk Allowance	24 days	Tue 21/9/21	Thu 14/10/21	440
444	**Lake side**	**590 days**	**Wed 22/3/23**	**Thu 31/10/24**	
445	Pool edge, paving and finishing	150 days	Thu 1/2/24	Sat 29/6/24	
446	Application for electricity power supply	210 days	Wed 22/3/23	Tue 17/10/23	
447	Lighting design	150 days	Wed 22/3/23	Fri 18/8/23	446SS
448	Underground cable ducts	60 days	Thu 1/2/24	Sun 31/3/24	447
449	Application for water supply	128 days	Mon 26/6/23	Tue 31/10/23	
450	Underground water supply for irrigation	60 days	Thu 1/2/24	Sun 31/3/24	449
451	Drainage pipes	60 days	Thu 1/2/24	Sun 31/3/24	
452	Emergency vehicular access	136 days	Mon 1/4/24	Wed 14/8/24	451
453	Outstanding works by NE/2016/01	91 days	Fri 1/9/23	Thu 30/11/23	
454	Subsoil drains and backfilling by C1	30 days	Fri 1/12/23	Sat 30/12/23	453
455	Bioswale near slope	92 days	Fri 1/12/23	Fri 1/3/24	453
456	Lighting system	61 days	Thu 1/8/24	Mon 30/9/24	448
457	**Irrigation system**	**141 days**	**Wed 1/11/23**	**Wed 20/3/24**	
458	Approval of WWO542	30 days	Wed 1/11/23	Thu 30/11/23	449,429SS
459	Approval of WWO 046	21 days	Fri 1/12/23	Thu 21/12/23	458
460	Underground water supply for irrigation	90 days	Fri 22/12/23	Wed 20/3/24	459SS+4 days
461	Soft landscaping works	92 days	Thu 1/8/24	Thu 31/10/24	455
462	**Buildings**	**463 days**	**Tue 8/8/23**	**Tue 12/11/24**	
463	Detailed designing	214 days	Tue 8/8/23	Fri 8/3/24	361SS
464	**A1: Lavatories**	**403 days**	**Sat 7/10/23**	**Tue 12/11/24**	
465	Structural works	151 days	Sat 7/10/23	Tue 5/3/24	352
466	Finishing and E&M works/Fire services	150 days	Wed 6/3/24	Fri 2/8/24	465
467	T& C	28 days	Wed 16/10/24	Tue 12/11/24	466,481SS
468	**A2: Management Office Building**	**403 days**	**Sat 7/10/23**	**Tue 12/11/24**	
469	Structural works	189 days	Sat 7/10/23	Fri 12/4/24	352
470	Finishing and E&M works/Fire services	150 days	Sat 13/4/24	Mon 9/9/24	469
471	T& C	28 days	Wed 16/10/24	Tue 12/11/24	470,481SS
472	**B1: Multi-Purpose Building**	**389 days**	**Sat 21/10/23**	**Tue 12/11/24**	
473	Structural works	191 days	Sat 21/10/23	Sun 28/4/24	352
474	Finishing and E&M works/Fire services	135 days	Mon 29/4/24	Tue 10/9/24	473
475	T& C	28 days	Wed 16/10/24	Tue 12/11/24	474,481SS
476	**B2: TX Room/Lavatories**	**375 days**	**Sat 4/11/23**	**Tue 12/11/24**	
477	Structural works	219 days	Sat 4/11/23	Sun 9/6/24	352
478	Finishing and E&M works/Fire services	113 days	Sun 31/3/24	Sun 21/7/24	477FS-71 days
479	Hand-over of Transformer Room	10 days	Mon 22/7/24	Wed 31/7/24	478
480	CLP installation and energisation	76 days	Thu 1/8/24	Tue 15/10/24	479
481	T& C	28 days	Wed 16/10/24	Tue 12/11/24	480
482	**C1: Storeroom/Lavatories**	**340 days**	**Sat 9/12/23**	**Tue 12/11/24**	
483	Structural works	124 days	Sat 9/12/23	Wed 10/4/24	352
484	Finishing and E&M works/Fire services	150 days	Thu 4/4/24	Sat 31/8/24	483FS-7 days
485	T& C	28 days	Wed 16/10/24	Tue 12/11/24	484,481SS
486	**C2: Water Treatment Plant Room**	**403 days**	**Sat 7/10/23**	**Tue 12/11/24**	
487	Modification to existing structure	230 days	Sat 7/10/23	Thu 23/5/24	352
488	Structural works	132 days	Wed 10/4/24	Mon 19/8/24	487FS-44 days
489	Finishing work, E&M installation & Fire service and T & C	102 days	Sat 6/7/24	Tue 15/10/24	488FS-45 days
490	Final T&C with permanent supply	28 days	Wed 16/10/24	Tue 12/11/24	489,480
491	Water play installation at A2	90 days	Mon 3/6/24	Sat 31/8/24	
492	**External works**	**590 days**	**Wed 22/3/23**	**Thu 31/10/24**	
493	Application for electricity power supply	224 days	Wed 22/3/23	Tue 31/10/23	422SS
494	Lighting design (1/12/2023)	285 days	Wed 22/3/23	Sun 31/12/23	493SS



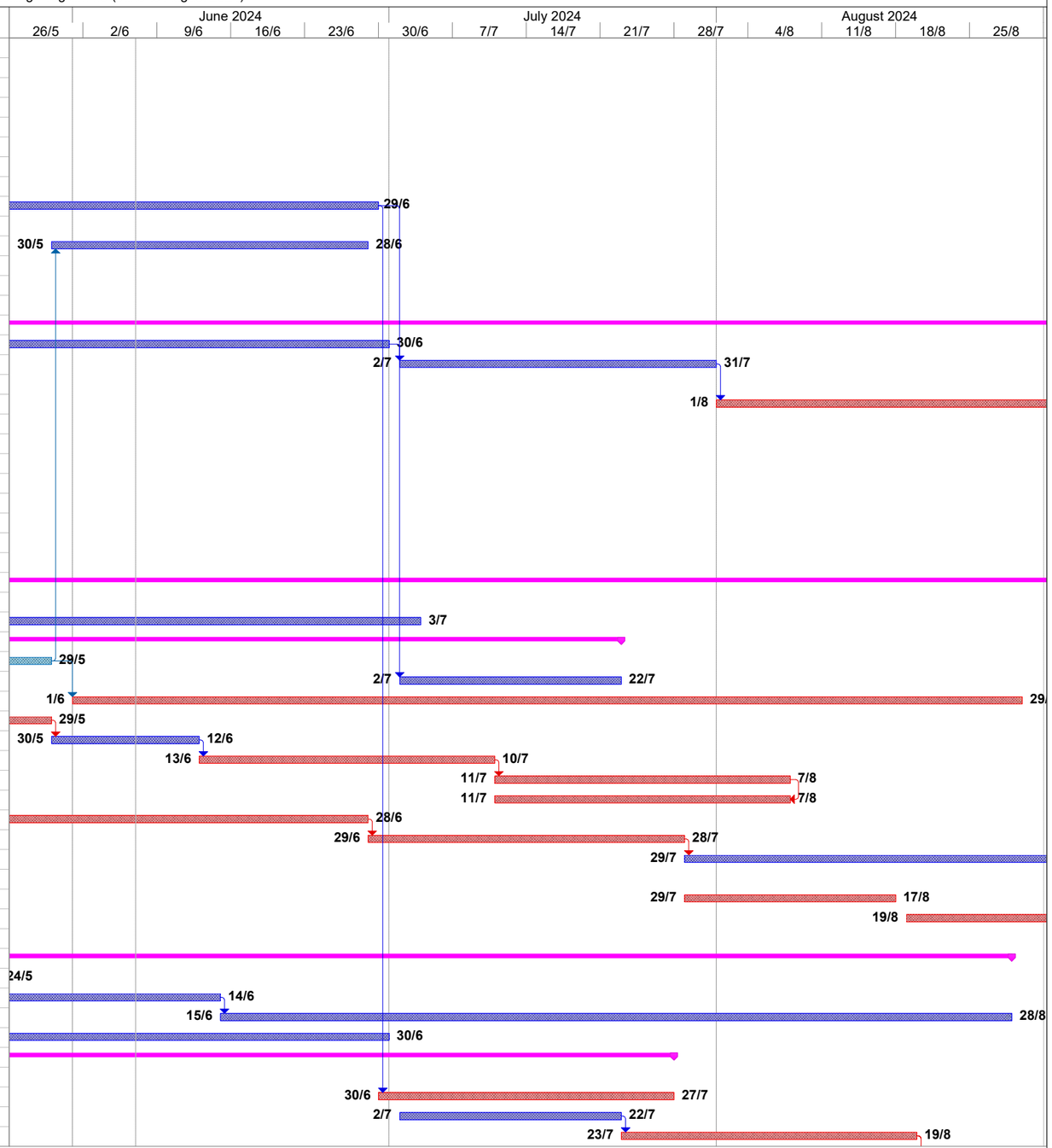
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
495	Underground cable ducts	121 days	Mon 1/4/24	Tue 30/7/24	448,494
496	Approval of WWO542	40 days	Mon 18/12/23	Fri 26/1/24	429SS
497	Approval of WWO 046	32 days	Sat 27/1/24	Tue 27/2/24	496
498	Underground water supply for irrigation	121 days	Wed 31/1/24	Thu 30/5/24	497SS+4 days
499	Irrigation system	61 days	Thu 1/8/24	Mon 30/9/24	
500	Approval of ighting systtem by LCSD	30 days	Sun 1/10/23	Mon 30/10/23	
501	Lighting system	61 days	Thu 1/8/24	Mon 30/9/24	500
502	Drainage pipes	121 days	Mon 1/4/24	Tue 30/7/24	
503	Road, pavement and other features	92 days	Wed 31/7/24	Wed 30/10/24	495,498,502
504	Shelters and Planter seats	132 days	Wed 20/3/24	Mon 29/7/24	
505	Stoplog, smart weir and overflow chamber	105 days	Thu 4/4/24	Wed 17/7/24	
506	Soft landscaping	92 days	Thu 1/8/24	Thu 31/10/24	
507	PMI - Additional drainage pipe for Quarry Park (Early Start)	121 days	Fri 1/12/23	Sat 30/3/24	
508	Preparation of O&M Manual	150 days	Thu 1/2/24	Sat 29/6/24	
509	As-built drg/model	180 days	Mon 22/4/24	Fri 18/10/24	
510	**Portion 2b**	**1065 days**	**Tue 14/12/21**	**Tue 12/11/24**	
511	Provision of site access [137 days after starting date as per Contract]	7 days	Tue 14/12/21	Mon 20/12/21	21SS
512	Mobilization & Site Clearance	16 days	Tue 21/12/21	Wed 5/1/22	511
513	Preparation & submission of MS, Temp works, associated plans & docs	240 days	Wed 5/1/22	Thu 1/9/22	512
514	Engineer's AIP of MS, Temp., works, plans & associated docs	240 days	Wed 2/2/22	Thu 29/9/22	513SS+28 days
515	Time Risk Allowance	15 days	Fri 30/9/22	Fri 14/10/22	514
516	Water leakage test within the lake by others	42 days	Thu 20/10/22	Wed 30/11/22	519
517	Completion of rectification works for leakage test within lake by others	77 days	Tue 3/10/23	Mon 18/12/23	529
518	**Artificial Lake Island**	**669 days**	**Mon 1/8/22**	**Thu 30/5/24**	
519	Gabion wall	80 days	Mon 1/8/22	Wed 19/10/22	514FS-60 days
520	Reconstruction of Gabion wall and stone facing rectification by C1	31 days	Wed 31/1/24	Fri 1/3/24	517
521	Placement of boulder (Stage 1)	151 days	Thu 1/12/22	Sun 30/4/23	517
522	Relaying of boulder (actual start subject to C1)	60 days	Wed 31/1/24	Sat 30/3/24	520SS
523	Soil replacement (Stage 2) (actual start subject to C1)	60 days	Wed 31/1/24	Sat 30/3/24	520SS
524	Soft landscaping	30 days	Wed 1/5/24	Thu 30/5/24	
525	**Artificial lake**	**774 days**	**Sat 1/10/22**	**Tue 12/11/24**	
526	**Granite stone facing**	**624 days**	**Sat 1/10/22**	**Sat 15/6/24**	
527	Mock up	15 days	Sat 1/10/22	Sat 15/10/22	
528	Late delivery of granite stone due to COVID 19	0 days	Mon 5/12/22	Mon 5/12/22	527
529	Installation (Phase 1)	162 days	Mon 5/12/22	Mon 15/5/23	528,516
530	Resumption of installation (Phase 2) (actual start subject to C1)	180 days	Tue 19/12/23	Sat 15/6/24	517
531	Construction of viewing steps (actual start subject to C1)	121 days	Mon 1/1/24	Tue 30/4/24	530SS+8 days
532	Finishing for viewing decks A & B and viewing steps	106 days	Wed 1/5/24	Wed 14/8/24	531
533	Protective pavement behind floating bridge	92 days	Wed 15/5/24	Wed 14/8/24	532SS+14 days
534	CNC walls	92 days	Wed 15/5/24	Wed 14/8/24	532SS+14 days
535	Soil replacement/Eco bag for Riparian Zones A, B & C	122 days	Wed 15/5/24	Fri 13/9/24	532SS+14 days
536	Planting works for Riparian zone A, B & C	60 days	Sat 14/9/24	Tue 12/11/24	535
537	Boulder placement (400 nos.) (actual start subject to C1)	90 days	Wed 31/1/24	Mon 29/4/24	517
538	Sloping Lawn	92 days	Mon 1/7/24	Mon 30/9/24	539
539	Nursery for Plantings	447 days	Tue 11/4/23	Sun 30/6/24	
540	**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**	
541	Commencement of Establishment Work for Section 1	0 days	Wed 13/11/24	Wed 13/11/24	490FS+1 day
542	Establishment Work Duration for Section 1	365 days	Wed 13/11/24	Wed 12/11/25	541SS-1 day
543	Completion of Works in Section 1	0 days	Wed 12/11/25	Wed 12/11/25	542
544	**Section of Works 2 - Portion 8**	**1251 days?**	**Fri 30/7/21**	**Tue 31/12/24**	
545	**Portion 8**	**1251 days?**	**Fri 30/7/21**	**Tue 31/12/24**	
546	Provision of site access [on starting date as per Contract]	7 days	Fri 30/7/21	Thu 5/8/21	32SS
547	Mobilization& Site Clearance	14 days	Fri 6/8/21	Thu 19/8/21	546
548	Preparation & submission of MS, Temp works, associated plans & docs	52 days	Fri 20/8/21	Sun 10/10/21	547
549	Engineer's AIP of MS, Temp works, plans& associated docs	22 days	Mon 11/10/21	Mon 1/11/21	548
550	**Drainage pipe and manhole**	**350 days**	**Tue 2/11/21**	**Mon 17/10/22**	



Task | Critical Task | Milestone | Summary | Progress

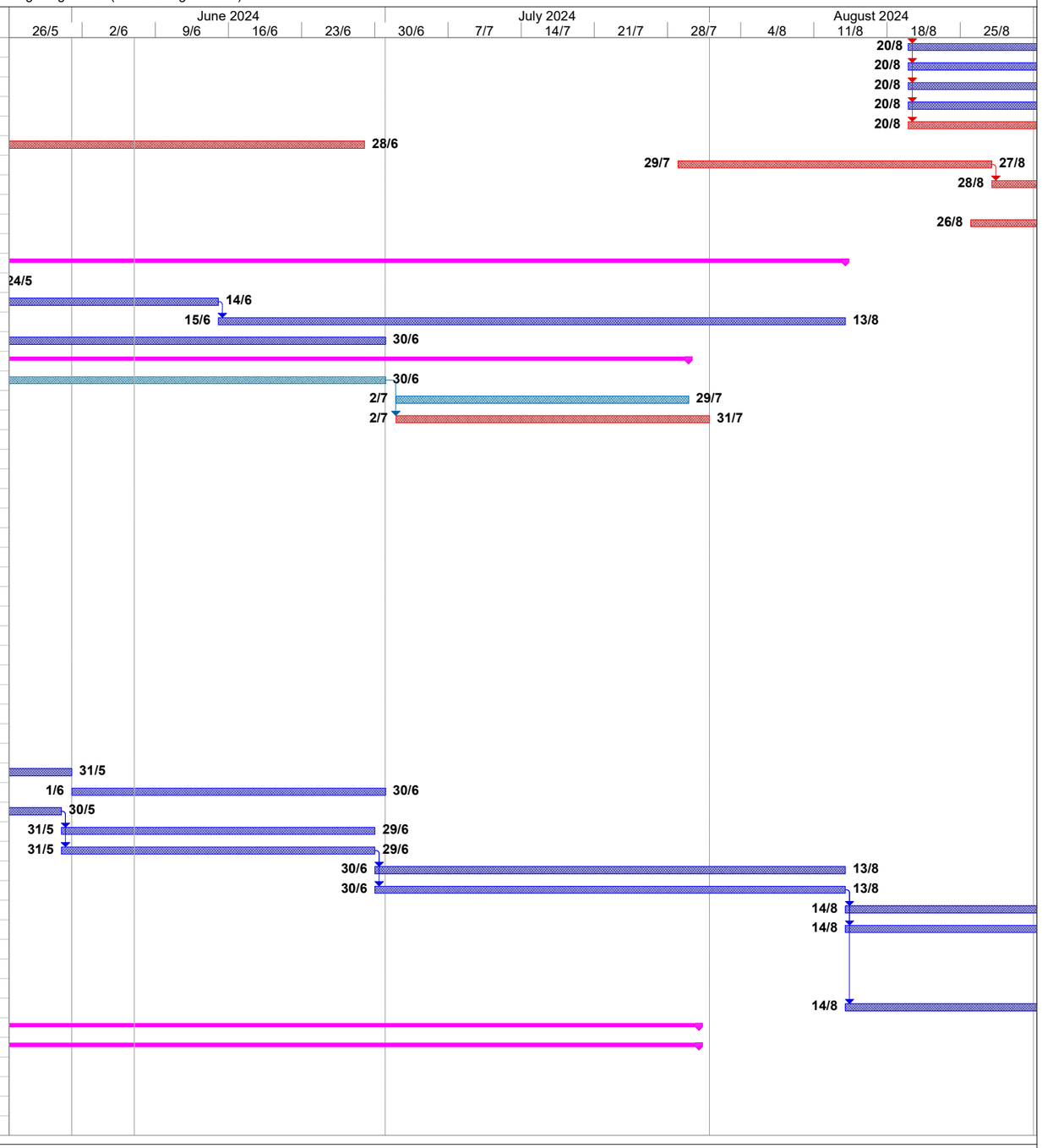
ID	Task Name	Duration	Start	Finish	Predecessors
551	Excavation	350 days	Tue 2/11/21	Mon 17/10/22	549
552	Pipe laying and manhole construction including backfilling	295 days	Tue 7/12/21	Tue 27/9/22	551SS+35 days
553	Excavation for planter	20 days	Wed 28/9/22	Mon 17/10/22	552
554	Awaiting for revision of design by PM	219 days	Tue 18/10/22	Wed 24/5/23	553
555	Time Risk Allowance	14 days	Tue 18/10/22	Mon 31/10/22	553
556	Application for electricity power supply	421 days	Mon 14/11/22	Mon 8/1/24	
557	Lighting design	321 days	Mon 14/11/22	Sat 30/9/23	556SS
558	Approval of lighting design by LCSD	100 days	Sun 1/10/23	Mon 8/1/24	557
559	Design and fabrication for lamp post holding down bolt	150 days	Thu 1/2/24	Sat 29/6/24	
560	Cable wiring & accessories	1 day?	Fri 30/7/21	Fri 30/7/21	
561	Testing and commissioning of lighting	30 days	Thu 30/5/24	Fri 28/6/24	582
562	**Irrigation system**	**72 days**	**Mon 18/12/23**	**Tue 27/2/24**	
563	Approval of WWO542	40 days	Mon 18/12/23	Fri 26/1/24	429SS
564	Approval of Form WWO 046	32 days	Sat 27/1/24	Tue 27/2/24	563
565	**Wing A**	**351 days**	**Tue 16/1/24**	**Tue 31/12/24**	
566	Awaiting hanover from of C1	167 days	Tue 16/1/24	Sun 30/6/24	
567	U channel and catchpit	30 days	Tue 2/7/24	Wed 31/7/24	566
568	**Lighting System**	**66 days**	**Thu 1/8/24**	**Sat 5/10/24**	
569	Cable Duct, pillar box, cable drawpit & lamp post footing	45 days	Thu 1/8/24	Sat 14/9/24	567
570	Installation of Lamp post	21 days	Sun 15/9/24	Sat 5/10/24	569
571	Irrigation system	30 days	Sun 6/10/24	Mon 4/11/24	570
572	Planter	60 days	Sun 15/9/24	Wed 13/11/24	569
573	Soil replacement	62 days	Mon 30/9/24	Sat 30/11/24	
574	Seat	27 days	Mon 18/11/24	Sat 14/12/24	
575	Edge and pavement	30 days	Mon 25/11/24	Tue 24/12/24	
576	Fininshing to panter wall, seat wall and panter kerb	58 days	Fri 1/11/24	Sat 28/12/24	
577	Soft landscaping works	91 days	Wed 2/10/24	Tue 31/12/24	
578	**Wing C**	**427 days**	**Thu 3/8/23**	**Wed 2/10/24**	
579	Catchpit	211 days	Thu 3/8/23	Thu 29/2/24	
580	U channel	45 days	Mon 20/5/24	Wed 3/7/24	
581	**Lighting System**	**99 days**	**Mon 15/4/24**	**Mon 22/7/24**	
582	Cable Duct, pillar box, cable drawpit & lamp post footing	45 days	Mon 15/4/24	Wed 29/5/24	
583	Installation of Lamp post	21 days	Tue 2/7/24	Mon 22/7/24	559
584	Irrigation system	90 days	Sat 1/6/24	Thu 29/8/24	582
585	Planter (RP 9 & RP10)	45 days	Mon 15/4/24	Wed 29/5/24	
586	Soil replacement (RP9 & RP10)	14 days	Thu 30/5/24	Wed 12/6/24	585
587	Seat	28 days	Thu 13/6/24	Wed 10/7/24	586
588	Edge and pavement	28 days	Thu 11/7/24	Wed 7/8/24	587
589	Fininshing to planter wall, seat wall and planter kerb	28 days	Thu 11/7/24	Wed 7/8/24	588FF
590	Procurement of safety mat for play area	120 days	Fri 1/3/24	Fri 28/6/24	
591	Installation of safety mat for play area	30 days	Sat 29/6/24	Sun 28/7/24	590
592	Planter (RP7 & RP8)	45 days	Mon 29/7/24	Wed 11/9/24	591
593	Soil replacement (RP9 & RP10)	14 days	Thu 12/9/24	Wed 25/9/24	592
594	Inspection/certification of play area equipment	20 days	Mon 29/7/24	Sat 17/8/24	
595	Soft landscaping works	45 days	Mon 19/8/24	Wed 2/10/24	
596	**Wing B**	**288 days**	**Wed 3/1/24**	**Wed 16/10/24**	
597	**Shelter (1 nos)**	156 days	Tue 26/3/24	Wed 28/8/24	
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	75 days	Sat 15/6/24	Wed 28/8/24	599
601	U channel and Catchpit	211 days	Sun 3/12/23	Sun 30/6/24	579SS
602	**Lighting system**	**118 days**	**Mon 1/4/24**	**Sat 27/7/24**	
603	Cable Duct, pillar box, cable pit & lamp post footing	45 days	Mon 1/4/24	Wed 15/5/24	
604	Installation of lamp post	28 days	Sun 30/6/24	Sat 27/7/24	559
605	Staircase	21 days	Tue 2/7/24	Mon 22/7/24	
606	Edge	28 days	Tue 23/7/24	Mon 19/8/24	605



Task | Critical Task | Milestone | Summary | Progress

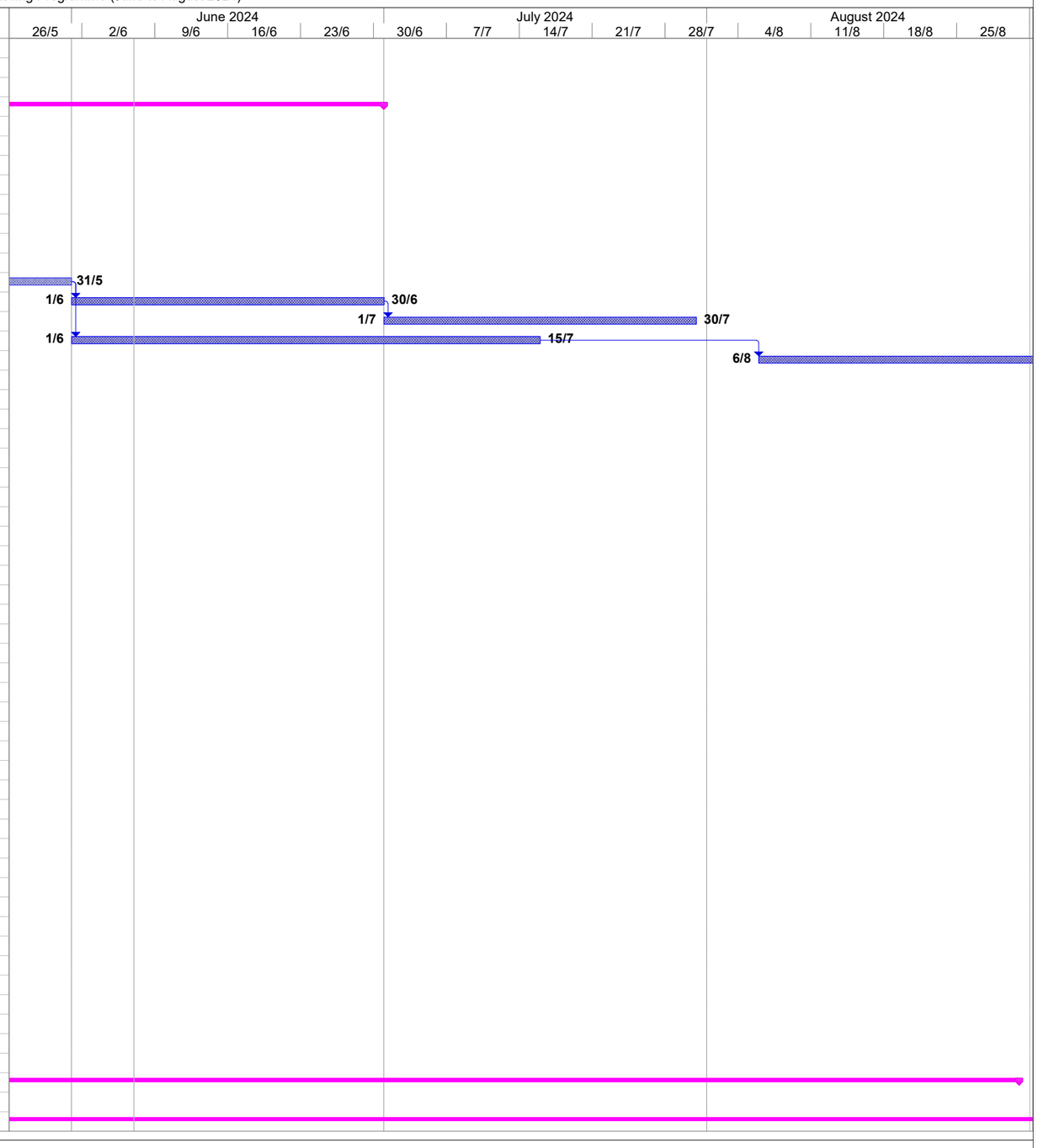
Based on Revised Programme dated 24 April 2024.

ID	Task Name	Duration	Start	Finish	Predecessors
607	Soil replacement	26 days	Tue 20/8/24	Sat 14/9/24	606
608	Irrigation system	26 days	Tue 20/8/24	Sat 14/9/24	606
609	Seat	30 days	Tue 20/8/24	Wed 18/9/24	606
610	pavement	45 days	Tue 20/8/24	Thu 3/10/24	606
611	Fiinshing to planter wall, seat wall and planter kerb	28 days	Tue 20/8/24	Mon 16/9/24	606
612	Procurement of safety mat for play area	120 days	Fri 1/3/24	Fri 28/6/24	590SS
613	Installation of safety mat for play area	30 days	Mon 29/7/24	Tue 27/8/24	
614	Inspection/certification of for play equipment	20 days	Wed 28/8/24	Mon 16/9/24	613
615	Hard landscape	13 days	Fri 4/10/24	Wed 16/10/24	610
616	Soft landscaping works	45 days	Mon 26/8/24	Wed 9/10/24	
617	**Wing D**	**779 days**	**Tue 30/8/22**	**Wed 16/10/24**	
618	**Shelter (3 nos)**	141 days	Tue 26/3/24	Tue 13/8/24	
619	Submission of design	60 days	Tue 26/3/24	Fri 24/5/24	598SS
620	Approval of design	21 days	Sat 25/5/24	Fri 14/6/24	619
621	Construction	60 days	Sat 15/6/24	Tue 13/8/24	620
622	U channel and Catchpit	92 days	Sun 31/3/24	Sun 30/6/24	579SS
623	**Lighting system**	**89 days**	**Thu 2/5/24**	**Mon 29/7/24**	
624	Cable Duct, pillar box, cable pit & lamp post footing	60 days	Thu 2/5/24	Sun 30/6/24	
625	Installation of lamp post	28 days	Tue 2/7/24	Mon 29/7/24	
626	Irrigation system	30 days	Tue 2/7/24	Wed 31/7/24	624
627	**Retainning Wall**	**701 days**	**Tue 30/8/22**	**Tue 30/7/24**	
628	Issuance of site sketch for retaining wall (Letter M45/420/400708)	0 days	Tue 30/8/22	Tue 30/8/22	
629	**Stage 1 (RWA 21, CH15 to CH51.5)**	**161 days**	**Mon 10/10/22**	**Sun 19/3/23**	
630	Excavation	60 days	Mon 10/10/22	Thu 8/12/22	
631	Blinding layer	60 days	Tue 1/11/22	Fri 30/12/22	
632	Base slab	60 days	Fri 11/11/22	Mon 9/1/23	
633	Wall stem	60 days	Fri 25/11/22	Mon 23/1/23	
634	Backfilling	55 days	Tue 24/1/23	Sun 19/3/23	
635	**Stage 2 (Remaining portion)**	**469 days**	**Mon 20/3/23**	**Sun 30/6/24**	
636	Revision of wall details by PM due to interface	150 days	Mon 20/3/23	Wed 16/8/23	
637	Tendering	30 days	Thu 17/8/23	Fri 15/9/23	
638	Final revised design received on 29 Sept 2023	0 days	Fri 29/9/23	Fri 29/9/23	
639	Checking of revised drawings and setting out works	30 days	Fri 29/9/23	Sat 28/10/23	
640	Excavation	21 days	Sun 29/10/23	Sat 18/11/23	
641	Blinding layer	21 days	Sun 5/11/23	Sat 25/11/23	
642	Base slab (3 bays)	21 days	Sun 12/11/23	Sat 2/12/23	
643	Wall stem (3 bays)	10 days	Sun 3/12/23	Tue 12/12/23	
644	Backfilling (24 layer)	70 days	Sat 23/3/24	Fri 31/5/24	
645	Filling slope	30 days	Sat 1/6/24	Sun 30/6/24	
646	Staircase @ RWA21	30 days	Wed 1/5/24	Thu 30/5/24	
647	Planter(tree plaza)	30 days	Fri 31/5/24	Sat 29/6/24	646
648	Planter(community garden)	30 days	Fri 31/5/24	Sat 29/6/24	646
649	Dwarf walls (PMI 1080)	45 days	Sun 30/6/24	Tue 13/8/24	648
650	Staircases	45 days	Sun 30/6/24	Tue 13/8/24	648
651	Edge	30 days	Wed 14/8/24	Thu 12/9/24	650
652	Seat	30 days	Wed 14/8/24	Thu 12/9/24	650
653	Soil replacement	21 days	Fri 13/9/24	Thu 3/10/24	651
654	Irrigation system	30 days	Fri 13/9/24	Sat 12/10/24	651
655	pavement	21 days	Mon 16/9/24	Sun 6/10/24	
656	Finishing to planter wall, seat wall and planter kerb	60 days	Wed 14/8/24	Sat 12/10/24	650
657	**Soft landscaping works**	**701 days**	**Tue 30/8/22**	**Tue 30/7/24**	
658	**Retainning Wall**	**701 days**	**Tue 30/8/22**	**Tue 30/7/24**	
659	Issuance of site sketch for retaining wall (Letter M45/420/400708)	0 days	Tue 30/8/22	Tue 30/8/22	
660	**Stage 1 (RWA 21, CH15 to CH51.5)**	**161 days**	**Mon 10/10/22**	**Sun 19/3/23**	
661	Excavation	60 days	Mon 10/10/22	Thu 8/12/22	659
662	Blinding layer	60 days	Tue 1/11/22	Fri 30/12/22	661SS+22 days



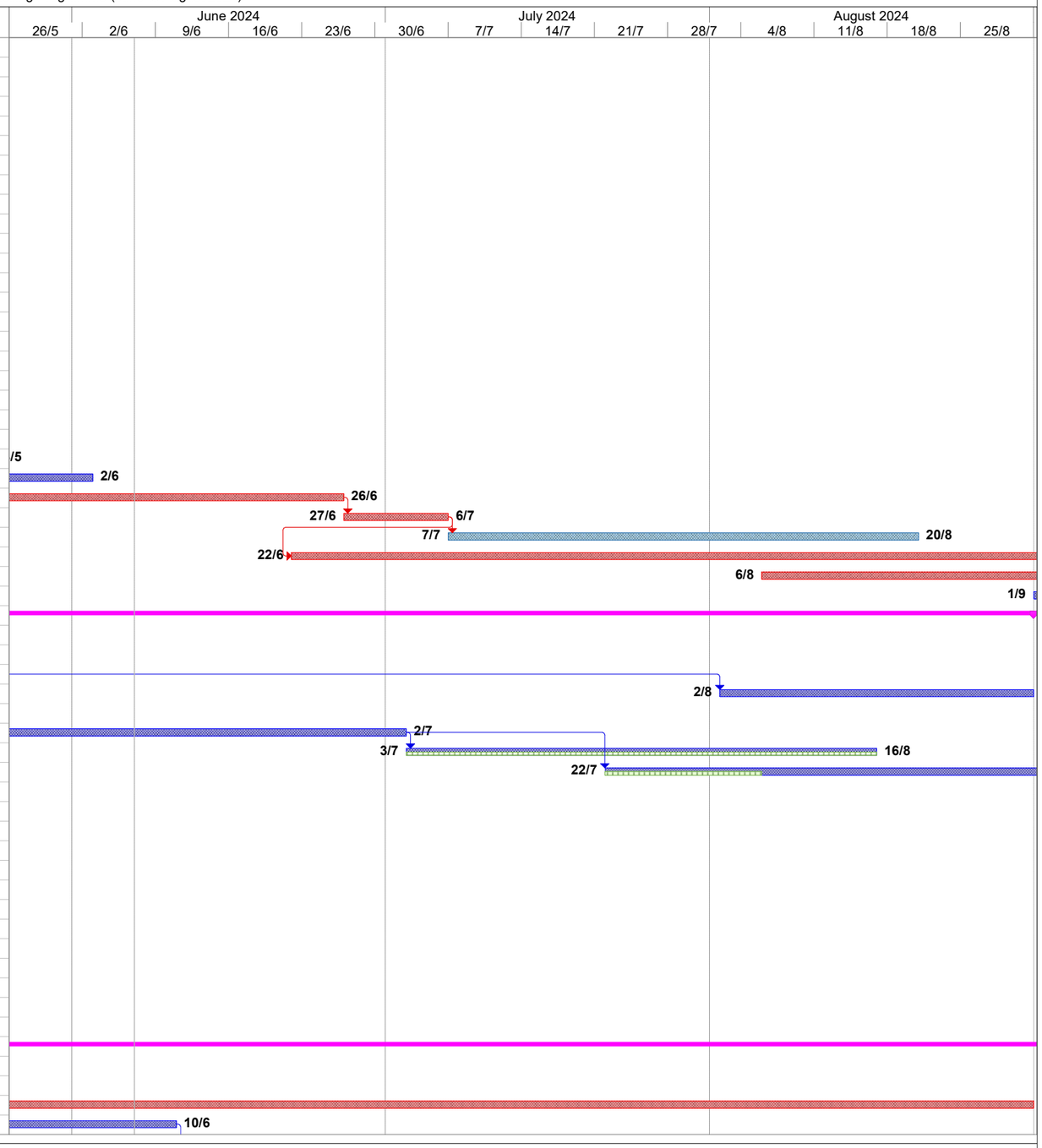
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
663	Base slab	60 days	Fri 11/11/22	Mon 9/1/23	662SS+10 days
664	Wall stem	60 days	Fri 25/11/22	Mon 23/1/23	663SS+14 days
665	Backfilling	55 days	Tue 24/1/23	Sun 19/3/23	664
666	**Stage 2 (Remaining portion)**	**469 days**	**Mon 20/3/23**	**Sun 30/6/24**	
667	Revision of wall details by PM due to interface	150 days	Mon 20/3/23	Wed 16/8/23	665
668	Tendering	30 days	Thu 17/8/23	Fri 15/9/23	667
669	Final revised design received on 29 Sept 2023	0 days	Fri 29/9/23	Fri 29/9/23	668
670	Checking of revised drawings and setting out works	30 days	Fri 29/9/23	Sat 28/10/23	669
671	Excavation	21 days	Sun 29/10/23	Sat 18/11/23	670
672	Blinding layer	21 days	Sun 5/11/23	Sat 25/11/23	671SS+7 days
673	Base slab (3 bays)	21 days	Sun 12/11/23	Sat 2/12/23	672SS+7 days
674	Wall stem (3 bays)	10 days	Sun 3/12/23	Tue 12/12/23	673
675	Backfilling (10 layer)	70 days	Sat 23/3/24	Fri 31/5/24	674
676	Filling slope	30 days	Sat 1/6/24	Sun 30/6/24	675
677	Finishing works	30 days	Mon 1/7/24	Tue 30/7/24	676
678	RC staicase at retaining wall	45 days	Sat 1/6/24	Mon 15/7/24	675
679	Railing/fence and signage	72 days	Tue 6/8/24	Wed 16/10/24	678
680	**Section of Works 2A - Establishment Works for all Landscape Softworks in Section 2 of the Works**	**365 days**	**Thu 17/10/24**	**Thu 16/10/25**	
681	Commencement of Establishment Work for Section 2	0 days	Thu 17/10/24	Thu 17/10/24	617FF+1 day
682	Establishment Work Duration for Section 2	365 days	Thu 17/10/24	Thu 16/10/25	681SS-1 day
683	Completion of Works in Section 2	0 days	Thu 16/10/25	Thu 16/10/25	682
684	**Section of Works 3 - Portions 1b, 3, 4, 5**	**763 days**	**Fri 30/7/21**	**Thu 31/8/23**	
685	**Portion 1b**	**276 days**	**Tue 29/11/22**	**Thu 31/8/23**	
686	Provision of site access [487 days after starting date as per Contract]	7 days	Tue 29/11/22	Mon 5/12/22	44SS
687	Mobilization& Site Clearance	14 days	Tue 6/12/22	Mon 19/12/22	686
688	Time Risk Allowance	7 days	Tue 20/12/22	Mon 26/12/22	687
689	PMI 066	**50 days**	**Thu 13/7/23**	**Thu 31/8/23**	
690	Sewerage pipes and manholes	50 days	Thu 13/7/23	Thu 31/8/23	688
691	Greywater pipes and manholes	50 days	Thu 13/7/23	Thu 31/8/23	690SS
692	Laying of 75mm thick milled asphalt chips	7 days	Fri 25/8/23	Thu 31/8/23	691FF
693	**Lighting**	**163 days**	**Wed 22/3/23**	**Thu 31/8/23**	
694	Application for electricity power supply	83 days	Wed 22/3/23	Mon 12/6/23	
695	Lighting design	140 days	Wed 22/3/23	Tue 8/8/23	694SS
696	Installation including ducting, draw pit and lighting	23 days	Wed 9/8/23	Thu 31/8/23	695,691FF
697	**Portion 3**	**702 days**	**Wed 29/9/21**	**Thu 31/8/23**	
698	Access date	0 days	Wed 29/9/21	Wed 29/9/21	49SS
699	Deferred possession (CE 004 & 006)	61 days	Wed 29/9/21	Sun 28/11/21	
700	Provision of site access	7 days	Mon 29/11/21	Sun 5/12/21	699
701	Mobilization& Site Clearance	14 days	Mon 6/12/21	Sun 19/12/21	700
702	Preparation& submission of MS, Temp works, associated plans & docs	52 days	Mon 20/12/21	Wed 9/2/22	701
703	Engineer AIP of MS, Temp works, plans& associated docs	21 days	Thu 10/2/22	Wed 2/3/22	702
704	Installation of chain link fencing	92 days	Thu 1/6/23	Thu 31/8/23	703
705	Soft landscaping works - hydroseeding	30 days	Wed 2/8/23	Thu 31/8/23	
706	GI works (PMI 006)	7 days	Mon 3/10/22	Sun 9/10/22	
707	Additional drainage works (PMI 075)	30 days	Wed 2/8/23	Thu 31/8/23	704FF,705FF
708	**Portion 4**	**763 days**	**Fri 30/7/21**	**Thu 31/8/23**	
709	Provision of site access [on starting date as per Contract]	7 days	Fri 30/7/21	Thu 5/8/21	54SS
710	Soft landscaping works - hydroseeding	30 days	Wed 2/8/23	Thu 31/8/23	705FF,714FF
711	GI works (PMI 006)	10 days	Mon 10/10/22	Wed 19/10/22	706
712	**Portion 5**	**551 days**	**Sun 27/2/22**	**Thu 31/8/23**	
713	Provision of site access [212 days after starting date as per Contract]	7 days	Sun 27/2/22	Sat 5/3/22	59SS
714	Soft landscaping works - hydroseeding	30 days	Wed 2/8/23	Thu 31/8/23	
715	Installation of chain link fencing	31 days	Tue 1/8/23	Thu 31/8/23	714FF
716	**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**	
720	**Section of Works 4 - Portions 6, 12**	**1155 days?**	**Fri 30/7/21**	**Thu 26/9/24**	
721	**Portion 6**	**972 days**	**Sat 29/1/22**	**Thu 26/9/24**	



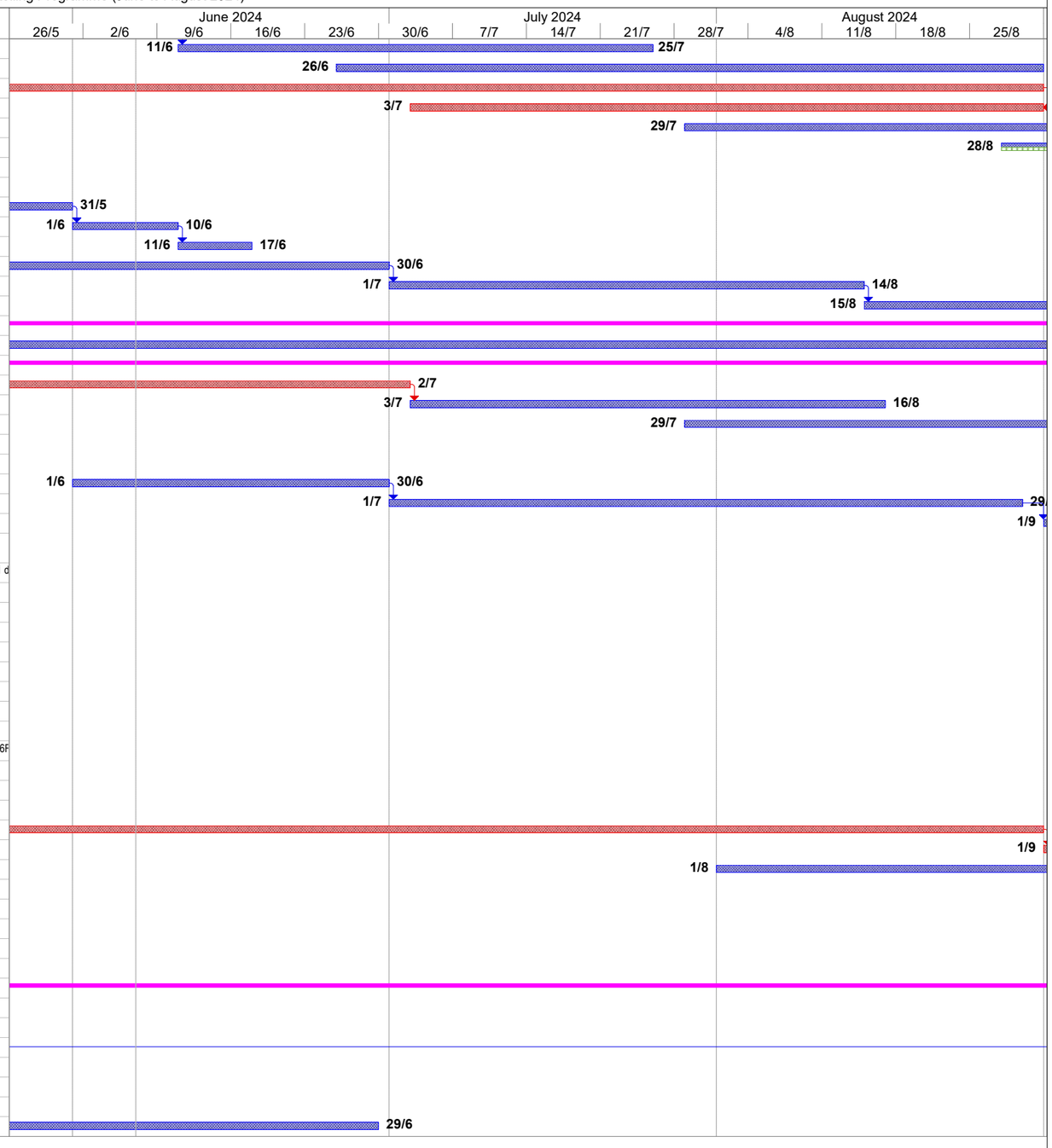
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
722	Provision of site access [183 days after starting date as per Contract]	0 days	Sat 29/1/22	Sat 29/1/22	71SS
723	Deferred possession	81 days	Sat 29/1/22	Tue 19/4/22	722
724	Mobilization& Site Clearance	14 days	Wed 20/4/22	Tue 3/5/22	723
725	Issuance of site sketch for retaining wall (Letter C10/500/400739)	0 days	Wed 14/9/22	Wed 14/9/22	724
726	Drainage works under PMQP 004	0 days	Fri 14/10/22	Fri 14/10/22	724
727	Time Risk Allowance	14 days	Fri 14/10/22	Thu 27/10/22	726
728	**Retaining wall RWA20**	**360 days**	**Tue 2/5/23**	**Thu 25/4/24**	
729	Excavation	112 days	Tue 2/5/23	Mon 21/8/23	
730	Blinding layer	110 days	Tue 9/5/23	Sat 26/8/23	729SS+7 days
731	Base slab (21 bays)	169 days	Tue 16/5/23	Tue 31/10/23	730SS+7 days
732	Wall stem (21 bays)	136 days	Mon 3/7/23	Wed 15/11/23	731SS+10 days
733	Additional Sewage System (PMI 086)	30 days	Thu 30/11/23	Fri 29/12/23	732
734	PMI for Grey Water	30 days	Sat 30/12/23	Sun 28/1/24	733
735	pipe laying and manhole construction above the base slab of retaining wall (RWA 20)	76 days	Wed 31/1/24	Mon 15/4/24	
736	Backfilling (15 layers)	10 days	Tue 16/4/24	Thu 25/4/24	134
737	**Retaining wall RWA19**	**136 days**	**Tue 27/2/24**	**Thu 11/7/24**	
738	Blinding layer (1-13)	45 days	Fri 1/12/23	Sun 14/1/24	
739	Base slab (1-13)	50 days	Mon 18/12/23	Mon 5/2/24	738SS+5 days
740	Wall stem (1-13)	59 days	Tue 2/1/24	Thu 29/2/24	739SS+9 days
741	pipe laying and manhole construction below the base slab of retaining wall (RWA 19)	49 days	Tue 27/2/24	Mon 15/4/24	
742	Backfilling	10 days	Tue 16/4/24	Thu 25/4/24	
743	Blinding layer (14-18)	28 days	Fri 26/4/24	Thu 23/5/24	742
744	Base slab (14-18)	28 days	Mon 6/5/24	Sun 2/6/24	
745	Wall stem (14-18)	45 days	Mon 13/5/24	Wed 26/6/24	
746	Backfilling	10 days	Thu 27/6/24	Sat 6/7/24	745
747	Railing	45 days	Sun 7/7/24	Tue 20/8/24	746
748	U channel & catchpit, edging and pavement	90 days	Sat 22/6/24	Thu 19/9/24	746FS-15 days
749	Soft landscaping works	45 days	Tue 6/8/24	Thu 19/9/24	748FF
750	CCTV inspection, testing and commissioning	26 days	Sun 1/9/24	Thu 26/9/24	
751	**Irrigation system Submission**	**474 days**	**Tue 16/5/23**	**Sat 31/8/24**	
752	Contractor's design	79 days	Tue 16/5/23	Wed 2/8/23	
753	Approval of WWO542	40 days	Wed 1/11/23	Sun 10/12/23	429SS,752
754	Approval of Form WWO 046	32 days	Mon 11/12/23	Thu 11/1/24	753
755	Irrigation system	30 days	Fri 2/8/24	Sat 31/8/24	754
756	**Lighting system**	**179 days**	**Mon 1/4/24**	**Thu 26/9/24**	
757	Cable Duct, pillar box, cable pit & lamp post footing	93 days	Mon 1/4/24	Tue 2/7/24	
758	Installation of lamp post	45 days	Wed 3/7/24	Fri 16/8/24	757
759	Cable wiring & accessories	45 days	Mon 22/7/24	Wed 4/9/24	757
760	Testing and Commissioning of lighting	22 days	Thu 5/9/24	Thu 26/9/24	759
761	Temporary LCSD Toilet (pending PMI)	0 days	Wed 1/5/24	Wed 1/5/24	
762	**Portion 12**	**1155 days?**	**Fri 30/7/21**	**Thu 26/9/24**	
763	Provision of site access [on starting date as per Contract]	7 days	Fri 30/7/21	Thu 5/8/21	76SS
764	Mobilization& Site Clearance	14 days	Fri 6/8/21	Thu 19/8/21	763
765	Preparation& submission of MS, Temp works, associated plans & docs	52 days	Fri 20/8/21	Sun 10/10/21	764
766	Engineer's AIP of MS, Temp works, plans& associated docs	22 days	Mon 11/10/21	Mon 1/11/21	765
767	Additional GI at Portion 12 (PMI 005)	15 days	Wed 1/6/22	Wed 15/6/22	
768	**Drainage pipe and manhole**	**379 days**	**Tue 2/11/21**	**Tue 15/11/22**	
769	Excavation	364 days	Tue 2/11/21	Mon 31/10/22	766
770	Pipe laying and manhole consstruction including backfilling	245 days	Wed 16/3/22	Tue 15/11/22	769FS-230 days
771	Draft wall construction	105 days	Wed 16/11/22	Tue 28/2/23	770
772	Awaiting for revision of design by PM due to interface	97 days	Wed 1/3/23	Mon 5/6/23	771
773	**Staircase**	**409 days**	**Tue 15/8/23**	**Thu 26/9/24**	
774	Footing (S1-10)	231 days	Tue 15/8/23	Mon 1/4/24	
775	Slab (S1-10)	258 days	Mon 28/8/23	Sat 11/5/24	
776	Seat and railing	195 days	Mon 19/2/24	Sat 31/8/24	
777	Dwaft wall (resumption)	30 days	Sun 12/5/24	Mon 10/6/24	775



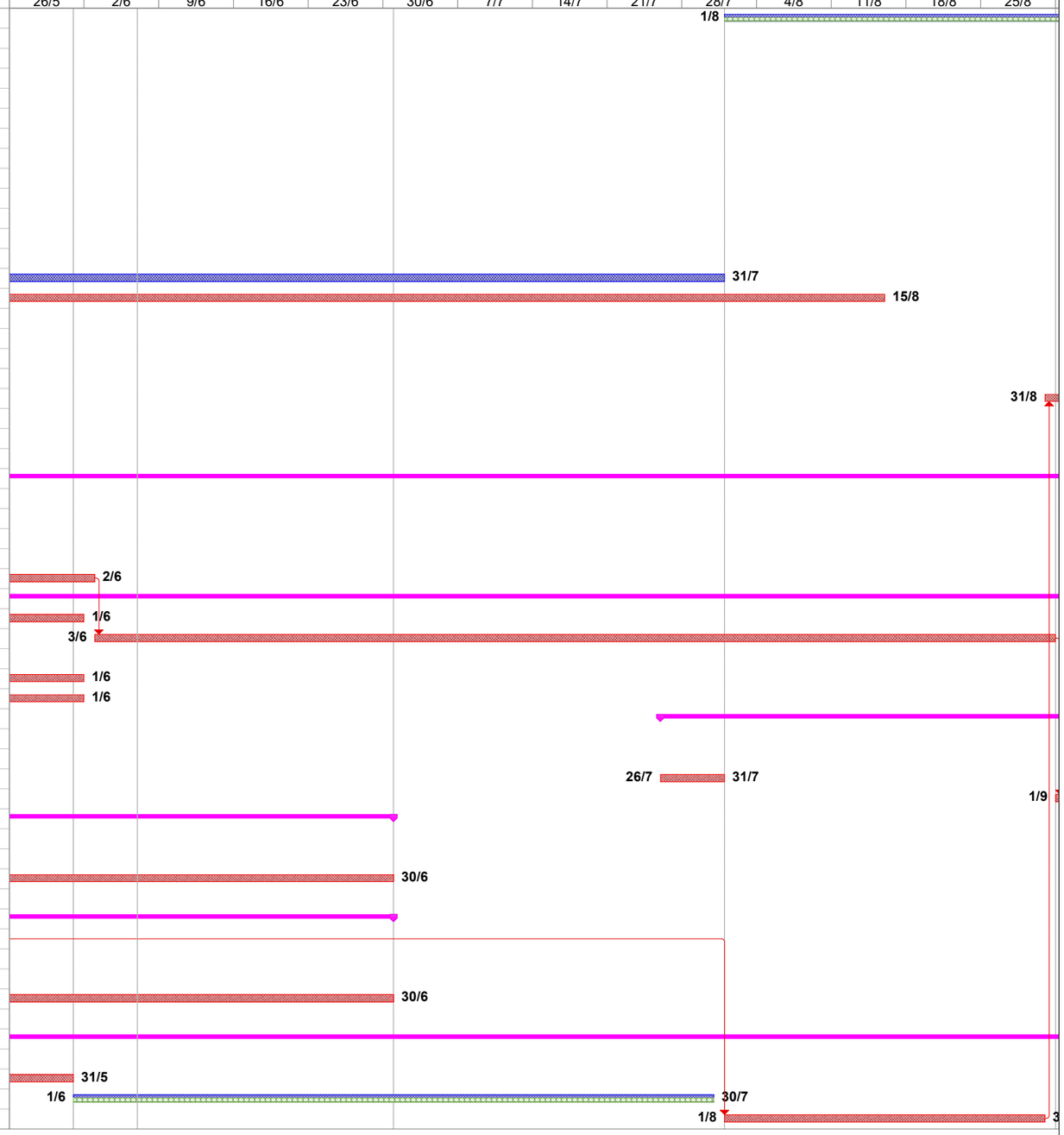
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
778	Footing (S11-15)	45 days	Tue 11/6/24	Thu 25/7/24	777
779	Slab (S11-15)	67 days	Wed 26/6/24	Sat 31/8/24	
780	U channel & catchpit, edging and pavement	195 days	Mon 19/2/24	Sat 31/8/24	
781	Soft landscaping	60 days	Wed 3/7/24	Sat 31/8/24	780FF
782	Children play area CPA 1	60 days	Mon 29/7/24	Thu 26/9/24	
783	Signage Post	30 days	Wed 28/8/24	Thu 26/9/24	
784	**Sunken Plaza**	**320 days?**	**Mon 30/10/23**	**Fri 13/9/24**	
785	Excavation	7 days	Mon 30/10/23	Sun 5/11/23	
786	Subsoil drain	30 days	Thu 2/5/24	Fri 31/5/24	785
787	U channel and catchpit	10 days	Sat 1/6/24	Mon 10/6/24	786
788	Underground cable duct	7 days	Tue 11/6/24	Mon 17/6/24	787
789	RC structure	151 days	Thu 1/2/24	Sun 30/6/24	
790	Hard landscaping	45 days	Mon 1/7/24	Wed 14/8/24	789
791	Soft landscaping	30 days	Thu 15/8/24	Fri 13/9/24	790,781FF
792	**Irrigation system**	**130 days**	**Thu 25/4/24**	**Sun 1/9/24**	
793	Irrigation system	130 days	Thu 25/4/24	Sun 1/9/24	
794	**Lighting system**	**179 days**	**Mon 1/4/24**	**Thu 26/9/24**	
795	Cable Duct, pillar box, cable pit & lamp post footing	90 days	Mon 1/4/24	Tue 2/7/24	757SS
796	Installation of lamp post	45 days	Wed 3/7/24	Fri 16/8/24	795
797	Cable wiring & accessories	45 days	Mon 29/7/24	Wed 11/9/24	
798	Testing and Commissioning of lighting	15 days	Thu 12/9/24	Thu 26/9/24	797
799	**Watermain**	**74 days?**	**Fri 1/3/24**	**Mon 13/5/24**	
800	Pipe laying	30 days	Sat 1/6/24	Sun 30/6/24	
801	GMH/FMH	60 days	Mon 1/7/24	Thu 29/8/24	800
802	CCTV inspection, testing and commissioning	26 days	Sun 1/9/24	Thu 26/9/24	801
803	**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**	
804	Commencement of Establishment Work for Section 4	0 days	Fri 27/9/24	Fri 27/9/24	748FS+1 day,780FS+1 d
805	Establishment Work Duration for Section 4	365 days	Fri 27/9/24	Fri 26/9/25	804SS-1 day
806	Completion of Works in Section 4	0 days	Fri 26/9/25	Fri 26/9/25	805
807	**Section of Works 5A - Portions 9, 10**	**1308 days**	**Fri 30/7/21**	**Wed 26/2/25**	
808	**Portion 9 [Sitting Out Area C & R2-1 Footpath]**	**1247 days**	**Wed 29/9/21**	**Wed 26/2/25**	
809	Provision of site access [61 days after starting date as per Contract]	8 days	Wed 29/9/21	Wed 6/10/21	88SS
810	Mobilization& Site Clearance	15 days	Thu 7/10/21	Thu 21/10/21	809
811	Preparation& submission of MS, Temp works, associated plans & docs	75 days	Tue 1/2/22	Sat 16/4/22	810
812	Engineer AIP of MS, Temp works, plans& associated docs	60 days	Sun 17/4/22	Wed 15/6/22	811
813	Construction of U channel and catchpit	256 days	Thu 16/6/22	Sun 26/2/23	812,815FS-65 days,816F
814	Time Risk Allowance	15 days	Mon 27/2/23	Mon 13/3/23	813
815	Modification of existing surface drain at slope toe (PMI 032)	0 days	Fri 19/8/22	Fri 19/8/22	
816	Modification of existing surface drain at slope toe (PMI 050)	0 days	Wed 28/9/22	Wed 28/9/22	815
817	Interface RS-1 and return of Site	537 days	Tue 14/3/23	Sat 31/8/24	
818	Resumption of modification of existing drain at slope toe (late return from RS-1)	90 days	Sun 1/9/24	Fri 29/11/24	817
819	Design and construction for a rain shelter (under PMI)	90 days	Thu 1/8/24	Tue 29/10/24	
820	Backfilling and compaction of road materials	30 days	Wed 30/10/24	Thu 28/11/24	819
821	Installation of E1 kerbs	30 days	Fri 29/11/24	Sat 28/12/24	820
822	Construction of porous pavement footpath	30 days	Sun 29/12/24	Mon 27/1/25	821
823	Installation of street furniture, traffic signs, bollards and road markings	30 days	Tue 28/1/25	Wed 26/2/25	822
824	Landscaping works	30 days	Tue 28/1/25	Wed 26/2/25	822
825	**Irrigation system**	**625 days**	**Tue 16/5/23**	**Wed 29/1/25**	
826	Contractor's design	79 days	Tue 16/5/23	Wed 2/8/23	
827	Approval of WWO542	40 days	Mon 18/12/23	Fri 26/1/24	826
828	Approval of Form WWO 046	32 days	Sat 27/1/24	Tue 27/2/24	827
829	Irrigation system	30 days	Mon 18/11/24	Tue 17/12/24	828
830	Testing	28 days	Thu 2/1/25	Wed 29/1/25	829
831	**Lighting system**	**317 days**	**Mon 1/4/24**	**Tue 11/2/25**	
832	Design and fabrication for lamp post holding down bolt	94 days	Thu 28/3/24	Sat 29/6/24	



Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
833	Cable Duct, pillar box, cable pit & lamp post footing	90 days	Thu 1/8/24	Tue 29/10/24	
834	Installation of lamp post	45 days	Wed 30/10/24	Fri 13/12/24	833
835	Cable wiring & accessories	45 days	Fri 29/11/24	Sun 12/1/25	834
836	Testing and Commissioning of lighting	30 days	Mon 13/1/25	Tue 11/2/25	835
837	**Portion 10**	**1205 days**	**Fri 30/7/21**	**Fri 15/11/24**	
838	Provision of site access [on starting date as per Contract]	7 days	Fri 30/7/21	Thu 5/8/21	93SS
839	Slope inspection & assessment work	50 days	Fri 6/8/21	Fri 24/9/21	838
840	Mobilization, access arrangements, logistic plan & Site Clearance	52 days	Sat 25/9/21	Mon 15/11/21	839
841	Preparation & submission of MS, Temp works, associated plans & docs	37 days	Tue 16/11/21	Wed 22/12/21	840
842	Time Risk Allowance	16 days	Thu 23/12/21	Fri 7/1/22	841
843	Main access blocked by C1at hiking trail	181 days	Mon 3/7/23	Sat 30/12/23	
844	Engineer's AIP of MS, Temp.works, plans & associated docs	21 days	Sat 8/1/22	Fri 28/1/22	842
845	Demolition and removal of disused water pipe and sprinkler system	160 days	Sat 29/1/22	Thu 7/7/22	844
846	Repair of cracks at drainage channel and concrete berm	700 days	Thu 1/9/22	Wed 31/7/24	845
847	Reinstatement of joint sealant at drainage channel	700 days	Fri 16/9/22	Thu 15/8/24	845
848	Installation of display sign for slope registration	59 days	Fri 30/7/21	Sun 26/9/21	
849	**Slope Works at Feature No. 11NE-D/C947 (420m)**	**96 days**	**Sun 31/12/23**	**Thu 4/4/24**	
850	Removal of damaged wire mesh	30 days	Sun 31/12/23	Mon 29/1/24	843
851	Construction of new wire mesh	60 days	Tue 30/1/24	Fri 29/3/24	850
852	Filling of void with cement soil	7 days	Sat 31/8/24	Fri 6/9/24	888
853	Reinstatement of concrete berm	14 days	Sat 7/9/24	Fri 20/9/24	852
854	Installation of hand railings	7 days	Sat 21/9/24	Fri 27/9/24	853
855	Repainting of handrailing	7 days	Sat 28/9/24	Fri 4/10/24	854
856	**Slope Works at Feature No. 11NE-D/C976 (185m)**	**217 days**	**Sat 30/3/24**	**Fri 1/11/24**	
857	Construction of concrete berm	21 days	Sat 21/9/24	Fri 11/10/24	853
858	Installation of hand railings	7 days	Sat 12/10/24	Fri 18/10/24	857
859	Repainting of existing steel maintenance staircase	7 days	Sat 19/10/24	Fri 25/10/24	858
860	Removal of existing handrailing and steel landing plates and re-construction	7 days	Sat 26/10/24	Fri 1/11/24	859
861	Construction of wire mesh	65 days	Sat 30/3/24	Sun 2/6/24	851
862	**Slope Works at Feature No. 11NE-D/C977 (300m)**	**175 days**	**Sat 4/5/24**	**Fri 25/10/24**	
863	Construction of 450 mm U-channel (~175m)	29 days	Sat 4/5/24	Sat 1/6/24	
864	Construction of wire mesh	90 days	Mon 3/6/24	Sat 31/8/24	861
865	Construction of concrete berm	14 days	Sat 12/10/24	Fri 25/10/24	857
866	Construction of handrailing	7 days	Sun 26/5/24	Sat 1/6/24	
867	Repainting of handrailing	7 days	Sun 26/5/24	Sat 1/6/24	
868	**Slope Works at Feature No. 11NE-D/C986 (190m)**	**113 days**	**Fri 26/7/24**	**Fri 15/11/24**	
869	Filling of void with cement soil	7 days	Sat 26/10/24	Fri 1/11/24	865
870	Construction of concrete berm	14 days	Sat 2/11/24	Fri 15/11/24	869
871	Installation of hand railings	6 days	Fri 26/7/24	Wed 31/7/24	
872	Construction of wire mesh	30 days	Sun 1/9/24	Mon 30/9/24	864
873	**Slope Works at Feature No. 11NE-D/C1026 (60m)**	**318 days**	**Fri 18/8/23**	**Sun 30/6/24**	
874	Filling of void with cement soil	30 days	Wed 1/11/23	Thu 30/11/23	
875	Installation of non-biodegradable erosion control mat	30 days	Fri 1/12/23	Sat 30/12/23	874
876	Hydroseeding	91 days	Mon 1/4/24	Sun 30/6/24	875
877	Repainting of handrailing	90 days	Fri 18/8/23	Wed 15/11/23	
878	**Slope Works at Feature No. 11NE-D/C987 (90m)**	**724 days**	**Fri 8/7/22**	**Sun 30/6/24**	
879	Construction of concrete berm	30 days	Mon 1/1/24	Tue 30/1/24	874
880	Installation of hand railings	7 days	Thu 8/2/24	Wed 14/2/24	879
881	Installation of non-biodegradable erosion control mat	30 days	Fri 8/7/22	Sat 6/8/22	845
882	Hydroseeding	91 days	Mon 1/4/24	Sun 30/6/24	881
883	Repainting of handrailing	90 days	Fri 18/8/23	Wed 15/11/23	
884	**Slope Works at Feature No. 11NE-D/C871 (260m)**	**152 days**	**Thu 2/5/24**	**Mon 30/9/24**	
885	Construction of lockable gate	14 days	Tue 17/9/24	Mon 30/9/24	
886	Removal of existing damaged hand railings	30 days	Thu 2/5/24	Fri 31/5/24	
887	Installation of hand railings	60 days	Sat 1/6/24	Tue 30/7/24	
888	Reinstatement of concrete berm	30 days	Thu 1/8/24	Fri 30/8/24	879



Task | Critical Task | Milestone | Summary | Progress

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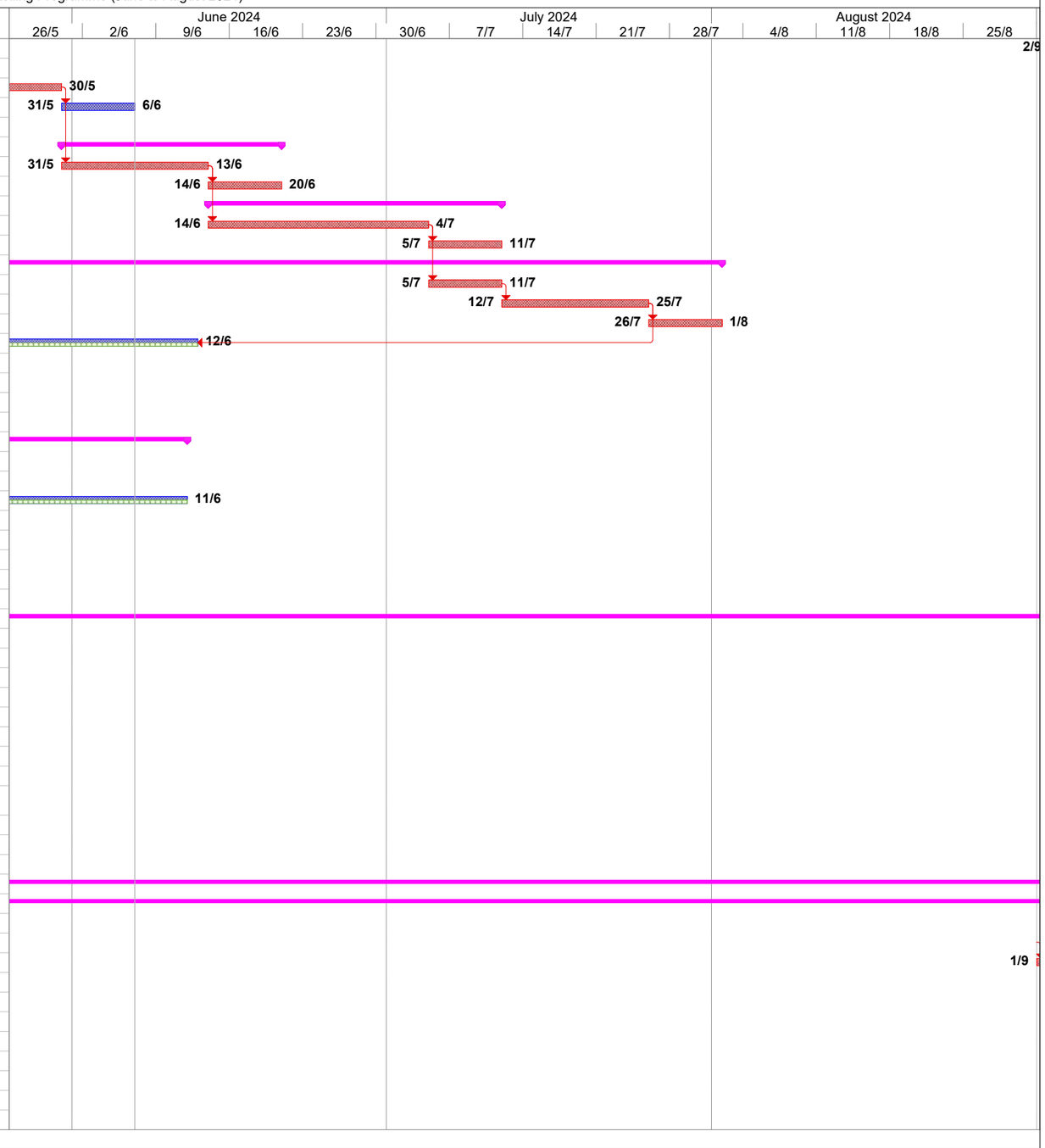
ID	Task Name	Duration	Start	Finish	Predecessors
889	Repainting of handrailing	29 days	Mon 2/9/24	Mon 30/9/24	
890	**Slope Works at Feature No. 11NE-D/C979 (45m)**	**294 days**	**Fri 18/8/23**	**Thu 6/6/24**	
891	Construction of concrete berm	14 days	Fri 17/5/24	Thu 30/5/24	
892	Installation of hand railings	7 days	Fri 31/5/24	Thu 6/6/24	891
893	Repainting of handrailing	90 days	Fri 18/8/23	Wed 15/11/23	
894	**Slope Works at Feature No. 11NE-D/C988 (370m)**	**21 days**	**Fri 31/5/24**	**Thu 20/6/24**	
895	Construction of concrete berm	14 days	Fri 31/5/24	Thu 13/6/24	891
896	Installation of hand railings	7 days	Fri 14/6/24	Thu 20/6/24	895
897	**Slope Works at Feature No. 11NE-D/C1003 (265m)**	**28 days**	**Fri 14/6/24**	**Thu 11/7/24**	
898	Construction of concrete berm	21 days	Fri 14/6/24	Thu 4/7/24	895
899	Installation of hand railings	7 days	Fri 5/7/24	Thu 11/7/24	898
900	**Slope Works at Feature No. 11NE-D/FR657 (63m)**	**190 days**	**Thu 25/1/24**	**Thu 1/8/24**	
901	Filling of void with cement soil	7 days	Fri 5/7/24	Thu 11/7/24	898
902	Construction of concrete berm	14 days	Fri 12/7/24	Thu 25/7/24	901
903	Installation of hand railings	7 days	Fri 26/7/24	Thu 1/8/24	902
904	Repainting of handrailing	140 days	Thu 25/1/24	Wed 12/6/24	902FF
905	**Slope Works at Feature No. 11NE-D/C1006 (60m)**	**57 days**	**Thu 1/2/24**	**Thu 28/3/24**	
906	Construction of concrete berm (~30m)	28 days	Thu 1/2/24	Wed 28/2/24	
907	Installation of hand railings (~30m)	14 days	Thu 29/2/24	Wed 13/3/24	906
908	Repainting of handrailing	14 days	Thu 14/3/24	Wed 27/3/24	907
909	**Slope Works at Feature No. 11NE-D/C980 (55m)**	**104 days**	**Thu 29/2/24**	**Tue 11/6/24**	
910	Construction of concrete berm	14 days	Thu 29/2/24	Wed 13/3/24	906
911	Installation of hand railings	7 days	Thu 14/3/24	Wed 20/3/24	910
912	Repainting of handrailing	90 days	Thu 14/3/24	Tue 11/6/24	
913	**Slope Works at Feature No. 11NE-D/C174 (70m)**	**14 days**	**Thu 14/3/24**	**Wed 27/3/24**	
914	Reinstatement of sprayed concrete	14 days	Thu 14/3/24	Wed 27/3/24	910
915	**Slope Works at Feature No. 11NE-D/C688 (167m)**	**28 days**	**Wed 31/1/24**	**Tue 27/2/24**	
916	Constructiion of tree rings x9	28 days	Wed 31/1/24	Tue 27/2/24	
917	Reinstatement of sprayed concrete	7 days	Thu 17/8/23	Wed 23/8/23	
918	**Slope Works at Feature No. 11NE-D/C978 (350m)**	**1152 days**	**Fri 30/7/21**	**Mon 23/9/24**	
919	Construction of concrete berm	8 days	Fri 30/7/21	Fri 6/8/21	
920	Installation of hand railings	8 days	Fri 30/7/21	Fri 6/8/21	
921	Repairing of existing steel maintenance staircase	8 days	Mon 16/9/24	Mon 23/9/24	
922	**Slope Works at Feature No. 11NE-D/C1004 (375m)**	**7 days**	**Fri 30/7/21**	**Thu 5/8/21**	
923	Repainting of handrailing	7 days	Fri 30/7/21	Thu 5/8/21	
924	**Slope Works at Feature No. 11NE-D/C998 (409m)**	**760 days**	**Mon 14/2/22**	**Thu 14/3/24**	
925	Construction of concrete maintenance staircase	19 days	Mon 14/2/22	Fri 4/3/22	
926	Handrailing	14 days	Fri 1/3/24	Thu 14/3/24	
927	**Section of Works 5AI - Establishment Works for all Landscape Softworks in Section 5A of the Works**	**365 days**	**Sat 16/11/24**	**Sat 15/11/25**	
928	Commencement of Establishment Work for Section 5A	0 days	Sat 16/11/24	Sat 16/11/24	837FF+1 day
929	Establishment Work Duration for Section 5A	365 days	Sat 16/11/24	Sat 15/11/25	928SS-1 day
930	Completion of Works in Section 5A	0 days	Sat 15/11/25	Sat 15/11/25	929
931	**Section of Works 5B - Portion 11**	**973 days**	**Sun 27/2/22**	**Sat 26/10/24**	
932	Portion 11	973 days	**Sun 27/2/22**	**Sat 26/10/24**	
933	Provision of site access [212 days after starting date as per Contract]	0 days	Sun 27/2/22	Sun 27/2/22	
934	Portion 9 delay (Handover site to other Contractor)	231.47 days	Tue 14/3/23	Sat 31/8/24	
935	Provision of site access and stockpile area for works at Portion 9	30 days	Sun 1/9/24	Mon 30/9/24	934
936	Road marking & miscellaneous work	30 days	Fri 27/9/24	Sat 26/10/24	
937	**Section of Works 6 - Portion 7**	**519 days**	**Tue 29/11/22**	**Tue 30/4/24**	
938	**Portion 7**	**519 days**	**Tue 29/11/22**	**Tue 30/4/24**	
939	Access date [487 days after starting date as per Contract]	0 days	Tue 29/11/22	Tue 29/11/22	110SS
940	Deferred possession (PMI 58)	90 days	Tue 29/11/22	Sun 26/2/23	939
941	Provision of site access	7 days	Mon 27/2/23	Sun 5/3/23	940
942	Mobilization& Site Clearance	60 days	Mon 6/3/23	Thu 4/5/23	941
943	Time Risk Allowance	15 days	Fri 5/5/23	Fri 19/5/23	942



Task | Critical Task | Milestone | Summary | Progress

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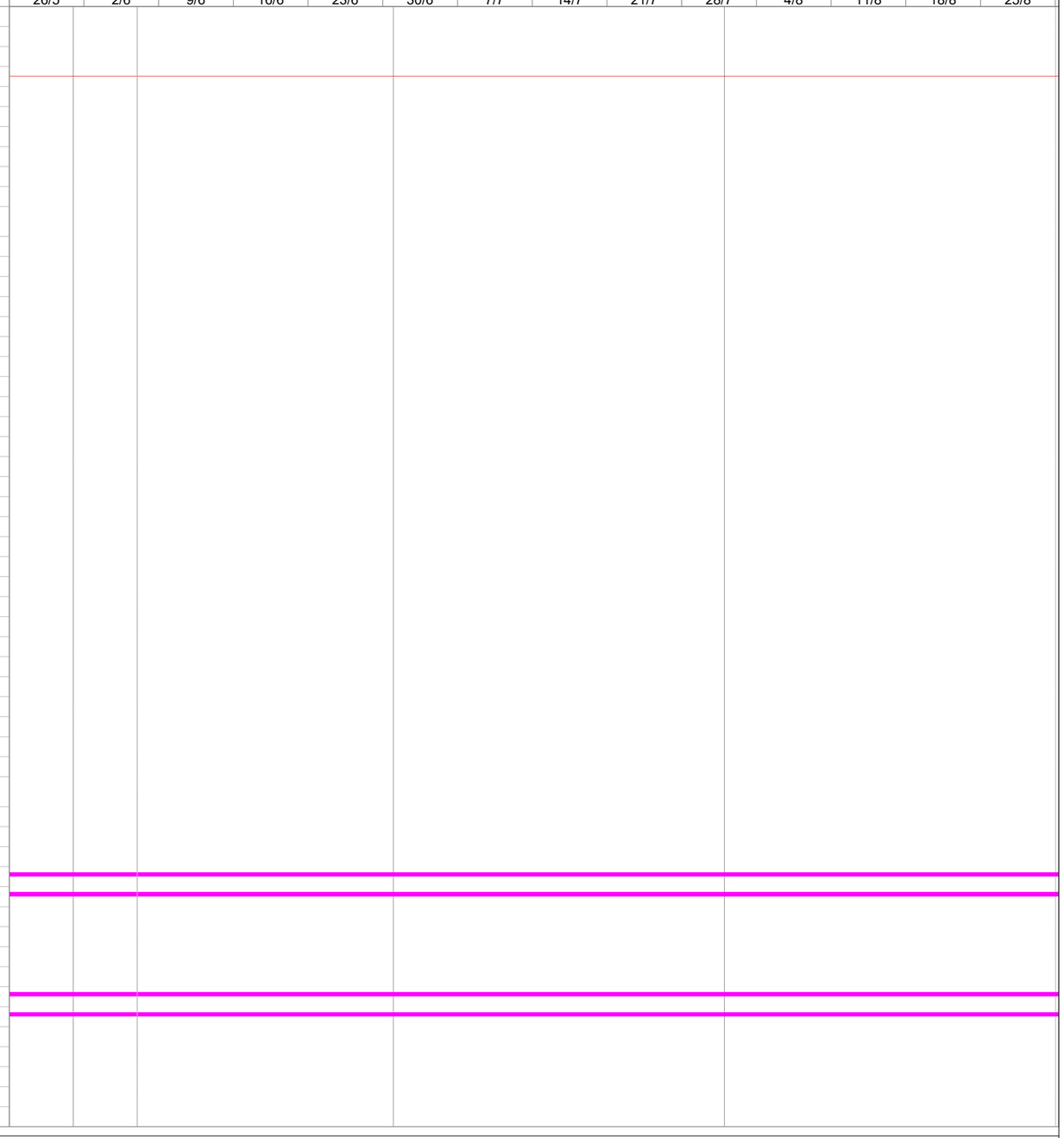
ID	Task Name	Duration	Start	Finish	Predecessors
944	Excavation/backfilling and compaction of material	30 days	Fri 1/12/23	Sat 30/12/23	942,943
945	Construction of U-channels with cover and catchpits	30 days	Sun 31/12/23	Mon 29/1/24	944
946	Road Paving work and asscociates street furniture	28 days	Tue 19/3/24	Mon 15/4/24	945
947	Soft landscaping works	30 days	Mon 1/4/24	Tue 30/4/24	946FF
948	**Irrigation system**	**228 days**	**Sat 16/9/23**	**Tue 30/4/24**	
949	Contractor's design	45 days	Sat 16/9/23	Mon 30/10/23	
950	Approval of WWO542	30 days	Wed 1/11/23	Thu 30/11/23	949
951	Approval of Form WWO 046	21 days	Fri 1/12/23	Thu 21/12/23	950
952	Underground water supply for irrigation	10 days	Fri 22/12/23	Sun 31/12/23	951
953	Irrigation system	10 days	Sun 21/4/24	Tue 30/4/24	947SS
954	**Section of Works 6A - Establishment Works for all Landscape Softworks in Section 6 of the Works**	**365 days**	**Fri 27/9/24**	**Fri 26/9/25**	
955	Commencement of Establishment Work for Section 6	0 days	Fri 27/9/24	Fri 27/9/24	956SS
956	Establishment Work Duration for Section 6	365 days	Fri 27/9/24	Fri 26/9/25	947
957	Completion of Works in Section 6	0 days	Fri 26/9/25	Fri 26/9/25	956FF
958	**Section of Works 7A - Portions 13a, 14 (DELETED)**	**109 days**	**Fri 27/9/24**	**Mon 13/1/25**	
959	**Portion 13a**	**109 days**	**Fri 27/9/24**	**Mon 13/1/25**	
960	Provision of site access [183 days after starting date as per Contract]	9 days	Fri 27/9/24	Sat 5/10/24	
961	Mobilization& Site Clearance	14 days	Fri 27/9/24	Thu 10/10/24	
962	(G.I Works) Geotechnical Instrumentation Installation	72 days	Fri 27/9/24	Sat 7/12/24	
963	Time Risk Allowance	21 days	Fri 27/9/24	Thu 17/10/24	
964	Bulk excavation of cut slope {Access path& Site G-2}	72 days	Fri 27/9/24	Sat 7/12/24	
965	Cutting & filling of slopes to formation level {Access path & Site G-2}	109 days	Fri 27/9/24	Mon 13/1/25	
966	Construction of drainage system with cover and catchpits {Access path & Site G-2}	84 days	Fri 27/9/24	Thu 19/12/24	
967	CCTV, testing & commissioning of drainage works	32 days	Fri 27/9/24	Mon 28/10/24	
968	Construction of footpath, pavements, road furniture& road marking etc.	73 days	Fri 27/9/24	Sun 8/12/24	
969	**Portion 14**	**109 days**	**Fri 27/9/24**	**Mon 13/1/25**	
970	Provision of site access [on starting date as per Contract]	7 days	Fri 27/9/24	Thu 3/10/24	
971	Mobilization& Site Clearance	14 days	Fri 27/9/24	Thu 10/10/24	
972	Preparation& submission of MS, Temp works, associated plans & docs	52 days	Fri 27/9/24	Sun 17/11/24	
973	Engineer's AIP of MS, Temp works, plans & associated docs	22 days	Fri 27/9/24	Fri 18/10/24	
974	Time Risk Allowance	35 days	Fri 27/9/24	Thu 31/10/24	
975	Cutting& filling of slopes to formation level {Site G-2}	108 days	Fri 27/9/24	Sun 12/1/25	
976	Excavation and Construction of Waterlines for fresh water & flushing water	74 days	Fri 27/9/24	Mon 9/12/24	
977	Application for (WW0046: Part IV & V)	30 days	Fri 27/9/24	Sat 26/10/24	
978	Testing and Commissioning of Waterlines for fresh water and flushing water	36 days	Fri 27/9/24	Fri 1/11/24	
979	Construction of pavement footpath	109 days	Fri 27/9/24	Mon 13/1/25	
980	Construction of miscellaneous work	35 days	Fri 27/9/24	Thu 31/10/24	
981	PMI 001 : Additional GI at Portion 14	109 days	Fri 27/9/24	Mon 13/1/25	
982	**Section of Works 7AI - Establishment Works for all Landscape Softworks in Section 7A of the Works (DELETED)**	**365 days**	**Fri 27/9/24**	**Fri 26/9/25**	
983	Commencement of Establishment Work for Section 7A	0 days	Fri 27/9/24	Fri 27/9/24	
984	Establishment Work Duration for Section 7A	365 days	Fri 27/9/24	Fri 26/9/25	
985	Completion of Works in Section 7A	0 days	Fri 26/9/25	Fri 26/9/25	984
986	**Section of Works 7B - Portions 13b, 15**	**1155 days?**	**Sat 26/2/22**	**Fri 25/4/25**	
987	Portion 13b & 15	1155 days?	**Sat 26/2/22**	**Fri 25/4/25**	
988	Provision of site access [212 days after starting date as per Contract]	7 days	Sun 27/2/22	Sat 5/3/22	133
989	Deferred possession	52 days	Sat 26/2/22	Mon 18/4/22	133SS
990	Mobilization& Site Clearance	21 days	Tue 19/4/22	Mon 9/5/22	989
991	Time Risk Allowance	15 days	Tue 10/5/22	Tue 24/5/22	990,367
992	**Portion 13b**	**1067 days?**	**Wed 25/5/22**	**Fri 25/4/25**	**991**
993	**Elevated walkway**	**914 days**	**Wed 25/5/22**	**Sat 23/11/24**	
994	Modification of existing retaining wall RWA10 (PMI 033)	60 days	Wed 25/5/22	Sat 23/7/22	990,367
995	**Modification of existing retaining wall RWA9 & 10**	**447 days**	**Sun 24/7/22**	**Fri 13/10/23**	**990,367,991,994**
996	**Wall RWA10**	**447 days**	**Sun 24/7/22**	**Fri 13/10/23**	
997	Excavation	100 days	Sun 24/7/22	Mon 31/10/22	994
998	Cutting away existing coping by wire sawing machine	75 days	Tue 1/11/22	Sat 14/1/23	997



Task | Critical Task | Milestone | Summary | Progress

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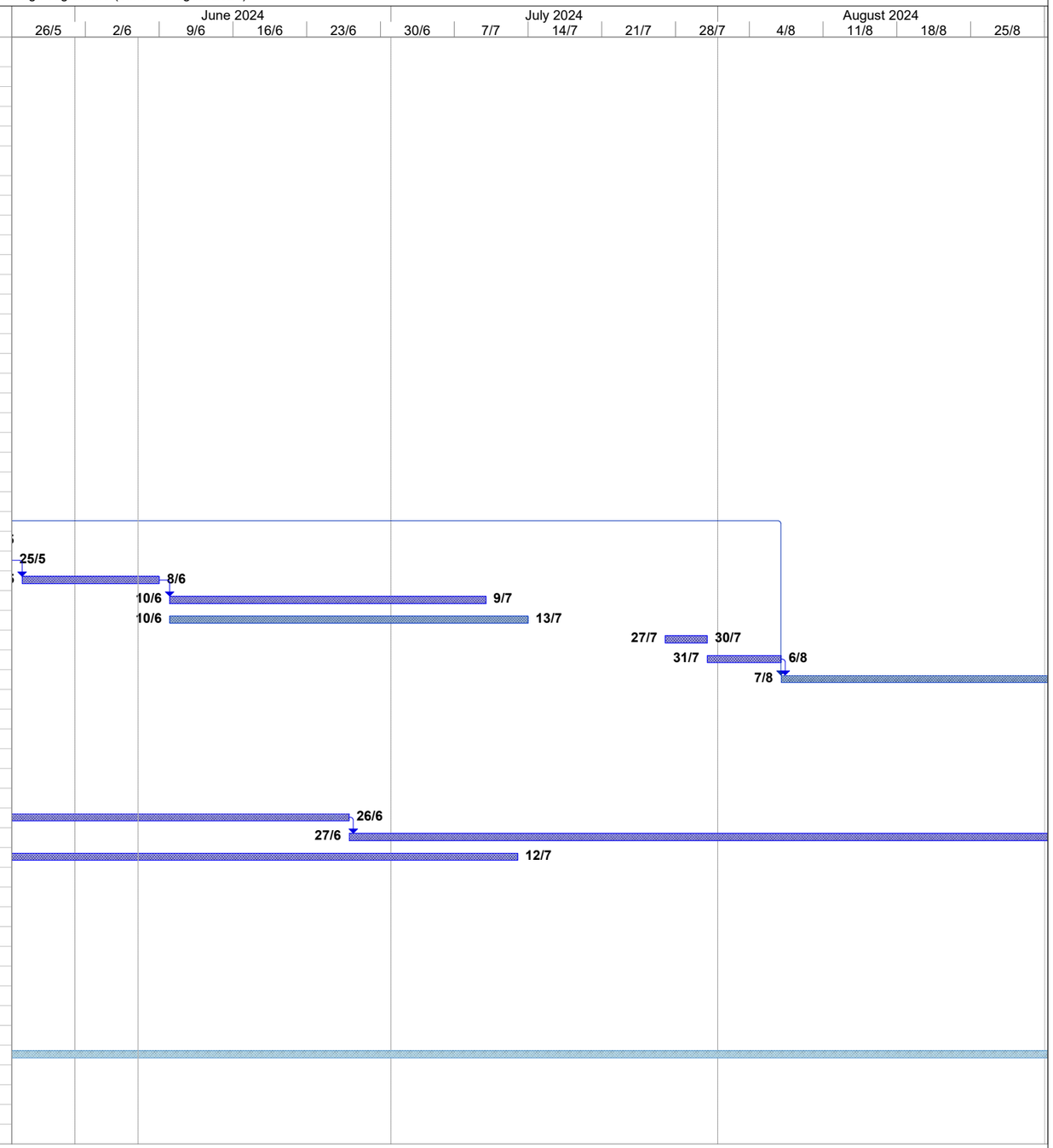
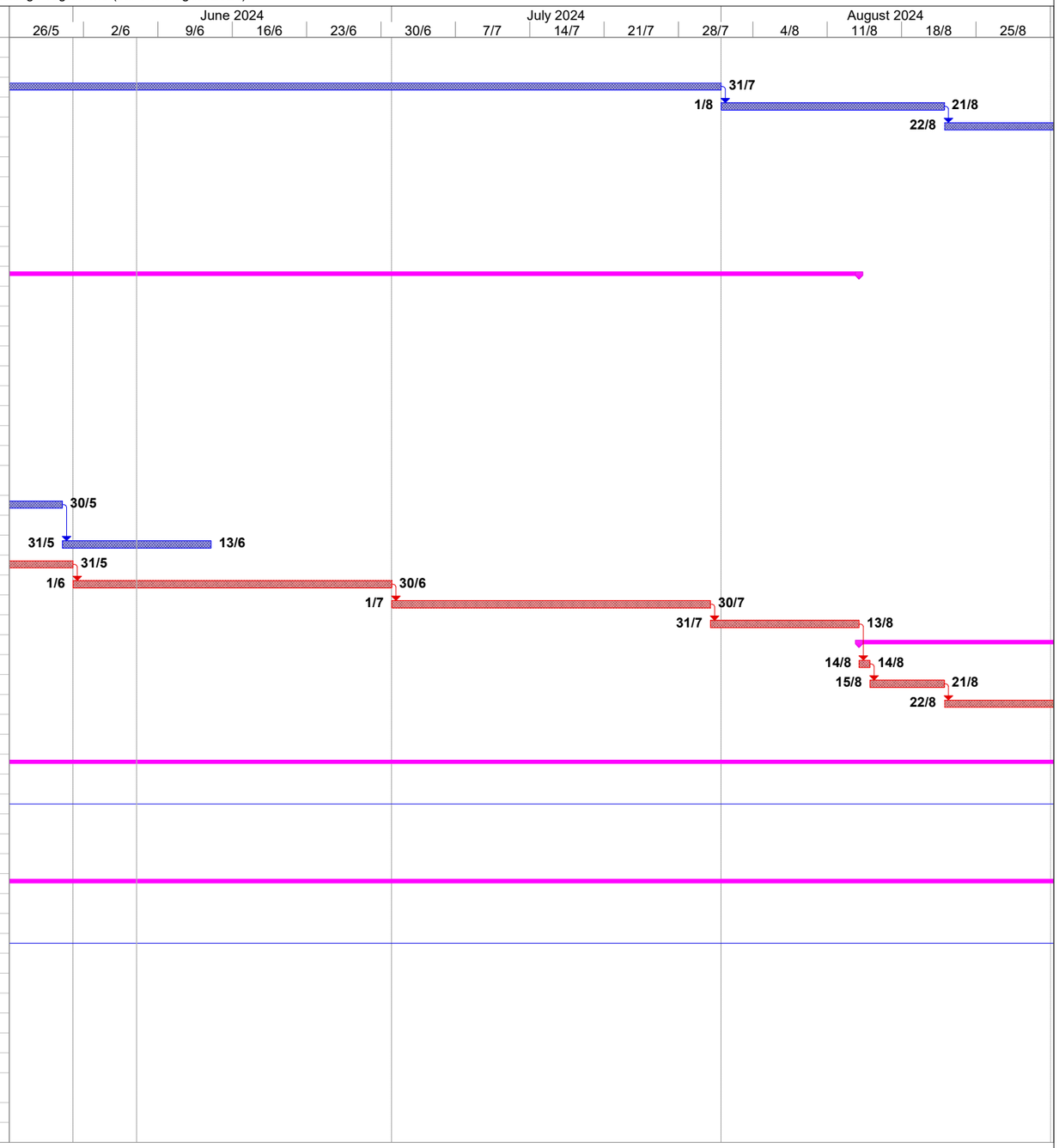
ID	Task Name	Duration	Start	Finish	Predecessors
999	Hacking away existing wall stem by hydraulic breaker (existing vertical bar to be retained for further connection)	45 days	Sun 15/1/23	Tue 28/2/23	998
1000	Construction of new RC wall stem	86 days	Mon 17/7/23	Tue 10/10/23	999
1001	Backfilling	4 days	Tue 10/10/23	Fri 13/10/23	
1002	**Wall RWA9**	**165 days**	**Thu 16/3/23**	**Sun 27/8/23**	
1003	Excavation	15 days	Thu 16/3/23	Thu 30/3/23	999FS+15 days
1004	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	1003
1005	Construction of new RC wall stem	75 days	Sat 10/6/23	Wed 23/8/23	1004
1006	Backfilling	4 days	Thu 24/8/23	Sun 27/8/23	1005
1007	**Bearing**	**252 days**	**Thu 16/3/23**	**Wed 22/11/23**	
1008	Material submission for appproval	30 days	Thu 16/3/23	Fri 14/4/23	
1009	Fabrication	106 days	Sat 15/4/23	Sat 29/7/23	1008
1010	Testing	29 days	Sun 30/7/23	Sun 27/8/23	1009
1011	Installation	7 days	Wed 1/11/23	Tue 7/11/23	1010,1001,1006
1012	Grouting to bearing bases and curing	15 days	Wed 8/11/23	Wed 22/11/23	1011
1013	**Precast beams**	**536 days**	**Wed 7/6/23**	**Sat 23/11/24**	
1014	Submission for approval	78 days	Wed 7/6/23	Wed 23/8/23	
1015	Fabrication	58 days	Wed 4/10/23	Thu 30/11/23	1014
1016	Post-tensioning and grouting	59 days	Tue 31/10/23	Thu 28/12/23	1015FS-31 days
1017	Capping ends	3 days	Fri 29/12/23	Sun 31/12/23	1016
1018	Installation	10 days	Mon 15/1/24	Wed 24/1/24	1017,1012
1019	Grouting to bearing tops and curing	15 days	Thu 25/1/24	Thu 8/2/24	1018
1020	Fabrication of permanent formwork	30 days	Fri 1/3/24	Sat 30/3/24	
1021	Installation of permanent formwork (stage 1)	31 days	Sun 31/3/24	Tue 30/4/24	1020
1022	Casting of in-situ tie beams & slab (Stage 1)	15 days	Wed 1/5/24	Wed 15/5/24	1021
1023	Removal of Formwork (Stage 1)	7 days	Thu 16/5/24	Wed 22/5/24	1022
1024	Edge beam painting	3 days	Thu 23/5/24	Sat 25/5/24	1023
1025	Stage 2 TTA & Falsework	13 days	Mon 27/5/24	Sat 8/6/24	1024
1026	Installation of permanent formwork (stage 2)	30 days	Mon 10/6/24	Tue 9/7/24	1025
1027	Casting of in-situ tie beams & slab (Stage 2)	34 days	Mon 10/6/24	Sat 13/7/24	
1028	Removal of Formwork (Stage 2)	4 days	Sat 27/7/24	Tue 30/7/24	
1029	Removal of Falsework and TTA	7 days	Wed 31/7/24	Tue 6/8/24	
1030	Finishing and landscaping works	109 days	Wed 7/8/24	Sat 23/11/24	1022,1029
1031	**Covered Walkway under PMQP 004**	**386 days**	**Thu 5/10/23**	**Thu 24/10/24**	
1032	Awaiting finished level from PM due to interfacing party	138 days	Thu 5/10/23	Mon 19/2/24	
1033	**Contractor Design**	**84 days**	**Tue 20/2/24**	**Mon 13/5/24**	
1034	Submission	50 days	Tue 20/2/24	Tue 9/4/24	1032
1035	Approval	34 days	Wed 10/4/24	Mon 13/5/24	1034
1036	**Construction**	**164 days**	**Tue 14/5/24**	**Thu 24/10/24**	
1037	Footing	44 days	Tue 14/5/24	Wed 26/6/24	1035
1038	Superstructure	120 days	Thu 27/6/24	Thu 24/10/24	1037
1039	Lighting system	60 days	Tue 14/5/24	Fri 12/7/24	1037SS
1040	**Additional works under PMQP 004**	**732 days?**	**Mon 24/10/22**	**Thu 24/10/24**	
1041	Issuance of PMQP 004	0 days	Mon 24/10/22	Mon 24/10/22	
1042	Hoarding and gate around Site G2	153 days	Wed 1/3/23	Mon 31/7/23	1041
1043	Greywater drainage pipes and manholes at Portion 12	60 days	Thu 1/2/24	Sun 31/3/24	
1044	**Revised slope works including U-channel & catchpit**	**884 days**	**Wed 25/5/22**	**Thu 24/10/24**	
1045	Late handover of site by others	195 days	Mon 24/10/22	Sat 6/5/23	1041SS
1046	Installation of monitoring instruments	14 days	Sun 17/12/23	Sat 30/12/23	1045
1047	**Slope B3**	**305 days**	**Mon 15/4/24**	**Thu 13/2/25**	
1048	Works area handed over by others	46 days	Fri 1/3/24	Mon 15/4/24	1046
1049	Excavatoin of slope B3	200 days	Tue 7/5/24	Fri 22/11/24	
1050	Construction of slope B3	83 days	Sat 23/11/24	Thu 13/2/25	1049
1051	**Slope B4**	**306 days**	**Fri 1/12/23**	**Tue 1/10/24**	
1052	Preparation of Slope details	23 days	Tue 2/1/24	Wed 24/1/24	
1053	Form slope formation	17 days	Tue 20/2/24	Thu 7/3/24	



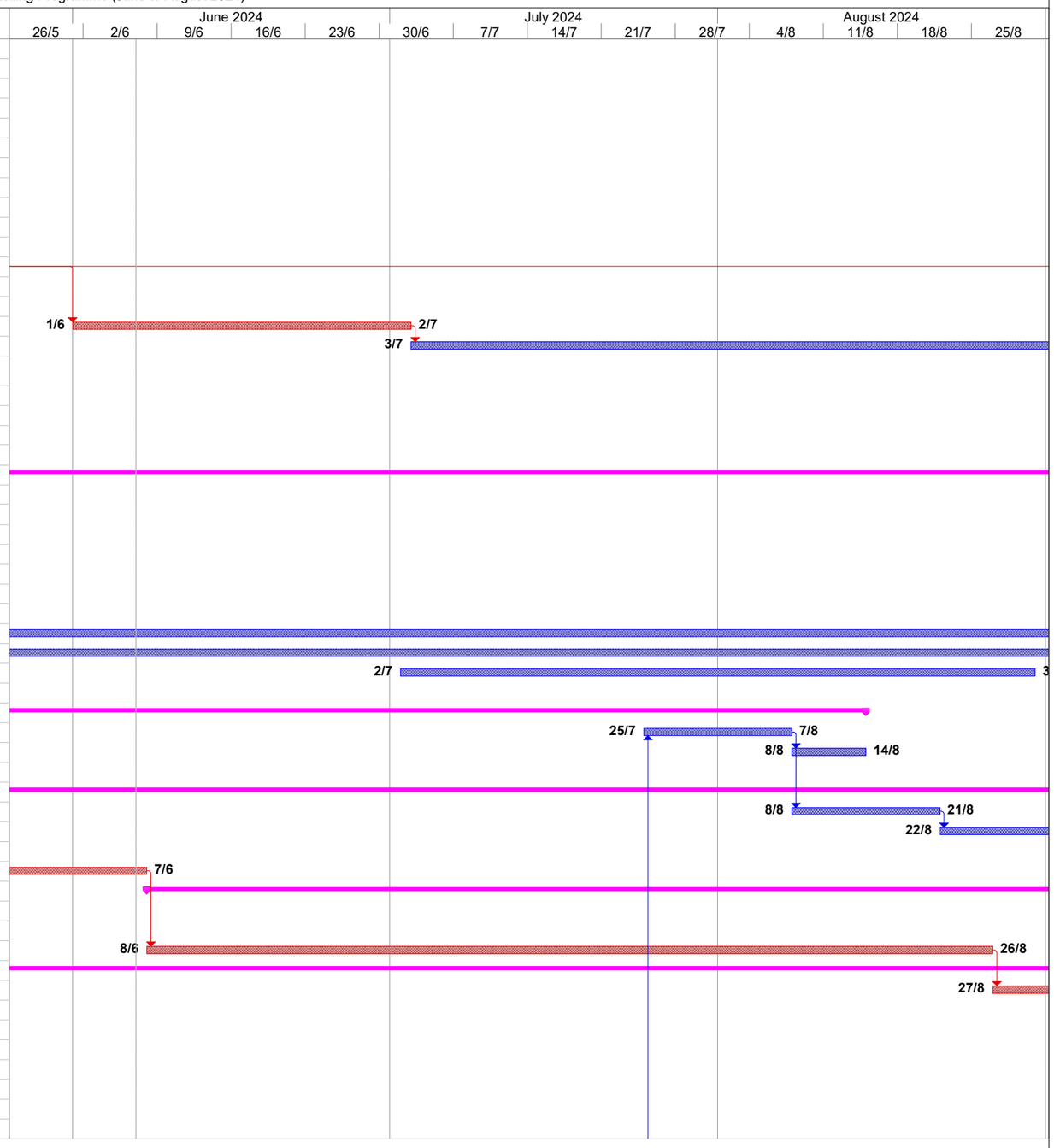
Task | Critical Task | Milestone | Summary | Progress

ID	Task Name	Duration	Start	Finish	Predecessors
1054	Construction of sub-soil & laying filter layer	9 days	Tue 20/2/24	Wed 28/2/24	
1055	Construction of no fine concrete for sub-soil	9 days	Tue 20/2/24	Wed 28/2/24	
1056	Backfill & compacted soil & SRT (33 layers)	135 days	Tue 19/3/24	Wed 31/7/24	
1057	Construction of concrete berm/ handrails	21 days	Thu 1/8/24	Wed 21/8/24	1056
1058	Construction of surface drain	12 days	Thu 22/8/24	Mon 2/9/24	1057
1059	Soil mix	14 days	Wed 4/9/24	Tue 17/9/24	1058
1060	Planting	14 days	Wed 18/9/24	Tue 1/10/24	1059
1061	**Revised access road including roundabout, drainage, sewerage and water mains**	**184 days**	**Wed 1/3/23**	**Thu 31/8/23**	
1062	Drainage, sewerage and water mains	184 days	Wed 1/3/23	Thu 31/8/23	
1063	Concrete pavement at roundabout	61 days	Thu 1/6/23	Mon 31/7/23	1062FS-71 days
1064	Watermains connection, sewerage pipes and manholes connection	683 days?	Mon 12/12/22	Thu 24/10/24	
1065	**footpath**	**611 days**	**Mon 12/12/22**	**Tue 13/8/24**	
1066	Implementation of TTA	1 day	Mon 12/12/22	Mon 12/12/22	1041
1067	UU detection	7 days	Tue 13/12/22	Mon 19/12/22	1066
1068	Trial pit	14 days	Tue 20/12/22	Mon 2/1/23	1067
1069	HYD condition letter and WSD's approval	90 days	Sat 1/7/23	Thu 28/9/23	
1070	Change design by Highways Department Lighting	67 days	Fri 29/9/23	Mon 4/12/23	1069
1071	TTA design review and revise	50 days	Tue 5/12/23	Tue 23/1/24	1070
1072	Implementation of TTA	1 day	Wed 24/1/24	Wed 24/1/24	1071
1073	UU detection	3 days	Thu 25/1/24	Sat 27/1/24	1072
1074	Trial pit	7 days	Sun 28/1/24	Sat 3/2/24	1073
1075	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	1074
1076	UU protection, relocation of hydrant	30 days	Wed 1/5/24	Thu 30/5/24	1075
1077	Cable for relocation of lamp post (Stage 1)	14 days	Sun 4/2/24	Sat 17/2/24	1074
1078	Cable for relocation of lamp post (Stage 2)	14 days	Fri 31/5/24	Thu 13/6/24	1076
1079	Relocation of Lamp post	30 days	Thu 2/5/24	Fri 31/5/24	
1080	Construction of waternain, sewerage pipe and manhole	30 days	Sat 1/6/24	Sun 30/6/24	1079
1081	UU installation	30 days	Mon 1/7/24	Tue 30/7/24	1080
1082	Reinstatement	14 days	Wed 31/7/24	Tue 13/8/24	1081
1083	**Portion 15- Sewerage Works**	**143 days**	**Wed 14/8/24**	**Fri 3/1/25**	
1084	Implementation of TTA	1 day	Wed 14/8/24	Wed 14/8/24	1082
1085	UU Detection	7 days	Thu 15/8/24	Wed 21/8/24	1084
1086	Trial pit	14 days	Thu 22/8/24	Wed 4/9/24	1085
1087	Construction	90 days	Thu 5/9/24	Tue 3/12/24	1086
1088	Reinstatement	31 days	Wed 4/12/24	Fri 3/1/25	1087
1089	**Irrigation system**	**663 days**	**Fri 19/5/23**	**Tue 11/3/25**	
1090	Contractor's design	76 days	Fri 19/5/23	Wed 2/8/23	
1091	Approval of WWO542	30 days	Thu 3/8/23	Fri 1/9/23	1090
1092	Approval of Form WWO 046	21 days	Fri 27/9/24	Thu 17/10/24	1091
1093	Underground water supply for irrigation	60 days	Fri 18/10/24	Mon 16/12/24	1092
1094	Irrigation system	45 days	Sun 26/1/25	Tue 11/3/25	1101SS,1093
1095	**Lighting system**	**939 days**	**Fri 30/9/22**	**Fri 25/4/25**	
1096	Contractor's design	45 days	Fri 30/9/22	Sun 13/11/22	
1097	Application for electricity power supply	362 days	Mon 14/11/22	Fri 10/11/23	1096
1098	Lighting design	300 days	Mon 14/11/22	Sat 9/9/23	
1099	LCSD's approval of lighting of ighting system	31 days	Fri 27/9/24	Sun 27/10/24	1098
1100	Installation including ducting and draw pit	90 days	Mon 28/10/24	Sat 25/1/25	1099
1101	Installation of lighting	60 days	Sun 26/1/25	Wed 26/3/25	1100
1102	Energization	15 days	Thu 27/3/25	Thu 10/4/25	1101
1103	Testing and Commissioning	15 days	Fri 11/4/25	Fri 25/4/25	1102
1104	Soil placement, woodland greening work and soft landscape works	120 days	Fri 27/9/24	Fri 24/1/25	
1105	**Section of Works 7BI - Establishment Works for all Landscape Softworks in Section 7B of the Works**	**365 days**	**Sat 4/1/25**	**Sat 3/1/26**	
1106	Commencement of Establishment Work for Section 7B	0 days	Sat 4/1/25	Sat 4/1/25	1088FS+1 day
1107	Establishment Work Duration for Section 7B	365 days	Sat 4/1/25	Sat 3/1/26	1106SS-1 day



Task | Critical Task | Milestone | Summary | Progress

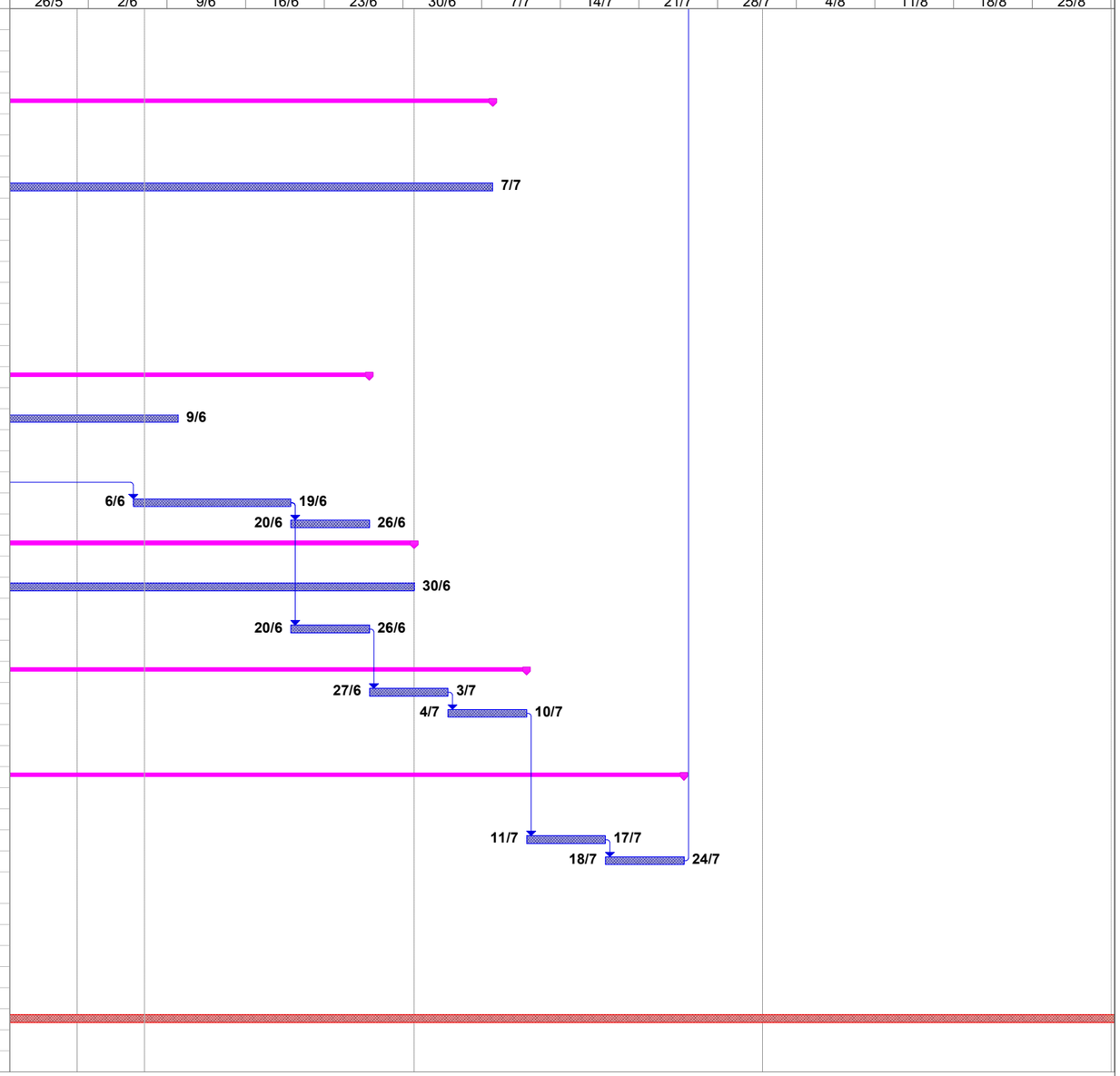
ID	Task Name	Duration	Start	Finish	Predecessors
1108	Completion of Works in Section 7B	0 days	Sat 3/1/26	Sat 3/1/26	1107
1109	**Section of Works 8 - Portion 16**	**809 days**	**Thu 16/6/22**	**Sun 1/9/24**	
1110	Portion 16	809 days	**Thu 16/6/22**	**Sun 1/9/24**	
1111	Site access date [321 days after starting date as per Contract]	0 days	Thu 16/6/22	Thu 16/6/22	149SS
1112	Time Risk Allowance	24 days	Thu 16/6/22	Sat 9/7/22	1111
1113	Late handover of site by others	350 days	Thu 16/6/22	Wed 31/5/23	1112
1114	Mobilization& Site Clearance	4 days	Thu 1/6/23	Sun 4/6/23	1113
1115	Removal of existing rock slope	45 days	Mon 5/6/23	Wed 19/7/23	1114
1116	Construction of fill slope A7	90 days	Thu 20/7/23	Tue 17/10/23	1115
1117	Construction of fill slope A8	80 days	Sun 30/7/23	Tue 17/10/23	1116FF
1118	Construction of slope surface drainage system	45 days	Wed 18/10/23	Fri 1/12/23	1116
1119	Hydroseeding	30 days	Sun 25/2/24	Mon 25/3/24	1118
1120	Chain link fence	30 days	Sat 2/12/23	Sun 31/12/23	1118FF
1121	Thrust boring of additional pipe from S201D to MHT1	179 days	Thu 5/10/23	Sun 31/3/24	
1122	Construction of staircase at Slope A6 and concrete pavement (under PMI)	32 days	Sat 1/6/24	Tue 2/7/24	1119
1123	Additional stormwater drainage pipe (PMN 092)	61 days	Wed 3/7/24	Sun 1/9/24	1122
1124	**Section of Works 8A - Establishment Works for all Landscape Softworks in Section 8 of the Works**	**365 days**	**Fri 27/9/24**	**Fri 26/9/25**	
1125	Commencement of Establishment Work for Section 8	0 days	Fri 27/9/24	Fri 27/9/24	1126SS
1126	Establishment Work Duration for Section 8	365 days	Fri 27/9/24	Fri 26/9/25	1119
1127	Completion of Works in Section 8	0 days	Fri 26/9/25	Fri 26/9/25	1126FF
1128	**Section of Works 9 - Portion 17**	**977 days**	**Sun 27/2/22**	**Wed 30/10/24**	
1129	**Portion 17**	**977 days**	**Sun 27/2/22**	**Wed 30/10/24**	
1130	Provision of site access [212 days after starting date as per Contract]	0 days	Sun 27/2/22	Sun 27/2/22	160SS
1131	Deferred possession	30 days	Sun 27/2/22	Mon 28/3/22	1130
1132	Slope inspection & assessment work & Tree Survey	23 days	Tue 29/3/22	Wed 20/4/22	1131
1133	Mobilization, access & Site Clearance	15 days	Thu 21/4/22	Thu 5/5/22	1132
1134	Time Risk Allowance	14 days	Fri 6/5/22	Thu 19/5/22	1132,1133
1135	Access blocked by C1 at hiking trail	181 days	Mon 3/7/23	Sat 30/12/23	
1136	Demolition and removal of disused water pipe and sprinkler system	50 days	Fri 20/5/22	Fri 8/7/22	1134
1137	Repair of cracks at drainage channel and concrete berm	777 days	Thu 1/9/22	Wed 16/10/24	1136
1138	Reinstatemnt of joint sealant at drainage channel	776 days	Fri 16/9/22	Wed 30/10/24	
1139	Installation of display sign for slope registration	60 days	Tue 2/7/24	Fri 30/8/24	
1140	Reinstatement of eroded soil berm due to inclement weather (PMI 117)	128 days	Thu 7/9/23	Fri 12/1/24	
1141	**Slope Works at Feature No. 11NE-D/C948 (310m)**	**228 days**	**Sun 31/12/23**	**Wed 14/8/24**	
1142	Construction of concrete berm	14 days	Thu 25/7/24	Wed 7/8/24	1203
1143	Repainting of existing steel maintenance staircase	7 days	Thu 8/8/24	Wed 14/8/24	1142
1144	Construction of wire mesh	80 days	Sun 31/12/23	Tue 19/3/24	1135
1145	**Slope Works at Feature No. 11NE-D/C949 (603m)**	**176 days**	**Wed 20/3/24**	**Wed 11/9/24**	
1146	Filling of voids with concrete	14 days	Thu 8/8/24	Wed 21/8/24	1142
1147	Construction of concrete berm	14 days	Thu 22/8/24	Wed 4/9/24	1146
1148	Installation of hand railings	7 days	Thu 5/9/24	Wed 11/9/24	1147
1149	Construction of wire mesh	80 days	Wed 20/3/24	Fri 7/6/24	1144
1150	**Slope Works at Feature No. 11NE-D/C981 (390m)**	**110 days**	**Sat 8/6/24**	**Wed 25/9/24**	
1151	Construction of concrete berm	14 days	Thu 5/9/24	Wed 18/9/24	1147
1152	Installation of hand railings	7 days	Thu 19/9/24	Wed 25/9/24	1151
1153	Construction of wire mesh	80 days	Sat 8/6/24	Mon 26/8/24	1149
1154	**Slope Works at Feature No. 11NE-B/C1013 (340m)**	**255 days**	**Mon 19/2/24**	**Wed 30/10/24**	
1155	Construction of wire mesh	65 days	Tue 27/8/24	Wed 30/10/24	1153
1156	Construction of concrete berm	14 days	Thu 19/9/24	Wed 2/10/24	1151
1157	Installation of hand railings	7 days	Thu 3/10/24	Wed 9/10/24	1156
1158	Construction of concrete maintenance staircase with hand railings	33 days	Mon 19/2/24	Fri 22/3/24	
1159	**Slope Works at Feature No. 11NE-B/C902 (360m)**	**70 days**	**Thu 1/2/24**	**Wed 10/4/24**	
1160	Filling of void with cement soil	14 days	Thu 1/2/24	Wed 14/2/24	
1161	Filling of void with concrete	14 days	Thu 15/2/24	Wed 28/2/24	1160
1162	Construction of concrete berm	14 days	Thu 29/2/24	Wed 13/3/24	1161



Task | Critical Task | Milestone | Summary | Progress

Based on Revised Programme dated 24 April 2024.

ID	Task Name	Duration	Start	Finish	Predecessors
1163	Installation of hand railings	7 days	Thu 14/3/24	Wed 20/3/24	1162
1164	Repainting of existing steel maintenance staircase	14 days	Thu 28/3/24	Wed 10/4/24	1163
1165	**Slope Works at Feature No. 11NE-B/C224 (40m)**	14 days	Thu 14/3/24	Wed 27/3/24	
1166	Reinstatement of sprayed concrete	14 days	Thu 14/3/24	Wed 27/3/24	1162
1167	**Slope Works at Feature No. 11NE-B/C225 (60m)**	102 days	Thu 28/3/24	Sun 7/7/24	
1168	Reinstatement of sprayed concrete	14 days	Thu 28/3/24	Wed 10/4/24	1166
1169	Reinstatement of damaged granite stone planter wall and granoite stone facing	14 days	Thu 11/4/24	Wed 24/4/24	1168
1170	Demolition and removal of existing damaged U-channel	14 days	Thu 25/4/24	Wed 8/5/24	1169
1171	Construction of 225 mm U channel (60m)	60 days	Thu 9/5/24	Sun 7/7/24	1170
1172	**Slope Works at Feature No. 11NE-B/C1014 (90m)**	**14 days**	**Thu 11/4/24**	**Wed 24/4/24**	
1173	Repair/Construction of concrete berm	14 days	Thu 11/4/24	Wed 24/4/24	1168
1174	**Slope Works at Feature No. 11NE-D/C983 (215m)**	**21 days**	**Thu 25/4/24**	**Wed 15/5/24**	
1175	Construction of concrete berm	14 days	Thu 25/4/24	Wed 8/5/24	1173
1176	Installation of hand railings	7 days	Thu 9/5/24	Wed 15/5/24	1175
1177	**Slope Works at Feature No. 11NE-D/C982 (230m)**	**37 days**	**Tue 2/1/24**	**Wed 7/2/24**	
1178	Repair/Construction of concrete berm	37 days	Tue 2/1/24	Wed 7/2/24	
1179	Installation of hand railings	24 days	Mon 15/1/24	Wed 7/2/24	
1180	**Slope Works at Feature No. 11NE-B/C901 (290m)**	**391 days**	**Fri 2/6/23**	**Wed 26/6/24**	
1181	Installation of non-biodegradable erosion control mat	90 days	Fri 2/6/23	Wed 30/8/23	
1182	Hydroseeding	70 days	Mon 1/4/24	Sun 9/6/24	1181
1183	Installation of hand railings	36 days	Thu 7/9/23	Thu 12/10/23	
1184	Repainting of handrailing	20 days	Sun 22/10/23	Fri 10/11/23	
1185	Filling of void with concrete	37 days	Tue 2/1/24	Wed 7/2/24	
1186	Reinstatement of concrete berm	14 days	Thu 6/6/24	Wed 19/6/24	1185
1187	Construction of lockable gate	7 days	Thu 20/6/24	Wed 26/6/24	1186
1188	**Slope Works at Feature No. 11NE-B/C900 (335m)**	**723 days**	**Sat 9/7/22**	**Sun 30/6/24**	
1189	Installation of non-biodegradable erosion control mat	78 days	Sun 12/2/23	Sun 30/4/23	
1190	Hydroseeding	91 days	Mon 1/4/24	Sun 30/6/24	1189
1191	Installation of hand railings	60 days	Sat 9/7/22	Tue 6/9/22	
1192	Reinstatement of concrete berm	7 days	Thu 20/6/24	Wed 26/6/24	1186
1193	Repainting of handrailing	30 days	Wed 10/5/23	Thu 8/6/23	
1194	**Slope Works at Feature No. 11NE-B/C899 (280m)**	**388 days**	**Mon 19/6/23**	**Wed 10/7/24**	
1195	Filling of voids with concrete	7 days	Thu 27/6/24	Wed 3/7/24	1192
1196	Construction of concrete berm	7 days	Thu 4/7/24	Wed 10/7/24	1195
1197	Installation of hand railings	60 days	Mon 19/6/23	Thu 17/8/23	
1198	Repainting of handrailing	30 days	Thu 6/7/23	Fri 4/8/23	
1199	**Slope Works at Feature No. 11NE-D/C872 (250m)**	**747 days**	**Sat 9/7/22**	**Wed 24/7/24**	
1200	Installation of hand railings	60 days	Sat 9/7/22	Tue 6/9/22	
1201	Repainting of handrailing	30 days	Sun 2/4/23	Mon 1/5/23	
1202	Filling of void with concrete	7 days	Thu 11/7/24	Wed 17/7/24	1196
1203	Reinstatement of concrete berm	7 days	Thu 18/7/24	Wed 24/7/24	1202
1204	**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**	
1205	Commencement of Establishment Work for Section 9	0 days	Thu 31/10/24	Thu 31/10/24	1206SS
1206	Establishment Work Duration for Section 9	365 days	Thu 31/10/24	Thu 30/10/25	1155
1207	Completion of Works in Section 9	0 days	Thu 30/10/25	Thu 30/10/25	1206FF
1208	**Section of Works 10 - All Tree Protection and Preservation Works**	**1202 days?**	**Fri 30/7/21**	**Tue 12/11/24**	
1209	Commencement of All Tree Protection and Preservation Work	0 days	Fri 30/7/21	Fri 30/7/21	
1210	All Tree Protection and Preservation Work	1202 days	Fri 30/7/21	Tue 12/11/24	1209
1211	Completion of All Tree Protection and Preservation Work	0 days	Tue 12/11/24	Tue 12/11/24	1210
1212		1 day?	Fri 30/7/21	Fri 30/7/21	

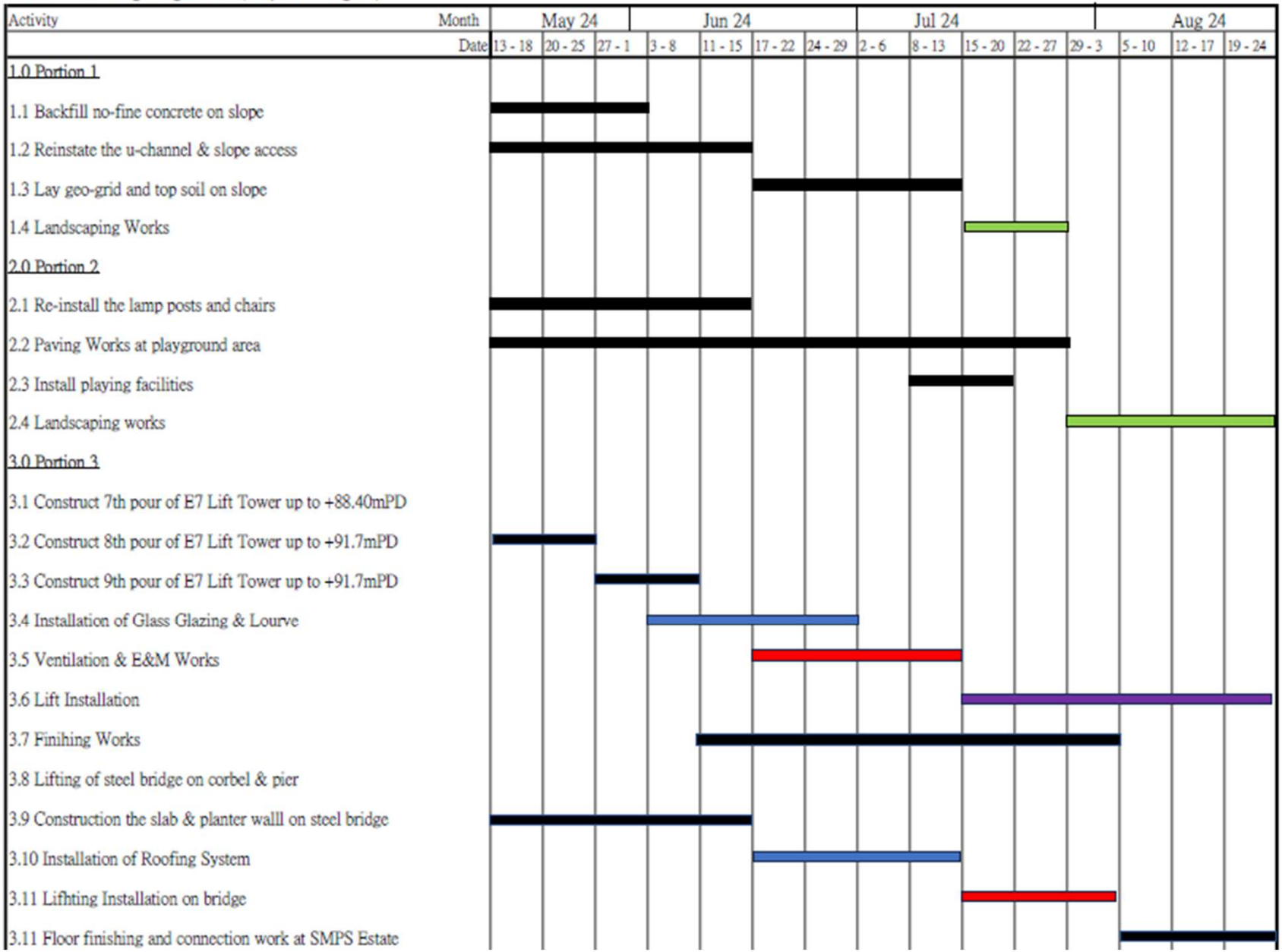


Task | Critical Task | Milestone | Summary | Progress

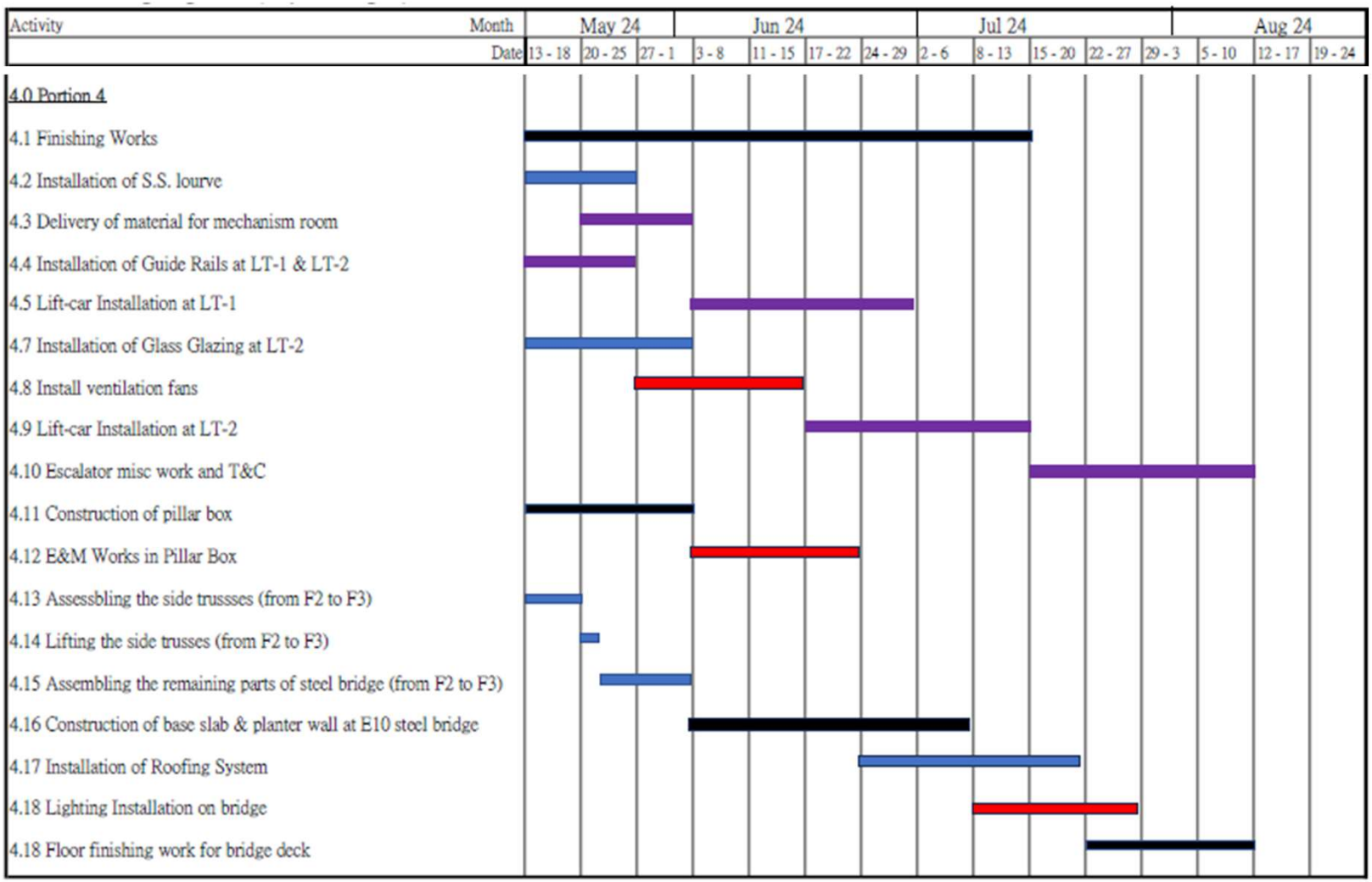
Contract 5 (NE/2019/02)

Major Activities in Coming 3 Months

3 Months Rolling Programme (May 24 - Aug 24)



Major Activities in Coming 3 Months



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

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METRES
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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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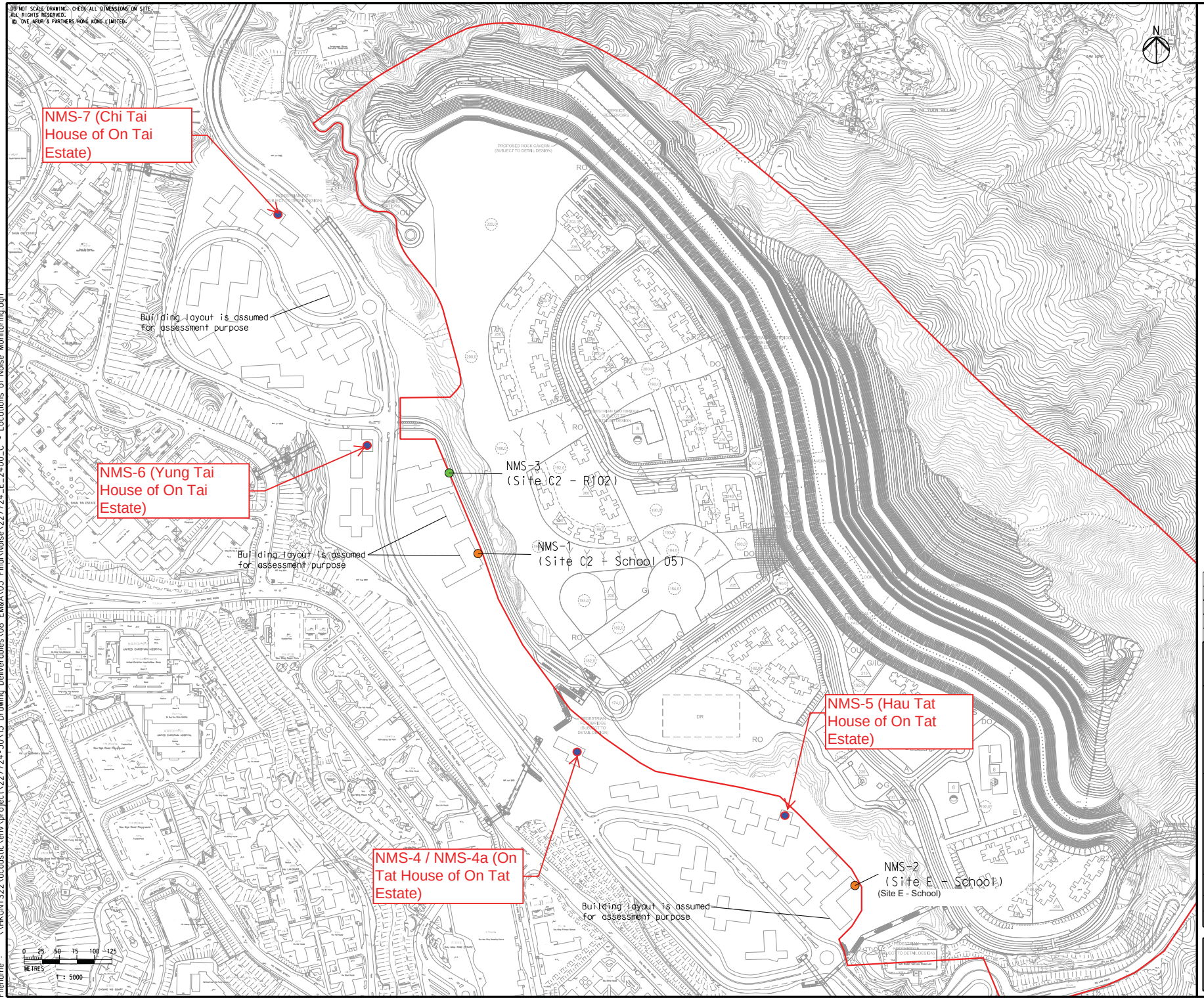


Legend

- 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

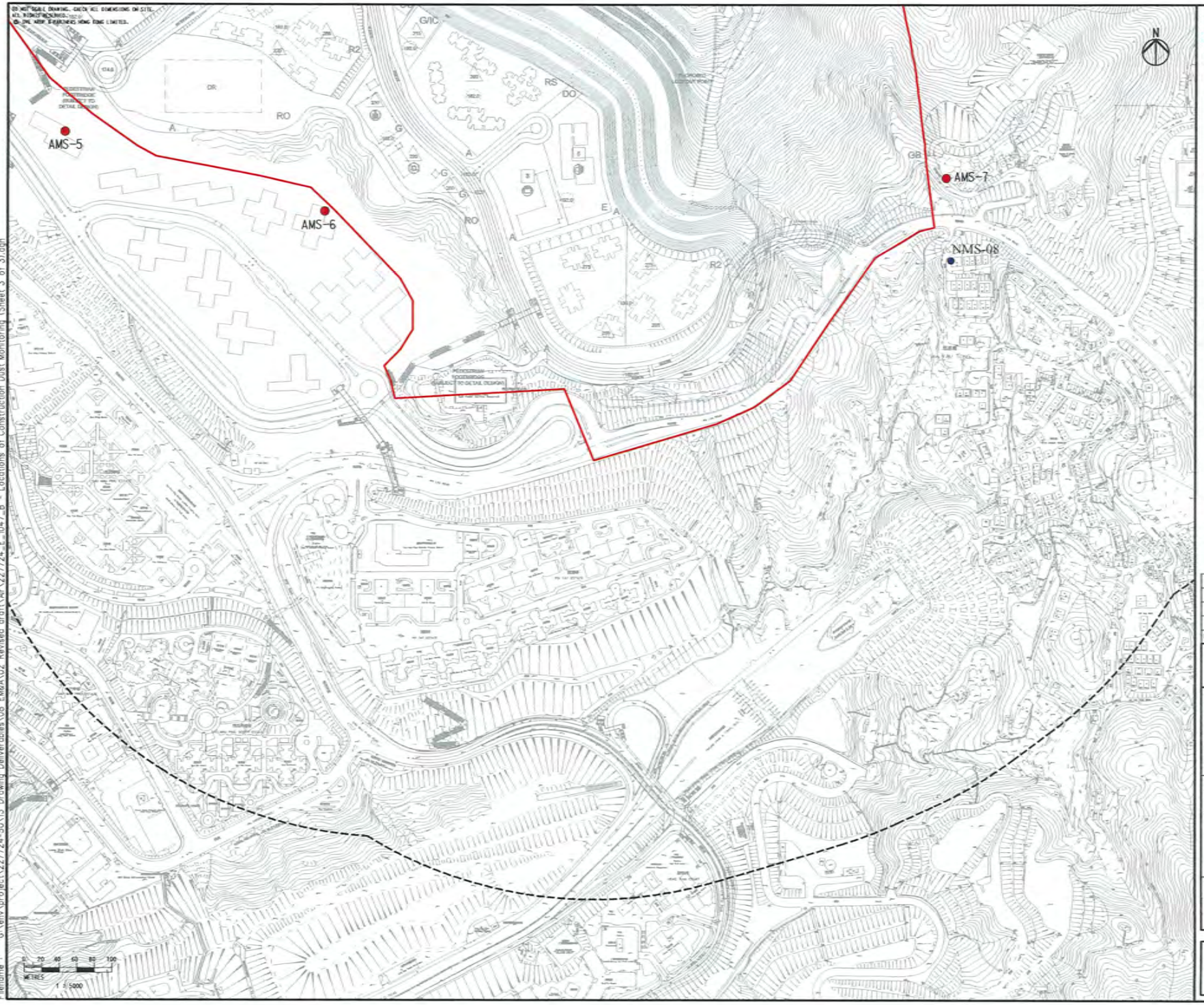
Drawn	Date	Checked	Approved
GL	03/14	TC	ST

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)

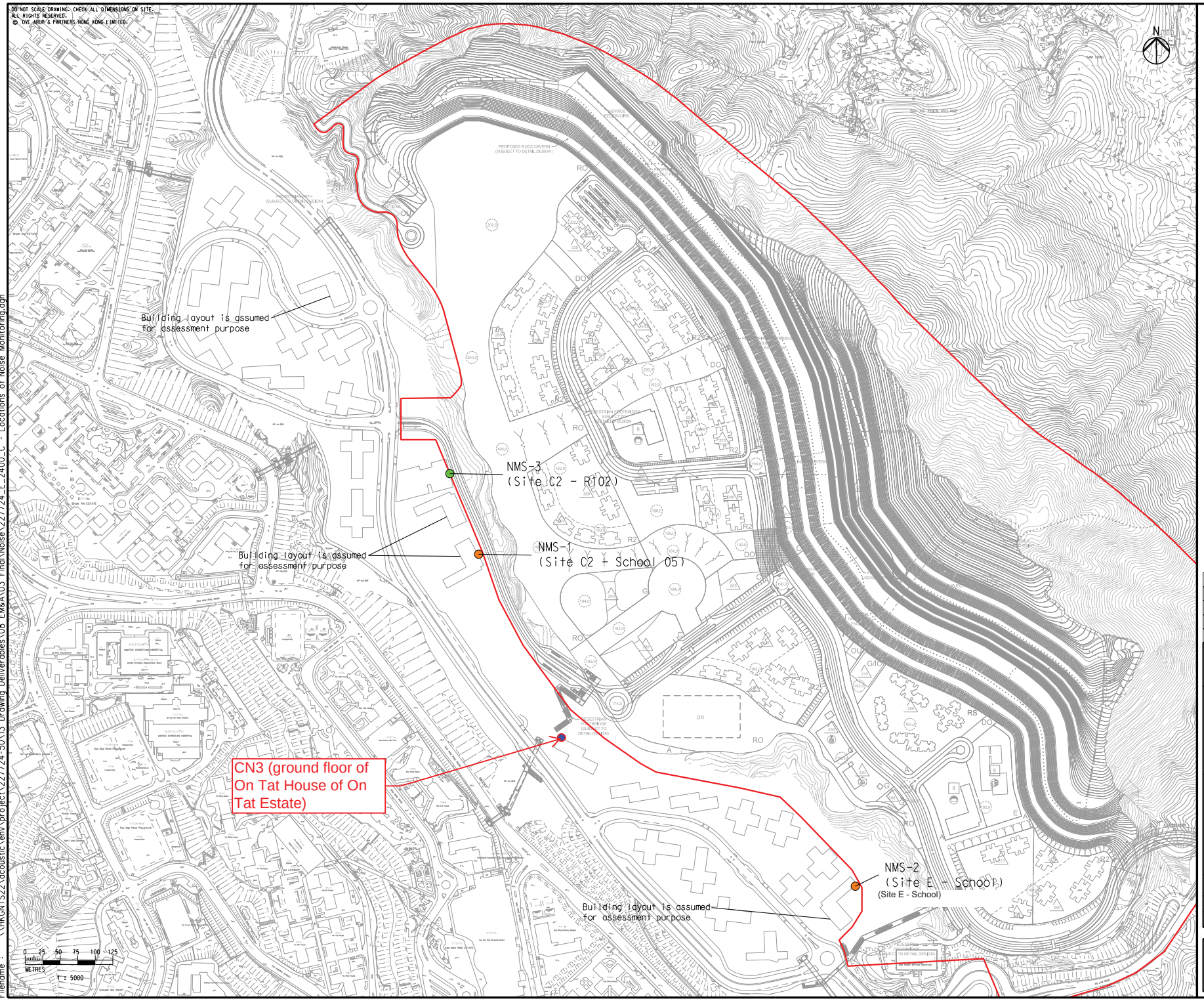
Development of Anderson Road Quarry - Investigation

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
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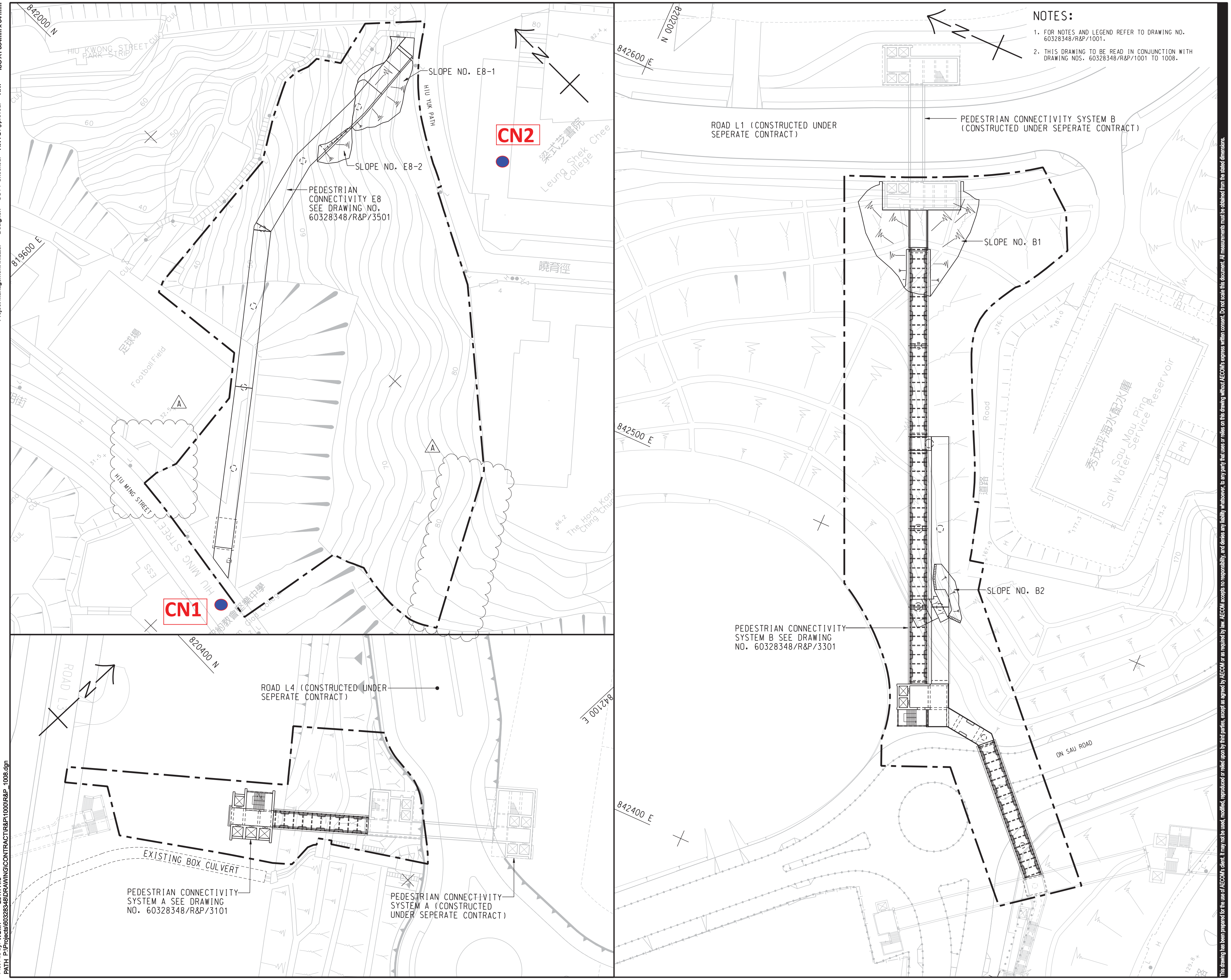


Project Management Initials: Designer: CCYT Checked: AWYC Approved: HKT ISO A1 594mm x 841mm

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

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

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

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

● noise monitoring location

ISSUE/REVISION 修訂

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

STATUS 階段

SCALE 比例 A1 1:500

DIMENSION UNIT 尺寸單位 METRES

KEY PLAN 索引圖 A1 1:60000

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

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-Apr-24
Location ID : AMS1a		Next Calibration Date:	28-Jun-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	5.8	5.7	11.5	1.654	48	48.85	Slope = 43.3743
13	5.3	5.3	10.6	1.588	46	46.81	Intercept = -22.9533
10	4.5	4.5	9	1.465	39	39.69	Corr. coeff. = 0.9979
7	2.9	2.9	5.8	1.180	27	27.48	
5	2.0	2.0	4	0.983	20	20.35	

Calculations :

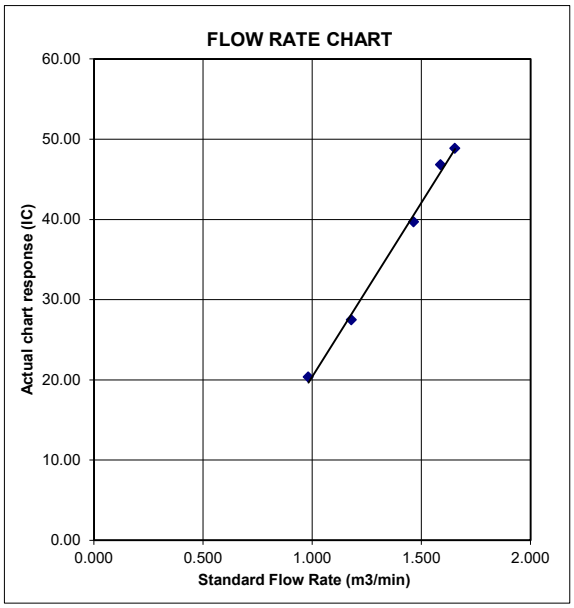
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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-Apr-24
Location ID :	AMS 5	Next Calibration Date:	28-Jun-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 = 48.5516
13	5.4	5.4	10.8	1.603	48	48.85	Intercept = -29.3695
10	4.4	4.4	8.8	1.449	39	39.69	Corr. coeff. = 0.9987
7	2.9	2.9	5.8	1.180	28	28.49	
5	2.0	2.0	4	0.983	18	18.32	

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)

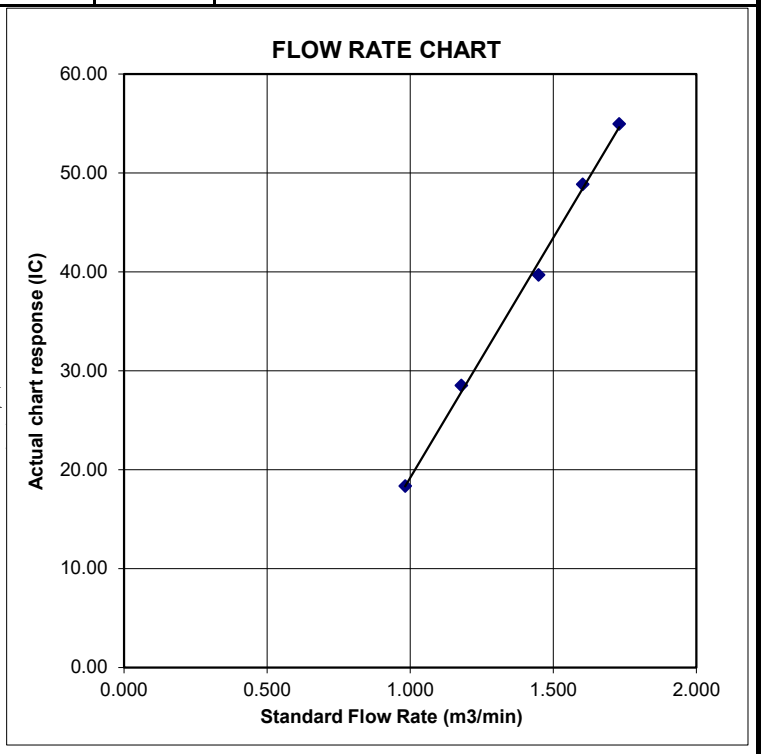
m = sampler slope

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-Apr-24
Location ID :	AMS 6	Next Calibration Date:	28-Jun-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 = 45.7980
13	5.2	5.2	10.4	1.573	47	46.00	Intercept = -24.9710
10	3.5	3.5	7	1.294	34	34.60	Corr. coeff. = 0.9991
7	2.5	2.5	5	1.096	25	25.44	
5	1.6	1.6	3.2	0.881	15	15.26	

Calculations :

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

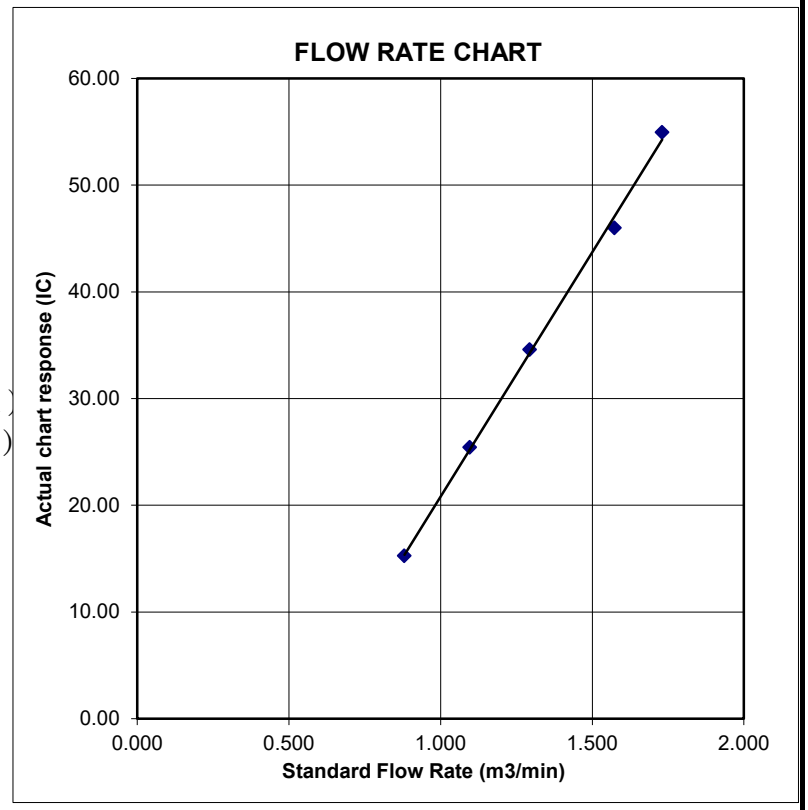
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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-Apr-24
Location ID :	AMS 7	Next Calibration Date:	28-Jun-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	6.4	6.4	12.8	1.744	54	54.95	Slope = 43.0357
13	5.3	5.3	10.6	1.588	46	46.81	Intercept = -20.6530
10	4.1	4.1	8.2	1.399	39	39.69	Corr. coeff. = 0.9993
7	2.8	2.8	5.6	1.159	29	29.51	
5	1.7	1.7	3.4	0.907	18	18.32	

Calculations :

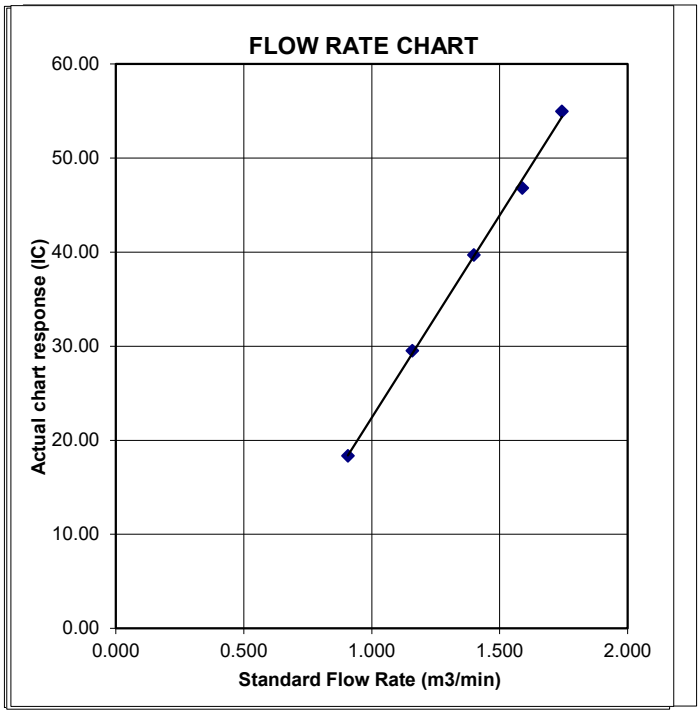
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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	: **HK2410654**
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	: 14-MAR-2024
		DATE OF ISSUE	: 21-MAR-2024
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

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

Signatories

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

Signatories	*Position*
Richard Fung	Managing Director

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

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

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

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

WORK ORDER	:	HK2410654
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.
HK2410654-001	S/N: 3Y6502	AIR	14-Mar-2024	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
Last Calibration Date:	16 February 2024

Equipment Verification Results:

Verification Date: 7 & 8 March 2024

Date	Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
7-Mar-24	2hr01mins	09:26 ~ 11:27	18.7	1016.6	49.9	3166	26.1
7-Mar-24	2hr02mins	11:34 ~ 13:36	18.7	1016.6	41.2	2647	21.6
7-Mar-24	2hr02mins	13:45 ~ 15:47	18.7	1016.6	53.1	3057	25.0
8-Mar-24	2hr01mins	10:22 ~ 12:23	18.8	1018.8	34.3	2198	18.2
8-Mar-24	2hr14mins	12:44 ~ 14:58	18.8	1018.8	49.1	3106	23.1

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

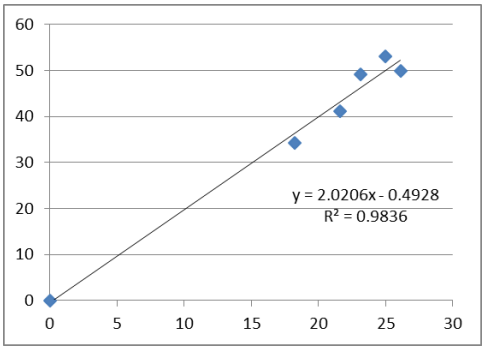
Sensitivity Adjustment Scale Setting (After Calibration) 658 (CPM)

Linear Regression of Y or X

Slope (K-factor): 2.0206 (µg/m^3)/CPM

Correlation Coefficient (R) 0.9918

Date of Issue 13 March 2024



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 2.0206 (µg/m^3)/CPM should be apply for TSP monitoring

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

Operator : Martin Li Signature : Date : 13 March 2024

QC Reviewer : Ben Tam Signature : Date : 13 March 2024

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	16-Feb-24
Location ID :	Calibration Room - TISCH Higher Volume Sampler (Model TE-5170) S/N:1260 (HVS 018)	Next Calibration Date:	16-May-24

CONDITIONS

Sea Level Pressure (hPa)	1019	Corrected Pressure (mm Hg)	764.25
Temperature (°C)	20.4	Temperature (K)	293

CALIBRATION ORIFICE

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

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	5.8	5.8	11.6	1.631	54	54.57	Slope = 31.3860
13	4.7	4.7	9.4	1.470	47	47.50	Intercept = 2.3377
10	3.6	3.6	7.2	1.289	42	42.45	Corr. coeff. = 0.9976
8	2.4	2.4	4.8	1.055	35	35.37	
5	1.2	1.2	2.4	0.751	26	26.28	

Calculations :

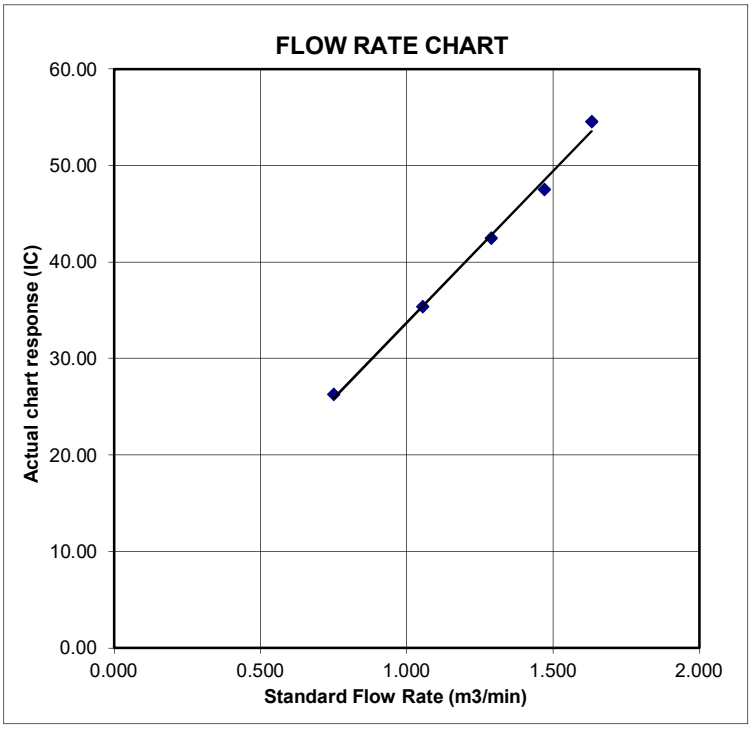
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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



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

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: **HK2410656**
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	: 14-MAR-2024
		DATE OF ISSUE	: 21-MAR-2024
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

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

Signatories

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

Signatories	*Position*
Richard Fung	Managing Director

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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	:	HK2410656
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.
HK2410656-001	S/N: 456658	AIR	14-Mar-2024	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
Last Calibration Date:	16 February 2024

Equipment Verification Results:

Verification Date: 7 & 8 March 2024

Date	Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
7-Mar-24	2hr01mins	09:26 ~ 11:27	18.7	1016.6	49.9	3121	25.8
7-Mar-24	2hr02mins	11:34 ~ 13:36	18.7	1016.6	41.2	2694	22.0
7-Mar-24	2hr02mins	13:45 ~ 15:47	18.7	1016.6	53.1	3242	26.5
8-Mar-24	2hr01mins	10:22 ~ 12:23	18.8	1018.8	34.3	2101	17.4
8-Mar-24	2hr14mins	12:44 ~ 14:58	18.8	1018.8	49.1	3151	23.4

Sensitivity Adjustment Scale Setting (Before Calibration) 703 (CPM)

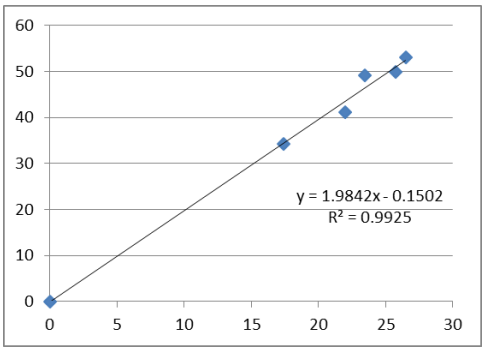
Sensitivity Adjustment Scale Setting (After Calibration) 705 (CPM)

Linear Regression of Y or X

Slope (K-factor): 1.9842 (µg/m^3)/CPM

Correlation Coefficient (R) 0.9962

Date of Issue 13 March 2024



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 1.9842 (µg/m^3)/CPM should be apply for TSP monitoring

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

Operator : Martin Li Signature : Date : 13 March 2024

QC Reviewer : Ben Tam Signature : Date : 13 March 2024

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	16-Feb-24
Location ID :	Calibration Room - TISCH Higher Volume Sampler (Model TE-5170) S/N:1260 (HVS 018)	Next Calibration Date:	16-May-24

CONDITIONS

Sea Level Pressure (hPa)	1019	Corrected Pressure (mm Hg)	764.25
Temperature (°C)	20.4	Temperature (K)	293

CALIBRATION ORIFICE

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

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	5.8	5.8	11.6	1.631	54	54.57	Slope = 31.3860
13	4.7	4.7	9.4	1.470	47	47.50	Intercept = 2.3377
10	3.6	3.6	7.2	1.289	42	42.45	Corr. coeff. = 0.9976
8	2.4	2.4	4.8	1.055	35	35.37	
5	1.2	1.2	2.4	0.751	26	26.28	

Calculations :

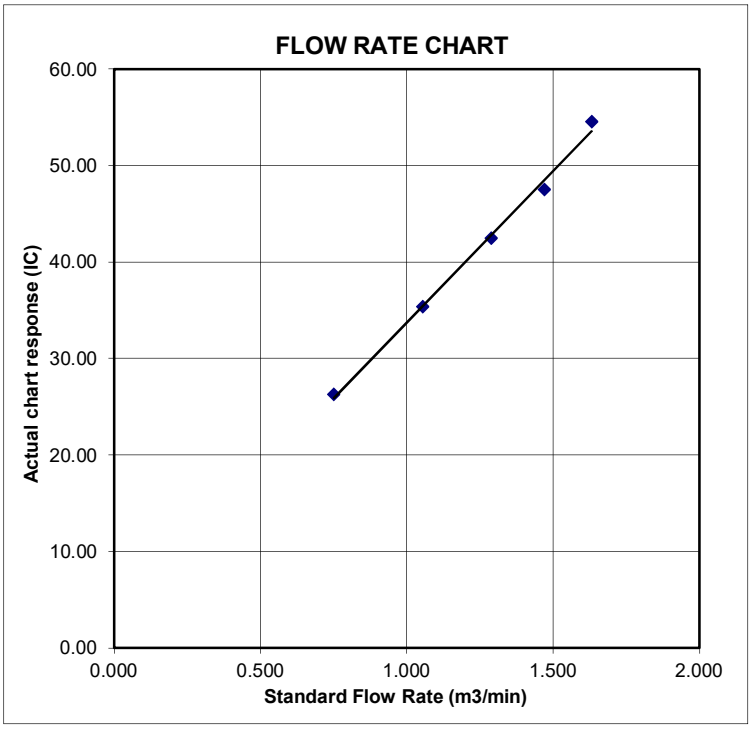
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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



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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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	: **HK2410657**
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	: 14-MAR-2024
		DATE OF ISSUE	: 21-MAR-2024
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

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

Signatories

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

Signatories	*Position*
Richard Fung	Managing Director

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

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

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

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WORK ORDER	:	HK2410657
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.
HK2410657-001	S/N: 456659	AIR	14-Mar-2024	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
Last Calibration Date:	16 February 2024

Equipment Verification Results:

Verification Date: 7 & 8 March 2024

Date	Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
7-Mar-24	2hr01mins	09:26 ~ 11:27	18.7	1016.6	49.9	2804	23.1
7-Mar-24	2hr02mins	11:34 ~ 13:36	18.7	1016.6	41.2	2532	20.7
7-Mar-24	2hr02mins	13:45 ~ 15:47	18.7	1016.6	53.1	3342	27.3
8-Mar-24	2hr01mins	10:22 ~ 12:23	18.8	1018.8	34.3	1951	16.2
8-Mar-24	2hr14mins	12:44 ~ 14:58	18.8	1018.8	49.1	2998	22.3

Sensitivity Adjustment Scale Setting (Before Calibration) 725 (CPM)

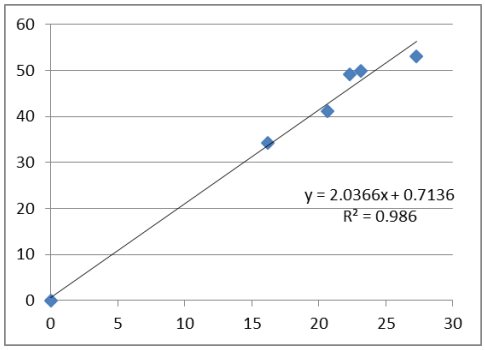
Sensitivity Adjustment Scale Setting (After Calibration) 727 (CPM)

Linear Regression of Y or X

Slope (K-factor): 2.0366 (µg/m^3)/CPM

Correlation Coefficient (R) 0.9929

Date of Issue 13 March 2024



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 2.0366 (µg/m^3)/CPM should be apply for TSP monitoring

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

Operator : Martin Li Signature : Date : 13 March 2024

QC Reviewer : Ben Tam Signature : Date : 13 March 2024

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	16-Feb-24
Location ID :	Calibration Room - TISCH Higher Volume Sampler (Model TE-5170) S/N:1260 (HVS 018)	Next Calibration Date:	16-May-24

CONDITIONS

Sea Level Pressure (hPa)	1019	Corrected Pressure (mm Hg)	764.25
Temperature (°C)	20.4	Temperature (K)	293

CALIBRATION ORIFICE

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

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	5.8	5.8	11.6	1.631	54	54.57	Slope = 31.3860
13	4.7	4.7	9.4	1.470	47	47.50	Intercept = 2.3377
10	3.6	3.6	7.2	1.289	42	42.45	Corr. coeff. = 0.9976
8	2.4	2.4	4.8	1.055	35	35.37	
5	1.2	1.2	2.4	0.751	26	26.28	

Calculations :

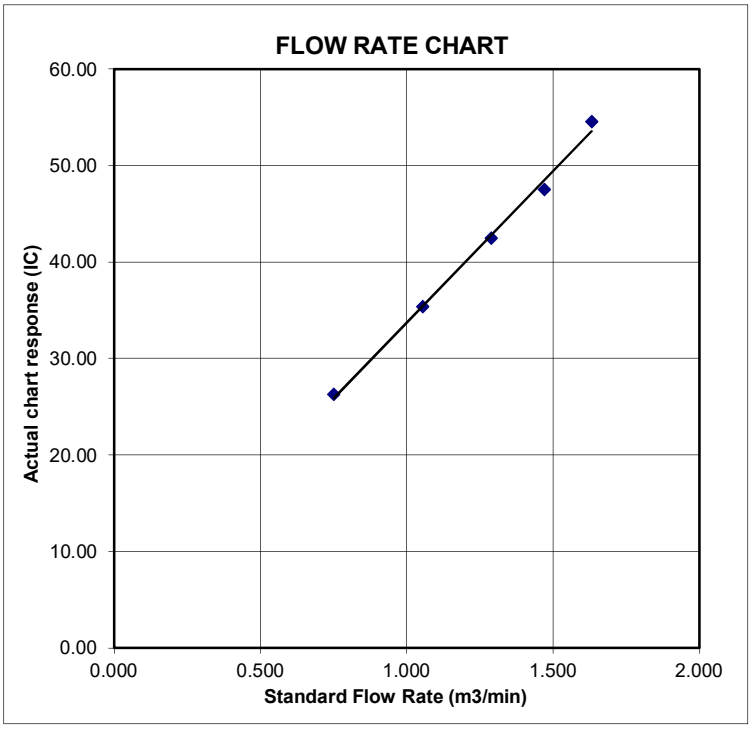
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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



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

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ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: **HK2410658**
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	: 14-MAR-2024
		DATE OF ISSUE	: 21-MAR-2024
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

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

Signatories

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

Signatories	*Position*
Richard Fung	Managing Director

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

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

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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 : HK2410658
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.
HK2410658-001	S/N: 456660	AIR	14-Mar-2024	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
Last Calibration Date:	16 February 2024

Equipment Verification Results:

Verification Date: 7 & 8 March 2024

Date	Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
7-Mar-24	2hr01mins	09:26 ~ 11:27	18.7	1016.6	49.9	3161	26.1
7-Mar-24	2hr02mins	11:34 ~ 13:36	18.7	1016.6	41.2	2638	21.6
7-Mar-24	2hr02mins	13:45 ~ 15:47	18.7	1016.6	53.1	3266	26.7
8-Mar-24	2hr01mins	10:22 ~ 12:23	18.8	1018.8	34.3	1989	16.5
8-Mar-24	2hr14mins	12:44 ~ 14:58	18.8	1018.8	49.1	3050	22.7

Sensitivity Adjustment Scale Setting (Before Calibration) 610 (CPM)

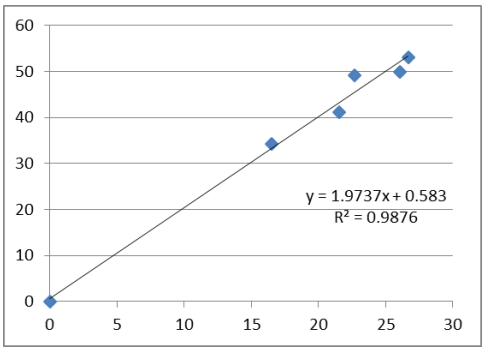
Sensitivity Adjustment Scale Setting (After Calibration) 609 (CPM)

Linear Regression of Y or X

Slope (K-factor): 1.9737 (µg/m^3)/CPM

Correlation Coefficient (R) 0.9937

Date of Issue 13 March 2024



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 1.9737 (µg/m^3)/CPM should be apply for TSP monitoring

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

Operator : Martin Li Signature : Date : 13 March 2024

QC Reviewer : Ben Tam Signature : Date : 13 March 2024

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	16-Feb-24
Location ID :	Calibration Room - TISCH Higher Volume Sampler (Model TE-5170) S/N:1260 (HVS 018)	Next Calibration Date:	16-May-24

CONDITIONS

Sea Level Pressure (hPa)	1019	Corrected Pressure (mm Hg)	764.25
Temperature (°C)	20.4	Temperature (K)	293

CALIBRATION ORIFICE

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

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	5.8	5.8	11.6	1.631	54	54.57	Slope = 31.3860
13	4.7	4.7	9.4	1.470	47	47.50	Intercept = 2.3377
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8	2.4	2.4	4.8	1.055	35	35.37	
5	1.2	1.2	2.4	0.751	26	26.28	

Calculations :

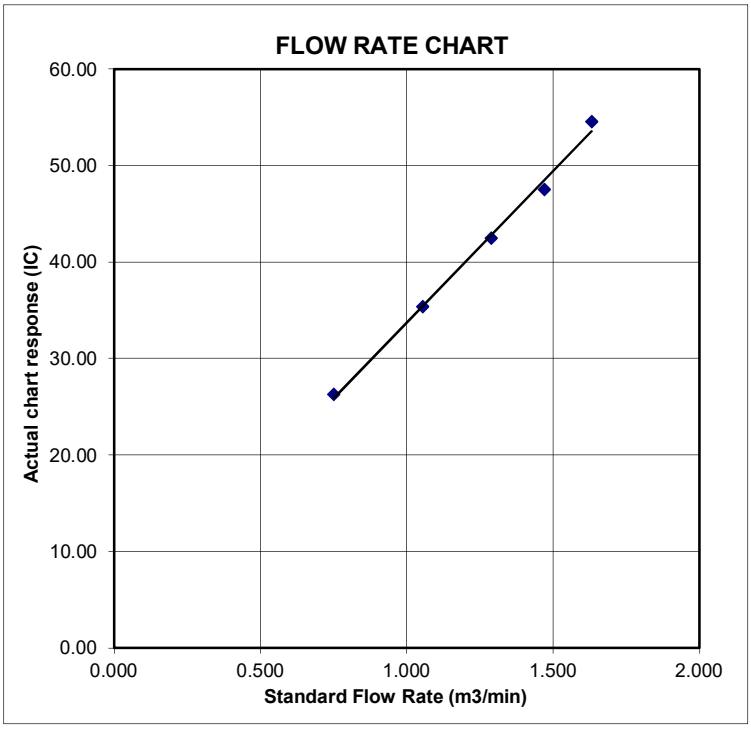
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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



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

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

Certificate of Calibration
校正證書

Certificate No. : C235334
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 : Integrating Sound Level Meter (EQ009)
Manufacturer / 製造商 : Brüel & Kjær
Model No. / 型號 : 2238
Serial No. / 編號 : 2285722
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 : 15 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 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 : C K Lo
Project Engineer

Certified By 核證 : K C Lee
Engineer

Date of Issue 簽發日期 : 15 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
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
校正證書

Certificate No. : C235334
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 using laboratory acoustic calibrator was performed before the test from 6.1.1.2 to 6.4.

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	CDK2302738

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

6.1.1.1 Before Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
52 - 132	L_{AFP}	A	F	94.00	1	94.2

6.1.1.2 After Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Limit (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
52 - 132	L_{AFP}	A	F	94.00	1	94.0	± 0.7

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
52 - 132	L_{AFP}	A	F	94.00	1	94.0 (Ref.)
				104.00		104.0
				114.00		113.9

IEC 60651 Type 1 Limit : ± 0.4 dB per 10 dB step and ± 0.7 dB for overall different.

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6.2 Time Weighting

6.2.1 Continuous Signal

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Limit (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
52 - 132	L_{AFP}	A	F	94.00	1	94.0	Ref.
	L_{ASP}		S			94.0	± 0.1
	L_{AIP}		I			94.0	± 0.1

6.2.2 Tone Burst Signal (2 kHz)

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Limit (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Burst Duration		
32 - 112	L_{AFP}	A	F	106.0	Continuous	106.0	Ref.
	L_{AFMax}				200 ms	105.0	-1.0 ± 1.0
	L_{ASP}		S		Continuous	106.0	Ref.
	L_{ASMax}				500 ms	102.0	-4.1 ± 1.0

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Limit (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
52 - 132	L_{AFP}	A	F	94.00	31.5 Hz	54.5	-39.4 ± 1.5
					63 Hz	67.8	-26.2 ± 1.5
					125 Hz	77.8	-16.1 ± 1.0
					250 Hz	85.3	-8.6 ± 1.0
					500 Hz	90.7	-3.2 ± 1.0
					1 kHz	94.0	Ref.
					2 kHz	95.2	+1.2 ± 1.0
					4 kHz	95.0	+1.0 ± 1.0
					8 kHz	92.8	-1.1 (+1.5 ; -3.0)
					12.5 kHz	89.7	-4.3 (+3.0 ; -6.0)

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6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Limit (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
52 - 132	L_{CFP}	C	F	94.00	31.5 Hz	90.9	-3.0 ± 1.5
					63 Hz	93.2	-0.8 ± 1.5
					125 Hz	93.8	-0.2 ± 1.0
					250 Hz	94.0	0.0 ± 1.0
					500 Hz	94.0	0.0 ± 1.0
					1 kHz	94.0	Ref.
					2 kHz	93.8	-0.2 ± 1.0
					4 kHz	93.1	-0.8 ± 1.0
					8 kHz	90.9	-3.0 (+1.5 ; -3.0)
					12.5 kHz	87.8	-6.2 (+3.0 ; -6.0)

6.4 Time Averaging

UUT Setting				Applied Value					UUT Reading (dB)	IEC 60804 Type 1 Limit (dB)
Range (dB)	Parameter	Frequency Weighting	Integrating Time	Frequency (kHz)	Burst Duration (ms)	Burst Duty Factor	Burst Level (dB)	Equivalent Level (dB)		
32 - 112	L_{Aeq}	A	10 sec.	4	1	1/10	110.0	100	99.9	± 0.5
						$1/10^2$		90	89.9	± 0.5
			60 sec.			$1/10^3$		80	79.3	± 1.0
			5 min.			$1/10^4$		70	69.2	± 1.0

Remarks : - UUT Microphone Model No. : 4188 & S/N : 2812706

- Mfr's Limit : IEC 60651 Type 1 & IEC 60804 Type 1

- Uncertainties of Applied Value :

94 dB	: 31.5 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
	12.5 kHz	: ± 0.70 dB
104 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
114 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
Burst equivalent level		: ± 0.2 dB (Ref. 110 dB continuous sound level)

- 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. : C236945
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 Level Meter (EQ013)
Manufacturer / 製造商 : Rion
Model No. / 型號 : NL-52
Serial No. / 編號 : 00921191
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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Certificate of Calibration
校正證書

Certificate No. : C236945
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	C230306
CL281	Multifunction Acoustic Calibrator	CDK2302738

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	93.8	± 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	93.8 (Ref.)
				104.00		103.8
				114.00		113.8

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	93.8	Ref.
			Slow			93.8	± 0.3

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Certificate of Calibration
校正證書

Certificate No. : C236945
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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	67.5	-26.2 ± 1.5
					125 Hz	77.6	-16.1 ± 1.5
					250 Hz	85.1	-8.6 ± 1.4
					500 Hz	90.6	-3.2 ± 1.4
					1 kHz	93.8	Ref.
					2 kHz	95.0	+1.2 ± 1.6
					4 kHz	94.8	+1.0 ± 1.6
					8 kHz	92.8	-1.1 (+2.1 ; -3.1)
					16 kHz	85.8	-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	92.9	-0.8 ± 1.5
					125 Hz	93.6	-0.2 ± 1.5
					250 Hz	93.8	0.0 ± 1.4
					500 Hz	93.8	0.0 ± 1.4
					1 kHz	93.8	Ref.
					2 kHz	93.7	-0.2 ± 1.6
					4 kHz	93.0	-0.8 ± 1.6
					8 kHz	90.9	-3.0 (+2.1 ; -3.1)
					16 kHz	83.9	-8.5 (+3.5 ; -17.0)

Certificate of Calibration
校正證書

Certificate No. : C236945
證書編號

Remarks : - UUT Microphone Model No. : UC-59 & S/N : 12910

- 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
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Certificate of Calibration
校正證書

Certificate No. : C236949
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 Level Meter (EQ016)
Manufacturer / 製造商 : Rion
Model No. / 型號 : NL-52
Serial No. / 編號 : 00464681
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
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Certificate of Calibration
校正證書

Certificate No. : C236949
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	C230306
CL281	Multifunction Acoustic Calibrator	CDK2302738

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	93.4	± 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	93.4 (Ref.)
				104.00		103.4
				114.00		113.4

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	93.4	Ref.
			Slow			93.4	± 0.3

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Certificate of Calibration
校正證書

Certificate No. : C236949
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)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	L_A	A	Fast	94.00	63 Hz	67.2	-26.2 ± 1.5
					125 Hz	77.2	-16.1 ± 1.5
					250 Hz	84.8	-8.6 ± 1.4
					500 Hz	90.2	-3.2 ± 1.4
					1 kHz	93.4	Ref.
					2 kHz	94.6	+1.2 ± 1.6
					4 kHz	94.4	+1.0 ± 1.6
					8 kHz	92.4	-1.1 (+2.1 ; -3.1)
					16 kHz	85.5	-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	92.5	-0.8 ± 1.5
					125 Hz	93.2	-0.2 ± 1.5
					250 Hz	93.4	0.0 ± 1.4
					500 Hz	93.5	0.0 ± 1.4
					1 kHz	93.4	Ref.
					2 kHz	93.3	-0.2 ± 1.6
					4 kHz	92.6	-0.8 ± 1.6
					8 kHz	90.5	-3.0 (+2.1 ; -3.1)
					16 kHz	83.5	-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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Certificate of Calibration
校正證書

Certificate No. : C236949
證書編號

Remarks : - UUT Microphone Model No. : UC-59 & S/N : 17434

- 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
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. : 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
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. : 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
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
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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. : 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
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
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
c/o 香港新界屯門興安里一號四樓
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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
Wed	1-May-24			
Thu	2-May-24		✓	
Fri	3-May-24			✓
Sat	4-May-24			
Sun	5-May-24			
Mon	6-May-24			
Tue	7-May-24			
Wed	8-May-24			✓
Thu	9-May-24			
Fri	10-May-24	✓	✓	
Sat	11-May-24			
Sun	12-May-24			
Mon	13-May-24			
Tue	14-May-24			✓
Wed	15-May-24			
Thu	16-May-24	✓	✓	
Fri	17-May-24			
Sat	18-May-24			
Sun	19-May-24			
Mon	20-May-24			✓
Tue	21-May-24			
Wed	22-May-24	✓	✓	
Thu	23-May-24			
Fri	24-May-24			
Sat	25-May-24			✓
Sun	26-May-24			
Mon	27-May-24			
Tue	28-May-24	✓	✓	
Wed	29-May-24			
Thu	30-May-24			
Fri	31-May-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
Sat	1-Jun-24			
Sun	2-Jun-24			
Mon	3-Jun-24	✓	✓	
Tue	4-Jun-24			
Wed	5-Jun-24			
Thu	6-Jun-24			✓
Fri	7-Jun-24			
Sat	8-Jun-24		✓	
Sun	9-Jun-24			
Mon	10-Jun-24			
Tue	11-Jun-24			
Wed	12-Jun-24			✓
Thu	13-Jun-24	✓	✓	
Fri	14-Jun-24			
Sat	15-Jun-24			
Sun	16-Jun-24			
Mon	17-Jun-24			
Tue	18-Jun-24			✓
Wed	19-Jun-24	✓	✓	
Thu	20-Jun-24			
Fri	21-Jun-24			
Sat	22-Jun-24			
Sun	23-Jun-24			
Mon	24-Jun-24			✓
Tue	25-Jun-24	✓	✓	
Wed	26-Jun-24			
Thu	27-Jun-24			
Fri	28-Jun-24			
Sat	29-Jun-24			✓
Sun	30-Jun-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-May-24	20281	27431.96	27455.96	1440	41	41	41	24	1021.2	1.48	2131	2.762	2.7912	0.0292	14
8-May-24	20298	27455.96	27479.96	1440	41	41	41	26.7	1014	1.47	2120	2.7725	2.8229	0.0504	24
14-May-24	20248	27479.96	27503.96	1440	41	41	41	25.5	1013.7	1.47	2122	2.7533	2.7891	0.0358	17
20-May-24	20438	27503.96	27527.96	1440	41	41	41	24.5	1006.8	1.47	2120	2.7657	2.7967	0.031	15
25-May-24	20352	27527.96	27551.96	1440	41	41	41	26.3	1010.1	1.47	2118	2.7859	2.8058	0.0199	9
31-May-24	20215	27551.96	27575.96	1440	41	41	41	27.2	1006.5	1.47	2114	2.7596	2.7916	0.032	15

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-May-24	20284	15501.03	15525.03	1440.00	39	39	39.0	24.6	1011.7	1.41	2028	2.7611	2.8048	0.0437	22
8-May-24	20196	15525.03	15549.03	1440.00	39	39	39.0	26.7	1014	1.41	2025	2.7710	2.8350	0.0640	32
14-May-24	20225	15549.03	15573.03	1440.00	39	39	39.0	25.5	1013.7	1.41	2027	2.7526	2.8577	0.1051	52
20-May-24	20367	15573.03	15597.03	1440.00	39	39	39.0	24.5	1006.8	1.41	2025	2.7682	2.8095	0.0413	20
25-May-24	20370	15597.03	15621.03	1440.00	39	39	39.0	26.3	1010.1	1.41	2023	2.7713	2.8012	0.0299	15
31-May-24	29919	15621.03	15645.03	1440.00	39	39	39.0	27.2	1006.5	1.40	2020	2.7779	2.8185	0.0406	20

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-May-24	20282	20588.10	20612.10	1440.00	40	40	40.0	24.6	1011.7	1.42	2043	2.7700	2.8004	0.0304	15
8-May-24	20197	20612.10	20636.10	1440.00	40	40	40.0	26.7	1014	1.42	2040	2.7699	2.8226	0.0527	26
14-May-24	20226	20636.10	20660.10	1440.00	40	40	40.0	25.5	1013.7	1.42	2042	2.7632	2.8260	0.0628	31
20-May-24	20229	20660.10	20684.10	1440.00	40	40	40.0	24.5	1006.8	1.42	2040	2.7587	2.8101	0.0514	25
25-May-24	20371	20684.10	20708.10	1440.00	42	42	42.0	26.3	1010.1	1.46	2101	2.7677	2.8080	0.0403	19
31-May-24	20214	20708.10	20732.10	1440.00	42	42	42.0	27.2	1006.5	1.46	2096	2.7495	2.7863	0.0368	18

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-May-24	20353	15371.32	15395.32	1440.00	41	41	41.0	25	1021.1	1.44	2060	2.7808	2.8021	0.0213	10
8-May-24	20350	15395.32	15419.32	1440.00	41	41	41.0	26.7	1014	1.43	2035	2.7705	2.8653	0.0948	47
14-May-24	20355	15419.32	15443.32	1440.00	41	41	41.0	25.5	1013.7	1.43	2071	2.7858	2.8985	0.1127	54
20-May-24	20436	15443.32	15467.32	1440.00	41	41	41.0	24.5	1006.8	1.43	2050	2.7656	2.8310	0.0654	32
25-May-24	20349	15467.32	15491.32	1440.00	41	41	41.0	26.3	1010.1	1.43	2058	2.7827	2.8123	0.0296	14

31-May-24	20209	15491.32	15515.32	1440.00	41	41	41.0	27.2	1006.5	1.43	2045	2.7588	2.7886	0.0298	15

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)		
10-May-24	13:00	70.8	74.5	64.5	71.3	75.5	62.5	72.3	77.0	65.0	71.6	75.0	65.5	70.5	74.0	64.5	72.4	76.5	64.0	72	70
16-May-24	13:05	72.2	75.5	63.5	72.9	76.0	64.5	71.7	74.0	64.0	73.5	77.5	65.5	71.8	75.0	65.0	72.4	75.5	64.5	72	70
22-May-24	13:10	70.9	73.5	68.0	69.3	72.0	65.5	70.7	73.5	67.5	71.1	74.0	68.5	71.4	74.5	98.5	69.9	73.5	67.5	71	70
28-May-24	10:50	70.6	72.6	61.3	71.7	75.2	58.5	71	75.5	55.8	71.5	75	61.3	67.6	72.5	55.9	70.1	73.7	56.2	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)		
10-May-24	10:30	55.7	58.5	52.5	58.3	63.5	54.5	59.7	64.5	53.5	57.9	62.0	53.0	58.5	64.0	54.5	56.8	60.5	53.5	58	70
16-May-24	10:35	61.3	65.5	60.0	63.7	66.5	61.5	62.6	66.0	60.5	62.8	66.5	61.0	61.6	65.0	60.0	62.4	66.5	61.5	62	70
22-May-24	10:40	59.6	62.5	57.5	61.7	64.5	58.0	63.3	65.5	60.5	60.4	64.0	57.5	62.4	66.5	57.5	61.8	65.0	58.0	62	70
28-May-24	15:06	56.2	57.9	52.1	57.1	60	52.9	57.8	58.9	53	59.5	60.5	54.1	58.6	60.1	53.9	56.4	59.1	52.5	58	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)		
10-May-24	9:30	66.4	69.3	62.7	65.6	67.9	62.3	66.1	68.0	68.3	54.9	66.6	69.7	54.8	62.2	57.0	62.9	66.0	56.0	64	75
16-May-24	13:30	62.5	64.8	53.7	63.9	65.6	54.5	64.8	65.9	55.4	62.5	65.7	56.4	65.3	57.4	55.7	55.6	66.0	50.6	63	75
22-May-24	13:30	65.8	68.0	57.8	65.7	69.2	62.3	64.6	67.4	59.5	65.4	68.0	59.5	63.3	67.3	58.1	63.8	64.2	59.6	65	75
28-May-24	10:15	61.8	62.2	58.1	60.9	62.7	56.4	61.5	64.2	56.5	62.5	64.6	56.8	60.9	62.6	58.6	60.2	62.3	57.1	61	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)			Leq30m in, dB(A)	Limit Level dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
10-May-24	9:00	66.6	68.5	62.5	65.3	67.5	61.5	66.2	68.0	61.0	67.3	69.5	64.5	65.6	67.0	62.5	65.9	67.5	63.0	66	75
16-May-24	9:05	64.3	66.5	60.5	63.7	65.5	60.0	64.1	66.0	61.5	62.6	64.5	59.5	63.3	66.0	60.5	62.9	66.5	61.0	64	75
22-May-24	9:10	65.3	67.5	60.5	64.7	66.5	60.0	62.4	64.0	59.5	62.6	64.5	59.0	63.5	65.0	59.5	62.8	65.5	60.5	64	75

28-May-24	16:27	65.7	68.3	61.6	64.9	67.4	61.5	62.3	63.4	61.3	69	68.1	61.1	64.2	66.3	61.8	65.1	67.8	58.5	66	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)		
10-May-24	9:50	65.6	68.5	62.5	66.4	69.0	63.5	65.2	68.5	63.0	64.8	67.5	62.5	65.5	68.0	63.0	66.7	69.5	64.0	66	75
16-May-24	9:55	66.8	69.5	63.5	66.4	69.0	64.0	65.9	68.5	62.5	66.3	68.0	63.5	65.2	67.5	63.0	64.9	66.5	61.5	66	75
22-May-24	10:00	62.3	64.5	60.5	63.5	65.5	61.0	64.3	66.5	61.5	66.7	68.5	62.5	63.9	66.5	60.5	62.4	65.0	61.0	64	75
28-May-24	11:28	59.5	63.2	55.7	58.9	62.3	55.1	59.9	64.3	54.9	60.2	64.9	56.2	58.7	61.2	57.1	59.1	62.4	56.9	59	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)		
10-May-24	10:30	61.5	64.2	57.9	60.2	61.6	60.5	58.1	60.4	56.9	57.5	59.9	54.4	53.0	54.4	52.3	53.5	54.4	53.0	58	75
16-May-24	13:30	69.5	69.2	55.8	67.9	59.4	53.3	57.8	60.9	54.8	57.2	61.3	54.4	58.5	62.4	55.7	57.5	60.7	53.6	65	75
22-May-24	9:30	75.8	66.6	53.2	70	68.2	56.3	65.4	68.5	59.6	65.8	67.2	61.4	64.4	66.7	49.3	62.7	69.3	58.6	70	75
28-May-24	9:36	54.7	56.4	52.2	54.3	55.4	52.9	54.4	55.7	52.3	54.9	56.1	53.5	55.4	56.7	54.1	56.7	58	55.1	55	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)		
10-May-23	11:20	63.4	66.8	54.9	65.2	67.6	62.3	61.8	64.6	58.0	61.5	63.4	57.4	63.7	68.5	53.8	61.2	64.2	55.5	63	75
16-May-24	11:55	62.5	64.9	55.2	60.4	62.3	57.6	59.5	60.6	58.5	59.5	60.4	58.2	58.0	59.4	57.3	55.5	57.6	54.2	60	75
22-May-24	10:20	66.8	69.5	55.4	62.3	64.6	56.8	62.5	66.0	58.3	63.6	65.0	58.2	64.2	67.3	52.4	68.3	68.0	54.9	65	76
28-May-24	8:55	57.4	59.9	50.9	57.3	58.8	55.4	57.5	60	53.8	58.5	60.7	55.3	58.2	61.5	54.2	58.1	60.6	54.7	58	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)		
10-May-24	8:45	65.5	66.8	57.6	63.5	63.7	54.2	59.2	62.5	53.6	61.8	64.7	54.8	60.2	61.4	54.2	64.6	63.5	52.1	63	75
16-May-24	9:00	65.2	64.5	55.4	60.2	62.8	54.2	62.6	60.7	51.1	60.8	62.9	54.4	61.9	64.3	52.0	65.5	62.0	53.5	63	75
22-May-24	8:30	72.4	75.5	60.0	73.5	76.8	70.2	68.2	68.5	59.5	66.2	67.3	60.4	63.3	65.7	67.5	68.5	70.4	62.1	70	75
28-May-24	13:33	58.1	60.1	56.9	57.6	59.8	56.5	59.6	60.4	58.1	59.9	61.3	57.4	60.1	62.7	59.7	57.5	60.5	56.2	59	75

NOISE MONITORING RESULT DATABASE FOR CONTRACT 3

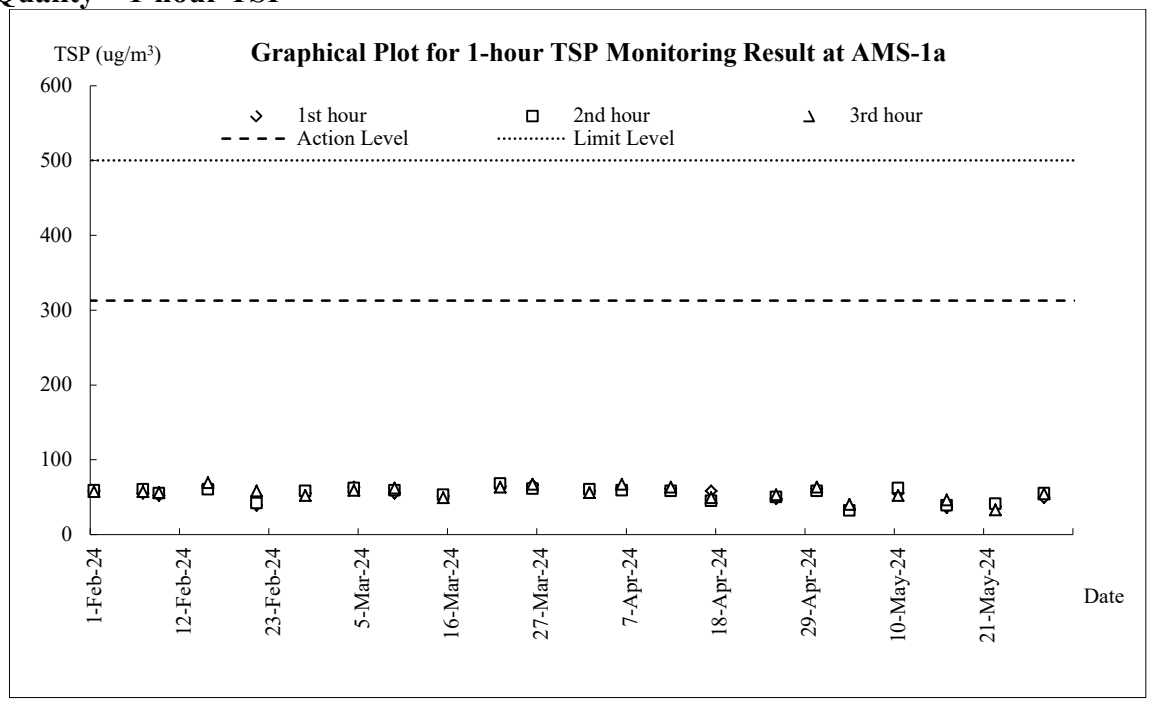
Noise Measurement Results (dB) of CN3

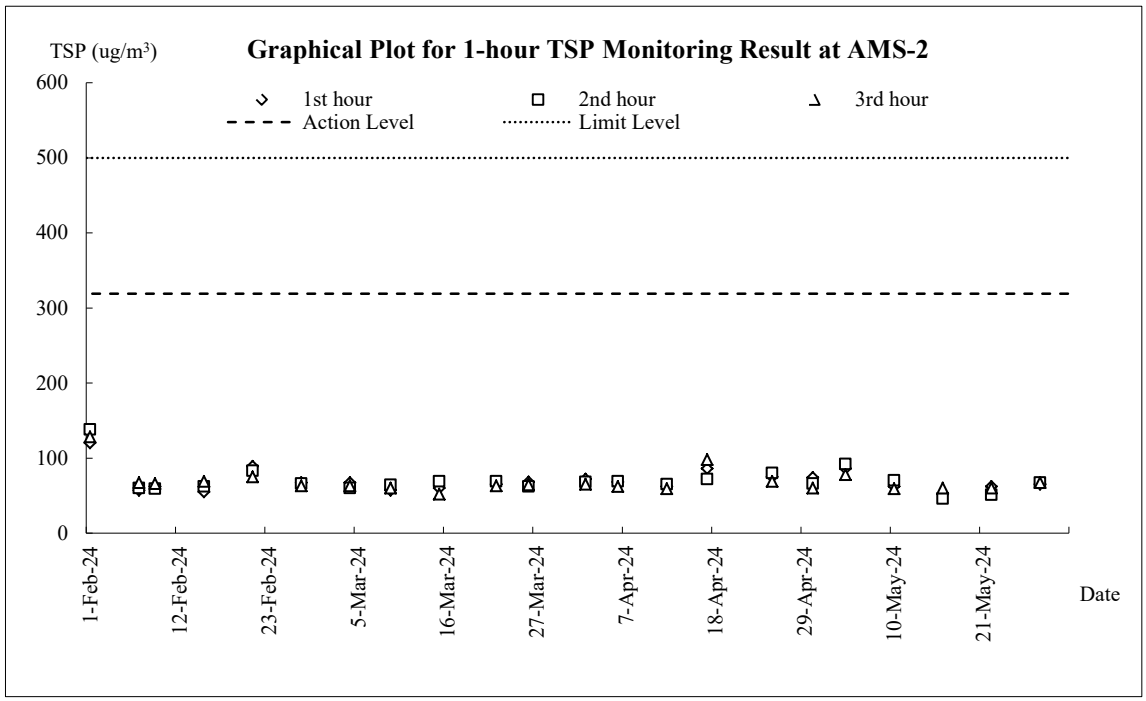
Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)	Limit Level dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
10-May-24	11:20	62.3	65.0	57.5	63.7	66.5	58.5	61.9	64.5	57.0	61.4	63.0	56.5	62.1	63.5	57.5	62.7	64.5	57.5	62	75
16-May-24	11:25	61.4	64.5	56.0	59.7	63.5	54.5	60.8	64.0	55.5	61.3	65.0	56.5	62.6	66.5	57.0	61.9	65.5	56.0	61	75
22-May-24	11:30	60.3	64.5	56.5	61.7	65.5	57.0	61.1	65.0	55.5	62.6	65.5	57.5	60.2	64.0	56.5	61.3	65.0	55.5	61	75
28-May-24	15:48	57.3	60.5	53.2	58.9	61.7	55.4	60.5	62.3	57.1	61.3	64.2	58	61.5	65	57.9	60.9	64.1	57.5	60	75

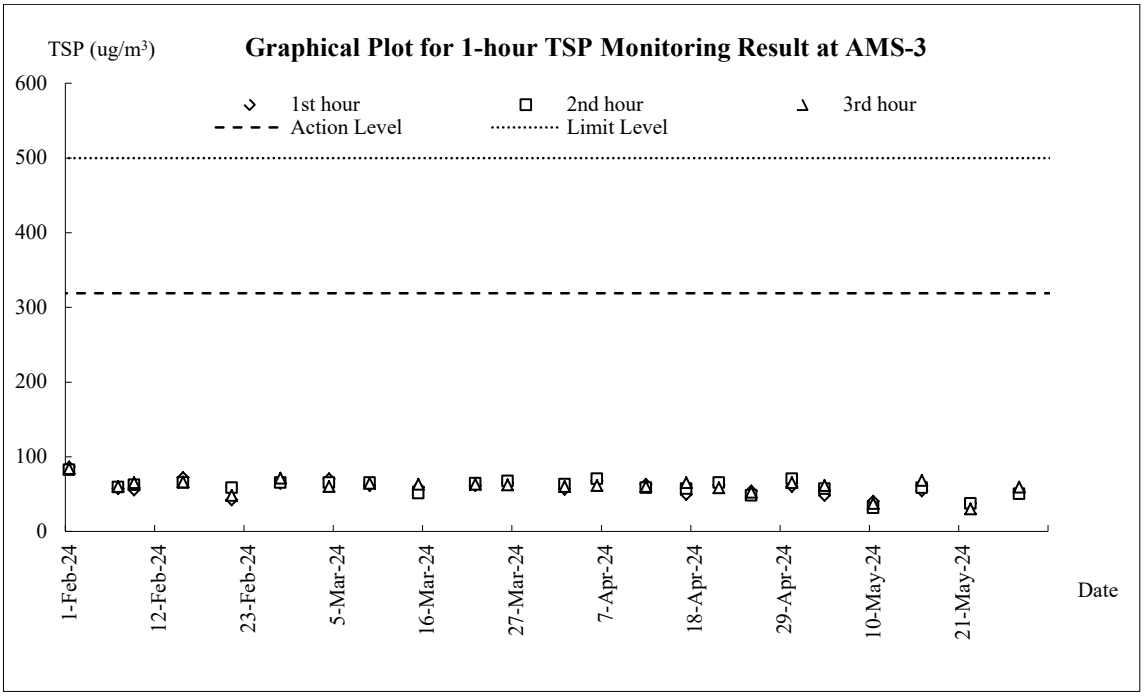
Appendix I

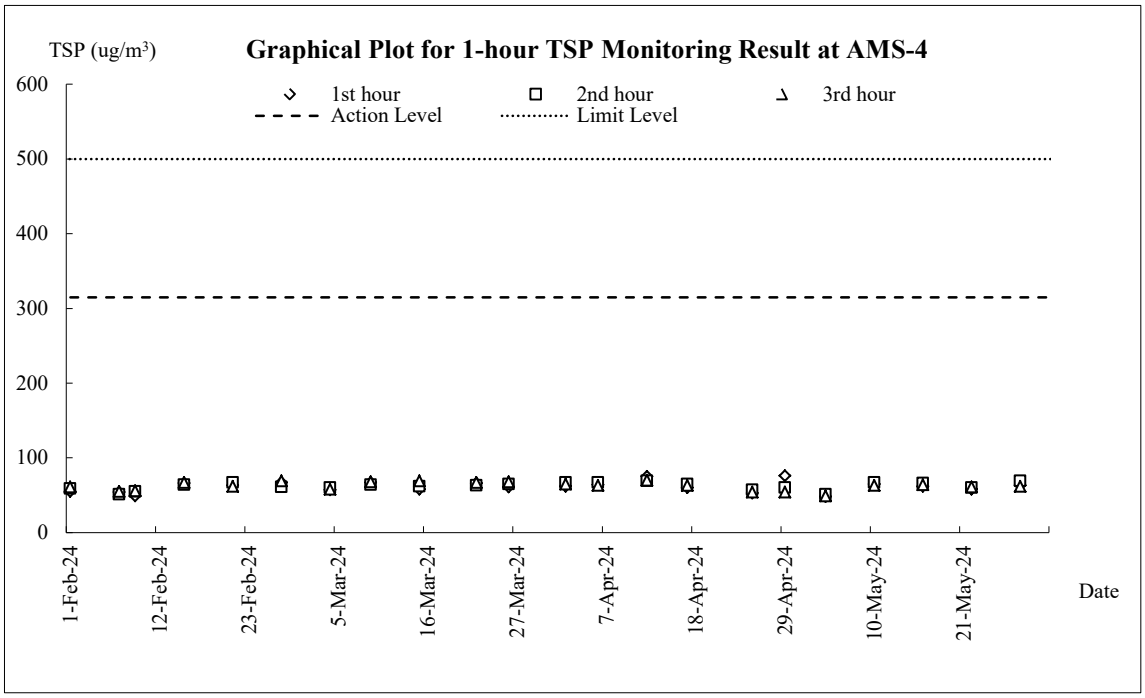
Graphical Plots for Monitoring Result

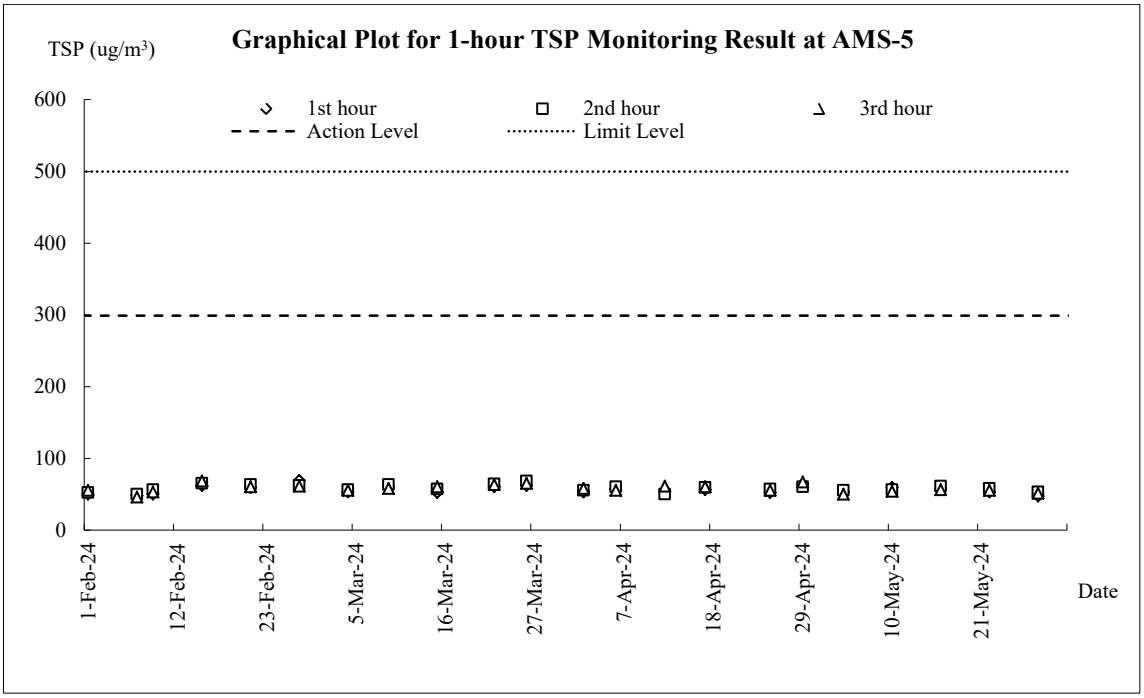
Air Quality – 1-hour TSP

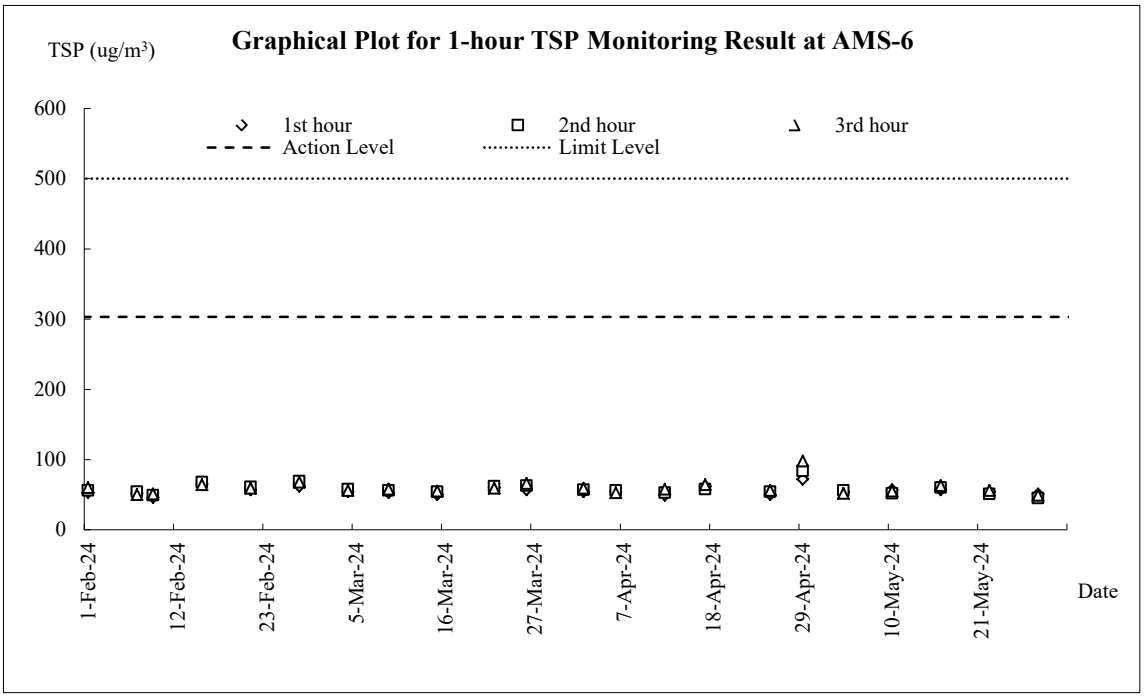


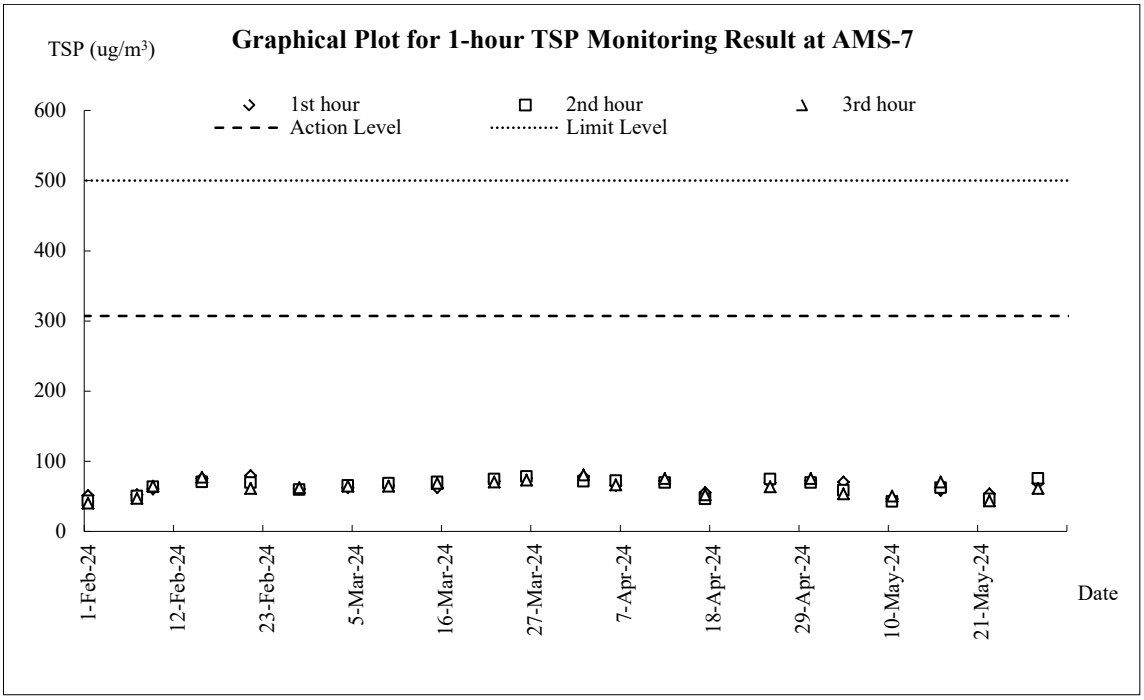



TSP (ug/m³)
Graphical Plot for 1-hour TSP Monitoring Result at AMS-3
1st hour
2nd hour
3rd hour
Action Level
Limit Level
600
500
400
300
200
100
0
1-Feb-24
12-Feb-24
23-Feb-24
5-Mar-24
16-Mar-24
27-Mar-24
7-Apr-24
18-Apr-24
29-Apr-24
10-May-24
21-May-24
Date

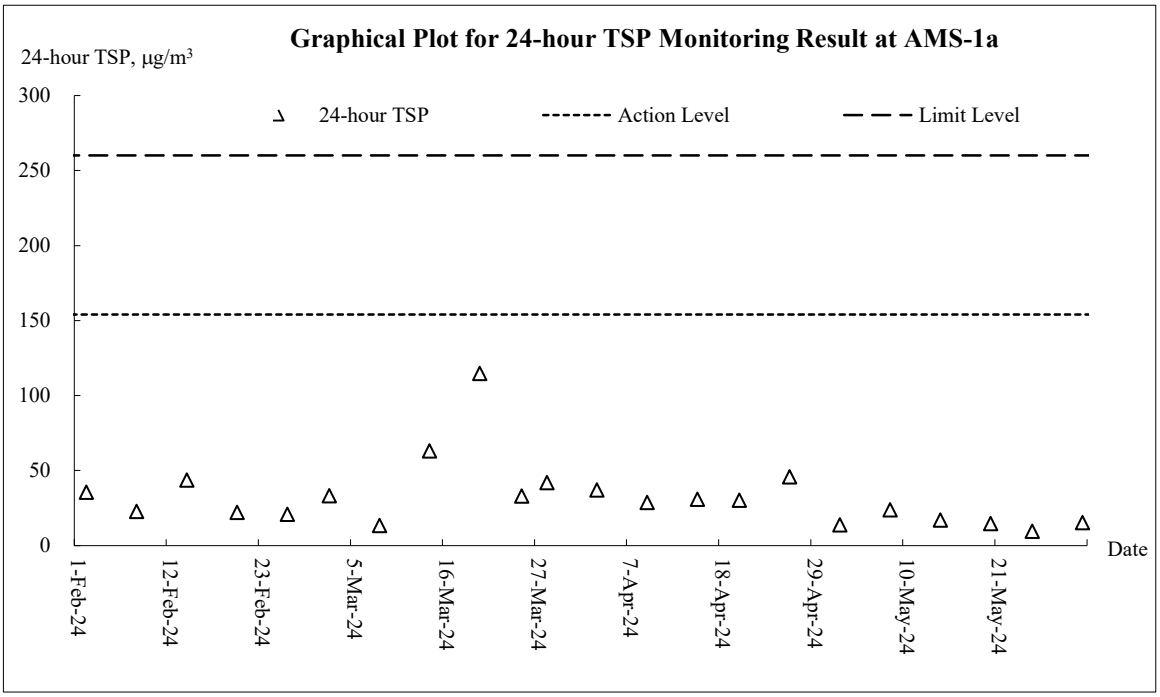

TSP (ug/m³)
Graphical Plot for 1-hour TSP Monitoring Result at AMS-4
1st hour
2nd hour
3rd hour
Action Level
Limit Level
600
500
400
300
200
100
0
1-Feb-24
12-Feb-24
23-Feb-24
5-Mar-24
16-Mar-24
27-Mar-24
7-Apr-24
18-Apr-24
29-Apr-24
10-May-24
21-May-24
Date

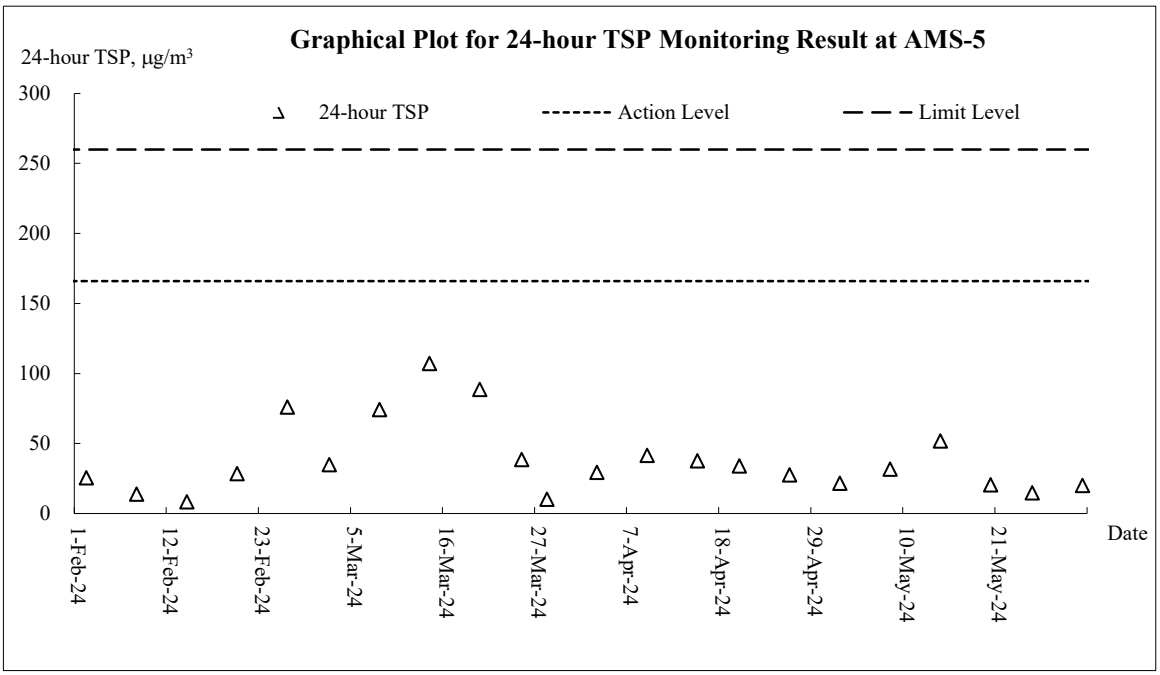

Graphical Plot for 1-hour TSP Monitoring Result at AMS-5
TSP (ug/m³)
1st hour
2nd hour
3rd hour
Action Level
Limit Level
600
500
400
300
200
100
0
1-Feb-24
12-Feb-24
23-Feb-24
5-Mar-24
16-Mar-24
27-Mar-24
7-Apr-24
18-Apr-24
29-Apr-24
10-May-24
21-May-24
Date

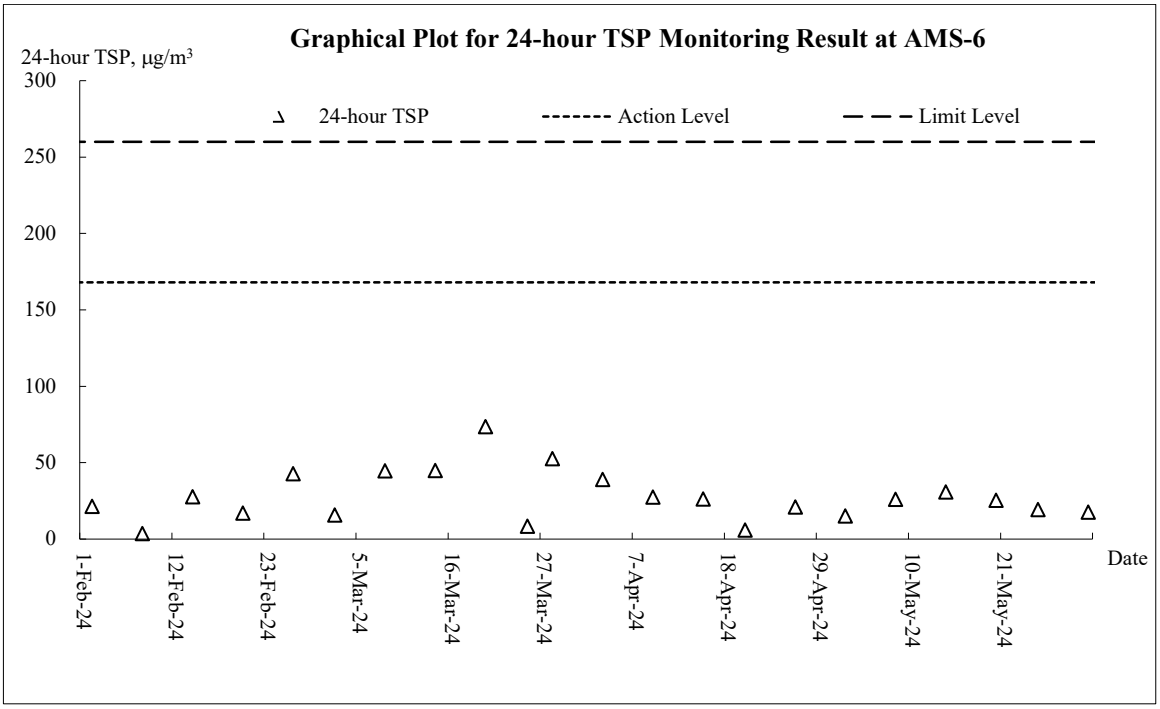

Graphical Plot for 1-hour TSP Monitoring Result at AMS-6
TSP (ug/m³)
1st hour
2nd hour
3rd hour
Action Level
Limit Level
600
500
400
300
200
100
0
1-Feb-24
12-Feb-24
23-Feb-24
5-Mar-24
16-Mar-24
27-Mar-24
7-Apr-24
18-Apr-24
29-Apr-24
10-May-24
21-May-24
Date

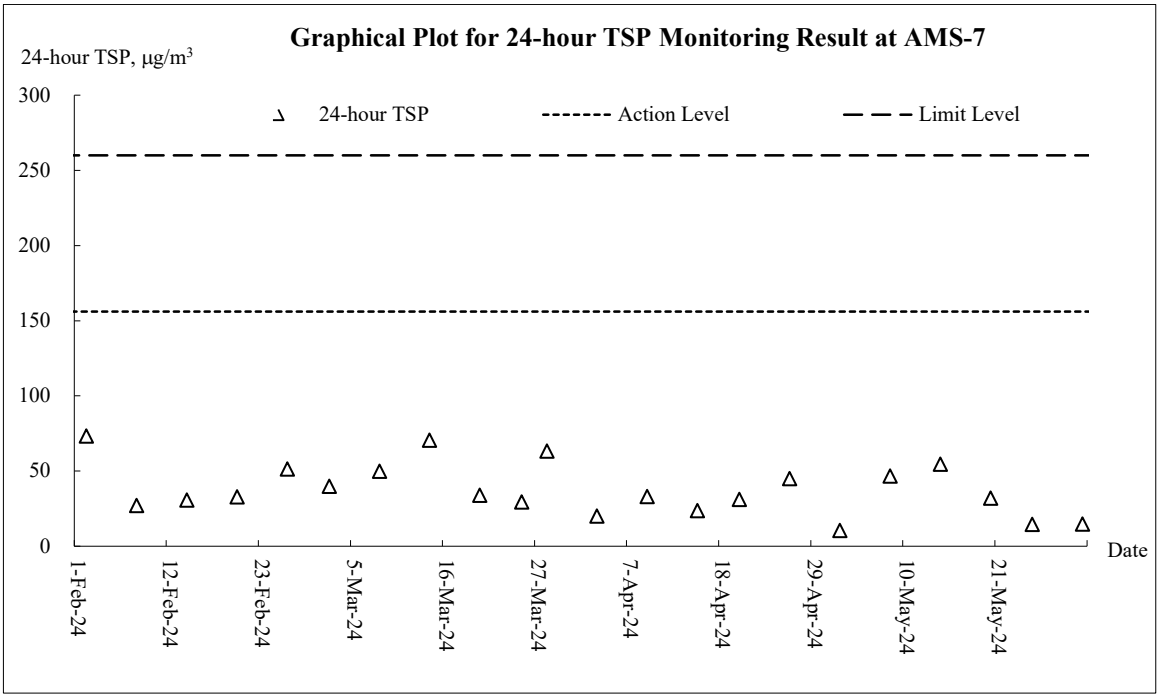

Graphical Plot for 1-hour TSP Monitoring Result at AMS-7
TSP (ug/m³)
1st hour
2nd hour
3rd hour
Action Level
Limit Level
600
500
400
300
200
100
0
1-Feb-24
12-Feb-24
23-Feb-24
5-Mar-24
16-Mar-24
27-Mar-24
7-Apr-24
18-Apr-24
29-Apr-24
10-May-24
21-May-24
Date

Air Quality – 24-hour TSP

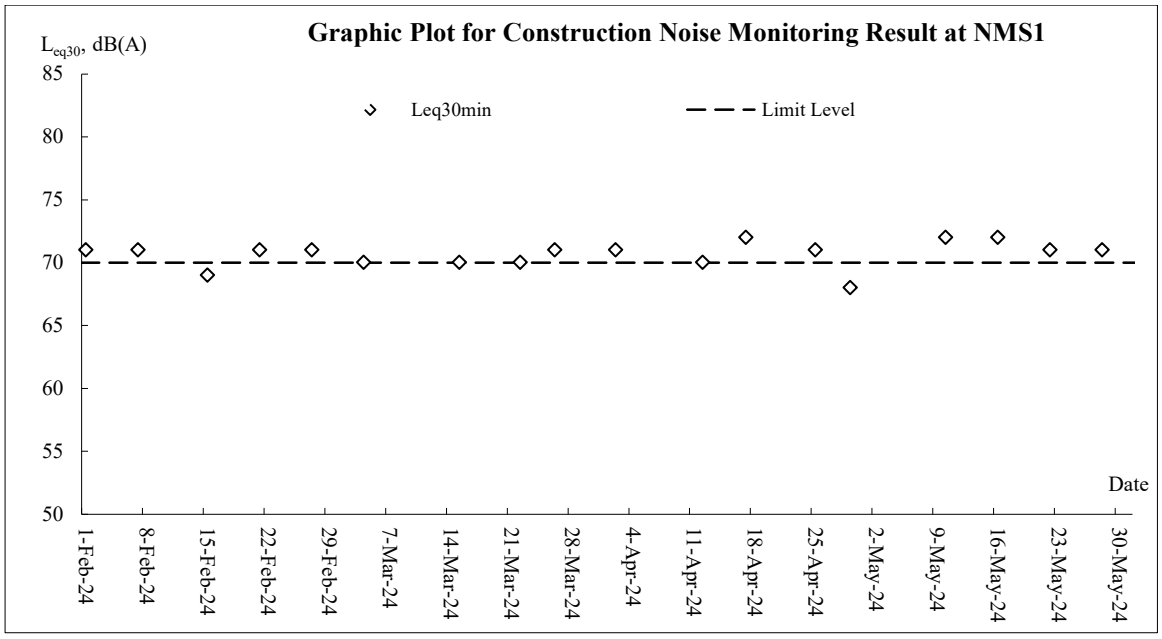





Graphical Plot for 24-hour TSP Monitoring Result at AMS-6
24-hour TSP, μg/m³
300
250
200
150
100
50
0
24-hour TSP
Action Level
Limit Level
1-Feb-24
12-Feb-24
23-Feb-24
5-Mar-24
16-Mar-24
27-Mar-24
7-Apr-24
18-Apr-24
29-Apr-24
10-May-24
21-May-24
Date


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-Feb-24
12-Feb-24
23-Feb-24
5-Mar-24
16-Mar-24
27-Mar-24
7-Apr-24
18-Apr-24
29-Apr-24
10-May-24
21-May-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-Feb-24
8-Feb-24
15-Feb-24
22-Feb-24
29-Feb-24
7-Mar-24
14-Mar-24
21-Mar-24
28-Mar-24
4-Apr-24
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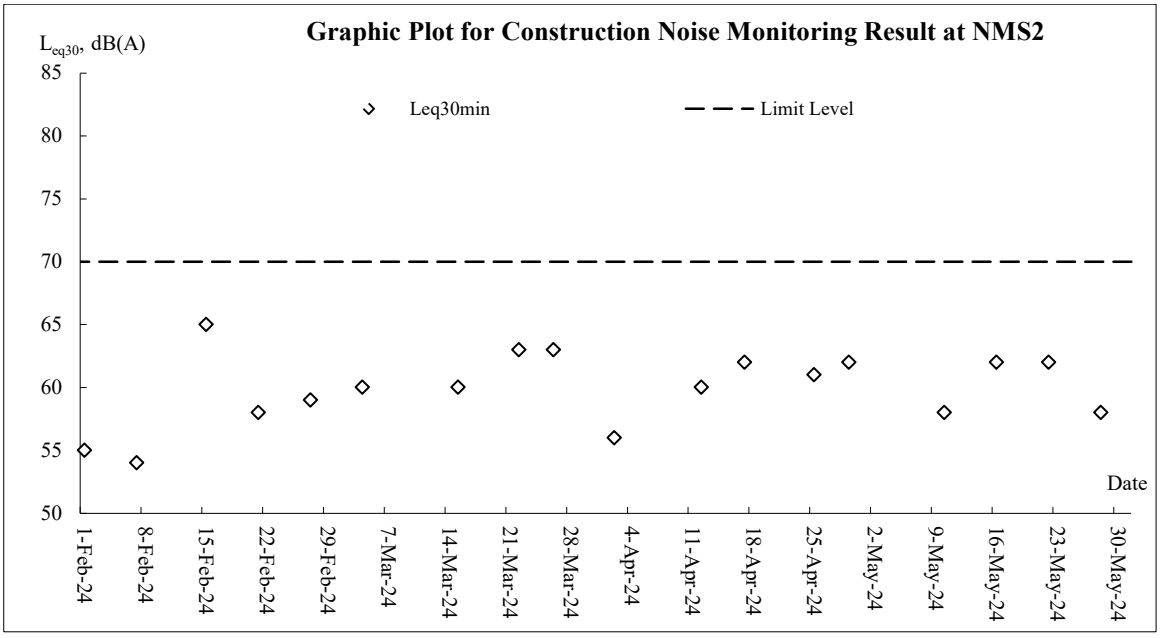
9-May-24
16-May-24
23-May-24
30-May-24


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-Feb-24
8-Feb-24
15-Feb-24
22-Feb-24
29-Feb-24
7-Mar-24
14-Mar-24
21-Mar-24
28-Mar-24
4-Apr-24
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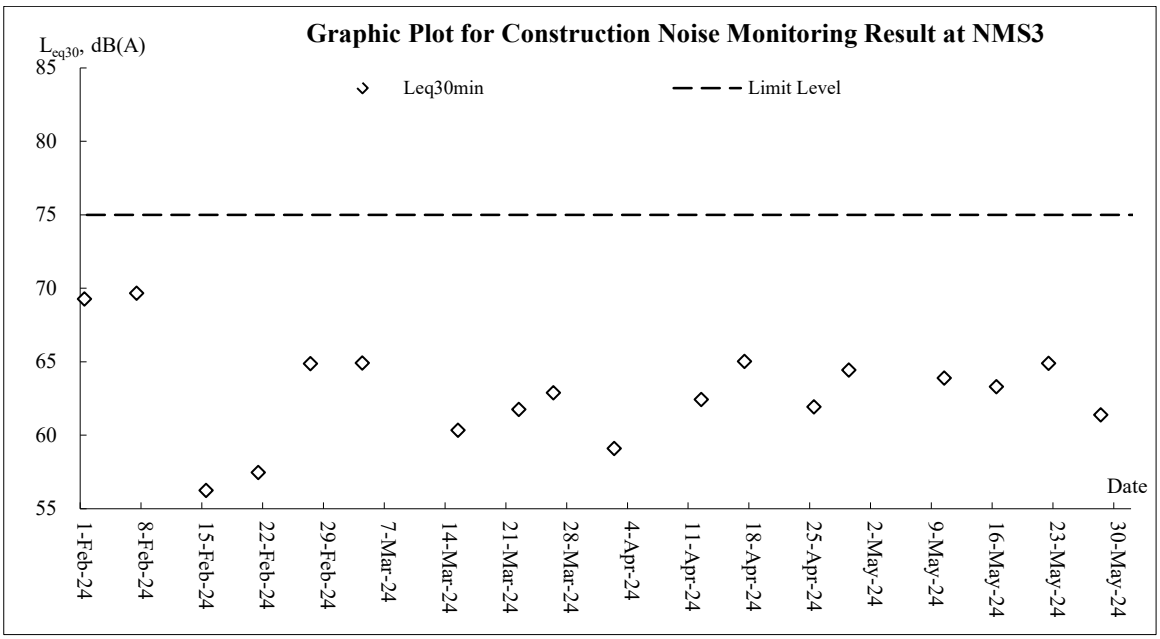
9-May-24
16-May-24
23-May-24
30-May-24


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-Feb-24
8-Feb-24
15-Feb-24
22-Feb-24
29-Feb-24
7-Mar-24
14-Mar-24
21-Mar-24
28-Mar-24
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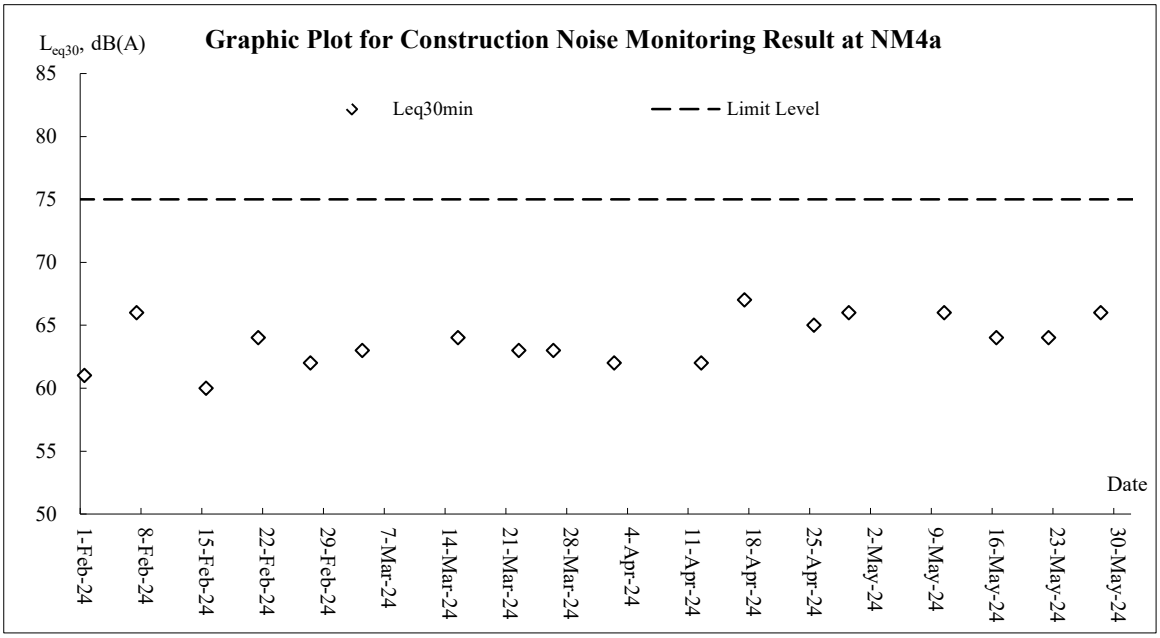
9-May-24
16-May-24
23-May-24
30-May-24


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-Feb-24
8-Feb-24
15-Feb-24
22-Feb-24
29-Feb-24
7-Mar-24
14-Mar-24
21-Mar-24
28-Mar-24
4-Apr-24
11-Apr-24
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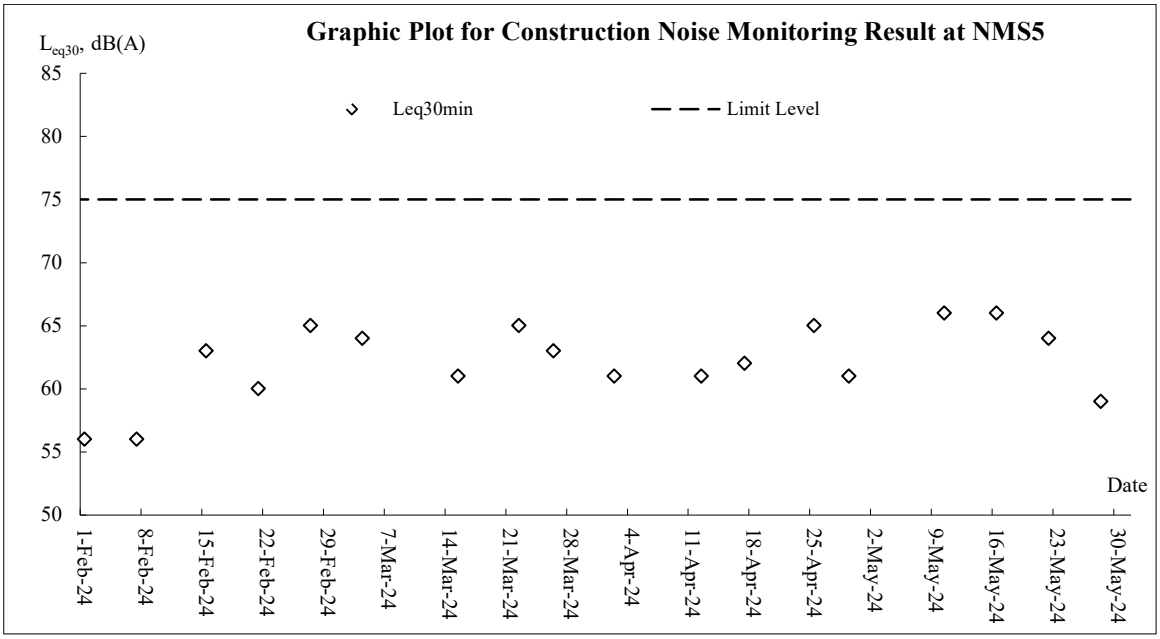
9-May-24
16-May-24
23-May-24
30-May-24


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-Feb-24
8-Feb-24
15-Feb-24
22-Feb-24
29-Feb-24
7-Mar-24
14-Mar-24
21-Mar-24
28-Mar-24
4-Apr-24
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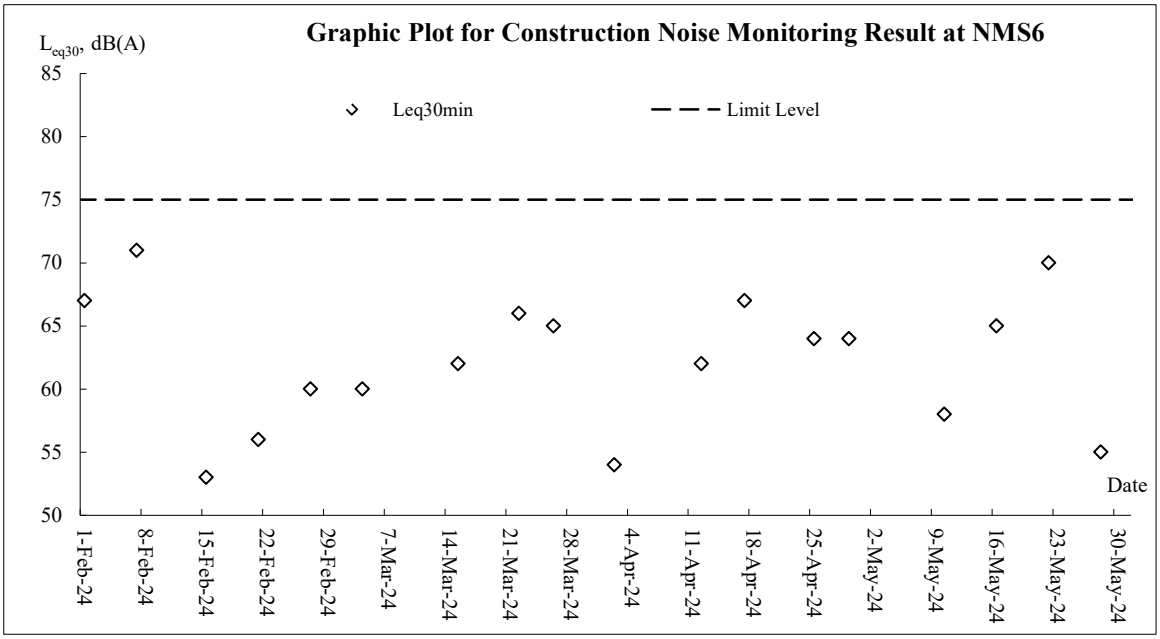
9-May-24
16-May-24
23-May-24
30-May-24


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-Feb-24
8-Feb-24
15-Feb-24
22-Feb-24
29-Feb-24
7-Mar-24
14-Mar-24
21-Mar-24
28-Mar-24
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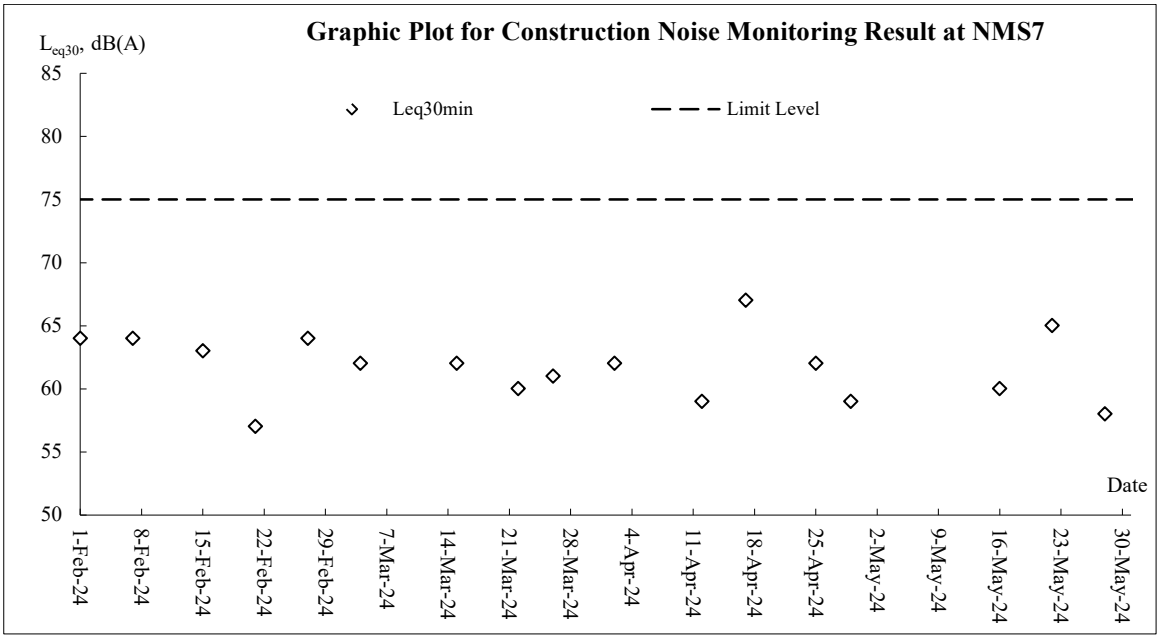
9-May-24
16-May-24
23-May-24
30-May-24


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-Feb-24
8-Feb-24
15-Feb-24
22-Feb-24
29-Feb-24
7-Mar-24
14-Mar-24
21-Mar-24
28-Mar-24
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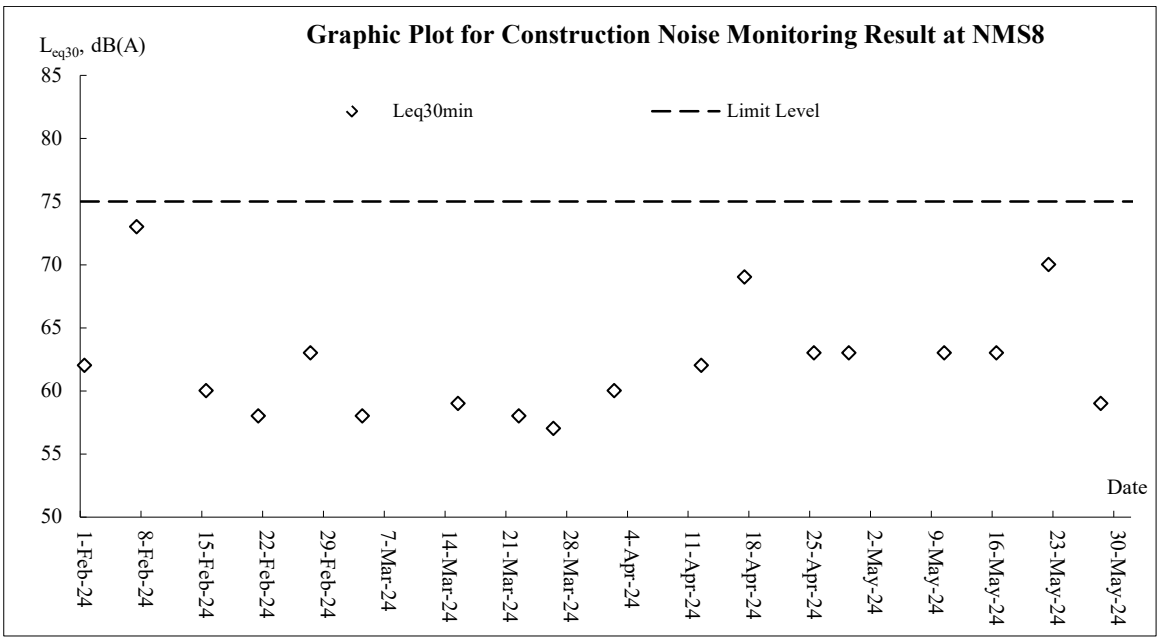
9-May-24
16-May-24
23-May-24
30-May-24


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-Feb-24
8-Feb-24
15-Feb-24
22-Feb-24
29-Feb-24
7-Mar-24
14-Mar-24
21-Mar-24
28-Mar-24
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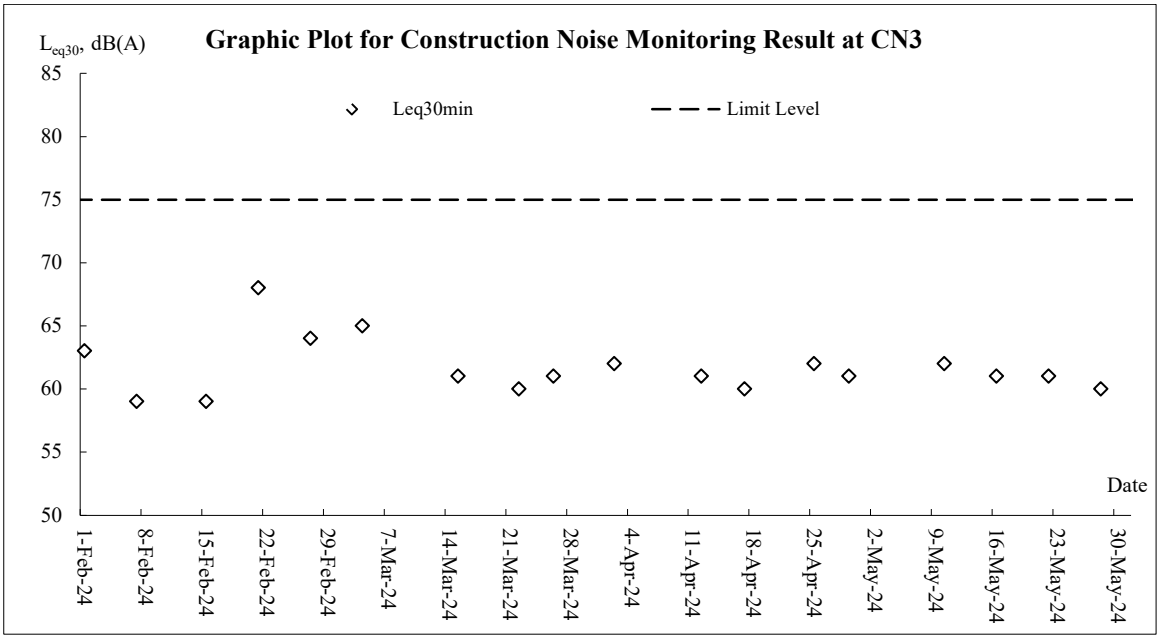
9-May-24
16-May-24
23-May-24
30-May-24


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-Feb-24
8-Feb-24
15-Feb-24
22-Feb-24
29-Feb-24
7-Mar-24
14-Mar-24
21-Mar-24
28-Mar-24
4-Apr-24
11-Apr-24
18-Apr-24
25-Apr-24
2-May-24
9-May-24
16-May-24
23-May-24
30-May-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-May-24	Wed	Mainly cloudy with a few showers.	52.9	22.8	6	S/SE	92.5
2-May-24	Thu	Isolated thunderstorms later.	1.1	23.6	11.2	E/SE	87.2
3-May-24	Fri	Moderate easterly winds,	Trace	23.5	17.5	E/SE	86
4-May-24	Sat	Mainly cloudy with one or two showers.	75.1	23.1	16	SE	92.7
5-May-24	Sun	Moderate easterly winds,	5.3	25	8.5	S/SE	82.2
6-May-24	Mon	Isolated thunderstorms later.	0	28.3	6.2	S/SE	78
7-May-24	Tue	occasionally strong offshore and on high ground.	0	27.9	8.7	W/SW	73.2
8-May-24	Wed	Moderate to fresh easterly winds	Trace	26.4	10.7	E/SE	72.5
9-May-24	Thu	Sunny intervals.	0	25.3	19.7	E/SE	63.2
10-May-24	Fri	Mainly cloudy. Moderate to fresh easterly winds	Trace	24.2	15.5	E/SE	68.7
11-May-24	Sat	Mainly cloudy with one or two showers.	Trace	26.5	9.5	S/SE	78.5
12-May-24	Sun	Moderate to fresh easterly winds	3.1	27.5	8.7	S/SE	79.5
13-May-24	Mon	Mainly cloudy with one or two showers.	0.7	26.3	9.2	SE	74.5
14-May-24	Tue	Mainly fine. Dry and hot during the day	0	24.4	15.2	E/SE	63.7
15-May-24	Wed	Moderate easterly winds, fresh offshore at first.	0	25.5	9.2	S/SE	58
16-May-24	Thu	Hot and very dry during the day.	0	25.2	16.5	E/SE	52
17-May-24	Fri	Moderate to fresh easterly winds	Trace	24.7	11.5	E/SE	68.7
18-May-24	Sat	Showers will be heavier at times later.	Trace	25.4	10.2	E/SE	75
19-May-24	Sun	Cloudy with occasional showers and a few squally thunderstorms.	17.5	24.2	13.5	E/SE	85.7
20-May-24	Mon	Becoming moderate southeasterlies later.	30.7	23.6	13	E	93.7
21-May-24	Tue	Cloudy with occasional showers and a few thunderstorms.	45.3	24.5	13	E	93.7
22-May-24	Wed	Mainly cloudy with a few showers.	Trace	26	6.2	S/SE	90.2
23-May-24	Thu	Moderate easterly winds, fresh offshore at first.	2.5	25.6	9.2	E/SE	88.7
24-May-24	Fri	Hot and very dry during the day.	17.6	24.6	6.2	E/SE	92.7
25-May-24	Sat	Moderate to fresh easterly winds	7.8	25.6	7.5	E/SE	88.5
26-May-24	Sun	Mainly cloudy with occasional showers and squally thunderstorms.	0.3	27.5	7	SE	82.5
27-May-24	Mon	Moderate south to southwesterly winds	6.7	28.2	11	W/SW	84.7
28-May-24	Tue	Mainly cloudy with occasional showers.	8.9	28.3	7.0	S/SE	80
29-May-24	Wed	Mainly cloudy with showers.	0	25.2	24	E/SE	70.5
30-May-24	Thu	Showers will be heavy with a few thunderstorms at first.	3.7	24.3	12.7	SE	85.2
31-May-24	Fri	Moderate to fresh easterly winds	13.4	26.9	14	E/SE	90

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	2.656	0.000	0.000	0.331	2.325	0.000	0.000	0.000	0.000	0.000	0.050
Apr	2.498	0.000	0.000	0.425	2.073	0.000	0.000	0.000	0.000	0.000	0.039
May (update to 25/5)	1.361	0.000	0.000	0.000	1.361	0.000	0.000	0.000	0.000	0.000	0.051
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	**0.251**	0.000	0.000	0.000	**0.251**	0.000	0.000	0.000	0.000	0.000	**0.041**
Apr	0.539	0.000	0.000	0.000	0.539	0.000	0.000	0.000	0.000	0.000	0.074
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.077
June											
July											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	**1.836**	**0.000**	**0.000**	**0.000**	**1.836**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.247**

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	0.028	0.026	0.002	0	0.026	0	0	0	0	0	0.073
Apr	0.007	0.006	0.001	0	0.006	0	0	0	0	0	0.064
May	0.004	0.003	0.001	0	0.003	0	0	0	0	0	0.066
June	---	---	---	---	---	---	---	---	---	---	---
Sub-total	0.141	0.133	0.008	0	0.133	0	0	0	0	0	0.356
July	---	---	---	---	---	---	---	---	---	---	---
Aug	---	---	---	---	---	---	---	---	---	---	---
Sept	---	---	---	---	---	---	---	---	---	---	---
Oct	---	---	---	---	---	---	---	---	---	---	---
Nov	---	---	---	---	---	---	---	---	---	---	---
Dec	---	---	---	---	---	---	---	---	---	---	---
Total	0.141	0.133	0.008	0	0.133	0	0	0	0	0	0.356

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	Accidental Spillage 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	Groundwater from Contaminated Area 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	V	V

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status				
					Contract 1	Contract 2	Contract 3	Contract 4	Contract 5
	(WMP) as part of the Environmental Management Plan (EMP) in accordance with the ***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
March 2024	**0**	0
April 2024	**1**	0
May 2024	**2**	0
Overall Total	**87**	**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/00019428-17)	Day time construction noise of breakers (8AM to 6PM). Requested to delay the operating hour of breakers to 10AM or 11AM			TCS00864/16/300/F0093
6	15-Jul-17	29-Aug-17	Tat Yi House, Po Tat Estate	Resident of Po Tat Estate	Construction noise	EPD	EPD (ref.N08/RE/00022479-17)	Construction noise	CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident and the working hour 08:00 to 18:00 did not breach any legal requirement. To	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

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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

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
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

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
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

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
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

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
								(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

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
			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

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
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

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
								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	

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
								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

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									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

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								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
85	23 and 26 Apr 2024	23 and 26 Apr 2024	Anderson Road Quarry (ARQ) Site	DSD	Water Quality	EPD	NA	EPD received complaint from DSD concerning muddy water was observed entering Tsui Ping River from the upstream on 23 and 26	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	Sent to EPD on 6 May 2024	TCS00864/16/300/F698a

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								April 2024, with similar situation at the catchpit at Tin Hau Temple.	related to the Project of Development of Anderson Road Quarry (ARQ) Site. According to the weather information from the Hong Kong Observatory, heavy rainfall of 40mm and 25mm was recorded on 23 and 26 April 2024 respectively. This intense rainfall caused a significant amount of storm runoff from roads and landscape being flushed into the public drainage system and deteriorated the water quality in the drainage system. According to the site photos provided by the Resident Site Staff (RSS) the discharge water at discharge point Qz off Po Lam Road at 23 and 26 April 2024 were clear despite the base colour of the stepped channel thereat. As advised by the RSS and the Contractor of Contract 1, the majority of the Contract 1 area has been handed over to other contracts on ARQ Site (such as building contract). Each of these interfacing contractors should have been granted a licence for discharge under the Water Pollution Control Ordinance. The discharge points of ARQ Site were located at Q2 and catchpit at Po Lam Road. The wastewater drainage layout plan in the		

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									ARQ Site is shown in ***Figure 1***. The remaining area under Contract 1 were some hard paved roads within the ARQ Site. There were no water quality impact anticpated for Contract 1 in the remaining works. Joint site inspection among the RSS, Contractor of Contract 4 and ET was carried out on weekly basis to audit the environmental performance. The implementation of mitigation measures were summarized below:- (a) The wastewater treatment facilities were implemented and properly functioned. (b) To minimize the generation of muddy water, the exposed areas were covered either with an impervious sheet or through hydroseeding. (c) Sump pits were constructed at the lowest point of the work area to store continuous rainfall, which helps prevent overload of wastewater treatment facilities were and ensures wastewater was properly treated before discharge to the designated discharge points.		
86	6 May 2024	6 May 2024	Anderson	DSD	Water Quality	EPD	NA	EPD received complaint	Joint site inspection among the RSS,	Sent to EPD on 20	TCS00864/ 16/300/F70

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
			Road Quarry (ARQ) Site					from DSD concerning muddy water was observed entering Tsui Ping River from the upstream on 6 May 2024, with similar situation at the catchpit at Tin Hau Temple.	Contractor of Contract 4 and ET was carried out on weekly basis to audit the environmental performance. The implementation of mitigation measures were summarized below: - The wastewater treatment facilities were implemented and properly functioned. - To minimize the generation of muddy water, the exposed areas were covered either with an impervious sheet or through hydroseeding. - Sump pits were constructed at the lowest point of the work area to store continuous rainfall, which helps prevent overload of wastewater treatment facilities were and ensures wastewater was properly treated before discharge to the designated discharge points.	May 2024	1a
87	20 May 2024	20 May 2024	Anderson Road Quarry (ARQ) Site	DSD	Water Quality	EPD	NA	EPD received complaint from DSD concerning muddy water was observed discharge from upstream of Tsui Ping River and at Tin Hau Temple in the morning of 20 May 2024.	Joint site inspection among the RSS, Contractor of Contract 4 and ET was carried out on weekly basis to audit the environmental performance. The implementation of mitigation measures were summarized below: - The wastewater treatment facilities were implemented and properly	Sent to EPD on 30 May 2024	TCS00864/16/300/F702a

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Log ref.	Date of Complaint
									functioned. - To minimize the generation of muddy water, the exposed areas were covered either with an impervious sheet or through hydroseeding. - Sump pits were constructed at the lowest point of the work area to store continuous rainfall, which helps prevent overload of wastewater treatment facilities were and ensures wastewater was properly treated before discharge to the designated discharge points.		

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

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