JOB NO.: TCS00864/16

CEDD SERVICE CONTRACT NO. NTE/07/2016 ENVIRONMENTAL TEAM FOR DEVELOPMENT OF ANDERSON ROAD QUARRY SITE – SITE FORMATION AND ASSOCIATED INFRASTRUCTURE WORKS

MONTHLY ENVIRONMENTAL MONITORING AND AUDIT REPORT (APRIL 2021)

PREPARED FOR
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT (CEDD)

Date	Reference No.	Prepared By	Certified By
28 May 2021	TCS00864/16/600/R0466v3		
		Nicola Hon (Environmental Consultant)	Tam Tak Wing (Environmental Team Leader)

Version	Date	Remarks
1	18 May 2021	First Submission
2	27 May 2021	Amended according to the IEC's comments on 20 May 2021
3	28 May 2021	Amended according to the IEC's comments on 28 May 2021

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: HKCEDD10/50/107351

Date: 31 May 2021

Attention: Mr Leung Siu Kau, Kelvin

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 (April 2021)

We refer to the emails of 18, 27 and 28 April 2021 from Action-United Environmental Services and Consulting attaching a Monthly Environmental Monitoring and Audit Report (April 2021) 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 Frankie Yuen on 2618 2831.

Yours faithfully
ANEWR CONSULTING LIMITED

James Choi
Independent Environmental Checker

CPSJ/YCFF/csym

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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. NTE/07/2016 Environmental Team for Development of Anderson Road Quarry Site – Site Formation and Associated Infrastructure Works (hereinafter called "the Service Contract") on 15 December 2016. The commencement date of the Service Contract is from December 2016 and the Contract Period is 70 months.

ES02 The Services under the Service Contract is to provide environmental monitoring and audit (EM&A) services for the Works Contracts pursuant to the requirement of Environmental Team (ET) under the 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 Anderson Road Quarry and other relevant statutory requirements.

ES03 To facilitate the project management and implementation, the Service Contract has been divided to three CEDD contracts including Contract NE/2016/01 (Contract 1), Contract NE/2016/05 (Contract 2) and Contract NE/2017/03 (Contract 3). As advised by the Resident Engineer (RE), the commencement date of Contract 1 was 21 December 2016 and the major construction works has been commenced on 12 April 2017. The commencement date of Contract 2 was 31 March 2017 and the major construction activities have been commenced on 2 May 2017. Furthermore, Contract 3 was commenced on 31 May 2018 and the major construction activities works was commenced in November 2018. The EM&A programme under the Project was commenced on 12 April 2017 pursuant to the requirement under the EM&A manual. In addition, variation order for extend service scope to E5, E6, E7 and C10 under Contract ED/2019/02 (Contract 5) was issued by AECOM. The commencement date of Contract 5 was on 30 March 2021.

ES04 This is the **49th** monthly EM&A report presenting the monitoring results and inspection findings for the period from **1 to 30 April 2021** (hereinafter 'the Reporting Period').

ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES

ES05 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	**6**	**108**
	24-hour TSP	**4**	**24**
Construction Noise	$L_{eq(30min)}$ Daytime for Contract NE/2016/01	**7**	**28**
	$L_{eq(30min)}$ Daytime for Contract NE/2017/03	**3**	**12**

BREACH OF ACTION AND LIMIT (A/L) LEVELS

ES06 No exceedance of air quality was recorded in the Reporting Period. For construction noise monitoring, no Limit Level exceedance was recorded but one 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

Environmental Aspect	Monitoring Parameters	Action Level	Limit Level	Event & Action		
				NOE Issued	Investigation	Corrective Actions
Construction Noise	$L_{eq(30min)}$ Daytime	**1**	0	0	Project-related.	The Contractor had enhanced the noise mitigation measures

ENVIRONMENTAL COMPLAINT

ES07 In the reporting period, there was one complaint received for Contract 3 regarding noise concerns. Investigation had undertaken by ET upon receipt of the complaint as follows.

(a) A complaint was received by EPD and referred to CEDD on 1 April 2021 regarding the construction noise. The complainant mentioned that piling work was conducted at construction site near SKH St. John's Tsang Shiu Tim Primary School in recent week which generated noise problem. Moreover, there were no noise mitigation measures provided in the construction site. In our investigation, the Contractor has implemented noise mitigation measures to reduce the noise impact and nuisance to the public. However, to eliminate the inconvenience caused to the nearby residents, the Contractor was advised to further adopt good practices on mitigating construction noise to reduce the noise impact to the nearby residents. Since the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance. Moreover, the Contractor has adopted noise mitigation measures to minimise noise impact to the public. Since the construction site is close to the residential area, the Contractor was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme.

NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES08 No environmental summons or successful prosecutions for the Project were recorded in the Reporting Period.

REPORTING CHANGE

ES09 Variation order for extend service scope to E5, E6, E7 and C10 under Contract ED/2019/02 (Contract 5) was issued by AECOM. The commencement date of Contract 5 was on 30 March 2021 and the EM&A activities include site inspection and reporting.

SITE INSPECTION

ES10 In this Reporting Period, joint site inspections to evaluate the site environmental performance for ***Contract 1*** were carried out by the RE, ET and Contractor on **8th, 13th, 20th and 27th April 2021** in which IEC joined the site inspection with SSEMC on **8th April 2021**. No non-compliance was noted during the site inspection.

ES11 In this Reporting Period, joint site inspections to evaluate the site environmental performance for ***Contract 2*** were carried out by the RE, ET and Contractor on **7th, 14th, 21st and 28th April 2021** in which IEC joined the site inspection on **21st April 2021**. No non-compliance was noted during the 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 **1st, 9th, 16th, 23rd and 30th April 2021** in which IEC joined the site inspection with SSEMC on **9th April 2021.** 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 5*** were carried out by the RE, ET and Contractor on **15th, 22nd and 27th April 2021** in which IEC joined the site inspection with SSEMC on **27th April 2021.** No non-compliance was noted during the site inspection.

FUTURE KEY ISSUES

ES14 During wet season, 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.

ES15 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.

ES16 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.

ES17 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 Action-United Environmental Services & Consulting (hereinafter referred as "AUES") has been awarded the CEDD Service Contract No. NTE/07/2016 Environmental Team for Development of Anderson Road Quarry Site – Site Formation and Associated Infrastructure Works (hereinafter called "the Service Contract") on 15 December 2016. The commencement date of the Service Contract was December 2016 and the Contract Period is 70 months.

1.1.2 The Services under the Service Contract is to provide environmental monitoring and audit (EM&A) services for the Works Contracts pursuant to the requirement of Environmental Team (ET) under the 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.

1.1.3 Development of Anderson Road Quarry is to provide land and the associated infrastructures for the proposed land used at the existing Anderson Road Quarry Site at the North-eastern of East Kowloon according to the final Recommended Outline Development Plan (hereinafter named as the Project Works).

1.1.4 To facilitate the project management and implementation, the Service Contract has been divided to three CEDD contracts including Contract NE/2016/01 (Contract 1), Contract NE/2016/05 (Contract 2) and Contract NE/2017/03 (Contract 3). As advised by the Resident Engineer (RE), the commencement date of Contract 1 was 21 December 2016 and the major construction works has been commenced on 12 April 2017. The commencement date of Contract 2 was 31 March 2017 and the major construction activities have been commenced on 2 May 2017. Furthermore, Contract 3 was commenced on 31 May 2018 and the major construction activities works was commenced in November 2018. The EM&A programme under the Project was commenced on 12 April 2017 pursuant to the requirement under the EM&A manual. In addition, variation order for extend service scope to E5, E6, E7 and C10 under Contract ED/2019/02 (Contract 5) was issued by AECOM. The commencement date of Contract 5 was on 30 March 2021.

1.1.5 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.

1.1.6 This is the **49th** monthly EM&A report presenting the monitoring results and inspection findings for the period from **1 to 30 April 2021 (**hereinafter referred as "Reporting Period").

REPORT STRUCTURE

1.1.1 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*

2. PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS

CONSTRUCTION CONTRACT PACKAGING

2.1.1 To facilitate the project management and implementation, the Project was divided by 3 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 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 31 March 2017 and 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;

(iv) Construction of green routes connecting to Jordan Valley Park and Choi Wing Road; and

(v) Slope improvement works in the vicinity of Po Lam Road South and other associated works.

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

2.1.4 The commencement date of Contract 3 is on 31 May 2018 and 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 5 (Contract No. ED/2019/02)

2.1.5 The commencement date of Contract 5 is on 30 March 2021 and the major Scope of Work of the Contract 5 is listed below:

(i) E5 & E6 Escalators:-
- Socket H piles
- Excavation for pile caps
- E5/E6 escalator superstructure
- Escalator system
- Drainage pipe & U channel
- Road lighting
- Slope works
- Architectural finishes and builder's works of E5/E6 escalators
- Electrical system for E5 /E6 escalator

(ii) E7 Lift Tower & Footbridge:-
- Mini-piles for Lift Tower
- Rock excavation for pilecaps
- Superstructure of Lift Tower & Footbridge
- A steel footbridge
- Drainage pipe & U channel
- Road lighting
- Architectural finishes and builder's works of Lift Tower
- Electrical & ventilation system
- Landscape planting & irrigation pipe
- Re-provision of access stairs
- Modification of existing structure.

(iii) E10 Lift Tower & Footbridge:-
- Rock excavation, footings for E10 Lift Tower
- Superstructure of Lift Tower & Footbridge
- Drainage pipe & U channel
- A steel footbridge
- Plumbing system and fire service system
- Road lighting
- Architectural finishes and builder's works of Lift Tower
- Electrical & ventilation system
- Landscape planting & irrigation pipe.

PROJECT ORGANIZATION

2.1.1 The project organization and contact details for Contracts 1, 2, 3 and 5are shown in ***Appendix B***.

CONSTRUCTION PROGRESS

2.1.6 The 3-month rolling construction programme for Contracts 1, 2, 3 and 5 are shown in ***Appendix C***. The major construction activities conducted in the Reporting Period are summarized in below.

Contract 1 (NE/2016/01)

Temporary Traffic Arrangement (TTA) at On Sau Road:

- Implementation of TTA at the junction between On Sau Road and Road L4 for road improvement works to continue

Pedestrian Connectivity System B:

- Bamboo Scaffold Erection for external ABWF works.

Construction of Internal Road L1:

- Excavation and laying of watermain to continue.
- Road work, footpath and cycle track at L1 east to continue.
- Gullies and upper drainage construction for road L1 west to continue.

Box Culvert BC1 at Internal Road L1:

- Defect rectification work to continue
- Slurry removal to continue

Construction of Internal Road L2

- Site formation works, road kerb construction and sub-base filling to continue.
- Drainage modification work and gully pipe construction to continue
- Watermain works and UU laying to continue.

Retaining Wall RWA9 at Road L3

- Backfilling and SRT of RWA9 Bays 1- Bay10 to continue
- Backfilling and SRT of RWA9 Bays 18-20 to continue.
- Additional mass concrete short wall behind Bay 17 to continue.
- Lower level drainage in progress.
- Construction of manhole SMH1, TM26a &TM26 completed.

Retaining Wall RWA10 at Road L3

- Backfill behind Bays 6 to 16 to continue.

Box Culvert BC2 at Internal Road L3:

- Backfilling at Bay 17 chamber structure to continue.

Construction of Internal Road L5:

- The First Batch paving block were arrived. Laying the concrete kerb construction for the cycle track and footpath before the demonstration of porous concrete pavement set up.

Water Pumping Station including Retaining Wall RWA13 and RWA14:

- Backfill at retaining wall RWA13 to continue.
- To continue the construction of valve chambers.
- To continue the Metal Works (i.e.: chequer plate.).
- To continue with the ABWF Works (i.e.: floor, timber door)
- To continue with the E&M Works.
- To continue the mass concrete fill works at slope A13.

Water Reservoir

- To continue excavation works for watermain works and construct valve chamber.
- To continue the construction works of WSD Access.

Artificial Flood Attenuation Lake

- To continue concrete lining works at remaining part (east side) of lake bottom.
- To continue the drainage works.

- To continue the construction of floating bridge guide posts, wall of landing and retaining wall.

Underground Stormwater Retention Tank (USRT)
- Backfill around USRT to continue.
- Backfill around Ventilation Duct area to continue.

Internal Road L4, Pedestrian Connectivity System A, Noise Barrier, RWA12 and RWA18:
- RWA12 Bays 15-21 wall construction to continue.
- Road works at footpath (laying sub-base, kerb construction and paving block construction) to continue
- U-channel construction would commence

PC System A
- North Tower 4th portion of wall and slab construction to continue.
- South Tower pile cap construction to continue.

PTT
- Steel work and PMMA panel installation to continue, road construction, make good formation condition and rock breaking for cycle track would continue.

Slope Stabilization at Portion B1:
- Continue to carry out stabilization works at Feature No. 11NE-D/C947, 11NE-D/C949, 11NE-D/C976 and 11NE-D/C977.

Slope Stabilization at Portion B5
- Continue to erect inspection scaffolds from 2nd to 3rd berm
- Continue to carry out stabilization works at Feature No. 11NE-D/C1005, 11NE-D/C948, 11NE-D/C949,11NE-D/C982, 11NE-B/C902 and Slope A15b
- Continue to trim the slope profile of Feature 11NE-D/C903.

Road Improvement Works at Po Lam Road:
- Construction of permanent footpath and surface drainage system to continue
- Excavation works to facilitate installation of the E&M/ACT/Earth pit and construction of permanent footpath and surface drainage system to continue
- Remove the existing concrete pavement and reconstruction to continue

MEP Works:
- Submission of designs and materials related to MEP works to continue.
- E&M installation works at PTT to continue.
- E&M installation works at Pump Hall of Fresh Water Pumping Station to continue.
- E&M installation works at Pedestrian Connectivity System B to continue.
- E&M installation works at Underground Stormwater Retention Tank to continue.
- E&M installation works at Underpass to continue

Site Formation Work at Portion B13:
- Land Parcel R2-4 & R2-6 Excavation to formation level to continue.

Site Formation Work at Portion B3:
- UC construction at land parcel C-5 to continue.
- Chain-link fence installation and UC construction at land parcel R2-7 and C-1 completed.

Site Formation Work at Portion B14:
- Backfilling and proof rolling/ SRT at Portion B14 to continue.

Site Formation Work at Portion E2 & E3:
- UC construction at land parcel E2 completed

- Excavation to formation level at land parcel E3 in progress
- Backfilling & SRT of fill slope zone of Portion E3 in progress

Site Formation Work at Portion G3 & Slope A6:
- Excavation to formation level at land parcel G3 to continue.
- Chain-link fence installation at land parcel G3 to continue.

Cavern (Portion B5):
- Rock fall fence installation complete.
- Rock mapping of Sub Area 5 slope at Ch0-Ch40 on level +208mPD - 210.5mPD to continue.
- Rock breaking of existing slope at Ch40-240 on level +204-206mPD to continue
- Rock dowel construction at Ch40-140 on level+206+208.5 to continue
- Planter wall construction to continue.

Underpass, East and West Portal:
- East Portal Rock slope A1 stabilization works in progress
- East Portal structure works for RWA1C & RWA1B retaining wall in progress
- East Portal install the crossing duct pipe and concrete carriageway
- West Portal Buttress wall construct work in progress
- West Portal Slope A3 construct u-channel and berm in progress
- Underpass – laying drainage layer, subbase and flexible pavement in progress

Hiking Trail (Portion B5):
- Site Clearance in progress from CH690 to 1055.
- Continue to erect the formwork and cast the concrete from CH1055 to 179.

Contract 2 (NE/2016/05)

1. Soil Nail Construction:
   - Excavation, Slope cutting work, Drilling and Grouting
2. Mass Concrete Construction: Working at height, lifting.
3. Framework and falsework installation and dismantling: Working at height, lifting, manual handling, moving plant
4. Lift tower construction: Working at height, lifting, Electric Arc welding, Flame cutting
5. Rebar fixing: Working at height, lifting, Electric arc welding, Flame cutting

Contract 3 (NE/2017/03)

Works in Road Improvement Works 1 (RIW1)
- Earth works (such as temporary soil nail, form working platform etc), RC works and no-fine concrete construction at RWC2 in-progress;
- Backfilling works at west side of KS27 subway extension is in progress;
- RC works for noise barrier in-progress;

Works in Road Improvement Works 2 (RIW2)
- Earth works (such as temporary soil nail, form working platform etc), RC works at Slope C3 is in progress;
- Utilities works at SE2 is in-progress;

Works in Road Improvement Works 3 (RIW3)
- Mini-pile construction at RWD1 along Sau Mau Ping Road was completed. RC works for RWD1 Bay 1 – 10 was in progress. ELS works for RWD1 Bay 11 – 14 was in progress.
- Construction of retaining wall RWD2 at Slope D2 was in-progress;
- Rock excavation works using drill and split method at Slope D3 along Lin Tak Road

was in-progress;
- Construction of mass concreting retaining wall at slope crest of Slope D3 was in-progress;
- No-fines concrete construction at slope crest of Slope D3 is in progress;
- Inspection Pit for UU at Sau Mau Ping Road is in progress.

Pedestrian Connectivity Facility E8 (PC-E8)
- RC works for escalator pit E7/E8 and E11/E12 were in-progress;
- ELS works for construction F8 abutment was in-progress.

Pedestrian Connectivity Facility E11 (PC-E11)
- ELS works, pile cap construction works and preparation works for drainage diversion works at PC1 were in-progress;
- Construction of RC structure at PC6 was in-progress;
- Construction of pier head at PC2 – PC5 were in-progress;
- Preparation works for steel-frame fabrication at off-site fabrication yard is on-going..

Pedestrian Connectivity Facilities Systems A (PC-SYA)
- RC construction works for sub-structure was completed;
- Backfilling to ground level and preparation works for construct above-ground structure were in-progress;

Pedestrian Connectivity Facilities Systems B (PC-SYB)
- Construction of RC pier at P6 and P7 is in-progress;
- Gasmain diversion works (by Towngas) at PC2 is in-progress;
- Cable diversion works (by CLPE) at PC1 is in-progress.

Tseung Kwan O Bus-Bus Interchange New Public Toilet (BBI-Toilet)
- Carry-out outstanding works and additional works.

Contract 5 (ED/2019/02)
- Portion 1: Site Clearance, Initial Survey.
- Portion 2: Site Clearance, Coordination with HD for access & facilities relocation.
- Portion 3: Initial Survey, TTA for site entrance for bus relocation.
- Portion 4: Prepare & Endorse TTA Scheme by TMLG.

2.1.7 Summary of the relevant permits, licenses, and/or notifications on environmental protection for the Project of contracts 1, 2, 3 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 1

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. 411762	NA	NA	valid
	Form NB – Notification pursuant to Air pollution Control (Construction Dust) Regulation	EPD ref. no. 412730	NA	NA	valid
2	Chemical Waste Producer Registration	Registration no. WPN 5213-292-C4115-01	15 Feb 17	End of project	valid
3	Water Pollution Control	WT00028050-2017	29 May 17	31 May	valid

Item	Description	License/Permit Status			
		Permit no./ account no./ Ref. no.	Valid Period		Status
			From	To	
	Ordinance – Discharge License			22	
4	Waste Disposal Regulation – Billing Account for Disposal of Construction Waste	Account no. 7026925	20 Jan 17	End of project	valid
5	Construction Noise Permit	GW-RE0025-21	18 Jan 21	17 Apr 21	valid
		GW-RE0301-21	17 Apr 21	16 Jul 21	valid

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

Item	Description	License/Permit Status			
		Permit no./ account no./ Ref. no.	Valid Period		Status
			From	To	
1	Notification pursuant to Air pollution Control (Construction Dust) Regulation	EPD ref. no. 312173	NA	NA	valid
2	Chemical Waste Producer Registration	Registration no. WPN 5213-294-K2890-08	3 Jul 17	End of Project	Valid
3	Water Pollution Control Ordinance – Discharge License	WT00028685-2017	02 Aug 17	31 Aug 22	Valid
		WT00028686-2017	02 Aug 17	31 Aug 22	Valid
		WT00028687-2017	02 Aug 17	31 Aug 22	Valid
4	Waste Disposal Regulation – Billing Account for Disposal of Construction Waste	Account no.7027548	12 Apr 17	End of project	Valid

Table 2-3 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	Notification to EPD on 29 May 2018.			
2	Chemical Waste Producer Registration	**For Area R1W3 (E11)** Registration no. WPN : 5213-294-C4239-04	6-Aug-18	End of Project	Valid
		For Area System A Registration no. WPN: 5213-293-C4239-05	6-Aug-18	End of Project	Valid
		For Area System B Registration no. WPN 5213-294-C4239-03	6-Aug-18	End of Project	Valid

Item	Description	License/Permit Status			
		Permit no./ account no./ Ref. no.	Valid Period		Status
			From	To	
		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)** WT00032742-2018	18-Jan-19	31-Jan-24	Valid
		For Area System A WT00033223-2019	31-Jan-19	31-Jan-24	Valid
		For Area System B WT00033229-2019	24-Jun-19	30-Jun-24	Valid
		For Area E8 WT00033224-2019	21-Mar-19	31-Mar-24	Valid
4	Waste Disposal Regulation – Billing Account for Disposal of Construction Waste	Account no.7031075	20 July 2018	End of project	Valid
5	Construction Noise Permit	GW-RE0307-21	2 Apr 21	16 May 21	Valid

Table 2-4 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. 466364	NA	NA	Valid
2	Chemical Waste Producer Registration	Registration no. WPN 5298-293-W3611-01	13 Apr 21	End of project	Valid
3	Water Pollution Control Ordinance – Discharge License	Working in Progress			
4	Waste Disposal Regulation – Billing Account for Disposal of Construction Waste	Working in Progress			

3. SUMMARY OF IMPACT MONITORING REQUIREMENTS

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.

MONITORING PARAMETERS

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

- Air quality; and
- Construction noise

3.1.4 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.

MONITORING LOCATIONS

3.1.5 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 Planned School facing Anderson Road	Not yet commenced
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 On Tat Estate facing the	Active

ID	ASR ID in EIA	Location in the EM&A Manual	Identified Location during Site Visit	Status
			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.

Construction Noise

3.1.6 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 planned school at DAR facing the project site	Not yet commenced
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

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

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

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

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

Addition Construction Noise Monitoring Location

3.1.7 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

MONITORING FREQUENCY AND PERIOD

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

Air Quality Monitoring

3.1.9 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

3.1.10 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

MONITORING EQUIPMENT

Air Quality Monitoring

3.1.11 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.

3.1.12 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

3.1.13 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}.

3.1.14 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	B&K-2238
Calibrator	Rion NC-74 & B&K-4231
Portable Wind Speed Indicator	Anemometer AZ Instrument 8908

MONITORING METHODOLOGY

1-hour TSP

3.1.15 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.

3.1.16 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

3.1.17 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

3.1.18 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.

3.1.19 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.

3.1.20 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

3.1.21 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.

3.1.22 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.

3.1.23 The sound level meter will be mounted on a tripod at a height of 1.2 m and placed at the assessment point and oriented such that the microphone is pointed to the site with the

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

3.1.24 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.

3.1.25 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.

3.1.26 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

3.1.27 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.

DERIVATION OF ACTION/LIMIT (A/L) LEVELS

3.1.28 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
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	***70*** dB(A)[Note 1]/ ***65*** dB(A)[Note 1]

Monitoring Location	Action Level	Limit Level in dB(A)
	Time Period: 0700-1900 hours on normal weekdays	
NMS-2(@)	complaints are received	
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 3December 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.

3.1.29 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.***

DATA MANAGEMENT AND DATA QA/QC CONTROL

3.1.30 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.

3.1.31 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

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-5, AMS-6 and AMS-7. Since installation of HVS for 24-hour TSP at AMS-2 and AMS-3 were pending approval from relevant departments, only 1-hour TSP monitoring was conducted at AMS-2 and AMS-3. No monitoring was conducted at AMS-4 since they are planned ASR which are still under construction/ not yet constructed.

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

RESULTS OF AIR QUALITY MONITORING

4.1.3 In the Reporting Period, a total of ***108*** 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
1-Apr-21	25	1-Apr-21	13:44	55	57	55
7-Apr-21	22	7-Apr-21	9:08	59	52	54
12-Apr-21	19	10-Apr-21	9:18	68	72	63
17-Apr-21	122	15-Apr-21	9:10	50	59	53
23-Apr-21	32	21-Apr-21	9:11	83	71	60
29-Apr-21	34	27-Apr-21	9:08	79	69	76
Average (Range)	**44 (19 – 122)**	Average (Range)		**63 (50 – 83)**		

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

1-hour TSP (μg/m³)				
Date	Start Time	1st reading	2nd reading	3rd reading
1-Apr-21	9:11	71	68	65
7-Apr-21	9:23	64	60	69
10-Apr-21	9:29	70	76	67
15-Apr-21	10:00	78	73	76
21-Apr-21	9:18	78	83	71
27-Apr-21	9:23	67	73	78
Average (Range)		**72 (60 – 83)**		

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

1-hour TSP (μg/m³)				
Date	Start Time	1st reading	2nd reading	3rd reading
1-Apr-21	12:30	70	73	76
7-Apr-21	9:40	68	63	71
10-Apr-21	9:58	64	69	73
15-Apr-21	12:30	75	82	78
21-Apr-21	9:20	77	62	69
27-Apr-21	9:36	76	64	68
Average		**71**		

1-hour TSP (μg/m³)				
Date	**Start Time**	**1st reading**	**2nd reading**	**3rd reading**
(Range)		**(62 – 82)**		

Table 4-4 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**
1-Apr-21	20	1-Apr-21	9:30	74	79	73
7-Apr-21	46	7-Apr-21	13:18	64	71	74
12-Apr-21	27	10-Apr-21	13:21	73	78	70
17-Apr-21	39	15-Apr-21	13:32	55	53	51
23-Apr-21	61	21-Apr-21	13:04	66	75	83
29-Apr-21	26	27-Apr-21	13:18	76	66	73
Average (Range)	**37 (20 – 61)**	Average (Range)		**70 (51 – 83)**		

Table 4-5 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**
1-Apr-21	20	1-Apr-21	9:58	76	70	75
7-Apr-21	42	7-Apr-21	13:36	76	71	80
12-Apr-21	41	10-Apr-21	13:46	68	76	72
17-Apr-21	55	15-Apr-21	10:21	77	83	84
23-Apr-21	79	21-Apr-21	13:11	89	76	68
29-Apr-21	27	27-Apr-21	13:34	80	76	83
Average (Range)	**44 (20 – 79)**	Average (Range)		**77 (68 – 89)**		

Table 4-6 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**
1-Apr-21	21	1-Apr-21	13:05	76	71	69
7-Apr-21	35	7-Apr-21	13:58	70	75	67
12-Apr-21	25	10-Apr-21	14:12	73	64	69
17-Apr-21	34	15-Apr-21	9:51	59	61	66
23-Apr-21	53	21-Apr-21	13:20	77	81	68
29-Apr-21	19	27-Apr-21	13:48	79	70	74
Average (Range)	**31 (21 – 53)**	Average (Range)		**71 (59 – 81)**		

4.1.4 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.

4.1.5 The meteorological data during the impact monitoring days are summarized in ***Appendix J***.

5. CONSTRUCTION NOISE MONITORING

GENERAL

5.1.1 In the Reporting Period, noise monitoring was performed at designated monitoring locations NMS2 and NMS3 and the additional monitoring locations NMS4a, NMS5, NMS6, NMS7 and NMS8. No monitoring was conducted at the designated monitoring locations NMS1 since they are the planned NSR and still under the construction.

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.

5.1.3 The noise monitoring schedule is presented in ***Appendix G*** and the monitoring results are summarized in the following sub-sections.

NOISE MONITORING RESULTS IN REPORTING MONTH

5.1.4 In the Reporting Period, a total of **28** 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	**NMS2**	**NMS3**	**NMS4a**	**NMS5**	**NMS6**	**NMS7**
7-Apr-21	60	62	70	68	69	69
15-Apr-21	62	72	72	66	71	69
21-Apr-21	65	65	69	68	70	69
27-Apr-21	62	67	66	64	68	68
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;

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

Construction Noise Level ($L_{eq30min}$), dB(A)	
Date	**NMS8**
8-Apr-21	64
16-Apr-21	66
22-Apr-21	68
28-Apr-21	64
Limit Level	**75 dB(A)**

5.1.5 For the additional noise monitoring under Contract 3, a total of **12** 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	**CN1**	**CN2**	**CN3**
8-Apr-21	58	67	64
16-Apr-21	63	62	64
22-Apr-21	63	64	65
28-Apr-21	64	62	68

Limit Level	***70*** dB(A) / ***65*** dB(A)[Note 1]	***70*** dB(A)[Note 1] / ***65*** dB(A)[Note 1]	**75 dB(A)**

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

5.1.6 As shown in ***Tables 5-1 and 5-2,*** no Limit Level exceedance was recorded in this Reporting Period. Moreover, one noise complaint (which triggered Action level exceedance) was received under the Project. The investigation for the noise complaint is included in Section 8 of the report.

6. WASTE MANAGEMENT

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.

RECORDS OF WASTE QUANTITIES

6.1.2 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.

6.1.3 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 1		Contract 2		Contract 3		Contract 5	
	Quantity	Disposal Location	Quantity	Disposal Location	Quantity	Disposal Location	Quantity	Disposal Location
Total generated Inert C&D Materials ('000m^3) (#)	15.432	-	0.34	-	0.869	-	0	-
Hard Rock and Large Broken Concrete ('000m^3)	0	-	0	-	0	-	0	-
Reused in this Contract (Inert) ('000m^3)	2.688	-	0	-	0	-	0	-
Reused in other Projects (Inert) ('000m^3)	11.312	*	0	-	0	*	0	-
Disposal as Public Fill (Inert) ('000m^3)	1.432	TKO 137	0.05	TKO 137	0.869	TKO 137	0	-

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 1		Contract 2		Contract 3		Contract 3	
	Quantity	Disposal Location	Quantity	Disposal Location	Quantity	Disposal Location	Quantity	Disposal Location
Recycled Metal ('000kg)	0	-	0	-	0	-	0	-
Recycled Paper / Cardboard Packing ('000kg)	0	-	0	-	0	-	0	-
Recycled Plastic ('000kg)	0	-	0	-	0.238	Licensed collector	0	-
Chemical Wastes ('000kg)	0	-	0	-	0	-	0	-
General Refuses ('000m^3)	0.044	SENT	0.29	SENT	0.032	SENT	0	-

7. SITE INSPECTION

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.

FINDINGS / DEFICIENCIES DURING THE REPORTING MONTH

Contract 1

7.1.2 In the Reporting Period, joint site inspections for Contract 1 to evaluate site environmental performance were carried out by the RE, ET and the Contractor on **8th, 13th, 20th and 27th April 2021** in which IEC joined the site inspection with SSEMC on **8th April 2021**. No non-compliance was noted. The findings / deficiencies of ***Contract 1*** that observed during the weekly site inspection are listed in ***Table 7-1***.

Table 7-1 Site Observations of Contract 1

Date	Findings / Deficiencies	Follow-Up Status
8 April 2021	• No adverse environmental issue was observed.	• NA
13 April 2021	• The Contractor should dispose the construction waste on the ground regularly at East Portal.	• Construction wastes were removed.
20 April 2021	• The Contractor was reminded to provide water spraying on site (General).	• Water spraying was provided for driller.
27 April 2021	• The Contractor was reminded to replace the broken acoustic mat for breaker. (Cavern)	• Reminder only.

Contract 2

7.1.3 In the Reporting Period, joint site inspections for Contract 2 to evaluate site environmental performance were carried out by the RE, ET and the Contractor on **7th, 14th, 21st and 28th April 2021** in which IEC joined the site inspection with SSEMC on **21st April 2021**. No non-compliance was noted. The findings / deficiencies of ***Contract 2*** that observed during the weekly site inspection are listed in ***Table 7-2***.

Table 7-2 Site Observations of Contract 2

Date	Findings / Deficiencies	Follow-Up Status
31 March 2021 (Last Reporting Period)	• Construction material was observed inside tree protection zone at portion 1. The Contractor should remove construction material from tree protection zone as soon as possible.	• Construction material inside tree protection zone was removed.
7 April 2021	• The Contractor was reminded to enhance house-keeping within site area next to site office. • The Contractor was reminded to clean the stagnant water at potion 1.	• Reminder only. • Reminder only.
14 April 2021	• The Contractor should dispose cumulated of construction waste regularly at portion 1. • The Contractor was reminded to maintain the tree protection zone properly at portion 2 next to site office.	• Accumulation of waste was disposed regularly. • Reminder only.

Date	Findings / Deficiencies	Follow-Up Status
	• The Contractor was reminded to clean the u-channel regularly at portion 1.	• Reminder only.
21 April 2021	• The Contractor should clean the muddy materials at the public road near portion 2. • The Contractor was reminded to dispose construction waste regularly at portion 1.	• Muddy materials at public road near Portion 2 was cleaned. • Reminder only.
28 April 2021	• Accumulation of stagnant water at concrete pits should be avoided. (Portion 1).	• To be followed up.

Contract 3

7.1.4 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 **1st, 9th, 16th, 23rd and 30th April 2021** in which IEC joined the site inspection with SSEMC on **9th April 2021**. No non-compliance was noted. The findings / deficiencies of ***Contract 3*** that observed during the weekly site inspection are listed in ***Table 7-3***

Table 7-3 Site Observations of Contract 3

Date	Findings / Deficiencies	Follow-Up Status
1 April 2021	• The Contractor was reminded to dispose wastes regularly at System A.	• Reminder only.
9 April 2021	• The Contractor was reminded to clear the U-channel at System B.	• Reminder only.
16 April 2021	• The Contractor was reminded to dispose construction wastes regularly at System A.	• Reminder only.
23 April 2021	• No adverse environmental issue was observed.	• NA
30 April 2021	• No adverse environmental issue was observed.	• NA

Contract 5

7.1.5 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 **15th, 22nd and 27th April 2021** in which IEC joined the site inspection with SSEMC on **27th April 2021**. No non-compliance was noted. The findings / deficiencies of ***Contract 5*** that observed during the weekly site inspection are listed in ***Table 7-4***

Table 7-4 Site Observations of Contract 5

Date	Findings / Deficiencies	Follow-Up Status
15 April 2021	• It was noted that construction works under the Contract has not yet commencement, the Contractor was reminded to obtain / apply all the necessary environmental licenses for the contract.	• Reminder only.
22 April 2021	• It was noted that construction works under the Contract has not yet commencement, the Contractor was reminded to maintain good housekeeping of the site area.	• Reminder only.
27 April 2021	• The Contractor was reminded to clean the general refuse regularly at E7.	• Reminder only.

8. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTION

8.1.1 In the Reporting Period, no environmental complaint was received.

Complaint received for Contract 3

(a) A complaint was received by EPD and referred to CEDD on 1 April 2021 regarding the construction noise. The complainant mentioned that piling work was conducted at construction site near SKH St. John's Tsang Shiu Tim Primary School in recent week which generated noise problem. Moreover, there were no noise mitigation measures provided in the construction site. In our investigation, the Contractor has implemented noise mitigation measures to reduce the noise impact and nuisance to the public. However, to eliminate the inconvenience caused to the nearby residents, the Contractor was advised to further adopt good practices on mitigating construction noise to reduce the noise impact to the nearby residents. Since the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance. Moreover, the Contractor has adopted noise mitigation measures to minimise noise impact to the public. Since the construction site is close to the residential area, the Contractor was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme.

8.1.2 Besides, no summons and prosecution under the EM&A Programme was lodged for the project. Investigation for the complaint was undertaken by the ET and presented in following sections.

8.1.3 The complaint log and Investigation Reports issued in the Reporting Period are shown in ***Appendix M.***

8.1.4 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
1 Apr 2017 – 31 Mar 2021	1	0	**48**	**Dust, Noise and light nuisance**
21 Mar 2017 – 31 Mar 2021	2	0	**10**	**Noise**
31 May 2018 – 31 Mar 2021	3	0	**7**	**Waste Management, Noise, Water Quality**
30 Mar 2021 – 31 Mar 2021	5	0	0	NA
1 – 30 April 2021	1	0	**48**	NA
	2	0	**10**	NA
	3	**1**	**8**	**Noise**
	5	0	**0**	NA

Table 8-2 Statistical Summary of Environmental Summons

Reporting Period	Contract no.	Environmental Summons Statistics		
		Frequency	Cumulative	Summons Nature
1 Apr 2017 – 31 Mar 2021	1	0	0	NA
21 Mar 2017 – 31 Mar 2021	2	0	0	NA
31 May 2018 – 31 Mar 2021	3	0	0	NA
30 Mar 2021 – 31 Mar 2021	5	0	0	NA
1 – 30 April 2021	1	0	0	NA
	2	0	0	NA
	3	0	0	NA

Reporting Period	Contract no.	Environmental Summons Statistics		
		Frequency	Cumulative	Summons Nature
	5	0	0	NA

Table 8-3 Statistical Summary of Environmental Prosecution

Reporting Period	Contract no.	Environmental Prosecution Statistics		
		Frequency	Cumulative	Prosecution Nature
1 Apr 2017 – 31 Mar 2021	1	0	0	NA
21 Mar 2017 – 31 Mar 2021	2	0	0	NA
31 May 2018 – 31 Mar 2021	3	0	0	NA
30 Mar 2021 – 31 Mar 2021	5	0	0	NA
1 – 30 April 2021	1	0	0	NA
	2	0	0	NA
	3	0	0	NA
	5	0	0	NA

9. IMPLEMENTATION STATUS OF MITIGATION MEASURES

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.

TENTATIVE CONSTRUCTION ACTIVITIES IN THE COMING MONTH

9.1.3 Construction activities for Contract 1 in the coming month are listed below:

Temporary Traffic Arrangement (TTA) at On Sau Road:

- Implementation of TTA at the junction between On Sau Road and Road L4 for road improvement works to continue

Pedestrian Connectivity System B:

- Bamboo Scaffold Erection for external ABWF works.

Construction of Internal Road L1:

- Excavation and laying of watermain to continue.
- Road work, footpath and cycle track at L1 east to continue.
- Gullies and upper drainage construction for road L1 west to continue.

Box Culvert BC1 at Internal Road L1:

- Defect rectification work to continue
- Slurry removal to continue
- Cat ladder installation to continue

Construction of Internal Road L2
- Site formation works, road kerb construction and sub-base filling to continue.
- Drainage modification work and gully pipe construction to continue
- Watermain works and UU laying to continue.

Retaining Wall RWA9 at Road L3
- Backfilling and SRT of RWA9 Bays 1- Bay10 to continue
- Lower level drainage in progress.

Retaining Wall RWA10 at Road L3
- Backfill behind Bays 6 to 16 to continue.

Box Culvert BC2 at Internal Road L3:
- Backfilling at Bay 17 chamber structure to continue.
- Cat ladder installation to continue

Construction of Internal Road L5:
- The First Batch paving block were arrived. Laying the concrete kerb construction for the cycle track and footpath before the demonstration of porous concrete pavement set up.

Water Pumping Station including Retaining Wall RWA13 and RWA14:
- Backfill at retaining wall RWA13 to continue.
- To continue the construction of drainage.
- To continue with the ABWF Works (i.e.: floor, timber door)
- To continue with the E&M Works.
- To continue the mass concrete fill works at slope A13.

Water Reservoir
- To continue excavation works for watermain works and construct valve chamber.
- To commence excavate additional manhole and dia.600mm pipe.
- To continue the construction works of WSD Access.

Artificial Flood Attenuation Lake
- To commence excavate additional manhole and dia.600mm pipe.
- To continue the drainage works.
- To continue the construction of floating bridge guide posts, wall of landing and retaining wall.

Underground Stormwater Retention Tank (USRT)
- Backfill around USRT to continue.
- Backfill around Ventilation Duct area to continue.

Internal Road L4, Pedestrian Connectivity System A, Noise Barrier, RWA12 and RWA18:
- RWA12 Bays 15-21 wall construction to continue.
- Road works at footpath (paving block construction) between CH100 to CH430 in progress
- U-channel construction between SC42a to existing catchpit in progress

PC System A
- North Tower 4th portion of wall and slab construction completed.
- South Tower pile cap construction completed.
- North Tower 5th portion of wall and slab construction in progress.
- South Tower 1st portion of wall and slab construction to continue.

PTT
- Steel work and PMMA panel installation to continue, road construction, make good

formation condition and rock breaking for cycle track would continue.

Slope Stabilization at Portion B1:

- Continue to carry out stabilization works at Feature No. 11NE-D/C947, 11NE-D/C949, 11NE-D/C976 and 11NE-D/C977.

Slope Stabilization at Portion B5

- Continue to erect inspection scaffolds from 2nd to 3rd berm
- Continue to carry out stabilization works at Feature No. 11NE-D/C1005, 11NE-D/C948, 11NE-D/C949,11NE-D/C982, 11NE-B/C902 and Slope A15b.
- Continue to trim the slope profile of Feature 11NE-D/C903 and A15a.

Road Improvement Works at Po Lam Road:

- Construction of permanent footpath and surface drainage system to continue
- Excavation works to facilitate installation of the E&M/ACT/Earth pit and construction of permanent footpath and surface drainage system in progress
- Remove the existing concrete pavement and reconstruction in progress

MEP Works:

- Submission of designs and materials related to MEP works in progress .
- E&M installation works at PTT in progress to continue.
- E&M installation works at Pump Hall of Fresh Water Pumping Station in progress .
- E&M installation works at Pedestrian Connectivity System B in progress .
- E&M installation works at Underground Stormwater Retention Tank in progress .
- E&M installation works at Underpass in progress

Site Formation Work at Portion B13:

- Land Parcel R2-4 & R2-6 Excavation to formation level in progress.

Site Formation Work at Portion B3:

- UC construction at land parcel C-5 to continue.
- Chain-link fence installation and UC construction at land parcel R2-7 and C-1 completed.

Site Formation Work at Portion B14:

- Backfilling and proof rolling/ SRT at Portion B14 in progress.

Site Formation Work at Portion E2 & E3:

- UC construction at land parcel E2 completed
- Excavation to formation level at land parcel E3 in progress
- Backfilling & SRT of fill slope zone of Portion E3 in progress

Site Formation Work at Portion G3 & Slope A6:

- Excavation to formation level at land parcel G3 in progress.
- Chain-link fence installation at land parcel G3 in progress.

Cavern (Portion B5):

- Rock fall fence installation complete.
- Rock mapping of Sub Area 5 slope at Ch0-Ch40 on level +196mPD - 202mPD to continue.
- Rock breaking of existing slope at Ch40-240 on level +200-202mPD to continue
- Rock dowel construction at Ch80-140 on level+203+206 to continue
- Planter wall construction to continue.

Underpass, East and West Portal:

- East Portal Rock slope A1 stabilization works in progress
- East Portal structure works for RWA1C & RWA1B retaining wall in progress
- East Portal install the crossing duct pipe and concrete carriageway

- West Portal Buttress wall construct work in progress
- West Portal Slope A3 construct u-channel and berm in progress
- Underpass – laying drainage layer, subbase and flexible pavement in progress

Hiking Trail (Portion B5):

- Continue to erect the formwork and cast the concrete from CH1055 to 1793.

9.1.4 Construction activities for Contract 2 in the coming month are listed below:

- Soil Nail Construction:
  - Excavation, Slope cutting work, Drilling and Grouting
- Mass Concrete Construction: Working at height, lifting.
- Framework and falsework installation and dismantling: Working at height, lifting, manual handling, moving plant
- Lift tower construction: Working at height, lifting, Electric Arc welding, Flame cutting
- Rebar fixing: Working at height, lifting, Electric arc welding, Flame cutting

9.1.5 Construction activities for Contract 3 in the coming month are listed below:

Road Improvement Works 1 (RIW1)

- Site formation, ELS works & RC works at RWC2;
- Backfilling works at KS27;

Road Improvement Works 2 (RIW2)

- ELS at Zone 6 & 7;
- Retaining wall construction for Bay 2 to 8;
- Remove piling platform at CT4 and utilities diversion works;
- Predrilling works at SE2.

Road Improvement Works 3 (RIW3)

- Construction of retaining wall RWD1 Bay 1 – 10 at Slope D1;
- ELS construction for RWD1 Bay 11 – 14 at Slope D1;
- ELS construction for footings of noise barrier VB1 SE1 at Slope D1;
- Construction of retaining wall RWD2 at Slope D2;
- Backfilling works at Slope D2;
- Stage 1 rock excavation at Slope D3;
- Soil nail installation at Slope D3; and
- Watermain works at Sau Mau Ping Road.

Pedestrian Connectivity Facility E8 (PC-E8)

- Construction of Deck at P3/P4;
- Escalator installation for E1/E2, E7/E8;
- Steel roof installation at P1/P2, P3/P4; and
- ELS construction for F8

Pedestrian Connectivity Facility E11 (PC-E11)

- Construction of ELS for PC1
- Diversion of Dia. 900mm Concrete Pipe and Construction of Manhole at PC1;
- Construction of lift tower LT2 &ST2 at PC6.

Pedestrian Connectivity Facility System A (PC-SYA)

- Backfilling to existing ground level and erection formworks for above ground structure construction.

Pedestrian Connectivity Facility System A (PC-SYB)

- Construction of RC structure at PC8 and Construction of pile cap at PC7; and

- Site coordination with Towngas and gasmain diversion works at PC2 (On Sau Road).

9.1.6 Construction activities for Contract 5 in the coming month are listed below:

- Portion 1: Erection of Site Hoarding, Tree Felling
- Portion 2: Erection of Site Hoarding, Tree Felling
- Portion 3: Erection of Site Hoarding, Trial Pit Excavation

KEY ISSUES FOR THE COMING MONTH

9.1.7 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

9.1.8 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

CONCLUSIONS

10.1.1 This is **49th** monthly EM&A report presenting the monitoring results and inspection findings for the Reporting Period from **1** to **30 April 2021**.

10.1.2 Variation order for extend service scope to E5, E6, E7 and C10 under Contract ED/2019/02 (Contract 5) was issued by AECOM. The commencement date of Contract 5 was on 30 March 2021 and the EM&A activities include site inspection and reporting.

10.1.3 No 24-hour or 1-hour TSP 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 Limit Level exceedance was recorded and no Notification of Exceedance was issued. However, one noise complaint (which triggered Action Level exceedance) was received under the project. Investigation for the complaint was undertaken by the ET (refer to S10.1.5)

10.1.5 In the reporting period, there was one complaint received for Contract 3 regarding noise concerns. Investigation had undertaken by ET upon receipt of the complaint. In our investigation, the Contractor 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, the Contractor was advised to further adopt good practices on mitigating construction noise to reduce the noise impact to the nearby residents. Since the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance. Moreover, the Contractor has adopted noise mitigation measures to minimise noise impact to the public. Since the construction site is close to the residential area, the Contractor was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme.

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 1, 2, 3 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.

RECOMMENDATIONS

10.1.8 During wet season, 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.

10.1.9 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.

10.1.10 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.

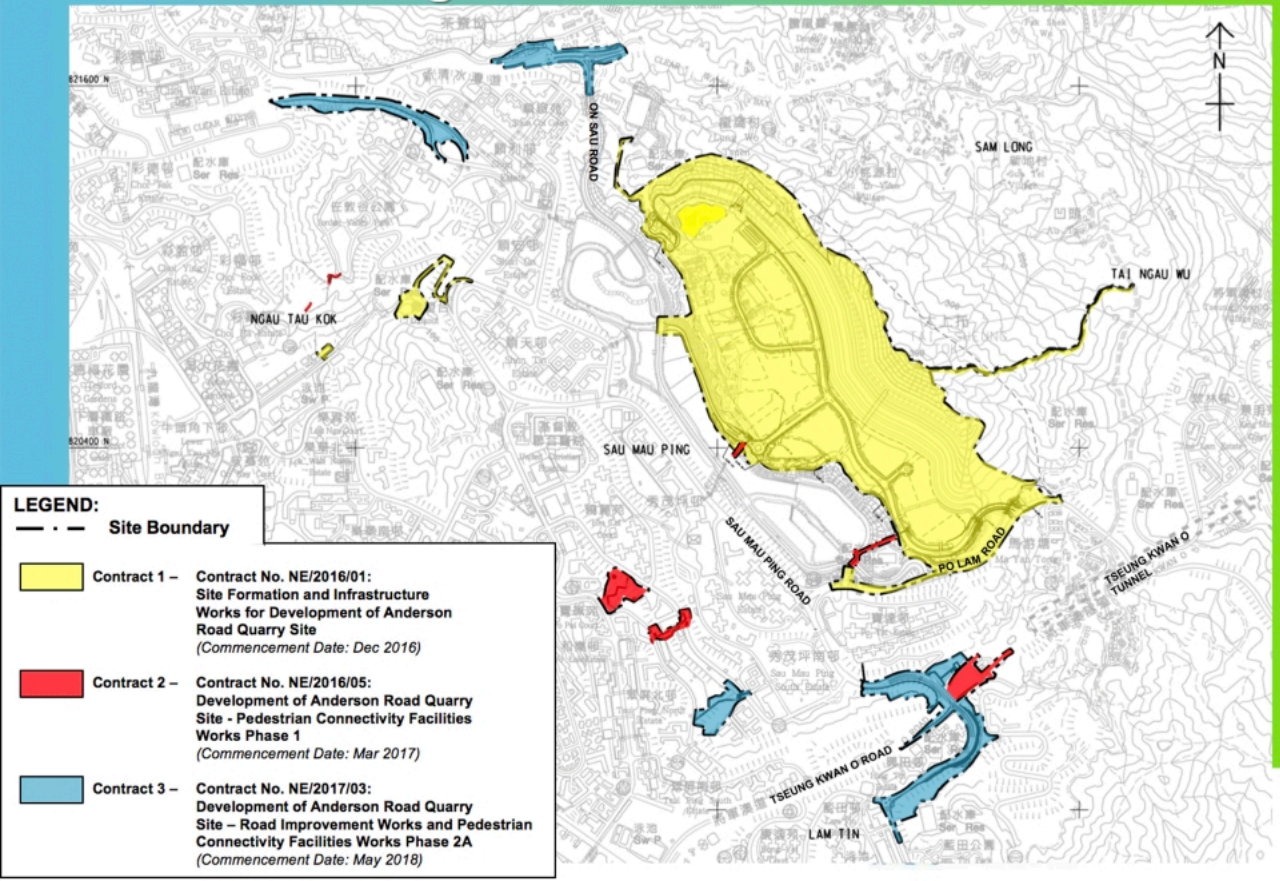
10.1.11 In addition, the Contractors should ensure all effluent discharge shall be fulfilled the Technical Memorandum of Effluent Discharged into Drainage and Sewerage Systems, inland and Coastal Waters criteria or relevant discharge license requirement.

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

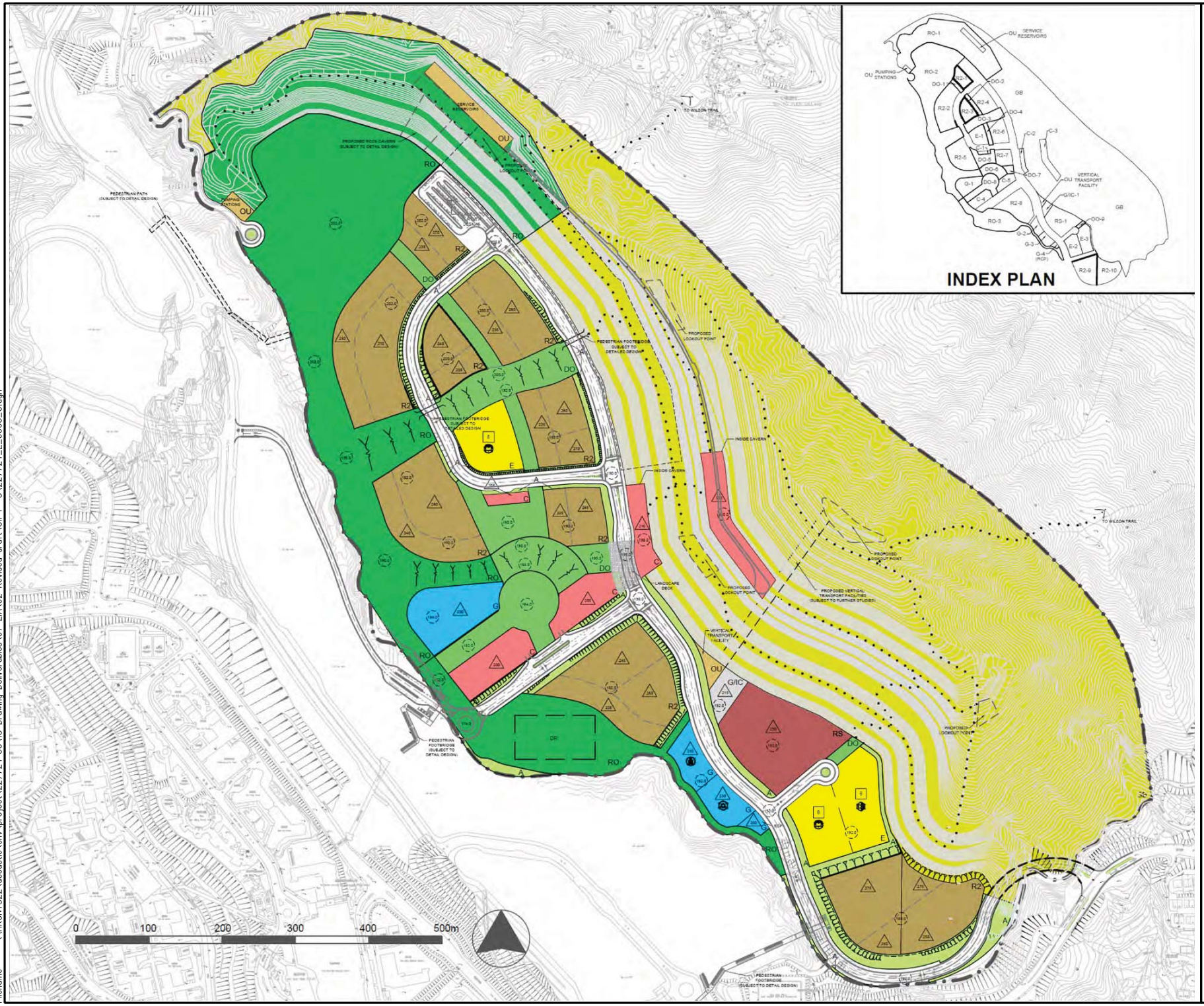
Appendix A

Layout plan of the Project

Contract Packages



Layout plan of Contract 1 (NE/2016/01)



Rev	Description	By	Date
C	THIRD ISSUE	GL	03/14
B	SECOND ISSUE	GL	01/14
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

Recommended Outline Development Plan

Drawing no.	Rev.
227724/E/0003	C

Drawn	Date	Checked	Approved
GL	03/14	TC	ST

Scale: AS SHOWN

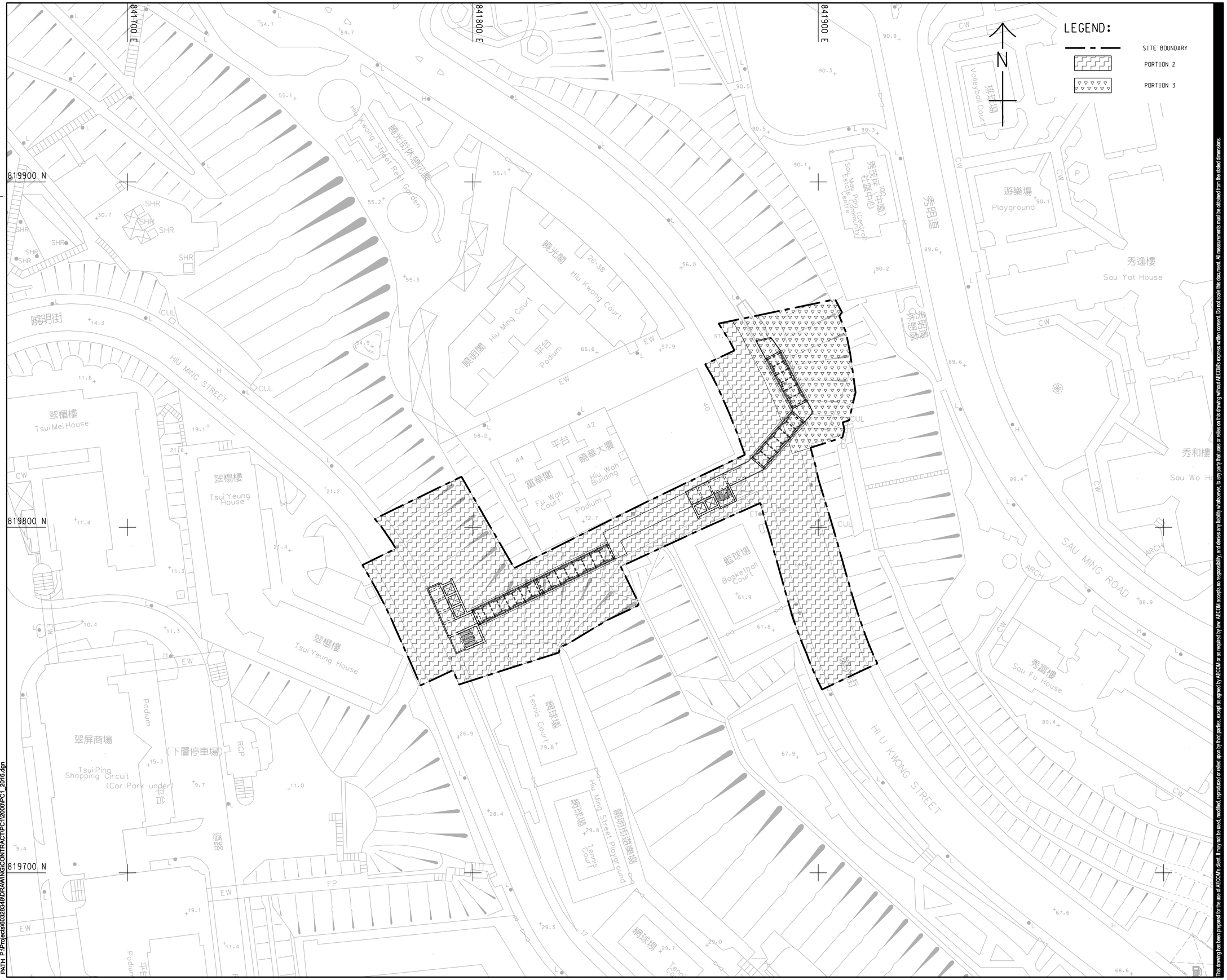
Status: PRELIMINARY

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

Printed by : 3/31/2014
Filename : \\HKGNTS22\acoustic\env\project\227724-50\13 Drawing Deliverables\07 EIA\02 Revised draft\Ch 1 - 3\227724_E_0003_C.dgn

Layout plan of Contract 2 (NE/2016/05)

Project Management Initials: Designer: PC/TK Checked: AC Approved: BWCW ISO A1 594mm x 841mm



Plot File by: WANGGLW 2016/10/24
PATH P:\Projects\60328348\DRAWING\CONTRACT\PC1\2000\PC1_2016.dgn

AECOM

PROJECT 項目

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

CONTRACT TITLE
PEDESTRIAN CONNECTIVITY FACILITIES WORKS PHASE 1

CLIENT 業主

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

ISSUE/REVISION 修訂

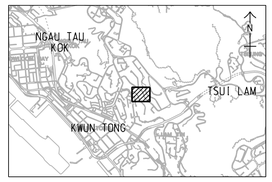
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
-	OCT. 16	TENDER DRAWING	AC

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/2016/05

SHEET TITLE 圖紙名稱
E2-C1-E3 - PORTION OF SITE

SHEET NUMBER 圖紙編號
60328348/PC1/2016

Project Management Initials: | Designer: PCTK | Checked: AC | Approved: BWCW | ISO A1 594mm x 841mm

842700 E | 842800 E | 842900 E

819700 N

819600 N

819500 N

LEGEND:

- SITE BOUNDARY
- PORTION 4
- PORTION 5
- PORTION 6

N

Road | 道路 | Elevated Road | 高架道路 | 連德道 | 兒童遊樂場 | 平台 (下層停車場) Podium (Car Park under) | 香港環境保護署 Environmental Protection Department | CUL | FP | TS | PH | WT

Plot File by: WANGGLW 2016/10/25
PATH: P:\projects\60328348\drawing\contract\pc1\3000\PC1_3016.dgn

AECOM

PROJECT 項目

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

CONTRACT TITLE
PEDESTRIAN CONNECTIVITY FACILITIES WORKS PHASE 1

CLIENT 業主

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

ISSUE/REVISION 修訂

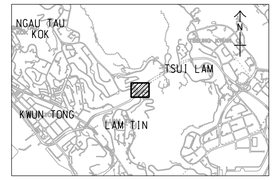
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
-	OCT. 16	TENDER DRAWING	AC

STATUS 階段

SCALE 比例
A1 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 60000



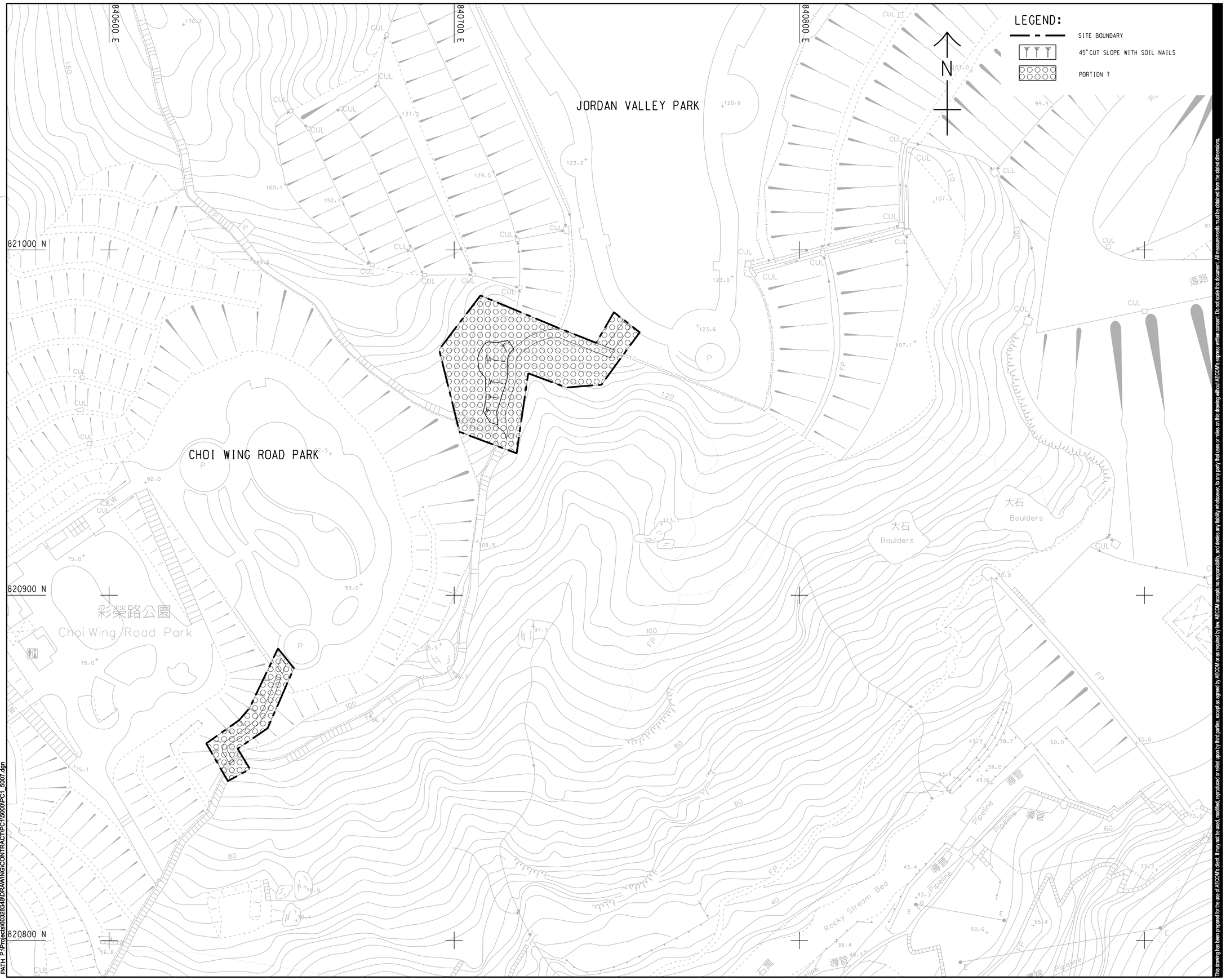
PROJECT NO. 項目編號
60328348

CONTRACT NO. 合約編號
NE/2016/05

SHEET TITLE 圖紙名稱
E12 AND BBI - PORTION OF SITE

SHEET NUMBER 圖紙編號
60328348/PC1/3016

Project Management Initials: | Designer: PCTK | Checked: AC | Approved: BWCW | ISO A1 594mm x 841mm



Plot File by: WANGGLW 2016/10/26
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AECOM

PROJECT 項目

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

CONTRACT TITLE
PEDESTRIAN CONNECTIVITY FACILITIES WORKS PHASE 1

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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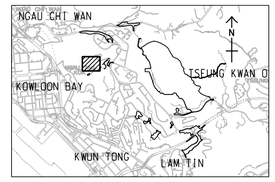
-	OCT. 16	TENDER DRAWING	AC

STATUS 階段

SCALE 比例
A1 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 60000



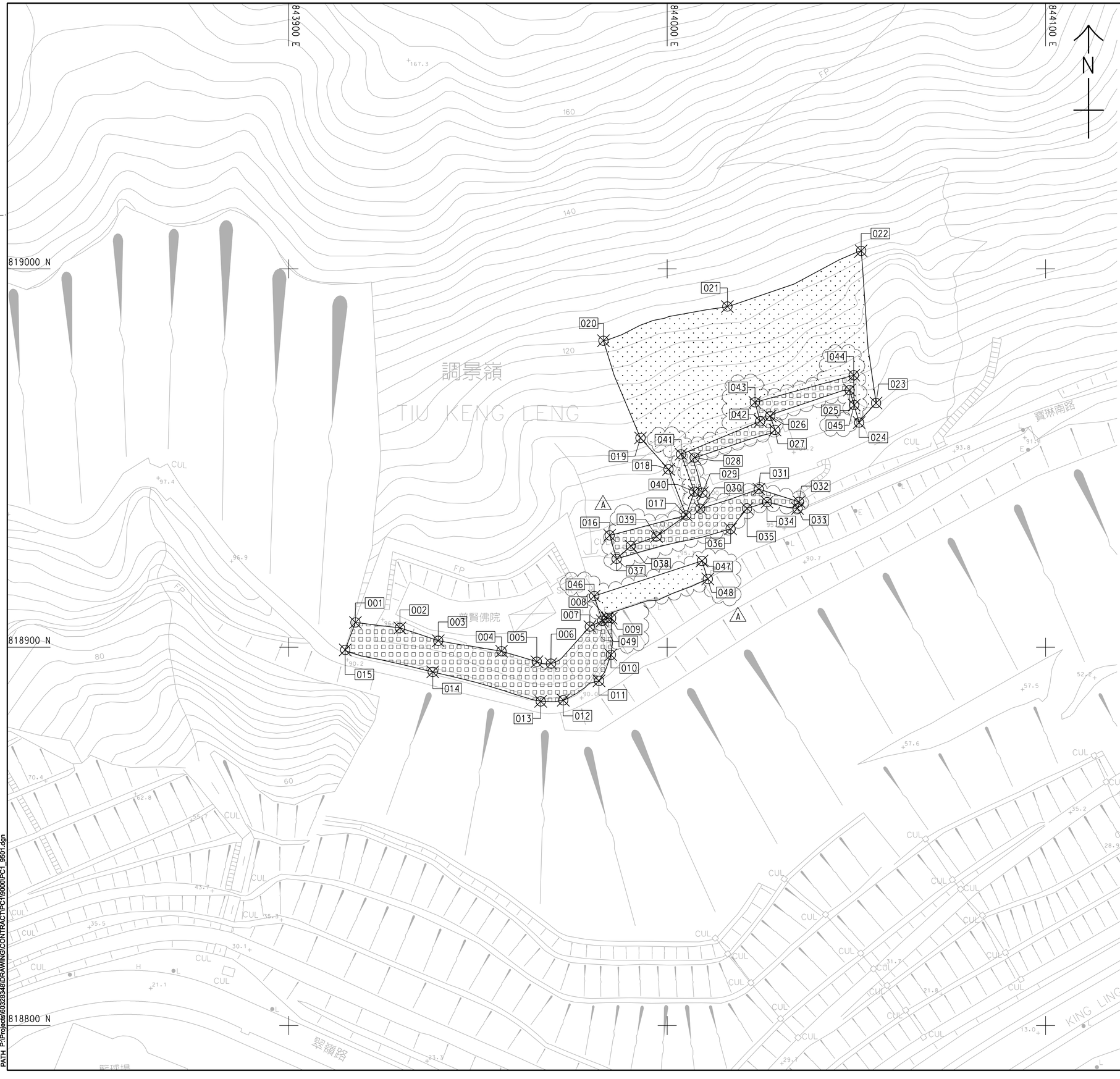
PROJECT NO. 項目編號
60328348

CONTRACT NO. 合約編號
NE/2016/05

SHEET TITLE 圖紙名稱
GREEN ROUTE - PORTION OF SITE

SHEET NUMBER 圖紙編號
60328348/PC1/5007

Project Management Initials: | Designer: PC/TK | Checked: AC | Approved: BWCW | ISO A1 594mm x 841mm



SETTING OUT POINTS

POINTS	EASTING	NORTHING
001	843917.587	818906.541
002	843929.342	818905.094
003	843939.483	818901.709
004	843956.219	818898.942
005	843965.528	818896.168
006	843969.261	818895.667
007	843979.545	818905.452
008	843984.131	818907.650
009	843985.175	818907.685
010	843985.110	818897.974
011	843981.962	818891.121
012	843972.510	818885.990
013	843966.562	818885.703
014	843938.026	818893.479
015	843914.8936	818899.2916
016	843917.5873	818906.5418
017	844004.9983	818934.8475
018	844000.3294	818947.0185
019	843992.9288	818955.3047
020	843983.1315	818980.9995
021	844015.8829	818990.0481
022	844051.2430	819004.7564
023	844055.1790	818964.5518
024	844050.7010	818959.3870
025	844048.1970	818967.9590
026	844027.1930	818961.0890
027	844028.4560	818957.440
028	844007.2170	818950.1120
029	844009.2850	818940.8450
030	844008.6995	818936.6258
031	844024.2060	818941.7840
032	844034.8059	818938.4355
033	844034.4315	818936.6727
034	844026.3820	818938.3480
035	844021.0980	818936.6740
036	844016.7340	818931.2790
037	843986.6120	818923.3580
038	843990.360	818926.797
039	843997.172	818929.287
040	844007.154	818941.102
041	844003.647	818950.980
042	844024.555	818959.707
043	844023.162	818964.725
044	844049.278	818971.887
045	844049.396	818964.017
046	843980.693	818913.535
047	844009.179	818922.804
048	844010.709	818918.044
049	843982.791	818907.077

Plot File by: WANGGLW 2016/11/16
PATH: P:\Projects\60328348\DRAWING\CONTRACT\PC1\90000PC1_9501.dgn

AECOM

PROJECT 項目

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

CONTRACT TITLE
PEDESTRIAN CONNECTIVITY FACILITIES WORKS PHASE 1

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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ISSUE/REVISION 修訂

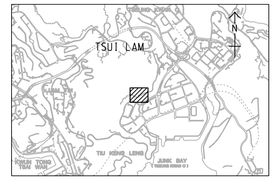
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
A	NOV. 16	TENDER ADDENDUM NO. 1	AC
-	OCT. 16	TENDER DRAWING	AC

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/2016/05

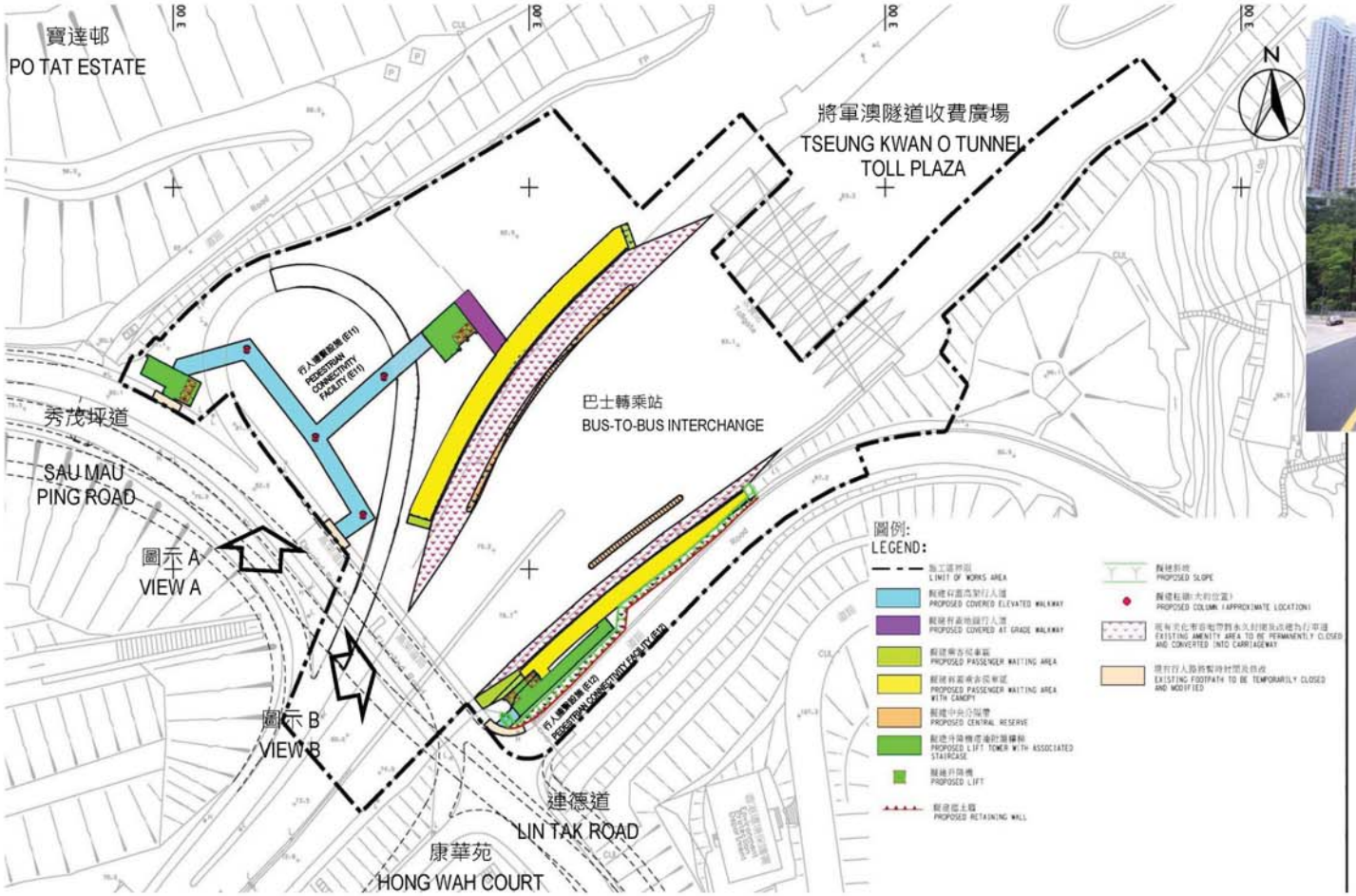
SHEET TITLE 圖紙名稱

INFRASTRUCTURAL WORKS AT PO LAM ROAD SOUTH TIU KENG LENG – PORTION OF SITE

SHEET NUMBER 圖紙編號

60328348/PC1/9501A

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

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

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.

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

AECOM

PROJECT 項目

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

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

CLIENT 業主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT 工程顧問公司

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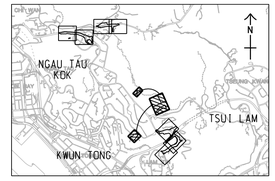
			yc
A	NOV. 17	TENDER ADDENDUM NO. 1	AWYC
-	OCT. 17	TENDER DRAWING	AWYC

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

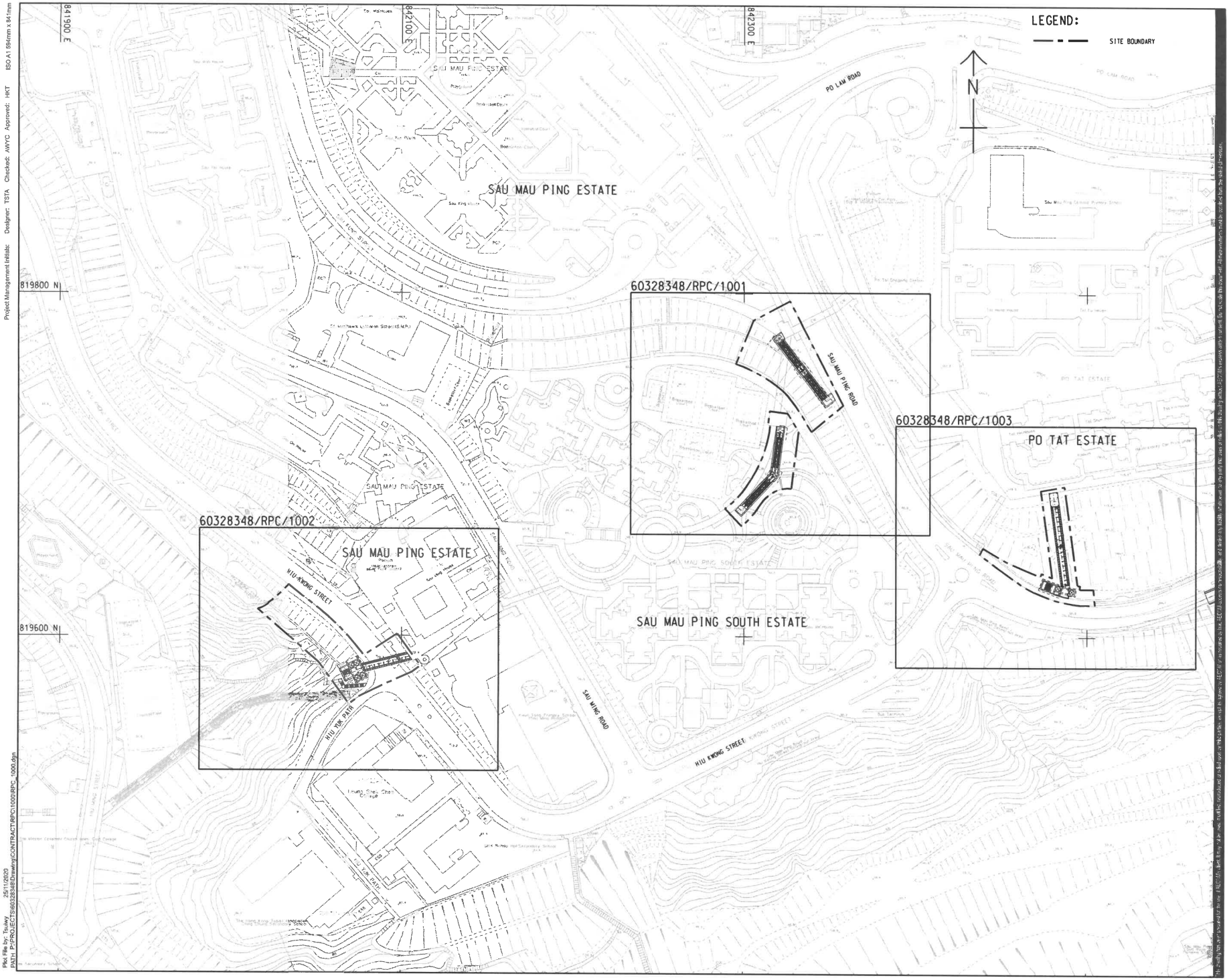
CONTRACT NO. 合約編號
NE/2017/03

SHEET TITLE 圖紙名稱
GENERAL LAYOUT

SHEET 8 OF 8

SHEET NUMBER 圖紙編號
60328348/R&P/1008A

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



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

Plot File by: Tauwy 25/11/2020
PATH: P:\PROJECTS\60328348\Drawing\CONTRACT\RPC\1000\RPC_1000.dgn

AECOM

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

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

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

CONSULTANT
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MR	DATE	DESCRIPTION	CHK.
-	NOV. 20	TENDER DRAWING	AWYC

STATUS

SCALE
A1 1 : 1000

DIMENSION UNIT
METRES

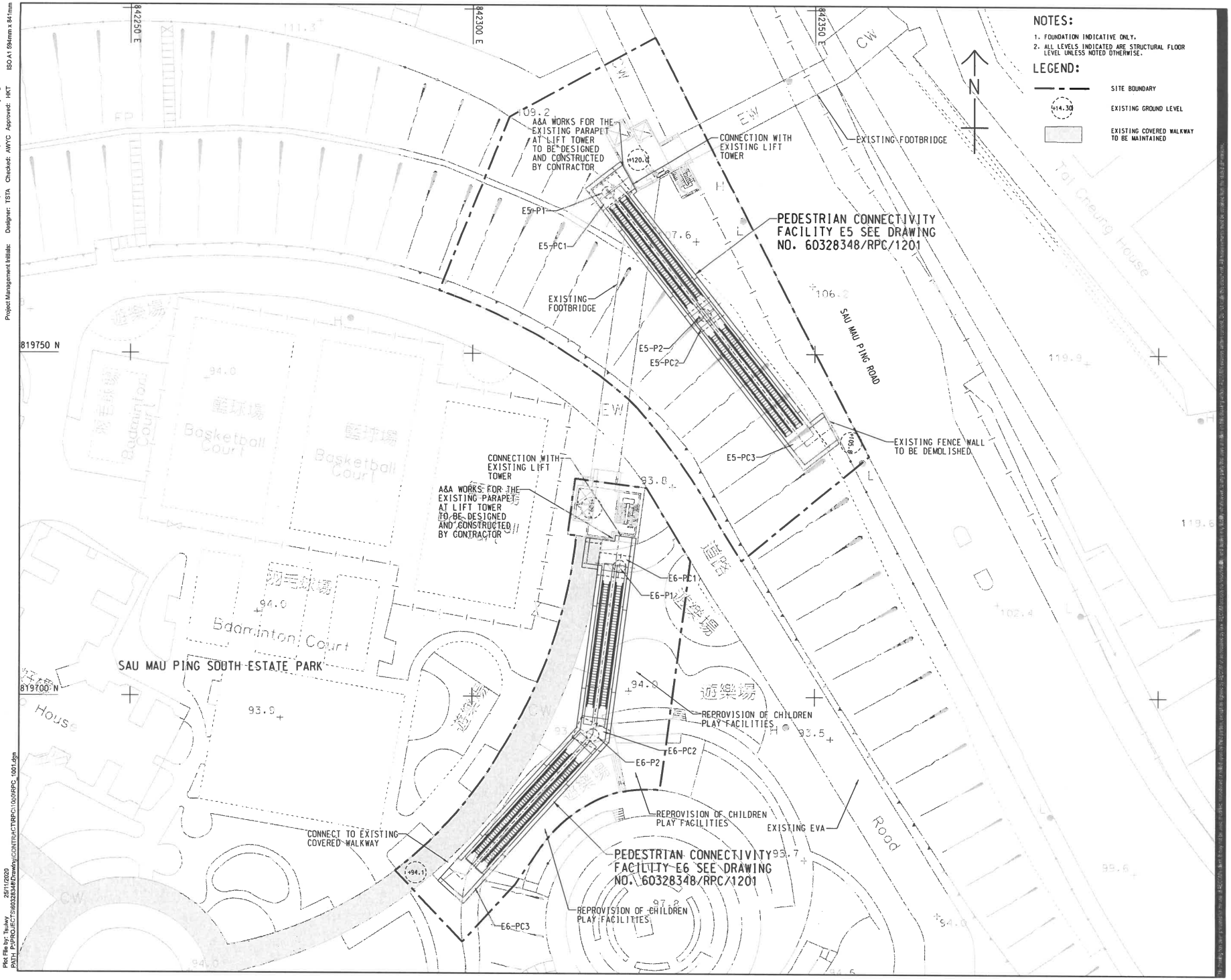
KEY PLAN

PROJECT NO.
60328348

CONTRACT NO.
ED/2019/02

SHEET TITLE
KEY PLAN

SHEET NUMBER
60328348/RPC/1000



AECOM

PROJECT

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

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

CLIENT

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

CONSULTANT

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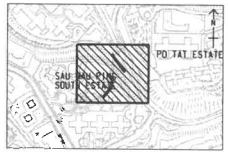
I/R	DATE	DESCRIPTION	CHK.
-	NOV. 20	TENDER DRAWING	AWYC

STATUS

SCALE A1 1 : 250

DIMENSION UNIT METRES

KEY PLAN A1 1 : 5000



PROJECT NO. 60328348

CONTRACT NO. ED/2019/02

SHEET TITLE

GENERAL LAYOUT - E5 & E6

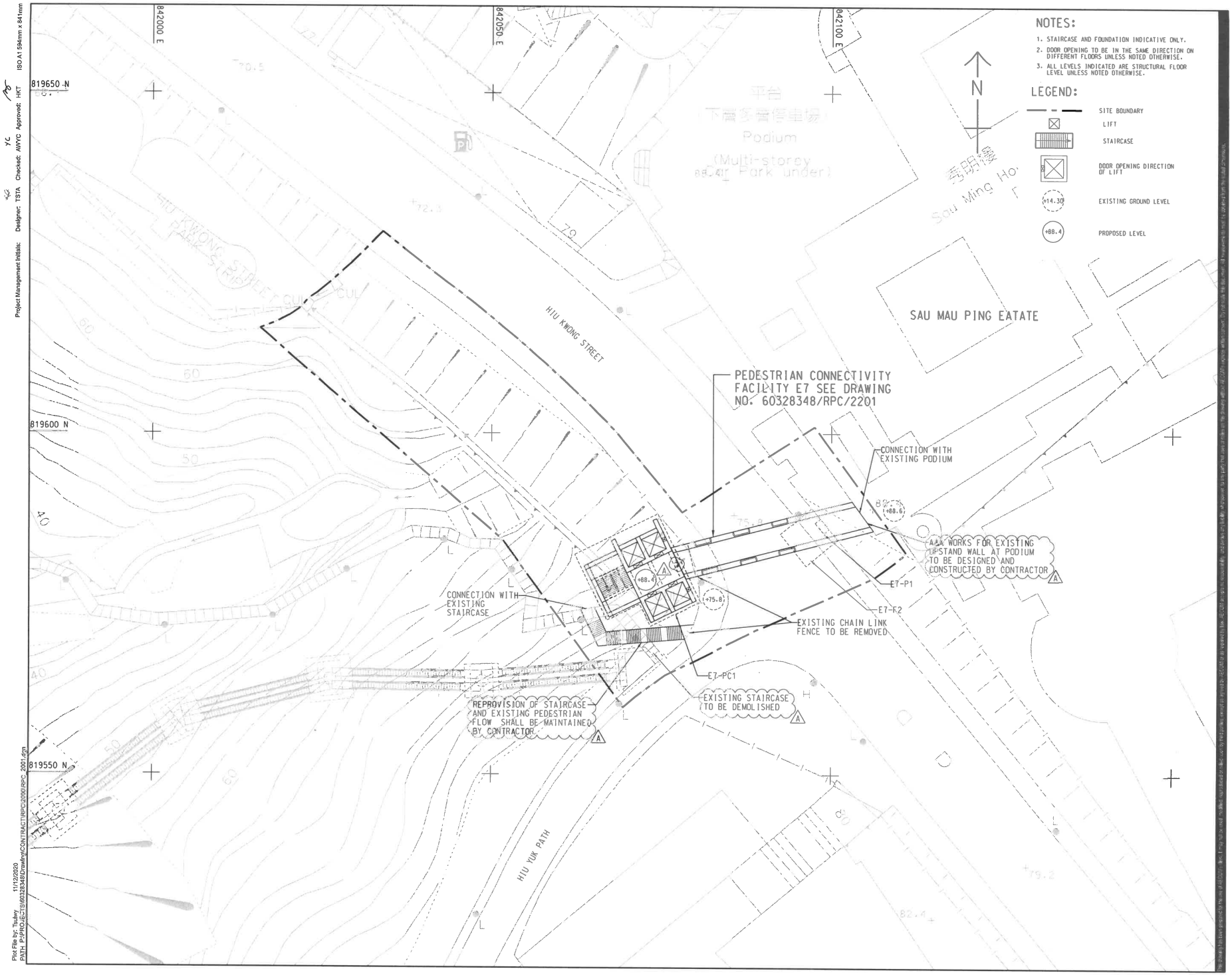
SHEET NUMBER

60328348/RPC/1001

Project Management Initials: Designer: TSTA Checked: AWYC Approved: HKT YC

ISO A1 594mm x 841mm

Plot File by: Tsukwy
PATH: P:\PROJECTS\60328348\Drawing\CONTRACT\RPC\1100\RPC_1001.dgn
25/11/2020



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

Plot File by: TauAny 11/12/2020
PATH: P:\PROJECTS\60328348\Draft\CONTRACT\RPC\2000\RPC_2001.dgn

AECOM

PROJECT

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

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

CLIENT

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT

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-	NOV. 20	TENDER DRAWING	AWYC
VR	DATE	DESCRIPTION	CHK

STATUS

SCALE A1 1 : 250

DIMENSION UNIT METRES

KEY PLAN A1 1 : 5000

PROJECT NO. 60328348

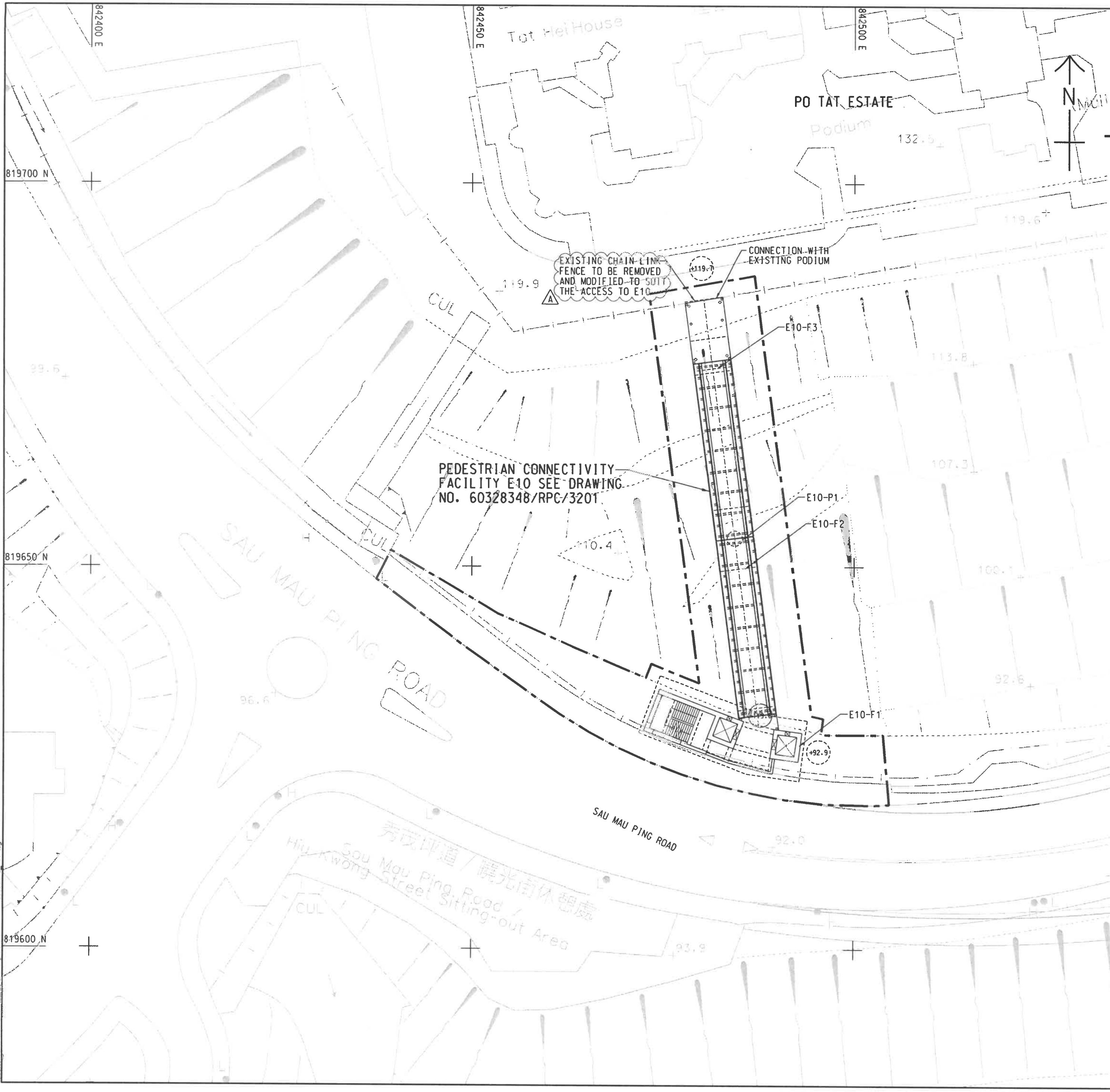
CONTRACT NO. ED/2019/02

SHEET TITLE

GENERAL LAYOUT - E7

SHEET NUMBER

60328348/RPC/2001A



NOTES:

1. STAIRCASE AND FOUNDATION INDICATIVE ONLY.
2. DOOR OPENING TO BE IN THE SAME DIRECTION ON DIFFERENT FLOORS UNLESS NOTED OTHERWISE.
3. COVERS TO WALKWAYS NOT SHOWN FOR CLARITY.
4. THE SETTING OUT OF COVERS TO ESCALATORS AND WALKWAYS ARE NOT SHOWN FOR CLARITY.
5. ALL LEVELS INDICATED ARE STRUCTURAL FLOOR LEVEL UNLESS NOTED OTHERWISE.

LEGEND:

- SITE BOUNDARY
- LIFT
- STAIRCASE
- DOOR OPENING DIRECTION OF LIFT
- +14.30 EXISTING GROUND LEVEL
- +119.6 PROPOSED LEVEL

AECOM

PROJECT

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

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

CLIENT

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

CONSULTANT

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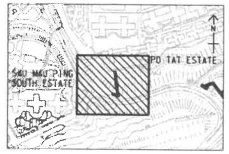
I/R	DATE	DESCRIPTION	CHK.
A	DEC. 20	TENDER ADDENDUM NO.1	YC AWYC
-	NOV. 20	TENDER DRAWING	AWYC

STATUS

SCALE A1 1 : 250 — DIMENSION UNIT METRES

KEY PLAN A1 1 : 5000



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

SHEET TITLE

GENERAL LAYOUT - E10

SHEET NUMBER

60328348/RPC/3001A

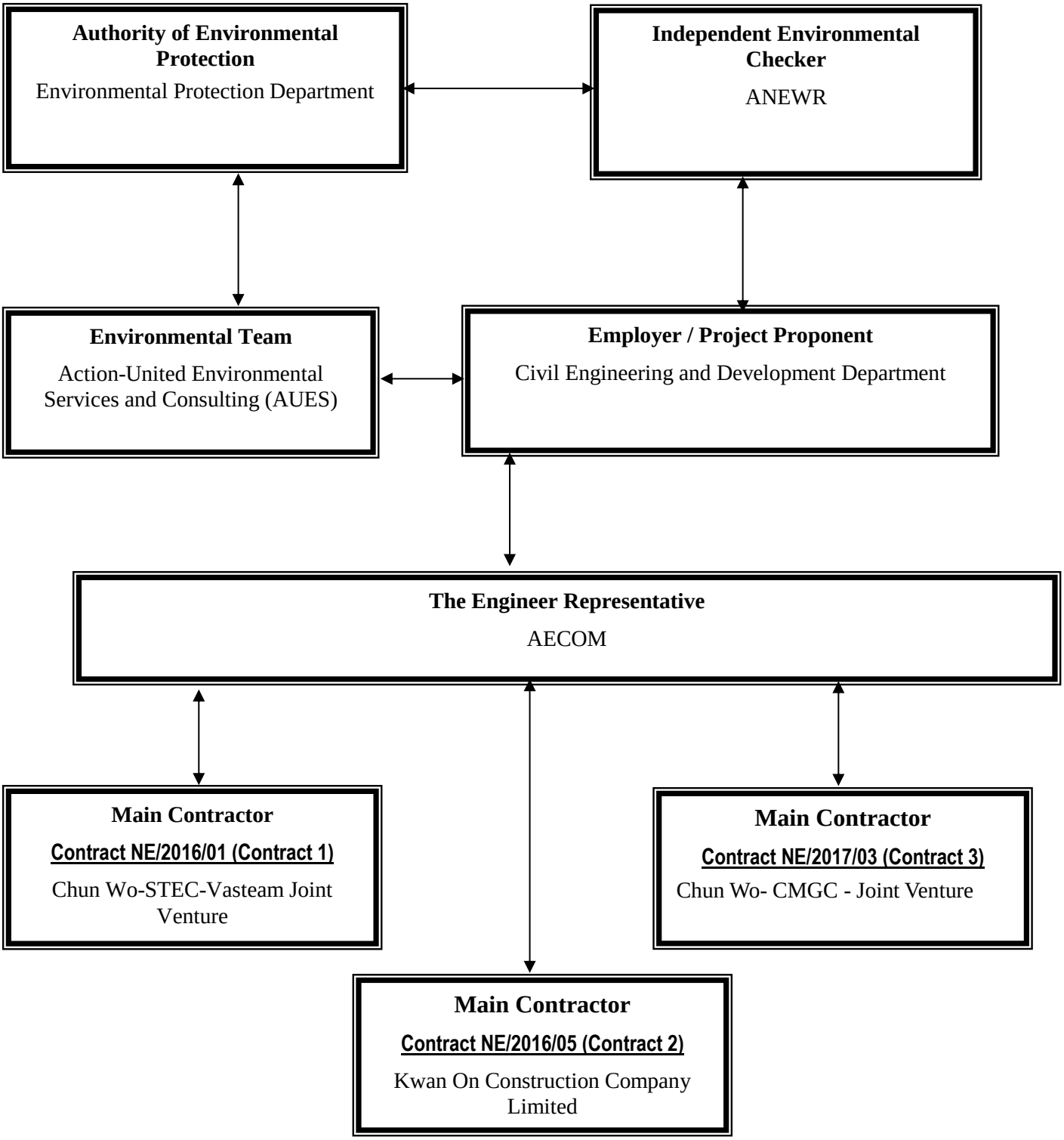
Project Management Initials: Designer: TSTA Checked: AWYC Approved: HKT — ISO A1 594mm x 841mm

Plot File by: YangRO 2020/12/11
PATH P:\PROJECTS\60328348\Drawing\CONTRACT\RPC\3000\RPC_3001.dgn

Appendix B

Project Organization Structure

Project Organization Structure



Contact Details of Key Personnel for Contract 1 – NE/2016/01

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Engineer	Leung Siu Kau, Kelvin	2301 1383	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
CSVJV	Project Manager	William Leung	2638 7181	2744 6937
CSVJV	Site Agent	TY Leung	2638 7181	2744 6937
CSVJV	Project Environmental Manager	Shelton Chan	2638 7181	2744 6937
CSVJV	Environmental Officer	Ken Chu	2638 7181	2744 6937
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.

CSVJV (Main Contractor) – Chun Wo-STEC-Vasteam Joint Venture

ANEWR (IEC) –ANewR Consulting Limited

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

Contact Details of Key Personnel for Contract 2 – NE/2016/05

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Engineer	Leung Siu Kau, Kelvin	2301 1383	2739 0076
AECOM	Chief Resident Engineer	Lee, Yu Ching Paul	5723 6880	2473 3221
AECOM	Senior Resident Engineer	Vincent Yuen	5599 1466	2473 3221
ANEWR	Independent Environmental Checker	James Choi	2618 2836	3007 8648
KOCCL	Project Director	Ambrose Kwong	2889 2675	2558 6900
KOCCL	Site Agent	Mr. Albert PK Ng	9150 1523	2558 6900
KOCCL	Safety and Environmental Manager	Joly C K Kwong	6111 5711	2558 6900
KOCCL	Environmental Officer	To be Confirmed	-	-
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.

KOCCL (Main Contractor) –Kwan On Construction Company Limited

ANEWR (IEC) –ANewR Consulting Limited

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

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

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Engineer	Leung Siu Kau, Kelvin	2301 1383	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	William Leung	9464 1392	3965 9900
CW – CMGC - JV	Site Agent	Chris Lam	9801 9974	3965 9900
CW – CMGC - JV	Environmental Officer	King Lam	9570 6187	3965 9900
CW – CMGC - JV	Environmental Supervisor	Belle Mak	6094 1580	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 5 –ED/2019/02

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Engineer	Leung Siu Kau, Kelvin	2301 1383	2739 0076
AECOM	Chief Resident Engineer	Lee, Yu Ching Paul	9824 7016	2473 3221
AECOM	Senior Resident Engineer	Hon Cho Piu, Bill	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
WL-UJV	Environmental Supervisor	Chan Chi Yuen	9289 5526	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.

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

ANEWR (IEC) –ANewR Consulting Limited

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

Appendix C

Construction Programme

- **(a) Contract 1 (NE/2016/01)**
- **(b) Contract 2 (NE/2016/05)**
- **(c) Contract 3 (NE/2017/03)**
- **(d) Contract 5 (ED/2019/02)**

Contract 1 (NE/2016/01)

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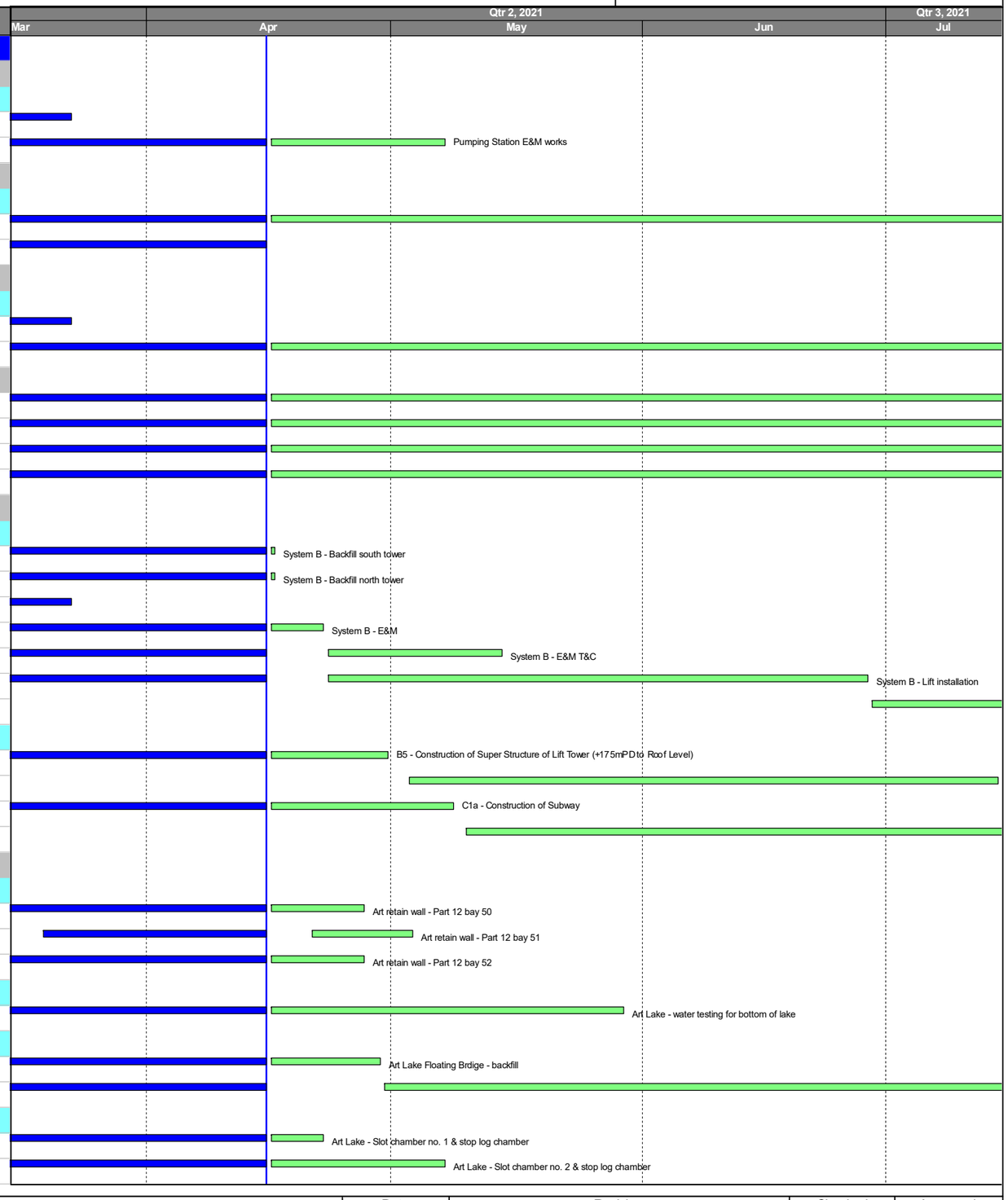
CHUN WO – STEC – VASTEAM JOINT VENTURE

CONTRACT NO.NE/2016/01 SITE FORMATION AND INFRASTRUCTURE WORKS FOR DEVELOPMENT OF ANDERSON ROAD QUARRY SITE
3-MONTH ROLLING PROGRAMME

Activity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	At Completion Duration	Start	Finish
Anderson Rd Sub-programme (Mar 2021) _ccn _210308							
Fresh Water Pumping Station							
Stage 5 -ABWF, Finishing & E&M							
FWP-1310	Pumping Station finishing	0			319	25-Feb-20 A	22-Mar-21 A
FWP-1320	Pumping Station E&M works	0			255	29-Jun-20 A	07-May-21
Salt Water Reservoir							
ABWF, Finishing & E&M							
SWR-1410	Saltwater Reservior ABWF & Finishing	0			474	18-Feb-20 A	20-Sep-21
SWR-1420	Saltwater Reservior E&M works	0			403	29-May-20 A	04-Oct-21
Fresh Water Reservoir							
ABWF, Finishing & E&M							
FWR-1990	Freshwater Reservior ABWF & Finishing	0			313	03-Mar-20 A	22-Mar-21 A
FWR-2000	Freshwater Reservior E&M works	0			255	12-Oct-20 A	20-Aug-21
RWS Access Road & External Works							
FWP-1400	Formation & Slope RWA13 works	0			378	16-May-20 A	20-Aug-21
FWP-1410	Watermain (DN600 & DN450) & Irrigation System along WSA access road	0			378	16-May-20 A	20-Aug-21
FWP-1420	Drainage (sewerage & surface) along WSA access road	0			316	30-Jul-20 A	20-Aug-21
FWP-1430	CLP power supply duct	0			275	16-Sep-20 A	20-Aug-21
Pedestrian Connection System A & B							
PC system B							
PCB-1090	System B - Backfill south tower	81	19-Aug-19	23-Nov-19	345	16-Feb-20 A	16-Apr-21
PCB-1100	System B - Backfill north tower	81	19-Aug-19	23-Nov-19	345	16-Feb-20 A	16-Apr-21
PCB-1110	System B - ABWF	81	05-Aug-19	09-Nov-19	279	16-Apr-20 A	22-Mar-21 A
PCB-1120	System B - E&M	22	23-Sep-19	19-Oct-19	262	05-Jun-20 A	22-Apr-21
PCB-1130	System B - E&M T&C	24	21-Oct-19	16-Nov-19	60	02-Mar-21 A	14-May-21
PCB-1140	System B - Lift installation	75	21-Oct-19	18-Jan-20	96	02-Mar-21 A	28-Jun-21
PCB-1150	System B - Lift T&C	27	20-Jan-20	22-Feb-20	27	29-Jun-21	30-Jul-21
PC system A							
PCA-1040	B5 - Construction of Super Structure of Lift Tower (+175mPD to Roof Level)	0			55	23-Feb-21 A	30-Apr-21
PCA-1050	B5 - Back Fill Lift Tower (North) upwards Formation Level	0			60	03-May-21	14-Jul-21
PCA-1140	C1a - Construction of Subway	0			102	02-Jan-21 A	08-May-21
PCA-1150	C1a - Construction of Super Structure of Lift Tower (+175mPD to Roof Level)	0			60	10-May-21	21-Jul-21
Artificial Flood Attenuation Lake							
Retaining wall Part 12 Bay 50-52)							
ART-1530	Art retain wall - Part 12 bay 50	12	31-Jan-20	13-Feb-20	37	12-Mar-21 A	27-Apr-21
ART-1540	Art retain wall - Part 12 bay 51	12	07-Feb-20	20-Feb-20	35	19-Mar-21 A	03-May-21
ART-1550	Art retain wall - Part 12 bay 52	12	31-Jan-20	13-Feb-20	37	12-Mar-21 A	27-Apr-21
Construction of lake bottom							
ART-1990	Art Lake - water testing for bottom of lake	45	28-Feb-20	24-Apr-20	72	02-Mar-21 A	29-May-21
Construction of Floating Bridge							
ART-2050	Art Lake Floating Brdige - backfill	30	01-Nov-19	05-Dec-19	285	16-May-20 A	29-Apr-21
ART-2060	Art Lake Floating Brdige - footing construction	30	06-Dec-19	13-Jan-20	161	11-Jan-21 A	28-Jul-21
Slot Chamber							
ART-2080	Art Lake - Slot chamber no. 1 & stop log chamber	18	09-Dec-19	31-Dec-19	279	16-May-20 A	22-Apr-21
ART-2090	Art Lake - Slot chamber no. 2 & stop log chamber	26	31-Jan-20	29-Feb-20	60	23-Feb-21 A	07-May-21



Planned Bar (WP) ◇ Planned Milestone (WP)
Actual Bar ◆ Milestone
Forecast Bar

3-month Rolling Programme
Anderson Rd Sub-programme
15-Apr-21

Date	Revision	Checked	Approved
15-Apr-21	C1-MPU202104		

俊和－上隧－浩隆聯營
CHUN WO – STEC – VASTEAM JOINT VENTURE

CONTRACT NO.NE/2016/01 SITE FORMATION AND INFRASTRUCTURE WORKS FOR DEVELOPMENT OF ANDERSON ROAD QUARRY SITE
3-MONTH ROLLING PROGRAMME

Activity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	At Completion Duration	Start	Finish
ART-2100	Art Lake - Slot chamber no. 3	33	31-Jan-20	09-Mar-20	60	23-Feb-21 A	07-May-21
Drainage							
ART-2110	Art Lake - Outside bay 38-45	63	04-Nov-19	18-Jan-20	344	02-Mar-20 A	29-Apr-21
ART-2120	Art Lake - Outside bay 3-8	28	09-Dec-19	13-Jan-20	285	16-May-20 A	29-Apr-21
ART-2130	Art Lake - Outside bay 9-28	56	21-Nov-19	31-Jan-20	314	07-Apr-20 A	29-Apr-21
ART-2140	Art Lake - Outside bay 50-52	14	31-Jan-20	15-Feb-20	172	28-Sep-20 A	29-Apr-21
Treatment Plant							
ART-1620	Treatment plant - Construct the wall(W1,2,3,6,7,8,9,11,12,13,14)	14	10-Dec-19	27-Dec-19	281	11-Jun-20 A	22-May-21
ART-1630	Treatment plant - Backfilling (by course material) to 197.1mPD, 8.2m Depth	30	28-Dec-19	05-Feb-20	131	11-Jan-21 A	22-Jun-21
Bioretention System							
ART-2150	Art Lake - Part 1,2,4	72	01-Feb-20	29-Apr-20	273	13-Jun-20 A	14-May-21
ART-2160	Art Lake - Part 3	32	14-Jan-20	22-Feb-20	229	06-Aug-20 A	14-May-21
ART-2170	Art Lake - Part 6,7,12	16	17-Feb-20	05-Mar-20	227	08-Aug-20 A	14-May-21
Underpass Tunnel							
VE Panels, Road Works, E&M							
TUN-3510	Install VE Panels (Frame & Panels)	0			166	28-Sep-20 A	22-Apr-21
TUN-3520	Tunnel - E&M 1st Fix (Bracket, Tracking & Cabling)	0			166	28-Sep-20 A	22-Apr-21
TUN-3530	Sub-base for Underpass road L1	0			166	28-Sep-20 A	22-Apr-21
TUN-3540	Tunnel - FS main, Socket & AFA equipment	0			156	19-Oct-20 A	29-Apr-21
TUN-3550	Underpass L1 paving, funiture, marking, signage from East Portal	0			156	19-Oct-20 A	29-Apr-21
TUN-3560	Tunnel - E&M 2nd Fix (Lighting & Equipment)	0			156	19-Oct-20 A	29-Apr-21
TUN-3570	Underpass ABWF works	0			139	09-Nov-20 A	29-Apr-21
TUN-3580	Tunnel - E&M Final Fix (Equipment connection & testing)	0			139	09-Nov-20 A	29-Apr-21
TUN-3590	Tunnel - T&C & Statutory inspection	0			30	30-Apr-21	05-Jun-21
Road L4 (RWA18, Noise Barrier, RWA12, Utilities & Road Works)							
Retaining Wall RWA12							
L4-3450	L4 (RWA12) - Bay 17-20 construct wall & backfill upto +170 (after system A sub-way)	0			150	19-Oct-20 A	22-Apr-21
L4-3460	L4 (RWA12) - Bay 17-20 construct wall & backfill upto +175	0			85	23-Apr-21	04-Aug-21
L4-3530	L4 (RWA12) - Bay 22 construct wall & backfill upto +170 (after twin 1950 pipe)	0			85	31-May-21	08-Sep-21
L4-3630	L4 (RWA12) - Bay 21 construct wall & backfill upto +170 (after system A sub-way)	0			85	23-Apr-21	04-Aug-21
L4-3700	L4 (RWA12) - Bay 23-29 construct wall & backfill	0			281	02-Apr-20 A	15-Mar-21 A
Road Works - Drainage							
L4-4250	L4 (Drainage) - Excavate & lay drain CH150 to CH200	0			278	18-May-20 A	22-Apr-21
L4-4260	L4 (Drainage) - Backfill for water main CH0 to CH200	0			72	02-Mar-21 A	29-May-21
L4-4270	L4 (Drainage) - Excavate & lay drain CH200 to CH250	0			268	29-May-20 A	22-Apr-21
L4-4280	L4 (Drainage) - Excavate & lay drain CH250 to CH300	0			102	02-Mar-21 A	06-Jul-21
L4-4290	L4 (Drainage) - Excavate & lay drain CH300 to CH350	0			268	29-May-20 A	22-Apr-21
L4-4300	L4 (Drainage) - Excavate & lay drain CH350 to CH400	0			102	02-Mar-21 A	06-Jul-21
L4-4310	L4 (Drainage) - Backfill for water main CH200 to CH400	0			30	07-Jul-21	10-Aug-21
Retaining Wall RWA9 at Road L3							
RWA9 Bay 13 to Bay 16							
RWA9-1220	RWA9 - F/W & rebat fixing to Bay 13, 14 & 15 Base Slab	0			38	03-Mar-21 A	19-Apr-21
RWA9-1230	RWA9 - Concrete laying for Bay 13, 14 & 15 Base Slab	0			3	20-Apr-21	22-Apr-21
RWA9-1240	RWA9 - F/W & rebat fixing to Bay 16 wall	0			21	23-Apr-21	18-May-21
RWA9-1250	RWA9 - Concrete laying for Bay 16 wall	0			1	20-May-21	20-May-21

Planned Bar (WP) ◇ Planned Milestone (WP)
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Forecast Bar

3-month Rolling Programme

Anderson Rd Sub-programme
15-Apr-21

Date	Revision	Checked	Approved
15-Apr-21	C1-MPU202104		

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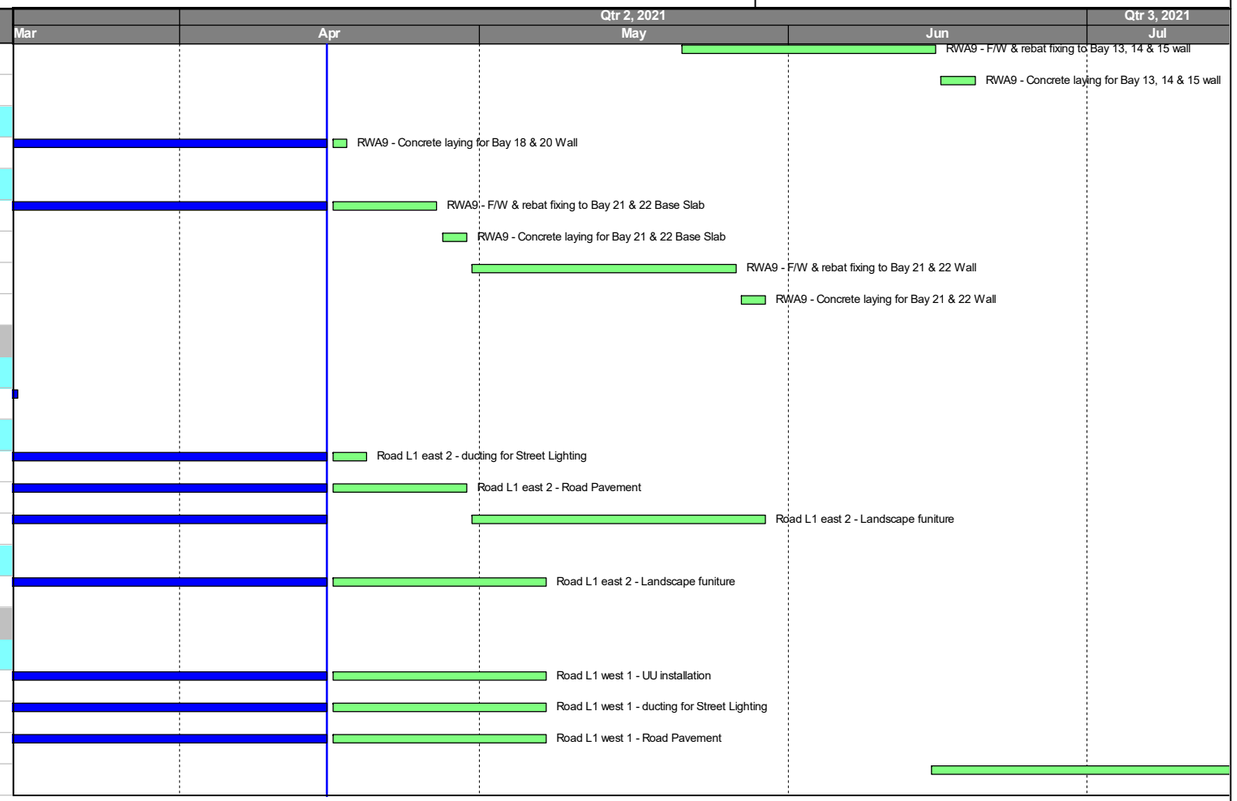
CHUN WO – STEC – VASTEAM JOINT VENTURE

CONTRACT NO.NE/2016/01 SITE FORMATION AND INFRASTRUCTURE WORKS FOR DEVELOPMENT OF ANDERSON ROAD QUARRY SITE
3-MONTH ROLLING PROGRAMME

Activity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	At Completion Duration	Start	Finish
RWA9-1260	RWA9 - F/W & rebat fixing to Bay 13, 14 & 15 wall	0			21	21-May-21	15-Jun-21
RWA9-1270	RWA9 - Concrete laying for Bay 13, 14 & 15 wall	0			4	16-Jun-21	19-Jun-21
RWA9 Bay 17 to Bay 20							
RWA9-1360	RWA9 - Concrete laying for Bay 18 & 20 Wall	0			27	15-Mar-21 A	17-Apr-21
RWA9 Bay 21 & Bay 22							
RWA9-1380	RWA9 - F/W & rebat fixing to Bay 21 & 22 Base Slab	0			45	02-Mar-21 A	26-Apr-21
RWA9-1390	RWA9 - Concrete laying for Bay 21 & 22 Base Slab	0			3	27-Apr-21	29-Apr-21
RWA9-1400	RWA9 - F/W & rebat fixing to Bay 21 & 22 Wall	0			21	30-Apr-21	26-May-21
RWA9-1410	RWA9 - Concrete laying for Bay 21 & 22 Wall	0			3	27-May-21	29-May-21
Road Works L5,L1 east (between Junction L3 & L5)							
Road L1 east part 1 (L5 toward L3 Junction)							
RL1a-1060	Road L1 east 1 - Landscape funiture	0			242	25-May-20 A	15-Mar-21 A
Road L1 east part 2 (L5 toward PC system B)							
RL1b-1040	Road L1 east 2 - ducting for Street Lighting	0			392	19-Dec-19 A	19-Apr-21
RL1b-1050	Road L1 east 2 - Road Pavement	0			308	17-Apr-20 A	29-Apr-21
RL1b-1060	Road L1 east 2 - Landscape funiture	0			285	13-Jun-20 A	29-May-21
Road L1 east part 3 (Junction L3 toward L5)							
RL1c-1060	Road L1 east 2 - Landscape funiture	0			267	13-Jun-20 A	07-May-21
Road Works PTT, L1 west (between Junction L3 & PTT)							
Road L1 west part 1 (Box culvert BC1)							
RL1c-1110	Road L1 west 1 - UU installation	0			88	18-Jan-21 A	07-May-21
RL1c-1120	Road L1 west 1 - ducting for Street Lighting	0			80	27-Jan-21 A	07-May-21
RL1c-1130	Road L1 west 1 - Road Pavement	0			80	27-Jan-21 A	07-May-21
RL1c-1140	Road L1 west 1 - Landscape funiture	0			60	15-Jun-21	24-Aug-21



Planned Bar (WP)
Actual Bar
Forecast Bar
Planned Milestone (WP)
Milestone

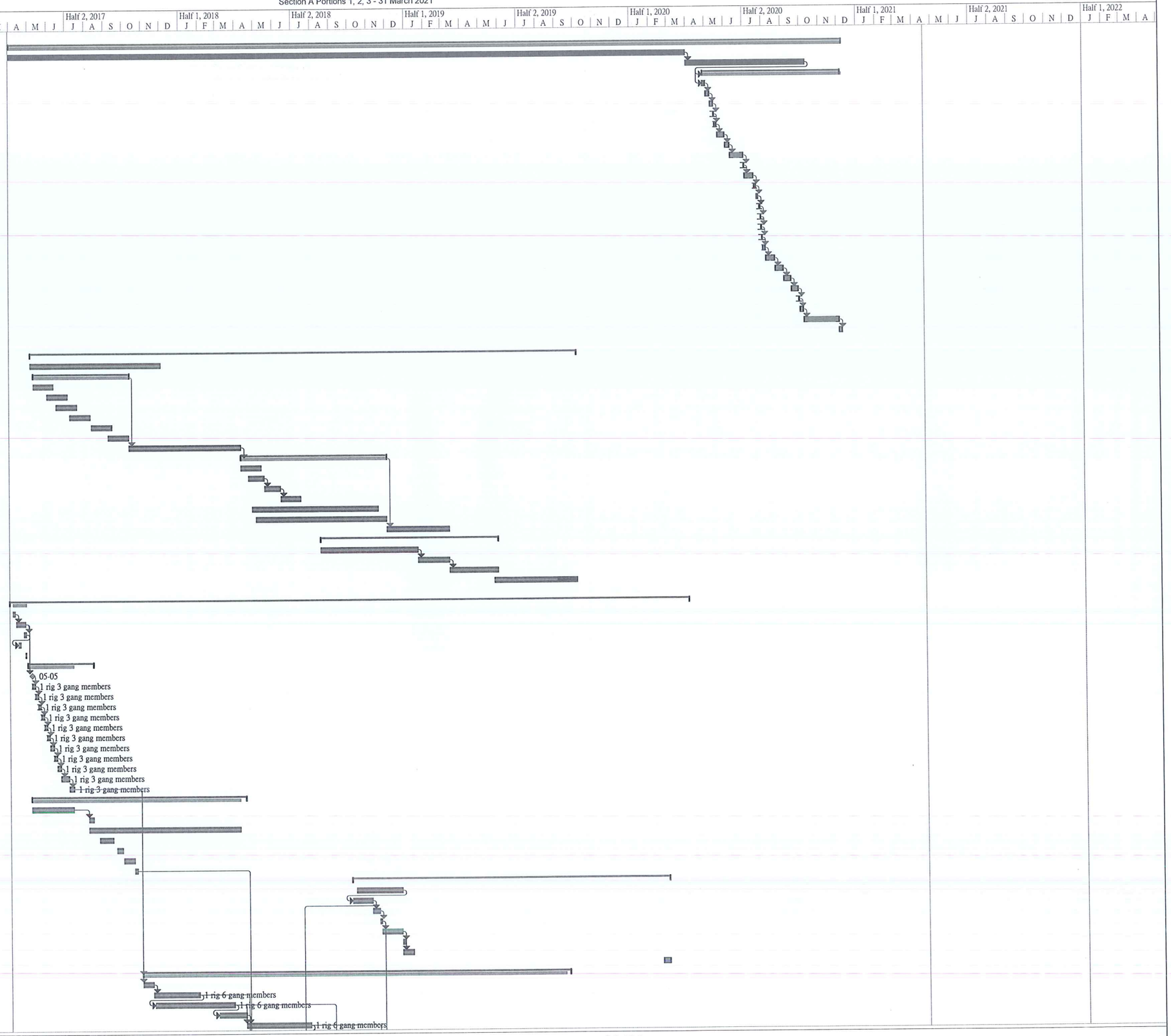
3-month Rolling Programme
Anderson Rd Sub-programme
15-Apr-21

Date	Revision	Checked	Approved
15-Apr-21	C1-MPU202104		

Contract 2 (NE/2016/05)

Contract No. NE/2016/05
Development of Anderson Road Quarry Site
Connection of Pedestrian Facilities Works Phase 1 - Programme
Section A Portions 1, 2, 3 - 31 March 2021

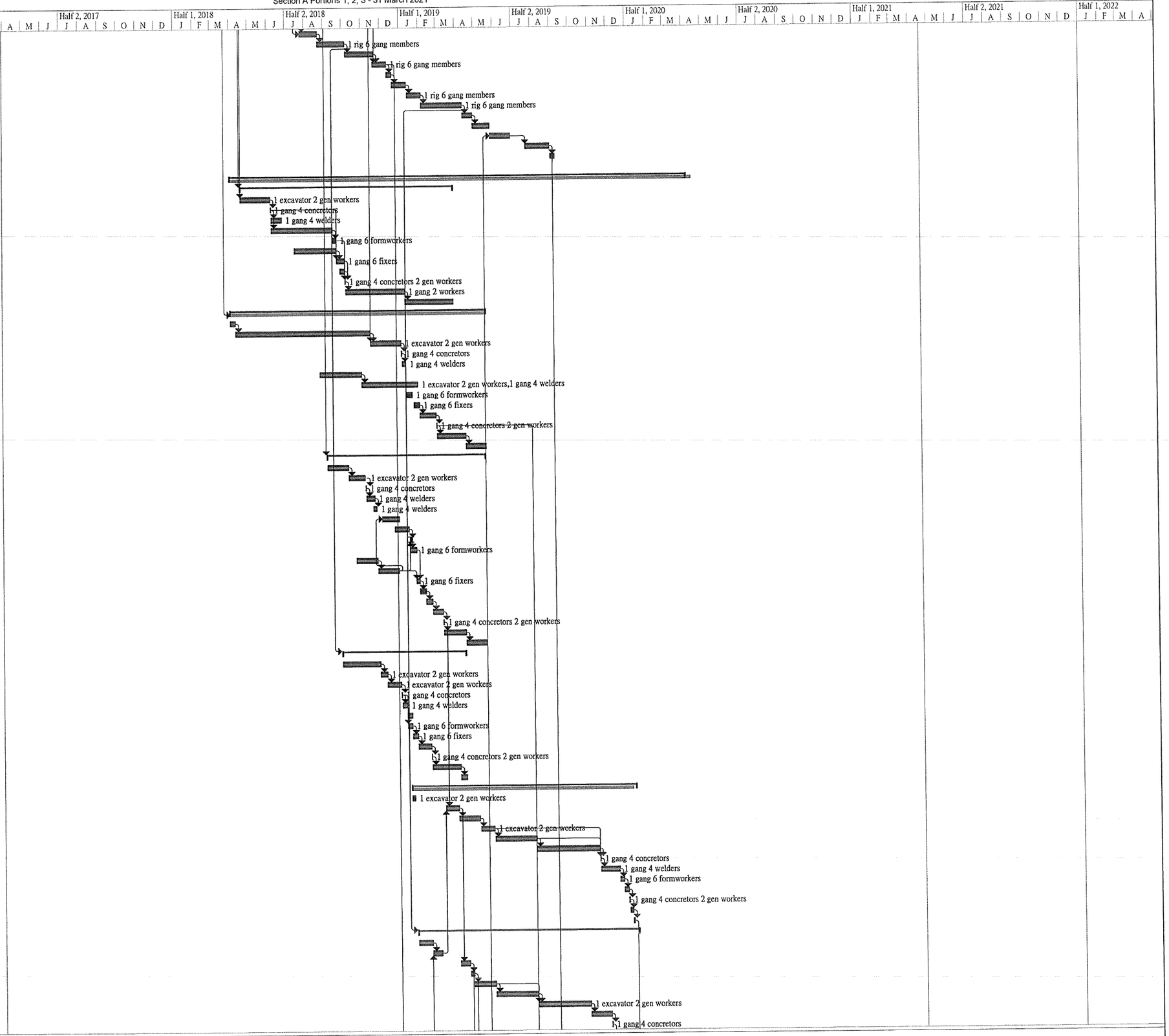
ID	Task Name	Duration	Start	Finish	Predece
1	**Section A Portions 1, 2, 3**				
2	**Revised Contract Period**	**1203 days?**	**Sat 01-04-17**	**Tue 08-12-20**	
3	Contract Commencement Period (Addendum No.2)	978 days	Sat 01-04-17	Tue 31-03-20	
4	Public Holidays since 1 April 2017	173 days	Tue 31-03-20	Sat 10-10-20	3
5	**Granted EOT from CE**	**199 days?**			4
6	CE124 - 5days exam	5 days			4
7	CE 051 - 7days exam	6 days			6
8	CE113 - 5days exam	5 days			7
9	CE 058 - 1days inclement weather March 2018	1 day			8
10	CE 078 - 4days inclement weather May 2018	4 days			9
11	CE102 - 11days inclement weather June 2018	11 days			10
12	CE109 - 7days inclement weather July 2018	7 days			11
13	CE149 & CE151 20days exam Jan & Feb 2019	20 days			12
14	PMI-159 - 1day exam	1 day			13
15	CE171 10 days exam Mar & April 2019	14 days			14
16	CE174 3 days inclement weather Feb 2019	3 days			15
17	3.5days inclement weather Mar 2019	3.5 days			16
18	CE193 2.5 day inclement weather April 2019	2.5 days			17
19	1 day school graduation May 2019	1 day			18
20	1 day inclement weather May 2019	1 day			19
21	1 day inclement weather June 2019	1 day			20
22	4 day inclement weather July 2019	4 days			21
23	14 days TownGas at Portion 3	14 days			22
24	12 days exam June 2019	12 days			23
25	11 days exam Jan 2020	11 days			24
26	10 days exam Feb 2020	10 days			25
27	2 days exam Mar 2020	2 days			26
28	6 days exam April 2020	6 days			27
29	COVID-19 Event Jan 31 to Mar 18, 2020	52 days			28
30	5 days exam May 2020	5 days	Thu 03-12-20	Tue 08-12-20	29
31					
32	**Submissions**	**788 days**	**Thu 04-05-17**	**Thu 03-10-19**	
33	MS socket H pile for RS1 and PC1 (3 revisions)	189 days	Thu 04-05-17	Fri 01-12-17	
34	**Submissions**	**139 days**	**Tue 09-05-17**	**Wed 11-10-17**	
35	MS for Weld test	30 days	Tue 09-05-17	Sat 10-06-17	
36	MS Tree felling	30 days	Wed 31-05-17	Mon 03-07-17	
37	MS Tree protection	30 days	Thu 15-06-17	Tue 18-07-17	
38	MS site entrance	30 days	Fri 07-07-17	Wed 09-08-17	
39	MS hoarding	30 days	Fri 11-08-17	Wed 13-09-17	
40	MS GI	30 days	Thu 07-09-17	Tue 10-10-17	
41	Approval of MS	161 days	Tue 10-10-17	Mon 09-04-18	34
42	**Pile cap submissions**	**211 days**	**Mon 09-04-18**	**Fri 30-11-18**	41
43	MS pilecap	30 days	Mon 09-04-18	Fri 11-05-18	
44	MS pile load test PC1 (3 revisions)	23 days	Sat 21-04-18	Wed 16-05-18	
45	Approval of Load Test	23 days	Thu 17-05-18	Mon 11-06-18	44
46	MS dismantle load test	30 days	Tue 12-06-18	Sat 14-07-18	45
47	MS ELS (2 revisions)	182 days	Fri 27-04-18	Fri 16-11-18	
48	MS Piling PC3 to PC5 (3 revisions)	189 days	Thu 03-05-18	Fri 30-11-18	
49	Approval of MS	90 days	Fri 30-11-18	Mon 11-03-19	42
50	**Superstructure submissions**	**256 days**	**Wed 15-08-18**	**Tue 28-05-19**	
51	MS Pier formwork (4 revisions)	141 days	Wed 15-08-18	Sat 19-01-19	
52	MS Deck	45 days	Sat 19-01-19	Mon 11-03-19	51
53	Approval of MS	70 days	Mon 11-03-19	Tue 28-05-19	52
54	Civil works liaison with CLP, PCCW, HKT	120 days	Wed 22-05-19	Thu 03-10-19	
55					
56	**Section A, Portion 1 - Escalator (E1)**	**979 days**	**Fri 31-03-17**	**Tue 31-03-20**	
57	Setting out of site boundary	4 days	Wed 05-04-17	Sat 08-04-17	
58	Setting out of predrill coordinates / Site clearance	14 days	Mon 10-04-17	Tue 25-04-17	57
59	Inspection pits	3 days	Sat 22-04-17	Wed 26-04-17	58
60	UU Detection	3 days	Fri 14-04-17	Mon 17-04-17	59
61	Contractor's office	2 days	Tue 25-04-17	Wed 26-04-17	
62	**Predrilling Works**	**95 days**	**Sat 29-04-17**	**Sun 13-08-17**	
63	Predrilling PD/E1/01	0 days	Sat 29-04-17	Fri 05-05-17	58
64	Predrill PD/E1/03	4 days	Fri 05-05-17	Wed 10-05-17	63
65	Predrill PD/E1/04	4 days	Wed 10-05-17	Mon 15-05-17	64
66	Predrill PD/E1/10	4 days	Mon 15-05-17	Fri 19-05-17	65
67	Predrill PD/E1/09	4 days	Sat 20-05-17	Wed 24-05-17	66
68	Predrill PD/E1/07	4 days	Thu 25-05-17	Mon 29-05-17	67
69	Predrill PD/E1/08	5 days	Mon 29-05-17	Fri 02-06-17	68
70	Predrill PD/E1/06	6 days	Sat 03-06-17	Fri 09-06-17	69
71	Predrill PD/E1/05	4 days	Fri 09-06-17	Wed 14-06-17	70
72	Predrill PD/E1/02	5 days	Wed 14-06-17	Tue 20-06-17	71
73	Additional Predrilling at PD/E1/06	12 days	Tue 20-06-17	Mon 03-07-17	72
74	Additional Predrilling for PMI003	7 days	Tue 04-07-17	Tue 11-07-17	73
75	**PreConstruction Works**	**309 days**	**Thu 04-05-17**	**Sat 14-04-18**	
76	Hoarding	60 days	Thu 04-05-17	Mon 10-07-17	
77	Temp Site Entrance	7 days	Fri 04-08-17	Fri 11-08-17	76
78	Trees	218 days	Fri 04-08-17	Thu 05-04-18	
79	Demolish manhole PMI 015	20 days	Mon 21-08-17	Tue 12-09-17	
80	Drawf wall	9 days	Mon 18-09-17	Wed 27-09-17	
81	Sheetpile Site Entrance near E1-PC5	15 days	Fri 29-09-17	Mon 16-10-17	
82	Sheetpiling E1-PC1	5 days	Mon 16-10-17	Sat 21-10-17	
83	**Haul Road**	**457 days**	**Mon 01-10-18**	**Tue 25-02-20**	
84	MS Haul Road (6 revisions)	67 days	Mon 08-10-18	Fri 21-12-18	
85	Haul Road approval	29 days	Mon 01-10-18	Fri 02-11-18	84
86	Haul Road to PC1 & PC2	10 days	Fri 02-11-18	Wed 14-11-18	85
87	Haul Road to PC3	3 days	Wed 14-11-18	Sat 17-11-18	86
88	Approval for Haul Road to PC5	30 days	Sat 17-11-18	Thu 20-12-18	87
89	Haul Road to PC5	4 days	Fri 21-12-18	Tue 25-12-18	88
90	Haul Road to PC4	15 days	Fri 21-12-18	Mon 07-01-19	88
91	Haul Road to PC1	10 days	Fri 14-02-20	Tue 25-02-20	
92	**Drilling Works**	**613 days?**	**Sat 28-10-17**	**Mon 16-09-19**	74
93	Boring Machine deployment and set up(2nrs)	14 days	Sat 28-10-17	Tue 14-11-17	74
94	Drill and grout H-Piles E1-PC1 (12nrs)	67 days	Tue 14-11-17	Sat 27-01-18	93
95	Drill and grout H-Piles RS1 (22nrs)	114 days	Fri 17-11-17	Sat 24-03-18	94
96	MS Approval and Setup for E1-PC6	40 days	Tue 27-02-18	Thu 12-04-18	95
97	Drill and grout E1-PC6 with revision PMI 057	92 days	Thu 12-04-18	Tue 24-07-18	95,96



Project: NE/2016/05
Date: 31 March 2021

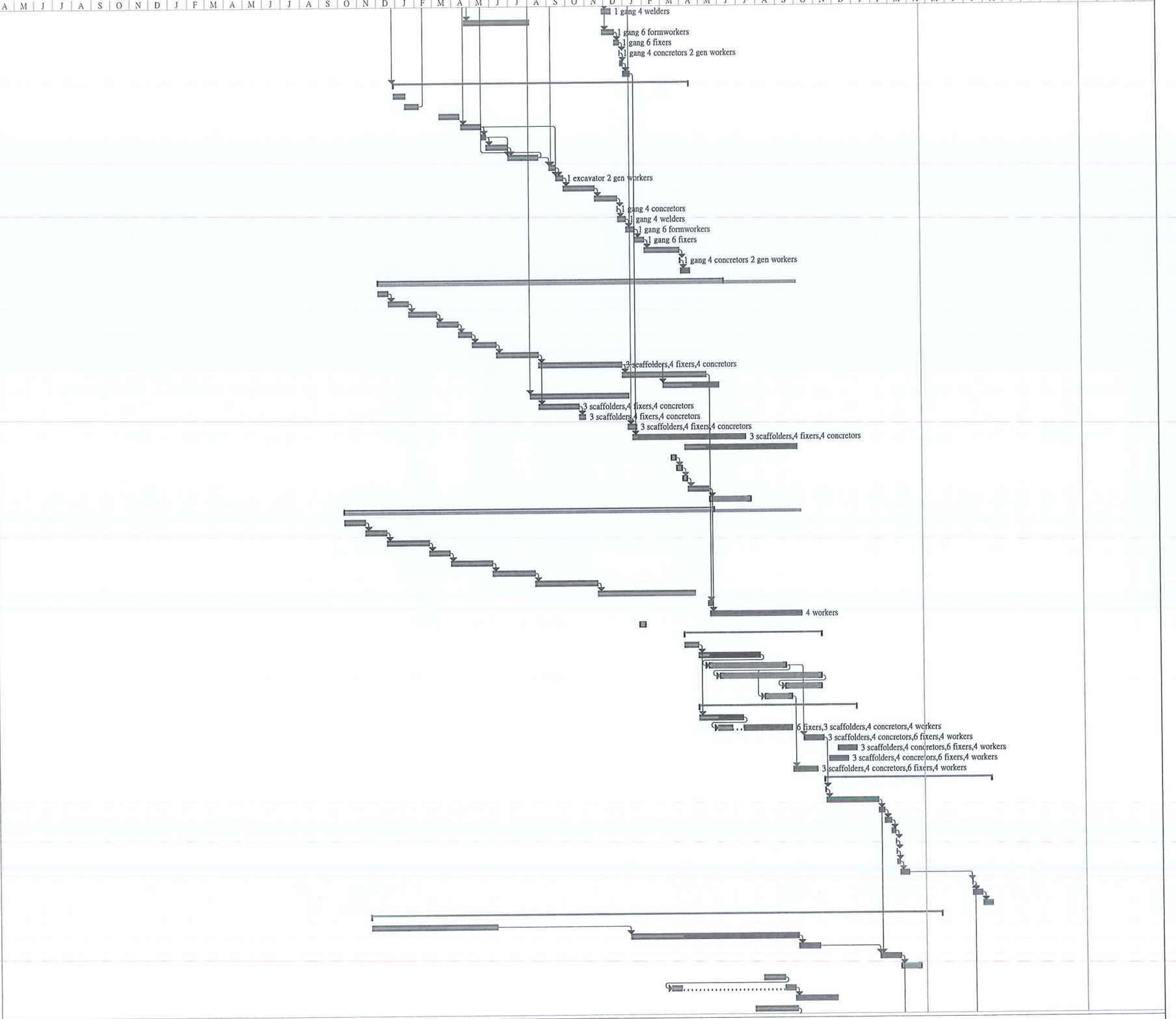
Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | Deadline | Critical | Critical Split | Progress

ID	Task Name	Duration	Start	Finish	Predece
98	MS approval and Setup for E1-PC2	26 days	Wed 25-07-18	Thu 23-08-18	97,85
99	Drill and grout E1-PC2 (12 nrs) with revision PMI 056	40 days	Thu 23-08-18	Sat 06-10-18	98
100	MS approval and Rig Setup for E1-PC3	40 days	Sun 07-10-18	Wed 21-11-18	99
101	Drill and grout E1-PC3 (16 nrs) incomplete	20 days	Tue 20-11-18	Wed 12-12-18	87,100
102	MS approval and Setup rig to PC5	8 days	Wed 12-12-18	Thu 20-12-18	101
103	Near Miss Incident	21 days	Fri 21-12-18	Sat 12-01-19	102
104	Drill and grout E1-PC5 (12 nrs)	20 days	Mon 14-01-19	Tue 05-02-19	103
105	Drill and grout E1-PC4 (16 nrs)	60 days	Tue 05-02-19	Fri 12-04-19	104
106	Drill and grout E1-PC3 (5 nrs)	14 days	Sat 13-04-19	Mon 29-04-19	105
107	Inclement weather Knock-out to Haul Road	25 days	Mon 29-04-19	Mon 27-05-19	106
108	Subcontractor Everwin Termination Effect	30 days	Mon 27-05-19	Sat 29-06-19	209
109	Drill and grout E1-PC3 staircase (8 nrs)	36 days	Tue 23-07-19	Sat 31-08-19	108
110	Additional Predrill PC3 Staircase	7 days	Mon 02-09-19	Mon 09-09-19	109
111					
112	**ELS & Pile Cap works**	**657 days**	**Mon 02-04-18**	**Mon 06-04-2(**	
113	**E1-PC1**	**306 days**	**Thu 19-04-18**	**Wed 27-03-19**	**94FS-3**
114	Excavate E1-PC1	43 days	Thu 19-04-18	Wed 06-06-18	82
115	Blinding E1-PC1	1 day	Thu 07-06-18	Thu 07-06-18	114
116	Pile Head Welding	15 days	Fri 08-06-18	Mon 25-06-18	115
117	MS formwork (3 revisions)	89 days	Fri 08-06-18	Sat 15-09-18	115
118	Formwork E1-PC1	5 days	Sat 15-09-18	Fri 21-09-18	117
119	BBS Approval	61 days	Sun 15-07-18	Fri 21-09-18	
120	Rebar fix E1-PC1	11 days	Fri 21-09-18	Thu 04-10-18	119,115
121	MS concrete	7 days	Thu 27-09-18	Thu 04-10-18	
122	Concrete E1-PC1	1 day	Fri 05-10-18	Fri 05-10-18	120,121
123	Waterproofing PMI 112	84 days	Sat 06-10-18	Tue 08-01-19	122
124	Backfill no-fines	70 days	Tue 08-01-19	Wed 27-03-19	123
125	**E1-PC6**	**368 days**	**Mon 02-04-18**	**Sat 18-05-19**	**97**
126	MS Piling E1-PC6 (2 revisions)	8 days	Mon 02-04-18	Tue 10-04-18	
127	MS Approval	194 days	Tue 10-04-18	Tue 13-11-18	126
128	Excavate E1-PC6	44 days	Wed 14-11-18	Wed 02-01-19	97,127
129	Blinding E1-PC6	1 day	Wed 02-01-19	Thu 03-01-19	128
130	Pile Head Welding	5 days	Fri 04-01-19	Wed 09-01-19	129
131	BBS Approval	60 days	Fri 24-08-18	Tue 30-10-18	
132	ELS	80 days	Tue 30-10-18	Mon 28-01-19	131
133	Formwork E1-PC6	9 days	Thu 10-01-19	Sat 19-01-19	
134	Rebar Fix E1-PC6	9 days	Tue 22-01-19	Thu 31-01-19	
135	Surface Geometric Testing	23 days	Thu 31-01-19	Tue 26-02-19	134
136	Concrete E1-PC6 footing	1 day	Wed 27-02-19	Wed 27-02-19	135
137	Waterproofing PMI 112	41 days	Thu 28-02-19	Mon 15-04-19	136
138	Backfill no-fines	30 days	Mon 15-04-19	Sat 18-05-19	137
139	**RS1**	**227 days**	**Wed 05-09-18**	**Thu 16-05-19**	**95FS-5**
140	Sheetpiling	30 days	Wed 05-09-18	Mon 08-10-18	
141	Piling RSI	24 days	Tue 09-10-18	Tue 06-11-18	140
142	Blinding RS1	1 day	Mon 05-11-18	Mon 05-11-18	141
143	ELS	12 days	Tue 06-11-18	Mon 19-11-18	142
144	Pile Head Welding	5 days	Sat 17-11-18	Thu 22-11-18	143
145	ELS as-built approval	25 days	Fri 30-11-18	Fri 28-12-18	150
146	Near Miss Incident	21 days	Fri 21-12-18	Sat 12-01-19	
147	Remove Waling	3 days	Mon 14-01-19	Wed 16-01-19	146,150
148	Formwork RS1	10 days	Mon 14-01-19	Thu 24-01-19	146
149	Revised Rebars PMI 148	30 days	Sat 20-10-18	Fri 23-11-18	
150	BBS Approval	30 days	Sat 24-11-18	Thu 27-12-18	149
151	Rebar Fix RS1	5 days	Thu 24-01-19	Tue 29-01-19	148,150
152	CNY PH	9 days	Tue 29-01-19	Fri 08-02-19	151
153	Continue Rebar Fix RS1	9 days	Fri 08-02-19	Mon 18-02-19	152
154	Surface Geometric Testing	15 days	Tue 19-02-19	Thu 07-03-19	153
155	Concrete RS1	1 day	Thu 07-03-19	Fri 08-03-19	154
156	Waterproofing PMI 112	32 days	Fri 08-03-19	Sat 13-04-19	155
157	Backfill no-fines	30 days	Sat 13-04-19	Thu 16-05-19	156
158	**E1-PC2**	**177 days**	**Thu 27-09-18**	**Fri 12-04-19**	**99FS-3**
159	MS ELS PC2 (4 revisions)	54 days	Thu 27-09-18	Mon 26-11-18	
160	Sheetpiling E1-PC2	11 days	Mon 26-11-18	Fri 07-12-18	159
161	Piling PC2	20 days	Fri 07-12-18	Sat 29-12-18	160
162	Blinding PC2	1 day	Sat 29-12-18	Sat 29-12-18	161
163	Pile Head Welding	7 days	Mon 31-12-18	Mon 07-01-19	162
164	BBS Approval	7 days	Mon 07-01-19	Tue 15-01-19	
165	Formwork PC2	7 days	Tue 08-01-19	Tue 15-01-19	162
166	Rebar Fix PC2	8 days	Wed 16-01-19	Thu 24-01-19	165
167	Surface Geometric Testing	19 days	Thu 24-01-19	Thu 14-02-19	166
168	Concrete PC2	1 day	Fri 15-02-19	Fri 15-02-19	167
169	Waterproofing PMI 112	40 days	Sat 16-02-19	Tue 02-04-19	168
170	Backfill no-fines	10 days	Tue 02-04-19	Fri 12-04-19	169
171	**E1-PC5**	**322 days**	**Mon 14-01-19**	**Thu 09-01-20**	
172	Sheetpile Site Entrance near E1-PC5	5 days	Mon 14-01-19	Fri 18-01-19	
173	Piling E1-PC5	19 days	Fri 08-03-19	Fri 29-03-19	155,187
174	Sheetpile remaining works E1-PC5	30 days	Fri 29-03-19	Thu 02-05-19	173
175	Excavate E1-PC5	20 days	Sat 04-05-19	Sat 25-05-19	174
176	Subcontractor Everwin Termination Effect	60 days	Mon 27-05-19	Thu 01-08-19	175
177	Continue excavate E1-PC5	90 days	Thu 01-08-19	Sat 09-11-19	176
178	Blinding E1-PC5	1 day	Mon 11-11-19	Mon 11-11-19	175,176
179	Pile Head Welding	28 days	Tue 12-11-19	Thu 12-12-19	178
180	Formwork E1-PC5	6 days	Fri 13-12-19	Thu 19-12-19	179
181	Rebar fix E1-PC5	6 days	Thu 19-12-19	Thu 26-12-19	180
182	Concrete E1-PC5	2 days	Thu 26-12-19	Sat 28-12-19	181
183	Waterproofing PMI 112	4 days	Sat 28-12-19	Thu 02-01-20	182
184	Backfill no-fines	2 days	Thu 02-01-20	Sat 04-01-20	183
185	**E1-PC4**	**317 days**	**Tue 22-01-19**	**Sat 11-01-20**	**105**
186	Sheetpiling	20 days	Tue 22-01-19	Wed 13-02-19	
187	Drilling 5nos piles	14 days	Wed 13-02-19	Thu 28-02-19	186,204
188	Redrill piles	14 days	Fri 29-03-19	Sat 13-04-19	173
189	Grout piles	6 days	Mon 15-04-19	Sat 20-04-19	188
190	Sheetpile remaining works E1-PC4	31 days	Sat 20-04-19	Sat 25-05-19	189
191	Subcontractor Everwin Termination Effect	60 days	Sat 25-05-19	Thu 01-08-19	190
192	Excavate E1-PC4	75 days	Thu 01-08-19	Thu 24-10-19	190,191
193	Temp soil storage	30 days	Thu 24-10-19	Tue 26-11-19	192
194	Blinding E1-PC4	1 day	Wed 27-11-19	Wed 27-11-19	193



Contract No. NE/2016/05
Development of Anderson Road Quarry Site
Connection of Pedestrian Facilities Works Phase 1 - Programme
Section A Portions 1, 2, 3 - 31 March 2021

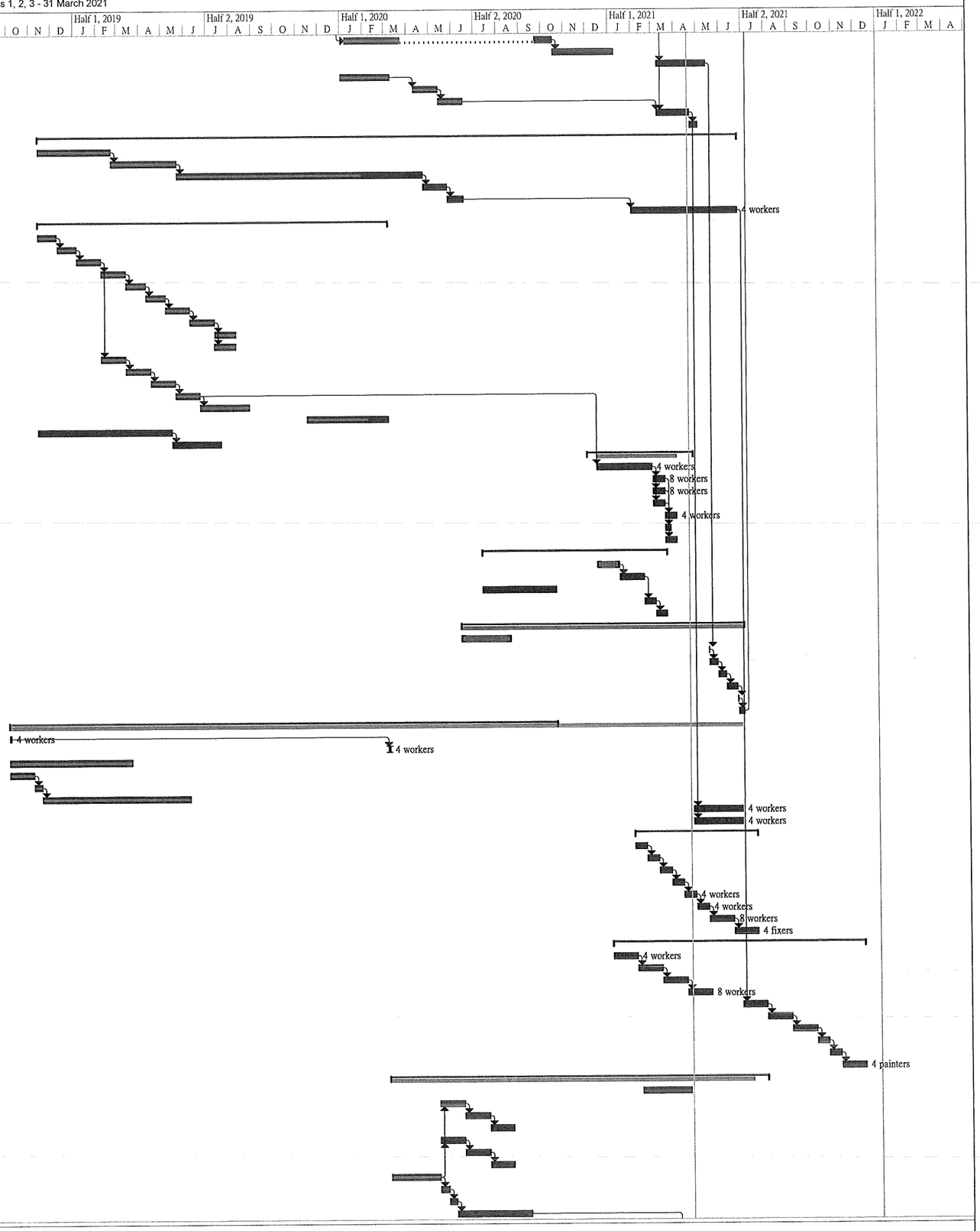
ID	Task Name	Duration	Start	Finish	Predece
195	Pile Head Welding	13 days	Thu 28-11-19	Thu 12-12-19	194
196	BBS Approval	94 days	Sat 20-04-19	Sat 03-08-19	189
197	Formwork E1-PC4	17 days	Thu 28-11-19	Tue 17-12-19	194
198	Rebar Fix E1-PC4	8 days	Tue 17-12-19	Wed 25-12-19	197
199	Concrete E1-PC4	1 day	Thu 26-12-19	Thu 26-12-19	198
200	Waterproofing PMI 112	4 days	Fri 27-12-19	Tue 31-12-19	199
201	Backfill no-fines	10 days	Tue 31-12-19	Sat 11-01-20	200
202	**E1-PC3 & RC staircase**	**423 days**	**Fri 28-12-18**	**Tue 14-04-20**	**101**
203	MS ELS (2 revisions)	17 days	Fri 28-12-18	Wed 16-01-19	
204	Drilling 5nos piles	20 days	Tue 15-01-19	Wed 06-02-19	
205	BBS Approval	30 days	Mon 11-03-19	Fri 12-04-19	
206	Continue drilling 11nos piles	30 days	Mon 15-04-19	Fri 17-05-19	188
207	Demobilize Everwin drilling rig	7 days	Sat 18-05-19	Sat 25-05-19	206
208	Subcontractor Everwin Termination Effect	31 days	Sat 25-05-19	Sat 29-06-19	207
209	Mobilize Ping On drilling rig to PC3 staircase	43 days	Sat 29-06-19	Fri 16-08-19	207,208
210	Sheetpile PC3 & RC Staircase	10 days	Tue 03-09-19	Fri 13-09-19	109,209
211	Excavate PC3 & Staircase	10 days	Fri 13-09-19	Wed 25-09-19	206,210
212	Removal of backfill material	45 days	Wed 25-09-19	Thu 14-11-19	211
213	ELS	32 days	Thu 14-11-19	Fri 20-12-19	212
214	Blinding PC3 & staircase	1 day	Fri 20-12-19	Sat 21-12-19	213
215	Pile Head Welding	12 days	Sat 21-12-19	Fri 03-01-20	214
216	Formwork PC3 & Staircase pilecaps	12 days	Fri 03-01-20	Fri 17-01-20	215
217	Rebar Fix PC3 & staircase pilecaps	14 days	Fri 17-01-20	Sat 01-02-20	216
218	COVID-19 Event Jan 31 to Mar 18, 2020	50 days	Sat 01-02-20	Sat 28-03-20	217
219	Concrete PC3 & Staircase pilecaps	1 day	Sat 28-03-20	Mon 30-03-20	218
220	Backfill no-fines	14 days	Mon 30-03-20	Tue 14-04-20	219
221	**Superstructure**	**495 days**	**Sat 01-12-18**	**Sun 07-06-20**	
222	Submission of Temp Work design and MS for Piers	14 days	Sat 01-12-18	Mon 17-12-18	
223	Approval of Temp Work design and MS for Piers	30 days	Mon 17-12-18	Sat 19-01-19	222
224	Submission of Temp Work design and MS for Piers(Rev 2,3)	40 days	Sat 19-01-19	Tue 05-03-19	223
225	Approval of Temp Work design and MS for Piers (Rev 3)	30 days	Tue 05-03-19	Mon 08-04-19	224
226	Submission of Temp Work design and MS for Piers (Rev 4)	20 days	Mon 08-04-19	Tue 30-04-19	225
227	Approval of Temp Work design and MS for Piers (Rev 4)	35 days	Tue 30-04-19	Sat 08-06-19	226
228	Subcontractor Everwin Termination Effect	60 days	Sat 08-06-19	Wed 14-08-19	227
229	Construction of Cap (E1-PC6) with drill and grout	120 days	Wed 14-08-19	Thu 26-12-19	228
230	Construction of E1-PC6 RC Abutment walls	120 days	Fri 27-12-19	Sat 09-05-20	229
231	PC6 Backfill & remove waling	80 days	Sun 01-03-20	Fri 29-05-20	229
232	Construction of Ramp (E1-RS1)	141 days	Thu 01-08-19	Mon 06-01-20	136
233	Construction of Pier P1	58 days	Wed 14-08-19	Fri 18-10-19	228
234	Construction of Pier P2	9 days	Fri 18-10-19	Mon 28-10-19	233
235	Construction of Pier P5	13 days	Sat 04-01-20	Sat 18-01-20	184
236	Construction of Pier P4	162 days	Sat 11-01-20	Fri 10-07-20	201
237	Construction of Pier/P3 Staircase	160 days	Sat 04-04-20	Wed 30-09-20	
238	Construction of Pier Head P1	8 days	Fri 13-03-20	Sat 21-03-20	
239	Construction of Pier Head P2	8 days	Sat 21-03-20	Tue 31-03-20	238
240	Construction of Pier Head P5	8 days	Tue 31-03-20	Wed 08-04-20	239
241	Construction of Pier Head P3	30 days	Thu 09-04-20	Tue 12-05-20	240
242	Construction of Pier Head P4	60.5 days	Wed 13-05-20	Sat 18-07-20	241
243	**Construction of Bearings and Movement Joints**	**529 days**	**Sat 06-10-18**	**Wed 20-05-20**	
244	Proposal of Bridge Bearing Specialist	30 days	Sat 06-10-18	Thu 08-11-18	
245	Approval of Bridge Bearing Specialist	30 days	Thu 08-11-18	Wed 12-12-18	244
246	Design submission of Bridge Bearing	60 days	Thu 13-12-18	Mon 18-02-19	245
247	Approval of Design submission of Bridge Bearing	30 days	Mon 18-02-19	Sat 23-03-19	246
248	Material Submission for Bridge Bearing	60 days	Mon 25-03-19	Thu 30-05-19	247
249	Approval of Material Submission for Bridge Bearing	60 days	Thu 30-05-19	Tue 06-08-19	248
250	Testing and result submission of Bridge Bearings	90 days	Tue 06-08-19	Thu 14-11-19	249
251	Procurement to delivery of Bridge Bearing	140 days	Thu 14-11-19	Sat 18-04-20	250
252	Installation of Bridge Bearings for PC6	7 days	Sat 09-05-20	Sat 16-05-20	230
253	Installation of Bridge Bearings for PC3	130 days	Tue 12-05-20	Mon 05-10-20	241
254	TTA for Detouring Pedestrians aat Memorial Park	10 days	Mon 20-01-20	Thu 30-01-20	
255	**Site formation for scaffolding**	**195.75 days**	**Wed 01-04-20**	**Thu 05-11-20**	
256	RS1-PC1	20 days	Wed 01-04-20	Thu 23-04-20	
257	P5 to P6	88 days	Thu 23-04-20	Thu 30-07-20	256
258	P4 to P5	110 days	Sat 09-05-20	Thu 10-09-20	257
259	P3 to P4	145.88 days	Wed 27-05-20	Thu 05-11-20	258
260	P2 to P3	53.13 days	Tue 08-09-20	Thu 05-11-20	259
261	P1 to P2	40 days	Thu 06-08-20	Sat 19-09-20	258
262	**Construction of esclator trough with cast-in items**	**224.75 days**	**Thu 23-04-20**	**Wed 30-12-20**	
263	Deck RS1 to P1	63 days	Thu 23-04-20	Thu 02-07-20	256
264	Deck P5 to P6	90 days	Sat 23-05-20	Fri 18-09-20	263
265	Deck P4 to P5	30 days	Tue 06-10-20	Sat 07-11-20	258
266	Deck P3 to P4	28 days	Mon 30-11-20	Wed 30-12-20	
267	Deck P2 to P3	28 days	Mon 16-11-20	Wed 16-12-20	
268	Deck P1 to P2	35 days	Sat 19-09-20	Wed 28-10-20	261
269	**Escalators Installation**	**239 days**	**Mon 09-11-20**	**Tue 03-08-21**	
270	Plumbing & measuring of escalator pit	2 days	Mon 09-11-20	Tue 10-11-20	265
271	Delivery, hoisting and positioning of escalator truss	75 days	Wed 11-11-20	Tue 02-02-21	270
272	Drive/ step chain, step and guiderail tracks installation	9 days	Wed 03-02-21	Fri 12-02-21	271
273	Balustrade, handrail, skirting and deflector device works	9 days	Fri 12-02-21	Tue 23-02-21	272
274	Electrical works and escalator pits installation	6 days	Tue 23-02-21	Mon 01-03-21	273
275	Permenant power energization for escalator	1 day	Tue 02-03-21	Tue 02-03-21	274
276	Inspection(low) speed running testing of escalator operation	1 day	Wed 03-03-21	Wed 03-03-21	275
277	Final tuning and adjusting of escalator equipment / devices (drive c	4 days	Thu 04-03-21	Mon 08-03-21	276
278	Normal (fast) speed running and safety testing of escalator operatic	13 days	Mon 08-03-21	Tue 23-03-21	277
279	Submission of Form LE5 to EMSD	1 day	Thu 01-07-21	Fri 02-07-21	347,278
280	Anticipate EMSD inspection	14 days	Fri 02-07-21	Sat 17-07-21	279
281	Anticipate Use Permit issue date	14 days	Mon 19-07-21	Tue 03-08-21	280
282	**Parapet and Roofing**	**816 days**	**Tue 13-11-18**	**Fri 14-05-21**	
283	Proposal of off-site fabrication of steelworks	180 days	Tue 13-11-18	Sat 01-06-19	
284	Approval of off site fabrication of steelworks	240 days	Wed 01-01-20	Fri 25-09-20	283
285	Fabrication of steelworks off-site	30 days	Fri 25-09-20	Thu 29-10-20	284
286	Erection of steelworks (RS1 to PC1, PC5 to PC6)	30 days	Wed 03-02-21	Mon 08-03-21	285,271
287	Erection of steelworks (PC1 to PC5)	30 days	Mon 08-03-21	Sat 10-04-21	286
288	Material submission of fall arrest system	30 days	Fri 31-07-20	Wed 02-09-20	
289	Approval of material for fall arrest system	30 days	Thu 05-03-20	Sat 19-09-20	288
290	Procurement of fall arrest system	60 days	Sat 19-09-20	Wed 25-11-20	289
291	Material submission of corrugated steel roof	60 days	Fri 17-07-20	Tue 22-09-20	



Project: NE/2016/05
Date: 31 March 2021

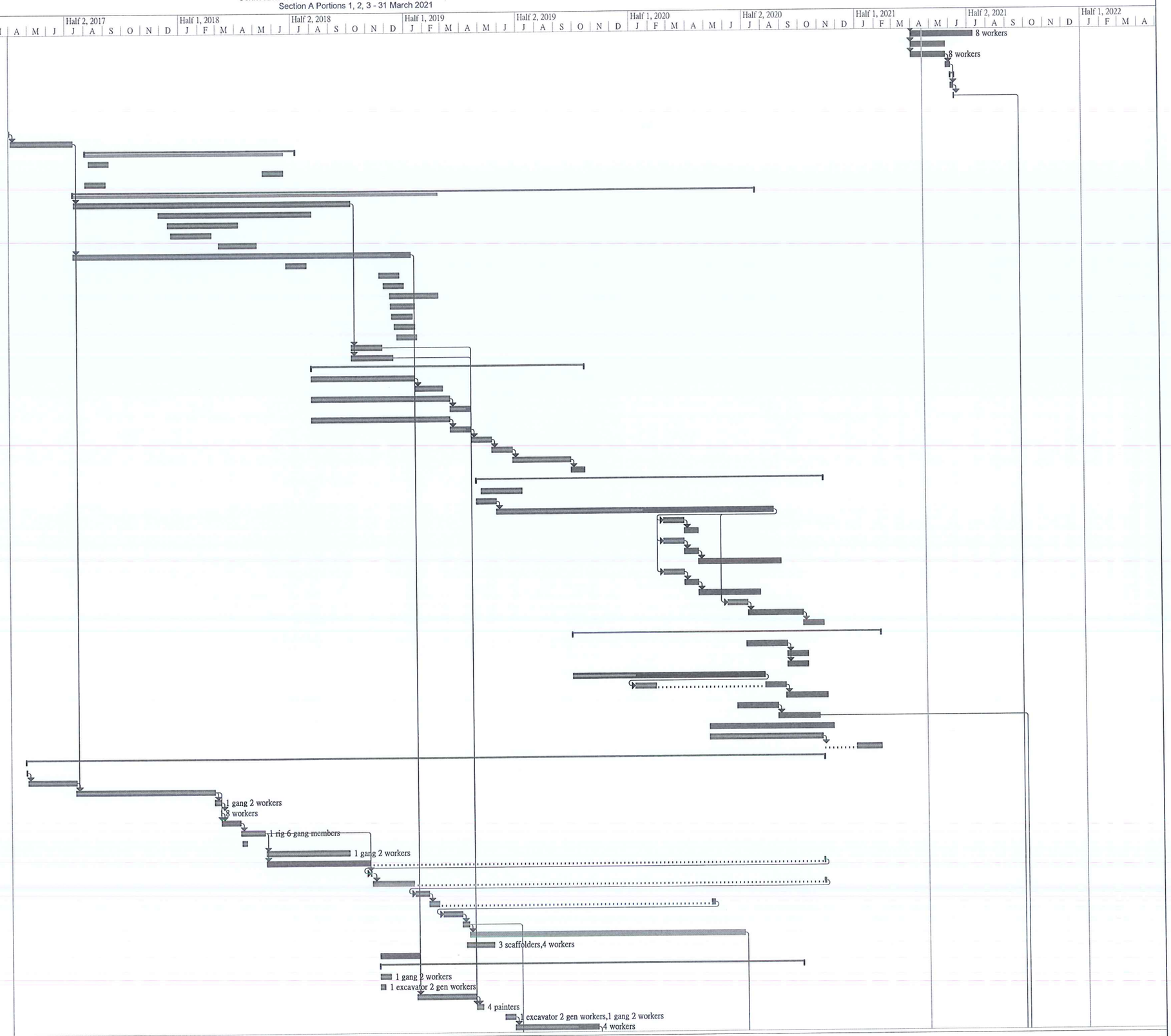
Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | Deadline | Critical | Critical Split | Progress

ID	Task Name	Duration	Start	Finish	Predeces
292	Approval of material for corrugated steel roof	90 days	Tue 07-01-20	Sat 17-10-20	291
293	Procurement of corrugated steel roof	75 days	Sat 17-10-20	Sat 09-01-21	292
294	Erection of roof system, gutter and fall arrest system	60 days	Mon 08-03-21	Fri 14-05-21	286
295	Material submission of Plexiglass	60 days	Thu 02-01-20	Mon 09-03-20	
296	Approval of material Plexiglass	30 days	Fri 10-04-20	Wed 13-05-20	295
297	Procurement to delivery of Plexiglass	30 days	Thu 14-05-20	Tue 16-06-20	296
298	Construction of Plexiglass parapet	40 days	Mon 08-03-21	Thu 22-04-21	286,297
299	Decking construction connecting to existing footpath	10 days	Thu 22-04-21	Mon 03-05-21	298
300	**Drainage Works Construction**	**854 days**	**Tue 13-11-18**	**Fri 25-06-21**	
301	Application of XP for carriageway for Hiu Ming Street	90 days	Tue 13-11-18	Thu 21-02-19	
302	TTA Application for drainage works at Hiu Ming Street	80 days	Thu 21-02-19	Wed 22-05-19	301
303	Road Works Advice	300 days	Wed 22-05-19	Wed 22-04-20	302
304	Implementation of TTA	30 days	Wed 22-04-20	Mon 25-05-20	303
305	Procurement to delivery of material for Drainage	20 days	Tue 26-05-20	Wed 17-06-20	304
306	Construction of Drainage PMI 016	130 days	Mon 01-02-21	Fri 25-06-21	305
307	**E & M Lighting Works**	**428 days**	**Tue 13-11-18**	**Thu 05-03-20**	
308	Proposal of Specialist for E&M Works	24 days	Tue 13-11-18	Sat 08-12-18	
309	Approval of Specialist for E&M Works	24 days	Mon 10-12-18	Sat 05-01-19	308
310	Material Submission of cable tray	30 days	Sat 05-01-19	Thu 07-02-19	309
311	Approval of material cable tray	30 days	Fri 08-02-19	Wed 13-03-19	310
312	Material submission of cables, conduits, fittings	24 days	Wed 13-03-19	Tue 09-04-19	311
313	Approval of material for cables conduits fittings	24 days	Tue 09-04-19	Mon 06-05-19	312
314	Material submission of lightings	30 days	Mon 06-05-19	Sat 08-06-19	313
315	Approval of material submission of Lightings	30 days	Sat 08-06-19	Fri 12-07-19	314
316	Material submission of Pillar Box c/w accessories	26 days	Fri 12-07-19	Sat 10-08-19	315
317	Approval of material submission of Pillar Box c/w accessories	27 days	Fri 12-07-19	Sat 10-08-19	315
318	Material submission of MCB distribution board	30 days	Fri 08-02-19	Wed 13-03-19	310
319	Approval of MCB distribution board	30 days	Wed 13-03-19	Tue 16-04-19	318
320	Material submission of communication cables	30 days	Tue 16-04-19	Mon 20-05-19	319
321	Approval of communication cables	30 days	Mon 20-05-19	Sat 22-06-19	320
322	Application of Power supply	60 days	Sat 22-06-19	Wed 28-08-19	321
323	Application of telemetry (Chubb)	100 days	Fri 15-11-19	Thu 05-03-20	
324	Application of E1 XP for telemetry by AECOM	164 days	Tue 13-11-18	Wed 15-05-19	
325	Completion of Telemetry Civil & E&M Works	60 days	Wed 15-05-19	Sat 20-07-19	324
326	**Construction and Installation works for pillar box**	**130 days**	**Tue 01-12-20**	**Sat 24-04-21**	
327	Positioning and construction of Pillar Box	68.75 days	Mon 14-12-20	Sat 27-02-21	321
328	Trenching works and laying of ducts and power cables	15 days	Mon 01-03-21	Wed 17-03-21	327
329	Trenching works and laying of telecommunication cables	15 days	Mon 01-03-21	Wed 17-03-21	327
330	Installation of E&M Component inside Pillar Box	15 days	Mon 01-03-21	Wed 17-03-21	327
331	Instalation and Connection of Telemetry system	15 days	Wed 17-03-21	Fri 02-04-21	329
332	Installation of Electricity Meter	7 days	Wed 17-03-21	Thu 25-03-21	328
333	T&C of E&M works inside pillar box	15 days	Wed 17-03-21	Fri 02-04-21	330
334	**Sump pit and pumps**	**225.75 days**	**Fri 10-07-20**	**Fri 19-03-21**	
335	Construction of Sump pit	28 days	Mon 14-12-20	Wed 13-01-21	
336	Trenches and ductings for sump pit to existing manhole	30 days	Thu 14-01-21	Tue 16-02-21	335
337	Procurement to delivery of Sump Pump, Piping and Associated Equ	90 days	Fri 10-07-20	Mon 19-10-20	
338	Installation of Sump Pump (by Wing Luen)	14 days	Tue 16-02-21	Thu 04-03-21	336
339	T&C of Sump Pump System	14 days	Thu 04-03-21	Fri 19-03-21	338
340	**Installation of Lighting for escalator**	**344.88 days**	**Thu 11-06-20**	**Thu 01-07-21**	
341	Procurement & Delivery of Lighting and accessories	60 days	Thu 11-06-20	Mon 17-08-20	
342	Handover of escalator cover walkway to E&M	1 day	Fri 14-05-21	Sat 15-05-21	294
343	Installation Conduit and cable containment	10 days	Sat 15-05-21	Wed 26-05-21	342
344	Cable and wiring	10 days	Thu 27-05-21	Mon 07-06-21	343
345	Installation of Light fitting	14 days	Mon 07-06-21	Tue 22-06-21	344
346	Power connection to Lighting	1 day	Wed 23-06-21	Wed 23-06-21	345
347	T&C of Lighting	7 days	Thu 24-06-21	Thu 01-07-21	346
348	**Landscape Works**	**667 days**	**Wed 03-10-18**	**Mon 19-10-20**	
349	Remove felled trees PMI 018	3 days	Wed 03-10-18	Fri 05-10-18	
350	Tree Pruning PMI 042	3 days	Tue 03-03-20	Thu 05-03-20	349
351	Individual TRA Form 2	150 days	Wed 03-10-18	Tue 19-03-19	
352	Submission of proposal of Landscape Specialist	30 days	Wed 03-10-18	Mon 05-11-18	
353	Nursery Inspection	10 days	Mon 05-11-18	Fri 16-11-18	352
354	Approval of proposal of Landscape specialist	180 days	Fri 16-11-18	Thu 06-06-19	353
355	Construction of hard and soft landscape works	60 days	Thu 22-04-21	Mon 28-06-21	298
356	Rectification of Defects	60 days	Thu 22-04-21	Mon 28-06-21	298
357	**Road and Pavings / Traffic Signs**	**150 days**	**Mon 01-02-21**	**Sat 17-07-21**	
358	Material submission of Road Pavers	15 days	Mon 01-02-21	Wed 17-02-21	
359	Approval of material submission of Road Pavers	15 days	Wed 17-02-21	Fri 05-03-21	358
360	Procurement to delivery of Road Pavers	15 days	Sat 06-03-21	Tue 23-03-21	359
361	Ordering to delivery of concrete kerbs from CSD	15 days	Tue 23-03-21	Thu 08-04-21	360
362	Construction of kerbs	15 days	Thu 08-04-21	Sat 24-04-21	361
363	Construction of footpath	15 days	Mon 26-04-21	Wed 12-05-21	362
364	Construction of Paved Area	30 days	Wed 12-05-21	Tue 15-06-21	363
365	Installation of Traffic / Directional Signs	30 days	Tue 15-06-21	Sat 17-07-21	364
366	**External Finishes**	**307.25 days**	**Fri 01-01-21**	**Fri 10-12-21**	
367	Material submission of tiles	30 days	Fri 01-01-21	Wed 03-02-21	
368	Approval of material of tiles	30 days	Wed 03-02-21	Tue 09-03-21	367
369	Procurement to delivery of tiles	30 days	Tue 09-03-21	Mon 12-04-21	368
370	Tiling works	30 days	Mon 12-04-21	Sat 15-05-21	369
371	Material submission of Paint	30 days	Sat 26-06-21	Thu 29-07-21	306
372	Comment of material submission of paint	30 days	Thu 29-07-21	Wed 01-09-21	371
373	2nd submission of paints	30 days	Wed 01-09-21	Tue 05-10-21	372
374	Approval of material submision of paints	15 days	Tue 05-10-21	Thu 21-10-21	373
375	Procurement to delivery of paints	15 days	Thu 21-10-21	Sat 06-11-21	374
376	Texture spray, fungus resistant paint	30 days	Mon 08-11-21	Fri 10-12-21	375
377	**Construction of Sau Mau Ping Memorial Park**	**460.38 days**	**Mon 02-03-20**	**Thu 29-07-21**	
378	Slope improvement work (11NE-D/CR222)	60 days	Tue 09-02-21	Fri 16-04-21	
379	Material submission of Pavillion	30 days	Thu 07-05-20	Wed 10-06-20	385
380	Approval of material submission of Pavillion	30 days	Wed 10-06-20	Tue 14-07-20	379
381	Procurement to delivery of Pavillion	30 days	Tue 14-07-20	Sat 15-08-20	380
382	Material submissin of Bench	30 days	Thu 07-05-20	Wed 10-06-20	385
383	Approval to material submission of Bench	30 days	Wed 10-06-20	Tue 14-07-20	382
384	Procurement to delivery of Bench	30 days	Tue 14-07-20	Sat 15-08-20	383
385	Design submission of Pole Light to LCSD	60 days	Mon 02-03-20	Thu 07-05-20	
386	Material of material submission of Pole Light	10 days	Thu 07-05-20	Tue 19-05-20	385
387	Approval of material submission of Pole Light	10 days	Tue 19-05-20	Fri 29-05-20	386
388	Procurement to delivery of Pole Light	90 days	Sat 30-05-20	Tue 08-09-20	387



Contract No. NE/2016/05
Development of Anderson Road Quarry Site
Connection of Pedestrian Facilities Works Phase 1 - Programme
Section A Portions 1, 2, 3 - 31 March 2021

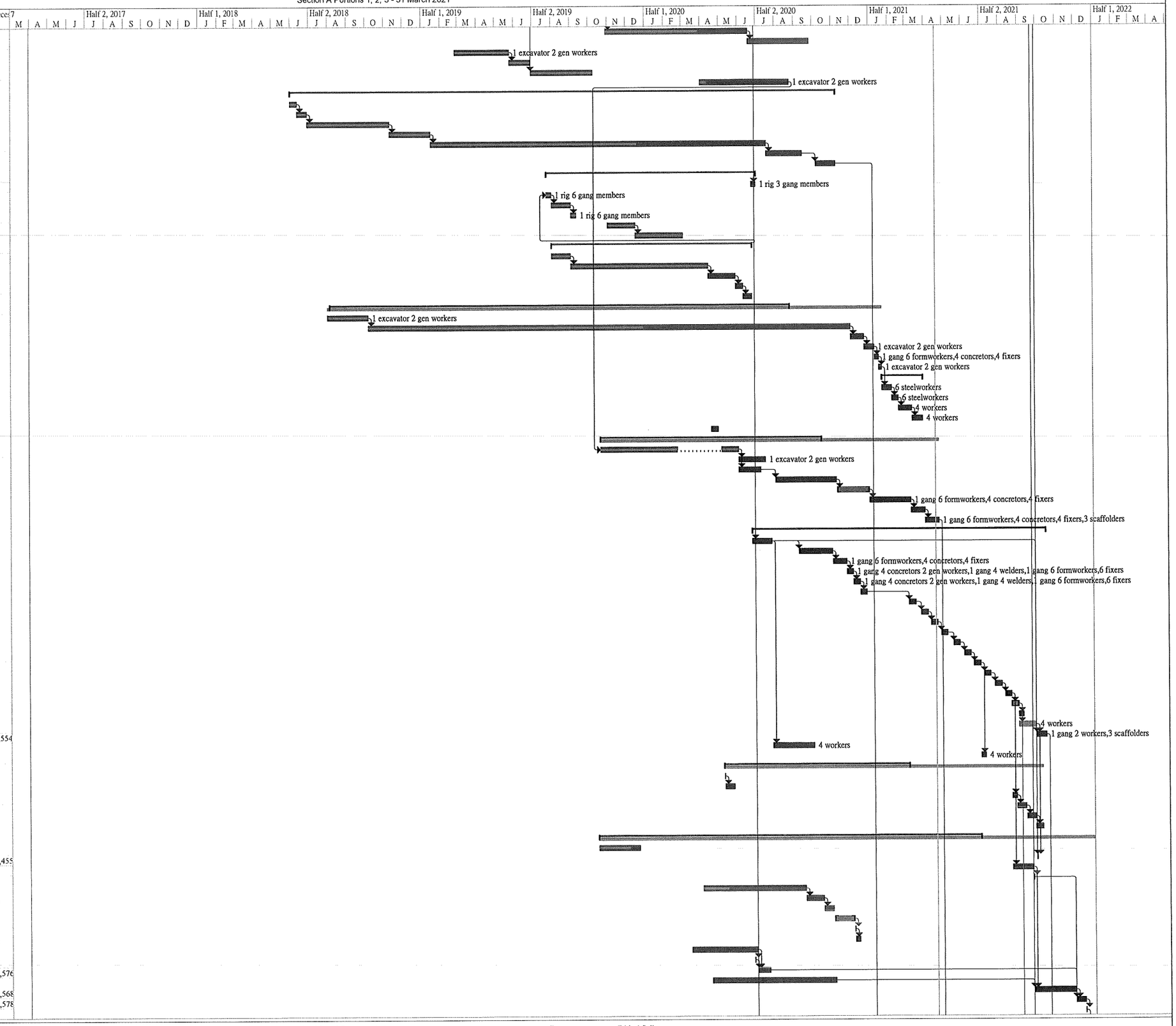
ID	Task Name	Duration	Start	Finish	Predece
389	Construction of Pavillion, bench, pole light with ducting	90 days	Thu 01-04-21	Sat 10-07-21	388
390	Construction of Irrigation system	50 days	Thu 01-04-21	Wed 26-05-21	388
391	Construction of Pavers	50 days	Thu 01-04-21	Wed 26-05-21	388
392	Handovwer to LCSD	7 days	Thu 27-05-21	Thu 03-06-21	391
393	**General Inspection and Tidy Up of Portion 1**	**5 days**	**Thu 03-06-21**	**Wed 09-06-21**	
394	General Inspection and Tidy Up of Portion 1	4 days	Thu 03-06-21	Tue 08-06-21	392
395	Handover Portion 1	1 day	Tue 08-06-21	Wed 09-06-21	394
396					
397	**Section A, Portion 2 - Lift Tower (E2)**				
398	Handover of Portion 1	1 day	Sat 01-04-17	Sat 01-04-17	
399	Site Preparation Works	91 days	Sun 02-04-17	Thu 13-07-17	398
400	**Submissions**	**304 days**	**Wed 02-08-17**	**Sat 07-07-18**	
401	MS for Lift LT1 excavation	30 days	Tue 08-08-17	Sat 09-09-17	
402	MS Footbridge	30 days	Wed 16-05-18	Mon 18-06-18	
403	MS trench excavation	30 days	Wed 02-08-17	Mon 04-09-17	
404	**Substructure**	**985 days**	**Thu 13-07-17**	**Mon 20-07-20**	
405	CSD	400 days	Fri 14-07-17	Fri 05-10-18	399
406	MS for socket H pile E2-PC2 (4 revisions)	221 days	Tue 28-11-17	Thu 02-08-18	
407	MS for ELS covered walkway C1 (3 revisions)	102 days	Wed 13-12-17	Thu 05-04-18	
408	MS for platform for minipiling (3 revisions)	59 days	Mon 18-12-17	Wed 21-02-18	
409	MS Rock fall fence (2 revisions)	56 days	Mon 05-03-18	Sat 05-05-18	
410	MS tree pruning proposal (4 revisions)	488 days	Thu 13-07-17	Thu 10-01-19	399
411	MS working platform	30 days	Fri 22-06-18	Wed 25-07-18	
412	MS ELS E2-PC1	30 days	Tue 20-11-18	Sat 22-12-18	
413	MS Piling	30 days	Tue 27-11-18	Sat 29-12-18	
414	MS Temp Gravity Wall for RWE 3b (3 revisions)	70 days	Fri 07-12-18	Sat 23-02-19	
415	MS Concrete Block Platform (2revisions)	35 days	Sat 08-12-18	Wed 16-01-19	
416	MS Predrilling E3-PC2 (2 revisions)	31 days	Mon 10-12-18	Sat 12-01-19	
417	MS footbridge	30 days	Fri 14-12-18	Wed 16-01-19	
418	MS Lift Tower	30 days	Tue 18-12-18	Sat 19-01-19	
419	Method Statement for Construction of Portion 2	45 days	Fri 05-10-18	Sat 24-11-18	405
420	Method Statemenst for Piling, ELS, Pilecap and Pier Construction	60 days	Fri 05-10-18	Tue 11-12-18	405
421	**Superstructure E2 and E3 Footbridge and Lift Tower**	**394 days**	**Wed 01-08-18**	**Wed 16-10-19**	
422	Submission of MS for formwork design for concreting Bridge Piers	150 days	Wed 01-08-18	Tue 15-01-19	
423	Approval of MS for formwork design for concreting Bridge Piers	40 days	Wed 16-01-19	Fri 01-03-19	422
424	Design and MS Submission of Lift Towers E2-ST1 and E3-ST1 (2	200 days	Wed 01-08-18	Tue 12-03-19	
425	Approval of Design and MS Submission of Lift Towers	30 days	Wed 13-03-19	Mon 15-04-19	424
426	Submission of MS for installation and Temporary Works design for	200 days	Wed 01-08-18	Tue 12-03-19	
427	Approval of MS of Temp Works design for concreting of Lift tower	30 days	Wed 13-03-19	Mon 15-04-19	426
428	Submission of Design and Material for Bridge Bearings	30 days	Mon 15-04-19	Sat 18-05-19	427
429	Approval of Design and Material for Bridge Bearings	30 days	Sat 18-05-19	Fri 21-06-19	428
430	Testing and result submission of Bridge Bearings	84 days	Fri 21-06-19	Mon 23-09-19	429
431	Procurement, ordering and delivery of Bridge Bearings	20 days	Tue 24-09-19	Wed 16-10-19	430
432	**Steel Bridge**	**501.5 days**	**Tue 23-04-19**	**Wed 04-11-20**	
433	Submission of MS for Erection of Steel Truss	60 days	Wed 01-05-19	Sat 06-07-19	
434	Proposal of off-site fabrication of steelworks for E2 and E3	30 days	Tue 23-04-19	Sat 25-05-19	
435	Approval of Off-Site fabrication of steelworks for Bridge E2 and E	400 days	Sat 25-05-19	Sat 15-08-20	434
436	Submission of Design of roof system	30 days	Wed 19-02-20	Mon 23-03-20	435
437	Approval of Design of roof system	20 days	Tue 24-03-20	Wed 15-04-20	436
438	Submsission of Material of Corrugated Steel Roof	30 days	Wed 19-02-20	Mon 23-03-20	435
439	Approval of corrugated steel roof	20 days	Tue 24-03-20	Wed 15-04-20	438
440	Procurement to delivery of corrugated steel roof	120 days	Wed 15-04-20	Thu 27-08-20	439
441	Submission of material fall arrest system	30 days	Wed 19-02-20	Mon 23-03-20	435
442	Approval of fall arrest system	20 days	Tue 24-03-20	Wed 15-04-20	441
443	Procurement to delivery of fall arrest system	90 days	Wed 15-04-20	Fri 24-07-20	442
444	Submission of Design of Glazing and Louvre	30 days	Mon 01-06-20	Fri 03-07-20	435
445	Approval of Design and Glazing and Louvre	80 days	Sat 04-07-20	Thu 01-10-20	444
446	Procurement, ordering and delivery of Glazing and Louvres	30 days	Thu 01-10-20	Wed 04-11-20	445
447	**E&M and Building works**	**445.5 days**	**Tue 24-09-19**	**Wed 03-02-21**	
448	Submission of shop drawing for irrigation system and submersible p	60 days	Wed 01-07-20	Sat 05-09-20	
449	Approval of shop drawing for irrigation system and submersible pu	30 days	Sat 05-09-20	Fri 09-10-20	448
450	Submission of Ventilation System	30 days	Sat 05-09-20	Fri 09-10-20	448
451	Design submission of lighting at footbridge	278 days	Tue 24-09-19	Thu 30-07-20	
452	Approval of Design Submission of Lighting at footbridge	60 days	Thu 02-01-20	Wed 02-09-20	451
453	Procurement to delivery of Lighting	60 days	Wed 02-09-20	Mon 09-11-20	452
454	Submission of MS for Lift Installation	60 days	Mon 15-06-20	Thu 20-08-20	
455	Approval of MS for Lift Installation	60 days	Thu 20-08-20	Tue 27-10-20	454
456	Procurement, ordering and delivery of Lift	180 days	Fri 01-05-20	Wed 18-11-20	
457	Application of E1 XP for telemetry by AECOM	164 days	Fri 01-05-20	Sat 31-10-20	
458	Completion of Telemetry Civil & E&M Works	36 days	Mon 02-11-20	Wed 03-02-21	457
459	**Setout Predrill location**	**1151.25 da**	**Mon 24-04-17**	**Tue 03-11-20**	
460	Contractor Site Office	2 days	Mon 24-04-17	Tue 25-04-17	
461	Site Clearance	70 days	Thu 27-04-17	Fri 14-07-17	460
462	MS rock slope excavation (4 revisions)	200 days	Thu 13-07-17	Wed 21-02-18	399,461
463	Inspection pits	10 days	Wed 21-02-18	Sat 03-03-18	462
464	Noise Barrier for LT1	1 day	Sat 03-03-18	Sat 03-03-18	463
465	Blocks for Platform and wall	27 days	Sun 04-03-18	Tue 03-04-18	464,462
466	E2-PC1 Piling	35 days	Wed 04-04-18	Sat 12-05-18	465
467	EOT school examination PMI 051	7 days	Fri 06-04-18	Fri 13-04-18	
468	Presplitting PMI 054	120 days	Tue 15-05-18	Wed 26-09-18	466
469	Rock slope cutting at LT1 to ground level	151 days	Tue 15-05-18	Mon 02-11-20	466
470	EOT school examination PMI 117	2 days	Tue 30-10-18	Fri 02-11-18	469,466
471	Rock slope cutting at LT1 to ground level(cont)	61 days	Fri 02-11-18	Tue 03-11-20	470
472	EOT school examination PMI 141	20 days	Wed 09-01-19	Thu 31-01-19	471
473	EOT school examination CE149 & 151	20 days	Thu 31-01-19	Wed 06-05-20	472
474	Rock slope cutting at LT1 to ground level(cont)	27 days	Sat 23-02-19	Mon 25-03-19	473
475	CE171 10 days exam Mar & April 2019	10 days	Mon 25-03-19	Fri 05-04-19	474
476	Rock cutting to basement level	396 days	Sat 06-04-19	Tue 23-06-20	475
477	Rock dowel stabilization PMI 076, PMI 080, PMI 103, PMI 132, P	40 days	Mon 01-04-19	Wed 15-05-19	
478	Rock dowel stabilization PMI 197	56 days	Tue 13-11-18	Mon 14-01-19	
479	**Site Formation Works**	**611 days**	**Tue 13-11-18**	**Sat 26-09-20**	
480	Inspection Pit PMI 106	15 days	Tue 13-11-18	Thu 29-11-18	
481	Trial Trench for tree roots PMI 077	7 days	Tue 13-11-18	Tue 20-11-18	
482	Approval of tree pruning proposal	85 days	Thu 10-01-19	Mon 15-04-19	410
483	Prune / Fell trees for access of plants	10 days	Tue 16-04-19	Fri 26-04-19	419,420
484	Relocation of RCP	14 days	Sat 01-06-19	Mon 17-06-19	
485	SWAP TTA	120 days	Mon 17-06-19	Tue 29-10-19	484



Project: NE/2016/05
Date: 31 March 2021

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | Deadline | Critical | Critical Split | Progress

ID	Task Name	Duration	Start	Finish	Predece
486	Pending WSD comments	208 days	Tue 29-10-19	Thu 18-06-20	485
487	Water diversion for Hiu Wah Building	90 days	Thu 18-06-20	Sat 26-09-20	486
488	Deploy Excavator and trim ground and slope from Retaining Wall 3b	81 days	Mon 25-02-19	Sat 25-05-19	
489	Evervin terminatiion effect	31 days	Sat 25-05-19	Sat 29-06-19	488
490	Retaining Wall RWE3b Works	90 days	Sat 29-06-19	Tue 08-10-19	475
491	Remove soil nails during triming	130 days	Wed 01-04-20	Mon 24-08-20	
492	**E2-PC1 (28 nos piles)**	796 days	Fri 01-06-18	Sat 07-11-20	
493	Deploy GI rig for predrilling	10 days	Fri 01-06-18	Tue 12-06-18	
494	Sheetpiling	15 days	Tue 12-06-18	Thu 28-06-18	493
495	Drill Pre-Bore H-Piles at E2-PC1 (28nos)	120 days	Fri 29-06-18	Sat 10-11-18	494
496	Stop for TTA use	60 days	Sat 10-11-18	Wed 16-01-19	495
497	Shoring works	489.75 days	Wed 16-01-19	Fri 17-07-20	496
498	Excavation works	52 days	Sat 18-07-20	Mon 14-09-20	497
499	RC Pilecap Works	30 days	Tue 06-10-20	Sat 07-11-20	498
500	**E2-PC2 (4nos piles)**	**306 days**	**Wed 24-07-19**	**Tue 30-06-20**	
501	Deploy GI rig for predrilling	7 days	Tue 23-06-20	Tue 30-06-20	476
502	Drill Pre-Bore H-Piles at E2-PC2 (2nos)	8 days	Wed 24-07-19	Thu 01-08-19	507
503	Swap TTA	28 days	Fri 02-08-19	Mon 02-09-19	502
504	Drill Pre-Bore H-Piles at E2-PC2 (2nos)	8 days	Mon 02-09-19	Wed 11-09-19	503
505	Shoring works	40 days	Fri 01-11-19	Mon 16-12-19	
506	RC Pilecap Works with couplers	70 days	Mon 16-12-19	Tue 03-03-20	505
507	**E3-PC3 (6nos piles)**	**292 days**	**Fri 02-08-19**	**Wed 24-06-2(**	
508	Drill Pre-Bore H-Piles (6 nos)	28 days	Fri 02-08-19	Mon 02-09-19	
509	Site formation works	200 days	Mon 02-09-19	Mon 13-04-20	508
510	Shoring works	40 days	Mon 13-04-20	Thu 28-05-20	509
511	RC Pilecap Works	11 days	Thu 28-05-20	Tue 09-06-20	510
512	RC Abutment Works	13 days	Tue 09-06-20	Wed 24-06-20	511
513	**C1 Footing**	**670 days**	**Sun 05-08-18**	**Mon 24-08-2(**	
514	Excavation 1.2m and remove C&D	60 days	Wed 01-08-18	Sat 06-10-18	
515	Stop for TTA use	702 days	Sat 06-10-18	Tue 01-12-20	514
516	Excavation 2.2m and remove C&D	20 days	Tue 01-12-20	Wed 23-12-20	515
517	Shoring works	15 days	Wed 23-12-20	Sat 09-01-21	516
518	RC concrete footing works	7 days	Sat 09-01-21	Sat 16-01-21	517
519	backfill	4 days	Sat 16-01-21	Thu 21-01-21	518
520	**Covered Walkway**	**59 days**	**Thu 21-01-21**	**Mon 29-03-21**	
521	Steelwork erection for covered walkway	14 days	Thu 21-01-21	Sat 06-02-21	519
522	Installation of steel sheet roof for covered walkway	10 days	Sat 06-02-21	Wed 17-02-21	521
523	Installation of Lighting to covered walkway	20 days	Wed 17-02-21	Thu 11-03-21	522
524	Installation of Irrigation Pipe	15 days	Fri 12-03-21	Mon 29-03-21	523
525	GI Predrilling works	10 days	Sat 18-04-20	Wed 29-04-20	
526	**E3-PC2 Pile cap (9 nos)**	**322 days**	**Sat 19-10-19**	**Wed 14-10-2(**	
527	Tower crane construction at Tennis Court	137 days	Sat 19-10-19	Mon 01-06-20	491
528	Slope trimming works	40 days	Mon 01-06-20	Wed 15-07-20	527
529	Tree felling works	33 days	Mon 01-06-20	Tue 07-07-20	527
530	Temp. Work Design Calculation for cut slope and shoring	89 days	Fri 31-07-20	Sat 07-11-20	529
531	Shoring works and excavation	47.88 days	Mon 09-11-20	Thu 31-12-20	530
532	Piling works	60 days	Fri 01-01-21	Tue 09-03-21	531
533	RC Pilecap works	21 days	Tue 09-03-21	Thu 01-04-21	532
534	RC Pier Works	21 days	Thu 01-04-21	Sat 24-04-21	533
535	**Lift Tower E3-ST1**	**427.75 day**	**Tue 23-06-20**	**Thu 14-10-21**	
536	Basement construction	29 days	Tue 23-06-20	Sat 25-07-20	476
537	Level to G/F +25mPD	50 days	Mon 07-09-20	Sat 31-10-20	536
538	Level +25mPD to +29mPD	20 days	Mon 02-11-20	Tue 24-11-20	537
539	Level +29mPD to +33mPD	10 days	Tue 24-11-20	Fri 04-12-20	538
540	Level +33mPD to +34mPD	10 days	Sat 05-12-20	Wed 16-12-20	539
541	Level +34mPD to +37.4mPD	10 days	Wed 16-12-20	Sat 26-12-20	540
542	Level +37.4mPD to +41.4mPD	10 days	Fri 05-03-21	Tue 16-03-21	541
543	Level +41.4mPD to +43.6mPD	10 days	Thu 25-03-21	Mon 05-04-21	542
544	Level +43.6mPD to +47mPD	10 days	Sat 10-04-21	Wed 21-04-21	543
545	Level +47mPD to +50.8mPD	10 days	Tue 27-04-21	Fri 07-05-21	544
546	Level +50.8mPD to +54.2mPD	10 days	Mon 17-05-21	Thu 27-05-21	545
547	Level +54.2mPD to +58.2mPD	10 days	Thu 03-06-21	Mon 14-06-21	546
548	Level +58.2mPD to +59.7mPD	10 days	Sat 19-06-21	Wed 30-06-21	547
549	Level +59.7mPD to +63mPD	10 days	Tue 06-07-21	Fri 16-07-21	548
550	Level +63mPD to +66.5mPD	10 days	Fri 23-07-21	Tue 03-08-21	549
551	Construction of Roof +66.5mPD to +70.45mPD	10 days	Mon 09-08-21	Thu 19-08-21	550
552	Construction of Roof +70.45mPD to +71.35mPD	10 days	Fri 20-08-21	Tue 31-08-21	551
553	Remove tower crane	7 days	Tue 31-08-21	Wed 08-09-21	552
554	Erection of glazing and louvres	25 days	Tue 31-08-21	Tue 28-09-21	552
555	Dismantling of external and internal scaffolding	15 days	Tue 28-09-21	Thu 14-10-21	536,554
556	Infill No Fine Concrete between Rock Slope and Wall of E3-ST1	60 days	Sat 25-07-20	Wed 30-09-20	536
557	Installation of bridge bearings	7 days	Thu 01-07-21	Thu 08-07-21	548
558	**E3 Lift Tower Lighting**	270 days	Thu 07-05-20	Fri 05-03-21	
559	Handover EMSD Pillar Box and associated ducting to E&M	1 day	Thu 07-05-20	Thu 07-05-20	
560	Electrical works inside Pillar Box EMSD and Lighting Compartmer	14 days	Fri 08-05-20	Sat 23-05-20	559
561	Conduit and cable containment	7 days	Fri 20-08-21	Fri 27-08-21	551
562	Cable and wiring	14 days	Fri 27-08-21	Sat 11-09-21	561
563	Installation of Light fitting	13 days	Mon 13-09-21	Mon 27-09-21	562
564	T&C	10 days	Mon 27-09-21	Fri 08-10-21	563
565	**E3 Lift Installation**	559 days	Mon 14-10-19	Wed 30-06-21	
566	Statuary Submission of Lift Design and Materials	60 days	Mon 14-10-19	Thu 19-12-19	
567	Handover lift shaft and associated ducting to E&M	1 day	Tue 28-09-21	Wed 29-09-21	554,455
568	E&M works inside Lift Shaft	30 days	Fri 20-08-21	Wed 22-09-21	551
569	Handover of Lift structure to E&M Lift subcontractor	1 day	Wed 22-09-21	Thu 23-09-21	568
570	Confirmation of telemetry service routing with CHUBB / HKT	150 days	Wed 01-04-20	Tue 15-09-20	
571	Chubb/HKT cable laying for telemetry cable system	26 days	Wed 16-09-20	Wed 14-10-20	570
572	Installation and connection of telemetry components in Pillar Box	14 days	Thu 15-10-20	Fri 30-10-20	571
573	CLP cable laying and lead-in into Pillar Box	30 days	Sun 01-11-20	Thu 03-12-20	
574	CLP Lift Meter Power and Connection	1 day	Fri 04-12-20	Fri 04-12-20	573
575	CLP Lift Meter Installation inside Pillar Box	7 days	Sat 05-12-20	Sat 12-12-20	574
576	Procurement to delivery of Sump Pump and Panel	96 days	Fri 13-03-20	Sat 27-06-20	
577	Handover Sump Pit and associated ducting to E&M	1 day	Tue 23-06-20	Wed 24-06-20	476
578	Installation of Sump Pump (by Wing Luen)	18 days	Mon 29-06-20	Sat 18-07-20	577,576
579	Delivery of Lift components to site	180 days	Wed 15-04-20	Mon 02-11-20	
580	Lift installation and Lift Shaft Ventilation installation	60 days	Wed 22-09-21	Mon 29-11-21	579,568
581	Testing & commissioning	14 days	Mon 29-11-21	Tue 14-12-21	569,578
582	EMSD Form LE5 submission	1 day	Tue 14-12-21	Wed 15-12-21	581

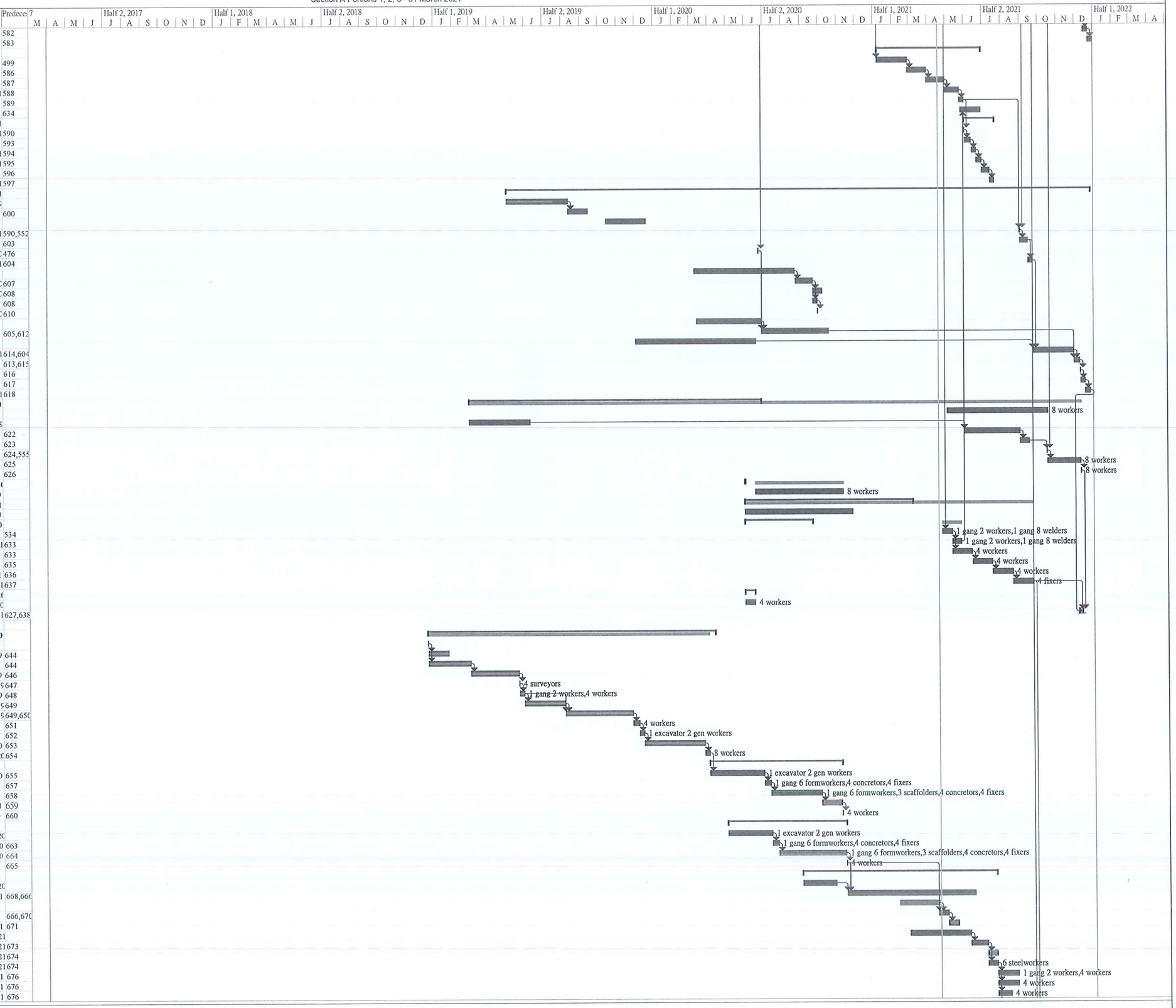


Project: NE/2016/05
Date: 31 March 2021

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | Deadline | Critical | Critical Split | Progress

Contract No. NE/2016/05
Development of Anderson Road Quarry Site
Connection of Pedestrian Facilities Works Phase 1 - Programme
Section A Portions 1, 2, 3 - 31 March 2021

ID	Task Name	Duration	Start	Finish	Predece
583	EMSD Inspection	7 days	Wed 15-12-21	Thu 23-12-21	582
584	Use Permit	7 days	Thu 23-12-21	Fri 31-12-21	583
585	**E2-LT1 Lift Shaft Construction**	**154 days**	**Thu 07-01-21**	**Tue 29-06-21**	
586	Completion of RC structure 1/F	45 days	Thu 07-01-21	Fri 26-02-21	499
587	Completion of RC structure 2/F	28 days	Sat 27-02-21	Tue 30-03-21	586
588	Completion of RC structure R/F	28 days	Tue 30-03-21	Fri 30-04-21	587
589	Erection of glazing and louvres	21 days	Fri 30-04-21	Mon 24-05-21	588
590	Dismantling of external and internal scaffolding	7 days	Mon 24-05-21	Tue 01-06-21	589
591	Remaining E2-PC2 Pier and cantilever slab	30 days	Wed 26-05-21	Tue 29-06-21	634
592	**E2-LT1 Lift Lighting**	45 days	Tue 01-06-21	Wed 21-07-21	
593	Handover EMSD Pillar Box and associated ducting to E&M	1 day	Tue 01-06-21	Wed 02-06-21	590
594	Electrical works inside Pillar Box EMSD and Lighting Compartmer	10 days	Wed 02-06-21	Sat 12-06-21	593
595	Conduit and cable containment	7 days	Mon 14-06-21	Mon 21-06-21	594
596	Cable and wiring	8 days	Mon 21-06-21	Wed 30-06-21	595
597	Installation of Light fitting	12 days	Wed 30-06-21	Tue 13-07-21	596
598	T&C	7 days	Wed 14-07-21	Wed 21-07-21	597
599	**E2-LT1 Lift Tower Installation**	865 days	Fri 03-05-19	Mon 27-12-21	
600	MS for E2 Lift Tower Erection	90 days	Fri 03-05-19	Mon 12-08-19	
601	Approval of submission	30 days	Mon 12-08-19	Sat 14-09-19	600
602	Statuary Submission of Lift Design and Materials	60 days	Mon 14-10-19	Thu 19-12-19	
603	Handover lift shaft and associated ducting to E&M	1 day	Tue 31-08-21	Wed 01-09-21	590,552
604	E&M works inside Lift Shaft	12 days	Wed 01-09-21	Tue 14-09-21	603
605	Handover Sump Pit and associated ducting to E&M	1 day	Tue 23-06-20	Wed 24-06-20	476
606	Handover of Lift structure to E&M Lift subcontractor	7 days	Wed 15-09-21	Wed 22-09-21	604
607	Confirmation of telemetry service routing with CHUBB / HKT	150 days	Mon 09-03-20	Sat 22-08-20	
608	Chubb/HKT cable laying for telemetry cable system	26 days	Mon 24-08-20	Mon 21-09-20	607
609	Installation and connection of telemetry components in Pillar Box	14 days	Tue 22-09-20	Wed 07-10-20	608
610	CLP Lift Meter Installation	7 days	Tue 22-09-20	Tue 29-09-20	608
611	CLP Lift Meter Power Connection	1 day	Tue 29-09-20	Wed 30-09-20	610
612	Procurement to delivery of Sump Pump and Panel	96 days	Fri 13-03-20	Sat 27-06-20	
613	Installation of Sump Pump (by Wing Luen)	100 days	Mon 29-06-20	Sat 17-10-20	605,612
614	Delivery of Lift components to site	180 days	Mon 02-12-19	Fri 19-06-20	
615	Lift installation and Lift Shaft Ventilation installation	60 days	Wed 22-09-21	Mon 29-11-21	614,604
616	Testing & commissioning	10 days	Mon 29-11-21	Thu 09-12-21	613,615
617	EMSD Form LE5 submission	1 day	Fri 10-12-21	Fri 10-12-21	616
618	EMSD Inspection	7 days	Sat 11-12-21	Sat 18-12-21	617
619	Use Permit	7 days	Sat 18-12-21	Mon 27-12-21	618
620	**Drainage and Landscape works at Hiu Ming Street**	**433.5 days**	**Fri 01-03-19**	**Sun 28-06-20**	
621	Decoration and Finishings Works at Hiu Ming Street	150 days	Mon 03-05-21	Sat 16-10-21	
622	Application of XP for Drainage Works at Hiu Ming Street	90 days	Fri 01-03-19	Mon 10-06-19	
623	Approval of TTA for construction of Drainage Works at Hiu Ming	82.25 days	Tue 01-06-21	Tue 31-08-21	622
624	Road Works Advice	14 days	Wed 01-09-21	Thu 16-09-21	623
625	Implementation of TTA	1 day	Fri 15-10-21	Fri 15-10-21	624,555
626	Drainage works at Hiu Ming Street	50 days	Sat 16-10-21	Fri 10-12-21	625
627	General Tidy Up	1 day	Sat 11-12-21	Sat 11-12-21	626
628	**Drainage Hiu Kwong Street PMI 045**	**1 day**	**Mon 01-06-20**	**Mon 01-06-20**	
629	Water Main Diversion	130 days	Thu 18-06-20	Tue 10-11-20	
630	**Steel Bridge between E3-ST1 and E3-P1**	**250 days**	**Mon 01-06-20**	**Sun 07-03-21**	
631	Fabrication and Delivery of Fabricated Steelworks	160 days	Mon 01-06-20	Thu 26-11-20	
632	**On Site Steelworks fabrication**	**101.13 days**	**Mon 01-06-20**	**Sun 20-09-20**	
633	Construction of Steel Bridge Deck between E3-ST1 and E3-P1 P	14 days	Sat 24-04-21	Tue 11-05-21	534
634	Construction of steel Roof E3-ST1 to E3-P1 Pier	14 days	Tue 11-05-21	Wed 26-05-21	633
635	Construction of Screeding and paving blocks	30 days	Tue 11-05-21	Sat 12-06-21	633
636	Installation of parapets and planters	30 days	Mon 14-06-21	Fri 16-07-21	635
637	Installation of lightings to steel truss between E3 tower and E3 abut	30 days	Sat 17-07-21	Thu 19-08-21	636
638	Installation of irrigation Pipe and water point	30 days	Thu 19-08-21	Wed 22-09-21	637
639	**Landscape Works**	**15 days**	**Mon 01-06-20**	**Wed 17-06-20**	
640	Tree Pruning PMI 044	15 days	Mon 01-06-20	Wed 17-06-20	
641	Handover Portion 2	1 day	Sat 11-12-21	Mon 13-12-21	627,638
642					
643	**Bridge between E2-P1 and E2-P3 (Section A E3 Portion 3)**	**427.25 days**	**Fri 21-12-18**	**Sun 12-04-20**	
644	Partial Handover of Portion 3	1 day	Fri 21-12-18	Fri 21-12-18	
645	Application of XP	30 days	Sat 22-12-18	Thu 24-01-19	644
646	Delay Possession of Partial Handover	63 days	Sat 22-12-18	Sat 02-03-19	644
647	Waiting for Full Handover of Portion 3	71 days	Sat 02-03-19	Tue 21-05-19	646
648	Initial site survey	1 day	Tue 21-05-19	Wed 22-05-19	647
649	Erection of Hoarding at South bound footpath of Hiu Kwong Street	7 days	Wed 22-05-19	Thu 30-05-19	648
650	RA approval from District Council	60 days	Thu 30-05-19	Mon 05-08-19	649
651	TownGas Diversion Works	100 days	Mon 05-08-19	Mon 25-11-19	649,650
652	Relocation of Crossing and shadow island	10 days	Mon 25-11-19	Fri 06-12-19	651
653	Trial Pit at E2-PC3 for UU	7 days	Fri 06-12-19	Sat 14-12-19	652
654	TownGas Handover Portion 3	90 days	Sat 14-12-19	Tue 24-03-20	653
655	Diversion of CLP lamp post	7 days	Tue 24-03-20	Wed 01-04-20	654
656	Construction of E2-F3	197 days	Wed 01-04-20	Sat 07-11-20	
657	Rock excavation with shoring for E2-F3	81 days	Wed 01-04-20	Tue 30-06-20	655
658	Construction of pad footing E2-F3	10 days	Wed 01-07-20	Sat 11-07-20	657
659	Construction of column for E2-F3	75 days	Sat 11-07-20	Sat 03-10-20	658
660	Construction of pier head for E2-F3	30 days	Sat 03-10-20	Fri 06-11-20	659
661	Installation of bearing at E2-P2 and E2-P1	1 day	Fri 06-11-20	Sat 07-11-20	660
662	Construction of E2-F4	176 days	Fri 01-05-20	Fri 13-11-20	
663	Rock Excavation with shoring for construction of E2-F4	65 days	Fri 01-05-20	Mon 13-07-20	
664	Construction of pad footing of E2-F4	10 days	Mon 13-07-20	Thu 23-07-20	663
665	Construction of columns for E2-P3 and Bridge Deck	100 days	Fri 24-07-20	Thu 12-11-20	664
666	Installation of bearing	1 day	Fri 13-11-20	Fri 13-11-20	665
667	Steel footbridge works	289.25 days	Tue 01-09-20	Wed 21-07-21	
668	Off site Fabrication of Steel deck truss between E2-LT1 to E2-P1, E	50 days	Tue 01-09-20	Mon 26-10-20	
669	Preparation works and Lifting of steel truss between E2-LT1 to E2-	190 days	Sat 14-11-20	Tue 15-06-21	668,666
670	Off site Fabrication of Steel deck truss between E2-P2 to E2-P3, E2	60 days	Tue 09-02-21	Fri 16-04-21	
671	Preparation works and lifting of truss for E2-P3 to connect to bridg	15 days	Thu 15-04-21	Sat 01-05-21	666,670
672	Bridge Deck Construction	15 days	Sat 01-05-21	Tue 18-05-21	671
673	Off site Fabrication of Steel deck truss between E2-P1 to E2-P2	90 days	Fri 26-02-21	Mon 07-06-21	
674	Preparation works and Lifting of steel truss between E2-P1 to E2-P	25 days	Mon 07-06-21	Mon 05-07-21	673
675	Bridge Deck Construction	15 days	Mon 05-07-21	Wed 21-07-21	674
676	Roof installation of bridge from E2-LT1 to E2-P3	15 days	Mon 05-07-21	Wed 21-07-21	674
677	Screeding and paving blocks for the bridge from E2-LT1 to E2-P3	30 days	Wed 21-07-21	Tue 24-08-21	676
678	Electrical installation and lighting works for bridge from E2-LT1 to E	30 days	Wed 21-07-21	Tue 24-08-21	676
679	Tubular handrail and planter on bridge from E2-LT1 to E2-P3	20 days	Wed 21-07-21	Thu 12-08-21	676

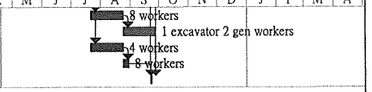


Project: NE/2016/05
Date: 31 March 2021

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | Deadline | Critical | Critical Split | Progress

Contract No. NE/2016/05
Development of Anderson Road Quarry Site
Connection of Pedestrian Facilities Works Phase 1 - Programme
Section A Portions 1, 2, 3 - 31 March 2021

ID	Task Name	Duration	Start	Finish	Predece
680	150mm dia storm drain pipe across Hiu Kwong Street	30 days	Wed 21-07-21	Tue 24-08-21	676
681	Trenching works for connection of existing water connection point	30 days	Tue 24-08-21	Mon 27-09-21	680
682	Water meter box and water point connection	30 days	Wed 21-07-21	Tue 24-08-21	676
683	General Tidy Up for Portion 3	5 days	Tue 24-08-21	Mon 30-08-21	682
684	**Handover Portion 3**	1 day	Wed 22-09-21	Thu 23-09-21	395,638

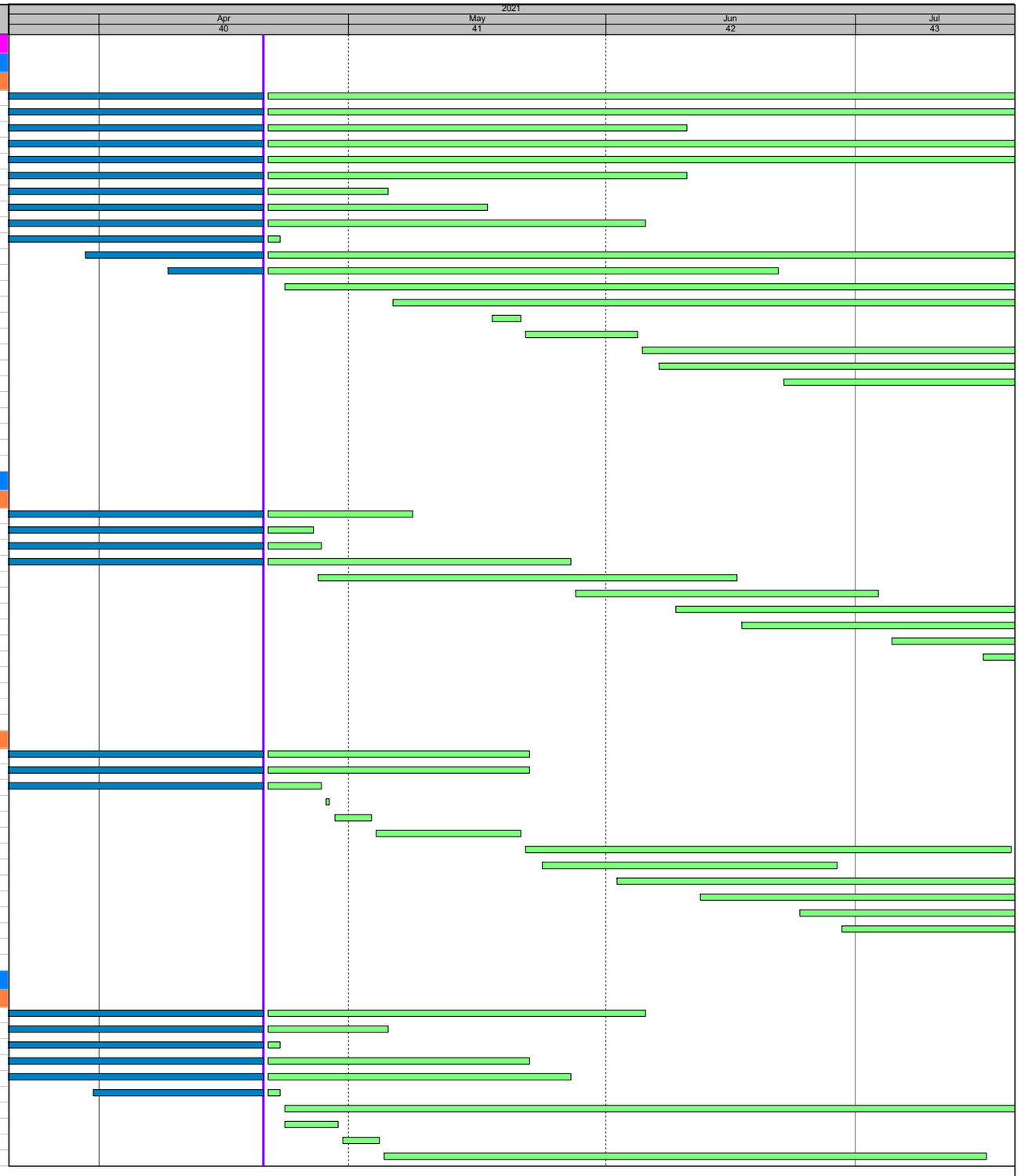


Task		Summary		External Milestone		Inactive Summary		Manual Summary Rollup		Finish-only		Critical Split	
Split		Project Summary		Inactive Task		Manual Task		Manual Summary		Deadline		Progress	
Milestone		External Tasks		Inactive Milestone		Duration-only		Start-only		Critical			

Project: NE/2016/05
Date: 31 March 2021

Contract 3 (NE/2017/03)

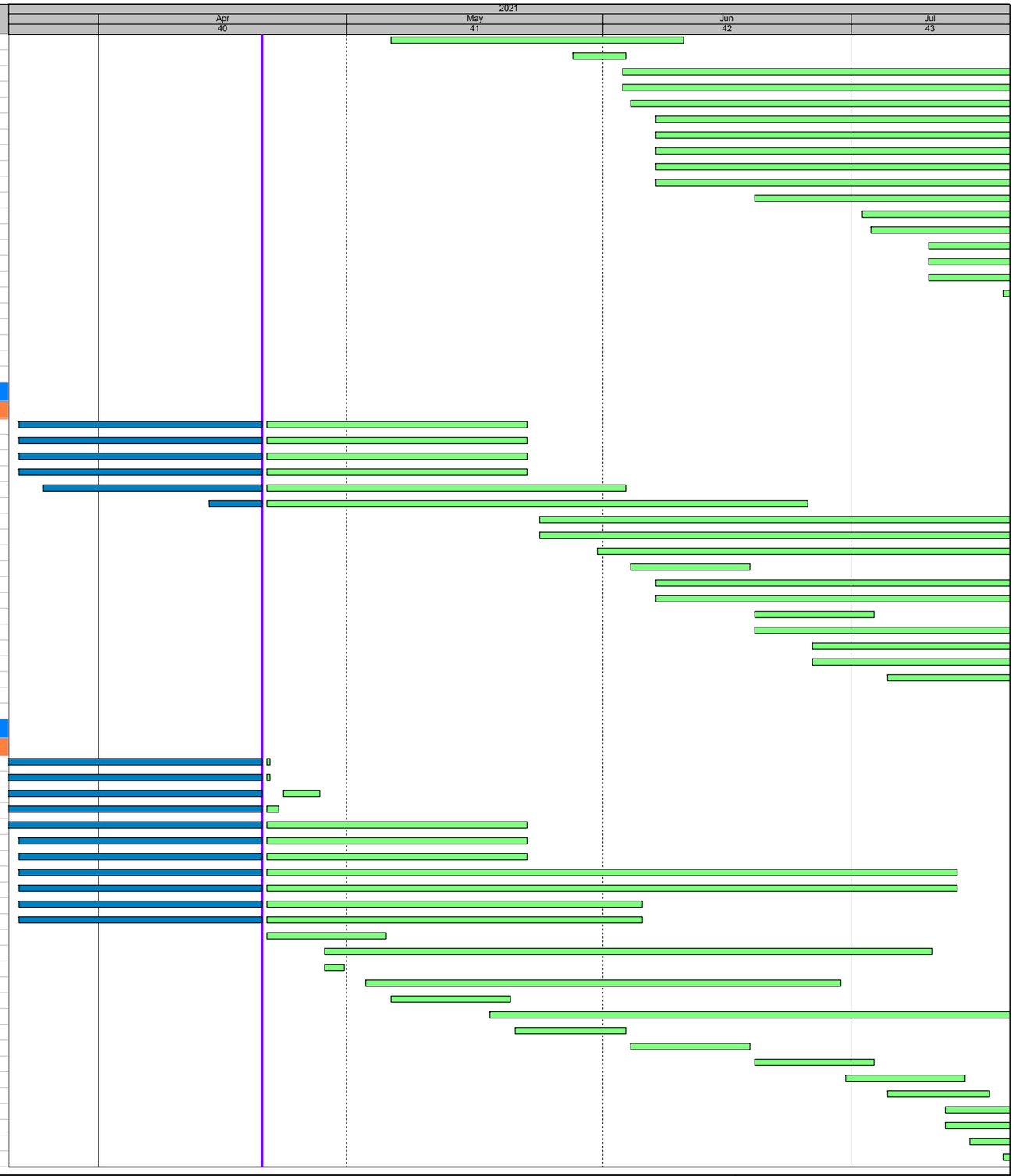
Activity ID	Activity Name	Duration	Start	Finish
NE2017/03 - ARQ PHASE 2A - Monthly Programme Update (202104)-0 _210416		910	01-Jun-20 A	16-Sep-22
Road Improvement Works Location 1 (RIW1)		471	04-Nov-20 A	10-Jun-22
Construction Works		471	04-Nov-20 A	10-Jun-22
CON10650	Construct RW wall (RWC2 type 1a & 1)	225	04-Nov-20 A	16-Aug-21
CON10652	Construct RW footing (RWC2 type 2)	225	04-Nov-20 A	16-Aug-21
CON10310	Construct RW footing (RWC2 type 4, 6, 7, 8)	121	07-Nov-20 A	10-Jun-21
CON10654	Construct RW wall (RWC2 type 2)	207	25-Nov-20 A	16-Aug-21
CON10370	Construct RW wall (RWC2 type 4, 6, 7, 8)	213	14-Dec-20 A	06-Nov-21
CON10410	Slope reinstatement works (RWC2 type 4, 6, 7, 8)	90	14-Dec-20 A	10-Jun-21
CON10670	Slope reinstatement works (RWC2 type 1a, 1, 2)	96	28-Dec-20 A	05-May-21
CON10729A	Temporary slope stabilization (RWC2 type 3)	60	03-Mar-21 A	17-May-21
CON10232	Existing drainage pipe diversion	48	10-Mar-21 A	05-Jun-21
CON11326	Site establishment for piling works	27	18-Mar-21 A	22-Apr-21
CON12370	Site clearance & ELS works (KS27 east side)	90	30-Mar-21 A	21-Jul-21
CON11510	Construct piling foundation at FE1 Type 1 (12nos, 5d/no, 1 team)	60	09-Apr-21 A	21-Jun-21
CON11330	(NCE??) Construct CT5 Type 1 piling foundation (18nos, 5d/no, 1 team)	90	23-Apr-21	10-Aug-21
CON12170	Drainage & utilities works (RWC2 type 1a, 1, 2)	72	06-May-21	31-Jul-21
CON10729B	(NCE130) Inclement weather (21/3/2021 to 20/4/2021) on RIW1 RWC2	3	18-May-21	21-May-21
CON10730	Moblization works for socket H-pile works (RWC2 type 3)	12	22-May-21	04-Jun-21
CON10750	Pre-drill & construct socket H-pile works (RWC2 type 3; 400nos, 3d/no, 4 team	300	05-Jun-21	10-Jun-22
CON10270	ELS to piling foundation pile cap (RWC2 type 5)	59	07-Jun-21	16-Aug-21
CON11550	Construct piling foundation at FE1 Type 2 (12nos, 2d/no, 1 team)	24	22-Jun-21	20-Jul-21
CON11552	ELS works for construct pile cap (FE1-PC1b, 32m, 1m/d)	36	21-Jul-21	31-Aug-21
CON12390	ELS works & construct subway footing (KS27 east side)	90	22-Jul-21	06-Nov-21
CON12190	Road works (RWC2 type 1a, 1, 2)	72	02-Aug-21	27-Oct-21
CON11332	Construct CT5 Type 2 piling foundation (21nos, 2d/no, 1 team)	42	11-Aug-21	29-Sep-21
CON10390	Construct pile cap (RWC2 type 5)	90	17-Aug-21	02-Dec-21
Road Improvement Works Location 2 (RIW2)		577	26-Nov-20 A	25-Jun-22
Construction Works in Slope C3 (Portion B)		335	26-Nov-20 A	26-Oct-21
CON20970	Construct RW3Cd wall (L=17m, 4wk/pour, 2pour)	48	26-Nov-20 A	08-May-21
CON20650A	(NCE067) Temporary works design change due to unforeseen gorund conditi	78	17-Dec-20 A	26-Apr-21
CON20910	Construct RW bay 14 to bay 16 base (L=19m)	42	23-Feb-21 A	27-Apr-21
CON20930	Construct RW bay 14 to bay 16 wall (L=19m)	42	16-Mar-21 A	27-May-21
CON20670	ELS to RW bay 9 to bay 13 formation	41	27-Apr-21	16-Jun-21
CON21010	Utilities & drainage works at Portion B (bay 3 to bay 8)	30	28-May-21	03-Jul-21
CON20170	Fabrication of NB steel post - along slope side	70	09-Jun-21	17-Aug-21
CON20790	Construct RW bay 9 to bay 13 base (L=30m)	66	17-Jun-21	02-Sep-21
CON21030	Utilities & drainage works at Portion B (bay 1 to bay 2)	30	05-Jul-21	07-Aug-21
CON20810	Construct RW bay 9 to bay 13 wall (L=30m)	66	16-Jul-21	02-Oct-21
CON21050	Utilities & drainage works at Portion B (bay 14 to bay 16)	30	09-Aug-21	11-Sep-21
CON20850A	Remaining works for junction at RWC3 C & B	42	13-Aug-21	02-Oct-21
CON20190	Steel post along slope side delivery	14	18-Aug-21	31-Aug-21
CON20290	Fabrication of NB acoustic panels - along slope side	70	18-Aug-21	26-Oct-21
Construction Noise Semi-Enclosure SE2 (Portion C)		414	28-Jan-21 A	25-Jun-22
CON21960	ELS for SE2 (Bay 13 to Bay 21)	48	28-Jan-21 A	22-May-21
CON21961	Further utilities diversion (Bay 13 to Bay 21)	72	28-Jan-21 A	22-May-21
CON21650D	Construct piling fdn (SE2 Bay4 to Bay12)	55	04-Feb-21 A	27-Apr-21
CON21650G	(NCE112) Inclement weather (21/2/2021 to 20/3/2021) on RIW2 NB	1	28-Apr-21	28-Apr-21
CON21650H	(NCE130) Inclement weather (21/3/2021 to 20/4/2021) on RIW2 NB	3	29-Apr-21	03-May-21
CON21650F	(EWN069) Shortage of concrete & aggregate supply @ RIW2	15	04-May-21	21-May-21
CON21670	Install sheet piles (CT4, SE2 Bay4 to Bay12; 230m 5m/d, 1 team)	48	22-May-21	19-Jul-21
CON21962	Construct piling platform SE2 (Bay 13 to Bay 21)	30	24-May-21	28-Jun-21
CON21690	Excavate & install lateral support (CT4, SE2 Bay4 to Bay12; L=110m)	48	02-Jun-21	29-Jul-21
CON21710	Construct NB pile cap (CT4, SE2 Bay4 to Bay12; L=110m)	48	12-Jun-21	09-Aug-21
CON21730	Construct NB tie beam (CT4, SE2 Bay4 to Bay12; L=110m)	48	24-Jun-21	19-Aug-21
CON21964	Predrill & construct piling fdn SE2 (Bay 13 to Bay 21)	84	29-Jun-21	07-Oct-21
CON21750	Backfilling, construct road drainage & road paving (CT4, SE2 Bay4 to Bay12;	66	18-Aug-21	05-Nov-21
CON22570	Slope implovement Works (pit-by-pit method) (CT4 & SE2 fount part, 250nos p	250	20-Aug-21	25-Jun-22
Road Improvement Works Location 3 (RIW3)		737	01-Jun-20 A	16-Sep-22
Construction Works		737	01-Jun-20 A	16-Sep-22
CON30654	(EWN 50, EWN52, EWN57, EWN58) JV Pending WSD confirm SMPR waterr	177	01-Jun-20 A	05-Jun-21
CON30870	Construct slip road 4 road works	72	15-Sep-20 A	05-May-21
CON30130	Slope works at slope D1 (stage 2, 20% completed)	72	21-Jan-21 A	22-Apr-21
CON31310	Utilities works, drainage works & watermain (CH0 to CH115)	72	22-Feb-21 A	22-May-21
CON31330	Road works (CH0 to CH115)	60	12-Mar-21 A	27-May-21
CON30250A	(NCE082) Inclement weather (21/8/2020 to 20/9/2020) affected to RIW3 mini	19	31-Mar-21 A	22-Apr-21
CON30150	Slope works at slope D1 (stage 3, 40% completed)	72	23-Apr-21	20-Jul-21
CON30250B	(NCE082) Inclement weather (21/9/2020 to 20/10/2020) on RIW3 D1	6	23-Apr-21	29-Apr-21
CON30250C	(NCE130) Inclement weather (21/3/2021 to 20/4/2021) on RIW3 D1	3	30-Apr-21	04-May-21
CON30350	Construct RWD1 (bay 8 to bay 14) pile cap (2 teams)	60	05-May-21	16-Jul-21



Actual Work
Remaining Work
Milestone

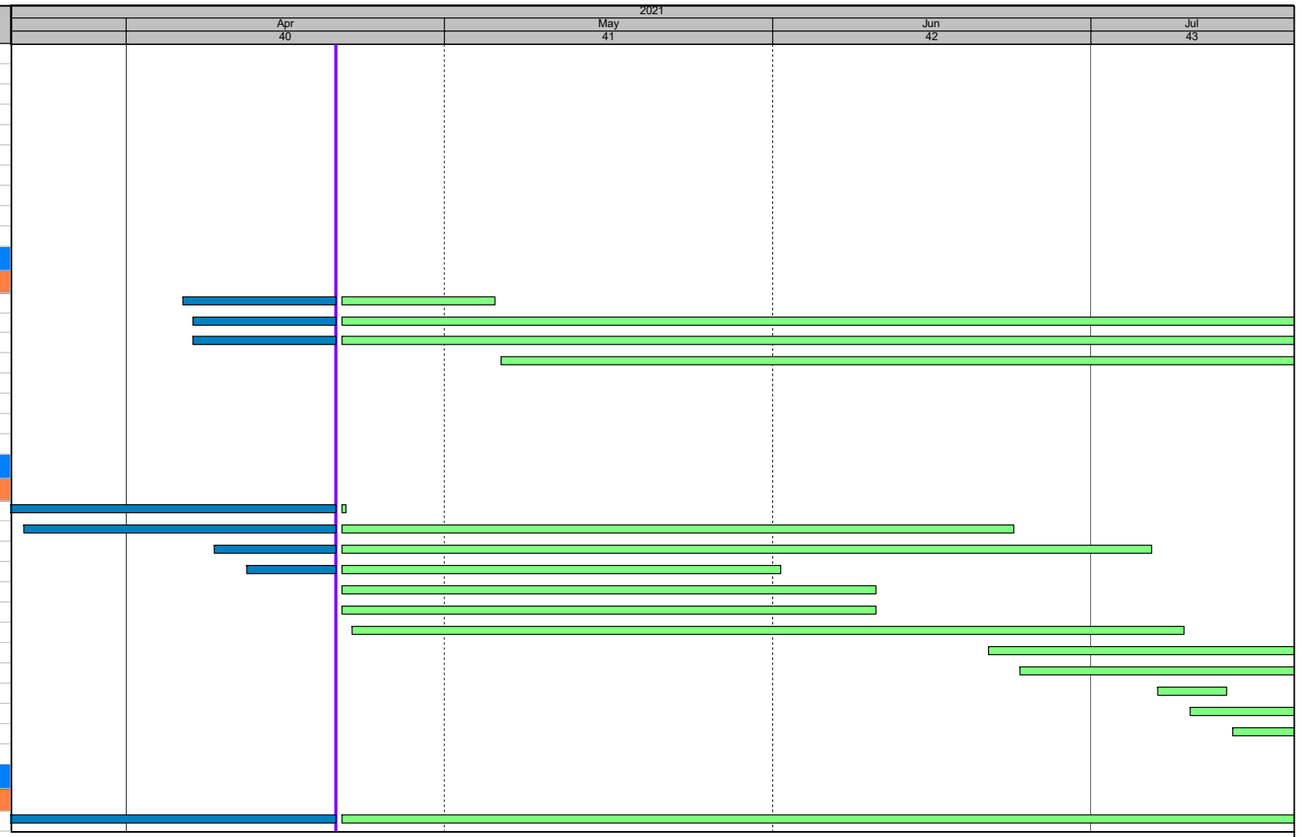
NE/2017/03 Development of Anderson Road Quarry Site - Investigation Design & Construction
Development of Anderson Road Quarry Site Road - Improvement Works & Pedestrian Connectivity Facilities Works Phase 2A
3-Month Rolling Programme

Activity ID	Activity Name	Duration	Start	Finish
CON31730	Road re-alignment & TTA modification on SMPR	30	06-May-21	10-Jun-21
CON31090	Install safety fencing, from haul road & hoarding (CH115 to CH275)	6	28-May-21	03-Jun-21
CON30370	Construct RWD1 (bay 8 to bay 14) wall (2 teams)	60	03-Jun-21	13-Aug-21
CON30430	Construct RWD1-Type 4 pile cap (CH144~CH160, 16m)	60	03-Jun-21	13-Aug-21
CON31110	Trees felling (Slope D3, CH115 to CH275)	60	04-Jun-21	14-Aug-21
CON30530	Drainage & utilities works (bay 1 to bay 7)	60	07-Jun-21	17-Aug-21
CON30650	Construct Twin Fresh Watermain CH10 to CH50	120	07-Jun-21	29-Oct-21
CON30656	Construct Twin Fresh Watermain CH50 to CH100	160	07-Jun-21	15-Dec-21
CON30658	Construct Twin Fresh Watermain CH270 to CH320	184	07-Jun-21	15-Jan-22
CON30662	Construct Fresh Watermain A CH320 to CH400 (EPD access)	180	07-Jun-21	11-Jan-22
CON31130	Cut slope works (CH115 to CH275) (L=160m, 24058m3, 65m3/d)	371	19-Jun-21	16-Sep-22
CON30550	Road works (bay 1 to bay 7)	60	02-Jul-21	09-Sep-21
CON30450	Construct RWD1-Type 4 (CH144~CH160) lay U/G utilities ducts & backfill	60	03-Jul-21	10-Sep-21
CON30490	Drainage & utilities works (bay 8 to bay 14)	60	10-Jul-21	17-Sep-21
CON30570	Drainage & utilities works (Type 4 RW)	60	10-Jul-21	17-Sep-21
CON30390	Construct RWD1 (bay 8 to bay 14) utilities works & backfill (2 teams)	60	10-Jul-21	17-Sep-21
CON31150	Construct RWD3 (CH60 to CH152)	150	19-Jul-21	15-Jan-22
CON30170	Slope works at slope D1 (stage 4, 55% completed)	72	21-Jul-21	15-Oct-21
CON30510	Road works (bay 8 to bay 14)	60	03-Aug-21	13-Oct-21
CON30610	Road works (Type 4 RW)	60	03-Aug-21	13-Oct-21
CON31170	Soil nail works (11NE-D/F246, CH190 to CH260)	150	16-Aug-21	16-Feb-22
CON31212	Rock slope mapping (Stage 2)	180	16-Aug-21	23-Mar-22
Pedestrian Connectivity Facility (PC-E11)		208	22-Mar-21 A	01-Dec-21
Construction Works		208	22-Mar-21 A	01-Dec-21
CON42510	Erect roof steel frame, gutter, corrugated metal sheet & fall arrest system E11-F	48	22-Mar-21 A	22-May-21
CON42490	Erect roof steel frame, gutter, corrugated metal sheet & fall arrest system E11-F	48	22-Mar-21 A	22-May-21
CON42590	Erect roof steel frame, gutter, corrugated metal sheet & fall arrest system E11-F	48	22-Mar-21 A	22-May-21
CON42610	Erect roof steel frame, gutter, corrugated metal sheet & fall arrest system E11-F	48	22-Mar-21 A	22-May-21
CON42670	Install glass & window to lift tower no 2	42	25-Mar-21 A	03-Jun-21
CON42390	Construct lift tower 1 (2 teams)	60	14-Apr-21 A	25-Jun-21
CON42690	ABWF works @E11-FB2 & E11-FB4	60	24-May-21	03-Aug-21
CON42710	ABWF works @E11-FB3 & E11-FB5	60	24-May-21	03-Aug-21
CON42630	Construct covered-walkway between PC-E11 & BBI toilet	102	31-May-21	29-Sep-21
CON42770	ABWF works @LT2 (inside 2nos lift shaft)	12	04-Jun-21	18-Jun-21
CON42790	E&M works to PC-E11 @E11-FB2 & E11-FB4	48	07-Jun-21	03-Aug-21
CON42810	E&M works to PC-E11 @E11-FB3 & E11-FB5	48	07-Jun-21	03-Aug-21
CON42870	E&M works to PC-E11 @LT2 (inside 2nos lift shaft)	12	19-Jun-21	03-Jul-21
CON42772	ABWF works @LT2 (Other than lift shart area)	48	19-Jun-21	14-Aug-21
CON42470	Erect steel frame E11-FB1, construct floor slab & side planter	48	26-Jun-21	21-Aug-21
CON42650	Install glass & window to lift tower no 1	42	26-Jun-21	14-Aug-21
CON42872	E&M works to PC-E11 @LT2 (Other than lift shart area)	36	05-Jul-21	14-Aug-21
CON42950	Lifts installation works in E11-LT2	90	16-Aug-21	01-Dec-21
CON42730	ABWF works @LT1 (inside 2nos lift shaft)	12	16-Aug-21	28-Aug-21
Pedestrian Connectivity Facility (PC-E8)		221	29-Dec-20 A	27-Sep-21
Construction Works		221	29-Dec-20 A	27-Sep-21
CON41690	3A_ Install escalator & temp. T&C (E8-E9 & E8-E10) (P4 to P5)	90	29-Dec-20 A	21-Apr-21
CON41710	3B_ Install escalator & temp. T&C (E8-E11 & E8-E12) (P5 to P6)	90	29-Dec-20 A	21-Apr-21
CON41150	Construct escalator pit P6>ABT (E13 & E14)	60	01-Mar-21 A	27-Apr-21
CON41010	Construct E8-ABT	30	03-Mar-21 A	22-Apr-21
CON41890	E&M works (P3 to P4)	60	08-Mar-21 A	22-May-21
CON41190	Erect steel roof (steel frame) P1>P2	48	22-Mar-21 A	22-May-21
CON41210	Erect steel roof (steel frame) P2>P3	48	22-Mar-21 A	22-May-21
CON41670	4A_ Install escalator & temp. T&C (E8-E5 & E8-E6) (P2 to P3)	90	22-Mar-21 A	13-Jul-21
CON41630	4B_ Install escalator & temp. T&C (E8-E3 & E8-E4) (P1 to P2)	90	22-Mar-21 A	13-Jul-21
CON41790	E&M works (P1 to P2)	60	22-Mar-21 A	05-Jun-21
CON41810	E&M works (P2 to P3)	60	22-Mar-21 A	05-Jun-21
CON41170A	(EWN048C) Install roof cladding F9 & F1>P1	12	21-Apr-21*	05-May-21
CON41830	E&M works (P6 to ABT)	60	28-Apr-21	10-Jul-21
CON41150A	(NCE130) Inclement weather (21/3/2021 to 20/4/2021) affected to E8	3	28-Apr-21	30-Apr-21
CON41290	Erect steel roof (steel frame) P6>ABT	48	03-May-21	29-Jun-21
CON41230A	(EWN048C) Install roof cladding P3>P4	12	06-May-21*	20-May-21
CON41730	3C_ Install escalator & temp. T&C (E8-E13 & E8-E14) (P6 to ABT)	90	18-May-21	02-Sep-21
CON41250A	(EWN048C) Install roof cladding P4>P5	12	21-May-21*	03-Jun-21
CON41270A	(EWN048C) Install roof cladding P5>P6	12	04-Jun-21*	18-Jun-21
CON41190A	(EWN048C) Install roof cladding P1>P2	12	19-Jun-21*	03-Jul-21
CON40630	Erect working platform (slope 326)	12	30-Jun-21	14-Jul-21
CON41210A	(EWN048C) Install roof cladding P2>P3	12	05-Jul-21*	17-Jul-21
CON41870	E&M works (P4 to P5)	60	12-Jul-21	18-Sep-21
CON41910	E&M works (External)	38	12-Jul-21	24-Aug-21
CON40650	Slope replacement works cycle 1 (slope 326)	24	15-Jul-21	11-Aug-21
CON41290A	(EWN048C) Install roof cladding P6>ABT	12	19-Jul-21*	31-Jul-21



Actual Work
Remaining Work
Milestone

Activity ID	Activity Name	Duration	Start	Finish
CON41310	ABWF works (F9 & F1 to P1)	48	02-Aug-21	27-Sep-21
CON41450	Landscaping works & reinstatement works	48	02-Aug-21	27-Sep-21
CON41330	ABWF works (P1 to P2)	48	02-Aug-21	27-Sep-21
CON41370	ABWF works (P2 to P3)	48	02-Aug-21	27-Sep-21
CON41350	ABWF works (P3 to P4)	48	02-Aug-21	27-Sep-21
CON41430	ABWF works (P4 to P5)	48	02-Aug-21	27-Sep-21
CON41390	ABWF works (P5 to P6)	48	02-Aug-21	27-Sep-21
CON41410	ABWF works (P6 to ABT)	48	02-Aug-21	27-Sep-21
CON40670	Slope replacement works cycle 2 (slope 326)	24	12-Aug-21	08-Sep-21
CON40690	Slope replacement works cycle 3 (slope 326)	24	12-Aug-21	08-Sep-21
Pedestrian Connectivity Facility System A (SYA)		209	06-Apr-21 A	08-Dec-21
Construction Works		209	06-Apr-21 A	08-Dec-21
CON50252A	(EWN069) Shortage of concrete & aggregate supply @ Sys A	25	06-Apr-21 A	05-May-21
CON50490	Install E&M (ELE/MVAC/PDS) incl. Pillar Box	106	07-Apr-21 A	28-Aug-21
CON50470	Application for power supply & energization (SYA)	120	07-Apr-21 A	28-Aug-21
CON50290	Construct superstructure of lift tower to roof level (3m/pour, +165.7 to +178.45r	84	06-May-21	14-Aug-21
CON50270	Erect bridge steel frame for SYA	48	16-Aug-21	12-Oct-21
CON50330	ABWF works (lift tower & starcase)	96	16-Aug-21	08-Dec-21
CON50390	Install window (phase 2)	90	16-Aug-21	01-Dec-21
CON50370	Install window (phase 1)	90	16-Aug-21	01-Dec-21
Pedestrian Connectivity Facility System B (SYB)		191	16-Mar-21 A	11-Nov-21
Construction Works		191	16-Mar-21 A	11-Nov-21
CON51130	Moblisation piling rig plant to SYS-PC4	6	16-Mar-21 A	21-Apr-21
CON51070	Pre-drill & construct piling fdn at SYB-PC6	74	22-Mar-21 A	23-Jun-21
CON51270	Pre-drill & construct socket H-pile works at SYB-PC1 (9nos, 8d/no, 1 team)	72	09-Apr-21 A	06-Jul-21
CON52130	Construct pier SYB-P2 (2 pour)	42	12-Apr-21 A	01-Jun-21
CON51790	TBA	42	21-Apr-21	10-Jun-21
CON51510	TBA	42	21-Apr-21	10-Jun-21
CON51150	Pre-drill & construct piling fdn at SYB-PC4	64	22-Apr-21	09-Jul-21
CON52170	Construct superstructure SYB-LT1	120	21-Jun-21	11-Nov-21
CON51690	Construct pile cap SYB-PC6 (120m3)	48	24-Jun-21	19-Aug-21
CON51450	Install sheet pile at SYB-PC1 (24m L, 4m/d, 1 team)	6	07-Jul-21	13-Jul-21
CON51730	Construct pile cap SYB-PC4 (52m3)	39	10-Jul-21	24-Aug-21
CON51470	Excavate & install support at SYB-PC1 (108m3, 25m3/d, 1 team + 12d)	18	14-Jul-21	03-Aug-21
CON51770	Construct pile cap SYB-PC1 (35m3)	36	04-Aug-21	14-Sep-21
Bus-Bus Interchange Public Toilet (BBI Toilet)		365	30-Sep-20 A	29-Sep-21
Works related to section 10A - Establishment Works for Landscape Softworks in Section 10		365	30-Sep-20 A	29-Sep-21
CON43370	Establishment Works for Landscape Softworks in Section 10 (Portion FI)	365	30-Sep-20 A	29-Sep-21



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

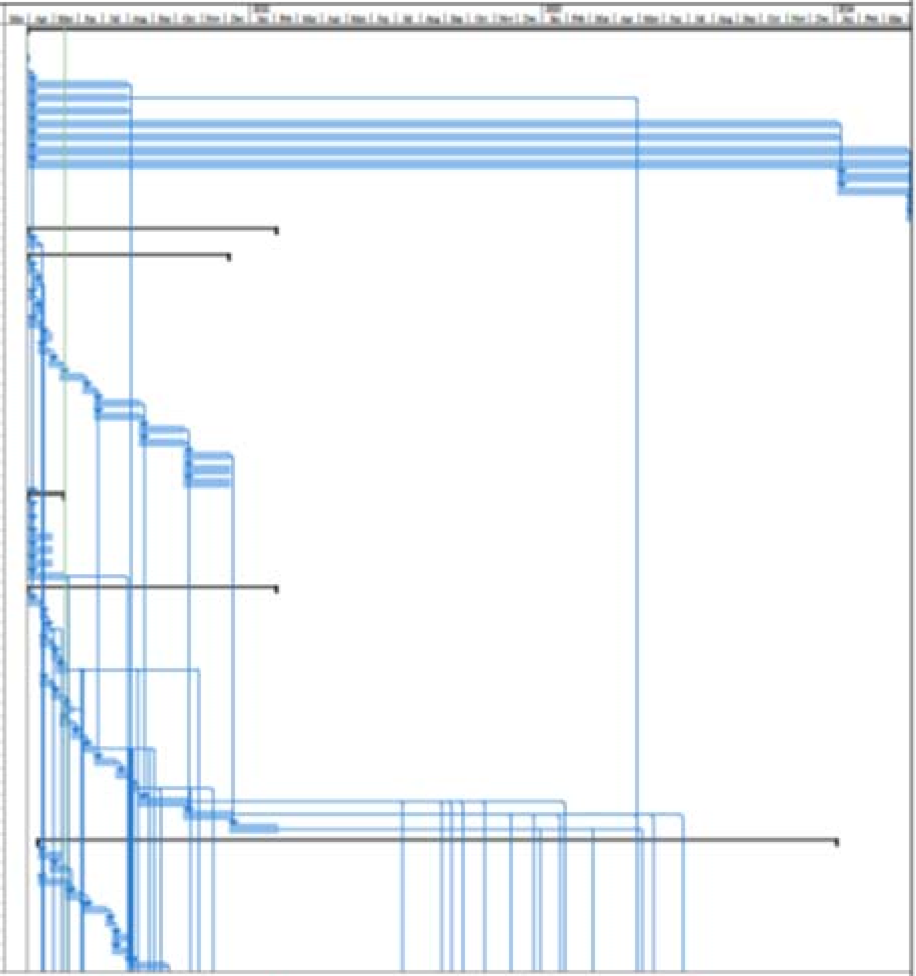
Contract 5 (NE/2019/02)

Contract No. [illegible]
Development of Anderson Road Quarry Site -
Remaining Pedestrian Connectivity Facilities Works

First Programme

Wing Lee – [illegible] Joint Venture

ID	Task Name	Duration	Start	Finish	Predecessors
1	Development of Anderson Road Quarry Site - Remaining Pedestrian Connectivity Facilities Works	1461 days	Tue 30/3/21	Sat 29/3/25	
2	Contract Starting Date	1 day	Tue 30/3/21	Tue 30/3/21	
3	Possession of Site (Portion 1a, 2, 3a & 4b)	1 day	Tue 30/3/21	Tue 30/3/21	
4	Possession of Site (Portion 1b)	122 days	Wed 31/3/21	Fri 30/7/21	3
5	Possession of Site (Portion 3b)	122 days	Wed 31/3/21	Fri 30/7/21	3
6	Possession of Site (Portion 4a)	122 days	Wed 31/3/21	Fri 30/7/21	3
7	Construction Period of Section 1	1009 days	Wed 31/3/21	Wed 3/1/24	3
8	Construction Period of Section 2	1009 days	Wed 31/3/21	Wed 3/1/24	3
9	Construction Period of Section 3	1095 days	Wed 31/3/21	Fri 29/3/24	3
10	Construction Period of Section 4	1095 days	Wed 31/3/21	Fri 29/3/24	3
11	Construction Period of Section 1A	365 days	Thu 4/1/24	Thu 2/1/25	7
12	Construction Period of Section 2A	365 days	Thu 4/1/24	Thu 2/1/25	8
13	Construction Period of Section 3A	365 days	Sat 30/3/24	Sat 29/3/25	9
14	Construction Period of Section 4A	365 days	Sat 30/3/24	Sat 29/3/25	10
15	Preliminary Work	310 days	Wed 31/3/21	Thu 3/2/22	
16	Mobilization of Site Accommodation	12 days	Wed 31/3/21	Sun 11/4/21	3
17	Major Sub-contractor Submission	250 days	Wed 31/3/21	Sun 5/12/21	
18	Submit Proposed Landscaping Sub-contractor	7 days	Wed 31/3/21	Tue 6/4/21	3
19	Accept Proposed Landscaping Sub-contractor	7 days	Wed 7/4/21	Tue 13/4/21	18
20	Submit Proposed Traffic Consultant	7 days	Wed 31/3/21	Tue 6/4/21	3
21	Accept Proposed Traffic Consultant	7 days	Wed 7/4/21	Tue 13/4/21	20
22	Submit Proposed Independent Checking Engineer	14 days	Wed 31/3/21	Tue 13/4/21	3
23	Accept Proposed Independent Checking Engineer	14 days	Wed 14/4/21	Tue 27/4/21	22
24	Submit Proposed Ground Investigation Sub-contractor	14 days	Mon 12/4/21	Sun 25/4/21	16
25	Accept Proposed Ground Investigation Sub-contractor	14 days	Mon 26/4/21	Sun 9/5/21	24
26	Submit Proposed Piling Sub-contractor	28 days	Mon 10/5/21	Sun 6/6/21	25
27	Accept Proposed Piling Sub-contractor	14 days	Mon 7/6/21	Sun 20/6/21	26
28	Submit & Accept Proposed E&M Sub-contractor	56 days	Mon 21/6/21	Sun 15/8/21	27
29	Submit & Accept Proposed Lift/Escalator Sub-contractor	56 days	Mon 21/6/21	Sun 15/8/21	27
30	Submit & Accept Bearing Sub-contractor	56 days	Mon 16/8/21	Sun 10/10/21	28
31	Submit & Accept Proposed Movement Joint Sub-contractor	56 days	Mon 16/8/21	Sun 10/10/21	29
32	Submit & Accept Proposed Steelwork Sub-contractor	56 days	Mon 11/10/21	Sun 5/12/21	31
33	Submit & Accept Proposed Waterproofing Sub-contractor	56 days	Mon 11/10/21	Sun 5/12/21	31
34	Submit & Accept Proposed Road Marking Sub-contractor	56 days	Mon 11/10/21	Sun 5/12/21	31
35	Contractual Submission	45 days	Wed 31/3/21	Fri 14/5/21	3
36	Initial Photo Record	7 days	Wed 31/3/21	Tue 6/4/21	3
37	Noise Mitigation Plan	7 days	Wed 31/3/21	Tue 6/4/21	3
38	Safety Management Plan	30 days	Wed 31/3/21	Thu 29/4/21	3
39	Environmental Management Plan	30 days	Wed 31/3/21	Thu 29/4/21	3
40	Waste Management Plan	30 days	Wed 31/3/21	Thu 29/4/21	3
41	Initial Condition Survey	45 days	Wed 31/3/21	Fri 14/5/21	3
42	Technical Submission	310 days	Wed 31/3/21	Thu 3/2/22	
43	Prepare Method Statement of Initial Survey	14 days	Wed 31/3/21	Tue 13/4/21	3
44	Review & Resubmit MS of Initial Survey	6 days	Wed 14/4/21	Mon 19/4/21	43
45	Acceptance of MS of Initial Survey	7 days	Tue 20/4/21	Mon 26/4/21	44
46	Prepare Method Statement of Tree Felling	14 days	Wed 14/4/21	Tue 27/4/21	23
47	Review & Resubmit MS of Tree Felling	7 days	Wed 28/4/21	Tue 4/5/21	46
48	Acceptance of MS of Tree Felling	14 days	Wed 5/5/21	Tue 18/5/21	47
49	Prepare Method Statement of Tree Transplanting	14 days	Wed 14/4/21	Tue 27/4/21	23
50	Review & Resubmit MS of Tree Transplanting	14 days	Wed 28/4/21	Tue 11/5/21	49
51	Acceptance of MS of Tree Transplanting	14 days	Wed 12/5/21	Tue 25/5/21	50
52	Prepare Method Statement of Ground Investigation	14 days	Mon 10/5/21	Sun 23/5/21	25
53	Review & Resubmit MS of Ground Investigation	14 days	Mon 24/5/21	Sun 6/6/21	52
54	Acceptance of MS of Ground Investigation	14 days	Mon 7/6/21	Sun 20/6/21	53
55	Prepare Method Statement of Piling Works	28 days	Mon 21/6/21	Sun 18/7/21	27
56	Review & Resubmit MS of Piling Works	14 days	Mon 19/7/21	Sun 1/8/21	55
57	Acceptance of MS of Piling Works	14 days	Mon 2/8/21	Sun 15/8/21	56
58	Submit & Accept of Lift & E&M Submission	60 days	Mon 16/8/21	Thu 14/10/21	28,29
59	Submit & Accept bearing & MJ Submission	60 days	Mon 11/10/21	Thu 9/12/21	30,31
60	Submit & Accept Steelwork submission	60 days	Mon 6/12/21	Thu 3/2/22	32
61	Section 1 - EE Escalator (Portion 1a & 1b)	997 days	Mon 12/4/21	Wed 3/1/24	
62	Site Clearance	30 days	Mon 12/4/21	Tue 11/5/21	16
63	Initial Survey	21 days	Tue 27/4/21	Mon 17/5/21	45
64	Coordination with Housing Authority for Access	36 days	Mon 12/4/21	Mon 17/5/21	16
65	Erection of Site Hoarding	21 days	Tue 18/5/21	Mon 7/6/21	63,62,64
66	Tree Felling	28 days	Tue 8/6/21	Mon 5/7/21	65,48
67	Trial Pit Excavation	7 days	Tue 6/7/21	Mon 12/7/21	66
68	Utilities Diversion	21 days	Tue 13/7/21	Mon 2/8/21	67
69	Installation of Monitoring & Instrumentation Point	21 days	Tue 13/7/21	Mon 2/8/21	67
70	Ground Investigation & initial [illegible]	45 days	Tue 3/8/21	Thu 16/9/21	68,54,6



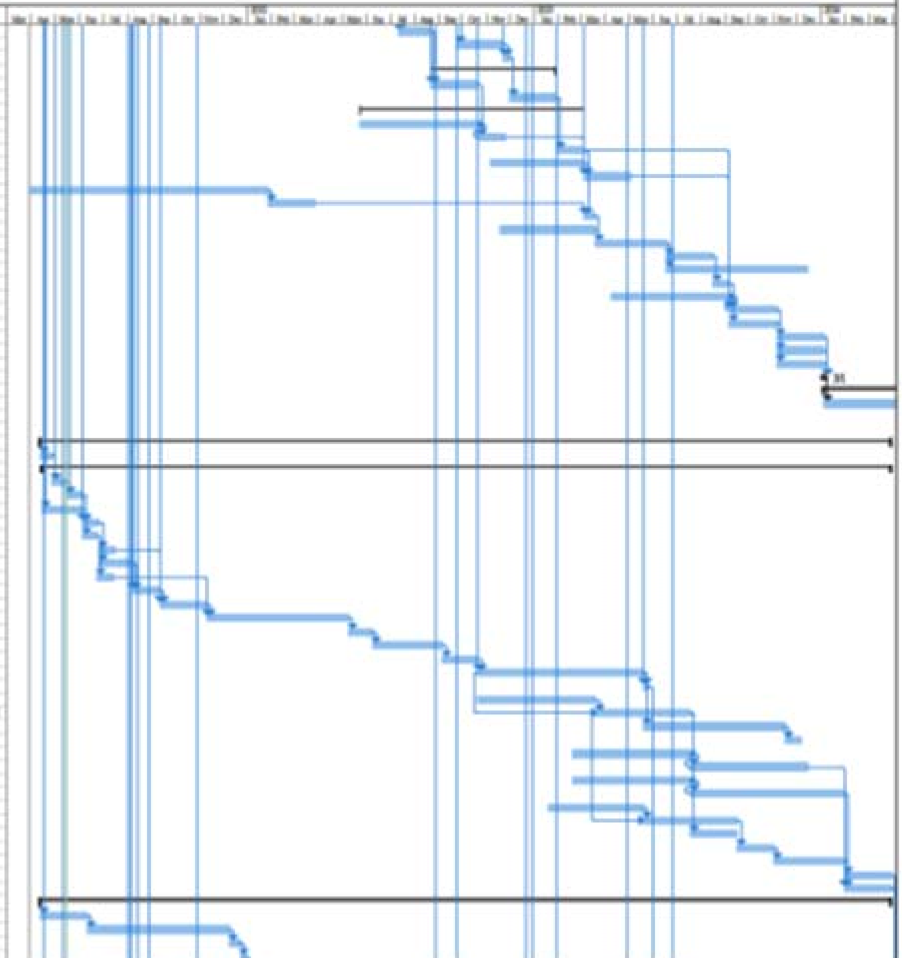
Project: Contract No. [illegible]	Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Manual Progress
Date: Sat [illegible]	Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	
	Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Progress	

First Programme

ID	Activity Name	Duration	Start	Finish	Preliminaries
71	Remove existing soil nail	90 days	Fri 17/9/21	Mon 17/1/22	70
72	Form rebar starters on Existing slope	42 days	Tue 16/11/21	Mon 27/12/21	71,77
73	**Piling Works**	**190 days**	**Tue 28/12/21**	**Tue 5/7/22**	
74	At Pile Cap B5-PC1 (12 no. of 610mm PHP Piles)	70 days	Tue 28/12/21	Tue 15/3/22	72
75	At Pile Cap B5-PC1 (18 no. of 610mm PHP Piles)	70 days	Wed 29/3/22	Tue 28/6/22	74
76	At Pile Cap B5-PC1 (16 no. of 610mm PHP Piles)	70 days	Wed 27/4/22	Tue 5/7/22	75
77	Leveling Top of Piling	30 days	Wed 6/7/22	Thu 4/8/22	76
78	**Excavation**	**230 days**	**Wed 16/2/22**	**Mon 3/10/22**	
79	For Pile Cap B5-PC1	75 days	Wed 16/2/22	Sun 1/5/22	74
80	For Pile Cap B5-PC2	75 days	Wed 27/4/22	Sun 10/7/22	75
81	For Pile Cap B5-PC3	60 days	Fri 5/8/22	Mon 3/10/22	77
82	**Pile Cap Construction**	**207 days**	**Mon 2/5/22**	**Tue 22/11/22**	
83	For Pile Cap B5-PC1	60 days	Mon 2/5/22	Thu 30/6/22	79
84	For Pile Cap B5-PC2	60 days	Mon 11/7/22	Thu 8/9/22	80
85	For Pile Cap B5-PC3	50 days	Tue 4/10/22	Tue 22/11/22	81
86	**Construction of Pier**	**135 days**	**Fri 9/9/22**	**Sat 21/1/23**	
87	For Pier B5-P1	42 days	Fri 9/9/22	Thu 20/10/22	84,79
88	For Pier B5-P2	60 days	Wed 23/11/22	Sat 21/1/23	87
89	Installation of Bearing	7 days	Sun 22/1/23	Sat 28/1/23	88,79
90	**Construction of Escalator Trough**	**160 days**	**Fri 21/10/22**	**Wed 20/5/23**	
91	From PC1 - PC2	60 days	Fri 21/10/22	Mon 19/12/22	87,83
92	From PC2 - PC3	60 days	Sun 29/1/23	Wed 29/3/23	89
93	**Installation of Escalator**	**207 days**	**Sat 23/7/22**	**Wed 3/5/23**	
94	Procurement & Delivery of Escalator Material	150 days	Sat 23/7/22	Tue 20/12/22	85SF
95	From PC1 - PC2	35 days	Tue 20/12/22	Mon 23/1/23	93
96	From PC2 - PC3	35 days	Tue 28/2/23	Wed 5/4/23	92
97	Ordering of steel frame, roofing panels & fall arrest system	120 days	Thu 5/1/23	Thu 4/5/23	
98	Erection of Canopy	60 days	Fri 5/5/23	Mon 3/7/23	96,97,60,97
99	Design Submission and Approval of A&A Works	300 days	Thu 5/5/22	Tue 20/2/23	
100	Connection of Existing lift tower	90 days	Wed 2/5/23	Sat 29/6/23	98
101	Installation of Movement Joint	14 days	Thu 4/5/23	Wed 17/5/23	96,100
102	Ordering of balustrades, banners & architectural features	120 days	Wed 18/1/23	Wed 17/5/23	
103	Finishing Work	90 days	Thu 18/5/23	Tue 15/8/23	101,102
104	Backfill nib cast & Existing existing Slope & Retaining wall	90 days	Wed 19/9/23	Mon 13/11/23	103
105	Geometry & Power Supply System	180 days	Thu 4/5/23	Mon 30/10/23	96
106	Construction of Pillar Box	21 days	Wed 19/9/23	Tue 5/9/23	103
107	Procurement & Delivery of E&M Material	150 days	Sun 9/4/23	Wed 6/9/23	104SF
108	E & M Installation & Lighting Installation	60 days	Wed 6/9/23	Sat 4/11/23	98,106
109	Discount & Misc. Road Works	120 days	Wed 6/9/23	Wed 3/1/24	106,103
110	Landscaping Works	120 days	Wed 6/9/23	Wed 3/1/24	106,103
111	Testing & Commissioning	90 days	Sun 5/11/23	Wed 3/1/24	104,105
112	***Section 2 Completion***	0 days	Wed 3/1/24	Wed 3/1/24	111,109,104,110
113	**Section 1A - Establishment Works (Portion 1a & 3b)**	**307 days**	**Thu 4/1/24**	**Thu 2/1/25**	
114	Establishment Works	307 days	Thu 4/1/24	Thu 2/1/25	112
115	***Section 1A Completion***	0 days	Thu 2/1/25	Thu 2/1/25	114
116					
117	**Section 2 - 3b Escalator (Portion 2)**	**1038 days**	**Thu 1/4/21**	**Wed 3/1/24**	
118	Site Clearance	30 days	Mon 12/4/21	Tue 11/5/21	16
119	Initial Survey	10 days	Tue 27/4/21	Fri 14/5/21	45
120	Erection of Site Hoarding	24 days	Sat 15/5/21	Mon 7/6/21	119,41
121	Tree Felling	21 days	Tue 8/6/21	Mon 28/6/21	120,48
122	Tree Transplanting	30 days	Tue 8/6/21	Fri 9/7/21	120,51
123	Coordination with 3D for access & facilities relocation	45 days	Sat 15/5/21	Mon 28/6/21	119
124	Set up park facilities & Perimeter	21 days	Tue 29/6/21	Mon 19/7/21	121,123
125	Installation of Monitoring & Instrumentation Point	12 days	Tue 20/7/21	Sat 31/7/21	124
126	Ground Investigation	45 days	Sat 4/9/21	Mon 18/10/21	122,54
127	**Piling Works**	**200 days**	**Tue 16/10/21**	**Fri 6/5/22**	
128	At Pile Cap B6-PC1 (12 no. of 610mm PHP Piles)	60 days	Tue 19/10/21	Fri 17/12/21	126,57
129	At Pile Cap B6-PC2 (16 no. of 610mm PHP Piles)	90 days	Sat 18/12/21	Mon 7/3/22	128
130	At Pile Cap B6-PC3 (16 no. of 610mm PHP Piles)	60 days	Tue 8/3/22	Fri 6/5/22	129
131	Leveling Top of Piling	30 days	Sat 7/5/22	Sun 5/6/22	130
132	**Excavation**	**230 days**	**Sat 18/12/21**	**Thu 4/8/22**	
133	For Pile Cap B6-PC1	60 days	Sat 18/12/21	Tue 15/2/22	128
134	For Pile Cap B6-PC2	75 days	Tue 8/3/22	Sat 21/5/22	129
135	For Pile Cap B6-PC3	60 days	Mon 6/6/22	Thu 4/8/22	131
136	**Pile Cap Construction**	**220 days**	**Wed 16/2/22**	**Fri 23/9/22**	
137	For Pile Cap B5-PC1	30 days	Wed 16/2/22	Wed 9/3/22	133
138	For Pile Cap B5-PC2	30 days	Sun 22/5/22	Sun 19/6/22	134
139	For Pile Cap B5-PC3	30 days	Fri 5/8/22	Fri 23/9/22	135
140	**Construction of Pier**	**135 days**	**Mon 11/7/22**	**Tue 22/11/22**	

First Programme

ID	Task Name	Duration	Start	Finish	Predecessors
141	Pie Pier E5-P2	42 days	Mon 11/7/22	Sat 22/8/22	139,70
142	Pie Pier E5-P2	60 days	Sat 24/9/22	Tue 22/11/22	139
143	Installation of Bearing	7 days	Wed 23/11/22	Tue 29/11/22	142,70
144	**Construction of Escalator Trough**	**160 days**	**Mon 22/8/22**	**Sat 28/1/23**	
145	From PC1 - PC2	60 days	Mon 22/8/22	Thu 20/10/22	141,137
146	From PC2 - PC3	60 days	Wed 30/11/22	Sat 28/1/23	143
147	**Installation of Escalator**	**285 days**	**Tue 24/5/22**	**Sat 4/3/23**	
148	Procurement & Delivery of Escalator Material	150 days	Tue 24/5/22	Fri 21/10/22	149SF
149	From PC1 - PC2	35 days	Fri 21/10/22	Thu 24/11/22	145
150	From PC2 - PC3	35 days	Sun 29/1/23	Sat 4/3/23	146
151	Ordering of steel frame, roofing panels & fall arrest system	120 days	Sat 5/11/22	Sat 4/3/23	
152	Erection of Canopy	60 days	Sun 5/3/23	Wed 3/5/23	150,60,140,151
153	Design Submission and Approval of A&A Works	300 days	Thu 1/4/21	Tue 25/1/22	
154	Connection of Existing lift tower	60 days	Wed 26/1/22	Sat 26/3/22	153
155	Installation of Movement Joint	14 days	Sun 5/3/23	Sat 18/3/23	150,154
156	Ordering of balustrades, barriers & architectural features	120 days	Sat 19/11/22	Sat 18/3/23	
157	Finishing Work	90 days	Sun 19/3/23	Fri 16/6/23	155,156
158	Backfill pile caps	60 days	Sat 17/6/23	Tue 15/8/23	157
159	Telemetry & Power Supply System	180 days	Sat 17/6/23	Wed 13/12/23	157
160	Construction of Pillar Box	21 days	Wed 16/8/23	Tue 5/9/23	158
161	Procurement & Delivery of E&M Material	150 days	Sun 9/4/23	Wed 6/9/23	162SF
162	E & M Installation & Lighting Installation	60 days	Wed 6/9/23	Sat 4/11/23	158,160,152
163	Drainage & Misc. Road Works	60 days	Wed 6/9/23	Sat 4/11/23	160
164	Reinstatement of park facilities	60 days	Sun 5/11/23	Wed 3/1/24	163
165	Landscaping Works	60 days	Sun 5/11/23	Wed 3/1/24	163
166	Testing & Commissioning	60 days	Sun 5/11/23	Wed 3/1/24	162
167	*Section 2 Completion*	0 days	Wed 3/1/24	Wed 3/1/24	164,166,165
168	**Section 2A - Establishment Work (Portion 2)**	**365 days**	**Thu 4/1/24**	**Thu 2/1/25**	
169	Establishment Works	365 days	Thu 4/1/24	Thu 2/1/25	167
170	*Section 2A Completion*	0 days	Thu 2/1/25	Thu 2/1/25	169
171					
172	**Section 3 - E7 Bridge (Portion 3a & 3b)**	**1080 days**	**Mon 12/4/21**	**Fri 29/3/24**	
173	Site Clearance	17 days	Mon 12/4/21	Mon 28/4/21	30
174	**E7 Lift Tower**	**1080 days**	**Wed 14/4/21**	**Fri 29/3/24**	
175	Initial Survey	18 days	Tue 27/4/21	Fri 14/5/21	173,47
176	Erection of Site Hoarding	21 days	Sat 15/5/21	Fri 4/6/21	175,41
177	TTA for Site Entrance & Bus Stop Relocation	52 days	Wed 14/4/21	Fri 4/6/21	31
178	Tree Felling	21 days	Sat 5/6/21	Fri 25/6/21	176,40,177
179	Trial Pit Excavation	18 days	Sat 5/6/21	Tue 22/6/21	176
180	Street Light Relocation	21 days	Sat 26/6/21	Fri 16/7/21	178
181	Diversion of existing stairway	42 days	Sat 26/6/21	Fri 6/8/21	178
182	Installation of Monitoring & Instrumentation Point	21 days	Wed 23/6/21	Tue 13/7/21	179
183	Installation Piezometer & Ground Investigation	35 days	Sat 7/8/21	Fri 10/9/21	181,34
184	Form piling platform on Existing slope	60 days	Sat 11/9/21	Tue 9/11/21	183,77,180
185	Piling Work (68 nos of 323mm Mini-piles)	180 days	Wed 10/11/21	Sun 8/5/22	184,182
186	Loading Test	30 days	Mon 9/5/22	Tue 7/6/22	185
187	Excavation of pile cap	90 days	Wed 8/6/22	Mon 5/9/22	186
188	Pile Cap Construction	45 days	Tue 6/9/22	Thu 20/10/22	187
189	Construction of Lift Tower (9 Floors)	210 days	Fri 21/10/22	Thu 18/5/23	188,58
190	Installation of Bearing	7 days	Fri 19/5/23	Thu 25/5/23	189,59
191	Fabrication of Louvres & Glazing	150 days	Fri 21/10/22	Sun 19/3/23	
192	Installation of Louvres & Glazing	120 days	Mon 20/3/23	Mon 17/7/23	189SS+150 days,191
193	Telemetry & Power Supply System	180 days	Fri 19/5/23	Tue 14/11/23	189
194	Construction of Pillar Box	21 days	Wed 15/11/23	Tue 5/12/23	193
195	Procurement & Delivery of Lift Material	150 days	Sat 18/2/23	Tue 18/7/23	196SF
196	Lift Installation	150 days	Tue 18/7/23	Thu 14/12/23	192
197	Procurement & Delivery of E&M Material	150 days	Sat 18/2/23	Tue 18/7/23	198SF
198	E & M Installation & Lighting Installation	196 days	Tue 18/7/23	Mon 29/1/24	192
199	Ordering of balustrades, barriers & architectural features	120 days	Thu 19/1/23	Thu 18/5/23	
200	Finishing Work of Lift Tower	120 days	Fri 19/5/23	Fri 15/9/23	191SS+60 days,199
201	Waterproofing & Installation of Fall Arrest System	60 days	Tue 18/7/23	Fri 15/9/23	192
202	Removal of scaffolding	60 days	Sat 16/9/23	Tue 31/10/23	200
203	Backfill and Reinstate existing slope	90 days	Wed 1/11/23	Mon 29/1/24	202
204	Underground drainage & water main works	60 days	Tue 30/1/24	Fri 29/3/24	203
205	Testing & Commissioning	60 days	Tue 30/1/24	Fri 29/3/24	198,196
206	**E7 Pier**	**1080 days**	**Mon 12/4/21**	**Fri 29/3/24**	
207	Prepare & Endorse TTA scheme by TMLO	60 days	Mon 12/4/21	Thu 10/6/21	31
208	Application of Excavation Permit	180 days	Fri 11/6/21	Tue 7/12/21	207
209	Implementation of TTA at carriageway	14 days	Wed 8/12/21	Tue 21/12/21	208
210	Installation of Monitoring & Instrumentation Point	7 days	Wed 22/12/21	Tue 28/12/21	209



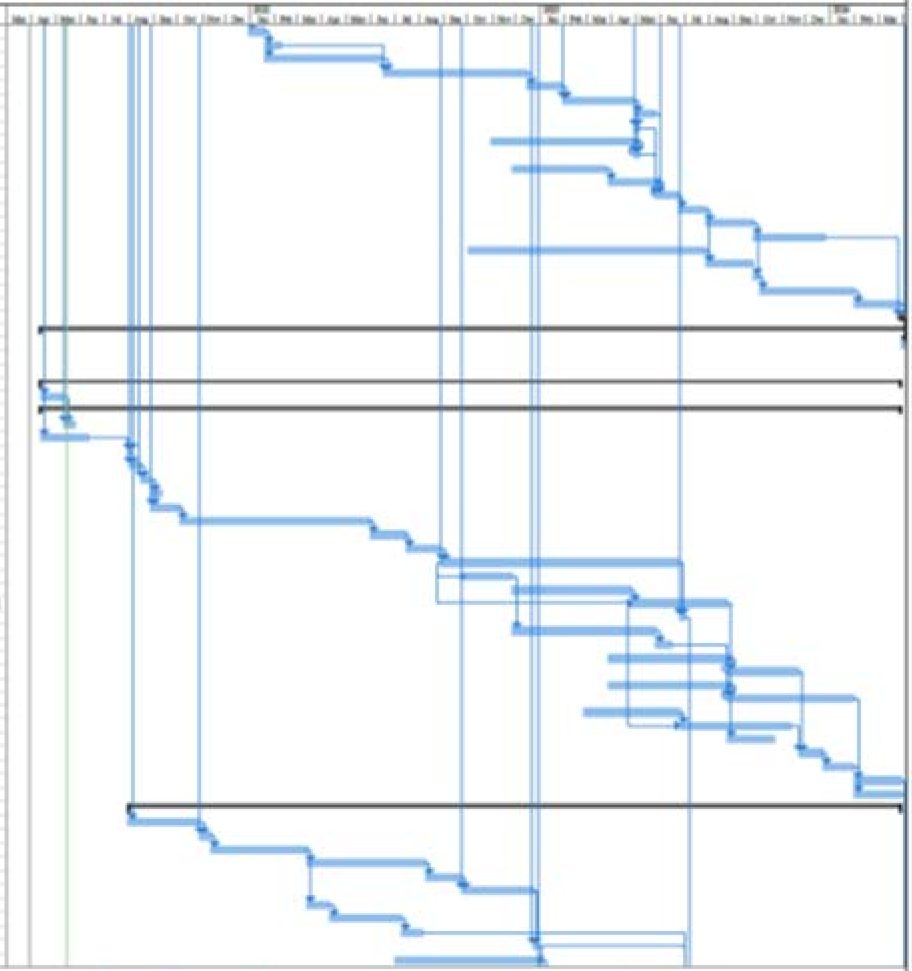
Project: Contract No. EE/2019/02	Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Manual Progress
Date: Sat 15/5/21	Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	
	Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Progress	

Contract No. ED/2019/02
Development of Anderson Road Quarry Site -
Remaining Pedestrian Connectivity Facilities Works

First Programme

Wing Lee - Unistruct Joint Venture

ID	Task Name	Duration	Start	Finish	Predecessors
211	Trial Pit Excavation	21 days	Wed 29/12/21	Tue 18/1/22	210
212	Relocation of street light post	21 days	Wed 19/1/22	Tue 8/2/22	211
213	Utilities Diversion	150 days	Wed 19/1/22	Fri 17/6/22	211
214	Excavation of footing	180 days	Sat 18/6/22	Wed 14/12/22	213,212
215	Construction of Footing E7-F1	45 days	Thu 15/12/22	Sat 28/1/23	214
216	Construction of Pier E7-F1 (4 Pours)	90 days	Sun 29/1/23	Fri 28/4/23	215,59
217	Allowable for achievement of concrete strength	27 days	Sat 29/4/23	Thu 25/5/23	216
218	Installation of Bearing	7 days	Sat 29/4/23	Fri 5/5/23	216,59
219	Submit & obtain BD's approval for A&A Works at Carpark	180 days	Mon 31/10/22	Sat 29/4/23	220SF
220	Forming support for steel bridge at Carpark	7 days	Sat 29/4/23	Fri 5/5/23	216,60,5
221	Ordering of steel frame, roofing panels & fall arrest system	120 days	Sat 26/11/22	Sat 25/3/23	
222	Fabrication of Steel Bridge	60 days	Mon 27/3/23	Fri 26/5/23	223SF,221
223	Erection of Steel Bridge	28 days	Fri 26/5/23	Thu 22/6/23	218,220,217,190
224	Construction of Concrete slab	35 days	Fri 23/6/23	Thu 27/7/23	223
225	Construction of Roofing System	60 days	Fri 28/7/23	Mon 25/9/23	224
226	E & M Installation & Lighting Installation	90 days	Tue 26/9/23	Sun 24/12/23	225
227	Design Submission and Approval of A&A Works	300 days	Sat 1/10/22	Thu 27/7/23	
228	Connection of Bridge on deck	60 days	Fri 28/7/23	Mon 25/9/23	224,227
229	Installation of Movement Joint	7 days	Tue 26/9/23	Mon 2/10/23	228
230	Finishing work of bridge deck	120 days	Tue 3/10/23	Tue 30/1/24	229
231	Landscaping Works	59 days	Wed 31/1/24	Fri 29/3/24	230
232	*Section 3 Completion*	1 day	Fri 29/3/24	Fri 29/3/24	204,205,226,231
233	**Section 3A - Establishment Works (Portion 3a & 3b)**	**1448 days**	**Mon 12/4/21**	**Sat 29/3/25**	
234	Establishment Works	365 days	Sat 30/3/24	Sat 29/3/25	232
235	*Section 3A Completion*	1 day	Sat 29/3/25	Sat 29/3/25	234
236					
237	**Section 4 - E10 Bridge (Portion 4a & 4b)**	**1083 days**	**Mon 12/4/21**	**Fri 29/3/24**	
238	Site Clearance	30 days	Mon 12/4/21	Tue 11/5/21	16
239	**E10 Lift Tower**	**1083 days**	**Mon 12/4/21**	**Fri 29/3/24**	
240	Initial Survey	14 days	Wed 12/5/21	Tue 25/5/21	238,47
241	Prepare & Endorse TTA scheme by TMLG	60 days	Mon 12/4/21	Thu 10/6/21	16
242	Implement TTA to form site entrance	1 day	Sat 31/7/21	Sat 31/7/21	241,6
243	Erection of Site Hoarding	14 days	Sun 1/8/21	Sat 14/8/21	242,41
244	Tree Felling	14 days	Sun 15/8/21	Sat 28/8/21	243,48
245	Installation of Monitoring & Instrumentation Point	14 days	Sun 29/8/21	Sat 11/9/21	244
246	Installation Piezometer & Ground Investigation	35 days	Sun 29/8/21	Sat 2/10/21	244,54
247	Excavation of Footing E10-PT1	240 days	Sun 3/10/21	Mon 30/5/22	246
248	Construction of Footing	45 days	Tue 31/5/22	Thu 14/7/22	247
249	Erection of Tower Crane	45 days	Fri 15/7/22	Sun 28/8/22	248
250	Construction of Lift Tower (12 pours)	300 days	Mon 29/8/22	Sat 24/6/23	249,58
251	Backfill of E10-PT1	60 days	Wed 28/9/22	Sat 26/11/22	250SS+30 days
252	Fabrication of Louvers & Glazing	150 days	Sat 26/11/22	Mon 24/4/23	
253	Installation of Louvers & Glazing	120 days	Wed 26/4/23	Wed 23/8/23	250SS+240 days,252
254	Installation of Bearing	7 days	Sun 25/6/23	Sat 1/7/23	250,59
255	Telemetry & Power Supply System	180 days	Sun 27/11/22	Thu 25/5/23	251
256	Construction of Pillar Box	21 days	Fri 26/5/23	Thu 15/6/23	255
257	Procurement & Delivery of Lift Material	150 days	Mon 27/3/23	Thu 24/8/23	258SF
258	Lift Installation	90 days	Thu 24/8/23	Tue 21/11/23	253
259	Procurement & Delivery of E&M Material	150 days	Mon 27/3/23	Thu 24/8/23	260SF
260	E & M Installation & Lighting Installation	160 days	Thu 24/8/23	Tue 30/1/24	253,256
261	Ordering of balustrades, barriers & architectural features	120 days	Sat 25/2/23	Sat 24/6/23	
262	Finishing Work of Lift Tower	140 days	Sun 25/6/23	Sat 11/11/23	250SS+60 days,261
263	Waterproofing & Installation of Fall Arrest System	60 days	Thu 24/8/23	Sun 22/10/23	253
264	Removal of scaffolding	30 days	Wed 22/11/23	Thu 21/12/23	262,258
265	Ground Level Drainage & water main laying	40 days	Fri 22/12/23	Tue 30/1/24	264
266	Reinstatement and Misc. Roadwork	59 days	Wed 31/1/24	Fri 29/3/24	265
267	Testing & Commissioning	59 days	Wed 31/1/24	Fri 29/3/24	260
268	**Pier & Abutment**	**973 days**	**Sat 31/7/21**	**Fri 29/3/24**	
269	Form Haul Road	90 days	Sat 31/7/21	Thu 28/10/21	4
270	Tree Felling	14 days	Fri 29/10/21	Thu 11/11/21	269,48
271	Excavation of Footing E10-PT2	120 days	Fri 12/11/21	Fri 11/3/22	270
272	Excavation of Footing E10-PT3	150 days	Sat 12/3/22	Mon 8/8/22	271
273	Construction of Footing E10-PT3	45 days	Tue 9/8/22	Thu 22/9/22	272
274	Construction of Abutment on PT3	90 days	Fri 23/9/22	Wed 21/12/22	273,58
275	Construction of Footing E10-PT2	30 days	Sat 12/3/22	Sun 10/4/22	271
276	Construction of Pier E10-P1 (4 pours)	90 days	Mon 11/4/22	Sat 9/7/22	275
277	Allowable for achievement of concrete strength	27 days	Sun 10/7/22	Fri 5/8/22	276
278	Installation of Bearing	7 days	Thu 22/12/22	Wed 28/12/22	274,59
279	Submit & obtain BD's approval for A&A Works at Carpark	180 days	Sat 2/7/22	Thu 29/12/22	280SF



Project: Contract No. ED/2019/02
Date: Sat 15/5/21

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Progress | Manual Progress

Contract No. ED/2019/02
Development of Anderson Road Quarry Site –
Remaining Pedestrian Connectivity Facilities Works

First Programme

Wing Lee – Unistrong Joint Venture

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
280		Forming support for steel bridge at Podium	20 days	Thu 29/12/22	Tue 17/1/23	279,80,279
281		Ordering of steel frame, roofing panels & fall arrest system	120 days	Tue 3/1/23	Tue 2/5/23	
282		Fabrication of Steel Bridge	60 days	Wed 3/5/23	Sun 2/7/23	281SS,281
283		Erection of Steel Bridge	28 days	Sun 2/7/23	Sat 29/7/23	277,279,280,282
284		Construction of Concrete slab	35 days	Sun 30/7/23	Sat 2/9/23	283
285		Construction of Roofing System	60 days	Sun 3/9/23	Wed 1/11/23	284
286		E & M Installation & Lighting Installation	110 days	Thu 2/11/23	Mon 19/2/24	285
287		Design Submission and Approval of A&A Works	300 days	Mon 7/11/22	Sat 2/9/23	
288		Connection of Existing Estate Podium	60 days	Sun 3/9/23	Wed 1/11/23	284,287
289		Installation of Movement Joint	7 days	Thu 2/11/23	Wed 8/11/23	285,288
290		Finishing work of bridge deck	116 days	Thu 9/11/23	Sun 3/3/24	289
291		Landscaping Works	26 days	Mon 4/3/24	Fri 29/3/24	290
292		*Section 4 Completion*	0 days	Fri 29/3/24	Fri 29/3/24	286,287,290,291
293		**Section 4A - Establishment Works (Portion 4a & 4b)**	**365 days**	**Sat 30/3/24**	**Sat 29/3/25**	
294		Establishment Works	365 days	Sat 30/3/24	Sat 29/3/25	292
295		*Section 4A Completion*	0 days	Sat 29/3/25	Sat 29/3/25	294

Project: Contract No. ED/2019/02 Date: Sat 1/5/21													
	Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Manual Progress
	Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	
	Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Progress	

Appendix D

Monitoring Locations for Impact Monitoring

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

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.

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. 227724/E/1045 Rev. 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
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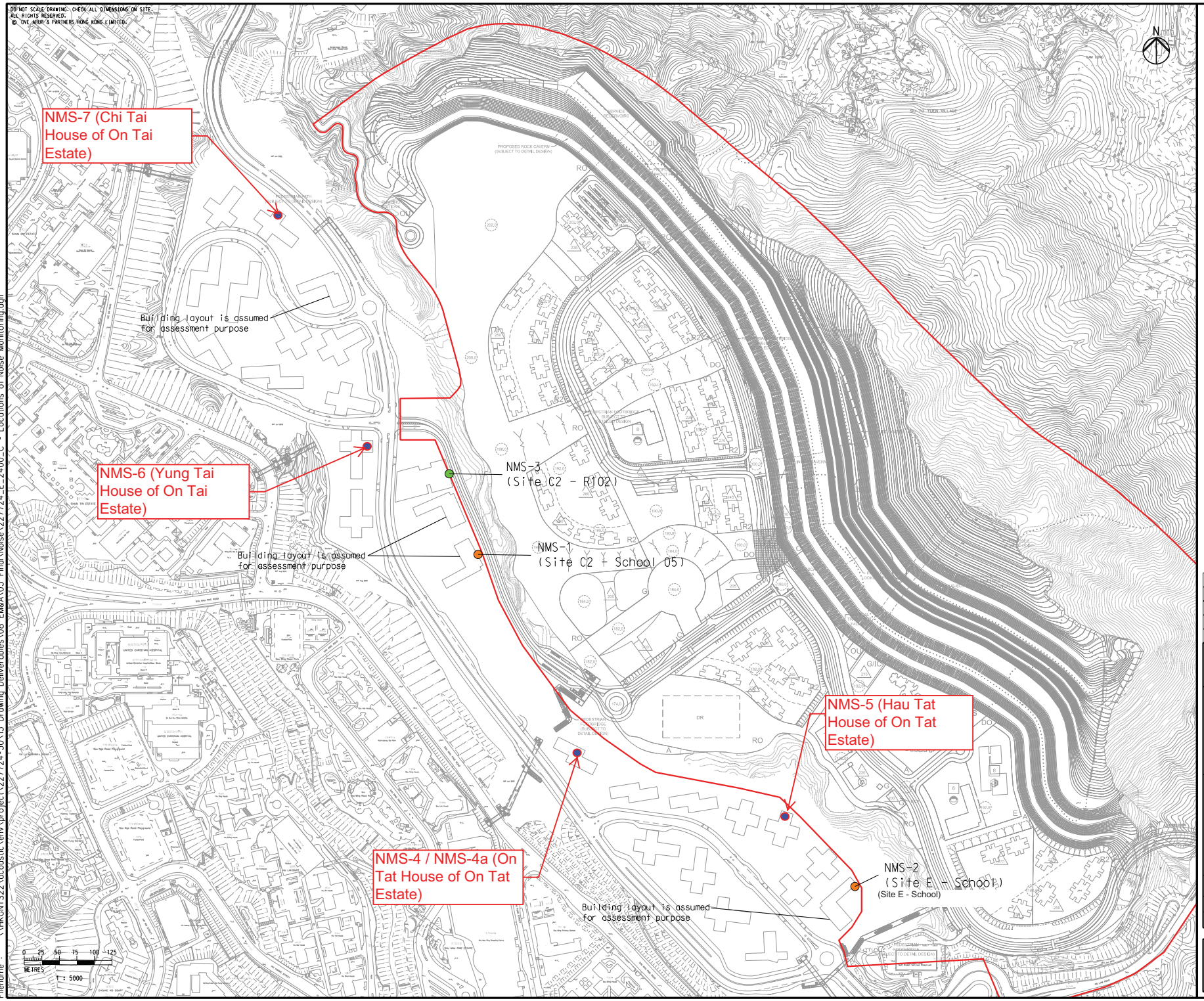

Legend

- 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

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

土木工程拓展署
Civil Engineering and Development Department

0 25 50 75 100 125
METRES
1 : 5000

Printed by : 4/8/2014
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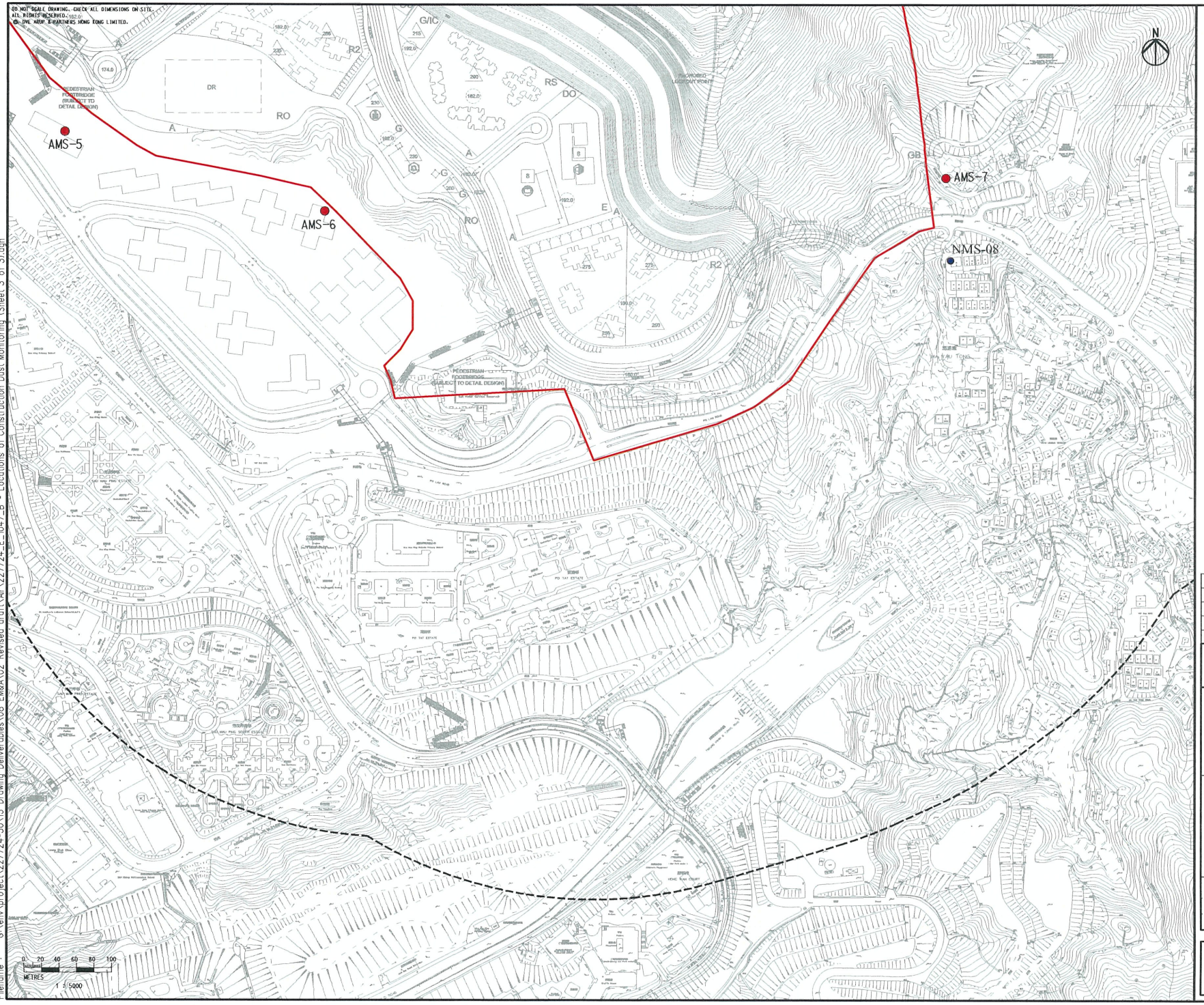


Rev	Description	By	Date
B	SECOND ISSUE	GL	03/14
A	FIRST ISSUE	GL	10/13

Consultant

Contract No. and Title

Agreement No. CE 18/2012(CE)

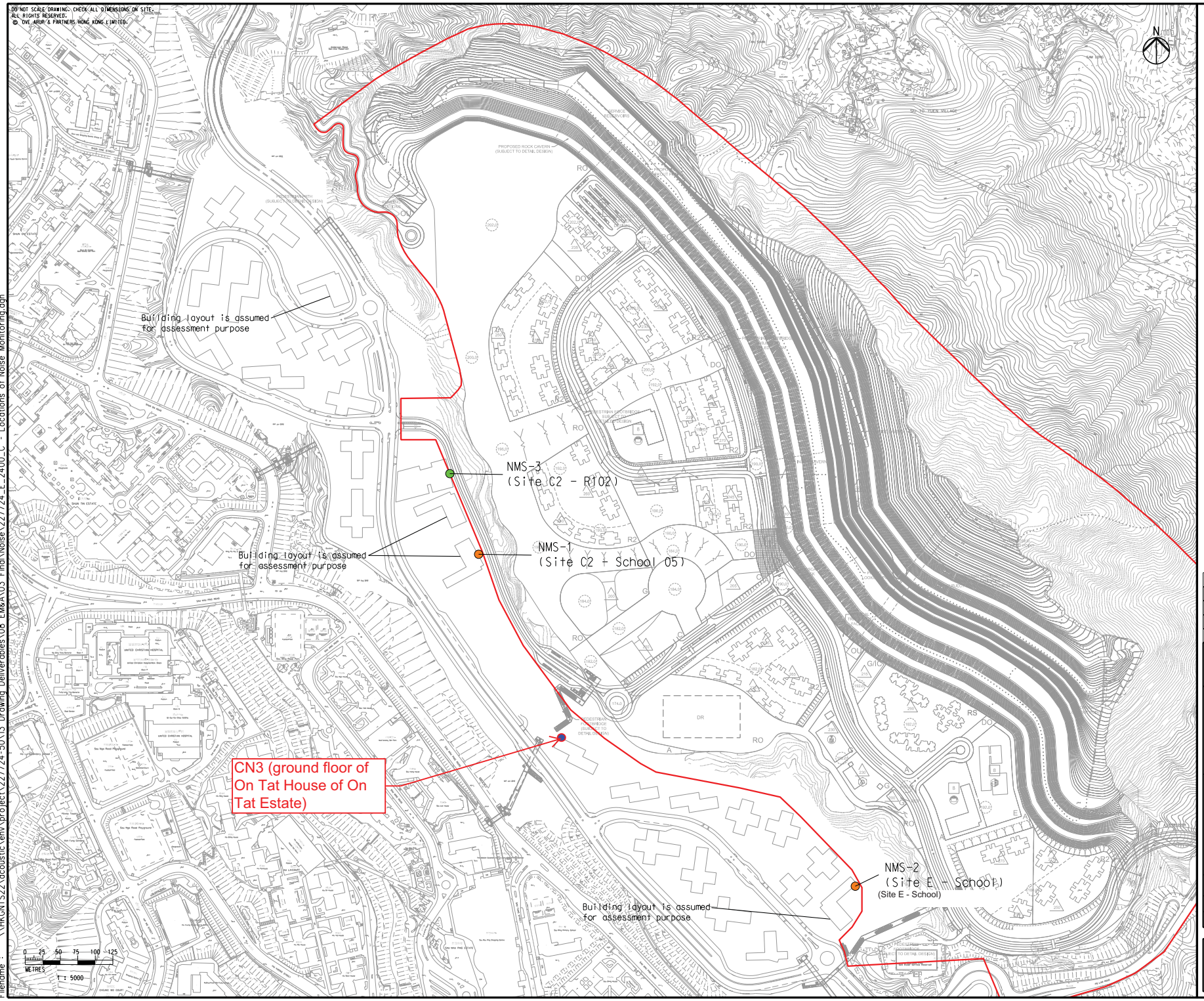
Development of Anderson Road Quarry - Investigation

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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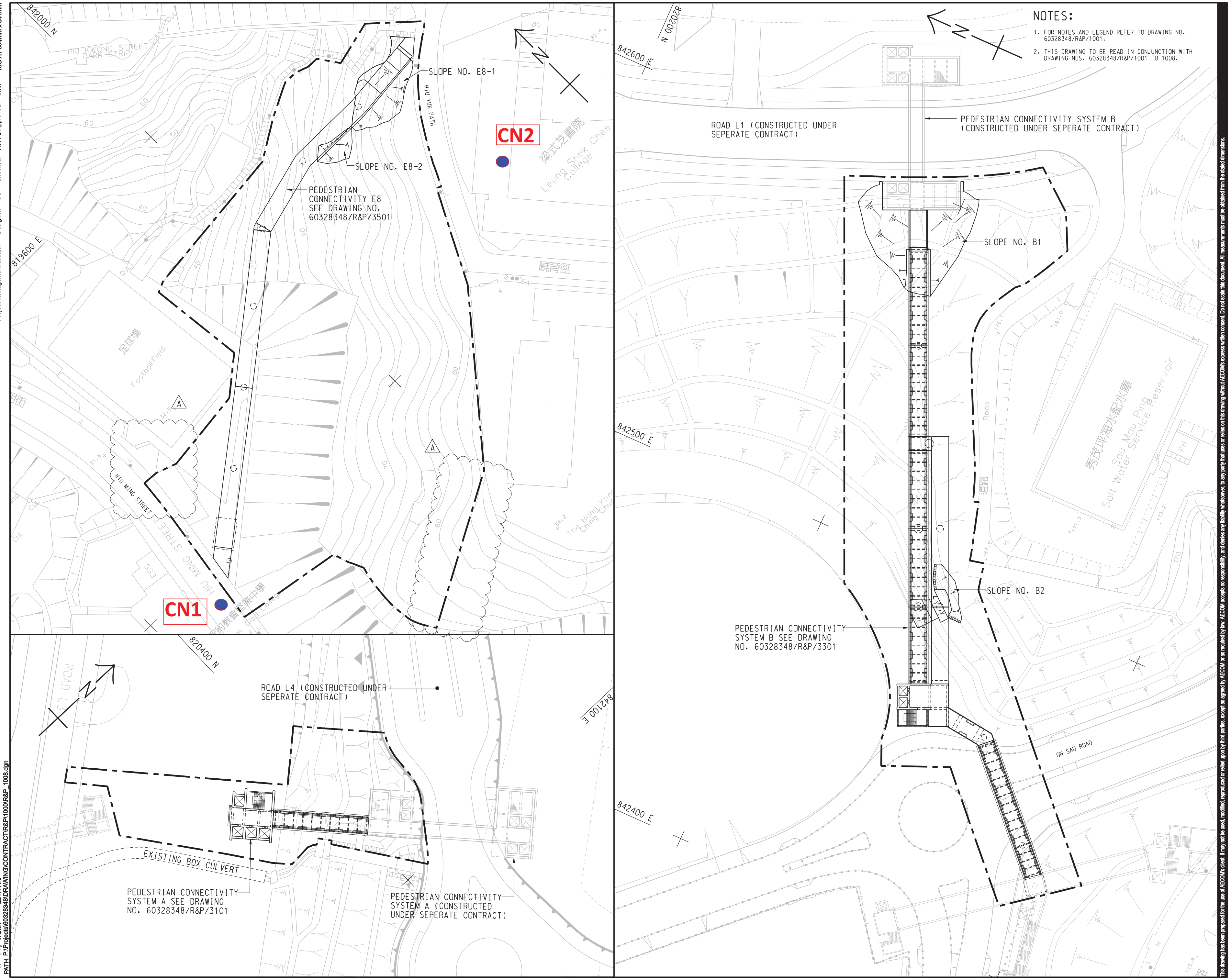

AECOM

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

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

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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

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: 5-Feb-21
Location ID : AMS1a	Next Calibration Date: 5-Apr-21
Model:TISCH High Volume Air Sampler TE-5170	Technician: Mr. Fai So

CONDITIONS

Sea Level Pressure (hPa)	1019.8	Corrected Pressure (mm Hg)	764.85
Temperature (°C)	19.9	Temperature (K)	293

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10574
Model->	TE-5025A	Qstd Intercept ->	-0.00985
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.6	6.6	13.2	1.751	48	48.57	Slope = 31.0065
13	5.2	5.2	10.4	1.554	40	40.48	Intercept = -7.8094
10	3.9	3.9	7.8	1.347	30	30.36	Corr. coeff. = 0.9794
7	2.4	2.4	4.8	1.057	24	24.29	
5	1.5	1.5	3	0.837	20	20.24	

Calculations :

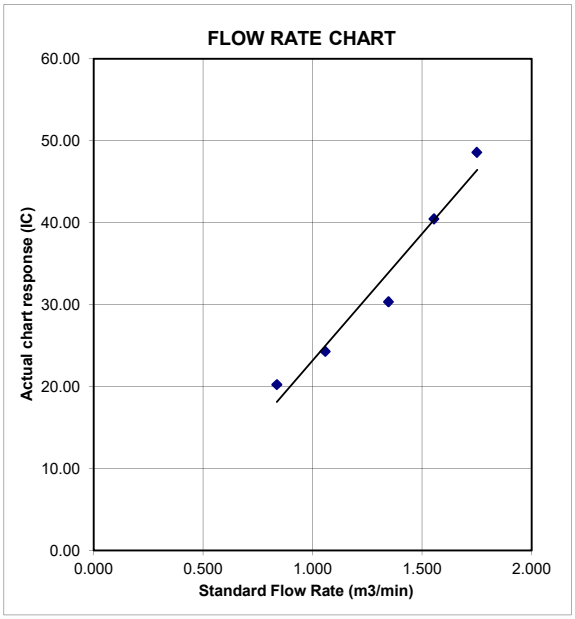
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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 : Tan Shan Village No. 5 - 6 — Date of Calibration: 5-Apr-21
Location ID : AMS1a — Next Calibration Date: 5-Jun-21
Model:TISCH High Volume Air Sampler TE-5170 — Technician: Mr. Fai So

CONDITIONS

Sea Level Pressure (hPa)	1017.5	Corrected Pressure (mm Hg)	763.125
Temperature (°C)	22.4	Temperature (K)	295

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10574
Model->	TE-5025A	Qstd Intercept ->	-0.00985
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.2	6.2	12.4	1.688	50	50.32	Slope = 41.8576
13	5.1	5.1	10.2	1.531	46	46.30	Intercept = -19.7549
10	3.8	3.8	7.6	1.322	34	34.22	Corr. coeff. = 0.9951
7	2.6	2.6	5.2	1.095	25	25.16	
5	1.6	1.6	3.2	0.860	17	17.11	

Calculations :

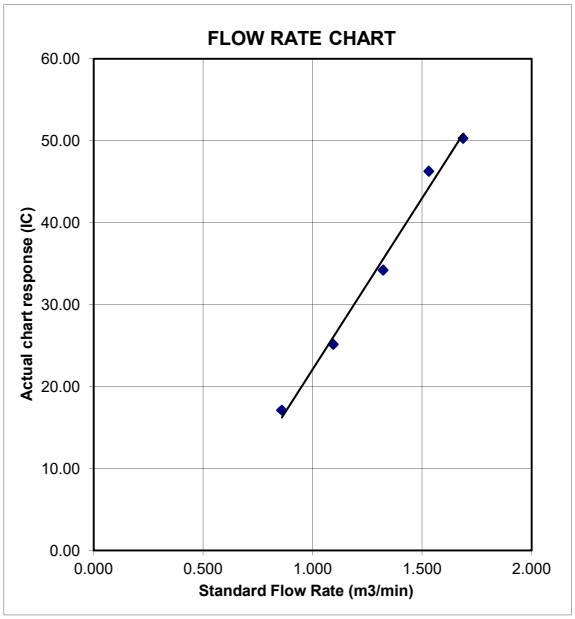
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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:	5-Feb-21
Location ID :	AMS 5	Next Calibration Date:	5-Apr-21
Model:TISCH High Volume Air Sampler TE-5170		Technician: Mr. Fai So	

CONDITIONS

Sea Level Pressure (hPa)	1019.8	Corrected Pressure (mm Hg)	764.85
Temperature (°C)	19.9	Temperature (K)	293

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10574
Model->	TE-5025A	Qstd Intercept ->	-0.00985
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.7	6.7	13.4	1.764	42	42.50	Slope = 24.7690
13	5.2	5.2	10.4	1.554	32	32.38	Intercept = -3.7560
10	3.9	3.9	7.8	1.347	28	28.33	Corr. coeff. = 0.9782
7	2.4	2.4	4.8	1.057	22	22.26	
5	1.5	1.5	3	0.837	18	18.21	

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)

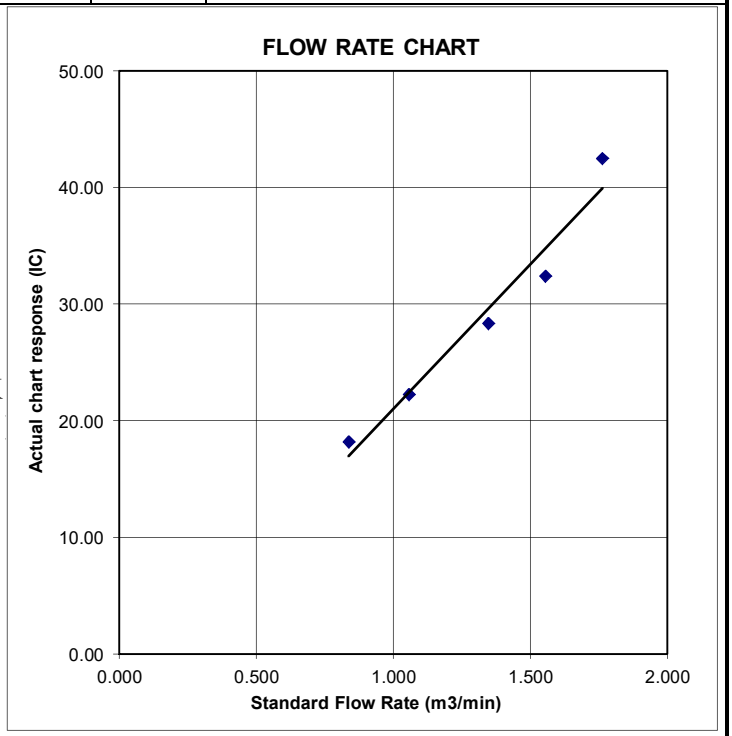
m = sampler slope

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:	5-Apr-21
Location ID :	AMS 5	Next Calibration Date:	5-Jun-21
Model:TISCH High Volume Air Sampler TE-5170		Technician: Mr. Fai So	

CONDITIONS

Sea Level Pressure (hPa)	1017.5	Corrected Pressure (mm Hg)	763.125
Temperature (°C)	22.4	Temperature (K)	295

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10574
Model->	TE-5025A	Qstd Intercept ->	-0.00985
Serial # ->	1941		

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	1.701	52	52.34	Slope = 41.6929
13	5.1	5.1	10.2	1.531	46	46.30	Intercept = -18.5896
10	3.9	3.9	7.8	1.340	36	36.23	Corr. coeff. = 0.9977
7	2.6	2.6	5.2	1.095	26	26.17	
5	1.6	1.6	3.2	0.860	18	18.12	

Calculations :

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

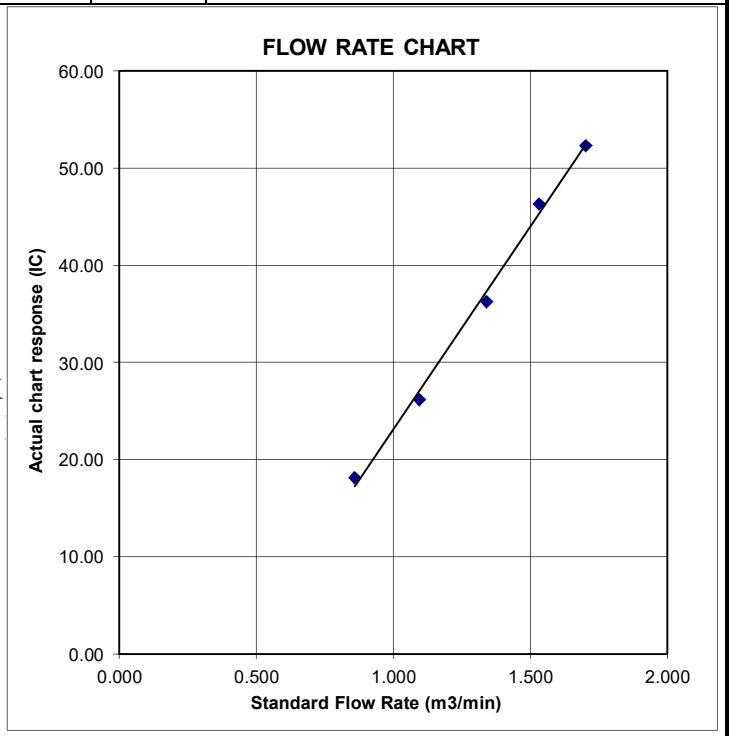
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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:	5-Apr-21
Location ID :	AMS 6	Next Calibration Date:	5-Jun-21
Model:TISCH High Volume Air Sampler TE-5170		Technician:	Mr. Fai So

CONDITIONS

Sea Level Pressure (hPa)	1017.5	Corrected Pressure (mm Hg)	763.125
Temperature (°C)	22.4	Temperature (K)	295

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10574
Model->	TE-5025A	Qstd Intercept ->	-0.00985
Serial # ->	1941		

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	1.701	52	52.34	Slope = 41.4931
13	5.1	5.1	10.2	1.531	48	48.31	Intercept = -17.0602
10	3.7	3.7	7.4	1.305	36	36.23	Corr. coeff. = 0.9961
7	2.5	2.5	5	1.073	28	28.18	
5	1.6	1.6	3.2	0.860	18	18.12	

Calculations :

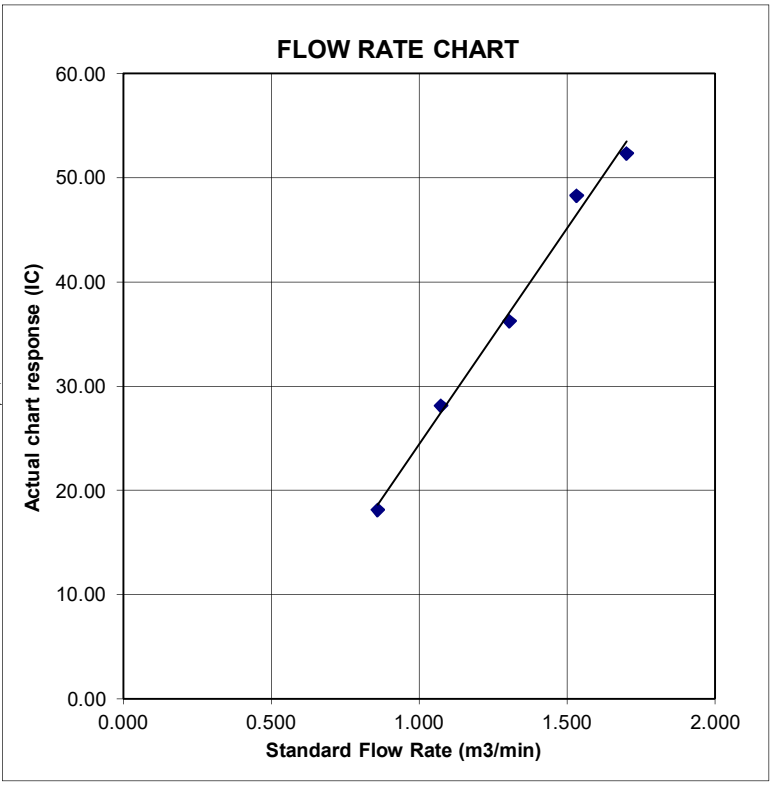
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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:	5-Feb-21
Location ID :	AMS 6	Next Calibration Date:	5-Apr-21
Model:TISCH High Volume Air Sampler TE-5170		Technician:	Mr. Fai So

CONDITIONS

Sea Level Pressure (hPa)	1019.8	Corrected Pressure (mm Hg)	764.85
Temperature (℃)	19.9	Temperature (K)	293

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10574
Model->	TE-5025A	Qstd Intercept ->	-0.00985
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.6	6.6	13.2	1.751	46	46.55	Slope = 28.3460
13	5.1	5.1	10.2	1.539	37	37.44	Intercept = -5.9572
10	4	4	8	1.364	28	28.33	Corr. coeff. = 0.9627
7	2.4	2.4	4.8	1.057	23	23.27	
5	1.5	1.5	3	0.837	20	20.24	

Calculations :

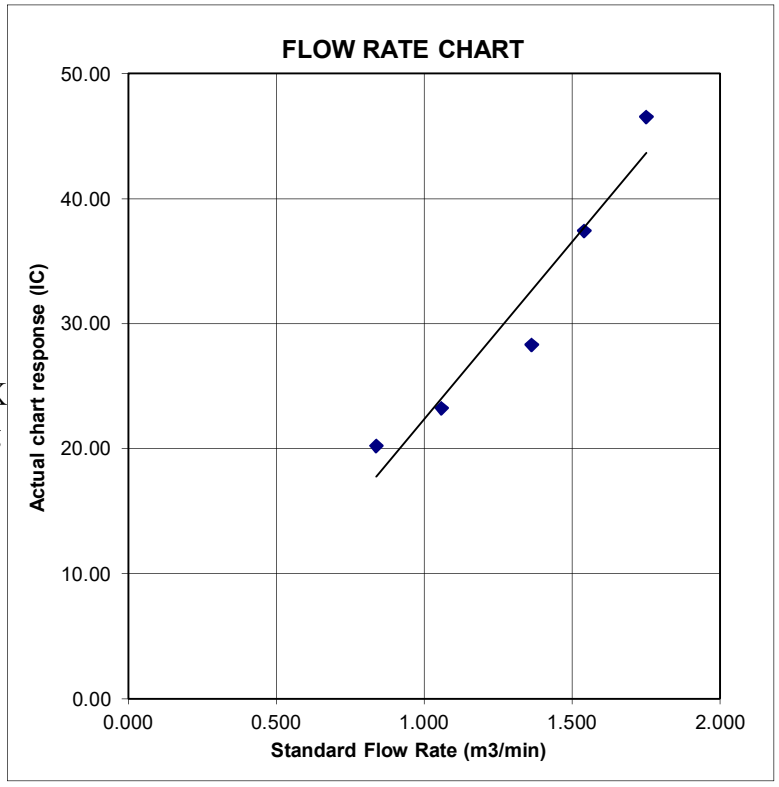
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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: 5-Feb-21
Location ID : AMS 7	Next Calibration Date: 5-Apr-21
Model:TISCH High Volume Air Sampler TE-5170	Technician: Mr. Fai So

CONDITIONS

Sea Level Pressure (hPa)	1019.8	Corrected Pressure (mm Hg)	764.85
Temperature (°C)	19.9	Temperature (K)	293

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10574
Model->	TE-5025A	Qstd Intercept ->	-0.00985
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.9	6.9	13.8	1.790	45	45.53	Slope = 26.5920
13	5.4	5.4	10.8	1.584	36	36.43	Intercept = -5.2857
10	4.1	4.1	8.2	1.381	27	27.32	Corr. coeff. = 0.9567
7	2.6	2.6	5.2	1.100	22	22.26	
5	1.4	1.4	2.8	0.809	19	19.23	

Calculations :

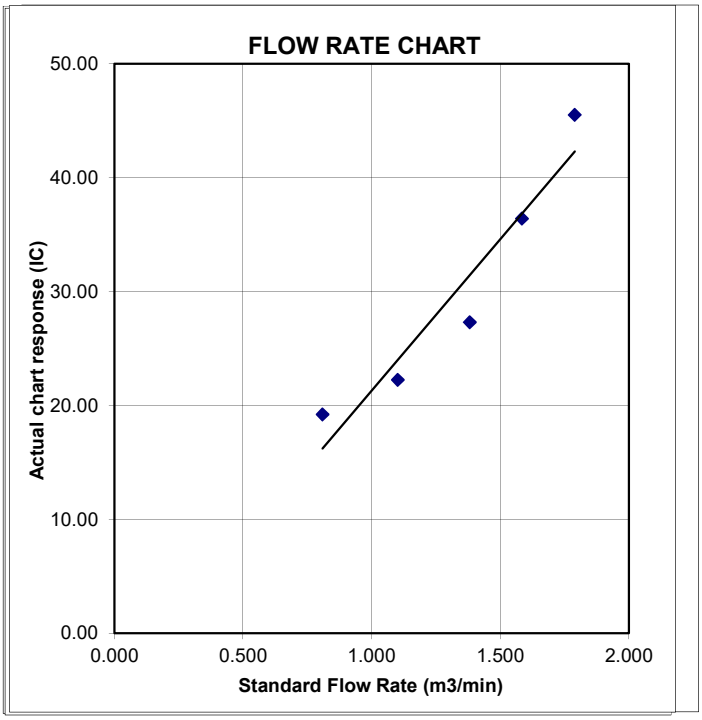
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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
Location ID : AMS 7
Model:TISCH High Volume Air Sampler TE-5170

Date of Calibration: 5-Apr-21
Next Calibration Date: 5-Jun-21
Technician: Mr. Fai So

CONDITIONS

Sea Level Pressure (hPa)	1017.5	Corrected Pressure (mm Hg)	763.125
Temperature (°C)	22.4	Temperature (K)	295

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10574
Model->	TE-5025A	Qstd Intercept ->	-0.00985
Serial # ->	1941		

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	1.701	52	52.34	Slope = 41.8637
13	5.1	5.1	10.2	1.531	48	48.31	Intercept = -17.8631
10	3.8	3.8	7.6	1.322	36	36.23	Corr. coeff. = 0.9956
7	2.6	2.6	5.2	1.095	28	28.18	
5	1.6	1.6	3.2	0.860	18	18.12	

Calculations :

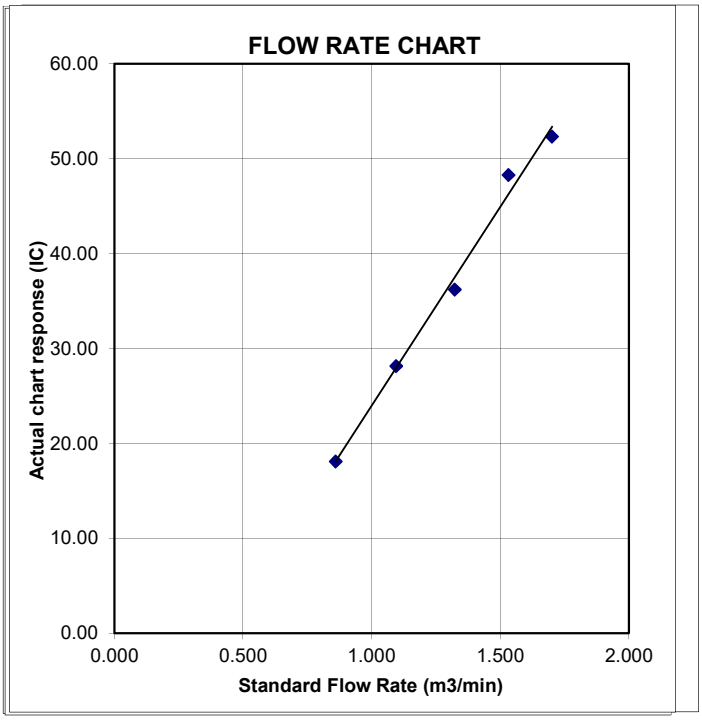
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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



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

Certificate of Calibration
校正證書

Certificate No. : C203572
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC20-1324) Date of Receipt / 收件日期 : 19 June 2020

Description / 儀器名稱 : Sound Calibrator (EQ082)
Manufacturer / 製造商 : Brüel & Kjær
Model No. / 型號 : 4231
Serial No. / 編號 : 2713428
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 : 29 June 2020

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
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
- The Bruel & Kjaer Calibration Laboratory, Denmark
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試 : Cheuk
K P Cheuk
Assistant Engineer

Certified By 核證 : KC Lee
K C Lee
Engineer

Date of Issue 簽發日期 : 6 July 2020

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

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Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C203572
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	C193756
CL281	Multifunction Acoustic Calibrator	CDK1806821
TST150A	Measuring Amplifier	C201309

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	94.0	± 0.2	± 0.2
114 dB, 1 kHz	114.1		

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	Uncertainty of Measured Value (Hz)
1	1.000 0	1 kHz ± 0.1 %	± 0.1

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.

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. : C203573
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC20-1324) Date of Receipt / 收件日期 : 19 June 2020

Description / 儀器名稱	:	Integrating Sound Level Meter (EQ010)
Manufacturer / 製造商	:	Brüel & Kjær
Model No. / 型號	:	2238
Serial No. / 編號	:	2285721
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 : 29 June 2020

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
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
- The Bruel & Kjaer Calibration Laboratory, Denmark
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試 : Cheuk
K P Cheuk
Assistant Engineer

Certified By 核證 :
K C Lee
Engineer

Date of Issue 簽發日期 : 6 July 2020

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. : C203573
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	C200258
CL281	Multifunction Acoustic Calibrator	CDK1806821

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)	
50 - 130	L_{AFP}	A	F	94.00	1	94.3

6.1.1.2 After Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.1	± 0.7

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
50 - 130	L_{AFP}	A	F	94.00	1	94.1 (Ref.)
				104.00		104.0
				114.00		114.0

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

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

Certificate of Calibration
校正證書

Certificate No. : C203573
證書編號

6.2 Time Weighting

6.2.1 Continuous Signal

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.1	Ref.
	L_{ASP}		S			94.1	± 0.1
	L_{AIP}		I			94.1	± 0.1

6.2.2 Tone Burst Signal (2 kHz)

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Burst Duration		
30 - 110	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 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{AFP}	A	F	94.00	31.5 Hz	54.8	-39.4 ± 1.5
					63 Hz	67.9	-26.2 ± 1.5
					125 Hz	77.9	-16.1 ± 1.0
					250 Hz	85.4	-8.6 ± 1.0
					500 Hz	90.9	-3.2 ± 1.0
					1 kHz	94.1	Ref.
					2 kHz	95.3	+1.2 ± 1.0
					4 kHz	95.1	+1.0 ± 1.0
					8 kHz	93.0	-1.1 (+1.5 ; -3.0)
					12.5 kHz	89.9	-4.3 (+3.0 ; -6.0)

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Certificate of Calibration
校正證書

Certificate No. : C203573
證書編號

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{CFP}	C	F	94.00	31.5 Hz	91.2	-3.0 ± 1.5
					63 Hz	93.4	-0.8 ± 1.5
					125 Hz	94.0	-0.2 ± 1.0
					250 Hz	94.1	0.0 ± 1.0
					500 Hz	94.1	0.0 ± 1.0
					1 kHz	94.1	Ref.
					2 kHz	94.0	-0.2 ± 1.0
					4 kHz	93.3	-0.8 ± 1.0
					8 kHz	91.1	-3.0 (+1.5 ; -3.0)
					12.5 kHz	87.9	-6.2 (+3.0 ; -6.0)

6.4 Time Averaging

UUT Setting				Applied Value					UUT Reading (dB)	IEC 60804 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Integrating Time	Frequency (kHz)	Burst Duration (ms)	Burst Duty Factor	Burst Level (dB)	Equivalent Level (dB)		
30 - 110	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	79.9	± 1.0
			5 min.			$1/10^4$		70	69.7	± 1.0

Remarks : - UUT Microphone Model No. : 4188 & S/N : 2812707

- Mfr's Spec. : 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.

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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. : C203574
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC20-1324) Date of Receipt / 收件日期 : 19 June 2020

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 : 29 June 2020

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
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
- The Bruel & Kjaer Calibration Laboratory, Denmark
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試 : Cheuk
K P Cheuk
Assistant Engineer

Certified By 核證 :
K C Lee
Engineer

Date of Issue 簽發日期 : 6 July 2020

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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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	C200258
CL281	Multifunction Acoustic Calibrator	CDK1806821

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	93.8

6.1.1.2 After Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (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		114.0

IEC 60651 Type 1 Spec. : ± 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 Spec. (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			94.1	± 0.1

6.2.2 Tone Burst Signal (2 kHz)

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (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 Spec. (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	90.8	-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 Spec. (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	93.2	-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 Spec. (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	89.6	± 0.5
			60 sec.			$1/10^3$		80	79.1	± 1.0
			5 min.			$1/10^4$		70	69.2	± 1.0

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

- Mfr's Spec. : 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.

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TISCH Environmental

RECALIBRATION DUE DATE:
January 19, 2022

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	January 19, 2021	**Rootsmeter S/N:** 438320	**Ta:** 294	°K
Operator:	Jim Tisch		**Pa:** 755.1	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	1.4830	3.2	2.00
2	3	4	1	1.0420	6.4	4.00
3	5	6	1	0.9290	8.0	5.00
4	7	8	1	0.8840	8.8	5.50
5	9	10	1	0.7340	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)
1.0029	0.6762	1.4192	0.9958	0.6715	0.8824
0.9986	0.9583	2.0071	0.9915	0.9516	1.2479
0.9965	1.0726	2.2440	0.9894	1.0650	1.3952
0.9954	1.1260	2.3535	0.9883	1.1180	1.4633
0.9899	1.3487	2.8385	0.9829	1.3391	1.7648
QSTD	**m=**	**2.10574**	**QA**	**m=**	**1.31858**
	b=	**-0.00985**		**b=**	**-0.00612**
	r=	**0.99992**		**r=**	**0.99992**

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	:	**HK2102513**
CLIENT	: **ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING**			
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG	SUB-BATCH	:	1
		DATE RECEIVED	:	15-JAN-2021
		DATE OF ISSUE	:	26-JAN-2021
PROJECT	:	NO. OF SAMPLES	:	1
		CLIENT ORDER	:	---

General Comments

- **Samples(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.**
- **Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.**
- **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 is the Final Report and supersedes any preliminary report with this batch number.

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

ALS Technichem (HK) Pty Ltd
Part of the ALS Laboratory Group
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Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK2102513
SUB-BATCH : 1
CLIENT : ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING
PROJECT :

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2102513-001	S/N: 3Y6502	AIR	15-Jan-2021	S/N: 3Y6502

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	3Y6502
Equipment Ref:	EQ113
Job Order	HK2102513

Standard Equipment:

Standard Equipment:	Higher Volume Sampler
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	8 October 2020

Equipment Verification Results:

Testing Date: 31 December 2020

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m^3 (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr01min	09:16 ~ 11:17	10.9	1027.0	0.058	3101	25.6
2hr01min	11:19 ~ 11:20	10.9	1027.0	0.027	1276	10.5
2hr01min	11:22 ~ 13:23	10.9	1027.0	0.026	1007	8.3

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

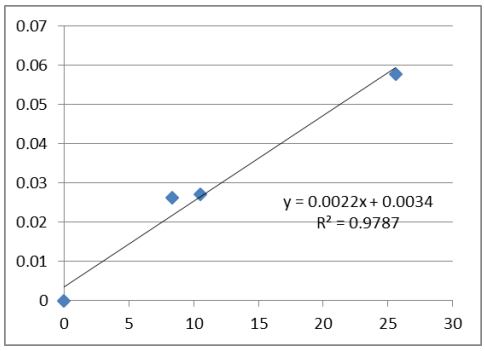
Sensitivity Adjustment Scale Setting (After Calibration) 655 (CPM)

Linear Regression of Y or X

Slope (K-factor): 0.0022

Correlation Coefficient 0.9893

Date of Issue 8 January 2021



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 0.0022 should be apply for TSP monitoring

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

Operator : Fai So Signature : Date : 8 January 2021

QC Reviewer : Ben Tam Signature : Date : 8 January 2021

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	8-Oct-20
Location ID :	Calibration Room	Next Calibration Date:	8-Jan-21

CONDITIONS

Sea Level Pressure (hPa)	1015.2	Corrected Pressure (mm Hg)	761.4
Temperature (°C)	25.5	Temperature (K)	299

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.03014
Model->	5025A	Qstd Intercept ->	-0.04616
Calibration Date->	7-Feb-20	Expiry Date->	7-Feb-21

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	1.785	56	56.00	Slope = 38.0056
13	5.1	5.1	10.2	1.596	49	49.00	Intercept = -11.6655
10	4	4	8.0	1.416	42	42.00	Corr. coeff. = 0.9991
8	2.5	2.5	5.0	1.124	32	32.00	
5	1.5	1.5	3.0	0.876	21	21.00	

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)

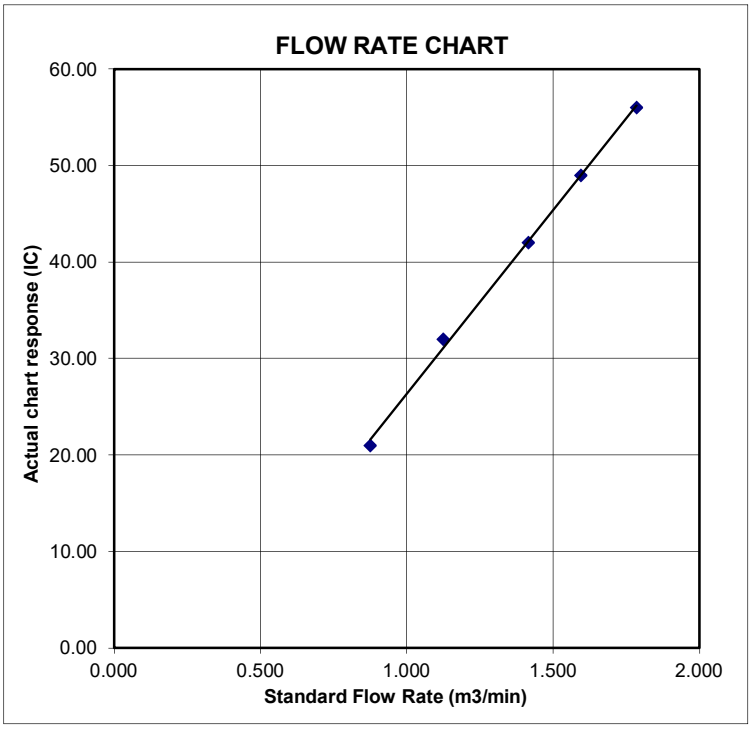
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



TISCH Environmental

RECALIBRATION DUE DATE:
February 7, 2021

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	February 7, 2020	**Rootsmeter S/N:** 438320	**Ta:** 295	°K
Operator:	Jim Tisch		**Pa:** 745.5	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **1612**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.3730	3.2	2.00
2	3	4	1	0.9820	6.4	4.00
3	5	6	1	0.8780	8.0	5.00
4	7	8	1	0.8340	8.8	5.50
5	9	10	1	0.6900	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9866	0.7186	1.4078	0.9957	0.7252	0.8896
0.9824	1.0004	1.9909	0.9914	1.0096	1.2581
0.9802	1.1165	2.2259	0.9893	1.1267	1.4066
0.9792	1.1741	2.3345	0.9882	1.1849	1.4753
0.9739	1.4114	2.8155	0.9828	1.4244	1.7792
QSTD	**m=**	**2.03014**	**QA**	**m=**	**1.27124**
	b=	**-0.04616**		**b=**	**-0.02917**
	r=	**0.99995**		**r=**	**0.99995**

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	:	**HK2102507**
CLIENT	: **ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING**			
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG	SUB-BATCH	:	1
		DATE RECEIVED	:	15-JAN-2021
		DATE OF ISSUE	:	26-JAN-2021
PROJECT	:	NO. OF SAMPLES	:	1
		CLIENT ORDER	:	---

General Comments

- **Samples(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.**
- **Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.**
- **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 is the Final Report and supersedes any preliminary report with this batch 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	:	HK2102507
SUB-BATCH	:	1
CLIENT	:	ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING
PROJECT	:	

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2102507-001	S/N: 366410	AIR	15-Jan-2021	S/N: 366410

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	366410
Equipment Ref:	EQ110
Job Order	HK2102507

Standard Equipment:

Standard Equipment:	Higher Volume Sampler
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	8 October 2020

Equipment Verification Results:

Testing Date: 31 December 2020

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m^3 (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr01min	09:16 ~ 11:17	10.9	1027.0	0.058	3158	26.1
2hr01min	11:19 ~ 11:20	10.9	1027.0	0.027	1608	13.3
2hr01min	11:22 ~ 13:23	10.9	1027.0	0.026	1107	9.2

Sensitivity Adjustment Scale Setting (Before Calibration) 674 (CPM)

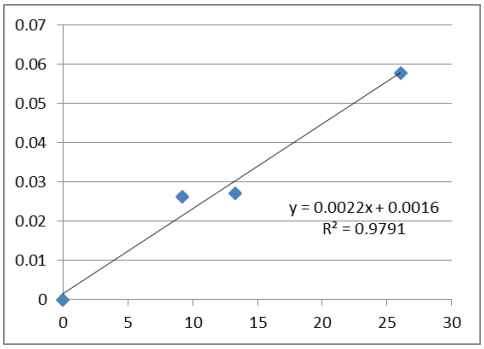
Sensitivity Adjustment Scale Setting (After Calibration) 674 (CPM)

Linear Regression of Y or X

Slope (K-factor): 0.0022

Correlation Coefficient 0.9895

Date of Issue 8 January 2021



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 0.0022 should be apply for TSP monitoring

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

Operator : Fai So Signature : Date : 8 January 2021

QC Reviewer : Ben Tam Signature : Date : 8 January 2021

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	8-Oct-20
Location ID :	Calibration Room	Next Calibration Date:	8-Jan-21

CONDITIONS

Sea Level Pressure (hPa)	1015.2	Corrected Pressure (mm Hg)	761.4
Temperature (°C)	25.5	Temperature (K)	299

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.03014
Model->	5025A	Qstd Intercept ->	-0.04616
Calibration Date->	7-Feb-20	Expiry Date->	7-Feb-21

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	1.785	56	56.00	Slope = 38.0056
13	5.1	5.1	10.2	1.596	49	49.00	Intercept = -11.6655
10	4	4	8.0	1.416	42	42.00	Corr. coeff. = 0.9991
8	2.5	2.5	5.0	1.124	32	32.00	
5	1.5	1.5	3.0	0.876	21	21.00	

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)

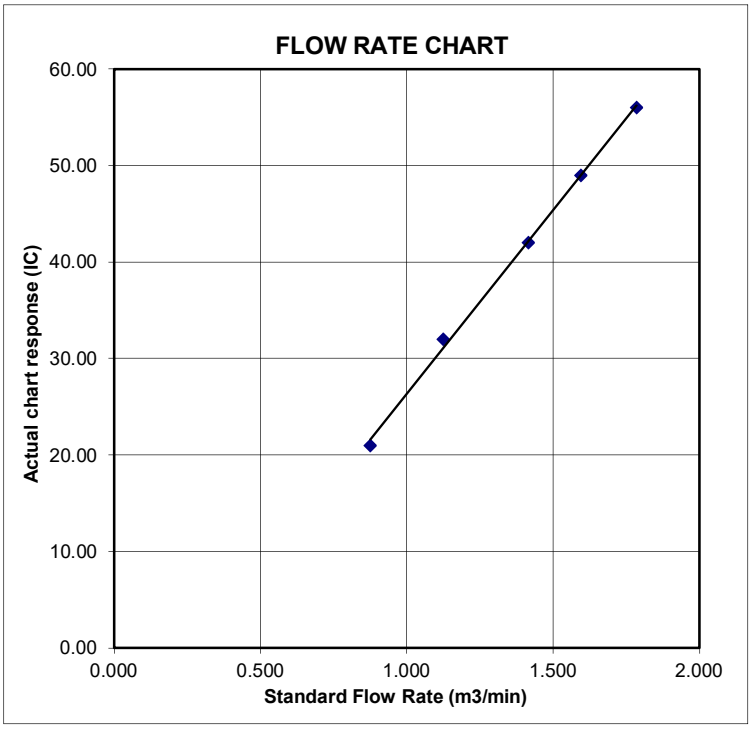
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



TISCH Environmental

RECALIBRATION DUE DATE:
February 7, 2021

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	February 7, 2020	**Rootsmeter S/N:** 438320	**Ta:** 295	°K
Operator:	Jim Tisch		**Pa:** 745.5	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **1612**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.3730	3.2	2.00
2	3	4	1	0.9820	6.4	4.00
3	5	6	1	0.8780	8.0	5.00
4	7	8	1	0.8340	8.8	5.50
5	9	10	1	0.6900	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9866	0.7186	1.4078	0.9957	0.7252	0.8896
0.9824	1.0004	1.9909	0.9914	1.0096	1.2581
0.9802	1.1165	2.2259	0.9893	1.1267	1.4066
0.9792	1.1741	2.3345	0.9882	1.1849	1.4753
0.9739	1.4114	2.8155	0.9828	1.4244	1.7792
QSTD	**m=**	**2.03014**	**QA**	**m=**	**1.27124**
	b=	**-0.04616**		**b=**	**-0.02917**
	r=	**0.99995**		**r=**	**0.99995**

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	:	**HK2025128**
CLIENT	: **ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING**			
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG	SUB-BATCH DATE RECEIVED DATE OF ISSUE	: 1 : 7-JUL-2020 : 14-JUL-2020	
PROJECT	: ----	NO. OF SAMPLES CLIENT ORDER	: 1 : ---	

General Comments

- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.**
- **Sample information (Project name, Sample ID, Sampling date/time, etc., if any) is provided by client.**
- **Calibration was subcontracted to and analysed by Action United Enviro Services.**

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 is the Final Report and supersedes any preliminary report with this batch number.

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

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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	:	HK2025128
SUB-BATCH	:	1
CLIENT	:	ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING
PROJECT	:	----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2025128-001	S/N: 11008018	AIR	07-Jul-2020	S/N: 11008018

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	TSI AM510
Serial No.	11008018
Equipment Ref:	EQ103
Work Order:	HK2025128

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	Calibration Room
Equipment Ref:	HVS 018
Last Calibration Date:	30 June 2020

Equipment Verification Results:

Calibration Date: 30 June 2020

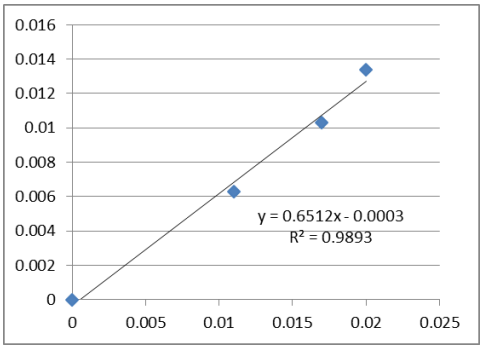
Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m^3 (Standard Equipment)	Concentration in mg/m^3 (Calibrated Equipment)	Tolerance (mg/m^3)
2hr02min	09:14 ~ 11:16	30.7	1004.6	0.013	0.020	+0.007
2hr02min	11:20 ~ 13:22	30.7	1004.6	0.010	0.017	+0.006
2hr02min	13:25 ~ 15:27	30.7	1004.6	0.006	0.011	+0.005

Linear Regression of Y or X

Slope (factor): 0.6512

Correlation Coefficient (R) 0.9946

Date of Issue 6 July 2020



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 0.6512 should be apply for TSP monitoring

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

Operator : Fai So Signature : Date : 6 July 2020

QC Reviewer : Ben Tam Signature : Date : 6 July 2020

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	30-Jun-20
Location ID :	Calibration Room	Next Calibration Date:	30-Sep-20

CONDITIONS

Sea Level Pressure (hPa)	1004.6	Corrected Pressure (mm Hg)	753.45
Temperature (°C)	30.7	Temperature (K)	304

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.03014
Model->	5025A	Qstd Intercept ->	-0.04616
Calibration Date->	7-Feb-20	Expiry Date->	7-Feb-21

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	1.761	56	55.23	Slope = 38.2549
13	4.9	4.9	9.8	1.544	49	48.33	Intercept = -10.8486
10	3.7	3.7	7.4	1.344	43	42.41	Corr. coeff. = 0.9947
8	2.4	2.4	4.8	1.087	32	31.56	
5	1.5	1.5	3.0	0.864	21	20.71	

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)

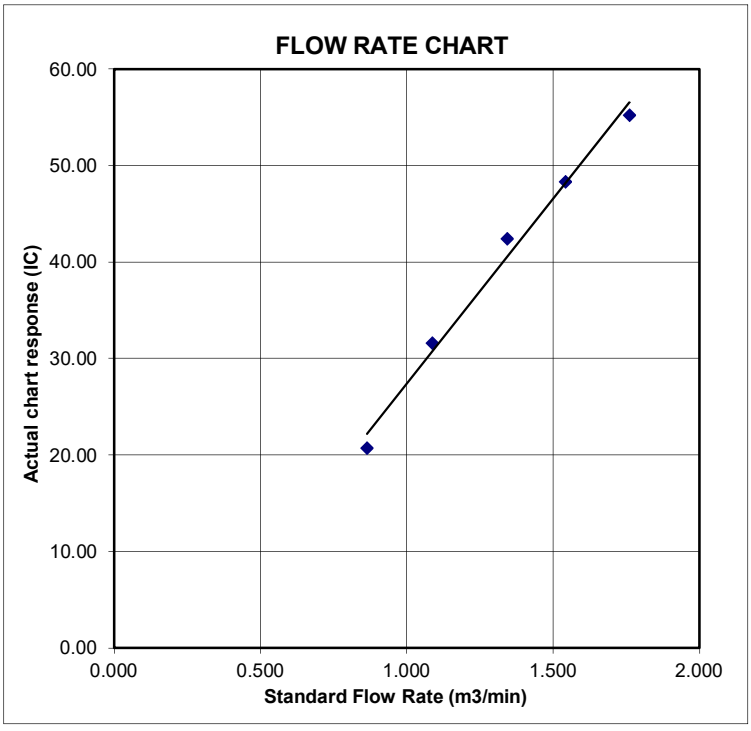
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



TISCH Environmental

RECALIBRATION DUE DATE:
February 7, 2021

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	February 7, 2020	**Rootsmeter S/N:** 438320	**Ta:** 295	°K
Operator:	Jim Tisch		**Pa:** 745.5	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **1612**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.3730	3.2	2.00
2	3	4	1	0.9820	6.4	4.00
3	5	6	1	0.8780	8.0	5.00
4	7	8	1	0.8340	8.8	5.50
5	9	10	1	0.6900	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9866	0.7186	1.4078	0.9957	0.7252	0.8896
0.9824	1.0004	1.9909	0.9914	1.0096	1.2581
0.9802	1.1165	2.2259	0.9893	1.1267	1.4066
0.9792	1.1741	2.3345	0.9882	1.1849	1.4753
0.9739	1.4114	2.8155	0.9828	1.4244	1.7792
QSTD	**m=**	**2.03014**	**QA**	**m=**	**1.27124**
	b=	**-0.04616**		**b=**	**-0.02917**
	r=	**0.99995**		**r=**	**0.99995**

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	: HK2025133
CLIENT	: ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING		
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG	SUB-BATCH DATE RECEIVED DATE OF ISSUE	: 1 : 7-JUL-2020 : 14-JUL-2020
PROJECT	: ----	NO. OF SAMPLES CLIENT ORDER	: 1 : ----

General Comments

- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.**
- **Sample information (Project name, Sample ID, Sampling date/time, etc., if any) is provided by client.**
- **Calibration was subcontracted to and analysed by Action United Enviro Services.**

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 is the Final Report and supersedes any preliminary report with this batch number.

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

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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	: HK2025133
SUB-BATCH	: 1
CLIENT	: ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING
PROJECT	: ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2025133-001	S/N: 11008060	AIR	07-Jul-2020	S/N: 11008060

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	TSI AM510
Serial No.	11008060
Equipment Ref:	EQ101
Work Order:	HK2025133

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	Calibration Room
Equipment Ref:	HVS 018
Last Calibration Date:	30 June 2020

Equipment Verification Results:

Testing Date: 30 June 2020

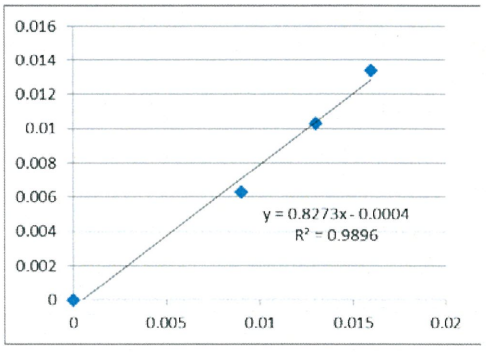
Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m^3 (Standard Equipment)	Concentration in mg/m^3 (Calibrated Equipment)	Tolerance (mg/m^3)
2hr02min	09:14 ~ 11:16	30.7	1004.6	0.013	0.016	+0.003
2hr02min	11:20 ~ 13:22	30.7	1004.6	0.010	0.013	+0.003
2hr02min	13:25 ~ 15:27	30.7	1004.6	0.006	0.009	+0.003

Linear Regression of Y or X

Slope (factor): 0.8273

Correlation Coefficient (R) 0.9948

Date of Issue 6 July 2020



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 0.8273 should be apply for TSP monitoring

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

Operator : Fai So Signature : Date : 6 July 2020

QC Reviewer : Ben Tam Signature : Date : 6 July 2020

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	30-Jun-20
Location ID :	Calibration Room	Next Calibration Date:	30-Sep-20

CONDITIONS

Sea Level Pressure (hPa)	1004.6	Corrected Pressure (mm Hg)	753.45
Temperature (°C)	30.7	Temperature (K)	304

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.03014
Model->	5025A	Qstd Intercept ->	-0.04616
Calibration Date->	7-Feb-20	Expiry Date->	7-Feb-21

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	1.761	56	55.23	Slope = 38.2549
13	4.9	4.9	9.8	1.544	49	48.33	Intercept = -10.8486
10	3.7	3.7	7.4	1.344	43	42.41	Corr. coeff. = 0.9947
8	2.4	2.4	4.8	1.087	32	31.56	
5	1.5	1.5	3.0	0.864	21	20.71	

Calculations :

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

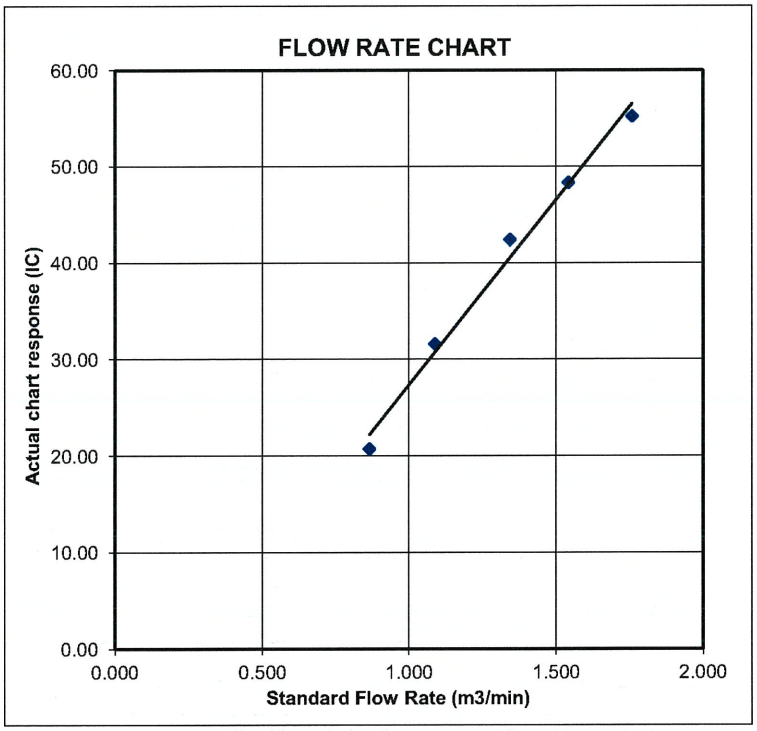
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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:
February 7, 2021

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	February 7, 2020	**Rootsmeter S/N:** 438320	**Ta:** 295	°K
Operator:	Jim Tisch		**Pa:** 745.5	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **1612**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.3730	3.2	2.00
2	3	4	1	0.9820	6.4	4.00
3	5	6	1	0.8780	8.0	5.00
4	7	8	1	0.8340	8.8	5.50
5	9	10	1	0.6900	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9866	0.7186	1.4078	0.9957	0.7252	0.8896
0.9824	1.0004	1.9909	0.9914	1.0096	1.2581
0.9802	1.1165	2.2259	0.9893	1.1267	1.4066
0.9792	1.1741	2.3345	0.9882	1.1849	1.4753
0.9739	1.4114	2.8155	0.9828	1.4244	1.7792
QSTD	**m=**	**2.03014**	**QA**	**m=**	**1.27124**
	b=	**-0.04616**		**b=**	**-0.02917**
	r=	**0.99995**		**r=**	**0.99995**

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.co
TOLL FREE: (877)263-761
FAX: (513)467-90

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

Certificate of Calibration
校正證書

Certificate No. : C205468
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC20-1324) Date of Receipt / 收件日期 : 22 September 2020

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 : 29 September 2020

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
The results are detailed in the subsequent page(s).

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

Tested By 測試 : K P Cheuk
Assistant Engineer

Certified By 核證 : H C Chan
Engineer

Date of Issue 簽發日期 : 30 September 2020

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. : C205468
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	C203952
CL281	Multifunction Acoustic Calibrator	CDK1806821
TST150A	Measuring Amplifier	C201309

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	94.1	± 0.3	± 0.2

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	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.

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

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

has been accepted by the HKAS Executive, on the recommendation of the Accreditation Advisory Board, as a
為香港認可處執行機關根據認可諮詢委員會建議而接受的

HOKLAS Accredited Laboratory
「香港實驗所認可計劃」認可實驗所

This laboratory meets the requirements of ISO / IEC 17025 : 2005 – General requirements for the competence
此實驗所符合ISO / IEC 17025 : 2005 –《測試及校正實驗所能力的通用規定》所訂的要求，
of testing and calibration laboratories and it has been accredited for performing specific tests or calibrations as
獲認可進行載於香港實驗所認可計劃《認可實驗所名冊》內下述測試類別中的指定
listed in the HOKLAS Directory of Accredited Laboratories within the test category of
測試或校正工作

Environmental Testing
環境測試

This laboratory is accredited in accordance with the recognised International Standard ISO / IEC 17025 : 2005.
本實驗所乃根據公認的國際標準 ISO / IEC 17025 : 2005 獲得認可。
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory
這項認可資格演示在指定範疇所需的技術能力及實驗所質量管理體系的運作
quality management system (see joint IAF-ILAC-ISO Communiqué).
(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 the Hong Kong Accreditation Service is affixed hereto by the authority of the HKAS Executive
香港認可處根據認可處執行機關的權限在此蓋上通用印章

CHAN Sing Sing, Terence, Executive Administrator
執行幹事 陳成城
Issue Date : 5 May 2009
簽發日期：二零零九年五月五日

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

L 000552

Appendix F

Event and Action Plan

Event / Action Plan for construction dust

Event	Action			
	ET	**IEC**	**ER**	**Contractor**
Action Level exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC, ER and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Rectify any unacceptable practice and implement remedial measures; and 3. Amend working methods agreed with ER if appropriate.
Action Level exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC, ER and Contractor; 3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; and 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 3. Implement the agreed proposals; and 4. Amend proposal if appropriate.
Limit Level exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor, IEC and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; and 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise the ER and ET on the effectiveness of the proposed remedial measures; and 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; and 5. Amend proposal if appropriate.
Limit Level exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 5. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise and ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; 5. Resubmit proposals if problem still not under control; and 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event and Action Plan for Construction Noise

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

Appendix G

Impact Monitoring Schedule

Impact Monitoring Schedule for the Reporting Period

Date		Noise Monitoring (0700 – 1900)	Air Quality Monitoring	
			1-hour TSP	24-hour TSP
Thu	1-Apr-21		✓	✓
Fri	2-Apr-21			
Sat	3-Apr-21			
Sun	4-Apr-21			
Mon	5-Apr-21			
Tue	6-Apr-21			
Wed	7-Apr-21	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	✓	✓
Thu	8-Apr-21	CN1, CN2, CN3 and NMS8		
Fri	9-Apr-21			
Sat	10-Apr-21		✓	
Sun	11-Apr-21			
Mon	12-Apr-21			✓
Tue	13-Apr-21			
Wed	14-Apr-21			
Thu	15-Apr-21	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	✓	
Fri	16-Apr-21	CN1, CN2, CN3 and NMS8		
Sat	17-Apr-21			✓
Sun	18-Apr-21			
Mon	19-Apr-21			
Tue	20-Apr-21			
Wed	21-Apr-21	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	✓	
Thu	22-Apr-21	CN1, CN2, CN3 and NMS8		
Fri	23-Apr-21			✓
Sat	24-Apr-21			
Sun	25-Apr-21			
Mon	26-Apr-21			
Tue	27-Apr-21	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	✓	
Wed	28-Apr-21	CN1, CN2, CN3 and NMS8		
Thu	29-Apr-21			✓
Fri	30-Apr-21			

✓	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-May-21			
Sun	2-May-21			
Mon	3-May-21	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	✓	
Tue	4-May-21			
Wed	5-May-21			✓
Thu	6-May-21			
Fri	7-May-21	CN1, CN2, CN3 and NMS8		
Sat	8-May-21		✓	
Sun	9-May-21			
Mon	10-May-21			
Tue	11-May-21			✓
Wed	12-May-21			
Thu	13-May-21	CN1, CN2, CN3 and NMS8		
Fri	14-May-21	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	✓	
Sat	15-May-21			
Sun	16-May-21			
Mon	17-May-21			✓
Tue	18-May-21			
Wed	19-May-21			
Thu	20-May-21	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	✓	
Fri	21-May-21			
Sat	22-May-21	CN1, CN2, CN3 and NMS8		✓
Sun	23-May-21			
Mon	24-May-21			
Tue	25-May-21	CN1, CN2, CN3 and NMS8		
Wed	26-May-21	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	✓	
Thu	27-May-21			
Fri	28-May-21			✓
Sat	29-May-21			
Sun	30-May-21			
Mon	31-May-21	CN1, CN2, CN3 and NMS8		

✓	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)	($\mu g/m^3$)
1-Apr-21	26915	23203.72	23227.72	1440	30	32	31	26.7	1007.6	1.24	1792	2.6614	2.7061	0.0447	25
7-Apr-21	26919	23227.72	23251.72	1440	30	32	31	23.1	1016	1.22	1751	2.6522	2.6915	0.0393	22
12-Apr-21	26971	23251.72	23275.72	1440	32	23	27.5	23.6	1018.7	1.13	1630	2.642	2.6724	0.0304	19
17-Apr-21	26683	23275.72	23299.72	1440	32	32	32	22.8	1015.8	1.24	1786	2.8831	3.1016	0.2185	122
23-Apr-21	27013	23299.72	23323.72	1440	32	32	32	27.3	1007.9	1.23	1773	2.8197	2.8756	0.0559	32
29-Apr-21	27015	23323.72	23347.72	1440	40	40	40	24.1	1013.3	1.43	2058	2.8235	2.8936	0.0701	34

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)	($\mu g/m^3$)
1-Apr-21	26916	10416.09	10440.09	1440.00	30	32	31.0	26.7	1007.6	1.40	2009	2.6563	2.6973	0.0410	20
7-Apr-21	26966	10440.09	10464.09	1440.00	30	32	31.0	23.1	1016	1.19	1718	2.6431	2.7220	0.0789	46
12-Apr-21	26972	10464.09	10488.09	1440.00	30	30	30.0	23.6	1018.7	1.17	1683	2.6401	2.6854	0.0453	27
17-Apr-21	26681	10488.09	10512.09	1440.00	30	30	30.0	22.8	1015.8	1.17	1683	2.8743	2.9404	0.0661	39
23-Apr-21	26975	10512.09	10536.09	1440.00	33	33	33.0	27.3	1007.9	1.23	1774	2.6940	2.8024	0.1084	61
29-Apr-21	26790	10536.09	10560.09	1440.00	34	34	34.0	24.1	1013.3	1.26	1818	2.7750	2.8225	0.0475	26

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)	($\mu g/m^3$)
1-Apr-21	26917	15620.03	15644.03	1440.00	30	32	31.0	26.7	1007.6	1.30	1867	2.6512	2.6886	0.0374	20
7-Apr-21	26967	15644.03	15668.03	1440.00	30	32	31.0	23.1	1016	1.16	1673	2.6385	2.7090	0.0705	42
12-Apr-21	26978	15668.03	15692.03	1440.00	30	32	31.0	24.6	1016.1	1.16	1670	2.6817	2.7497	0.0680	41
17-Apr-21	26968	15692.03	15716.03	1440.00	30	32	31.0	22.8	1015.8	1.16	1673	2.6407	2.7328	0.0921	55
23-Apr-21	27011	15716.03	15740.03	1440.00	32	34	33.0	27.3	1007.9	1.20	1730	2.8284	2.9647	0.1363	79
29-Apr-21	26791	15740.03	15764.03	1440.00	34	34	34.0	24.1	1013.3	1.23	1774	2.7920	2.8392	0.0472	27

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)	($\mu g/m^3$)
1-Apr-21	26918	10896.21	10920.21	1440.00	34	36	35.0	26.7	1007.6	1.51	2169	2.6478	2.6939	0.0461	21
7-Apr-21	26920	10920.21	10944.21	1440.00	34	36	35.0	23.1	1016	1.27	1824	2.6556	2.7190	0.0634	35
12-Apr-21	26974	10944.21	10968.21	1440.00	34	34	34.0	23.6	1018.7	1.24	1790	2.6823	2.7270	0.0447	25
17-Apr-21	26682	10968.21	10992.21	1440.00	34	34	34.0	22.8	1015.8	1.24	1790	2.8806	2.9420	0.0614	34
23-Apr-21	27012	10992.21	11016.21	1440.00	34	34	34.0	27.3	1007.9	1.23	1776	2.8234	2.9183	0.0949	53

29-Apr-21	26788	11016.21	11040.21	1440.00	36	36	36.0	24.1	1013.3	1.29	1855	2.7785	2.8139	0.0354	19

NOISE MONITORING RESULT DATABASE FOR CONTRACT 1

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)			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)		
7-Apr-21	11:15	60.8	62	59.3	60.6	62	59	58.5	60.2	56.8	58.4	59.4	57.3	61.1	61.5	59.1	59.5	61.2	56.6	60	70
15-Apr-21	11:17	60.6	61.5	59.6	60.6	61.8	59.2	64.8	68.7	60.6	60.4	61.6	58.9	61.2	62.9	59.6	61.4	62.2	60.5	62	70
21-Apr-21	9:02	63.5	65.3	61.8	64.5	66.4	62.4	65.4	67	63.2	65.6	66.6	64.5	63.8	65.2	62	64.7	66.1	63.4	65	70
27-Apr-21	9:22	61.8	63	56.5	60.6	64.5	55.5	60	63.5	55	63.4	65.5	57	59.3	62	54	64.9	66	57.5	62	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)		
7-Apr-21	14:13	63.1	64.6	61.6	61.7	63.5	60.1	61.0	61.9	59.8	61.3	62.5	60.0	62.9	64.5	60.7	61.7	63.5	60.0	62	75
15-Apr-21	10:17	71.5	75.5	61.5	71.7	75.0	63.5	65.3	70.0	55.5	74.7	79.0	59.0	73.8	78.0	63.0	62.7	66.0	55.5	72	75
21-Apr-21	9:48	63.5	66.0	60.0	66.0	69.5	63.0	64.6	65.0	64.0	64.2	66.0	61.5	65.1	68.0	60.0	65.7	67.5	61.5	65	75
27-Apr-21	13:06	65.1	68.0	60.5	67.7	70.5	62.5	68.1	71.0	63.5	66.8	69.5	60.5	67.0	70.0	61.5	66.3	69.5	60.5	67	75

Noise Measurement Results (dB) of NMS4a

Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)	Limit Level dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)		
7-Apr-21	9:30	70.3	73.2	61.9	70.8	73.3	66.5	69.6	73.4	62.2	70.3	73.1	66.9	70.1	71.9	67.6	68.6	70.2	63.1	70	75
15-Apr-21	9:33	73.1	88.5	56.5	71.3	86	55.5	73	64.5	56	62.9	65	56	71.4	62	55	74	73	55	72	75
21-Apr-21	10:31	64.5	66.3	62.6	65.6	67	63.7	69.1	71.2	65.9	70.3	72.3	68.1	69.6	71.4	67.8	69.6	71.7	67	69	75
27-Apr-21	10:58	63.9	65	58.5	65	67.5	59	68.6	70	63.5	66.6	69	60	67.1	70	62.5	65.9	68.5	60.5	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)		
7-Apr-21	16:39	67.1	69.7	63.1	67.1	69	64.2	67.9	69.7	65.5	68.3	69.9	65.8	68.4	70.5	65.9	66.2	68.5	62.3	68	75

15-Apr-21	10:30	67	68.7	65.1	66.7	68.5	63.8	67.3	69	62.3	64.5	66.7	61.1	65.6	67.2	62.6	67.1	69.1	64.5	66	75
21-Apr-21	11:19	60.4	63.5	57	61.2	64.5	57.5	69.9	71.5	63.5	62.4	65.5	56.5	71.4	74.5	63	69.6	73.5	64	68	75
27-Apr-21	10:16	64	66.5	57	63.2	65.5	56.5	62.8	65	55	63.8	66	56.5	64.9	67	57.5	63	66.5	57.5	64	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)		
7-Apr-21	15:03	67.5	69.7	64.3	68.9	71.4	65.3	68.8	71.9	62.3	70.6	72.7	66.9	68.3	69.8	65.4	69.8	72	67	69	75
15-Apr-21	10:57	75.3	78	62.5	62	65.5	59	65.8	70.5	57	68.8	73.5	57.5	69.6	70.5	68	71.6	76.5	60	71	75
21-Apr-21	13:08	69.5	71.7	67.5	70	71.5	68.3	71	72.8	68.4	69.8	71.3	67.8	70.4	72	68.4	70.4	72	67.2	70	75
27-Apr-21	13:57	68.8	71	63.5	66.2	68.5	62	67.2	70	63	69.3	71.5	63.5	68.2	70.5	62.5	67.3	70	62.5	68	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)		
7-Apr-21	15:58	68.7	70.7	65	68.8	71.9	61.5	68.5	71	64.2	68.8	71.1	65.1	69.2	71	66.9	66.6	69.9	60.4	69	75
15-Apr-21	13:49	68.6	71	63.5	68	70	63.5	69.2	72.5	61.5	69.3	72.5	62	71.8	75.5	66	62.8	64.5	60	69	75
21-Apr-21	13:59	70.7	74.5	64.6	68.9	71.6	65	69.8	72.3	66.1	68.9	72.1	64.5	68	70.5	63.8	70	73.2	64.5	69	75
27-Apr-21	14:44	67.6	70	63.5	68.3	70.5	64	66	69.5	61	67.6	69.5	63	69.5	72	64.5	69.2	71.5	64	68	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)		
8-Apr-21	10:12	64.7	68.2	59.6	65.5	68.6	60.9	63.7	67.9	59.8	63	68.8	60.7	64	68.7	60.7	63.5	67.7	59.8	64	75
16-Apr-21	14:53	65.7	69.5	55.5	66.1	70.5	52	64.9	69.5	54	65.9	70.5	54.5	65.2	69	53.5	67.2	71.5	56.5	66	75
22-Apr-21	11:27	67.3	69.5	63	68.4	70.5	65	69.4	72	65	68.3	70.5	64	66.4	69	61.5	68.2	69.5	66	68	75
28-Apr-21	9:11	64.2	67	58.7	65	67.7	59.5	63.7	66.6	58.3	63.1	66.5	55.9	64.5	67.7	58.7	65.8	67.3	59.4	64	75

NOISE MONITORING RESULT DATABASE FOR CONTRACT 3

Noise Measurement Results (dB) of CN1

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)		
8-Apr-21	11:40	56.7	58	51.1	60.5	61	50.5	55.2	57.5	50.4	57	58.7	50.6	53.6	55.5	48.9	59.2	59.3	50	58	70
16-Apr-21	14:35	61.1	62	60.2	61.2	62.8	59.8	63.5	65.3	61.5	63.8	65.5	61.5	63.8	65.3	61.9	63.7	65	61.4	63	70
22-Apr-21	9:13	62.1	63.3	60.9	64.3	65.7	62.4	61.6	62.7	60.2	62.3	64.1	60.3	61.5	63	60.1	62.9	64.4	60.8	63	70
28-Apr-21	11:29	61.2	64	58.5	62	64	59.5	64	65.5	61.5	63.1	64	61.5	62.8	64	59	66.5	67.5	63	64	70

Noise Measurement Results (dB) of CN2

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)**		
8-Apr-21	11:04	64.1	65.2	61.2	68.9	68.6	60.9	68.5	68.6	61.1	63.5	65	60.8	65.5	66.2	61.5	66	67.4	61.9	67	70
16-Apr-21	13:51	59.6	60.5	58	60.7	61.8	59.3	61.8	63.3	60.4	61.3	62.9	59.8	61.9	63.6	60.2	64	66.5	60.6	62	70
22-Apr-21	9:57	64.1	67	59	61.6	63.5	58.5	67	69.5	58	61.7	65.5	58.5	65.8	67.5	58.5	63.6	66	59.5	64	70
28-Apr-21	10:44	62.1	65	57	59.6	61.5	56.5	65	67.5	56	59.7	63.5	56.5	63.8	65.5	56.5	61.6	64	57.5	62	70

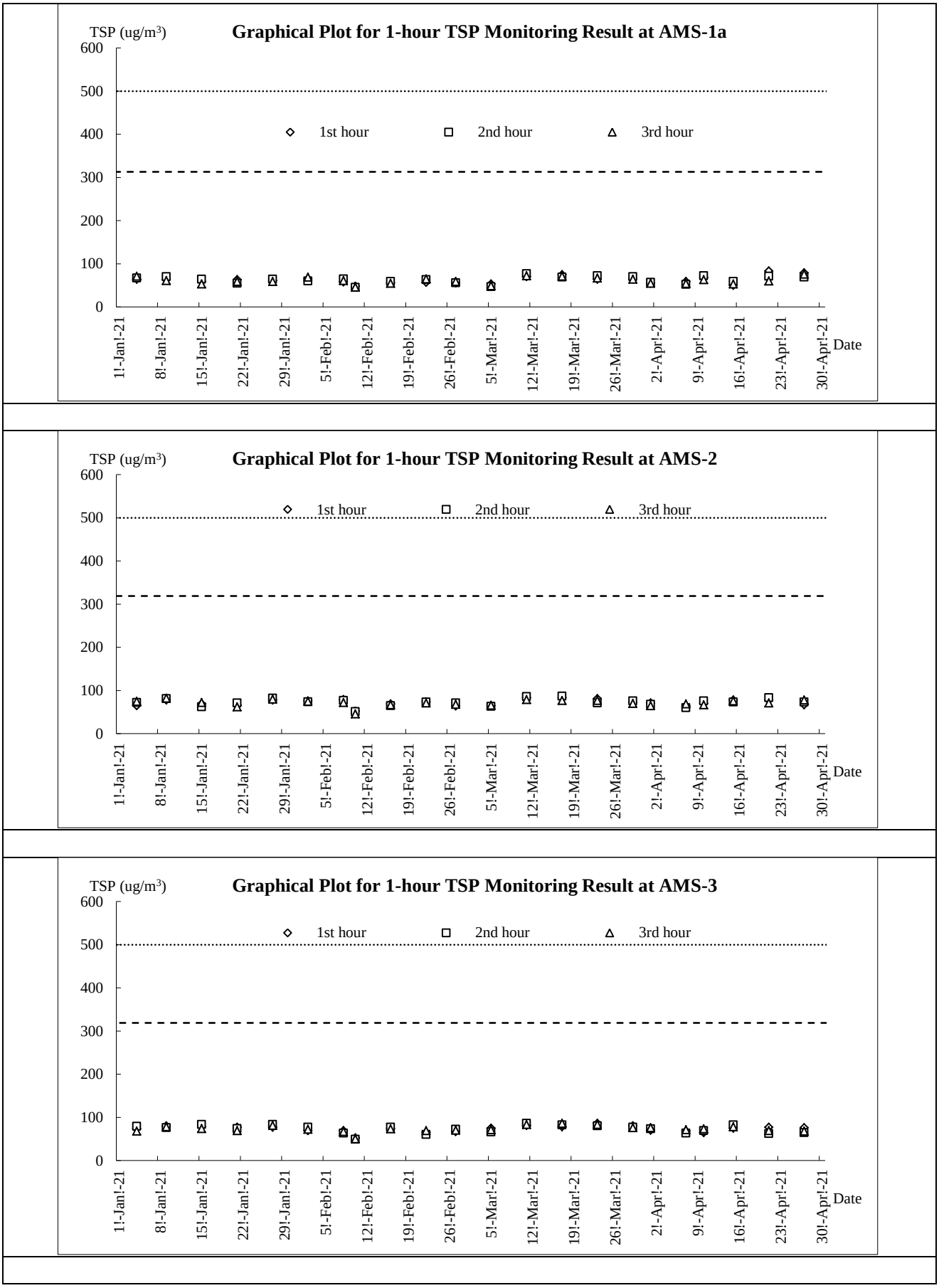
Noise Measurement Results (dB) of CN3

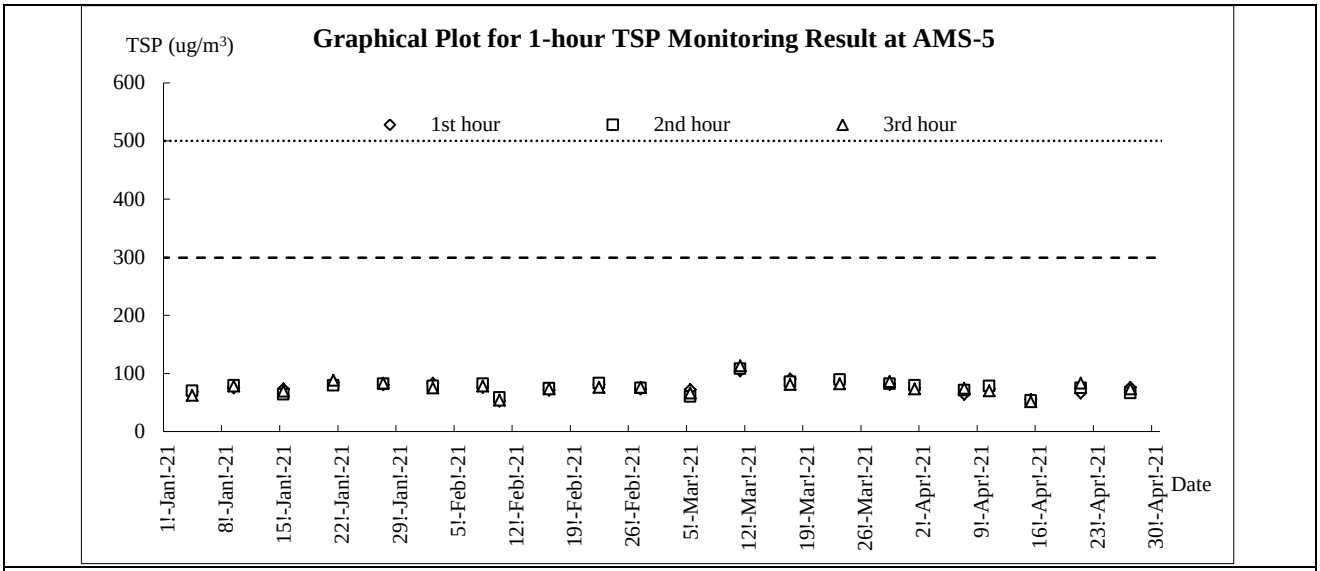
Date	**Start Time**	**1st Leq (5min)**			**2nd Leq (5min)**			**3rd Leq (5min)**			**4th Leq (5min)**			**5th Leq (5min)**			**6th Leq (5min)**			**Leq30min, dB(A)**	**Limit Level dB(A)**
		Leq, dB(A)	**L10, dB(A)**	**L90, dB(A)**	**Leq, dB(A)**	**L10, dB(A)**	**L90, dB(A)**	**Leq, dB(A)**	**L10, dB(A)**	**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)**		
8-Apr-21	9:14	60.8	63.4	56.3	65.2	68.1	56.7	63.5	66.5	57.5	63.6	65.2	56.2	65.2	69.6	57.1	63.2	65.6	57.7	64	75
16-Apr-21	13:00	61.6	62.3	60.2	62.8	63.6	60.7	64.9	67	61	65	67	61.9	65.4	66.9	63.6	64.4	66.7	61.2	64	75
22-Apr-21	10:48	63.3	64.8	61.6	64.5	66.6	61.5	65	66.8	62.4	63.6	65.1	61.5	65.5	67.8	62.6	66	68.1	62.4	65	75
28-Apr-21	10:03	67.6	70	62.5	67	69	62.5	68.2	71.5	60.5	68.3	71.5	61	70.8	74.5	65	61.8	63.5	59	68	75

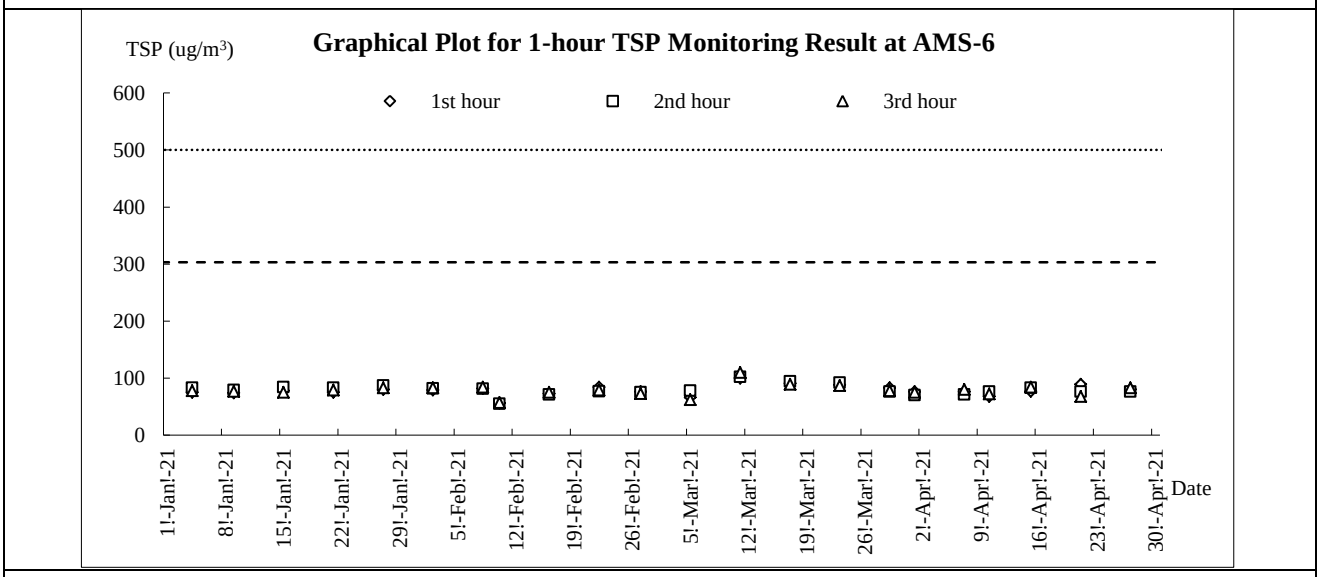
Appendix I

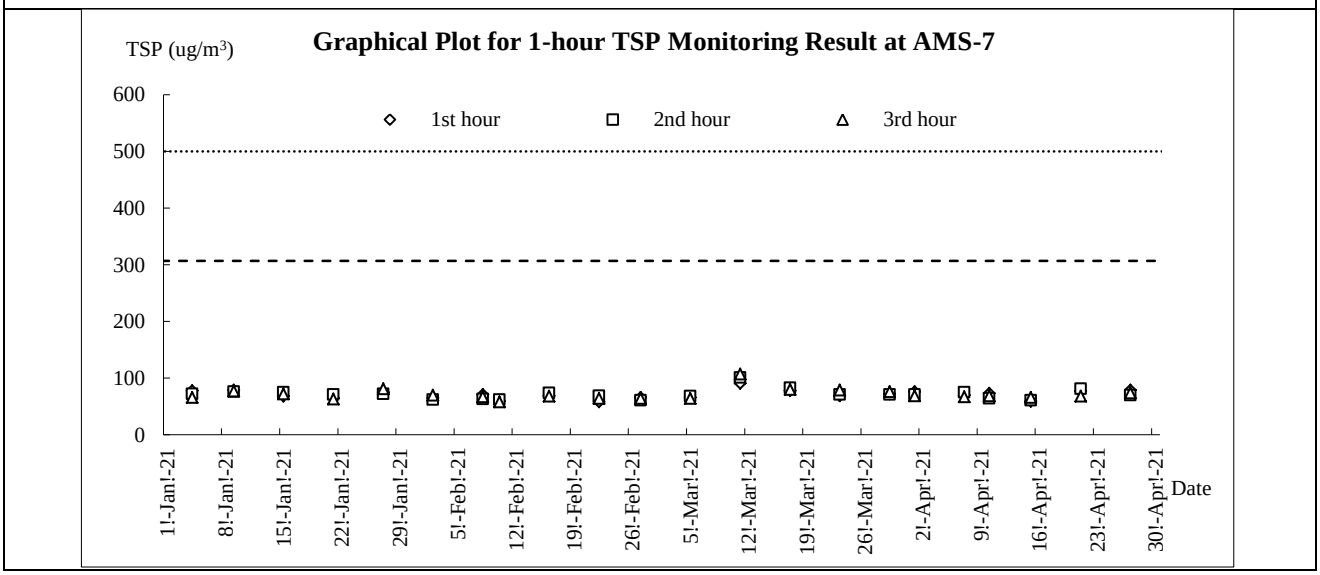
Graphical Plots for Monitoring Result

Air Quality – 1-hour TSP

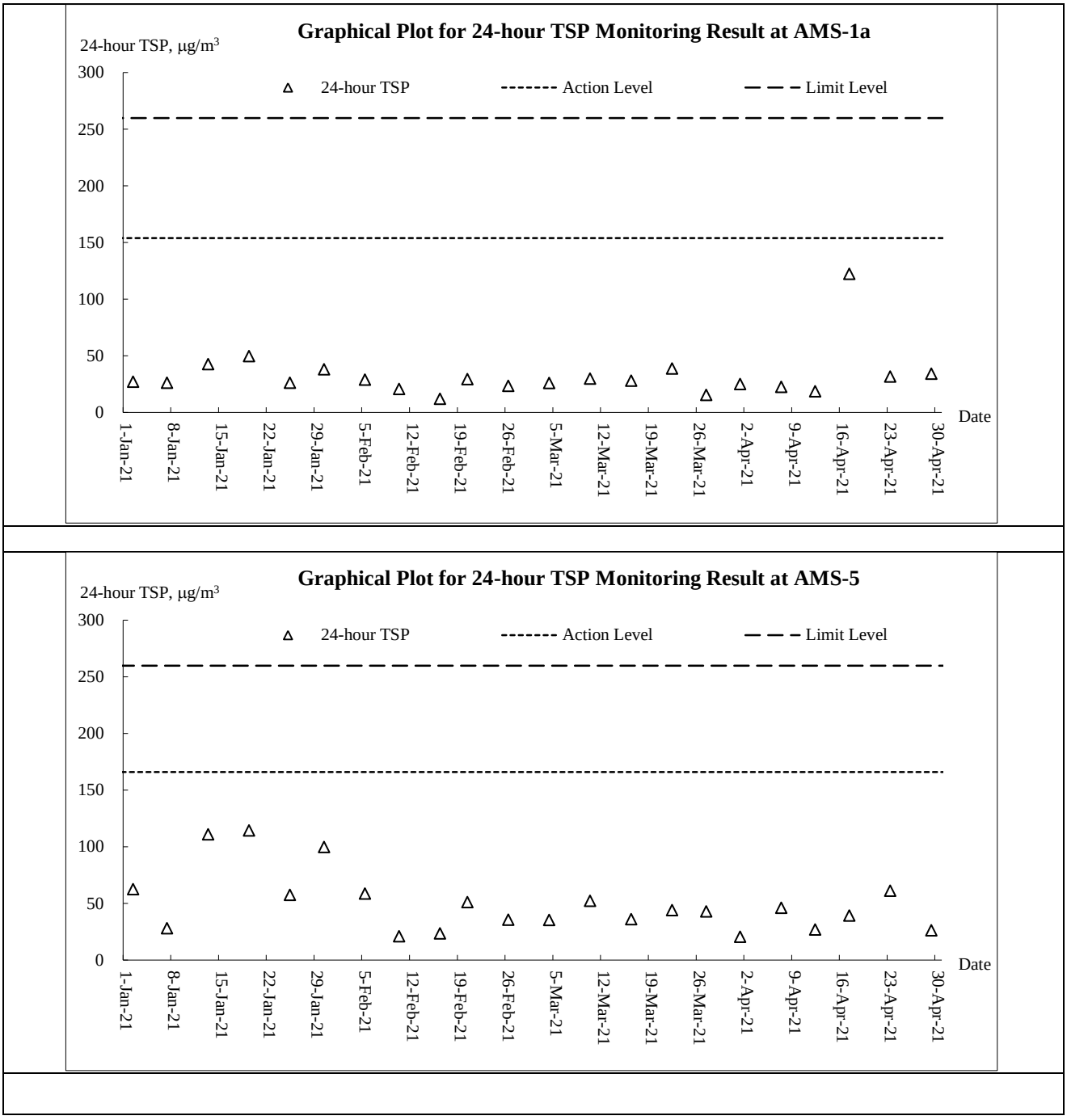


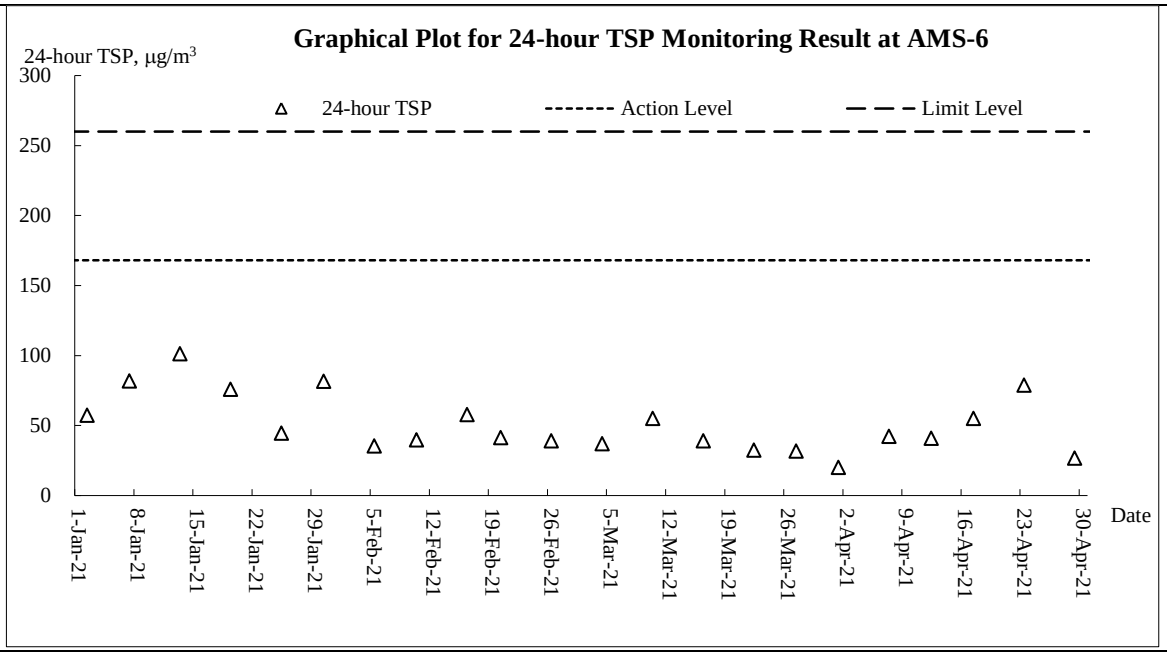

Graphical Plot for 1-hour TSP Monitoring Result at AMS-5
TSP (ug/m3)
1st hour
2nd hour
3rd hour
600
500
400
300
200
100
0
1!-Jan!-21
8!-Jan!-21
15!-Jan!-21
22!-Jan!-21
29!-Jan!-21
5!-Feb!-21
12!-Feb!-21
19!-Feb!-21
26!-Feb!-21
5!-Mar!-21
12!-Mar!-21
19!-Mar!-21
26!-Mar!-21
2!-Apr!-21
9!-Apr!-21
16!-Apr!-21
23!-Apr!-21
30!-Apr!-21
Date

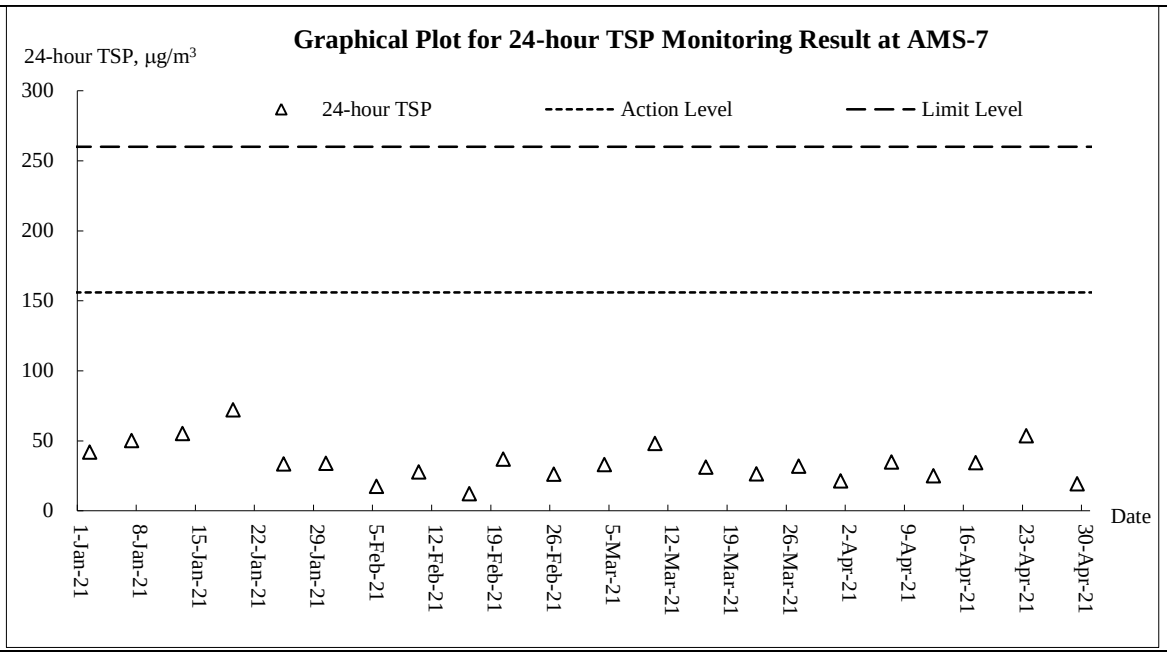

Graphical Plot for 1-hour TSP Monitoring Result at AMS-6
TSP (ug/m3)
1st hour
2nd hour
3rd hour
600
500
400
300
200
100
0
1!-Jan!-21
8!-Jan!-21
15!-Jan!-21
22!-Jan!-21
29!-Jan!-21
5!-Feb!-21
12!-Feb!-21
19!-Feb!-21
26!-Feb!-21
5!-Mar!-21
12!-Mar!-21
19!-Mar!-21
26!-Mar!-21
2!-Apr!-21
9!-Apr!-21
16!-Apr!-21
23!-Apr!-21
30!-Apr!-21
Date


Graphical Plot for 1-hour TSP Monitoring Result at AMS-7
TSP (ug/m3)
1st hour
2nd hour
3rd hour
600
500
400
300
200
100
0
1!-Jan!-21
8!-Jan!-21
15!-Jan!-21
22!-Jan!-21
29!-Jan!-21
5!-Feb!-21
12!-Feb!-21
19!-Feb!-21
26!-Feb!-21
5!-Mar!-21
12!-Mar!-21
19!-Mar!-21
26!-Mar!-21
2!-Apr!-21
9!-Apr!-21
16!-Apr!-21
23!-Apr!-21
30!-Apr!-21
Date

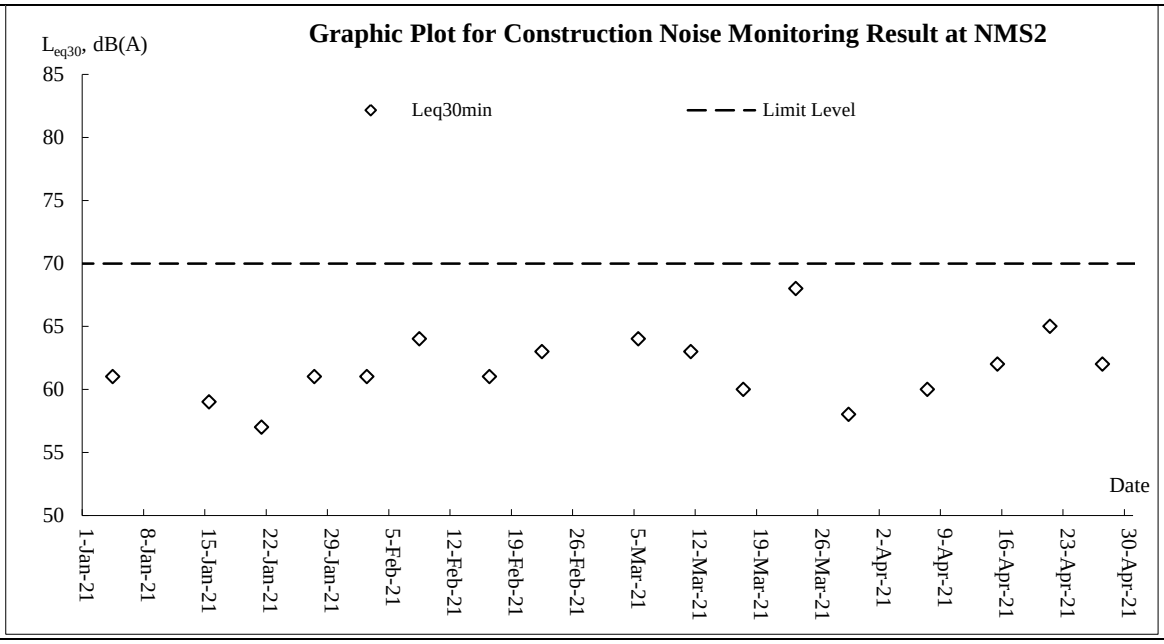
Air Quality – 24-hour TSP




Graphical Plot for 24-hour TSP Monitoring Result at AMS-6
24-hour TSP, μg/m³
24-hour TSP
Action Level
Limit Level
300
250
200
150
100
50
0
1-Jan-21
8-Jan-21
15-Jan-21
22-Jan-21
29-Jan-21
5-Feb-21
12-Feb-21
19-Feb-21
26-Feb-21
5-Mar-21
12-Mar-21
19-Mar-21
26-Mar-21
2-Apr-21
9-Apr-21
16-Apr-21
23-Apr-21
30-Apr-21
Date


Graphical Plot for 24-hour TSP Monitoring Result at AMS-7
24-hour TSP, μg/m³
24-hour TSP
Action Level
Limit Level
300
250
200
150
100
50
0
1-Jan-21
8-Jan-21
15-Jan-21
22-Jan-21
29-Jan-21
5-Feb-21
12-Feb-21
19-Feb-21
26-Feb-21
5-Mar-21
12-Mar-21
19-Mar-21
26-Mar-21
2-Apr-21
9-Apr-21
16-Apr-21
23-Apr-21
30-Apr-21
Date

Noise


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-Jan-21
8-Jan-21
15-Jan-21
22-Jan-21
29-Jan-21
5-Feb-21
12-Feb-21
19-Feb-21
26-Feb-21
5-Mar-21
12-Mar-21
19-Mar-21
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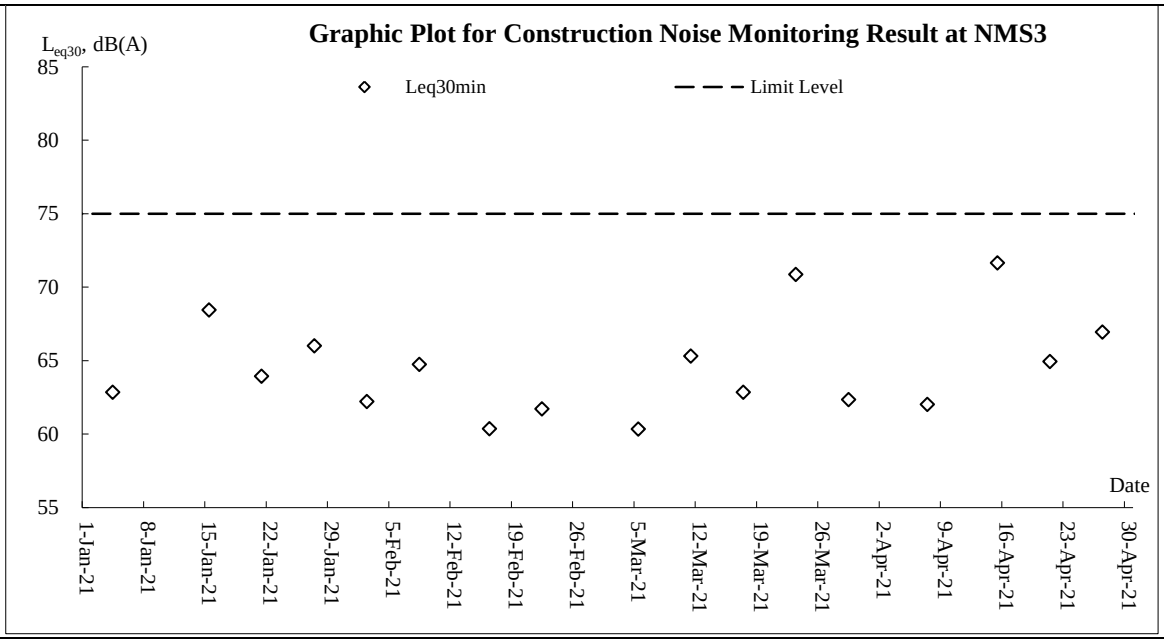
2-Apr-21
9-Apr-21
16-Apr-21
23-Apr-21
30-Apr-21


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-Jan-21
8-Jan-21
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5-Feb-21
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26-Feb-21
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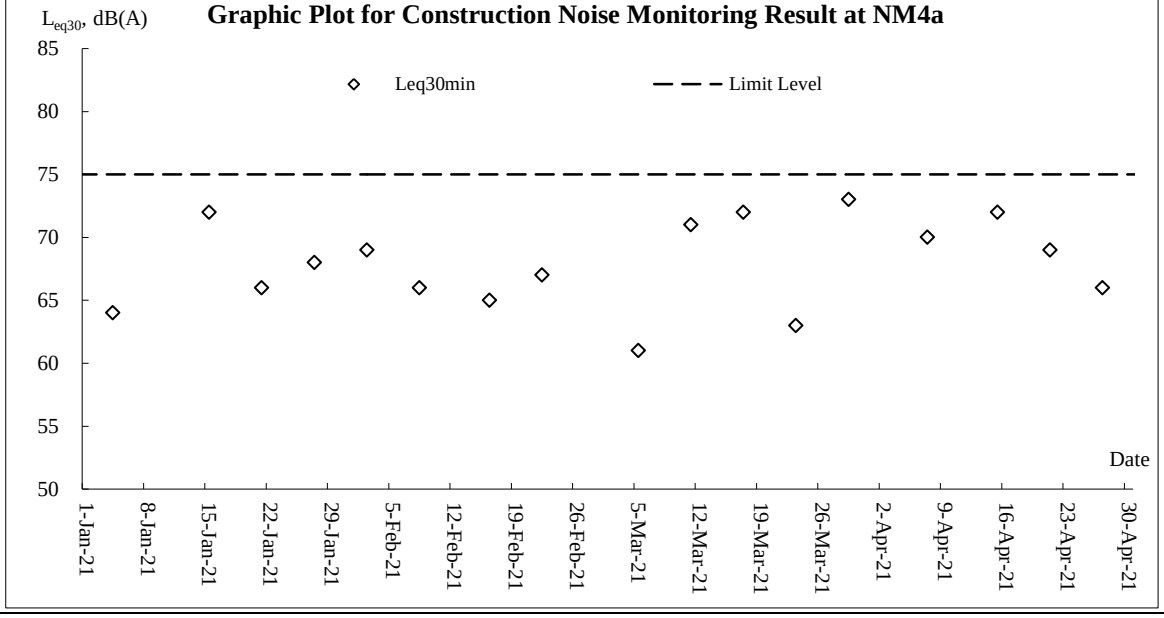
30-Apr-21


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-Jan-21
8-Jan-21
15-Jan-21
22-Jan-21
29-Jan-21
5-Feb-21
12-Feb-21
19-Feb-21
26-Feb-21
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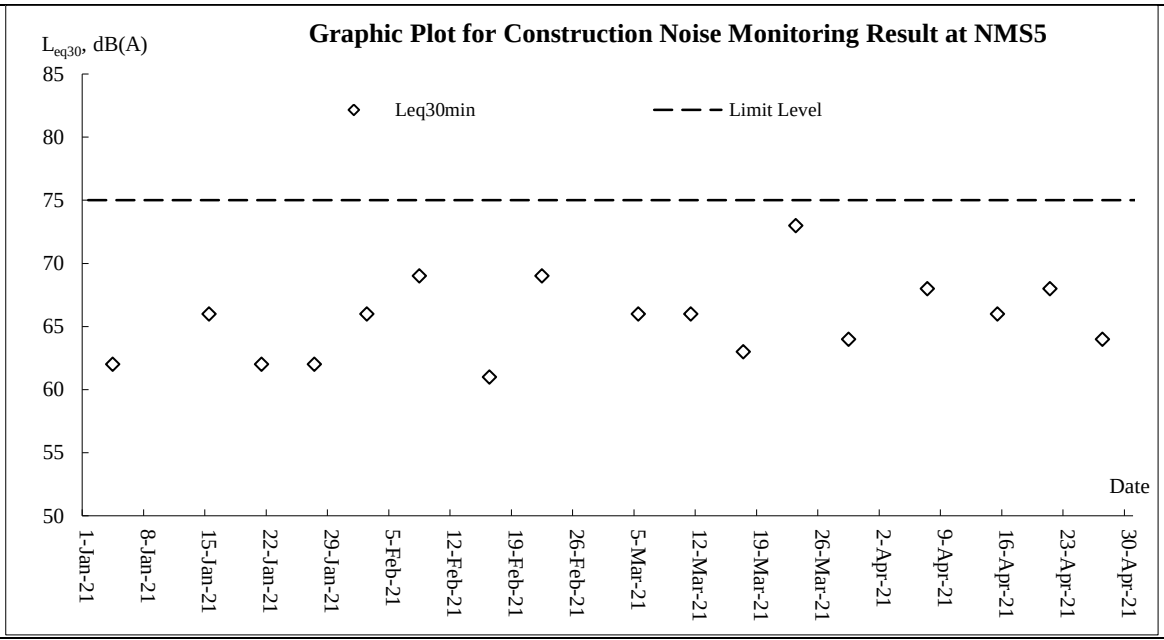
Graphic Plot for Construction Noise Monitoring Result at NMS5
L_{eq30}, dB(A)
Leq30min
Limit Level
85
80
75
70
65
60
55
50
Date
1-Jan-21
8-Jan-21
15-Jan-21
22-Jan-21
29-Jan-21
5-Feb-21
12-Feb-21
19-Feb-21
26-Feb-21
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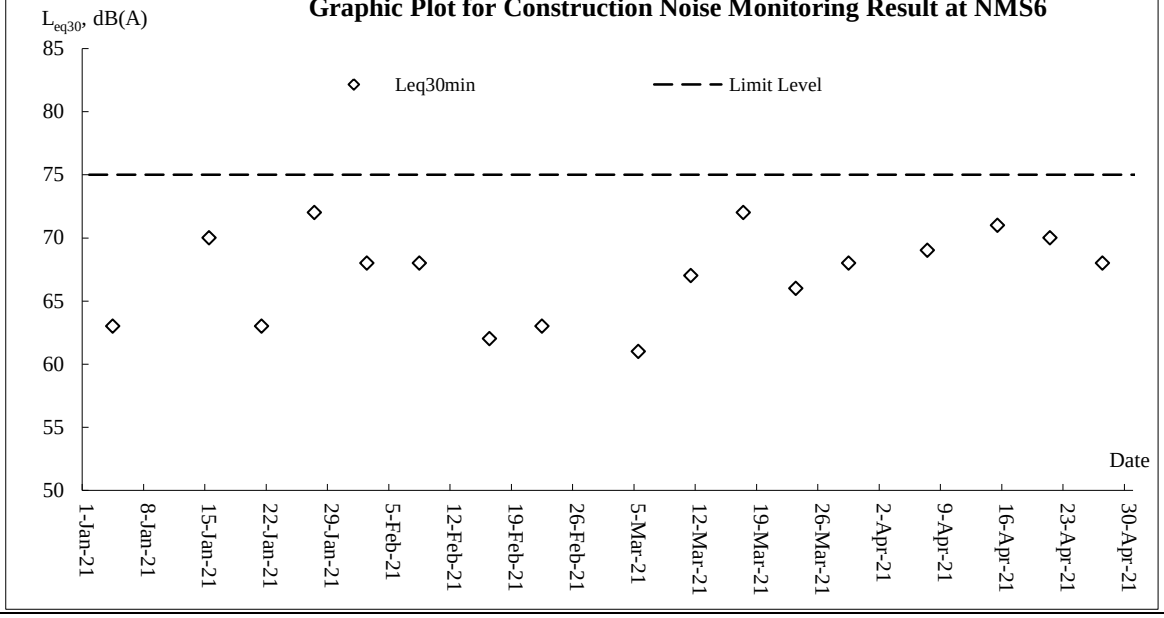
23-Apr-21
30-Apr-21


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-Jan-21
8-Jan-21
15-Jan-21
22-Jan-21
29-Jan-21
5-Feb-21
12-Feb-21
19-Feb-21
26-Feb-21
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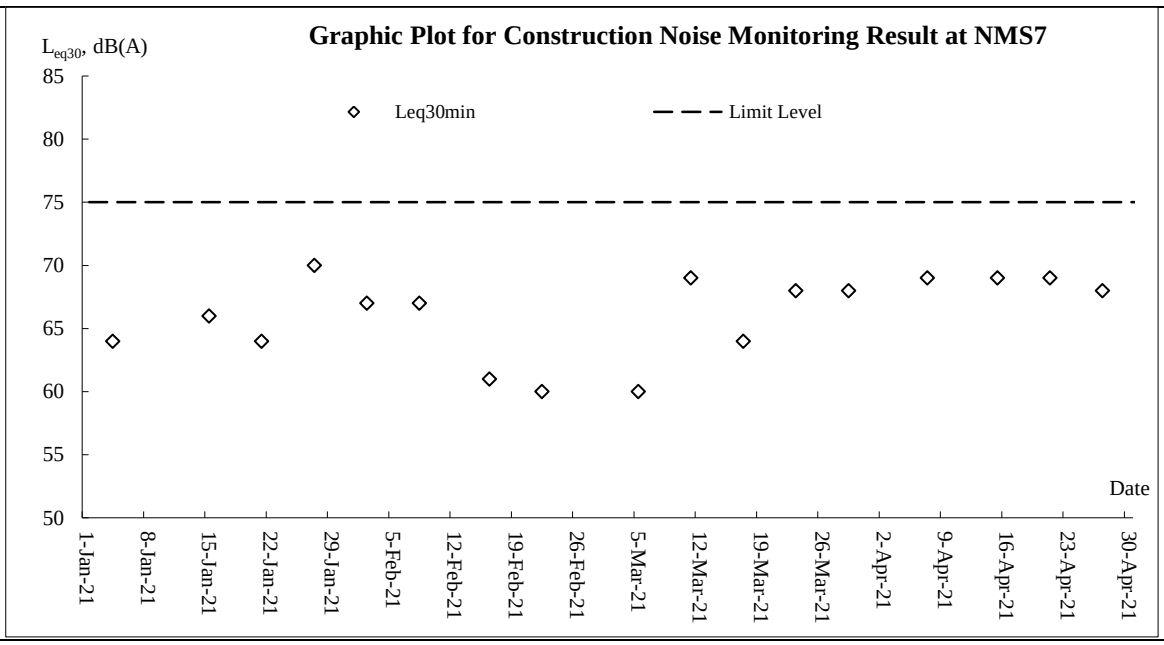
30-Apr-21


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-Jan-21
8-Jan-21
15-Jan-21
22-Jan-21
29-Jan-21
5-Feb-21
12-Feb-21
19-Feb-21
26-Feb-21
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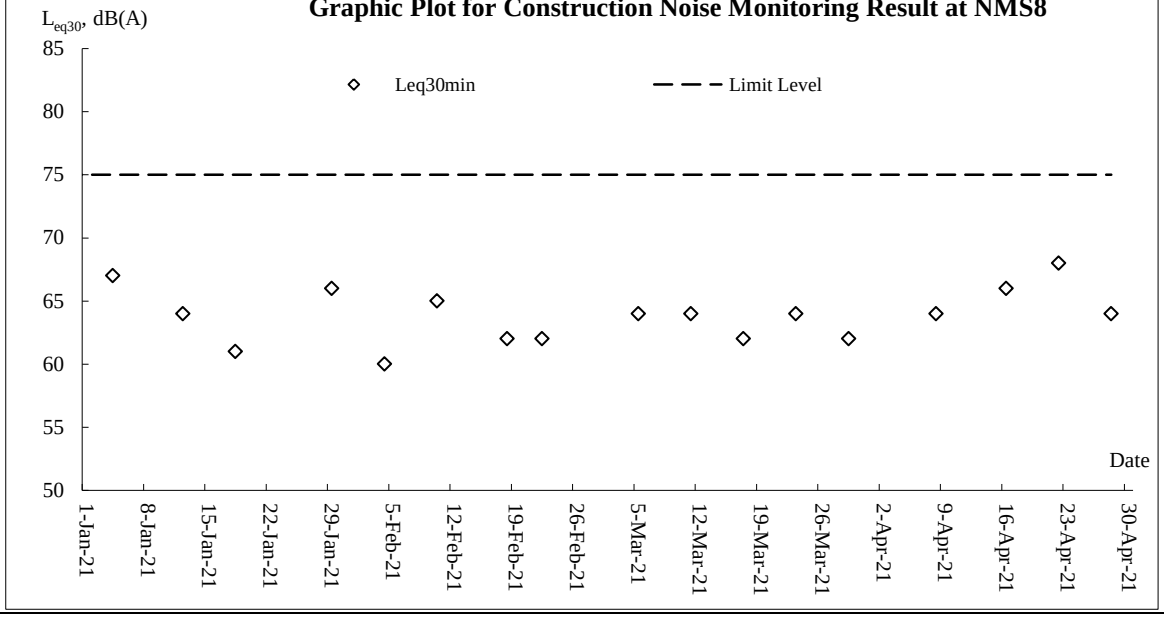
23-Apr-21
30-Apr-21


Graphic Plot for Construction Noise Monitoring Result at NMS8
L_{eq30}, dB(A)
Leq30min
Limit Level
85
80
75
70
65
60
55
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Date
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8-Jan-21
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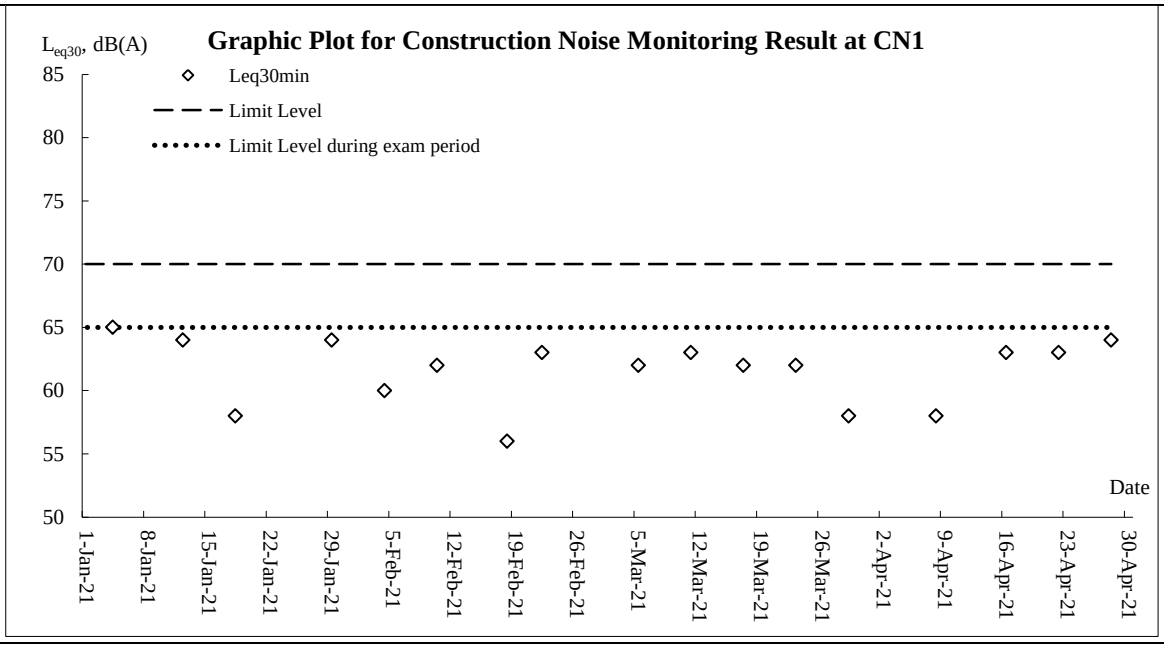
23-Apr-21
30-Apr-21


Graphic Plot for Construction Noise Monitoring Result at CN1
L_{eq30}, dB(A)
Leq30min
Limit Level
Limit Level during exam period
85
80
75
70
65
60
55
50
Date
1-Jan-21
8-Jan-21
15-Jan-21
22-Jan-21
29-Jan-21
5-Feb-21
12-Feb-21
19-Feb-21
26-Feb-21
5-Mar-21
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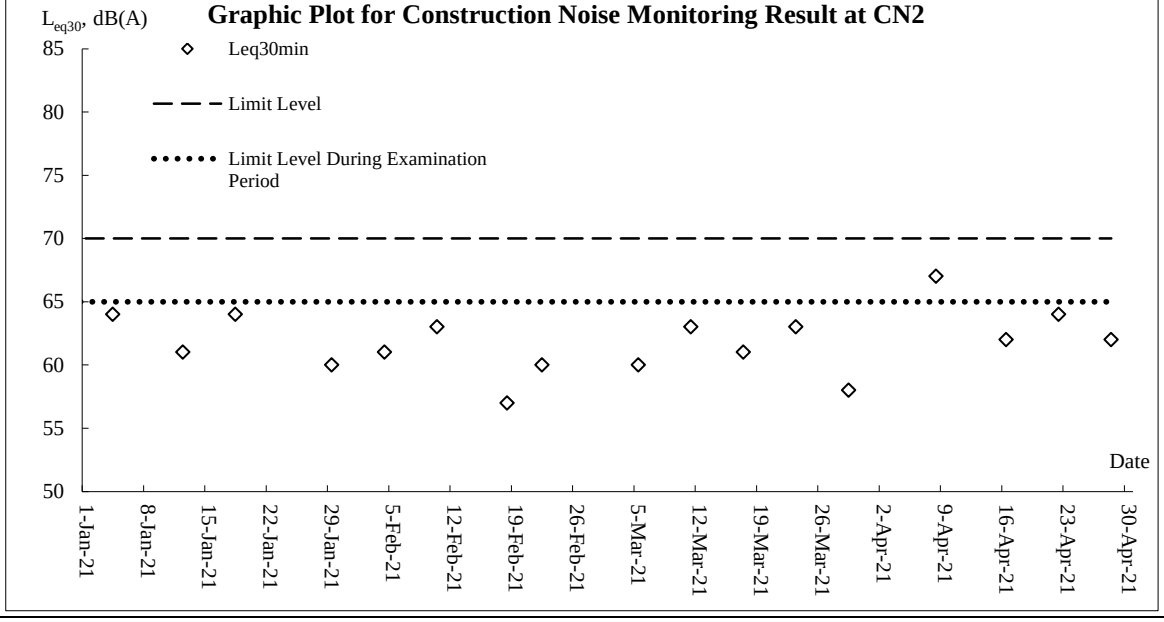
23-Apr-21
30-Apr-21


Graphic Plot for Construction Noise Monitoring Result at CN2
L_{eq30}, dB(A)
Leq30min
Limit Level
Limit Level During Examination Period
85
80
75
70
65
60
55
50
Date
1-Jan-21
8-Jan-21
15-Jan-21
22-Jan-21
29-Jan-21
5-Feb-21
12-Feb-21
19-Feb-21
26-Feb-21
5-Mar-21
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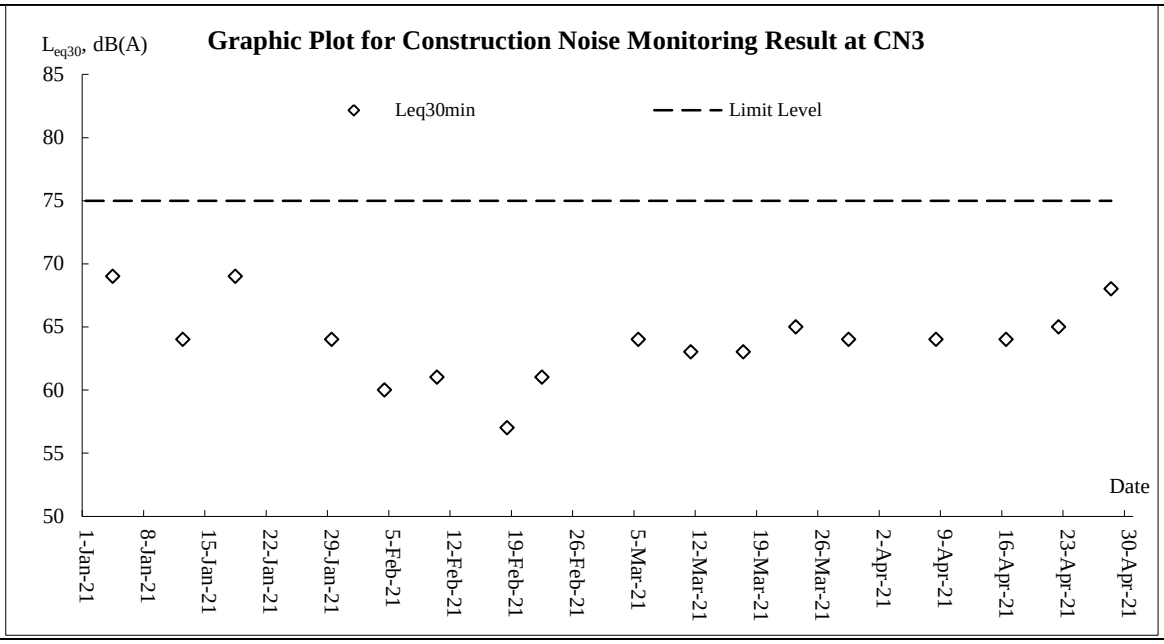
23-Apr-21
30-Apr-21


Graphic Plot for Construction Noise Monitoring Result at CN3
L_{eq30}, dB(A)
Leq30min
Limit Level
85
80
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70
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Date
1-Jan-21
8-Jan-21
15-Jan-21
22-Jan-21
29-Jan-21
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12-Feb-21
19-Feb-21
26-Feb-21
5-Mar-21
12-Mar-21
19-Mar-21
26-Mar-21
2-Apr-21
9-Apr-21
16-Apr-21
23-Apr-21
30-Apr-21

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-Apr-21	Thu	Mainly cloudy with one or two showers.	Trace	27.2	7.5	S/SW	76.7
2-Apr-21	Fri	Cloudy with a few showers.	0	27.6	10.2	S/SW	71.5
3-Apr-21	Sat	Fine. Hot. Light winds.	0	27.4	9.7	S/SW	67.2
4-Apr-21	Sun	Moderate easterly winds, strengthening gradually overnight	0.8	23.6	8.1	E	69
5-Apr-21	Mon	Moderate east to northeasterly winds, occasionally fresh offshore.	0.7	21.1	7.6	E	71
6-Apr-21	Tue	Sunny intervals at first tomorrow and a few showers later.	0	23.1	14.5	SE	72.5
7-Apr-21	Wed	Becoming cloudy tonight.	0	22.2	16	E	72.5
8-Apr-21	Thu	Cloudy with a few showers.	0	22.3	11	E	72.5
9-Apr-21	Fri	Cloudy with one or two rain patches.	7.5	19.7	15	E.SE	83.7
10-Apr-21	Sat	Moderate to fresh east to northeasterly winds	0	21.4	10.7	E	77
11-Apr-21	Sun	Fine. Hot. Light winds.	0	22.3	13.7	E	68.2
12-Apr-21	Mon	Mainly cloudy with one or two showers.	0	24.7	10	SE	77
13-Apr-21	Tue	Mainly cloudy with one or two showers.	0	26	8.7	SE	74.2
14-Apr-21	Wed	Becoming cloudy tonight.	Trace	23	10	E	84
15-Apr-21	Thu	Cloudy with a few showers.	8.3	21.2	15.7	E	90
16-Apr-21	Fri	Moderate northerly winds.	1.5	22.2	14.5	E	87
17-Apr-21	Sat	Light winds tomorrow.	2.5	21.6	10.7	E	67.5
18-Apr-21	Sun	Moderate to fresh easterly winds	Trace	22.8	23.7	E	59
19-Apr-21	Mon	Fine. Hot. Light winds.	0	21.9	24.2	E	62.2
20-Apr-21	Tue	Light winds tomorrow.	0	22.5	18.5	E	69
21-Apr-21	Wed	Fine. Hot. Light winds.	0	23.7	12	SE	69.5
22-Apr-21	Thu	Cloudy periods overnight.	0	25.3	11.5	E/SE	10
23-Apr-21	Fri	Moderate northerly winds.	0	27.6	12.5	W/SW	7
24-Apr-21	Sat	Light winds tomorrow.	Trace	23.8	10	E/NE	10.5
25-Apr-21	Sun	Moderate to fresh easterly winds	0.9	23.3	16.2	E/NE	13.2
26-Apr-21	Mon	Mainly cloudy with a few showers.	0.3	22.3	19.5	E	12.5
27-Apr-21	Tue	Cloudy periods overnight.	5.7	22	18.7	E/NE	10.5
28-Apr-21	Wed	Fine and hot during the day tomorrow.	4.2	24.3	13	E/NE	9.5
29-Apr-21	Thu	Moderate to fresh easterly winds	0.1	25.1	8.7	W/NW	6.5
30-Apr-21	Fri	occasionally strong offshore at first.	0	25.3	8.7	SE	5.5

Appendix K

Waste Flow Table

Contract No.: NE/2016/01

Site Formation and Infrastructure Works for Development of Anderson Road Quarry Site

Monthly Summary Waste Flow Table for 2021 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract (see Note 6)	Reused in other Projects (see Note 8)	Disposed as Public Fill	Imported Fill	Metals (see Note 9)	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	42.293	0.000	9.773	31.040	1.480	0.180	0.000	0.000	0.000	0.000	0.110
Feb	15.750	0.000	2.893	11.601	1.256	0.000	0.000	0.047	0.006	0.000	0.121
Mar	34.287	0.000	12.750	21.267	0.270	0.000	0.012	1.064	0.006	0.000	0.131
Apr	15.432	0.000	2.688	11.312	1.432	0.650	0.000	0.000	0.000	0.000	0.044
May											
Jun											
Sub-total	107.762	0.000	28.104	75.220	4.438	0.830	0.012	1.111	0.012	0.000	0.406
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	107.762	0.000	28.104	75.220	4.438	0.830	0.012	1.111	0.012	0.000	0.406

Notes:

(1) The performance targets are given in PS Clause 1.119 (14).

(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.

(7) The cut-off date of this summary is 20th of each month.

(8) The Inert C&D materials of reused in other Projects including glass materials.

(9) The C&D waste generation of metal including rechargable battery recycling.

Name of Department : CEDD

Contract No. : NE/2016/05

Monthly Summary Waste Flow Table for 2021 (year)

[PS Clause 1.129]

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes 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 3)	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	0.12	0	0	0	0.04	0	0	0	0	0	0.08
Feb	0.06	0	0	0	0.01	0	0	0	0	0	0.05
Mar	0.12	0	0	0	0.02	0	0	0	0	0	0.15
Apr	0.34	0	0	0	0.05	0	0	0	0	0	0.29
May	-	-	-	-	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-	-	-	-
Sub-total	0.69	0	0	0	0.12	0	0	0	0	0	0.57
July	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-	-	-
Sept	-	-	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-

Notes:
(1) The performance targets are given in PS Clause 6.14
(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.
(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works. Together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m^3.

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 2021 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large 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	1.509	0.000	0.000	0.349	1.509	0.000	0.000	0.057	0.006	0.000	0.159
Feb	2.460	0.000	0.023	0.253	2.438	0.000	0.000	0.000	3.472	0.000	0.057
Mar	3.048	0.000	0.143	0.746	2.905	0.000	0.000	0.000	0.210	0.000	0.102
Apr	0.869	0.000	0.000	0.000	0.869	0.000	0.000	0.000	0.238	0.000	0.032
May											
Jun											
Sub-total	7.887	0.000	0.165	1.348	7.722	0.000	0.000	0.057	3.926	0.000	0.350
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	7.887	0.000	0.165	1.348	7.722	0.000	0.000	0.057	3.926	0.000	0.350

Notes:

(1) The performance targets are given in PS Clause 1.119 (14).

(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.

Appendix 13

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

Monthly Summary Waste Flow Table for 2021 (year)

[PS Clause 1.129]

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes 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 3)	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	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-
Mar	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0
May	-	-	-	-	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-	-	-	-
Sub-total	0	0	0	0	0	0	0	0	0	0	0
July	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-	-	-
Sept	-	-	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-

Notes: (1) The performance targets are given in PS Clause 6.14

(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.

(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works. Together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m^3.

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 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
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
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 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	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	@	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 5
	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, 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 Representati ve dust monitoring station	All construction sites where practicable	V	N/A	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	V	V
S5.6.11 to	Use of " Quiet " Plant and Working Methods.	Reduce the noise	Contractor	All	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 5
S5.6.13		levels of plant items		construction sites where practicable				
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
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	N/A
S5.6.19	Sequencing operation of construction plants equipment.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction ion sites where practicable	V	V	N/A	N/A
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
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	N/A	N/A
Water Quality Impact (Contraction Phase)								
S6.6.3	<u>Construction Runoff</u> In accordance with the Practice Note for Professional Persons on Construction ion Site Drainage, Environmental 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	Control construction runoff	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 5
	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. • 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 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							

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 5
	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. • 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	Handling of site sewage	Contractor	All construction sites	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 5
	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 water quality impact after undertaking all required measure							
S6.6.8 and 6.6.9	<u>Accidental Spillage</u> To prevent accidental spillage of chemicals, proper storage and handling facilities should be provided. All the tanks, containers and storage area should be bunded and the locations should be locked as far as possible from the sensitive watercourse and storm drains. The Contractor is required to register as a chemical waste producer if chemical wastes would be generated from the construction ion activities. Storage of chemical waste arising from the construction ion activities should be well managed with suitable labels an d warnings while disposal of those chemical wastes should be comply with the requirement states in Waste Disposal Ordinance (Cap 354) as well as Waste Disposal (Chemical Waste) (General) Regulations.	Prevention of accidental spillage	Contractor	All construction sites	V	V	V	V
S6.6.11-S6.6.14	<u>Groundwater from Contaminated Area</u> The Contractor should apply for a discharge licence under the WPCO through the Regional Office of EPD for groundwater discharge. Prior to the excavation works within these potentially contaminated areas, the groundwater quality should be reviewed during the process of discharge license application. The compliancy to the TM-DSS and the existence of prohibited substance should be confirmed after further SI. If the review results indicated that the groundwater to be generated from the excavation works would be contaminated, the contaminated groundwater should be either properly treated in compliance with TMDSS or properly recharged into the ground. If wastewater treatment is deployed, the wastewater treatment unit shall deploy suitable treatment process (e.g. oil interceptor / activated carbon) to reduce the pollution level to an acceptable standard and remove any prohibited substances (e.g. Petroleum Carbon Ranges (PCRs)). All treated effluent from wastewater treatment plant shall meet the requirements as stated in TM-DSS and should be 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.	Minimize contaminated groundwater impacts	Contractor	All construction sites	NA	NA	NA	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 5
	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	Good Site Practice 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	V
S8.5.2 (6)	The contractor should submit a Waste Management Plan (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.	Minimize waste generation during construction	Contractor	All construction sites	V	V	V	V
S8.5.3	Waste Reduction Measures 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;	Reduce waste generation	Contractor	All construction sites where practicable	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 5
	• 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.							
S8.5.5	Storage of Waste 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
S8.5.6	Collection and Transportation of Waste The following recommendation should be implemented to minimize the impacts: • 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.	Minimize waste impacts from storage	Contractor	All construction sites	@	@	@	@
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
S8.5.15	Contaminated Soil	Remediate	Contractor	All	V	V	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 5
	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.	contaminated soil		construction sites where applicable				
S8.5.17	Chemical Waste • 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.	Control the chemical waste and ensure proper storage, handling and disposal.	Contractor	All construction sites	V	V	V	V
S8.5.18	General Waste • 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	V
S8.5.19	Sewage • 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
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	Northern part of the proposed Quarry Park.	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 5
			the planting).					
.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 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.	Minimize impacts on Hydrological condition and water quality of hillside watercourses.	Contractor	All construction sites	V	N/A	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 5
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
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	V	N/A
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
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	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	**1**	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	**1**	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
Overall Total	**66**	**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	Status	Investigation Report Ref.
1	23-Mar-17	NA	Anderson Road Quarry site	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	Anderson Road Quarry site	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 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	Anderson Road Quarry site	Resident of On Tat Estate	Construction noise	SPRO hotline	NA	Mr. Hsu Yau Wai reported that he received complaint from a resident (Ms Cheng) living at Shing Tat House 24/F Room 22 about the noise generated from our site this week. The noise heard was mainly rock breaking noise from our site.	Noise monitoring was carried out by ET 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
4	21-Jun-17	29-Aug-17	Anderson Road Quarry site	Resident of Po Tat Estate	Construction noise	EPD	EPD (ref.N08/RE/00019373-17)	day time construction noise of breakers (8am to 6pm)	These two complaints were forwarded by CEDD to ET on 31 August 2017 which after the complaint dates. Investigation was conducted based on the site information by the Contractor of Contract 1 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	Anderson Road Quarry site	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	Anderson Road Quarry site	Resident of Po Tat Estate	Construction noise	EPD	EPD (ref.N08/RE/00022479-17)	Construction noise	CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident and the working hour 08:00 to 18:00 did not breach any legal requirement. To eliminate the inconvenience caused to the nearby resident, CWSTVJV was advised to further enhance the noise mitigation measures as appropriately.	no comment by IEC on 3 Nov 2017	TCS00864/16/300/F0094
7	28-Jul-17	29-Aug-17	Anderson Road Quarry site	unknown	Dust	EPD	EPD (ref.N08/RE/00023986-17)	Poor control on dust emission at Anderson Road Construction Site	CWSTVJV has implemented dust mitigation measures to eliminate the inconvenience caused to the nearby resident and status of the implementation of dust mitigation measures was considered effective based on the site observation.	no comment by IEC on 15 Nov 2017	TCS00864/16/300/F0097

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Status	Investigation Report Ref.
8	2-Aug-17	29-Aug-17	Anderson Road Quarry site	Resident of On Tat Estate	Construction noise	EPD	EPD (ref.N08/RE/00024557-17)	Day time construction noise of breakers (8AM to 6PM)	CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. According to the impact noise monitoring result obtained in August 2017, there were no breaches of EM&A requirement. However, to eliminate the inconvenience caused to the nearby resident, CWSTVJV should further enhance the noise mitigation measures as appropriately. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 15 Nov 2017	TCS00864/16/300/F0098
9	19-Sep-17	19-Sep-17	Anderson Road Quarry site	Resident of Sau Mau Ping Estate	Construction noise	SPRO hotline	NA	The complainant is living at Sau Mau Ping Estate Sau Nga House 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. 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	Anderson Road Quarry site	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.			TCS00864/16/300/F0088
11	27-Sep-17	13-Oct-17	Anderson Road Quarry site	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 morning but only 1 operating in the afternoon. He requested to shift the operation of the breakers to afternoon.	CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. According to the impact noise monitoring result obtained in September and October 2017, there were no breaches of EM&A requirement. However, to eliminate the inconvenience caused to the nearby resident, CWSTVJV should properly maintain the noise mitigation measures as appropriate. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 30 Nov 2017	TCS00864/16/300/F0106
12	3-Oct-17	13-Oct-17	Anderson Road Quarry site	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/F0106
13	25-Oct-17	26-Oct-17	Anderson Road Quarry site	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

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14	6-Nov-17	7-Nov-17	Anderson Road Quarry site	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 開始傳出機器不停挼石的噪音(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	Anderson Road Quarry site	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
16	1-Nov-17	14-Nov-17	Anderson Road Quarry site	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挼鐵噪音。	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.	no comment by IEC on 13 Dec 2017	TCS00864/16/300/F0110
17	25-Aug-17	26-Oct-17	Anderson Road Quarry site	Resident of Sau Mau Ping Estate	Construction Noise	EPD	EPD (ref.N08/RE/00027738-17)	Night time construction noise of hammering (around 12AM)	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
18	12-Sep-17	26-Oct-17	Anderson Road Quarry site	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/F0117
19	15-Dec-17	21-Dec-17	Anderson Road Quarry site	Resident of Sau Mau Ping Estate	Construction Noise	EPD	NA	Resident of Sau Yee House complained suspected construction noise from Anderson Construction Site at restricted hour (7pm to 7am).	It is confirmed by CWSTVJV and checked against the site diary that no construction activities were carried out after 19:00 at the subject site. Therefore, the complaint about noise nuisance during night time should not be related to the Project.	no comment by IEC on 10 Jan 2018	TCS00864/16/300/F0118
20	20-Dec-17	21-Dec-17	Anderson Road Quarry site	Resident of On Tat Estate	Dust	EPD	NA	投訴安達臣道信和地盤水車已經壞了十多天， 一直無灑水，四周非常大塵。 投訴人住於安達邨，投訴安達臣道石礦場有大地盤，地盤大車工作時間不停出入揚起沙塵，吹到安達邨，影響空氣環境，要求部門到場視察。	CWSTVJV has implemented dust mitigation measures to eliminate the inconvenience caused to the nearby resident. It is considered that the complaint was an isolated case due to malfunction of water tanker and CWSTVJV has promptly rectified the deficiency. As advised by CWSTVJV, another water tanker will be deployed in mid-January 2018 to enhance the dust suppression measures throughout the construction site.	no comment by IEC on 25 Jan 2018	TCS00864/16/300/F0121
21	28-Dec-17	10-Jan-18	Anderson Road Quarry site	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	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	no comment by IEC on 8 Feb 2018	TCS00864/16/300/F0129

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									result was below the Limit Level under the EM&A Programme. Moreover, it is confirmed by CWSTVJV and checked against the site diary that no construction activities were carried out during restricted hour at the subject site. Therefore, the complaint about noise nuisance during restricted hour should not be related to the Project.		
22	15-Jan-18	15-Jan-18	Anderson Road Quarry site	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	Anderson Road Quarry site	Resident of On Tai Estate (referred by Mr. Lam Wai)	Construction Noise	SPRO hotline	NA	"智泰對出，白天噪音過大，可否加裝隔音板?高層受影響"	The Environmental Team has conducted an ad-hoc noise measurement for Leq(30min) at the corridor of 22/F of Chi Tai House on 2 February 2018 facing the construction site. The measurement noise result was 65dB(A) which below the Limit Level under the EM&A Programme. In our investigation, CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. According to the impact noise monitoring result obtained in January 2018, there were no breaches of EM&A requirement.	no comment by IEC on 22 Feb 2018	TCS00864/16/300/F0137
24	1-Feb-18	2-Feb-18	Anderson Road Quarry site	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
25	28-Feb-18	28-Feb-18	Anderson Road Quarry site	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掘石仔噪音滋擾, 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

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26	11-Apr-18	12-Apr-18	Anderson Road Quarry site	Resident of HimTat House	Construction Noise	SPRO Hotline	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 practicable. The implementation of noise mitigation measures will be kept in view in subsequent site inspection.	no comment by IEC on 7 May 2018	TCS00864/16/300/F0160b
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.		NA	NA
28	18-May-18	24-May-18	Anderson Road Quarry Site	Undisclosed	Construction Noise	EPD	NA	投訴人指安達臣道石礦場地盤(NE/2016/01)在入夜 19:00 後仍見到有長臂喉工程車在運作，及持續產生大噪音及閃燈，非常擾民。	As advised by CWSTVJV and confirmed by RE/AECOM, there were no construction activities carried out after 19:00 and concreting was completed before 19:00. It is concluded that the retracting process is not a general construction work using Powered Mechanical Equipment and complaint was an isolated case due to misunderstanding of the site operation. To prevent similar incidents in future, CWSTVJV has recommended several mitigation measures.	no comment by IEC on 30 July 2018	TCS00864/16/300/F0174b
29	25-Jun-18	19-Jul-18	Pedestrian Connectively E8 under Contract 3	Kwun Tong DC member Ms. 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	投訴人指馬游塘區堆填區往將軍澳方向行車入口因配合項目需要而進行移除山坡工程，但其鑽地鑿石的噪音嚴重影響藍田康雅苑*居民，要求有關部門跟進。 *註:投訴人於 2018 年 8 月 27 日更正指受影響屋苑應為藍田康華苑。	to reduce the inconvenience caused to the nearby resident, Kwan On should properly maintain the noise mitigation measures as appropriate, such as maintain good site practice including intermittent use of machine and plant and Sequencing operation of construction plant equipment. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 7 Sep 2018	TCS00864/16/300/F0196a

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31	26-Feb-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
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
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

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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
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
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

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41	15-Feb-19	25-Feb-19	Anderson Road Quarry Site	Undisclosed	noise	1823	2-494807 4127	1823 has referred a case to CEDD on 15 February 2019, which the complainant complained about the construction noise generated from the CEDD site near 法源寺 (Ma Yau Tong Village). The complainant requested for the details of works and the completion date, the complainant also requested CEDD to use other construction methods in order to re	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 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.	no comment by IEC on 29 Mar 2019	TCS00864/16/300/F0251a
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
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 breach the Noise Control Ordinance.	no comment by IEC on 6 May 2019	TCS00864/16/300/F0264

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45	16-Jun-19	18-Jun-19	Anderson Road Quarry Site	Undisclosed	noise	EPD	NA	EPD referred a case to CEDD on 17 June 2019 regarding the construction noise heard at On Tat Estate on Sunday.	The Contractor explained that general cleaning by water jet was carried out in the construction site on the concerned day. Since the work did not involve the use of Powered Mechanical Equipment (PME), it would not violate the noise control ordinance.	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 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.	no comment by IEC on 12 August 2019	TCS00864/16/300/F0292b
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
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

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49	5-Nov-19	11-Nov-19	Work Area Portion 2&3 (lift tower construction work at Hiu Kwong Street)	NA	Noise	EPD	NA	A public complaint was received by EPD relating to the noise generated from breaking work of lift tower construction work at Hiu Kwong Street (Portion 2&3).	In our investigation, Kwan On has implemented noise mitigation measures to reduce the noise impact to the nearby resident. Nevertheless, since the construction site is close to the residential area, adequate noise mitigation measures shall be provided to reduce to noise nuisance to the public. As the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance. Kwan On was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme.	no comment by IEC on 27 Dec 2019	TCS00864/16/300/F0332a
50	7-Nov-19	11-Nov-19	Work Area Portion 6	Mr. Cheng	Noise	EPD	NA	寶達邨居民鄭先生, 表示將軍澳隧道出口工程, 日間噪音嚴重, 8:30-17:00, 幾部幾同時開動, 而且無防音欄, 之前是有, 現要求環保署向對方反映改善	In our investigation, Kwan On has implemented noise mitigation measures to reduce the noise impact to the nearby resident. Nevertheless, since the construction site is close to the residential area, adequate noise mitigation measures shall be provided to reduce to noise nuisance to the public. As the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance. Kwan On was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme.	no comment by IEC on 27 Dec 2019	TCS00864/16/300/F0333a
51	10-Nov-19	12-Nov-19	Underpass	Resident of Ma Yau Tong Village	Noise	EPD	NA	<u>On 10 November 2019</u> 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。 <u>On 11 November 2019</u> 寶琳路近馬游塘村開掘隧道的工程地盤每日 8am-6pm 發出噪音，欠缺遮擋，聲音影響馬游塘村 4-22 號村屋。希望政府部門 1.調查地盤有否違規 2.實施減音措施以減低對附近居民的滋擾	In our investigation, CWSTVJV had implemented the noise mitigation measures to reduce to noise impact to the public. Since the works were conducted within approved normal hours with implementation of noise mitigation measures, there were no violation of legislative requirement. For the complainant's concern on the operation noise after commencement of the project, it is out of the scope of the EM&A programme and the relevant department will follow up the concern.	no comment by IEC on 30 Dec 2019	TCS00864/16/300/F0337a
52	11-Nov-19	20-Nov-19	Construction site near on Tai Estate Ancillary Facilities Building on On Sau Road	Mr. Wong (resident of Yung Tai House of On Tai Estate)	Noise	1823	ref. 2-597630 3183	黃先生投訴安秀道安泰邨服務設施大樓附近掘路工程已持續數年還未完成，並投訴其經常發出噪音滋擾，要求部門跟進。 On 22 November 2019, the project hotline received a call from the same complainant reported on the noise nuisance near On Sau Road and On	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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								Yan Street. He suggested to speed up the noise making works by intensely concentrate the excavation works during day time. No intermittence is suggested in order to speed up the works and to avoid waste of manpower.			
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
54	4-Mar-20	17-Mar-20	Near Hiu Ming Street Playground (E8)	Undisclosed	Noise	1823	ref. 3-628323 7171	投訴人投訴有關秀茂坪邨秀安樓附近有兩個地盤 ， 地盤由星期一至五，每天早上約 9AM-5 PM 持續不斷發出強烈的嘈音， 投訴人表示地盤是在曉明街藍球場旁邊的位置(投訴人未能告知確實街號) ，因此要求部門盡快回覆及告知有關情況 。 A public complaint was received by 1823 on 4 March 2020 regarding the construction noise. The complainant mentioned that there were two construction sites near Hiu Ming Street Playground generated construction noise continuously during 9AM to 5PM on weekdays.	In our investigation, CW-CMGCJV had implemented the noise mitigation measures for the works at upper section of E8 near Hiu Yuk Path and no noise impact was observed and anticipated in Hiu Ming Street based on the site activities and our inspection record. It is considered that the complaint is likely related to another construction site located near Hiu Ming Street Playground and not caused by the works under the Project. Since the works were conducted within approved normal hours with implementation of noise mitigation measures, there were no violation of legislative requirement.	no comment by IEC on 15 Apr 2020	TCS00864/16/300/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	In our investigation, the wheel washing facilities at site exit of E11 is one of the dust quality mitigation measures conducted by CW-CMGCJV and corresponding measure was implemented to prevent overflow of wastewater out of the site. In our recent site inspection, no outflow of muddy water from the site was observed and the condition of concerned Lin Tak Road was satisfactory. It is considered that the complaint was unlikely due to the project.	no comment by IEC on 15 Apr 2020	TCS00864/16/300/F0360a

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Status	Investigation Report Ref.
								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.			
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 generated from the Anderson Road Quarry Site had been continued for two years.	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. 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
57	1-Apr-20	20-Apr-20	Work Area Portion 2	Undisclosed	Noise	1823	NA	觀塘秀茂坪紀念公園傍及曉明街的地盤，共兩個地盤，是地政總署管轄的。投訴人表示已被工程噪音滋擾了兩年多；另外投訴人得知完工時間要到2021年，投訴人不明白為何工程頭尾要 3 年多時間. 要求地政總署直接以電郵回覆工程長的原因及有沒有措施解決地盤發出的噪音。 A public complaint was received by 1823 on 1 April 2020 and subsequently transmitted to Environmental Team (ET) on 20 April 2020, regarding the noise nuisance generated from the construction site in Hui Ming Street. The complainant concerned about the slow progress and implementation of noise mitigation measures to alleviate the noise impact arising from the construction work.	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

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Status	Investigation Report Ref.
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
59	18-Jun-20	23-Jun-20	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 after 6pm 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
60	23-Jul-20	24-Jul-20	Anderson Road Quarry Site near On Tat Estate	Undisclosed	Noise	EPD	NA	A public complaint was received by EPD on 23 July 2020 regarding the construction noise generated from the use of PME at Anderson Road Quarry Site near On Tat Estate at 6:30am (restricted hours). He/ she requested 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. Since the works were conducted within approved normal hours with implementation of noise mitigation measures, there were no violation of legislative requirement. Nevertheless, as the construction site is 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 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	Status	Investigation Report Ref.
61	14-Nov-20	18-Nov-20	Near Hiu Ming Street Playground (E8)	Undisclosed	Noise	1823	NA	A public complaint was received by 1823 on 14 November 2020 regarding the construction noise. The complainant mentioned that there was piling works at Hiu Ming Street Playground, generating huge noise during 9AM to 10AM on 14 November 2020. He/she requested relevant department to follow up	In our investigation, there was no noise impact was observed and anticipated in Hiu Ming Street based on the site activities and our inspection record. Since the works were conducted within approved normal hours with implementation of noise mitigation measures, there were no violation of legislative requirement	no comment by IEC on 4 January 2021	TCS00864/16/300/F0424
62	4-Dec-20	7-Dec-20	Opposite to On Tai Estate – lower portion of Road L4	Undisclosed	Dust	EPD	NA	A public complaint was received by EPD on 4 December 2020 regarding the dust impact. The complainant mentioned that the construction site opposite to On Tai Estate had dust emission problem due to lack of water spraying. He/she requested relevant department to follow up	In our investigation, CWSTVJV has implemented dust mitigation measures to eliminate the inconvenience caused to the nearby resident. In view of the potential traffic dust impact and implementation of dust mitigation measures, it is considered that the complaint was not valid to the Project	no comment by IEC on 4 January 2021	TCS00864/16/300/F0434
63	3-Dec-20	7-Dec-20	Ma Yau Tong Village (East Portal)	Undisclosed	Noise and dust	1823 & EPD	3-6574141017	A public complaint was received by 1823 and EPD on 14 November 2020 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	In our investigation, CWSTVJV had provided the dust and noise mitigation 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	no comment by IEC on 4 January 2021	TCS00864/16/300/F0435
64	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.	-	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	Status	Investigation Report Ref.
65	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	-	TCS00864/16/300/F0454
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/0007086-21	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.	-	TCS00864/16/300/F0459
67	Not provided	1-Apr-21	Construction site near SKH St. John's Tsang Shiu Tim Primary School (System B under Contract 3)	Undisclosed	Noise	EPD	NA	A complaint was received by EPD and referred to CEDD on 1 April 2021 regarding the construction noise. The complainant mentioned that piling work was conducted at construction site near SKH St. John's Tsang Shiu Tim Primary School in recent week which generated noise problem. Moreover, there were no noise mitigation measures provided in the construction site	In our investigation, the Contractor has implemented noise mitigation measures to reduce the noise impact and nuisance to the public. Since the works were carried out within the non-restricted hours, it is considered that the works under the contract did not breach the Noise Control Ordinance. Moreover, the Contractor has adopted noise mitigation measures to minimise noise impact to the public. Since the construction site is close to the residential area, the Contractor was reminded to implement the mitigation measures as far as practicable as recommended in the EM&A Programme	-	TCS00864/16/300/F0458

Appendix N

Implementation Status for Water Quality Mitigation Measures

Water Quality Mitigation Measure

Paving for exposed slope to reduce dust dispersion & mitigate the silty runoff generation at Q1.

Impermeable cover for slope at System A.

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

Q4. Wastewater treatment facility Temporary Water Reservoir 150 cu.m + AquaSed of 60 cu.m per hour

Q6: Wastewater treatment facility 24 cu. m.

Q7. Wastewater treatment facility 30 cu.m Sedimentation Tank + AquaSed of 60 cu.m per hour

Q9. Two nos. of 30 cu.m Sedimentation Tank + AquaSed of 60 cu.m per hour