

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 (DECEMBER 2020)

PREPARED FOR CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT (CEDD)

DateReference No.Prepared ByCertified By15 January 2021TCS00864/16/600/R0438v2AudAud

Nicola Hon (Environmental Consultant) Tam Tak Wing (Environmental Team Leader)

Version	Date	Remarks
1	14 January 2021	First Submission
2	15 January 2021	Amended according to the IEC's comments on 15 January 2021



Your reference:	
Our reference:	HKCEDD10/50/107034
Date:	18 January 2021
С	our reference:

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 (December 2020)

We refer to the emails of 14 and 15 January 2021 from Action-United Environmental Services and Consulting attaching a Monthly Environmental Monitoring and Audit Report (December 2020) 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 Ricky Lau on 2618 2831.

Yours faithfully ANEWR CONSULTING LIMITED

Independent Environmental Checker

LYMA/LCCR/lsmt

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EXECUTIVE SUMMARY

- ES01 Action-United Environmental Services & Consulting (AUES) has been awarded the Civil Engineering and Development Department (CEDD) Service Contract No. 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.
- ES04 This is the **45th** monthly EM&A report presenting the monitoring results and inspection findings for the period from **1 to 31 December 2020** (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	Environmental Monitoring	Reporting Period		
Aspect	Parameters / Inspection	Number of Active Monitoring Locations	Total Occasions	
Air Opelity	1-hour TSP	<u>6</u>	90	
Air Quality	24-hour TSP	4	24	
Construction Noise	L _{eq(30min)} Daytime for Contract NE/2016/01	7	35	
Construction Noise	$L_{eq(30min)}$ Daytime for Contract NE/2017/03	3	15	

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 complaints (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.

Environmontol	Monitoring	Action	T ::4	Event & Action			
Aspeci Parameters Level Level		NOE Issued	Investigation	Corrective Actions			
A in Opelity	1-hour TSP	0	0	0	NA	NA	
Air Quality	24-hour TSP	0	0	0	NA	NA	
Construction Noise	L _{eq(30min)} Daytime	1	0	0	Project-related	The Contractor had enhanced the noise mitigation measures	



ENVIRONMENTAL COMPLAINT

In the reporting period, there were two complaints received for Contract 1 regarding the dust and noise concerns. Investigation had undertaken by ET upon receipt of the complaint as follows.

- (a) 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. In our investigation, the Contactor 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.
- (b) A public complaint was received by 1823 on 3 December 2020 and subsequently referred by EPD on 4 December 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, the Contactor 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.

NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES07 No environmental summons or successful prosecutions for the Project were recorded in the Reporting Period.

REPORTING CHANGE

ES08 No reporting change was made in the Reporting Period.

SITE INSPECTION

- ES09 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 1st, 10th, 15th, 22nd and 29th **December 2020** in which IEC joined the site inspection with SSEMC on 10th **December 2020**. No non-compliance was noted during the site inspection.
- ES10 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 2nd, 9th, 16th, 23rd and 30th **December 2020** in which IEC joined the site inspection with SSEMC on 16th **December 2020**. 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 3* were carried out by the RE, ET and Contractor on 4th, 11th, 18th, 24th and 31st **December 2020** in which IEC joined the site inspection with SSEMC on 11th **December 2020**. No non-compliance was noted during the site inspection.

FUTURE KEY ISSUES

- ES12 During dry season, the Contractors should fully implement air quality mitigation measures to reduce construction dust emission as far as practicable. Furthermore, since construction site is highly visible to the resident at nearby estates, noise mitigation measures such as using of quiet plants should be implemented in accordance with the EM&A requirement.
- ES13 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.

- ES14 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.
- ES15 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.
- 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 45th monthly EM&A report presenting the monitoring results and inspection findings for the period from 1 to 31 December 2020 (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 Section 8 Environmental Complaints and Non-Compliance Section 9 Implementation Status of Mitigation Measures Conclusions and Recommendations Section 10



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.

PROJECT ORGANIZATION

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

CONSTRUCTION PROGRESS

2.1.5 The 3-month rolling construction programme for Contracts 1, 2 and 3 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:

- PC system B substructure backfill work to continue.
- 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

Construction of Internal Road L2

- Site formation works to continue.
- Drainage pipe lower and middle level complete, upper level and gully pipe 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.
- Mass concrete fill behind Bay 17 to continue.
- Trimming of pile head of bored pile no. RWA9-P1&P2 to continue.
- Base slab construction of Bay 16 to continue.
- Wall construction of RWA9 Bays 12, 14, 15 and 16 to continue
- Lower level drainage in progress.
- Construction of manhole SMH1, TM26a &TM26 to continue.

Retaining Wall RWA10 at Road L3

- RWA10 Bay 7 wall construction to continue.
- 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:

• Concrete kerb construction and road base, base course laying to continue.



Water Pumping Station including Retaining Wall RWA13 and RWA14:

- Backfill at retaining wall RWA13 & RWA14 (Bay 15) to continue.
- To continue the watermain works outside Water Pumping Station.
- To continue the Metal Works (i.e.: chequer plate.).
- To continue with the ABWF Works (i.e.: floor)
- To continue with the E&M Works.
- To continue the mass concrete fill works at slope A13.

Water Reservoir

- To continue excavation works (rock breaking) for drainage.
- To continue drainage works (manhole construction and pipe laying).

Artificial Flood Attenuation Lake

- To continue laying granular bed, HDPE membrane and concrete lining works at remaining part of lake bottom.
- To continue with drainage works.
- To continue excavation of the remaining floating bridge footing.
- To continue the construction of floating bridge footing.

Underground Stormwater Retention Tank (USRT)

- Backfill around USRT in progress.
- Backfill around Ventilation Duct area to continue.

Internal Road L4, Pedestrian Connectivity System A, Noise Barrier, RWA12 and RWA18:

- RWA12 Bays 22 and 23 wall construction to continue.
- Construction of gully for road drainage manhole R428 construction complete
- System A south piling work to continue. Pile loading test to continue
- Excavation and pipe laying for DN300 fresh watermain and NS125 salt watermain complete.
- Excavation and road lighting ducting works complete
- Construction of additional buttress wall complete
- Road works (laying sub-base and kerb construction) complete
- Excavation and traffic signal post ducting works to continue

PC System A

- North Tower wall construction to continue.
- Sump pit construction to continue.
- Subway SYA-SW1 construction to continue.
- South Tower forming of no-fines concrete slope to continue.
- South Tower extension of h-pile to continue

PTT

 Drainage work at Row A& B C&D, D&E complete, gully pipe and down pipe catchpit in progress.

Slope Stabilization at Portion B1:

 Continue to carry out stabilization works at Feature No. 11NE-D/C1004, 11NE-D/C1005, Slope A15b, 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 8th berm
- Continue to carry out stabilization works at 11NE-D/C949 and 11NE-D/C948

Road Improvement Works at Po Lam Road:

• Construction of permanent footpath and surface drainage system to continue



MEP Works:

- Submission of designs and materials related to MEP works 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 USRT to continue

Site Formation Work at Portion B13

• Excavation to formation level to continue.

Site Formation Work at Portion B7 & B15:

• Chainlink fence and UC construction at land parcel R2-5 & Portion B15 to continue.

Site Formation Work at Portion B3:

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

Site Formation Work at Portion B14:

Backfilling and proof rolling/ SRT at Portion B14 to continue.

Site Formation Work at Portion E2 & E3:

Backfilling & SRT of fill slope zone of Portion E2 & E3 to continue

Site Formation Work at Portion A1 (land parcel R2-8):

• Backfilling, proof rolling chainlink fence and UC construction at land parcel R2-8 to continue.

Site Formation Work at Portion A-1 (land parcel G-1):

Chainlink fence & UC construction at land parcel G-1 completed.

Site Formation Work at Portion G3, G4, G5 & Slope A6:

- Excavation to formation level at land parcel G3 to continue.
- Chainlink 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:

- Box Culvert BC 3 Bay 10,11 at East Portal structure works to continue
- Box Culvert BC3 Bay 11 &12, Excavation work in progress
- Safety precaution measure completed for site formation works at East Portal.
- Site Formation works at East Portal in progress.
- West Portal Structure works in progress.
- Relocation of the Fire Hydrant at Po Lam Road in progress.

Contract 2 (NE/2016/05)

- 1. Portion 1:
 - Continue Piling works for Pile Cap E1 -PC4 and E1-PC5; and
- Backfilling with no-fines concrete around pile cap E1-RS1, E1-PC1 and E1-PC2.
- 2. Portion 2: Rock breaking for E3-F1.
- 3. Portion 3: Relocation of existing pedestrian crossing



- 4. Portion 4: Rectification of defects
- 5. Portion 5:
 - Footing construction of the covered walkway footing BBI-NB-F2,F1a, F1b.
 - Footing construction for Northern and Southern High Mast footings
 - Drainage Works
- 6. Portion 6:
 - -Rock breaking for rock cut slope and BBI Footing.
 - -Fixing formwork, reinforcement and place concrete for RWE12.

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.



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

	License/Permit Status		tus		
Item	Description	Permit no./ account	Valid I	Period	Status
		no./ Ref. no.	From	То	Status
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 Ordinance – Discharge License	WT00028050-2017	29 May 17	31 May 22	valid
4	WasteDisposalRegulation–BillingAccount for Disposal ofConstruction Waste	Account no. 7026925	20 Jan 17	End of project	valid
5	Construction Noise Permit	GW-RE0865-20	13 Nov 20	12 Feb 21	valid

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

Table 2-2	Status of Environmental Licenses and Permits of the Contract 2
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	License/Permit Status				
Item	Description	Permit no./ account	Valid	Period	Status
		no./ Ref. no.	From	То	Status
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	WT00028685-2017	02 Aug 17	31 Aug 22	Valid
	License	WT00028686-2017	02 Aug 17	31 Aug 22	Valid
		WT00028687-2017	02 Aug 17	31 Aug 22	Valid
4	WasteDisposalRegulation–BillingAccount for Disposal ofConstruction Waste	Account no.7027548	12 Apr 17	End of project	Valid
5	Construction Noise Permit	GW-RE0587-20	13 Jul 20	25 Nov 20	Valid
		GW-RE0966-20	20 Nov 20	19 Feb 21	Valid

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



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		License/Permit Status			
Item	Description	Permit no./ account	Valid	Period	Status
		no./ Ref. no.	From	То	
1	Form NA – Notification pursuant to Air Pollution Control (Construction Dust) Regulation	Notification to EPD on 29	9 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
		For Area E8 Registration no. WPN 5213-292-C4239-06	6-Aug-18	End of Project	Valid
3	WaterPollutionControlOrdinance	For Area R1W3 (E11) WT00032742-2018	18-Jan-19	31-Jan-24	Valid
	– Discharge License	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	WasteDisposalRegulation-Billing Account forDisposalofConstruction Waste	Account no.7031075	20 July 2018	End of project	Valid



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 5-1 Summary of Extern Requirements			
Environmental Issue	Parameters		
Air Quality	• 1-hour TSP by Real-Time Portable Dust Meter; and		
All Quality	• 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 		
Noise	• Supplementary information for data auditing, statistical results such as L ₁₀ and L ₉₀ shall also be obtained for reference.		

Table 3-1Summary of EM&A Requirements

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
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ID	ASR ID	Location in the	ē	Status
ID	in EIA	EM&A Manual	Site Visit	
AMS-1	ACYC-01	Chi Yum Ching	Ground of Chi Yum Ching	Replaced by
		She	facing the project site	AMS-1a
AMS-1a (*)	ACYC-01	Tan Shan	Ground of Tan Shan Village	Active
		Village No. 5 - 6	No. 5 - 6 facing the project site	
AMS-2 (#)	DARB-13	Block 8, Site B	Ground of Fung Tai House of	Active
			On Tai Estate	
AMS-3 (:)	DARC-16	Planned Clinic	Ground of Planned Clinic and	Active
		and Community	Community Centre facing	
		Centre, Site C2	Anderson Road (Ancillary	
			Facilities Building)	
AMS-4	DARC-26	Planned School,	Ground of Planned School	Not yet
		Site C2 Note 1	facing Anderson Road	commenced
AMS-5	DARE-06	Block 5, DAR	Main roof of Oi Tat House of	Active
		Site E	On Tat Estate facing the	
			project site	
AMS-6	DARE-17	Block 9, Site E	Main roof of Hau Tat House of	Active
			On Tat Estate facing the	



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ID	ASR ID in EIA	Location in the EM&A Manual	8	Status
			project site	
AMS-7	AMYT-04	Ma Yau Tong	Balcony at 2 nd floor of Village	Active
		Village	House Anderson Road No. 1	
		-	facing the project site	

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.

ID	NSR ID in EIA	Location	Status		
NMS-1	Site C2 –	Ground of planned school at DAR facing the	Not yet		
	School 05 Note 1	project site commenced			
NMS-2	Site E – School	Rooftop of S.K.H. St. John's Tsang Shiu Tim	Active		
(@)		Primary School, where 1m from the exterior			
		of the building facing the project site			
NMS-3(:)	Site C2 – R102–	Ground of Ancillary Facilities Building	Active		
		facing the project site			
NMS-4*	Oi Tat House	1m from the exterior of ground floor façade	Suspended		
		of Oi Tat House of On Tat Estate facing the			
		project site			
NMS-4a#	Oi Tat House	Rooftop of Oi Tat House where 1m from the Active			
		exterior of Oi Tat House facing the project			
		site			
NMS-5#	Hau Tat House	22/F, refuge floor of Hau Tat House where	Active		
		1m from the exterior of Hau Tat House			
		facing the project site.			
NMS-6~	Yung Tai House	Rooftop of Yung Tai House where 1m from	Active		
	of On Tai Estate	the exterior of the building facing the project			
		site)			
NMS-7~	Chi Tai House	Rooftop of Chi Tai House where 1m from the	Active		
	of On Tai Estate				
NMS-8^	No. 3-4 Ma Yau	<u> </u>			
	Tong Village	and facing the construction site			

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*.

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

 Table 3-4
 Additional Impact Monitoring Stations – Construction Noise

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

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, Rion NC-75 & B&K-4231
Portable Wind Speed Indicator	Anemometer AZ Instrument 8908

MONITORING METHODOLOGY

<u>1-hour TSP</u>

- The 1-hour TSP monitor was a brand named "Sibata LD-3 Laser Dust monitor Particle Mass Profiler 3.1.15 & Counter" which is a portable, battery-operated laser photometer. The 1-hour TSP meter provides a real time 1-hour TSP measurement based on 90° light scattering. The 1-hour TSP monitor consists of the following:
 - A pump to draw sample aerosol through the optic chamber where TSP is measured; (a.)
 - A sheath air system to isolate the aerosol in the chamber to keep the optics clean for (b.) maximum reliability; and
 - A built-in data logger compatible with Windows based program to facilitate data (c.) collection, analysis and reporting.
- The 1-hour TSP meter to be used will be within the valid period, calibrated by the manufacturer 3.1.16 prior to purchasing. Zero response of the instrument will be checked before and after each monitoring event.

24-hour TSP

- The equipment used for 24-hour TSP measurement is Thermo Andersen Model GS2310 TSP 3.1.17 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:
 - An anodized aluminum shelter: (a.)
 - A 8"x10" stainless steel filter holder; (b.)
 - A blower motor assembly; (c.)
 - A continuous flow/pressure recorder; (d.)
 - A motor speed-voltage control/elapsed time indicator; (e.)
 - (f.) A 7-day mechanical timer, and
 - A power supply of 220v/50 Hz (g.)
- 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°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 m³/min. Motor brushes of HVS will be regularly replaced of about five hundred hours per time. The calibration certificates of all monitoring equipment used for the impact monitoring program in the Reporting Period and the HOKLAS accredited certificate of laboratory are attached in *Appendix E*.

Noise Monitoring

- 3.1.21 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*.

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

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

(*) 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 Logotion	Action Level Limit Level in dB(A)			
Monitoring Location	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}		



N	Action Level	Limit Level in dB(A)		
Monitoring Location	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+		$70 \text{ dB(A)}^{\text{Note 1}} / 65 \text{ dB(A)}^{\text{Note 1}}$		
CN2+		$70 \text{ dB(A)}^{\text{Note 1}} / 65 \text{ dB(A)}^{\text{Note 1}}$		
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 90 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 4-1Summary of 24-hour and 1-hour TSP Monitoring Results (AMS-1a)

	24-hour		1-hour	ГSP (µg/m ³)	
Date	TSP (µg/m ³)	Date	Start Time	1 st reading	2 nd reading	3 rd reading
1-Dec-20	33	2-Dec-20	13:26	70	72	76
7-Dec-20	34	8-Dec-20	9:18	68	71	65
12-Dec-20	33	14-Dec-20	13:44	55	54	56
18-Dec-20	16	24-Dec-20	9:27	38	46	40
23-Dec-20	37	29-Dec-20	13:44	62	66	65
28-Dec-20	28	-	-	-	-	-
Average (Range)	30 (16 - 37)	Averag (Rang			60 (38 - 76)	

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

1-hour TSP (µg/m ³)						
Date	Start Time	1 st reading	2 nd reading	3 rd reading		
2-Dec-20	9:24	68	77	72		
8-Dec-20	9:41	74	76	72		
14-Dec-20	9:10	68	66	70		
24-Dec-20	13:26	56	59	61		
29-Dec-20	9:10	70	65	64		
Ave	erage		68			
(Ra	ange)		(56 - 77)			

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

1-hour TSP (µg/m ³)						
Date	Start Time	1 st reading	2 nd reading	3 rd reading		
2-Dec-20	12:58	75	82	79		
8-Dec-20	13:06	78	81	87		
14-Dec-20	12:20	76	74	76		
24-Dec-20	12:40	80	77	74		
29-Dec-20	12:20	78	73	72		
	erage	77				
(Ra	inge)		(72 - 87)			



	Table 4-4	Summary of 24-hour and 1-hour TSP Monitoring Results (AMS-5)
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	24-hour	1-hour TSP (µg/m ³)				
Date	TSP (µg/m ³)	Date	Start Time	1 st reading	2 nd reading	3 rd reading
1-Dec-20	30	2-Dec-20	9:27	70	72	70
7-Dec-20	67	8-Dec-20	9:09	75	80	71
12-Dec-20	40	14-Dec-20	9:26	66	65	64
18-Dec-20	44	24-Dec-20	9:18	84	75	79
23-Dec-20	49	29-Dec-20	9:25	72	70	68
28-Dec-20	55	-	-	-	-	-
Average (Range)	47 (30 - 67)	Averag (Range	-		72 (64 - 84)	

Table 4-5	Summary of 24-hour and 1-hour TSP Monitoring Results (AMS-6)
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	24-hour					
Date	$\frac{\text{TSP}}{(\mu \text{g/m}^3)}$	Date	Start Time	1 st reading	2 nd reading	3 rd reading
1-Dec-20	48	2-Dec-20	9:42	69	70	68
7-Dec-20	84	8-Dec-20	9:26	83	74	81
12-Dec-20	44	14-Dec-20	9:55	68	67	64
18-Dec-20	40	24-Dec-20	9:31	82	75	73
23-Dec-20	38	29-Dec-20	9:55	84	82	78
28-Dec-20	46	-	-	-	-	-
Average	50	Average 75				
(Range)	(38 - 84)	(Rang	(Range) (64 – 84)			

Table 4-6Summary of 24-hour and 1-hour TSP Monitoring Results (AMS-7)

	24-hour	1-hour TSP (µg/m ³)					
Date	TSP (μg/m ³)	Date	Start Time	1 st reading	2 nd reading	3 rd reading	
1-Dec-20	56	2-Dec-20	13:57	77	86	89	
7-Dec-20	58	8-Dec-20	13:34	69	71	75	
12-Dec-20	34	14-Dec-20	12:55	71	72	70	
18-Dec-20	33	24-Dec-20	9:55	45	52	49	
23-Dec-20	50	29-Dec-20	12:53	74	73	71	
28-Dec-20	37	-	-	-	-	-	
Average (Range)	45 (33 - 58)	Average (Range)		6			

- 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 **35** 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
2-Dec-20	63	66	64	60	64	60
8-Dec-20	63	67	66	63	66	62
14-Dec-20	66	66	69	68	70	67
24-Dec-20	63	64	65	66	70	69
29-Dec-20	65	66	65	68	71	61
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	g Results for	r Contract 1
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	Construction Noise Level (L _{eq30min}), dB(A)				
Date	NMS8				
2-Dec-20	66				
11-Dec-20	65				
17-Dec-20	67				
21-Dec-20	65				
31-Dec-20	61				
Limit Level	75 dB(A)				

5.1.5 For the additional noise monitoring under Contract 3, a total of **15** 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						
2-Dec-20	70	66	61			
11-Dec-20	66	64	63			
17-Dec-20	65	63	63			



21-Dec-20	68	64	61
31-Dec-20	58	57	60
Limit Level	70 dB(A) / 65 dB(A) ^{Note 1}	70 dB(A) ^{Note 1} / 65 dB(A) ^{Note 1}	75 dB(A)

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

5.1.6 As shown in Tables 5-1 and 5-2, no Limit Level exceedance was recorded in this Reporting Moreover, one noise complaint (which triggered Action level exceedance) was Period. 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 6-1Summary of Quantities of Inert C&D Materials	Table 6-1	Summary o	of Quantities of In	ert C&D Materials
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	Contr	ract 1	Contract 2		Contract 3	
Type of Waste	Quantity	Disposal Location	Quantity	Disposal Location	Quantity	Disposal Location
Total generated Inert C&D Materials ('000m ³) (#)	16.53	-	0.1	-	1.442	-
Hard Rock and Large Broken Concrete ('000m ³)	0	-	0	-	0	-
Reused in this Contract (Inert) ('000m ³)	4.965	-	0	-	0.503	-
Reused in other Projects (Inert) ('000m ³)	10.597	*	0	-	0.308	*
Disposal as Public Fill (Inert) ('000m ³)	0.968	TKO 137	0.03	TKO 137	0.939	TKO 137

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

(*) Approved alternative disposal ground.

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

	Contr	ract 1	Contract 2		Contract 3	
Type of Waste	Quantity	Disposal Location	Quantity	Disposal Location	Quantity	Disposal Location
Recycled Metal ('000kg)	0	-	0	-	0	-
Recycled Paper / Cardboard Packing ('000kg)	1.231	Licensed collector	0	-	0	-
Recycled Plastic ('000kg)	0	-	0	-	0.546	Licensed collector
Chemical Wastes ('000kg)	0	Licensed collector	0	-	0	-
General Refuses ('000m ³)	0.162	SENT	0.07	SENT	0.042	SENT



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 1st, 10th, 15th, 22nd and 29th December 2020 in which IEC joined the site inspection with SSEMC on 10th December 2020. No non-compliance was noted. The findings / deficiencies of *Contract 1* that observed during the weekly site inspection are listed in *Table 7-1*.

Date	Findings / Deficiencies	Follow-Up Status
24 November 2020 (Last Reporting Period)	• The Contractor should provide acoustic mat for the breaker at Water Reservoir.	• Acoustic mat was provided.
1 December 2020	 NRMM label should be displayed on the generator used on site. (USRT) The Contractor was reminded to provide water spraying more frequently during the dry seasons. (General) 	 NRMM label was provided. Reminder Only.
10 December 2020	 Drip tray should be provided for chemical storage on-site. (PTT & Po Lam Road) Water spraying frequency should be increased for the haul road and dusty activities during dry season to reduce dust impact. Moreover, proper noise mitigation measures should be provided for the works area near to the NSR to reduce noise impact (General) 	 Chemical containers were removed. (PTT & Po Lam Road) Reminder only.
15 December 2020	• The Contractor was reminded to provide water spraying on site (General)	• Reminder only.
22 December 2020	• The Contractor was reminded to provide water spraying on site (General)	• Reminder only.
29 December 2020	• The Contractor was reminded to provide water spraying during breaking works. (PTT).	• Reminder only.

Table 7-1Site Observations of Contract 1

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 2nd, 9th, 16th, 23rd and 30th December 2020 in which IEC joined the site inspection with SSEMC on 16th December 2020. 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 7-2Site Observations of Contract 2

Date	Findings / Deficiencies	Follow-Up Status
2 December	• Retained tree without tree protection zone was	Tree protection
2020	observed at portion 1. The Contractor was	zone was provided



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Date	Findings / Deficiencies	Follow-Up Status
	advised to provide tree protection for retained tree.	for retained tree.
9 December 2020	• The Contractor was reminded to remove construction material near tree protection zone at portion 2.	• Reminder only.
	 The Contractor was reminded to spray water regularly at exposed work area for dust suppression. 	• Reminder only.
16 December 2020	 The Contractor was reminded to review the temporary drainage system at portion 3. 	• Reminder only.
23 December 2020	• The Contractor was reminded to enhance the housekeeping within site area.	Reminder only.
30 December 2020	• The Contractor was reminded to enhance the housekeeping within site area.	• Reminder only.

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 4^{th} , 11^{th} , 18^{th} , 24^{th} and 31^{st} December 2020 in which IEC joined the site inspection with SSEMC on 11^{th} December 2020. No non-compliance was noted. The findings / deficiencies of *Contract 3* that observed during the weekly site inspection are listed in *Table 7-3*

Gable 7-3 Site Observations of Contract 3
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Date	Date Findings / Deficiencies	
4 December	• The Contractor was reminded to clear the	• Reminder only.
2020	stagnant water at F1	
	• The Contractor was reminded to provide water spraying at E11.	• Reminder only.
11 December	• The Contractor was reminded to provide water	• Reminder only.
2020	spraying System B.	
18 December	• No adverse environmental issue was observed.	• NA
2020		
24 December	• No adverse environmental issue was observed.	• NA
2020		
31 December 2020	• No adverse environmental issue was observed.	• NA



8. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTION

8.1.1 In the Reporting Period, two environmental complaints were received for Contract 1 in relation to the construction noise and dust emission.

Complaints received for Contract 1

- (c) 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.
- (d) A public complaint was received by 1823 on 3 December 2020 and subsequently referred by EPD on 4 December 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.
- 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*.

Depenting Devied	Contract	Environmental Complaint Statistics			
Reporting Period	no.	Frequency	Cumulative	Complaint Nature	
1 Apr 2017 – 30 Nov 2020	1	0	44	Dust, Noise and light nuisance	
21 Mar 2017 – 30 Nov 2020	2	0	10	Noise	
31 May 2018 – 30 Nov 2020	3	0	6	Waste Management, Noise, Water Quality	
	1	2	46	Dust & Noise	
1 – 31 December 2020	2	0	10	NA	
	3	0	6	NA	

 Table 8-1
 Statistical Summary of Environmental Complaints

Depending Devied	Contract	Environmental Summons Statistics				
Reporting Period	no.	Frequency	Cumulative	Summons Nature		
1 Apr 2017 – 30 Nov 2020	1	0	0	NA		
21 Mar 2017 – 30 Nov 2020	2	0	0	NA		
31 May 2018 – 30 Nov 2020	3	0	0	NA		

CEDD Contract No. NTE/07/2016 Environmental Team for Development of Anderson Road Quarry Site – Site Formation and Associated Infrastructure Works Monthly Environmental Monitoring & Audit Report (December 2020)



Torring Environmental fromtoring & Audit Report (December 2020)

Donouting Douted	Contract	Environmental Summons Statistics			
Reporting Period	no.	Frequency	Cumulative	Summons Nature	
	1	0	0	NA	
1 – 31 December 2020	2	0	0	NA	
	3	0	0	NA	

Table 8-3 Statistical Summary of Environmental Prosecution

Reporting Period	Contract	Environmental Prosecution Statistics		
	no.	Frequency	Cumulative	Prosecution Nature
1 Apr 2017 – 30 Nov 2020	1	0	0	NA
21 Mar 2017 – 30 Nov 2020	2	0	0	NA
31 May 2018 – 30 Nov 2020	3	0	0	NA
1 – 31 December 2020	1	0	0	NA
	2	0	0	NA
	3	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*.

	Environmental witigation weasures
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.

 Table 9-1
 Environmental Mitigation Measures

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:
 - 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:

- PC system B substructure backfill work to continue.
- 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

Construction of Internal Road L2



- Site formation works to continue.
- Drainage pipe lower and middle level complete, upper level and gully pipe 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.
- Mass concrete fill behind Bay 17 to continue.
- Base slab construction of Bay 16 to continue.
- Wall construction of RWA9 Bays 15 and 16 to continue
- Lower level drainage in progress.
- Construction of manhole SMH1, TM26a &TM26 to continue.

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 watermain works outside Water Pumping Station.
- To continue the Metal Works (i.e.: chequer plate.).
- To continue with the ABWF Works (i.e.: floor)
- To continue with the E&M Works.
- To continue the mass concrete fill works at slope A13.

Water Reservoir

- To continue excavation works (rock breaking) for watermain works (i.e.: valve chamber).
- To continue drainage works (backfilling).

Artificial Flood Attenuation Lake

- To continue laying granular bed, HDPE membrane and concrete lining works at remaining part of lake bottom.
- To continue with drainage works.
- To continue the construction of floating bridge footing.

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 Bay 21 wall construction to continue.
- Backfilling behind Bays 22-26 to continue.
- 600 concrete pipe between R343 and CP17-1 in progress.
- Pressure test and swabbing for DN300 fresh watermain and NS125 salt watermain at CHC-10 to CHC390 complete.
- Road works (laying sub-base, kerb construction and flexible pavement) complete
- Excavation and traffic signal post ducting works to continue

PC System A

- North Tower wall construction to continue.
- Subway SYA-SW1 wall and top slab construction to continue.



- South Tower forming of no-fines concrete slope to continue.
- South Tower extension of h-pile to continue.
- South Tower installation of capping plate to continue

•

<u>PTT</u>
Steel work and PMMA panel installation to continue, make good formation condition and rock breaking for cycle track would commence.

Slope Stabilization at Portion B1:

 Continue to carry out stabilization works at Feature No. 11NE-D/C1004, 11NE-D/C1005, Slope A15b, 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 6th berm
- Continue to carry out stabilization works at Feature No. 11NE-D/C949 and 11NE-D/C948
- Continue to trim the slope profile of Feature 11NE-D/C902 and Slope 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 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 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 USRT to continue

Site Formation Work at Portion B13:

• Excavation to formation level to continue.

Site Formation Work at Portion B7 & B15:

• Chainlink fence and UC construction at land parcel R2-5 & Portion B15 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:

Backfilling & SRT of fill slope zone of Portion E2 & E3 to continue

Site Formation Work at Portion A1 (land parcel R2-8):

 Backfilling, proof rolling chain-link fence and UC construction at land parcel R2-8 to continue.

Site Formation Work at Portion A-1 (land parcel G-1):

• Chain-link fence & UC construction at land parcel G-1 completed.

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 Head Wall construct work in progress
- East Portal site formation works for RWA1C retaining wall in progress
- East Portal drainage system construct manhole and rock excavation in progress
- West Portal Buttress wall construct work in progress
- West Portal Slope A3 construct u-channel and berm in progress
- Underpass profile barrier, VE panel frame, painting, drainage works in progress.

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

- Portion 1: Continue grouting works for piles at Pile Cap E1 –PC3. Construction for pile cap E1 –PC3 & E1 –PC5. Construction of Pier E1-P1.
 Postefilling with no fines concents around nile cap E1 PC6
 - Backfilling with no-fines concrete around pile cap E1-PC6.
- Portion 2: Existing lighting removal Installation of rock dowel and shotcreting.
- Portion 3: Rock Excavation for E2-F4.
- Tree branch pruning of Tree No. P-T00967.
- Portion 6:
 - Drainage work
 - Cable diversion.
 - Fixing formwork, reinforcement and place concrete for RWE12
- 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 Roa d).

KEY ISSUES FOR THE COMING MONTH

- 9.1.6 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
- 9.1.7 During dry season, the Contractors should fully implement air quality mitigation measures to reduce construction dust emission as far as practicable. Furthermore, since construction site is highly visible to the resident at nearby estates, noise mitigation measures such as using of quiet plants should be implemented in accordance with the EM&A requirement.
- 9.1.8 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 **45th** monthly EM&A report presenting the monitoring results and inspection findings for the Reporting Period from **1** to **31 December 2020**.
- 10.1.2 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.
- 10.1.3 For construction noise, no Limit Level exceedance was recorded and no Notification of Exceedance was issued during this Reporting Period. 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 \$10.1.4)
- 10.1.4 In the Reporting Period, there were two complaints received in relation to the dust and noise concerns for Contract 1 respectively. Investigation had undertaken by ET upon receipt of the complaint. In our investigation, the Contractor had provided the noise and dust mitigation measures to minimize the noise impact to the resident nearby. It was concluded that the dust impact was not valid to the project. For the noise complaint, it was likely related to the contact works, as enhancement noise measure, the Contractor extended the noise barrier to encircle noisy activity. As the works were conducted within approved normal hours with implementation of noise and dust mitigation measures, there were no breaches of legislative requirement.
- 10.1.5 No notification of summons or successful prosecution was received under the Project.
- 10.1.6 During the Reporting Period, weekly joint site inspection by the RE, ET with the relevant Main-contractor was carried out for Contracts 1, 2 and 3 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

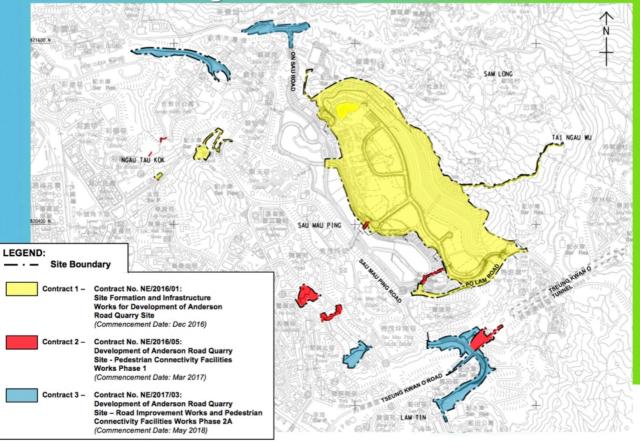
- 10.1.7 During dry season, the Contractors should fully implement air quality mitigation measures to reduce construction dust emission as far as practicable. Furthermore, since construction site is highly visible to the resident at nearby estates, noise mitigation measures such as using of quiet plants should be implemented in accordance with the EM&A requirement.
- 10.1.8 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.
- 10.1.9 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.
- 10.1.10 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.
- 10.1.11 Mosquito control measures should be continued to prevent mosquito breeding on site.



Appendix A

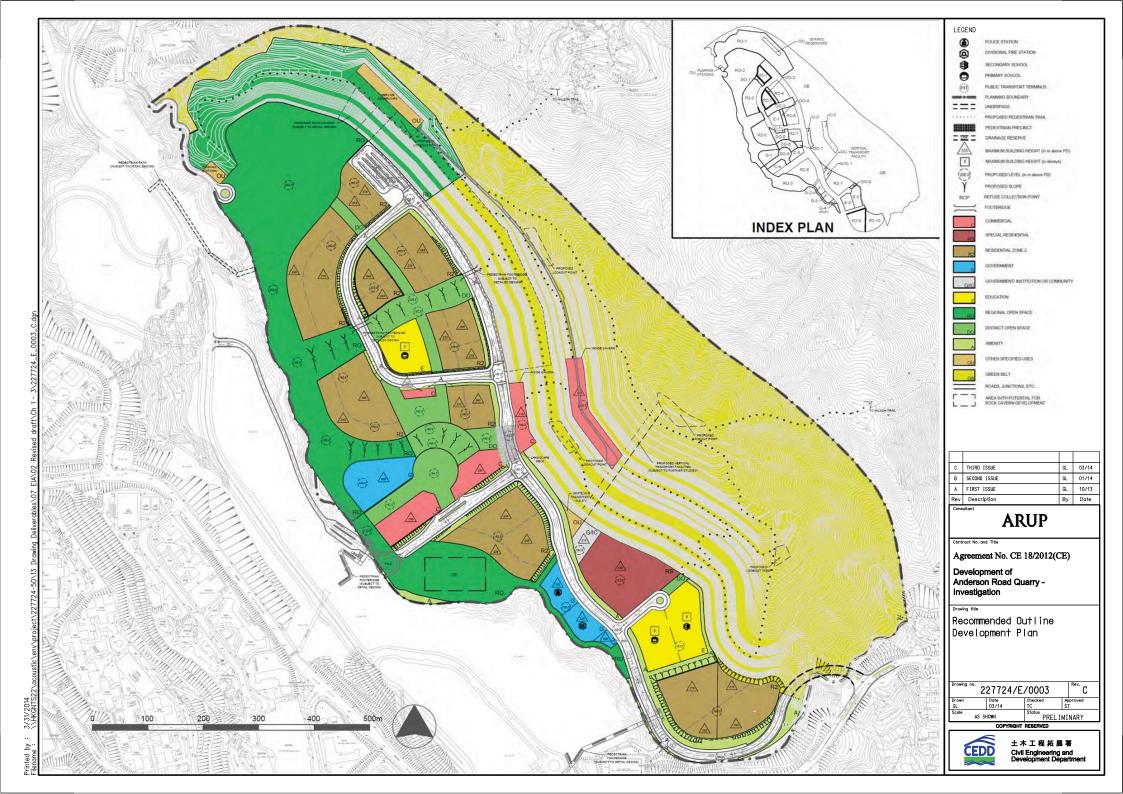
Layout plan of the Project

Contract Packages





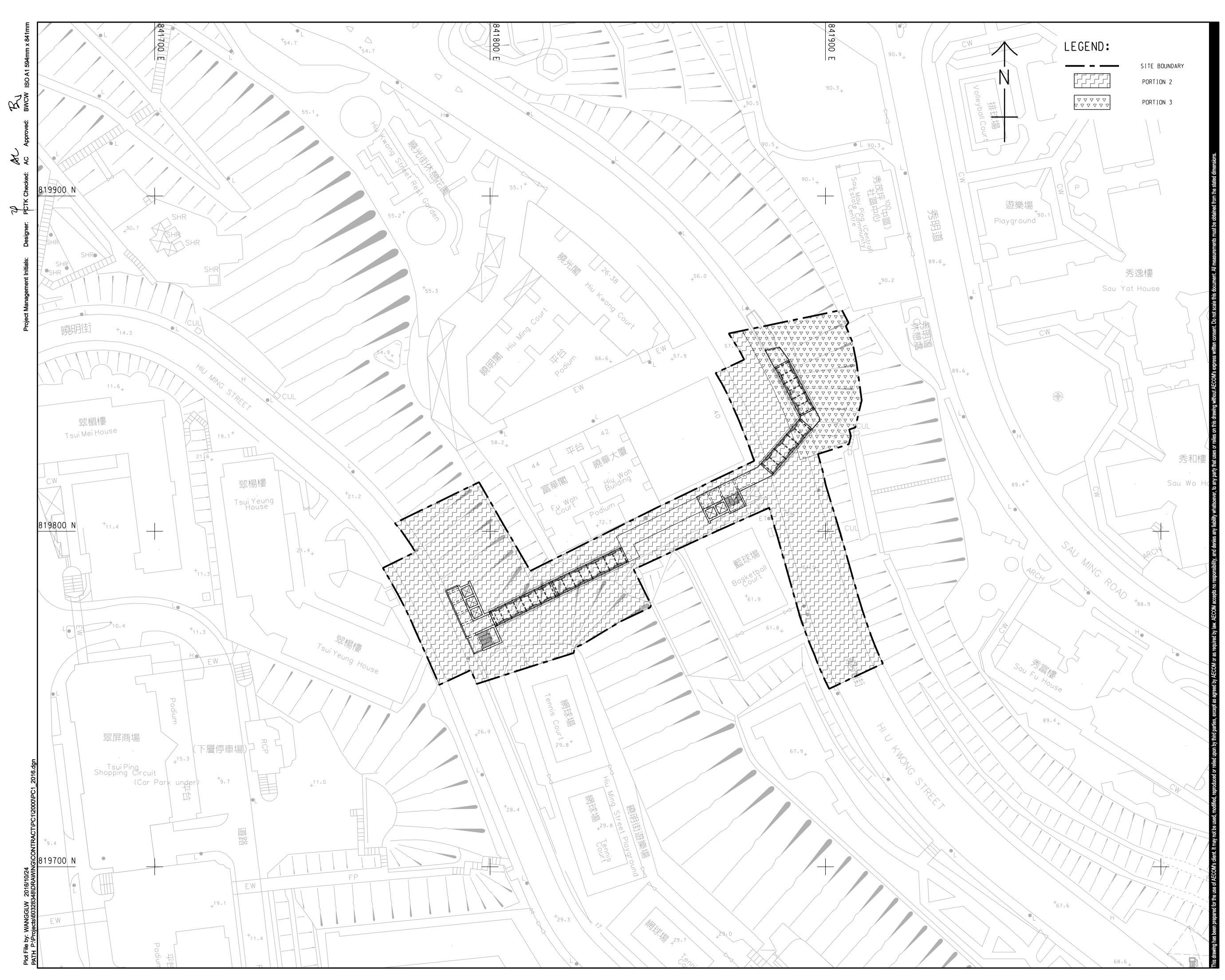
Layout plan of Contract 1 (NE/2016/01)





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

 $Z: Jobs \\ 2016 \\ TCS00864 \\ (CEDD) \\ 600 \\ EM\&A Report \\ Submission \\ Monthly \\ EM\&A \\ Report \\ 2020 \\ December \\ 2020 \\ R0438v \\ 2.docx \\ Report \\ 2020 \\ R0438v \\ 2.docx \\ 2020 \\ R0438v \\ 2.docx \\ Report \\ 2020 \\ R0438v \\ 2.docx \\ Report \\ 2020 \\ R0438v \\ 2.docx \\ Report \\ 2020 \\ R0438v \\ 2.docx \\ 2020 \\ R048v \\ 2.docx \\ 2020 \\ 2020 \\ R048v \\ 2020 \\$





PROJECT _{項目}

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

CONTRACT TITLE PEDESTRIAN CONNECTIVITY FACILITIES WORKS PHASE 1

CLIENT 業主



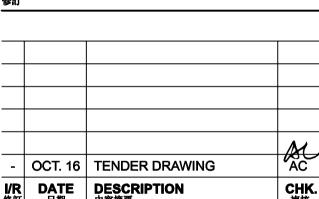
上木工程拓展署
 Civil Engineering and
 Development Department

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}



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

STA 階段

-	OCT. 16	TENDER DRAWING	AC
阁	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
۲.	ATUS		

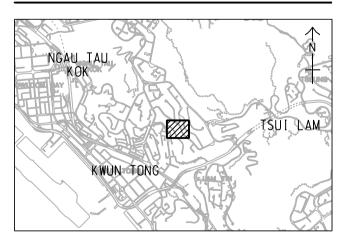
DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
ATUS		

SCALE 比例 A1 1 : 500

DIMENSION UNIT ^{尺寸單位}

METRES

KEY PLAN A1 1 : 60000 索引圖



PROJECT NO. _{項目編}號

CONTRACT NO. ^{合約編號}

60328348

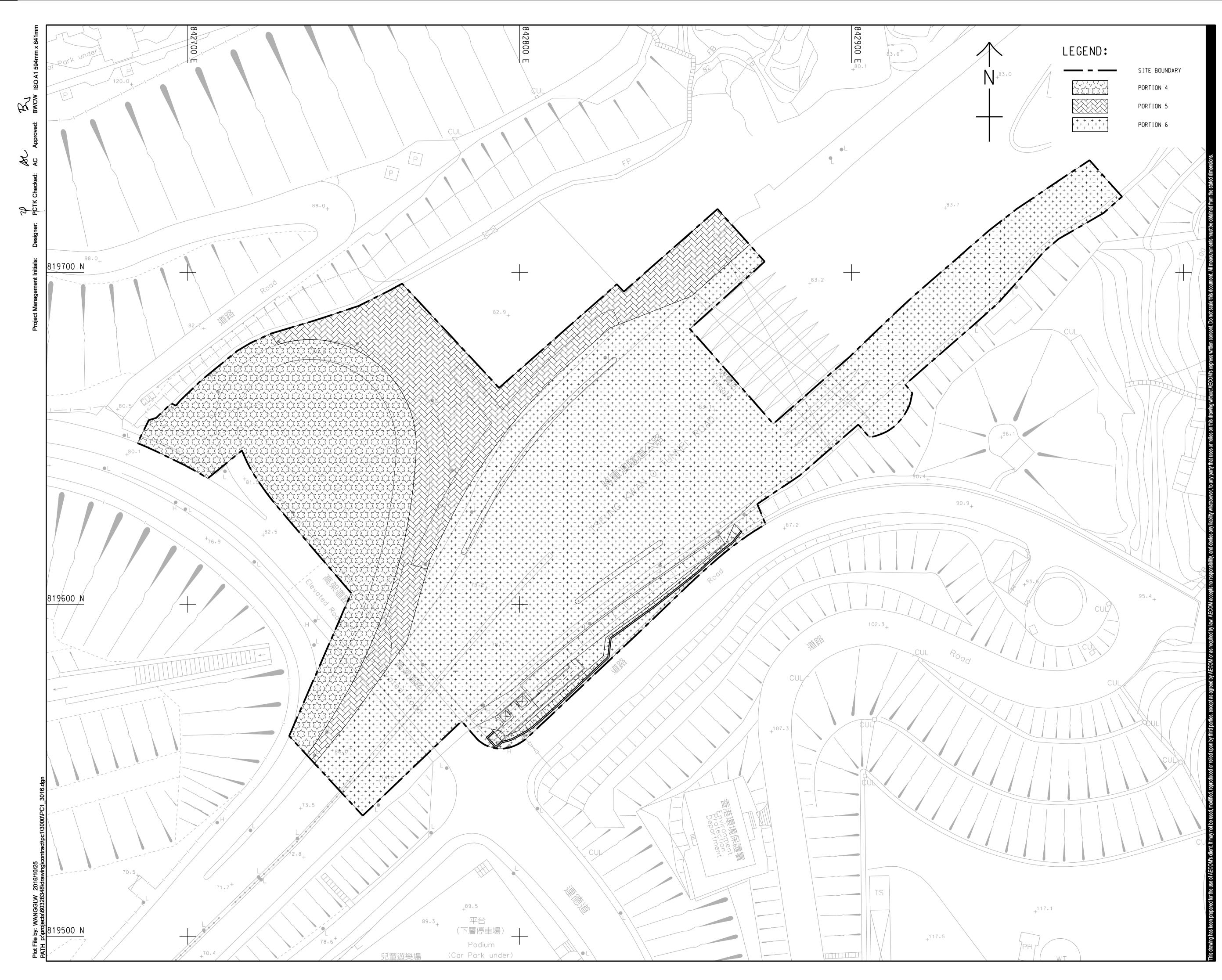
NE/2016/05

SHEET TITLE 圖紙名稱

E2-C1-E3 - PORTION OF SITE

SHEET NUMBER 圖紙編號

60328348/PC1/2016





PROJECT _{項目}

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

CONTRACT TITLE PEDESTRIAN CONNECTIVITY FACILITIES WORKS PHASE 1

CLIENT 業主

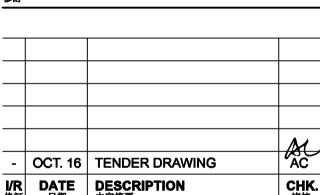


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SCALE _{比例}

A1 1 : 500

NGAU TAU KOK

KWUN TONG

KEY PLAN A1 1 : 60000 索引圖

STATUS 階段

			- AC
-	OCT. 16	TENDER DRAWING	AC
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
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DIMENSION UNIT 尺寸單位

METRES

60328348

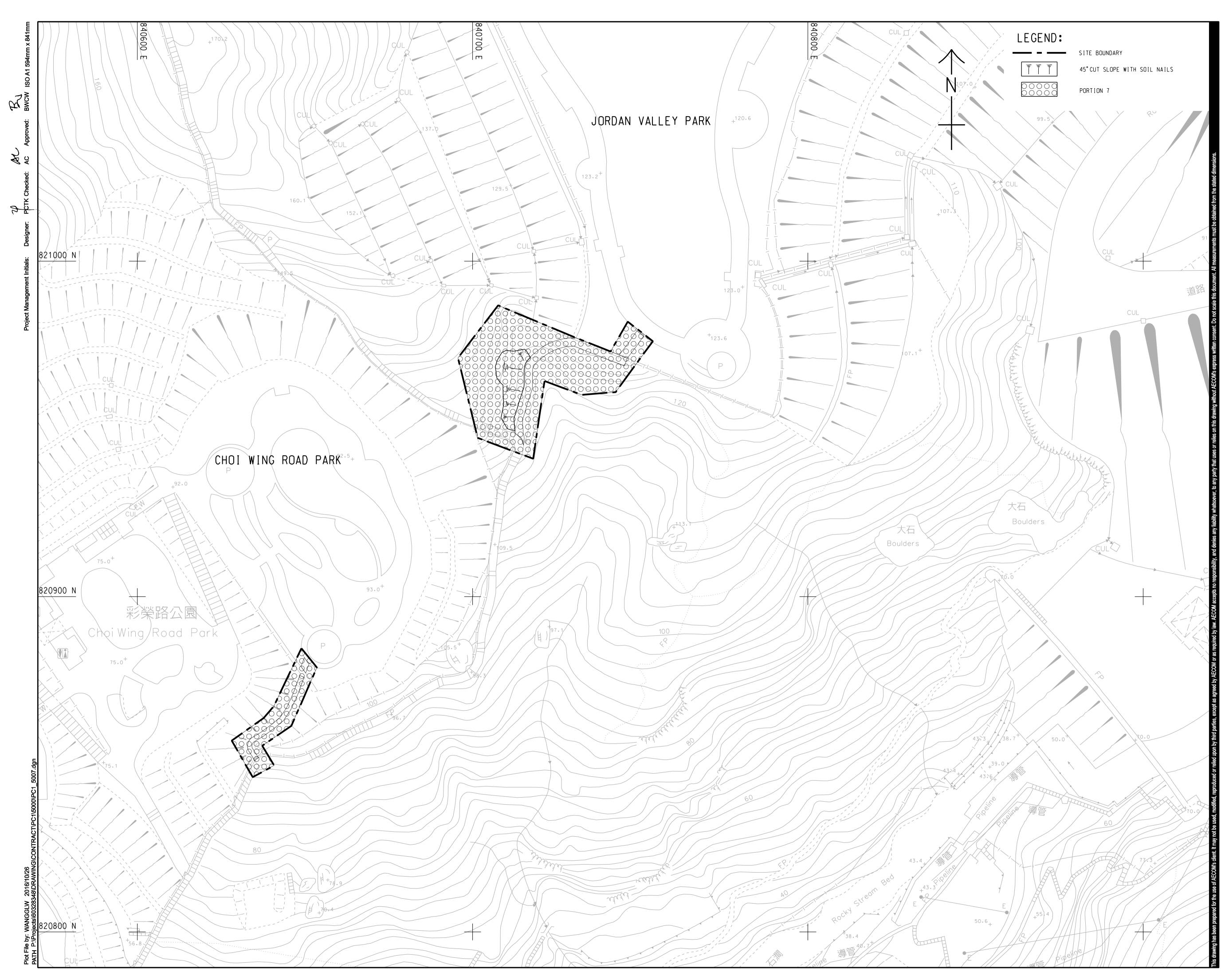
PROJECT NO. 項目編號

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 ^{項目}

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

CONTRACT TITLE PEDESTRIAN CONNECTIVITY FACILITIES WORKS PHASE 1

CLIENT 業主



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ISSUE/REVISION 修訂

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

A1 1 : 500

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

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

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-	OCT. 16		AC
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
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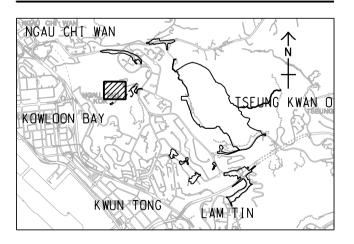
STATUS 階段

SCALE 比例

DIMENSION UNIT 尺寸單位

METRES

KEY PLAN A1 1 : 60000 家引圖



PROJECT NO. ^{項目編}號

60328348

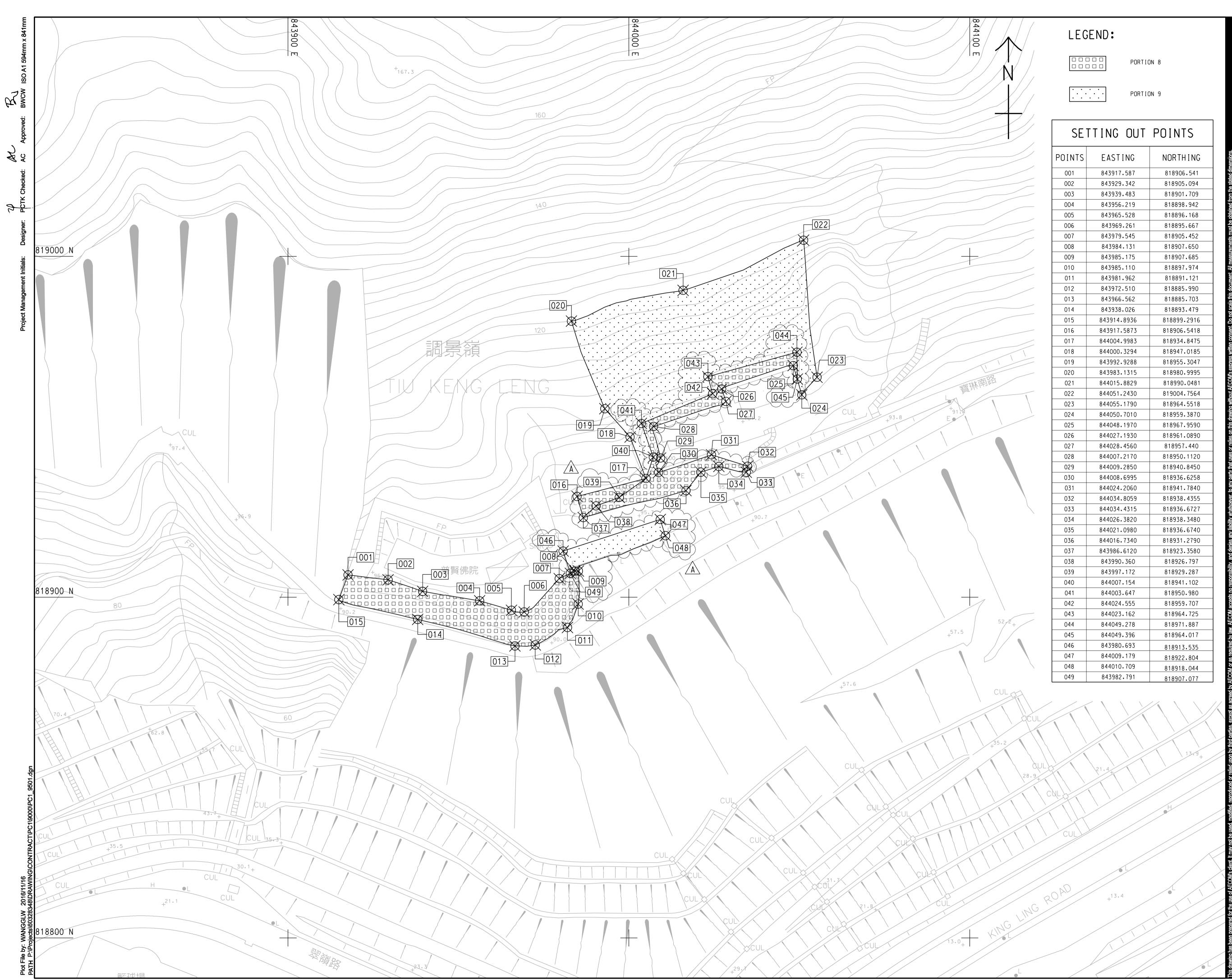
CONTRACT NO. ^{合約編號}

NE/2016/05 SHEET TITLE 圖紙名稱

GREEN ROUTE - PORTION OF SITE

SHEET NUMBER 圖紙編號

60328348/PC1/5007





SE	ITING UUT	PUINIS
OINTS	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
015		
	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	
048	844010.709	818922.804
049	843982.791	818918.044



PROJECT ^{項目}

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

CONTRACT TITLE PEDESTRIAN CONNECTIVITY FACILITIES WORKS PHASE 1

CLIENT _{業主}



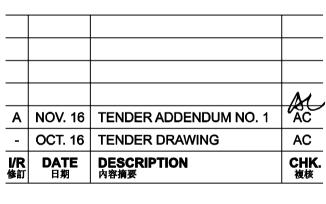
た木工程拓展署
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 Development Department

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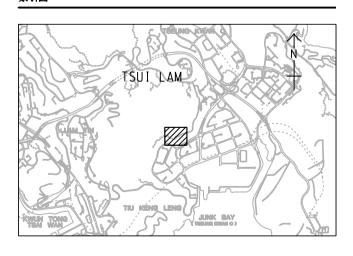
STATUS 階段

A1 1 : 500

SCALE 比例

DIMENSION UNIT ^{尺寸單位} METRES

KEY PLAN A1 1 : 60000 家引國



PROJECT NO. _{項目編}號

CONTRACT NO. ^{合約編號}

60328348

NE/2016/05

SHEET TITLE 圖紙名稱

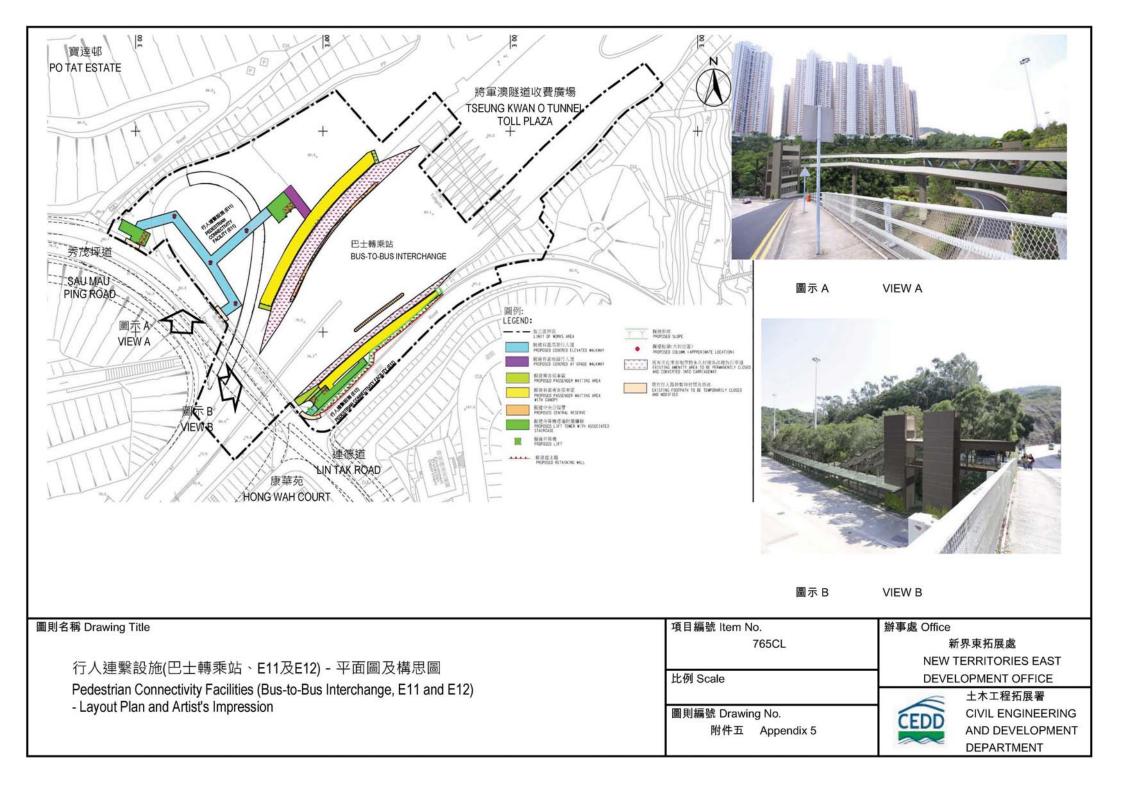
INFRASTRUCTURAL WORKS AT PO LAM ROAD SOUTH TIU KENG LENG – PORTION OF SITE

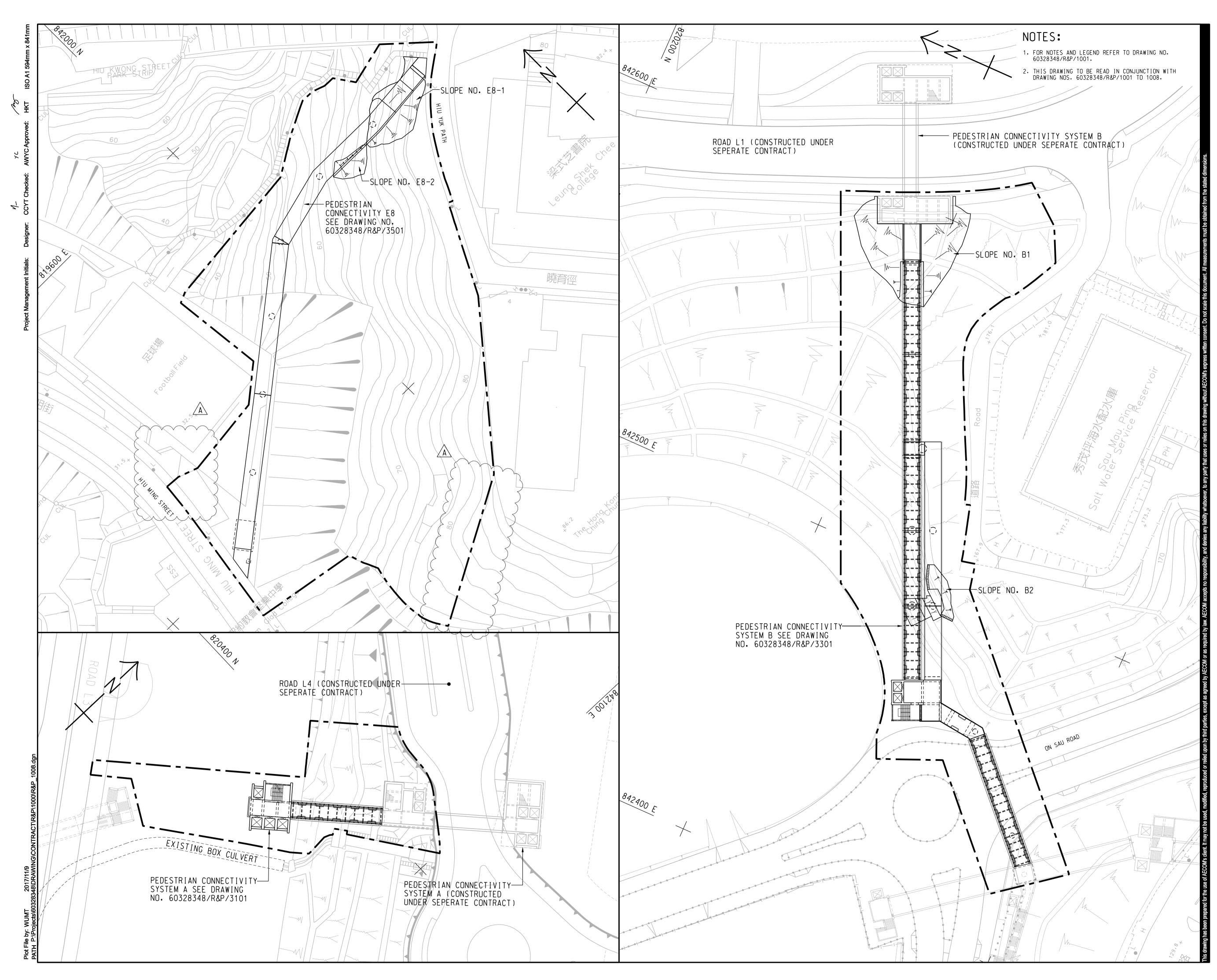
SHEET NUMBER 圖紙編號

60328348/PC1/9501A



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







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}



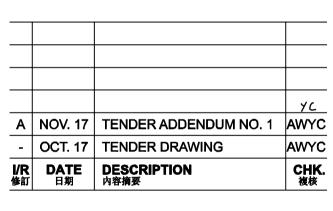
全林工程拓展署 Civil Engineering and Development Department

CONSULTANT 工程顧問公司

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STATUS ^{階段}

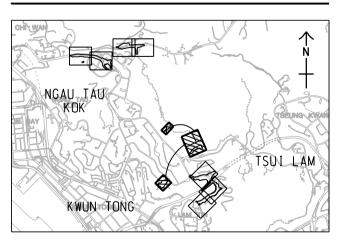
SCALE 比例

A1 1 : 500

DIMENSION UNIT _{尺寸單位}

METRES

KEY PLAN A1 1 : 60000 家引國



PROJECT NO. _{項目編}號

60328348

NE/2017/03

SHEET TITLE 圖紙名稱

GENERAL LAYOUT

SHEET NUMBER 圖紙編號

60328348/R&P/1008A

CONTRACT NO. ^{合約編}號

SHEET 8 OF 8

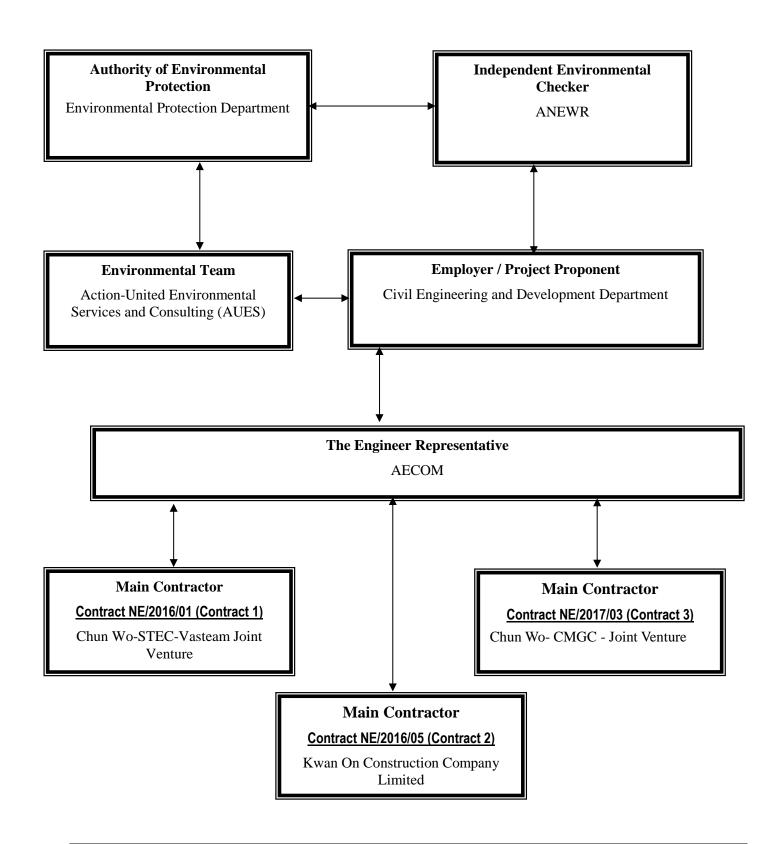


Appendix B

Project Organization Structure



Project Organization Structure





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	Adi Lee	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

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

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



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	Adi Lee	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	Leung Ka Kui	6671 0383	2558 6900
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

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

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



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	Adi Lee	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

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

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)



Contract 1 (NE/2016/01)

俊和-上隧-浩隆聨營	

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

	俊和-上隧-浩隆聯營 CHUN WO - STEC - VASTEAM JOINT VENTURE					3-N	ROLLING PROGRAMME	AMME		
Activity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	At Completion Duration	Start	Finish	l, 2020 lov	Dec	Jan
Anderson Rd	Sub-programme (Dec 2020) _ccn _201205	Durunon	0							oun
Fresh Water Pum	ping Station									
Stage 5 - ABWF,	Finishing & E&M									
FWP-1300	Pumping Station ABWF	0			304	31-Dec-19 A	08-Jan-21			Pumping Station ABWF
FWP-1310	Pumping Station finishing	0			278	25-Feb-20 A	29-Jan-21			
FWP-1320	Pumping Station E&M works	0			244	29-Jun-20 A	23-Apr-21			
Salt Water Reserv	oir									
ABWF, Finishing	3 & E&M									
SWR-1410	Saltwater Reservior ABWF & Finishing	0			473	18-Feb-20 A	18-Sep-21			
SWR-1420	Saltwater Reservior E&M works	0			402	29-May-20 A	02-Oct-21		-	
Fresh Water Rese	rvoir									
ABWF, Finishing	g & E&M									
FWR-1990	Freshwater Reservior ABWF & Finishing	0			256	03-Mar-20 A	11-Jan-21			Freshwater Reservior ABWF &
FWR-2000	Freshwater Reservior E&M works	0			254	12-Oct-20 A	19-Aug-21	_		
RWS Access Roa	d & External Works									
FWP-1400	Formation & Slope RWA13 works	0			379	16-May-20 A	21-Aug-21			
FWP-1410	Watermain (DN600 & DN450) & Irrigation System along WSA access road	0			379	16-May-20 A	21-Aug-21			
FWP-1420	Drainage (sewerage & surface) along WSA access road	0			317	30-Jul-20 A	21-Aug-21			
FWP-1430	CLP power supply duct	0			276	16-Sep-20 A	21-Aug-21			
Pedestrian Conne	ection System A & B									
PC system B	•									
PCB-1090	System B - Backfill south tower	81	19-Aug-19	23-Nov-19	250	16-Feb-20 A	16-Dec-20		System B - Backfill south tower	
PCB-1100	System B - Backfill north tower	81	19-Aug-19	23-Nov-19	250	16-Feb-20 A	16-Dec-20		System B - Backfill north tower	
PCB-1110	System B - ABWF	81	05-Aug-19	09-Nov-19	214	16-Apr-20 A	31-Dec-20	_		system B - ABWF
PCB-1120	System B - E&M	22	23-Sep-19	19-Oct-19	173	05-Jun-20 A	31-Dec-20			ystem B - E&M
PCB-1130	System B - E&M T&C	24	21-Oct-19	16-Nov-19	24	02-Jan-21	29-Jan-21	_		ystem D - Low
PCB-1140	System B - Lift installation	75	21-Oct-19	18-Jan-20	75	02-Jan-21	06-Apr-21	_		
PC system A										
PCA-1030	B5 - Construction of Sub-Structure of Lift Tower (+166 to +175m PD)	0			60	16-Nov-20 A	27-Jan-21			
PCA-1040	B5 - Construction of Super Structure of Lift Tower (+10 5mPDto Roof Level)	0			60	28-Jan-21	14-Apr-21	_		
PCA-1120	C1a - Construction of Pile Caps	0			81	23-Sep-20 A	31-Dec-20	_		a - Construction of Pile Caps
PCA-1120 PCA-1130	C1a - Construction of Prie Caps C1a - Construction of Sub-Structure of Lift Tower (+166 to +175mPD)	0			60	04-Nov-20 A	31-Dec-20			·
PCA-1130 PCA-1140	C1a - Construction of Sub-Structure of Lint lower (+166 to +175mPD) C1a - Construction of Subway	0			90	02-Jan-21	23-Apr-21 A			
	·	U			90	uz-Jarl-Z'l	23-Apr-21			
Artificial Flood Att										
Retaining wall Pa		40	19 Dec 10	02 lan 00	464	08 him 00 h	24 De- 00			
ART-1480	Art retain wall - Part 11 bay 46	12	18-Dec-19	03-Jan-20	164	08-Jun-20 A	21-Dec-20		Art retain wall - Part 11	
ART-1490	Art retain wall - Part 11 bay 47	12	18-Dec-19	03-Jan-20	164	08-Jun-20 A	21-Dec-20		Art retain wall - Part 11	
ART-1500	Art retain wall - Part 11 bay 48	12	27-Dec-19	10-Jan-20	164	15-Jun-20 A	30-Dec-20			retain wall - Part 11 bay 48
ART-1510	Art retain wall - Part 11 bay 49	12	18-Dec-19	03-Jan-20	164	08-Jun-20 A	21-Dec-20		Art retain wall - Part 11	bay 49
Retaining wall Pa										
ART-1520	Art retain wall - Part 12 backfill by course material, excavation, 300mm rock fill	14	11-Jan-20	30-Jan-20	162	30-Jun-20 A	12-Jan-21			Art retain wall - Part 12 backf
ART-1530	Art retain wall - Part 12 bay 50	12	31-Jan-20	13-Feb-20	12	13-Jan-21	26-Jan-21			
ART-1540	Art retain wall - Part 12 bay 51	12	07-Feb-20	20-Feb-20	12	20-Jan-21	02-Feb-21			
ART-1550	Art retain wall - Part 12 bay 52	12	31-Jan-20	13-Feb-20	12	13-Jan-21	26-Jan-21			
Backfill at back o	of retaining wall									
									Date	Rev
	nned Bar (WP) ual Bar Milestone (WP)							ing Programme	15-Dec-20	C1-MPU202012
	uai Bar ♦ ♦ Millestone ecast Bar				on Rd Sub-p	orogramme				
				15-Dec-	-20					

		ge 1 of 4	
	Qtr 1, 2021 Feb		Mar
	Duration Obsting faithfung		
	Pumping Station finishing		
F & Finishi	ng		
	System B - E&M T&C		
B 5 ·	Construction of Sub-Structure of Lift	Tower (+166 to +175mPD)
ackfill by co	urse material, excavation, 300mm ro	ck fill	
Art ret	airi wall - Part 12 bay 50		
Δ	Art retain wall - Part 12 bay 5 ain wall - Part 12 bay 52	1	
- Art ret	ann wan - r∹an 1∠ Day 5∠		
Revisior	:	Checked	Approved
			- pprotou

俊和-上隧-浩隆聯營

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

	CHUN WO - STEC - VASTEAM JOINT VENTURE					J -1	IONTH	
vity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	At Completion Duration	Start	Finish	l, 2020 Iov Dec Jan
ART-1940	Art retain wall - Bay 47-52	30	20-Dec-19	30-Jan-20	184	16-May-20 A	22-Dec-20	Art retain wall - Bay 47-52
Construction of	lake bottom							
ART-1960	Art Lake - Construction north part	36	06-Dec-19	20-Jan-20	208	16-Apr-20 A	22-Dec-20	Art Lake - Construction north part
ART-1970	Art Lake - Excavation south part	30	06-Dec-19	13-Jan-20	236	10-Mar-20 A	22-Dec-20	Art Lake - Excavation south part
ART-1980	Art Lake - Construction south part	36	14-Jan-20	27-Feb-20	184	23-May-20 A	31-Dec-20	Art Lake - Construction south part
ART-1990	Art Lake - water testing for bottom of lake	45	28-Feb-20	24-Apr-20	45	02-Jan-21	26-Feb-21	
Construction of	Floating Bridge							
ART-2050	Art Lake Floating Brdige - backfill	30	01-Nov-19	05-Dec-19	228	16-May-20 A	18-Feb-21	
ART-2060	Art Lake Floating Brdige - footing construction	30	06-Dec-19	13-Jan-20	78	19-Feb-21	26-May-21	
Slot Chamber	······································							
ART-2080	Art Lake - Slot chamber no. 1 & stop log chamber	18	09-Dec-19	31-Dec-19	184	16-May-20 A	22-Dec-20	At also. Clat dombara 1.8 star las sharehar
ART-2090		26	31-Jan-20	29-Feb-20	26	23-Dec-20	25-Jan-21	Art Lake - Slot chamber no. 1 & stop log chamber
	Art Lake - Slot chamber no. 2 & stop log chamber							
ART-2100	Art Lake - Slot chamber no. 3	33	31-Jan-20	09-Mar-20	33	23-Dec-20	02-Feb-21	
Drainage								
ART-2110	Art Lake - Outside bay 38-45	63	04-Nov-19	18-Jan-20	274	02-Mar-20 A	30-Jan-21	
ART-2120	Art Lake - Outside bay 3-8	28	09-Dec-19	13-Jan-20	215	16-May-20 A	30-Jan-21	
ART-2130	Art Lake - Outside bay 9-28	56	21-Nov-19	31-Jan-20	244	07-Apr-20 A	30-Jan-21	
ART-2140	Art Lake - Outside bay 50-52	14	31-Jan-20	15-Feb-20	102	28-Sep-20 A	30-Jan-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	228	11-Jun-20 A	16-Mar-21	
ART-1630	Treatment plant - Backfilling (by course material) to 197.1mPD, 8.2m Depth	30	28-Dec-19	05-Feb-20	84	16-Jan-21	30-Apr-21	
Bioretention Sy	stem							
ART-2150	Art Lake - Part 1,2,4	72	01-Feb-20	29-Apr-20	236	13-Jun-20 A	27-Mar-21	
ART-2160	Art Lake - Part 3	32	14-Jan-20	22-Feb-20	192	06-Aug-20 A	27-Mar-21	
ART-2170	Art Lake - Part 6,7,12	16	17-Feb-20	05-Mar-20	190	08-Aug-20 A	27-Mar-21	
nderpass Tunn	el							
Box Culvert BC	3							
TUN-3360	BC3 - CH2506 to CH2484 (22m)	0			174	11-Jun-20 A	08-Jan-21	BC3 - CH2506 to CH2484 (2
VE Panels, Roa								
TUN-3510	Install VE Panels (Frame & Panels)	0			83	28-Sep-20 A	08-Jan-21	Install VE Panels (Frame & I
TUN-3520					83		08-Jan-21	Tunnel - E&M 1st Fix (Brack
	Tunnel - E&M 1st Fix (Bracket, Tracking & Cabling)	0				28-Sep-20 A		Sub-base for Underpass roa
TUN-3530	Sub-base for Underpass road L1	0			83	28-Sep-20 A	08-Jan-21	
TUN-3540	Tunnel - FS main, Socket & AFA equipment	0			73	19-Oct-20 A	15-Jan-21	Tunnel - FS n
TUN-3550	Underpass L1 paving, funiture, marking, signage from East Portal	0			73	19-Oct-20 A	15-Jan-21	Underpass L1
TUN-3560	Tunnel - E&M 2nd Fix (Lighting & Equipment)	0			73	19-Oct-20 A	15-Jan-21	Tunnel - E&M
TUN-3570	Underpass ABWF works	0			56	09-Nov-20 A	15-Jan-21	Underpass AE
TUN-3580	Tunnel - E&M Final Fix (Equipment connection & testing)	0			56	09-Nov-20 A	15-Jan-21	Tunnel - E&M
TUN-3590	Tunnel - T&C & Statutory inspection	0			30	16-Dec-20	22-Jan-21	
oad L4 (RWA18	3, Noise Barrier, RWA12, Utilities & Road Works)							
Retaining Wall I	RWA12							
L4-3450	L4 (RWA12) - Bay 17-20 construct wall & backfill upto +170 (after system A sub-way)	0			85	19-Oct-20 A	29-Jan-21	
L4-3460	L4 (RWA12) - Bay 17-20 construct wall & backfill upto +175	0			85	30-Jan-21	17-May-21	
L4-3530	L4 (RWA12) - Bay 22 construct wall & backfill upto +170 (after twin 1950 pipe)	0			85	23-Jan-21	10-May-21	
L4-3630	L4 (RWA12) - Bay 21 construct wall & backfill upto +170 (after system A sub-way)	0			85	16-Dec-20	31-Mar-21	
L4-3030	L4 (RWA12) - Bay 21-29 construct wall & backfill	0			210	02-Apr-20 A	16-Dec-20	L4 (RWA12) - Bay 23-29 construct wall & backfill
24-3700	L+ (WVA12)- Day 23-23 CUINUUC Wall & DACKIII	U			210	02-API-20 A	10-DeC-20	
	anned Bar (WP) 🔷 🔷 Planned Milestone (WP)					•		Date
	tual Bar \blacklozenge \blacklozenge Milestone						n Koll	ing Programme 15-Dec-20 C1-MPU202012
				Anderso				

	Pa	ge 2 of 4	
	Qtr 1, 2021		Mar
	Feb		Mar
		Ar	Lake - water testing for botto
		Art Lake Floating B	rdige - backfill
Artiska	Slot chamber no. 2 & stop log chan	nber	
, ut Lane -	Art Lake - Slot chamber no. 3		
,	Art Lake - Outside bay 38-45		
,	Art Lake - Outside bay 3-8		
,	Art Lake - Outside bay 9-28		
,	Art Lake - Outside bay 50-52		
ls)			
acking & Cab	ing)		
Socket & AFA	equipment		
ng, funiture, i	marking, signage from East Portal		
	& Equipment)		
works			
	ent connection & testing)		
nei - 1&C & S	tatutory inspection		
14	(RWA12) - Bay 17-20 construct wa	ll & backfill upto +170 /s	ifter system A sub-wav)
			-, nous may,
	·	<u>.</u>	
Revision		Checked	Approved
			1

				CT NO.NE/2016/01 SITE FORMATION AND INFRASTRUCTURE WORKS FOR DEVELOPMENT OF ANDERSON ROAD QUARRY SITE 3-MONTH ROLLING PROGRAMME						
vity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	At Completion Duration	Start	Finish	l, 2020	Dec	lan
Road Works - D	rainage	Duration	Start	FilliSII	Duration			10V	Dec	Jan
L4-4250	L4 (Drainage) - Excavate & lay drain CH150 to CH200	0			189	18-May-20 A	31-Dec-20			L4 (Drainage) - Excavate & lay drain CH150 to C
L4-4260	L4 (Drainage) - Backfill for water main CH0 to CH200	0			30	02-Jan-21	05-Feb-21	-		
L4-4270	L4 (Drainage) - Excavate & lay drain CH200 to CH250	0			179	29-May-20 A	31-Dec-20		[L4 (Drainage) - Excavate & lay drain CH200 to C
L4-4280	L4 (Drainage) - Excavate & lay drain CH250 to CH300	0			80	02-Jan-21	12-Apr-21	-		
L4-4290	L4 (Drainage) - Excavate & lay drain CH300 to CH350	0			179	29-May-20 A	31-Dec-20			L4 (Drainage) - Excavate & lay drain CH300 to C
L4-4300	L4 (Drainage) - Excavate & lay drain CH350 to CH400	0			80	02-Jan-21	12-Apr-21	_		
Retaining Wall R	WA9 at Road L3						1			
RWA9 Bay 13 to	Bay 16									
RWA9-1190	RWA9 - Break bore pile head for Bay 16 & lay blinding layer	0			57	31-Oct-20 A	08-Jan-21			RWA9 - Break bore pile head fo
RWA9-1200	RWA9 - F/W & rebat fixing to Bay 16 Base Slab	0			21	09-Jan-21	02-Feb-21	-		
RWA9-1210	RWA9 - Concrete laying for Bay 16 Base Slab	0			1	03-Feb-21	03-Feb-21			
RWA9-1220	RWA9 - F/W & rebat fixing to Bay 13, 14 & 15 Base Slab	0			14	04-Feb-21	23-Feb-21			
RWA9-1230	RWA9 - Concrete laying for Bay 13, 14 & 15 Base Slab	0			3	24-Feb-21	26-Feb-21			
RWA9-1240	RWA9 - F/W & rebat fixing to Bay 16 wall	0			21	27-Feb-21	23-Mar-21	-		
RWA9 Bay 17 to	Bay 20									
RWA9-1290	RWA9 - F/W & rebat fixing to Bay 17 & 19 Base Slab	0			51	31-Oct-20 A	31-Dec-20			RWA9 - F/W & rebat fixing to Bay 17 & 19 Base
RWA9-1300	RWA9 - Concrete laying for Bay 17 & 19 Base Slab	0			3	02-Jan-21	05-Jan-21	_		RWA9 - Concrete laying for Bay 17 &
RWA9-1310	RWA9 - F/W & rebat fixing to Bay 18 & 20 Base Slab	0			10	06-Jan-21	16-Jan-21			RWA9 - F/W 8
RWA9-1320	RWA9 - Concrete laying for Bay 18 & 20 Base Slab	0			3	18-Jan-21	20-Jan-21	-		RWA9
RWA9-1330	RWA9 - F/W & rebat fixing to Bay 17 & 19 Wall	0			10	21-Jan-21	01-Feb-21	-		
RWA9-1340	RWA9 - Concrete laying for Bay 17 & 19 Wall	0			3	02-Feb-21	04-Feb-21	_		
RWA9-1350	RWA9 - F/W & rebat fixing to Bay 18 & 20 Wall	0			14	05-Feb-21	24-Feb-21	-		
RWA9-1360	RWA9 - Concrete laying for Bay 18 & 20 Wall	0			3	25-Feb-21	27-Feb-21	-		
RWA9 Bay 21 &										
RWA9-1370	RWA9 - Excav & formation work for Bay 20 to 21 & lay blinding layer	0			21	21-Jan-21	17-Feb-21			
RWA9-1380	RWA9 - F/W & rebat fixing to Bay 21 & 22 Base Slab	0			21	18-Feb-21	13-Mar-21			
	1 east (between Junction L3 & L5)									
toad L5										
RL5-1040	Road L5 - ducting for Street Lighting	0			310	02-Dec-19 A	16-Dec-20		Road L5 - ducting for Street	et Lighting
RL5-1050	Road L5 - Road Pavement	0			313	04-Dec-19 A	22-Dec-20		Road L5 - Road	ad Pavement
RL5-1060	Road L5 - Landscape funiture	0			184	16-May-20 A	22-Dec-20		Road L5 - Lar	
	rt 1 (L5 toward L3 Junction)				104	10 may 20 M	22-000-20			
RL1a-1030	Road L1 east 1 - UU installation	0			315	28-Nov-19 A	18-Dec-20		Road L1 east 1 - UU ir	stallation
RL1a-1040	Road L1 east 1 - ducting for Street Lighting	0			261	10-Feb-20 A	22-Dec-20			1 -ducting for Street Lighting
RL1a-1050	Road L1 east 1 - Road Pavement	0			309	09-Dec-19 A	22-Dec-20			1 -Road Pavement
RL1a-1060	Road L1 east 1 - Landscape funiture	0			195		15-Jan-21			Road L1 east 1 -
	·	0			195	25-May-20 A	15-Jan-21			
	rt 2 (L5 toward PC system B)				007	40 D 40 A	40 D 00		Road L1 east 2 - ducti	na for Street Liabting
RL1b-1040	Road L1 east 2 - ducting for Street Lighting	0			297	19-Dec-19 A	18-Dec-20			Road L1 east 2 - Road Pavement
RL1b-1050	Road L1 east 2 - Road Pavement	0			213	17-Apr-20 A	31-Dec-20			
RL1b-1060	Road L1 east 2 - Landscape funiture	0			190	13-Jun-20 A	29-Jan-21			
	rt 3 (Junction L3 toward L5)									2 Matamain insta ^{ll}
RL1c-1020	Road L1 east 3 - Watermain installation	0			260	11-Feb-20 A	22-Dec-20		Road L1 east	3 -Watermain installation
RL1c-1023	Road L1 east 3 - Fibe optic installation	0			220	16-Apr-20 A	08-Jan-21			Road L1 east 3 - Fibe optic inst
RL1c-1030	Road L1 east 3 - UU installation	0			288	06-Jan-20 A	22-Dec-20		Road L1 east	3 - UU Installation

Anderson Rd Sub-programme

15-Dec-20

Forecast Bar

F				
		Pa	ge 3 of 4	
		Qtr 1, 2021	-	Mar
		Feb		Mar
CH200				
		L4 (Drainage) - Backfill	for water main CH0 to C	-1200
CH250				
CH350				
for Bay	16 & lay	blinding layer		
		RWA9 - F/W & rebat fixing to		
		RWA9 - Concrete laying for		
				W & rebat fixing to Bay 13, *
				A9 - Concrete laying for Bay
se Slab				
	ise Slab			
		Bay 18 & 20 Base Slab		
49 - Cor	ncrete lay	ng for Bay 18 & 20 Base Slab		
		RWA9 - F/W & rebat fixing to B	ay 17 & 19 Wall	
		RWA9 - Concrete laying f	or Bay 17 & 19 Wall	
			RWA9-	F/W & rebat fixing to Bay 18
			– R	NA9 - Concrete laying for Ba
			RWA9 - Excav & forma	tion work for Bay 20 to 21 &
				F
I - Land	scape fui	hiture		
	Ra	ad L1 east 2 - Landscape funiture		
istallatio	'n			
Rev	vision		Checked	Approved

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		CONTRACT NO.NI	E/2016/01 S	A	NDERS	RASTRUCTURE WORKS FOR DEVELOPMENT OF UARRY SITE PROGRAMME	Page 4 of 4
ivity ID	Activity Name	BL Project BL Project BL Project Duration Start Finish	At Completion	Start	Finish		Qtr 1, 2021
RL1c-1040	Road L1 east 3 - ducting for Street Lighting	Duration Start Finish	Duration 218	16-Apr-20 A	06-Jan-21	Dec Jan Road L1 east 3 - ducting for Street Ligh	ng Feb Mar
RL1c-1050	Road L1 east 3 - Road Pavement	0	214	16-Apr-20 A	31-Dec-20	Road L1 east 3 - Road Pavement	
RL1c-1060	Road L1 east 2 - Landscape funiture	0	199	13-Jun-20 A	09-Feb-21		Road L1 east 2 - Landscape funiture
Road Works PTT	L1 west (between Junction L3 & PTT)						
Road L1 west pa	rt 1 (Box culvert BC1)						
RL1c-1070	Road L1 west 1 - Drain Works (except gully near slope)	0	339	11-Nov-19 A	31-Dec-20	Road L1 west 1 - Drain Works (except gully near slo	e)
RL1c-1090	Road L1 west 1 - Watermain installation	0	187	28-May-20 A	09-Jan-21	Road L1 west 1 - Watermain inst	llation
RL1c-1100	Road L1 west 1 - Fibe optic installation	0	199	28-May-20 A	23-Jan-21	Roz	I L1 west 1 - Fibe optic installation
RL1c-1110	Road L1 west 1 - UU installation	0	45	17-Dec-20	10-Feb-21		Road L1 west 1 - UU installation
RL1c-1120	Road L1 west 1 - ducting for Street Lighting	0	40	29-Dec-20	17-Feb-21		Road L1 west 1 - ducting for Street Lig
RL1c-1130	Road L1 west 1 - Road Pavement	0	40	29-Dec-20	17-Feb-21		Road L1 west 1 - Road Pavement

Planned Bar (WP) 🔶	♦ Planned Milestone (WP)	2 month Dolling Drogramma	Date		Re
Actual Bar \blacklozenge	 ♦ Milestone 	3-month Rolling Programme Anderson Rd Sub-programme	15-Dec-20	C1-MPU202012	
		15-Dec-20			

Revision	Checked	Approved



Contract 2 (NE/2016/05)

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)	Task Name	Duration	Start	Finish	Predecess		А
1	Section A Portions 1, 2, 3						
2 3	Revised Contract Period Contract Commencement Period (Addendum No.2)		Sat 01-04-17 Sat 01-04-17	Tue 08-12-20 Tue 31-03-20			
4	Public Holidays since 1 April 2017	173 days		Sat 10-10-20	3		
5	Granted EOT from CE CE124 - 5days exam	199 days? 5 days			4 4		
7	CE 051 - 7days exam	6 days			6		
8	CE113 - 5days exam	5 days			7 8		
9 10	CE 058 - Idays inclement weather March 2018 CE 078 - 4days inclement weather May 2018	1 day 4 days			8 9		
11	CE102 - 11days inclement weather June 2018	11 days			10		
12	CE109 - 7days inclement weather July 2018 CE149 & CE151 20days exam Jan & Feb 2019	7 days 20 days			11 12		
14	PMI-159 - 1day exam	1 day			13		
15 16	CE171 10 days exam Mar & April 2019 CE174 3 days inclement weather Feb 2019	14 days 3 days			14 15		
17	3.5days inclement weather Mar 2019	3.5 days			16		
18 19	CE193 2.5 day inclement weather April 2019	2.5 days			17 18		
20	1 day school graduation May 2019 1 day inclement weather May 2019	1 day 1 day			19		
21	1 day inclement weather June 2019	1 day			20 21		
22 23	4 day inclement weather July 2019 14 days TownGas at Portion 3	4 days 14 days			21 22		
24	12 days exam June 2019	12 days			23		
25 26	11 days exam Jan 2020 10 days exam Feb 2020	11 days 10 days			24 25		
27	2 days exam Mar 2020	2 days			26		
28	6 days exam April 2020	6 days			27 28		
29 30	COVID-19 Event Jan 31 to Mar 18, 2020 5 days exam May 2020	52 days 5 days	Thu 03-12-20	Tue 08-12-20			
31							
32 33	Submissions MS socket H pile for RS1 and PC1 (3 revisions)	788 days 189 days	Thu 04-05-17 Thu 04-05-17				
34	Submissions	139 days	Tue 09-05-17	Wed 11-10-1			
35 36	MS for Weld test	30 days 30 days	Tue 09-05-17 Wed 31-05-17		,		
37	MS Tree felling MS Tree protection	30 days	Thu 15-06-17				
38	MS site entrance	30 days	Fri 07-07-17	Wed 09-08-1			
39 40	MS hoarding MS GI	30 days 30 days	Fri 11-08-17 Thu 07-09-17	Wed 13-09-17 Tue 10-10-17			
41	Approval of MS	161 days	Tue 10-10-17	Mon 09-04-18	834		
42	Pile cap submissions MS pilecap	211 days 30 days	Mon 09-04-18 Mon 09-04-18		41		
44	MS pile load test PC1 (3 revisions)	23 days	Sat 21-04-18	Wed 16-05-18	8		
45	Approval of Load Test	23 days	Thu 17-05-18 Tue 12-06-18				
46 47	MS dismantle load test MS ELS (2 revisions)	30 days 182 days	Fri 27-04-18	Fri 16-11-18	43		
48	MS Piling PC3 to PC5 (3 revisions)	189 days	Thu 03-05-18		10		
49 50	Approval of MS Superstructure submissions	90 days 256 days	Fri 30-11-18 Wed 15-08-18	Mon 11-03-19 Tue 28-05-19			
51	MS Pier formwork (4 revisions)	141 days	Wed 15-08-18	Sat 19-01-19			
52 53	MS Deck Approval of MS	45 days 70 days	Sat 19-01-19 Mon 11-03-19	Mon 11-03-19			
54	Civil works liaison with CLP, PCCW, HKT	120 days	Wed 22-05-19				
55	G. C. A. D. C. I. Frederic (F1)	070 dave	E-: 21 02 17	Tuo 21 03 20			-
56 57	Section A, Portion 1 - Escalator (E1) Setting out of site boundary	4 days	Fri 31-03-17 Wed 05-04-17				h
58	Setting out of predrill coordinates / Site clearance	14 days	Mon 10-04-17				1
59 60	Inspection pits UU Detection	3 days 3 days	Sat 22-04-17 Fri 14-04-17	Wed 26-04-1 Mon 17-04-1		-	9
61	Contractor's office	2 days	Tue 25-04-17	Wed 26-04-1	7		
62 63	Predrilling Works Predrilling PD/E1/01	95 days 0 days	Sat 29-04-17 Sat 29-04-17	Sun 13-08-17 Fri 05-05-17			
64	Predrill PD/E1/03	4 days	Fri 05-05-17	Wed 10-05-1			
65 66	Predrill PD/E1/04	4 days 4 days	Wed 10-05-17 Mon 15-05-17				
67	Predrill PD/E1/10 Predrill PD/E1/09	4 days	Sat 20-05-17	Wed 24-05-1			
68	Predrill PD/E1/07	4 days	Thu 25-05-17	Mon 29-05-1			
69 70	Predrill PD/E1/08 Predrill PD/E1/06	5 days 6 days	Mon 29-05-17 Sat 03-06-17	Fri 02-06-17		-	
71	Predrill PD/E1/05	4 days	Fri 09-06-17	Wed 14-06-1	770		
72 73	Predrill PD/E1/02 Additional Predrilling at PD/E1/06	5 days 12 days	Wed 14-06-17 Tue 20-06-17				
74	Additional Predrilling for PMI003	7 days	Tue 04-07-17	Tue 11-07-17	73		
75	PreConstruction Works	309 days 60 days	Thu 04-05-17 Thu 04-05-17				
76 77	Hoarding Temp Site Entrance	7 days	Fri 04-08-17	Fri 11-08-17			
78	Trees	218 days	Fri 04-08-17	Thu 05-04-18			
79 80	Demolish manhole PMI 015 Drawf wall	20 days 9 days	Mon 21-08-17 Mon 18-09-17				
81	Sheetpile Site Entrance near E1-PC5	15 days	Fri 29-09-17	Mon 16-10-1	7		
82 83	Sheetpiling E1-PC1 Haul Road	5 days 457 days	Mon 16-10-17 Mon 01-10-18				
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				
86 87	Haul Road to PC1 & PC2 Haul Road to PC3	10 days 3 days	Fri 02-11-18 Wed 14-11-18	Wed 14-11-1 Sat 17-11-18		-	
88	Approval for Haul Road to PC5	30 days	Sat 17-11-18	Thu 20-12-18	8 87		
	Haul Road to PC5 Haul Road to PC4	4 days 15 days	Fri 21-12-18 Fri 21-12-18	Tue 25-12-18 Mon 07-01-1			1
89 90	Haul Road to PC4	10 days	Fri 14-02-20	Tue 25-02-20	0		
90 91							18
90 91 92	Drilling Works	613 days?		Mon 16-09-1		-	
90 91		613 days? 14 days 67 days	Sat 28-10-17 Sat 28-10-17 Tue 14-11-17	Tue 14-11-17	7 74	-	
90 91 92 93	Drilling Works Boring Machine deployment and set up(2nrs)	14 days	Sat 28-10-17	Tue 14-11-17 Sat 27-01-18 Sat 24-03-18	7 74 93 94		

Task

Split Milestone

Project: portion 1-3 (7 Sept. 2020) Date: Mon 14-12-20

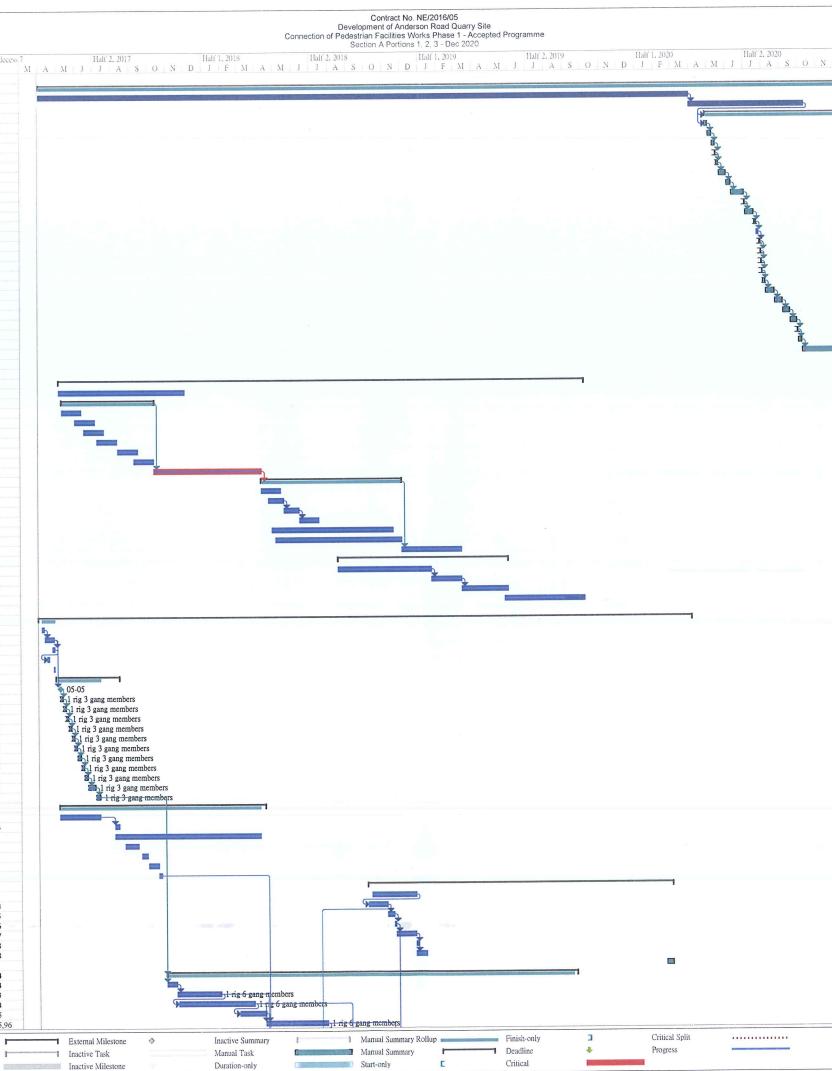
Summary

External Tasks

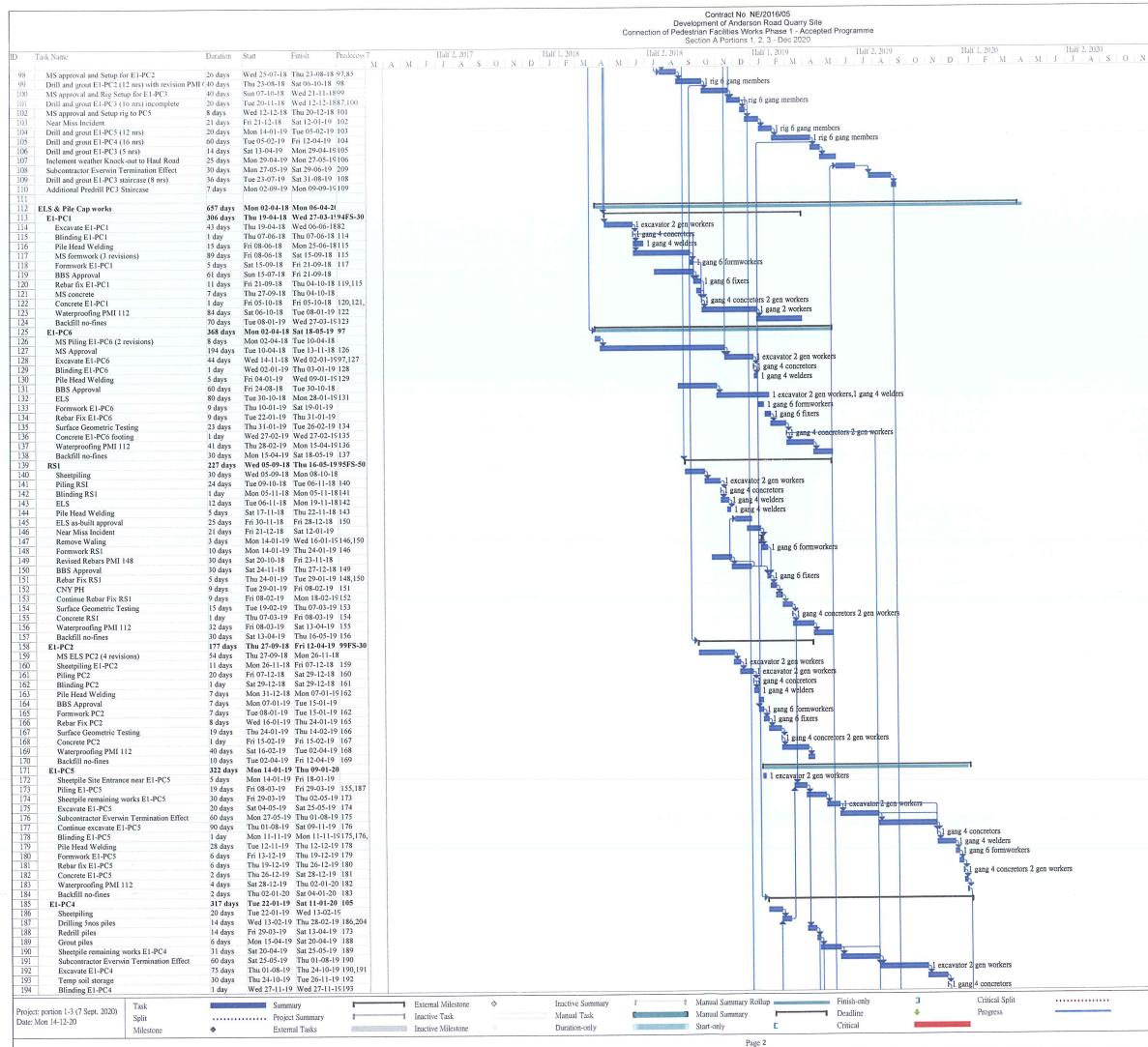
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Project Summary

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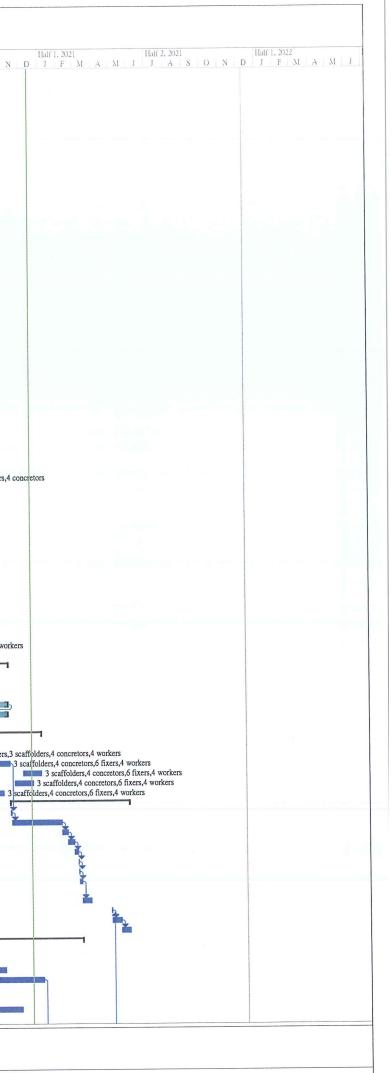


Half 1, 2021 J F M	I A M J	Half 2, 2021 J A	S O N	D J	f 1, 2022 F M	A M	1
2							

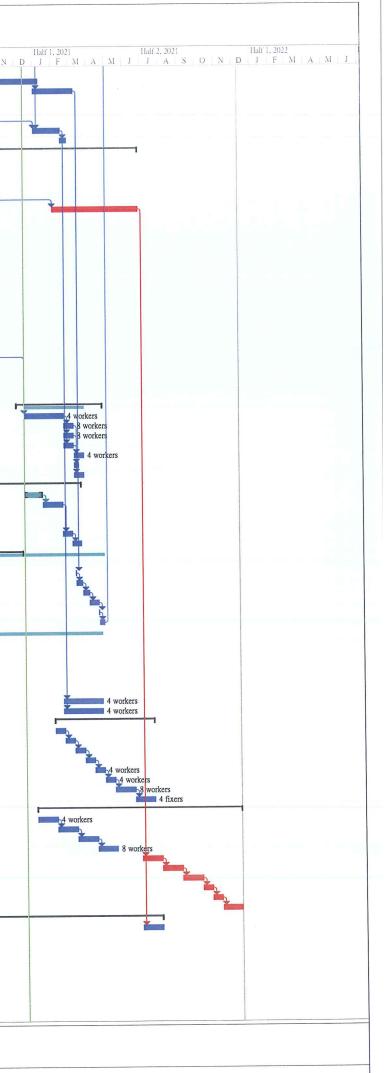


Half 1, 2021 J F N	I A M J	Half 2, 2021 J A S	O N	Half 1, 2022 D J F N	A M	1

				5	Contract No. NE/2016/05 Development of Anderson Road Quarry Site Connection of Pedestrian Facilities Works Phase 1 - Accepted Programme Section A Portions 1, 2, 3 - Dec 2020
	D Task Name	Duration	Start I	Finish Predecess 7	Half 2, 2020 Half 2, 2020
	195 Pile Head Welding	13 days	Thu 28-11-19	Thu 12-12-19 194	M A M J J A S O N D J F M A M J J A S O N D J K A S O N D J K A S O N D J K A S O N D J K A S O N D J K A S O N D J K A S O N D J K A S O N D J K A S
	196 BBS Approval	94 days	Sat 20-04-19	Sat 03-08-19 189	leang 6 formworkers
					1 gang 6 fixers
	199 Concrete E1-PC4	1 day	Thu 26-12-19	Thu 26-12-19 198	ang 4 concretors 2 gen workers
	202 E1-PC3 & RC staircase		Fri 28-12-18	Гue 14-04-20 101	
	0				
	206 Continue drilling 11nos piles				
Bit Market Production Productin Production Production Production Production Production					
Image: Description Image:	209 Mobilize Ping On drilling rig to PC3 stai	case 43 days	Sat 29-06-19	Fri 16-08-19 207,208	
Number Number<					tagen workers
	212 Removal of backfill material				
Image: Section of the section of t					F1 gang 4 concretors
Image: 17 - 2 interaction 14.4 10.100 ± 10.10					
Image: Control in the second	216 Formwork PC3 & Staircase pilecaps	12 days	Fri 03-01-20	Fri 17-01-20 215	
Control 14 Normal Harr Life Automation					
The second sec	219 Concrete PC3 & Staircase pilecaps	1 day	Sat 28-03-20	Mon 30-03-20218	51 gang 4 concretors 2 gen workers
Image: Section of the Time Analysis of the Time A					
1000000000000000000000000000000000000			Sat 01-12-18	Mon 17-12-18	
Term Provide State	223 Approval of Temp Work design and MS for	Piers 30 days	Mon 17-12-18	Sat 19-01-19 222	
	226 Submission of Temp Work design and MS	or Piers 20 days	Mon 08-04-19	Tue 30-04-19 225	
Image: constraint of the second of					
30 No. Relation according to the second	229 Construction of Cap (E1-PC6) with drill and	grout 120 days	Wed 14-08-19	Thu 26-12-19 228	3 scaffolders, 4 fixers, 4 concretors
30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) 11 t de (1-45) Under 100 (1-45) 30 Control (1-45) Under 100 (1-45) Under 100 (1-45) 30 Control (1-45) Under 100 (1-45) Under 100 (1-45) 30 Control (1-45) Under 100 (1-45) Under 100 (1-45) 30 Unde 100 (1-45) <td></td> <td></td> <td></td> <td></td> <td></td>					
30 Second S					
Non-stand Non-stand <t< td=""><td>233 Construction of Pier P1</td><td>58 days</td><td>Wed 14-08-19</td><td>Fri 18-10-19 228</td><td>3 scaffolders.4 fixers.4 concretors</td></t<>	233 Construction of Pier P1	58 days	Wed 14-08-19	Fri 18-10-19 228	3 scaffolders.4 fixers.4 concretors
0 0 <td></td> <td></td> <td></td> <td></td> <td>3 scaffolders,4 fixers 4 concretors</td>					3 scaffolders,4 fixers 4 concretors
Status Market Mark	236 Construction of Pier P4	162 days	Sat 11-01-20	Fri 10-07-20 201	3 scaffolders,4 fi
Consistent (Find Lab) Line					
Image: Second of the late 1* in the lot 2*	239 Construction of Pier Head P2		Sat 21-03-20	Tue 31-03-20 238	
	240 Construction of Pier Head P5				
84 Approx 41m/Sp. Barring Space Biolog Muscle 144 Weil 24-114 Weil 24-114 <td>243 Construction of Bearings and Movement Jo</td> <td>ints 529 days</td> <td>Sat 06-10-18</td> <td>Wed 20-05-2(</td> <td></td>	243 Construction of Bearings and Movement Jo	ints 529 days	Sat 06-10-18	Wed 20-05-2(
Microal Ansatz Marcine of Selection of Histop Selection Selection of Histop Selection Selection Selection of Histop Selection Sele					
128 Main Shoming In Kindge Showing In Kindge Shoming In Kindge Showing In Kindge	246 Design submission of Bridge Bearing	60 days	Thu 13-12-18	Mon 18-02-19245	
909 Approval of Marriel Section 20 Pills Denvel 10 (a) Thus and Pills Denvel 10 (b)					
201 Tring and reads meaning of middle Bandle			Thu 30-05-19	Tue 06-08-19 248	
213 mutukas of holge Bearing for PC0 7.87 Stat 04-50.20 Mutukas of holge Bearing for PC0 7.87 Stat 04-50.20 Mutukas of holge Bearing for PC0 7.87	250 Testing and result submission of Bridge Be	arings 90 days	Tue 06-08-19	Thu 14-11-19 249	
10					
31 The Velocing Velocina in Memory Prediction of the Velocina in Memory Prediction of Velocina in Memory Prediction of Velocina in Memory Prediction of Velocina in Veloc	253 Installation of Bridge Bearings for PC3	130 days	Tue 12-05-20	Mon 05-10-20241	
55 BS (PC) 10 dog We (0 104.20 2 Tog (104.20 2 Str					
Bit Pit op 5 Int op 0.000, 35 (0.000, 0.000	256 RS1-PC1	20 days	Wed 01-04-20	Thu 23-04-20	
297 P) Io Pi A 15 B Sey Wet 27:02 Th to 71:10:28 10 P 1o P2 51 L d yr 10:20:00 Th to 60:00 2 Th to 71:02:03 10 P 1o P2 10 d yr 10:20:00 Th to 60:00 2 Th to 71:02:03 10 P 1o P2 10 d yr 10:20:00 Th to 60:00 2 Th to 71:02:03 10 P 1o P2 10 d yr 10:20:00 Th to 60:00 2 Th to 71:00 2:03 10 P 1o P2 10 d yr 10:20:00 Th to 71:00 2:03 10 P 1o P2 10 d yr 10:20:00 Th to 71:00 2:03 10 P 1o P2 10 d yr 10:20:00 Th to 71:00 2:03 10 P 1o P4 10 d yr 10:20:00 Th to 71:00 2:03 10 P 1o P4 10 d yr 10:20:00 Th to 71:00 2:03 10 P 1o P4 10 d yr 10:20:00 Th to 71:00 2:03 10 P 10 d Yr 10:20:00 Th to 71:00 2:03 P 10:00:00 Th to 71:00 2:03 10 P 10 d Yr 10:20:00 Th to 71:00 2:03 P 10:00:00 Th to 71:00:00 Th to 71:00 Th to 71					
61 P1 v P2 0 40xp Tub 06:00 30 31:00:00 30 54 Sol 10:00:00 30 54 62 Contractione creater wrape write in 22:25 (W Tub 24:40 30 10:00:07 30 36) Sol 20:00:00:00:00:00:00:00:00:00:00:00:00:0	259 P3 to P4	145.88 da	ay: Wed 27-05-20	Thu 05-11-20 258	
2000 Control on of reclarer trong is vitic activities and parameter is and parameteris and parameteris and parameter is and parameter is an					
625 Deck P30 ro 0 days Tut 204-02 <					
4d Deck P5 to F6 90 day Stat 2-03.0 Fn 144-00 24.0 5 Deck P1 to F5 30 day Tex 0-10.0 70.0 70.0 7 Deck P2 to F5 32 day Men 161-12.0 Wei 161-20.0 10.0 600 Deck P2 to F2 35 day Stat 10-20.0 Wei 12-10.0 10.0 7 Deck P2 to F2 35 day Men 0-1-1.0 97.6 25.0 700 Deck P2 to F2 35 day Men 0-1-1.0 97.6 25.0 7 Deck P2 to F2 35 day Men 0-1-1.0 97.6 25.0 700 Deck P2 to F2 35 day Men 0-1-1.0 97.6 25.0 7 Deck P2 to F2 35 day Men 0-1.0 10.0	263 Deck RS1 to P1	63 days	Thu 23-04-20	Thu 02-07-20 256	
66 0 ek P 10 P4 28 day Mon 30-11-20 Web 10-12-20 70 0 ek P 10 P2 35 days Sai 19-09-20 Web 23-10-22-64 70 0 ek P 10 P2 35 days Sai 19-09-20 Web 23-10-22-64 70 0 ek P 10 P2 35 days Sai 19-09-20 Web 23-10-22-64 70 0 ek P 10 P2 35 days Sai 19-09-20 Web 23-10-12-0 Feedball 10-12-0 70 0 ek P 10 P2 35 days Sai 19-09-20 Web 23-21 PA 70 0 ek P 10 P2 36 days Web 23-21 PA Web 23-21 PA 71 0 ek P 10 P3 1 ea 2-02-12 PA Web 23-21 PA PA Web 23-21 PA 72 0 ek P 10 P3 1 ea 2-02-12 PA Web 23-21 PA Web 23-21 PA PA Web 23-21					
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2070 Planking facultabilities 197,575 w/s Uno 09-11-20 F1240-521 1 2071 Planking facultabilities 197,975 w/s Uno 09-11-20 F1240-521 270 2071 Planking facultabilities 100-09-221 271 2071 Planking facultabilities Well 11-120 100-09-21 271 2071 Planking facultabilities Well 11-120 100-09-21 271 2071 Planking facultabilities Well 12-07 100-09-21 271 2071 Planking facultabilities Well 12-07 100-09-21 271 2071 Planking facultabilities Marking and adving will reget analysis 271 271 2071 Normal (Group well and regis regis regis analysis 271 271 271 271 2072 Normal (Group well and regis regis analysis 275 271 271 271 271 271 2					
270 Pulmbing & mesuning of escalator yi 2 days Mon 09-11-20 Ue 10-11-20 265 271 Dolivery, step and guiderail rats installang 9 days Mon 09-11-20 Ue 10-11-20 265 272 Dolivery, step and guiderail rats installang 9 days Mon 09-12-21 Tri 10-20-221 273 Baluratoria, distribution of escalator y Mon 09-12-12 Tri 10-20-221 Tri 10-20-221 274 Electrical works and decetal devies of this installang 6 days Tru 25-02-21 Mon 09-30-21 Tru 25-02-21 275 Permeand adjusting of escalator y Mon 09-30-21 Tru 25-02-21 Tru 25-02-21 Mon 09-30-21 Tru 25-02-21 Tru 25-02-21 Tru 25-02-21 Tru 25-02-21 Tru 25-02-21 Tru 25-02-21					
272 Drive' step hand quiderail tracks installing 0					
273 Balaurade, handrali, skring and defeord elocy e vol avg. Fit 12-0.21 Tota 23-0.22 1272 4 Elocytical volvs and exclusator prisinstalladio volvs and exclusator prising and excl					
275 Permentant power energization for scalator it The 02.0-2.1 274 276 Inspection(low) spect numing tering of scalator equipment / 4 days The 04.03-2.1 274 276 Inspection(low) might and adjusting of scalator equipment / 4 days The 04.03-2.1 276 277 Final turing and adjust specting on a starty testing of scalator equipment / 4 days The 04.03-2.1 The 27.03-2.1 The 27.03-2.1 278 Submission of Forn LE5 to EMSD 1 day Mon 08-0.3-2.1 The 27.03-2.1 The 27.03-2.1 278 Anticipate USP permit issue date 14 days Thu 10.05-2.1 277 281 Anticipate USP ermit issue date 14 days Thu 10.05-2.1 278 283 Peroposal of off-site fabrication of steleworks 180 days Fri 28.05-20 Thu 3-1.18 284 Approval of affisite fabrication of steleworks 180 days Fri 28.05-20 Rus 24.04 285 Exerction of steleworks 160 days Fri 10-20.02 28.1 286 Percential submission of fall arrest system 30 days Fri 10-20.02 28.1 286 Percential for fall arrest system 30 days Fri 10-20.02	273 Balustrade, handrail, skirting and deflector	device v9 days	Fri 12-02-21	Tue 23-02-21 272	
276 Inspection(low) spec4 numing cellator c(1 day) Wel 03-03-21 275 7 Final tuning and safety to requirement / 4 days Mon 03-03-21 277 8 Morandi (bas) spec4 numing and safety to regulator) of C1 day (bas) spec4 numing and safety to regulator) of C1 day (bas) spec4 numing and safety to regulator) Mon 08-03-21 277 279 Submission of Form LES to END 1 day Mon 08-03-21 277 280 Anticipate USP Permit issue date 1 days Mon 08-03-21 277 281 Anticipate USP Permit issue date 1 days Mon 08-03-21 277 282 Paraptet and Rooling To e27-04-21 1277 283 Anticipate USP Permit issue date 1 days Tun 13-05-21 277 284 Approval of off-site fabrication of stelworks 1 Bo 02-01 1 Tun 13-05-21 277 285 Paraptet and Rooling To e27-04-21 145 200 286 Perspose of off-site fabrication of stelworks 1 Bo 02-02 284 286 Fabrication of stelworks 0 days Fri 10-02-0 Tin 20-10-02 284 287 Material submission of full arest system 0 days Fri 10-02-0 Tin 20-10-02 284 288 Paraptet and Rooling Fri 10-02-0 Tin 20-10-02 284 Medea-10-10-02 Tin 20-10-02 28					
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278 Normal (fast) speed running and safety testing of es 13 days Mon 08-03-21 Tue 23-03-21 277 279 Submission of Form LES to ENSD 1 day Mon 26-04-21 Tue 27-04-21 346 270 Anticipate LSND inspection 14 days Tue 27-04-21 741 Tue 25-02 1279 281 Anticipate USe Permit issue date 14 days Tue 13-05-21 279 282 Parapet and Roofing 15 do days Tue 13-01-20 283 Paropet and Roofing 160 days Tue 13-01-20 284 Approval of off site fabrication of steelworks 160 days Frai 10-20 285 Epricition of steelworks off-site 30 days Frai 10-20 Tun 13-12-20 286 Erection of steelworks 68,75 days Frai 1-0-20 Ved 02-09-20 287 287 Material submission of fail arrest system 30 days Frai 10-020 Ved 02-09-20 287 288 Pproval of material for fall arrest system 60 days Sat 19-09-20 287 Inactive Summary I Manual Summary Rollup Finish-only I Critical Split 289 Procurement of fall arrest system 60 days Sat 19-09-20					
279 Submission of Form LS to EMSD 1 day Mon 26-04-21 Tu 27-04-21 Tu 14-05-21 279 280 Anticipate EMSD inspection 14 days Tu 13-05-21 279 281 Parpet and Roofing 756.75 days Tu 13-05-21 280 282 Parpet and Roofing 756.75 days Tu 13-05-21 280 283 Porposal of off site fabrication of steelworks 240 days Hol 10-05-02 810-06-19 284 Approval of faile fabrication of steelworks 200 days Fri 25-09-20 Tu 21-00-20 283 285 Fabrication of steelworks 68.75 days Fri 16-10-20 Tu 31-12-20 283 286 Percourement of fail arrest system 30 days Fri 20-09-20 Tu 21-09-20 283 287 Material submission of fail arrest system 30 days Fri 10-02 Tu 31-19-20 283 288 Approval of fail arrest system 60 days Sat 19-09-20 284 Approval or datal fail fail assistion of steelworks 60 days Sat 19-09-20 284 280 Material submission of call arrest system 60 days Sat 19-09-20 Ved 20-9-22 rel <	278 Normal (fast) speed running and safety tes		Mon 08-03-21	Tue 23-03-21 277	
281 Anticipate Use Permit issue date 14 days Thu 13-05-21 Fri 28-05-21 280 282 Parapet and Roofing 756.75 day: Tue 13-11-18 Tue 09-021 Finitian of steelworks 180 days Finitian of steelworks 240 days Wed 01-01-20 Finitian of steelworks 240 days Wed 01-01-20 Finitian of steelworks 240 days Wed 01-01-20 Finitian of steelworks 711 Station of steelworks 56.75 day: Tue 13-11-18 Station of steelworks 56.75 day: Tue 13-11-18 Station of steelworks 240 days Wed 01-01-20 Finitian of steelworks Finitian of steelworks 56.75 day: Tue 13-11-18 Station of steelworks Finitian of steelworks 56.75 day: Tue 13-11-12 Finitian of steelworks Station of steelworks	279 Submission of Form LE5 to EMSD	1 day			
282 Parapet and Roofing 756.75 day: Tue 13-11-18 Tue 09-03-21 283 Proposal of 071-site fabrication of steelworks 180 days Tue 13-11-18 Sat 01-03-19 284 Approval of 071-site fabrication of steelworks 100 days Fri 31-07-20 Wed 01-01-20 285 Fabrication of steelworks 68.75 days Fri 16-020 Thu 31-12-20 286 Erection of steelworks 69.75 days Fri 10-020 Thu 31-12-20 287 Material submission of fall arrest system 30 days Sat 19-09-20 287. 288 Approval of fall arrest system 60 days Sat 19-09-20 287. 289 Procurement of fall arrest system 60 days Sat 19-09-20 287. 280 Material submission of corrugated steel roof 60 days Sat 19-09-20 287. 280 Material submission of corrugated steel roof 60 days Sat 19-09-20 287. 281 Approval of 71 stept. 200/ Naterial submission of corrugated steel roof 60 days Sat 19-09-20 287. 282 Procurement of fall arrest system 60 days Sat 19-02-20 Wed 20-9-20 287.		the second s			
284 Approval of off site fabrication of steelworks 240 days Wed 01-01-20 Fi 25-09-20 283 285 Fabrication of steelworks off-site 30 days Fi 25-09-20 71hu 29-10-20 284 286 Erection of steelworks off-site 30 days Fi 10-20 Thu 31-12-0 Ved 02-09-20 284 287 Material submission of fall arrest system 30 days Fi 10-20 Wed 02-09-20 287 288 Approval of material for fall arrest system 30 days Thu 05-03-20 Sat 19-09-20 287 289 Procurement of fall arrest system 60 days Sat 19-09-20 Ved 25-11-22 28 roject: portion 1-3 (7 Sept. 2020) Aterial submission of corrugated steel roof 60 days Fi 17-7-20 Tue 22-09-20 rate: Won 14-12-20 Task Split Split Split Split Manual Task Manual Task Manual Summary Deadline Progress Maiestone Ketmal Tasks External Tasks Inactive Milestone Duration-only Start-only Critical Finish-only Progress	282 Parapet and Roofing				
285 Fabrication of steelworks off-site 30 days Fri 25-09-20 Thu 29-10-20 284 286 Erection of steelworks 68.75 days Fri 16-10-20 Thu 31-12-20 287 Material submission of fall arrest system 30 days Fri 05-02-20 287 288 Approval of material for fall arrest system 60 days Sat 19-09-20 287 289 Procurement of fall arrest system 60 days Fri 17-07-20 Wed 25-11-20 288 290 Material submission of corrugated steel roof 60 days Fri 17-07-20 Tue 22-09-20 roject: portion 1-3 (7 Sept. 2020) Task Summary Fri 16-10-20 Manual Summary Rollup Finish-only Inactive Summary roject: worki-14-12-20 Manual 14-12-20 Manual Summary Rollup Finish-only Progress					
287 Material submission of fall arrest system 30 days Fri 31-07-20 Wed 02-09-20 287 288 Approval of material for fall arrest system 30 days Thu 05-03-20 Sat 19-09-20 287 289 Procurement of fall arrest system 60 days Sat 19-09-20 Wed 22-11-2C 288 290 Material submission of corrugated steel roof 60 days Fri 17-07-20 Wed 22-11-2C 288 roject: Fri 17-07-20 Tue 22-09-20 Fri 11-07-20 Tue 22-09-20 roject: Fri 17-07-20 Tue 22-09-20 Fri 11-07-20 Tue 22-09-20 roject: Fri 17-07-20 Tue 22-09-20 Fri 11-07-20 Tue 22-09-20 roject: Fri 17-07-20 Tue 22-09-20 Fri 11-07-20 Tue 22-09-20 roject: Fri 11-07-20 Tue 22-09-20 Fri 11-07-20 Fri 10-01 Fri	285 Fabrication of steelworks off-site	30 days	Fri 25-09-20	Thu 29-10-20 284	
288 Approval of material for fall arrest system 30 days Thu 05-03-20 Sat 19-09-20 Sat 19-09-20 Sat 19-09-20 Sat 19-09-20 Wed 25-11-2C 288 289 Procurement of fall arrest system 60 days Sat 19-09-20 Wed 25-11-2C 288 Image: Control of tall arrest system 60 days Fin 17-07-20 Tue 22-09-20 Image: Control of tall arrest system Image: Contrest system <td< td=""><td></td><td></td><td></td><td></td><td></td></td<>					
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Task Summary External Milestone Inactive Summary Manual Summary Finish-only I Critical Split roject: portion 1-3 (7 Sept. 2020) Split	289 Procurement of fall arrest system				
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Split Froget Summary I I Inactive Task Inactive Task Inactive Task Inactive Task Milestone	Project: portion 1-3 (7 Sept. 2020)			•	External whestone
Milestone V External rasks macro microsofe Danaton on y	Date: Mon 14-12-20 Split				i inactive task vitatidat task
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			Contract No. NE/2016/05 Development of Anderson Road Quarry Site Connection of Pedestrian Facilities Works Phase 1 - Accepted Programme Section A Portions 1, 2, 3 - Dec 2020
ID T	ask Name Duratio	on Start Finish Pro	decess 7 Half 2, 2017 Half 1, 2018 Half 2, 2018 Half 1, 2019 Half 2, 2019 Half 1, 2020 M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J A S O N D J F M M J A
291	Approval of material for corrugated steel roof 90 day		
292 293	Procurement of corrugated steel roof 75 day Erection of roof system, gutter and fall arrest system 60 day		
294	Material submission of Plexiglass 60 day	s Thu 02-01-20 Mon 09-03-20	
295 296	Approval of material Plexiglass 30 day Procurement to delivery of Plexiglass 30 day		
297	Construction of Plexiglass parapet 40 day	s Fri 01-01-21 Mon 15-02-2128	6,296
298 299 1	Decking construction connecting to existing footpatl 10 day Drainage Works Construction 854 day	s Mon 15-02-21 Thu 25-02-21 29 ys Tue 13-11-18 Fri 25-06-21	
300	Application of XP for carriageway for Hiu Ming Str 90 day	s Tue 13-11-18 Thu 21-02-19	
301 302	TTA Application for drainage works at Hiu Ming St 80 day Road Works Advice 300 da	s Thu 21-02-19 Wed 22-05-1930 Wed 22-05-19 Wed 22-04-2030	
303	Implementation of TTA 30 day		
304 305	Procurement to delivery of material for Drainage 20 day Construction of Drainage PMI 016 130 da	Tue 26-05-20 Wed 17-06-2030 Mon 01-02-21 Fri 25-06-21 30	
306 I 307		Tue 13-11-18 Thu 05-03-20 rs Tue 13-11-18 Sat 08-12-18	
308	Proposal of Specialist for E&M Works 24 day Approval of Specialist for E&M Works 24 day	s Mon 10-12-18 Sat 05-01-19 30	
309 310	Material Submission of cable tray 30 day Approval of material cable tray 30 day		
310	Material submission of cables, conduits, fittings 24 day		
312 313	Approval of material for cables conduits fittings 24 day Material submission of lightings 30 day		
314	Approval of material submission of Lightings 30 day	s Sat 08-06-19 Fri 12-07-19 31	3
315 316	Material submission of Pillar Box c/w accessories 26 day Approval of material submission of Pillar Box c/w a 27 day		
317	Material submission of MCB distribution board 30 day	s Fri 08-02-19 Wed 13-03-1930	9
318 319	Approval of MCB distribution board 30 day Material submission of communication cables 30 day		
320	Approval of communication cables 30 day	Mon 20-05-19 Sat 22-06-19 31	
321 322	Application of Power supply60 dayApplication of telemetry (Chubb)100 day	rs Sat 22-06-19 Wed 28-08-1932 hys Fri 15-11-19 Thu 05-03-20	
323	Application of E1 XP for telemetry by AECOM 164 da	ys Tue 13-11-18 Wed 15-05-19	
324 325	Completion of Telemetry Civil & E&M Works 60 day Construction and Installation works for pillar box 130 da		
326	Positioning and construction of Pillar Box 60 day	vs Mon 14-12-20 Thu 18-02-21 32	
327 328	Trenching works and laying of ducts and power cabl15 day Trenching works and laying of telecommunication c 15 day		
329	Installation of E&M Component inside Pillar Box 15 day	rs Thu 18-02-21 Sat 06-03-21 32	6
330 331	Instalation and Connection of Telemetry system 15 day Installation of Electricity Meter 7 days		
332	T&C of E&M works inside pillar box 15 day	Mon 08-03-21 Wed 24-03-2132	
333 334	Sump pit and pumps 225.75 Construction of Sump pit 28 day	5 day: Fri 10-07-20 Fri 19-03-21 //s Mon 14-12-20 Wed 13-01-21	
335	Trenches and ductings for sump pit to existing manh 30 day	/s Thu 14-01-21 Tue 16-02-21 33	4
336	Procurement to delivery of Sump Pump, Piping and 90 day Associated Equipment	vs Fri 10-07-20 Mon 19-10-20	
337	Installation of Sump Pump (by Wing Luen) 14 day	/s Tue 16-02-21 Thu 04-03-21 33	
338	T&C of Sump Pump System 14 day Installation of Lighting for escalator 164 day	vs Thu 04-03-21 Fri 19-03-21 33 ays Thu 11-06-20 Fri 11-12-20	
340	Procurement & Delivery of Lighting and accessories 60 day	/s Thu 11-06-20 Mon 17-08-20	
341 342	Handover of escalator cover walkway to E&M 1 day Installation Conduit and cable containment 10 day		
343	Cable and wiring 10 day	vs Mon 22-03-21 Thu 01-04-21 34	2
344 345	Installation of Light fitting 14 day Power connection to Lighting 1 day		
346	T&C of Lighting 7 days	Mon 19-04-21 Mon 26-04-2134	
347 348	Landscape Works 667 d Remove felled trees PMI 018 3 days	ays Wed 03-10-18 Mon 19-10-20 Wed 03-10-18 Fri 05-10-18	4 workers
349	Tree Pruning PMI 042 3 days	Tue 03-03-20 Thu 05-03-20 34	8 L 4 WOLKEIS
350 351	Individual TRA Form 2 150 da Submission of proposal of Landscape Specialist 30 day	ays Wed 03-10-18 Tue 19-03-19 ys Wed 03-10-18 Mon 05-11-18	
352	Nursery Inspection 10 day		
353 354	Approval of proposal of Landscape specialist 180 day Construction of hard and soft landscape works 60 day	Mon 15-02-21 Thu 22-04-21 29	7
355	Rectification of Defects 60 day		7
357	Road and Pavings / Traffic Signs 150 d Material submission of Road Pavers 15 day	Mon 01-02-21 Wed 17-02-21	
358 359	Approval of material submission of Road Pavers 15 day Procurement to delivery of Road Pavers 15 day		
360	Ordering to delivery of concrete kerbs from CSD 15 day	ys Tue 23-03-21 Thu 08-04-21 3	59
361 362	Construction of kerbs 15 day Construction of footpath 15 day		
363	Construction of Paved Area 30 da	Wed 12-05-21 Tue 15-06-21 3	52
364 365	Installation of Traffic / Directional Signs 30 day External Finishes 307.2	ys Tue 15-06-21 Sat 17-07-21 3 5 day: Fri 01-01-21 Fri 10-12-21	
366	Material submission of tiles 30 day	ys Fri 01-01-21 Wed 03-02-21	
367 368	Approval of material of tiles 30 da Procurement to delivery of tiles 30 da		
369	Tiling works 30 da	ys Mon 12-04-21 Sat 15-05-21 3	58
370 371	Material submission of Paint 30 da Comment of material submission of paint 30 da		
372	2nd submission of paints 30 da	ys Wed 01-09-21 Tue 05-10-21 3	n
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376	Construction of Sau Mau Ping Memorial Park 460 d Slope improvement work (11NE-D/CR222) 30 da)5
378	Material submission of Pavillion 30 da	ys Thu 07-05-20 Wed 10-06-203	34
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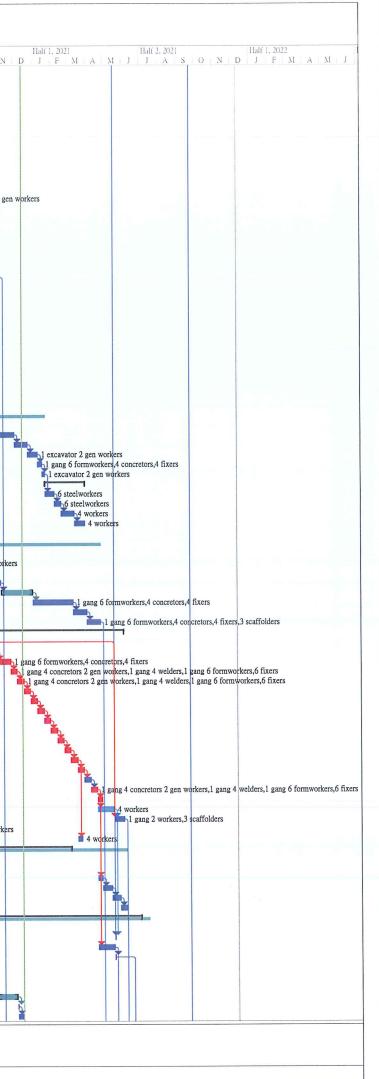


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Development of Anderson Road Quarry Site
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Section A Portions 1 2 3 - Dec 2020

99 EOT school examination PMI 117 2 days Tue 30-10-18 Fri 02-11-18 468,465 10 Rock slope cutting at LT1 to ground level(cont) 61 days Fri 02-11-18 Tue 03-11-20 469 11 EOT school examination PMI 141 20 days Wed 09-01-19 Thu 31-01-19 470	y Site ccepted Programme
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Submission of Venitation System 30 days Sat 05:09-20 Fri 09:10-20 447 Design submission of Lighting at footb 60 days Thu 02:01-20 Wed 02:09:2C450 Thu 30:07:20 Approval of Design Submission of Lighting 60 days Med 02:09:2C450 Thu 20:08:20 Procurement to delivery of Lighting 60 days Med 02:09:2C450 Thu 20:08:20 Approval of MS for Lift Installation 60 days Mon 15:06:20 Thu 20:08:20 Approval of MS for Lift Installation 60 days Mon 02:1-12:0 Ved 18:1-1:20 Completion of Telemetry Civil & E&M Works 16 days Mon 02:1-12:0 Ved 03:00:2:14:56 Contractor Site Office 2 days Mon 24:0-41:7 Tue 03:11:20 Contractor Site Office 2 days Mon 24:0-41:7 Tue 03:11:20 Rock slope excavation (4 revisions) 10 days Sto 03:0-18: 46:1 Koit Noise Barrier for LT1 1 day Sat 03:0-31:8: 46:1 Sat 03:0-31:8: 46:1 Bocks for Platform and wall 27 days Sto 04:18: Sto 12:0-21:8:398,460 EOT school examination PMI 051 7 days Sto 04:18: Sto 12:0-21:8:46:45 Rock slope eutring at LT1 to ground level 15 days <td< td=""><td>I</td></td<>	I
Approval of Design Submission of Lighting at Footb 60 days Thu 20-01-20 Wed 02-09-224 50 Procurement to delivery of Lighting 60 days Wed 02-09-20 Mon 09-11-20451 Submission of Kor Lift Installation 60 days Wed 02-09-20 Mon 15-06-20 Thu 20-08-20 Approval of MS for Lift Installation 60 days Fin 10-05-20 Thu 20-08-20 Thu 20-08-20 Approval of MS for Lift Installation 60 days Fin 10-520 Sat 31-10-20 Completion of Telemetry Divi & E&M Works 36 days Mon 02-11-20 Wed 03-02-21456 Contractor Site Office 2 days Mon 12-00-17 Tre 20-17-17 Ved 21-02-18398,460 Inspection pits 10 days Wed 21-02-18 Sat 03-03-18 461 Noise Barrie for LT1 1 days Sut 0-0-318 462 Blocks for Platform and wall 27 days Sut 0-0-318 Kot 3,461 E2-PC1 Pling 35 days Wed 04-04-18 Sat 12-0-18 462 Cord scannation PMI 051 7 days Tru 50-51.8 Kot 3,461 E2-0-18 E2-T School examination PMI 051 7 days Tru 20-0-18 Kot 3,461 E2-T school examination PMI 141<	
Procurement to delivery of Lighting 60 days Wed 02-09-20 Mon 09-11-20-451 Submission of MS for Lift Installation 60 days Thu 20-08-20 Thu 20-08-20 Approval of MS for Lift Installation 60 days Thu 20-08-20 Wed 18-11-20 Approval of MS for Lift Installation 60 days Fn 01-05-20 Wed 18-11-20 Application of E1 XP for telemetry by AECON 164 days Fn 01-05-20 Sat 31-10-20 Completion of Telemetry Civil & E&M Works 36 days Mon 22-11-20 Wed 03-02-21456 totut Predrill location 1151.25 da Mon 24-04-17 Tue 03-11-20 Completion of Telemetry Civil & E&M Works 36 days Mon 22-10-20 Hold 30-02-21456 totut Predrill location 1151.25 da Mon 24-04-17 Tue 03-11-20 Completion of Telemetry Civil & E&M Works 36 days Mon 22-04-17 Fi 14-07-17 459 Noise Barrier for LT1 1 days Wed 21-02-18 Sat 03-03-18 461 Noise Barrier for LT1 1 days Su 04-04-18 Sat 12-05-18 464 E2-PC1 Piling 35 days Wed 04-04-18 Sat 12-05-18 464 E2-PC1 Piling 35 days Wed 04-04-18 Sat 12-05-18 464 E2-PC1 Piling 41 L21 dayon Lei 5-05-18 Wed 26-09-18465 ECT School examination PMI 051 7 days Fri 06-01-18 Tri 03-01-12 0.465 ECT school examination PMI 117 2 days Tue 13-01-18 Tri 03-01-18 464,465 Rock slope cutting at LT1 to ground level [151 days Tue 13-01-18 Tri 03-01-18 464,465 ECT school examination PMI 141 20 days Wed 00-01-18 Tri 03-01-18 464,465 ECT school examination PMI 141 20 days Mon 22-03-19 Fri 05-04-19 473	
Submission of MS for Lift Installation 60 days Mon 15-06-20 Thu 20-08-20 Approval of MS for Lift Installation 60 days Thu 20-08-20 Tue 27.10-20 453 Approval of MS for Lift Installation 60 days Fri 01-05-20 Submission of Tue 20-08-20 Tue 27.10-20 453 Approval of MS for Lift Installation 60 days Fri 01-05-20 Sub 27.10-20 453 Application of EL XP for telemetry by AECOM 164 days Fri 01-05-20 Sub 31-10-20 Completion of Telemetry Vivil & E&M Works 36 days Mon 24-04-17 Tue 25-04-17 Site Clearance 70 days Thu 27-04-17 Tie 25-04-17 File 20-11-7 Site Clearance 70 days Thu 13-07-17 Wed 21-02-18 398,460 Inspection pits 10 day Wed 21-02-18 388,460 Fri 10-04-18 Sat 12-05-18 Blocks for Platform and wall 27 days Stu 04-04-18 Sat 12-05-18 464 EOT school examination PMI 051 7 days Fri 06-01-18 Fri 12-04-18 Fort School examination PMI 117 2 days Tue 03-11-20 Hed 3-465 EOT school examination PMI 141 20 days Fri 02-11-18 468	
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CE171 10 days exam Mar & April 2019 10 days Mon 25-03-19 Fri 05-04-19 473	.
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Rock dowel stabilization PMI 076, PMI 080, PMI 40 days Mon 01-04-19 Wed	3 scaffolders,4 workers
103, PMI 132, PMI 123 15-05-19	
ortion 1-3 (7 Sept. 2020) Task Summary External Milestone \diamond Inactive Summary I Manual Summary Rollup	Finish-only Critical Split
Harding Poly (14-12-20) Split Project Summary Imactive Task Manual Task Manual Summary 14-12-20 Milestone External Tasks Inactive Milestone Duration-only Start-only	Deadline Progress Critical

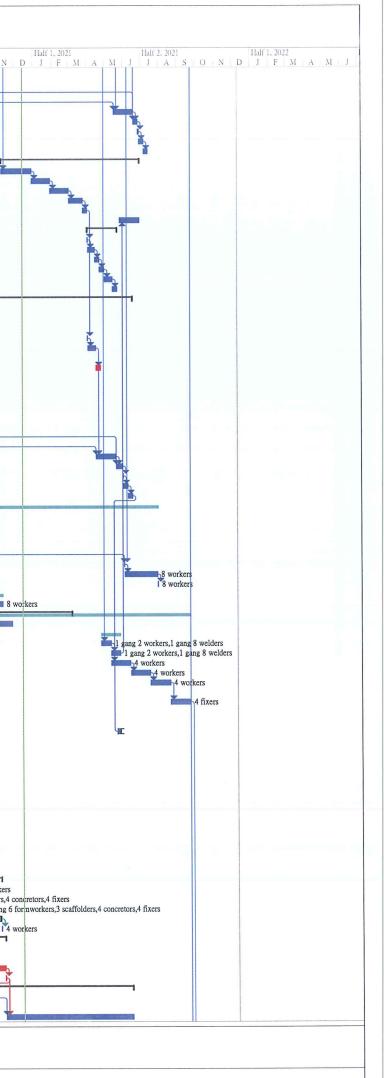


		Contract No. NE/2016/05 Development of Anderson Road Quarry Site Connection of Pedestrian Facilities Works Phase 1 - Accepted Programme Section A Portions 1, 2, 3 - Dec 2020
Task Name	Duration Start Finish Predecess 7	Half 2, 2017 Half 1, 2018 Half 2, 2018 Half 1, 2019 Half 2, 2019 Half 1, 2020 Half 2, 2020
Rock dowel stabilization PMI 197	56 days Tue 13-11-18 Mon 14-01-19	I A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S
Site Formation Works	611 days Tue 13-11-18 Sat 26-09-20	1 gang 2 workers
Inspection Pit PMI 106 Trial Trench for tree roots PMI 077	15 days Tue 13-11-18 Thu 29-11-18 7 days Tue 13-11-18 Tue 20-11-18	I gang 2 Workers 1 excavator 2 gen workers
Approval of tree pruning proposal	85 days Thu 10-01-19 Mon 15-04-19409	
Prune / Fell trees for access of plants	10 days Tue 16-04-19 Fri 26-04-19 418,419,-	4 painters
Relocation of RCP SWAP TTA	14 days Sat 01-06-19 Mon 17-06-19 120 days Mon 17-06-19 Tue 29-10-19 483	1 excavator 2 gen workers, 1 gang 2 workers
Pending WSD comments	208 days Tue 29-10-19 Thu 18-06-20 484	×
Water diversion for Hiu Wah Building	90 days Thu 18-06-20 Sat 26-09-20 485	
Deploy Excavator and trim ground and slope from Ret. Everwin terminatiion effect	ain 81 days Mon 25-02-19 Sat 25-05-19 31 days Sat 25-05-19 Sat 29-06-19 487	1 exclavator 2 gen workers
Retaining Wall RWE3b Works	90 days Sat 29-06-19 Tue 08-10-19 474	
Remove soil nails during triming	130 days Wed 01-04-20 Mon 24-08-20	
E2-PC1 (28 nos piles)	796 days Fri 01-06-18 Sat 07-11-20	
Deploy GI rig for predrilling Sheetpiling	10 days Fri 01-06-18 Tue 12-06-18 15 days Tue 12-06-18 Thu 28-06-18 492	
Drill Pre-Bore H-Piles at E2-PC1 (28nos)	120 days Fri 29-06-18 Sat 10-11-18 493	
Stop for TTA use	60 days Sat 10-11-18 Wed 16-01-19494	
Shoring works Excavation works	489.75 day: Wed 16-01-19 Fri 17-07-20 495 52 days Sat 18-07-20 Mon 14-09-20 496	
RC Pilecap Works	30 days Tue 06-10-20 Sat 07-11-20 497	
E2-PC2 (4nos piles)	306 days Wed 24-07-19 Tue 30-06-20	
Deploy GI rig for predrilling	7 days Tue 23-06-20 Tue 30-06-20 475	1 rig 3 gang 1
Drill Pre-Bore H-Piles at E2-PC2 (2nos) Swap TTA	8 days Wed 24-07-19 Thu 01-08-19 506 28 days Fri 02-08-19 Mon 02-09-19 501	rig 6 gang members
Drill Pre-Bore H-Piles at E2-PC2 (2nos)	8 days Mon 02-09-19 Wed 11-09-19 502	1 rig 6 gang members
Shoring works	40 days Fri 01-11-19 Mon 16-12-19	
RC Pilecap Works with couplers	70 days Mon 16-12-19 Tue 03-03-20 504 292 days Fri 02-08-19 Wed 24-06-20	
E3-PC3 (6nos piles) Drill Pre-Bore H-Piles (6 nos)	292 days Fri 02-08-19 Wed 24-06-20 28 days Fri 02-08-19 Mon 02-09-19	
Site formation works	200 days Mon 02-09-19 Mon 13-04-20507	
Shoring works	40 days Mon 13-04-20 Thu 28-05-20 508	
RC Pilecap Works	11 days Thu 28-05-20 Tue 09-06-20 509	
RC Abutment Works C1 Footing	13 days Tue 09-06-20 Wed 24-06-20 510 670 days Sun 05-08-18 Mon 24-08-20	
Excavation 1.2m and remove C&D	60 days Wed 01-08-18 Sat 06-10-18	1 excavator 2 gen workers
Stop for TTA use	702 days Sat 06-10-18 Tue 01-12-20 513	
Excavation 2.2m and remove C&D Shoring works	20 days Tue 01-12-20 Wed 23-12-2C514 15 days Wed 23-12-20 Sat 09-01-21 515	
RC concrete footing works	15 days Wed 23-12-20 Sat 09-01-21 515 7 days Sat 09-01-21 Sat 16-01-21 516	
backfill	4 days Sat 16-01-21 Thu 21-01-21 517	
Covered Walkway	59 days Thu 21-01-21 Mon 29-03-21	
Steelwork erection for covered walkway Installation of steel sheet roof for covered walkwa	14 days Thu 21-01-21 Sat 06-02-21 518 ay 10 days Sat 06-02-21 Wed 17-02-21520	
Installation of Lighting to covered walkway	20 days Wed 17-02-21 Thu 11-03-21 521	
Installation of Irrigation Pipe	15 days Fri 12-03-21 Mon 29-03-21522	
GI Predrilling works	10 days Sat 18-04-20 Wed 29-04-20	
E3-PC2 Pile cap (9 nos) Tower crane construction at Tennis Court	322 days Sat 19-10-19 Wed 14-10-20 137 days Sat 19-10-19 Mon 01-06-20490	
Slope trimming works	40 days Mon 01-06-20 Wed 15-07-20526	1 excavato
Tree felling works	33 days Mon 01-06-20 Tue 07-07-20 526	
Temp. Work Design Calculation for cut slope and	4 sl 89 days Fri 31-07-20 Sat 07-11-20 528 47.88 days Mon 09-11-20 Thu 31-12-20 529	
Shoring works and excavation Piling works	47.88 days Mon 09-11-20 Thu 31-12-20 529 60 days Fri 01-01-21 Tue 09-03-21 530	
RC Pilecap works	21 days Tue 09-03-21 Thu 01-04-21 531	
RC Pier Works	21 days Thu 01-04-21 Sat 24-04-21 532	
Lift Tower E3-ST1 Basement construction	307.5 days Tue 23-06-20 Wed 02-06-21 29 days Tue 23-06-20 Sat 25-07-20 475	
Level to G/F +25mPD	29 days Tue 23-06-20 Sat 23-07-20 475 50 days Mon 07-09-20 Sat 31-10-20 535	
Level +25mPD to +29mPD	20 days Mon 02-11-20 Tue 24-11-20 536	
Level +29mPD to +33mPD	10 days Tue 24-11-20 Fri 04-12-20 537	
Level +33mPD to +34mPD Level +34mPD to +37.4mPD	10 days Sat 05-12-20 Wed 16-12-20 538 10 days Wed 16-12-20 Sat 26-12-20 539	
Level +37.4mPD to +41.4mPD	10 days Mon 28-12-20 Thu 07-01-21 540	
Level +41.4mPD to +43.6mPD	10 days Thu 07-01-21 Tue 19-01-21 541	
Level +43.6mPD to +47mPD	10 days Tue 19-01-21 Fri 29-01-21 542	
Level +47mPD to +50.8mPD Level +50.8mPD to +54.2mPD	10 days Sat 30-01-21 Wed 10-02-21543 10 days Wed 10-02-21 Sat 20-02-21 544	
Level +54.2mPD to +58.2mPD	10 days Mon 22-02-21 Thu 04-03-21 545	
Level +58.2mPD to +59.7mPD	10 days Thu 04-03-21 Tue 16-03-21 546	
Level +59.7mPD to +63mPD Level +63mPD to +66.5mPD	10 days Tue 16-03-21 Fri 26-03-21 547 10 days Sat 27-03-21 Wed 07-04-21548	
Construction of Roof +66.5mPD to +70.45mPD	10 days Sat 27-05-21 wed 07-04-21 549	
Remove tower crane	7 days Mon 19-04-21 Mon 26-04-21550	
Erection of glazing and louvres	25 days Mon 19-04-21 Sat 15-05-21 550	
Dismantling of external and internal scaffolding Infill No Fine Concrete between Rock Slope and	15 days Mon 17-05-21 Wed 02-06-21535,552 Wi60 days Sat 25-07-20 Wed 30-09-20535	
Installation of bridge bearings	7 days Tue 16-03-21 Tue 23-03-21 547	
E3 Lift Tower Lighting	270 days Thu 07-05-20 Fri 05-03-21	
Handover EMSD Pillar Box and associated ducti		
Electrical works inside Pillar Box EMSD and Lig Conduit and cable containment	ghti 14 days Fri 08-05-20 Sat 23-05-20 557 7 days Mon 19-04-21 Mon 26-04-21550	
Cable and wiring	14 days Mon 26-04-21 Wed 12-05-21559	
Installation of Light fitting	13 days Wed 12-05-21 Wed 26-05-21 560	
T&C E3 Lift Installation	10 days Wed 26-05-21 Mon 07-06-21561 559 days Mon 14-10-19 Wed 30-06-21	
E3 Lift Installation Statuary Submission of Lift Design and Material		
Handover lift shaft and associated ducting to E&	M 1 day Mon 17-05-21 Mon 17-05-21552,454	
E&M works inside Lift Shaft	25 days Mon 19-04-21 Sat 15-05-21 550	
Handover of Lift structure to E&M Lift subcontr Confirmation of telemetry service routing with C		
Chubb/HKT cable laying for telemetry cable syst		
Installation and connection of telemetry component	ents 14 days Thu 15-10-20 Fri 30-10-20 569	
CLP cable laying and lead-in into Pillar Box	30 days Sun 01-11-20 Thu 03-12-20	
CLP Lift Meter Power and Connection CLP Lift Meter Installation inside Pillar Box	1 day Fri 04-12-20 Fri 04-12-20 571 7 days Sat 05-12-20 Sat 12-12-20 572	
		External Milestone Inactive Summary I I Manual Summary Rollup Finish-only I Critical Split
t: portion 1-3 (7 Sept. 2020) Task Mon 14.12.20 Split	Summary Project Summary	External Milestone Inactive Summary I Manual Summary Rollup Finish-only Critical Split Inactive Task Manual Task Manual Summary Deadline Progress
	interest interest outstanding a	
Mon 14-12-20 Spin Milestone	External Tasks	Inactive Milestone Duration-only Start-only C Critical



ID Task Name			
	Duration	Start Finish Predecess 7	Section A Portions 1, 2, 3 - Dec 2020 Half 2, 2017 Half 1, 2018 Half 1, 2019 Half 2, 2019 Half 1, 2020 Half 2, 2020
	Sump Pump and Panel 96 days sociated ducting to E&M 1 day	Fri 13-03-20 Sat 27-06-20 Tue 23-06-20 Wed 24-06-20475	M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O Z A S
576 Installation of Sump Pump	(by Wing Luen) 18 days	Mon 29-06-20 Sat 18-07-20 575,574	
577 Delivery of Lift component 578 Lift installation and Lift Sh	aft Ventilation installatio 30 days		
579 Testing & commissioning	7 days	Sat 19-06-21 Sat 26-06-21 567,576,	
580 EMSD Form LE5 submissi 581 EMSD Inspection	on I day 7 days	Sat 26-06-21 Mon 28-06-21579 Mon 28-06-21 Tue 06-07-21 580	
582 Use Permit	7 days	Tue 06-07-21 Tue 13-07-21 581	
583 E2-LT1 Lift Shaft Construc 584 Completion of RC structure		Interview Interview <t< td=""><td></td></t<>	
585 Completion of RC structure	e 2/F 28 days	Tue 29-12-20 Fri 29-01-21 584	
586 Completion of RC structure 587 Erection of glazing and lou			
588 Dismantling of external and	d internal scaffolding 7 days	Thu 25-03-21 Thu 01-04-21 587	
589 Remaining E2-PC2 Pier an 590 E2-LT1 Lift Lighting	d cantilever slab 30 days 45 days	Wed 26-05-21 Tue 29-06-21 632 Fri 02-04-21 Sat 22-05-21	
	x and associated ducting 1 day ar Box EMSD and Lighti 10 days	Fri 02-04-21 Fri 02-04-21 588 Sat 03-04-21 Wed 14-04-21591	
593 Conduit and cable containing		Wed 14-04-21 Thu 22-04-21 592	
594 Cable and wiring 595 Installation of Light fitting	8 days 12 days	Thu 22-04-21 Fri 30-04-21 593 Sat 01-05-21 Fri 14-05-21 594	
596 T&C	7 days	Fri 14-05-21 Sat 22-05-21 595	
597 E2-LT1 Lift Tower Installat 598 MS for E2 Lift Tower Erec		s Fri 03-05-19 Thu 17-06-21 Fri 03-05-19 Mon 12-08-19	
599 Approval of submission	30 days	Mon 12-08-19 Sat 14-09-19 598	
	t Design and Materials 60 days ociated ducting to E&M 1 day	Mon 14-10-19 Thu 19-12-19 Fri 02-04-21 Fri 02-04-21 588	
602 E&M works inside Lift Sha	aft 12 days	Sat 03-04-21 Fri 16-04-21 601	
	sociated ducting to E&M 1 day to E&M Lift subcontract(7 days	Tue 23-06-20 Wed 24-06-20475 Fri 16-04-21 Sat 24-04-21602	
605 Confirmation of telemetry :	service routing with CHU 150 day	s Mon 09-03-20 Sat 22-08-20	
607 Installation and connection	or telemetry cable system 26 days of telemetry components 14 days		
608 CLP Lift Meter Installation 609 CLP Lift Meter Power Con		Tue 22-09-20 Tue 29-09-20 606	
610 Procurement to delivery of	Sump Pump and Panel 96 days		
611Installation of Sump Pump612Delivery of Lift component		s Mon 29-06-20 Sat 17-10-20 603,610 s Mon 02-12-19 Fri 19-06-20	
613 Lift installation and Lift Sh	aft Ventilation installatio 30 days	Fri 16-04-21 Thu 20-05-21 612,602	
614 Testing & commissioning 615 EMSD Form LE5 submissi	on 10 days	Thu 20-05-21 Mon 31-05-21611,613 Mon 31-05-21 Tue 01-06-21 614	
616 EMSD Inspection	7 days	Tue 01-06-21 Wed 09-06-21615	
617 Use Permit 618 Drainage and Landscape we	7 days orks at Hiu Ming Street 433.5 da	Wed 09-06-21 Thu 17-06-21 616 ays Fri 01-03-19 Sun 28-06-20	
619 Decoration and Finishings	Works at Hiu Ming Stree 190 day	s Fri 01-03-19 Mon 30-09-19	8 workers
620 Application of XP for Drai 621 Approval of TTA for const	nage Works at Hiu Ming 90 days ruction of Drainage 90 days		
Works at Hiu Ming Street		18-09-19	
623 Implementation of TTA	14 days 1 day	Wed 18-09-19 Fri 04-10-19 621 Wed 02-06-21 Thu 03-06-21 622,553	
624 Drainage works at Hiu Mir 625 General Tidy Up	ng Street 50 days 1 day	Thu 03-06-21 Thu 29-07-21 623 Thu 29-07-21 Fri 30-07-21 624	
626 Drainage Hiu Kwong Str		Mon 01-06-20 Mon 01-06-20	
627 Water Main Diversion 628 Steel Bridge between E3-ST	130 day	s Thu 18-06-20 Tue 10-11-20 s Mon 01-06-20 Sun 07-03-21	
629 Fabrication and Delivery o	f Fabricated Steelworks 160 day	s Mon 01-06-20 Thu 26-11-20	
630 On Site Steelworks fabric 631 Construction of Steel Br	ation 100 day idge Deck between E3-S 14 days		
632 Construction of steel Ro	of E3-ST1 to E3-P1 Pier 14 days	Tue 11-05-21 Wed 26-05-21631	
633 Construction of Screeding 634 Installation of parapets and			
635 Installation of lightings to s			
tower and E3 abutment 636 Installation of irrigation Pi	pe and water point 30 days	Thu 19-08-21 Wed 22-09-21635	
637 Landscape Works 638 Tree Pruning PMI 044	15 days		4 workers
639 Handover Portion 2	l day	Wed 26-05-21 Thu 27-05-21 617	
640 641 Bridge between E2-P1 and 1	E2-P3 (Section A E3 Por 427 25 -	day: Fri 21-12-18 Sun 12-04-20	
642 Partial Handover of Portion	n 3 1 day	Fri 21-12-18 Fri 21-12-18	
643 Application of XP 644 Delay Possession of Partial	30 days I Handover 63 days		
645 Waiting for Full Handover	of Portion 3 71 days	Sat 02-03-19 Tue 21-05-19 644	
	l day outh bound footpath of Hii 7 days	Tue 21-05-19 Wed 22-05-19645 Wed 22-05-19 Thu 30-05-19 646	54 surveyors
648 RA approval from District	Council 60 days	Thu 30-05-19 Mon 05-08-19647	
650 Relocation of Crossing and	I shadow island 10 days		14 workers
651 Trial Pit at E2-PC3 for UU 652 TownGas Handover Portio	7 days	Fri 06-12-19 Sat 14-12-19 650	1 excavator 2 gen workers
653 Diversion of CLP lamp po	st 7 days	Tue 24-03-20 Wed 01-04-20652	8 workers
654 Construction of E2-F3 655 Rock excavation with shor	ing for E2-F3 81 days		1 excavator 2 gen works
656 Construction of pad footing	g E2-F3 10 days	Wed 01-07-20 Sat 11-07-20 655	agang 6 formworkers
657 Construction of column for 658 Construction of pier head			
659 Installation of bearing at E	2-P2 and E2-P1 1 day	Fri 06-11-20 Sat 07-11-20 658	
660 Construction of E2-F4 661 Rock Excavation with shore	176 days ing for construction of E:65 days		
662 Construction of pad footin	g of E2-F4 10 days	Mon 13-07-20 Thu 23-07-20 661	
663 Construction of columns for 664 Installation of bearing	or E2-P3 and Bridge Decl 100 day 1 day	ri 13-11-20 Fri 13-11-20 662 Fri 13-11-20 Fri 13-11-20 663	
665 Steel footbridge works	299.25 d	ays Wed 15-07-20 Tue 15-06-21	
666 Off site Fabrication of Stee E2-LT1 to E2-P1, E2-P1 to		Tue 01-09-20 Mon 26-10-20	
		rs Sat 14-11-20 Tue 15-06-21 666,664	
Project: portion 1-5 (/ Sept. 2020)	Task Inclusion	Summary	External Milestone \diamond Inactive Summary I Manual Summary Rollup Finish-only I Critical Split
Date: Mon 14-12-20		Project Summary	Inactive Task Manual Task Manual Summary Deadline Progress
	Milestone 🔷	External Tasks	Inactive Milestone Duration-only Start-only E Critical

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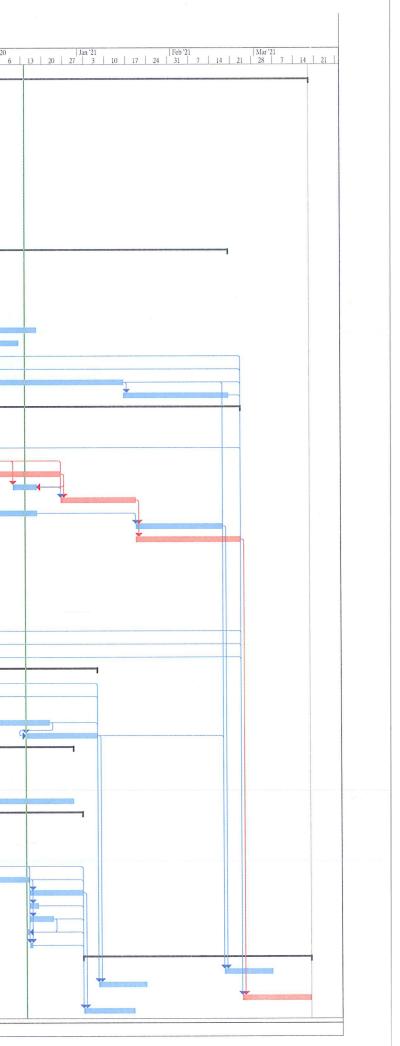
			Conr	Contract No. NE Development of Anderson ection of Pedestrian Facilities Works Section A Portions 1, 2	2016/05 Road Quarry Site : Phase 1 - Accepted Programme 3 - Dec 2020		
68 Off site Fabrication of Steel deck truss between E2-P2 to E2-P3, E2-P3 to bridge by others 90 days 69 Preparation works and lifting of truss for E2-P3 to c 30 days 70 Off site Fabrication of Steel deck truss between E2-130 days 71 Preparation works and Lifting of steel truss between 25 days 72 Roof installation of bridge from E2-LT1 to E2-P3 is to 30 days 73 Screeding and paving blocks for the bridge from E2-L3 0 days 74 Electrical installation and lighting works for bridge from E2-L11 to 20 days 75 Tubular handrail and planter on bridge from E2-L11 to 20 days 76 150mm dia storm drain pipe across Hiu Kwong Street 30 days 77 Trenching works for connection of existing water com 30 days 30 days 78 Water meter box and water point connection 30 days	s Wed 15-07-20 Fri 23-10-20 s Wed 19-08-20 Wed 16-12-20664 s Fri 20-02-21 Wed 31-03-21 s Wed 31-03-21 Wed 28-04-21670 s Wed 28-04-21 Sat 15-05-21 671 s Sat 15-05-21 Thu 17-06-21 672 s Sat 15-05-21 Thu 17-06-21 672 s Sat 15-05-21 Thu 17-06-21 672 s Sat 15-05-21 Wed 21-07-21676 s Sat 15-05-21 Thu 17-06-21 672 Fri 18-06-21 Wed 23-06-21 672 Fri 18-06-21 Wed 23-06-21678	Half 2, 2017 A , M J J A S O	Half 1, 2018	Half 2, 2018 Ha	f 1, 2019 Half 2, 2019	Half 1, 2020 I	Half 2. 2020 J A S O N

Project: portion 1-3 (7 Sept. 2020) Date: Mon 14-12-20	Task Split Milestone	\$ Summary Project Summary External Tasks	1	External Milestone Inactive Task Inactive Milestone	Inactive Summary Manual Task Duration-only	Manual Summary Rollur Manual Summary Start-only	Finish-only Deadline Critical	 Critical Split Progress	
			_			 Page 8			

Half 1, 2021 D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | O | J | F | M | A | M | J | J | A | S | O | N | O | J | F | M | A | M | J | J | A | S | O | N | O | J | F | M | A | M | J | J | A | S | O | N | O | J | F | M | A | M | J | J | A | S | O | M | A | M | J | J | A | S | O | M | A | M | J | J | A | S | O | M | A | M | J | J | A | S | O | M | A | M | J | J | A | S | O | M | A | M | J | J | A | S | O | M | A | M | J | J | A | S | O | M | A | M | J | J | A | S | O | M | A | M | J | J | A | S | O | M | A | M | A | M | A | M | A | M | J | J | A | A | M | A | M | A | M | A | M | A | M | A | M | A | . All 6 steelworkers 1 gang 2 workers 4 workers 4 workers 8 workers 1 excavator 2 gen workers 4 workers 8 workers ₩

					Monthly programme for section D Portion 6 (31 December/2020)
ID	Task Name	Duration	Start	Finish	May '20 Jun '20 Jul '20 Aug '20 Sep '20 Oct '20 Nov '20 Dec '20 26 3 10 17 24 31 7 14 21 28 5 12 19 26 2 9 16 23 30 6 13 20 27 4 11 18 25 1 8 15 22 29 16 23 30 6 13 20 27 4 11 18 25 1 8 15 22 29 16
1 2		267 4	T 42/5/20	71 40/2/24	
3	Portion 6 overall construction programme for outstanding		Tue 12/5/20	Thu 18/3/21	
4	Foundation construction Completed E12 Footing construction	9 days	Tue 12/5/20 Tue 12/5/20	Fri 22/5/20 Tue 12/5/20	♦ 12/5
5	Completed BBI Footing construction	0 days 0 days	Fri 22/5/20	Fri 22/5/20	◆ 12/5 ◆ 22/5
6	CLP & tel-com Cable diversion		Tue 12/5/20	Thu 17/9/20	
7	Excavation of cable trench	6 days	Tue 12/5/20	Mon 18/5/20	
8	CLP cable diversion (1st phase)	20 days	Tue 19/5/20	Wed 10/6/20	
9	Site Clearance for CLP	4 days	Thu 2/7/20	Mon 6/7/20	
10	CLP cable diversion (2nd phase)	7 days	Tue 7/7/20	Tue 14/7/20	
11	CNP issued by EPD for night cable sewping	1 day	Fri 10/7/20	Fri 10/7/20	
12	CLP cable diversion (3rd phase)	24 days	Wed 15/7/20	Tue 11/8/20	
13	Telecom cable diversion (with drawpit construction)	25 days	Wed 12/8/20	Wed 9/9/20	
14	Backfilling of cable trench	7 days	Thu 10/9/20	Thu 17/9/20	
15	E12 Lift Tower construction	221 days	Mon 8/6/20	Fri 19/2/21	
16	E12 Lift tower construction (1st phase)	21 days	Mon 8/6/20	Wed 1/7/20	
17	Erection of temporary scaffolding working platform	60 days	Thu 2/7/20	Wed 9/9/20	
18	E12 Lift tower construction (2nd phase)	10 days	Thu 10/9/20	Mon 21/9/20	
19	E12 Lift tower construction (3rd phase)	20 days	Tue 22/9/20	Wed 14/10/20	
20	E12 Lift tower construction (4th phase)	20 days	Thu 15/10/20	Fri 6/11/20	
21	E12 Lift tower louvre, glazing and E&M installation	35 days	Sat 7/11/20	Thu 17/12/20	
22 23	Finishing Erection of E12 Lift Tower	30 days	Sat 7/11/20	Fri 11/12/20	
23	Construction of irrigation system	14 days	Sat 7/11/20	Mon 23/11/20	
25	Relocation of existing fire hydrant	7 days	Tue 24/11/20	Tue 1/12/20	
26	E12 Lift installation	60 days	Sat 7/11/20	Fri 15/1/21 Fri 19/2/21	
27	E12 telemetry civil provision & E&M work E12 Staircase & Footbridge construction	30 days	Sat 16/1/21 Fri 18/9/20	Tue 23/2/21	
28	Rock Excavation of sump pit	10 days	Fri 18/9/20	Tue 29/9/20	
29	Construction of sump pit	20 days	Wed 30/9/20	Thu 22/10/20	
30	Installation of E&M equipments of sump pit	14 days	Fri 23/10/20	Sat 7/11/20	*
31	E12 Staircase construction	21 days	Sat 7/11/20	Tue 1/12/20	¥
32	E12 Footbridge Construction	21 days	Wed 2/12/20	Fri 25/12/20	
33	Installation of bearing & movement joint	7 days	Thu 10/12/20	Thu 17/12/20	
34	E12 Footbridge Steel Structure Installation (steel roof & fall	21 days	Sat 26/12/20	Tue 19/1/21	
35	Pilliar box construction	14 days	Wed 2/12/20	Thu 17/12/20	
36	E12 footbridge E&M installation	25 days	Wed 20/1/21	Wed 17/2/21	
37	Finishing Erection of E12 Footbridge & staircase	30 days	Wed 20/1/21	Tue 23/2/21	
38	RWE12 Retaining Wall	166 days	Tue 12/5/20	Fri 20/11/20	
39	DN600 DI pipe installation (heading method)	90 days	Tue 12/5/20	Mon 24/8/20	1
40	Lisance with EPD for TTA and application of RA	16 days	Tue 25/8/20	Fri 11/9/20	
41	DN600 DI pipe installation (trench excavation method)	30 days	Sat 12/9/20	Fri 16/10/20	
42	Construction of retaining wall RWE12 bay 14	30 days	Tue 12/5/20	Mon 15/6/20	
43	Construction of retaining wall RWE12 bay 13	21 days	Wed 23/9/20	Fri 16/10/20	
44	Rock slope stabilization survey	4 days	Sat 17/10/20	Wed 21/10/20	
45	Rock slope stabilization work for RWE 12	14 days	Thu 22/10/20		
46	Erection of finishing of RWE12 & EPD road	30 days	Sat 17/10/20	Fri 20/11/20	
47	BBI-SB Covered walkway construction	95 days	Fri 18/9/20	Wed 6/1/21	
40	BBI Steel Structure Installation	30 days	Fri 18/9/20	Thu 22/10/20	
50	BBI PMMA Installation	30 days	Fri 23/10/20	Thu 26/11/20	
51	Stormwater drainage system (footpath) Paving block for footway	30 days	Fri 23/10/20 Fri 27/11/20	Thu 26/11/20 Mon 21/12/20	
52	BBI E&M installation	21 days 21 days	Mon 14/12/20		
53	Construction of temporary ramp	45 days	Sat 7/11/20	Tue 29/12/20	
54	Construction of U-channel	1 day	Sat 7/11/20	Sat 7/11/20	
55	Construction of concrete footing	7 days	Mon 9/11/20	Mon 16/11/20	
56	Construction of column	7 days	Tue 17/11/20		
57	Construction of steel deck	30 days		Tue 29/12/20	
58	Road work	91 days	Fri 18/9/20	Fri 1/1/21	1
59	Central divider construction (with u-channel)	21 days	Fri 18/9/20	Mon 12/10/20	
60	Stormwater drainage system (road section)	50 days	Fri 18/9/20	Sat 14/11/20	
61	Sewerage drainage system	21 days	Fri 18/9/20	Mon 12/10/20	
62	Road kerb erection	14 days	Mon 16/11/20	Tue 1/12/20	
63	Concrete road pavement	25 days	Mon 16/11/20		
64	Beam barrier installation	16 days	Tue 15/12/20		
65	Roadmarking erection	3 days	Tue 15/12/20		
66	Traffic sign erection	7 days	Tue 15/12/20		
67	ETC & MTC system inspection & testing	1 day		Mon 14/12/20	
68	Lane conversion of Lane 1 & 2	1 day	Tue 15/12/20		
69	Test & completion	65 days	Sat 2/1/21	Thu 18/3/21	
70	E&M T&C and use Permit	14 days	Thu 18/2/21	Fri 5/3/21	
71	BBI-SB T&C	14 days	Thu 7/1/21	Fri 22/1/21	
72	E12 Lift tower and staircase T&C	20 days	Wed 24/2/21	Thu 18/3/21	
15	Road Work T&C	14 days	Sat 2/1/21	Mon 18/1/21	

Page 1

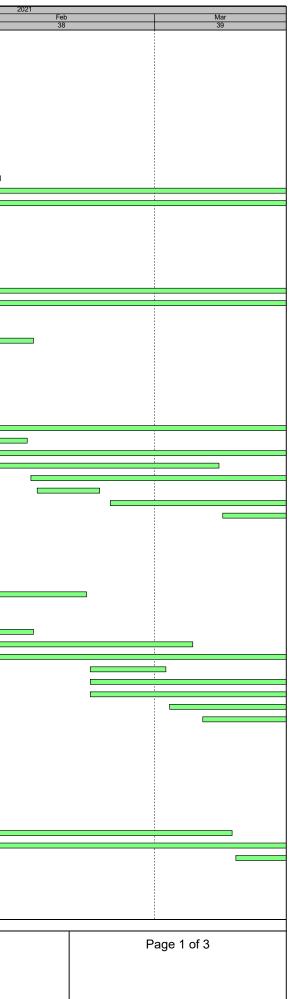




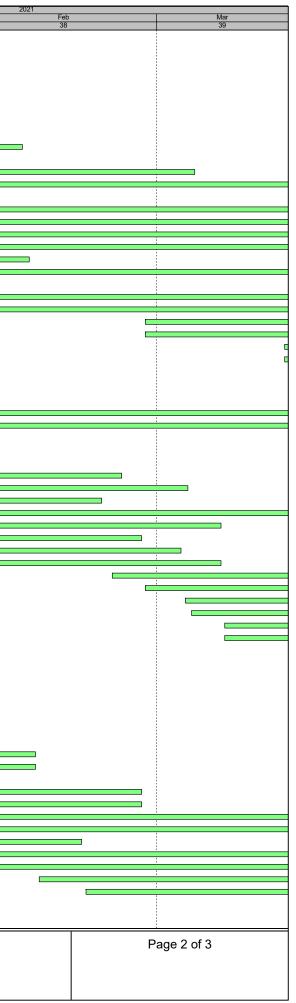
Contract 3 (NE/2017/03)

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	Activity Name	Duration	Start	Finish	2020
					Dec Jan 36 37
E2017/03 - ARQ PHASE	E 2A - Monthly Programme Update (202011)-1 _201201	1002	23-May-19 08:00 A	17-Feb-22 18:00	
Road Improvement Wo	orks Location 1 (RIW1)	553	06-Apr-20 08:00 A	17-Feb-22 18:00	
Construction Works		553	06-Apr-20 08:00 A	17-Feb-22 18:00	
CON10231	Existing watermain diversion (by WSD)	24	06-Apr-20 08:00 A	07-Dec-20 18:00	
CON10254D	Protection works to existing 11kV cable (by CLP)	26	22-Aug-20 08:00 A	21-Nov-20 18:00	
CON11576	Construct NB RC wall (FE1-F4b to FE1-F7b, 57m, 0.85m/d, 1 team)	66	11-Sep-20 08:00 A	07-Dec-20 18:00	
CON11152B	(NCE082) Inclement weather (21/9/2020 to 20/10/2020) on RIW1 RWC2	6	15-Oct-20 08:00 A	21-Nov-20 18:00	
CON10728E1	Apply 2nd CNP for diversion works by proposing alternative solution	26	20-Oct-20 08:00 A	12-Dec-20 18:00	
CON10728F	Site formation works (RWC2 Type 3a & 4)	23	21-Oct-20 08:00 A	21-Nov-20 18:00	
CON11170	Utilities works, drainage works for slip road 2 stage 3	60	22-Oct-20 08:00 A	05-Jan-21 18:00	
CON11210	Utilities works, drainage works for slip road 2 stage 4	18	22-Oct-20 08:00 A	28-Nov-20 18:00	
CON10650	Construct RW wall (RWC2 type 1 a & 1)	78	04-Nov-20 08:00 A	05-Feb-21 18:00	
CON10652	Construct RW footing (RWC2 type 2)	150	04-Nov-20 08:00 A	10-May-21 18:00	
CON10310	Construct RW footing (RWC2 type 4, 6, 7, 8)	121	07-Nov-20 08:00 A	16-Apr-21 18:00	
CON12354	Construct subway wall and soffit (KS27 west side, bay 3)	30	09-Nov-20 08:00 A	12-Dec-20 18:00	
CON12334	TTA application for TMLG approval	18	13-Nov-20 08:00 A	03-Dec-20 18:00	
		59		02-Feb-21 18:00	
CON10270	ELS to bore pile pile cap (RWC2 type 5)	60	23-Nov-20 08:00		
CON11190	Road works for slip road 2_stage 3		23-Nov-20 08:00	03-Feb-21 18:00	♦ (NCE074) Uncharted pipes were found during site formation works at type 3 / 3a
CON10728F1	(NCE074) Uncharted pipes were found during site formation works at type 3 /	0	23-Nov-20 08:00	10.5 00.10.00	(ICED 4) Dictated pipes were found during site formation works at type 57 a
CON10728F2	Determination of pipe routing & arrange SLG for seeking UU advice	24	23-Nov-20 08:00	19-Dec-20 18:00	
CON10654	Construct RW wall (RWC2 type 2)	138	25-Nov-20 08:00	17-May-21 18:00	
CON10370	Construct RW wall (RWC2 type 4, 6, 7, 8)	115	30-Nov-20 08:00	23-Apr-21 18:00	
CON11230	Road works for slip road 2_stage 4	18	30-Nov-20 08:00	19-Dec-20 18:00	
CON11318G	RA application, TTA setup & Trial run	12	04-Dec-20 08:00	17-Dec-20 18:00	
CON12356	Existing drainage & sewer modification works (west side)	48	14-Dec-20 08:00	10-Feb-21 18:00	
CON11508	Pre-drill works on FE1	18	18-Dec-20 08:00	11-Jan-21 18:00	
CON11270	Upgrading works on existing slip road 2 stage 5	18	21-Dec-20 08:00	13-Jan-21 18:00	
CON10728F3	Further site formation works after diversion (RWC2 Type 3a & 4)	18	21-Dec-20 08:00	13-Jan-21 18:00	
CON11506	Erect piling platform on FE1	12	12-Jan-21 08:00	25-Jan-21 18:00	
CON10728G	Remove platform no. 1 haul road	5	14-Jan-21 08:00	19-Jan-21 18:00	
CON10728H	Temporary diversion - Stage 2	6	20-Jan-21 08:00	26-Jan-21 18:00	
CON11510	Construct piling foundation at FE1 Type 1 (12nos, 5d/no, 1 team)	60	26-Jan-21 08:00	13-Apr-21 18:00	
CON10730	Moblization works for socket H-pile works (RWC2 type 3)	12	27-Jan-21 08:00	09-Feb-21 18:00	
CON10390	Construct pile cap (RWC2 type 5)	90	03-Feb-21 08:00	28-May-21 18:00	
CON11326	Site establishment for piling works	27	04-Feb-21 08:00	10-Mar-21 18:00	
CON10750	Pre-drill & construct socket H-pile works (RWC2 type 3; 400nos, 3d/no, 4 team	300	10-Feb-21 08:00	17-Feb-22 18:00	
CON12358	Construct subway footing (KS27 west side, bay 2)	6	11-Feb-21 08:00	20-Feb-21 18:00	
CON12360	Construct subway wall and soffit (KS27 west side, bay 2)	30	22-Feb-21 08:00	31-Mar-21 18:00	
CON11330	(NCE??) Construct CT5 Type 1 piling foundation (18nos, 5d/no, 1 team)	90	11-Mar-21 08:00	02-Jul-21 18:00	
		303	14-Aug-20 08:00 A	20-Jul-21 18:00	
Road Improvement Wo					
Construction Works in S		303	14-Aug-20 08:00 A	20-Jul-21 18:00	
CON20774	Soil nail works at RW3b	90	14-Aug-20 08:00 A	19-Dec-20 18:00	
CON20650	Install sheet pile to RW bay 9 to bay 13	18	14-Oct-20 08:00 A	27-Nov-20 18:00	
CON20950	Construct RW3Cd base (L=17m, 3wk/pour, 2pour)	36	14-Oct-20 08:00 A	25-Nov-20 18:00	
CON20170	Fabrication of NB steel post - along slope side	90	21-Nov-20 08:00	18-Feb-21 18:00	
CON20970	Construct RW3Cd wall (L=17m, 4wk/pour, 2pour)	48	26-Nov-20 08:00	23-Jan-21 18:00	
CON20670	ELS to RW bay 9 to bay 13 formation	41	28-Nov-20 08:00	18-Jan-21 18:00	
CON20910	Construct RW bay 14 to bay 16 base (L=19m)	42	21-Dec-20 08:00	10-Feb-21 18:00	
CON20930	Construct RW bay 14 to bay 16 wall (L=19m)	42	14-Jan-21 08:00	06-Mar-21 18:00	
CON20790	Construct RW bay 9 to bay 13 base (L=30m)	66	19-Jan-21 08:00	13-Apr-21 18:00	
CON20190	Steel post along slope side delivery	12	19-Feb-21 08:00	02-Mar-21 18:00	
CON20290	Fabrication of NB acoustic panels - along slope side	126	19-Feb-21 08:00	24-Jun-21 18:00	
CON20810	Construct RW bay 9 to bay 13 wall (L=30m)	66	19-Feb-21 08:00	12-May-21 18:00	
CON20210	Fabrication of NB steel post - central median near junction at on sau road left tu	140	03-Mar-21 08:00	20-Jul-21 18:00	
CON21010	Utilities & drainage works at Portion B (bay 3 to bay 8)	30	08-Mar-21 08:00	15-Apr-21 18:00	
	mi-Enclosure SE2 (Portion C)	200	21-Oct-20 08:00 A	26-Jun-21 18:00	
CON21958	Utilities diversion	200	21-Oct-20 08:00 A	04-Dec-20 18:00	
CON21956 CON21652A		30	29-Oct-20 08:00 A	02-Dec-20 18:00	
00N2 1002A	Protect existing utilities				
CONIDOZOD	JV prepare revise design of RW1 for CT4 & SE2 due to CE259	7	09-Nov-20 08:00 A	28-Nov-20 18:00	
		18	30-Nov-20 08:00	19-Dec-20 18:00	
CON22730C	ICE review & cert revise design of RW1 for CT4 & SE2 due to CE259		03-Dec-20 08:00	09-Jan-21 18:00	
CON22730C CON21652B	Construct working platform for piling works	30			
CON22730C CON21652B CON21960	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21)	48	05-Dec-20 08:00	02-Feb-21 18:00	
CON22730C CON21652B CON21960 CON22730D	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21) PM review & acceptance revise design of RW1 for CT4 & SE2 due to CE259	48 36	05-Dec-20 08:00 21-Dec-20 08:00	03-Feb-21 18:00	
CON22730C CON21652B CON21960	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21)	48 36 30	05-Dec-20 08:00 21-Dec-20 08:00 03-Feb-21 08:00		
CON21652B CON21960 CON22730D	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21) PM review & acceptance revise design of RW1 for CT4 & SE2 due to CE259	48 36	05-Dec-20 08:00 21-Dec-20 08:00	03-Feb-21 18:00	
CON22730C CON21652B CON21960 CON22730D CON22730D	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21) PM review & acceptance revise design of RW1 for CT4 & SE2 due to CE259 Construct piling platform SE2 (Bay 13 to Bay 21)	48 36 30	05-Dec-20 08:00 21-Dec-20 08:00 03-Feb-21 08:00	03-Feb-21 18:00 12-Mar-21 18:00	
CON22730C CON21652B CON21960 CON22730D CON21962 CON21650D CON21964	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21) PM review & acceptance revise design of RW1 for CT4 & SE2 due to CE259 Construct piling platform SE2 (Bay 13 to Bay 21) Construct piling fdn (SE2 Bay4 to Bay12) Predrill & construct piling fdn SE2 (Bay 13 to Bay 21)	48 36 30 55	05-Dec-20 08:00 21-Dec-20 08:00 03-Feb-21 08:00 04-Feb-21 08:00	03-Feb-21 18:00 12-Mar-21 18:00 16-Apr-21 18:00	
CON22730C CON21652B CON21960 CON22730D CON21962 CON21650D CON21664 Road Improvement Wor	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21) PM review & acceptance revise design of RW1 for CT4 & SE2 due to CE259 Construct piling platform SE2 (Bay 13 to Bay 21) Construct piling fdn (SE2 Bay4 to Bay12) Predrill & construct piling fdn SE2 (Bay 13 to Bay 21)	48 36 30 55 84 718	05-Dec-20 08:00 21-Dec-20 08:00 03-Feb-21 08:00 04-Feb-21 08:00 13-Mar-21 08:00 23-May-19 08:00 A	03-Feb-21 18:00 12-Mar-21 18:00 16-Apr-21 18:00 26-Jun-21 18:00 21-Oct-21 18:00	
CON22730C CON21652B CON21960 CON22730D CON21962 CON21650D CON21964 Road Improvement Work Construction Works	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21) PM review & acceptance revise design of RW1 for CT4 & SE2 due to CE259 Construct piling platform SE2 (Bay 13 to Bay 21) Construct piling fdn (SE2 Bay4 to Bay12) Predrill & construct piling fdn SE2 (Bay 13 to Bay 21) orks Location 3 (RIW3)	48 36 30 55 84 718 718	05-Dec-20 08:00 21-Dec-20 08:00 03-Feb-21 08:00 04-Feb-21 08:00 13-Mar-21 08:00 23-May-19 08:00 A 23-May-19 08:00 A	03-Feb-21 18:00 12-Mar-21 18:00 16-Apr-21 18:00 26-Jun-21 18:00 21-Oct-21 18:00 21-Oct-21 18:00	
CON22730C CON21652B CON21960 CON22730D CON21962 CON21650D CON21964 Road Improvement Works CON31050	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21) PM review & acceptance revise design of RW1 for CT4 & SE2 due to CE259 Construct piling platform SE2 (Bay 13 to Bay 21) Construct piling fdn (SE2 Bay4 to Bay12) Predrill & construct piling fdn SE2 (Bay 13 to Bay 21) orks Location 3 (RIW3) (CE140) Cut slope works (CH0 to CH115) (L=115m, 10857m3, 30m3/d)	48 36 30 55 84 718 718 365	05-Dec-20 08:00 21-Dec-20 08:00 03-Feb-21 08:00 04-Feb-21 08:00 13-Mar-21 08:00 23-May-19 08:00 A 23-May-19 08:00 A	03-Feb-21 18:00 12-Mar-21 18:00 16-Apr-21 18:00 26-Jun-21 18:00 21-Oct-21 18:00 21-Oct-21 18:00 01-Feb-21 18:00	
CON22730C CON21652B CON21960 CON22730D CON21962 CON21650D CON21964 Road Improvement Work	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21) PM review & acceptance revise design of RW1 for CT4 & SE2 due to CE259 Construct piling platform SE2 (Bay 13 to Bay 21) Construct piling fdn (SE2 Bay4 to Bay12) Predrill & construct piling fdn SE2 (Bay 13 to Bay 21) orks Location 3 (RIW3)	48 36 30 55 84 718 718	05-Dec-20 08:00 21-Dec-20 08:00 03-Feb-21 08:00 04-Feb-21 08:00 13-Mar-21 08:00 23-May-19 08:00 A 23-May-19 08:00 A	03-Feb-21 18:00 12-Mar-21 18:00 16-Apr-21 18:00 26-Jun-21 18:00 21-Oct-21 18:00 21-Oct-21 18:00	
CON22730C CON21652B CON21960 CON22730D CON21962 CON21650D CON21964 CON21964 Construction Works CON31050	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21) PM review & acceptance revise design of RW1 for CT4 & SE2 due to CE259 Construct piling platform SE2 (Bay 13 to Bay 21) Construct piling fdn (SE2 Bay4 to Bay12) Predrill & construct piling fdn SE2 (Bay 13 to Bay 21) orks Location 3 (RIW3) (CE140) Cut slope works (CH0 to CH115) (L=115m, 10857m3, 30m3/d)	48 36 30 55 84 718 718 365	05-Dec-20 08:00 21-Dec-20 08:00 03-Feb-21 08:00 04-Feb-21 08:00 13-Mar-21 08:00 23-May-19 08:00 A 23-May-19 08:00 A	03-Feb-21 18:00 12-Mar-21 18:00 16-Apr-21 18:00 26-Jun-21 18:00 21-Oct-21 18:00 21-Oct-21 18:00 01-Feb-21 18:00	
CON22730C CON21652B CON21960 CON22730D CON21962 CON21650D CON21964 CON21964 Construction Works CON31050	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21) PM review & acceptance revise design of RW1 for CT4 & SE2 due to CE259 Construct piling platform SE2 (Bay 13 to Bay 21) Construct piling fdn (SE2 Bay4 to Bay12) Predrill & construct piling fdn SE2 (Bay 13 to Bay 21) orks Location 3 (RIW3) (CE140) Cut slope works (CH0 to CH115) (L=115m, 10857m3, 30m3/d) PM review & acceptance and slope stabilization measures (Stage 1)	48 36 30 55 84 718 718 365 180	05-Dec-20 08:00 21-Dec-20 08:00 03-Feb-21 08:00 04-Feb-21 08:00 13-Mar-21 08:00 23-May-19 08:00 A 23-May-19 08:00 A 13-May-19 08:00 A	03-Feb-21 18:00 12-Mar-21 18:00 16-Apr-21 18:00 26-Jun-21 18:00 21-Oct-21 18:00 21-Oct-21 18:00 01-Feb-21 18:00 18-Dec-20 18:00	Anderson Road Quarry Site - Investigation Design & Construction
CON22730C CON21652B CON21960 CON22730D CON21962 CON21650D CON21964 oad Improvement Work CON31050 CON31074 Actual Work	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21) PM review & acceptance revise design of RW1 for CT4 & SE2 due to CE259 Construct piling platform SE2 (Bay 13 to Bay 21) Construct piling fdn (SE2 Bay4 to Bay12) Predrill & construct piling fdn SE2 (Bay 13 to Bay 21) orks Location 3 (RIW3) (CE140) Cut slope works (CH0 to CH115) (L=115m, 10857m3, 30m3/d) PM review & acceptance and slope stabilization measures (Stage 1)	48 36 30 55 84 718 718 365 180	05-Dec-20 08:00 21-Dec-20 08:00 03-Feb-21 08:00 04-Feb-21 08:00 13-Mar-21 08:00 23-May-19 08:00 A 23-May-19 08:00 A 23-May-19 08:00 A 11-Mar-20 08:00 A	03-Feb-21 18:00 12-Mar-21 18:00 16-Apr-21 18:00 26-Jun-21 18:00 21-Oct-21 18:00 21-Oct-21 18:00 01-Feb-21 18:00 18-Dec-20 18:00	Anderson Road Quarry Site - Investigation Design & Construction Poad - Improvement Works & Pedestrian Connectivity Escilities Works Phase 20
CON22730C CON21652B CON21960 CON22730D CON22730D CON21962 CON21650D CON21964 CON21964 CON21964 CON21964 CON21964 CON21050 CON31050 CON31074	Construct working platform for piling works ELS for SE2 (Bay 13 to Bay 21) PM review & acceptance revise design of RW1 for CT4 & SE2 due to CE259 Construct piling platform SE2 (Bay 13 to Bay 21) Construct piling fdn (SE2 Bay4 to Bay12) Predrill & construct piling fdn SE2 (Bay 13 to Bay 21) orks Location 3 (RIW3) (CE140) Cut slope works (CH0 to CH115) (L=115m, 10857m3, 30m3/d) PM review & acceptance and slope stabilization measures (Stage 1)	48 36 30 55 84 718 718 365 180	05-Dec-20 08:00 21-Dec-20 08:00 03-Feb-21 08:00 04-Feb-21 08:00 13-Mar-21 08:00 23-May-19 08:00 A 23-May-19 08:00 A 23-May-19 08:00 A 11-Mar-20 08:00 A	03-Feb-21 18:00 12-Mar-21 18:00 16-Apr-21 18:00 26-Jun-21 18:00 21-Oct-21 18:00 21-Oct-21 18:00 01-Feb-21 18:00 18-Dec-20 18:00	Anderson Road Quarry Site - Investigation Design & Construction Road - Improvement Works & Pedestrian Connectivity Facilities Works Phase 2A 3-Month Rolling Programme



Activity ID	Activity Name	Duration	Start	Finish	2020	
					Dec	Jan
CON20654	(EV/NLEO, EV/NE2, EV/NE7, EV/NE8), IV/ Dending W/SD, confirm SMDD waterr	177	01-Jun-20 08:00 A	31-Dec-20 18:00	36	37
CON30654	(EWN 50, EWN52, EWN57, EWN58) JV Pending WSD confirm SMPR waterr					
CON30850	Construct slip road 4 utilities works & black fill & road works	72	18-Aug-20 08:00 A	04-Dec-20 18:00		
CON30250	Construct mini pile at RWD1 (bay 8 to bay 14) (121nos, 1.4d/no, 2 teams)	81	21-Aug-20 08:00 A	24-Dec-20 18:00		
CON30252	ELS works at RWD1-Type 4	81	21-Aug-20 08:00 A	24-Dec-20 18:00		
CON30870	Construct slip road 4 road works	72	15-Sep-20 08:00 A	05-Jan-21 18:00		
CON30310	Construct RWD1 (bay 1 to bay 7) wall (2 teams)	60	18-Sep-20 08:00 A	30-Nov-20 18:00		
CON30054	Erect fencing, gate at new works area	48	02-Oct-20 08:00 A	28-Nov-20 18:00		
CON30310B	(NCE082) Inclement weather (21/9/2020 to 20/10/2020) affected to RIW3 RW	6	18-Nov-20 08:00 A	23-Nov-20 18:00		
CON30330	Construct RWD1 (bay 1 to bay 7) utilities works & backfill (2 teams)	60	24-Nov-20 08:00	04-Feb-21 18:00		
CON30530	Drainage & utilities works (bay 1 to bay 7)	60	27-Nov-20 08:00	08-Feb-21 18:00		
CON30070	Form haul road B	42	30-Nov-20 08:00	20-Jan-21 18:00		
CON30550	Road works (bay 1 to bay 7)	60	21-Dec-20 08:00	06-Mar-21 18:00		
CON31310	Utilities works, drainage works & watermain (CH0 to CH115)	72	22-Dec-20 08:00	22-Mar-21 18:00		
CON30250A	(NCE082) Inclement weather (21/8/2020 to 20/9/2020) affected to RIW3 mini	19	28-Dec-20 08:00	19-Jan-21 18:00		
CON30650	Construct Twin Fresh Watermain CH10 to CH100	120	02-Jan-21 08:00	01-Jun-21 18:00		
CON30656	Construct Twin Fresh Watermain CH10 to CH100	160	02-Jan-21 08:00	20-Jul-21 18:00		
CON30658	Construct Twin Fresh Watermain CH270 to CH320	184	02-Jan-21 08:00	17-Aug-21 18:00		
CON30662	Construct Fresh Watermain A CH320 to CH400 (EPD access)	180	02-Jan-21 08:00	12-Aug-21 18:00	_	
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CON31730	Road re-alignment & TTA modification on SMPR	30	06-Jan-21 08:00	09-Feb-21 18:00	_	
CON31330	Road works (CH0 to CH115)	60	13-Jan-21 08:00	30-Mar-21 18:00		
CON30250B	(NCE082) Inclement weather (21/9/2020 to 20/10/2020) on RIW3 D1	6	20-Jan-21 08:00	26-Jan-21 18:00		
CON30130	Slope works at slope D1 (stage 2, 20% completed)	72	21-Jan-21 08:00	22-Apr-21 18:00		
CON30350	Construct RWD1 (bay 8 to bay 14) pile cap (2 teams)	60	27-Jan-21 08:00	14-Apr-21 18:00		
CON30370	Construct RWD1 (bay 8 to bay 14) wall (2 teams)	60	27-Feb-21 08:00	13-May-21 18:00		
CON30430	Construct RWD1-Type 4 pile cap (CH144~CH160, 16m)	60	27-Feb-21 08:00	13-May-21 18:00	1	
CON30660	Construct Twin Fresh Watermain CH100 to CH190	174	20-Mar-21 08:00	21-Oct-21 18:00		
CON30666	Construct Salt Watermain A near F1-3 (TKO Rd Slip Rd)	60	20-Mar-21 08:00	04-Jun-21 18:00	-	
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Pedestrian Connectivity Facility	/ (PC-E11)	425	28-Feb-20 08:00 A	26-May-21 18:00		
Construction Works		425	28-Feb-20 08:00 A	26-May-21 18:00		
CON43010	Maintenance temporary access form lin tak road to new bus-bus interchange	288	28-Feb-20 08:00 A	11-Jan-21 18:00		
CON42270	Construct U/G utilities & backfill	120	07-Sep-20 08:00 A	23-Mar-21 18:00		
CON42910	Application for power supply & energization (PC-E11)	144	11-Sep-20 08:00 A	28-Apr-21 18:00		
CON42294	Existing DN900 drainage pipe diversion	66	12-Sep-20 00:00 A	01-Dec-20 18:00		
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CON42350E	(CE148) Provision of additional wall for lift shafts at E11-LT2	60	05-Nov-20 08:00 A	16-Jan-21 18:00		
CON42294A	(NCE082) Inclement weather (21/9/2020 to 20/10/2020) on E11-PC1	6	02-Dec-20 08:00	08-Dec-20 18:00		
CON42296	Construct type L manhole (2nos)	60	09-Dec-20 08:00	23-Feb-21 18:00		
CON42298	Construct sub-structure for E11-PC1	60	19-Dec-20 08:00	05-Mar-21 18:00		
CON42450	Erect steel frame E11-FB2, construct floor slab & side planter	30	14-Jan-21 08:00	20-Feb-21 18:00		
CON42630	Construct covered-walkway between PC-E11 & BBI toilet	102	18-Jan-21 08:00	26-May-21 18:00		
CON42670	Install glass & window to lift tower no 2	42	18-Jan-21 08:00	10-Mar-21 18:00		
CON42430	Erect steel frame E11-FB3, construct floor slab & side planter	30	20-Jan-21 08:00	26-Feb-21 18:00		
CON42530	Erect steel frame E11-FB4, construct floor slab & side planter	30	26-Jan-21 08:00	04-Mar-21 18:00		
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CON42550	Erect steel frame E11-FB5, construct floor slab & side planter	30	01-Feb-21 08:00	10-Mar-21 18:00	_	
CON42510	Erect roof steel frame, gutter, corrugated metal sheet & fall arrest system E11-F	48	22-Feb-21 08:00	22-Apr-21 18:00		
CON42490	Erect roof steel frame, gutter, corrugated metal sheet & fall arrest system E11-F	48	27-Feb-21 08:00	28-Apr-21 18:00		
CON42590	Erect roof steel frame, gutter, corrugated metal sheet & fall arrest system E11-F	48	05-Mar-21 08:00	05-May-21 18:00		
CON42390	Construct lift tower 1 (2 teams)	60	06-Mar-21 08:00	21-May-21 18:00		
CON42610	Erect roof steel frame, gutter, corrugated metal sheet & fall arrest system E11-F	48	11-Mar-21 08:00	11-May-21 18:00		
CON42770	ABWF works @LT2 (inside 2nos lift shaft)	12	11-Mar-21 08:00	24-Mar-21 18:00		
		180	04-Sep-20 08:00 A	04-May-21 18:00		
Pedestrian Connectivity Facility						
Construction Works		180	04-Sep-20 08:00 A	04-May-21 18:00		
CON41610	1_Install escalator & temp. T&C (E8-E1 & E8-E2) (F1 to P1)	90	04-Sep-20 08:00 A	21-Dec-20 18:00		
CON41650	2_Install escalator & temp. T&C (E8-E7 & E8-E8) (P3 to P4)	90	19-Sep-20 08:00 A	08-Jan-21 18:00		
CON41230	Erect steel roof & install roof cladding P3>P4	48	21-Sep-20 08:00 A	28-Dec-20 18:00		
CON41170	Erect steel roof & install roof cladding F9 & F1>P1	48	05-Oct-20 08:00 A	07-Dec-20 18:00		
CON40590E	Rock stabilization works to E8-F8 (additional duration due to higher rockhead k	18	12-Nov-20 08:00 A	02-Dec-20 18:00		
CON40910	Construct pier E8-P2 (2 pour)	42	19-Nov-20 08:00 A	09-Jan-21 18:00		
CON40910 CON41770	E&M works (F9 & F1 to P1)	60	30-Nov-20 08:00	10-Feb-21 18:00		
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CON41850	E&M works (P5 to P6)	60	30-Nov-20 08:00	10-Feb-21 18:00		
CON40870	Construct footing E8-F8 (72m3) & backfilling	30	03-Dec-20 08:00	09-Jan-21 18:00		
CON41250	Erect steel roof & install roof cladding P4>P5	48	29-Dec-20 08:00	26-Feb-21 18:00		
CON41270	Erect steel roof & install roof cladding P5>P6	48	29-Dec-20 08:00	26-Feb-21 18:00		
CON41690	3A_Install escalator & temp. T&C (E8-E9 & E8-E10) (P4 to P5)	90	29-Dec-20 08:00	21-Apr-21 18:00		
CON41710	3B_Install escalator & temp. T&C (E8-E11 & E8-E12) (P5 to P6)	90	29-Dec-20 08:00	21-Apr-21 18:00		
CON41010	Construct E8-ABT	30	11-Jan-21 08:00	17-Feb-21 18:00	1	
CON41050	Construct escalator pit P1>P2 (E3 & E4)	60	11-Jan-21 08:00	24-Mar-21 18:00	1	
CON41030	Construct escalator pit P2>P3 (E5 & E6)	60	11-Jan-21 08:00	24-Mar-21 18:00	-	
					-	
CON41890	E&M works (P3 to P4)	60	11-Feb-21 08:00	29-Apr-21 18:00	-	
CON41150	Construct escalator pit P6>ABT (E13 & E14)	60	18-Feb-21 08:00	04-May-21 18:00		
Pedestrian Connectivity Facility	/ System A (SYA)	187	11-Aug-20 08:00 A	30-Mar-21 18:00		
Construction Works		187	11-Aug-20 08:00 A	30-Mar-21 18:00		
Actual Work		Ν	E/2017/03 Dev	elonment of	Anderson Road Quarry Site - Investigation Des	sian & Construction
	Darrel					
Remaining Work	Developm	ent of A	nderson Road	Quarry Site	Road - Improvement Works & Pedestrian Conn	lectivity Facilities works Phase 2A
♦ Milestone					3-Month Rolling Programme	
+ + Willocono					e menar kening i regramme	
L						



ctivity ID	Activity Name	Duration	Start	Finish	2020		
					Dec	Ja 37	
CON50250	Construct superstructure of lift tower to roof level (3m/pour, +144 to +165.7mPl	162	11-Aug-20 08:00 A	25-Feb-21 18:00	30	31	
CON50250A	(NCE081) Inclement weather (21/8/2020 to 20/9/2020) affected to SYA	102	26-Feb-21 08:00	19-Mar-21 18:00			
		19					
CON50250B	(NCE082) Inclement weather (21/9/2020 to 20/10/2020) affected to SYA	6	20-Mar-21 08:00	30-Mar-21 18:00			
Pedestrian Connectivity	y Facility System B (SYB)	478	12-Jun-20 08:00 A	28-Jan-22 18:00			
Construction Works		478	12-Jun-20 08:00 A	28-Jan-22 18:00			
CON52190	Construct above ground structure SYB-ABT	90	12-Jun-20 08:00 A	28-Dec-20 18:00			
CON50859G	(NCE079) Further excavation to facilitate Towngas diversion as per-request in	54	27-Oct-20 08:00 A	30-Dec-20 18:00			
CON51910	Construct pier SYB-P8 (2 pour)	42	03-Nov-20 08:00 A	09-Jan-21 18:00			
CON51970	Construct pier SYB-P7 (2 pour)	42	12-Nov-20 08:00 A	11-Jan-21 18:00			
CON50859F	(NCE082) Inclement weather (21/9/2020 to 20/10/2020) on Sys B	6	18-Nov-20 08:00 A	24-Nov-20 18:00			
CON51290	Install sheet pile at SYB-PC6	12	08-Dec-20 08:00	21-Dec-20 18:00			
CON51310	Excavate & install support at SYB-PC6	30	22-Dec-20 08:00	28-Jan-21 18:00			
CON50855	Gasmain diversion (Sys B) - Apply 2nd stage TTA & civil works for gasmain dive	12	31-Dec-20 08:00	14-Jan-21 18:00			
CON51810	Construct underground drainage pipe	312	11-Jan-21 08:00	28-Jan-22 18:00			
CON50856	Gasmain diversion (Sys B) - gasmain diversion works (by Towngas)	36	15-Jan-21 08:00	01-Mar-21 18:00			
CON51050	Moblisation piling rig plant to SYS-PC6	6	29-Jan-21 08:00	04-Feb-21 18:00			 -
CON51370	Install sheet pile at SYB-PC4	12	29-Jan-21 08:00	11-Feb-21 18:00			-
CON51070	Pre-drill & construct piling fdn at SYB-PC6	50	05-Feb-21 08:00	12-Apr-21 18:00			
CON51390	Excavate & install support at SYB-PC4	30	16-Feb-21 08:00	22-Mar-21 18:00			
CON50857	Gasmain diversion (Sys B) - Reinstate road surface including pedestrain road	8	02-Mar-21 08:00	10-Mar-21 18:00			
CON50858	Gasmain diversion (Sys B) - Apply 3rd stage TTA (reinstate central median)	14	11-Mar-21 08:00	30-Mar-21 18:00			
Bus-Bus Interchange P		365	01-Apr-20 08:00 A	01-Apr-21 18:00			
v	n 10A - Establishment Works for Landscape Softworks in Section 10	365	01-Apr-20 08:00 A	01-Apr-21 18:00			
CON43370	Establishment Works for Landscape Softworks in Section 10 (Portion FI)	365	01-Apr-20 08:00 A	01-Apr-21 18:00			

Actual Work

Remaining Work

Milestone

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





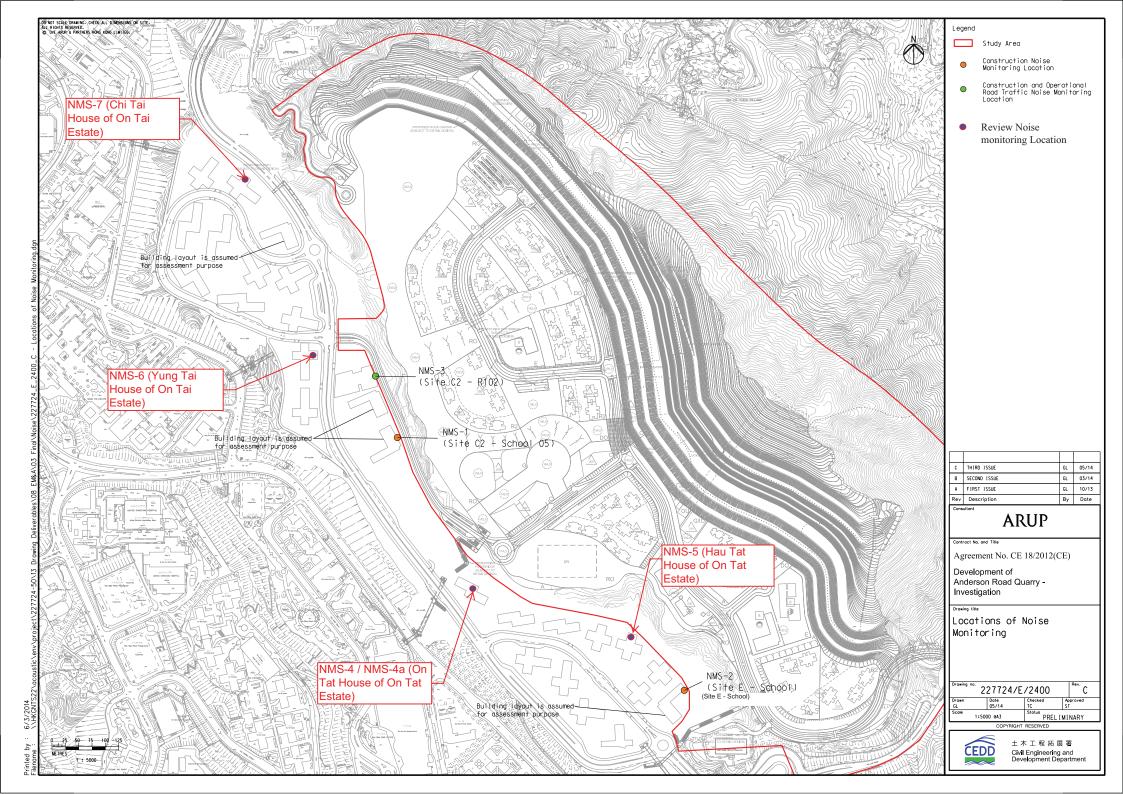
Appendix D

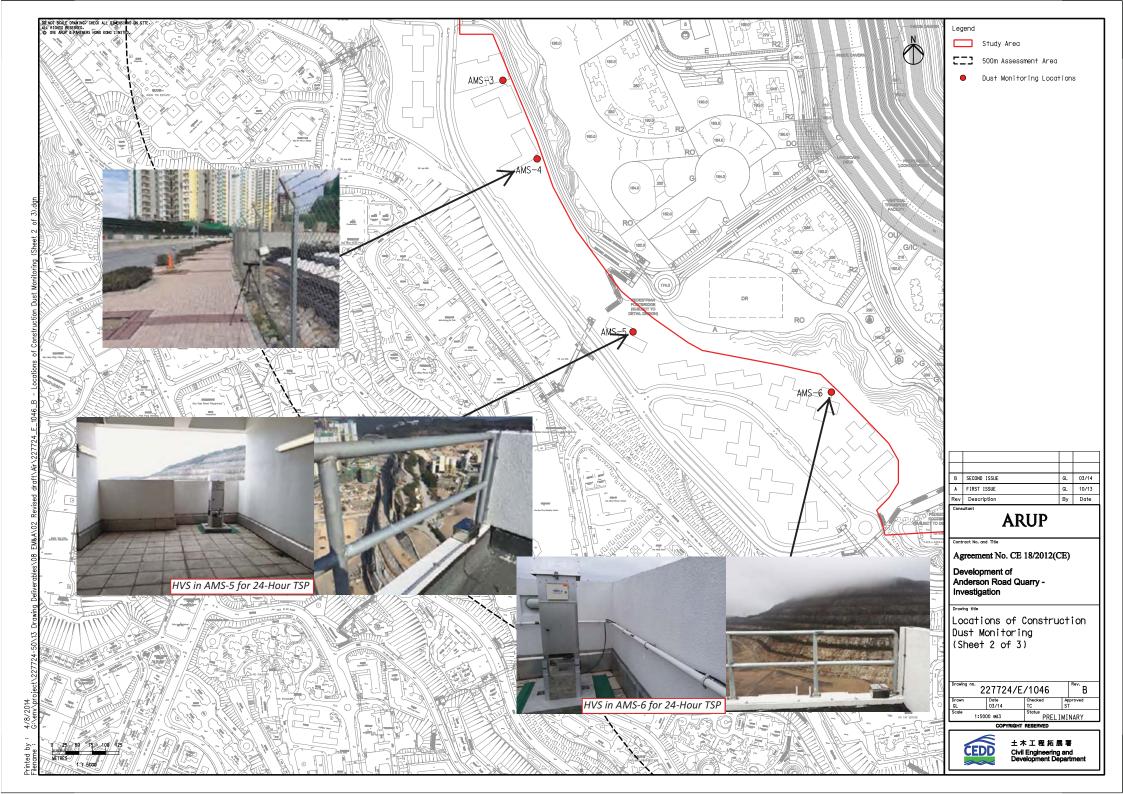
Monitoring Locations for Impact Monitoring

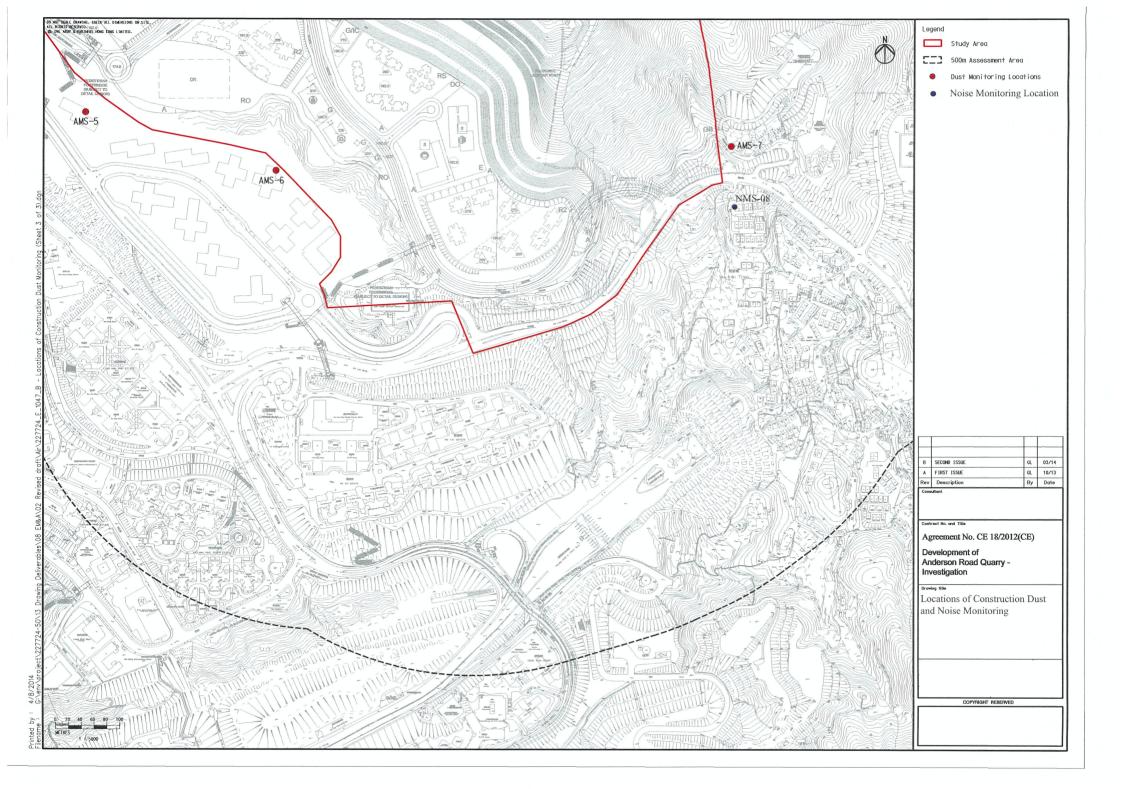


Monitoring Locations for Contract 1 (NE/2016/01)



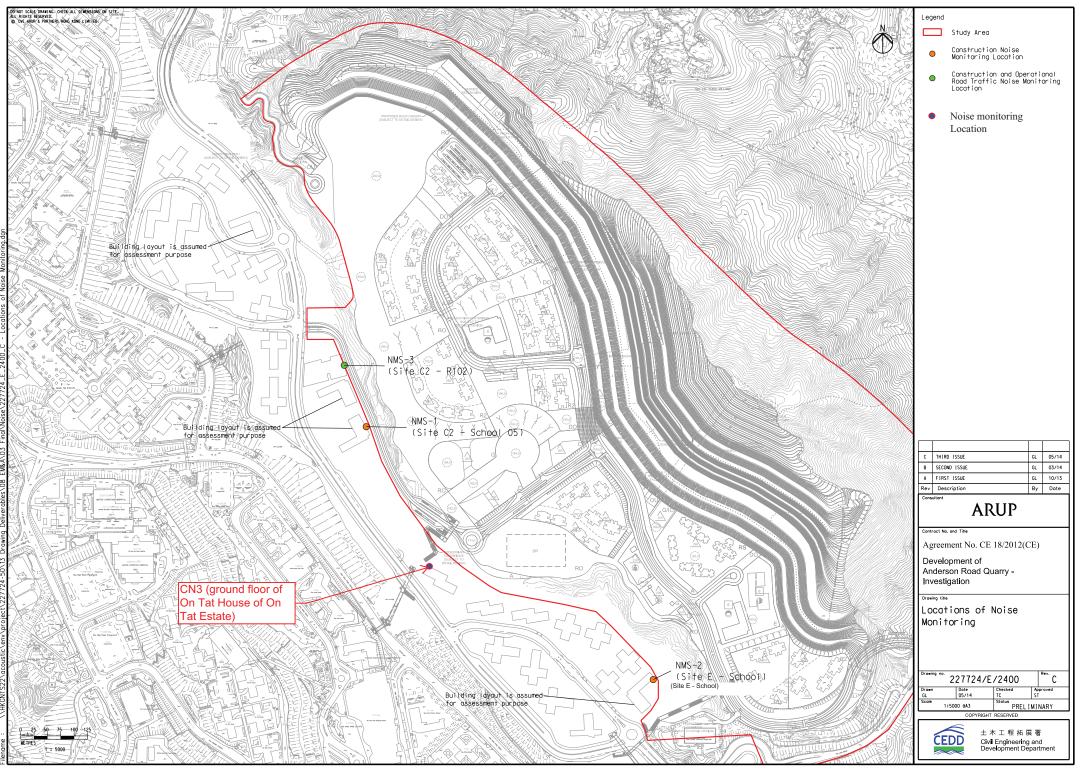






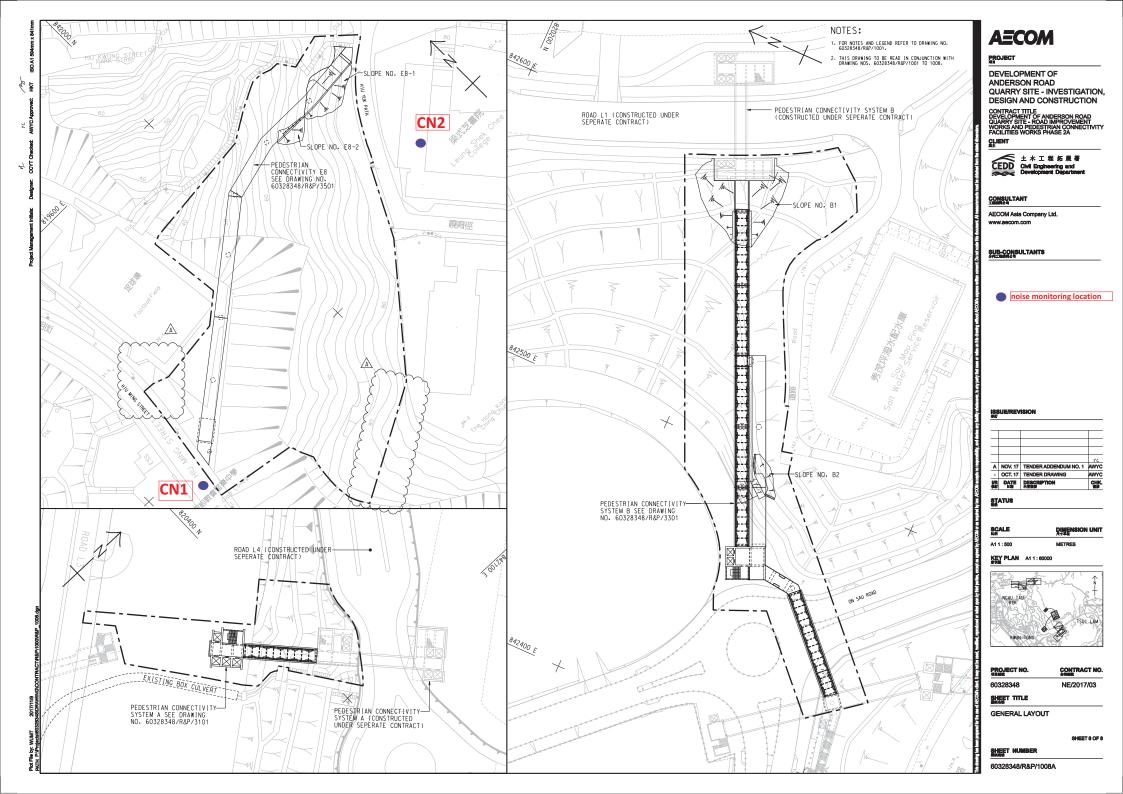


Monitoring Locations for Contract 3 (NE/2017/03)



inted by : 6/3/ ename : \\HK

2012

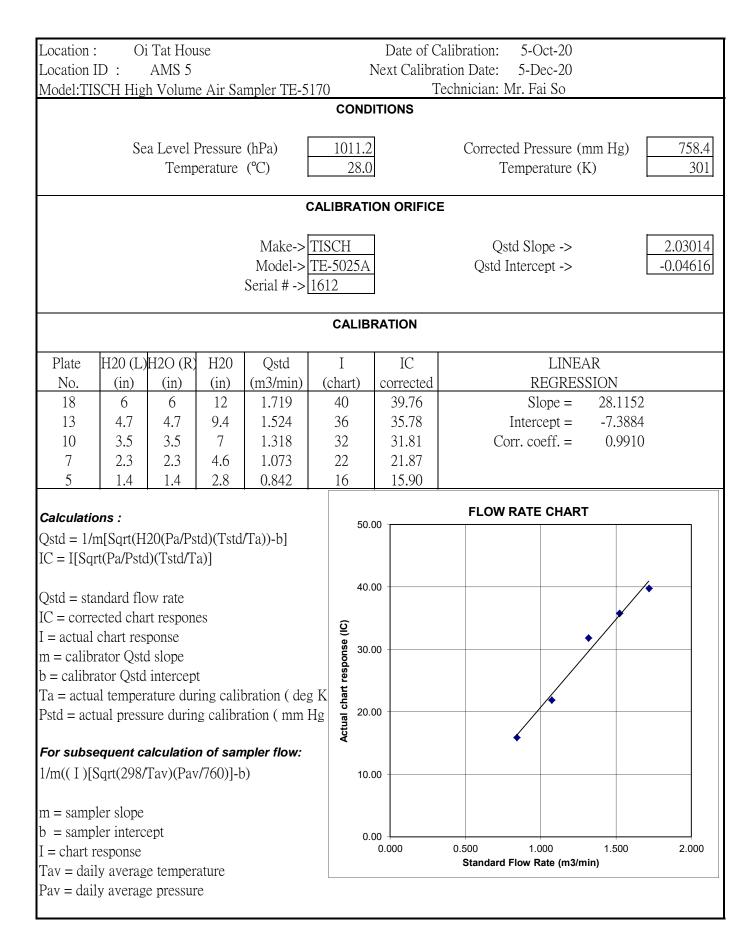




Appendix E

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

Location : Tan Shan Village No. 5 - 6 Date of Calibration: 5-Oct-20										
Location I		AMS1a					ration Date: 5-Dec-20			
Model:TIS	SCH High V	/olume Air	Sampler 7	TE-5170			Technician: Mr. Fai So			
					CONDITIO	NS				
		Son Low	el Pressure	(hD_0)	1011.2	5	Corrected Pressure (mm Hg) 758.4			
			mperature	. ,	28.0					
		10	mperature	(C)	20.0	<u></u>				
				CALI	BRATION	ORIFICE				
				Make->	TISCH]	Qstd Slope -> 2.03014			
					TE-5025A		Qstd Intercept -> -0.04616			
				Serial # ->	1612					
CALIBRATION										
Plate	H20 (L)	H2O (R)	H20	Qstd	Ι	IC	LINEAR			
No.	(in)	(in)	(in)	(m3/min)	(chart)	corrected				
18	4.7	4.7	9.4	1.524	54	53.67	Slope = 30.2212			
13	3.8	3.8	7.6	1.372	48	47.71	Intercept = 7.0946			
10	2.9	2.9	5.8	1.202	44	43.73	Corr. coeff. = 0.9984			
7	1.8	1.8	3.6	0.952	36	35.78				
5	1.1	1.1	2.2	0.749	30	29.82	<u> </u>			
Calculatio	ns ·									
		(Pa/Pstd)(T	std/Ta))-bj							
IC = I[Sqr	t(Pa/Pstd)(7	[std/Ta)]				FLOW RATE CHART				
-	ndard flow					50.00	*			
	cted chart r					50.00 -	<u> </u>			
	chart respon						• • • • • • • • • • • • • • • • • • •			
	ator Qstd sl 1tor Qstd in					<u>୍</u> ଥି 40.00				
		ire during c	alibration	(deg K)		ouse	×			
		during cali				8 30.00				
For subse	quent calc	ulation of s	ampler flo	w:		00.04 (C) 00.05 (C) 00.05 (C) 00.05 (C)				
1/m((I)[S	grt(298/Ta	v)(Pav/760)]-b)			20.00 ¥				
m = sampl	er slope									
	er intercept	t				10.00				
I = chart re										
	y average t	emperature				0.00				
	y average p					0.00				
	Standard Flow Rate (m3/min)									



Location	IIo	n Tot Ho					Data of (Calibration	. 5	Oat 20		
Location :Hau Tat HouseDate of Calibration:5-Oct-20Location ID :AMS 6Next Calibration Date:5-Dec-20												
			e Air Sa	mpler TE-51	70	1		Technician				
1110401111			e i ili ou			ONDIT						
				_							_	
	Se	a Level H	Pressure	(hPa)	10	011.2		Corre	ected F	Pressure (m	m Hg)	758.4
		Temp	erature	(°C)		28.0			Temp	perature (K))	301
				C.	ALIBR		N ORIFICE					
				Make->'	ГISCH	I			Qstd S	lope ->	Γ	2.03014
				Model->'	ГЕ-50	25A		Qst	d Inter	cept ->		-0.04616
Serial # -> 1612												
					CA		ATION					
Plate	H20 (L)	H2O (R)	H20	Qstd	Ι		IC			LINEAR		
No.	(in)	(in)	(m3/min)	(cha 54	,	corrected			REGRESSI			
	18 5.4 5.4 10.8 1.632						53.67	Slope = 45.0309				
13	4.2	4.2	8.4	1.442	48		47.71	Intercept = -18.7794 Corr. coeff. = 0.9977				
10	3.4	3.4	6.8	1.299	4(39.76		Corr. (coeff. =	0.9977	
7	2.2	2.2	4.4	1.050	28		27.83					
5	1.3	1.3	2.6	0.812	18	5	17.89					
Calculatio	ons :							FLOV	V RATI	E CHART		
Qstd = 1/r	n[Sqrt(H	20(Pa/Ps	td)(Tstd	/Ta))-b]		60.00) -					
IC = I[Squ	t(Pa/Pstc	l)(Tstd/T	a)]									
						50.00						
Qstd = sta											◆	
IC = correction		-	es								, 	
I = actual		-			e (IC	40.00				/		
m = calibration b = calibration calibration b = calibration	-	-	+		suoc							
	-	-		oration (deg	K	30.00						
				ation (mm H	Ta La				,			
1 514 – 401	uur press	ure durm	g cunon		Actual chart response (IC)	~~~~~						
For subse	equent ca	alculatio	n of san	pler flow:	Act	20.00			•			
1/m((I)[S	Sqrt(298/	Tav)(Pav	r/760)] - t))								
						10.00)					
m = samp												
b = samp		ept				0.00						
I = chart r	-	- 4					0.000	0.500			1.500	2.000
Tav = dail								Standar	d Flow I	Rate (m3/min)		
Pav = dail	y average	e pressur	C									

-												
Location :	Ma Yau T	Village				Dat	e of C	alibration:	5-Oct-20			
Location I	D: Al	MS 7				Ν	Next (Calibra	ation Date:	5-Dec-20		
Model:TIS	SCH High V	Volum	e Air Sa	mpler TE-5	170			Т	echnician:	Mr. Fai So		
					CC	NDI	TION	s				
							•					
	Sea L	Level I	Pressure	(hPa)	10	1011.2			Correc	cted Pressure ((mm Hg)	758.4
		Temp	erature	(°C)	1	28.0	J		I	Temperature ((K)	301
				C	ALIBR	ATIC	ON OF	RIFICE				
						_	1					
				Make->						Std Slope ->		2.03014
	Model-> TE-5								Qsto	Intercept ->		-0.04616
				Serial # ->	1612		l					
					CA	LIBR	RATIO	'n				
Plate	H20 (L)H2	$O(\mathbb{R})$	H20	Qstd	Ι		T	С		LINE	٨R	
No.	(in)	(m3/min)	(chai	rt)		ected		REGRES				
18									Slope = 37.9754			
13		2.5	5	1.118	48		47	.69 71		Intercept =	4.861	
10		2.0	4	1.002	44		43		(Corr. coeff. =	0.992	
7		1.2	2.4	0.781	36							
5		0.8	1.6	0.642	28							
	010	0.0	110	01012	20		27					
Calculatio	ons :				ī	d						
Qstd = 1/r	n[Sqrt(H20	(Pa/Ps	td)(Tstd	/Ta))-b]					FI O	W RATE CHA	RT	
IC = I[Squ	t(Pa/Pstd)(7	Гstd/Т	a)]			6	60.00					
Qstd = sta	ndard flow	rate				Į	50.00				/ •	•
IC = corrections	cted chart r	espone	es								*	
I = actual	chart respor	nse								,	*	
m = calibi	ator Qstd sl	lope				୍ୱିତ୍ର	40.00 -			/		
b = calibra	ator Qstd in	tercep	t			onse	40.00 - 30.00 - 20.00 -			*		
Ta = actua	al temperatu	ire dur	ing calil	oration (de	gK)	espo	30.00 -					
Pstd = act	ual pressure	e durin	g calibra	ation (mm	Hg)	art				•		
						l ch						
For subse	equent calc	n of san	pler flow:		ctua	20.00 -						
1/m((I)[S	Sqrt(298/Tav	v)(Pav	r/760)]-b))		◄						
							10.00 -					
m = samp	ler slope											
b = samp	ler intercept	t										
I = chart r	esponse						0.00 0.0		0.50	1	.000	1.500
Tav = dail	y average te	emper	ature				0.0			ard Flow Rate (m		1.000
Pav = dail	y average p	ressur	e		Į							

Location I	Location : Tan Shan Village No. 5 - 6Date of Calibration:5-Dec-20Location ID :AMS1aNext Calibration Date:5-Feb-21Model:TISCH High Volume Air Sampler TE-5170Technician: Mr. Fai So										
1110001.11			Sampler		CONDITIO						
			el Pressure mperature	. ,	1021.5 16.8		Corrected Pressure (mm Hg) 766.125 Temperature (K) 290				
				CALI	BRATION	ORIFICE					
				Make-> Model-> Serial # ->	TE-5025A]	Qstd Slope -> 2.03014 Qstd Intercept -> -0.04616				
				(CALIBRAT	ON					
Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION				
18 13	6.1 4.9	6.1 4.9	12.2 9.8	1.774 1.593	54 48	54.98 48.87	Slope = 43.3678 Intercept = -21.6700				
10 7 5	3.7 2.5 1.6	3.7 2.5 1.6	7.4 5 3.2	1.387 1.144 0.920	36 28 18	36.65 28.51 18.33	Corr. coeff. = 0.9967				
-	o ns : n[Sqrt(H20 t(Pa/Pstd)(7		std/Ta))-b]			60.00	FLOW RATE CHART				
IC = corre I = actual	ndard flow ected chart r chart respon- ator Qstd sl	respones nse				50.00					
b = calibra Ta = actua	ator Qstd in al temperatu ual pressure	tercept ure during c				00.04 (C) 90.05 900000 90.05 90000 90000 90000					
	e quent calc Sqrt(298/Ta		-	ow:		Actual Ch Actual Ch Actual Ch					
I = chart r	ler intercept esponse					10.00					
	y average to y average p					0.00 L 0.00	0 0.500 1.000 1.500 2.000 Standard Flow Rate (m3/min)				

Location :												
Location I		AMS 5	A.' G		170		Next Calibra		5-Feb-21			
Model: TTS	SCH High	h Volume	e Air Sa	mpler TE-5	1/0			echnician: I	Vir. Fai So			
						COND	TIONS					
	Se	a Level I		F		1021.5			ed Pressure (mn	n Hg)	766.12	-
		Temp	berature	(°C)		16.8	J	Т	Cemperature (K)		29	90
					CAL	.IBRATI	ON ORIFICE					
				Make->]	-	std Slope ->	Γ	2.0301	
				Model-> Serial # ->			-	Qstd 2	Intercept ->		-0.0461	16
CALIBRATION												
Plate	H20 (L)	H2O (R)	H20	Qstd		Ι	IC		LINEAR			
No.	(in)	(in)	(in)	(m3/min)	(0	chart)	corrected		REGRESSI	ON		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$												
13	4.9	4.9	9.8	1.593		48	48.87	G	-	21.2200		
10	3.7	3.7	7.4	1.387		37	37.67	Co	orr. coeff. =	0.9948		
7 5	2.5 1.6	2.5 1.6	5 3.2	1.144 0.920		26 20	26.47 20.36					
	1.0	1.0		0.920		20	20.30	51.014				
Calculatio						60.0	00 00	FLOW	RATE CHART			
Qstd = 1/n				/Ta))-b]							•	
IC = I[Sqr	t(Pa/Pstd	.)(Tstd/Ta	a)]			50.0						
Qstd = sta	ndard flo	w rate				50.0				1		
IC = corre			es			â				/		
I = actual	-	-				ຍ ອ	00					
m = calibr	-	-				spons						
b = calibra	-	-			V	≝ 30.0 ≝	00					
				bration (deg ation (mm H		al cha			/•			
$1 \operatorname{stu} = \operatorname{acti}$	iai piessi		g canora		.1g	Actual chart response (IC) 0.05 0.05 0.05	00 00		•/			
For subse	quent ca	lculation	of samp	oler flow:								
1/m((I)[S	qrt(298/7	Гav)(Pav	/760)]-b)		10.0	00					
m = sampl	ler slope											
b = sample		ept				0.0	00					
I = chart respectively.	esponse					0.0	0.000	0.500	1.000	1.500	2.000	0
Tav = dail	y average	e temper	ature					Standard	Flow Rate (m3/min)			
Pav = dail	y average	e pressur	e									

Location :	Location : Hau Tat House Date of Calibration: 5-Dec-20										
Location I		AMS 6			-	Ν		ation Date:			
Model: TT:	SCH Higi	h Volum	e Air Sa	mpler TE-51		ONDIT		echnician: I	Mr. Fai So		
					U	ONDIT					
	Se	a Level I	Pressure	(hPa)]	021.5		Correct	ed Pressure (m	m Hg) 766.125	
		Temp	erature	(°C)		16.8		Т	Cemperature (K)) 290	
				C	ALIB	RATIO					
				M.1		TT		0.	4.1.01	2.0201.4	
				Make->' Model->'				-	std Slope -> Intercept ->	2.03014 -0.04616	
				Serial # ->		02011		Qsia		-0.0+010	
CALIBRATION											
Plate	H20 (L)	H2O (R)	H20	Qstd		Ι	IC		LINEAR	-	
No.	(in)	(in)	(in)	(m3/min)		art)	corrected		REGRESSI	ON	
18	6	6	12	1.760		52	52.94	Slope = 40.3048			
13	5.1	5.1	10.2	1.624		6	46.83	Intercept = -18.7596			
10	3.9	3.9	7.8	1.423		6 10	36.65	Co	orr. coeff. =	0.9961	
7 5	2.5 1.7	2.5 1.7	5 3.4	1.144 0.947		28 .9	28.51 19.34				
	1.7	1.7	5.1	0.917		. /	17.51				
Calculatio	ons :							FLOW F	RATE CHART		
Qstd = 1/r				/Ta))-b]		60.00					
IC = I[Sqn	t(Pa/Psto	l)(Tstd/T	a)]							•	
Qstd = sta	ndard flo	w rate				50.00					
IC = correction			es							*	
I = actual		-			ģ	2 40.00					
m = calibr	-	-				nse				•	
b = calibra	_	-				30.00					
				oration (deg	K.				*		
Pstd = act	ual press	ure durin	ig calibra	ation (mm H	lg	Actual chart response 30.00 20.00					
For subse	equent ca	alculatio	n of san	pler flow:		20.00			•		
1/m((I)[S	Sqrt(298/	Tav)(Pav	r/760)]-t)							
						10.00	-				
m = samp	_										
b = samp		ept				0.00					
I = chart r	-		- 4			0.00 C	0.000	0.500		1.500 2.000	
Tav = dail								Standard F	Flow Rate (m3/min)		
Pav = dail	y average	e pressur	C								

	Ma Yau	-	Village					Calibration:		ec-20		
Location I	D: A	MS 7				Ν	Vext Calibr			eb-21		
Model:TIS	SCH High	Volum	e Air Sa	mpler TE-5	170		r	Technician:	: Mr. Fa	ai So		
					CO	NDI	TIONS					
							l				-	
	Sea	Level l	Pressure	(hPa)	102	21.5		Corre	cted Pre	essure (mi	m Hg)	766.125
		Temp	erature	(°C)	1	16.8			Tempe	rature (K))	290
				C	ALIBR	ΑΤΙΟ	ON ORIFIC	E				
				-							_	
				Make->	TISCH			(Qstd Slo	ope ->		2.03014
	Model-> TE-5							Qsto	d Interc	ept ->		-0.04616
				Serial # ->	1612							
					CAL	IBR	RATION					
Plate	H20 (L)H	$2 \cap (\mathbf{P})$	H20	Qstd	Ι		IC			LINEAF)	
	No. (in) (in) (in) (m $3/min$) (ch								D			
18									REGRESSION Slope = 40.7522			
13	5.0	5.0	12.4	1.609	48		53.96 48.87		Intercept = -18.3498			
10							40.87 37.67	(Corr. cc	-	0.9950	
10 7	2.5	2.5	5	1.144	37 26	26.47				. —	0.9950	
5	2.3 1.6	2.5 1.6	3.2	0.920	20		20.47					
	1.0	1.0	5.2	0.920	20		20.30					
Calculatio	ons:											
	n[Sqrt(H2()(Pa/Ps	td)(Tstd	/Ta)) - b]	Ē						F	
-	t(Pa/Pstd)			<i>(10)</i>		60.00 FLOW RATE CHART						
10 – 1[0q1		(1500/1	u)]									
Ostd = sta	ndard flow	<i>i</i> rate					50.00					
-	ected chart		es				50.00				•	
	chart respo	-	•••									
	ator Qstd s					<u>ତ</u>	40.00				/	
	ator Qstd in	-	t			nse						
	-	-		oration (de	vK)	spo	20.00					
	-		-	ation (mm		, Tre	50.00					
	1		2			cha	40.00 30.00 20.00			/		
For subse	equent cal	culatio	n of san	pler flow:		stua	20.00					
1/m((I)[S	Sqrt(298/Ta	av)(Pav	r/760)]-t))		Ă						
							10.00					
m = samp	ler slope											
	ler intercer	ot										
I = chart r							0.00	0.500			4 500	
	ly average	temper	ature				0.000	0.500 Stand		000 / Rate (m3/n	1.500	2.000
	y average	-						Gianu			,	
	-											



輝創工程有限公司

Sun Creation Engineering Limited Calibration & Testing Laboratory

Certificate of Calibration 校正證書

Certificate No.: C200487 證書編號

ITEM TESTED / 送檢I	百百	(Job No. / 序引編號:IC19-1098)	Date of Receipt / 收件日期: 7 January 2020
Description / 儀器名稱	:	Sound Calibrator (EQ089)	
Manufacturer / 製造商	:	Rion	
Model No. / 型號	:	NC-75	
Serial No. / 編號	:	34680623	
Supplied By / 委託者	:	Action-United Environmental Services a	nd Consulting
		Unit A, 20/F., Gold King Industrial Build	ding,
		35-41 Tai Lin Pai Road, Kwai Chung, N	.Т.
TEST CONDITIONS /	測料	修件	
Temperature / 函庄			Deletive Upmidity / 扫影记录序 · · · · (50 + 25)0/

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

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 22 January 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	: <u>Chenk</u> K P Cheuk Assistant Engineer			
Certified By 核證	K C Lee Engineer	Date of Issue 簽發日期	:	24 January 2020

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。



輝創工程有限公司

Sun Creation Engineering Limited Calibration & Testing Laboratory

Certificate of Calibration 校正證書

Certificate No. : C200487 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 CL130 CL281 TST150A

Description Universal Counter Multifunction Acoustic Calibrator Measuring Amplifier <u>Certificate No.</u> C193756 CDK1806821 C181288

- 4. Test procedure : MA100N.
- 5. Results :
- 5.1 Sound Level Accuracy

UUT	Measured Value	Mfr's Spec.	Uncertainty of Measured Value
Nominal Value	(dB)	(dB)	(dB)
94 dB, 1 kHz	94.0	± 0.25	± 0.2

5.2 Frequency Accuracy

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

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

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ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES





CONTACT	: MR BEN TAM	WORK ORDER HK2001299					
CLIENT	ACTION UNITED ENVIRONMENT						
	SERVICES AND CONSULTING						
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41	SUB-BATCH : 1					
	TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG	DATE RECEIVED : 6-JAN-2020					
	KONG	DATE OF ISSUE : 10-JAN-2020					
PROJECT	:	NO. OF SAMPLES : 1					
		CLIENT ORDER ÷					

General Comments

- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.
- Sample information (Project name, Sample ID, Sampling date/time, etc., 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
Kichard Jong.	
Richard Fung	Managing Director

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

Results apply to sample(s) as submitted. 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 SUB-BATCH

CLIENT

PROJECT

: HK2001299

¹ ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING :



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2001299-001	S/N: 11008017	AIR	06-Jan-2020	S/N: 11008017

Equipment Verification Report (TSP)

Equipment Calibrated:

Туре:	Laser Dust monitor
Manufacturer:	TSI AM510
Serial No.	11008017
Equipment Ref:	EQ102
Work Order:	HK2001299

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES Office (Calibration Room)
Equipment Ref:	HVS 018
Last Calibration Date:	3 December 2019

Equipment Verification Results:

Verification Date:

27 & 31 December 2019

0.5354

0.9984

6 January 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)
2hr	09:08 ~ 11:10	18.0	1020.3	0.040	0.076	+0.036
2hr	11:15 ~ 13:16	19.2	1024.9	0.048	0.087	+0.039
2hr15min	13:22 ~ 15:23	19.2	1024.9	0.034	0.066	+0.032

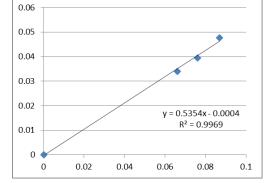
Linear Regression of Y or X

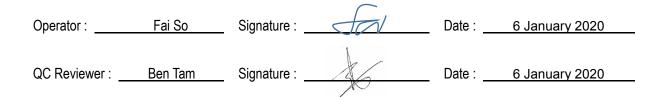
Slope (factor):	
Correlation Coefficient (R)	
Date of Issue	

Remarks:

- 1. **Strong** Correlation (R>0.8)
- 2. Factor 0.5354 should be apply for TSP monitoring

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





Location : Location ID :	Gold Ki Calibrat	-	strial Buildi m	nung		of Calibration: 3-I libration Date: 3-N			
					COND	ITIONS			
	Sea Level] Temp	Pressure perature	. ,	1	1023.1 16.4		Corrected Pressu Temperatu		767.325 289
				CALI	BRATI	ON ORIFICE			
Make-> TIS Model-> 502 Calibration Date-> 5-Fel							Qstd Slope Qstd Intercept Expiry Date	->(2.0968 0.00065 -Feb-20
					CALIB	RATION			
Plate H20 No. (ir	(L)H2O (R) 1) (in)	H20 (in)	Qstd (m3/min)		I art)	IC corrected		INEAR RESSION	
18 6. 13 5. 10 4. 8 2. 5 1.	2 5.2 1 4.1 6 2.6	13.0 10.4 8.2 5.2 3.2	1.754 1.569 1.393 1.109 0.870	4	53 18 11 50 22	54.04 48.94 41.80 30.59 22.43	Slope Intercep Corr. coeff	t = -9.6198	
Calculations : Qstd = 1/m[Squ IC = I[Sqrt(Pa/ Qstd = standard IC = corrected I = actual chart m = calibrator (C Ta = actual ten Pstd = actual p For subsequen 1/m((I)[Sqrt(2 m = sampler she	Pstd)(Tstd/T I flow rate chart response Qstd slope Qstd intercep nperature du ressure durin t calculation (98/Tav)(Pay	ra)] es t ring cali ng calibr n of san	bration (de ation (mm apler flow:		00 90 90 90 90 90 90 90 90 90 90 90 90 9	.00	FLOW RATE C	CHART	
 b = sampler intercept I = chart response Tav = daily average temperature Pav = daily average pressure 					0	0.000	0.500 1.000 Standard Flow Rate	1.500 e (m3/min)	2.000



Key

ΔH: calibrator manometer reading (in H2O) ΔP: rootsmeter manometer reading (mm Hg)

Ta: actual absolute temperature (°K)

Pa: actual barometric pressure (mm Hg)

RECALIBRATION DUE DATE:

February 5, 2020

	0e	rtifa	cate	of	Oal	iori	tion	
			Calibration	Certificati	on Informat	ion		
Cal. Date:	February 5	, 2019	Roots	meter S/N:	438320	Ta:	293	°K
Operator:	Jim Tisch		Pa:	753.1	mm Hg			
Calibration I	Calibration Model #: TE-5025A Calibrator S/I							-
Vol. Init			Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔΗ]
4	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.4830	3.2	2.00	
	2	3	4	1	1.0430	6.4	4.00	1
	3	5	6	1	0.9300	7.9	5.00]
	4	7	8	1	0.8870	8.7	5.50]
	5	9	10	1	0.7320	12.7	8.00	
				Data Tabula	tion]
	Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstc}\right)}$)(<u>Tstd</u>)		Qa	$\sqrt{\Delta H(Ta/Pa)}$	
	(m3)	(x-axis)	(y-ax	(is)	Va	(x-axis)	(y-axis)	
	1.0036	0.6767	1.41	97	0.9958	0.6714	0.8821	1
	0.9993	0.9581	2.00	78	0.9915	0.9506	1.2475	1
	0.9973	1.0723	2.24	48	0.9895	1.0640	1.3947]
	0.9962	1.1231	2.35	44	0.9884	1.1144	1.4628]
	0.9908	1.3536	2.83		0.9831	1.3431	1.7642	
		m=	2.096			m=	1.31298	
,	QSTD	b=	-0.00		QA	b=	-0.00040	1
		r=	0.999	999		<u>r=</u>	0.99999]
				Calculatio	ns	216/100418/04/10040244141824404404404404884494444]
	Vstd=	ΔVol((Pa-ΔP)	/Pstd)(Tstd/T	a)	Va=	ΔVol((Pa-Δ	P)/Pa)	1
	Qstd=	Vstd/∆Time	******		Qa=	Va/∆Time		1
			For subsequ	ent flow ra	te calculatio	ns:		1
	$\mathbf{Qstd=1/m}\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right) \cdot b\right) \qquad \mathbf{Qa=1/m}\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right) \cdot b\right)$							
	Standard	Conditions			_			
Tstd:	298.15		de diving to the second se			RECA	LIBRATION	
Pstd: 760 mm Hg								100

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

b: intercept m: slope

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

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES





CONTACT	: MR BEN TAM	WORK ORDER HK2001300							
CLIENT	ACTION UNITED ENVIRONMENT								
	SERVICES AND CONSULTING								
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41	SUB-BATCH : 1							
	TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG	DATE RECEIVED : 6-JAN-2020							
	KONG	DATE OF ISSUE : 10-JAN-2020							
PROJECT	:	NO. OF SAMPLES : 1							
		CLIENT ORDER							

General Comments

- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.
- Sample information (Project name, Sample ID, Sampling date/time, etc., 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 Jong.	
Richard Fung	Managing Director

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

Results apply to sample(s) as submitted. 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 SUB-BATCH

CLIENT

PROJECT

: HK2001300

¹ ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING :



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2001300-001	S/N: 366410	AIR	06-Jan-2020	S/N: 366410

Equipment Verification Report (TSP)

Equipment Calibrated:

Туре:	Laser Dust monitor			
Manufacturer:	Sibata LD-3B			
Serial No.	366410			
Equipment Ref:	EQ110			
Job Order	HK2001300			

Standard Equipment:

Standard Equipment:	Higher Volume Sampler		
Location & Location ID:	AUES office (calibration room)		
Equipment Ref:	HVS 018		
Last Calibration Date:	3 December 2019		

Equipment Verification Results:

Testing Date:

27&31 December 2019

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr	09:08 ~ 11:10	18.0	1020.3	0.040	2298	19.2
2hr	11:15 ~ 13:16	19.2	1024.9	0.048	2477	20.6
2hr15min	13:22 ~ 15:23	19.2	1024.9	0.034	1941	14.4

Sensitivity Adjustment Scale Setting (Before Calibration) Sensitivity Adjustment Scale Setting (After Calibration)



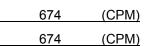
Slope (K-factor):	0.0022
Correlation Coefficient	0.9937
Date of Issue	6 January 2020

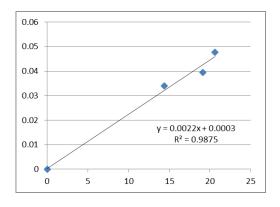
Remarks:

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 : _	far	Date :	6 January 2020
QC Reviewer :	Ben Tam	Signature : _	K	Date :	6 January 2020

Location : Gold King Industrial Building, Kwai Chung Location ID : Calibration Room								of Calibration: 3-I libration Date: 3-N	
					COND	ITIONS			
Sea Level Pressure (hPa) 10 Temperature (°C)					1023.1 16.4		Corrected Pressu Temperatu		767.325 289
				CALI	BRATI	ON ORIFICE			
		Calibrat	Make-> Model-> ion Date->		SCH 25A 26-19		Qstd Slope Qstd Intercept Expiry Date	->(2.0968 0.00065 -Feb-20
					CALIB	RATION			
Plate H20 No. (ir	(L)H2O (R) 1) (in)	H20 (in)	Qstd (m3/min)		I art)	IC corrected		INEAR RESSION	
18 6. 13 5. 10 4. 8 2. 5 1.	2 5.2 1 4.1 6 2.6	13.0 10.4 8.2 5.2 3.2	1.754 1.569 1.393 1.109 0.870	4	53 18 11 50 22	54.04 48.94 41.80 30.59 22.43	Slope Intercep Corr. coeff	t = -9.6198	
Calculations : Qstd = 1/m[Squ IC = I[Sqrt(Pa/ Qstd = standard IC = corrected I = actual chart m = calibrator (C Ta = actual ten Pstd = actual p For subsequen 1/m((I)[Sqrt(2 m = sampler she	Pstd)(Tstd/T I flow rate chart response Qstd slope Qstd intercep nperature du ressure durin t calculation (98/Tav)(Pay	ra)] es t ring cali ng calibr n of san	bration (de ation (mm apler flow:		00 90 90 90 90 90 90 90 90 90 90 90 90 9	.00	FLOW RATE C	CHART	
 b = sampler intercept I = chart response Tav = daily average temperature Pav = daily average pressure 				0	0.000	0.500 1.000 Standard Flow Rate	1.500 e (m3/min)	2.000	



Key

ΔH: calibrator manometer reading (in H2O) ΔP: rootsmeter manometer reading (mm Hg)

Ta: actual absolute temperature (°K)

Pa: actual barometric pressure (mm Hg)

RECALIBRATION DUE DATE:

February 5, 2020

	0e	rtifa	cate	of	Oal	iori	tion	
			Calibration	Certificati	on Informat	ion		
Cal. Date:	February 5	, 2019	Roots	meter S/N:	438320	Ta:	293	°К
Operator:	Jim Tisch					Pa:	753.1	mm Hg
Calibration I	Calibration Model #: TE-5025A Calibrator S				1941			-
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔΗ]
4	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.4830	3.2	2.00	
	2	3	4	1	1.0430	6.4	4.00	1
	3	5	6	1	0.9300	7.9	5.00]
	4	7	8	1	0.8870	8.7	5.50]
	5	9	10	1	0.7320	12.7	8.00	
				Data Tabula	tion]
	Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstc}\right)}$)(<u>Tstd</u>)		Qa	$\sqrt{\Delta H(Ta/Pa)}$	
	(m3)	(x-axis)	(y-ax	(is)	Va	(x-axis)	(y-axis)	
	1.0036	0.6767	1.41	97	0.9958	0.6714	0.8821	1
	0.9993	0.9581	2.00	78	0.9915	0.9506	1.2475	1
	0.9973	1.0723	2.24	48	0.9895	1.0640	1.3947]
	0.9962	1.1231	2.35	44	0.9884	1.1144	1.4628]
	0.9908	1.3536	2.83		0.9831	1.3431	1.7642	
		m=	2.096			m=	1.31298	
,	QSTD	b=	-0.00		QA	b=	-0.00040	1
		r=	0.999	999		<u>r=</u>	0.99999	
				Calculatio	ns	216/100418/04/1004-044118/04/04/04/04/04/04/04/04/04/04/04/04/04/]
	Vstd=	ΔVol((Pa-ΔP)	/Pstd)(Tstd/T	a)	Va=	ΔVol((Pa-Δ	P)/Pa)	1
	Qstd=	Vstd/∆Time	******		Qa=	Va/∆Time		1
			For subsequ	ent flow ra	te calculatio	ns:		1
	Qstd=	1/m ((Pa Pstd Tstd	-))-b)	Qa=	$1/m \left(\sqrt{\Delta H} \right)$	l(Ta/Pa))-b)	
	Standard	Conditions			_			
Tstd:	298.15					RECA	LIBRATION	
Pstd:	760	mm Hg					nnual racalibrati	100

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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b: intercept m: slope

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ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES





CONTACT	: MR BEN TAM	WORK ORDER HK2001298				
CLIENT	ACTION UNITED ENVIRONMENT					
	SERVICES AND CONSULTING					
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41	SUB-BATCH : 1				
	TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG	DATE RECEIVED : 6-JAN-2020				
	KONG	DATE OF ISSUE : 10-JAN-2020				
PROJECT	:	NO. OF SAMPLES : 1				
		CLIENT ORDER +				

General Comments

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- 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
Kichard Jong.	
Richard Fung	Managing Director

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

Results apply to sample(s) as submitted. 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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CLIENT

PROJECT

: HK2001298

¹ ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING :



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2001298-001	S/N: 2X6145	AIR	06-Jan-2020	S/N: 2X6145

Equipment Verification Report (TSP)

Equipment Calibrated:

Туре:	Laser Dust monitor	
Manufacturer:	Sibata LD-3B	
Serial No.	2X6145	
Equipment Ref:	EQ105	
Job Order	HK2001298	

Standard Equipment:

Standard Equipment:	Higher Volume Sampler	
Location & Location ID:	AUES office (calibration room)	
Equipment Ref:	HVS 018	
Last Calibration Date:	3 December 2019	

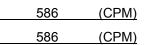
Equipment Verification Results:

Testing Date:

27&31 December 2019

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr	09:08 ~ 11:10	18.0	1020.3	0.040	2254	18.8
2hr	11:15 ~ 13:16	19.2	1024.9	0.048	2561	21.3
2hr15min	13:22 ~ 15:23	19.2	1024.9	0.034	1841	13.6

Sensitivity Adjustment Scale Setting (Before Calibration) Sensitivity Adjustment Scale Setting (After Calibration)



Linear Regression of Y or X

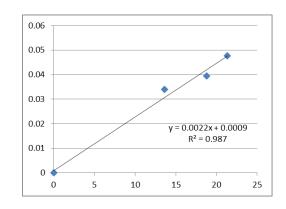
Slope (K-factor):	0.0022		
Correlation Coefficient	0.9935		
Date of Issue	6 January 2020		

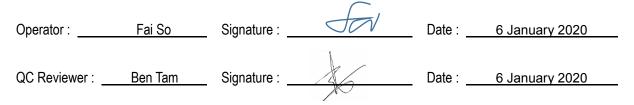
Remarks:

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





TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industrial Building, Kwa Location ID : Calibration Room						nung		of Calibration: 3-I libration Date: 3-N	
					COND	ITIONS			
	Sea Level] Temp	Pressure perature	. ,	1	.023.1 16.4		Corrected Pressi Temperati		767.325 289
				CALI	BRATI	ON ORIFICE			
		Calibrat	Make-> Model-> ion Date->		SCH 25A 26-19		Qstd Slope Qstd Intercept Expiry Date	->(2.0968 0.00065 -Feb-20
					CALIB	RATION			
Plate H20 No. (ir	(L)H2O (R) 1) (in)	H20 (in)	Qstd (m3/min)		I art)	IC corrected		INEAR RESSION	
18 6. 13 5. 10 4. 8 2. 5 1.	2 5.2 1 4.1 6 2.6	13.0 10.4 8.2 5.2 3.2	1.754 1.569 1.393 1.109 0.870	4	53 18 11 50 22	54.04 48.94 41.80 30.59 22.43	04 Slope = 2 94 Intercept = 2 80 Corr. coeff. = 59		
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 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					00 90 90 90 90 90 90 90 90 90 90 90 90 9	.00	FLOW RATE C	CHART	
 b = sampler intercept I = chart response Tav = daily average temperature Pav = daily average pressure 					0	0.000	0.500 1.000 Standard Flow Rate	1.500 e (m3/min)	2.000



Key

ΔH: calibrator manometer reading (in H2O) ΔP: rootsmeter manometer reading (mm Hg)

Ta: actual absolute temperature (°K)

Pa: actual barometric pressure (mm Hg)

RECALIBRATION DUE DATE:

February 5, 2020

	0e	rtifa	cate	of	Oal	iori	tion	
			Calibration	Certificati	on Informat	ion		
Cal. Date:	February 5	, 2019	Roots	meter S/N:	438320	Ta:	293	°К
Operator:	Jim Tisch					Pa:	753.1	mm Hg
Calibration I	Model #:	TE-5025A	Cali	brator S/N:	1941			-
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔΗ]
4	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.4830	3.2	2.00	
	2	3	4	1	1.0430	6.4	4.00	1
	3	5	6	1	0.9300	7.9	5.00]
	4	7	8	1	0.8870	8.7	5.50]
	5	9	10	1	0.7320	12.7	8.00	
				Data Tabula	tion]
	Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstc}\right)}$)(<u>Tstd</u>)		Qa	$\sqrt{\Delta H(Ta/Pa)}$	
	(m3)	(x-axis)	(y-ax	(is)	Va	(x-axis)	(y-axis)	
	1.0036	0.6767	1.41	97	0.9958	0.6714	0.8821	1
	0.9993	0.9581	2.00	78	0.9915	0.9506	1.2475	1
	0.9973	1.0723	2.24	48	0.9895	1.0640	1.3947]
	0.9962	1.1231	2.35	44	0.9884	1.1144	1.4628]
	0.9908	1.3536	2.83		0.9831	1.3431	1.7642	
		m=	2.096			m=	1.31298	
,	QSTD	b=	-0.00		QA	b=	-0.00040	1
		r=	0.999	999		<u>r=</u>	0.99999]
				Calculatio	ns	216/100418/04/1004-044118/04/04/04/04/04/04/04/04/04/04/04/04/04/]
	Vstd=	ΔVol((Pa-ΔP)	/Pstd)(Tstd/T	a)	Va=	ΔVol((Pa-Δ	P)/Pa)	1
	Qstd=	Vstd/∆Time	******		Qa=	Va/∆Time		1
			For subsequ	ent flow ra	te calculatio	ns:		1
	Qstd=	1/m ((Pa Pstd Tstd	-))-b)	$Qa = 1/m \left(\left(\sqrt{\Delta H \left(Ta/Pa \right)} \right) - b \right)$			
	Standard	Conditions			_			
Tstd:	298.15		de diving to the second se			RECA	LIBRATION	
Pstd:	760	mm Hg					nnual racalibrati	100

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

b: intercept m: slope

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

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES





CONTACT	: MR BEN TAM	WORK ORDER HK2001293					
CLIENT	ACTION UNITED ENVIRONMENT						
	SERVICES AND CONSULTING						
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41	SUB-BATCH : 1					
	TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG	DATE RECEIVED : 6-JAN-2020					
	KONG	DATE OF ISSUE : 10-JAN-2020					
PROJECT	:	NO. OF SAMPLES : 1					
		CLIENT ORDER +					

General Comments

- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.
- Sample information (Project name, Sample ID, Sampling date/time, etc., 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 Jong.	
Richard Fung	Managing Director

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

Results apply to sample(s) as submitted. 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 SUB-BATCH

CLIENT

PROJECT

: HK2001293

¹ ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING :



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2001293-001	S/N: 3Y6503	AIR	06-Jan-2020	S/N: 3Y6503

Equipment Verification Report (TSP)

Equipment Calibrated:

Туре:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	3Y6503
Equipment Ref:	EQ112
Job Order	HK2001293

Standard Equipment:

Standard Equipment:	Higher Volume Sampler
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	3 December 2019

Equipment Verification Results:

Testing Date:

27&31 December 2019

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr	09:08 ~ 11:10	18.0	1020.3	0.040	2371	19.8
2hr	11:15 ~ 13:16	19.2	1024.9	0.048	2479	20.7
2hr15min	13:22 ~ 15:23	19.2	1024.9	0.034	1899	14.1

Sensitivity Adjustment Scale Setting (Before Calibration) Sensitivity Adjustment Scale Setting (After Calibration)



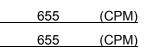
Slope (K-factor):	0.0022				
Correlation Coefficient	0.9889				
Date of Issue	6 January 2020				

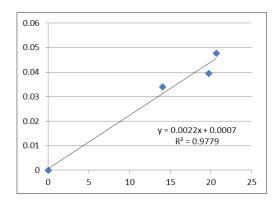
Remarks:

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 :	Sal	Date :	6 January 2020
QC Reviewer :	Ben Tam	Signature :	46	Date :	6 January 2020

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industrial Building, Kwa Location ID : Calibration Room						nung		of Calibration: 3-I libration Date: 3-N	
					COND	ITIONS			
	Sea Level] Temp	Pressure perature	. ,	1	.023.1 16.4		Corrected Pressu Temperatu		767.325 289
				CALI	BRATI	ON ORIFICE			
		Calibrat	Make-> Model-> ion Date->		SCH 25A 26-19		Qstd Slope Qstd Intercept Expiry Date	->(2.0968 0.00065 -Feb-20
					CALIB	RATION			
Plate H20 No. (ir	(L)H2O (R) 1) (in)	H20 (in)	Qstd (m3/min)		I art)	IC corrected		INEAR RESSION	
18 6. 13 5. 10 4. 8 2. 5 1.	2 5.2 1 4.1 6 2.6	13.0 10.4 8.2 5.2 3.2	1.754 1.569 1.393 1.109 0.870	4	53 18 11 50 22	54.04 48.94 41.80 30.59 22.43	04 Slope = 2 94 Intercept = 2 80 Corr. coeff. = 59		
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 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					00 90 90 90 90 90 90 90 90 90 90 90 90 9	.00	FLOW RATE C	CHART	
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Operator:	Jim Tisch					Pa:	753.1	mm Hg
Calibration I	Model #:	TE-5025A	Cali	brator S/N:	1941			-
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔΗ]
4	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.4830	3.2	2.00	
	2	3	4	1	1.0430	6.4	4.00	1
	3	5	6	1	0.9300	7.9	5.00]
	4	7	8	1	0.8870	8.7	5.50]
	5	9	10	1	0.7320	12.7	8.00	
				Data Tabula	tion]
	Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstc}\right)}$)(<u>Tstd</u>)		Qa	$\sqrt{\Delta H(Ta/Pa)}$	
	(m3)	(x-axis)	(y-ax	(is)	Va	(x-axis)	(y-axis)	
	1.0036	0.6767	1.41	97	0.9958	0.6714	0.8821	1
	0.9993	0.9581	2.00	78	0.9915	0.9506	1.2475	1
	0.9973	1.0723	2.24	48	0.9895	1.0640	1.3947]
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,	QSTD	b=	-0.00		QA	b=	-0.00040	1
		r=	0.999	999		<u>r=</u>	0.99999]
				Calculatio	ns	216/100418/04/1004-044118/04/04/04/04/04/04/04/04/04/04/04/04/04/]
	Vstd=	ΔVol((Pa-ΔP)	/Pstd)(Tstd/T	a)	Va=	ΔVol((Pa-Δ	P)/Pa)	1
	Qstd=	Vstd/∆Time	******		Qa=	Va/∆Time		1
			For subsequ	ent flow ra	te calculatio	ns:		1
	Qstd=	1/m ((Pa Pstd Tstd	-))-b)	$Qa = 1/m \left(\left(\sqrt{\Delta H \left(Ta/Pa \right)} \right) - b \right)$			
	Standard	Conditions			_			
Tstd:	298.15		de diving to the second se			RECA	LIBRATION	
Pstd:	760	mm Hg					nnual racalibrati	100

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b: intercept m: slope

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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. : 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 : $(23 \pm 2)^{\circ}C$ Line Voltage / 電壓 :

Relative Humidity / 相對濕度 : $(50 \pm 25)\%$

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 29 June 2020 ٠

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

K P Cheuk Assistant Engineer

K ¢ Lee Engineer

Certified By 核證

Date of Issue 簽發日期

6 July 2020

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

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

- 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 S	Setting	Applied	Value	UUT	
Range	Parameter	Frequency	Time	Level	Freq.	Reading
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)
50 - 130	L _{AFP}	А	F	94.00	1	94.3

6.1.1.2 After Self-calibration

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

6.1.2 Linearity

	UU	Γ Setting	Applie	d Value	UUT	
Range	Parameter	Frequency	Time	Level	Freq.	Reading
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)
50 - 130	L _{AFP}	А	F	94.00	1	94.1 (Ref.)
				104.00		104.0
				114.00		114.0

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

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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

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Certificate of Calibration 校正證書

Certificate No.: C203573 證書編號

6.2 Time Weighting

6.2.1 Continuous Signal

0 01101100000								
UUT Setting				Applied Value		UUT	IEC 60651	
Range	Parameter	Frequency	Time	Level Freq.		Reading	Type 1 Spec.	
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)	(dB)	
50 - 130	L _{AFP}	А	F	94.00	1	94.1	Ref.	
	L _{ASP}		S			94.1	± 0.1	
	L _{AIP}		Ι			94.1	± 0.1	

6.2.2 Tone Burst Signal (2 kHz)

UUT Setting			Applied Value		UUT	IEC 60651	
Range	Parameter	Frequency	Time	Level	Burst	Reading	Type 1 Spec.
(dB)		Weighting	Weighting	(dB)	Duration	(dB)	(dB)
30 - 110	L _{AFP}	А	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	IEC 60651
Range	Parameter	Frequency	Time	Level	Freq.	Reading	Type 1 Spec.
(dB)		Weighting	Weighting	(dB)		(dB)	(dB)
50 - 130	L_{AFP}	А	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
			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	$+1.2 \pm 1.0$
					4 kHz	95.1	$+1.0 \pm 1.0$
					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

		Setting		Applied Value		UUT	IEC 60651
Range	Parameter	Frequency	Time	Level	Freq.	Reading	Type 1 Spec.
(dB)		Weighting	Weighting	(dB)		(dB)	(dB)
50 - 130	L _{CFP}	С	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	$\textbf{-0.8} \pm 1.0$
					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

	nine riveruging									
UUT Setting			Applied Value					UUT	IEC 60804	
Range	Parameter	Frequency	Integrating	Frequency	Burst	Burst	Burst	Equivalent	Reading	Type 1
(dB)		Weighting	Time	(kHz)	Duration	Duty	Level	Level	(dB)	Spec.
					(ms)	Factor	(dB)	(dB)		(dB)
30 - 110	L _{Acq}	А	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.			1/104		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 250 Hz - 500 Hz 1 kHz 2 kHz - 4 kHz 8 kHz 12.5 kHz 104 dB : 1 kHz 114 dB : 1 kHz Burst equivalent level	: $\pm 0.30 \text{ dB}$: $\pm 0.20 \text{ dB}$: $\pm 0.35 \text{ dB}$: $\pm 0.45 \text{ dB}$: $\pm 0.70 \text{ dB}$: $\pm 0.10 \text{ dB}$ (Ref. 94 dB) : $\pm 0.10 \text{ dB}$ (Ref. 94 dB) : $\pm 0.2 \text{ dB}$ (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.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.



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 C	Consulting			
		Unit A, 20/F., Gold King Industrial Building,				
		35-41 Tai Lin Pai Road, Kwai Chung, N.T.				

TEST CONDITIONS / 測試條件

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

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 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

K P Cheuk Assistant Engineer

Certified By 核證 K Q Lee

Engineer

Date of Issue 簽發日期 :

6 July 2020

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

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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—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. : 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 IDDescriptionCertificate No.CL130Universal CounterC193756CL281Multifunction Acoustic CalibratorCDK1806821TST150AMeasuring AmplifierC201309

- 4. Test procedure : MA100N.
- 5. Results :
- 5.1 Sound Level Accuracy

UUT	Measured Value	Mfr's Spec.	Uncertainty of Measured Value
Nominal Value	(dB)	(dB)	(dB)
94 dB, 1 kHz			± 0.2
114 dB, 1 kHz	114.1		

5.2 Frequency Accuracy

UUT Nominal Value	Measured Value	Mfr's	Uncertainty of Measured Value
(kHz)	(kHz)	Spec.	(Hz)
1	1.000 0	$1 \text{ kHz} \pm 0.1 \%$	± 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.

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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 G	Consulting
	Unit A, 20/F., Gold King Industrial Building	· · · · · · · · · · · · · · · · · · ·
	35-41 Tai Lin Pai Road, Kwai Chung, N.T.	

TEST CONDITIONS / 測試條件

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

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 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

K P Cheuk

Assistant Engineer

KC Lee Engineer

Certified By 核證 Date of Issue 簽發日期 :

6 July 2020

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

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輝創工程有限公司

Sun Creation Engineering Limited

Calibration & Testing Laboratory

Certificate of Calibration 校正證書

Certificate No.: C203574 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 S	Setting	Applied	Value	UUT	
Range	Parameter	Parameter Frequency		Level	Freq.	Reading
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)
52 - 132	L _{AFP}	А	F	94.00	1	93.8

6.1.1.2 After Self-calibration

		UUT	Setting		Applied	d Value	UUT	IEC 60651
	Range	nge Parameter Frequency		Time	Level Freq.		Reading	Type 1 Spec.
÷ .	(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)	(dB)
	52 - 132	L _{AFP}	А	F	94.00	1	94.0	± 0.7

6.1.2 Linearity

	UU	Γ Setting	Applied	d Value	UUT	
Range	Parameter	Frequency Time		Level	Freq.	Reading
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)
52 - 132	L _{AFP}	Α	F	94.00	1	94.0 (Ref.)
				104.00		104.0
				114.00		114.0

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

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

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/傅真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.



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

6.2 Time Weighting

6.2.1 Continuous Signal

	ÿ										
	UUT	Setting		Applie	d Value	UUT	IEC 60651				
Range	Parameter	Frequency Time		Level	Freq.	Reading	Type 1 Spec.				
(dB)	Weighting Weighting		(dB) (kHz)		(dB) (dB)						
52 - 132	L _{AFP} A F		94.00	1	94.0	Ref.					
	L _{ASP} S		S			94.0	± 0.1				
	L _{AIP} I				94.1	± 0.1					

6.2.2 Tone Burst Signal (2 kHz)

	UUT	Setting		App	lied Value	UUT	IEC 60651
Range	Parameter	Frequency	Time	Level	Level Burst		Type 1 Spec.
(dB)		Weighting	Weighting	(dB)	(dB) Duration		(dB)
32 - 112	L _{AFP}	А	F	106.0	106.0 Continuous		Ref.
	L _{AFMax}				200 ms	105.0	-1.0 ± 1.0
	L _{ASP}		S		Continuous		Ref.
	L _{ASMax}				500 ms	102.0	-4.1 ± 1.0

6.3 Frequency Weighting

6.3.1 A-Weighting

	UUT	Setting		Appl	ied Value	UUT	IEC 60651
Range	Parameter	Frequency	Time	Level	Level Freq.		Type 1 Spec.
(dB)		Weighting	Weighting	(dB)		(dB)	(dB)
52 - 132	L _{AFP}	А	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	$+1.2 \pm 1.0$
					4 kHz	95.0	$+1.0 \pm 1.0$
					8 kHz	92.8	-1.1 (+1.5 ; -3.0)
					12.5 kHz	89.7	-4.3 (+3.0 ; -6.0)

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。



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

6.3.2 C-Weighting

	UUT	Setting		Appl	ied Value	UUT	IEC 60651
Range	Parameter	Frequency	Time	Level	Freq.	Reading	Type 1 Spec.
(dB)		Weighting	Weighting	(dB)		(dB)	(dB)
52 - 132	L _{CFP}	С	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

1 mile Aw	ine Averaging										
	UUT Setting				Applied Value					IEC 60804	
Range	Parameter	Frequency	Integrating	Frequency	Burst	Burst	Burst	Equivalent	Reading	Type 1	
(dB)		Weighting	Time	(kHz)	Duration	Duty	Level	Level	(dB)	Spec.	
					(ms)	Factor	(dB)	(dB)		(dB)	
32 - 112	L _{Aeq}	А	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.			1/104		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 250 Hz - 500 Hz 1 kHz	: ± 0.30 dB : ± 0.20 dB
	2 kHz - 4 kHz 8 kHz	$\pm 0.35 \text{ dB}$ $\pm 0.45 \text{ dB}$
	12.5 kHz	$\pm 0.70 \text{ dB}$
	104 dB : 1 kHz	$\pm 0.10 \text{ dB}$ (Ref. 94 dB)
	114 dB : 1 kHz	$\pm 0.10 \text{ dB}$ (Ref. 94 dB)
	Burst equivalent level	$\pm 0.2 \text{ dB}$ (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.

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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

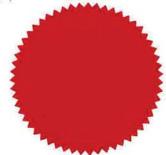
Environmental Testing 環境測試

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

∟ 000552



Appendix F

Event and Action Plan

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



Event and Action Plan for Construction Noise

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

		Noise Monitoring	Air Quality Monitoring					
	Date	(0700 – 1900)	1-hour TSP	24-hour TSP				
Tue	1-Dec-20			✓				
Wed	2-Dec-20	CN1, CN2, CN3, NMS2, NMS3, NMS-4a, NMS5, NMS6, NMS7 and NMS8	\checkmark					
Thu	3-Dec-20							
Fri	4-Dec-20							
Sat	5-Dec-20							
Sun	6-Dec-20							
Mon	7-Dec-20			✓				
Tue	8-Dec-20	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	\checkmark					
Wed	9-Dec-20							
Thu	10-Dec-20							
Fri	11-Dec-20	CN1, CN2, CN3 and NMS8						
Sat	12-Dec-20			✓				
Sun	13-Dec-20							
Mon	14-Dec-20	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	✓					
Tue	15-Dec-20							
Wed	16-Dec-20							
Thu	17-Dec-20	CN1, CN2, CN3 and NMS8						
Fri	18-Dec-20			√				
Sat	19-Dec-20							
Sun	20-Dec-20							
Mon	21-Dec-20	CN1, CN2, CN3 and NMS8						
Tue	22-Dec-20							
Wed	23-Dec-20			\checkmark				
Thu	24-Dec-20	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	\checkmark					
Fri	25-Dec-20							
Sat	26-Dec-20							
Sun	27-Dec-20							
Mon	28-Dec-20			✓				
Tue	29-Dec-20	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	\checkmark					
Wed	30-Dec-20							
Thu	31-Dec-20	CN1, CN2, CN3 and NMS8						

\checkmark	Monitoring Day
	Sunday or Public Holiday

•	8	Noise Monitoring	Air Quality Monitoring					
	Date	(0700 – 1900)	1-hour TSP	24-hour TSP				
Fri	1-Jan-21							
Sat	2-Jan-21			√				
Sun	3-Jan-21							
Mon	4-Jan-21	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	\checkmark					
Tue	5-Jan-21							
Wed	6-Jan-21	CN1, CN2, CN3 and NMS8						
Thu	7-Jan-21			✓				
Fri	8-Jan-21							
Sat	9-Jan-21		\checkmark					
Sun	10-Jan-21							
Mon	11-Jan-21							
Tue	12-Jan-21	CN1, CN2, CN3 and NMS8						
Wed	13-Jan-21			\checkmark				
Thu	14-Jan-21							
Fri	15-Jan-21	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	\checkmark					
Sat	16-Jan-21							
Sun	17-Jan-21							
Mon	18-Jan-21	CN1, CN2, CN3 and NMS8						
Tue	19-Jan-21			\checkmark				
Wed	20-Jan-21							
Thu	21-Jan-21	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	\checkmark					
Fri	22-Jan-21							
Sat	23-Jan-21							
Sun	24-Jan-21							
Mon	25-Jan-21			✓				
Tue	26-Jan-21							
Wed	27-Jan-21	NMS2, NMS3, NMS-4a, NMS5, NMS6 and NMS7	\checkmark					
Thu	28-Jan-21							
Fri	29-Jan-21	CN1, CN2, CN3 and NMS8						
Sat	30-Jan-21			\checkmark				
Sun	31-Jan-21							

\checkmark	Monitoring Day
	Sunday or Public Holiday

Appendix H

Database of Monitoring Result

CEDD Contract No. NTE/07/2016 Environmental Team for Development of Anderson Road Quarry Site – Site Formation and Associated Infrastructure Works Monthly Environmental Monitoring & Audit Report (December 2020)



24-HOUR TSP MONITORING RESULT DATABASE

24-hour TSP	Monitoring	Data for	AMS10			24-110			UNING KE	SULT DATABA					
24-nour ISP	r wionitoring	g Data Ior	AMSIA					1110			4.05			DUGTUUTUC	T
DATE	SAMPLE NUMBER		APSED TIN			RT REA	DING	AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WI		DUST WEIGHT COLLECTED	24-hr TSP ₂
		INITIAL	FINAL	(min)	MIN			(°C)	(hPa)	(m ³ /min)	(std m ³)	INITIAL	FINAL	(g)	$(\mu g/m^3)$
1-Dec-20	26281	23275.7	23299.71	1440.6	31	32	31.5	19.3	1020	0.82	1183	2.6797	2.7184	0.0387	33
7-Dec-20	26493	23299.71	23323.71	1440	31	32	31.5	18.8	1020.4	1.24	1780	2.6482	2.708	0.0598	34
12-Dec-20	26458	23323.71	23347.71	1440	30	32	31	20.9	1015.3	1.22	1757	2.652	2.7097	0.0577	33
18-Dec-20	26523	23347.71	23371.71	1440	31	32	31.5	17.5	1021.1	1.24	1783	2.6506	2.6783	0.0277	16
23-Dec-20	26568	23371.71	23395.71	1440	30	32	31	18.4	1016.9	1.22	1762	2.6964	2.7621	0.0657	37
28-Dec-20	26529	23395.71	23419.71	1440	30	32	31	18.7	1014.8	1.22	1761	2.6617	2.7114	0.0497	28
24-hour TSP	P Monitoring	g Data for A	AMS-5												
DATE	SAMPLE NUMBER		APSED TIN			RT REA		AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WI	-	DUST WEIGHT COLLECTED	24-hr TSP
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(°C)	(hPa)	(m ³ /min)	$(std m^3)$	INITIAL	FINAL	(g)	$(\mu g/m^3)$
1-Dec-20	26264	9888.07	9912.07	1440.00	30	32	31.0	19.7	1022.3	1.38	1988	2.6851	2.7449	0.0598	30
7-Dec-20	26515	9912.07	9936.08	1440.60	30	32	31.0	20.7	1020.4	1.21	1747	2.6622	2.7790	0.1168	67
12-Dec-20	26366	9936.08	9960.08	1440.00	30	32	31.0	20.9	1015.3	1.21	1743	2.6832	2.7521	0.0689	40
18-Dec-20	26520	9960.08	9984.08	1440.00	30	32	31.0	16.5	1021.6	1.22	1754	2.6544	2.7308	0.0764	44
23-Dec-20	26525	9984.08	10008.08		30	32	31.0	18.4	1016.9	1.21	1749	2.6593	2.7442	0.0849	49
28-Dec-20	26583	10008.08	10032.08	1440.00	30	32	31.0	18.7	1014.8	1.21	1747	2.6915	2.7882	0.0967	55
24-hour TSP	P Monitoring	g Data for A	AMS-6												
DATE	SAMPLE NUMBER	MPLE 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	(°C)	(hPa)	(m ³ /min)	(std m ³)	INITIAL	FINAL	(g)	$(\mu g/m^3)$
1-Dec-20	26263	15092.02			30	32	31.0	19.7	1022.3	1.11	1605	2.6912	2.7686	0.0774	48
7-Dec-20	26514		15140.02		30	32	31.0	20.7	1020.4	1.24	1790	2.6717	2.8223	0.1506	84
12-Dec-20	26423		15164.02		30	32	31.0	20.9	1015.3	1.24	1787	2.7948	2.8739	0.0791	44
18-Dec-20	26521		15188.02		30	32	31.0	16.5	1021.6	1.25	1799	2.6516	2.7243	0.0727	40
23-Dec-20	26528	15188.02	15212.02	1440.00	30	32	31.0	18.4	1016.9	1.24	1792	2.6779	2.7460	0.0681	38
28-Dec-20	26582	15212.02	15236.02	1440.00	30	32	31.0	18.7	1014.8	1.24	1791	2.6984	2.7812	0.0828	46
24-hour TSP	P Monitoring	g Data for A	AMS-7												
DATE	SAMPLE NUMBER	ELAPSED TIME		CHART READING			AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WI	EIGHT (g)	DUST WEIGHT COLLECTED	24-hr TSP	
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(°C)	(hPa)	(m ³ /min)	(std m ³)	INITIAL	FINAL	(g)	$(\mu g/m^3)$
1-Dec-20	26282		10452.19		35	36	35.5	19.3	1020	0.82	1180	2.6935	2.7594	0.0659	56
7-Dec-20	26492	10452.19	10476.19	1440.00	35	36	35.5	18.8	1020.4	1.33	1920	2.6572	2.7693	0.1121	58
12-Dec-20	26495	10416.19	10440.19	1440.00	34	36	35.0	20.9	1015.3	1.32	1895	2.6617	2.7270	0.0653	34
18-Dec-20	26522	10440.19	10464.20	1440.60	34	35	34.5	17.5	1021.1	1.31	1889	2.6489	2.7110	0.0621	33
				1440.00	34	36	35.0	18.4	1016.9	1.32	1901	2.6852	2.7805	0.0953	50

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Monthly Environmental Monitoring & Audit Report (December 2020)



28-Dec-20 26581 10488.20 10512.20 1440.00 34 36 35.0 18.7 1014.8 1.32 1899 2.7175 2.7873 0.0698 37														
		26581	10488.20	10512.20	1440.00	34	350	1014.8	1.32	1899	2.7175	/ / 8 / 3	0.0698	37

NOISE MONITORING RESULT DATABASE FOR CONTRACT 1

Noise Measu	uremer	nt Resul	ts (dB)	of NMS	52																
	Start	1st	Leq (5n	nin)	2nd	Leq (5)	min)	3rd	Leq (5)	min)	4th	Leq (5r	nin)	5th	Leq (51	min)	6th	Leq (5r	nin)	Lag20min	Limit
Date	Start Time	Leq,		L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq30min, dB(A)	Level
	Time	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	ub (11)	dB(A)
2-Dec-20	10:25	62.6	66.6	60.1	62.5	65.4	58.6	61.6	65	57.3	63.9	66.5	57	64.9	67.2	58.5	63	67.3	58	63	70
8-Dec-20	10:44	63.5	66.6	58.1	64.2	67.9	59.7	64.3	67.7	59.9	63.1	66.8	60.8	62.7	65.9	59.9	61.2	64.9	58	63	70
14-Dec-20	11:11	65.7	67.2	62	66.6	69.5	63.2	67.4	70.2	64.1	65.4	67.5	62.6	65	66.5	62.5	63.8	67	60.8	66	70
24-Dec-20	15:49	63.4	64.5	61	64.3	65	62.5	62.1	63.5	60.5	63.3	65	60.5	62.1	64.5	60.5	63.7	65	61.5	63	70
29-Dec-20	11:11	64.8	67.2	61.6	65.6	68.1	62.4	66.6	69.2	63.3	64.2	67.1	61.9	63.4	66.2	60.8	65.7	68.6	64.5	65	70

Noise Measu	uremei	nt Resu	lts (dB)	of NM	S3																
	Start	1st	Leq (5n	nin)	2nd	Leq (5	min)	3rd	Leq (51	min)	4th	Leq (5r	nin)	5th	Leq (51	nin)	6th	Leq (51	nin)	Log20min	Limit
Data	Time	Leq, dB(A)	L10, dB(A)		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90,	Leq30min, dB(A)	Level dB(A)									
2-Dec-20	15:30	66.5	69.3	62.4	65.5	68.2	61.6	66.2	69.0	62.0	63.5	67.8	60.8	67.2	68.5	63.6	66.8	69.6	62.7	66	75
8-Dec-20	9:42	67.1	69.0	64.5	67.7	70.0	63.0	66.3	69.0	63.5	68.3	70.0	63.5	67.9	69.5	63.0	67.3	70.0	635	67	75
14-Dec-20	14:10	65.5	67.3	62.1	67.0	68.1	63.8	65.3	67.6	62.9	64.7	67.4	60.8	66.0	67.9	62.5	65.2	67.1	62.3	66	75
24-Dec-20	15:02	65.1	68.5	60.5	63.4	67.5	61.0	62.9	66.5	61.5	64.4	68.5	60.0	65.1	68.0	61.5	63.3	66.5	62.0	64	75
29-Dec-20	14:11	65.5	68.1	62.0	63.8	65.6	61.2	65.7	67.5	62.7	66.6	68.7	63.1	68.5	70.6	64.2	67.0	69.4	62.8	66	75

Noise Meas	sureme	ent Resu	lts (dB)) of NM	S4a																
	Start	1st	Leq (5n	nin)	2nd	Leq (5r	nin)	3rd	Leq (51	nin)	4th	Leq (5n	nin)	5th	Leq (5n	nin)	6th	Leq (5r	nin)	Leg30min,	Limit
Date	Time	Leq,	L10,		Leq,	L10,	L90,	dB(A)	Level												
	Time	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	uD(II)	dB(A)
2-Dec-20	9:27	62.8	64.7	59.8	66	65.4	60	62.5	64.2	59.7	63	64.6	60.8	63.1	65	60.6	63.2	65.5	60.4	64	75
8-Dec-20	10:34	65.3	66.5	60.5	64.4	65	61.5	64.8	67	62.5	67.1	68.5	62.5	67.6	69.5	63	66.1	68.5	61.5	66	75
14-Dec-20	9:26	69.6	71.2	65.3	71.2	71.6	66.1	67.9	69.7	65.3	68.6	70.3	66.2	68.3	70.1	66.1	69.3	70.9	67	69	75
24-Dec-20	9:30	63.3	67	62	64.7	68.5	62	63.3	66	61	66.4	68	64.5	64.7	67	63	66.7	69	65.5	65	75
29-Dec-20	9:23	66.3	68.9	62.2	67.8	67.7	62.4	63.4	64.5	62	63.6	65.4	61.6	65.2	67.9	62.1	64.2	66.3	61.8	65	75

Noise Measure	urement	Results (dB) of NMS5						
Date	Start	1st Leq (5min)	2nd Leq (5min)	3rd Leq (5min)	4th Leq (5min)	5th Leq (5min)	6th Leq (5min)	Leq30min, Limit



	Time	Leq,	L10,	L90,	dB(A)	Level															
		dB(A)		dB(A)																	
2-Dec-20	10:13	61.2	63.1	58.8	60.2	62.3	57.8	60.8	62.5	58.1	60.1	62.2	56.9	57.8	59.8	55.3	59.8	61.6	57.2	60	75
8-Dec-20	11:26	63.3	65.5	60.5	62.7	64.5	60.5	62.2	64.5	60	63.3	66	59.5	63.2	65.5	61	64.4	66.5	61	63	
14-Dec-20	10:20	67.4	68.9	65.3	68.3	69.5	66.5	68.6	70.1	66.9	68.5	69.8	67.1	68.1	69.2	66	67.4	68.8	65.7	68	75
24-Dec-20	10:27	66.4	68	62	65.5	66	64.5	64.3	65	62	64.9	65	64	66.7	69.5	64.5	66.3	67.5	65	66	75
29-Dec-20	10:22	67.6	69.6	65.5	68.4	70	66.6	67.1	68.4	65.7	68.5	72.1	64.8	67.8	69	66.5	67.1	68.6	65.5	68	75

Noise Measu	uremen	nt Resul	lts (dB)	of NMS	56																
	Start	1st	Leq (5n	nin)	2nd	Leq (51	nin)	3rd	Leq (5)	min)	4th	Leq (5r	nin)	5th	Leq (51	nin)	6th	Leq (51	nin)	Lag20min	Limit
Date	Time	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)		L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq30min, dB(A)	Level dB(A)									
2-Dec-20	13:15	61.2	63.2	58.6	60.3	62.7	57	61.1	62.7	58.6	63.9	65.9	61	62.5	64.8	59.3	62	64.3	57.9	64	75
8-Dec-20	13:17	62.7	64.5	60.5	64.4	68	60.5	63.4	65.5	61	64.3	66.5	59	62.8	65	59.5	65.2	66.5	60	66	75
14-Dec-20	14:43	68.6	70.6	65.2	67.8	69.5	65.7	68.6	69.9	67	68.2	69.8	66.2	69	70.5	67.2	68.6	70.1	66.6	70	75
24-Dec-20	13:25	67.4	69	65	68.5	70	66	68	69.5	66.5	69.5	71.5	66.5	68	70.7	65.5	68.5	69	65	70	75
29-Dec-20	14:37	67.4	70.4	56	69.7	72.6	64	69.6	71.9	66.2	67.8	70	65.1	68.3	70.4	65.2	68	69.8	65.9	71	75

Noise Measu	uremer	nt Resul	lts (dB)	of NMS	S7																
	Clark	1st	Leq (5n	nin)	2nd	Leq (5)	min)	3rd	Leq (51	nin)	4th	Leq (51	nin)	5th	Leq (51	nin)	6th	Leq (5r	nin)	T	Limit
Date	Start Time	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq30min, dB(A)	Level
	1 mie	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	uD(A)	dB(A)
2-Dec-20	14:07	59	61.7	54.1	60.3	62.4	57.6	58.1	60.6	53.9	58.4	60.5	55.5	62.8	63.8	55.3	58.9	61.4	54.6	60	75
8-Dec-20	14:08	61.5	64.5	55.5	62.8	66.5	55	61.7	63.5	57.5	62.5	65	58.5	61.3	64.5	57	63.2	66.5	58.5	62	75
14-Dec-20	15:38	67.9	70	64.9	67.6	69.6	65.2	68.3	70.1	65.9	66	68.2	63.1	66.4	68.3	63.8	67.8	69.6	65.7	67	75
24-Dec-20	14:19	69.1	70.5	63	71.1	73.5	62.5	69.3	72	61.5	67.7	69.5	62	69	70.5	67	69.8	68.5	64.5	69	75
29-Dec-20	15:30	61.3	64.4	57.1	60.8	62.9	58	59.8	61.3	57.4	62.6	63	58.3	61.6	64.8	57.6	61.7	65.1	56.5	61	75

Noise Measu	ıremer	nt Resul	ts (dB)	of NMS	58																
	Start	1st	Leq (5n	nin)	2nd	Leq (5)	min)	3rd	Leq (51	min)	4th	Leq (5r	nin)	5th	Leq (5r	nin)	6th	Leq (5)	min)	L ag 20min	Limit
Date	Start Time	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq30min, dB(A)	Level
	Time	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	uD(II)	dB(A)
2-Dec-20	14:04	66.2	68.4	62.6	66.8	69	63.5	65.6	68	62.2	63.9	67.1	55.9	66.5	68.8	62.6	65.6	67.2	62.1	66	75
11-Dec-20	13:41	65.2	68	59.7	66	68.7	60.5	64.7	67.6	59.3	64.1	67.5	56.9	65.5	68.7	59.7	66.8	68.3	60.4	65	75
17-Dec-20	9:32	66.3	68.5	62	67.4	69.5	64	68.4	71	64	67.3	69.5	63	65.4	68	60.5	67.2	68.5	65	67	75
21-Dec-20	14:13	65.7	68	60.4	64.4	67.5	59.4	64.8	67	56.7	65.7	68.3	61.6	63.5	67.5	59.5	65.7	68.3	61.7	65	75
31-Dec-20	11:21	63.2	64.1	56.2	60.1	62	55.1	59.6	62.1	54.7	62.4	63.8	55.6	61.8	62.4	54.1	58.4	60.5	53.6	61	75

NOISE MONITORING RESULT DATABASE FOR CONTRACT 3



Noise Measu	uremen	nt Resul	ts (dB)	of CN1																	
	Start	1st 1	Leq (5n	nin)	2nd	Leq (51	nin)	3rd	Leq (51	nin)	4th	Leq (5r	nin)	5th	Leq (5r	nin)	6th	Leq (5r	nin)	Leq30min,	Limit
Date	Time	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	dB(A)	Level
	TIME	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	uD(A)	dB(A)
2-Dec-20	15:47	70.7	71.1	68.3	69.2	69.7	68.2	69.1	69.8	68.1	73.5	73.3	65.1	66.7	68.6	64.8	68.7	69.4	65.9	70	70
11-Dec-20	15:07	64.7	62.6	56.5	69.5	64.9	57.9	62.2	59.5	56.8	64.6	61.8	58.7	66.2	63.8	59.5	65	62.4	58	66	70
17-Dec-20	13:02	66.6	69	61.5	65.1	66.5	62	65.8	67.5	63	64.3	66.5	61.5	64.2	66.5	61.5	66.1	68.5	63.5	65	70
21-Dec-20	13:03	67.8	69.3	65.7	66.8	68.2	63.2	67.3	68.9	65.6	68.5	70	66.8	68.4	70.2	65.6	65.7	67.2	62.8	68	70
31-Dec-20	15:20	58.4	60.4	53.4	58.2	59.6	52.6	58.1	59.2	51.3	56.1	58.7	51.8	61.4	61.9	53.9	55.8	57	50.6	58	70

Noise Measu	uremer	nt Resul	lts (dB)	of CN2																	
	Stant	1st]	Leq (5n	nin)	2nd	Leq (5	min)	3rd	Leq (5)	min)	4th	Leq (5r	nin)	5th	Leq (51	nin)	6th	Leq (51	min)	Log20min	Limit
Date	Start Time	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq30min, dB(A)	Level
	1 mie	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	uD(A)	dB(A)
2-Dec-20	15:11	61.2	62.8	57.2	59.5	61.7	57.3	63	64.8	57.7	69.2	72.1	61.1	68.1	71.2	60.7	68.5	71.8	61.7	66	70
11-Dec-20	14:32	64.8	64.2	58	66.4	69	59.5	62.1	65.5	58.6	63.5	66.6	59.9	64.7	67.8	59.7	61.5	64.9	58.2	64	70
17-Dec-20	11:17	62.7	65.5	57.5	62.4	65.5	57	63.7	66.5	57.5	62.1	64.5	55	61.7	65.5	54.5	63.1	66	56.5	63	70
21-Dec-20	13:45	63.8	65.4	56.8	65.7	67.8	59.9	64.3	66.5	58.6	63.4	65.1	58.2	61.5	63.2	55.5	62.8	64.3	57.6	64	70
31-Dec-20	14:44	56.7	56.2	51.5	55.9	58.1	52.6	54.8	56.4	51.1	56.4	58.1	51.2	58.6	59.4	53.7	58.7	59.1	53.6	57	70

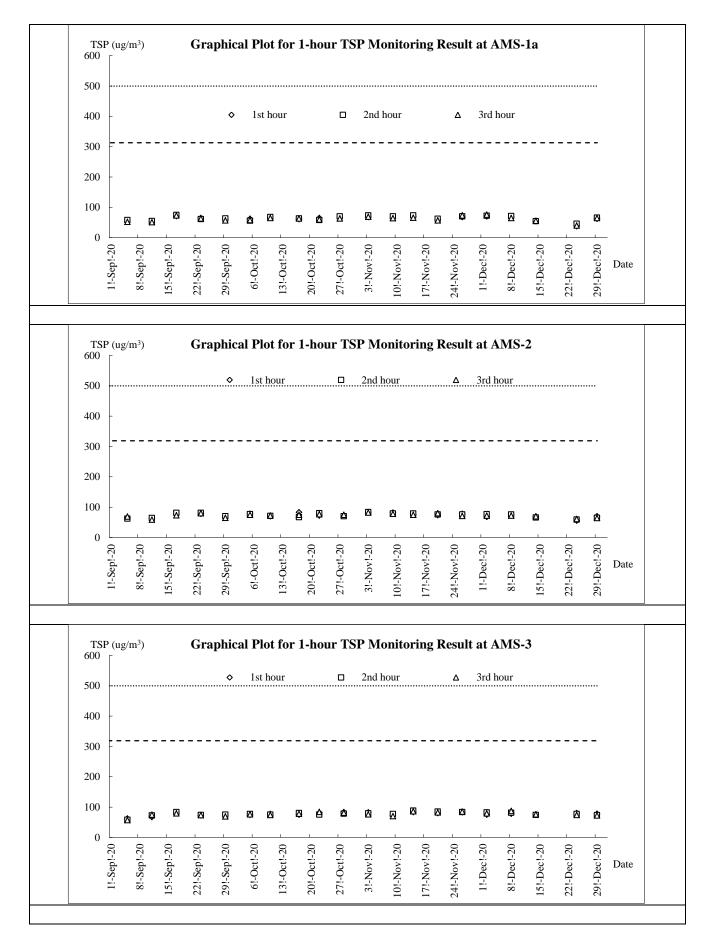
Noise Measu	uremer	nt Resul	lts (dB)	of CN3	•																
	Start	1st	Leq (5n	nin)	2nd	Leq (5)	min)	3rd	Leq (5	min)	4th	Leq (51	nin)	5th	Leq (51	nin)	6th	Leq (51	min)	Log20min	Limit
Date	Time	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq30min, dB(A)	Level
	Time	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	uD(A)	dB(A)
2-Dec-20	9:36	60.9	62.2	55.6	60.6	62	55.4	57.9	59.6	53.9	63.4	63.8	55.4	60.6	62	54	59.3	61.4	54.8	61	75
11-Dec-20	9:56	64.2	70.6	58.6	64.7	69.9	59.9	62.2	66.8	58.8	61.2	66.9	57.7	61.5	65.5	56.6	63.1	67.5	57.4	63	75
17-Dec-20	10:24	65.9	67.5	57	61.3	64.5	56.5	60.1	62.5	57	61.7	66	58.5	64.3	68.5	58	61.7	65.5	58	63	75
21-Dec-20	15:11	63.3	65.6	58.6	61.1	63.5	57.9	60.7	62.6	56	59.5	61.6	57.8	61.1	62.2	55	60	62	56.7	61	75
31-Dec-20	10:18	59.5	61.7	55.4	61.7	62.2	57	60.4	62.7	57.2	56.2	59.4	55.2	58.7	60.8	56.2	60.4	61.1	57.3	60	75

Appendix I

Graphical Plots for Monitoring Result



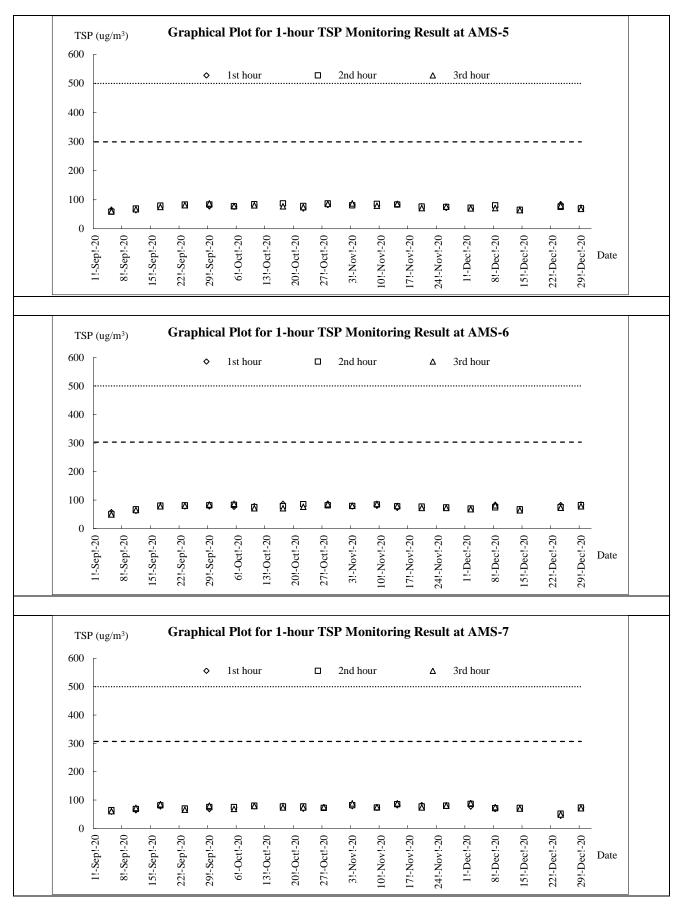
Air Quality – 1-hour TSP



CEDD Contract No. NTE/07/2016 Environmental Team for Development of Anderson Road Quarry Site – Site Formation and Associated Infrastructure Works

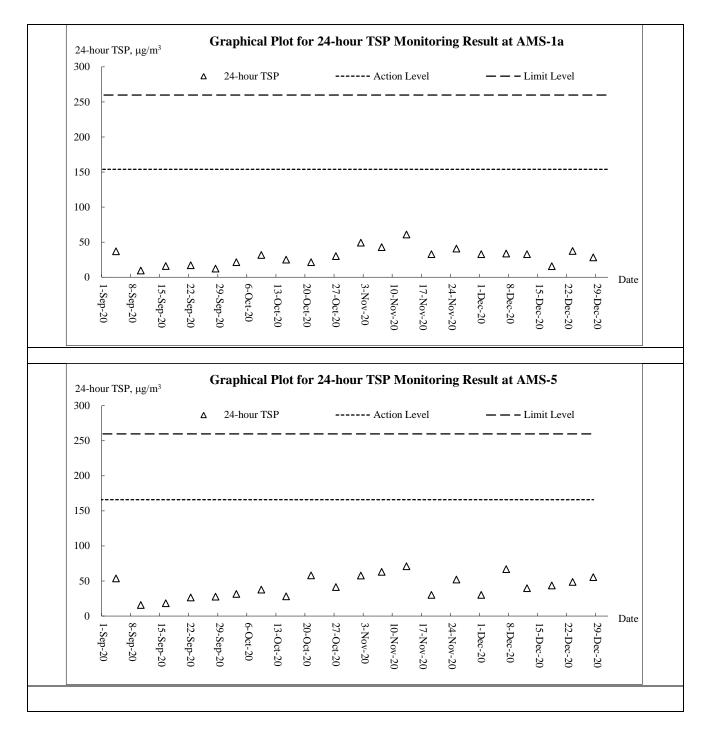


Monthly Environmental Monitoring & Audit Report (December 2020)





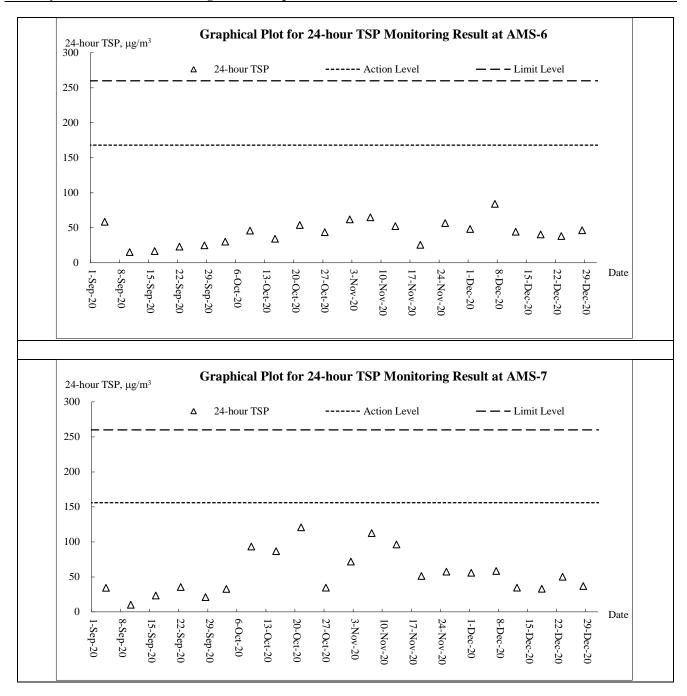
Air Quality – 24-hour TSP



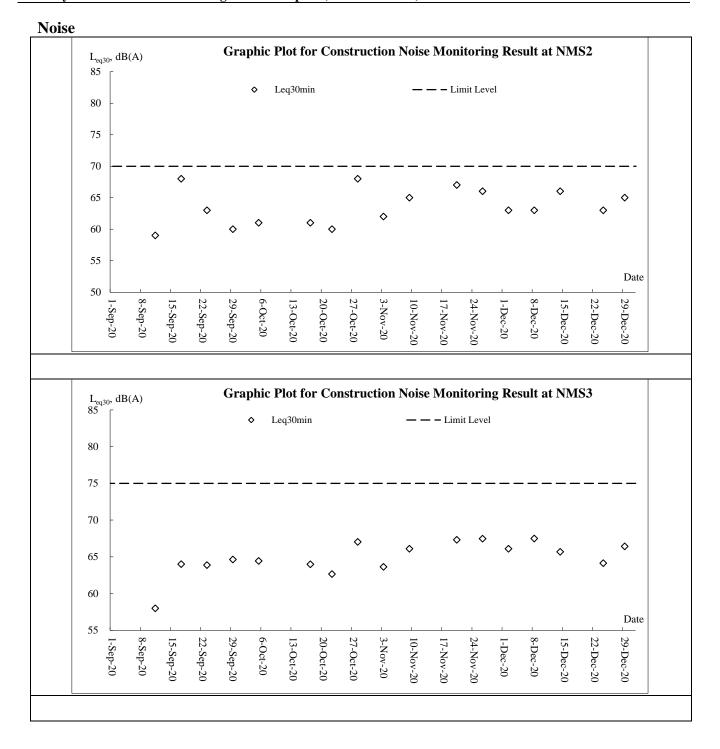
CEDD Contract No. NTE/07/2016 Environmental Team for Development of Anderson Road Quarry Site – Site Formation and Associated Infrastructure Works

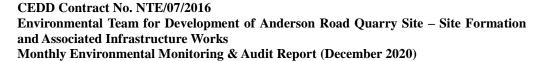


Monthly Environmental Monitoring & Audit Report (December 2020)

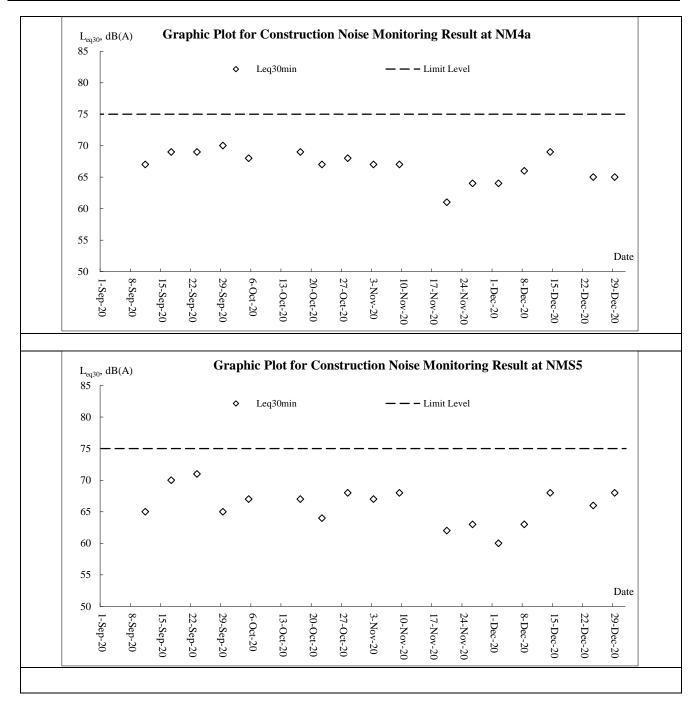


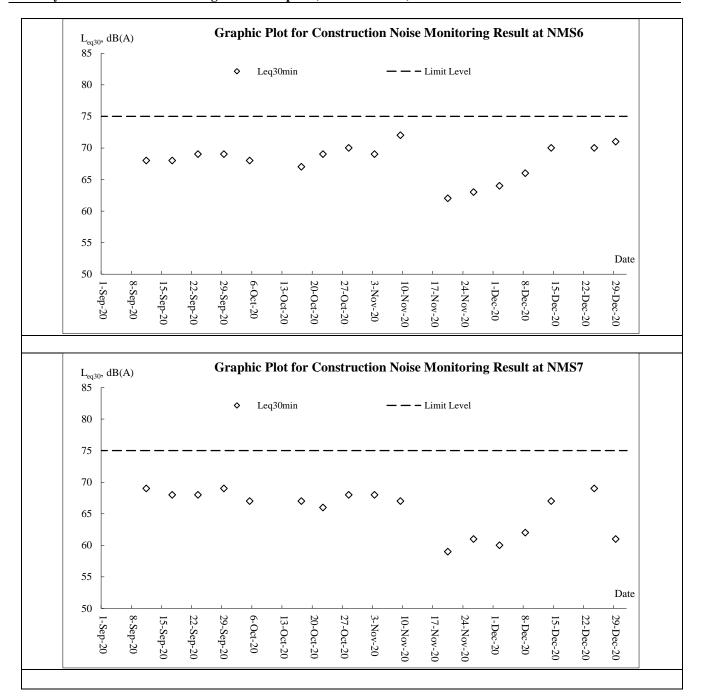




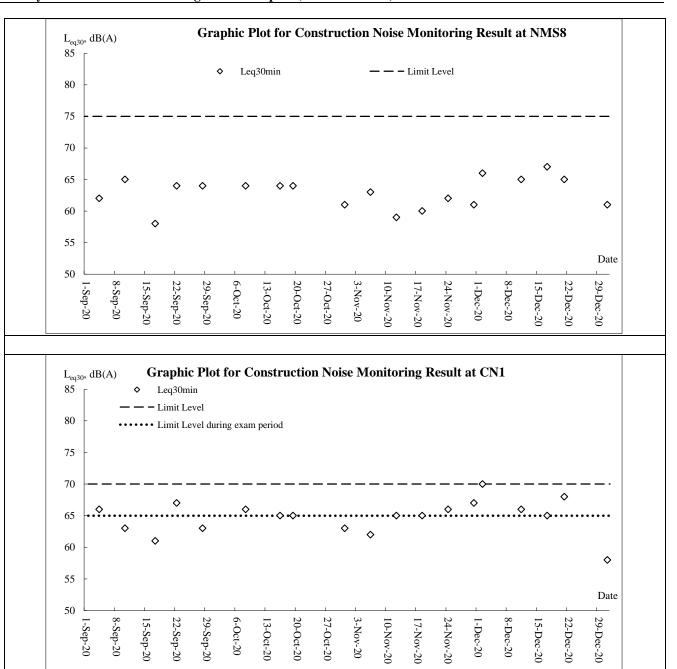






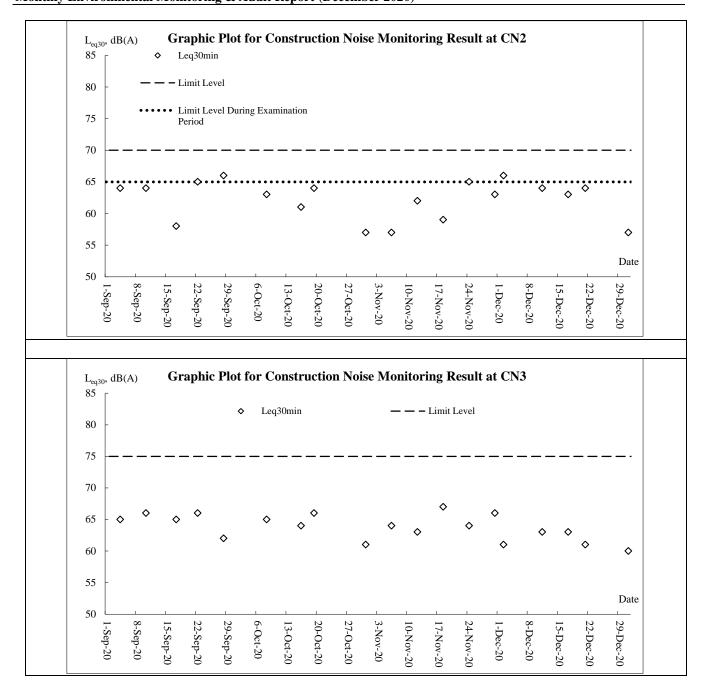






AUES







Appendix J

Meteorological Data



			Total	Kwun Tong Station	Kai Ta	k Station	King's Park Station
Date		Weather	Rainfall (mm)	Mean Air Temp. (°C)	Wind Speed (km/h)	Wind Direction	Mean Relative Humidity (%)
1-Dec-20	Tue	Temperatures will fall progressively.	0	18.7	10	N/NE	59.5
2-Dec-20	Wed	Fine and dry in the next couple of days.	0	19.1	9.2	N/NE	61.2
3-Dec-20	Thu	Fine and dry.	0	17.8	10.7	N/NW	56.7
4-Dec-20	Fri	Fine and dry. Cool tonight. Moderate to fresh northerly winds.	0	15.8	9.5	N/NW	57.5
5-Dec-20	Sat	Cool in the morning and at night.	0	16.4	7.7	N/NW	61
6-Dec-20	Sun	Mainly cloudy and dry.	0	18.2	8.7	E/SE	61.7
7-Dec-20	Mon	Sunny periods in the afternoon.	0	21	7	W/NW	58.5
8-Dec-20	Tue	Mainly cloudy. Dry with sunny intervals in the afternoon.	0	20	9.2	NW	58
9-Dec-20	Wed	Mainly cloudy with bright periods.	Trace	18.9	10	E	64.2
10-Dec-20	Thu	Bright periods during the day.	0.3	20.9	6.7	N/NE	72.5
11-Dec-20	Fri	Mainly cloudy. Sunny intervals during the day	Trace	22.1	10	E/SE	77.5
12-Dec-20	Sat	Moderate east to northeasterly winds.	Trace	20.5	11	E/SE	69.7
13-Dec-20	Sun	Moderate to fresh easterly winds	0	20.2	14.5	E/SE	74.5
14-Dec-20	Mon	Mainly cloudy. Bright at first.	Trace	17.9	10	E/SE	78
15-Dec-20	Tue	Mainly cloudy and cool.	Trace	13.7	8.5	N/NE	73
16-Dec-20	Wed	Moderate north to northeasterly winds, occasionally fresh.	0	13.9	8.7	N/NE	67.5
17-Dec-20	Thu	Mainly cloudy. Dry with bright periods in the afternoon.	0	14.3	7.5	N/NW	68.2
18-Dec-20	Fri	Dry with sunny periods in the afternoon.	0	16.7	9.7	W/NW	61.5
19-Dec-20	Sat	Mainly cloudy and cool tonight.	0	14.6	10.5	W/NW	57
20-Dec-20	Sun	Moderate north to northeasterly winds, occasionally fresh offshore.	0	15.9	11	N/NW	46
21-Dec-20	Mon	Mainly fine and dry.	0	16.3	8.5	W/NW	48.5
22-Dec-20	Tue	Mainly cloudy and dry. Rather cool in the morning	0	16.2	9.2	E/SE	58
23-Dec-20	Wed	Mainly fine. Dry in the afternoon.	1.2	17.6	10	E/SE	81.5
24-Dec-20	Thu	Moderate north to northeasterly winds.	0	21.4	7	W/SW	71.7
25-Dec-20	Fri	Mainly fine and dry.	0	18.3	6.5	W/SW	67
26-Dec-20	Sat	Moderate easterly winds, fresh offshore.	0	18.1	7.2	SE	61.2
27-Dec-20	Sun	Mainly fine. Dry in the afternoon.	0	21.7	8	E/SE	56.7
28-Dec-20	Mon	Mainly fine. Visibility relatively low in some areas	0	21	15	E/SE	61
29-Dec-20	Tue	Light to moderate easterly winds	0	22.4	15	E/SE	67
30-Dec-20	Wed	Fine and dry. Become cold tonight	0	15.1	16	N/NW	52.5
31-Dec-20	Thu	Fine and dry. Become cold tonight.	0	10	9.2	E/NE	23.7

Appendix K

Waste Flow Table

Contract No.: NE/2016/01

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

l	i	A stual Quan	tition of Inant C P-I	D Materials Genera	tod Monthly			A stual Quantitias	of C & D Wastes (Seveneted Monthly	Actual Quantities of C&D Wastes Generated Monthly					
		Actual Quan	titles of Inert C&I	J Materials Genera	ted Monthly			Actual Quantities	of C&D wastes C	senerated Monthly						
Month	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	129.197	22.841	126.974	0.924	1.299	0.000	0.005	0.025	0.007	0.000	0.141					
Feb	110.670	2.524	109.300	1.240	0.130	0.000	0.000	0.000	0.000	0.000	0.205					
Mar	161.220	2.884	153.483	7.567	0.170	0.000	0.007	0.000	0.008	0.000	0.169					
Apr	47.464	1.609	35.093	11.120	1.251	1.103	0.004	0.575	0.003	0.000	0.120					
May	71.700	0.723	58.845	12.190	0.665	0.000	0.000	0.142	0.000	0.000	0.087					
Jun	73.326	1.753	61.073	12.146	0.107	0.000	0.000	0.000	0.000	0.000	0.096					
Sub-total	593.577	32.334	544.768	45.187	3.622	1.103	0.016	0.742	0.018	0.000	0.818					
Jul	40.409	0.735	27.864	11.906	0.639	0.000	0.023	0.529	0.019	0.000	0.230					
Aug	30.703	1.775	19.691	10.472	0.540	0.000	0.000	0.000	0.000	0.000	0.150					
Sep	13.692	0.262	5.374	8.195	0.123	0.000	0.003	0.020	0.001	0.000	0.147					
Oct	31.429	0.000	21.336	9.913	0.180	0.019	0.013	0.000	0.011	0.000	0.460					
Nov	21.542	0.234	4.198	16.556	0.788	0.000	0.000	0.189	0.000	0.166	0.139					
Dec	16.530	0.000	4.965	10.597	0.968	0.000	0.000	1.231	0.000	0.000	0.162					
Total	747.882	35.340	628.196	112.826	6.860	1.122	0.055	2.711	0.049	0.166	2.106					

Monthly Summary Waste Flow Table for <u>2020</u> (year)

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 20^{th} 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.

Appendix II

Contract No. : NE/2016/05

Name of Department : <u>CEDD</u>

Monthly Summary Waste Flow Table for 2020 (year) [PS Clause 1 129]

	[PS Clause 1.129]										
		Actual Quantit	ties of Inert C&	&D Materials G	enerated Mont	hly	Act	ual Quantities o	f C&D Wastes	Generated Mo	onthly
Month	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	0.397	0	0.113	0	0.150	0	0	0	0	0	0.134
Feb	0.237	0	0.071	0	0.118	0	0	0	0	0	0.048
Mar	0.615	0	0	0	0.405	0	0	0	0	0	0.210
Apr	0.608	0	0	0	0.528	0	0	0	0	0	0.080
May	0.420	0	0.05	0	0.260	0	0	0	0	0	0.110
June	0.357	0	0.017	0	0.250	0	0	0	0	0	0.090
Sub-total		0		0		0	0	0	0	0	
July	0.240	0	0.03	0	0.100	0	0	0	0	0	0.110
Aug	0.370	0	0.04	0	0.180	0	0	0	0	0	0.150
Sept	0.150	0	0	0	0.090	0	0	0	0	0	0.060
Oct	0.150	0	0	0	0.070	0	0	0	0	0	0.080
Nov	0.120	0	0	0	0.040	0	0	0	0	0	0.080
Dec	0.100	0	0	0	0.030	0	0	0	0	0	0.070
Total	3.136	0	0.321	0	2.191	0	0	0	0	0	1.152

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

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

Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material. (3)

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 (4) where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m³.

Contract No.: NE/2017/03

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

		Actual Quant	ities of Inert C&I	D Materials Genera	ted Monthly			Actual Quantities	of C&D Wastes (Generated Monthly	
Month	Total Quantity Generated	Hard Rock and 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)	Chemical Waste	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	1.284	0.000	0.083	1.058	1.202	0.000	0.002	0.069	0.000	0.000	0.029
Feb	4.744	0.000	0.023	1.590	4.721	0.000	0.000	0.000	0.620	0.000	0.027
Mar	6.140	0.000	0.083	0.503	6.057	0.000	0.002	0.054	0.569	0.000	0.025
Apr	1.828	0.000	0.000	0.968	1.828	0.000	0.000	0.000	0.000	0.000	0.031
May	0.380	0.000	0.000	0.015	0.380	0.000	0.000	0.000	0.260	0.000	0.026
Jun	1.181	0.000	0.000	0.135	1.181	0.000	0.002	0.176	2.210	0.000	0.015
Sub-total	15.557	0.000	0.188	4.268	15.370	0.000	0.006	0.299	3.660	0.000	0.153
Jul	2.107	0.000	0.938	1.575	1.169	0.000	0.000	0.000	0.000	0.000	0.011
Aug	2.041	0.000	0.323	0.713	1.718	0.000	0.000	0.000	0.830	0.000	0.048
Sep	2.924	0.000	0.443	0.570	2.482	0.000	0.003	0.022	0.850	0.000	0.024
Oct	1.324	0.000	0.090	1.185	1.234	0.000	0.000	0.000	1.218	0.000	0.046
Nov	0.246	0.000	0.015	0.405	0.231	0.000	0.000	0.000	0.532	0.000	0.037
Dec	1.442	0.000	0.503	0.308	0.939	0.000	0.000	0.000	0.546	0.000	0.042
Total	25.641	0.000	2.498	9.023	23.144	0.000	0.009	0.321	7.636	0.000	0.362

Monthly Summary Waste Flow Table for <u>2020</u>(year)

Contract No.: NE/2017/03

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

	Forecast of Total Quantities of C&D Materials to be Generated from the Contract*											
Total Quantity Generated												
(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)		
15.000	15.000 0.000 0.000 15.000 0.000 0.100 2.000 0.300 1.000 3.500											

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 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 (0.88 kg/L)

Appendix L

Implementation Schedule for Environmental Mitigation Measures



EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main	Who to implement the	Location of the	Implementation Status			
		Concern to Address	measures?	measure	Contract 1	Contract 2	Contract 3	
	ct (Contraction Phase)		•	1				
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	
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	
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 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 continuously; 	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	œ	Ø	@	



ender the activities so as to maintain the entire surface wet ; • Where a scriftching is created around the perioding under construction, effective dust screens, sheeting or netting should be provided to enclose the scriftching; • Interview of the scriftching; • Any skip hoist for material transport should be totally enclosed by impervious sheeting; • Exposed earth should be streed in an area sheltered on the top and the 3 sides; • Center of the scriftching; • Exposed earth should be properly treated by compact ion, turfing, bluenent, shorteret or other suitable surface stabiliser within is interlocked with the material filling line and no overfilling is allowed; and • Control construction site where the exposed earth should be properly treated by compact ion, stuffing, bluenent, shorteret or other suitable surface stabiliser within is interlocked with the material where the exposed earth should be property treated by compact ion, stuffing, bluenent, shorteret or other suitable surface stabiliser within is interlocked with the material where the exposed earth should be operated on-site and plant should be torstruction site where the exposed earth should be operated on-site and plant should be torstruction site where the exposed earth should be operated on-site and plant should be torstruction site where is enviced regularly during the construction or gramme. Control construction is construction in exposed is allowed; and information of a should be through the hours in a close the pace is a should be should be should be through the should be intermittent us should be should be through the should be intermittent us should be should be through the should be intermittent us should be should be through the should be intermittent us and should be operated on-site and plant should be property fit tet and maintained during the construction ion exposed	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			
S4.7.7 Implement regular dust monitoring under EM&A programme during the Control construction airborne noise Control construction airborne noise Selected Representati ve dust sites where practicable All V N/A N/A Noise Impact (Contraction Phase. Noise Impact (Contraction Phase) Control construction on site Selected Representati ve dust sites where practicable All V N/A N/A S5.6.9 Implement the following good site management practices: • Ontrol construction on programme; • Control construction on sites where practicable All @ V V • only well-maintained plant should be operated on-site and plant should be should be should be should be should be throttled down to a minimum; • Control construction on airborne noise Contractor All @ V V V V V V N/A N/A N/A M/A		 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 				Contact I	contract 2	Contract 3	
 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 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. 	\$4.7.7	Implement regular dust monitoring under EM&A programme during the		Representati ve dust monitoring	construction sites where	V	N/A	N/A	
 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 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. 	Noise Impa	act (Contraction Phase)							
$V_{A} = V_{A}$		 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 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. 	ion	Contractor	construction sites where	@ V	V N/A	V	



EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main	Who to implement the	Location of the	Implementation Status			
		Concern to Address	measures?	measure	Contract 1	Contract 2	Contract 3	
\$5.6.13		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	
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	
\$5.6.19	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	
\$5.6.34	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	
\$5.6.35	Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected representative locations	Contractor	Selected Representati ve Noise monitoring stations	V	N/A	N/A	
Water Qua	ality 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	Who to implement the	Location of the measure		mplementation Sta	1
		Concern to Address	measures?		Contract 1	Contract 2	Contract 3
	 minimize polluted runoff. Sediment at ion tanks with sufficient capacity, constructed from preformed individual cells of approximately 6 to 8 m³ capacities, are recommended as a general mitigation measure which can be used for set 1 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. 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 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, aggr	Concern to Address	measures?	measure	Contract 1	Contract 2	Contract 3
	 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 						
	 Precations to be taken at any time of year when ransforms are fikely, act ions to be taken when a rainstorm is imminent or forecasted, and act ions to 						



EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main	Who to implement the	Location of the measure		mplementation Sta	
		Concern to Address	measures?	measure	Contract 1	Contract 2	Contract 3
	 be taken during or after rainstorms are summarized in Appendix A2 of <i>ProPECC PN 1/94</i>. Particular attention should be paid to the control of silty surface runoff during storm events. All vehicles and plant should be cleaned before leaving a construction ion site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at every construction ion site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The sect ion of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient back all toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and rains. Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. The oil interceptors should be provided for the oil interceptors to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass 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	Sewage from Workforce	Handling of site	Contractor	All	V	V	V
and 6.6.7	• 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, and contractor's site practices. Nevertheless, a licensed contractor should be employed to provide appropriate and adequate portable toilets to cater around 37.5 m3/day sewage and be responsible for appropriate disposal and maintenance. Since portable chemical toilets will be provided, no adverse water quality impact from the workforce sewage is anticipated.	sewage		construction sites			



EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main	Who to implement the	Location of the	Implementation Status			
		Concern to Address	measures?	measure	Contract 1	Contract 2	Contract 3	
	• 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	Accidental Spillage To prevent accidental spillage of chemicals, proper storage and handling facilities should be provided. All the tanks, containers and storage area should be bunded and the locations should be locked as far as possible from the sensitive watercourse and storm drains. The Contractor is required to register as a chemical waste producer if chemical wastes would be generated from the construction ion activities. Storage of chemical waste arising from the construction ion activities should be well managed with suitable labels an d warnings while disposal of those chemical wastes should be comply with the requirement states in Waste Disposal Ordinance (Cap 354) as well as Waste Disposal (Chemical Waste) (General) Regulations.	Prevention of accidental spillage	Contractor	All construction sites	@	V	V	
S6.6.11- S6.6.14	Groundwater from Contaminated Area The Contractor should apply for a discharge licence under the WPCO through the Regional Office of EPD for groundwater discharge. Prior to the excavation works within these potentially contaminated areas, the groundwater quality should be reviewed during the process of discharge license application. The compliancy to the TM-DSS and the existence of prohibited substance should be confirmed after further SI. If the review results indicated that the groundwater to be generated from the excavation works would be contaminated, the contaminated groundwater should be either properly treated in compliance with TMDSS or properly recharged into the ground. If wastewater treatment is deployed, the wastewater treatment unit shall deploy suitable treatment process (e.g. oil interceptor / activated carbon) to reduce the pollution level to an acceptable standard and remove any prohibited substances (e.g. Petroleum Carbon Ranges (PCRs)). All treated effluent from wastewater treatment plant shall meet the requirements as stated in TM-DSS and should be discharged into the foul sewers. If groundwater recharging wells are deployed, recharging wells should be installed as appropriate for recharging the contaminated groundwater back into the ground. The recharging wells should be selected at places where the groundwater quality	Minimize contaminated groundwater impacts	Contractor	All construction sites	NA	NA	NA	



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		
	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 at the recharge well. Prior to recharge, any prohibited substances such as PCRs should be removed as necessary by installing the petrol interceptor.							
	nagement (Contraction Phase)							
\$8.5.2	 <u>Good Site Practice</u> The following good site practices are recommended throughout the construction ion activities: nomination of an approved personnel, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collect ion and effective disposal to an appropriate facility, of all wastes generated at the site; training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling; provision of sufficient waste disposal points and regular collect ion for disposal; appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; 	Minimize generation construction	waste during	Contractor	All construction sites	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 <i>ETWB TC(W) No. 19/2005</i> for construction ion phase. The EMP should be submit ted to the Engineer for approval. Mitigation measures proposed in the EIA Report and the EM&A Manual should be adopted.	Minimize generation construction	waste during	Contractor	All construction sites	V	V	V
S8.5.3	 <u>Waste Reduction Measures</u> Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve reduction: segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling o materials and their proper disposal; proper storage and site practices to minimize the potential for damage and contamination of construction ion materials; plan and stock construction ion materials carefully to minimize amount of 	Reduce generation	waste	Contractor	All construction sites where practicable	V	V	V



EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main	Who to implement the	Location of the measure	Implementation Status			
		Concern to Address	measures?	measure	Contract 1	Contract 2	Contract 3	
	 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. 							
\$8.5.5	 <u>Storage of Waste</u> The following recommendation should be implemented to minimize the impacts: waste such as soil should be handled and stored well to ensure secure containment; stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; different locations should be designated to stockpile each material to enhance reuse; 	Minimize waste impacts from storage	Contractor Contractor	All construction sites	V	V	V	
\$8.5.6	Collection and Transportation of WasteThe following recommendation should be implemented to minimize the impacts:remove waste in timely manner;employ the trucks with cover or enclosed containers for wastetransportation;obtain relevant waste disposal permits from the appropriate authorities; anddisposal of waste should be done at licensed waste disposal facilities.	Minimize waste impacts from storage	Contractor	All construction sites	V	V	V	
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 	Minimize waste impacts from excavated and C&D materials	Contractor	All construction sites	V	V	V	
\$8.5.15	Provision of wheel wash facilities <u>Contaminated Soil</u> As a precaution, it is recommended that standard good site practice should be	Remediate contaminated soil	Contractor	All	V	V	N/A	



EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the	Location of the measure	Implementation Status Contract 1 Contract 2 Contract 3			
	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.	Concern to Address	measures?	sites where applicable	Contract 1	Contract 2	Contract 3	
S8.5.17	 <u>Chemical Waste</u> 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	
S8.5.18	 <u>General Waste</u> General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. Preferably enclosed and covered areas should be provided for general refuse collect ion and routine cleaning for these areas should also be implemented to keep areas clean. A reputable waste collector should be employed to remove general refuse on a daily basis. 	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	V	V	V	
\$8.5.19	 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	
Ecology (C	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 / horticulturis t / Certified Arborist to supervise the	Northern part of the proposed Quarry Park.	N/A	N/A	N/A	



EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main	Who to implement the	Location of the	Implementation Status				
		Concern to Address	measures?	measure	Contract 1	Contract 2	Contract 3		
			planting).						
0.7.10	 Construction phase in situ mitigation measures to minimize impacts on hydrological condition and water quality of hillside watercourses include: Temporary severage and drainage will be designed and installed to collect wastewater and prevent it from entering nearby watercourses; Proper locations well away from nearby watercourses; Proper locations well away for nearby watercourses; To prevent muddy water entering nearby watercourses; 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 on 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 wi	Minimize impacts on Hydrological condition and water quality of hillside watercourses.	Contractor	All construction sites	V	N/A	V		



EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main	Who to implement the	Location of the	Implementation Status			
		Concern to Address	measures?	measure	Contract 1	Contract 2	Contract 3	
	 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. 	Hydrological condition and water quality of hillside watercourses.		construction sites				
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	
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 , <i>ETWB TCW No. 29/2004</i> and <i>10/2013</i> . 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	
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	
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	
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	

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

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Appendix M2

Complaint Log

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		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	reported that some night works with noise and flashing caused nuisance to nearby resident after 11:00 pm on 23	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	TCS00864/16/3 00/F0087
2	28-Jul-17	28-Jul-17		Resident of On Tat Estate	Construction noise	SPRO hotline	NA	resident living in the flat on 38/F of Yin Tat House (賢達樓), On Tat Estate. The resident complained	and JV in the presence of the complainant in her flat at 10 am on		TCS00864/16/3 00/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	TCS00864/16/3 00/F0081
4	21-Jun-17	29-Aug-17	Anderson Road Quarry site	Resident of Po Tat Estate	Construction noise	EPD		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,	no comment	TCS00864/16/3 00/F0093
5	22-Jun-17	29-Aug-17	Anderson Road Quarry site	Resident of Po Tat Estate	Dust & Construction noise	EPD	N08/RE/0	breakers (8AM to 6PM). Requested to delay the operating hour of	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.	by IEC on 3 Nov 2017	TCS00864/16/3 00/F0093
6	15-Jul-17	29-Aug-17	Anderson Road Quarry site	Resident of Po Tat Estate	Construction noise	EPD	EPD (ref.N08/ RE/00022 479-17)		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	TCS00864/16/3 00/F0094
7	28-Jul-17	29-Aug-17	Anderson Road Quarry site	unknown	Dust	EPD			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	TCS00864/16/3 00/F0097



	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/00024 557-17)	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.	NOV 2017	TCS00864/16/3 00/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.	conducted in the Quarry Site. The measurement results taken at	no comment by IEC on 18 Oct 2017	TCS00864/16/3 00/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/00031 074-17)	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.	both 秀雅樓 and 秀義樓 were 63dB(A) which below the Limit Level under the EM&A Programme.		TCS00864/16/3 00/F0088
11	27-Sep-17	13-Oct-17	Anderson Road Quarry site	Resident of On Tat Estate	Construction noise	EPD		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,		TCS00864/16/3 00/F0106
12	3-Oct-17	13-Oct-17	Anderson Road Quarry site	Resident of On Tat Estate	Construction noise	EPD	N08/RE/0	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	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	TCS00864/16/3 00/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	TCS00864/16/3 00/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 揼 石 的 噪 音 (幾 乎 每 日 在 08:00-19:00 進行工程),已持續一 年,他全家人受到滋援。	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	TCS00864/16/3 00/F0109
15	13-Nov-17	14-Nov-17	Anderson Road Quarry site	Mr. Lam Wai	light pollution and noise	SPRO hotline	NA	 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。 隔音布未固定,大風吹過發出極 大的聲浪 	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	TCS00864/16/3 00/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 揼鐵噪音。	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.	by IEC on 13	
17	25-Aug-17	26-Oct-17	Anderson Road Quarry site	Resident of Sau Mau Ping Estate	Construction Noise	EPD	·	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	TCS00864/16/3 00/F0114
18	12-Sep-17	26-Oct-17	Anderson Road Quarry site	Resident of On Tat Estate	Construction Noise	EPD		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	TCS00864/16/3 00/F0117
19	15-Dec-17	21-Dec-17	Anderson Road Quarry site	Resident of Sau Mau Ping Estate	Construction Noise	EPD	NA	complained suspected construction noise from Anderson Construction	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	TCS00864/16/3 00/F0118
20	20-Dec-17	21-Dec-17	Anderson Road Quarry site	Resident of On Tat Estate	Dust	EPD	NA	了十多大,一直無灑水,四周非常 大塵。 投訴人住於安達邨,投訴		by IEC on 25	TCS00864/16/3 00/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	TCS00864/16/3 00/F0129



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			Anderson	Resident of				noise of breaking rock for a long time and strongly requested to know	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. 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		
22	15-Jan-18	15-Jan-18	Road Quarry site	Chun Tat House of On Tat Estate, 40/F	Construction Noise	SPRO mobile	NA	date of the breaking rock part of works opposite to Chun Tat House. She said we should do more on the	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.	by IEC on 8	TCS00864/16/3 00/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.	by IEC on 22	TCS00864/16/30 0/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	disturbing noise was heard after 6:00	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	TCS00864/16/30 0/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 間揼石仔噪音滋援,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	TCS00864/16/30 0/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	severe recently and asked about the completion date of the works close to Him Tat House. The resident	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	TCS00864/16/3 00/F0160b
27	25-Apr-18	•	Junction of Hiu Kwong Street and Hiu Ming Street	seniour not	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。	retracting process is not a general construction work using Powered Mechanical Equipment and complaint was an isolated	no comment by IEC on 30 July 2018	TCS00864/16/3 00/F0174b
29	25-Jun-18				Waste Managemen t	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 completion is not	no comment by IEC on 24	TCS00864/16/3 00/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	TCS00864/16/3 00/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	TCS00864/16/3 00/F0197a
32	6-Sep-18	7-Sep-18	Tsui Yeung House	Resident of Tsui Yeung House	Construction Noise	Verbal	NA	complained that the contractor has conducted the noisy works such as	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	TCS00864/16/3 00/F0201
33	24-Oct-18	25-Oct-18	E3		Construction Noise	Whatsap p Message	NA		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	TCS00864/16/3 00/F0209a
34	12-Nov-18	13-Nov-18	Road	Resident of ChingTat House(referre dby 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.	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	TCS00864/16/3 00/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	TCS00864/16/3 00/F0223a



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36	13-Nov-18	14-Nov-18	Anderson Road Quarry Site	Undisclosed	Noise and dust	1823	NA	the starting time of construction work at project site and also to solve the	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	TCS00864/16/3 00/F0224
37	9-Dec-18	12-Dec-18	Anderson Road Quarry Site	Undisclosed	Construction noise	1823	2-492790 7305	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.	road as concerned by the complanant. 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	TCS00864/16/3 00/F0230a
38	19-Dec-18	27-Dec-18	Anderson Road Quarry Site	Undisclosed	Construction noise	1823	2-494807 4127	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	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	TCS00864/16/3 00/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	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	TCS00864/16/3 00/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	TCS00864/16/3 00/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	TCS00864/16/3 00/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	TCS00864/16/3 00/F0250
43	21-Feb-19	26-Feb-19	Anderson Road Quarry Site	Undisclosed	noise	received by DEVB and referred to CEDD	NA	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	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	TCS00864/16/3 00/F0252a
44	1-Mar-19	26-Feb-19	E3 of Contract 2	Undisclosed	noise	CEDD	NA	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	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	TCS00864/16/3 00/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	TCS00864/16/3 00/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.	Was considered effective based on the site observation.	no comment by IEC on 12 August 2019	TCS00864/16/3 00/F0292b
47	6-Aug-19	C	Ming		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	TCS00864/16/3 00/F0310a
48	15-Oct-19	18-Oct-19	Work Area Portion 6 (Tseung Kwan O Tunnel Bus-Bus Interchang e Pedestrian Connectivi ty Facilities E12)		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	TCS00864/16/3 00/F0326a



	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.
49	5-Nov-19	11-Nov-19	Work Area Portion 2&3 (lift tower constructio n 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).	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	TCS00864/16/3 00/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	TCS00864/16/3 00/F0333a
51	10-Nov-19	12-Nov-19		Resident of Ma Yau Tong Village	Noise	EPD	NA	On 10 November 2019 投訴人為馬游塘村居民,自本年初 寶林路開展掘隧道工程,每天嗓音 不斷,由8至6,由於欠缺遮擋,聲 音直向4至22號村屋,將來通車,相 信噪音不只8-6,現懇請環保署為本 村居民正式評估,並向政府提出村 民困擾,考慮盡快設置隔音屏。 On 11 November 2019 寶琳路近馬游塘村開掘隧道的工程 地盤每日 8am-6pm 發出嗓音,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.		TCS00864/16/3 00/F0337a
52	11-Nov-19			Mr. Wong (resident of Yung Tai House of On Tai Estate)	Noise	1823	ref. 2-597630 3183	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 援,要求部門跟進。 On 22 November 2019, the project botine received a call from the same	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	TCS00864/16/3 00/F0338a



		Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Status	Investigation Report Ref.
								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			Resident of On Tat Estate	Noise	EPD	NA	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	TCS00864/16/3 00/F0357a
54	4-Mar-20	17-Mar-20	Near Hiu Ming Street Playgroun d (E8)	Undisclosed	Noise	1823	ref. 3-628323 7171	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	TCS00864/16/3 00/F0359a
55	23-Mar-20	23-Mar-20	Near Lin Tak Road (E11)	Undisclosed	Water Quality	Project hotline	NA	早輛出入口每日早上八時左右个時 有泥水從地盤流出路面,估計泥水 是清洗工程直輛所致,今梁先生的	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	TCS00864/16/3 00/F0360a



	g Date of Complaint		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	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	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	no comment by IEC on 11 May 2020	TCS00864/16/3 00/F0361a
57	1-Apr-20	20-Apr-20	Work Area Portion 2	Undisclosed	Noise	1823	NA	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		no comment by IEC on 7 May 2020	TCS00864/16/3 00/F0366a

CEDD Contract No. NTE/07/2016 Environmental Team for Development of Anderson Road Quarry Site – Site Formation and Associated Infrastructure Works Monthly Environmental Monitoring & Audit Report (December 2020)



	g 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	$1/_N/_3V/11$	Work Area Portion 2	Undisclosed	Noise	Project hotline	NA	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 mothar's beatth. The		no comment by IEC on 28 May 2020	TCS00864/16/3 00/F0370a
59	18-Jun-20	23-Jun-20	System B	Undisclosed	Noise	EPD	NA	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 corride out	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	TCS00864/16/3 00/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	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	TCS00864/16/3 00/F0401

CEDD Contract No. NTE/07/2016 Environmental Team for Development of Anderson Road Quarry Site – Site Formation and Associated Infrastructure Works Monthly Environmental Monitoring & Audit Report (December 2020)



			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 Playgroun d (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	TCS00864/16/3 00/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	TCS00864/16/3 00/F0434
63	3-Dec-20	7-Dec-20	Ma Yau Tong Village (East Portal)	Undisclosed	Noise and dust	1823 & EPD	3-657414 1017	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	TCS00864/16/3 00/F0435



Fax Cover Sheet

То	Mr. Tommy Li	Fax No	By e-n	nail			
Company	AECOM						
сс							
From	Nicola Hon	Date	15 Dece	mber 2020			
Our Ref	TCS00864/16/300/ F0434	No of Pages	7	(Incl. cover sheet)			
RE	CEDD Service Contract No. NTE/07/2016 Environmental Team for Development of Anderson Road Quarry Site – Site Formation and Associated Infrastructure Works Investigation Report for Dust Complaint Opposite to On Tai Estate						
If you do not	reacive all pages or transmission is illegible al	and contract the of	ininator on	(052) 2050 6050 to ro conc			

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Dear Sir,

Enclosed please find the investigation report for the captioned for your follow up action.

Should you have any queries or need further information, please do not hesitate to contact us or the undersigned at Tel: 2959-6059 or Fax: 2959-6079.

Yours Faithfully, For and on Behalf of **Action-United Environmental Services & Consulting**

Nicola Hon Environmental Consultant

Encl.

EPD	Ms. Hsu Ping Ping, Alice	Fax: 2591 0558
EPD	Mr. Paul Wong	Fax: 2756 8588
CEDD	Mr. Kelvin Leung (Ch Eng/E2)	Fax: 2739 0076
ANewR (IEC)	Mr. Adi Lee	By e-mail

Complaint Log No.	NTE/07/2016 - 61
Received Date by ET	7 December 2020
Related Contracts	Contract 1 (NE/2016/01)
Complaint Details	投訴位於安達臣道安泰邨對面屬於俊和的地盤因沒有灑水, 導致沙塵滾滾,嚴重污染環境。
Complaint Location	Opposite to On Tai Estate – lower portion of Road L4
Date of Complaint	4 December 2020
Environmental Aspect	Dust
Complainant	Undisclosed
Complaint Route	referred by EPD
Investigation Result	1. A public complaint was referred 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. The site layout and complaint location are shown in <i>Figure 1</i> .
	2. As advised by the Contractor of Contract 1 - NE/2016/01 (CWSTVJV), site activities on 4 December 2020 at lower portion of Road L4 included breaking work and excavation. Dust mitigation measure such as water spraying was provided for all the dusty activities.
	3. Joint site inspection among the AECOM, CW-CMGCJV and Environmental Team (ET) was carried out on 10 December 2020 for complaint investigation. Observations during site investigation are summarised as follows.
	(a) The construction site opposite to On Tai Estate was Lower Portion of Road L4. (<i>Photo 1</i>)
	(b) As dust mitigation measures, water spraying was provided for breaking and excavation works. (<i>Photos 2 & 3</i>)
	(c) Hoarding was erected along the site boundary to avoid dispersion of construction dust out of working areas. (<i>Photo 4</i>)
	 (d) On Sau Road is located adjacent to construction site and On Tai Estate, fugitive dust generated by road traffic was anticipated as localized dust impact. (<i>Photo 5</i>)
	(e) Moreover, as dust control, the haul roads over the site were sprayed continuously by two water bowsers and water sprinklers. The route of water bowsers along the site are shown in <i>Figure 2</i>
	4. There are two air quality monitoring stations AMS2 (Ground of Fung Tai House of On Tai Estate) and AMS3 (Ground of Planned Clinic and Community Centre facing Anderson Road (Ancillary Facilities Building) for the Contract. According to the 1-hour

	TSP monitoring results obtained in November and December 2020, all the monitoring results were fell within the Action Level $(319 \ \mu g/m^3)$ and Limit Level $(500 \ \mu g/m^3)$, which revealed that the dust impact received by representative NSR were within acceptable level. The relevant air quality monitoring result is shown in <i>Appendix A</i> .
5.	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.
6.	Nevertheless, the subject site of the project is close to the residential area, CWSTVJV was reminded to implement the dust mitigation measures as far as practicable as recommended in the EM&A Programme. The ET will closely monitor the environmental performance and dust mitigation measures in subsequent site inspection.

Prepared By :	Nicola Hon
Designation :	Environmental Consultant
Signature :	Anh
Date :	15 December 2020

Photo Record



Photo 1

The construction site opposite to On Tai Estate was Lower Portion of Road L4.

Photo 2

As dust mitigation measures, water spraying was provided for breaking and excavation works.



Photo 3

As dust mitigation measures, water spraying was provided for breaking and excavation works.



Photo 5

On Sau Road is located adjacent to construction site and On Tai Estate, fugitive dust generated by road traffic was anticipated as localized dust impact.

Photo 4

Hoarding was erected along the site boundary to avoid dispersion of construction dust out of working areas.

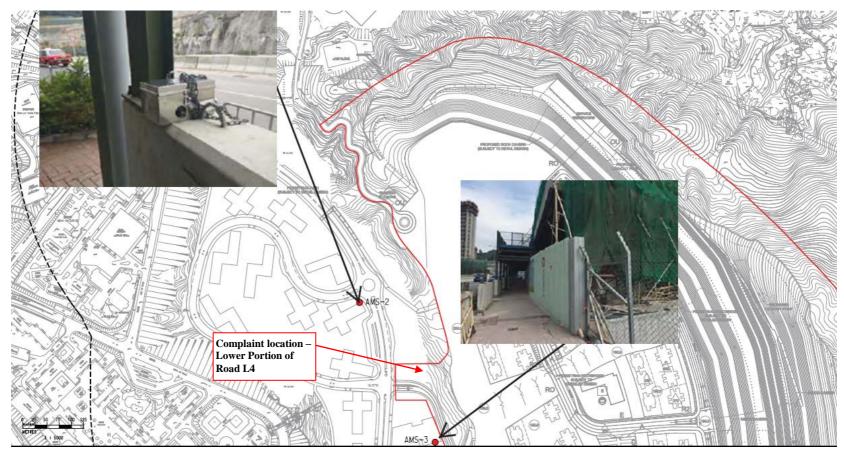


Figure 1The Layout of NE/2016/01 and the Complaint Location

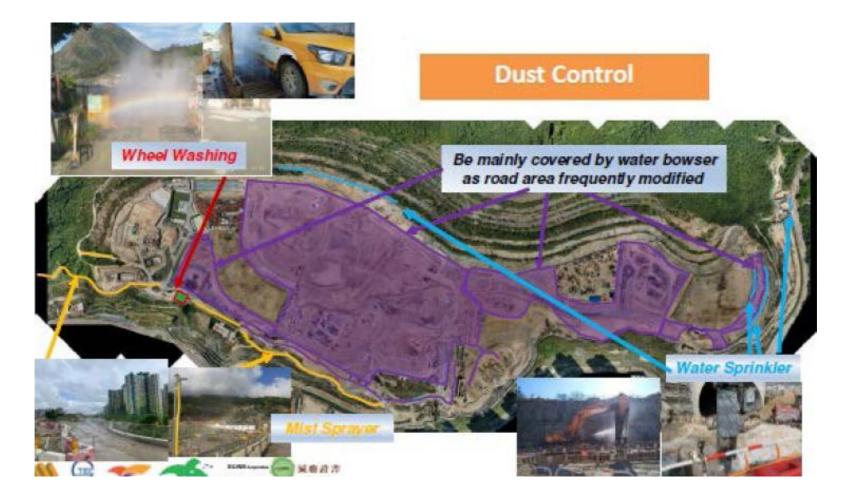


Figure 2 The Route of Water Bowsers Along the Site

Appendix A

AMS2, 1-hour TSP (µg/m ³) Measurement							
Date	Time	1 st hour	2 nd hour	3 rd hour			
3-Nov-20	9:18	83	84	82			
9-Nov-20	9:06	82	79	78			
14-Nov-20	9:41	75	79	75			
20-Nov-20	9:10	74	76	80			
26-Nov-20	9:15	78	76	71			
2-Dec-20	9:24	68	77	72			
8-Dec-20	9:41	74	76	72			
Action Level	319	Limit I	Level	500			

Table 1Summary of Construction 1-Hour TSP Monitoring Results

Table 2	Summary of Construction 1-Hour TSP Monitoring Results
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AMS3, 1-hour TSP (µg/m ³) Measurement							
Date	Time	1 st hour	2 nd hou	ır 3 rd hour			
3-Nov-20	9:30	82	79	76			
9-Nov-20	12:15	72	77	70			
14-Nov-20	12:50	83	88	86			
20-Nov-20	12:20	80	85	82			
26-Nov-20	12:18	83	83	85			
2-Dec-20	12:58	75	82	79			
8-Dec-20	13:06	78	81	87			
Action Level	319	Limit I	Level	500			



Fax Cover Sheet

То	Mr. Tommy Li	Fax No	By e-n	nail		
Company	AECOM					
сс						
From	Nicola Hon	Date	15 Dece	ember 2020		
Our Ref	TCS00864/16/300/ F0435	No of Pages	7	(Incl. cover sheet)		
RE	CEDD Service Contract No. NTE/07/2016 Environmental Team for Development of Anderson Road Quarry Site – Site Formation and Associated Infrastructure Works Investigation Report for Noise and Dust Complaint at Ma Yau Tong Village					
16 1 4		1 1 1 1 1				

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Nicola Hon Environmental Consultant

Encl.

EPD	Ms. Hsu Ping Ping, Alice	Fax: 2591 0558
EPD	Mr. Paul Wong	Fax: 2756 8588
CEDD	Mr. Kelvin Leung (Ch Eng/E2)	Fax: 2739 0076
ANewR (IEC)	Mr. Adi Lee	By e-mail

Complaint Log No.	NTE/07/2016 - 62		
Received Date by ET	7 December 2020		
Related Contracts	Contract 1 (NE/2016/01)		
Complaint Details	投訴人投訴寶琳路在安達臣道路口的對面,土木工程拓展署在進行 建築工程,工地近斜坡面對村的部份位置,使用了隔音布設立了隔 音屏障,但是隔音布被整齊地切割了幾十個約15厘米「X」形的切 口。請問這樣被切割了的隔音布,在隔除噪音方面還有用嗎? 地 盤缺乏灑水,經常有大量泥塵吹入村內。		
Complaint Location	Ma Yau Tong Village (East Portal)		
Date of Complaint	3 December 2020		
Environmental Aspect	Noise and Dust		
Complainant	Villager		
Complaint Route	received by 1823 (case number: 3-6574141017) and referred by EPD		
Investigation Result	 A public complaint was received by 1823 on 3 December 2020 and subsequently referred by EPD on 4 December 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. The site layout and complaint location are shown in <i>Figure 1</i>. As advised by the Contractor of Contract 1 - NE/2016/01 (CWSTVJV), the major construction activities included rock excavation through drilling/ breaking. As the noise mitigation measure, the noise barriers were provided along the works area. Joint site inspection among the AECOM, CWSTVJV and Environmental Team (ET) was carried out on 10 December 2020 for complaint investigation. The observations during the site 		
	 inspection are summarized in below: (a) Hoarding was erected along the site boundary to avoid dispersion of construction dust out of working areas. Moreover, acoustic mats were erected at location facing the Ma Yau Tong. (<i>Photo 1</i>) (b) The head of the breaker was wrapped with acoustic material to minimize noise impact. (<i>Photo 2</i>) (c) Exposed slope was covered with tarpaulin sheets to reduce dust impact. (<i>Photo 3</i>) (d) Water spraying was provided for dusty activities to reduce dust impact. (<i>Photo 4</i>) 		
	(e) As enhancement noise measure, the Contractor extended the noise barrier to encircle noisy activity. (<i>Photo 5</i>)		

(f)	CWSTVJV explained that to strike a balance between the public safely and noise control they cut part of the acoustic mats in "V"-shaped as a relieve to the wind-blown pressure in order to minimize risk and disturbance to road users.
(g)	Moreover, as dust control, the haul roads over the site were sprayed continuously by two water bowsers and water sprinklers. The route of water bowsers along the site are shown in <i>Figure 2</i> .
Villa Ton and 2020 Lev at r	re are one air quality monitoring station AMS7 (Ma Yau Tong age) and one noise monitoring station NMS8 (No.3-4 Ma Yau g Village) near the East portal. According to the impact noise air monitoring results obtained in November and December 0 to dated, all the monitoring results were fell within the Limit el, which revealed that the construction noise and dust received epresentative NSR and ASR were within acceptable level. relevant noise and air monitoring result is shown in <i>Appendix</i>
miti resid as e barr with dust	ur investigation, CWSTVJV had provided the dust and noise gation measures to minimize the dust and noise impact to the dent nearby. To response the concern from the complainant, nhancement noise measure, the Contractor extended the noise ier to encircle noisy activity. Since the works were conducted in approved normal hours with implementation of noise and mitigation measures, there were no breaches of legislative tirement.

Prepared By : _	Nicola Hon		
Designation : _	Environmental Consultant		
Signature :	Auch		
Date :	15 December 2020		

Photo Record



Photo 1

Hoarding was erected along the site boundary to avoid dispersion of construction dust out of working areas. Moreover, acoustic mats were erected at location facing the Ma Yau Tong.





The head of the breaker was wrapped with acoustic material to minimize noise impact.





Photo 3

Exposed slope was covered with tarpaulin sheets to reduce dust impact.



Photo 5 The Contractor extended the noise barrier to encircle noisy activity.

Photo 4 Water spraying was provided for dusty activities to reduce dust impact.

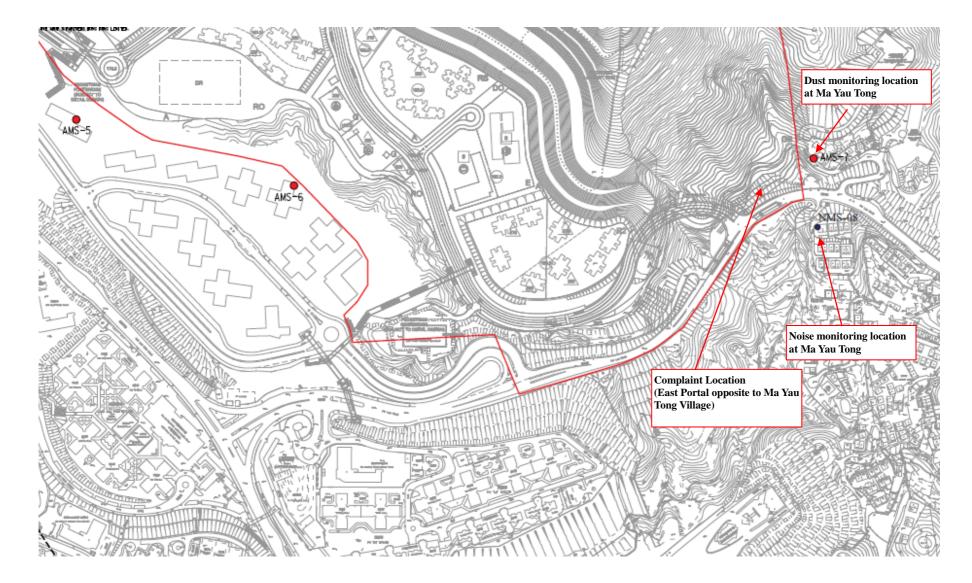


Figure 1 The Layout of NE/2016/01 and the Complaint Location

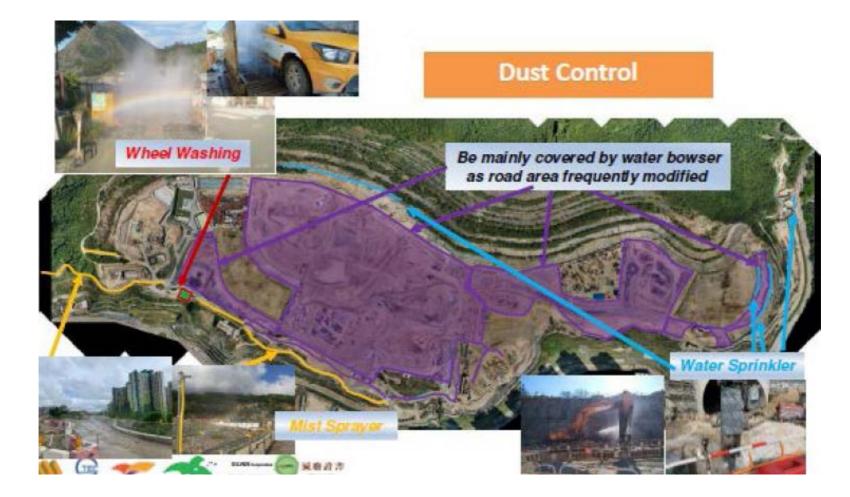


Figure 2 The Route of Water Bowsers Along the Site

Appendix A

	Construction Noise Level (L _{eq30min}), dB(A)			
Date	Time	NMS8		
6-Nov-20	14:09	63		
12-Nov-20	16:09	59		
18-Nov-20	10:11	60		
24-Nov-20	16:27	62		
30-Nov-20	11:45	61		
2-Dec-20	14:04	66		
8-Dec-20	13:41	65		
Limit Level	75 dB(A)			

Table 1 Summary of Construction Noise Monitoring Results

Table 2Summary of 24 hour TSP Monitoring Results

Impact 24-hour TSP Result, (ug/m ³)		
Date	AMS7	
2-Nov-20	72	
7-Nov-20	113	
13-Nov-20	96	
19-Nov-20	51	
25-Nov-20	57	
1-Dec-20	56	
7-Dec-20	95	
Limit Level	260 (ug/m ³)	

Table 3	Summarv	of 1- hour	TSP Monitoring Results

Impact 1-hour TSP for AMS7 (µg/m ³)				
Date	Time	1 st hour	2 nd hour	3 rd hour
3-Nov-20	13:41	79	82	88
9-Nov-20	12:48	73	73	75
14-Nov-20	13:21	82	85	88
20-Nov-20	13:11	82	77	74
26-Nov-20	12:53	81	80	80
2-Dec-20	13:57	77	86	89
8-Dec-20	13:34	69	71	75
Limit Level	500 (ug/m ³)			



Appendix N

Implementation Status for Water Quality Mitigation Measures

Water Quality Mitigation Measure



Impermeable cover for slope at PTT.

0 12 2

