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 (MARCH 2018)

PREPARED FOR
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT (CEDD)

Date	Reference No.	Prepared By	Certified By
26 April 2018	TCS00864/16/600/R0159v2	Nicola Hon (Environmental Consultant)	Tam Tak Wing (Environmental Team Leader)

Version	Date	Remarks
1	11 April 2018	First Submission
2	26 April 2018	Amended according to the IEC's comments on 16 and 25 April 2018

ANEWR

Civil Engineering and Development Department
New Territories East Development Office
Suite 1213 Chinachem Golden Plaza
77 Mody Road
Tsim Sha Tsui East
Kowloon

Your reference:

Our reference: HKCEDD10/50/104948

Date: 27 April 2018

Attention: Mr Stephen T S Li

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 (March 2018)

We refer to the emails of 11, 23 and 26 April 2018 from Action-United Environmental Services and Consulting attaching a Monthly Environmental Monitoring and Audit Report (March 2018) for the captioned project.

We have no further comment and hereby verify the Monthly Environmental Monitoring and Audit Report (March 2018).

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

Yours faithfully
ANEWR CONSULTING LIMITED

Adi Lee
Independent Environmental Checker

LYMA/LHHN/WCKJ/lhmh

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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 is divided to three CEDD contracts including Contract 1 (NE/2016/01), Contract 2 (NE/2016/05) and Contract 3. As advised by the RE, the date for commencement of Contract 1 was on 21 December 2016 and the major construction works has been commenced on 12 April 2017. The date for commencement of Contract 2 was 31 March 2017 and the major construction activities have been commenced on 2 May 2017. The EM&A programme under the Project was therefore commenced on 12 April 2017 pursuant to the requirement under the EM&A manual.

ES04 This is the **12th** monthly EM&A report presenting the monitoring results and inspection findings for the reporting period from **1 to 31 March 2018** (hereinafter 'the Reporting Period').

ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES

ES05 Environmental monitoring activities under the EM&A programme in the Reporting Period are summarized in the following table.

Environmental Aspect	Environmental Monitoring Parameters / Inspection	Reporting Period	
		Number of Active Monitoring Locations	Total Occasions
Air Quality	1-hour TSP	**4**	**72**
	24-hour TSP	**4**	**20**
Construction Noise	$L_{eq(30min)}$ Daytime	**4**	**16**

BREACH OF ACTION AND LIMIT (A/L) LEVELS

ES06 No exceedance of air quality and construction noise was recorded in the Reporting Period. The environmental exceedance, NOE issued and investigation of exceedance are summarized in the following table.

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

ENVIRONMENTAL COMPLAINT

ES07 In the Reporting Period, no environmental complaints were received for the Project.

NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

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

REPORTING CHANGE

ES09 No reporting changes were made in the Reporting Period.

SITE INSPECTION

ES10 In this Reporting Period, joint site inspection to evaluate the site environmental performance for ***Contract 1*** was carried out by the RE, ET and Contractor on **8, 13, 21 and 27 March 2018** in which IEC joined the site inspection with SSEMC on **13 March 2018**. No non-compliance was noted during the site inspection.

ES11 In this Reporting Period, joint site inspection to evaluate the site environmental performance for ***Contract 2*** was carried out by the RE, ET and Contractor on **7, 14, 21 and 28 March 2018** in which IEC joined the site inspection with SSEMC on **21 March 2018**. No non-compliance was noted during the site inspection.

FUTURE KEY ISSUES

ES12 As wet season is approaching, preventive measures for muddy water or other water pollutants from site surface overflow to public area should be properly maintained. The Contractors should paid special attention on water quality mitigation measures and fully implement according ISEMM of the EM&A Manual.

ES13 Since construction site is highly visible to the resident at nearby estates, the Contractors should fully implement air quality mitigation measures to reduce construction dust emission.

ES14 Construction noise would be a key environmental issue during construction work of the Project. Noise mitigation measures such as using quiet plants should be implemented in accordance with the EM&A requirement.

ES15 In addition, all effluent discharge shall be ensure to fulfill Technical Memorandum of Effluent Discharged into Drainage and Sewerage Systems, inland and Coastal Waters criteria or discharge permits stipulation.

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1. INTRODUCTION

1.1 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 is in 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 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 is divided to three CEDD contracts including Contract 1 (NE/2016/01), Contract 2 (NE/2016/05) and Contract 3. As advised by the RE, the date for commencement of Contract 1 was on 21 December 2016 and the major construction works has been commenced on 12 April 2017. The date for commencement of Contract 2 was 31 March 2017 and the major construction activities have been commenced on 2 May 2017. The EM&A programme under the Project was therefore 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 were conducted on ***17th January 2017*** to ***30th January 2017***, ***16th February 2017*** to ***2nd March 2017 and 26th March 2017 to 8th April 2017*** at all designated monitoring locations before construction work commencement.

1.1.6 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.

1.1.7 This is the **12th** monthly EM&A report presenting the monitoring results and inspection findings for the reporting period from **1 to 31 March 2018**.

1.2 REPORT STRUCTURE

1.1.1 The Monthly Environmental Monitoring and Audit (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	*Water Quality Monitoring*
Section 7	*Waste Management*
Section 8	*Site Inspections*
Section 9	*Environmental Complaints and Non-Compliance*
Section 10	*Implementation Status of Mitigation Measures*
Section 11	*Conclusions and Recommendations*

2. PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS

2.1 CONSTRUCTION CONTRACT PACKAGING

2.1.1 To facilitate the project management and implementation, the Project would be divided by the 3 contracts as described in following. The details of each contracts is summarized below and the delineation of each contracts 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; and
(iii) Associated landscape works.
(iv) Construction of green routes connecting to Jordan Valley Park and Choi Wing Road
(v) Slope improvement works in the vicinity of Po Lam Road South and other associated works.

Contract 3 (Contract number to be assigned)

2.1.4 The commencement date of Contract 3 is to be confirmed.

(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.

2.2 PROJECT ORGANIZATION

2.2.1 The project organization for Contracts 1 and 2 is shown in ***Appendix B***.

2.3 CONSTRUCTION PROGRESS

2.3.1 The three-months rolling construction program for Contracts 1 and 2 are enclosed in ***Appendix C***. As provided by the Contractors of Contracts 1 and 2, the major construction activities conducted in the Reporting Period are summarized in below.

Contract 1 (NE/2016/01)

i. Site Cleaning:
ii. Land Contamination Ground Investigation
iii. Site Formation in Portion A3, A4 and B6:
iv. Site Formation in Portion B8 and KW Asphalt Plant:
v. Alliance Concrete Plant at Portion B7:
- Debris removal and breaking of concrete slab

vi. KWP Crushing Plant
- Commenced demolition of structure.

vii. West Portal Area;
- Continued trimming slope at West Portal at top-down direction
- The soil nailing works at Slope A3

viii. East Portal Area;
- Installation of 11 kV cable trough
- Excavation for site formation at Slope A1
- Commenced the additional GI works for ADBH09A
- The soil nailing works at Slope A1

ix. Underpass
- Commenced tunnel face excavation from West Portal
- Commenced excavation for benching from CH2373 to CH2397

x. Internal Road L4, RWA18, RWA12 and Pedestrian Connectivity System A:
- construction of base slab of noise barrier
- formworks for noise barrier bay #24
- excavation of retaining wall RWA18
- Excavation of retaining wall RWA12 bay #22
- Erection of formwork and concreting
- construction of the new haul road to retaining wall RWA12

xi. Underground Stormwater Retention Tank:
- Stripping soil to expose rock head level and excavation
- Temporary soil nails
- Erection of tower crane
- rebar fixing for a wall structure
- placement of steel reinforcement
- concreting

xii. Water Pumping Station and Retaining Wall RWA13 and RWA14:
- excavation of slope A13 and the area of water pumping stations
- construction of base slabs for retaining wall RWA13 and RWA14

xiii. Pedestrian Connectivity System B:
- excavation at North lift tower and South lift tower
- excavation for the u-channel

xiv. Internal Road L1:
- excavation for the internal road L1 adjacent to the Pedestrian Connectivity System B

xv. Box Culvert BC1 and BC2:
- rebar fixing for a box culvert BC1's wall section and top slab of bay #13
- excavation works for box culvert BC2

xvi. Internal Road L5:
- setting out points and excavation for construction of manholes and drainage pipelines

Contract 2 (NE/2016/05)

1. Portion 1: Continue piling works, commence ELS for E1-PC4 and E1-PC6, Completed tree pruning, completed proof drilling
2. Portion 2: Continue piling works at Hiu Kwong Street. Completed temporary rock fall fence/ noise barrier at Hiu Ming Street.
3. Portion 4: Continue the Slip Road construction, Continue Tree transplant works, commence TTA road diversion
4. Portion 5: commence ELD for covered walkway
5. Portion 6: Continue rock dowel installation works.
6. Portion 7: Continue to construction Hiking trail extension work in Site A, Continue slope improvement works in Site B;
7. Portion 8 & 9: Continue soil nail construction.

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

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

Item	Description	License/Permit Status			
		Permit no./ account no./ Ref. no.	Valid Period		Status
			From	To	
1	Form NA - Notification pursuant to Air pollution Control (Construction Dust) Regulation	EPD ref. no. 411762	NA	NA	valid
	Form NB - Notification pursuant to Air pollution Control (Construction Dust) Regulation	EPD ref. no. 412730	NA	NA	valid
2	Chemical Waste Producer Registration	Registration no. WPN 5213-292-C4115-01	15 Feb 2017	End of project	valid
3	Water Pollution Control Ordinance - Discharge License	WT00027252-2017	20 Mar 2017	31 Mar 2022	valid
4	Waste Disposal Regulation - Billing Account for Disposal of Construction Waste	Account no. 7026925	20 Jan 2017	End of project	valid
6	Construction Noise Permit	GW-RE1017-17	23 Dec 17	19 Jun 18	valid
		GW-RE0098-18	12 Feb 18	22 Aug 18	valid

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

Item	Description	License/Permit Status			
		Permit no./ account no./ Ref. no.	Valid Period		Status
			From	To	
1	Notification pursuant to Air pollution Control (Construction Dust) Regulation	EPD ref. no. 312173	NA	NA	valid
2	Chemical Waste Producer Registration	Registration no. WPN 5213-294-K28 90-08	3 July 2017	End of Project	Valid
3	Water Pollution Control Ordinance - Discharge License	WT00028685-2017	02 Aug 2017	31 Aug 2022	Valid
		WT00028686-2017	02 Aug 2017	31 Aug 2022	Valid
		WT00028687-2017	02 Aug 2017	31 Aug 2022	Valid
4	Waste Disposal Regulation - Billing Account for Disposal of Construction Waste	Account no.7027548	12 Apr 2017	End of project	Valid
5	Construction Noise Permit	GW0RE0145-18	8 Mar 2018	4 Apr 2018	Valid

3. SUMMARY OF IMPACT MONITORING REQUIREMENTS

3.1 GENERAL

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

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

3.2 MONITORING PARAMETERS

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

- Air quality; and
- Construction noise

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

Table 3-1 Summary of EM&A Requirements

Environmental Issue	Parameters
Air Quality	• 1-hour TSP by Real-Time Portable Dust Meter; and • 24-hour TSP by High Volume Air Sampler
Noise	• Leq(30min) in normal working days (Monday to Saturday) 07:00-19:00 except public holiday • Supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.

3.3 MONITORING LOCATIONS

3.3.1 According to the EM&A Manual Section 4.6, seven (7) most representative and affected air sensitive receivers (ASR) were selected as air monitoring stations (AQM). The air quality monitoring locations are listed in ***Table 3-2*** and illustrated in ***Appendix D.***

Table 3-2 Impact Monitoring Stations - Air Quality

ID	ASR ID in EIA	Location in the EM&A Manual	Identified Location during Site Visit
AMS-1	ACYC-01	Chi Yum Ching She	Ground of Chi Yum Ching facing the project site
AMS-2	DARB-13	Block 8, Site B Note 1	Ground of Block 8, Site B facing On Sau Road
AMS-3	DARC-16	Planned Clinic and Community Centre, Site C2 Note 1	Ground of Planned Clinic and Community Centre facing Anderson Road
AMS-4	DARC-26	Planned School, Site C2 Note 2	Ground of Planned School facing Anderson Road
AMS-5	DARE-06	Block 5, DAR Site E	Main roof of Oi Tat House of On Tat Estate facing the project site
AMS-6	DARE-17	Block 9, Site E	Main roof of Hau Tat House of On Tat Estate facing the project site
AMS-7	AMYT-04	Ma Yau Tong Village	Balcony at 2nd floor of Village House Anderson Road No. 1 facing the project site

Note 1: The ASR is under construction and not yet in operation.
Note 2: The ASR is not yet constructed.

3.3.2 In our recent site visit at the subject site, 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 changes for the baseline monitoring programme was submitted and agreed by EPD before the baseline monitoring.

3.3.3 In our baseline monitoring proposal, baseline 1-hour TSP monitoring will be conducted at all AQM location AMS-1 to AMS-7. However, baseline 24-hour TSP monitoring will be conducted at existing ASR AMS-1, AMS-5, AMS-6 and AMS-7 only with our justifications present below:

(a) AQM Locations AMS-2, AMS-3 & AMS-4 are planned ASRs which are still under construction/ has not yet constructed. During recent site visit, there were no suitable locations for setting up the HVS and electricity supply at these AQM locations.

(b) Alternative locations were considered in accordance with EM&A Manual Section 4.7.3. However, there were no suitable location found and our justifications are provided in below:

(i) Alternative locations Sau Mau Ping Estate and Shun Tin Estate were located at downhill of the subject site which separated by the active construction site (i.e., AMS-2, AMS-3 & AMS-4) and Sau Mau Ping Road. In view of the level deviation, the baseline data obtained in these alternative locations could not represent the baseline condition of the designated location AMS-2, AMS-3 & AMS-4. Moreover, when the planned ASR AMS-2, AMS-3 & AMS-4 activate sooner or later, impact monitoring should be carried out at these designated locations instead of the alternative locations.

(ii) Alternative location such as site boundary of the site subject was considered, however, there were no provisions of power supply to sustain the HVS continuously after consultation with the Contractor.

(c) According to EM&A Manual Section 4.7.4, as an exceptional cases, it is proposed to adopt the Action Level established at AMS-5 to AMS-2, AMS-3 & AMS-4 for impact monitoring as AMS-5 with our justification below.

(i) AMS-5 is the closest ASR to AMS-2, AMS-3 & AMS-4 under same direction of prevailing wind.

(ii) In view of the baseline 1-hour TSP data, the measured results at AMS-5 were lower than those collected at AMS-2, AMS-3 & AMS-4. As a conservation approach, adopting Action Level at AMS-5 for Location AMS-2, AMS-3 & AMS-4 is more stringent for the project.

(iii) The Action level for AMS-2, AMS-3 & AMS-4 will be subject to review in accordance with EM&A Manual Section 4.7.5

Construction Noise

3.3.4 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 2-3*** and illustrated in ***Appendix D***.

Table 3-3 Impact Monitoring Stations - Construction Noise

ID	NSR ID in EIA	Location
NMS-1	Site C2 – School 05 [Note 1]	Ground of planned school at DAR facing the project

		site
NMS-2	Site E – School [Note 1]	Ground area between the planned school and Him Tat House facing the project site
NMS-3	Site C2 – R102 [Note 1]	Ground of Ancillary Facilities Building facing the project site
NMS-4*	Oi Tat House	1m from the exterior of ground floor façade of Oi Tat House of On Tat Estate facing the project site
NMS-4a#	Oi Tat House	Rooftop of Oi Tat House where 1m from the exterior of Oi Tat House facing the project site
NMS-5#	Hau Tat House	22/F, refuge floor of Hau Tat House where 1m from the exterior of Hau Tat House facing the project site.
NMS-6~	Yung Tai House of On Tai Estate	Rooftop of Yung Tai House where 1m from the exterior of the building facing the project site)
NMS-7~	Chi Tai House of On Tai Estate	Rooftop of Chi Tai House where 1m from the exterior of the building facing the project site

Note 1: The NSR is under construction and not yet in operation.

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.

(#) 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.

3.4 MONITORING FREQUENCY AND PERIOD

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

Air Quality Monitoring

3.4.2 Frequency of impact air quality monitoring is as follows:

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

Noise Monitoring

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

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

3.5 MONITORING EQUIPMENT

Air Quality Monitoring

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

3.5.2 All equipment to be used for air quality monitoring is listed in ***Table 3-4***.

Table 3-4 Air Quality Monitoring Equipment

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

Noise Monitoring

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

3.5.4 Noise equipment as perform for baseline monitoring is listed in ***Table 3-5***.

Table 3-5 Construction Noise Monitoring Equipment

Equipment	Model
Integrating Sound Level Meter	B&K Type 2238
Calibrator	Cesva CB - 5
Portable Wind Speed Indicator	Anemometer AZ Instrument 8908

3.6 MONITORING METHODOLOGY

1-hour TSP

3.6.1 The 1-hour TSP monitor was a brand named "Sibata LD-3 Laser Dust monitor Particle Mass Profiler & Counter" which is a portable, battery-operated laser photometer. The 1-hour TSP meter provides a real time 1-hour TSP measurement based on 90° light scattering. The 1-hour TSP monitor consists of the following:

(a.) A pump to draw sample aerosol through the optic chamber where TSP is measured;

(b.) A sheath air system to isolate the aerosol in the chamber to keep the optics clean for maximum reliability; and

(c.) A built-in data logger compatible with Windows based program to facilitate data collection, analysis and reporting.

3.6.2 The 1-hour TSP meter to be used will be within the valid period, calibrated by the manufacturer prior to purchasing. Zero response of the instrument will be checked before and after each monitoring event.

24-hour TSP

3.6.3 The equipment used for 24-hour TSP measurement is Thermo Andersen Model GS2310 TSP high volume air sampling system, which complied with *EPA Code of Federal Regulation, Appendix B to Part 50*. The High Volume Air Sampler (HVS) consists of the following:

(a.) An anodized aluminum shelter;

(b.) A 8"x10" stainless steel filter holder;

(c.) A blower motor assembly;

(d.) A continuous flow/pressure recorder;

(e.) A motor speed-voltage control/elapsed time indicator;

(f.) A 7-day mechanical timer, and

(g.) A power supply of 220v/50 Hz

3.6.4 For HVS for 24-hour TSP monitoring, the HVS is mounted in a metallic cage with a top for

protection and also it is sat on the existing ground or the roof of building. The flow rate of the HVS between 0.6m^3/min and 1.7m^3/min will be properly set in accordance with the manufacturer's instruction to within the range recommended in *EPA Code of Federal Regulation, Appendix B to Part 50*. Glass Fiber Filter 8" x 10" of TE-653 will be used for 24-Hour TSP monitoring and would be supplied by laboratory. The general procedures of sampling are described as below:-

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

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

3.6.6 The HVS used for 24-hour TSP monitoring will be calibrated before the commencement for sampling, and after in two months interval for 1 point checking of maintenance and six months interval for five points calibrate in accordance with the manufacturer's instruction using the NIST-certified standard calibrator (Tisch Calibration Kit Model TE-5025A) to establish a relationship between the follow recorder meter reading in cfm (cubic feet per minute) and the standard flow rate, Qstd, in m^3/min. Motor brushes of HVS will be regularly replaced of about five hundred hours per time. The calibration certificates of all monitoring equipment used for the impact monitoring program in the Reporting Period and the HOKLAS accredited certificate of laboratory are attached in ***Appendix E***.

Noise Monitoring

3.6.7 As referred to in the Technical Memorandum (TM) issued under the NCO, sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804:1985 (Type 1) specifications shall be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration levels from before and after the noise measurement agree to within 1.0 dB.

3.6.8 All noise measurements will be performed with the meter set to FAST response and on the A-weighted equivalent continuous sound pressure level (Leq). $Leq_{(30\ min)}$ in six consecutive $Leq_{(5\ min)}$ measurements will be used as the monitoring parameter for the time period between 07:00-19:00 hours on weekdays throughout the construction period.

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

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

3.6.10 Immediately prior to and following each noise measurement the accuracy of the sound level meter will be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements will be accepted as valid only if the calibration level from before and after the noise measurement agrees to within 1.0 dB.

3.6.11 Noise measurements will not be made in fog, rain, wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed will be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

3.6.12 The sound level meter and calibrator are calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme at yearly basis. The calibration certificates of all monitoring equipment used for the impact monitoring program in the Reporting Period is attached in ***Appendix E***.

Meteorological Information

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

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

3.7.1 The baseline results form the basis for determining the environmental acceptance criteria for the impact monitoring. According to the approved Environmental Monitoring and Audit Manual, the air quality, construction noise were set up, namely Action and Limit levels are listed in ***Tables 3-6 and 3-7***.

Table 3-6 Action and Limit Levels for Air Quality Monitoring

Monitoring Station	Action Level (μg /m^3)		Limit Level (μg/m^3)	
	1-hour TSP	24-hour TSP	1-hour TSP	24-hour TSP
AMS-1	313	154	500	260
AMS-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 3-7 Action and Limit Levels for Construction Noise

Monitoring Location	Action Level	Limit Level in dB(A)
	Time Period: 0700-1900 hours on normal weekdays	
NMS-1	When one or more documented complaints are received	***75*** dB(A) [Note 1] / ***70*** dB(A) [Note 2] / ***65*** dB(A) [Note 2]
NMS-2		
NMS-3		***75*** dB(A)

NMS-4a*		***75*** dB(A)
NMS-4*		***75*** dB(A)
NMS-5(#)		***75*** dB(A)
NMS-6(#)		***75*** dB(A)
NMS-7*		***75*** dB(A)

Note 1: Locations NMS-1 and NMS-2 are planned school as NSRs which are still under construction/ not yet constructed; hence the Limit Levels of 75dB(A) is adopted for NMS-1 and NMS-2 until the school is occupied and in operation.

Note 2: 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 is recommended by RE and agreed by IEC, NMS4 is temporary suspended and the monitoring location is relocated to NMS4a.
(#) Additional noise monitoring location is recommended by RE and agreed by IEC which effective on 7 March 2018.

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

3.8 DATA MANAGEMENT AND DATA QA/QC CONTROL

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

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

4. AIR QUALITY MONITORING

4.1 GENERAL

4.1.1 In the Reporting Period, air quality monitoring was performed at the active designated monitoring locations AMS-1, AMS-5, AMS-6 and AMS-7. No monitoring was conducted at AMS-2, AMS-3 and 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.

4.2 RESULTS OF AIR QUALITY MONITORING

4.2.1 In the Reporting Period, a total of ***72*** events of 1-hour TSP and ***20*** events 24-hours TSP monitoring were carried out and the monitoring results are summarized in ***Tables 4-1 to 4-4***. The detailed 24-hour TSP monitoring data are presented in ***Appendix H*** and the relevant graphical plots are shown in ***Appendix I***.

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

Date	24-hour TSP (μg/m³)	1-hour TSP (μg/m³)				
		Date	Start Time	1st reading	2nd reading	3rd reading
5-Mar-18	21	3-Mar-18	9:38	35	48	43
10-Mar-18	32	9-Mar-18	9:49	62	67	67
16-Mar-18	38	15-Mar-18	9:21	46	45	51
22-Mar-18	38	21-Mar-18	13:51	75	71	71
28-Mar-18	53	26-Mar-18	13:14	50	53	54
		29-Mar-18	13:40	74	79	78
Average (Range)	**36 (21 – 53)**	Average (Range)		**59 (35 – 79)**		

Table 4-2 Summary of 24-hour and 1-hour TSP Monitoring Results (AMS-5)

Date	24-hour TSP (μg/m³)	1-hour TSP (μg/m³)				
		Date	Start Time	1st reading	2nd reading	3rd reading
5-Mar-18	22	3-Mar-18	9:41	56	57	54
10-Mar-18	42	9-Mar-18	13:53	62	64	65
16-Mar-18	33	15-Mar-18	9:22	63	59	64
22-Mar-18	29	21-Mar-18	9:14	68	72	74
28-Mar-18	24	26-Mar-18	9:30	77	77	77
		29-Mar-18	9:24	78	83	83
Average (Range)	**30 (22 – 42)**	Average (Range)		**69 (54 – 83)**		

Table 4-3 Summary of 24-hour and 1-hour TSP Monitoring Results (AMS-6)

Date	24-hour TSP (μg/m³)	1-hour TSP (μg/m³)				
		Date	Start Time	1st reading	2nd reading	3rd reading
5-Mar-18	30	3-Mar-18	9:26	52	59	59
10-Mar-18	66	9-Mar-18	13:03	64	65	67
16-Mar-18	68	15-Mar-18	9:13	62	60	58
22-Mar-18	40	21-Mar-18	9:02	84	70	70
28-Mar-18	43	26-Mar-18	9:44	77	78	75

Date	24-hour TSP (μg/m³)	1-hour TSP (μg/m³)				
		Date	Start Time	1st reading	2nd reading	3rd reading
		29-Mar-18	9:08	80	82	82
Average (Range)	**49 (30 – 68)**	Average (Range)		**69 (52 – 84)**		

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

Date	24-hour TSP (μg/m³)	1-hour TSP (μg/m³)				
		Date	Start Time	1st reading	2nd reading	3rd reading
5-Mar-18	28	3-Mar-18	13:21	48	31	34
10-Mar-18	33	9-Mar-18	9:07	65	63	67
16-Mar-18	28	15-Mar-18	13:08	39	42	43
22-Mar-18	30	21-Mar-18	13:08	77	75	68
28-Mar-18	38	26-Mar-18	9:26	55	57	58
		29-Mar-18	12:55	82	83	81
Average (Range)	**31 (28 – 38)**	Average (Range)		**59 (31 – 83)**		

4.2.2 As shown in ***Tables 4-1 to 4-4***, all the 1-hour TSP and 24-hour TSP monitoring results were below the Action/Limit Levels. No Notification of Exceedance (NOE) was issued in this Reporting Period.

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

5. CONSTRUCTION NOISE MONITORING

5.1 GENERAL

5.1.1 In the Reporting Period, noise monitoring was performed at the additional monitoring locations NMS4a, NMS5, NMS6 and NMS7. No monitoring was conducted at NMS1, NMS2 and NMS3 since they are planned NSR which are still under construction/ not yet constructed.

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

5.2 NOISE MONITORING RESULTS IN REPORTING MONTH

5.2.1 In the Reporting Period, a total of **16** events noise measurements were carried out at the designated locations. 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

Construction Noise Level ($L_{eq30min}$), dB(A)				
Date	**NMS4a**	**NMS5**	**NMS6**	**NMS7**
9-Mar-18	75	74	72	72
15-Mar-18	64	66	61	71
21-Mar-18	72	60	64	70
26-Mar-18	73	65	65	67
Limit Level	**75 dB(A)**			

5.2.2 As shown in ***Tables 5-1,*** no construction noise measurement results that exceeded the Limit Level were recorded. Moreover, no environmental complaints (which triggered Action Level exceedance) were received in this reporting period.

6. WASTE MANAGEMENT

6.1 GENERAL WASTE MANAGEMENT

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

6.2 RECORDS OF WASTE QUANTITIES

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

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

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

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

Type of Waste	Contract 1		Contract 2	
	Quantity	Disposal Location	Quantity	Disposal Location
Total generated Inert C&D Materials (‘000m^3)	9.911	-	0.041	-
Hard Road and Large Broken Concrete	1.152	-	0	-
Reused in this Contract (Inert) (‘000m^3)	8.660	-	0.001	-
Reused in other Projects (Inert) (‘000m^3)	0	-	0	-
Disposal as Public Fill (Inert) (‘000m^3)	0.099	TKO 137	0.04	TKO 137

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

Type of Waste	Contract 1		Contract 2	
	Quantity	Disposal Location	Quantity	Disposal Location
Recycled Metal (‘000kg)	471.850	License collector	0	-
Recycled Paper / Cardboard Packing (‘000kg)	0.326	License collector	0	-
Recycled Plastic (‘000kg)	0	-	0	-
Chemical Wastes (‘000kg)	0	-	0	-
General Refuses (‘000m^3)	0.011	SENT	0.0004	SENT

7. SITE INSPECTION

7.1 REQUIREMENTS

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

7.2 FINDINGS / DEFICIENCIES DURING THE REPORTING MONTH

Contract 1

7.2.1 In the Reporting Period, joint site inspection for Contract 1 to evaluate site environmental performance was carried out by the RE, ET and the Contractor on **8, 13, 21 and 27 March 2018** in which IEC joined the site inspection with SSEMC on **8 March 2018**. No non-compliance was noted.

7.2.2 The findings / deficiencies of ***Contract 1*** that observed during the weekly site inspection are listed in ***Table 7-1***.

Table 7-1 Site Observations of Contract 1

Date	Findings / Deficiencies	Follow-Up Status
27 February 2018 (last reporting period)	• Earth bund for the temporary drainage was damaged. Maintenance for the earth bund should be conducted and ensure all turbid water should be diverted to de-silting facilities for proper treatment prior discharge. (Q3) • Drip tray should be provided for oil drums storage on-site. (West Portion)	• Damaged earth bund was repaired and no overflow of turbid water was observed. • Drip tray was provided for the oil drums storage on-site.
8 March 2018	• Turbid water discharged into the public drainage was observed. All wastewater generated from site should be diverted to the de-silting facilities prior to discharge. (East Portion) • As a reminder, the Contractor should review and clean up the existing temporary drainage before wet season. (General)	• Earth bund was provided to divert the wastewater generated from site to the de-silting facilities. • Not required for reminder.
13 March 2018	• Dust emitted from drilling works was observed. Dust mitigation measures should be provided to reduce dust impact. (East Portal) • Drip tray should be provided for all chemical storage on-site. (West Portal) • NRMM label should be displayed properly for all NRMM using on-site. (Bar Bending Yard) • As a reminder, debris cumulated inside the drip tray should be removed and housekeeping should be improved to maintain the site area clean and tidy. (East Portal)	• Water spraying was provided to minimize dust emission during drilling works. • Drip tray was provided for chemical storage on-site. • NRMM label was displayed properly. • Not required for reminder.
21 March 2018	• Effective dust mitigation measures should be provided for breaking activities and haul road to minimize dust generation. (General)	• Water spraying was provided to minimize dust generation.
27 March 2018	• Earth bund should be provided to prevent site surface runoff overflow into public drainage. (East Portion) • Soil and debris cumulated inside the bypass channel should be cleared. (East Portion) • As a reminder, housekeeping should be improved. General refuse scattered on-site should be cleared to maintain the site area clean and tidy. (Bending Yard)	• Earth bund was provided to prevent site surface runoff overflow into public drainage. • Soil and debris cumulated inside the bypass channel was cleared. • Not required for reminder.

Contract 2

7.2.3 In the Reporting Period, joint site inspection for Contract 2 to evaluate site environmental performance was carried out by the RE, ET and the Contractor on **7, 14, 21 and 28 March 2018** in which IEC joined the site inspection with SSEMC on **28 March 2018**. No non-compliance was noted.

7.2.4 The findings / deficiencies of ***Contract 2*** that observed during the weekly site inspection are listed in ***Table 7-2***.

Table 7-2 Site Observations of Contract 2

Date	Findings / Deficiencies	Follow-Up Status
7 March 2018	• Construction materials were observed at tree protection zone near site office. The Contractor was advised to remove the construction materials from tree protection zone. • The Contractor was reminded to maintain the U-channel at portion 2.	• Construction materials were removed. • Not required for reminder.
14 March 2018	• General refuse accumulated in the drainage channel was observed. The Contractor was advised to clean up the general refuse and maintain the drainage system. (Portion 7) • The Contractor was reminded to provide tree protection zone to retained tree	• General refuse was removed from the well at Portion 7. • Not required for reminder.
21 March 2018	• Oil stain was observed on site and the Contractor should to clean the oil stain properly. (Portion 2) • The Contractor was reminded to well maintain the tree protection zone. • The Contractor was reminded to renew the NRMM label in portion 1. • The Contractor was reminded to remove the stagnant water regularly. • The Contractor was reminded to provide waste sorting on site especially for C&D waste and general refuse.	• Oil stain was cleaned at Portion 2. • Not required for reminder. • Not required for reminder. • Not required for reminder. • Not required for reminder.
28 March 2018	• Free-standing chemical without label and drip tray was observed at Portion 1. The Contractor should provide chemical label for the container with drip tray underneath to prevent land contamination. • Tree protection zone should be provided for trees to be retained at Portion 1. • The Contractor was reminded to remove the stagnant water at Portion 2.	• Free-standing chemical was removed from site. • To be followed. • Not required for reminder.

Other Contracts

7.2.5 Since Contract 3 has not yet commenced, no site inspection was performed in the Reporting Period.

8. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

8.1 ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTION

8.1.1 In the Reporting Period, no environmental complaints were received for the Project. The outstanding investigation finding for the environmental complaint received in pervious reporting month is shown below.

(a) On 28 February 2018, a public complaint was received by EPD regarding the day time construction noise generated by breaking work near Shing Tat House of On Tat Estate. In our investigation, breaking works at Underground Stormwater Retention Tank (USRT) area which opposite to Shing Tat House was only 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. It is believe that with the completion of URST works, 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. Investigation Report for the complaint has been submitted by the ET with no further comment by IEC.

8.1.2 The complaint log and Investigation Report for the above complaint is shown in ***Appendix M.***

8.1.3 In the Reporting Period, no summons and prosecution under the EM&A Programme was lodged for the project. The statistical summary table of environmental complaint is presented in ***Tables 8-1, 8-2*** and ***8-3***.

Table 8-1 Statistical Summary of Environmental Complaints

Reporting Period	Contract no.	Environmental Complaint Statistics		
		Frequency	Cumulative	Complaint Nature
1 April 2017 –28 Feb 2018	1	0	**25**	**Dust, Noise and light nuisance**
1 April 2017 –28 Feb 2018	2	0	0	NA
1 – 31 Mar 2018	1	0	**25**	NA
1 – 31 Mar 2018	2	0	0	NA

Table 8-2 Statistical Summary of Environmental Summons

Reporting Period	Contract no.	Environmental Summons Statistics		
		Frequency	Cumulative	Summons Nature
1 April 2017 –28 Feb 2018	1	0	0	NA
1 April 2017 –28 Feb 2018	2	0	0	NA
1 – 31 Mar 2018	1	0	0	NA
1 – 31 Mar 2018	2	0	0	NA

Table 8-3 Statistical Summary of Environmental Prosecution

Reporting Period	Contract no.	Environmental Prosecution Statistics		
			Cumulative	Prosecution Nature
1 April 2017 –28 Feb 2018	1	0	0	NA
1 April 2017 –28 Feb 2018	2	0	0	NA
1 – 31 Mar 2018	1	0	0	NA
1 – 31 Mar 2018	2	0	0	NA

The Other Contracts

8.1.4 Since Contract 3 has not yet commenced, no environmental complaint, summons and prosecution are received in the Reporting Period.

9. IMPLEMENTATION STATUS OF MITIGATION MEASURES

9.1 GENERAL REQUIREMENTS

9.1.1 The environmental mitigation measures that recommended in the Implementation Schedule for Environmental Mitigation Measures (ISEMM) in the approved EM&A Manual covered the issues of dust, noise, water and waste and they are summarized presented in ***Appendix L.***

9.1.2 All contracts under the Project shall be implementing the required environmental mitigation measures according to the approved EM&A Manual as subject to the site condition. Environmental mitigation measures generally implemented in this Reporting Period are summarized in ***Table 9-1***.

Table 9-1 Environmental Mitigation Measures

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

9.2 TENTATIVE CONSTRUCTION ACTIVITIES IN THE COMING MONTH

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

i. Pedestrian Connectivity System B:
- Commence piling works at the South Lift Tower
- Continue excavation of U-channel 750U and commence construction.

ii. Internal Road L1 and Road L3:
- Continue excavation of the internal road L1 adjacent to Pedestrian Connectivity System B

iii. Box Culvert BC1 and BC2:
- Continue excavation of the internal road L1 adjacent to Pedestrian Connectivity System B.

iv. West Portal, East Portal and Underpass Tunnel:
- Continue slope cut at slope A3 and A4
- Continue slope cut at East Portal.

- Continue excavation for heading of tunnel face from West Portal.

v. Water Pumping Station including Retaining Wall RWA13 and RWA14:
- Continue excavation at Water Pumping Station area
- Continue construction of base slabs of retaining wall RWA13
- Continue construction of blinding layers of retaining wall RWA14

vi. Portion A3:
- Continue excavation for site formation
- Continue construction of U-channel

vii. Portion B8 and KW Asphalt Plant:
- Continue backfilling and compacting

viii. Portion B15:
- Continue demolishment of the KWP Crushing plant and Batching Plant

ix. Underground Stormwater Retention Tank (USRT):
- Continue open-cut excavation for the underground stormwater retention tank
- Continue construction of base slabs in Zone A and B.
- Continue steel reinforcement works for a wall structure in Zone A.
- Continue erection of structural components of a tower crane.

xvii. Internal Road L4 Pedestrian Connectivity System A, RWA12 and RWA18:
- Continue construction of wall structure of retaining wall RWA12 bay #22 upward +165mPD.
- Construction a temporary cascade at retaining wall RWA12 bay #22.
- Continue construction of a temporary haul road.
- Continue excavation of retaining wall RWA2 bay #17 to 20.
- Continue excavation of retaining wall RWA18.
- Continue construction of noise barrier structures.

x. PTT:
- Conduct a pile load test for a vertical H-pile (1 no.).
- Commence excavation for construction of pile caps.

xi. Rock Slope Survey and Slope Stabilization at Portion B1:
- Commence trial erection for bamboo scaffolds at slope feature 11NE-D/C998 and 11NE-D/C1004 upon approval of a method statement submitted.
- Continue erection of inspection scaffolds and platforms for slope feature 11NE-D/C988 for CH230 to CH250, CH605 to CH615 and CH623 to CH633.
- Continue rock dowelling at CH150 to CH225 slope feature 11NE-D/C998 and slope A16.
- Continue erection of inspection scaffolds and platforms for slope feature 11NE-D/C999 for CH230 to CH250 and CH347 to CH357.

xii. Establishment Works of the Planting Medium on the Existing Slope Berms in Portion B1 and B5:
- Continue establishment works at existing berms on slopes in Portion B1 for 9-month establishment works for landscape softworks under establishment schedule no.1
- Continue establishment works at existing berms on slopes in Portion B1 for 17-month establishment works for landscape softworks under establishment schedule no.2
- Continue establishment works on slopes in Portion B1 for 30-month establishment works for landscape softworks under establishment schedule no.3

xiii. Mitigation Works for Natural Terrain Catchment B5:
- Commence construction of U-channel and catch pits.
- Commence construction of gabion block barriers.

xiv. Road Improvement Works at Po Lam Road:
- Continue site clearance and construction of temporary footpath in Phase 1.
- Commence excavation to expose existing underground utilities in Phase 1.

xv. Land Contamination – Ground Investigation:
- Continue drilling works and installation of a monitoring well for ground investigation at BH10.

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

1. Portion 1: Continue piling work. Continue ELS for E1-PC4 and E1-PC6. Commence Piling Load Test.
2. Portion 2: Commence piling works; Commence rock slope excavation.
3. Portion 4: Continue the slip road construction and commence TTA road diversion.
4. Portion 5: Complete sheet piling installation. Complete UU ground settlement markers. Complete tree transplant work, Commence covered walkway construction;
5. Portion 6: Continue Rock dowel installation work. Cary out removal of existing EPD fence. Carry out inspection pit to locate existing water mains;
6. Portion 7: Complete hiking trail extension in Site A. Commence slope improvement work in Site B;
7. Portion 8 & 9: Carry out soil nail head construction works. Carry out trial pits for baffle works

9.3 KEY ISSUES FOR THE COMING MONTH

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

10. CONCLUSIONS AND RECOMMENDATIONS

10.1 CONCLUSIONS

10.1.1 This is **12th** monthly EM&A report presenting the monitoring results and inspection findings for the Reporting Period from **1** to **31 March 2018**.

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 In the Reporting Period, no construction noise measurement results that exceeded the Limit Level were recorded and no noise complaint was received.

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

10.1.5 In the Reporting Period, no environmental complaints were received for 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 and 2 in accordance with the EM&A Manual stipulation whereas IEC performed monthly site inspection for both contracts. No non-compliance observed during the site inspection.

10.2 RECOMMENDATIONS

10.2.1 As wet season is approaching, preventive measures for muddy water or other water pollutants from site surface overflow to public area should be properly maintained. The Contractors should paid special attention on water quality mitigation measures and fully implement according ISEMM of the EM&A Manual.

10.2.2 Since construction site is highly visible to the resident at nearby estates, the Contractors should fully implement air quality mitigation measures to reduce construction dust emission.

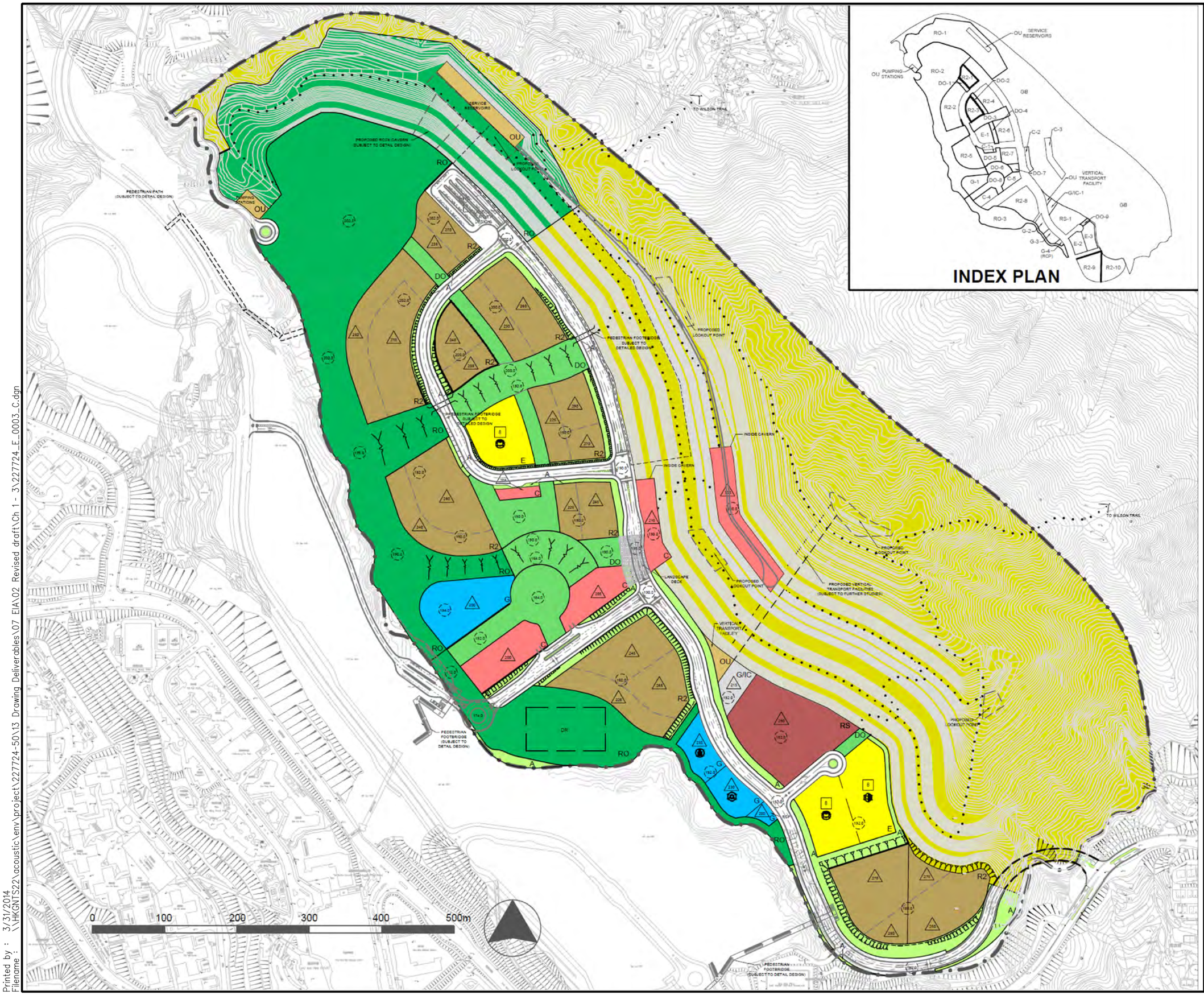
10.2.3 Construction noise would be a key environmental issue during construction work of the Project. Noise mitigation measures such as using quiet plants should be implemented in accordance with the EM&A requirement.

10.2.4 In addition, all effluent discharge shall be ensure to fulfill Technical Memorandum of Effluent Discharged into Drainage and Sewerage Systems, inland and Coastal Waters criteria or discharge permits stipulation.

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

Appendix A

Layout plan of the Project



LEGEND

- POLICE STATION
- DIVISIONAL FIRE STATION
- SECONDARY SCHOOL
- PRIMARY SCHOOL
- PTT — PUBLIC TRANSPORT TERMINUS
- PLANNING BOUNDARY
- UNDERPASS
- PROPOSED PEDESTRIAN TRAIL
- PEDESTRIAN PRECINCT
- DR — DRAINAGE RESERVE
- 255 — MAXIMUM BUILDING HEIGHT (in m above PD)
- 8 — MAXIMUM BUILDING HEIGHT (in storeys)
- 200.0 — PROPOSED LEVEL (in m above PD)
- PROPOSED SLOPE
- RCP — REFUSE COLLECTION POINT
- FOOTBRIDGE
- C — COMMERCIAL
- RS — SPECIAL RESIDENTIAL
- R2 — RESIDENTIAL ZONE-2
- G — GOVERNMENT
- G/IC — GOVERNMENT/ INSTITUTION OR COMMUNITY
- E — EDUCATION
- RO — REGIONAL OPEN SPACE
- DO — DISTRICT OPEN SPACE
- A — AMENITY
- OU — OTHER SPECIFIED USES
- GB — GREEN BELT
- ROADS, JUNCTIONS, ETC.
- AREA WITH POTENTIAL FOR ROCK CAVERN DEVELOPMENT

Rev	Description	By	Date
C	THIRD ISSUE	GL	03/14
B	SECOND ISSUE	GL	01/14
A	FIRST ISSUE	GL	10/13

Consultant

ARUP

Contract No. and Title

Agreement No. CE 18/2012(CE)

Development of Anderson Road Quarry - Investigation

Drawing title

Recommended Outline Development Plan

Drawing no.			Rev.
227724/E/0003			C
Drawn GL	Date 03/14	Checked TC	Approved ST
Scale AS SHOWN		Status PRELIMINARY	

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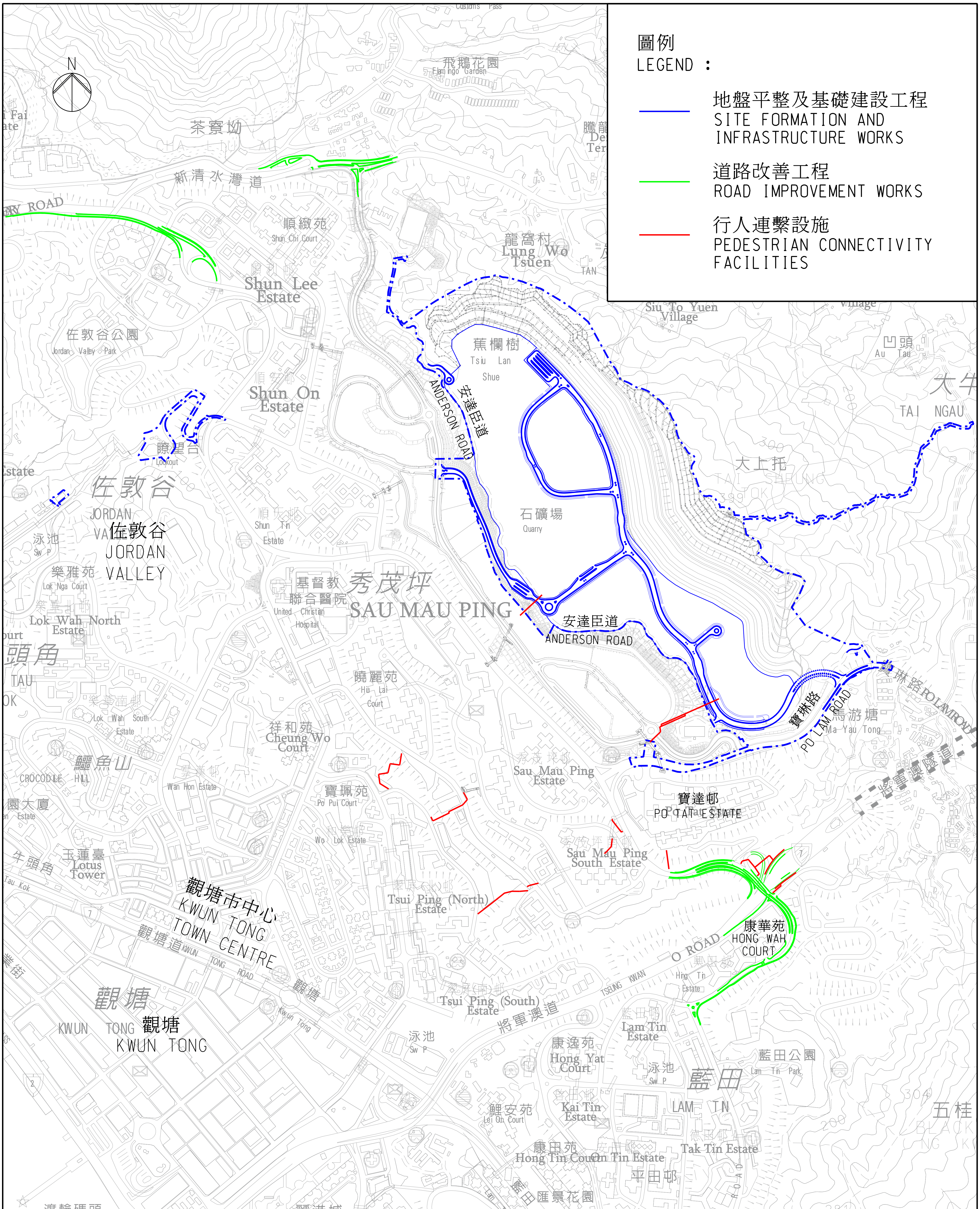
土木工程拓展署
Civil Engineering and Development Department

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



圖則名稱 drawing title	繪圖 drawn: H K TSANG	簽署 initial	日期 date: 23.3.16	項目編號 item no.	辦事處 office: 新界東拓展處 NEW TERRITORIES EAST DEVELOPMENT OFFICE
安達臣道石礦場發展工程位置圖 DEVELOPMENT OF ANDERSON ROAD QUARRY SITE PROJECT LOCATION PLAN	核對 checked: L M CHAN	簽署 initial	日期 date: 23.3.16	比例 scale: 1:10 000 @ A3	土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT (CEDD)
	核准 approved: T S LI	簽署 initial	日期 date: 23.3.16	圖則編號 drawing no.: CDEARQZ0003	

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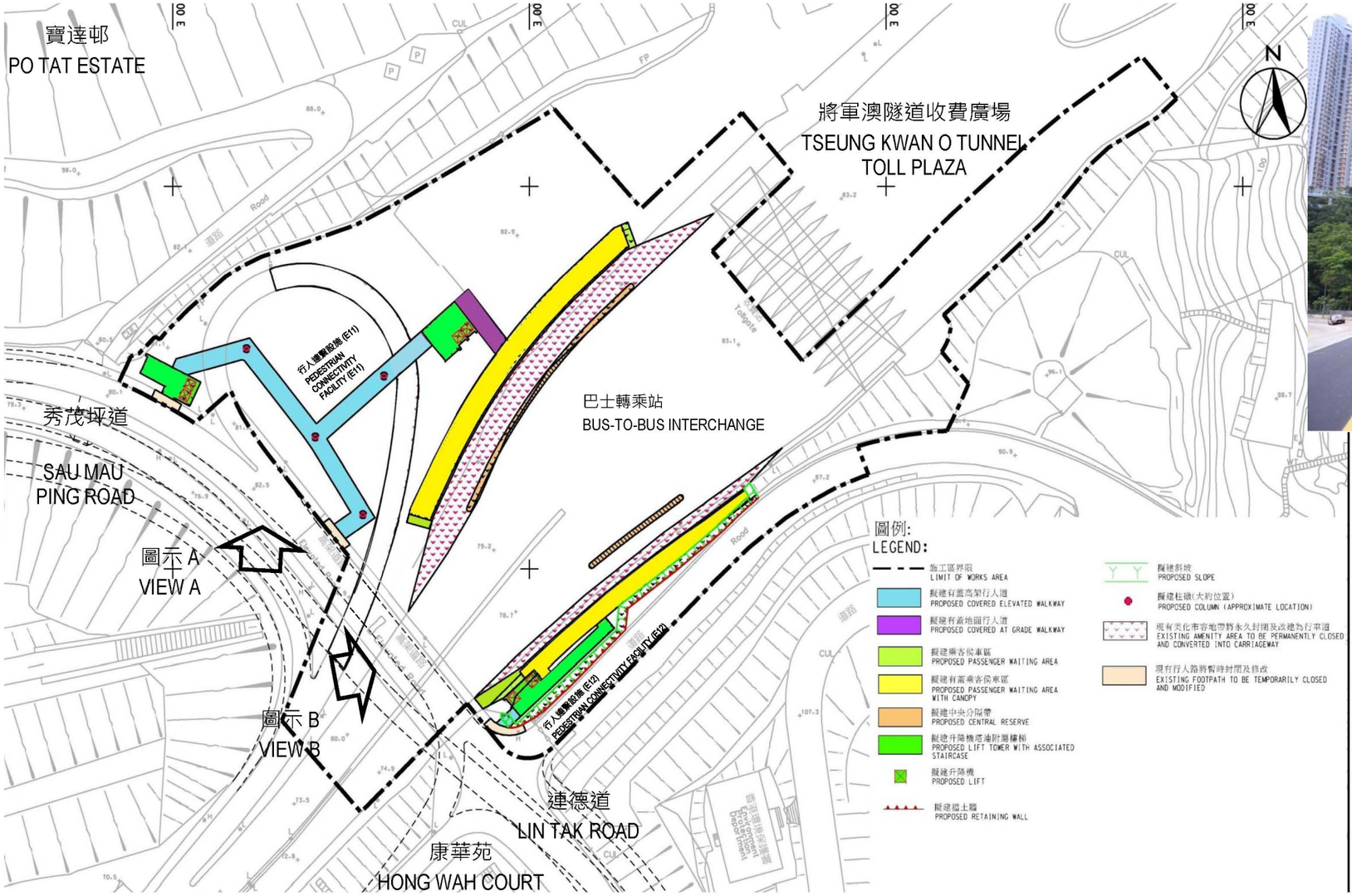
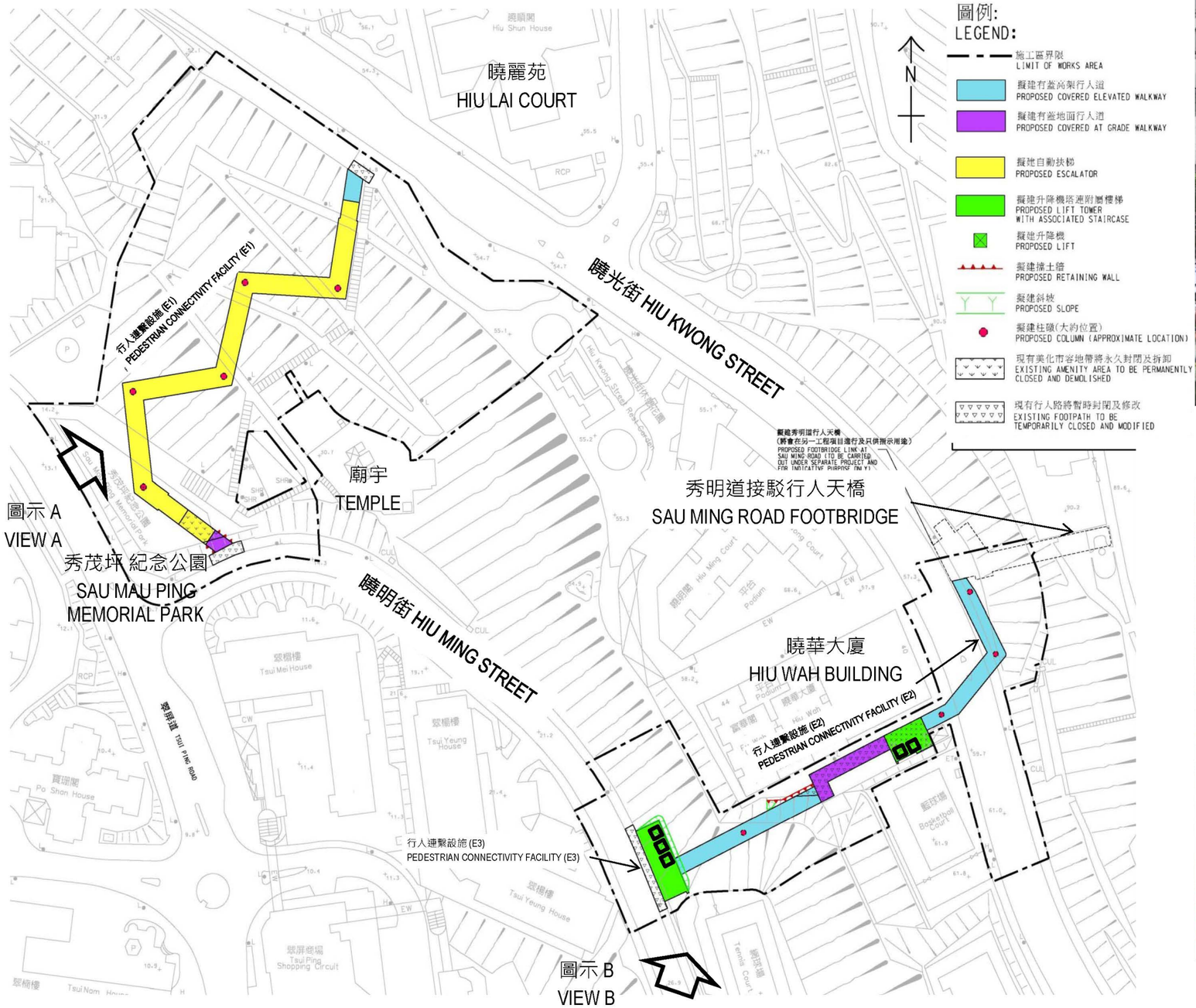
A3 297MM X 420MM



圖示 A VIEW A

圖示 B VIEW B

圖則名稱 Drawing Title	項目編號 Item No.	辦事處 Office
行人連繫設施(巴士轉乘站、E11及E12) - 平面圖及構思圖 Pedestrian Connectivity Facilities (Bus-to-Bus Interchange, E11 and E12) - Layout Plan and Artist's Impression	765CL	新界東拓展處 NEW TERRITORIES EAST DEVELOPMENT OFFICE
	比例 Scale	土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
	圖則編號 Drawing No. 附件五 Appendix 5	



圖示 A VIEW A

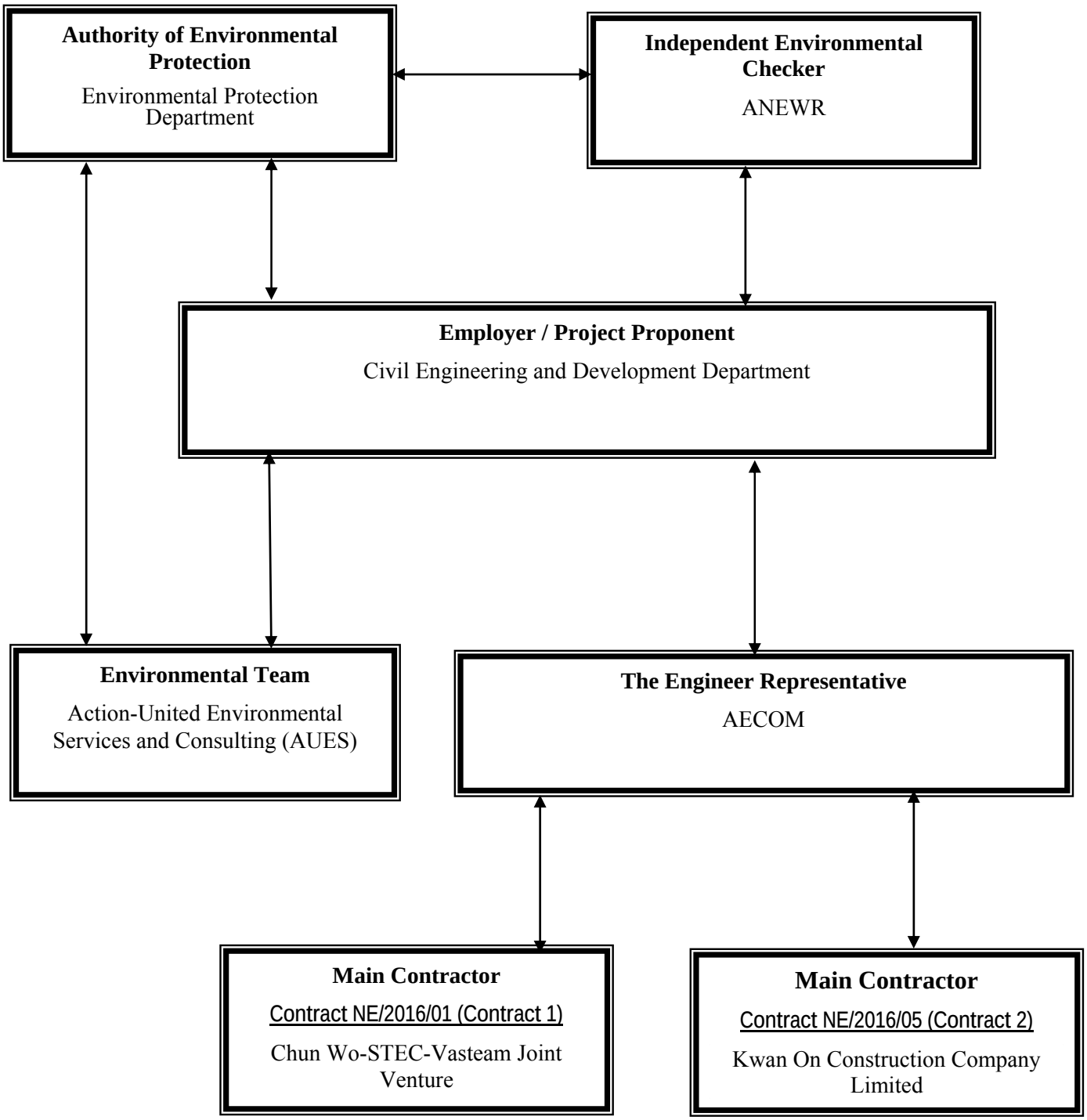
圖示 B VIEW B

圖則名稱 Drawing Title	項目編號 Item No.	辦事處 Office
行人連繫設施(E1、E2及E3) - 平面圖及構思圖 Pedestrian Connectivity Facilities (E1, E2 and E3) - Layout Plan and Artist's Impression	765CL	新界東拓展處 NEW TERRITORIES EAST DEVELOPMENT OFFICE
	比例 Scale	土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
	圖則編號 Drawing No. 附件二 Appendix 2	

Appendix B

Organization Chart

Project Organization Structure for



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

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Engineer	Stephen Li	2301 1383	2739 0076
AECOM	Chief Resident Engineer	Dennis Leung	2967 6608	2473 3221
AECOM	Senior Resident Engineer	Simon Leung	2967 6608	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	Kiwi Chan	2638 7181	2744 6937
AUES	Environmental Team Leader	T. W. Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Nicola Hon	2959 6059	2959 6079
AUES	Environmental Consultant	Ben Tam	2959 6059	2959 6079

Legend:

CEDD (Employer) – Civil Engineering and Development Department

AECOM (Engineer) – AECOM Asia Co. Ltd.

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

ANEWR (IEC) –ANewR Consulting Limited

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

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

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Engineer	Stephen Li	2301 1383	2739 0076
AECOM	Chief Resident Engineer	Dennis Leung	2967 6608	2473 3221
AECOM	Senior Resident Engineer	Simon Leung	2967 6608	2473 3221
ANEWR	Independent Environmental Checker	Adi Lee	2618 2836	3007 8648
KOCCL	Project Director	Ambrose Kwong	2889 2675	2558 6900
KOCCL	Site Agent	Antony Kwok	2898 8510	2558 6900
KOCCL	Safety and Environmental Manager	Joly C K Kwong	6111 5711	2558 6900
KOCCL	Environmental Officer	Fung Hiu Lam, Purvi	6395 3685	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

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

Appendix C

Construction Programme

(a) Contract 1 (NE/2016/01)

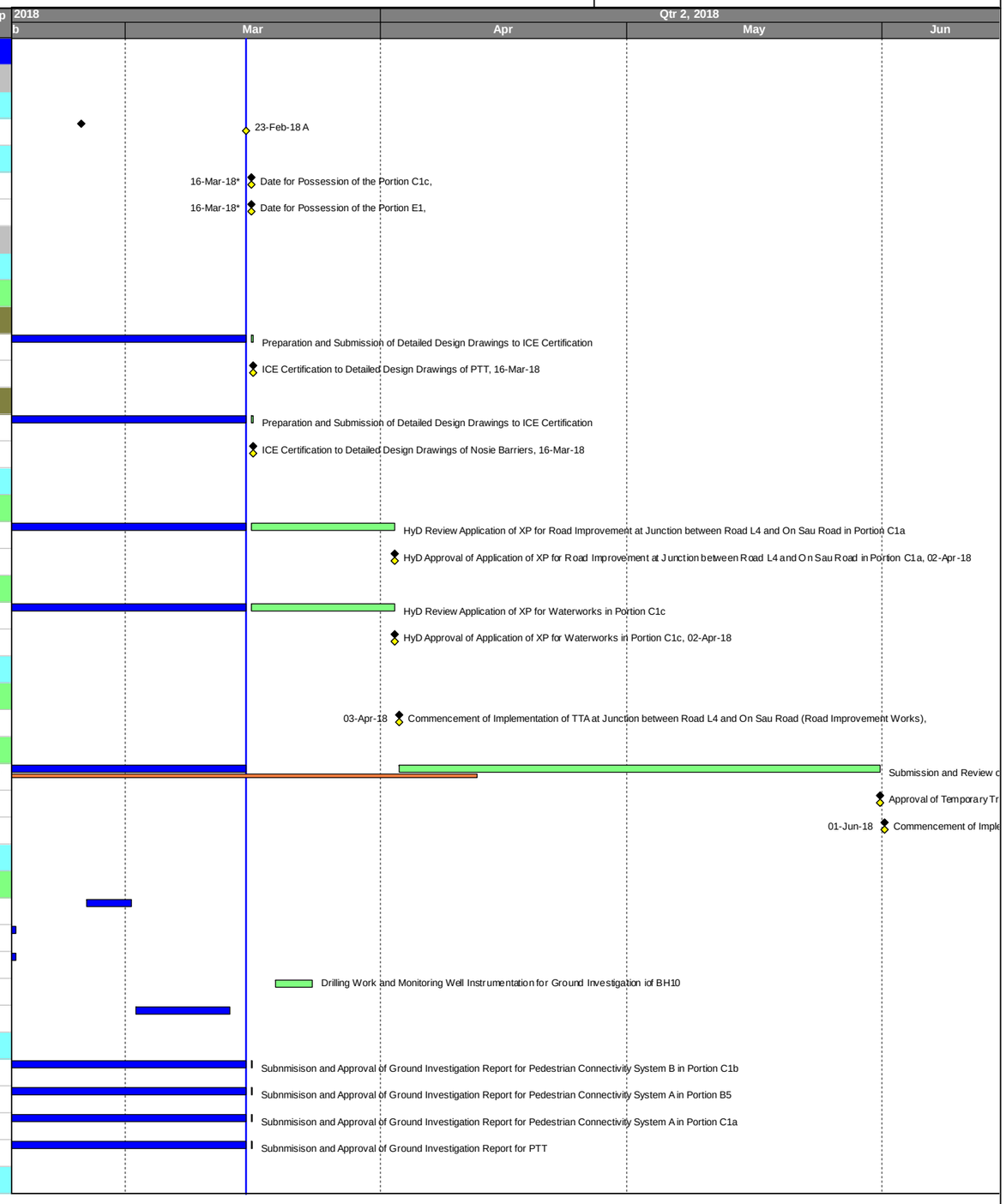
(b) Contract 2 (NE/2016/05)

20 Mar 2018

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

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

Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
ARQ - Works Programme Rev.1 - 3MRP (15 Mar 2018)								
Project Key Dates								
Key Dates for Completion of Sections of the Works								
AKC1010	KD1 - Completion of Section I of the Works - Portion A4	0	0		23-Feb-18		23-Feb-18 A	100%
Possession Periods								
AKP1220	Date for Possession of the Portion C1c	0	0	24-Jan-18		16-Mar-18*		0%
AKP1270	Date for Possession of the Portion E1	0	0	25-Dec-16		16-Mar-18*		0%
Preliminary								
Design								
Alternative Design (AD)								
PTT (Changing from Bored Piles to Socket H Piles and Pile Cap/Tie Beam Thickness)								
APD1040	Preparation and Submission of Detailed Design Drawings to ICE Certification	30	251	07-Jul-17	10-Aug-17	16-May-17 A	16-Mar-18	98%
APD1050	ICE Certification to Detailed Design Drawings of PTT	0	0		10-Aug-17		16-Mar-18	0%
Noise Barriers (Re-design of Footings) at Road L4								
APD2040	Preparation and Submission of Detailed Design Drawings to ICE Certification	30	330	29-May-17	04-Jul-17	06-Feb-17 A	16-Mar-18	98%
APD2050	ICE Certification to Detailed Design Drawings of Nosie Barriers	0	0		04-Jul-17		16-Mar-18	0%
Excavation Permit (XP)								
On Sau Road (Junction between Road L4 and On Sau Road)								
APF1020	HyD Review Application of XP for Road Improvement at Junction between Road L4 and On Sau Road in Portion C1a	180	312	26-May-17	21-Nov-17	26-May-17 A	02-Apr-18	90%
APF1030	HyD Approval of Application of XP for Road Improvement at Junction between Road L4 and On Sau Road in Portion C1a	0	0		21-Nov-17		02-Apr-18	0%
Portion C1c								
APF1170	HyD Review Application of XP for Waterworks in Portion C1c	180	120	01-Aug-17	27-Jan-18	04-Dec-17 A	02-Apr-18	90%
APF1180	HyD Approval of Application of XP for Waterworks in Portion C1c	0	0		27-Jan-18		02-Apr-18	0%
Temporary Traffic Arrangement and Control								
On Sau Road (Junction between Road L4 and On Sau Road)								
APT2030	Commencement of Implementation of TTA at Junction between Road L4 and On Sau Road (Road Improvement Works)	0	0	22-Nov-17		03-Apr-18		0%
Portion C1c								
APT4010	Submission and Review of Temporary Traffic Arrangement (TTA) Scheme for Portion C1c	75	179	28-Jan-18	12-Apr-18	04-Dec-17 A	31-May-18	21.33%
APT4020	Approval of Temporary Traffic Arrangement (TTA) Scheme for Portion C1c	0	0		12-Apr-18		31-May-18	0%
APT4030	Commencement of Implementation of TTA for Portion C1c	0	0	13-Apr-18		01-Jun-18		0%
Land Contamination - Ground Investigation								
Portion B7/B12/B15 (BH-01 to BH-11)								
APL1030A003	Drilling Work and Monitoring Well Instrumentation for Ground Investigation iof BH05	0	5			24-Feb-18 A	01-Mar-18 A	100%
APL1030A005	Drilling Work and Monitoring Well Instrumentation for Ground Investigation iof BH04	0	4			12-Feb-18 A	15-Feb-18 A	100%
APL1030A006	Drilling Work and Monitoring Well Instrumentation for Ground Investigation iof BH07	0	23			20-Jan-18 A	15-Feb-18 A	100%
APL1030A007	Drilling Work and Monitoring Well Instrumentation for Ground Investigation iof BH10	0	5			19-Mar-18*	23-Mar-18	0%
APL1030A008	Drilling Work and Monitoring Well Instrumentation for Ground Investigation iof BH11	0	10			02-Mar-18 A	13-Mar-18 A	100%
Ground Investigation								
APG1110	Subnmisison and Approval of Ground Investigation Report for Pedestrian Connectivity System B in Portion C1b	21	255	01-Jun-17	24-Jun-17	10-May-17 A	16-Mar-18	98%
APG1120	Subnmisison and Approval of Ground Investigation Report for Pedestrian Connectivity System A in Portion B5	21	291	22-Mar-17	19-Apr-17	22-Mar-17 A	16-Mar-18	98%
APG1130	Subnmisison and Approval of Ground Investigation Report for Pedestrian Connectivity System A in Portion C1a	21	142	24-Aug-17	16-Sep-17	21-Sep-17 A	16-Mar-18	98%
APG1140	Subnmisison and Approval of Ground Investigation Report for PTT	21	267	05-Aug-17	29-Aug-17	24-Apr-17 A	16-Mar-18	98%
ARQ - MEP Submission								



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

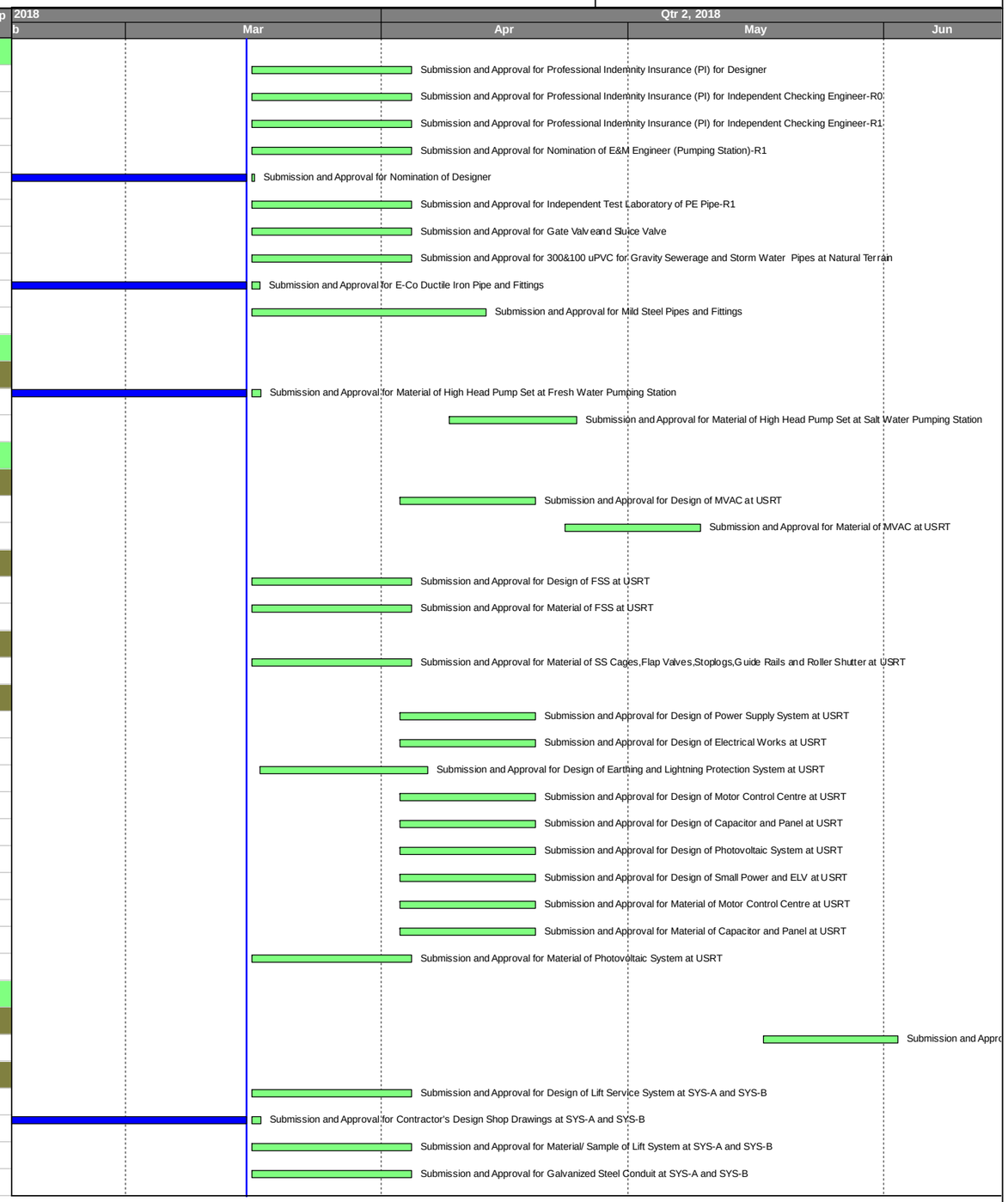
Planned Bar (WP)
Actual Bar
Forecast Bar
Planned Milestone (WP)
Milestone

3-MONTH ROLLING PROGRAMME
(In comparison with WP Rev.1 dated 25 Aug 2017)

ARQ - Programme Logics based on WP Rev.1 dated 25 Aug 2017			
Date	Revision	Checked	Approved
20-Mar-18	3MRP Rev.1 (Cut Off on 15 Mar 18)		

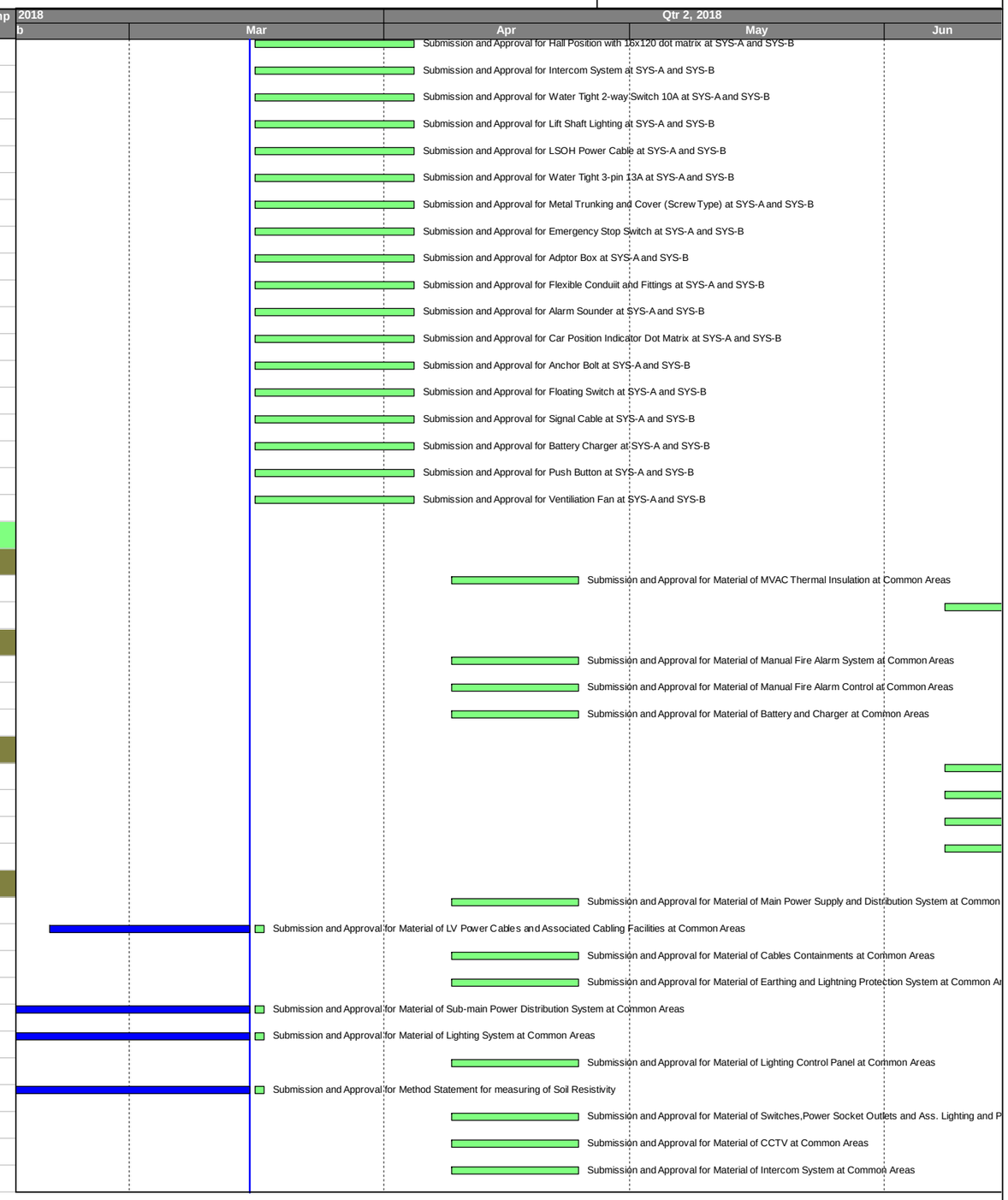
俊和－上隧－浩隆聯營
CHUN WO – STEC – VASTEAM JOINT VENTURE

Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
General Submission								
A1029	Submission and Approval for Professional Indemnity Insurance (PI) for Designer	0	14			16-Mar-18*	04-Apr-18	0%
A1030	Submission and Approval for Professional Indemnity Insurance (PI) for Independent Checking Engineer-R0	0	14			16-Mar-18*	04-Apr-18	0%
A1031	Submission and Approval for Professional Indemnity Insurance (PI) for Independent Checking Engineer-R1	0	14			16-Mar-18*	04-Apr-18	0%
A1050	Submission and Approval for Nomination of E&M Engineer (Pumping Station)-R1	0	14			16-Mar-18*	04-Apr-18	0%
A1140	Submission and Approval for Nomination of Designer	0	95			20-Nov-17 A	16-Mar-18	95%
A1170	Submission and Approval for Independent Test Laboratory of PE Pipe-R1	0	14			16-Mar-18*	04-Apr-18	0%
A1180	Submission and Approval for Gate Valve and Sluice Valve	0	14			16-Mar-18*	04-Apr-18	0%
A1190	Submission and Approval for 300&100 uPVC for Gravity Sewerage and Storm Water Pipes at Natural Terrain	0	14			16-Mar-18*	04-Apr-18	0%
A1200	Submission and Approval for E-Co Ductile Iron Pipe and Fittings	0	124			16-Oct-17 A	17-Mar-18	95%
A1210	Submission and Approval for Mild Steel Pipes and Fittings	0	21			16-Mar-18*	13-Apr-18	0%
Fresh and Salt Water Pumping Station								
Mechanical								
A1320	Submission and Approval for Material of High Head Pump Set at Fresh Water Pumping Station	0	124			16-Oct-17 A	17-Mar-18	90%
A1330	Submission and Approval for Material of High Head Pump Set at Salt Water Pumping Station	0	14			09-Apr-18*	24-Apr-18	0%
Underground Stormwater Retention Tank								
MVAC								
A2460	Submission and Approval for Design of MVAC at USRT	0	14			03-Apr-18*	19-Apr-18	0%
A2470	Submission and Approval for Material of MVAC at USRT	0	14			23-Apr-18*	09-May-18	0%
Fire Services								
A2600	Submission and Approval for Design of FSS at USRT	0	14			16-Mar-18*	04-Apr-18	0%
A2610	Submission and Approval for Material of FSS at USRT	0	14			16-Mar-18*	04-Apr-18	0%
Mechanical								
A2620	Submission and Approval for Material of SS Cages,Flap Valves,Stoplogs,Guide Rails and Roller Shutter at USRT	0	14			16-Mar-18*	04-Apr-18	0%
Electrical								
A2480	Submission and Approval for Design of Power Supply System at USRT	0	14			03-Apr-18*	19-Apr-18	0%
A2490	Submission and Approval for Design of Electrical Works at USRT	0	14			03-Apr-18*	19-Apr-18	0%
A2500	Submission and Approval for Design of Earthing and Lightning Protection System at USRT	0	14			17-Mar-18*	06-Apr-18	0%
A2510	Submission and Approval for Design of Motor Control Centre at USRT	0	14			03-Apr-18*	19-Apr-18	0%
A2520	Submission and Approval for Design of Capacitor and Panel at USRT	0	14			03-Apr-18*	19-Apr-18	0%
A2540	Submission and Approval for Design of Photovoltaic System at USRT	0	14			03-Apr-18*	19-Apr-18	0%
A2550	Submission and Approval for Design of Small Power and ELV at USRT	0	14			03-Apr-18*	19-Apr-18	0%
A2560	Submission and Approval for Material of Motor Control Centre at USRT	0	14			03-Apr-18*	19-Apr-18	0%
A2570	Submission and Approval for Material of Capacitor and Panel at USRT	0	14			03-Apr-18*	19-Apr-18	0%
A2590	Submission and Approval for Material of Photovoltaic System at USRT	0	14			16-Mar-18*	04-Apr-18	0%
Pedestrian Connectivity System A								
Electrical								
A2650	Submission and Approval for Design of Power Supply System at SYS-A	0	14			17-May-18*	02-Jun-18	0%
Passenger Lift								
A2690	Submission and Approval for Design of Lift Service System at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2700	Submission and Approval for Contractor's Design Shop Drawings at SYS-A and SYS-B	0	36			31-Jan-18 A	17-Mar-18	90%
A2710	Submission and Approval for Material/ Sample of Lift System at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2720	Submission and Approval for Galvanized Steel Conduit at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%



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

Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
A2730	Submission and Approval for Hall Position with 16x120 dot matrix at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2740	Submission and Approval for Intercom System at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2750	Submission and Approval for Water Tight 2-way Switch 10A at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2760	Submission and Approval for Lift Shaft Lighting at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2770	Submission and Approval for LSOH Power Cable at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2780	Submission and Approval for Water Tight 3-pin 13A at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2790	Submission and Approval for Metal Trunking and Cover (Screw Type) at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2800	Submission and Approval for Emergency Stop Switch at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2810	Submission and Approval for Adptor Box at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2820	Submission and Approval for Flexible Conduiit and Fittings at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2830	Submission and Approval for Alarm Sounder at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2840	Submission and Approval for Car Position Indicator Dot Matrix at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2850	Submission and Approval for Anchor Bolt at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2860	Submission and Approval for Floating Switch at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2870	Submission and Approval for Signal Cable at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2880	Submission and Approval for Battery Charger at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2890	Submission and Approval for Push Button at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
A2900	Submission and Approval for Ventiliation Fan at SYS-A and SYS-B	0	14			16-Mar-18*	04-Apr-18	0%
Common for All Areas								
MVAC								
A2970	Submission and Approval for Material of MVAC Thermal Insulation at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
A2980	Submission and Approval for Material of MVAC LMCP at Common Areas	0	14			08-Jun-18*	25-Jun-18	0%
Fire Services								
A3070	Submission and Approval for Material of Manual Fire Alarm System at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
A3080	Submission and Approval for Material of Manual Fire Alarm Control at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
A3090	Submission and Approval for Material of Battery and Charger at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
Plumbing and Drainage Services								
A3120	Submission and Approval for Material of Tanks,Pipes,Valves and Fittings for Fresh Water and Cleaning Water Supply System	0	14			08-Jun-18*	25-Jun-18	0%
A3130	Submission and Approval for Material of Tanks,Pipes,Valves and Fittings for Flushing Water Supply System	0	14			08-Jun-18*	25-Jun-18	0%
A3140	Submission and Approval for Material of Pipes,Valves and Fittings for Drainage System	0	14			08-Jun-18*	25-Jun-18	0%
A3150	Submission and Approval for Material of LMCP for Drainage Pump System	0	14			08-Jun-18*	25-Jun-18	0%
Electrical								
A2990	Submission and Approval for Material of Main Power Supply and Distribution System at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
A3000	Submission and Approval for Material of LV Power Cables and Associated Cabling Facilities at Common Areas	0	22			19-Feb-18 A	17-Mar-18	90%
A3010	Submission and Approval for Material of Cables Containments at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
A3020	Submission and Approval for Material of Earthing and Lightning Protection System at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
A3030	Submission and Approval for Material of Sub-main Power Distribution System at Common Areas	0	71			18-Dec-17 A	17-Mar-18	90%
A3040	Submission and Approval for Material of Lighting System at Common Areas	0	71			18-Dec-17 A	17-Mar-18	90%
A3050	Submission and Approval for Material of Lighting Control Panel at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
A3051	Submission and Approval for Method Statement for measuring of Soil Resistivity	0	32			05-Feb-18 A	17-Mar-18	90%
A3060	Submission and Approval for Material of Switches,Power Socket Outlets and Ass. Lighting and Power at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
A3210	Submission and Approval for Material of CCTV at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
A3220	Submission and Approval for Material of Intercom System at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%



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

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

3-MONTH ROLLING PROGRAMME
(In comparison with WP Rev.1 dated 25 Aug 2017)

ARQ - Programme Logics based on WP Rev.1 dated 25 Aug 2017

Date	Revision	Checked	Approved
20-Mar-18	3MRP Rev.1 (Cut Off on 15 Mar 18)		

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CHUN WO – STEC – VASTEAM JOINT VENTURE

Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
A3230	Submission and Approval for Material of Telephone System at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
A3240	Submission and Approval for Material of Security System at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
A3250	Submission and Approval for Material of Redio System at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
A3260	Submission and Approval for Material of ELV Cable at Common Areas	0	14			09-Apr-18*	24-Apr-18	0%
A3270	Submission and Approval for Material of UPS at Fresh and Salt Water Pumping Station	0	14			09-Apr-18*	24-Apr-18	0%
Instrumentation								
A3160	Submission and Approval for Material of Station Control and Instrumentation Panel at Common Areas	0	14			08-Jun-18*	25-Jun-18	0%
A3170	Submission and Approval for Valve Control Panel and Instrutmentation Panel at Common Areas	0	14			08-Jun-18*	25-Jun-18	0%
A3180	Submission and Approval for Process Instruments at Common Areas	0	26			12-Feb-18 A	17-Mar-18	90%
A3190	Submission and Approval for Upgrading Works to Existing SCADA at SWS SW P/S, CKL SW P/S and CSW Office at Common Areas	0	14			16-Mar-18*	04-Apr-18	0%
Civil Requirement								
A3110	Submission and Approval for Drawings of Civil Requirement for ARQ	0	14			16-Mar-18*	04-Apr-18	0%
Interface with Other Contractors								
AI1040	KW to Backfill the Stockpile Area within South Boundary of Zone A (Assume 50 layers with 2 days cycle per layer)	100	188	05-May-17	31-Aug-17	28-Aug-17 A	18-Apr-18	75%
AI1050A002	Demolish and Remove KWP Crushing Plant in Portion B15	0	34			10-Feb-18 A	24-Mar-18	73.33%
AI1050A003	Demolish and Remove KW Batching Plant in Portion B15	0	40			08-Mar-18 A	27-Apr-18	0%
Construction and Installation								
Temporary Works								
Tower Cranes at Underground Stormwater Tank								
ACT1110	Delivery of Tower Crane Components to Site	21	9	12-Dec-17	01-Jan-18	23-Feb-18 A	03-Mar-18 A	100%
ACT1120A001	Erect Bottom Part - Structural Frame of a Tower Crane in Zone C	0	4			28-Feb-18 A	03-Mar-18 A	100%
Underpass Tunnel								
West Portal								
ACU1050A013	B1 - Soil Nail Drilling and Grouting at West Portal (J7 to J8)	0	6			13-Apr-18*	18-Apr-18	0%
ACU1050A014	B1 - Soil Nail Drilling and Grouting at West Portal (F1 to F16)	0	12			19-Apr-18	30-Apr-18	0%
ACU1050A015	B1 - Soil Nail Drilling and Grouting at West Portal (E1 to E12)	0	14			01-May-18	14-May-18	0%
ACU1050A016	B1 - Soil Nail Drilling and Grouting at West Portal (E13 to E24)	0	14			15-May-18	28-May-18	0%
ACU1050A017	B1 - Soil Nail Drilling and Grouting at West Portal (D1 to D12)	0	14			29-May-18	11-Jun-18	0%
ACU1050A018	B1 - Soil Nail Drilling and Grouting at West Portal (D13 to D27)	0	14			12-Jun-18	25-Jun-18	0%
ACU1060A001	B1 - Rock Breaking at West Portal beyond West Portal Entrance	0	317			17-May-17 A	30-Mar-18	88%
East Portal								
ACU2050A002	D1 - Demolition of Existing No-fine Concrete from +185 to +190mPD	0	1			26-Mar-18*	26-Mar-18	0%
ACU2050A003	D1 - Trimming of Slope Profile for Permanent Soil Nailing Works at Row K and L	0	22			05-Mar-18 A	29-Mar-18	45.45%
ACU2050A004	D1 - Soil Nail Drilling and Grouting at East Portal (J1 to J6)	0	5			04-Jun-18*	08-Jun-18	0%
ACU2050A005	D1 - Soil Nail Drilling and Grouting at East Portal (H1 to H11)	0	5			09-Jun-18	14-Jun-18	0%
ACU2050A014	D1 - Stage 2 - Forming Temporary Haul Road +185mPD to +181mPD	0	6			16-Mar-18	21-Mar-18	0%
ACU2050A016	D1 - Stage 3 - Tree Felling adjacent to Slope A2 at +183mPD (RWA1c)	0	1			16-Mar-18*	16-Mar-18	0%
ACU2050A017	D1 - Stage 3 - Froming Temporary Haul Road +183mPD to +176mPD (RWA1c)	0	24			17-Mar-18	09-Apr-18	0%
ACU2050A019	D1 - Stage 4 - Froming Temporary Haul Road +183mPD to +176mPD (RWA1c)	0	14			10-Apr-18	23-Apr-18	0%
ACU2050A020	D1 - Stage 4 - Protective Fencing at +176mPD (RWA1c)	0	3			24-Apr-18	26-Apr-18	0%
ACU2050A021	D1 - Stage 4 - Temporary Soil Nailing Works (65nos.) at Slope A2 (RWA1c)	0	30			27-Apr-18	26-May-18	0%
ACU2050A022	D1 - Stage 5 - Excavation from +170mPD to +168.5mPD (At East Portal Entrance)	0	4			27-May-18	30-May-18	0%
ACU2050A023	D1 - Stage 5 - Removal of Top Row Concrete Block at +170mPD to +168.5mPD (At East Portal Entrance)	0	1			31-May-18	31-May-18	0%

Planned Bar (WP)
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Planned Milestone (WP)
Milestone

3-MONTH ROLLING PROGRAMME
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Date	Revision	Checked	Approved
20-Mar-18	3MRP Rev.1 (Cut Off on 15 Mar 18)		

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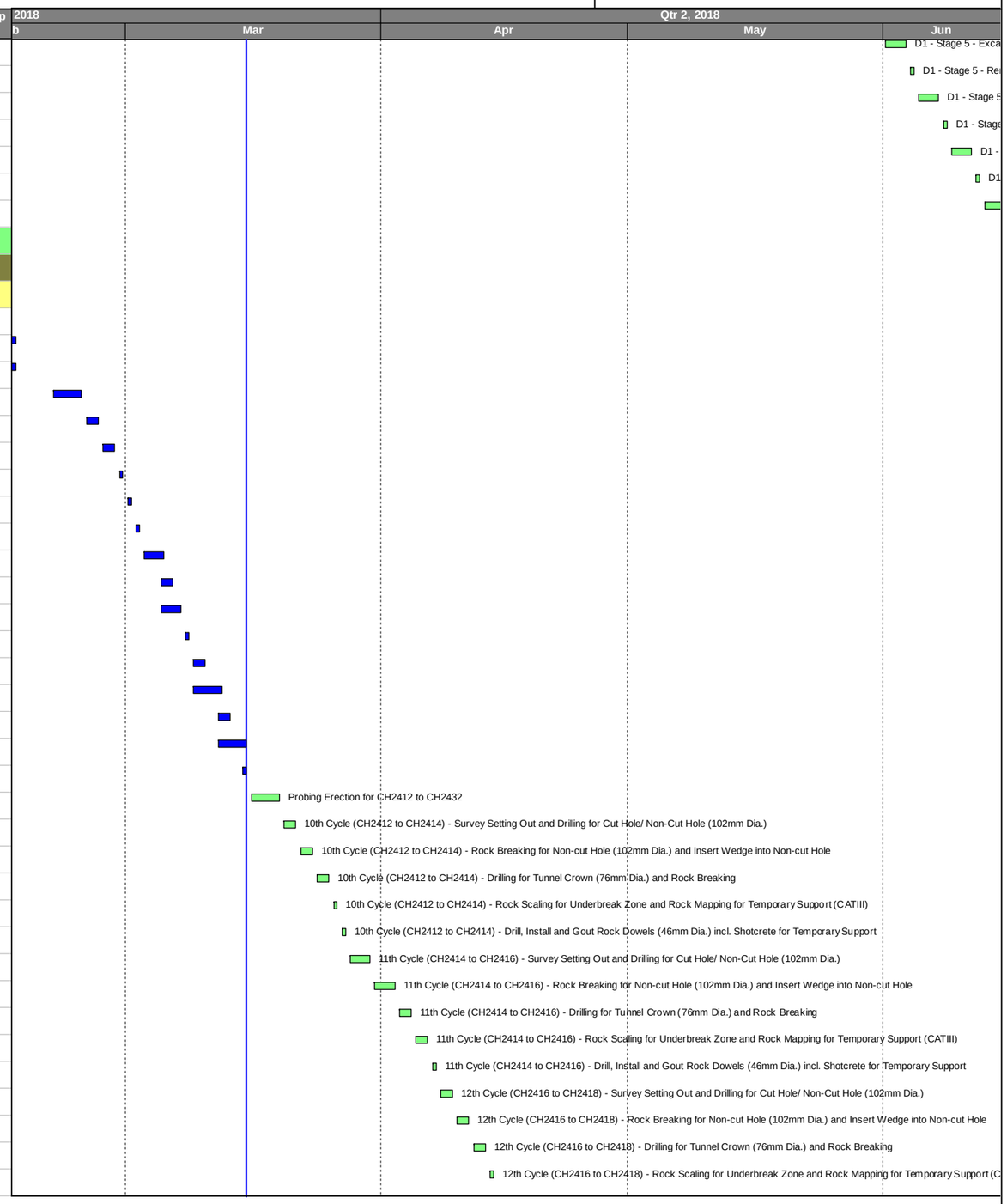
CHUN WO – STEC – VASTEAM JOINT VENTURE

Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
ACU2050A024	D1 - Stage 5 - Excavation from +168.5mPD to +167mPD (At East Portal Entrance)	0	3			01-Jun-18	03-Jun-18	0%
ACU2050A025	D1 - Stage 5 - Removal of 4th Row Concrete Block at +168.5mPD to +167mPD (At East Portal Entrance)	0	1			04-Jun-18	04-Jun-18	0%
ACU2050A026	D1 - Stage 5 - Excavation from +167mPD to +165.5mPD (At East Portal Entrance)	0	3			05-Jun-18	07-Jun-18	0%
ACU2050A027	D1 - Stage 5 - Removal of 3rd Row Concrete Block at +167mPD to +165.5mPD (At East Portal Entrance)	0	1			08-Jun-18	08-Jun-18	0%
ACU2050A028	D1 - Stage 5 - Excavation from +165.5mPD to +164mPD (At East Portal Entrance)	0	3			09-Jun-18	11-Jun-18	0%
ACU2050A029	D1 - Stage 5 - Removal of 2nd Row Concrete Block at +165.5mPD to +164mPD (At East Portal Entrance)	0	1			12-Jun-18	12-Jun-18	0%
ACU2050A030	D1 - Stage 5 - Excavation from +164mPD to +162.5mPD (At East Portal Entrance)	0	3			13-Jun-18	15-Jun-18	0%
Underpass Tunnel								
Tunnel Construction								
Tunnel Construction from West Portal								
CH2389.5 to CH2421 (Support Type A: 31.5m)								
ACU3010A026	6th Cycle (CH2403 to CH2405) - Survey Setting Out and Drilling for Cut Hole/ Non-Cut Hole (102mm Dia.)	0	8			08-Feb-18 A	15-Feb-18 A	100%
ACU3010A030	6th Cycle (CH2403 to CH2405) - Drill, Install and Gout Rock Dowels (46mm Dia.) incl. Shotcrete for Temporary Support	0	2			14-Feb-18 A	15-Feb-18 A	100%
ACU3010A031	7th Cycle (CH2405 to CH2408) - Survey Setting Out and Drilling for Cut Hole/ Non-Cut Hole (102mm Dia.)	0	4			20-Feb-18 A	23-Feb-18 A	100%
ACU3010A032	7th Cycle (CH2405 to CH2408) - Rock Breaking for Non-cut Hole (102mm Dia.) and Insert Wedge into Non-cut Hole	0	2			24-Feb-18 A	25-Feb-18 A	100%
ACU3010A033	7th Cycle (CH2405 to CH2408) - Drilling for Tunnel Crown (76mm Dia.) and Rock Breaking	0	2			26-Feb-18 A	27-Feb-18 A	100%
ACU3010A034	7th Cycle (CH2405 to CH2408) - Rock Scaling for Underbreak Zone and Rock Mapping for Temporary Support (CATIII)	0	1			28-Feb-18 A	28-Feb-18 A	100%
ACU3010A035	7th Cycle (CH2405 to CH2408) - Drill, Install and Gout Rock Dowels (46mm Dia.) incl. Shotcrete for Temporary Support	0	1			01-Mar-18 A	01-Mar-18 A	100%
ACU3010A036	8th Cycle (CH2408 to CH2410) - Survey Setting Out and Drilling for Cut Hole/ Non-Cut Hole (102mm Dia.)	0	1			02-Mar-18 A	02-Mar-18 A	100%
ACU3010A037	8th Cycle (CH2408 to CH2410) - Rock Breaking for Non-cut Hole (102mm Dia.) and Insert Wedge into Non-cut Hole	0	3			03-Mar-18 A	05-Mar-18 A	100%
ACU3010A038	8th Cycle (CH2408 to CH2410) - Drilling for Tunnel Crown (76mm Dia.) and Rock Breaking	0	2			05-Mar-18 A	06-Mar-18 A	100%
ACU3010A039	8th Cycle (CH2408 to CH2410) - Rock Scaling for Underbreak Zone and Rock Mapping for Temporary Support (CATIII)	0	3			05-Mar-18 A	07-Mar-18 A	100%
ACU3010A040	8th Cycle (CH2408 to CH2410) - Drill, Install and Gout Rock Dowels (46mm Dia.) incl. Shotcrete for Temporary Support	0	1			08-Mar-18 A	08-Mar-18 A	100%
ACU3010A041	9th Cycle (CH2410 to CH2412) - Survey Setting Out and Drilling for Cut Hole/ Non-Cut Hole (102mm Dia.)	0	2			09-Mar-18 A	10-Mar-18 A	100%
ACU3010A042	9th Cycle (CH2410 to CH2412) - Rock Breaking for Non-cut Hole (102mm Dia.) and Insert Wedge into Non-cut Hole	0	4			09-Mar-18 A	12-Mar-18 A	100%
ACU3010A043	9th Cycle (CH2410 to CH2412) - Drilling for Tunnel Crown (76mm Dia.) and Rock Breaking	0	2			12-Mar-18 A	13-Mar-18 A	100%
ACU3010A044	9th Cycle (CH2410 to CH2412) - Rock Scaling for Underbreak Zone and Rock Mapping for Temporary Support (CATIII)	0	4			12-Mar-18 A	15-Mar-18 A	100%
ACU3010A045	9th Cycle (CH2410 to CH2412) - Drill, Install and Gout Rock Dowels (46mm Dia.) incl. Shotcrete for Temporary Support	0	1			15-Mar-18 A	15-Mar-18 A	100%
ACU3010A045a	Probing Erection for CH2412 to CH2432	0	4			16-Mar-18	19-Mar-18	0%
ACU3010A046	10th Cycle (CH2412 to CH2414) - Survey Setting Out and Drilling for Cut Hole/ Non-Cut Hole (102mm Dia.)	0	2			20-Mar-18	21-Mar-18	0%
ACU3010A047	10th Cycle (CH2412 to CH2414) - Rock Breaking for Non-cut Hole (102mm Dia.) and Insert Wedge into Non-cut Hole	0	2			22-Mar-18	23-Mar-18	0%
ACU3010A048	10th Cycle (CH2412 to CH2414) - Drilling for Tunnel Crown (76mm Dia.) and Rock Breaking	0	2			24-Mar-18	25-Mar-18	0%
ACU3010A049	10th Cycle (CH2412 to CH2414) - Rock Scaling for Underbreak Zone and Rock Mapping for Temporary Support (CATIII)	0	1			26-Mar-18	26-Mar-18	0%
ACU3010A050	10th Cycle (CH2412 to CH2414) - Drill, Install and Gout Rock Dowels (46mm Dia.) incl. Shotcrete for Temporary Support	0	1			27-Mar-18	27-Mar-18	0%
ACU3010A051	11th Cycle (CH2414 to CH2416) - Survey Setting Out and Drilling for Cut Hole/ Non-Cut Hole (102mm Dia.)	0	3			28-Mar-18	30-Mar-18	0%
ACU3010A052	11th Cycle (CH2414 to CH2416) - Rock Breaking for Non-cut Hole (102mm Dia.) and Insert Wedge into Non-cut Hole	0	3			31-Mar-18	02-Apr-18	0%
ACU3010A053	11th Cycle (CH2414 to CH2416) - Drilling for Tunnel Crown (76mm Dia.) and Rock Breaking	0	2			03-Apr-18	04-Apr-18	0%
ACU3010A054	11th Cycle (CH2414 to CH2416) - Rock Scaling for Underbreak Zone and Rock Mapping for Temporary Support (CATIII)	0	2			05-Apr-18	06-Apr-18	0%
ACU3010A055	11th Cycle (CH2414 to CH2416) - Drill, Install and Gout Rock Dowels (46mm Dia.) incl. Shotcrete for Temporary Support	0	1			07-Apr-18	07-Apr-18	0%
ACU3010A056	12th Cycle (CH2416 to CH2418) - Survey Setting Out and Drilling for Cut Hole/ Non-Cut Hole (102mm Dia.)	0	2			08-Apr-18	09-Apr-18	0%
ACU3010A057	12th Cycle (CH2416 to CH2418) - Rock Breaking for Non-cut Hole (102mm Dia.) and Insert Wedge into Non-cut Hole	0	2			10-Apr-18	11-Apr-18	0%
ACU3010A058	12th Cycle (CH2416 to CH2418) - Drilling for Tunnel Crown (76mm Dia.) and Rock Breaking	0	2			12-Apr-18	13-Apr-18	0%
ACU3010A059	12th Cycle (CH2416 to CH2418) - Rock Scaling for Underbreak Zone and Rock Mapping for Temporary Support (CATIII)	0	1			14-Apr-18	14-Apr-18	0%



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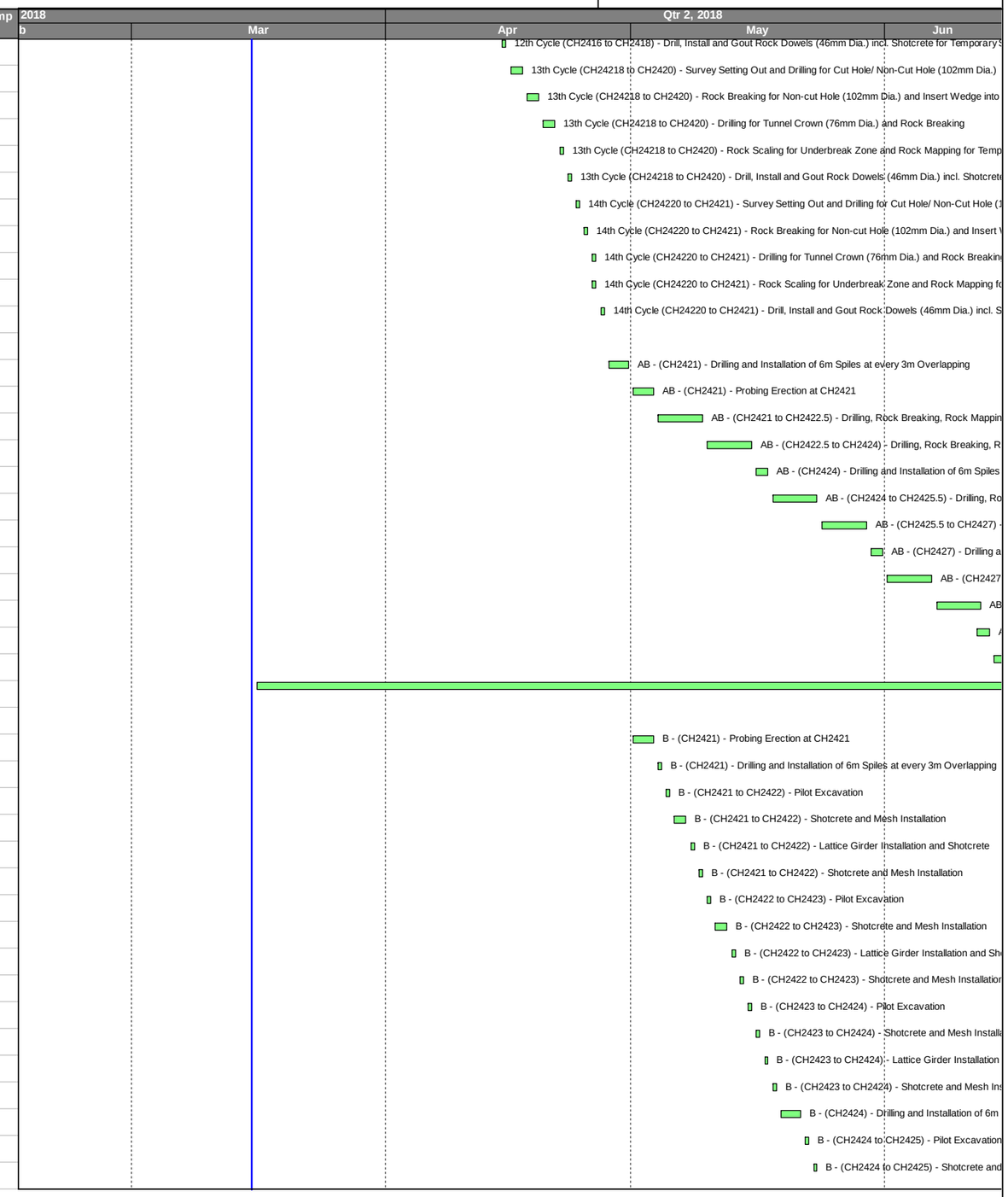
CHUN WO – STEC – VASTEAM JOINT VENTURE

Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
ACU3010A060	12th Cycle (CH2416 to CH2418) - Drill, Install and Gout Rock Dowels (46mm Dia.) incl. Shotcrete for Temporary Support	0	1			15-Apr-18	15-Apr-18	0%
ACU3010A226	13th Cycle (CH24218 to CH2420) - Survey Setting Out and Drilling for Cut Hole/ Non-Cut Hole (102mm Dia.)	0	2			16-Apr-18	17-Apr-18	0%
ACU3010A227	13th Cycle (CH24218 to CH2420) - Rock Breaking for Non-cut Hole (102mm Dia.) and Insert Wedge into Non-cut Hole	0	2			18-Apr-18	19-Apr-18	0%
ACU3010A228	13th Cycle (CH24218 to CH2420) - Drilling for Tunnel Crown (76mm Dia.) and Rock Breaking	0	2			20-Apr-18	21-Apr-18	0%
ACU3010A229	13th Cycle (CH24218 to CH2420) - Rock Scaling for Underbreak Zone and Rock Mapping for Temporary Support (CATIII)	0	1			22-Apr-18	22-Apr-18	0%
ACU3010A230	13th Cycle (CH24218 to CH2420) - Drill, Install and Gout Rock Dowels (46mm Dia.) incl. Shotcrete for Temporary Support	0	1			23-Apr-18	23-Apr-18	0%
ACU3010A231	14th Cycle (CH24220 to CH2421) - Survey Setting Out and Drilling for Cut Hole/ Non-Cut Hole (102mm Dia.)	0	1			24-Apr-18	24-Apr-18	0%
ACU3010A232	14th Cycle (CH24220 to CH2421) - Rock Breaking for Non-cut Hole (102mm Dia.) and Insert Wedge into Non-cut Hole	0	1			25-Apr-18	25-Apr-18	0%
ACU3010A233	14th Cycle (CH24220 to CH2421) - Drilling for Tunnel Crown (76mm Dia.) and Rock Breaking	0	1			26-Apr-18	26-Apr-18	0%
ACU3010A234	14th Cycle (CH24220 to CH2421) - Rock Scaling for Underbreak Zone and Rock Mapping for Temporary Support (CATIII)	0	1			26-Apr-18	26-Apr-18	0%
ACU3010A235	14th Cycle (CH24220 to CH2421) - Drill, Install and Gout Rock Dowels (46mm Dia.) incl. Shotcrete for Temporary Support	0	1			27-Apr-18	27-Apr-18	0%
CH2421 to CH2435 (Support Type AB - 1st Scenario): 1.5m/ cycle (4days/m) for Heading								
ACU3010A061	AB - (CH2421) - Drilling and Installation of 6m Spiles at every 3m Overlapping	0	3			28-Apr-18	30-Apr-18	0%
ACU3010A061a	AB - (CH2421) - Probing Erection at CH2421	0	3			01-May-18	03-May-18	0%
ACU3010A062	AB - (CH2421 to CH2422.5) - Drilling, Rock Breaking, Rock Mapping, rock Dowelling Works and Shotcrete for Tunnel Crown	0	6			04-May-18	09-May-18	0%
ACU3010A063	AB - (CH2422.5 to CH2424) - Drilling, Rock Breaking, Rock Mapping, rock Dowelling Works and Shotcrete for Tunnel Crown	0	6			10-May-18	15-May-18	0%
ACU3010A064	AB - (CH2424) - Drilling and Installation of 6m Spiles at every 3m Overlapping	0	2			16-May-18	17-May-18	0%
ACU3010A065	AB - (CH2424 to CH2425.5) - Drilling, Rock Breaking, Rock Mapping, rock Dowelling Works and Shotcrete for Tunnel Crown	0	6			18-May-18	23-May-18	0%
ACU3010A066	AB - (CH2425.5 to CH2427) - Drilling, Rock Breaking, Rock Mapping, rock Dowelling Works and Shotcrete for Tunnel Crown	0	6			24-May-18	29-May-18	0%
ACU3010A067	AB - (CH2427) - Drilling and Installation of 6m Spiles at every 3m Overlapping	0	2			30-May-18	31-May-18	0%
ACU3010A068	AB - (CH2427 to CH2428.5) - Drilling, Rock Breaking, Rock Mapping, rock Dowelling Works and Shotcrete for Tunnel Crown	0	6			01-Jun-18	06-Jun-18	0%
ACU3010A069	AB - (CH2428.5 to CH2430) - Drilling, Rock Breaking, Rock Mapping, rock Dowelling Works and Shotcrete for Tunnel Crown	0	6			07-Jun-18	12-Jun-18	0%
ACU3010A070	AB - (CH2430) - Drilling and Installation of 6m Spiles at every 3m Overlapping	0	2			12-Jun-18	13-Jun-18	0%
ACU3010A071	AB - (CH2430) - Probing Erection at CH2430	0	2			14-Jun-18	15-Jun-18	0%
ACU3011A001	AB - Excavation of Benching for CH2479.5 to CH2400	0	92			16-Mar-18	15-Jun-18	0%
CH2421 to CH2435 (Support Type B - 2nd Scenario) 1m/ cycle for Pilot								
ACU3010A076	B - (CH2421) - Probing Erection at CH2421	0	3			01-May-18	03-May-18	0%
ACU3010A077	B - (CH2421) - Drilling and Installation of 6m Spiles at every 3m Overlapping	0	1			04-May-18	04-May-18	0%
ACU3010A078	B - (CH2421 to CH2422) - Pilot Excavation	0	1			05-May-18	05-May-18	0%
ACU3010A079	B - (CH2421 to CH2422) - Shotcrete and Mesh Installation	0	2			06-May-18	07-May-18	0%
ACU3010A080	B - (CH2421 to CH2422) - Lattice Girder Installation and Shotcrete	0	1			08-May-18	08-May-18	0%
ACU3010A081	B - (CH2421 to CH2422) - Shotcrete and Mesh Installation	0	1			09-May-18	09-May-18	0%
ACU3010A236	B - (CH2422 to CH2423) - Pilot Excavation	0	1			10-May-18	10-May-18	0%
ACU3010A237	B - (CH2422 to CH2423) - Shotcrete and Mesh Installation	0	2			11-May-18	12-May-18	0%
ACU3010A238	B - (CH2422 to CH2423) - Lattice Girder Installation and Shotcrete	0	1			13-May-18	13-May-18	0%
ACU3010A239	B - (CH2422 to CH2423) - Shotcrete and Mesh Installation	0	1			14-May-18	14-May-18	0%
ACU3010A240	B - (CH2423 to CH2424) - Pilot Excavation	0	1			15-May-18	15-May-18	0%
ACU3010A241	B - (CH2423 to CH2424) - Shotcrete and Mesh Installation	0	1			16-May-18	16-May-18	0%
ACU3010A242	B - (CH2423 to CH2424) - Lattice Girder Installation and Shotcrete	0	1			17-May-18	17-May-18	0%
ACU3010A243	B - (CH2423 to CH2424) - Shotcrete and Mesh Installation	0	1			18-May-18	18-May-18	0%
ACU3010A244	B - (CH2424) - Drilling and Installation of 6m Spiles at every 3m Overlapping	0	3			19-May-18	21-May-18	0%
ACU3010A245	B - (CH2424 to CH2425) - Pilot Excavation	0	1			22-May-18	22-May-18	0%
ACU3010A246	B - (CH2424 to CH2425) - Shotcrete and Mesh Installation	0	1			23-May-18	23-May-18	0%



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

Planned Bar (WP)
Actual Bar
Forecast Bar
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Milestone

3-MONTH ROLLING PROGRAMME
(In comparison with WP Rev.1 dated 25 Aug 2017)

ARQ - Programme Logics based on WP Rev.1 dated 25 Aug 2017

Date	Revision	Checked	Approved
20-Mar-18	3MRP Rev.1 (Cut Off on 15 Mar 18)		

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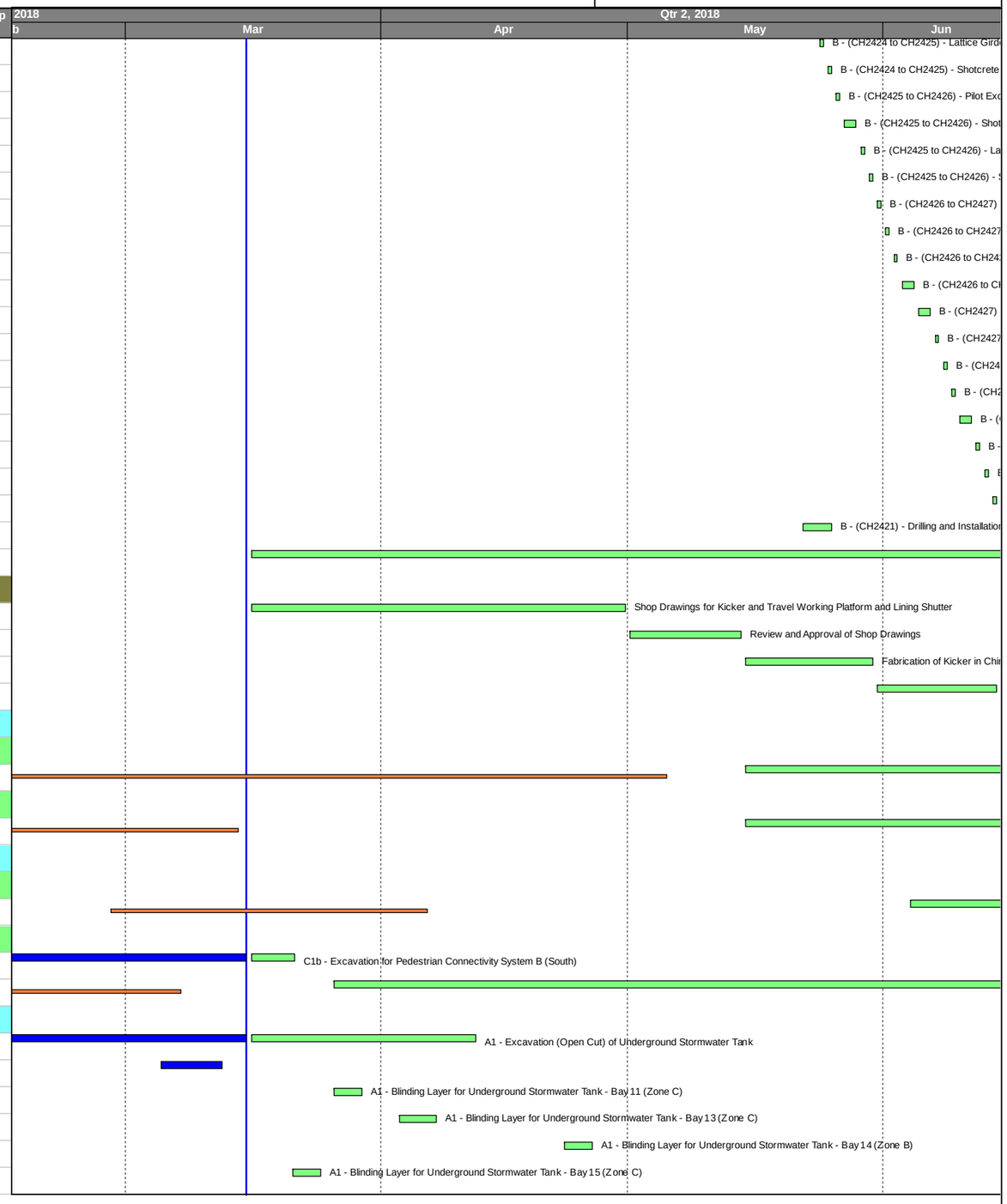
CHUN WO – STEC – VASTEAM JOINT VENTURE

Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
ACU3010A247	B - (CH2424 to CH2425) - Lattice Girder Installation and Shotcrete	0	1			24-May-18	24-May-18	0%
ACU3010A248	B - (CH2424 to CH2425) - Shotcrete and Mesh Installation	0	1			25-May-18	25-May-18	0%
ACU3010A249	B - (CH2425 to CH2426) - Pilot Excavation	0	1			26-May-18	26-May-18	0%
ACU3010A250	B - (CH2425 to CH2426) - Shotcrete and Mesh Installation	0	2			27-May-18	28-May-18	0%
ACU3010A251	B - (CH2425 to CH2426) - Lattice Girder Installation and Shotcrete	0	1			29-May-18	29-May-18	0%
ACU3010A252	B - (CH2425 to CH2426) - Shotcrete and Mesh Installation	0	1			30-May-18	30-May-18	0%
ACU3010A253	B - (CH2426 to CH2427) - Pilot Excavation	0	1			31-May-18	31-May-18	0%
ACU3010A254	B - (CH2426 to CH2427) - Shotcrete and Mesh Installation	0	1			01-Jun-18	01-Jun-18	0%
ACU3010A255	B - (CH2426 to CH2427) - Lattice Girder Installation and Shotcrete	0	1			02-Jun-18	02-Jun-18	0%
ACU3010A256	B - (CH2426 to CH2427) - Shotcrete and Mesh Installation	0	2			03-Jun-18	04-Jun-18	0%
ACU3010A257	B - (CH2427) - Drilling and Installation of 6m Spiles at every 3m Overlapping	0	2			05-Jun-18	06-Jun-18	0%
ACU3010A258	B - (CH2427 to CH2428) - Pilot Excavation	0	1			07-Jun-18	07-Jun-18	0%
ACU3010A259	B - (CH2427 to CH2428) - Shotcrete and Mesh Installation	0	1			08-Jun-18	08-Jun-18	0%
ACU3010A260	B - (CH2427 to CH2428) - Lattice Girder Installation and Shotcrete	0	1			09-Jun-18	09-Jun-18	0%
ACU3010A261	B - (CH2427 to CH2428) - Shotcrete and Mesh Installation	0	2			10-Jun-18	11-Jun-18	0%
ACU3010A262	B - (CH2428 to CH2429) - Pilot Excavation	0	1			12-Jun-18	12-Jun-18	0%
ACU3010A263	B - (CH2428 to CH2429) - Shotcrete and Mesh Installation	0	1			13-Jun-18	13-Jun-18	0%
ACU3010A264	B - (CH2428 to CH2429) - Lattice Girder Installation and Shotcrete	0	1			14-Jun-18	14-Jun-18	0%
ACU3010A266	B - (CH2421) - Drilling and Installation of Permanent 6m Spiles at every 3m Overlapping for Tunnel Heading	0	4			22-May-18	25-May-18	0%
ACU3010A267	B - Excavation of Benching for CH2479.5 to CH2489.5	0	92			16-Mar-18	15-Jun-18	0%
Tunnel Lining								
ACU3140A001	Shop Drawings for Kicker and Travel Working Platform and Lining Shutter	0	46			16-Mar-18*	30-Apr-18	0%
ACU3140A002	Review and Approval of Shop Drawings	0	14			01-May-18	14-May-18	0%
ACU3140A003	Fabrication of Kicker in China PRC	0	16			15-May-18	30-May-18	0%
ACU3140A3	Fabrication of Working Platform in China PRC	0	15			31-May-18	14-Jun-18	0%
Pedestrian Connectivity System A								
Lift Tower (North) and Subway within Portion B5								
ACS1020	B5 - Construction of Pre-Bored H-Piles (66nos) of Lift Tower (4 days/pile/plant by 2 plants)	132	132	21-Nov-17	05-May-18	15-May-18	22-Oct-18	0%
Lift Tower (South) and Subway within Portion C1a								
ACS1090	C1a - Construction of Pre-Bored H-Piles (48nos) of Lift Tower (3 days/pile/plant,assume 2 rigs)	144	72	18-Sep-17	14-Mar-18	15-May-18	09-Aug-18	0%
Pedestrian Connectivity System B								
Lift Tower (North) and Subway within Portion A1								
ACS2030	A1 - Construction of Footings and Wall Structure upwards Level (+176mPD)	30	120	27-Feb-18	06-Apr-18	04-Jun-18*	26-Oct-18	0%
Lift Tower (South) and Subway within Portion C1b								
ACS2110	C1b - Excavation for Pedestrian Connectivity System B (South)	90	99	07-Jul-17	21-Oct-17	20-Nov-17 A	21-Mar-18	95%
ACS2120	C1b - Construction of Pre-bored H-Piles (55nos) of Lift Tower (2.5 days/pile/plant) by 1 workfront	110	140	23-Oct-17	07-Mar-18	26-Mar-18*	13-Sep-18	0%
Underground Stormwater Retention Tank (Portion A1)								
ACN1010	A1 - Excavation (Open Cut) of Underground Stormwater Tank	201	275	02-May-17	30-Dec-17	10-May-17 A	12-Apr-18	90%
ACN1010A008	A1 - Drilling and Grouting for 7th Row of Temporary soil Nails	0	7			05-Mar-18 A	12-Mar-18 A	100%
ACN1010A020	A1 - Blinding Layer for Underground Stormwater Tank - Bay 11 (Zone C)	0	4			26-Mar-18	29-Mar-18	0%
ACN1010A022	A1 - Blinding Layer for Underground Stormwater Tank - Bay 13 (Zone C)	0	4			03-Apr-18	07-Apr-18	0%
ACN1010A023	A1 - Blinding Layer for Underground Stormwater Tank - Bay 14 (Zone B)	0	4			23-Apr-18	26-Apr-18	0%
ACN1010A024	A1 - Blinding Layer for Underground Stormwater Tank - Bay 15 (Zone C)	0	4			21-Mar-18	24-Mar-18	0%



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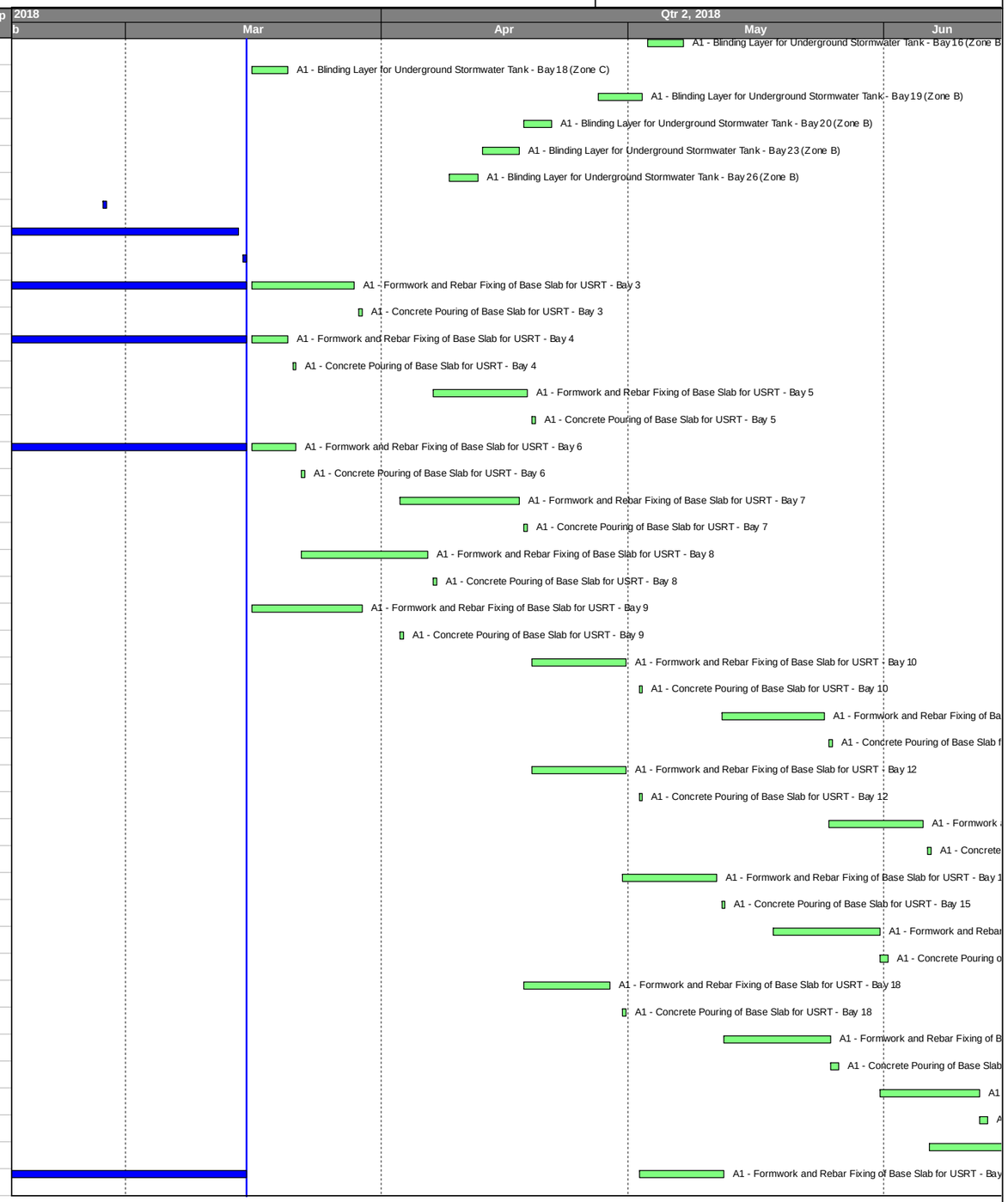
20 Mar 2018

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

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

Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
ACN1010A025	A1 - Blinding Layer for Underground Stormwater Tank - Bay 16 (Zone B)	0	4			03-May-18	07-May-18	0%
ACN1010A027	A1 - Blinding Layer for Underground Stormwater Tank - Bay 18 (Zone C)	0	4			16-Mar-18*	20-Mar-18	0%
ACN1010A028	A1 - Blinding Layer for Underground Stormwater Tank - Bay 19 (Zone B)	0	4			27-Apr-18	02-May-18	0%
ACN1010A029	A1 - Blinding Layer for Underground Stormwater Tank - Bay 20 (Zone B)	0	4			18-Apr-18	21-Apr-18	0%
ACN1010A032	A1 - Blinding Layer for Underground Stormwater Tank - Bay 23 (Zone B)	0	4			13-Apr-18	17-Apr-18	0%
ACN1010A035	A1 - Blinding Layer for Underground Stormwater Tank - Bay 26 (Zone B)	0	4			09-Apr-18	12-Apr-18	0%
ACN1020A002	A1 - Concrete Pouring of Base Slab for USRT - Bay 1	0	1			26-Feb-18 A	26-Feb-18 A	100%
ACN1020A003	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 2	0	22			14-Feb-18 A	14-Mar-18 A	100%
ACN1020A004	A1 - Concrete Pouring of Base Slab for USRT - Bay 2	0	1			15-Mar-18 A	15-Mar-18 A	100%
ACN1020A005	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 3	0	34			14-Feb-18 A	28-Mar-18	0%
ACN1020A006	A1 - Concrete Pouring of Base Slab for USRT - Bay 3	0	1			29-Mar-18	29-Mar-18	0%
ACN1020A007	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 4	0	43			26-Jan-18 A	20-Mar-18	60%
ACN1020A008	A1 - Concrete Pouring of Base Slab for USRT - Bay 4	0	1			21-Mar-18	21-Mar-18	0%
ACN1020A009	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 5	0	10			07-Apr-18	18-Apr-18	0%
ACN1020A010	A1 - Concrete Pouring of Base Slab for USRT - Bay 5	0	1			19-Apr-18	19-Apr-18	0%
ACN1020A011	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 6	0	28			14-Feb-18 A	21-Mar-18	50%
ACN1020A012	A1 - Concrete Pouring of Base Slab for USRT - Bay 6	0	1			22-Mar-18	22-Mar-18	0%
ACN1020A013	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 7	0	12			03-Apr-18	17-Apr-18	0%
ACN1020A014	A1 - Concrete Pouring of Base Slab for USRT - Bay 7	0	1			18-Apr-18	18-Apr-18	0%
ACN1020A015	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 8	0	10			22-Mar-18	06-Apr-18	0%
ACN1020A016	A1 - Concrete Pouring of Base Slab for USRT - Bay 8	0	1			07-Apr-18	07-Apr-18	0%
ACN1020A017	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 9	0	12			16-Mar-18*	29-Mar-18	0%
ACN1020A018	A1 - Concrete Pouring of Base Slab for USRT - Bay 9	0	1			03-Apr-18	03-Apr-18	0%
ACN1020A019	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 10	0	10			19-Apr-18	30-Apr-18	0%
ACN1020A020	A1 - Concrete Pouring of Base Slab for USRT - Bay 10	0	1			02-May-18	02-May-18	0%
ACN1020A021	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 11	0	10			12-May-18	24-May-18	0%
ACN1020A022	A1 - Concrete Pouring of Base Slab for USRT - Bay 11	0	1			25-May-18	25-May-18	0%
ACN1020A023	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 12	0	10			19-Apr-18	30-Apr-18	0%
ACN1020A024	A1 - Concrete Pouring of Base Slab for USRT - Bay 12	0	1			02-May-18	02-May-18	0%
ACN1020A025	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 13	0	10			25-May-18	05-Jun-18	0%
ACN1020A026	A1 - Concrete Pouring of Base Slab for USRT - Bay 13	0	1			06-Jun-18	06-Jun-18	0%
ACN1020A029	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 15	0	10			30-Apr-18	11-May-18	0%
ACN1020A030	A1 - Concrete Pouring of Base Slab for USRT - Bay 15	0	1			12-May-18	12-May-18	0%
ACN1020A033	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 17	0	10			18-May-18	31-May-18	0%
ACN1020A034	A1 - Concrete Pouring of Base Slab for USRT - Bay 17	0	1			31-May-18	01-Jun-18	0%
ACN1020A035	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 18	0	10			18-Apr-18	28-Apr-18	0%
ACN1020A036	A1 - Concrete Pouring of Base Slab for USRT - Bay 18	0	1			30-Apr-18	30-Apr-18	0%
ACN1020A041	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 21	0	10			12-May-18	25-May-18	0%
ACN1020A042	A1 - Concrete Pouring of Base Slab for USRT - Bay 21	0	1			25-May-18	26-May-18	0%
ACN1020A043	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 22	0	10			31-May-18	12-Jun-18	0%
ACN1020A044	A1 - Concrete Pouring of Base Slab for USRT - Bay 22	0	1			12-Jun-18	13-Jun-18	0%
ACN1020A047	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 24	0	10			06-Jun-18	19-Jun-18	0%
ACN1020A049	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 25	0	81			30-Jan-18 A	12-May-18	5%



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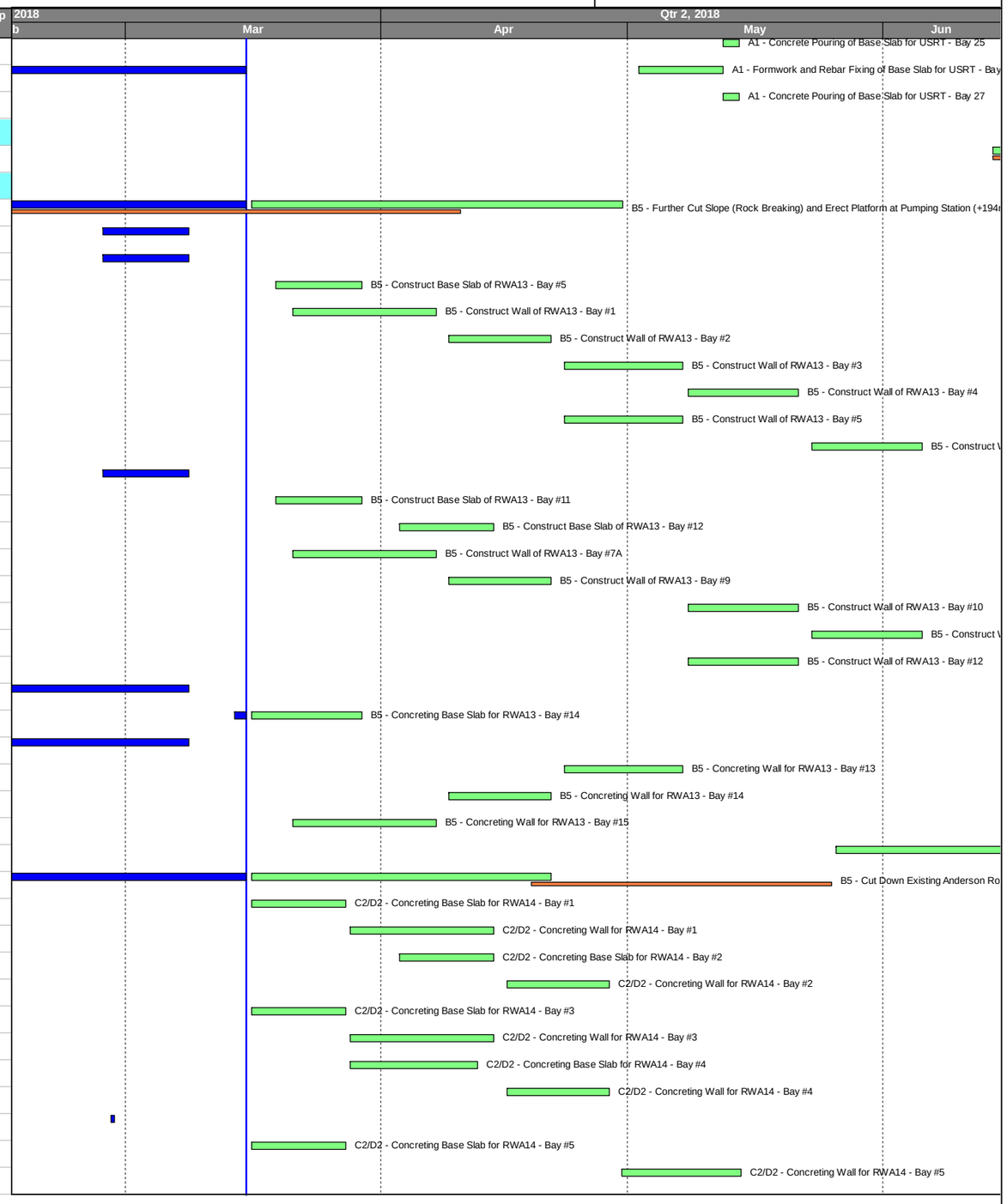
CHUN WO – STEC – VASTEAM JOINT VENTURE

Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
ACN1020A050	A1 - Concrete Pouring of Base Slab for USRT - Bay 25	0	1			12-May-18	14-May-18	0%
ACN1020A053	A1 - Formwork and Rebar Fixing of Base Slab for USRT - Bay 27	0	81			30-Jan-18 A	12-May-18	5%
ACN1020A054	A1 - Concrete Pouring of Base Slab for USRT - Bay 27	0	1			12-May-18	14-May-18	0%
Artificial Flood Attenuation Lake/ Underground Water Tretment Plant (Portion B4)								
ACF1010	B4 - Construct Channels along Slope Toe incl Manholes, Catchpits and Associated Drainage Pipes Connecting to Lake	90	90	14-Jun-18	29-Sep-18	14-Jun-18*	29-Sep-18	0%
Water Pumping Stations (Portion B5)								
ACW1050	B5 - Further Cut Slope (Rock Breaking) and Erect Platform at Pumping Station (+194mPD)	180	209	29-Aug-17	10-Apr-18	14-Aug-17 A	30-Apr-18	81%
ACW1060A008	B5 - Construct Base Slab of RWA13 - Bay #2	0	10			26-Feb-18 A	08-Mar-18 A	100%
ACW1060A010	B5 - Construct Base Slab of RWA13 - Bay #4	0	10			26-Feb-18 A	08-Mar-18 A	100%
ACW1060A011	B5 - Construct Base Slab of RWA13 - Bay #5	0	10			19-Mar-18*	29-Mar-18	0%
ACW1060A013	B5 - Construct Wall of RWA13 - Bay #1	0	12			21-Mar-18*	07-Apr-18	0%
ACW1060A014	B5 - Construct Wall of RWA13 - Bay #2	0	12			09-Apr-18*	21-Apr-18	0%
ACW1060A23	B5 - Construct Wall of RWA13 - Bay #3	0	12			23-Apr-18	07-May-18	0%
ACW1060A33	B5 - Construct Wall of RWA13 - Bay #4	0	12			08-May-18	21-May-18	0%
ACW1060A43	B5 - Construct Wall of RWA13 - Bay #5	0	12			23-Apr-18	07-May-18	0%
ACW1060A53	B5 - Construct Wall of RWA13 - Bay #6A	0	12			23-May-18	05-Jun-18	0%
ACW1070A007	B5 - Construct Base Slab of RWA13 - Bay #7A	0	10			26-Feb-18 A	08-Mar-18 A	100%
ACW1070A011	B5 - Construct Base Slab of RWA13 - Bay #11	0	10			19-Mar-18*	29-Mar-18	0%
ACW1070A012	B5 - Construct Base Slab of RWA13 - Bay #12	0	10			03-Apr-18	14-Apr-18	0%
ACW1070A12	B5 - Construct Wall of RWA13 - Bay #7A	0	12			21-Mar-18*	07-Apr-18	0%
ACW1070A32	B5 - Construct Wall of RWA13 - Bay #9	0	12			09-Apr-18	21-Apr-18	0%
ACW1070A42	B5 - Construct Wall of RWA13 - Bay #10	0	12			08-May-18	21-May-18	0%
ACW1070A52	B5 - Construct Wall of RWA13 - Bay #11	0	12			23-May-18	05-Jun-18	0%
ACW1070A62	B5 - Construct Wall of RWA13 - Bay #12	0	12			08-May-18	21-May-18	0%
ACW1080A013	B5 - Concreting Base Slab for RWA13 - Bay #13	0	27			02-Feb-18 A	08-Mar-18 A	100%
ACW1080A014	B5 - Concreting Base Slab for RWA13 - Bay #14	0	14			14-Mar-18 A	29-Mar-18	0%
ACW1080A015	B5 - Concreting Base Slab for RWA13 - Bay #15	0	27			02-Feb-18 A	08-Mar-18 A	100%
ACW1080A016	B5 - Concreting Wall for RWA13 - Bay #13	0	12			23-Apr-18*	07-May-18	0%
ACW1080A017	B5 - Concreting Wall for RWA13 - Bay #14	0	12			09-Apr-18*	21-Apr-18	0%
ACW1080A018	B5 - Concreting Wall for RWA13 - Bay #15	0	12			21-Mar-18*	07-Apr-18	0%
ACW1090	B5 - Back Fill for RWA13	90	30	26-Oct-17	12-Feb-18	26-May-18	30-Jun-18	0%
ACW1110	B5 - Cut Down Existing Anderson Road to RWA14 Footing Level (from +194mPD to +192mPD)	30	86	19-Apr-18	25-May-18	04-Jan-18 A	21-Apr-18	7%
ACW1120A002	C2/D2 - Concreting Base Slab for RWA14 - Bay #1	0	10			16-Mar-18	27-Mar-18	0%
ACW1120A003	C2/D2 - Concreting Wall for RWA14 - Bay #1	0	12			28-Mar-18	14-Apr-18	0%
ACW1120A005	C2/D2 - Concreting Base Slab for RWA14 - Bay #2	0	10			03-Apr-18*	14-Apr-18	0%
ACW1120A006	C2/D2 - Concreting Wall for RWA14 - Bay #2	0	12			16-Apr-18	28-Apr-18	0%
ACW1120A008	C2/D2 - Concreting Base Slab for RWA14 - Bay #3	0	10			16-Mar-18	27-Mar-18	0%
ACW1120A009	C2/D2 - Concreting Wall for RWA14 - Bay #3	0	12			28-Mar-18	14-Apr-18	0%
ACW1120A011	C2/D2 - Concreting Base Slab for RWA14 - Bay #4	0	10			28-Mar-18	12-Apr-18	0%
ACW1120A012	C2/D2 - Concreting Wall for RWA14 - Bay #4	0	12			16-Apr-18	28-Apr-18	0%
ACW1120A013	C2/D2 - Concreting Blinding Layer for RWA14 - Bay #5	0	1			27-Feb-18 A	27-Feb-18 A	100%
ACW1120A014	C2/D2 - Concreting Base Slab for RWA14 - Bay #5	0	10			16-Mar-18	27-Mar-18	0%
ACW1120A015	C2/D2 - Concreting Wall for RWA14 - Bay #5	0	12			30-Apr-18	14-May-18	0%



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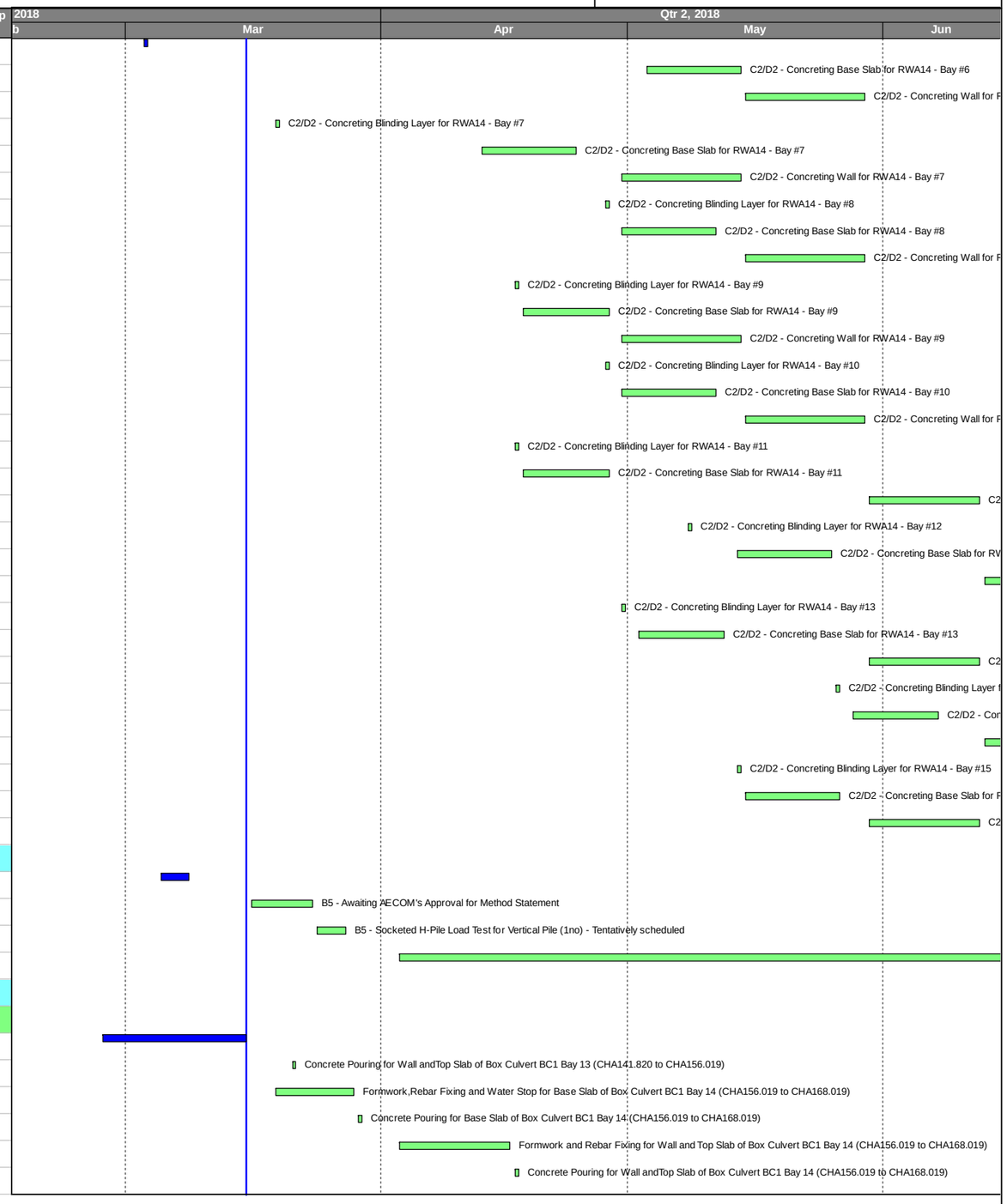
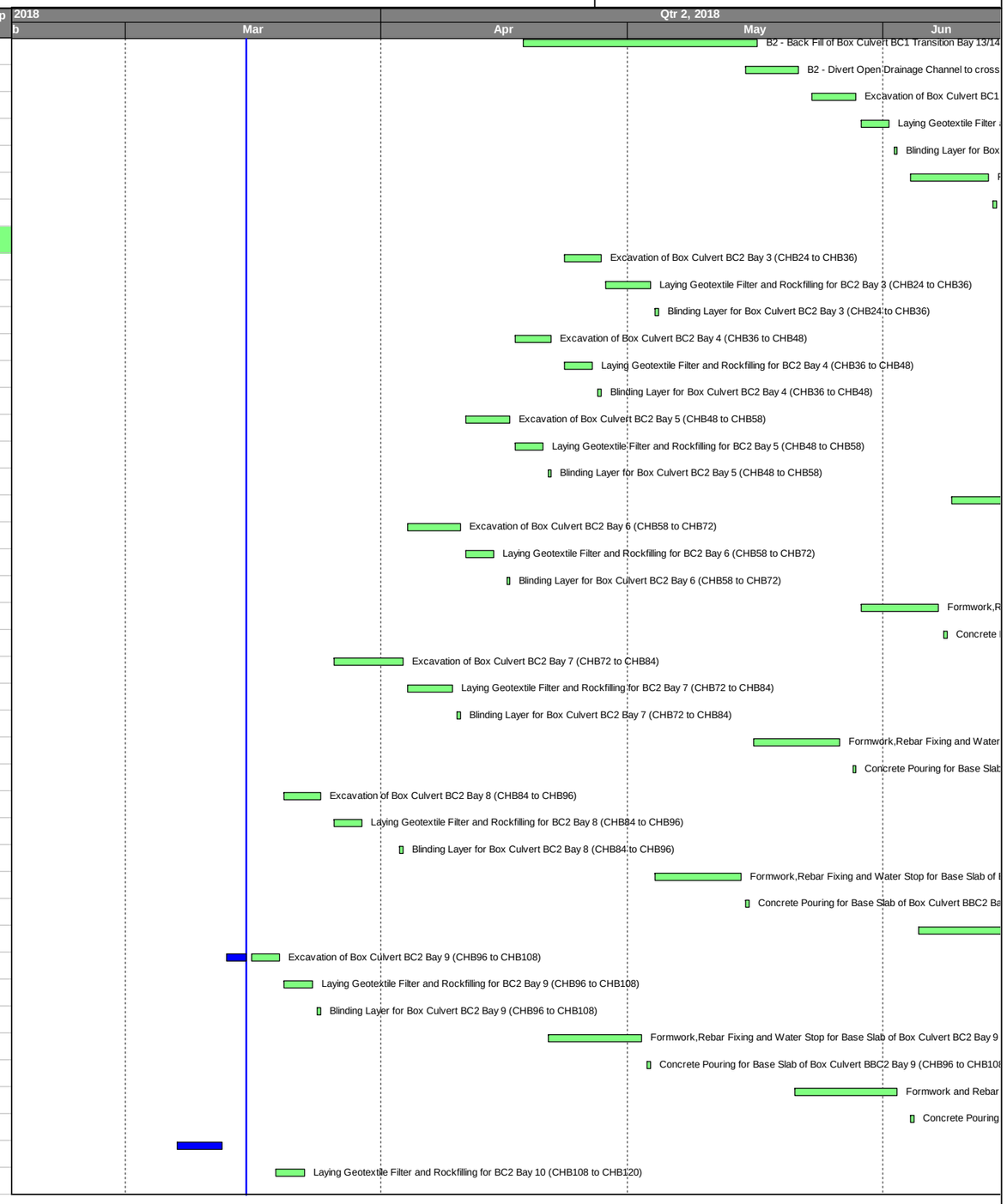
Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
ACW1120A016	C2/D2 - Concreting Blinding Layer for RWA14 - Bay #6	0	1			03-Mar-18 A	03-Mar-18 A	100%
ACW1120A017	C2/D2 - Concreting Base Slab for RWA14 - Bay #6	0	10			03-May-18	14-May-18	0%
ACW1120A018	C2/D2 - Concreting Wall for RWA14 - Bay #6	0	12			15-May-18	29-May-18	0%
ACW1120A019	C2/D2 - Concreting Blinding Layer for RWA14 - Bay #7	0	1			19-Mar-18*	19-Mar-18	0%
ACW1120A020	C2/D2 - Concreting Base Slab for RWA14 - Bay #7	0	10			13-Apr-18	24-Apr-18	0%
ACW1120A021	C2/D2 - Concreting Wall for RWA14 - Bay #7	0	12			30-Apr-18	14-May-18	0%
ACW1120A022	C2/D2 - Concreting Blinding Layer for RWA14 - Bay #8	0	1			28-Apr-18*	28-Apr-18	0%
ACW1120A023	C2/D2 - Concreting Base Slab for RWA14 - Bay #8	0	10			30-Apr-18	11-May-18	0%
ACW1120A024	C2/D2 - Concreting Wall for RWA14 - Bay #8	0	12			15-May-18	29-May-18	0%
ACW1120A025	C2/D2 - Concreting Blinding Layer for RWA14 - Bay #9	0	1			17-Apr-18*	17-Apr-18	0%
ACW1120A026	C2/D2 - Concreting Base Slab for RWA14 - Bay #9	0	10			18-Apr-18	28-Apr-18	0%
ACW1120A027	C2/D2 - Concreting Wall for RWA14 - Bay #9	0	12			30-Apr-18	14-May-18	0%
ACW1120A028	C2/D2 - Concreting Blinding Layer for RWA14 - Bay #10	0	1			28-Apr-18*	28-Apr-18	0%
ACW1120A029	C2/D2 - Concreting Base Slab for RWA14 - Bay #10	0	10			30-Apr-18	11-May-18	0%
ACW1120A030	C2/D2 - Concreting Wall for RWA14 - Bay #10	0	12			15-May-18	29-May-18	0%
ACW1120A031	C2/D2 - Concreting Blinding Layer for RWA14 - Bay #11	0	1			17-Apr-18*	17-Apr-18	0%
ACW1120A032	C2/D2 - Concreting Base Slab for RWA14 - Bay #11	0	10			18-Apr-18	28-Apr-18	0%
ACW1120A033	C2/D2 - Concreting Wall for RWA14 - Bay #11	0	12			30-May-18	12-Jun-18	0%
ACW1120A034	C2/D2 - Concreting Blinding Layer for RWA14 - Bay #12	0	1			08-May-18*	08-May-18	0%
ACW1120A035	C2/D2 - Concreting Base Slab for RWA14 - Bay #12	0	10			14-May-18	25-May-18	0%
ACW1120A036	C2/D2 - Concreting Wall for RWA14 - Bay #12	0	12			13-Jun-18	27-Jun-18	0%
ACW1120A037	C2/D2 - Concreting Blinding Layer for RWA14 - Bay #13	0	1			30-Apr-18*	30-Apr-18	0%
ACW1120A038	C2/D2 - Concreting Base Slab for RWA14 - Bay #13	0	10			02-May-18	12-May-18	0%
ACW1120A039	C2/D2 - Concreting Wall for RWA14 - Bay #13	0	12			30-May-18	12-Jun-18	0%
ACW1120A040	C2/D2 - Concreting Blinding Layer for RWA14 - Bay #14	0	1			26-May-18*	26-May-18	0%
ACW1120A041	C2/D2 - Concreting Base Slab for RWA14 - Bay #14	0	10			28-May-18	07-Jun-18	0%
ACW1120A042	C2/D2 - Concreting Wall for RWA14 - Bay #14	0	12			13-Jun-18	27-Jun-18	0%
ACW1120A043	C2/D2 - Concreting Blinding Layer for RWA14 - Bay #15	0	1			14-May-18*	14-May-18	0%
ACW1120A044	C2/D2 - Concreting Base Slab for RWA14 - Bay #15	0	10			15-May-18	26-May-18	0%
ACW1120A045	C2/D2 - Concreting Wall for RWA14 - Bay #15	0	12			30-May-18	12-Jun-18	0%
Public Transportation Terminus (Portion B5)								
ACP1040A001	B5 - Socketed H-Pile Load Test for Raking Pile (RX04)	0	4			05-Mar-18 A	08-Mar-18 A	100%
ACP1040A002	B5 - Awaiting AECOM's Approval for Method Statement	0	7			16-Mar-18	23-Mar-18	0%
ACP1040A003	B5 - Socketed H-Pile Load Test for Vertical Pile (1no) - Tentatively scheduled	0	3			24-Mar-18	27-Mar-18	0%
ACP1040A004	B5 - Excavation and Construct Pile Caps with Erection of Steel Posts GL.E/1-9	0	90			03-Apr-18*	21-Jul-18	0%
Internal Road Construction								
Single Cell Box Culvert BC1 incl. Transition Section CH141.820 to CH168.019								
ACL10050A007	Formwork and Rebar Fixing for Wall and Top Slab of Box Culvert BC1 Bay 13 (CHA141.820 to CHA156.019)	0	16			26-Feb-18 A	15-Mar-18 A	100%
ACL10050A009	Concrete Pouring for Wall andTop Slab of Box Culvert BC1 Bay 13 (CHA141.820 to CHA156.019)	0	1			21-Mar-18*	21-Mar-18	0%
ACL10050A013	Formwork,Rebar Fixing and Water Stop for Base Slab of Box Culvert BC1 Bay 14 (CHA156.019 to CHA168.019)	0	9			19-Mar-18*	28-Mar-18	0%
ACL10050A014	Concrete Pouring for Base Slab of Box Culvert BC1 Bay 14 (CHA156.019 to CHA168.019)	0	1			29-Mar-18	29-Mar-18	0%
ACL10050A015	Formwork and Rebar Fixing for Wall and Top Slab of Box Culvert BC1 Bay 14 (CHA156.019 to CHA168.019)	0	11			03-Apr-18	16-Apr-18	0%
ACL10050A017	Concrete Pouring for Wall andTop Slab of Box Culvert BC1 Bay 14 (CHA156.019 to CHA168.019)	0	1			17-Apr-18	17-Apr-18	0%



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

Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
ACL10050A018	B2 - Back Fill of Box Culvert BC1 Transition Bay 13/14 (CHA141.820 to CHA168.019)	0	24			18-Apr-18	16-May-18	0%
ACL10050A019	B2 - Divert Open Drainage Channel to crossover BC1 Bay 14 (CHA156.019 to CHA168.019)	0	6			15-May-18	21-May-18	0%
ACL10050A020	Excavation of Box Culvert BC1 Bay 15 (CHCHA168.019 to CHA178.392)	0	5			23-May-18	28-May-18	0%
ACL10050A021	Laying Geotextile Filter and Rockfilling for Box Culvert BC1 Bay 15 (CHA168.019 to CHA178.392)	0	4			29-May-18*	01-Jun-18	0%
ACL10050A022	Blinding Layer for Box Culvert BC1 Bay 15 (CHA168.019 to CHA178.392)	0	1			02-Jun-18	02-Jun-18	0%
ACL10050A023	Formwork,Rebar Fixing and Water Stop for Base Slab of Box Culvert BC1 Bay 15 (CHA168.019 to CHA178.392)	0	9			04-Jun-18	13-Jun-18	0%
ACL10050A024	Concrete Pouring for Base Slab of Box Culvert BC1 Bay 15 (CHA168.019 to CHA178.392)	0	1			14-Jun-18	14-Jun-18	0%
Twin Cell Box Culvert BC2								
ACL10050A044	Excavation of Box Culvert BC2 Bay 3 (CHB24 to CHB36)	0	5			23-Apr-18	27-Apr-18	0%
ACL10050A045	Laying Geotextile Filter and Rockfilling for BC2 Bay 3 (CHB24 to CHB36)	0	4			28-Apr-18*	03-May-18	0%
ACL10050A046	Blinding Layer for Box Culvert BC2 Bay 3 (CHB24 to CHB36)	0	1			04-May-18	04-May-18	0%
ACL10050A051	Excavation of Box Culvert BC2 Bay 4 (CHB36 to CHB48)	0	5			17-Apr-18	21-Apr-18	0%
ACL10050A052	Laying Geotextile Filter and Rockfilling for BC2 Bay 4 (CHB36 to CHB48)	0	4			23-Apr-18*	26-Apr-18	0%
ACL10050A053	Blinding Layer for Box Culvert BC2 Bay 4 (CHB36 to CHB48)	0	1			27-Apr-18	27-Apr-18	0%
ACL10050A058	Excavation of Box Culvert BC2 Bay 5 (CHB48 to CHB58)	0	5			11-Apr-18	16-Apr-18	0%
ACL10050A059	Laying Geotextile Filter and Rockfilling for BC2 Bay 5 (CHB48 to CHB58)	0	4			17-Apr-18*	20-Apr-18	0%
ACL10050A060	Blinding Layer for Box Culvert BC2 Bay 5 (CHB48 to CHB58)	0	1			21-Apr-18	21-Apr-18	0%
ACL10050A061	Formwork,Rebar Fixing and Water Stop for Base Slab of Box Culvert BC2 Bay 5 (CHB48 to CHB58)	0	9			09-Jun-18	20-Jun-18	0%
ACL10050A065	Excavation of Box Culvert BC2 Bay 6 (CHB58 to CHB72)	0	5			04-Apr-18	10-Apr-18	0%
ACL10050A066	Laying Geotextile Filter and Rockfilling for BC2 Bay 6 (CHB58 to CHB72)	0	4			11-Apr-18*	14-Apr-18	0%
ACL10050A067	Blinding Layer for Box Culvert BC2 Bay 6 (CHB58 to CHB72)	0	1			16-Apr-18	16-Apr-18	0%
ACL10050A068	Formwork,Rebar Fixing and Water Stop for Base Slab of Box Culvert BC2 Bay 6 (CHB58 to CHB72)	0	9			29-May-18	07-Jun-18	0%
ACL10050A069	Concrete Pouring for Base Slab of Box Culvert BBC2 Bay 6 (CHB58 to CHB72)	0	1			08-Jun-18	08-Jun-18	0%
ACL10050A072	Excavation of Box Culvert BC2 Bay 7 (CHB72 to CHB84)	0	5			26-Mar-18	03-Apr-18	0%
ACL10050A073	Laying Geotextile Filter and Rockfilling for BC2 Bay 7 (CHB72 to CHB84)	0	4			04-Apr-18*	09-Apr-18	0%
ACL10050A074	Blinding Layer for Box Culvert BC2 Bay 7 (CHB72 to CHB84)	0	1			10-Apr-18	10-Apr-18	0%
ACL10050A075	Formwork,Rebar Fixing and Water Stop for Base Slab of Box Culvert BC2 Bay 7 (CHB72 to CHB84)	0	9			16-May-18	26-May-18	0%
ACL10050A076	Concrete Pouring for Base Slab of Box Culvert BBC2 Bay 7 (CHB72 to CHB84)	0	1			28-May-18	28-May-18	0%
ACL10050A079	Excavation of Box Culvert BC2 Bay 8 (CHB84 to CHB96)	0	5			20-Mar-18	24-Mar-18	0%
ACL10050A080	Laying Geotextile Filter and Rockfilling for BC2 Bay 8 (CHB84 to CHB96)	0	4			26-Mar-18*	29-Mar-18	0%
ACL10050A081	Blinding Layer for Box Culvert BC2 Bay 8 (CHB84 to CHB96)	0	1			03-Apr-18	03-Apr-18	0%
ACL10050A082	Formwork,Rebar Fixing and Water Stop for Base Slab of Box Culvert BC2 Bay 8 (CHB84 to CHB96)	0	9			04-May-18	14-May-18	0%
ACL10050A083	Concrete Pouring for Base Slab of Box Culvert BBC2 Bay 8 (CHB84 to CHB96)	0	1			15-May-18	15-May-18	0%
ACL10050A084	Formwork and Rebar Fixing for Wall and Top Slab of Box Culvert BC2 Bay 8 (CHB84 to CHB96)	0	11			05-Jun-18	16-Jun-18	0%
ACL10050A086	Excavation of Box Culvert BC2 Bay 9 (CHB96 to CHB108)	0	6			13-Mar-18 A	19-Mar-18	40%
ACL10050A087	Laying Geotextile Filter and Rockfilling for BC2 Bay 9 (CHB96 to CHB108)	0	4			20-Mar-18*	23-Mar-18	0%
ACL10050A088	Blinding Layer for Box Culvert BC2 Bay 9 (CHB96 to CHB108)	0	1			24-Mar-18	24-Mar-18	0%
ACL10050A089	Formwork,Rebar Fixing and Water Stop for Base Slab of Box Culvert BC2 Bay 9 (CHB96 to CHB108)	0	9			21-Apr-18	02-May-18	0%
ACL10050A090	Concrete Pouring for Base Slab of Box Culvert BBC2 Bay 9 (CHB96 to CHB108)	0	1			03-May-18	03-May-18	0%
ACL10050A091	Formwork and Rebar Fixing for Wall and Top Slab of Box Culvert BC2 Bay 9 (CHB96 to CHB108)	0	11			21-May-18	02-Jun-18	0%
ACL10050A092	Concrete Pouring for Wall andTop Slab of Box Culvert BC2 Bay 9 (CHB96 to CHB108)	0	1			04-Jun-18	04-Jun-18	0%
ACL10050A093	Excavation of Box Culvert BC2 Bay 10 (CHB108 to CHB120)	0	5			07-Mar-18 A	12-Mar-18 A	100%
ACL10050A094	Laying Geotextile Filter and Rockfilling for BC2 Bay 10 (CHB108 to CHB120)	0	4			19-Mar-18*	22-Mar-18	0%



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

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

3-MONTH ROLLING PROGRAMME
(In comparison with WP Rev.1 dated 25 Aug 2017)

ARQ - Programme Logics based on WP Rev.1 dated 25 Aug 2017

Date	Revision	Checked	Approved
20-Mar-18	3MRP Rev.1 (Cut Off on 15 Mar 18)		

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

Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
ACL10050A095	Blinding Layer for Box Culvert BC2 Bay 10 (CHB108 to CHB120)	0	1			23-Mar-18	23-Mar-18	0%
ACL10050A096	Formwork,Rebar Fixing and Water Stop for Base Slab of Box Culvert BC2 Bay 10 (CHB108 to CHB120)	0	9			10-Apr-18	19-Apr-18	0%
ACL10050A097	Concrete Pouring for Base Slab of Box Culvert BBC2 Bay 10 (CHB108 to CHB120)	0	1			20-Apr-18	20-Apr-18	0%
ACL10050A098	Formwork and Rebar Fixing for Wall and Top Slab of Box Culvert BC2 Bay 10 (CHB108 to CHB120)	0	11			07-May-18	18-May-18	0%
ACL10050A099	Concrete Pouring for Wall andTop Slab of Box Culvert BC2 Bay 10 (CHB108 to CHB120)	0	1			19-May-18	19-May-18	0%
ACL10050A100	Excavation of Box Culvert BC2 Bay 11 (CHB120 to CHB128)	0	5			01-Mar-18 A	06-Mar-18 A	100%
ACL10050A101	Laying Geotextile Filter and Rockfilling for BC2 Bay 11 (CHB120 to CHB128)	0	4			19-Mar-18*	22-Mar-18	0%
ACL10050A102	Blinding Layer for Box Culvert BC2 Bay 11 (CHB120 to CHB128)	0	1			23-Mar-18	23-Mar-18	0%
ACL10050A103	Formwork,Rebar Fixing and Water Stop for Base Slab of Box Culvert BC2 Bay 11 (CHB120 to CHB128)	0	9			24-Mar-18	07-Apr-18	0%
ACL10050A104	Concrete Pouring for Base Slab of Box Culvert BBC2 Bay 11 (CHB120 to CHB128)	0	1			09-Apr-18	09-Apr-18	0%
ACL10050A105	Formwork and Rebar Fixing for Wall and Top Slab of Box Culvert BC2 Bay 11 (CHB120 to CHB128)	0	11			21-Apr-18	04-May-18	0%
ACL10050A106	Concrete Pouring for Wall andTop Slab of Box Culvert BC2 Bay 11 (CHB120 to CHB128)	0	1			05-May-18	05-May-18	0%
At-grade Internal Road L1								
Road L1 and L5 (Portion A1)								
ACL10100A001	A1 - Excavation and Rock Breaking along Road L1 from Pedestrian Connectivity System B to West Portal	0	181			04-Sep-17 A	17-Apr-18	80%
ACL10110	A1 - Install Road Drainage, Water Mains, Ducts and Utilities along Road L1 from System B to West Portal	80	80	04-Apr-18	11-Jul-18	18-Apr-18	24-Jul-18	0%
ACL10120A001	A1 - Drainage Pipes Laying at Road L5	0	80			16-Mar-18	25-Jun-18	0%
ACL10120A002	A1 - Waterworks at Cul-De-Sac of Road L5	0	60			14-May-18	25-Jul-18	0%
At-grade Internal Road L4 (Portion C1a)								
Noise Barrier								
ACL401489	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #16 (1st Stage)	0	2			02-Jun-18	04-Jun-18	0%
ACL401490	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #16 (1st Stage)	0	3			05-Jun-18	07-Jun-18	0%
ACL401491	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #16 (1st Stage)	0	1			08-Jun-18	08-Jun-18	0%
ACL401498	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #17 (1st Stage)	0	2			09-Jun-18	11-Jun-18	0%
ACL401499	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #17 (1st Stage)	0	3			12-Jun-18	14-Jun-18	0%
ACL401507	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #18 (1st Stage)	0	2			30-May-18	31-May-18	0%
ACL401508	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #18 (1st Stage)	0	3			01-Jun-18	04-Jun-18	0%
ACL401509	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #18 (1st Stage)	0	1			05-Jun-18	05-Jun-18	0%
ACL401516	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #19 (1st Stage)	0	2			06-Jun-18	07-Jun-18	0%
ACL401517	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #19 (1st Stage)	0	3			08-Jun-18	11-Jun-18	0%
ACL401518	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #19 (1st Stage)	0	1			12-Jun-18	12-Jun-18	0%
ACL401525	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #20 (1st Stage)	0	2			15-May-18	16-May-18	0%
ACL401526	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #20 (1st Stage)	0	3			17-May-18	19-May-18	0%
ACL401527	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #20 (1st Stage)	0	1			21-May-18	21-May-18	0%
ACL401534	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #21 (1st Stage)	0	2			23-May-18	24-May-18	0%
ACL401535	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #21 (1st Stage)	0	3			25-May-18	28-May-18	0%
ACL401536	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #21 (1st Stage)	0	1			29-May-18	29-May-18	0%
ACL401543	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #22 (1st Stage)	0	2			11-May-18	12-May-18	0%
ACL401544	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #22 (1st Stage)	0	3			14-May-18	16-May-18	0%
ACL401545	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #22 (1st Stage)	0	1			17-May-18	17-May-18	0%
ACL401552	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #23 (1st Stage)	0	2			18-May-18	19-May-18	0%
ACL401553	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #23 (1st Stage)	0	3			21-May-18	24-May-18	0%
ACL401554	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #23 (1st Stage)	0	1			25-May-18	25-May-18	0%

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3-MONTH ROLLING PROGRAMME
(In comparison with WP Rev.1 dated 25 Aug 2017)

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20-Mar-18	3MRP Rev.1 (Cut Off on 15 Mar 18)		

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CHUN WO – STEC – VASTEAM JOINT VENTURE

Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
ACL401562	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #24 (1st Stage)	0	8			27-Feb-18 A	07-Mar-18 A	100%
ACL401563	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #24 (1st Stage)	0	1			16-Mar-18	16-Mar-18	0%
ACL401564	C1a - Rebar Placement for 3600mm HT Wall of Noise Barrier - Bay #24 (2nd Stage)	0	2			17-Mar-18	19-Mar-18	0%
ACL401565	C1a - Installation of Temporary Platform and Formworks for 3600mm HT Wall of Noise Barrier - Bay #24 (2nd Stage)	0	2			20-Mar-18	21-Mar-18	0%
ACL401566	C1a - Concreting Pouring for 3600mm HT Wall of Noise Barrier - Bay #24 (2nd Stage)	0	1			22-Mar-18	22-Mar-18	0%
ACL401567	C1a - Rebar Placement for 2400mm HT Wall of Noise Barrier - Bay #24 (3rd Stage)	0	2			23-Mar-18	24-Mar-18	0%
ACL401568	C1a - Installation of Formworks for 2400mm HT Wall of Noise Barrier - Bay #24 (3rd Stage)	0	1			26-Mar-18	26-Mar-18	0%
ACL401569	C1a - Concrete Pouring for 2400mm HT Wall of Noise Barrier - Bay #24 (3rd Stage)	0	1			09-Apr-18	09-Apr-18	0%
ACL401570	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #25 (1st Stage)	0	2			04-Apr-18	06-Apr-18	0%
ACL401571	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #25 (1st Stage)	0	3			07-Apr-18	10-Apr-18	0%
ACL401572	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #25 (1st Stage)	0	1			11-Apr-18	11-Apr-18	0%
ACL401573	C1a - Rebar Placement for 3600mm HT Wall of Noise Barrier - Bay #25 (2nd Stage)	0	2			12-Apr-18	13-Apr-18	0%
ACL401574	C1a - Installation of Temporary Platform and Formworks for 3600mm HT Wall of Noise Barrier - Bay #25 (2nd Stage)	0	2			14-Apr-18	16-Apr-18	0%
ACL401575	C1a - Concreting Pouring for 3600mm HT Wall of Noise Barrier - Bay #25 (2nd Stage)	0	1			17-Apr-18	17-Apr-18	0%
ACL401576	C1a - Rebar Placement for 2400mm HT Wall of Noise Barrier - Bay #25 (3rd Stage)	0	2			18-Apr-18	19-Apr-18	0%
ACL401577	C1a - Installation of Formworks for 2400mm HT Wall of Noise Barrier - Bay #25 (3rd Stage)	0	1			20-Apr-18	20-Apr-18	0%
ACL401578	C1a - Concrete Pouring for 2400mm HT Wall of Noise Barrier - Bay #25 (3rd Stage)	0	1			21-Apr-18	21-Apr-18	0%
ACL401581	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #26 (1st Stage)	0	1			24-Feb-18 A	24-Feb-18 A	100%
ACL401582	C1a - Rebar Placement for 3600mm HT Wall of Noise Barrier - Bay #26 (2nd Stage)	0	24			27-Feb-18 A	26-Mar-18	0%
ACL401583	C1a - Installation of Temporary Platform and Formworks for 3600mm HT Wall of Noise Barrier - Bay #26 (2nd Stage)	0	2			27-Mar-18	28-Mar-18	0%
ACL401584	C1a - Concreting Pouring for 3600mm HT Wall of Noise Barrier - Bay #26 (2nd Stage)	0	1			29-Mar-18	29-Mar-18	0%
ACL401585	C1a - Rebar Placement for 2400mm HT Wall of Noise Barrier - Bay #26 (3rd Stage)	0	2			03-Apr-18	04-Apr-18	0%
ACL401586	C1a - Installation of Formworks for 2400mm HT Wall of Noise Barrier - Bay #26 (3rd Stage)	0	1			06-Apr-18	06-Apr-18	0%
ACL401587	C1a - Concrete Pouring for 2400mm HT Wall of Noise Barrier - Bay #26 (3rd Stage)	0	1			07-Apr-18	07-Apr-18	0%
ACL401588	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #27 (1st Stage)	0	2			09-Apr-18	10-Apr-18	0%
ACL401589	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #27 (1st Stage)	0	3			11-Apr-18	13-Apr-18	0%
ACL401590	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #27 (1st Stage)	0	1			14-Apr-18	14-Apr-18	0%
ACL401591	C1a - Rebar Placement for 3600mm HT Wall of Noise Barrier - Bay #27 (2nd Stage)	0	2			16-Apr-18	17-Apr-18	0%
ACL401592	C1a - Installation of Temporary Platform and Formworks for 3600mm HT Wall of Noise Barrier - Bay #27 (2nd Stage)	0	2			18-Apr-18	19-Apr-18	0%
ACL401593	C1a - Concreting Pouring for 3600mm HT Wall of Noise Barrier - Bay #27 (2nd Stage)	0	1			20-Apr-18	20-Apr-18	0%
ACL401594	C1a - Rebar Placement for 2400mm HT Wall of Noise Barrier - Bay #27 (3rd Stage)	0	2			21-Apr-18	23-Apr-18	0%
ACL401595	C1a - Installation of Formworks for 2400mm HT Wall of Noise Barrier - Bay #27 (3rd Stage)	0	1			24-Apr-18	24-Apr-18	0%
ACL401596	C1a - Concrete Pouring for 2400mm HT Wall of Noise Barrier - Bay #27 (3rd Stage)	0	1			25-Apr-18	25-Apr-18	0%
ACL401597	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #28 (1st Stage)	0	24			02-Mar-18 A	29-Mar-18	0%
ACL401598	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #28 (1st Stage)	0	3			03-Apr-18	06-Apr-18	0%
ACL401599	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #28 (1st Stage)	0	1			07-Apr-18	07-Apr-18	0%
ACL401600	C1a - Rebar Placement for 3600mm HT Wall of Noise Barrier - Bay #28 (2nd Stage)	0	2			09-Apr-18	10-Apr-18	0%
ACL401601	C1a - Installation of Temporary Platform and Formworks for 3600mm HT Wall of Noise Barrier - Bay #28 (2nd Stage)	0	2			11-Apr-18	12-Apr-18	0%
ACL401602	C1a - Concreting Pouring for 3600mm HT Wall of Noise Barrier - Bay #28 (2nd Stage)	0	1			13-Apr-18	13-Apr-18	0%
ACL401603	C1a - Rebar Placement for 2400mm HT Wall of Noise Barrier - Bay #28 (3rd Stage)	0	2			14-Apr-18	16-Apr-18	0%
ACL401604	C1a - Installation of Formworks for 2400mm HT Wall of Noise Barrier - Bay #28 (3rd Stage)	0	1			17-Apr-18	17-Apr-18	0%
ACL401605	C1a - Concrete Pouring for 2400mm HT Wall of Noise Barrier - Bay #28 (3rd Stage)	0	1			18-Apr-18	18-Apr-18	0%
ACL401606	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #29 (1st Stage)	0	2			19-Apr-18	20-Apr-18	0%

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Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
ACL401607	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #29 (1st Stage)	0	3			21-Apr-18	24-Apr-18	0%
ACL401608	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #29 (1st Stage)	0	1			25-Apr-18	25-Apr-18	0%
ACL401609	C1a - Rebar Placement for 3600mm HT Wall of Noise Barrier - Bay #29 (2nd Stage)	0	2			26-Apr-18	27-Apr-18	0%
ACL401610	C1a - Installation of Temporary Platform and Formworks for 3600mm HT Wall of Noise Barrier - Bay #29 (2nd Stage)	0	2			28-Apr-18	30-Apr-18	0%
ACL401611	C1a - Concreting Pouring for 3600mm HT Wall of Noise Barrier - Bay #29 (2nd Stage)	0	1			02-May-18	02-May-18	0%
ACL401612	C1a - Rebar Placement for 2400mm HT Wall of Noise Barrier - Bay #29 (3rd Stage)	0	2			03-May-18	04-May-18	0%
ACL401613	C1a - Installation of Formworks for 2400mm HT Wall of Noise Barrier - Bay #29 (3rd Stage)	0	1			05-May-18	05-May-18	0%
ACL401614	C1a - Concrete Pouring for 2400mm HT Wall of Noise Barrier - Bay #29 (3rd Stage)	0	1			07-May-18	07-May-18	0%
ACL401615	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #30 (1st Stage)	0	2			12-Apr-18	13-Apr-18	0%
ACL401616	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #30 (1st Stage)	0	3			14-Apr-18	17-Apr-18	0%
ACL401617	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #30 (1st Stage)	0	1			18-Apr-18	18-Apr-18	0%
ACL401618	C1a - Rebar Placement for 3600mm HT Wall of Noise Barrier - Bay #30 (2nd Stage)	0	2			19-Apr-18	20-Apr-18	0%
ACL401619	C1a - Installation of Temporary Platform and Formworks for 3600mm HT Wall of Noise Barrier - Bay #30 (2nd Stage)	0	2			21-Apr-18	23-Apr-18	0%
ACL401620	C1a - Concreting Pouring for 3600mm HT Wall of Noise Barrier - Bay #30 (2nd Stage)	0	1			24-Apr-18	24-Apr-18	0%
ACL401621	C1a - Rebar Placement for 2400mm HT Wall of Noise Barrier - Bay #30 (3rd Stage)	0	2			25-Apr-18	26-Apr-18	0%
ACL401622	C1a - Installation of Formworkst for 2400mm HT Wall of Noise Barrier - Bay #30 (3rd Stage)	0	1			27-Apr-18	27-Apr-18	0%
ACL401623	C1a - Concrete Pouring for 2400mm HT Wall of Noise Barrier - Bay #30 (3rd Stage)	0	1			28-Apr-18	28-Apr-18	0%
ACL401624	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #31 (1st Stage)	0	2			23-Apr-18	24-Apr-18	0%
ACL401625	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #31 (1st Stage)	0	3			25-Apr-18	27-Apr-18	0%
ACL401626	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #31 (1st Stage)	0	1			28-Apr-18	28-Apr-18	0%
ACL401627	C1a - Rebar Placement for 3600mm HT Wall of Noise Barrier - Bay #31 (2nd Stage)	0	2			30-Apr-18	02-May-18	0%
ACL401628	C1a - Installation of Temporary Platform and Formworks for 3600mm HT Wall of Noise Barrier - Bay #31 (2nd Stage)	0	2			03-May-18	04-May-18	0%
ACL401629	C1a - Concreting Pouring for 3600mm HT Wall of Noise Barrier - Bay #31 (2nd Stage)	0	1			05-May-18	05-May-18	0%
ACL401630	C1a - Rebar Placement for 2400mm HT Wall of Noise Barrier - Bay #31 (3rd Stage)	0	2			07-May-18	08-May-18	0%
ACL401631	C1a - Installation of Formworks for 2400mm HT Wall of Noise Barrier - Bay #31 (3rd Stage)	0	1			09-May-18	09-May-18	0%
ACL401632	C1a - Concrete Pouring for 2400mm HT Wall of Noise Barrier - Bay #31 (3rd Stage)	0	1			10-May-18	10-May-18	0%
ACL401633	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #32 (1st Stage)	0	2			16-Apr-18	17-Apr-18	0%
ACL401634	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #32 (1st Stage)	0	3			18-Apr-18	20-Apr-18	0%
ACL401635	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #32 (1st Stage)	0	1			21-Apr-18	21-Apr-18	0%
ACL401636	C1a - Rebar Placement for 3600mm HT Wall of Noise Barrier - Bay #32 (2nd Stage)	0	2			23-Apr-18	24-Apr-18	0%
ACL401637	C1a - Installation of Temporary Platform and Formworks for 3600mm HT Wall of Noise Barrier - Bay #32 (2nd Stage)	0	2			25-Apr-18	26-Apr-18	0%
ACL401638	C1a - Concreting Pouring for 3600mm HT Wall of Noise Barrier - Bay #32 (2nd Stage)	0	1			27-Apr-18	27-Apr-18	0%
ACL401639	C1a - Rebar Placement for 2400mm HT Wall of Noise Barrier - Bay #32 (3rd Stage)	0	2			28-Apr-18	30-Apr-18	0%
ACL401640	C1a - Installation of Steel Formworks for 2400mm HT Wall of Noise Barrier - Bay #32 (3rd Stage)	0	1			02-May-18	02-May-18	0%
ACL401641	C1a - Concrete Pouring for 2400mm HT Wall of Noise Barrier - Bay #32 (3rd Stage)	0	1			03-May-18	03-May-18	0%
ACL401642	C1a - Installation of Formworks for Base Slab of Noise Barrier - Bay #33 (1st Stage)	0	2			23-Apr-18	24-Apr-18	0%
ACL401643	C1a - Rebar Placement for Base Slab of Noise Barrier - Bay #33 (1st Stage)	0	3			25-Apr-18	27-Apr-18	0%
ACL401644	C1a - Concreting Pouring for Base Slab of Noise Barrier - Bay #33 (1st Stage)	0	1			28-Apr-18	28-Apr-18	0%
ACL401645	C1a - Rebar Placement for 3600mm HT Wall of Noise Barrier - Bay #33 (2nd Stage)	0	2			30-Apr-18	02-May-18	0%
ACL401646	C1a - Installation of Temporary Platform and Formworks for 3600mm HT Wall of Noise Barrier - Bay #33 (2nd Stage)	0	2			03-May-18	04-May-18	0%
ACL401647	C1a - Concreting Pouring for 3600mm HT Wall of Noise Barrier - Bay #33 (2nd Stage)	0	1			05-May-18	05-May-18	0%
ACL401648	C1a - Rebar Placement for 2400mm HT Wall of Noise Barrier - Bay #33 (3rd Stage)	0	2			07-May-18	08-May-18	0%
ACL401649	C1a - Installation of Formworks for 2400mm HT Wall of Noise Barrier - Bay #33 (3rd Stage)	0	1			09-May-18	09-May-18	0%

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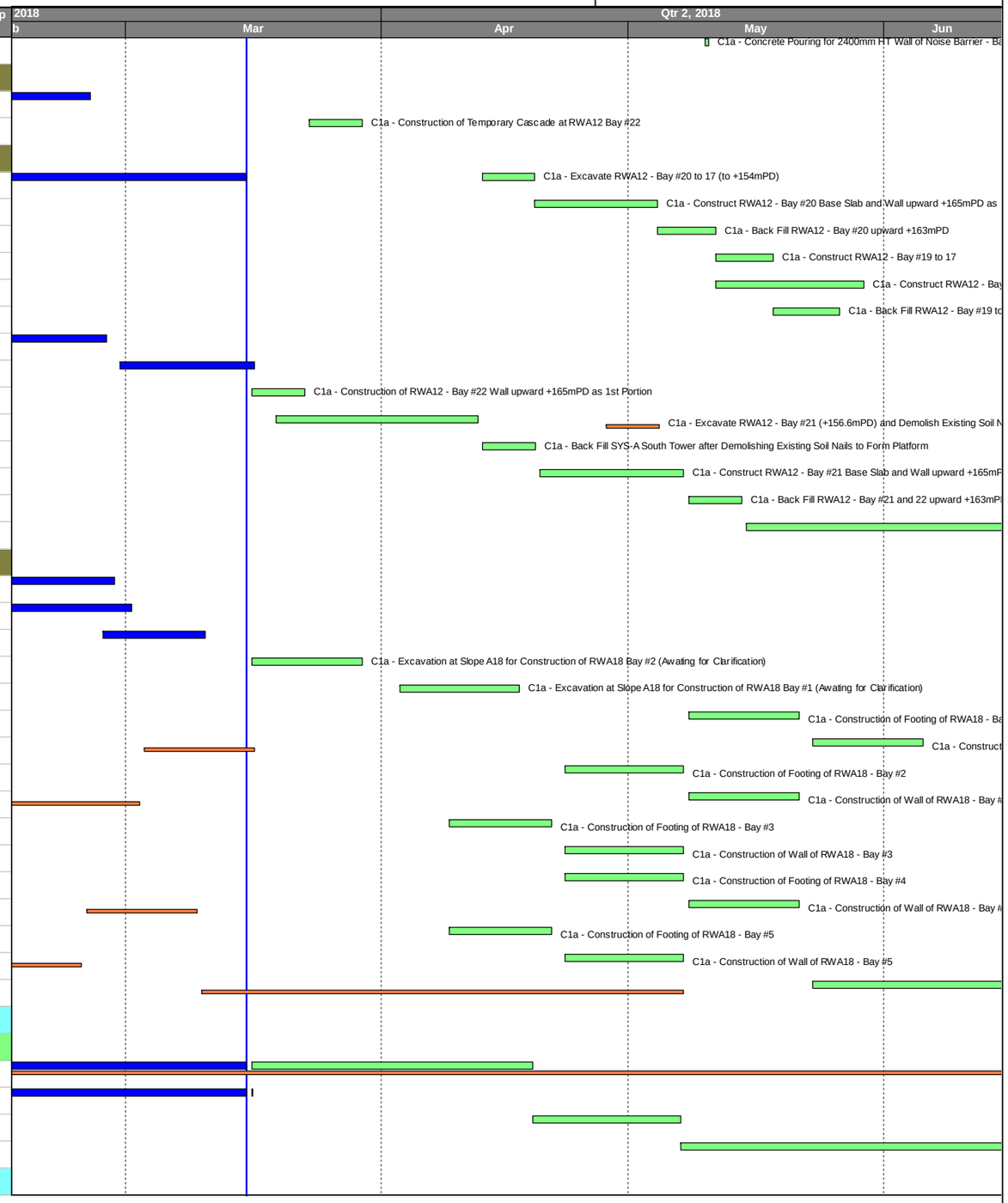
ACL401650	C1a - Concrete Pouring for 2400mm HT Wall of Noise Barrier - Bay #33 (3rd Stage)	0	1			10-May-18	10-May-18	0%
Twin 1950 Dia. Downpipe and Cascade								
ACL40020A001B	C1a - Construct Temporary Haul Road at Road L4 to retaining Wall RWA12	0	19			31-Jan-18 A	24-Feb-18 A	100%
ACL40050A001	C1a - Construction of Temporary Cascade at RWA12 Bay #22	0	6			23-Mar-18	29-Mar-18	0%
Retaining Wall RWA12								
ACL40020A002	C1a - Excavate RWA12 - Bay #20 to 17 (to +154mPD)	0	207			07-Aug-17 A	19-Apr-18	60%
ACL40020A003	C1a - Construct RWA12 - Bay #20 Base Slab and Wall upward +165mPD as 1st Portion	0	12			19-Apr-18	04-May-18	0%
ACL40020A004	C1a - Back Fill RWA12 - Bay #20 upward +163mPD	0	6			04-May-18	11-May-18	0%
ACL40020A005	C1a - Construct RWA12 - Bay #19 to 17	0	6			11-May-18	18-May-18	0%
ACL40020A006	C1a - Construct RWA12 - Bay #20 Wall upward +175mPD as 2nd Portion	0	14			11-May-18	29-May-18	0%
ACL40020A007	C1a - Back Fill RWA12 - Bay #19 to 17	0	6			18-May-18	26-May-18	0%
ACL40030	C1a - Excavate RWA12 - Bay #22 (to +154mPD)	12	40	04-Nov-17	17-Nov-17	08-Jan-18 A	26-Feb-18 A	100%
ACL40030A001	C1a - Construction of RWA12 - Bay #22 Base Slab	0	15			28-Feb-18 A	16-Mar-18 A	100%
ACL40040A001	C1a - Construction of RWA12 - Bay #22 Wall upward +165mPD as 1st Portion	0	6			16-Mar-18	22-Mar-18	0%
ACL40110	C1a - Excavate RWA12 - Bay #21 (+156.6mPD) and Demolish Existing Soil Nails	5	18	28-Apr-18	04-May-18	19-Mar-18*	12-Apr-18	0%
ACL40110A001	C1a - Back Fill SYS-A South Tower after Demolishing Existing Soil Nails to Form Platform	0	6			13-Apr-18	19-Apr-18	0%
ACL40120A001	C1a - Construct RWA12 - Bay #21 Base Slab and Wall upward +165mPD as 1st Portion	0	14			20-Apr-18	07-May-18	0%
ACL40120A002	C1a - Back Fill RWA12 - Bay #21 and 22 upward +163mPD (15 layers @ 4 layers/day)	0	6			08-May-18	14-May-18	0%
ACL40955	C1a - Excavate RWA12 - Bay #1 to 8	78	60	26-Jul-17	26-Oct-17	15-May-18*	26-Jul-18	0%
Retaining Wall RWA18								
ACL40170A001	C1a - Excavation at Slope A18 for Construction of RWA18 Bay #5	0	38			11-Jan-18 A	27-Feb-18 A	100%
ACL40170A002	C1a - Excavation at Slope A18 for Construction of RWA18 Bay #4	0	40			11-Jan-18 A	01-Mar-18 A	100%
ACL40170A003	C1a - Excavation at Slope A18 for Construction of RWA18 Bay #3	0	12			26-Feb-18 A	10-Mar-18 A	100%
ACL40170A004	C1a - Excavation at Slope A18 for Construction of RWA18 Bay #2 (Awating for Clarification)	0	12			16-Mar-18	29-Mar-18	0%
ACL40170A005	C1a - Excavation at Slope A18 for Construction of RWA18 Bay #1 (Awating for Clarification)	0	12			03-Apr-18	17-Apr-18	0%
ACL40180	C1a - Construction of Footing of RWA18 - Bay #1	12	12	16-Dec-17	02-Jan-18	08-May-18	21-May-18	0%
ACL40190	C1a - Construction of Wall of RWA18 - Bay #1	12	12	03-Mar-18	16-Mar-18	23-May-18	05-Jun-18	0%
ACL40200	C1a - Construction of Footing of RWA18 - Bay #2	12	12	02-Dec-17	15-Dec-17	23-Apr-18	07-May-18	0%
ACL40210	C1a - Construction of Wall of RWA18 - Bay #2	12	12	14-Feb-18	02-Mar-18	08-May-18	21-May-18	0%
ACL40220	C1a - Construction of Footing of RWA18 - Bay #3	12	12	18-Nov-17	01-Dec-17	09-Apr-18*	21-Apr-18	0%
ACL40230	C1a - Construction of Wall of RWA18 - Bay #3	12	12	31-Jan-18	13-Feb-18	23-Apr-18	07-May-18	0%
ACL40240	C1a - Construction of Footing of RWA18 - Bay #4	12	12	02-Dec-17	15-Dec-17	23-Apr-18	07-May-18	0%
ACL40250	C1a - Construction of Wall of RWA18 - Bay #4	12	12	24-Feb-18	09-Mar-18	08-May-18	21-May-18	0%
ACL40260	C1a - Construction of Footing of RWA18 - Bay #5	12	12	18-Nov-17	01-Dec-17	09-Apr-18*	21-Apr-18	0%
ACL40270	C1a - Construction of Wall of RWA18 - Bay #5	12	12	07-Feb-18	23-Feb-18	23-Apr-18	07-May-18	0%
ACL40275	C1a - Back Filling Retaining Wall RWA18 (5 bays)	45	45	10-Mar-18	07-May-18	23-May-18	16-Jul-18	0%
Portion A3								
Site Formation								
ACA30020	A3 - Soil Excavation for Site Formation in Portion A3	306	150	07-Sep-17	18-Sep-18	13-Oct-17 A	19-Apr-18	64%
ACA30030	A3 - Rock Breaking for Site Formation in Portion A3	56	115	19-Sep-18	26-Nov-18	25-Oct-17 A	16-Mar-18	98%
ACA30035	A3 - Construct U-Channel with Cover (675UC) along Slope A16	14	14	27-Nov-18	12-Dec-18	19-Apr-18	07-May-18	0%
ACA30040	A3 - Construction of U-Channel, Catchpits and 525mm dia. drainage pipe connecting to Manhole A1	45	35	27-Nov-18	21-Jan-19	07-May-18	19-Jun-18	0%
Portion A4 (based on Sub Programme Ref.CWSTVJV/893/CSF/0208-2017)								



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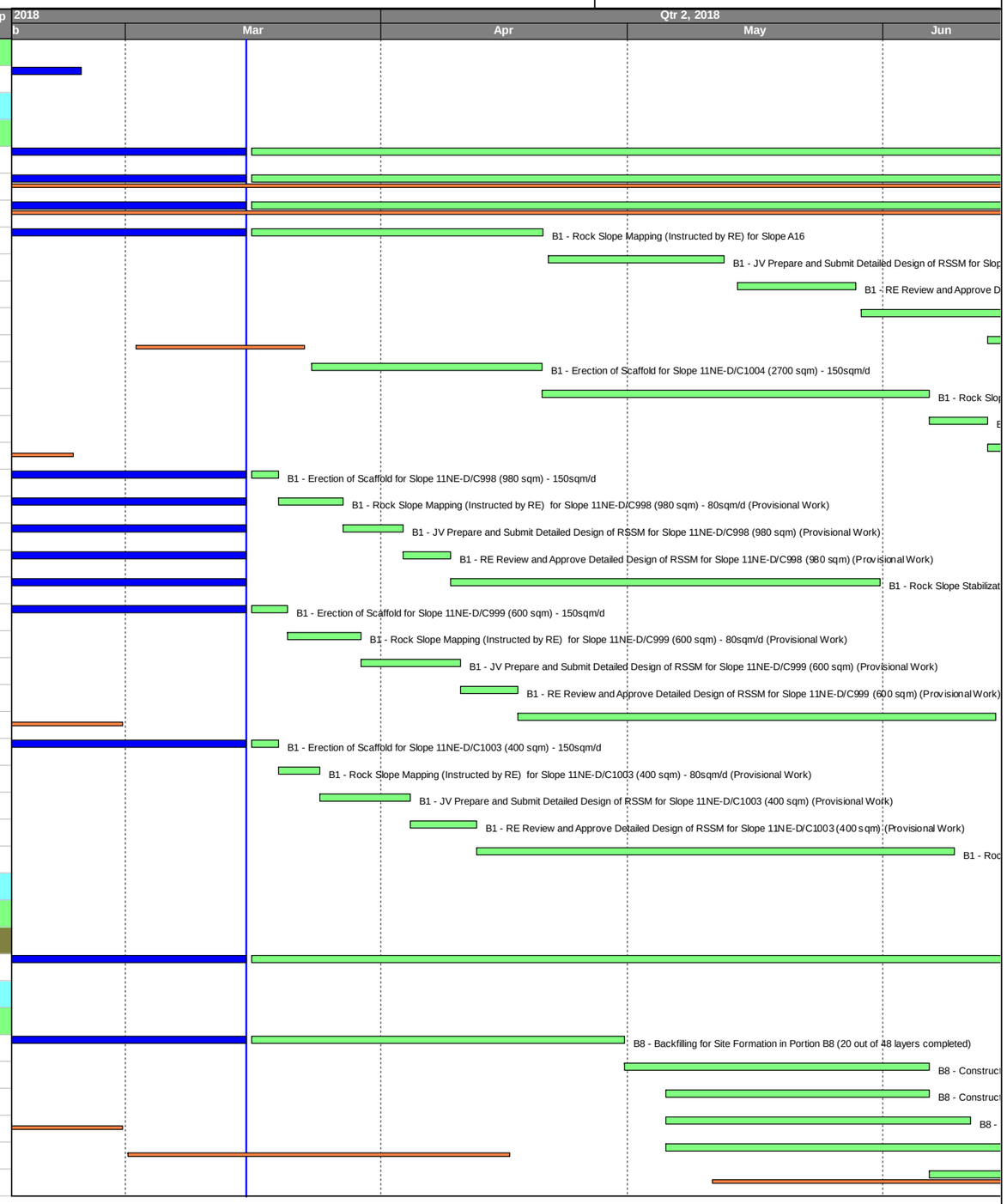
Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
Site Formation								
ACA40131A003	A4 - Defect Correction according to the Pre-inspection	0	7			13-Feb-18 A	23-Feb-18 A	100%
Portion B1								
Site Formation								
ACB10010	B1 - 9 Months Establishment Works for Landscape Softworks (Dwg.No.60328348/SF&I/1051&1052)	270	430	24-Jan-17	20-Oct-17	15-Sep-17 A	19-Nov-18	8%
ACB10020	B1 - 17 Months Establishment Works for Landscape Softworks (Dwg.No.60328348/SF&I/1051&1052)	510	651	24-Jan-17	17-Jun-18	15-Sep-17 A	28-Jun-19	8%
ACB10030	B1 - 30 Months Establishment Works for Landscape Softworks (Dwg.No.60328348/SF&I/1051&1052)	900	912	24-Jan-17	12-Jul-19	19-Feb-17 A	19-Aug-19	42%
ACB10060	B1 - Rock Slope Mapping (Instructed by RE) for Slope A16	30	75	19-Jul-17	22-Aug-17	16-Jan-18 A	20-Apr-18	10%
ACB10070	B1 - JV Prepare and Submit Detailed Design of RSSM for Slope A16 (Provisional Work)	18	18	23-Aug-17	12-Sep-17	21-Apr-18	12-May-18	0%
ACB10080	B1 - RE Review and Approve Detailed Design of RSSM for Slope A16 (Provisional Work)	12	12	13-Sep-17	26-Sep-17	14-May-18	28-May-18	0%
ACB10090	B1 - Rock Slope Stabilization Measures of RSSM for Slope A16 (Provisional Work)	48	48	27-Sep-17	24-Nov-17	29-May-18	25-Jul-18	0%
ACB10310	B1 - Erection of Scaffold for Slope 11NE-D/C988 (2600 sqm) - 150sqm/d	18	18	02-Mar-18	22-Mar-18	13-Jun-18	06-Jul-18	0%
ACB10380	B1 - Erection of Scaffold for Slope 11NE-D/C1004 (2700 sqm) - 150sqm/d	20	20	27-Nov-17	19-Dec-17	23-Mar-18	20-Apr-18	0%
ACB10390	B1 - Rock Slope Mapping (Instructed by RE) for Slope 11NE-D/C1004 (2700 sqm) - 80sqm/d (Provisional Work)	38	38	20-Dec-17	05-Feb-18	20-Apr-18	06-Jun-18	0%
ACB10400	B1 - JV Prepare and Submit Detailed Design of RSSM for Slope 11NE-D/C1004 (2700 sqm) (Provisional Work)	6	6	06-Feb-18	12-Feb-18	06-Jun-18	13-Jun-18	0%
ACB10410	B1 - RE Review and Approve Detailed Design of RSSM for Slope 111NE-D/C1004 (2700 sqm) (Provisional Work)	6	6	13-Feb-18	22-Feb-18	13-Jun-18	21-Jun-18	0%
ACB10650	B1 - Erection of Scaffold for Slope 11NE-D/C998 (980 sqm) - 150sqm/d	7	156	28-Jul-17	04-Aug-17	10-Jul-17 A	19-Mar-18	60%
ACB10660	B1 - Rock Slope Mapping (Instructed by RE) for Slope 11NE-D/C998 (980 sqm) - 80sqm/d (Provisional Work)	13	190	05-Aug-17	19-Aug-17	07-Aug-17 A	27-Mar-18	50%
ACB10670	B1 - JV Prepare and Submit Detailed Design of RSSM for Slope 11NE-D/C998 (980 sqm) (Provisional Work)	6	184	21-Aug-17	26-Aug-17	18-Aug-17 A	03-Apr-18	40%
ACB10680	B1 - RE Review and Approve Detailed Design of RSSM for Slope 11NE-D/C998 (980 sqm) (Provisional Work)	6	187	28-Aug-17	02-Sep-17	19-Aug-17 A	09-Apr-18	40%
ACB10690	B1 - Rock Slope Stabilization Measures for Slope 11NE-D/C998 (980 sqm)	48	164	04-Sep-17	01-Nov-17	08-Nov-17 A	31-May-18	10%
ACB10710	B1 - Erection of Scaffold for Slope 11NE-D/C999 (600 sqm) - 150sqm/d	4	52	13-Oct-17	17-Oct-17	16-Jan-18 A	20-Mar-18	5%
ACB10720	B1 - Rock Slope Mapping (Instructed by RE) for Slope 11NE-D/C999 (600 sqm) - 80sqm/d (Provisional Work)	8	8	18-Oct-17	26-Oct-17	20-Mar-18	29-Mar-18	0%
ACB10730	B1 - JV Prepare and Submit Detailed Design of RSSM for Slope 11NE-D/C999 (600 sqm) (Provisional Work)	6	6	27-Oct-17	03-Nov-17	29-Mar-18	10-Apr-18	0%
ACB10740	B1 - RE Review and Approve Detailed Design of RSSM for Slope 11NE-D/C999 (600 sqm) (Provisional Work)	6	6	04-Nov-17	10-Nov-17	10-Apr-18	17-Apr-18	0%
ACB10750	B1 - Rock Slope Stabilization Measures for Slope 11NE-D/C999 (600 sqm)	48	48	30-Dec-17	28-Feb-18	17-Apr-18	14-Jun-18	0%
ACB10770	B1 - Erection of Scaffold for Slope 11NE-D/C1003 (400 sqm) - 150sqm/d	3	128	11-Sep-17	13-Sep-17	13-Oct-17 A	19-Mar-18	10%
ACB10780	B1 - Rock Slope Mapping (Instructed by RE) for Slope 11NE-D/C1003 (400 sqm) - 80sqm/d (Provisional Work)	5	5	14-Sep-17	19-Sep-17	19-Mar-18*	24-Mar-18	0%
ACB10790	B1 - JV Prepare and Submit Detailed Design of RSSM for Slope 11NE-D/C1003 (400 sqm) (Provisional Work)	6	6	20-Sep-17	26-Sep-17	24-Mar-18	04-Apr-18	0%
ACB10800	B1 - RE Review and Approve Detailed Design of RSSM for Slope 11NE-D/C1003 (400 sqm) (Provisional Work)	6	6	27-Sep-17	04-Oct-17	04-Apr-18	12-Apr-18	0%
ACB10810	B1 - Rock Slope Stabilization Measures for Slope 11NE-D/C1003 (400 sqm) (Provisional Work)	48	48	02-Nov-17	29-Dec-17	12-Apr-18	09-Jun-18	0%
Portion B5								
Portion B5 North & East Side adjacent to Portion B2 and Pumping Station and Reservoirs								
Site Formation								
ACB50060	B5 - 9 Months Establishment Works for Landscape Softworks (Dwg.No.60328348/SF&I/1051&1052)	270	404	24-Jan-17	20-Dec-17	15-Sep-17 A	25-Jan-19	5%
Portion B8								
Site Formation								
ACB80020	B8 - Backfilling for Site Formation in Portion B8 (20 out of 48 layers completed)	60	194	09-Oct-17	18-Dec-17	01-Sep-17 A	30-Apr-18	42%
ACB80030	B8 - Construct New U-Channel 300U (approx 80m) and Catchpit TC6c	30	30	14-Nov-17	18-Dec-17	30-Apr-18	06-Jun-18	0%
ACB80040	B8 - Construct New U-Channel 375U (approx 66m) and Catchpit TC6d	26	26	19-Dec-17	20-Jan-18	05-May-18	06-Jun-18	0%
ACB80050	B8 - Construct New U-Channel 450U (approx 73m) and Catchpit TC6a	30	30	22-Jan-18	28-Feb-18	05-May-18	11-Jun-18	0%
ACB80060	B8 - Construct New U-Channel 525U (approx 80m) and Catchpit TC6c	36	36	01-Mar-18	16-Apr-18	05-May-18	19-Jun-18	0%
ACB80090	B8 - Erect Boundary Chainlink Fence (appox 600m) and Gates in Portion B8	90	90	11-May-18	27-Aug-18	06-Jun-18	21-Sep-18	0%



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

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

3-MONTH ROLLING PROGRAMME
(In comparison with WP Rev.1 dated 25 Aug 2017)

ARQ - Programme Logics based on WP Rev.1 dated 25 Aug 2017

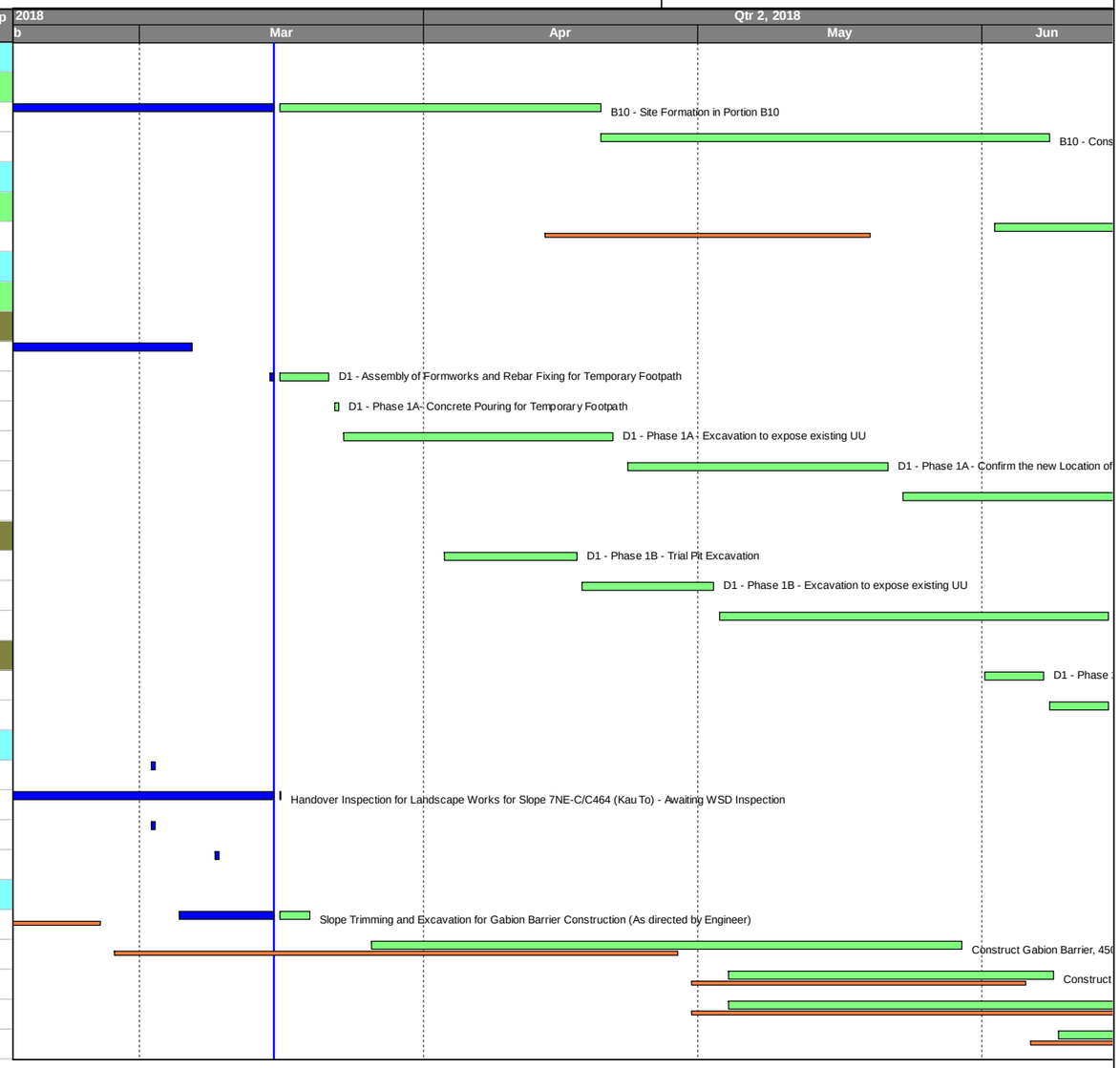
Date	Revision	Checked	Approved
20-Mar-18	3MRP Rev.1 (Cut Off on 15 Mar 18)		

20 Mar 2018

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

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

Activity ID	Activity Name	BL Project Duration	At Completion Duration	BL Project Start	BL Project Finish	Start	Finish	% Comp
Portion B10								
Site Formation								
ACB100020	B10 - Site Formation in Portion B10	45	185	31-Oct-17	21-Dec-17	01-Sep-17 A	20-Apr-18	42%
ACB100030	B10 - Construct New U-Channel (450U,525U and 675U; approx 90m) and Catchpits (3nos)	40	40	22-Dec-17	09-Feb-18	20-Apr-18	08-Jun-18	0%
Portion C1c								
Site Formation								
ACC20010	C1c - Site Clearance in Portion C1c	30	30	14-Apr-18	19-May-18	02-Jun-18	09-Jul-18	0%
Portion D1								
Road Improvement at Po Lam Road								
Phase 1 Road Improvement Works (Location A)								
ACD10025A001	D1 - Subletting and Material Preparation for Po Lam Road Improvement Works	0	52			02-Jan-18 A	06-Mar-18 A	100%
ACD10025A001a	D1 - Assembly of Formworks and Rebar Fixing for Temporary Footpath	0	6			15-Mar-18 A	21-Mar-18	16.67%
ACD10025A002	D1 - Phase 1A- Concrete Pouring for Temporary Footpath	0	1			22-Mar-18	22-Mar-18	0%
ACD10035A001	D1 - Phase 1A- Excavation to expose existing UU	0	22			23-Mar-18	21-Apr-18	0%
ACD10035A002	D1 - Phase 1A- Confirm the new Location of Fire Hydrant	0	24			23-Apr-18	21-May-18	0%
ACD10045	D1 - Phase 1A- CLP to Lay New Cables and Abandon Existing Cables	24	47	30-Aug-17	26-Sep-17	23-May-18	18-Jul-18	0%
Phase 1 Road Improvement Works (Location B)								
ACD10130A001	D1 - Phase 1B - Trial Pit Excavation	0	12			03-Apr-18*	17-Apr-18	0%
ACD10140A001	D1 - Phase 1B - Excavation to expose existing UU	0	12			18-Apr-18	02-May-18	0%
ACD10150A001	D1 - Phase 1B - Confirm Proposed Location of Drawpits (Earth/E&M/ATC) and Light Signal Head	0	36			03-May-18	14-Jun-18	0%
Phase 2 Road Improvement Works								
ACD10180A001	D1 - Phase 2 - Excavation for Footing Construction	0	6			01-Jun-18*	07-Jun-18	0%
ACD10190A001	D1 - Phase 2 - Construct Pad Footing	0	6			08-Jun-18	14-Jun-18	0%
Shui Chuen O & Kau To (Portion E2) - Subject to Excision								
ACO10066	Handover Inspection for Slope 7NE-C/C499 (Landscape Softworks)	7	1	13-Sep-17	20-Sep-17	02-Mar-18 A	02-Mar-18 A	100%
ACO10243	Handover Inspection for Landscape Works for Slope 7NE-C/C464 (Kau To) - Awaiting WSD Inspection	7	67	30-Oct-17	06-Nov-17	21-Dec-17 A	16-Mar-18	90%
ACO10271	Handover Inspection for Landscape Works for Slope 7NE-C/CR78 (Kau To)	7	1	15-Nov-17	22-Nov-17	02-Mar-18 A	02-Mar-18 A	100%
ACO10281	Handover Inspection for Landscape Works for Slope 7SE-C/F238 (Shui Chuen O)	7	1	19-Oct-17	26-Oct-17	09-Mar-18 A	09-Mar-18 A	100%
Mitigation Works for Natural Terrain Catchment B5 adjacent to Anderson Road - Subject to Excision								
ACO10140	Slope Trimming and Excavation for Gabion Barrier Construction (As directed by Engineer)	30	13	18-Jan-18	24-Feb-18	05-Mar-18 A	19-Mar-18	80%
ACO10150	Construct Gabion Barrier, 450UC and Catch Pits	50	50	26-Feb-18	28-Apr-18	26-Mar-18*	29-May-18	0%
ACO10160	Construct 800mm and 1500mm Concrete Maintenance Access	30	30	30-Apr-18	05-Jun-18	04-May-18	08-Jun-18	0%
ACO10170	Demolish Existing Culvert and Seal Outlet Pipe incl. Modification of Catchpit and Stepped Channel (As directed by Engr)	40	40	30-Apr-18	16-Jun-18	04-May-18	21-Jun-18	0%
ACO10180	Construct Gate type I (Location determined by Engineer)	10	10	06-Jun-18	16-Jun-18	09-Jun-18	21-Jun-18	0%



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Planned Bar (WP)
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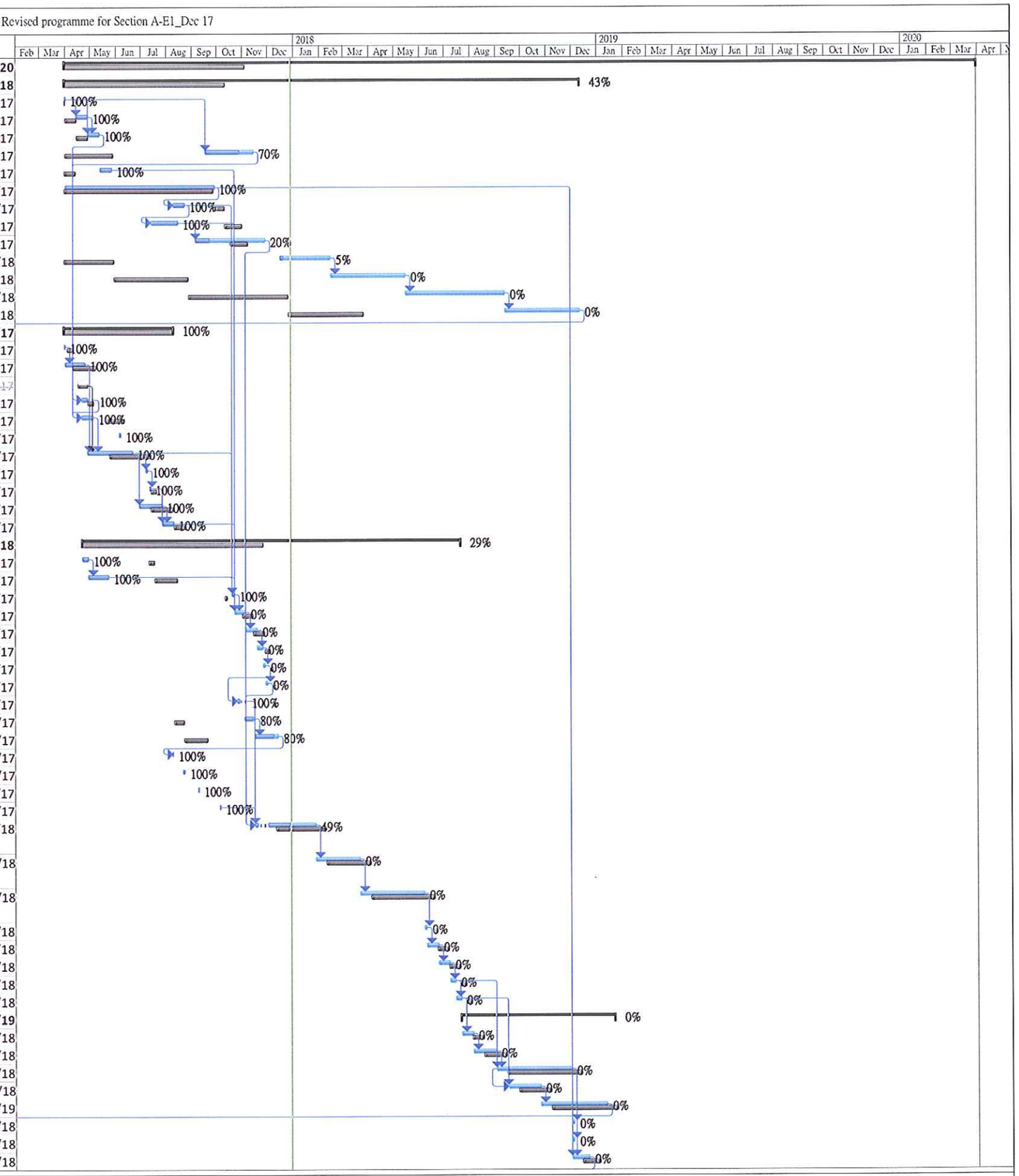
3-MONTH ROLLING PROGRAMME
(In comparison with WP Rev.1 dated 25 Aug 2017)

ARQ - Programme Logics based on WP Rev.1 dated 25 Aug 2017

Date	Revision	Checked	Approved
20-Mar-18	3MRP Rev.1 (Cut Off on 15 Mar 18)		

Revised programme for Section A-E1_Dec 17

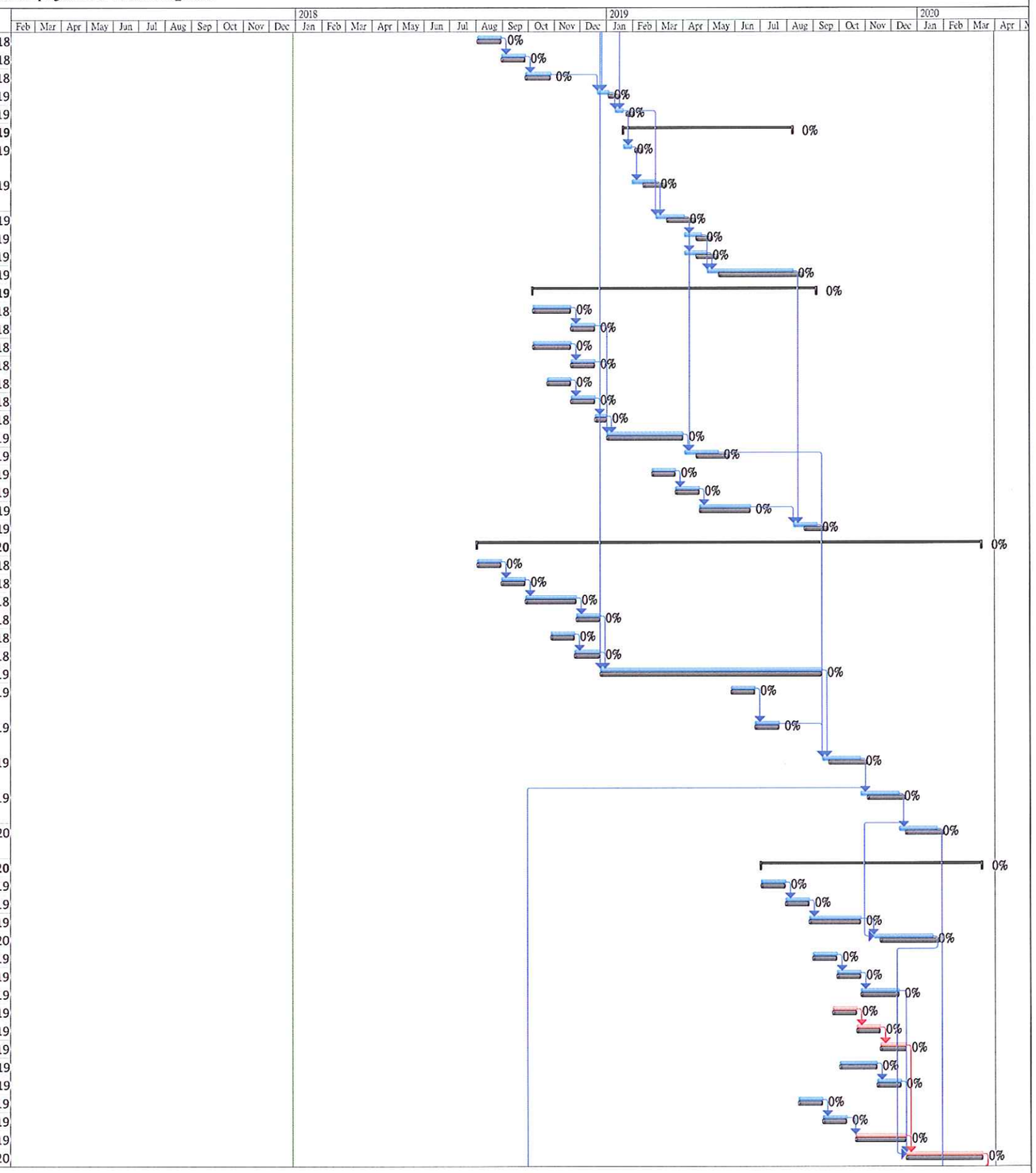
ITEM	ID	Task Name	Duration	Remaining Duration	Start	Finish
1	**A.1.1**	**Section A, Portion 1 - Escalator (E1)**	**1096 days**	**986.55 days**	**Fri 31/3/17**	**Mon 30/3/20**
2	**A.1.1.1**	**Pre Construction Works**	**620 days**	**354.65 days**	**Fri 31/3/17**	**Mon 10/12/18**
3	A.1.1.1.1	Access Date for Portion 1	1 day	0 days	Fri 31/3/17	Fri 31/3/17
4	A.1.1.1.2	Site Clearance	14 days	0 days	Fri 14/4/17	Thu 27/4/17
5	A.1.1.1.3	Site Condition Survey	14 days	0 days	Fri 28/4/17	Thu 11/5/17
6	A.1.1.1.4	Initial site survey and submission	58 days	17.4 days	Sun 17/9/17	Mon 13/11/17
7	1.1.5	Carry out Tree Survey and Report Submission	14 days	0 days	Sat 13/5/17	Fri 26/5/17
8	A.1.1.1.5	Application for Excavation Permit (XP)	180 days	0 days	Sat 1/4/17	Wed 27/9/17
9	A.1.1.1.7	Implement TTA at Hiu Ming Street/Hiu Kwong Street	14 days	0 days	Wed 9/8/17	Tue 22/8/17
10	A.1.1.1.8	Erection of Hoarding	33 days	0 days	Thu 13/7/17	Mon 14/8/17
11	A.1.1.1.9	Tree Fell	84 days	67.2 days	Tue 5/9/17	Mon 27/11/17
12	A.1.1.1.10	Design submission of Escalator	60 days	57 days	Sat 16/12/17	Tue 13/2/18
13	A.1.1.1.11	Comment of design submission of Escalator	90 days	90 days	Wed 14/2/18	Mon 14/5/18
14	1.1.12	Second design submission of Escalator	120 days	120 days	Tue 15/5/18	Tue 11/9/18
15	1.1.13	Approval of design submission of Escalator	90 days	90 days	Wed 12/9/18	Mon 10/12/18
16	**A.1.1.2**	**Ground Investigation**	**132 days**	**0 days**	**Fri 31/3/17**	**Wed 9/8/17**
17	A.1.1.2.1	Proposal of ground investigation specialist	1 day	0 days	Fri 31/3/17	Fri 31/3/17
18	A.1.1.2.2	Approval of ground investigation specialist	24 days	0 days	Sat 1/4/17	Mon 24/4/17
19	~~A.1.1.2.3~~	~~Submisison of Construction impact assessmentt~~	~~12 days~~	~~12 days~~	~~Mon 17/4/17~~	~~Fri 28/4/17~~
20	A.1.1.2.4	Establishment of Drilling rigs	7 days	0 days	Fri 21/4/17	Fri 5/5/17
21	A.1.1.2.5	Inspection Pits (10 nr)	14 days	0 days	Fri 21/4/17	Thu 4/5/17
22	1.2.6	Additional Inspection Pit (PMI 1 & PMI 2)	2 days	0 days	Mon 5/6/17	Tue 6/6/17
23	A.1.1.2.6	Predrilling (10 nr)	54 days	0 days	Fri 28/4/17	Tue 20/6/17
24	1.2.8	Additional Pre-drilling (PMI 3)	2 days	0 days	Fri 7/7/17	Sat 8/7/17
25	A.1.1.2.7	Demobilization of Drilling rigs	1 day	0 days	Wed 12/7/17	Wed 12/7/17
26	A.1.1.2.8	In-situ testing and result submission	28 days	0 days	Thu 29/6/17	Wed 26/7/17
27	A.1.1.2.9	Laboratory tests	14 days	0 days	Thu 27/7/17	Wed 9/8/17
28	**A.1.1.3**	**Piling Works (Pr-bored Socket H-Pile)**	**454.4 days**	**322.53 days**	**Sat 22/4/17**	**Fri 20/7/18**
29	A.1.1.3.1	Proposal of Piling Specialist	7 days	0 days	Sat 22/4/17	Fri 28/4/17
30	A.1.1.3.2	Approval of Piling Specialist	24 days	0 days	Sat 29/4/17	Mon 22/5/17
31	A.1.1.3.3	Establishment of Piling rigs (1 nr)	3 days	0 days	Thu 19/10/17	Sat 21/10/17
32	A.1.1.3.4	Construction of Preliminary Pile (1 nr)	13 days	13 days	Sun 22/10/17	Fri 3/11/17
33	A.1.1.3.5	Establishment of pile testing equipment	14 days	14 days	Sat 4/11/17	Fri 17/11/17
34	A.1.1.3.6	Load Test Preliminary Pile (1 nr)	7 days	7 days	Sat 18/11/17	Fri 24/11/17
35	A.1.1.3.7	Submission of Load Test Report (Preliminary Pile)	3 days	3 days	Sat 25/11/17	Mon 27/11/17
36	A.1.1.3.8	Review of Load Test result	3 days	3 days	Tue 28/11/17	Thu 30/11/17
37	A.1.1.3.9	Establishment of Piling rigs (1 nr)	3 days	0 days	Wed 25/10/17	Sat 4/11/17
38	A.1.1.3.10	Submission of temporary working platform design	12 days	2.4 days	Fri 3/11/17	Tue 14/11/17
39	A.1.1.3.11	Approval of temporary working platform design	28 days	5.6 days	Wed 15/11/17	Tue 12/12/17
40	A.1.1.3.11a	CCTV on uncharted Manhole (PMI 12)	1 day	0 days	Tue 8/8/17	Tue 8/8/17
41	A.1.1.3.11b	Demolition of Uncharted Manhole (PMI 15)	2 days	0 days	Mon 21/8/17	Tue 22/8/17
42	A.1.1.2.11c	Revised Pile Loading Schedule (PMI 17)	1 day	0 days	Fri 8/9/17	Fri 8/9/17
43	A.1.1.2.11d	Pile Sleeve Not Required For E1-RS1 & E1-PC1 (PMI 19)	1 day	0 days	Wed 4/10/17	Wed 4/10/17
44	A.1.1.3.12	Construction of Main Pile for pile cap E1-RS1 and E1-PC1(34nrs)	60 days	30.4 days	Wed 15/11/17	Fri 26/1/18
45	A.1.1.3.13	Construction of main pile for pile cap E1 PC6 and E1-PC5 (30 nrs)	53 days	53 days	Fri 26/1/18	Tue 20/3/18
46	A.1.1.3.14	Construction of main pile for pile cap E1 PC2, E1 PC3 and E1 PC4 (44nrs)	77 days	77 days	Tue 20/3/18	Tue 5/6/18
47	A.1.1.3.15	Establishment of Drilling rigs for proof drill (1 nr)	3 days	3 days	Tue 5/6/18	Fri 8/6/18
48	A.1.1.3.16	Selection and Carry out Proof drill (2 nrs)	14 days	14 days	Fri 8/6/18	Fri 22/6/18
49	A.1.1.3.17	Establishment of pile testing equipment	14 days	14 days	Fri 22/6/18	Fri 6/7/18
50	A.1.1.3.18	Selection and Carry Out Load Test Main Pile (1 nr)	7 days	7 days	Fri 6/7/18	Fri 13/7/18
51	A.1.1.3.19	Submission of Load Test Report (Main Pile)	7 days	7 days	Fri 13/7/18	Fri 20/7/18
52	**A.1.1.4**	**Pile Cap & Footing**	**184 days**	**184 days**	**Fri 20/7/18**	**Sun 20/1/19**
53	A.1.1.4.1	Submission of temporary works for ELS	14 days	14 days	Fri 20/7/18	Fri 3/8/18
54	A.1.1.4.2	Approval of temporary works for ELS	28 days	28 days	Fri 3/8/18	Fri 31/8/18
55	A.1.1.4.3	Installing ELS Works	90 days	90 days	Fri 31/8/18	Thu 29/11/18
56	A.1.1.4.4	Pile cap (E1-PC1 and E1-PC2)	39 days	39 days	Fri 14/9/18	Tue 23/10/18
57	A.1.1.4.5	Pile Cap (E1-PC3 ~ PC6)	79 days	79 days	Tue 23/10/18	Thu 10/1/19
58	A.1.1.4.5a	Interface detail E1-RS1 (PMI 30)	3 days	3 days	Thu 29/11/18	Sun 2/12/18
59	A.1.1.4.5b	Water Pipe Diversion (PMI 16)	3 days	3 days	Thu 29/11/18	Sun 2/12/18
60	A.1.1.4.6	Retaining structure (E1-RS1)	21 days	21 days	Thu 29/11/18	Thu 20/12/18



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

Revised programme for Section A-E1_Dec 17

ITEM	ID	Task Name	Duration	Remaining Duration	Start	Finish
61	A.1.1.4.7	Material submission of water proofing works	28 days	28 days	Thu 2/8/18	Wed 29/8/18
62	A.1.1.4.8	Approval of material of water proofing wroks	28 days	28 days	Thu 30/8/18	Wed 26/9/18
63	A.1.1.4.9	Procurement to delivery of water proofing material	30 days	30 days	Thu 27/9/18	Fri 26/10/18
64	A.1.1.4.10	Waterproofing Works	14 days	14 days	Thu 20/12/18	Thu 3/1/19
65	A.1.1.4.11	Backfilling	10 days	10 days	Thu 10/1/19	Sun 20/1/19
66	**A.1.1.5**	**Superstructures**	**199 days**	**199 days**	**Sun 20/1/19**	**Wed 7/8/19**
67	A.1.1.5.1	Submission of temporary work design and method for piers construction	10 days	10 days	Sun 20/1/19	Wed 30/1/19
68	A.1.1.5.2	Approval to temporary works design and method for piers construction	28 days	28 days	Wed 30/1/19	Wed 27/2/19
69	A.1.1.5.3	Construction of piers (E1-P1 ~ P5)	34 days	34 days	Wed 27/2/19	Tue 2/4/19
70	A.1.1.5.4	Conatruction of Ramp Structures	20 days	20 days	Tue 2/4/19	Mon 22/4/19
71	A.1.1.5.5	Construction of Abutment (E1-PC6)	27 days	27 days	Tue 2/4/19	Mon 29/4/19
72	A.1.1.5.6	Construction of deck slab with cast in items	100 days	100 days	Mon 29/4/19	Wed 7/8/19
73	**A.1.1.6**	**Construction of Bearings and Movement Joints**	**333.4 days**	**333.4 days**	**Sat 6/10/18**	**Wed 4/9/19**
74	A.1.1.6.1	Proposal of Bridge Bearing Specialist	45 days	45 days	Sat 6/10/18	Mon 19/11/18
75	A.1.1.6.2	Approval of Bridge Bearing Specialist	28 days	28 days	Tue 20/11/18	Mon 17/12/18
76	A.1.1.6.3	Design submission of Bridge Bearing	45 days	45 days	Sat 6/10/18	Mon 19/11/18
77	A.1.1.6.4	Approval of design submission of Bridge bearing	28 days	28 days	Tue 20/11/18	Mon 17/12/18
78	A.1.1.6.5	Material submission of Bridge Bearing	28 days	28 days	Tue 23/10/18	Mon 19/11/18
79	A.1.1.6.6	Approval of material submission to Bridge Bearing	28 days	28 days	Tue 20/11/18	Mon 17/12/18
80	A.1.1.6.7	Testing and submission of result of Bridge Bearing	14 days	14 days	Tue 18/12/18	Mon 31/12/18
81	A.1.1.6.8	Procurement and delivery of Bridge Bearing	90 days	90 days	Tue 1/1/19	Sun 31/3/19
82	A.1.1.6.9	Installation of Bearings (6 nr)	40 days	40 days	Tue 2/4/19	Sun 12/5/19
83	A.1.1.6.10	Material submission of movement joints	28 days	28 days	Sat 23/2/19	Fri 22/3/19
84	A.1.1.6.11	Approval of material submission of movement joints	28 days	28 days	Sat 23/3/19	Fri 19/4/19
85	A.1.1.6.12	Procurement to delivery of movement joints	60 days	60 days	Sat 20/4/19	Tue 18/6/19
86	A.1.1.6.13	Construction of MJ (3 nr)	28 days	28 days	Wed 7/8/19	Wed 4/9/19
87	**A.1.1.7**	**Installation of Escalators (E1-ES01 to ES-12)**	**592 days**	**592 days**	**Thu 2/8/18**	**Sun 15/3/20**
88	A.1.1.7.1	Proposal of Escalator Specialist	28 days	28 days	Thu 2/8/18	Wed 29/8/18
89	A.1.1.7.2	Approval of Escalator Specialist	28 days	28 days	Thu 30/8/18	Wed 26/9/18
90	A.1.1.7.3	Submission of Escalator E&M (SEM)	60 days	60 days	Thu 27/9/18	Sun 25/11/18
91	A.1.1.7.4	Approval of Escalator E&M (SEM)	28 days	28 days	Mon 26/11/18	Sun 23/12/18
92	A.1.1.7.5	Material submission of escalator	28 days	28 days	Sat 27/10/18	Fri 23/11/18
93	A.1.1.7.6	Approval of material submission of escalator	30 days	30 days	Sat 24/11/18	Sun 23/12/18
94	A.1.1.7.7	Procurement to delivery of escalator	260 days	260 days	Mon 24/12/18	Mon 9/9/19
95	A.1.1.7.8	Submission of method statement for installation of escalator	28 days	28 days	Mon 27/5/19	Sun 23/6/19
96	A.1.1.7.9	Approval of method statement for installation of escalator	28 days	28 days	Mon 24/6/19	Sun 21/7/19
97	A.1.1.7.10	Installation of escalators and associate works (E1-RS1 to E1-P2)	45 days	45 days	Tue 10/9/19	Thu 24/10/19
98	A.1.1.7.11	Installation of escalator and associate works (E1-P2 to E1 P4)	45 days	45 days	Fri 25/10/19	Sun 8/12/19
99	A.1.1.7.12	Escalator Installation and associate works (E1-P4 to E1-ABT)	45 days	45 days	Mon 9/12/19	Wed 22/1/20
100	**A.1.1.7.13**	**Parapet and Roofing**	**259 days**	**259 days**	**Mon 1/7/19**	**Sun 15/3/20**
101	A.1.1.7.14	Material submission of Plexiglass	28 days	28 days	Mon 1/7/19	Sun 28/7/19
102	A.1.1.7.15	Approval of material of Plexiglass	28 days	28 days	Mon 29/7/19	Sun 25/8/19
103	A.1.1.7.16	Procurement to delivery of Plexiglass	60 days	60 days	Mon 26/8/19	Thu 24/10/19
104	A.1.1.7.17	Construction of pedestrian Plexiglass parapet	70 days	70 days	Sat 9/11/19	Fri 17/1/20
105	A.1.1.7.18	Material submission of fall arrest system	28 days	28 days	Fri 30/8/19	Thu 26/9/19
106	A.1.1.7.19	Approval of material of fall arrrest system	28 days	28 days	Fri 27/9/19	Thu 24/10/19
107	A.1.1.7.20	Procurement of fall arrest system	45 days	45 days	Fri 25/10/19	Sun 8/12/19
108	A.1.1.7.21	Material submission of corrugated steel roof	28 days	28 days	Sun 22/9/19	Sat 19/10/19
109	A.1.1.7.22	Approval of material for corrugated steel roof	28 days	28 days	Sun 20/10/19	Sat 16/11/19
110	A.1.1.7.23	Procurement of corrugated steel roof	30 days	30 days	Sun 17/11/19	Mon 16/12/19
111	A.1.1.7.24	Design submission of roof system	44 days	44 days	Mon 30/9/19	Tue 12/11/19
112	A.1.1.7.25	Approval of design submission of roof system	28 days	28 days	Wed 13/11/19	Tue 10/12/19
113	A.1.1.7.26	Proposal of off site fabrication of steelworks	28 days	28 days	Tue 13/8/19	Mon 9/9/19
114	A.1.1.7.27	Approval of off site fabrication of steelworks	28 days	28 days	Tue 10/9/19	Mon 7/10/19
115	A.1.1.7.28	Fabrication of steelworks	60 days	60 days	Fri 18/10/19	Mon 16/12/19
116	A.1.1.7.29	Erect Canopy and roofing system	90 days	90 days	Tue 17/12/19	Sun 15/3/20



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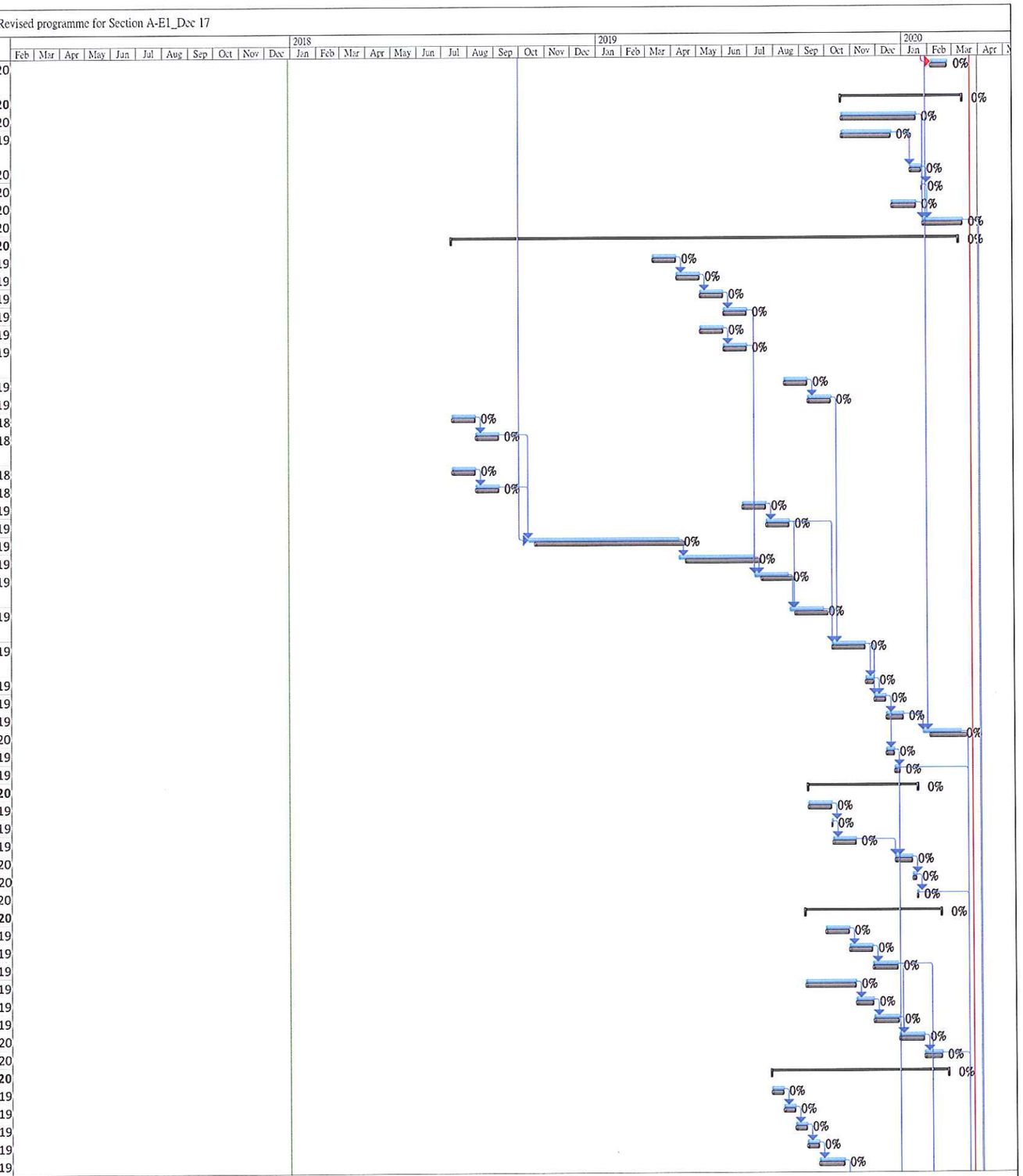
Critical Progress | Task Progress | Finish-only | Baseline Split | Summary Progress | Project Summary | Inactive Task | Deadline

Revised programme for Section A-E1_Dec 17

ITEM	ID	Task Name	Duration	Remaining Duration	Start	Finish
117	A.1.1.7.30	Decking construction connecting to existing footpath	20 days	20 days	Tue 4/2/20	Sun 23/2/20
118	**A.1.1.8**	**Drainage works construction**	**145 days**	**145 days**	**Sun 20/10/19**	**Thu 12/3/20**
119	A.1.1.8.1	Application of XP for carriageway of Hiu Ming Street	90 days	90 days	Sun 20/10/19	Fri 17/1/20
120	A.1.1.8.2	TTA application for drainage works at carriageway of Hiu Ming Street	60 days	60 days	Sun 20/10/19	Wed 18/12/19
121	A.1.1.8.3	Road works advice	14 days	14 days	Fri 10/1/20	Thu 23/1/20
122	A.1.1.8.4	Implementation of TTA	1 day	1 day	Fri 24/1/20	Fri 24/1/20
123	A.1.1.8.5	Procurement to delivery of material of drainage	30 days	30 days	Thu 19/12/19	Fri 17/1/20
124	A.1.1.8.6	Construction of drainage	48 days	48 days	Sat 25/1/20	Thu 12/3/20
125	**A.1.1.9**	**E & M Works**	**605 days**	**605 days**	**Thu 12/7/18**	**Sat 7/3/20**
126	A.1.1.9.1	Proposal of Specialist for E&M works	28 days	28 days	Sat 9/3/19	Fri 5/4/19
127	A.1.1.9.2	Approval of Specialist for E&M works	28 days	28 days	Sat 6/4/19	Fri 3/5/19
128	A.1.1.9.3	Material submission of cable tray	28 days	28 days	Sat 4/5/19	Fri 31/5/19
129	A.1.1.9.4	Approval of material submission of cable tray	28 days	28 days	Sat 1/6/19	Fri 28/6/19
130	A.1.1.9.5	Material submission of cables,conduits, fittings	28 days	28 days	Sat 4/5/19	Fri 31/5/19
131	A.1.1.9.6	Approval of material submission of cables, conduits, fittings	28 days	28 days	Sat 1/6/19	Fri 28/6/19
132	A.1.1.9.7	Material submission of lightings	28 days	28 days	Mon 12/8/19	Sun 8/9/19
133	A.1.1.9.8	Approval of material submission of lightings	28 days	28 days	Mon 9/9/19	Sun 6/10/19
134	A.1.1.9.9	Material submission of pillar box c/w accessories	28 days	28 days	Thu 12/7/18	Wed 8/8/18
135	A.1.1.9.10	Approval of material submission of pillar box c/w accessories	28 days	28 days	Thu 9/8/18	Wed 5/9/18
136	A.1.1.9.11	Material submission of MCB distribution board	28 days	28 days	Thu 12/7/18	Wed 8/8/18
137	A.1.1.9.12	Approval of MCB distribution board	28 days	28 days	Thu 9/8/18	Wed 5/9/18
138	A.1.1.9.13	Material submission of communication cables	28 days	28 days	Sun 23/6/19	Sat 20/7/19
139	A.1.1.9.14	Approval of communication cables	28 days	28 days	Sun 21/7/19	Sat 17/8/19
140	A.1.1.9.15	Positioning,/Construction/Installation of Pillar Box	180 days	180 days	Wed 10/10/18	Sun 7/4/19
141	A.1.1.9.16	Application of Power Supply	90 days	90 days	Mon 8/4/19	Sat 6/7/19
142	A.1.1.9.17	Trenching works and laying of ducting and power cables	40 days	40 days	Sun 7/7/19	Thu 15/8/19
143	A.1.1.9.18	Trenching works and laying of telecommunication cables	40 days	40 days	Sun 18/8/19	Thu 26/9/19
144	A.1.1.9.19	Trenching works and laying of lighting/communication cables	40 days	40 days	Mon 7/10/19	Fri 15/11/19
145	A.1.1.9.20	Connection of Telecommunication cables	10 days	10 days	Sat 16/11/19	Mon 25/11/19
146	A.1.1.9.21	Lighting/Communication connections	14 days	14 days	Tue 26/11/19	Mon 9/12/19
147	A.1.1.9.22	Finishing Works	21 days	21 days	Tue 10/12/19	Mon 30/12/19
148	A.1.1.9.23	T&C of Escalator and Submission of Form LE5 to EMSD	45 days	45 days	Thu 23/1/20	Sat 7/3/20
149	A.1.1.9.24	Reinstatement of footpath/stair	10 days	10 days	Tue 10/12/19	Thu 19/12/19
150	A.1.1.9.25	Demobilization and Clean up the Site	7 days	7 days	Fri 20/12/19	Thu 26/12/19
151	**A.1.1.10**	**Landscaping Works**	**131 days**	**131 days**	**Sun 8/9/19**	**Thu 16/1/20**
152	A.1.1.10.1	Submission of proposal of Landscape specialist	28 days	28 days	Sun 8/9/19	Sat 5/10/19
153	A.1.1.10.2	Nursery Inspection	1 day	1 day	Sun 6/10/19	Sun 6/10/19
154	A.1.1.10.3	Approval of proposal of Landscape specialist	28 days	28 days	Mon 7/10/19	Sun 3/11/19
155	A.1.1.10.4	Construction of hard and soft Landscape works	21 days	21 days	Fri 20/12/19	Thu 9/1/20
156	A.1.1.10.5	Rectification of detects	5 days	5 days	Fri 10/1/20	Tue 14/1/20
157	A.1.1.10.6	General tidy up	2 days	2 days	Wed 15/1/20	Thu 16/1/20
158	**A.1.1.11**	**Road and Pavings / traffic Signs**	**162 days**	**162 days**	**Wed 4/9/19**	**Wed 12/2/20**
159	A.1.1.11.1	Material submission of road pavers	28 days	28 days	Sat 28/9/19	Fri 25/10/19
160	A.1.1.11.2	Approval of material submission of road pavers	28 days	28 days	Sat 26/10/19	Fri 22/11/19
161	A.1.1.11.3	Procurement to delivery of road pavers	30 days	30 days	Sat 23/11/19	Sun 22/12/19
162	A.1.1.11.4	Ordering to delivery of concrete kerbs from CSD	60 days	60 days	Wed 4/9/19	Sat 2/11/19
163	A.1.1.11.5	Construction of kerbs	21 days	21 days	Sun 3/11/19	Sat 23/11/19
164	A.1.1.11.6	Construction of footpath	30 days	30 days	Sun 24/11/19	Mon 23/12/19
165	A.1.1.11.7	Construction of paved area	30 days	30 days	Tue 24/12/19	Wed 22/1/20
166	A.1.1.11.8	Installation of traffic/Directional Signs	21 days	21 days	Thu 23/1/20	Wed 12/2/20
167	**A.1.1.12**	**External Finishes**	**211 days**	**211 days**	**Thu 25/7/19**	**Thu 20/2/20**
168	A.1.1.12.1	Material submission of tiles	14 days	14 days	Thu 25/7/19	Wed 7/8/19
169	A.1.1.12.2	Comment of material submission of tiles	14 days	14 days	Thu 8/8/19	Wed 21/8/19
170	A.1.1.12.3	2nd submission of material of tiles	14 days	14 days	Thu 22/8/19	Wed 4/9/19
171	A.1.1.12.4	Approval of material of tiles	14 days	14 days	Thu 5/9/19	Wed 18/9/19
172	A.1.1.12.5	Procurement to delivery of tiles	30 days	30 days	Thu 19/9/19	Fri 18/10/19



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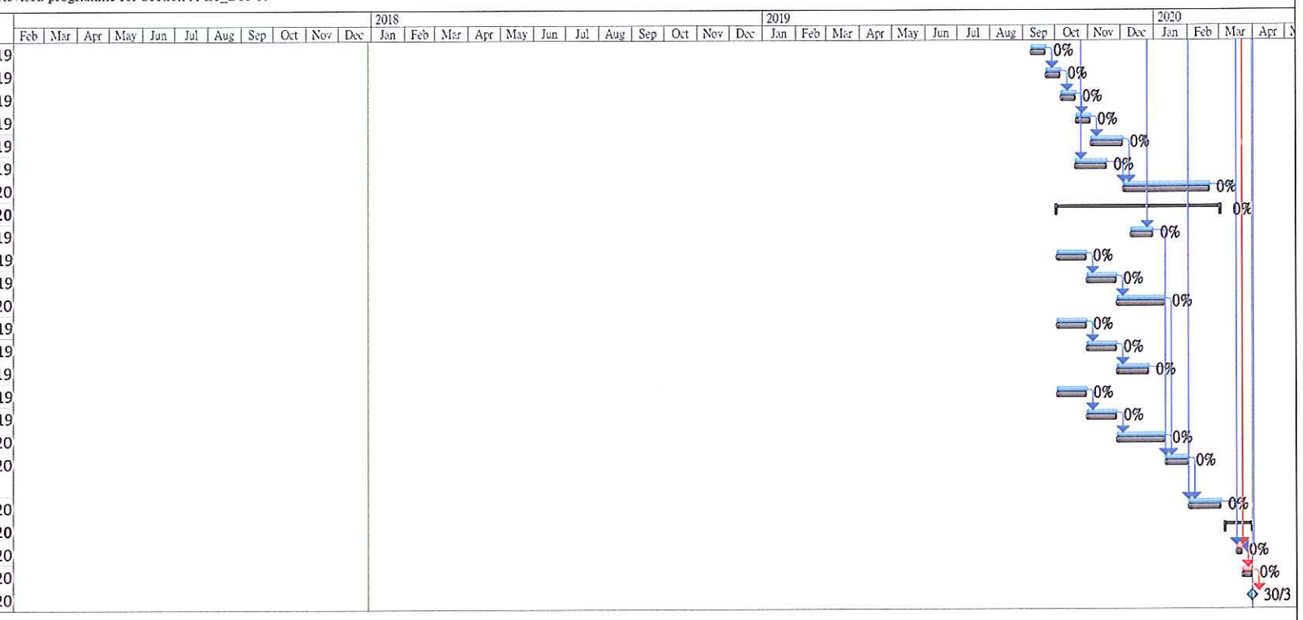
Revised programme for Section A-E1_Dec 17

ITEM	ID	Task Name	Duration	Remaining Duration	Start	Finish
173	A.1.1.12.6	Material submission of paint	14 days	14 days	Sun 8/9/19	Sat 21/9/19
174	A.1.1.12.7	Comment of matreial submission of paint	14 days	14 days	Sun 22/9/19	Sat 5/10/19
175	A.1.1.12.8	2nd submission of paints	14 days	14 days	Sun 6/10/19	Sat 19/10/19
176	A.1.1.12.9	Approval of material submission of paints	14 days	14 days	Sun 20/10/19	Sat 2/11/19
177	A.1.1.12.10	Procurement to delivery of paints	30 days	30 days	Sun 3/11/19	Mon 2/12/19
178	A.1.1.12.11	Construction of Tactile/Cermaric/Concrete Tiles	30 days	30 days	Sat 19/10/19	Sun 17/11/19
179	A.1.1.12.12	Texture Spray/Fungus Resistant Paint	80 days	80 days	Tue 3/12/19	Thu 20/2/20
180	**A.1.1.13**	**Construction of Sau Mau Ping Memorial Park**	**152 days**	**152 days**	**Wed 2/10/19**	**Sun 1/3/20**
181	A.1.1.13.1	Slope improvement work (11NE-D/CR222)	21 days	21 days	Tue 10/12/19	Mon 30/12/19
182	A.1.1.13.2	Material submission of Pavillion	28 days	28 days	Wed 2/10/19	Tue 29/10/19
183	A.1.1.13.3	Approval ot material submission of Pavillion	28 days	28 days	Wed 30/10/19	Tue 26/11/19
184	A.1.1.13.4	Procurement to delivery of Pavillion	45 days	45 days	Wed 27/11/19	Fri 10/1/20
185	A.1.1.13.5	Material submission of Bench	28 days	28 days	Wed 2/10/19	Tue 29/10/19
186	A.1.1.13.6	Approval to material submission of Bench	28 days	28 days	Wed 30/10/19	Tue 26/11/19
187	A.1.1.13.7	Procument to delivery of Bench	30 days	30 days	Wed 27/11/19	Thu 26/12/19
188	A.1.1.13.8	Material submission of Pole Light	28 days	28 days	Wed 2/10/19	Tue 29/10/19
189	A.1.1.13.9	Approval of material submission of Pole Light	28 days	28 days	Wed 30/10/19	Tue 26/11/19
190	A.1.1.13.10	Procurement to delivery of Pole light	45 days	45 days	Wed 27/11/19	Fri 10/1/20
191	A.1.1.13.11	Construction of Pavillon/Bench/Pole Light with ducting	21 days	21 days	Sat 11/1/20	Fri 31/1/20
192	A.1.1.13.12	Construction of Pavers	30 days	30 days	Sat 1/2/20	Sun 1/3/20
193	**A.1.1.14**	**General Inspection and Tidy up of Portion 1**	**25 days**	**25 days**	**Fri 6/3/20**	**Mon 30/3/20**
194	A.1.1.14.1	General Inspection and tidy up of Portion 1	5 days	5 days	Mon 16/3/20	Fri 20/3/20
195	A.1.1.14.2	Allowabale Terminal Float	10 days	10 days	Sat 21/3/20	Mon 30/3/20
196	A.1.1.14.3	Completion of works	0 days	0 days	Mon 30/3/20	Mon 30/3/20



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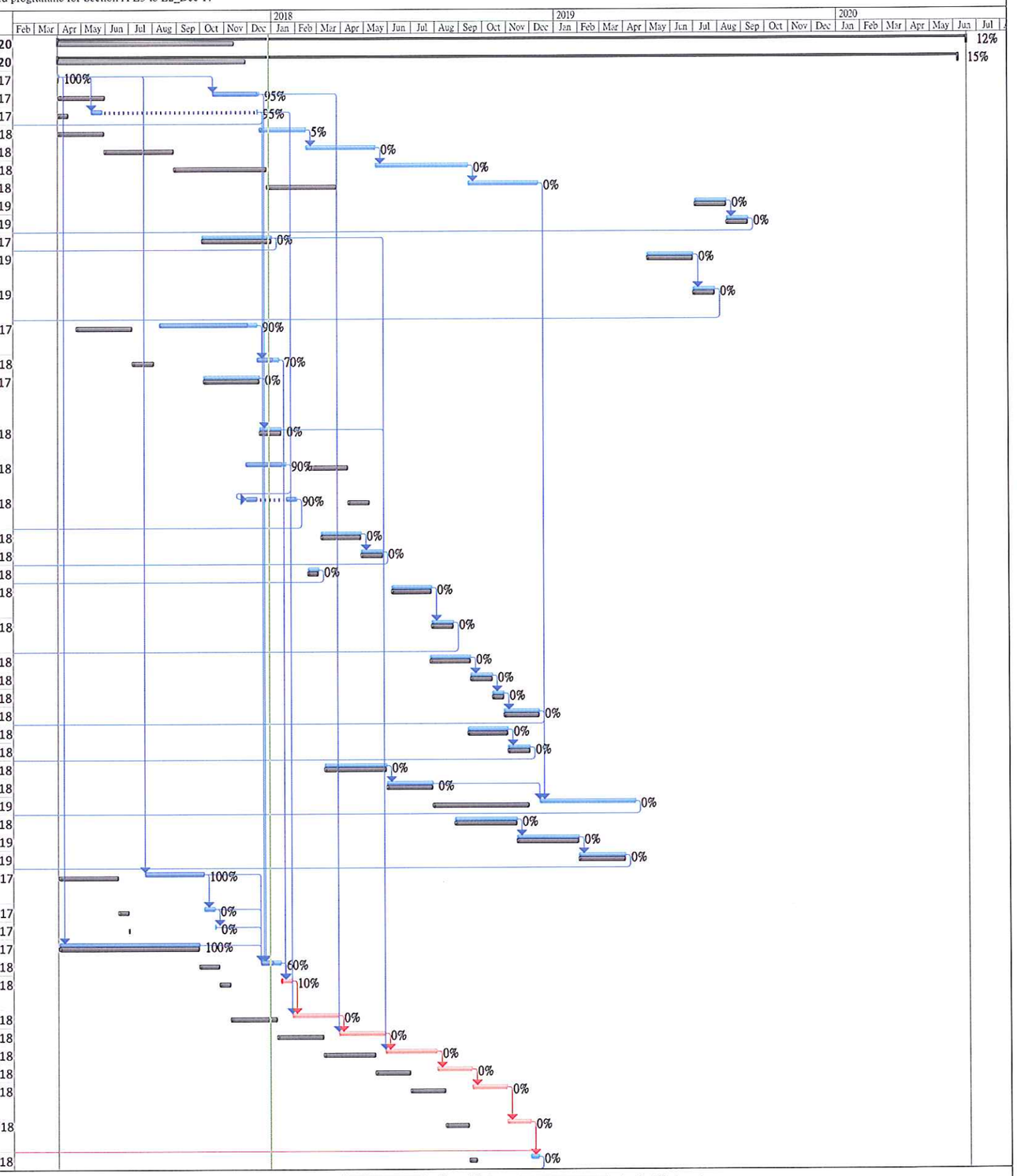
Revised programme for Section A E3 to E2_Dec 17

ID	Task Name	Duration	Remaining Duration	Start	Finish
A.2.1	**Section A**	**1175 days**	**1039.17 days**	**Fri 31/3/17**	**Wed 17/6/20**
A.2.1.1	**E3 and E2 Footbridge and lift Tower**	**1164 days**	**994.66 days**	**Fri 31/3/17**	**Sat 6/6/20**
A.2.1.1.1	Access Date of Portion 2	1 day	0 days	Fri 31/3/17	Fri 31/3/17
A.2.1.1.2	Initial Site survey	60 days	3 days	Tue 17/10/17	Fri 15/12/17
A.2.1.1.3	Initial Tree survey	15 days	0.75 days	Sat 13/5/17	Wed 13/12/17
A.2.1.1.4	Design submission of lift	60 days	57 days	Sat 16/12/17	Tue 13/2/18
A.2.1.1.5	Comment of design submission of lift	90 days	90 days	Wed 14/2/18	Mon 14/5/18
A.2.1.1.5a	Second design submission of lift	120 days	120 days	Tue 15/5/18	Tue 11/9/18
A.2.1.1.5b	Approval of design submission of lift	90 days	90 days	Wed 12/9/18	Mon 10/12/18
A.2.1.1.6	Design submission of lighting at footbridge	41 days	41 days	Tue 2/7/19	Sun 11/8/19
A.2.1.1.7	Approval of design submission of lighting for footbridge	28 days	28 days	Mon 12/8/19	Sun 8/9/19
A.2.1.1.8	Proposal of Concrete Batching Plant and mixes	90 days	90 days	Tue 3/10/17	Sun 31/12/17
A.2.1.1.9	Submission of shop drawing for irrigation system and submersible pump for the footbridge	60 days	60 days	Wed 1/5/19	Sat 29/6/19
A.2.1.1.10	Acceptance of shop drawing for irrigation system and submersible pump system	28 days	28 days	Sun 30/6/19	Sat 27/7/19
A.2.1.1.11	Method Statement submission for excavation of rock for bridge tower E3-ST1 and approval	126 days	12.6 days	Wed 9/8/17	Tue 12/12/17
A.2.1.1.12	Approval of method statement of excavation of rock	28 days	8.4 days	Wed 13/12/17	Tue 9/1/18
A.2.1.1.13	Method Statement Submission for installation and Temporary works design for concreting of bridge tower E3-ST1	72 days	72 days	Thu 5/10/17	Fri 15/12/17
A.2.1.1.14	Approval of method statement of temporary works design for concreting of bridge tower of bridge tower E3-ST1	28 days	28 days	Sat 16/12/17	Fri 12/1/18
A.2.1.1.15	Method Statement submission for installation of socket H piles including predrill location and Proof Drill location	52 days	5.2 days	Tue 28/11/17	Thu 18/1/18
A.2.1.1.16	Approval of method statement for installation of socket H piles including predrill and proof drill location	28 days	2.8 days	Tue 28/11/17	Thu 1/2/18
A.2.1.1.17	Submission of Method statement for testing of socket H piles	52 days	52 days	Mon 5/3/18	Wed 25/4/18
A.2.1.1.18	Approval of method statement for testing of socket H piles	28 days	28 days	Thu 26/4/18	Wed 23/5/18
A.2.1.1.19	Submission of construction impact assessment	14 days	14 days	Fri 16/2/18	Thu 1/3/18
A.2.1.1.20	Submission of method statement for formwork design for casting the bridge piers footing and bridge piers	52 days	52 days	Mon 4/6/18	Wed 25/7/18
A.2.1.1.21	Approval of method statement for formwork design for casting bridge piers footing and piers	28 days	28 days	Thu 26/7/18	Wed 22/8/18
A.2.1.1.22	Design and Material Submission of proposed bridge bearings	52 days	52 days	Tue 24/7/18	Thu 13/9/18
A.2.1.1.23	Approval of design and material of bridge bearing	28 days	28 days	Fri 14/9/18	Thu 11/10/18
A.2.1.1.24	Testing and result submission of bridge bearing	15 days	15 days	Fri 12/10/18	Fri 26/10/18
A.2.1.1.25	Procurement, ordering and delivery of bridge bearings	45 days	45 days	Sat 27/10/18	Mon 10/12/18
A.2.1.1.26	Submission of method statement for erection of steel truss	52 days	52 days	Mon 10/9/18	Wed 31/10/18
A.2.1.1.27	Approval of method statement for erection of steel truss	28 days	28 days	Thu 1/11/18	Wed 28/11/18
A.2.1.1.28	Method statement submission for proposed lift installation	80 days	80 days	Fri 9/3/18	Sun 27/5/18
A.2.1.1.29	Material Submission of Proposed Lift	60 days	60 days	Mon 28/5/18	Thu 26/7/18
A.2.1.1.30	Procurement, ordering & delivery of proposed lift	124 days	124 days	Tue 11/12/18	Sat 13/4/19
A.2.1.1.31	Design and Material Submission of glazing and lourvres	80 days	80 days	Fri 24/8/18	Sun 11/11/18
A.2.1.1.32	Method Statement of glazing and louvre installation	80 days	80 days	Mon 12/11/18	Wed 30/1/19
A.2.1.1.33	Procurement, ordering and delivery of louvres & glazing	60 days	60 days	Thu 31/1/19	Sun 31/3/19
A.2.1.1.35	Approval of TTA to block FP of Hiu Ming St and Hiu Kwong Street for erection of Hoarding	76 days	0 days	Thu 20/7/17	Tue 3/10/17
A.2.1.1.36	Road Works Advice	14 days	14 days	Wed 4/10/17	Tue 17/10/17
A.2.1.1.37	Implementation of TTA	1 day	1 day	Wed 18/10/17	Wed 18/10/17
A.2.1.1.38	Application of Excavation permit	180 days	0 days	Sat 1/4/17	Wed 27/9/17
A.2.1.1.39	Erection of Hoardings for footbridge E3, E2	26 days	10.4 days	Sat 16/12/17	Wed 10/1/18
A.2.1.1.40	Mobilisation of excavator for breaking of rock for escalator tower E3-ST1	14 days	12.6 days	Thu 11/1/18	Wed 24/1/18
A.2.1.1.41	Breaking of 50% of rock for escalator tower E3-ST1	60 days	60 days	Thu 25/1/18	Sun 25/3/18
A.2.1.1.42	Breaking of remaining 50% of rock for escalator tower E3-ST1	60 days	60 days	Mon 26/3/18	Thu 24/5/18
A.2.1.1.43	Construction of E3-ST1 substructure E3-PC1	67 days	67 days	Fri 25/5/18	Mon 30/7/18
A.2.1.1.44	Construction E3 superstructure E3 -ST1up to level 34mPD	45 days	45 days	Tue 31/7/18	Thu 13/9/18
A.2.1.1.45	Contruction of E3 superstructure E3-ST1 from 34mPD to 43.6mPD	45 days	45 days	Fri 14/9/18	Sun 28/10/18
A.2.1.1.46	Infill the space with no fine concrete between rock slope and edge of E3-ST1	30 days	30 days	Mon 29/10/18	Tue 27/11/18
A.2.1.1.47	Erect tubular platform for rock slope survey	10 days	10 days	Wed 28/11/18	Fri 7/12/18



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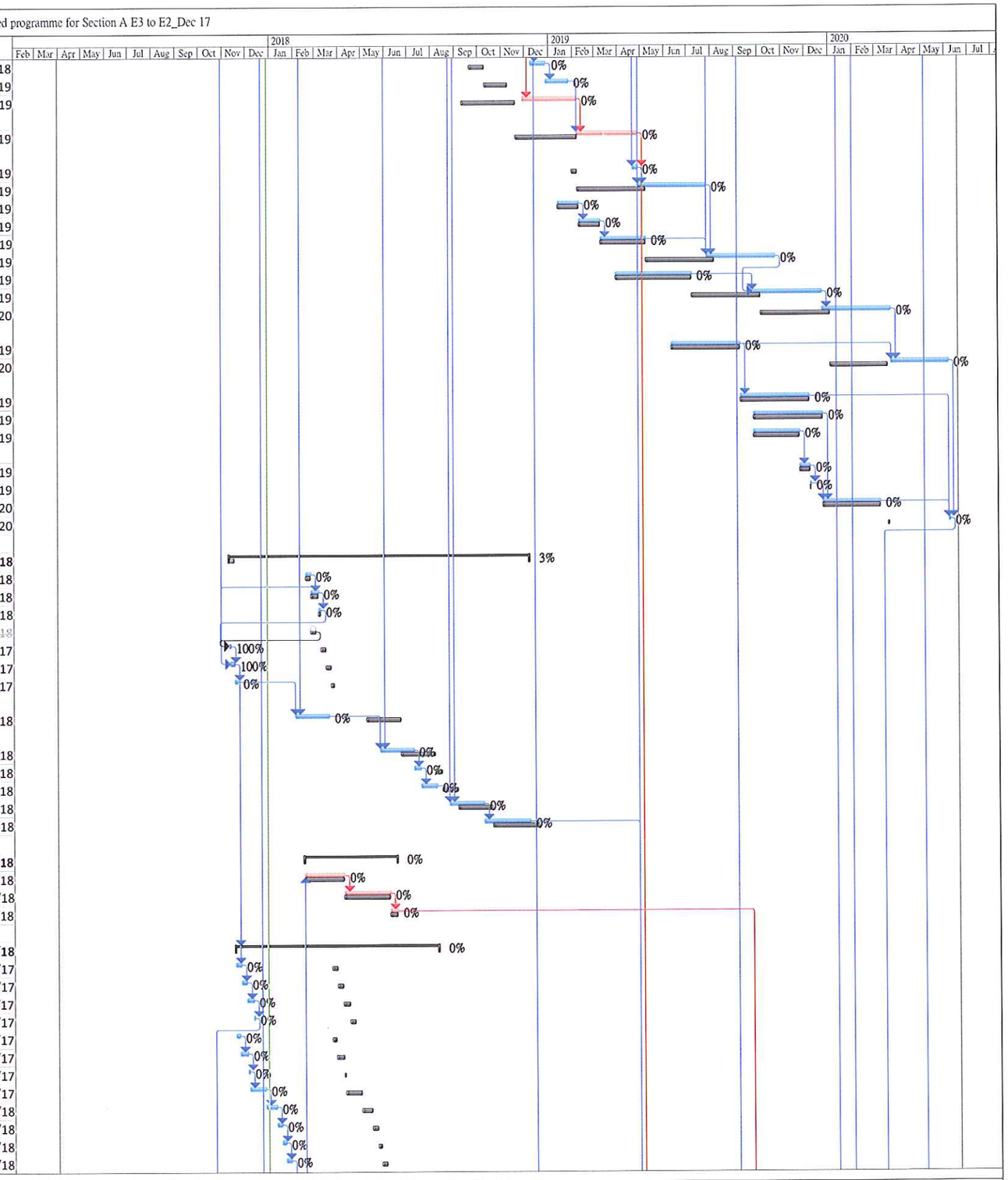
Revised programme for Section A E3 to E2_Dec 17

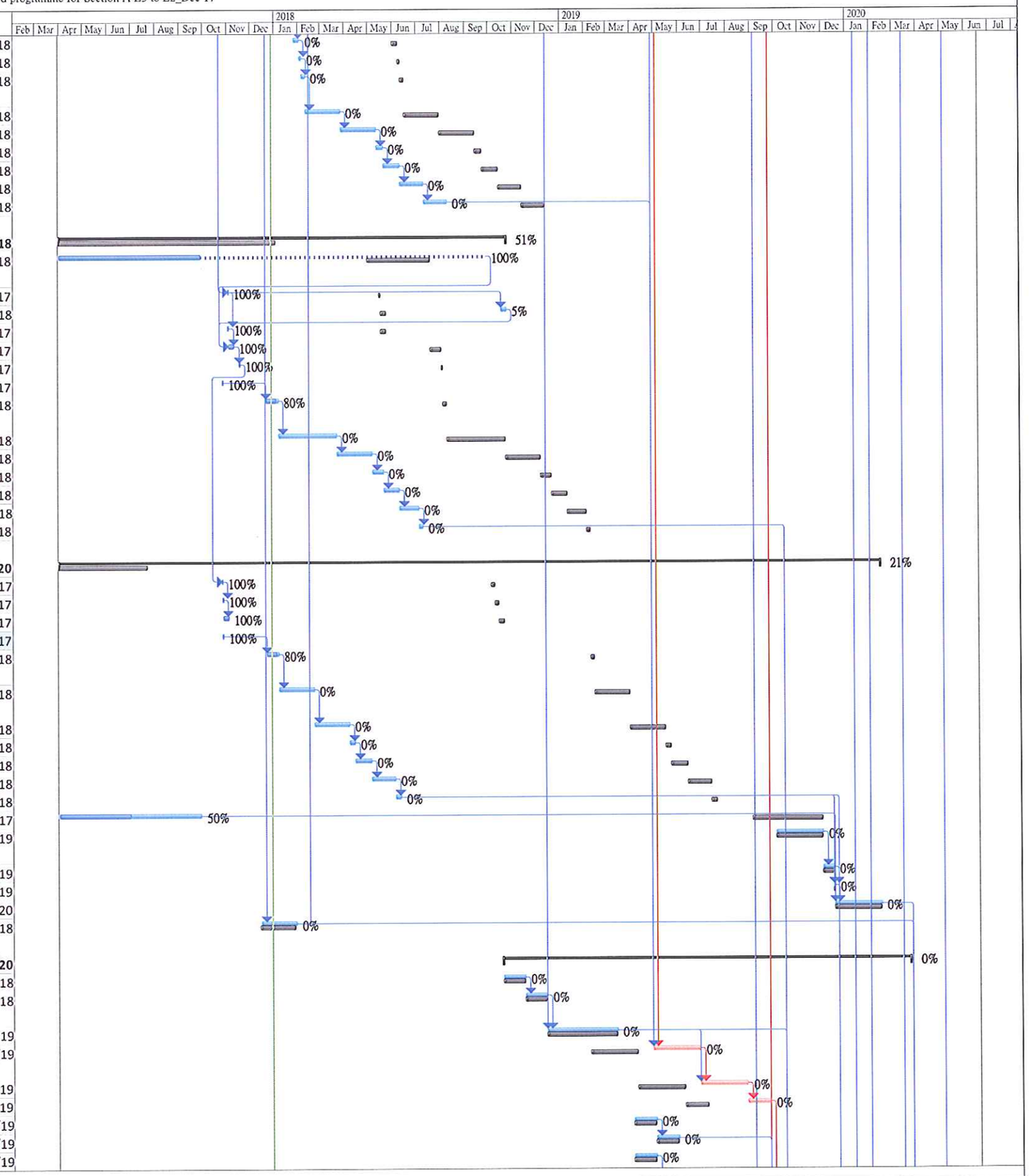
ID	Task Name	Duration	Remaining Duration	Start	Finish
A.2.1.1.48	Rock slope survey	20 days	20 days	Sat 8/12/18	Thu 27/12/18
A.2.1.1.49	Rock slope stabilization works to be instructed	30 days	30 days	Fri 28/12/18	Sat 26/1/19
A.2.1.1.50	Construction of E3 Superstructure E3-ST1 from 43.6mPD to 59.7mPD	70 days	70 days	Wed 28/11/18	Tue 5/2/19
A.2.1.1.51	Construction of E3 Superstructure E3-ST1 from 59.7mPD to 71.2mPD	80 days	80 days	Wed 6/2/19	Fri 26/4/19
A.2.1.1.52	Installation of bridge bearing	7 days	7 days	Sat 20/4/19	Fri 26/4/19
A.2.1.1.53	Installation of lift (3nrs)	90 days	90 days	Sat 27/4/19	Thu 25/7/19
A.2.1.1.54	Design of glazing and louver	28 days	28 days	Sat 12/1/19	Fri 8/2/19
A.2.1.1.55	Approval of design for glazing and louver	28 days	28 days	Sat 9/2/19	Fri 8/3/19
A.2.1.1.56	Procurement to delivery of glazing and louver	60 days	60 days	Sat 9/3/19	Tue 7/5/19
A.2.1.1.57	Installation of glazing and louver	90 days	90 days	Fri 26/7/19	Wed 23/10/19
A.2.1.1.58	Application of telecommunication lines	100 days	100 days	Fri 29/3/19	Sat 6/7/19
A.2.1.1.59	Installation of E&M for the lift towers	90 days	90 days	Tue 24/9/19	Sun 22/12/19
A.2.1.1.60	Positioning, Construction, installation and connection of pillar box	90 days	90 days	Mon 23/12/19	Sat 21/3/20
A.2.1.1.61	Application and connection of power supply	90 days	90 days	Mon 10/6/19	Sat 7/9/19
A.2.1.1.62	Testing and comminissioning of lifts and submission of form LE5 to EMSD	75 days	75 days	Sun 22/3/20	Thu 4/6/20
A.2.1.1.63	Decoration and Finishings works for E3-ST1	90 days	90 days	Sun 8/9/19	Fri 6/12/19
A.2.1.1.64	Application of XP for Drainage works at Hiu Ming Street	90 days	90 days	Wed 25/9/19	Mon 23/12/19
A.2.1.1.65	Approval of TTA for construction of Drainage works at Hiu Ming Street	60 days	60 days	Wed 25/9/19	Sat 23/11/19
A.2.1.1.66	Road Works Advice	14 days	14 days	Sun 24/11/19	Sat 7/12/19
A.2.1.1.67	Implementation of TTA	1 day	1 day	Sun 8/12/19	Sun 8/12/19
A.2.1.1.68	Drainage works at Hiu Ming Street	75 days	75 days	Tue 24/12/19	Sat 7/3/20
A.2.1.1.69	General tidy up	2 days	2 days	Fri 5/6/20	Sat 6/6/20
A.2.1.2	**Pile Cap E3-PC3 and E3 Abutment**	**392 days**	**379.8 days**	**Thu 9/11/17**	**Wed 5/12/18**
A.2.1.2.1	Set up tubular platform for removal of soil nails at Slope E3b	7 days	7 days	Fri 16/2/18	Thu 22/2/18
A.2.1.2.2	Removal of soil nails (19nrs) at slope E3b	10 days	10 days	Fri 23/2/18	Sun 4/3/18
A.2.1.2.3	Removal of tubular platform	3 days	3 days	Mon 5/3/18	Wed 7/3/18
~~A.2.1.2.4~~	~~Mobilization of plants for predrilling for pile cap E3-PC 3~~	~~7 days~~	~~7 days~~	~~Fri 23/2/18~~	~~Thu 1/3/18~~
A.2.1.2.5	Setting up of plants for predrill for pile cap E3-PC3	2 days	0 days	Thu 9/11/17	Fri 10/11/17
A.2.1.2.6	Predrill for pile cap E3-PC3	6 days	0 days	Fri 10/11/17	Wed 15/11/17
A.2.1.2.7	Mobilization of plants for drilling for installation of pre-bored socket H piles (9 nrs) for pile cap E3-PC3	4 days	4 days	Thu 16/11/17	Sun 19/11/17
A.2.1.2.8	Drilling and installation of pre-bored socket H piles (9 nrs)for pile cap E3-PC3	45 days	45 days	Fri 2/2/18	Sun 18/3/18
A.2.1.2.9	Testing of piles	45 days	45 days	Thu 24/5/18	Sat 7/7/18
A.2.1.2.10	Proof Drilling	9 days	9 days	Sun 8/7/18	Mon 16/7/18
A.2.1.2.11	Excavation with temporary shoring for pile cap E3-PC3	21 days	21 days	Tue 17/7/18	Mon 6/8/18
A.2.1.2.12	Construction of Pile caps E3-PC3	45 days	45 days	Thu 23/8/18	Sat 6/10/18
A.2.1.2.13	Construction of E3 Abutment	60 days	60 days	Sun 7/10/18	Wed 5/12/18
A.2.1.3	**Substructure of Covered Walkway**	**122 days**	**122 days**	**Wed 14/2/18**	**Fri 15/6/18**
A.2.1.3.1	Excavation of footing of covered walkway footing	52 days	52 days	Wed 14/2/18	Fri 6/4/18
A.2.1.3.2	Construction of footing of covered walkway footing	60 days	60 days	Sat 7/4/18	Tue 5/6/18
A.2.1.3.3	Backfill the footing of the covered walkway	10 days	10 days	Wed 6/6/18	Fri 15/6/18
A.2.1.4	**Pile Cap E3-PC2 and column**	**266 days**	**266 days**	**Thu 16/11/17**	**Wed 8/8/18**
A.2.1.4.1	Mobilization of plants for predrilling for pile cap E3-PC 2	7 days	7 days	Thu 16/11/17	Wed 22/11/17
A.2.1.4.2	Setting up of plants for predrill for pile cap E3-PC2	7 days	7 days	Thu 23/11/17	Wed 29/11/17
A.2.1.4.3	Predrill for pile cap E3-PC2	9 days	9 days	Thu 30/11/17	Fri 8/12/17
A.2.1.4.4	Demobilization of predrill rig	1 day	1 day	Sat 9/12/17	Sat 9/12/17
A.2.1.4.5	Site clearance for soil nails for zone 1	5 days	5 days	Thu 16/11/17	Mon 20/11/17
A.2.1.4.6	Erection of tubular scaffold platform for soil nails for zone 1	10 days	10 days	Tue 21/11/17	Thu 30/11/17
A.2.1.4.7	Setting out of soil nails	2 days	2 days	Fri 1/12/17	Sat 2/12/17
A.2.1.4.8	Construction of soil nails (29nrs)	21 days	21 days	Sun 3/12/17	Sat 23/12/17
A.2.1.4.9	Construction of soil nails heads (29nrs)	14 days	14 days	Sun 24/12/17	Sat 6/1/18
A.2.1.4.10	Removal of tubular scaffold platform	7 days	7 days	Sun 7/1/18	Sat 13/1/18
A.2.1.4.11	Site clearance for soil nails for zone 2	5 days	5 days	Sun 14/1/18	Thu 18/1/18
A.2.1.4.12	Erection of tubular scaffold platform for soil nails for zone 2	7 days	7 days	Fri 19/1/18	Thu 25/1/18



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

Revised programme for Section A E3 to E2_Dec 17

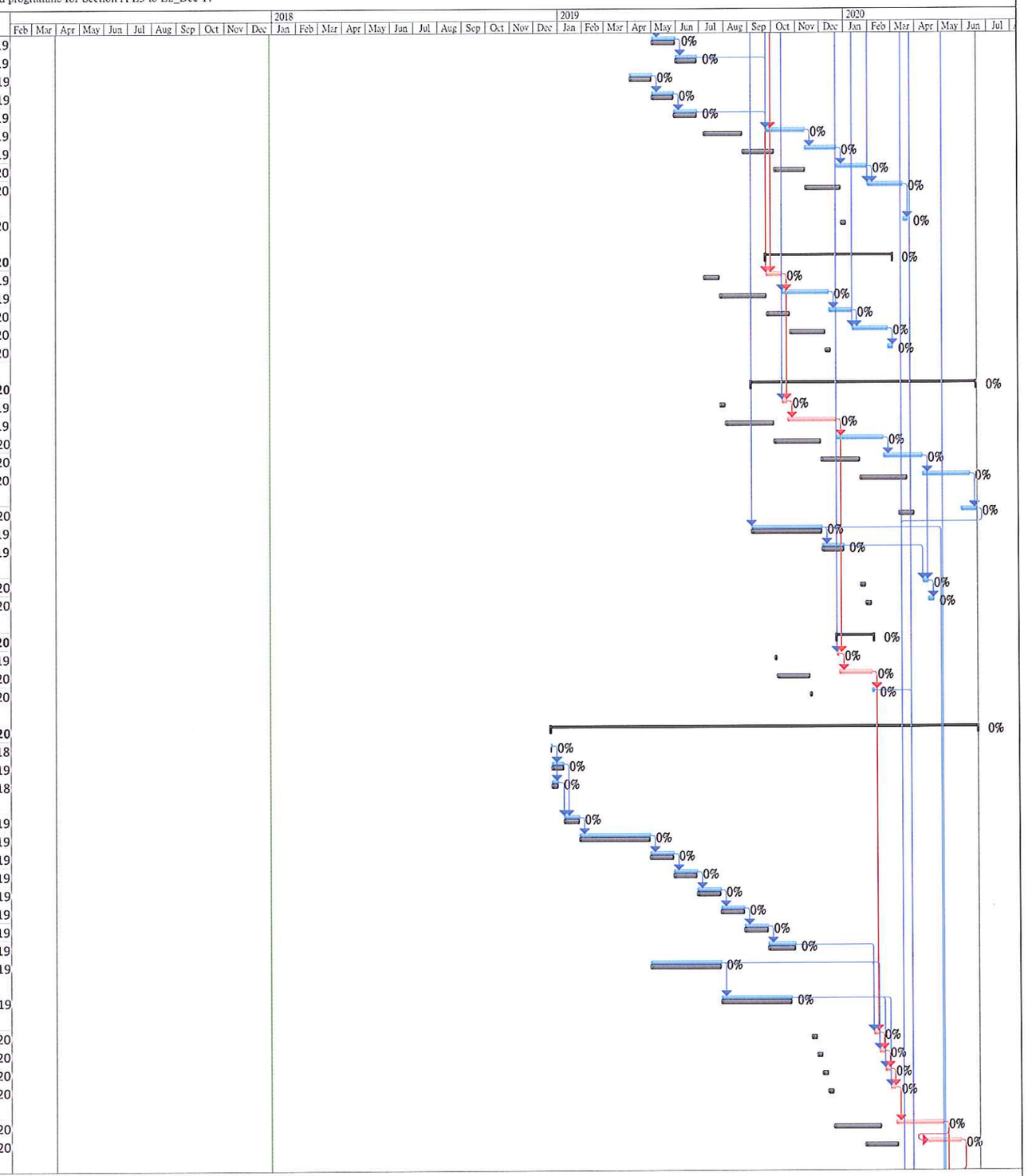
ID	Task Name	Duration	Remaining Duration	Start	Finish
A.2.1.4.13	Removal of soil nails (7nrs)	7 days	7 days	Fri 26/1/18	Thu 1/2/18
A.2.1.4.14	Removal of tubular scaffold platform from zone 2	3 days	3 days	Fri 2/2/18	Sun 4/2/18
A.2.1.4.15	Mobilization of plant for drilling and installation of pre-bored socket H piles	5 days	5 days	Mon 5/2/18	Fri 9/2/18
A.2.1.4.16	Drilling and construction of pre-bored socket H piles (9nrs)	45 days	45 days	Sat 10/2/18	Mon 26/3/18
A.2.1.4.17	Testing of piles	45 days	45 days	Tue 27/3/18	Thu 10/5/18
A.2.1.4.18	Proof Drilling	9 days	9 days	Fri 11/5/18	Sat 19/5/18
A.2.1.4.19	Excavation with shoring for construction of pile cap E3-PC2	21 days	21 days	Sun 20/5/18	Sat 9/6/18
A.2.1.4.20	Construction of pile cap E3-PC2	30 days	30 days	Sun 10/6/18	Mon 9/7/18
A.2.1.4.21	Construction of Column E3-P1	30 days	30 days	Tue 10/7/18	Wed 8/8/18
A.2.1.5	**Pile Cap E2-PC1**	**571 days**	**278.11 days**	**Sat 1/4/17**	**Tue 23/10/18**
A.2.1.5.1	Application of Excavation permit for area occupied by pile cap E2-PC1	180 days	0 days	Sat 1/4/17	Thu 27/9/18
A.2.1.5.2	Mobilization of plant for predrill for pile cap E2-PC1	1 day	0 days	Thu 2/11/17	Thu 2/11/17
A.2.1.5.3	Initial site survey	7 days	6.65 days	Wed 17/10/18	Tue 23/10/18
A.2.1.5.4	Setting up plant for predrill for pile cap E2-PC1	1 day	0 days	Thu 2/11/17	Fri 3/11/17
A.2.1.5.5	Predrill for pile cap E2-PC1	7 days	0 days	Fri 3/11/17	Thu 9/11/17
A.2.1.5.6	Demobilization of predrill rig	1 day	0 days	Fri 17/11/17	Fri 17/11/17
A.2.1.5.6a	Pile Sleeve Not Required for E2-PC1 & PC2 (PMI 20)	1 day	0 days	Thu 26/10/17	Thu 26/10/17
A.2.1.5.7	Mobilization of plant for drilling and installation of pre-bored socket H piles	16 days	3.2 days	Thu 21/12/17	Fri 5/1/18
A.2.1.5.8	Drilling and construction for pre-bored socket H piles(35nrs)	75 days	75 days	Sat 6/1/18	Wed 21/3/18
A.2.1.5.9	Testing of piles	45 days	45 days	Thu 22/3/18	Sat 5/5/18
A.2.1.5.10	Proof Drilling	14 days	14 days	Sun 6/5/18	Sat 19/5/18
A.2.1.5.11	Excavation with temporary shoring for pile cap E2-PC1	20 days	20 days	Sun 20/5/18	Fri 8/6/18
A.2.1.5.12	Construction of pile cap E2-PC1	25 days	25 days	Sat 9/6/18	Tue 3/7/18
A.2.1.5.13	Backfill the pile cap E2-PC1	5 days	5 days	Wed 4/7/18	Sun 8/7/18
A.2.1.6	**Substructure E2-PC2**	**1049 days**	**831.43 days**	**Sat 1/4/17**	**Thu 13/2/20**
A.2.1.6.1	Mobilization of plants for predrilling for pile cap E2-PC 2	1 day	0 days	Wed 25/10/17	Wed 25/10/17
A.2.1.6.2	Setting up plant for predrill for pile pile cap E2-PC2	1 day	0 days	Thu 26/10/17	Thu 26/10/17
A.2.1.6.3	Predrill for pile cap E2-PC2	7 days	0 days	Fri 27/10/17	Thu 2/11/17
A2.1.6.3a	Pile Sleeve Not Required for E2-PC1 & PC2 (PMI 20)	1 day	0 days	Thu 26/10/17	Thu 26/10/17
A.2.1.6.4	Mobilization of plants for drilling and installation of pre-bored socket H Ples for pile cap E2-PC2	15 days	3 days	Fri 22/12/17	Fri 5/1/18
A.2.1.6.5	Drilling and installation of pre-bored socket H piles for pile cap E2-PC2	45 days	45 days	Sat 6/1/18	Mon 19/2/18
A.2.1.6.6	Testing of piles	45 days	45 days	Tue 20/2/18	Thu 5/4/18
A.2.1.6.7	Proof Drilling	7 days	7 days	Fri 6/4/18	Thu 12/4/18
A.2.1.6.8	Excavation with shoring for pile cap E2-PC2	21 days	21 days	Fri 13/4/18	Thu 3/5/18
A.2.1.6.9	Construction of pile cap E2-PC2	30 days	30 days	Fri 4/5/18	Sat 2/6/18
A.2.1.6.10	Backfill the pile cap E2-PC2	7 days	7 days	Sun 3/6/18	Sat 9/6/18
A.2.1.6.11	Application of XP for Drainage works at Hiu Kwong Street	180 days	90 days	Sat 1/4/17	Wed 27/9/17
A.2.1.6.12	Approval of TTA for construction of Drainage works at Hiu Kwong Street	60 days	60 days	Wed 2/10/19	Sat 30/11/19
A.2.1.6.13	Road Works Advice	14 days	14 days	Sun 1/12/19	Sat 14/12/19
A.2.1.6.14	Implementation of TTA	1 day	1 day	Sun 15/12/19	Sun 15/12/19
A.2.1.6.15	Construction of Drainage works at Hiu Kwong Street	60 days	60 days	Mon 16/12/19	Thu 13/2/20
A.2.1.6.16	Trees felling works between E3-ST1 and E3 abutment	45 days	45 days	Thu 14/12/17	Sat 27/1/18
A.2.1.7	**Steel Bridge between E3-ST1 and E3 Abutment**	**522 days**	**522 days**	**Thu 18/10/18**	**Sun 22/3/20**
A.2.1.7.1	Proposal of off site fabrication of steelworks for E2 and E3	28 days	28 days	Thu 18/10/18	Wed 14/11/18
A.2.1.7.2	Approval of off site fabrication of steelworks for bridge E2 and E3	28 days	28 days	Thu 15/11/18	Wed 12/12/18
A.2.1.7.3	Fabbrication and Delivery of fabricated steelworks	90 days	90 days	Thu 13/12/18	Tue 12/3/19
A.2.1.7.4	Construction of launching platform for steel bridge between E3-ST1 and E3 abutment	60 days	60 days	Sat 27/4/19	Tue 25/6/19
A.2.1.7.5	Assembly of steel truss between E3 tower and E3 abutment	60 days	60 days	Wed 26/6/19	Sat 24/8/19
A.2.1.7.6	Bridge launching between E3-ST1 and E3 Abutment	29 days	29 days	Sun 25/8/19	Sun 22/9/19
A.2.1.7.7	Design submission of roof system	28 days	28 days	Wed 3/4/19	Tue 30/4/19
A.2.1.7.8	Approval of design of roof system	28 days	28 days	Wed 1/5/19	Tue 28/5/19
A.2.1.7.9	Material submission of corrugated steel roof	28 days	28 days	Wed 3/4/19	Tue 30/4/19



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

Revised programme for Section A E3 to E2_Dec 17

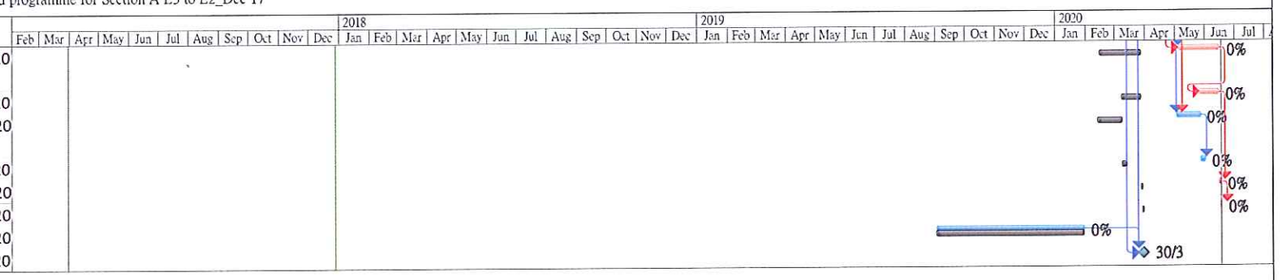
ID	Task Name	Duration	Remaining Duration	Start	Finish
A.2.1.7.10	Approval of corrugated steel roof	30 days	30 days	Wed 1/5/19	Thu 30/5/19
A.2.1.7.11	Procurement to delivery of corrugated steel roof	28 days	28 days	Fri 31/5/19	Thu 27/6/19
A.2.1.7.12	Material submission of fall arrest system	28 days	28 days	Wed 3/4/19	Tue 30/4/19
A.2.1.7.13	Approval of fall arrest system	28 days	28 days	Wed 1/5/19	Tue 28/5/19
A.2.1.7.14	Procurement to delivery of fall arrest system	30 days	30 days	Wed 29/5/19	Thu 27/6/19
A.2.1.7.15	Roof construction of the steel truss E3-ST1 to E3 abutment	50 days	50 days	Mon 23/9/19	Mon 11/11/19
A.2.1.7.16	Construction of screeding and paving blocks	40 days	40 days	Tue 12/11/19	Sat 21/12/19
A.2.1.7.17	Installation of parapets and planters	40 days	40 days	Sun 22/12/19	Thu 30/1/20
A.2.1.7.18	Installation of lightings to steel truss between E3 tower and E3 abutment	45 days	45 days	Fri 31/1/20	Sun 15/3/20
A.2.1.7.19	Installation of irrigation pipe and water point	7 days	7 days	Mon 16/3/20	Sun 22/3/20
A.2.1.8	**Superstructure of Covered Walkway**	**162 days**	**162 days**	**Mon 23/9/19**	**Mon 2/3/20**
A.2.1.8.1	Expose the substructure of the Covered Walkway	20 days	20 days	Mon 23/9/19	Sat 12/10/19
A.2.1.8.2	Construction of columns and beams for covered walkway	60 days	60 days	Sun 13/10/19	Wed 11/12/19
A.2.1.8.3	Installation of steel sheet roof for the covered walkway	30 days	30 days	Thu 12/12/19	Fri 10/1/20
A.2.1.8.4	Installation of Lighting to covered walkway	45 days	45 days	Sat 11/1/20	Mon 24/2/20
A.2.1.8.5	Installation of irrigation pipe	7 days	7 days	Tue 25/2/20	Mon 2/3/20
A.2.1.9	**Superstructure of E2-LT1 and Lift**	**287 days**	**287 days**	**Wed 4/9/19**	**Tue 16/6/20**
A.2.1.9.1	Excavation to expose footing E2-PC1	7 days	7 days	Sun 13/10/19	Sat 19/10/19
A.2.1.9.2	Construction of superstructure of lift tower E2-LT1	62 days	62 days	Sun 20/10/19	Fri 20/12/19
A.2.1.9.3	Installation of lift (2nrs)	60 days	60 days	Sat 21/12/19	Tue 18/2/20
A.2.1.9.4	Installation of E&M for the lift towers and Pillar Box	50 days	50 days	Wed 19/2/20	Wed 8/4/20
A.2.1.9.5	Testing and comminissioning of lifts and submission of form LE5 to EMSD	60 days	60 days	Thu 9/4/20	Sun 7/6/20
A.2.1.9.6	Installation of louver and finishing works	20 days	20 days	Thu 28/5/20	Tue 16/6/20
A.2.1.9.7	Application for connection to existing water mains	90 days	90 days	Wed 4/9/19	Mon 2/12/19
A.2.1.9.8	Trenching works for connection of existing water connection point	28 days	28 days	Tue 3/12/19	Mon 30/12/19
A.2.1.9.9	Installation of water meter box	7 days	7 days	Thu 9/4/20	Wed 15/4/20
A.2.1.9.10	Planting works on bridge	7 days	7 days	Thu 16/4/20	Wed 22/4/20
A.2.1.10	**Superstructure of E2-P1**	**48 days**	**48 days**	**Sat 21/12/19**	**Thu 6/2/20**
A.2.1.10.1	Excavation to expose Pile cap E2-PC2 for column E2-P1	3 days	3 days	Sat 21/12/19	Mon 23/12/19
A.2.1.10.2	Construction of column for E2-P1	42 days	42 days	Tue 24/12/19	Mon 3/2/20
A.2.1.10.3	General tidy up	3 days	3 days	Tue 4/2/20	Thu 6/2/20
A.3.1.11	**Bridge between E2-P1 to E2-P3**	**545 days**	**545 days**	**Fri 21/12/18**	**Wed 17/6/20**
A.3.1.11.1	Access date of E2 between Pier E2-P2 to E2-P3 (Portion 3)	1 day	1 day	Fri 21/12/18	Fri 21/12/18
A.3.1.11.2	Initial site survey	15 days	15 days	Sat 22/12/18	Sat 5/1/19
A.3.1.11.3	Erection of Hoarding at South bound footpath of Hiu Kwong St	8 days	8 days	Sat 22/12/18	Sat 29/12/18
A.3.1.11.4	Excavation of inspection pits to locate utilities	20 days	20 days	Sun 6/1/19	Fri 25/1/19
A.3.1.11.5	Diversion of utilities by UU	90 days	90 days	Sat 26/1/19	Thu 25/4/19
A.3.1.11.6	Excavation with shoring for construction of E2-F3	30 days	30 days	Fri 26/4/19	Sat 25/5/19
A.3.1.11.7	Construction of pad footing of E2-F3	30 days	30 days	Sun 26/5/19	Mon 24/6/19
A.3.1.11.8	Construction of column for E2-P2	30 days	30 days	Tue 25/6/19	Wed 24/7/19
A.3.1.11.9	Excavation with shoring for construction of E2-F4	30 days	30 days	Thu 25/7/19	Fri 23/8/19
A.3.1.11.10	Construction of pad footing of E2-F4	30 days	30 days	Sat 24/8/19	Sun 22/9/19
A.3.1.11.11	Construction of column for E2-P3 and the bridge deck	35 days	35 days	Mon 23/9/19	Sun 27/10/19
A.3.1.11.12	Off site Fabrication of Steel deck truss between E2-LT1 to E2-P1, E2-P1 to E2-P2	90 days	90 days	Fri 26/4/19	Wed 24/7/19
A.3.1.11.13	Off site Fabrication of Steel deck truss between E2-P2 to E2-P3 and E2-P3 to bridge constructed by others	90 days	90 days	Thu 25/7/19	Tue 22/10/19
A.3.1.11.14	Lifting of steel truss between E2-LT1 to E2-P1	7 days	7 days	Tue 4/2/20	Mon 10/2/20
A.3.1.11.15	Lifting of steel truss between E2-P1 to E2-P2	7 days	7 days	Tue 11/2/20	Mon 17/2/20
A.3.1.11.16	Lifting of Truss between E2-P2 to E2-P3	7 days	7 days	Tue 18/2/20	Mon 24/2/20
A.3.1.11.17	Lifting of truss for E2-P3 to connect to bridge constructed by others	7 days	7 days	Tue 25/2/20	Mon 2/3/20
A.3.1.11.18	Roof installation of the bridge from E2-LT1 to E2-P3	60 days	60 days	Tue 3/3/20	Fri 1/5/20
A.3.1.11.19	Screeding and paving blocks for the bridge from E2-LT1 to E2-P3	42 days	42 days	Sun 12/4/20	Sat 23/5/20



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

Revised programme for Section A E3 to E2_Dec 17

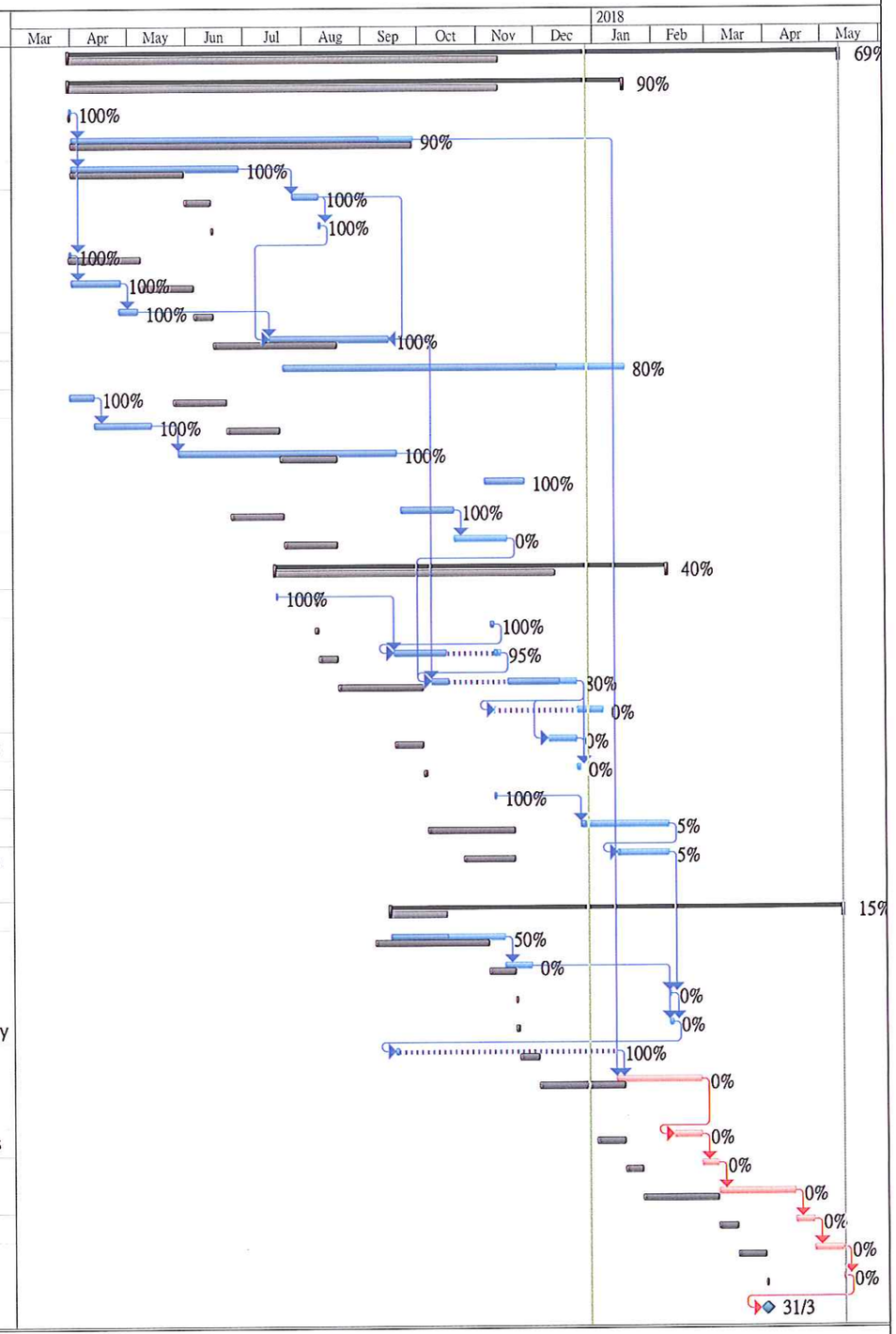
ID	Task Name	Duration	Remaining Duration	Start	Finish
A.3.1.11.20	Electrical installation and lighting works for bridge from E2-LT1 to E2-P3	42 days	42 days	Mon 4/5/20	Sun 14/6/20
A.3.1.11.21	Tubular handrail and planter on bridge from E2-LT1 to E2-P3	20 days	20 days	Tue 26/5/20	Sun 14/6/20
A.3.1.11.22	Trenching works for connection of existing water connection point	25 days	25 days	Sat 2/5/20	Tue 26/5/20
A.3.1.11.23	Water meter box and water point construction	5 days	5 days	Wed 27/5/20	Sun 31/5/20
A.3.1.11.24	Planting works on bridge	2 days	2 days	Mon 15/6/20	Tue 16/6/20
A.3.1.11.25	General tidy up for Portion 3	1 day	1 day	Wed 17/6/20	Wed 17/6/20
A.3.1.11.26	Overall landscape works	150 days	150 days	Mon 2/9/19	Wed 29/1/20
A.3.1.11.27	Completion of works	0 days	0 days	Mon 30/3/20	Mon 30/3/20



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

Revised programme for Section B_Dec 17

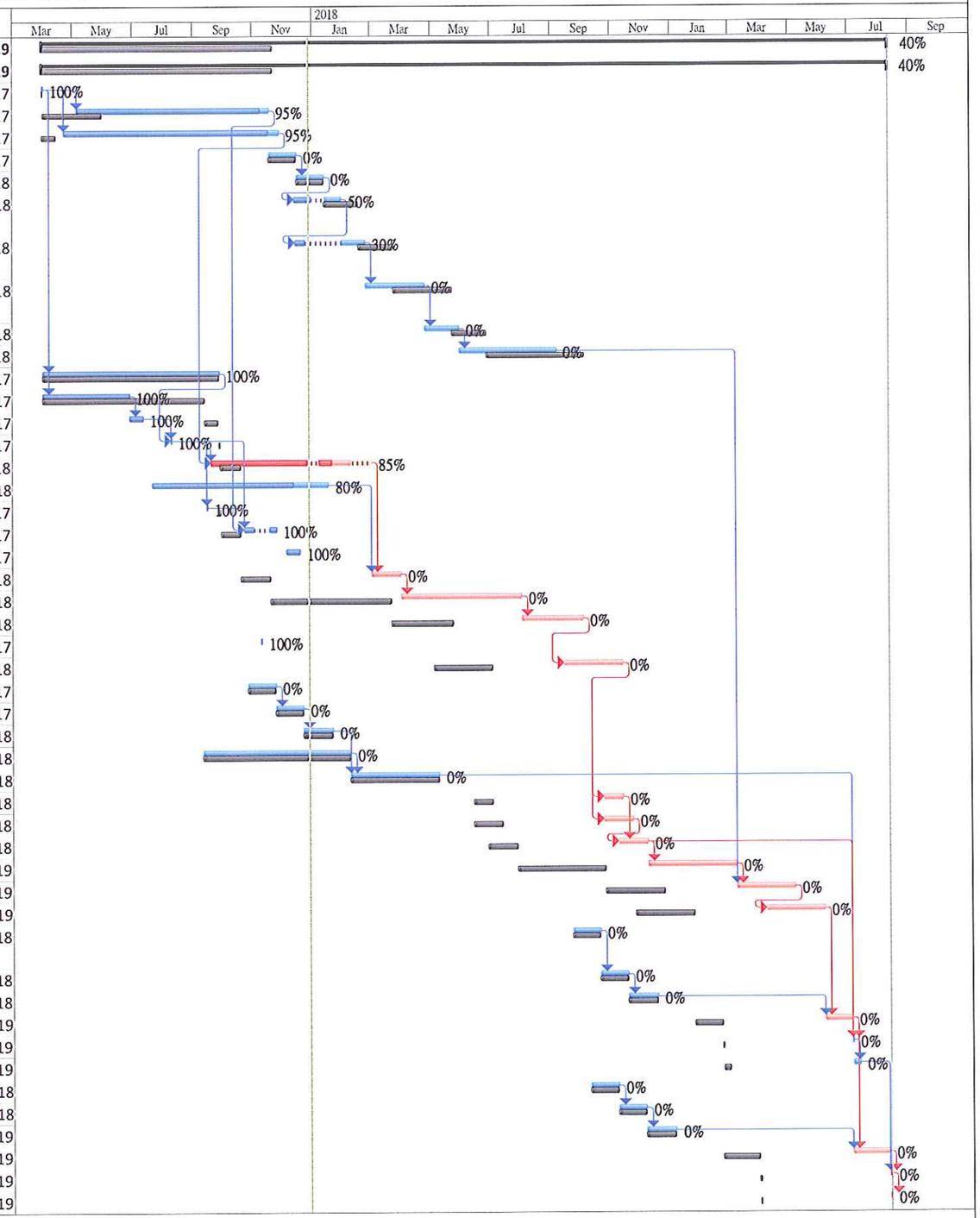
ID	Task Name	Duration	Remaining Duration	Start	Finish	Predecessors
B.4.1	**SECTION B - CONSTRUCTION OF SLIP ROAD**	**406 days**	**127.14 days**	**Fri 31/3/17**	**Thu 10/5/18**	
B.4.1.1	**PRE CONSTRUCTION WORKS**	**292 days**	**29.97 days**	**Fri 31/3/17**	**Tue 16/1/18**	
B.4.1.1.1	Access Date of Portion 4	1 day	0 days	Fri 31/3/17	Fri 31/3/17	
B.4.1.1.2	Application of Excavation Permit	180 days	18 days	Sat 1/4/17	Wed 27/9/17	3
B.4.1.1.3	Application of TTA and approval	88 days	0 days	Sat 1/4/17	Tue 27/6/17	3
B.4.1.1.4	Road works advice	14 days	0 days	Wed 26/7/17	Tue 8/8/17	5
B.4.1.1.5	Implementation of TTA for ingress and egress	1 day	0 days	Wed 9/8/17	Wed 9/8/17	6
B.4.1.1.6	Proposal of landscape specialist	1 day	0 days	Fri 31/3/17	Fri 31/3/17	3FS-1 day
B.4.1.1.7	Approval to proposal of landscape specialist	26 days	0 days	Sat 1/4/17	Wed 26/4/17	8
B.4.1.1.10	Tree survey	10 days	0 days	Wed 26/4/17	Fri 5/5/17	9
B.4.1.1.11	Trees Transplant	63 days	0 days	Fri 14/7/17	Thu 14/9/17	10,6FF,7
B.4.1.1.11a	Landscaping Works (PMI 9)	180 days	36 days	Fri 21/7/17	Tue 16/1/18	
B.4.1.1.12	Submission of material for drainage works	13 days	0 days	Fri 31/3/17	Wed 12/4/17	
B.4.1.1.13	Approval of submission for drainage works	30 days	0 days	Thu 13/4/17	Fri 12/5/17	13
B.4.1.1.16	Procurement and delivery of drainage pipes and material	115 days	0 days	Sat 27/5/17	Mon 18/9/17	14
1.1.14	Material Test for Drainage Pipe (PMI 21)	21 days	0 days	Sat 4/11/17	Fri 24/11/17	
B.4.1.1.17	Submission of method statement for Drainage works	28 days	0 days	Thu 21/9/17	Wed 18/10/17	
B.4.1.1.18	Approval of method statement for drainage works	28 days	28 days	Thu 19/10/17	Wed 15/11/17	17
B.4.1.2	**First Stage Works**	**206 days**	**124.1 days**	**Mon 17/7/17**	**Wed 7/2/18**	
B.4.1.2.1	Utilities Detection	1 day	0 days	Mon 17/7/17	Mon 17/7/17	
B.4.1.2.2	Survey of existing drainage	2 days	0 days	Tue 7/11/17	Wed 8/11/17	
B.4.1.2.3	Initial site survey	31 days	1.55 days	Sun 17/9/17	Sun 12/11/17	21,20
B.4.1.2.4	Drainage works at first stage	45 days	9 days	Sat 7/10/17	Thu 21/12/17	11,15,22,18
B.4.1.2.4a	Revised Drainage Works (PMI 26)	14 days	13.95 days	Thu 9/11/17	Thu 4/1/18	23
B.4.1.2.5	Draw pits construction	15 days	15 days	Thu 7/12/17	Thu 21/12/17	23FS-15 days
B.4.1.2.6	Laying street lighting cables	2 days	2 days	Fri 22/12/17	Sat 23/12/17	23,25
B.4.1.2.6a	Revised Setting Out amd Vertical Road Profile (PMI 25)	1 day	0 days	Thu 9/11/17	Thu 9/11/17	
B.4.1.2.7	Road works	46 days	43.7 days	Sun 24/12/17	Wed 7/2/18	27
B.4.1.2.8	Construct Temporary road before implementation of road closure	27 days	25.65 days	Fri 12/1/18	Wed 7/2/18	28FS-27 days
B.4.1.3	**Second Stage Works**	**238 days**	**202.41 days**	**Fri 15/9/17**	**Thu 10/5/18**	
B.4.1.3.1	Application of TTA to divert traffic of existing slip road	60 days	30 days	Fri 15/9/17	Mon 13/11/17	
B.4.1.3.2	Road Works advice	14 days	14 days	Tue 14/11/17	Mon 27/11/17	31
B.4.1.3.3	Implementation of TTA to divert traffic to Temp slip road	1 day	1 day	Thu 8/2/18	Thu 8/2/18	32,29
B.4.1.3.4	Utilities detection and Suirvey of existing drainage	2 days	2 days	Thu 8/2/18	Fri 9/2/18	32,33FS-1 day
B.4.1.3.5	Initial site survey	2 days	0 days	Sun 17/9/17	Wed 10/1/18	34
B.4.1.3.6	Drainage works at entrance of existing slip road (D101+ others)	45 days	45 days	Thu 11/1/18	Sat 24/2/18	35,4
B.4.1.3.7	Draw pits construction	15 days	15 days	Sat 10/2/18	Sat 24/2/18	36FS-15 days
B.4.1.3.8	Laying street lighting cables	9 days	9 days	Sun 25/2/18	Mon 5/3/18	37
B.4.1.3.9	Road works	40 days	40 days	Tue 6/3/18	Sat 14/4/18	38
B.4.1.3.10	Remaining clash barriers and road markings	10 days	10 days	Sun 15/4/18	Tue 24/4/18	39
B.4.1.3.11	Reinstate works area	15 days	15 days	Wed 25/4/18	Wed 9/5/18	40
B.4.1.3.12	General tidy up	1 day	1 day	Thu 10/5/18	Thu 10/5/18	41
B.4.1.3.13	Completion of works	0 days	0 days	Sat 31/3/18	Sat 31/3/18	42



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

Revised programme for Section C_Dec 17

ITEM	ID	Task Name	Duration	Remaining Duration	Start	Finish
1	**C.5.1**	**SECTION C - CONSTRUCTION OF BUS BUS INTERCHANGE**	**863.75 days**	**520.28 days**	**Fri 31/3/17**	**Sun 11/8/19**
2	**C.5.1.1**	**Works not within TKOT carriageway**	**863.75 days**	**520.28 days**	**Fri 31/3/17**	**Sun 11/8/19**
3	C.5.1.1.1	Access Date of Portion 5	1 day	0 days	Fri 31/3/17	Fri 31/3/17
4	C.5.1.1.2	Initial Site Survey	197 days	9.85 days	Fri 5/5/17	Fri 17/11/17
5	C.5.1.1.3	Tree survey	220 days	11 days	Sat 22/4/17	Mon 27/11/17
6	C.5.1.1.4	Proposal of strucutral steel erectors	28 days	28 days	Sat 18/11/17	Fri 15/12/17
7	C.5.1.1.5	Approval of structural steel erectors	28 days	28 days	Sat 16/12/17	Fri 12/1/18
8	C.5.1.1.6	Submission of method statement of construction of covered walkway	35 days	17.5 days	Wed 13/12/17	Tue 30/1/18
9	C.5.1.1.7	Approval of method statement of construction of covered walkway	35 days	24.5 days	Thu 14/12/17	Fri 23/2/18
10	C.5.1.1.8	Submission of offsite fabrication of steel for covered walkway	60 days	60 days	Sat 24/2/18	Tue 24/4/18
11	C.5.1.1.9	Approval of proposal offsite fabrication of covered walkway	35 days	35 days	Wed 25/4/18	Tue 29/5/18
12	C.5.1.1.10	Fabrication of covered walkway	100 days	100 days	Wed 30/5/18	Thu 6/9/18
13	C.5.1.1.11	Application of XP	180 days	0 days	Sat 1/4/17	Wed 27/9/17
14	C.5.1.1.12	Application of TTA for loading and unloading area	88 days	0 days	Sat 1/4/17	Tue 27/6/17
15	C.5.1.1.13	Road works advice	14 days	0 days	Wed 28/6/17	Tue 11/7/17
16	C.5.1.1.14	Implementation of TTA	1 day	0 days	Wed 9/8/17	Wed 9/8/17
17	C.5.1.1.15	Tree Fellings	131 days	19.65 days	Tue 19/9/17	Thu 1/3/18
18	C.5.1.1.15a	Landscaping Works (PMI 9)	180 days	36 days	Fri 21/7/17	Tue 16/1/18
19	C.5.1.1.16	Utilities detection	1 day	0 days	Fri 15/9/17	Fri 15/9/17
20	C.5.1.1.17	Excavation of inpsection pit for locating existing utilities	17 days	0 days	Mon 23/10/17	Fri 24/11/17
21	C.5.1.1.17a	Excavation of inpsection pit for locating existing TCS (PMI 32)	14 days	0 days	Tue 5/12/17	Mon 18/12/17
22	C.5.1.1.18	Arrangement with UU companies for diversion of UU	30 days	30 days	Thu 1/3/18	Sat 31/3/18
23	C.5.1.1.19	Diversion of utilities	123 days	123 days	Sat 31/3/18	Wed 1/8/18
24	C.5.1.1.20	Construction of footing of covered walkway	63 days	63 days	Wed 1/8/18	Wed 3/10/18
25	C.5.1.1.20a	Revised Drainage Works at Portion 4 & 5 (PMI 26)	1 day	0 days	Thu 9/11/17	Thu 9/11/17
26	C.5.1.1.21	Drainage works D201 to D207 above the footing	60 days	60 days	Thu 13/9/18	Mon 12/11/18
27	C.5.1.1.22	Material submission of Pillar box c.w accessories	28 days	28 days	Fri 27/10/17	Thu 23/11/17
28	C.5.1.1.23	Approval of material submission of Pillar box c/w accessories	28 days	28 days	Fri 24/11/17	Thu 21/12/17
29	C.5.1.1.24	Procurement to delivery of pillar box and accessories	30 days	30 days	Fri 22/12/17	Sat 20/1/18
30	C.5.1.1.25	Positioning and construction of pillar box	150 days	150 days	Mon 11/9/17	Wed 7/2/18
31	C.5.1.1.26	Application of Power Supply	90 days	90 days	Thu 8/2/18	Tue 8/5/18
32	C.5.1.1.27	Construct draw pits	20 days	20 days	Tue 23/10/18	Mon 12/11/18
33	C.5.1.1.28	Laying of TCS cables by others	30 days	30 days	Tue 23/10/18	Thu 22/11/18
34	C.5.1.1.29	Laying of cables for lighting	30 days	30 days	Wed 7/11/18	Fri 7/12/18
35	C.5.1.1.30	Construction of new high mast lighting and other lightings	90 days	90 days	Fri 7/12/18	Thu 7/3/19
36	C.5.1.1.31	Installation of posts and beams for covered walkway	60 days	60 days	Thu 7/3/19	Mon 6/5/19
37	C.5.1.1.32	Installation of glass cover for covered walkway	60 days	60 days	Sat 6/4/19	Wed 5/6/19
38	C.5.1.1.33	Material submission of fittings and lighting for covered walkway	28 days	28 days	Sat 22/9/18	Fri 19/10/18
39	C.5.1.1.34	Approval of fitting and lightings for covered walkway	28 days	28 days	Sat 20/10/18	Fri 16/11/18
40	C.5.1.1.35	Procurement to delivery of lightings	30 days	30 days	Sat 17/11/18	Sun 16/12/18
41	C.5.1.1.36	Installation of lighting of covered walkway	28 days	28 days	Wed 5/6/19	Wed 3/7/19
42	C.5.1.1.37	Connection of power supply to lightings	1 day	1 day	Wed 3/7/19	Thu 4/7/19
43	C.5.1.1.38	Testing and commissioning of electrical works	7 days	7 days	Thu 4/7/19	Thu 11/7/19
44	C.5.1.1.39	Material submission of paver blocks	28 days	28 days	Wed 10/10/18	Tue 6/11/18
45	C.5.1.1.40	Approval to submission of paver blocks	28 days	28 days	Wed 7/11/18	Tue 4/12/18
46	C.5.1.1.41	Procurement to delivery of paver blocks	30 days	30 days	Wed 5/12/18	Thu 3/1/19
47	C.5.1.1.42	Construction of paving blocks for covered walkway	37 days	37 days	Wed 3/7/19	Fri 9/8/19
48	C.5.1.1.43	General tidy up	2 days	2 days	Fri 9/8/19	Sun 11/8/19
49	C.5.1.1.44	Completion of Works	1 day	1 day	Sat 10/8/19	Sun 11/8/19



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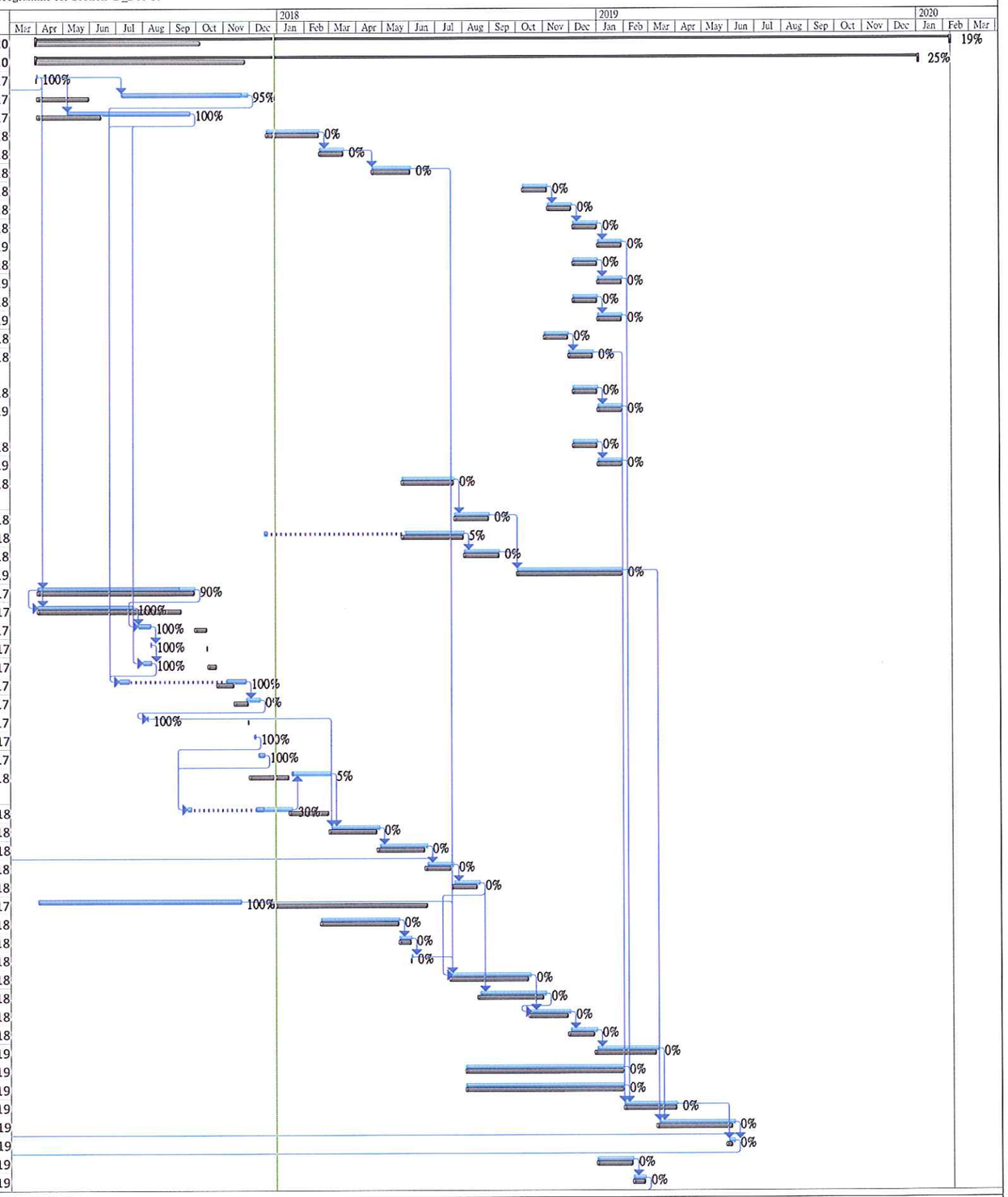
Revised programme for Section D_Dec 17

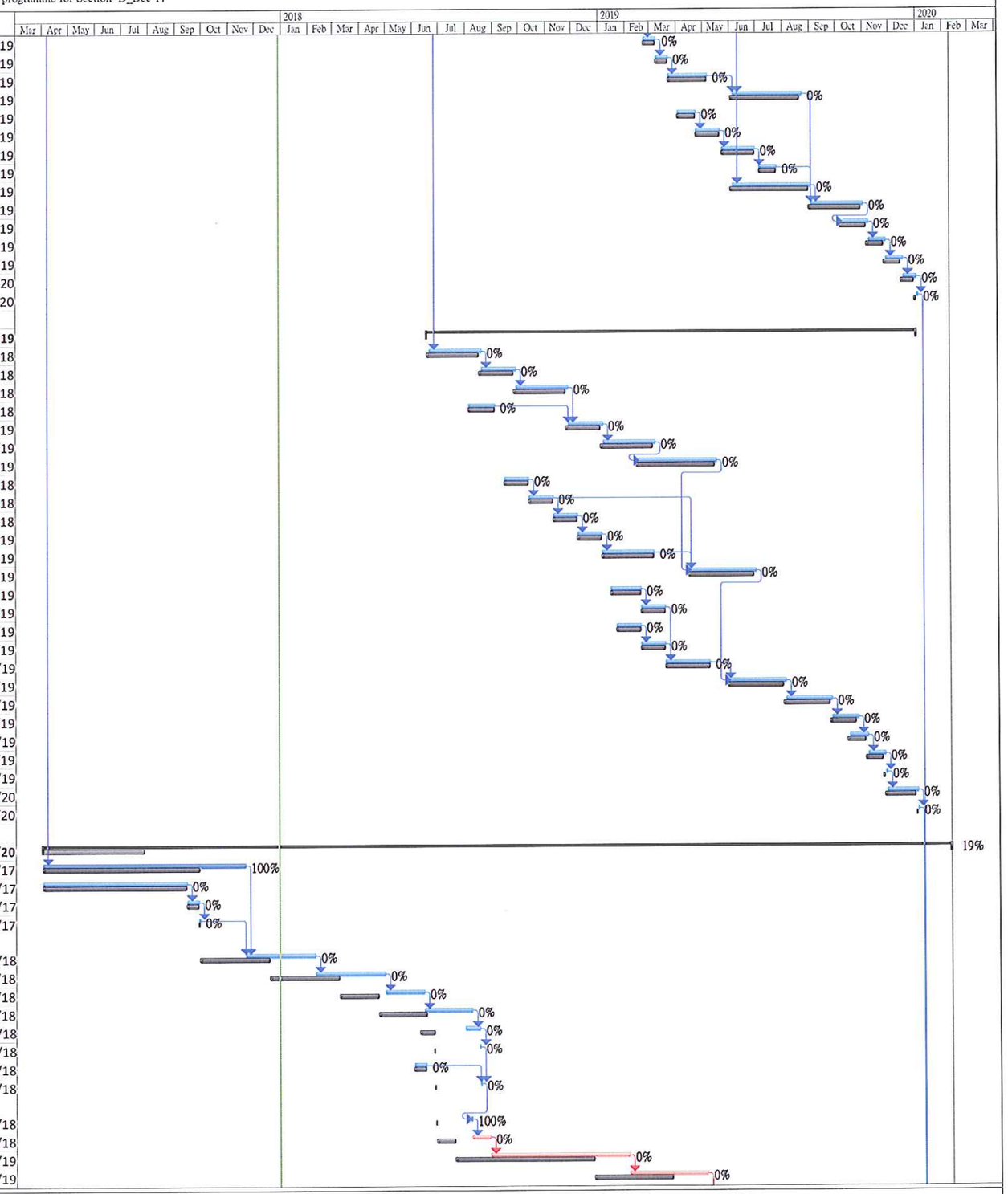
ITEM	ID	Task Name	Duration	Remaining Duration	Start	Finish
1	**D.6.1**	**Section D**	**1045 days**	**851.52 days**	**Fri 31/3/17**	**Sat 8/2/20**
2	**D.6.1.1**	**Construction E12 Footbridge and Lift Tower**	**1008.5 days**	**756.87 days**	**Fri 31/3/17**	**Fri 3/1/20**
3	D.6.1.1.1	Access Date for Portion 6	1 day	0 days	Fri 31/3/17	Fri 31/3/17
4	D.6.1.1.2	Initial Site Survey	145 days	7.25 days	Thu 6/7/17	Mon 27/11/17
5	D.6.1.1.3	Tree survey	141 days	0 days	Fri 5/5/17	Fri 22/9/17
6	D.6.1.1.4	Submission of material for water mains	60 days	60 days	Tue 19/12/17	Fri 16/2/18
7	D.6.1.1.5	Approval to submission of water mains	28 days	28 days	Sat 17/2/18	Fri 16/3/18
8	D.6.1.1.6	Procurement to Delivery of water mains material	45 days	45 days	Wed 18/4/18	Fri 1/6/18
9	D.6.1.1.7	Proposal of E&M Specialist	28 days	28 days	Mon 8/10/18	Sun 4/11/18
10	D.6.1.1.8	Approval of E&M Specialist	28 days	28 days	Mon 5/11/18	Sun 2/12/18
11	D.6.1.1.9	Material submission of cable tray	28 days	28 days	Tue 4/12/18	Mon 31/12/18
12	D.6.1.1.10	Approval of material submission of cable tray	28 days	28 days	Tue 1/1/19	Mon 28/1/19
13	D.6.1.1.11	Material submission of cables, conduit, fittings	28 days	28 days	Tue 4/12/18	Mon 31/12/18
14	D.6.1.1.12	Approval of material submission of cables conduit, fittings	28 days	28 days	Tue 1/1/19	Mon 28/1/19
15	D.6.1.1.13	Material submission of proposed lightings	28 days	28 days	Tue 4/12/18	Mon 31/12/18
16	D.6.1.1.14	Approval of proposed lighting	28 days	28 days	Tue 1/1/19	Mon 28/1/19
17	D.6.1.1.15	Material submission of pillar box c/w accessories	28 days	28 days	Thu 1/11/18	Wed 28/11/18
18	D.6.1.1.16	Approval of material submission of pillar box c/w accessories	28 days	28 days	Thu 29/11/18	Wed 26/12/18
19	D.6.1.1.17	Material submission of MCB distribution board	28 days	28 days	Tue 4/12/18	Mon 31/12/18
20	D.6.1.1.18	Approval of material submission of MCB distribution board	28 days	28 days	Tue 1/1/19	Mon 28/1/19
21	D.6.1.1.15	Material submission of communication cables	28 days	28 days	Tue 4/12/18	Mon 31/12/18
22	D.6.1.1.14	Approval of submission of communication cables	28 days	28 days	Tue 1/1/19	Mon 28/1/19
23	D.6.1.1.15	Submission of Lift Structural E&M (SEM), layout and installation drawings	60 days	60 days	Tue 22/5/18	Fri 20/7/18
24	D.6.1.1.14	Approval of Lift's SEM, layout and installation drawings	40 days	40 days	Sat 21/7/18	Wed 29/8/18
25	D.6.1.1.15	Material submission of proposed lifts	71 days	67.45 days	Sat 16/12/17	Tue 31/7/18
26	D.6.1.1.14	Approval of submission of proposed lift	41 days	41 days	Wed 1/8/18	Mon 10/9/18
27	D.6.1.1.12	Procurement to delivery of lift	120 days	120 days	Mon 1/10/18	Mon 28/1/19
28	D.6.1.1.13	Excavation Permit	180 days	18 days	Sat 1/4/17	Wed 27/9/17
29	D.6.1.1.14	Application of TTA for loading and unloading area	109 days	0 days	Sat 1/4/17	Tue 18/7/17
30	D.6.1.1.15	Road Works advice	14 days	0 days	Tue 25/7/17	Mon 7/8/17
31	D.6.1.1.16	Implementation of TTA	1 day	0 days	Tue 8/8/17	Tue 8/8/17
32	D.6.1.1.17	Erection of hoarding	10 days	0 days	Sun 30/7/17	Tue 8/8/17
33	D.6.1.1.18	Site Clearance and Tree felling	34 days	0 days	Mon 3/7/17	Fri 24/11/17
34	D.6.1.1.19	Construct temporary drainage systems	16 days	16 days	Sat 25/11/17	Sun 10/12/17
35	D.6.1.1.20	Utilities Detection	1 day	0 days	Fri 4/8/17	Fri 4/8/17
36	D.6.1.1.20a	CCTV Inspection on uncharted Leachate pipes (PMI 27)	2 days	0 days	Mon 4/12/17	Tue 5/12/17
37	D.6.1.1.20b	Revised RWE12 level (PMI 34)	7 days	0 days	Sat 9/12/17	Fri 15/12/17
38	D.6.1.1.21	Predrill for Excavation of rocks from retaining wall CH97.5 to CH45	45 days	42.75 days	Mon 15/1/18	Thu 1/3/18
39	D.6.1.1.22	Predrill for Excavation of rocks from retaining wall CH45 to CH0	45 days	31.5 days	Tue 19/9/17	Tue 16/1/18
40	D.6.1.1.23	Excavation of rock from retaining wall chainage CH97.5 to CH45	55 days	55 days	Thu 1/3/18	Wed 25/4/18
41	D.6.1.1.22	Excavation of rock from retaining wall chainage CH45 to CH0	55 days	55 days	Wed 25/4/18	Tue 19/6/18
42	D.6.1.1.23	Construction of Retaining walls chainage CH97.5 to CH 45	30 days	30 days	Tue 19/6/18	Thu 19/7/18
43	D.6.1.1.24	Construction of Retaining walls chainage CH45 to CH 0	30 days	30 days	Thu 19/7/18	Sat 18/8/18
44	D.6.1.1.25	XP application for works in TKOT carriageway	232 days	0 days	Sat 1/4/17	Sat 18/11/17
45	D.6.1.1.26	Application of TTA for diversion of water mains	90 days	90 days	Sat 17/2/18	Thu 17/5/18
46	D.6.1.1.27	Road works advice	14 days	14 days	Fri 18/5/18	Thu 31/5/18
47	D.6.1.1.28	Implementation of TTA for water mains diversion	1 day	1 day	Fri 1/6/18	Fri 1/6/18
48	D.6.1.1.29	Diversion of water mains	90 days	90 days	Tue 17/7/18	Mon 15/10/18
49	D.6.1.1.30	Rock slope treatment	75 days	75 days	Sat 18/8/18	Thu 1/11/18
50	D.6.1.1.31	Construction of substructure of lift tower	45 days	45 days	Mon 15/10/18	Thu 29/11/18
51	D.6.1.1.32	Construction E12-P1, E12, P2	30 days	30 days	Thu 29/11/18	Sat 29/12/18
52	D.6.1.1.33	Construction of lift tower superstructures	70 days	70 days	Sat 29/12/18	Sat 9/3/19
53	D.6.1.1.34	Application of Power Supply	180 days	180 days	Thu 2/8/18	Mon 28/1/19
54	D.6.1.1.35	Positioning/Construction/installation of Pillar Box	180 days	180 days	Thu 2/8/18	Mon 28/1/19
55	D.6.1.1.36	Trenching works for laying cables and communication cables	60 days	60 days	Tue 29/1/19	Fri 29/3/19
56	D.6.1.1.37	Lift car installations	87 days	87 days	Sat 9/3/19	Tue 4/6/19
57	D.6.1.1.38	Connection of cables and communication cables to lift car	7 days	7 days	Tue 28/5/19	Tue 4/6/19
58	D.6.1.1.39	Submission of material for glazing and louver	41 days	41 days	Sat 29/12/18	Thu 7/2/19
59	D.6.1.1.40	Comment of submission for glazing and louver	14 days	14 days	Fri 8/2/19	Thu 21/2/19



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

Revised programme for Section D_Dec 17

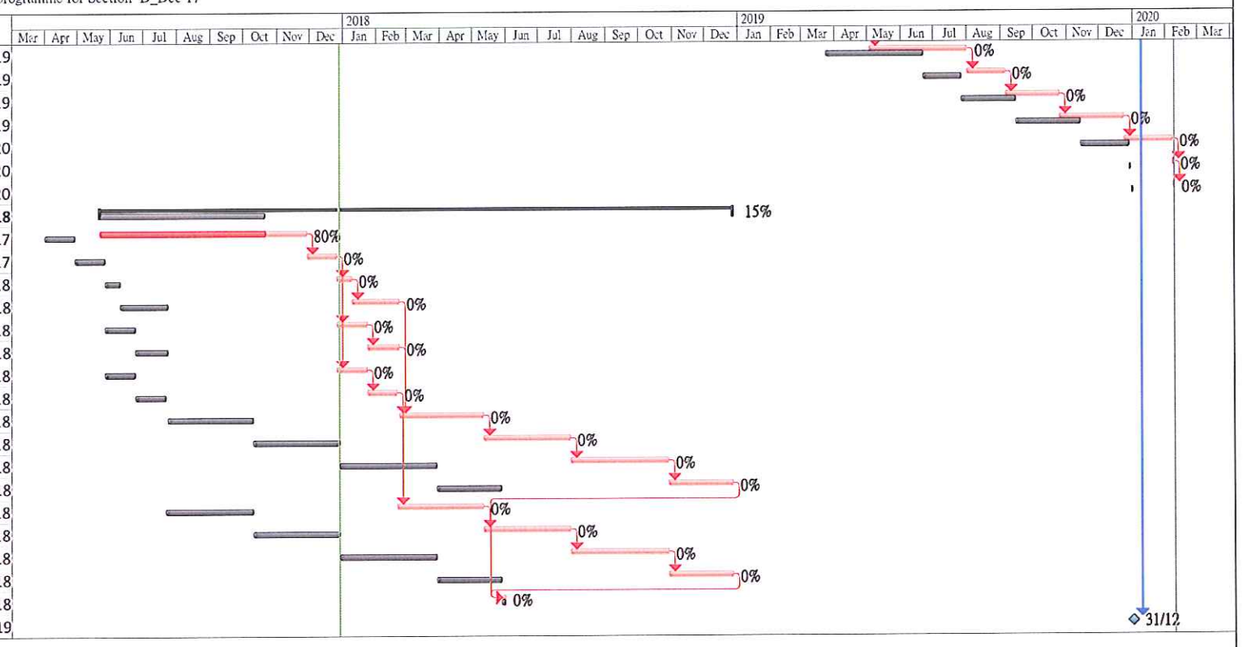
ITEM	ID	Task Name	Duration	Remaining Duration	Start	Finish
60	D.6.1.1.41	Second submission of proposal of glazing and louver	14 days	14 days	Fri 22/2/19	Thu 7/3/19
61	D.6.1.1.42	Approval of glazing and louver	14 days	14 days	Fri 8/3/19	Thu 21/3/19
62	D.6.1.1.43	Procurement to delivery of glazing and louver	45 days	45 days	Fri 22/3/19	Sun 5/5/19
63	D.6.1.1.44	Glazing and louvers installation	80 days	80 days	Tue 4/6/19	Fri 23/8/19
64	D.6.1.1.45	Submission of sump pump system	21 days	21 days	Tue 2/4/19	Mon 22/4/19
65	D.6.1.1.46	Approval to submission of sump pump system	28 days	28 days	Tue 23/4/19	Mon 20/5/19
66	D.6.1.1.47	Procurement to delivery of sump pump	38 days	38 days	Thu 23/5/19	Sat 29/6/19
67	D.6.1.1.48	Installation of sump pump system	20 days	20 days	Fri 5/7/19	Wed 24/7/19
68	D.6.1.1.49	Installation of E&M works	90 days	90 days	Tue 4/6/19	Mon 2/9/19
69	D.6.1.1.50	T&C for lift and submission of form LE5 to EMSD	60 days	60 days	Mon 2/9/19	Fri 1/11/19
70	D.6.1.1.51	Construction of staircase footing	30 days	30 days	Tue 8/10/19	Thu 7/11/19
71	D.6.1.1.52	Construction of staircase	20 days	20 days	Thu 7/11/19	Wed 27/11/19
72	D.6.1.1.53	construction of cover for staircase	20 days	20 days	Wed 27/11/19	Tue 17/12/19
73	D.6.1.1.54	Installation of lighting to staircase	15 days	15 days	Tue 17/12/19	Wed 1/1/20
74	D.6.1.1.55	General tidy up	2 days	2 days	Wed 1/1/20	Fri 3/1/20
75						
76	**D.6.1.2**	**Covered Walkway**	**563 days**	**563 days**	**Sun 17/6/18**	**Tue 31/12/19**
77	D.6.1.2.1	Construction of footing BB1-SB-F4	60 days	60 days	Tue 19/6/18	Sat 18/8/18
78	D.6.1.2.2	Construction of footing BB1-SB-F3	40 days	40 days	Sat 18/8/18	Thu 27/9/18
79	D.6.1.2.3	Construction of tooting BB1-SB-F2, BB1-SB-F1	60 days	60 days	Thu 27/9/18	Mon 26/11/18
80	D.6.1.2.4	Procurement to delivery of drainage material	30 days	30 days	Sat 4/8/18	Sun 2/9/18
81	D.6.1.2.5	Construct the drainage from Manhole D701 to D702	40 days	40 days	Mon 26/11/18	Sat 5/1/19
82	D.6.1.2.6	Construct the drainage from Manhole D702 to D803	60 days	60 days	Sat 5/1/19	Wed 6/3/19
83	D.6.1.2.7	Relocation of street lighting cables and lighting	90 days	90 days	Fri 15/2/19	Thu 16/5/19
84	D.6.1.2.8	Proposal of steel works specialist	28 days	28 days	Fri 14/9/18	Thu 11/10/18
85	D.6.1.2.9	Approval of steelworks specialist	28 days	28 days	Fri 12/10/18	Thu 8/11/18
86	D.6.1.2.10	Submission of off site fabrication of steelworks	28 days	28 days	Fri 9/11/18	Thu 6/12/18
87	D.6.1.2.11	Approval of off site fabrication of steel works	28 days	28 days	Fri 7/12/18	Thu 3/1/19
88	D.6.1.2.12	Off site fabrication of steelworks	60 days	60 days	Fri 4/1/19	Mon 4/3/19
89	D.6.1.2.13	construction of columns for covered walkway	75 days	75 days	Tue 16/4/19	Sun 30/6/19
90	D.6.1.2.14	Design submission of roof structure	35 days	35 days	Mon 14/1/19	Sun 17/2/19
91	D.6.1.2.15	Approval to design of roof structure	28 days	28 days	Mon 18/2/19	Sun 17/3/19
92	D.6.1.2.16	Material submission of roof panels	28 days	28 days	Mon 21/1/19	Sun 17/2/19
93	D.6.1.2.17	Approval of material submission of roof panels	28 days	28 days	Mon 18/2/19	Sun 17/3/19
94	D.6.1.2.18	Procurement to delivery of roof panels	51 days	51 days	Mon 18/3/19	Tue 7/5/19
95	D.6.1.2.19	construction of roof structures of covered walkway	64 days	64 days	Fri 31/5/19	Sat 3/8/19
96	D.6.1.2.20	construction of paving blocks to covered walkway	53 days	53 days	Sat 3/8/19	Wed 25/9/19
97	D.6.1.2.21	Installation of lighting to covered walkway and bridges	30 days	30 days	Wed 25/9/19	Fri 25/10/19
98	D.6.1.2.22	Connection of bridge drainage to manholes	21 days	21 days	Tue 15/10/19	Tue 5/11/19
99	D.6.1.2.23	Construction of water points	20 days	20 days	Tue 5/11/19	Mon 25/11/19
100	D.6.1.2.24	Connection of water to irrigation pipes	2 days	2 days	Mon 25/11/19	Wed 27/11/19
101	D.6.1.2.25	Construction of Paving blocks to other area	35 days	35 days	Wed 27/11/19	Wed 1/1/20
102	D.6.1.2.26	General tidy up	1 day	1 day	Wed 1/1/20	Thu 2/1/20
103						
104	**D.6.1.3**	**Works in TKOT Carriageway**	**1044 days**	**850.79 days**	**Sat 1/4/17**	**Sat 8/2/20**
105	D.6.1.3.1	Excavation Permit for drainage works in TKOT carriageway	232 days	0 days	Sat 1/4/17	Sat 18/11/17
106	D.6.1.3.2	Application of TTA for drainage works in TKOT carriageway	165 days	165 days	Sat 1/4/17	Tue 12/9/17
107	D.6.1.3.3	Road works advice	14 days	14 days	Wed 13/9/17	Tue 26/9/17
108	D.6.1.3.4	Implementation of TTA for drainage works in Southbound carriageway	1 day	1 day	Wed 27/9/17	Wed 27/9/17
109	D.6.1.3.5	Drainage from Manhole D601 to D607	80 days	80 days	Sun 19/11/17	Tue 6/2/18
110	D.6.1.3.6	Drainage works from Manhole D607 to D803	80 days	80 days	Wed 7/2/18	Fri 27/4/18
111	D.6.1.3.7	Construction of bus bay island	45 days	45 days	Sat 28/4/18	Mon 11/6/18
112	D.6.1.3.8	Reconstruction of Concrete Pavement	55 days	55 days	Tue 12/6/18	Sun 5/8/18
113	D.6.1.3.9	Road Marking	17 days	17 days	Sun 29/7/18	Tue 14/8/18
114	D.6.1.3.10	completion of works in TKOT Southbound carriageway	1 day	1 day	Tue 14/8/18	Tue 14/8/18
115	D.6.1.311	Road Works Advice for TTA in Northbound carriageway	14 days	14 days	Thu 31/5/18	Wed 13/6/18
116	D.6.1.3.12	Implementation of TTA for drainage works in Northbound carriageway	1 day	1 day	Wed 15/8/18	Wed 15/8/18
117	D.6.1.3.13	Utilitiies Detection	1 day	0 days	Sat 4/8/18	Sat 4/8/18
118	D.6.1.3.14	Inspection Pit to locate existing utilities	21 days	21 days	Sun 5/8/18	Sat 25/8/18
119	D.6.1.3.15	Diversion of utilities	160 days	160 days	Sun 26/8/18	Fri 1/2/19
120	D.6.1.3.16	Drainage works D401 to D410	90 days	90 days	Sat 2/2/19	Thu 5/5/19



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

Revised programme for Section D_Dec 17

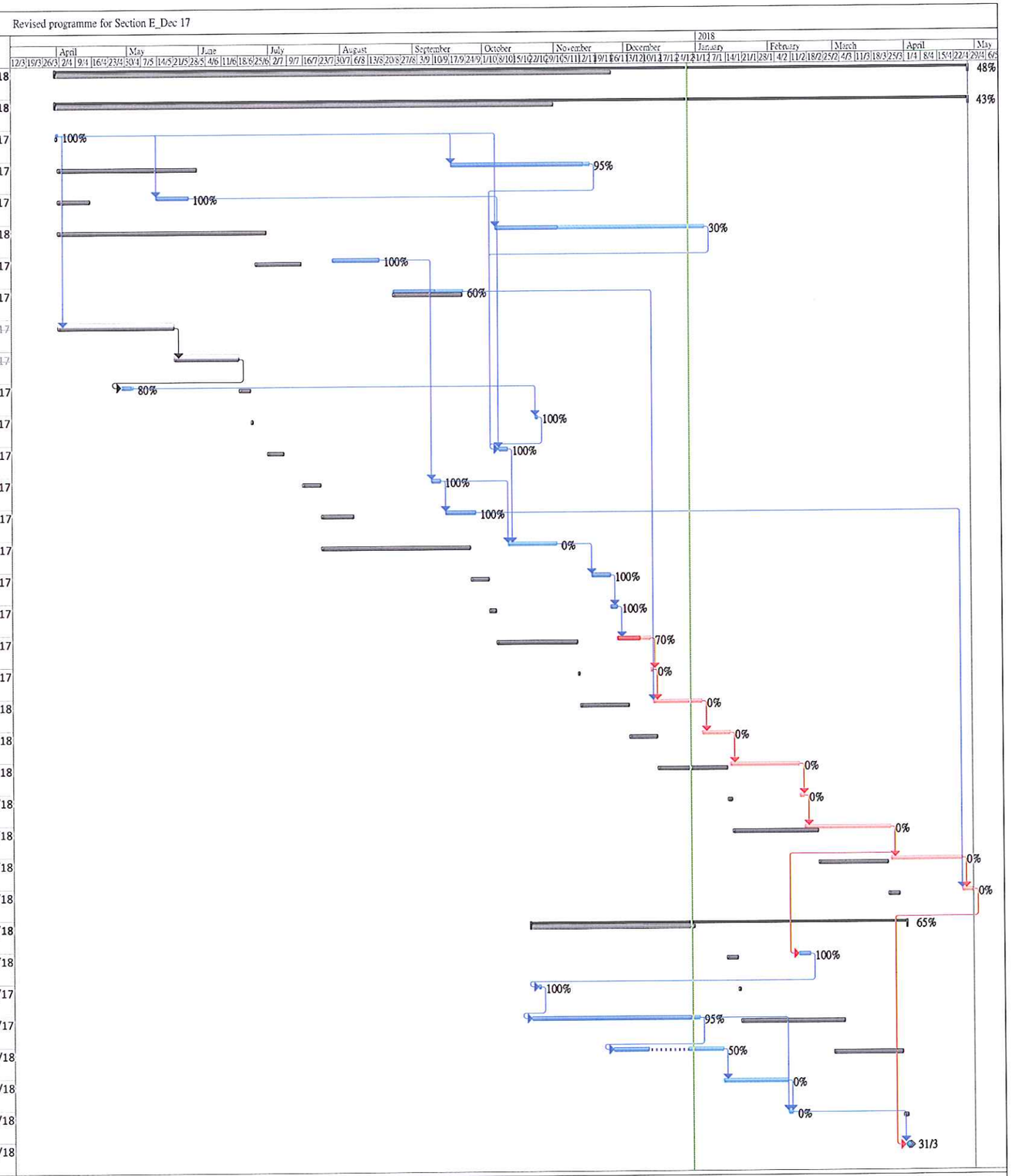
ITEM	ID	Task Name	Duration	Remaining Duration	Start	Finish
121	D.6.1.3.17	Drainage works D410 to D419	90 days	90 days	Fri 3/5/19	Wed 31/7/19
122	D.6.1.3.18	Drainage works D301	35 days	35 days	Thu 1/8/19	Wed 4/9/19
123	D.6.1.3.19	Construction of kerb for Bus Bay kerb island	50 days	50 days	Thu 5/9/19	Thu 24/10/19
124	D.6.1.3.20	Laying of Subbase and pavement for Bus Bay	60 days	60 days	Fri 25/10/19	Mon 23/12/19
125	D.6.1.3.21	Remaining Road Marking and signage	45 days	45 days	Tue 24/12/19	Thu 6/2/20
126	D.6.1.3.22	General tidy up	1 day	1 day	Fri 7/2/20	Fri 7/2/20
127	D.6.1.3.23	Completion of Works	1 day	1 day	Sat 8/2/20	Sat 8/2/20
128	**D.6.1.4**	**AUTOTOLL**	**584 days**	**496.2 days**	**Mon 22/5/17**	**Wed 26/12/18**
129	D.6.1.4.1	Proposal of Specialist for MTC and ETC system	190 days	38 days	Mon 22/5/17	Mon 27/11/17
130	D.6.1.4.2	Approval of Specialist for MTC and ETC system	28 days	28 days	Tue 28/11/17	Mon 25/12/17
131	D.6.1.4.3	Material submission of Autotoll System	14 days	14 days	Tue 26/12/17	Mon 8/1/18
132	D.6.1.4.4	Approval of material submission of autotoll system	44 days	44 days	Tue 9/1/18	Wed 21/2/18
133	D.6.1.4.5	Statuory submission of Auto Toll system	28 days	28 days	Tue 26/12/17	Mon 22/1/18
134	D.6.1.4.6	Approval of Auto Toll System	30 days	30 days	Tue 23/1/18	Wed 21/2/18
135	D.6.1.4.7	Method statement submission of Swapping of autotoll system	28 days	28 days	Tue 26/12/17	Mon 22/1/18
136	D.6.1.4.8	Approval of method statement of swapping of autotoll system	28 days	28 days	Tue 23/1/18	Mon 19/2/18
137	D.6.1.4.9	Activation of manual toll system of Lane 2	78 days	78 days	Thu 22/2/18	Thu 10/5/18
138	D.6.1.4.10	Deactivation of autotoll system in Lane 2	80 days	80 days	Fri 11/5/18	Sun 29/7/18
139	D.6.1.4.11	Inatallation and activation of autotoll system in Lane 1	90 days	90 days	Mon 30/7/18	Sat 27/10/18
140	D.6.1.4.12	Testing and commissioning of autotoll and manual toll system	60 days	60 days	Sun 28/10/18	Wed 26/12/18
141	D.6.1.4.13	Activation of manual toll system of Lane 11	80 days	80 days	Tue 20/2/18	Thu 10/5/18
142	D.6.1.4.14	Deactivation of autotoll system in Lane 11	80 days	80 days	Fri 11/5/18	Sun 29/7/18
143	D.6.1.4.15	Inatallation and activation of autotoll system in Lane 1	90 days	90 days	Mon 30/7/18	Sat 27/10/18
144	D.6.1.4.16	Testing and commissioning of autotoll and manual toll system	60 days	60 days	Sun 28/10/18	Wed 26/12/18
145	D.6.1.4.17	General tidy up	3 days	3 days	Mon 28/5/18	Wed 30/5/18
146	D.6.1.4.18	Completion of works	0 days	0 days	Tue 31/12/19	Tue 31/12/19



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

Revised programme for Section E_Dec 17

ITEM	ID	Task Name	Duration	Remaining Duration	Start	Finish
1	**E.7.1**	**SECTION E - HIKING TRAILS (JORDAN SECTION & CHOI WAN SECTION)**	**393 days**	**202.63 days**	**Fri 31/3/17**	**Fri 27/4/18**
2	**E.7.1.1**	**CONSTRUCTION OF HIKING TRAIL (Jordan section)**	**393 days**	**223.44 days**	**Fri 31/3/17**	**Fri 27/4/18**
3	E.7.1.1.1	Access Date of Portion 7	1 day	0 days	Fri 31/3/17	Fri 31/3/17
4	E.7.1.1.2	Initial Survey of Site (Jordan and Choi Wan Section)	60 days	3 days	Sun 17/9/17	Wed 15/11/17
5	E.7.1.1.3	Tree survey and submission (Jordan and Choi Wan Section)	14 days	0 days	Sat 13/5/17	Fri 26/5/17
6	E.7.1.1.4	Mobilization of plant, access , equipment, material	90 days	63 days	Fri 6/10/17	Wed 3/1/18
7	E.7.1.1.5	Submission of construction impact assessment	20 days	0 days	Fri 28/7/17	Wed 16/8/17
8	E.7.1.1.6	Procurement to delivery of soil nails	30 days	12 days	Wed 23/8/17	Thu 21/9/17
~~9~~	~~E.7.1.1.7~~	~~Submission of method statement of excavation of slope~~	~~50 days~~	~~50 days~~	~~Sat 1/4/17~~	~~Sat 20/5/17~~
~~10~~	~~E.7.1.1.8~~	~~Approval of Method Statement of excavation of slope~~	~~28 days~~	~~28 days~~	~~Sun 21/5/17~~	~~Sat 17/6/17~~
11	E.7.1.1.9	Construction of Hoarding	5 days	1 day	Fri 28/4/17	Tue 2/5/17
12	E.7.1.1.10	Utilities detection	1 day	0 days	Mon 23/10/17	Mon 23/10/17
13	E.7.1.1.11	Construction of confirmation Trial Pit TP1	4 days	0 days	Sat 7/10/17	Tue 10/10/17
14	E.7.1.1.12	Construction of confirmation borehole J1-BH1	4 days	0 days	Fri 8/9/17	Mon 11/9/17
15	E.7.1.1.13	Construct borehole J1-BH2 and test samples	13 days	0 days	Thu 14/9/17	Tue 26/9/17
16	E.7.1.1.14	Excavation of slope and drainage construction	21 days	21 days	Wed 11/10/17	Tue 31/10/17
17	E.7.1.1.15	Erection of tubular platform for soil nails	8 days	0 days	Thu 16/11/17	Thu 23/11/17
18	E.7.1.1.16	Setting out of soil nails	3 days	0 days	Fri 24/11/17	Sun 26/11/17
19	E.7.1.1.17	Construction of Test nails TN1 and TN2	14 days	4.2 days	Mon 27/11/17	Sun 10/12/17
20	E.7.1.1.18	Pull out tests for TN1 and TN2	1 day	1 day	Mon 11/12/17	Mon 11/12/17
21	E.7.1.1.19	Construction of soil nails (45nrs)	21 days	21 days	Tue 12/12/17	Mon 1/1/18
22	E.7.1.1.20	Construction of soil nail heads	12 days	12 days	Tue 2/1/18	Sat 13/1/18
23	E.7.1.1.21	Construction of staircase	30 days	30 days	Sun 14/1/18	Mon 12/2/18
24	E.7.1.1.22	Hydroseeding of slope	2 days	2 days	Tue 13/2/18	Wed 14/2/18
25	E.7.1.1.23	Construction of hiking trail	37 days	37 days	Thu 15/2/18	Fri 23/3/18
26	E.7.1.1.24	Construction of Planter walls with planting	30 days	30 days	Sat 24/3/18	Sun 22/4/18
27	E.7.1.1.25	General tidy up	5 days	5 days	Mon 23/4/18	Fri 27/4/18
28	**E.7.1.2**	**CONSTRUCTION OF HIKING TRAIL (Choi Wan section)**	**162 days**	**57.05 days**	**Fri 20/10/17**	**Sat 31/3/18**
29	E.7.1.2.1	Erection of hoarding	5 days	0 days	Mon 12/2/18	Fri 16/2/18
30	E.7.1.2.2	Utilities detection	1 day	0 days	Mon 23/10/17	Mon 23/10/17
31	E.7.1.2.3	Construction of hiking trail	72 days	3.6 days	Fri 20/10/17	Sat 30/12/17
32	E.7.1.2.4	Construction of planter walls with planting	30 days	15 days	Fri 24/11/17	Tue 9/1/18
33	E.7.1.2.4a	Landscaping Works (PMI 33)	28 days	28 days	Wed 10/1/18	Tue 6/2/18
34	E.7.1.2.5	General tidy up	2 days	2 days	Wed 7/2/18	Thu 8/2/18
35	E.7.1.2.6	Completion of Works	0 days	0 days	Sat 31/3/18	Sat 31/3/18



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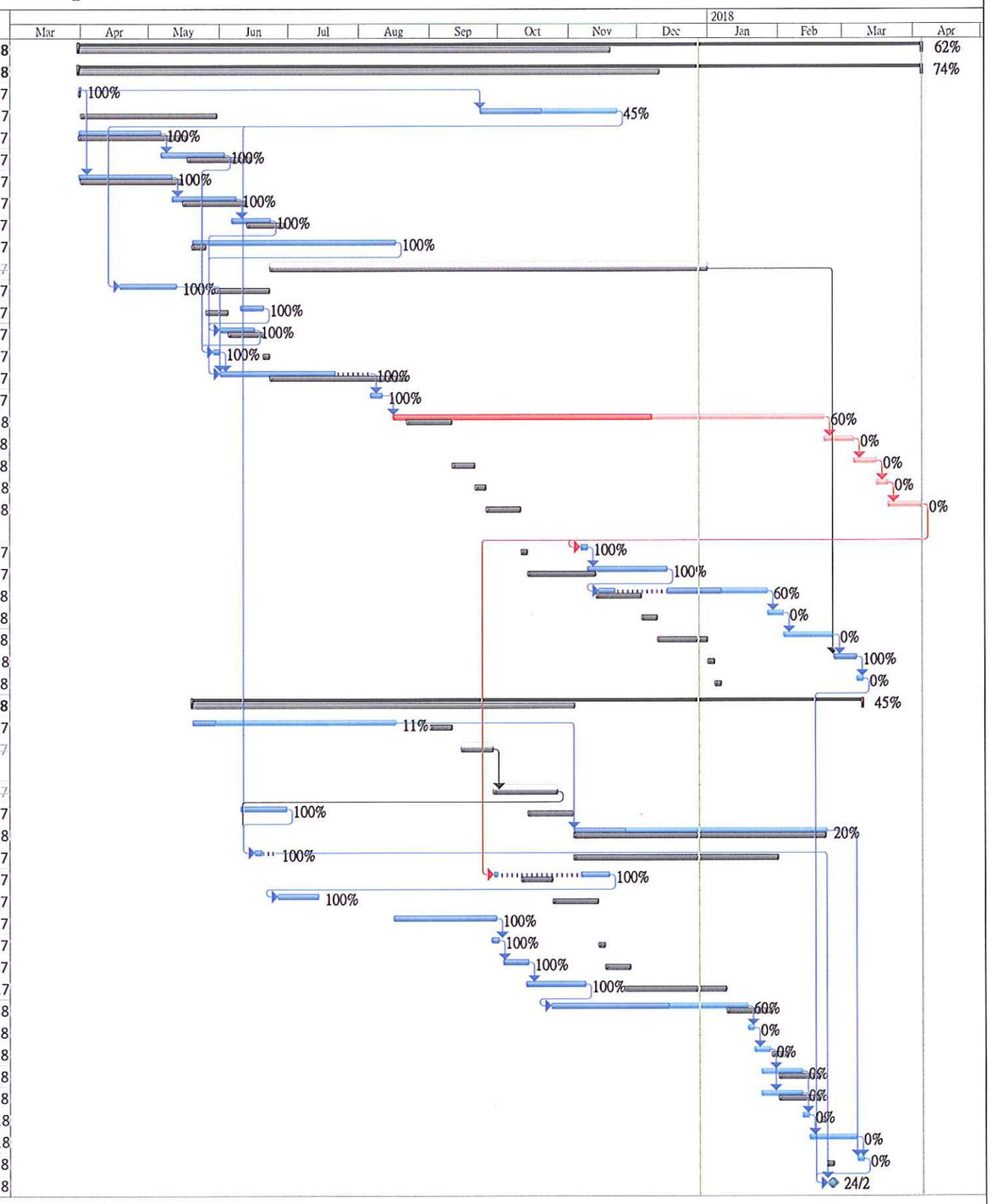
Revised programme for Section F_Dec 17

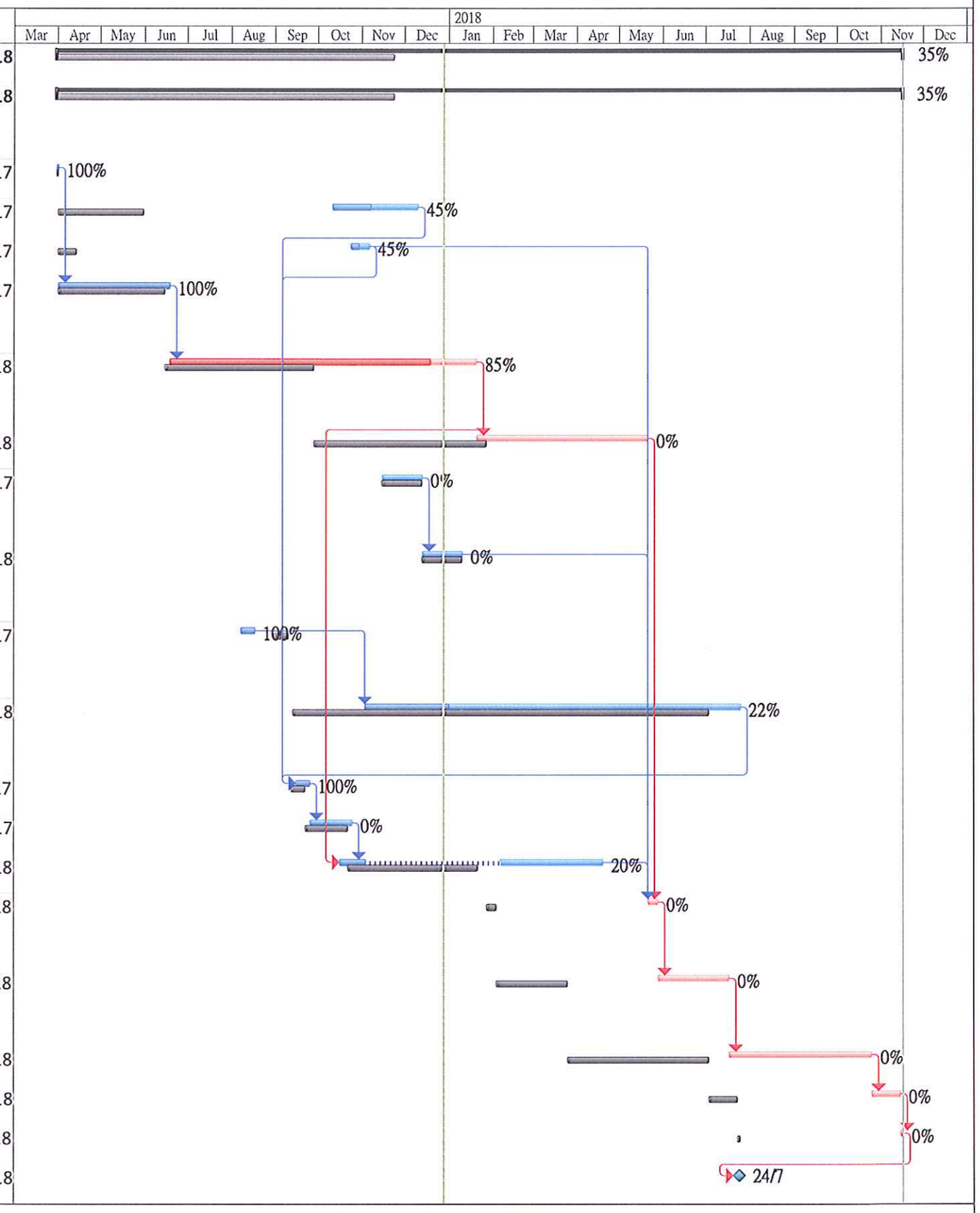
ITEM	ID	Task Name	Duration	Remaining Duration	Start	Finish
1	**F.8.1**	**SECTION F - ENTRUSTED SLOPES (SITE A & SITE B)**	**370 days**	**139.57 days**	**Fri 31/3/17**	**Wed 4/4/18**
2	**F.8.1.1**	**CONSTRUCTION OF SOIL NAILS IN SITE B**	**370 days**	**97.85 days**	**Fri 31/3/17**	**Wed 4/4/18**
3	F.8.1.1.1	Access Date of Portion 8	1 day	0 days	Fri 31/3/17	Fri 31/3/17
4	F.8.1.1.2	Initial Site Survey for site A and Site B	60 days	33 days	Sat 23/9/17	Tue 21/11/17
5	F.8.1.1.3	Submission of method statement of soil nailing works	36 days	0 days	Fri 31/3/17	Fri 5/5/17
6	F.8.1.1.4	Approval of method statement of soil nailing works	28 days	0 days	Sat 6/5/17	Fri 2/6/17
7	F.8.1.1.5	Material submission of soil nailing system	41 days	0 days	Fri 31/3/17	Wed 10/5/17
8	F.8.1.1.6	Approval of material for soil nailing system	28 days	0 days	Thu 11/5/17	Wed 7/6/17
9	F.8.1.1.7	Procurement to delivery of soil nails system	17 days	0 days	Tue 6/6/17	Thu 22/6/17
10	F.8.1.1.8	Submission of Construction Impact Assessment	89 days	0 days	Sat 20/5/17	Wed 16/8/17
~~11~~	~~F.8.1.1.9~~	~~Monitoring of ground movement and ground water~~	~~192 days~~	~~192 days~~	~~Fri 23/6/17~~	~~Sun 31/12/17~~
12	F.8.1.1.10	General site clrearance	25 days	0 days	Tue 18/4/17	Fri 12/5/17
13	F.8.1.1.11	Tree Survey for slope features 11NE-D/C709, C714, C711	10 days	0 days	Sat 10/6/17	Mon 19/6/17
14	F.8.1.1.12	Erection of tubular Scaffold for slope 11NE-D/C709, C714	15 days	0 days	Thu 1/6/17	Thu 15/6/17
15	F.8.1.1.13	Setting out of soil nails	3 days	0 days	Mon 29/5/17	Wed 31/5/17
16	F.8.1.1.14	Construction of soil nail (198nrs)	50.4 days	0 days	Thu 1/6/17	Sat 5/8/17
17	F.8.1.1.14a	Additional soil nail (13nrs) (PMI 22)	5 days	0 days	Sun 6/8/17	Thu 10/8/17
18	F.8.1.1.15	Construction of soil nail heads	189 days	75.6 days	Wed 16/8/17	Tue 20/2/18
19	F.8.1.1.15a	Additional soil nail heads (13nrs) (PMI 22)	13 days	13 days	Wed 21/2/18	Mon 5/3/18
20	F.8.1.1.16	Construction of sprayed concrete	10 days	10 days	Tue 6/3/18	Thu 15/3/18
21	F.8.1.1.17	Removal of tubular scaffold and tidy up	5 days	5 days	Fri 16/3/18	Tue 20/3/18
22	F.8.1.1.18	Erection of tubular scaffold for slope feature 11NE-D/C711	15 days	15 days	Wed 21/3/18	Wed 4/4/18
23	F.8.1.1.19	Setting out of soil nails	3 days	0 days	Mon 6/11/17	Wed 8/11/17
24	F.8.1.1.20	Construction of soil nails (82nrs)	35 days	0 days	Thu 9/11/17	Wed 13/12/17
25	F.8.1.1.21	Construction of soil nails heads	51 days	20.4 days	Tue 14/11/17	Fri 26/1/18
26	F.8.1.1.22	Removal of tubular scaffold and tidy up	7 days	7 days	Sat 27/1/18	Fri 2/2/18
27	F.8.1.1.23	Laying of non-biodegradable control mat	22 days	22 days	Sat 3/2/18	Sat 24/2/18
28	F.8.1.1.24	hydroseeding of slope	10 days	0 days	Sun 25/2/18	Tue 6/3/18
29	F.8.1.1.25	General tidy up site	3 days	3 days	Wed 7/3/18	Fri 9/3/18
30	**F.8.1.2**	**CONSTRUCTION OF SOIL NAILS IN SITE A**	**294 days**	**162.14 days**	**Sat 20/5/17**	**Fri 9/3/18**
31	F.8.1.2.1	Submission of Construction Impact Assessment	89 days	79 days	Sat 20/5/17	Wed 16/8/17
~~32~~	~~F.8.1.2.2~~	~~Submission of method statement of demolition of terrace~~	~~14 days~~	~~14 days~~	~~Fri 15/9/17~~	~~Thu 28/9/17~~
~~33~~	~~F.8.1.2.3~~	~~Approval to method statement of demolition of terrace~~	~~28 days~~	~~28 days~~	~~Fri 29/9/17~~	~~Thu 26/10/17~~
34	F.8.1.2.4	Tree Survey	20 days	0 days	Sat 10/6/17	Thu 29/6/17
35	F.8.1.2.5	Monitoring of ground movement and ground water	111 days	88.8 days	Fri 3/11/17	Wed 21/2/18
36	F.8.1.2.6	Demolition of existing terrace structure	3 days	0 days	Fri 16/6/17	Sat 24/6/17
37	F.8.1.2.7	Erection of Tubular Platform	14 days	0 days	Fri 29/9/17	Sat 18/11/17
38	F.8.1.2.8	Stripping of 500mm thick top soil	18 days	0 days	Mon 26/6/17	Thu 13/7/17
39	F.8.1.2.8a	Verification Inspection Pits (PMI 14)	45 days	0 days	Wed 16/8/17	Fri 29/9/17
40	F.8.1.2.9	Setting out of soil nails	3 days	0 days	Thu 28/9/17	Sat 30/9/17
41	F.8.1.2.10	Pull Out Test (4 nrs)	11 days	0 days	Tue 3/10/17	Fri 13/10/17
42	F.8.1.2.11	Construction of soil nail (162nrs)	26 days	0 days	Fri 13/10/17	Tue 7/11/17
43	F.8.1.2.12	Construction of soil nail heads	86 days	34.4 days	Tue 24/10/17	Wed 17/1/18
44	F.8.1.2.12a	Remove of Dead Tree Stump (PMI 28)	3 days	3 days	Thu 18/1/18	Sat 20/1/18
45	F.8.1.2.13	Removal of tubular scaffold and tidy up	7 days	7 days	Sun 21/1/18	Sat 27/1/18
46	F.8.1.2.14	Laying of biodegradable control mat	18 days	18 days	Wed 24/1/18	Sat 10/2/18
47	F.8.1.2.15	Construction of granite stone wall	18 days	18 days	Wed 24/1/18	Sat 10/2/18
48	F.8.1.2.16	Hydroseeding of slope	3 days	3 days	Sun 11/2/18	Tue 13/2/18
49	F.8.1.2.16a	Erection of Chain Fence	21 days	21 days	Wed 14/2/18	Tue 6/3/18
50	F.8.1.2.17	General tidy up site	3 days	3 days	Wed 7/3/18	Fri 9/3/18
51	F.8.1.2.18	Completion of Works	0 days	0 days	Sat 24/2/18	Sat 24/2/18



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

Revised programme for Section F1_Dec 17

ITEM	ID	Task Name	Duration	Remaining Duration	Start	Finish
1	**F1.9.1**	**SECTION F1 - FLEXIBLE BARRIER**	**595 days**	**388.28 days**	**Fri 31/3/17**	**Thu 15/11/18**
2	**F1.9.1.1**	**CONSTRUCTION OF Flexible barriers near Tiu King Leng**	**595 days**	**388.28 days**	**Fri 31/3/17**	**Thu 15/11/18**
3	F1.9.1.1.1	Access Date for Portion 9	1 day	0 days	Fri 31/3/17	Fri 31/3/17
4	F1.9.1.1.2	Initial Site Survey	60 days	33 days	Wed 11/10/17	Sat 9/12/17
5	F1.9.1.1.3	Initial Tree Survey	13 days	7.15 days	Tue 24/10/17	Sun 5/11/17
6	F1.9.1.1.4	Material and design submission for flexible barrier systems	78 days	0 days	Sat 1/4/17	Sat 17/6/17
7	F1.9.1.1.5	Approval to material and design submission for flexible barrier system	216 days	32.4 days	Sun 18/6/17	Fri 19/1/18
8	F1.9.1.1.6	Procurement of flexible barriers	121 days	121 days	Sat 20/1/18	Sun 20/5/18
9	F1.9.1.1.7	Submission of method statement for Flexible barrier construction	28 days	28 days	Wed 15/11/17	Tue 12/12/17
10	F1.9.1.1.8	Approval of method statement for flexible barrier construction	28 days	28 days	Wed 13/12/17	Tue 9/1/18
11	F1.9.1.1.9	Submission of construction impact assessment	10 days	0 days	Mon 7/8/17	Wed 16/8/17
12	F1.9.1.1.10	Monitoring of vibration and ground water level	264 days	205.4 days	Fri 3/11/17	Tue 24/7/18
13	F1.9.1.1.11	Construction of piezometers (2nr) (PMI 4)	10 days	0 days	Fri 15/9/17	Sun 24/9/17
14	F1.9.1.1.12	Ground Investigation works	30 days	30 days	Mon 25/9/17	Tue 24/10/17
15	F1.9.1.1.13	Construction of Baffles	91 days	72.8 days	Mon 16/10/17	Wed 18/4/18
16	F1.9.1.1.14	General site clearance for Flexible barriers	7 days	7 days	Mon 21/5/18	Sun 27/5/18
17	F1.9.1.1.15	Erection of tubular platform for flexible barrier construction	50 days	50 days	Mon 28/5/18	Mon 16/7/18
18	F1.9.1.1.16	Erection of flexible barriers	100 days	100 days	Tue 17/7/18	Wed 24/10/18
19	F1.9.1.1.17	Removal of platform	20 days	20 days	Thu 25/10/18	Tue 13/11/18
20	F1.9.1.1.18	General tidy up	2 days	2 days	Wed 14/11/18	Thu 15/11/18
21	F1.9.1.1.19	Completion of works	0 days	0 days	Tue 24/7/18	Tue 24/7/18



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Appendix D

Monitoring Locations for Impact Monitoring

Legend

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

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

Consultant

ARUP

Contract No. and Title

Agreement No. CE 18/2012(CE)

Development of Anderson Road Quarry - Investigation

Drawing title

Locations of Construction Dust Monitoring (Sheet 1 of 3)

Drawing no.	Rev.
227724/E/1045	B

Drawn	Date	Checked	Approved
GL	03/14	TC	ST

Scale	Status
1:5000 @A3	PRELIMINARY

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Civil Engineering and Development Department

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

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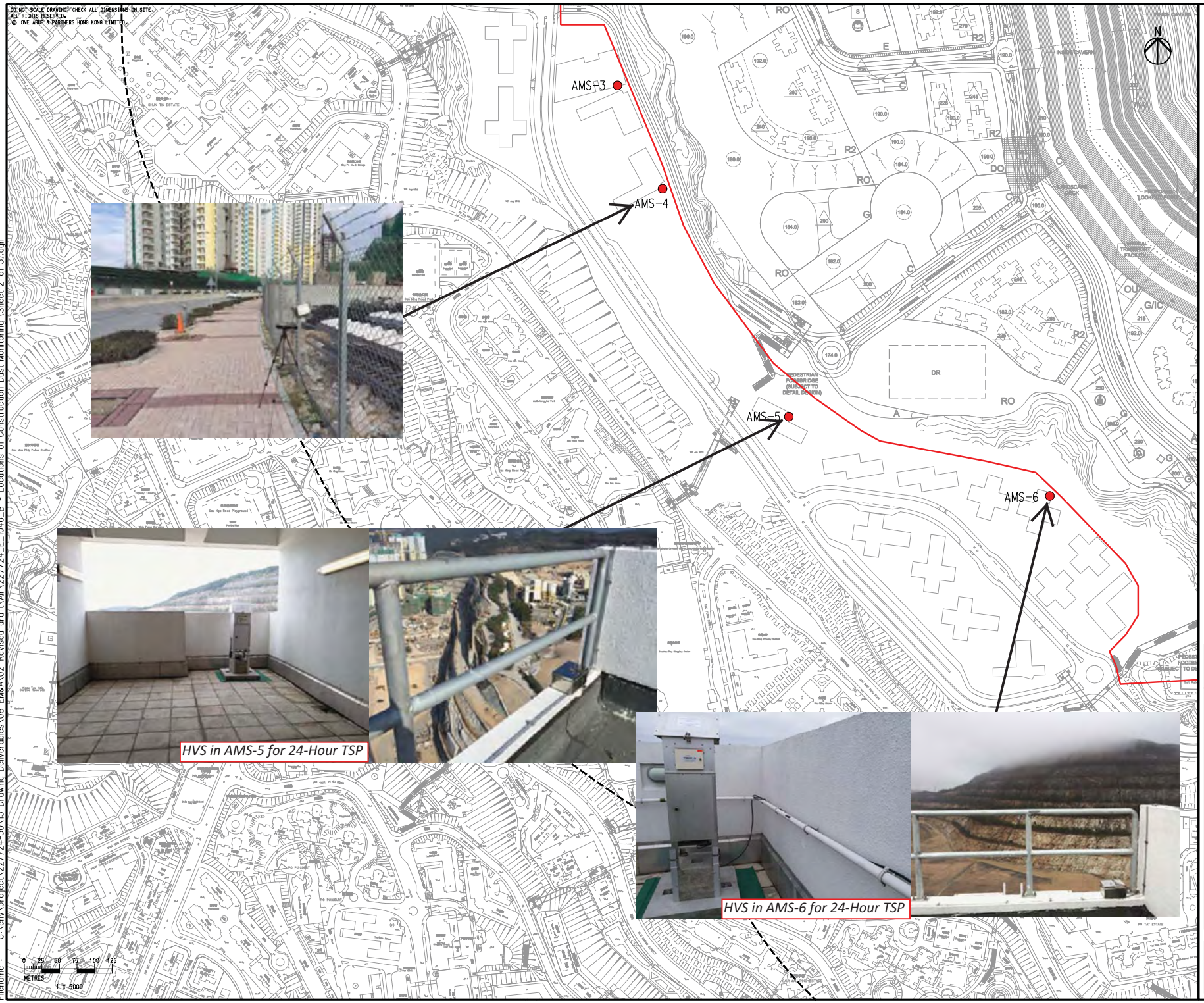

Legend

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

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

Consultant

ARUP

Contract No. and Title

Agreement No. CE 18/2012(CE)

Development of Anderson Road Quarry - Investigation

Drawing title

Locations of Construction Dust Monitoring (Sheet 2 of 3)

Drawing no.	Rev.
227724/E/1046	B

Drawn	Date	Checked	Approved
GL	03/14	TC	ST

Scale	Status
1:5000 @A3	PRELIMINARY

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

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HVS in AMS-7 for 24-Hour TSP

Legend

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

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

Consultant

ARUP

Contract No. and Title

Agreement No. CE 18/2012(CE)

Development of Anderson Road Quarry - Investigation

Drawing title

Locations of Construction Dust Monitoring (Sheet 3 of 3)

Drawing no.	Rev.
227724/E/1047	B

Drawn	Date	Checked	Approved
GL	03/14	TC	ST

Scale	Status
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Civil Engineering and Development Department

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

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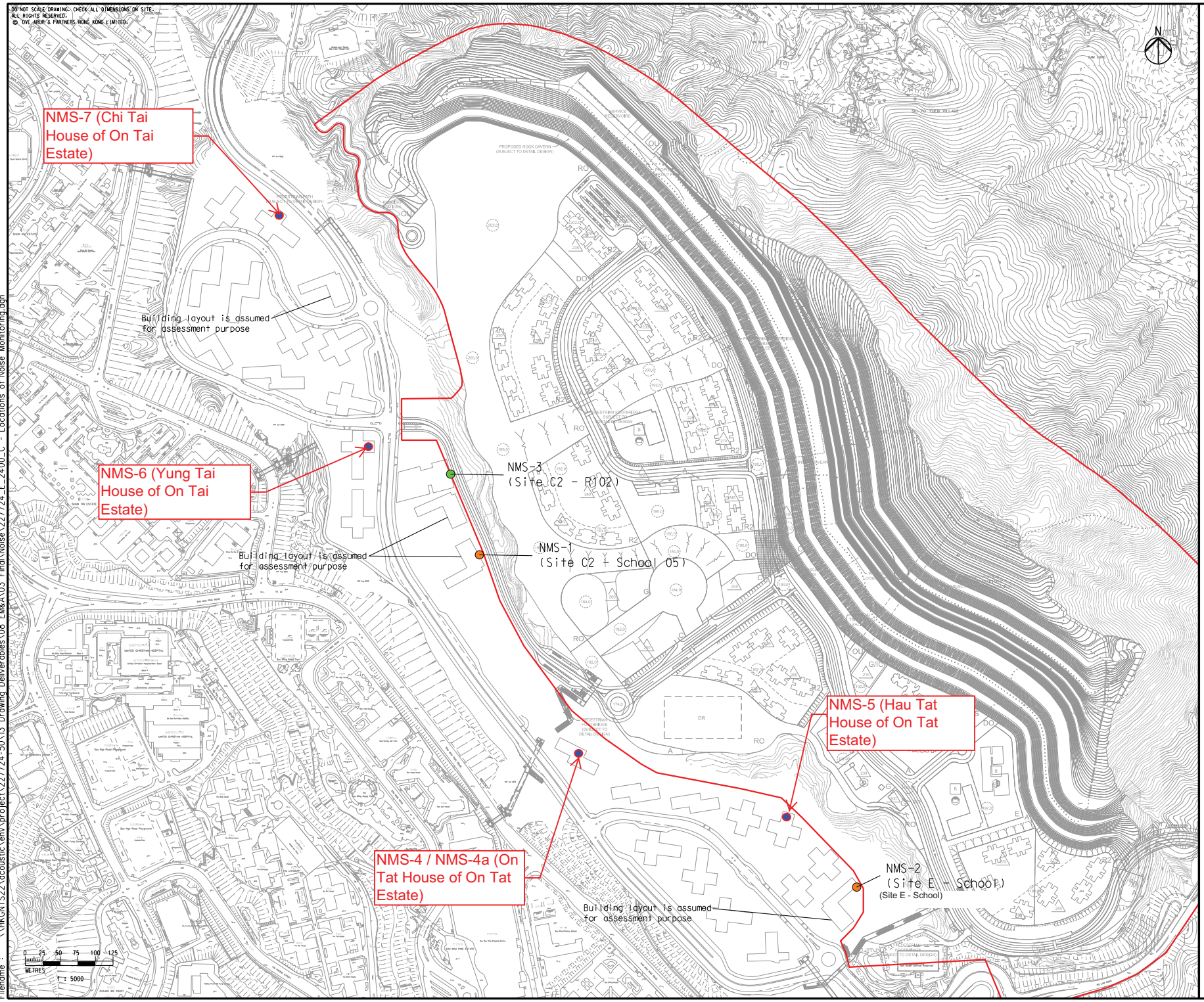

Legend

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

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

Consultant

ARUP

Contract No. and Title

Agreement No. CE 18/2012(CE)

Development of Anderson Road Quarry - Investigation

Drawing title

Locations of Noise Monitoring

Drawing no.	Rev.
227724/E/2400	C

Drawn	Date	Checked	Approved
GL	05/14	TC	ST

Scale	Status
1:5000 @A3	PRELIMINARY

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Civil Engineering and Development Department

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

Appendix E

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

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Chi Yum Ching She		Date of Calibration:	2-Feb-18
Location ID :	AMS1	Next Calibration Date:	2-Apr-18
Model:TISCH High Volume Air Sampler TE-5170		Technician: Mr. Ip Ka Hing	

CONDITIONS

Sea Level Pressure (hPa)	1024.6	Corrected Pressure (mm Hg)	768.45
Temperature (ºC)	11.1	Temperature (K)	284

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.11965
Model->	5025A	Qstd Intercept ->	-0.02696
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.6	6.6	13.2	1.778	53	54.58	Slope = 37.7058
13	5.4	5.4	10.8	1.609	47	48.40	Intercept = -11.9369
10	4.1	4.1	8.2	1.404	41	42.22	Corr. coeff. = 0.9983
7	2.5	2.5	5	1.099	29	29.87	
5	1.6	1.6	3.2	0.882	20	20.60	

Calculations :

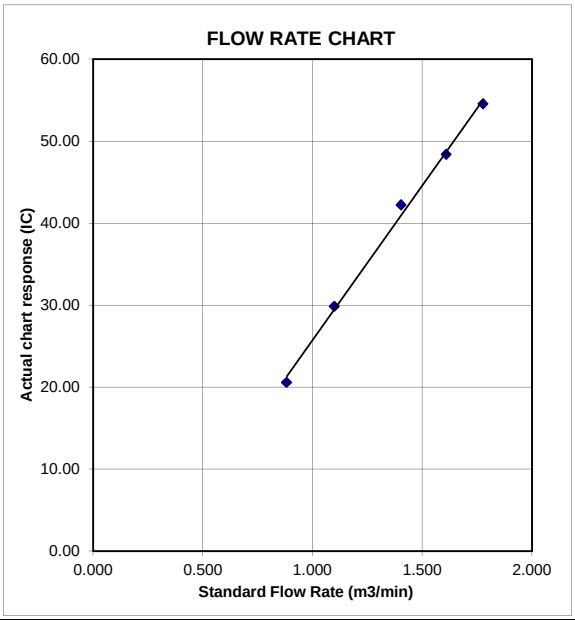
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

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



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Oi Tat House	Date of Calibration:	2-Feb-18
Location ID :	AMS 5	Next Calibration Date:	2-Apr-18
Model:TISCH High Volume Air Sampler TE-5170		Technician: Mr. Ip Ka Hing	

CONDITIONS

Sea Level Pressure (hPa)	1024.6	Corrected Pressure (mm Hg)	768.45
Temperature (ºC)	11.1	Temperature (K)	284

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.11965
Model->	5025A	Qstd Intercept ->	-0.02696
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION	
18	6.3	6.3	12.6	1.737	55	56.64	Slope =	37.3684
13	4.8	4.8	9.6	1.518	48	49.43	Intercept =	-7.4063
10	3.8	3.8	7.6	1.352	43	44.28	Corr. coeff. =	0.9982
7	2.5	2.5	5	1.099	33	33.99		
5	1.3	1.3	2.6	0.796	21	21.63		

Calculations :

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

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

Qstd = standard flow rate

IC = corrected chart respones

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K

Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

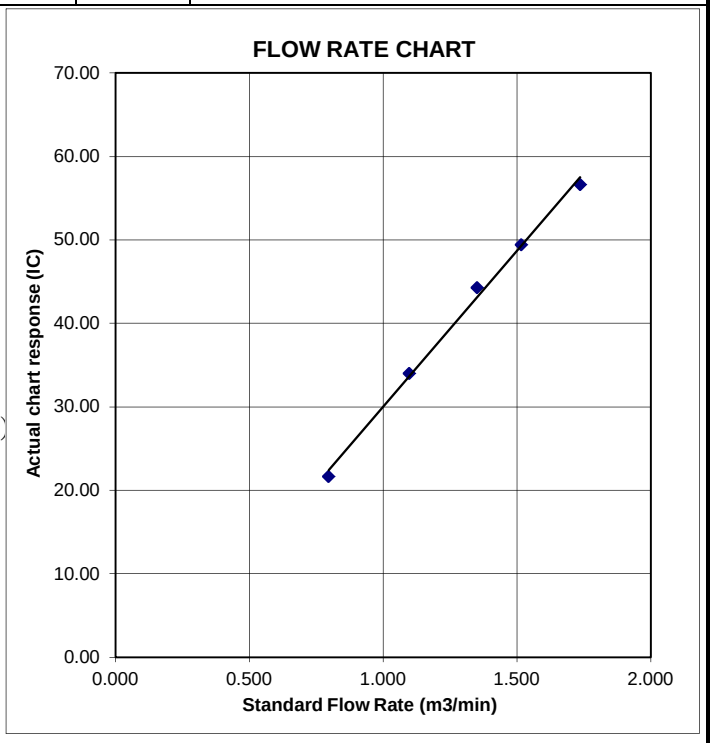
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Hau Tat House	Date of Calibration:	2-Feb-18
Location ID :	AMS 6	Next Calibration Date:	2-Apr-18
Model:TISCH High Volume Air Sampler TE-5170		Technician: Mr. Ip Ka Hing	

CONDITIONS

Sea Level Pressure (hPa)	1024.6	Corrected Pressure (mm Hg)	768.45
Temperature (ºC)	11.1	Temperature (K)	284

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.11965
Model->	5025A	Qstd Intercept ->	-0.02696
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.2	6.2	12.4	1.724	53	54.58	Slope = 30.4759
13	4.7	4.7	9.4	1.502	47	48.40	Intercept = 1.9536
10	3.6	3.6	7.2	1.316	40	41.19	Corr. coeff. = 0.9983
7	2.2	2.2	4.4	1.032	32	32.96	
5	1.3	1.3	2.6	0.796	26	26.78	

Calculations :

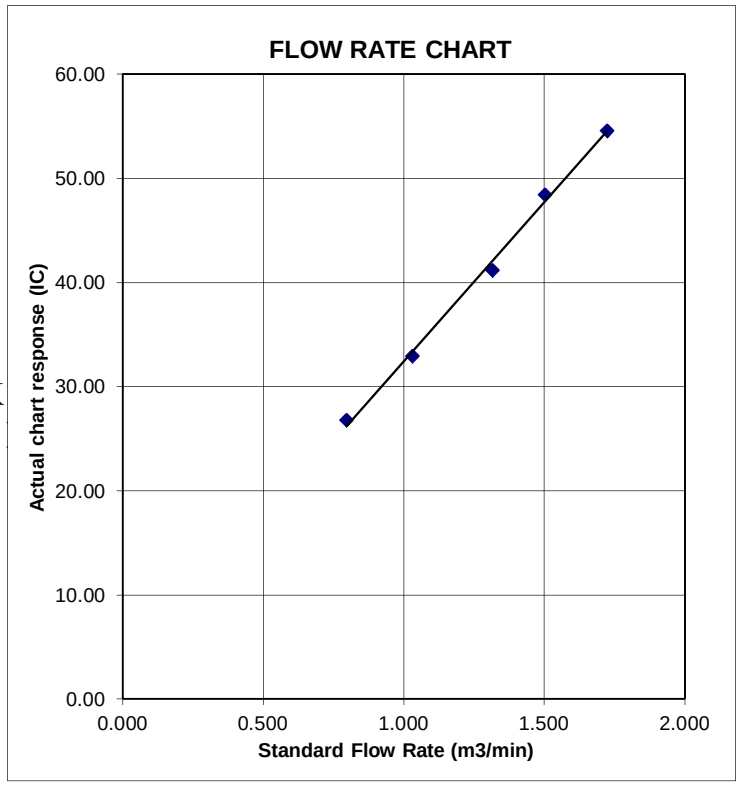
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

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



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Ma Yau Tong Village	Date of Calibration:	2-Feb-18
Location ID :	AMS 7	Next Calibration Date:	2-Apr-18
Model:TISCH High Volume Air Sampler TE-5170		Technician:	Mr. Ip Ka Hing

CONDITIONS

Sea Level Pressure (hPa)	1024.6	Corrected Pressure (mm Hg)	768.45
Temperature (°C)	11.1	Temperature (K)	284

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.11965
Model->	5025A	Qstd Intercept ->	-0.02696
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.3	6.3	12.6	1.737	46	47.37	Slope = 29.9579
13	5.2	5.2	10.4	1.580	41	42.22	Intercept = -4.6321
10	3.7	3.7	7.4	1.334	35	36.04	Corr. coeff. = 0.9991
7	2.4	2.4	4.8	1.077	27	27.81	
5	1.5	1.5	3	0.854	20	20.60	

Calculations :

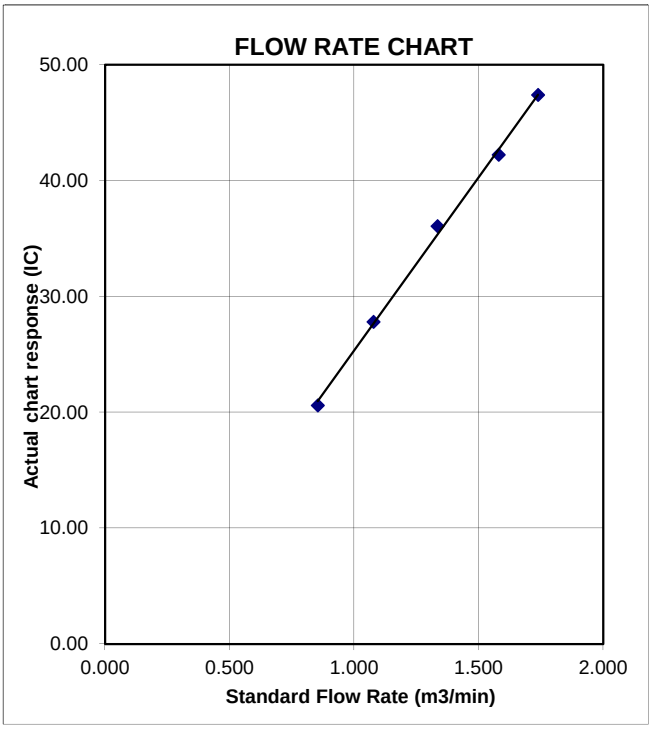
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

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



TISCH ENVIRONMENTAL, INC.
145 SOUTH MIAMI AVE
VILLAGE OF CLEVES, OH
45002
513.467.9000
877.263.7610 TOLL FREE
513.467.9009 FAX

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Feb 28, 2017 Rootsmeter S/N 0438320 Ta (K) - 294
Operator Tisch Orifice I.D. - 1941 Pa (mm) - 750.57

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.4600	3.2	2.00
2	NA	NA	1.00	1.0410	6.4	4.00
3	NA	NA	1.00	0.9280	7.9	5.00
4	NA	NA	1.00	0.8840	8.7	5.50
5	NA	NA	1.00	0.7290	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9967	0.6827	1.4149		0.9957	0.6820	0.8851
0.9925	0.9534	2.0010		0.9915	0.9524	1.2517
0.9904	1.0672	2.2372		0.9894	1.0661	1.3995
0.9894	1.1192	2.3464		0.9884	1.1181	1.4678
0.9840	1.3499	2.8299		0.9830	1.3485	1.7702

Qstd slope (m) = 2.11965
intercept (b) = -0.02696
coefficient (r) = 0.99991

y axis = SQRT[H2O(Pa/760)(298/Ta)]

Qa slope (m) = 1.32729
intercept (b) = -0.01686
coefficient (r) = 0.99991

y axis = SQRT[H2O(Ta/Pa)]

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{[SQRT(H2O(Pa/760)(298/Ta))]- b}
Qa = 1/m{[SQRT H2O(Ta/Pa)]- b}

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: **HK1815078**
CLIENT	: ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING		
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG	SUB-BATCH	: 1
		DATE RECEIVED	: 5-JAN-2018
		DATE OF ISSUE	: 5-FEB-2018
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ----

General Comments

- Sample(s) were received in ambient condition.
- Sample(s) analysed and reported on an as received basis.

Signatories

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

Signatories	*Position*
Richard Fung	General Manager

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 : HK1815078
SUB-BATCH : 1
CLIENT : ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK1815078-001	S/N: 366409	AIR	05-Jan-2018	S/N: 366409

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	366409
Equipment Ref:	EQ109
Job Order	HK1815078

Standard Equipment:

Standard Equipment:	Higher Volume Sampler
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	1 December 2017

Equipment Verification Results:

Testing Date: 5 January 2018

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr07min	10:27 ~ 12:34	19.3	1015.3	0.011	474	3.7
2hr01min	12:38 ~ 14:39	19.3	1015.3	0.012	577	4.8
2hr08min	14:42 ~ 16:50	19.3	1015.3	0.036	2097	16.4

Sensitivity Adjustment Scale Setting (Before Calibration) 520 (CPM)

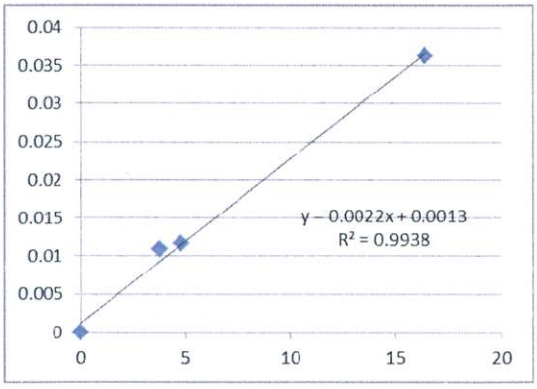
Sensitivity Adjustment Scale Setting (After Calibration) 521 (CPM)

Linear Regression of Y or X

Slope (K-factor): 0.0022

Correlation Coefficient 0.9967

Date of Issue 9 January 2018



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 : Martin Li Signature : Date : 9 January 2018

QC Reviewer : Ben Tam Signature : Date : 9 January 2018

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	1-Dec-17
Location ID :	Calibration Room	Next Calibration Date:	1-Mar-18

CONDITIONS

Sea Level Pressure (hPa)	1018.8	Corrected Pressure (mm Hg)	764.1
Temperature (°C)	21.2	Temperature (K)	294

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.11965
Model->	5025A	Qstd Intercept ->	-0.02696
Calibration Date->	28-Feb-17	Expiry Date->	28-Feb-18

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected
18	6.3	6.3	12.6	1.703	54	54.49
13	5	5	10.0	1.518	48	48.44
10	3.9	3.9	7.8	1.342	42	42.38
8	2.4	2.4	4.8	1.056	32	32.29
5	1.0	1.0	2.0	0.686	23	23.21

LINEAR REGRESSION

Slope =	31.2239
Intercept =	0.7901
Corr. coeff. =	0.9971

Calculations :

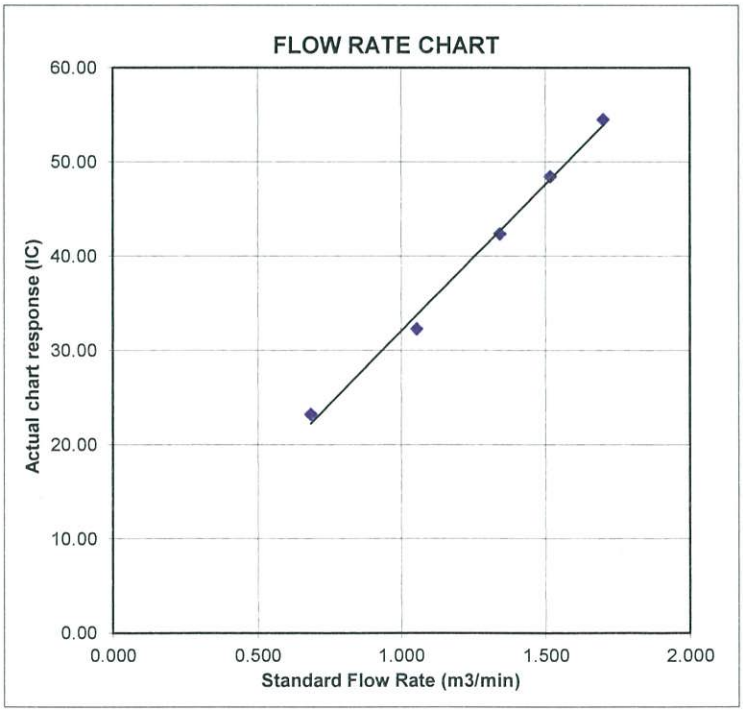
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

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



ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: **HK1815073**
CLIENT	: ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING		
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG	SUB-BATCH	: 1
		DATE RECEIVED	: 5-JAN-2018
		DATE OF ISSUE	: 5-FEB-2018
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ----

General Comments

- Sample(s) were received in ambient condition.
- Sample(s) analysed and reported on an as received basis.

Signatories

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

Signatories	*Position*
Richard Fung	General Manager

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

WORK ORDER : HK1815073
SUB-BATCH : 1
CLIENT : ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK1815073-001	S/N: 2X6145	AIR	05-Jan-2018	S/N: 2X6145

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	2X6145
Equipment Ref:	EQ105
Job Order	HK1815073

Standard Equipment:

Standard Equipment:	Higher Volume Sampler
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	1 December 2017

Equipment Verification Results:

Testing Date: 5 January 2018

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr07min	10:27 ~ 12:34	19.3	1015.3	0.011	511	4.0
2hr01min	12:38 ~ 14:39	19.3	1015.3	0.012	598	4.9
2hr08min	14:42 ~ 16:50	19.3	1015.3	0.036	2111	16.5

Sensitivity Adjustment Scale Setting (Before Calibration) 583 (CPM)

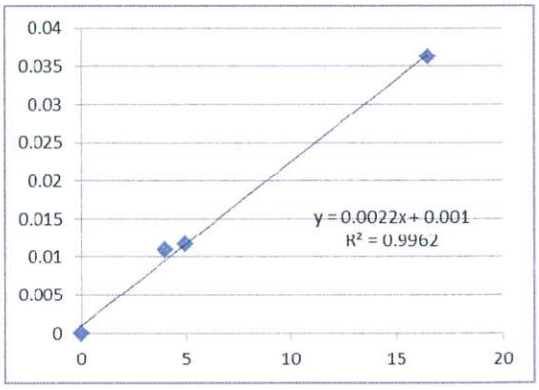
Sensitivity Adjustment Scale Setting (After Calibration) 583 (CPM)

Linear Regression of Y or X

Slope (K-factor): 0.0022

Correlation Coefficient 0.9981

Date of Issue 9 January 2018



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 : Martin Li Signature : Date : 9 January 2018

QC Reviewer : Ben Tam Signature : Date : 9 January 2018

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	1-Dec-17
Location ID :	Calibration Room	Next Calibration Date:	1-Mar-18

CONDITIONS

Sea Level Pressure (hPa)	1018.8	Corrected Pressure (mm Hg)	764.1
Temperature (°C)	21.2	Temperature (K)	294

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.11965
Model->	5025A	Qstd Intercept ->	-0.02696
Calibration Date->	28-Feb-17	Expiry Date->	28-Feb-18

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected
18	6.3	6.3	12.6	1.703	54	54.49
13	5	5	10.0	1.518	48	48.44
10	3.9	3.9	7.8	1.342	42	42.38
8	2.4	2.4	4.8	1.056	32	32.29
5	1.0	1.0	2.0	0.686	23	23.21

LINEAR REGRESSION

Slope =	31.2239
Intercept =	0.7901
Corr. coeff. =	0.9971

Calculations :

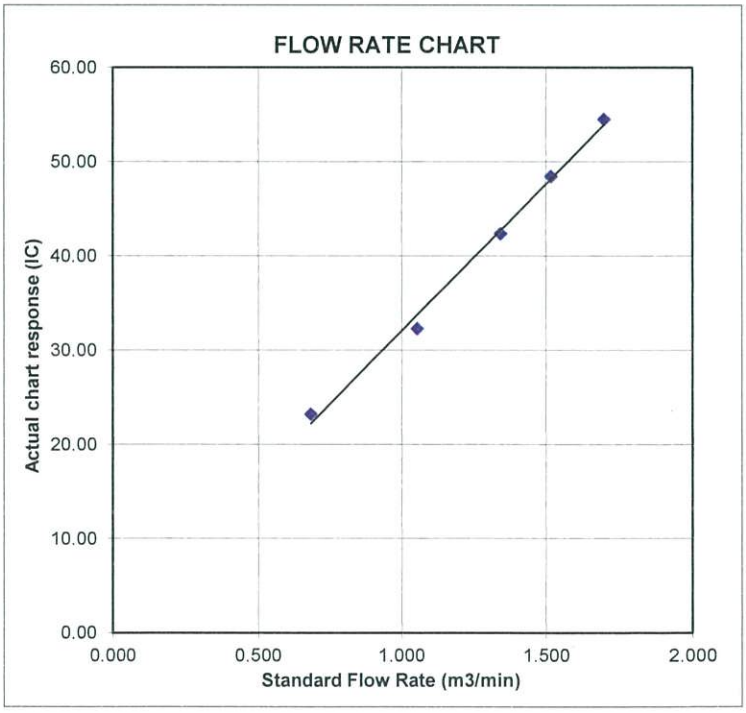
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

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



ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: **HK1815077**
CLIENT	: ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING		
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG	SUB-BATCH	: 1
		DATE RECEIVED	: 5-JAN-2018
		DATE OF ISSUE	: 5-FEB-2018
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ----

General Comments

- Sample(s) were received in ambient condition.
- Sample(s) analysed and reported on an as received basis.

Signatories

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

Signatories	*Position*
Richard Fung	General Manager

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

WORK ORDER : HK1815077
SUB-BATCH : 1
CLIENT : ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK1815077-001	S/N: 3Y6503	AIR	05-Jan-2018	S/N: 3Y6503

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	3Y6503
Equipment Ref:	EQ112
Job Order	HK1815077

Standard Equipment:

Standard Equipment:	Higher Volume Sampler
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	1 December 2017

Equipment Verification Results:

Testing Date: 5 January 2018

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr07min	10:27 ~ 12:34	19.3	1015.3	0.011	521	4.1
2hr01min	12:38 ~ 14:39	19.3	1015.3	0.012	674	5.6
2hr08min	14:42 ~ 16:50	19.3	1015.3	0.036	2077	16.3

Sensitivity Adjustment Scale Setting (Before Calibration) 661 (CPM)

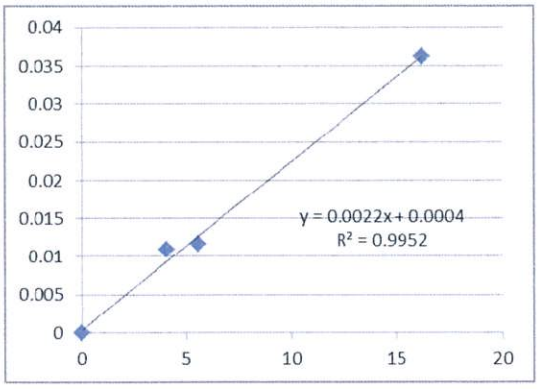
Sensitivity Adjustment Scale Setting (After Calibration) 661 (CPM)

Linear Regression of Y or X

Slope (K-factor): 0.0022

Correlation Coefficient 0.9976

Date of Issue 9 January 2018



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 : Martin Li Signature : Date : 9 January 2018

QC Reviewer : Ben Tam Signature : Date : 9 January 2018

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	1-Dec-17
Location ID :	Calibration Room	Next Calibration Date:	1-Mar-18

CONDITIONS

Sea Level Pressure (hPa)	1018.8	Corrected Pressure (mm Hg)	764.1
Temperature (°C)	21.2	Temperature (K)	294

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.11965
Model->	5025A	Qstd Intercept ->	-0.02696
Calibration Date->	28-Feb-17	Expiry Date->	28-Feb-18

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected
18	6.3	6.3	12.6	1.703	54	54.49
13	5	5	10.0	1.518	48	48.44
10	3.9	3.9	7.8	1.342	42	42.38
8	2.4	2.4	4.8	1.056	32	32.29
5	1.0	1.0	2.0	0.686	23	23.21

LINEAR REGRESSION

Slope =	31.2239
Intercept =	0.7901
Corr. coeff. =	0.9971

Calculations :

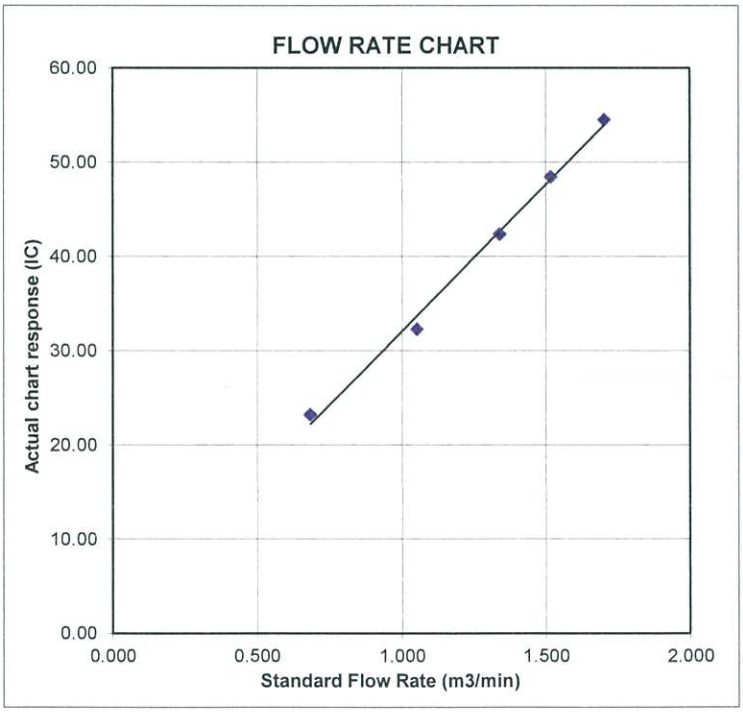
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

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

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

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



ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR BEN TAM	WORK ORDER	: **HK1815072**
CLIENT	: ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING		
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG	SUB-BATCH	: 1
		DATE RECEIVED	: 5-JAN-2018
		DATE OF ISSUE	: 5-FEB-2018
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ----

General Comments

- Sample(s) were received in ambient condition.
- Sample(s) analysed and reported on an as received basis.

Signatories

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

Signatories	*Position*
Richard Fung	General Manager

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.

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

WORK ORDER : HK1815072
SUB-BATCH : 1
CLIENT : ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK1815072-001	S/N: 366410	AIR	05-Jan-2018	S/N: 366410

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	366410
Equipment Ref:	EQ110
Job Order	HK1815072

Standard Equipment:

Standard Equipment:	Higher Volume Sampler
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	1 December 2017

Equipment Verification Results:

Testing Date: 5 January 2018

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr07min	10:27 ~ 12:34	19.3	1015.3	0.011	498	3.9
2hr01min	12:38 ~ 14:39	19.3	1015.3	0.012	571	4.7
2hr08min	14:42 ~ 16:50	19.3	1015.3	0.036	2095	16.4

Sensitivity Adjustment Scale Setting (Before Calibration) 670 (CPM)

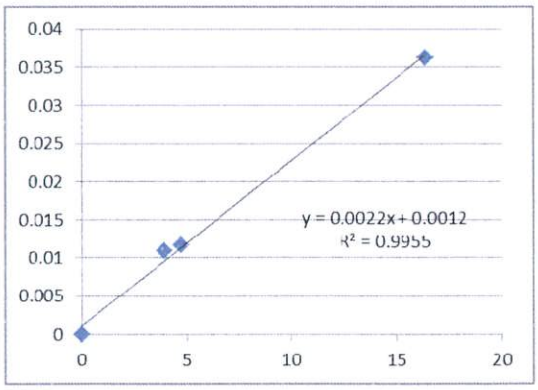
Sensitivity Adjustment Scale Setting (After Calibration) 669 (CPM)

Linear Regression of Y or X

Slope (K-factor): 0.0022

Correlation Coefficient 0.9977

Date of Issue 9 January 2018



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 : Martin Li Signature : Date : 9 January 2018

QC Reviewer : Ben Tam Signature : Date : 9 January 2018

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	1-Dec-17
Location ID :	Calibration Room	Next Calibration Date:	1-Mar-18

CONDITIONS

Sea Level Pressure (hPa)	1018.8	Corrected Pressure (mm Hg)	764.1
Temperature (°C)	21.2	Temperature (K)	294

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.11965
Model->	5025A	Qstd Intercept ->	-0.02696
Calibration Date->	28-Feb-17	Expiry Date->	28-Feb-18

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected
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LINEAR REGRESSION

Slope =	31.2239
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Calculations :

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For subsequent calculation of sampler flow:

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b = sampler intercept
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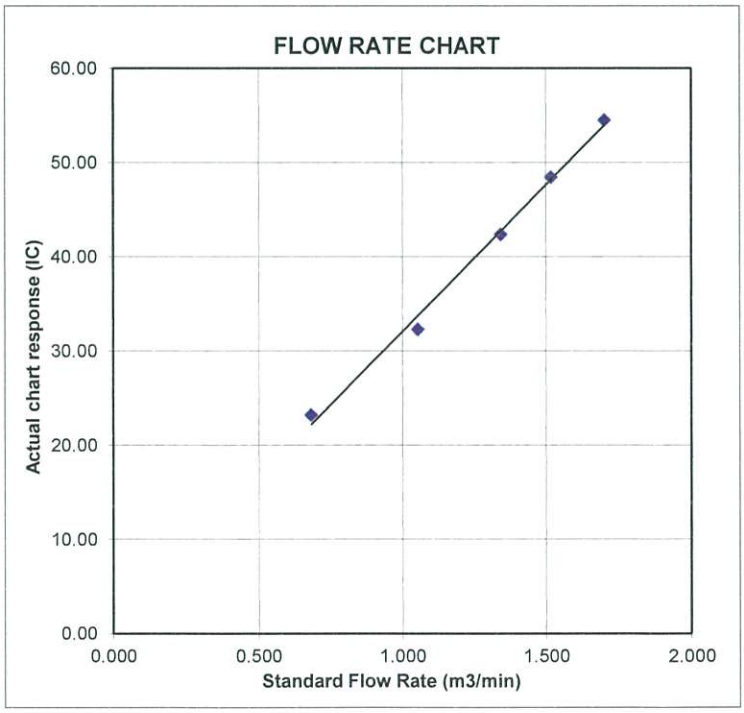
Tav = daily average temperature
Pav = daily average pressure



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

Certificate of Calibration
校正證書

Certificate No. : C174098
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC17-0924) Date of Receipt / 收件日期 : 14 July 2017

Description / 儀器名稱 : Integrating Sound Level Meter (EQ010)
Manufacturer / 製造商 : Brüel & Kjær
Model No. / 型號 : 2238
Serial No. / 編號 : 2285721
Supplied By / 委託者 : Action-United Environmental Services and Consulting
Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 22 July 2017

TEST RESULTS / 測試結果

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

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

Tested By 測試 : H T Wong
Technical Officer

Certified By 核證 : K C Lee
Engineer

Date of Issue 簽發日期 : 25 July 2017

The test equipment used for calibration are traceable to the Nation 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, Tsing Shan Wan Exchange Building, 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青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C174098
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. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C170048
CL281	Multifunction Acoustic Calibrator	PA160023

4. Test procedure : MA101N.

5. Results :

5.1 Sound Pressure Level

5.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.0	± 0.7

5.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
50 - 130	L_{AFP}	A	F	94.00	1	94.0 (Ref.)
				104.00		104.0
				114.00		114.0

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

5.2 Time Weighting

5.2.1 Continuous Signal

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.0	Ref.
	L_{ASP}		S			94.0	± 0.1
	L_{AIP}		I			94.1	± 0.1

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Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C174098
證書編號

5.2.2 Tone Burst Signal (2 kHz)

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Burst Duration		
30 - 110	L_{AFP}	A	F	106.0	Continuous	106.0	Ref.
	L_{AFMax}				200 ms	105.0	-1.0 ± 1.0
	L_{ASP}		S		Continuous	106.0	Ref.
	L_{ASMax}				500 ms	102.0	-4.1 ± 1.0

5.3 Frequency Weighting

5.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{AFP}	A	F	94.00	31.5 Hz	54.7	-39.4 ± 1.5
					63 Hz	67.8	-26.2 ± 1.5
					125 Hz	77.7	-16.1 ± 1.0
					250 Hz	85.3	-8.6 ± 1.0
					500 Hz	90.7	-3.2 ± 1.0
					1 kHz	94.0	Ref.
					2 kHz	95.2	+1.2 ± 1.0
					4 kHz	95.0	+1.0 ± 1.0
					8 kHz	92.8	-1.1 (+1.5 ; -3.0)
					12.5 kHz	89.7	-4.3 (+3.0 ; -6.0)

5.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{CFP}	C	F	94.00	31.5 Hz	91.2	-3.0 ± 1.5
					63 Hz	93.3	-0.8 ± 1.5
					125 Hz	93.9	-0.2 ± 1.0
					250 Hz	94.0	0.0 ± 1.0
					500 Hz	94.1	0.0 ± 1.0
					1 kHz	94.0	Ref.
					2 kHz	93.9	-0.2 ± 1.0
					4 kHz	93.2	-0.8 ± 1.0
					8 kHz	91.0	-3.0 (+1.5 ; -3.0)
					12.5 kHz	87.8	-6.2 (+3.0 ; -6.0)

The test equipment used for calibration are traceable to the Nation 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。

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Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C174098
證書編號

5.4 Time Averaging

UUT Setting				Applied Value					UUT Reading (dB)	IEC 60804 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Integrating Time	Frequency (kHz)	Burst Duration (ms)	Burst Duty Factor	Burst Level (dB)	Equivalent Level (dB)		
30 - 110	L_{Aeq}	A	10 sec.	4	1	1/10	110.0	100	100.0	± 0.5
						$1/10^2$		90	90.1	± 0.5
			60 sec.			$1/10^3$		80	79.9	± 1.0
			5 min.			$1/10^4$		70	69.8	± 1.0

Remarks : - UUT Microphone Model No. : 4188 & S/N : 2658547

- Mfr's Spec. : IEC 60651 Type 1 & IEC 60804 Type 1

- Uncertainties of Applied Value :

94 dB	: 31.5 Hz - 125 Hz	: ± 0.35 dB
	250 Hz - 500 Hz	: ± 0.30 dB
	1 kHz	: ± 0.20 dB
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	12.5 kHz	: ± 0.70 dB
104 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
114 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
Burst equivalent level		: ± 0.2 dB (Ref. 110 dB continuous sound level)

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

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

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

The test equipment used for calibration are traceable to the Nation 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。

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

Certificate of Calibration
校正證書

Certificate No. : C172791
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC17-0924) Date of Receipt / 收件日期 : 16 May 2017

Description / 儀器名稱 : Sound Level Calibrator (EQ084)
Manufacturer / 製造商 : Cesva
Model No. / 型號 : CB-5
Serial No. / 編號 : 030023
Supplied By / 委託者 : Action-United Environmental Services and Consulting
Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C
Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 23 May 2017

TEST RESULTS / 測試結果

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

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

Tested By 測試 : H T Wong
Technical Officer

Certified By 核證 : K C Lee
Engineer

Date of Issue 簽發日期 : 24 May 2017

The test equipment used for calibration are traceable to the Nation 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, Tsing Shan Wan Exchange Building, 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青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C172791
證書編號

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

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

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C163709
CL281	Multifunction Acoustic Calibrator	PA160023
TST150A	Measuring Amplifier	C161175

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	93.8	± 0.3	± 0.2
104 dB, 1 kHz	103.9		± 0.3

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	Uncertainty of Measured Value (Hz)
1	0.994	1 kHz ± 1.5 %	± 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.

The test equipment used for calibration are traceable to the Nation 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。

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c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Hong Kong Accreditation Service
香港認可處

Certificate of Accreditation
認可證書

This is to certify that
特此證明

ALS TECHNICHEM (HK) PTY LIMITED

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

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

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

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

Environmental Testing
環境測試

This laboratory is accredited in accordance with the recognised International Standard ISO / IEC 17025 : 2005.
本實驗所乃根據公認的國際標準 ISO / IEC 17025 : 2005 獲得認可。
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory
這項認可資格演示在指定範疇所需的技術能力及實驗所質量管理體系的運作
quality management system (see joint IAF-ILAC-ISO Communiqué).
(見國際認可論壇、國際實驗所認可合作組織及國際標準化組織的聯合公報)。

The common seal of the Hong Kong Accreditation Service is affixed hereto by the authority of the HKAS Executive
香港認可處根據認可處執行機關的權限在此蓋上通用印章

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

Registration Number : HOKLAS 066
註冊號碼：

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

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

L 000552

Appendix F

Event and Action Plan

Event / Action Plan for construction dust

Event	Action			
	ET	**IEC**	**ER**	**Contractor**
Action Level exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC, ER and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Rectify any unacceptable practice and implement remedial measures; and 3. Amend working methods agreed with ER if appropriate.
Action Level exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC, ER and Contractor; 3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; and 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 3. Implement the agreed proposals; and 4. Amend proposal if appropriate.

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

Event and Action Plan for Construction Noise

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

Appendix G

Impact Monitoring Schedule

Impact Monitoring Schedule for the Reporting Period

Date		Noise Monitoring (0700 – 1900)	Air Quality Monitoring	
			1-hour TSP	24-hour TSP
Thu	1-Mar-18			
Fri	2-Mar-18			
Sat	3-Mar-18		✓	
Sun	4-Mar-18			
Mon	5-Mar-18			✓
Tue	6-Mar-18			
Wed	7-Mar-18			
Thu	8-Mar-18			
Fri	9-Mar-18	✓	✓	
Sat	10-Mar-18			✓
Sun	11-Mar-18			
Mon	12-Mar-18			
Tue	13-Mar-18			
Wed	14-Mar-18			
Thu	15-Mar-18	✓	✓	
Fri	16-Mar-18			✓
Sat	17-Mar-18			
Sun	18-Mar-18			
Mon	19-Mar-18			
Tue	20-Mar-18			
Wed	21-Mar-18	✓	✓	
Thu	22-Mar-18			✓
Fri	23-Mar-18			
Sat	24-Mar-18			
Sun	25-Mar-18			
Mon	26-Mar-18	✓	✓	
Tue	27-Mar-18			
Wed	28-Mar-18			✓
Thu	29-Mar-18		✓	
Fri	30-Mar-18			
Sat	31-Mar-18			

✓	Monitoring Day
	Sunday or Public Holiday

Impact Monitoring Schedule for next Reporting Period

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

✓	Monitoring Day
	Sunday or Public Holiday

Appendix H

Database of Monitoring Result

24-hour TSP Database

24-hour TSP Monitoring Data for AMS-1

DATE	SAMPLE NUMBER	ELAPSED TIME			CHART READING			AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WEIGHT (g)		DUST WEIGHT COLLECTED	24-hr TSP
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(℃)	(hPa)	(m^3/min)	(std m^3)	INITIAL	FINAL	(g)	(μg/m^3)
5-Mar-18	22314	19255.14	19279.14	1440.00	38	41	39.5	17.8	1017.9	1.38	1986	2.6654	2.7066	0.0412	21
10-Mar-18	22290	19279.14	19303.24	1446.00	37	40	38.5	18.2	1017.4	1.35	1954	2.6794	2.7427	0.0633	32
16-Mar-18	22365	19303.24	19327.24	1440.00	37	40	38.5	19.8	1015.2	1.35	1941	2.6664	2.7395	0.0731	38
22-Mar-18	22386	19327.24	19351.34	1446.00	38	41	39.5	22.2	1014.5	1.37	1981	2.6696	2.7442	0.0746	38
28-Mar-18	22432	19351.34	19375.34	1440.00	37	39	38.0	20.2	1014.9	1.33	1920	2.6612	2.7637	0.1025	53

24-hour TSP Monitoring Data for AMS-5

DATE	SAMPLE NUMBER	ELAPSED TIME			CHART READING			AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WEIGHT (g)		DUST WEIGHT COLLECTED	24-hr TSP
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(℃)	(hPa)	(m^3/min)	(std m^3)	INITIAL	FINAL	(g)	(μg/m^3)
5-Mar-18	22333	5632.75	5656.67	1435.20	38	40	39.0	17.8	1017.9	1.26	1804	2.6927	2.7321	0.0394	22
10-Mar-18	22292	5656.67	5680.53	1431.60	37	40	38.5	18.2	1017.4	1.24	1779	2.6691	2.7437	0.0746	42
16-Mar-18	22298	5680.53	5704.40	1432.20	36	37	36.5	19.8	1015.2	1.18	1696	2.6750	2.7313	0.0563	33
22-Mar-18	22384	5704.40	5728.27	1432.20	32	32	32.0	20	1014.5	1.06	1521	2.6749	2.7195	0.0446	29
28-Mar-18	22408	5728.27	5752.15	1432.80	36	38	37.0	20.2	1014.9	1.20	1715	2.6386	2.6806	0.0420	24

24-hour TSP Monitoring Data for AMS-6

DATE	SAMPLE NUMBER	ELAPSED TIME			CHART READING			AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WEIGHT (g)		DUST WEIGHT COLLECTED	24-hr TSP
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(℃)	(hPa)	(m^3/min)	(std m^3)	INITIAL	FINAL	(g)	(μg/m^3)
5-Mar-18	22334	10872.09	10896.29	1452.00	40	42	41.0	17.8	1017.9	1.30	1889	2.6693	2.7256	0.0563	30
10-Mar-18	22291	10896.29	10920.29	1440.00	39	41	40.0	18.2	1017.4	1.27	1823	2.6812	2.8008	0.1196	66
16-Mar-18	22381	10920.29	10944.29	1440.00	39	40	39.5	19.8	1015.2	1.24	1792	2.6744	2.7970	0.1226	68
22-Mar-18	22387	10944.29	10968.29	1440.00	44	44	44.0	20	1014.5	1.39	2006	2.6672	2.7482	0.0810	40
28-Mar-18	22390	10968.29	10992.53	1454.40	38	42	40.0	20.2	1014.9	1.26	1833	2.6583	2.7379	0.0796	43

24-hour TSP Monitoring Data for AMS-7

DATE	SAMPLE NUMBER	ELAPSED TIME			CHART READING			AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WEIGHT (g)		DUST WEIGHT COLLECTED	24-hr TSP
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(℃)	(hPa)	(m^3/min)	(std m^3)	INITIAL	FINAL	(g)	(μg/m^3)
5-Mar-18	22313	6269.66	6293.96	1458.00	42	43	42.5	17.8	1017.9	1.59	2324	2.6754	2.7402	0.0648	28
10-Mar-18	22289	6293.96	6318.36	1464.00	42	44	43.0	18.2	1017.4	1.61	2356	2.6827	2.7602	0.0775	33
16-Mar-18	22297	6318.36	6342.56	1452.00	40	42	41.0	19.8	1015.2	1.54	2231	2.6631	2.7253	0.0622	28
22-Mar-18	22385	6342.56	6366.61	1443.00	39	42	40.5	22.2	1014.5	1.51	2184	2.6909	2.7562	0.0653	30
28-Mar-18	22433	6366.61	6390.74	1447.80	39	41	40.0	20.2	1014.9	1.50	2174	2.6748	2.7580	0.0832	38

Noise Database

Noise Measurement Results (dB) of NMS4a

Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	
9-Mar-18	13:54	75.8	77.5	72.5	75.4	77	72.5	75.1	77	72.5	72.8	75.5	68	73.7	76	70	73.7	75.5	70	75
15-Mar-18	10:19	66.4	69	63	65.4	67	63	65.2	67.5	62	61.8	62.5	59.5	60.3	62	57	59.2	61	56.5	64
21-Mar-18	10:56	74.5	77	69.5	74.1	76.5	69	72.1	75	66.5	72	74.5	67	68.8	72.5	61	62	64	57.5	72
26-Mar-18	11:27	72	74	68	73.2	75.5	69	73.9	76.5	69.5	72.1	74.5	68	72.9	75.5	69	71.3	73	67	73

Noise Measurement Results (dB) of NMS5

Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	
9-Mar-18	13:10	69.6	70.5	63.5	76.8	81	67	75	78	65	75.7	77	67	74	78.5	64	68.8	71.5	61.5	74
15-Mar-18	9:33	64.5	66.5	60.5	66.7	68.5	63	66.5	68.5	63	65.6	67.5	62.5	65.9	68	62.5	67.3	69.5	63.5	66
21-Mar-18	11:38	61.3	64	56	58.5	61.5	50	52.8	55.5	49	56.1	59.5	49.5	61.1	63.5	57.5	62.5	60.5	56	60
26-Mar-18	10:44	59.2	61.5	56.5	64.1	66.5	61	67.1	69	63	65.7	67	63.5	66.9	69.5	63.5	65	66.5	62	65

Noise Measurement Results (dB) of NMS6

Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	
9-Mar-18	14:43	70.9	74.5	63.5	71.7	74	64.5	73.2	76.5	64.5	74.2	78	64	71.2	74.5	62.5	71.2	74	63.5	72
15-Mar-18	11:12	57.9	60.5	53.5	58.7	61	54.5	59.3	61.5	55	60.2	62	57.5	63.1	65	59.5	62.3	64	59.5	61
21-Mar-18	10:09	64.5	66.5	60.5	64.5	66.5	61	65.2	66.5	61	65	67	62	63.6	65.5	60	63	64.5	61	64
26-Mar-18	13:24	64.3	66	61.5	64.6	66.5	62	64.4	66.5	61.5	65.7	68	63	65.2	67	62	65.8	67	63.5	65

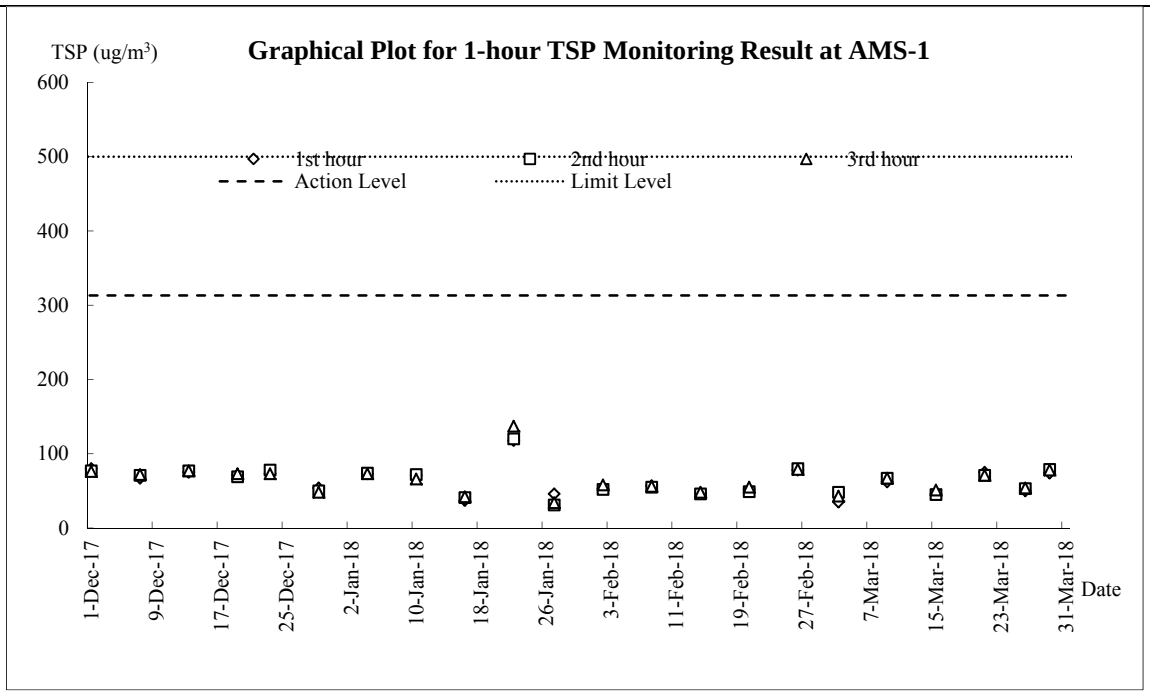
Noise Measurement Results (dB) of NMS7

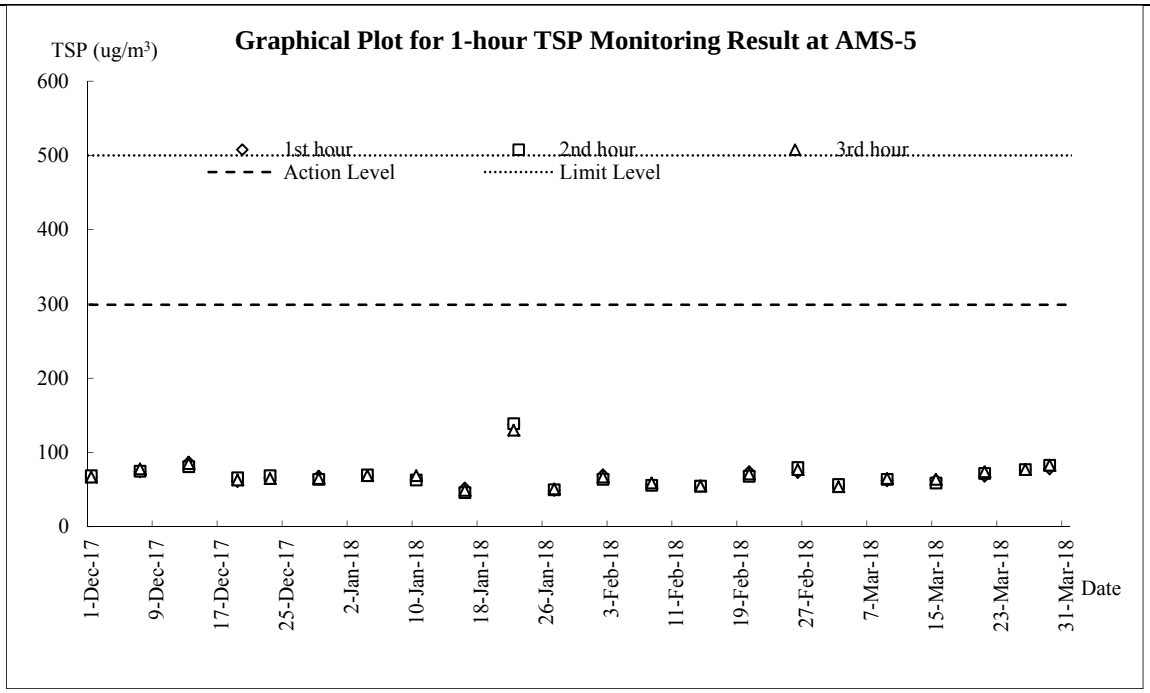
Date	Start Time	1st Leq (5min)			2nd Leq (5min)			3rd Leq (5min)			4th Leq (5min)			5th Leq (5min)			6th Leq (5min)			Leq30min, dB(A)
		Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	Leq, dB(A)	L10, dB(A)	L90, dB(A)	
9-Mar-18	15:30	69.5	73	62	68.7	71.5	62	71.2	74.5	63	73.5	76.5	67	73.9	77	67	73.8	77	63.5	72
15-Mar-18	13:29	71.7	74.5	66.5	71.4	74	66.5	70.7	74	65	70.8	74	64.5	68.9	72.5	62.5	71	74	62	71
21-Mar-18	9:26	67	70.5	60	70.7	74	63.5	69	72.5	61	70.6	73.5	63	69.7	73	62	71.8	75.5	61	70
26-Mar-18	14:07	67.9	71	61	68	71.5	62	67.3	70.5	61.5	67.1	70.5	61.5	65.5	68.5	60	67.2	70.5	61.5	67

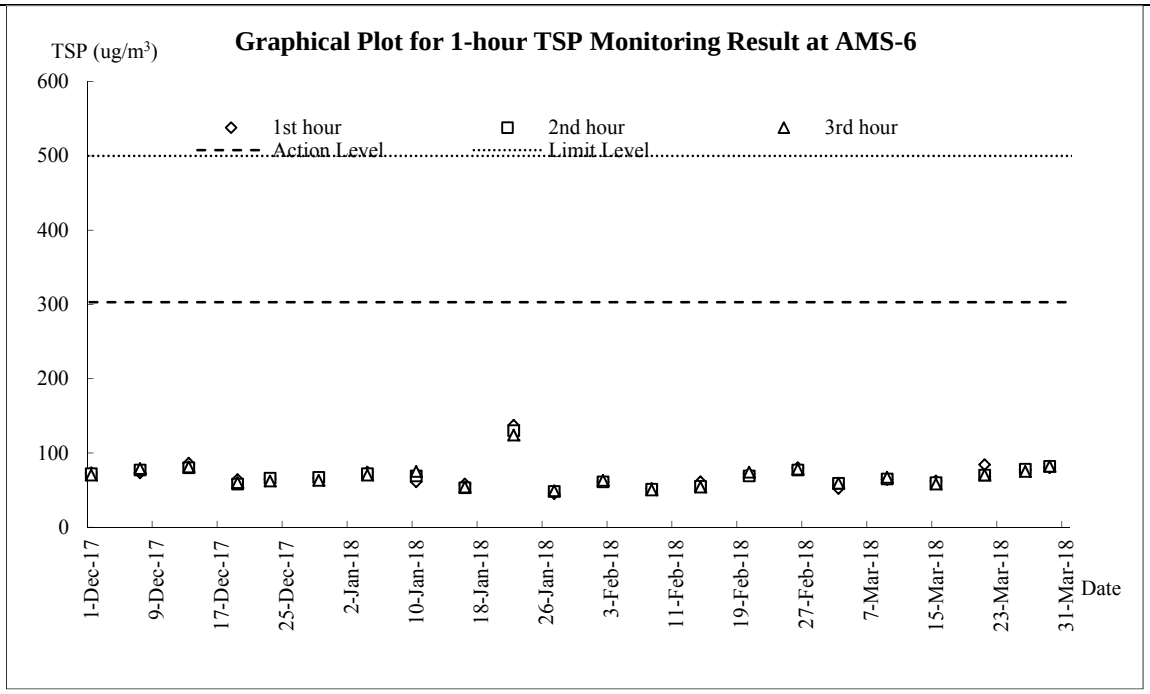
Appendix I

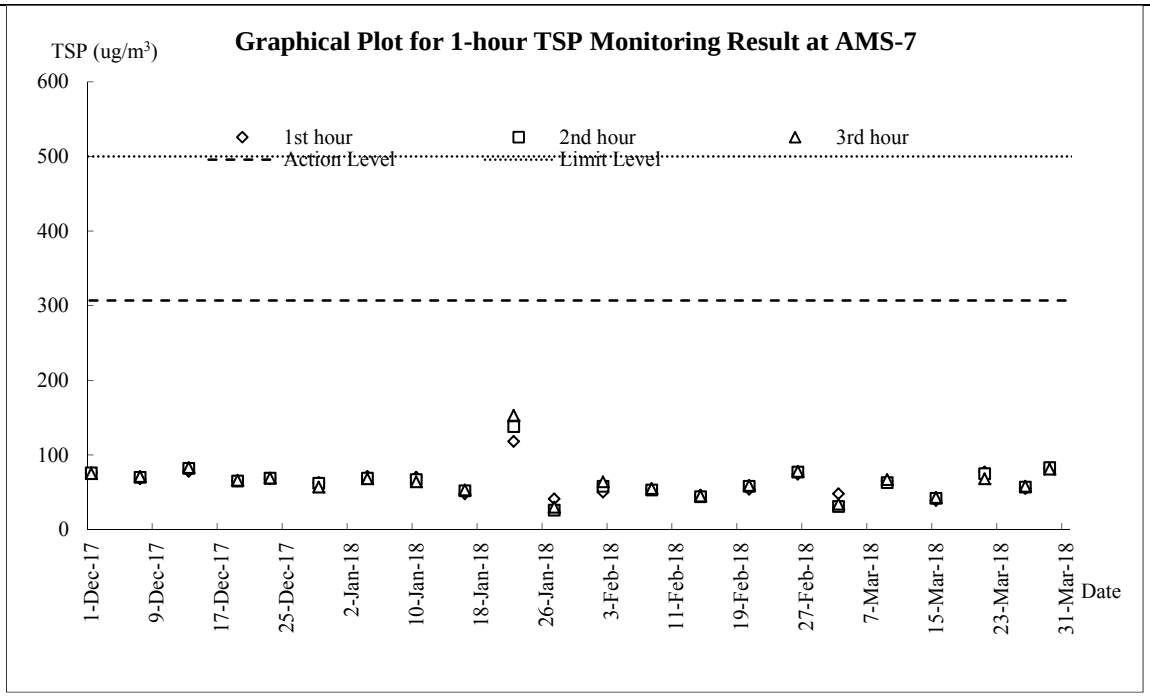
Graphical Plots for Monitoring Result

Air Quality – 1-hour TSP

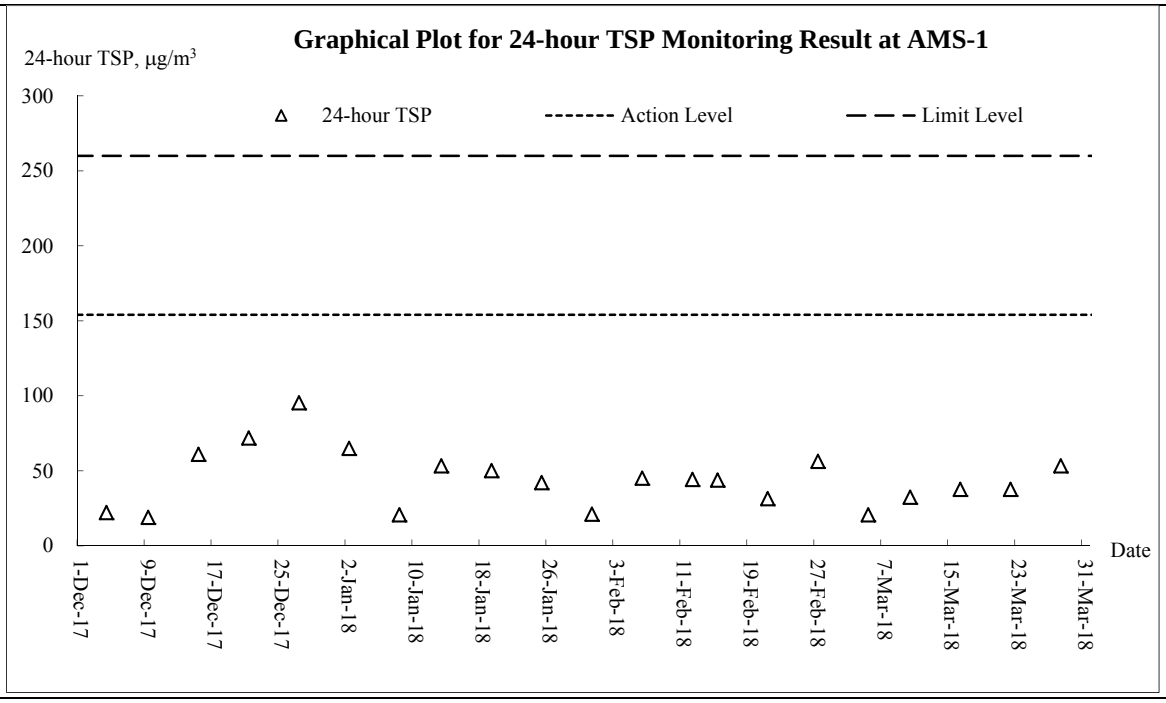


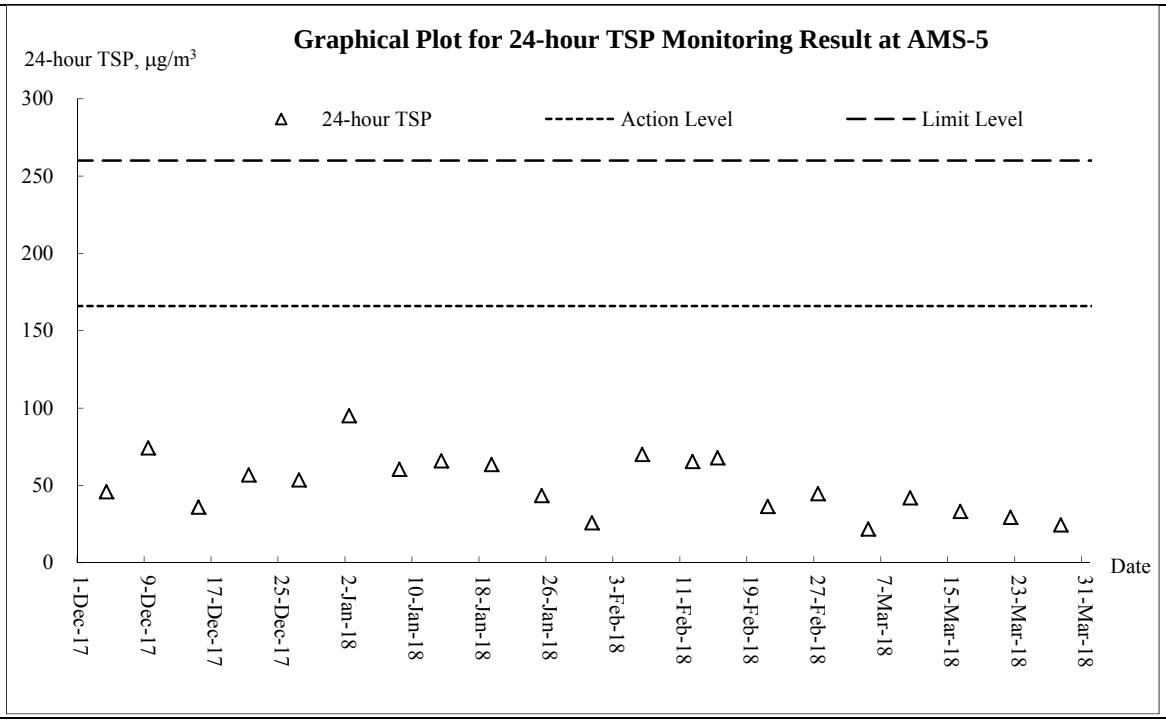


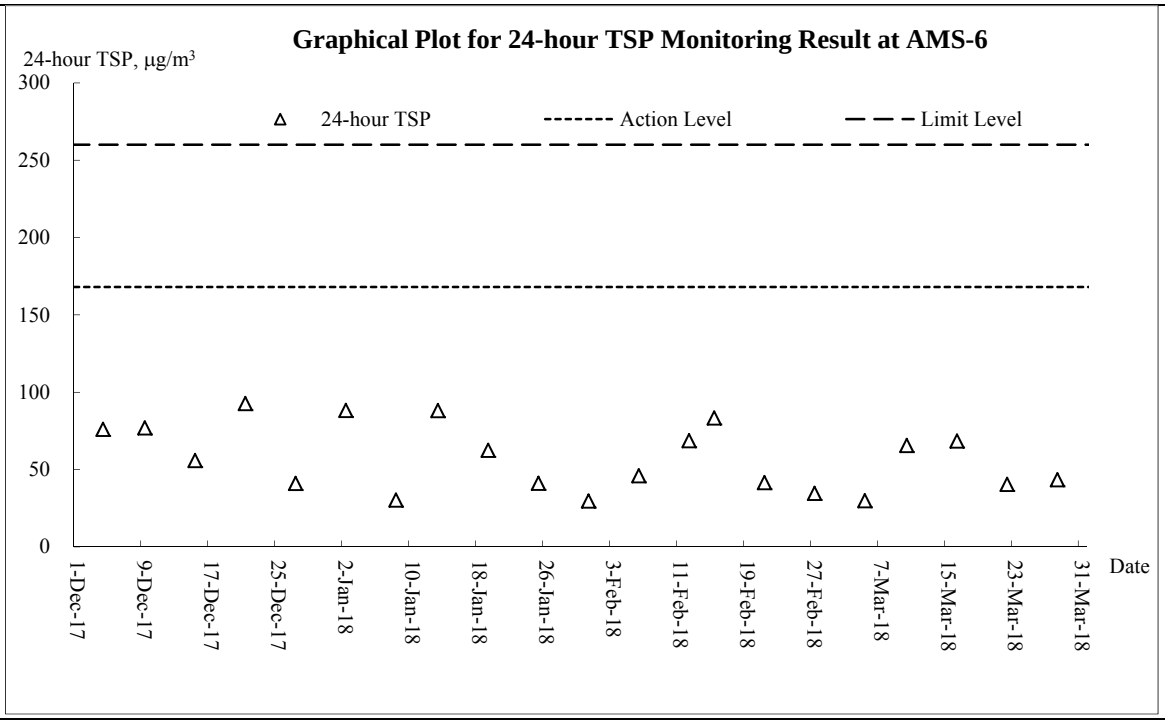

Graphical Plot for 1-hour TSP Monitoring Result at AMS-6
TSP (ug/m3)
600
500
400
300
200
100
0
1st hour
2nd hour
3rd hour
Action Level
Limit Level
1-Dec-17
9-Dec-17
17-Dec-17
25-Dec-17
2-Jan-18
10-Jan-18
18-Jan-18
26-Jan-18
3-Feb-18
11-Feb-18
19-Feb-18
27-Feb-18
7-Mar-18
15-Mar-18
23-Mar-18
31-Mar-18
Date

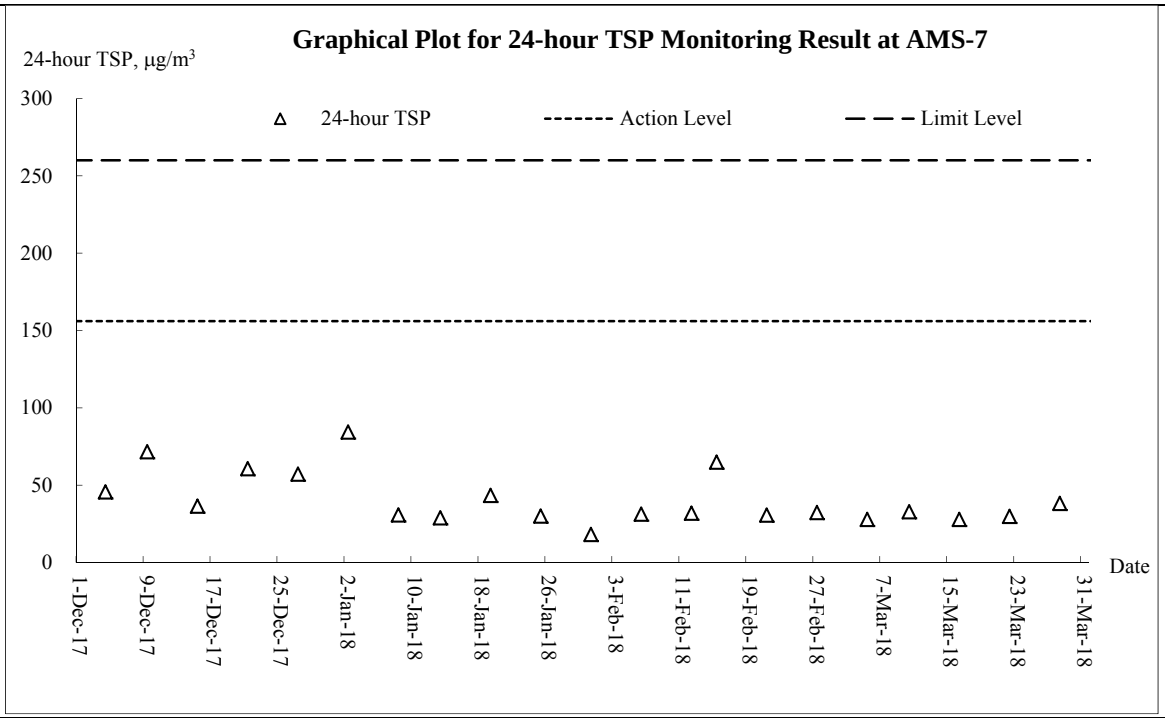

Graphical Plot for 1-hour TSP Monitoring Result at AMS-7
TSP (ug/m3)
600
500
400
300
200
100
0
1st hour
2nd hour
3rd hour
Action Level
Limit Level
1-Dec-17
9-Dec-17
17-Dec-17
25-Dec-17
2-Jan-18
10-Jan-18
18-Jan-18
26-Jan-18
3-Feb-18
11-Feb-18
19-Feb-18
27-Feb-18
7-Mar-18
15-Mar-18
23-Mar-18
31-Mar-18
Date

Air Quality – 24-hour TSP

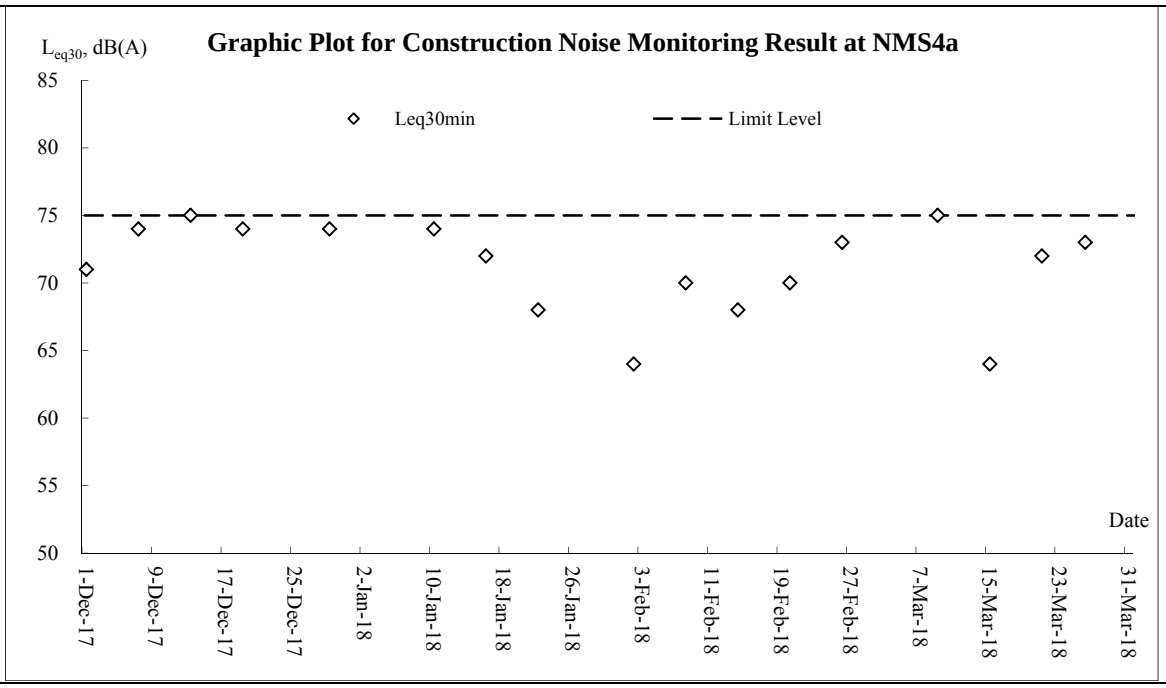





Graphical Plot for 24-hour TSP Monitoring Result at AMS-6
24-hour TSP, µg/m³
24-hour TSP
Action Level
Limit Level
300
250
200
150
100
50
0
1-Dec-17
9-Dec-17
17-Dec-17
25-Dec-17
2-Jan-18
10-Jan-18
18-Jan-18
26-Jan-18
3-Feb-18
11-Feb-18
19-Feb-18
27-Feb-18
7-Mar-18
15-Mar-18
23-Mar-18
31-Mar-18
Date


Graphical Plot for 24-hour TSP Monitoring Result at AMS-7
24-hour TSP, µg/m³
24-hour TSP
Action Level
Limit Level
300
250
200
150
100
50
0
1-Dec-17
9-Dec-17
17-Dec-17
25-Dec-17
2-Jan-18
10-Jan-18
18-Jan-18
26-Jan-18
3-Feb-18
11-Feb-18
19-Feb-18
27-Feb-18
7-Mar-18
15-Mar-18
23-Mar-18
31-Mar-18
Date

Noise


Graphic Plot for Construction Noise Monitoring Result at NMS4a
L_{eq30}, dB(A)
85
80
75
70
65
60
55
50
Leq30min
Limit Level
Date
1-Dec-17
9-Dec-17
17-Dec-17
25-Dec-17
2-Jan-18
10-Jan-18
18-Jan-18
26-Jan-18
3-Feb-18
11-Feb-18
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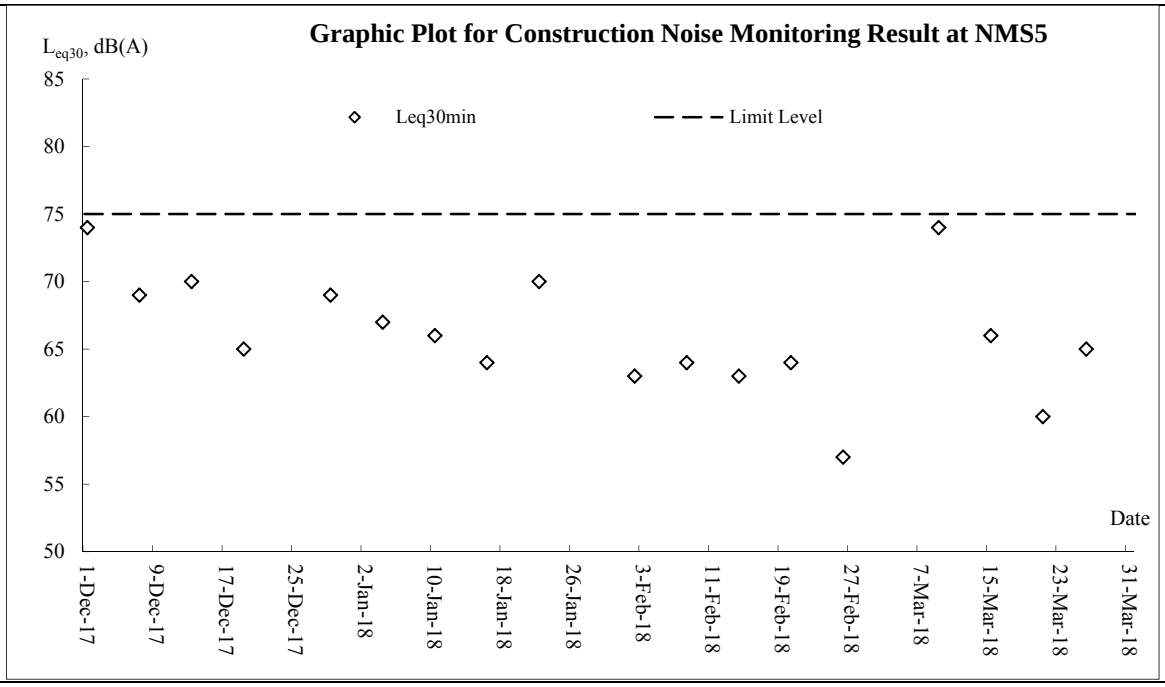
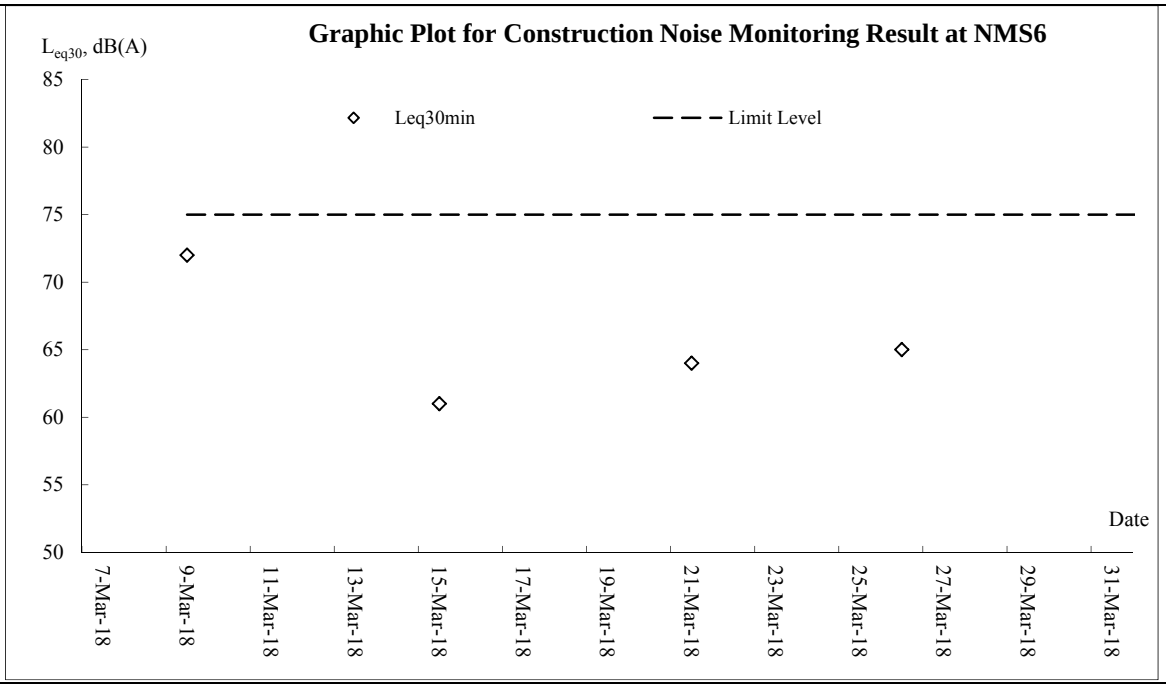
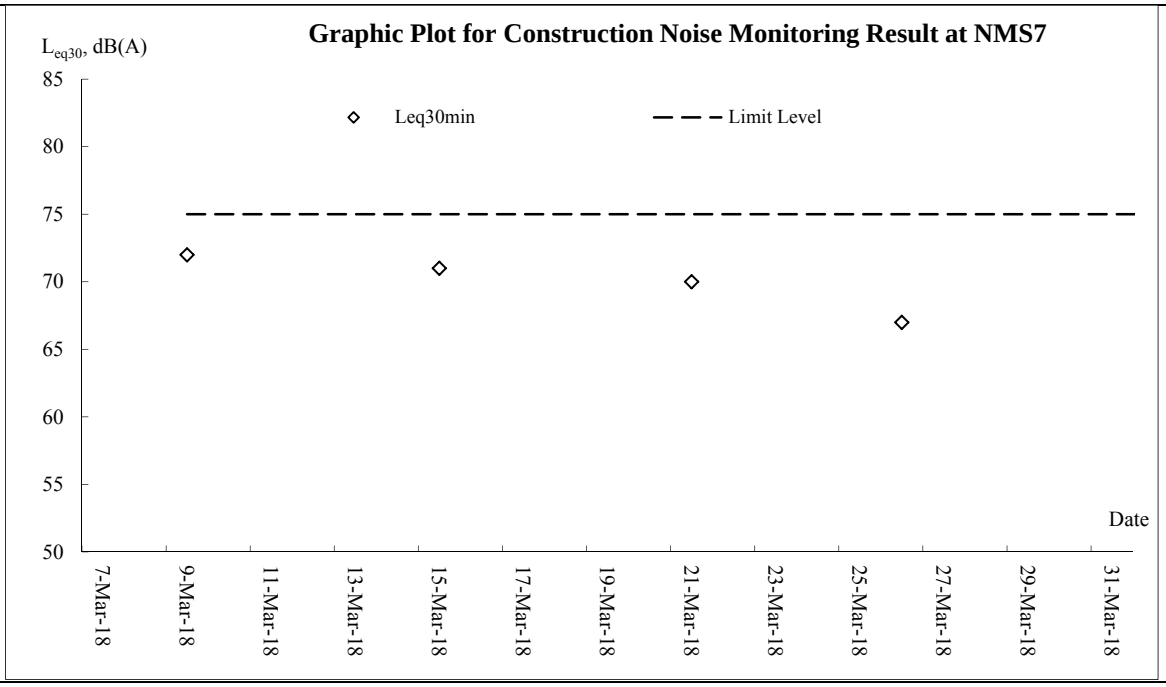
27-Feb-18
7-Mar-18
15-Mar-18
23-Mar-18
31-Mar-18


Graphic Plot for Construction Noise Monitoring Result at NMS5
L_{eq30}, dB(A)
85
80
75
70
65
60
55
50
Leq30min
Limit Level
Date
1-Dec-17
9-Dec-17
17-Dec-17
25-Dec-17
2-Jan-18
10-Jan-18
18-Jan-18
26-Jan-18
3-Feb-18
11-Feb-18
19-Feb-18
27-Feb-18
7-Mar-18
15-Mar-18
23-Mar-18
31-Mar-18


Graphic Plot for Construction Noise Monitoring Result at NMS6
L_{eq30}, dB(A)
85
80
75
70
65
60
55
50
Leq30min
Limit Level
Date
7-Mar-18
9-Mar-18
11-Mar-18
13-Mar-18
15-Mar-18
17-Mar-18
19-Mar-18
21-Mar-18
23-Mar-18
25-Mar-18
27-Mar-18
29-Mar-18
31-Mar-18


Graphic Plot for Construction Noise Monitoring Result at NMS7
L_{eq30}, dB(A)
85
80
75
70
65
60
55
50
Leq30min
Limit Level
Date
7-Mar-18
9-Mar-18
11-Mar-18
13-Mar-18
15-Mar-18
17-Mar-18
19-Mar-18
21-Mar-18
23-Mar-18
25-Mar-18
27-Mar-18
29-Mar-18
31-Mar-18

Appendix J

Meteorological Data

Date		Weather	Total Rainfall (mm)	Kwun Tong Station	Kai Tak Station		King's Park Station
				Mean Air Temp. (°C)	Wind Speed (km/h)	Wind Direction	Mean Relative Humidity (%)
1-Mar-18	Thu	Fresh to strong easterly winds.	0	21.7	9.7	SE	82.5
2-Mar-18	Fri	Fresh to strong easterly winds.	Trace	21.2	13	E/SE	74.7
3-Mar-18	Sat	Fresh to strong easterly winds.	0	22.2	7.9	E	81.0
4-Mar-18	Sun	Fresh to strong easterly winds.	Trace	23.9	7.9	E/SE	87.2
5-Mar-18	Mon	Fresh to strong easterly winds.	0	26.1	6.5	SE	80
6-Mar-18	Tue	Cloudy with one or two rain patches.	Trace	20.2	16	E/SE	80.5
7-Mar-18	Wed	Becoming cold progressively.	Trace	18.3	16	E/SE	76
8-Mar-18	Thu	Cloudy with a few rain patches.	20.3	15.4	10.7	NW	79.5
9-Mar-18	Fri	Fine and dry. Moderate to fresh north to northeasterly winds.	0	13.6	11.6	N/NE	51
10-Mar-18	Sat	Fine and dry. Moderate easterly winds.	0	15.6	8.1	E/NE	52.3
11-Mar-18	Sun	Fine and dry. Moderate easterly winds.	0	18	13	E/SE	66.7
12-Mar-18	Mon	Fine. Dry in the afternoon. Moderate easterly winds.	0	19.8	11	SE	67.5
13-Mar-18	Tue	Fine. Dry in the afternoon. Moderate easterly winds.	0	20.4	10.1	SE	74.7
14-Mar-18	Wed	Mainly cloudy with a few showers. Moderate easterly winds.	2.4	20.2	11.2	SE	83
15-Mar-18	Thu	Fine and dry. Moderate to fresh northerly winds.	Trace	22.7	6.7	SE	78
16-Mar-18	Fri	Fine and dry. Moderate easterly winds.	0	23.4	10.2	SE	77.5
17-Mar-18	Sat	Fine and dry. Moderate easterly winds.	Trace	19.3	6.9	E/NE	79.6
18-Mar-18	Sun	Fine. Dry in the afternoon. Moderate easterly winds.	Trace	20.9	8.8	SE	83.2
19-Mar-18	Mon	Fine. Dry in the afternoon. Moderate easterly winds.	Trace	22.6	8	SE	83.2
20-Mar-18	Tue	Fine and dry. Moderate to fresh northerly winds.	Trace	19.8	15	NW	73
21-Mar-18	Wed	Fine and dry. Moderate to fresh northerly winds.	0	18.3	9.1	N/NW	44.2
22-Mar-18	Thu	Moderate easterly winds, fresh at times.	0	18.9	10	N/NE	45.7
23-Mar-18	Fri	Fine at first	0	19.8	8.5	E/SE	56.2
24-Mar-18	Sat	Fine and dry. Moderate to fresh northerly winds.	Trace	20.4	7.5	E/NE	61.3
25-Mar-18	Sun	Mainly cloudy with sunny periods. Moderate east to northeasterly winds.	Trace	21.4	11.2	E/SE	61.5
26-Mar-18	Mon	Sunny periods in the afternoon. Light winds.	0	23.2	9.6	SE	67.7
27-Mar-18	Tue	Mainly fine. Warm in the afternoon.	0	23.8	9	SE	69
28-Mar-18	Wed	Mainly fine. Warm in the afternoon.	0	22.7	10.2	SE	74.2
29-Mar-18	Thu	Hot and dry in the afternoon. Light winds.	0	22.7	9.2	SE	69.5
30-Mar-18	Fri	Mainly fine.	0	23	6.9	E/NE	72.1
31-Mar-18	Sat	Mainly fine.	0	23.3	6.8	E/NE	72.3

Appendix K

Waste Flow Table

Contract No.: NE/2016/01

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

Monthly Summary Waste Flow Table for 2018 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract (see Note 6)	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste (see Note 5)	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan	30.706	19.998	10.550	0.000	0.158	1.191	132.060	0.000	0.000	0.000	0.013
Feb	23.014	12.020	10.887	0.000	0.107	1.569	0.000	0.000	0.000	0.000	0.008
Mar	9.911	1.152	8.660	0.000	0.099	0.736	471.850	0.326	0.000	0.000	0.011
Apr											
May											
Jun											
Sub-total	63.631	33.170	30.097	0.000	0.364	3.496	603.910	0.326	0.000	0.000	0.032
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	63.631	33.170	30.097	0.000	0.364	3.496	603.910	0.326	0.000	0.000	0.032

Notes:

(1) The performance targets are given in PS Clause 1.119 (14).
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material and waste will be collected by recycler for recycling.
(4) Use the conversion factor, density of general refuse (1 t/m^3) and inert C&D materials (2 t/m^3).
(5) Use the conversion factor for chemical waste (0.88kg/L).
(6) Assume a dump truck delivers 7.5 m^3 material in 1 trip.
(7) The cut-off date of this summary is 20th of each month.

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract (see Note 6)	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste (see Note 5)	Others, e.g. general refuse
(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
875.389	350.330	510.059	0.000	15.000	5.000	1000.000	2.000	4.830	10.000	3.500

Notes:

(1) The performance targets are given in PS Clause 1.119 (14).
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material and waste will be collected by recycler for recycling.
(4) Use the conversion factor, density of general refuse (1 t/m^3) and inert C&D materials (2 t/m^3).
(5) Use the conversion factor for chemical waste (0.88kg/L).
(6) Assume a dump truck delivers 7.5 m^3 material in 1 trip.
(7) The cut-off date of this summary is 20th of each month.

Appendix (ii)

Name of Department: CEDD

Contract No. : NE/2016/05

Monthly Summary Waste Flow Table for 2018 (year)

[PS Clause 1.129]

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock & Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemicals Waste	Others, e.g. general refuse
	(in '000 m^3)	(in '000 m^3)	(in '000 m^3)	(in '000 m^3)	(in '000 m^3)	(in '000 m^3)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 m^3)
Jan	0.046	0.00	0.001	0.00	0.045	0.00	0.00	0.00	0.00	0.00	0.0006
Feb	0.089	0.00	0.001	0.00	0.088	0.00	0.00	0.00	0.00	0.00	0.0028
Mar	0.041	0.00	0.001	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.0004
Apr											
May											
June											
Sub-total											
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total											

Notes:
(1) The performance targets are given in PS Clause 6.14
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works. Together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m^3.

Appendix L

Implementation Schedule for Environmental Mitigation Measures

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status	
					Contract 1	Contract 2
Dust Impact (Contraction Phase)						
S4.7.2 to S4.7.5	Mitigation measures in form of regular watering under a good site practice should be adopted. Watering once per hour on exposed worksites and haul road is proposed to achieve dust removal efficiency of 91.7%. While the above watering frequencies are to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.75 L/m^2 to achieve the respective dust removal efficiencies.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	V	V
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
S4.7.6	Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction phase: • Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; • Any dusty materials remaining after a stockpile is removed should be wet ted with water and cleared from the surface of roads; • A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones; • The load of dusty materials on a vehicle leaving a construction ion site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; • Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road sect ion between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; • When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction ion period. • The port ion of any road leading only to construction ion site that is	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	@	V

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status	
					Contract 1	Contract 2
	within 30m of a vehicle entrance or exit should be kept clear of dusty materials; • Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously; • Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet ; • Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; • Any skip hoist for material transport should be totally enclosed by impervious sheeting; • Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides; • Cement or dry PFA delivered in bulk should be stored in a closed silo fit ted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; and • Exposed earth should be properly treated by compact ion, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.					
S4.7.7	Implement regular dust monitoring under EM&A programme during the Construction phase.	Control construction airborne noise	Selected Representative dust monitoring station	All construction sites where practicable	V	N/A
Noise Impact (Contraction Phase)						
S5.6.9	Implement the following good site management practices: • only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction ion programme; • machines and plant (such as trucks, cranes) that may be in	Control construction ion airborne noise	Contractor	All construction sites where practicable	V	V

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status	
					Contract 1	Contract 2
	intermittent use should be shut down between work periods or should be throttled down to a minimum; • plant known to emit noise strongly in one direct ion, where possible, be orientated so that the noise is directed away from nearby NSRs; • silencers or mufflers on construction ion equipment should be properly fit ted and maintained during the construction ion works; • mobile plant should be sited as far away from NSRs as possible and practicable; and • material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.					
S5.6.11 to S5.6.13	Use of " Quiet " Plant and Working Methods.	Reduce the noise levels of plant items	Contractor	All construction sites where practicable	V	V
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
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
S5.6.19	Sequencing operation of construction plants equipment.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction ion sites where practicable	V	V
S5.6.34	Implement temporary noise barrier along Road L4.	Further reduce the construction ion airborne noise	Contractor	Road L4 of ARQ	N/A	N/A
S5.6.35	Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected representative locations	Contractor	Selected Representative Noise monitoring stations	V	N/A
Water Quality Impact (Contraction Phase)						
S6.6.3	Construction Runoff	Control construction runoff	Contractor	All	@	@

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
	In accordance with the Practice Note for Professional Persons on Construction ion Site Drainage, Environmental Protect ion Department , 1994 (ProPECC PN 1/94), best management practices should be implemented as far as practicable as below: • At the start of site establishment , perimeter cut -off drains to direct off-site water around the site should be constructed with internal drainage works. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. • Diversion of natural stormwater should be provided as far as possible. The design of temporary on-site drainage should prevent runoff going through site surface, construction machinery and equipment in order to avoid or minimize polluted runoff. Sediment at ion tanks with sufficient capacity, constructed from preformed individual cells of approximately 6 to 8 m^3 capacities, are recommended as a general mitigation measure which can be used for set t ling surface runoff prior to disposal. The system capacity shall be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped. • The dikes or embankments for flood protect ion should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt /sediment t rap. The silt /sediment t raps should be incorporated in the permanent drainage channels to enhance deposit ion rates. • The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94. The detailed design of the sand/silt traps should be undertaken by the contractor prior to the commencement of construction ion. • Construction works should be programmed to minimize surface excavation works during the rainy seasons (April to September). All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means. • All drainage facilities and erosion and sediment control structures			construction sites		

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status	
					Contract 1	Contract 2
	should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas. • Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, it should be dug and backfilled in short sect ions wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. • All open stockpiles of construction ion materials (for example, aggregates, sand and fill material) of should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction ion materials, soil, silt or debris into any drainage system. • Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction ion materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. • Precautions to be taken at any time of year when rainstorms are likely, act ions to be taken when a rainstorm is imminent or forecasted, and act ions to be taken during or after rainstorms are summarized in Appendix A2 of ***ProPECC PN 1/94***. Particular attention should be paid to the control of silty surface runoff during storm events. • All vehicles and plant should be cleaned before leaving a construction ion site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at every construction ion site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The sect ion of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient back all toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and rains. • Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. The oil interceptors					

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
	should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain. • Construction ion solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts. • All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bun ds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby. • Regular environmental audit on the construction site should be carried out in order to prevent any malpractices. Not ices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the rivers.					
S6.6.6 and 6.6.7	<u>Sewage from Workforce</u> • Portable chemical toilets should be provided for handling the construction sewage generated by the workforce. Assume that the capacity of the chemical toilets would be 0.4m3 and suck up twice a day under normal practices, around 45 chemical toilets would be required for the whole site at peak hour. And it should be noted that under normal construction periods, less chemical toilets would be needed. In addition, the total number of the chemical toilets would be subject to later detailed design, the capacity of the chemical toilets, and contractor's site practices. Nevertheless, a licensed contractor should be employed to provide appropriate and adequate portable toilets to cater around 37.5 m3/day sewage and be responsible for appropriate disposal and maintenance. Since portable chemical toilets will be provided, no adverse water quality impact from the workforce sewage is anticipated. • Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction ion phase of the Project . Regular environmental audit on the construction ion site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental	Handling of site sewage	Contractor	All construction sites	V	V

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status	
					Contract 1	Contract 2
	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	@	@
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	Minimize contaminated groundwater impacts	Contractor	All construction sites	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
	into the ground. The recharging wells should be selected at places where the groundwater quality will not be affected by the recharge operation as indicated in the Sect ion 2.3 of TM-DSS. The baseline groundwater quality shall be determined prior to the select ion of the recharge wells, and submit a working plan (including the laboratory analytical results showing the quality of groundwater at the proposed recharge location(s) as well as the pollutant levels of groundwater to be recharged) to EPD for agreement . Pollution levels of groundwater to be recharged shall not be higher than pollutant levels of ambient groundwater at the recharge well. Prior to recharge, any prohibited substances such as PCRs should be removed as necessary by installing the petrol interceptor.					
Waste Management (Contraction Phase)						
S8.5.2	Good Site Practice The following good site practices are recommended throughout the construction ion activities: • nomination of an approved personnel, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collect ion and effective disposal to an appropriate facility, of all wastes generated at the site; • training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling; • provision of sufficient waste disposal points and regular collect ion for disposal; • appropriate measures to minimize windblown litter and dust during transportation of waste by either covering t rucks or by transporting wastes in enclosed containers; • regular cleaning an d maintenance programme for drainage systems, sumps and oil interceptors;	Minimize waste generation during construction	Contractor	All construction sites	V	V
S8.5.2 (6)	The contractor should submit a Waste Management Plan (WMP) as part of the Environmental Management Plan (EMP) in accordance with the ***ETWB TC(W) No. 19/2005*** for construction ion phase. The EMP should be submit ted to the Engineer for approval. Mitigation measures proposed in the EIA Report and the EM&A Manual should be adopted.	Minimize waste generation during construction	Contractor	All construction sites	V	V
S8.5.3	Waste Reduction Measures Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following	Reduce waste generation	Contractor	All construction sites where	V	V

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status	
					Contract 1	Contract 2
	recommendations are proposed to achieve reduction: • segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling o materials and their proper disposal; • proper storage and site practices to minimize the potential for damage and contamination of construction ion materials; • plan and stock construction ion materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste; • sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable port ions (i.e. soil, broken concrete, metal etc.); • provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.			practicable		
S8.5.5	<u>Storage of Waste</u> The following recommendation should be implemented to minimize the impacts: • waste such as soil should be handled and stored well to ensure secure containment ; • stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; • different locations should be designated to stockpile each material to enhance reuse;	Minimize waste impacts from storage	Contractor Contractor	All construction ion sites	V	V
S8.5.6	<u>Collection and Transportation of Waste</u> The following recommendation should be implemented to minimize the impacts: • remove waste in timely manner; • employ the trucks with cover or enclosed containers for waste • transportation; • obtain relevant waste disposal permits from the appropriate authorities; and • disposal of waste should be done at licensed waste disposal facilities.	Minimize waste impacts from storage	Contractor	All construction sites	V	@
S8.5.8	<u>Excavated and C&D Material</u> Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at public filling areas or reclamation sites. The following mitigation measures should be	Minimize waste impacts from excavated and C&D materials	Contractor	All construction sites	V	@

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status	
					Contract 1	Contract 2
	implemented in handling the excavated and C&D materials: • maintain temporary stockpiles and reuse excavated fill material for backfilling; • carry out on-site sorting; • make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; • implement a recording system for the amount of waste generated, recycled and disposed of for checking; The recommended C&D materials handling should include: • On-site sorting of C&D materials • Reuse of C&D materials • Use of Standard Formwork and Planning of Construction Materials purchasing • Provision of wheel wash facilities					
S8.5.15	<u>Contaminated Soil</u> As a precaution, it is recommended that standard good site practice should be implemented during the construction phase to minimize any potential exposure to contaminated soils or groundwater. The details of mitigation measures to minimize the potential environmental implications arising from the handling of contaminated materials refer to Land Contamination Section.	Remediate contaminated soil	Contractor	All construction sites where applicable	@	@
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
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	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	V	@

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	Implementation Status	
					Contract 1	Contract 2
	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.					
S8.5.19	Sewage • The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities. • Regularly collect ion by licensed collectors should be arranged to minimize potential environmental impacts.	Minimize production of sewage impacts	Contractor	All construction sites	V	V
Ecology (Contraction Phase)						
S. 10.7.2 to 10.7.6	Re-provision of Wooded Area for ecological function at the future Quarry Park.	Compensate for the loss of three woodland patches of a total area of about 1.13ha.	Contractor/ Detailed Design Consultant (qualified botanist / horticulturist / Certified Arborist to supervise the planting).	Northern part of the proposed Quarry Park.	N/A	NA
.10.7.10	Construction phase in situ mitigation measures to minimize impacts on hydrological condition and water quality of hillside watercourses include: • Temporary sewerage and drainage will be designed and installed to collect wastewater and prevent it from entering nearby watercourses; • Proper locations well away from nearby watercourses will be used for temporary storage of materials (i.e. equipment , fill materials, chemicals and fuel) and temporary stockpile of construction debris and spoil, and these will be identified before commencement of works; • To prevent muddy water entering nearby watercourses, work sites close to nearby watercourses will be isolated, using such items as sandbags or silt curtains with lead edge at bot tom and properly supported props. Other protective measures will also be taken to ensure that no pollution or siltation occurs to the water gathering grounds of the works site;	Minimize impacts on Hydrological condition and water quality of hillside watercourses.	Contractor	All construction sites	V	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
	• Stockpiling of construction ion 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 t rap any sediments and prevent them from entering watercourses; • Construction debris and spoil will be covered and/or properly disposed as soon as possible to avoid being washed into nearby watercourses; • Exposed soil will be covered as quickly as possible following format ion works, followed, where appropriate, by covering with biodegradable geotextile blanket for erosion control purposes; • Where appropriate, earth-bunding will be carried out of areas where soils have been disturbed or where vegetation has been cleared, to ensure that surface runoff will not move soils off-site; • Construction ion effluent, site run-off and sewage will be probably collected and/or treated. Wastewater from any construction ion site will be minimised via the following in descending order: reuse, recycling and treatment ; • Proper locations for discharge out lets of wastewater treatment facilities well away from sensitive receivers will be identified and used; • Silt traps will be installed at points where drainage from the site enters local watercourses; • Appropriate sanitary facilities for on-site workers will be provided; • The site boundary will be clearly marked and any works beyond the boundary strictly prohibited, and • Regular water monitoring and site audit will be carried out at suitable points. If the monitoring and audit results show that pollution occurs, adequate measures including temporary cessation of works will be considered.					
S.10.7.11	Implement an emergency contingency plan during the construction phase and the plan will include, but not be limited to, the following: • Potential emergency situations; • Chemicals or hazardous materials used on-site (and their location); • Emergency response team; • Emergency response procedures; • List of emergency telephone hot lines;	Minimize impacts on Hydrological condition and water quality of hillside watercourses.	Contractor	All construction sites	N/A	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
	• Locations and types of emergency response equipment , and • Training plan and testing for effectiveness.					
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**, ***ETWB TCW No. 29/2004*** and ***10/2013***. Final locations of transplanted trees shall be agreed prior to commencement of the work.	Minimize landscape impact and retention of landscape resources	Detailed Design Consultant /	Onsite where possible. Otherwise consider offsite locations	*	N/A
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
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
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

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

Appendix M

Complaint Log
And
Investigation Report for Complaint

Appendix M1 Cumulative Complaint and Summons/ prosecution

Reporting Month	Number of Complaints in Reporting Month	Number of Summons/ Prosecution in Reporting Month
March 2017	**1**	0
April 2017	0	0
May 2017	0	0
June 2017	**2**	0
July 2017	**3**	0
August 2017	**3**	0
September 2017	**4**	0
October 2017	**2**	0
November 2017	**3**	0
December 2017	**3**	0
January 2018	**1**	0
February 2018	**3**	0
March 2018	**0**	0
Overall Total	**25**	**0**

Appendix M2 Complaint Log

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Status	Investigation Report Ref.
1	23-Mar-17	NA	On Tat Estate	Resident of On Tat Estate	Construction noise	SPRO hotline	NA	A resident living in On Tat House reported that some night works with noise and flashing caused nuisance to nearby resident after 11:00 pm on 23 March 2017.	According the incident report conducted by the CWSTVJV, demobilization of crawler crane was undertaken on 23 March 2017 11pm and it is TD requirement to carry out demobilization of heavy machine at nighttime. It is considered this complaint was a single incident and would not be happened again in future.	no comment by IEC on 11 Oct 2017	TCS00864/16/300/F0087
2	28-Jul-17	28-Jul-17	38/F of Yin Tat House (賢達樓), On Tat Estate	Resident of On Tat Estate	Construction noise	SPRO hotline	NA	Mr. Hsu received a complaint from a resident living in the flat on 38/F of Yin Tat House (賢達樓), On Tat Estate. The resident complained about the noise level of our works during daytime.	Noise monitoring by Contractor was conducted in Yin Tat House, On Tat Estate, at around 2 pm on 28-Jul-2017. Another noise monitoring was carried out by ET and representatives of AECOM and JV in the presence of the complainant in her flat at 10 am on 1-Aug-2017 and was witnessed by Mr. Hsu. No exceedance of noise was recorded. The complainant was satisfied about the monitoring results.	no comment by IEC on 9 Aug 2017	TCS00864/16/300/F0060
3	29-Aug-17	29-Aug-17	Shing Tat House 24/F	Resident of On Tat Estate	Construction noise	SPRO hotline	NA	Mr. Hsu Yau Wai reported that he received complaint from a resident (Ms Cheng) living at Shing Tat House 24/F Room 22 about the noise generated from our site this week. The noise heard was mainly rock breaking noise from our site.	Noise monitoring was carried out by ET and representatives of AECOM and JV in the presence of the complainant in her flat at 3pm on 30-Aug-2017. No exceedance of noise was recorded. The complainant was satisfied about the monitoring results.	no comment by IEC on 8 Sep 2017	TCS00864/16/300/F0081
4	21-Jun-17	29-Aug-17	Tat Yan House, Po Tat Estate	Resident of Po Tat Estate	Construction noise	EPD	EPD (ref.N08/RE/00019373-17)	day time construciton noise of breakers (8am to 6pm)	These two complaints were forwarded by CEDD to ET on 31 August 2017 which after the complaint dates. Investigation was conducted based on the site information by the Contractor of Contract 1 as well as the observation during weekly site inspection carried out ET during June 2017. In our investigation, CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident and the working hour 08:00 to 18:00 did not breach any legal requirement. To eliminate the inconvenience caused to the nearby resident CWSTVJV was advised to further enhance the noise mitigation measures as appropriately.	no comment by IEC on 3 Nov 2017	TCS00864/16/300/F0093
5	22-Jun-17	29-Aug-17	Tat Yan House, Po Tat Estate	Resident of Po Tat Estate	Dust & Construction noise	EPD	EPD (ref. N08/RE/00019428-17)	Day time construction noise of breakers (8AM to 6PM). Requested to delay the operating hour of breakers to 10AM or 11AM			TCS00864/16/300/F0093
6	15-Jul-17	29-Aug-17	Tat Yi House, Po Tat Estate	Resident of Po Tat Estate	Construction noise	EPD	EPD (ref.N08/RE/00022479-17)	Construction noise	CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident and the working hour 08:00 to 18:00 did not breach any legal requirement. To eliminate the inconvenience caused to the nearby resident, CWSTVJV was advised to further enhance the noise mitigation measures as appropriately.	no comment by IEC on 3 Nov 2017	TCS00864/16/300/F0094
7	28-Jul-17	29-Aug-17	Anderson Road	unknown	Dust	EPD	EPD (ref.N08/RE/00023986-17)	Poor control on dust emission at Anderson Road Construction Site	CWSTVJV has implemented dust mitigation measures to eliminate the inconvenience caused to the nearby resident and status of the implementation of dust mitigation measures was considered effective based on the site observation.	no comment by IEC on 15 Nov 2017	TCS00864/16/300/F0097

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Status	Investigation Report Ref.
8	2-Aug-17	29-Aug-17	Chun Tat House, On Tat Estate	Resident of On Tat Estate	Construction noise	EPD	EPD (ref.N08/RE/00024557-17)	Day time construction noise of breakers (8AM to 6PM)	CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. According to the impact noise monitoring result obtained in August 2017, there were no breaches of EM&A requirement. However, to eliminate the inconvenience caused to the nearby resident, CWSTVJV should further enhance the noise mitigation measures as appropriately. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 15 Nov 2017	TCS00864/16/300/F0098
9	19-Sep-17	19-Sep-17	Sau Mau Ping Estate Sau Nga House	Resident of Sau Mau Ping Estate	Construction noise	SPRO hotline	NA	The complainant is living at Sau Mau Ping Estate Sau Nga House 38/F. He complained about the noise nuisance recently from August to September especially during night time after 12:00 am, even in Saturdays and Sundays. The noise nuisance caused a great disturbance to him. He made a request to conduct investigation about the source of the noise during night time.	ET has conducted an ad-hoc noise measurement for Leq (30min) on the rooftop of 秀雅樓 and 秀義樓 in the afternoon of 22 September 2017. During the course of noise measurement, construction activities such as excavation and breaking were conducted in the Quarry Site. The measurement results taken at both 秀雅樓 and 秀義樓 were 63dB(A) which below the Limit Level under the EM&A Programme.	no comment by IEC on 18 Oct 2017	TCS00864/16/300/F0088
10	21-Sep-17	13-Oct-17	Sau Mau Ping Estate Sau Nga House and Sau Yee House	Resident of Sau Mau Ping Estate	Construction noise	EPD	EPD (ref.N08/RE/00031074-17)	On 21 September 2017, the same complaint further reported that the noise can be heard at both Sau Yee House and Sau Nga House even in daytime and he strongly requested the Contractor to follow up the case immediately.			TCS00864/16/300/F0088
11	27-Sep-17	13-Oct-17	Chun Tat House, On Tat Estate	Resident of On Tat Estate	Construction noise	EPD	EPD (ref.N08/RE/00029489-17)	The complainant questioned why there were 6 to 7 breakers operating in the morning but only 1 operating in the afternoon. He requested to shift the operation of the breakers to afternoon.	CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. According to the impact noise monitoring result obtained in September and October 2017, there were no breaches of EM&A requirement. However, to eliminate the inconvenience caused to the nearby resident, CWSTVJV should properly maintain the noise mitigation measures as appropriate. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 30 Nov 2017	TCS00864/16/300/F0106
12	3-Oct-17	13-Oct-17	Chun Tat House, On Tat Estate	Resident of On Tat Estate	Construction noise	EPD	EPD (ref. N08/RE/00032407-17)	Day time construction noise, the complainant requested using less breaker at one time, erecting taller noise barrier to cover the equipment. In addition, the complainant would like to know the construction schedule whether there will be more breaking activities in near future			TCS00864/16/300/F0106
13	25-Oct-17	26-Oct-17	Tat Kwai House, Po Tat Estate	Resident of Po Tat Estate	Dust	EPD	NA	投訴安達臣道地盤的泥車落泥，令他達貴樓的住所受到大塵影響，要求跟進及回覆	Investigation revealed that CWSTVJV has implemented dust mitigation measures to eliminate the inconvenience caused to the nearby resident. Nevertheless, based on the observation during site inspection on 31 October 2017, CWSTVJV was advised to enhance the dust mitigation measures particularly during dry season.	no comment by IEC on 15 Nov 2017	TCS00864/16/300/F0100

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Status	Investigation Report Ref.
14	6-Nov-17	7-Nov-17	Chun Tat House, On Tat Estate	Resident of On Tat Estate	Noise	EPD	NA	安達邨俊達樓居民投訴石礦場地盤又再於早上 07:45 開始傳出機器不停掘石的噪音(幾乎每日在 08:00-19:00 進行工程)，已持續一年，他全家人受到滋擾。	Ad-hoc noise measurement was conducted by ET at rooftop of Chun Tat House in the morning of 20 November 2017 and measurement result was below the Limit Level under the EM&A Programme. CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 30 Nov 2017	TCS00864/16/300/F0109
15	13-Nov-17	14-Nov-17	Chi Tai House, On Tai Estate	Mr. Lam Wai	light pollution and noise	SPRO hotline	NA	1. 智泰樓面向安達臣地盤方向，有照射燈深夜時分仍然常開，影響居民正常睡眠質素，照成一定的精神壓力。 2. 隔音布未固定，大風吹過發出極大的聲浪	To ease the concern by the complaint, CWSTVJV has adjusted the lights to the orientation pointing the ground and that to minimise the nuisance. For the maintenance of noise barrier, CWSTVJV has immediately fixed the noise barrier nearest to On Tai Estate and prolonged the cover area of the noise barrier to reduce the noise impact to the public.	no comment by IEC on 24 Nov 2017	TCS00864/16/300/F0104
16	1-Nov-17	14-Nov-17	Shing Tat House, On Tat Estate	Resident of Po Tat Estate	Noise	EPD	NA	居住於安達邨誠達樓高層的投訴人投訴由早上八時半至下午六時聽到掘鐵噪音。	CWSTVJV had already deployed the acoustic mat as noise barrier at the site boundary near Shing Tat House. To enhance the noise mitigation measures, CWSTVJV deployed an acoustic mat as noise barrier for the breaking work in order to reduce construction noise affecting the upper floor of On Tat Estate.	no comment by IEC on 13 Dec 2017	TCS00864/16/300/F0110
17	25-Aug-17	26-Oct-17	Sau Yee House, Sau Mau Ping Estate	Resident of Sau Mau Ping Estate	Construction Noise	EPD	EPD (ref.N08/RE/00027738-17)	Night time construction noise of hammering (around 12AM)	It is confirmed by CWSTVJV and checked against the site diary that no construction activities were carried out after 19:00 at the subject site. Therefore, the complaint about noise nuisance during night time should not be related to the Project.	no comment by IEC on 14 Dec 2017	TCS00864/16/300/F0114
18	12-Sep-17	26-Oct-17	Chun Tat House, On Tat Estate	Resident of On Tat Estate	Construction Noise	EPD	EPD (ref. N08/RE/00029489-17)	Day time construction noise of breakers (8AM to 5PM)	Noise mitigation measures were implemented to reduce the noise impact to the nearby resident. According to the impact noise monitoring result in September 2017, there were no breaches of EM&A requirement. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 10 Jan 2018	TCS00864/16/300/F0117
19	15-Dec-17	21-Dec-17	Sau Yee House	Resident of Sau Mau Ping Estate	Construction Noise	EPD	NA	Resident of Sau Yee House complained suspected construction noise from Anderson Construction Site at restricted hour (7pm to 7am).	It is confirmed by CWSTVJV and checked against the site diary that no construction activities were carried out after 19:00 at the subject site. Therefore, the complaint about noise nuisance during night time should not be related to the Project.	no comment by IEC on 10 Jan 2018	TCS00864/16/300/F0118
20	20-Dec-17	21-Dec-17	On Tat Estate	Resident of On Tat Estate	Dust	EPD	NA	投訴安達臣道信和地盤水車已經壞了十多天， 一直無灑水，四周非常大塵。 投訴人住於安達邨，投訴安達臣道石礦場有大地盤，地盤大車工作時間不停出入揚起沙塵，吹到安達邨，影響空氣環境，要求部門到場視察。	CWSTVJV has implemented dust mitigation measures to eliminate the inconvenience caused to the nearby resident. It is considered that the complaint was an isolated case due to malfunction of water tanker and CWSTVJV has promptly rectified the deficiency. As advised by CWSTVJV, another water tanker will be deployed in mid-January 2018 to enhance the dust suppression measures throughout the construction site.	no comment by IEC on 25 Jan 2018	TCS00864/16/300/F0121
21	28-Dec-17	10-Jan-18	Sau Yee House	Resident of Sau Mau Ping Estate	Construction Noise	CE's office	NA	日間及凌晨均聽到轟隆聲的噪音及震動，懷疑是由附近工程引起	ET has conducted an ad-hoc noise measurement for Leq (30min) in the complainant's flat in the monitoring of 17 January 2018.It was noted that the complainant's flat is not in direct line of sight to the Anderson Road Quarry Site. The measurement noise	no comment by IEC on 8 Feb 2018	TCS00864/16/300/F0129

Log ref.	Date of Complaint	Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Follow up action	Status	Investigation Report Ref.
									result was below the Limit Level under the EM&A Programme. Moreover, it is confirmed by CWSTVJV and checked against the site diary that no construction activities were carried out during restricted hour at the subject site. Therefore, the complaint about noise nuisance during restricted hour should not be related to the Project.		
22	15-Jan-18	15-Jan-18	Chun Tat House	Resident of Chun Tat House of On Tat Estate, 40/F	Construction Noise	SPRO mobile	NA	She is irritated by the construction noise of breaking rock for a long time and strongly requested to know exactly when will be the completion date of the breaking rock part of works opposite to Chun Tat House. She said we should do more on the mitigation measures because our site is very close to the residents nearby.	CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. According to the impact noise monitoring result obtained in January 2018, there were no breaches of EM&A requirement. However, to eliminate the inconvenience caused to the nearby resident, CWSTVJV should properly maintain the noise mitigation measures as appropriate. Since the works were carried out within the non-restricted hours, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 8 Feb 2018	TCS00864/16/300/F0130
23	1-Feb-18	2-Feb-18	Chi Tai House of On Tai Estate	Resident of On Tai Estate (referred by Mr. Lam Wai)	Construction Noise	SPRO hotline	NA	"智泰對出，白天噪音過大，可否加裝隔音板?高層受影響"	The Environmental Team has conducted an ad-hoc noise measurement for Leq(30min) at the corridor of 22/F of Chi Tai House on 2 February 2018 facing the construction site. The measurement noise result was 65dB(A) which below the Limit Level under the EM&A Programme. In our investigation, CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. According to the impact noise monitoring result obtained in January 2018, there were no breaches of EM&A requirement.	no comment by IEC on 22 Feb 2018	TCS00864/16/300/F0137
24	1-Feb-18	2-Feb-18	Shing Tat House of On Tat Estate	Resident of Shing Tat House (referred by Mr. Hsu Yau Wai)	Construction Noise	SPRO hotline	NA	Mr. Hsu reported that some disturbing noise was heard after 6:00 pm from the site near Shing Tat House of On Tat Estate.	AECOM has liaised with Mr. Hsu on 2 February 2018 for the complaint matter and he reported to AECOM that the noise was generated until 7:00 pm on 1 February 2018. 3. As advised by Contractor of Contract 1, breaking works at USRT area which opposite to Shing Tat House was only carried out from 8:00 to 18:00. However, rock breaking at System A was extended to 19:00 on 1 February 2018. As noise mitigation measures, noise barriers were erected for the works area. Further to the complaint case, CWSTVJV would seek for other quiet work method such as using drilling machine to reduce noise level and speed up the rock breaking process, so that to reduce the noise intensity level and the duration of exposure.	no comment by IEC on 28 Feb 2018	TCS00864/16/300/F0140
25	28-Feb-18	28-Feb-18	Shing Tat House of On Tat Estate	Resident of Shing Tat House	Construction Noise	EPD	NA	安達邨誠達樓居民, 投訴人是返夜班, 一年半以來長期受對出地盤日間掠石仔噪音滋擾, 由於單位與地盤太近, 堅持環保署跟進及回覆如何處理及減低噪音, 他亦要求知道何日完工.	Breaking works at Underground Stormwater Retention Tank area which opposite to Shing Tat House was carried out from 8:00 to 18:00. The Contractor has implemented noise mitigation measures to reduce the noise impact to the nearby resident. It was advised that the rock breaking works shall tentatively be completed by end of April and it is believe that the noise impact should be minimized. Since the works were carried out within the non-restricted hours and noise monitoring noise were within acceptable level, it is considered that the works under the project did not breach the Noise Control Ordinance.	no comment by IEC on 19 Mar 2018	TCS00864/16/300/F0143

AUES

Fax Cover Sheet

To	**Mr. Dennis Leung**	**Fax No**	**By e-mail**
Company	**AECOM**		
cc			
From	**Nicola Hon**	**Date**	**19 March 2018**
Our Ref	TCS00864/16/300/**F0143a**	**No of Pages**	6 **(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 Environmental Complaint from resident of Shing Tat House of On Tat Estate**		

If you do not receive all pages, or transmission is illegible, please contact the originator on (852) 2959-6059 to re-send. Should this facsimile be sent to the wrong fax number, would receiver please destroy this copy and notify Action-United Environmental Services & Consulting immediately. Thank you.

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	Mr. Leo Luk	Fax: 2591 0558
EPD	Mr. Paul Wong	Fax: 2756 8588
CEDD/BCP	Mr. Stephen Li (Ch Eng/NTE2)	Fax: 2739 0076
ANewR (IEC)	Mr. Adi Lee	By e-mail
CWSTVJV	Mr. TY Leung	By e-mail

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

Investigation Report on Environmental Complaint / Enquires

Complaint Log No.	NTE/07/2016 – 26
Received Date by ET	28 February 2018
Related Contracts	Contract 1 (NE/2016/01)
Complaint Details	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掠石仔噪音滋擾，由於單位與地盤太近，堅持環保署跟進及回覆如何處理及減低噪音，他亦要求知道何日完工.
Complaint Location	Shing Tat House of On Tat Estate
Date of Complaint	28 February 2018
Environmental Aspect	Noise
Complainant	Resident of Shing Tat House
Complaint Route	EPD
Investigation Result	1. A public complaint was received by EPD on 28 February 2018 regarding the day time construction noise generated by breaking work near Shing Tat House of On Tat Estate. The complainant requested the relevant department to follow up and alleviate the noise impact. The site layout and complaint location are shown in ***Figure 1***. 2. As advised by Contractor of Contract 1 - NE/2016/01 (CWSTVJV), breaking works at Underground Stormwater Retention Tank (USRT) area which opposite to Shing Tat House was only carried out from 8:00 to 18:00. Apart from the topographical screening effect to On Tat Estate from USRT, noise barriers were in place and maintained for mitigation of noise generated from site plants to the residents of On Tat Estate. ***(Photo 1)*** To reduce the sound intensity of rock breaking works nearby the residents of On Tat Estate, only two rock drills were deployed for the breaking works as good site practice. Moreover, QPME of Generator was used for the USRT works area. ***(Photo 2)*** 3. Joint site inspection among the RE, CWSTVJV and ET was carried out in February 2018 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. ***(Photos 3 to 4)*** Moreover, quiet plants (e.g. QPME) are used to reduce the cumulative noise impact from the construction activities of the whole site. 4. In our investigation, CWSTVJV has implemented noise mitigation measures to reduce the noise impact to the nearby resident. As advised by CWSTVJV, the rock breaking works shall tentatively be completed by end of April. It is believe that with the completion of URST works, the noise impact should be minimized.

	5. According to the impact noise monitoring result obtained at On Tat Estate in February 2018, there were no breaches of EM&A requirement. Nevertheless, to reduce the inconvenience caused to the nearby resident, CWSTVJV 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. 6. Nevertheless, in view of the subject site of the project 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.

Prepared By : Nicola Hon

Designation : Environmental Consultant

Signature :

Date : 19 March 2018

Photo Record

Photo 1
Breaking works at Underground Stormwater Retention Tank (USRT) area which opposite to Shing Tat House. Apart from the topographical screening effect to On Tat Estate from USRT, noise barriers were in place and maintained for mitigation of noise generated from site plants to the residents of On Tat Estate.

Photo 2
QPME of Generator was used for the USRT works area.

Photo 3

Excavation and breaking works were carried out at USRT and there was direct line of sight between the construction site and the upper floor of Shing Tat House. As noise mitigation measures, erection of acoustic mat as temporary noise barrier was installed along the boundary of Portion A toward On Tat Estate.

Photo 4

As noise mitigation measures, the head of the breakers were wrapped by acoustic materials.

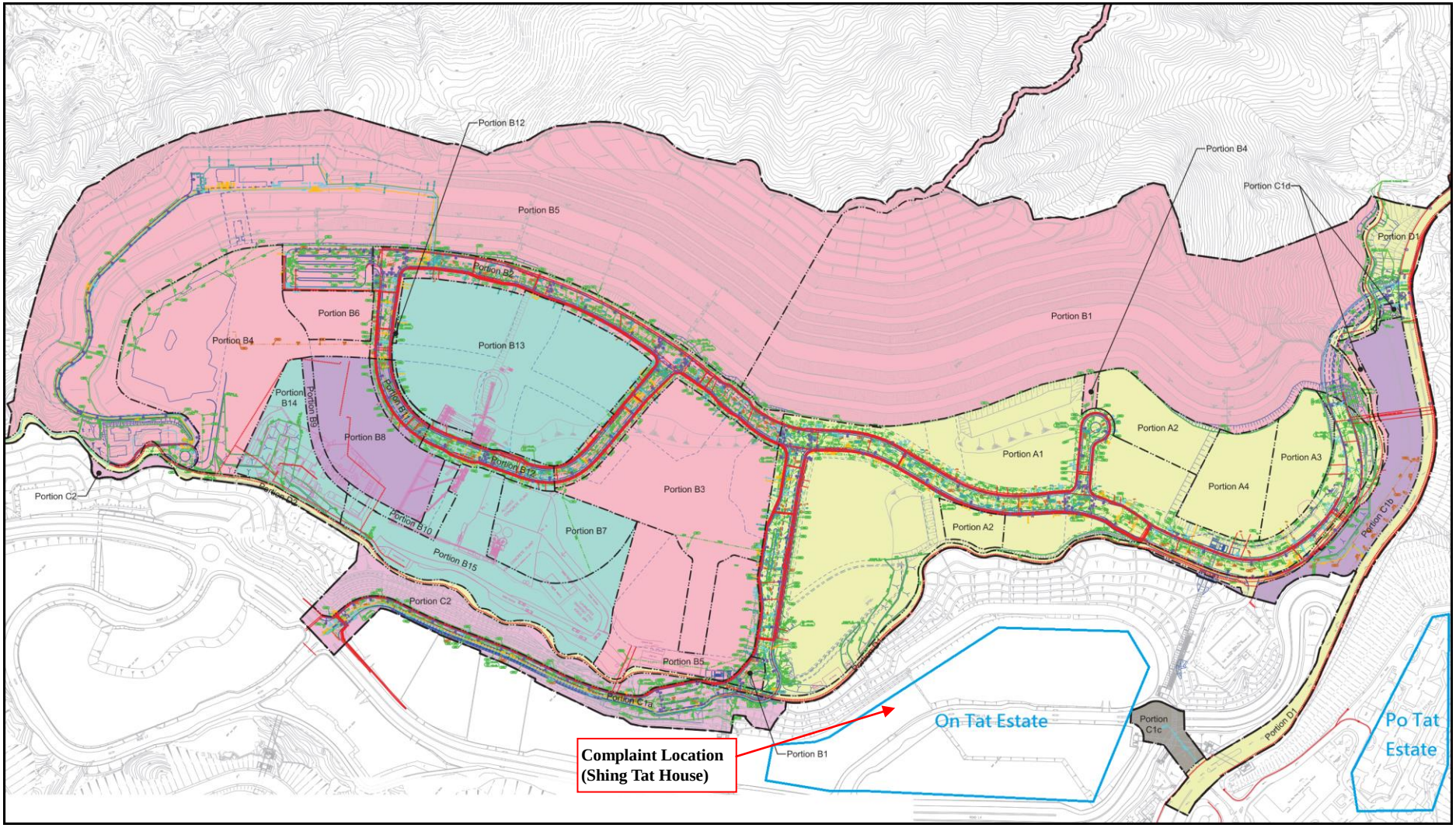


Figure 1 The Layout of NE/2016/01 and the Complaint Location