

JOB NO.: TCS00881/18 & TCS00944/18

SITE FORMATION AND ASSOCIATED INFRASTRUCTURAL WORKS FOR DEVELOPMENT OF COLUMBARIUM, CREMATORIUM AND RELATED FACILITIES AT SANDY RIDGE CEMETERY

MONTHLY ENVIRONMENTAL MONITORING AND AUDIT Report (No.30) – January 2021

PREPARED FOR HSIN CHONG TSUN YIP JOINT VENTURE & SANG HING CIVIL CONTRACTORS CO., LTD

Date	<b>Reference No.</b>	<b>Prepared By</b>	Certified By
11 February 2021	TCS00881/18/600/R0524v2	Anh	Am

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

Version	Date	Remarks
1	8 February 2021	First Submission
2	11 February 2021	Amended according to the IEC's comments on 11 January 2021



### Our Ref: TCS00881/18/300/L0525

**Civil Engineering and Development Department** 2/F, Civil Engineering and Development Building, 101 Princess Margaret Rd, Homantin, Kowloon

Attn: Mr. SHUM Ngai Hung, Steven

16 February 2021 By e-mail

Dear Sirs,

# Re: Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery Monthly Environmental Monitoring & Audit Report (No.30) – January 2021

We confirmed that the captioned report has complied with the requirement set out in the EM&A Manual, we hereby certify the captioned report pursuant to Specific Condition 3.4 of the Environmental Permit No. FEP-01/534/2017/A and EP-534/2017/A.

Should you have any queries, please feel free to contact the undersigned at Tel: 2959-6059 or Fax: 2959-6079 or Email: <u>twtam@fordbusiness.com</u>.

Yours sincerely, For and on Behalf of Action-United Environmental Services & Consulting (AUES)

T. W. Tam Environmental Team Leader TW/nh

cc ARUP (RE of Contract 1) ARUP (RE of Contract 2)
. HCTY-JV (Contractor of Contract 1) Sang Hing (Contractor of Contract 2) Acuity (IEC) Mr. Steven Tang Mr. Anthony Lau Mr. Ho Man To Mr. Elvin Lam Mr. Jacky Leung by e-mail by e-mail by e-mail by e-mail

 Tel
 (852) 2959-6059

 Fax
 (852) 2959-6079

 Email
 info@fordbusiness.com









Our ref: PL-202102030

Hsin Chong Tsun Yip Joint Venture (CV/2016/10) Hsin Chong Centre 107-109 Wai Yip Street Kwun Tong, Kowloon Hong Kong

Attention: Mr. HO Man-to

16 February 2021

Dear Sir,

Site formation and Associated Infrastructural Works for Development of Columbarium at Sandy Ridge Cemetery Monthly Environmental Monitoring and Audit Report (No. 30) January 2021

I refer to the email of the ET dated on 16/02/2021 regarding the captioned Monthly Report. According to Section 3.4 of the EP-534/2017/A and the FEP-01/534/2017/A, I hereby verify the Monthly EM&A report for January 2021 with Ref. No. TCS00881/18/600/R0524v2.

Please be reminded to address comments from EPD and IEC on the relevant EPs submission and reports for our further review.

Yours faithfully,

CH Leung

Leung CH Jacky Independent Environmental Checker

cc. CEDD-DPTL/Land Works – Mr. SHUM Steven ARUP – Mr. LEE Davis ET Leader – Mr. TAM



## **EXECUTIVE SUMMARY**

ES.01. This is the 30<sup>th</sup> Monthly Environmental Monitoring and Audit (EM&A) Report summarizing the monitoring results and inspection findings under the Project for the period from 1<sup>st</sup> to 31<sup>st</sup> January 2021 (the Reporting Month).

## **ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES**

In the Reporting Month, the major construction works under the Project included Contract ES.02. CV/2016/10 (hereinafter named "Contract 1") and Contract CV/2017/02 (hereinafter named "Contract 2"). Environmental monitoring activities under the EM&A programme in this Reporting Month are summarized in the following table.

Issues	<b>Environmental Monitoring</b>	Monitorin	Total Occasions/	
155465	Parameters / Inspection	CV/2016/10	CV/2017/02	dates
Air Quality	1-hour TSP	ASR-1	ASR-2	45
Air Quality	24-hour TSP	ASK-1	ASR-3	18
Construction Noise	L <sub>eq (30min)</sub> Daytime	CN-1 CN-2	CN-3 CN-4	20
Water Quality	In-situ measurement and Water sampling	M3	M1, M2 and M4	13
Ecology	Sensitive Habitat	Transect within site area of CV/2016/10	Transect within site area of CV/2017/02	5 <sup>th</sup> Jan 21
Landscape & Visual	Site Inspection	Site area of CV/2016/10	Site area of CV/2017/02	20 <sup>th</sup> Jan 21
Inspection	Environmental Team (ET) Regular Environmental Site Inspection		Site area of	4
& Âudit	Independent Environmental Checker (IEC) Monthly Environmental Site Audit		CV/2017/02	1

Table ES-1 Summary of EM&A Programme in the Reporting Month

# **BREACH OF ACTION AND LIMIT (A/L) LEVELS**

In the Reporting Month, no exceedance of air quality, noise monitoring and water quality was ES.03. recorded. The statistics of environmental exceedance, Notification of Exceedance (NOE) issued and investigation of exceedance are summarized in the following table.

Table ES-2	Table ES-2         Breach of Action and Limit (A/L) Levels in the Reporting Month					
Environmental	Monitoring	Action Limi		Event &	k Action	
Issues	Parameters	Level	Level	<b>Investigation Findings</b>	<b>Corrective Actions</b>	
Ain Quality	1-hour TSP	0	0	-	-	
Air Quality	24-hour TSP	0	0	-	-	
Construction Noise	Leq <sub>30min</sub> Daytime	0	0	-	-	
	DO	0	0	-	-	
Water Quality	Turbidity	0	0	-	-	
	SS	0	0	_	-	

Note: NOE – Notification of Exceedance

- Monthly ecological monitoring for sensitive habitat for area of Contract 1 and Contract 2 were ES.04. undertaken on 5<sup>th</sup> January 2021. In the Reporting Month, there was no precautionary check for the presence of nesting birds carried out for Contract 1 and Contract 2 outside the breeding season.
- Landscape and visual inspection at both Contracts were undertaken on  $20^{th}$  January 2021. The ES.05. Contractor was reminded to prevent the construction material pile within Tree Protection Zone and ensure no works is allowed within the TPZ.



## ENVIRONMENTAL COMPLAINT

ES.06. No environmental complaint was recorded or received in this Reporting Month. The statistics of environmental complaint are summarized in the following table.

Table ES-3Environmental Complaint Summaries in the Reporting Month

Reporting Month		Environmental Complaint Statistics			
		Frequency	Cumulative	<b>Complaint Nature</b>	
1 21 January 2021	Contract 1	0	0	NA	
1 – 31 January 2021	Contract 2	0	1	NA	

ES.07. In addition, no complaint and emergency event relating to violation of environmental legislation for illegal dumping and landfilling was received.

#### NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES.08. No environmental summons or successful prosecution was recorded in this Reporting Month. The statistics of summons or successful prosecutions are summarized in the following tables.

## Table ES-4Environmental Summons Summaries in the Reporting Month

Reporting Month		Environmental Summons Statistics		
		Frequency	Cumulative	Summons Nature
1 21 January 2021	Contract 1	0	0	NA
1 – 31 January 2021	Contract 2	0	0	NA

#### Table ES-5 Environmental Prosecution Summaries in the Reporting Month

Reporting Month		Environmental Prosecution Statistics			
		Frequency	Cumulative	<b>Prosecution Nature</b>	
1 – 31 January 2021	Contract 1	0	0	NA	
1 - 51 January 2021	Contract 2	0	0	NA	

#### **REPORTING CHANGE**

ES.09. No reporting change was made in the Reporting Month.

#### SITE INSPECTION

ES.010. In the Reporting Month, joint site inspections for Contract 1 to evaluate the site environmental performance were carried out by the Resident Engineer (RE), ET and the Contractor of the Contract 1 on 7<sup>th</sup>, 14<sup>th</sup>, 21<sup>st</sup> and 28<sup>th</sup> January 2021. Moreover, joint site inspections for Contract 2 by the RE, ET and the Contractor of Contract 2 were carried out on 7<sup>th</sup>, 14<sup>th</sup>, 21<sup>st</sup> and 28<sup>th</sup> January 2021. IEC attended the both Contract joint site inspection on 21<sup>st</sup> January 2020. No non-compliance was noted during the site inspections.

#### FUTURE KEY ISSUES

- ES.011. The Contractors are reminded to pay special attention on water quality mitigation measures and should fully implement the measures as recommended in the EM&A Manual, in particular to prevent surface runoff and other pollutants from flowing to local stream and Conservation Area.
- ES.012. During dry season, air quality mitigation measures such as wheel wash facilities, watering of haul roads, loose soil construction surface and covering of dusty materials with tarpaulin sheet should be implemented as far as practicable.
- ES.013. Construction noise mitigation measures such as use of movable noise barriers and Quality Powered Mechanical Equipment should be properly provided to reduce construction noise impact, where appropriate.
- ES.014. The Contractors should properly maintain the cleanliness and tidiness of the site. In addition, mosquito control should be performed to prevent mosquito breeding on site.



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# 1. INTRODUCTION

## **1.1 PROJECT BACKGROUND**

1.1.1 Civil Engineering and Development Department (CEDD) is the Project Proponent for the Project "Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery". The Project is a Designated Project to be implemented under Environmental Permit No. EP-534/2017/A and FEP-01/534/2017/A. The layout plan of the Project is shown in Appendix A. Major works to be executed under the Project shall include to the following:

A Designated Works under EP-534/2017/A

- Site formation of about 8 hectares of land and associated drainage, sewerage and landscape works for development of Columbarium and Crematorium facilities at the Sandy Ridge Cemetery;
- (ii) Construction of a new road (about 600m) including a section of viaduct connecting the platform for Crematorium and Man Kam To Road and the pick-up/drop-off point at Man Kam To Road;
- (iii) Widening of about 900m of the existing Sha Ling Road;
- (iv) Widening of about 1.4km of the existing Lin Ma Hang Road; and
- (v) Improvement works to the existing barging point at Siu Lam

### Non-Designated Works

- (i) Construction of a sewage detention tank complete with odour and septicity control mechanism;
- (ii) Construction of noise barriers along Sha Ling Road;
- (iii) Construction of a new Refuse Collection Point (RCP) near the junction between Man Kam To Road and Sha Ling Road;
- (iv) Landscaping works (including both hard and soft landscape works);
- (v) Associated tree felling, transplanting and compensatory planting works;
- (vi) Associated street lighting, street furniture and road marking, etc.; and
- (vii) Other works which are specified in PS of the Contract.
- 1.1.2 To facilitate the Project management, the Project works were separated into three Contracts to be executed which are described in below sub-sections.
- 1.1.3 Contract No. CV/2016/10 Site Formation and Associated Infrastructural Works for Development of Columbarium at Sandy Ridge Cemetery (hereinafter named "Contract 1"):-
  - Site formation of about 1.77 ha of land for the proposed pick-up and drop-off area for shuttle bus operation;
  - Upgrading of a section of 900m existing Sha Ling Road from 3m wide carriageway to 7.3m wide carriageway with footpath at both sides;
  - Construction of one EVA with a total length of about 160m;
  - Construction of noise barriers along Sha Ling Road;
  - Modification of junction between Man Kam To Road and Sha Ling Road;
  - Construction of a new pick up / drop off point at Man Kam To Road;
  - Relocation and construction of a new refuse collection point near junction between Man Kam To Road and Sha Ling Road;
  - Associated geotechnical works including cut and fill slopes, soil nailing works and retaining structures;
  - Associated drainage, sewerage and waterworks along Sha Ling Road; and
  - Associated landscaping works.
- 1.1.4 Contract No. CV/2017/02 Infrastructural Works at Man Kam To Road and Lin Ma Hang Road for Development of Columbarium at Sandy Ridge Cemetery (hereinafter named "Contract 2"):-
  - Construction of a new road connecting Columbarium site to Crematorium site;
  - Construction of one EVA with a total length of about 300m;
  - Widening of a section of 1.4 km long Lin Ma Hang Road (between Man Kam To Road and Ping Yuen River) from 6m wide carriageway to 7.3m with 2m width footpath on both sides;
  - Provision of a pair of lay-by at Lin Ma Hang Road;
  - Construction of a new vehicular access connecting the Sheung Shui Landmark North PTI and Lung Sum Avenue;



- Construction of covered walkway along Fanling Station Road;
- Removal of planters and central divider along Fanling Station Road and San Wan Road;
- Associated drainage, sewerage, waterworks and utility works along Man Kam To Road and Lin Ma Hang Road;
- Associated geotechnical works including cut and fill slopes, soil nailing works and retaining structures; and
- Associated landscaping works.
- 1.1.5 CEDD Contract No. (to be confirmed):-
  - Site Formation for the platform of the columbarium site;
  - Construction of two 2 at-grade access roads;
  - Construction of road junction between Man Kam To Road and the new access road;
  - Associated drainage, sewerage and waterworks along the two new access roads;
  - Associated geotechnical works including cut and fill slopes, soil nailing works and retaining structures; and
  - Associated landscaping works
- 1.1.6 Hsin Chong Tsun Yip Joint Venture (hereafter referred as "HCTYJV") has been awarded Contract 1 on 5 December 2017. According to the Contract requirement, HCTYJV shall take over the responsibility for part of the Environmental Permit No. EP-534/2017 for ease of management, therefore application for Further Environmental Permit was submitted by HCTYJV to EPD on 26 January 2018 and Further Environmental Permit No. FEP-01/534/2017 was granted to HCTYJV by EPD on 23 February 2018. Furthermore, EPD issued Environmental Permit No. FEP-01/534/2017/A on 24 December 2018.
- 1.1.7 Sang Hing Civil Contractors Company Limited (hereinafter referred as "Sang Hing") was awarded Contract 2 on 23 May 2018. The Contract Works is a Designated Project as under Environmental Permit (EP) No. EP-534/2017. Furthermore, EPD issued Environmental Permit No. EP-534/2017/A on 24 December 2018.
- 1.1.8 Action-United Environmental Services & Consulting (AUES) has been commissioned by the Contractors as an Environmental Team (ET) to implement the Environmental Monitoring and Audit (EM&A) programme in accordance with the approved EM&A Manual as well as the associated duties. As part of the EM&A programme, baseline monitoring to determine the ambient environmental conditions was completed before construction work commencement. The Baseline Monitoring Report (air, noise and water) certified by ET Leader (ETL) and verified by Independent Environmental Checker (IEC) was submitted to Environmental Protection Department (EPD) and it was approved by EPD on 25 October 2018.
- 1.1.9 Major construction work of Contract 1 and Contract 2 was commenced on 16 August 2018 and 5 November 2018 respectively.
- 1.1.10 This is the **30<sup>th</sup>** Monthly EM&A Report summarizing the monitoring results and inspection findings for the period from **1**<sup>st</sup> to **31**<sup>st</sup> January 2021.

# **1.2 REPORT STRUCTURE**

- 1.2.1 The Monthly EM&A Report is structured into the following sections:-
  - Section 1 Introduction Section 2 **Project Organization and Construction Progress** Section 3 Summary of Monitoring Requirements Section 4 Air Quality Monitoring Results Noise Monitoring Results Section 5 Water Quality Monitoring Results Section 6 Section 7 Ecology Monitoring Results Section 8 Landscape & Visual Section 9 Waste Management
  - Section 10 Site Inspections



Section 11 Environmental Complaints and Non-Compliance

- Section 12 Implementation Status of Mitigation Measures
- Section 13 Conclusions and Recommendation



# 2. PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS

# 2.1 CONSTRUCTION CONTRACT PACKAGING

- 2.1.1 To facilitate the project management and implementation, the Project was divided by the following contracts:
  - Contract 1 (Contract No. CV/2016/10)
  - Contract 2 (Contract No. CV/2017/02)
  - Contract 3 (Contract No. TBA)
- 2.1.2 Organization structure and contact details of relevant parties with respect to on-site environmental management are shown in *Appendix B*.

## 2.2 CONSTRUCTION PROGRESS

2.2.1 The three-month rolling construction programme for Contract 1 and Contract 2 are enclosed in *Appendix C*. Construction activities of the Contract 1 and Contract 2 undertaken in the Reporting Month are presented below.

## Contract 1 (CV/2016/10)

- General site housekeeping
- Bulk excavation
- Construction of cut slope, installation of soil nailing and construction of surface channel and planter wall
- Construction of fill slope and surface channel
- Construction of pick-up and drop-off Point near Man Kam To Road
- Construction of storm/ sewer drain
- Laying of street lighting ducts
- Laying of watermains

# Contract 2 (CV/2017/02)

- Construction of Manhole, gullies, drainage pipe at Lin Ma Hang Road between CH50-16 Northbound & CH675-780 Northtbound & CH1345-1377 Northbound.
- Man Kam To Road DN800 DI Sewerage Pipe FM4.23-4.28 (250m)
- Man Kam To Road DN400 DI Watermain CH510-690 at North Fast Lane
- Soil Nail Works at Lin Ma Hang Road Slope C224 & C231
- Filling Works and drainage works for slope FS18 (Part A1).
- Construction of Manhole, gullies, drainage pipe at Sandy Ridge Road E CH230-300 (~70m)
- Construction of Retaining Wall 14
- Construction of Retaining Wall 12
- Fanling Station Road Covered Walkway

# 2.3 SUMMARY OF ENVIRONMENTAL SUBMISSIONS

2.3.1 Summary of the relevant permits, licenses, and/or notifications on environmental protection for the Project in this Reporting Month is presented in *Tables 2-1 and 2-2*.

Table 2-1 State	is of Environmental	Licenses and	<b>Permits for Contract</b> 1	L
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Item	Description	License/ Permit ref no.	License/ Permit Status
1	Air Pollution Control	Ref. no. 428909	Valid
	(Construction Dust) Regulation	Acknowledged by EPD on 20/12/2017	
2	Chemical waste Producer	WPN: 5231-641-H3937-01	Valid
	Registration	Issued by EPD on 27/03/2018	
3	Water Pollution Control	License no. WT00030795-2018	Valid
	Ordinance	Issued date: 9/5/2018	
		Expire Date: 31/5/2023	
4	Billing Account for Disposal	Account no.: 7029769	Valid



Item	Description		License/ P	Permit ref no.	License/ Permit Status	
	of Construction Waste					
Table 2	Table 2-2Status of Environmental Licenses and Permits for Contract 2					
Item	Description		License/ Permit ref no.		License/ Permit Status	
1	Air Pollution Control (Construction Dust) Regulation		<u> </u>	Man Kam To Road (near Sha Ling Road to Kong Nga Po Road	Valid	
		Ref. no.	. 440405 vledged by EPD on	Fanling Station Road	Valid	
			vledged by EPD on	Sa Ling Road (Sandy Ridge Cemetery)	Valid	
				Lin Ma Hang Road (San Uk Ling – Muk Wu Nga Yiu)	Valid	
				Lung Sum Avenue (near Landmark North)	Valid	
2	Chemical waste Producer Registration		5213-641-S4151-01 by EPD on 04/02/20		Valid	
3	Water Pollution Control Ordinance	Issued of	e no: 32936-2018 late: 16/01/2019 Date: 31/01/2024	Man Kam To Road & Lin Ma Hang Road, Man Kam To	Valid	
		License WT000 Issued c		Columbarium at Sandy Ridge Cemetery	Valid	
		License WT000 Issued c		Fanling Station Road	Valid	
4	Billing Account for Disposal of Construction Waste		t no.: 7031098		Valid	

# 2.4 SUMMARY OF SUBMISSION UNDER THE ENVIRONMENTAL PERMIT REQUIREMENTS

2.4.1 *Tables 2-3 to 2-4* summarized the submission status under the EP and/or FEP stipulation in the Reporting Month.

Table 2-3Status of Submission as under FEP

Item	EP and / or FEP Stipulation	Description	Status
1	Condition 2.10 of FEP	Management organization of : i) the main construction companies; ii) ET; and iii) IEC and the supporting team	Submitted and no approval is required.
2	Condition 2.11 of FEP	i) Detailed phasing programme of all construction works; and ii) Location plan of all construction works	Submitted and no approval is required.
3	Condition 2.12 of FEP	Contamination Assessment Plan (CAP)	Approved by EPD on 27 May 2019
4	Condition 2.13 of FEP	Grassland Reinstatement Plan	Pending approval
5	Condition 2.14 to 2.16 of FEP	Vegetation Survey Report and Vegetation Transplantation Proposal for	Approved by EPD on 12 October 2018



Item	EP and / or FEP Stipulation	Description	Status
		Contract 1	
6	Condition 2.17 of FEP	Woodland Compensation Plan (Rev.05)	Approved by EPD on 30 Jun 2020
7	Condition 2.18 of FEP	Monitoring and Survey Plan for Golden-headed Cisticola for Contract 1 (Rev.02)	Approved by EPD on 22 Oct 2019
8	Condition 2.20 of FEP	Landscape & Visual Mitigation and Tree Preservation Plan(s) Contract 1 (Rev.04)	Pending approval
9	Condition 2.22 of FEP	Traffic Noise Mitigation Plan Contract 1 (Rev. 4)	Pending approval
10	Condition 3.3 of the FEP	Baseline Monitoring Report (Air, Noise and Water)	Approved by EPD on 25 October 2018
11	Condition 4.2 of the FEP	The Contract Internet website	Internet website address has notified EPD on 15 Jun 2018 and no approval is required.

Table 2-4	<b>Status of Submission</b>	as under EP

Item	EP and / or FEP Stipulation	Description	Status
1	Condition 2.10 of EP	Management organization of : i) the main construction companies; ii) ET; and iii) IEC and the supporting team	Submitted and no approval is required.
2	Condition 2.11 of EP	i) Detailed phasing programme of all construction works; and ii) Location plan of all construction works	Submitted and no approval is required.
3	Condition 2.12 of EP	Layout Plan for the proposed footpath at Lin Ma Hang Road	Pending approval
4	Condition 2.13 of EP	Contamination Assessment Plan (CAP)	Approved by EPD on 27 May 2019
5	Condition 2.14 of EP	Grassland Reinstatement Plan	Pending approval
6	Condition 2.15 to 2.17 of EP	Vegetation Survey Report and Vegetation Transplantation Proposal under Contract 2	Pending approval
7	Condition 2.18 of EP	Woodland Compensation Plan (Rev.05)	Approved by EPD on 30 Jun 2020
8	Condition 2.19 of EP	Monitoring and Survey Plan for Golden-headed Cisticola Contract 2	Pending approval
9	Condition 2.22 of EP	Landscape & Visual Mitigation and Tree Preservation Plan(s) Contract 2	Pending approval
10	Condition 2.24 of EP	Traffic Noise Mitigation Plan Contract 2	Pending approval
11	Condition 3.3 of the EP	Baseline Monitoring Report (Air, Noise and Water)	Approved by EPD on 25 October 2018
12	Condition 4.2 of the EP	The Contract Internet website	Internet website address has notified EPD on 15 June 2018 and no approval is required.



# 3. SUMMARY OF IMPACT MONITORING REQUIREMENT

## 3.1 GENERAL

- 3.1.1 The EM&A requirements are set out in the Approved EM&A Manual. Environmental issues such as air quality, construction noise, water quality and ecology 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 impact monitoring shall cover the following environmental aspect:
  - Air quality;
  - Construction noise;
  - Water quality;
  - Ecology; and
  - Landscape and visual

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

## Table 3-1Summary of EM&A Requirements

<b>Environmental Issue</b>	Parameters
Air Quality	<ul><li>1-hour TSP;</li><li>24-hour TSP</li></ul>
Noise	<ul> <li>Leq<sub>(30min)</sub> during normal working hours.; and</li> <li>Leq<sub>(15min)</sub> during the construction works undertaken in Restricted Hours</li> </ul>
In-situ Measurements         Dissolved Oxygen Concentration (mg/L) & Saturation (%);         Temperature (°C);         Turbidity (NTU);         Salinity (ppm)         pH unit;         Water depth (m); and         Stream Flow Velocity (m/sec).         Laboratory Analysis         Suspended Solids (mg/L)	
Ecology	Ecologically sensitive habitats (wetland habitats and non-wetland habitats)

#### **3.3** MONITORING LOCATIONS

- 3.3.1 According to the Approved EM&A Manual of the Project *Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery*, the designated monitoring locations for air quality, noise, water quality and ecology under the monitoring programme, is shown in *Appendix D*.
- 3.3.2 Since the Project was divided into three Works Contracts and all Contracts will be commenced at different time, the construction phase impact monitoring will only be performed at the Contract-related monitoring stations upon commencement of each Contract Works.

#### Air Quality

3.3.3 There were three (3) designated air quality monitoring stations recommended in the Approved EM&A Manual Section 5.6.1.1. There was proposed relocation of air quality monitoring location ASR-3 in October 2018 since the landlord refused to set up the HVS at his premises and nearby Conservation Area due to noise nuisance and Muk Wu Nga Yiu House No. 2A was proposed as alternative location ASR-3a. The proposal dated on 9 November 2018 which verified by IEC was submitted to EPD for approval. Based on rationale in Section 3.3.2, the Contract-related air quality monitoring location for construction phase were summarized in *Table 3-2* and illustrated in *Appendix D*.

Village House at San Uk Ling

Village House at Muk Wu Nga Yiu

Village House at Muk Wu Nga Yiu



Contract 2

Contract 2

Contract 2

Table 5 2	Designated All Quanty Monitorn	ng Docation ander the Project	
Location ID	Description in EM&A Manual	Location	Related Work Contract
ASR-1	Village House along Man Kam To	Sha Ling Village House No.6	Contract 1

Tuble 5 2 Designated fill Quality filometring Docution under the Hojeet	Table 3-2	<b>Designated Air</b>	Quality Monitoring	Location under the Project
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*Remark: (#) There was proposed relocation of air quality monitoring location ASR-3 in October 2018. The proposal dated on 9 November 2018 after verified by IEC was submitted to EPD for approval.* 

San Uk Ling Village House No.1

Muk Wu Nga Yiu House No.28

Muk Wu Nga Yiu House No.2A

- i) Be at the site boundary or such locations close to the major dust emission source;
- ii) Close to the sensitive receptors;

Road

ASR-2

ASR-3

ASR-3a (#)

- iii) Take into account the prevailing meteorological conditions;
- iv) For monitoring location located in the vicinity of the ASRs, care shall be taken to cause minimal disturbance to the occupants during monitoring.
- v) When positioning the HVS, the following points shall be noted:
  - a. a horizontal platform with appropriate support to secure the samples against gusty wind shall be provided;
  - b. no two samplers shall be placed less than 2m apart;
  - c. the distance between the HVS and an obstacle, such as buildings, must be at least twice the height that the obstacle protrudes above the HVS;
  - d. a minimum of 2 m separation from walls, parapets and penthouses is required for HVS at the rooftop;
  - e. a minimum of 2 m separation from any supporting structure, measures horizontally is required;
  - f. no furnace or incinerator flue is nearby;
  - g. airflow around the sampler is unrestricted;
  - h. the HVS is more than 20 m from the dripline;
  - i. any wire fence and gate to protect the HVS, shall not cause any obstruction during monitoring;
  - j. permission must be obtained to set up the HVS and to obtain access to the monitoring stations; and
  - k. a secured supply of electricity is needed to operate the HVS.

# **Construction Noise**

3.3.5 There were four (4) designated noise monitoring locations recommended in the Approved EM&A Manual Section 6.5.1.1. Based on rationale in Section 3.3.2, the Contract-related noise quality monitoring location for construction phase were summarized in *Table 3-3* and illustrated in *Appendix D*.

 Table 3-3
 Designated Construction Noise Monitoring Location under the Project

Locatio n ID	Description in EM&A Manual	Location	Related Work Contract
CN-1	Village house to the west of	•	Contract 1
	Sha Ling Road	Road (free field condition)	
CN-2	Village house to the north of	Sha Ling Village House No. 25 (free	Contract 1
	Man Kam To Road	field condition)	& 3
CN-3	Village house near San Uk	San Uk Ling Village House No. 18 (free	Contract 2
	Ling	field condition)	
CN-4	Village house of Muk Wu	Muk Wu Village House No. 267 (1m	Contract 2
		façade from the building)	

<sup>3.3.4</sup> If the designated monitoring location is required to relocate, alternative monitoring location shall agree with IEC and seek for EPD approval which shall meet the following criteria:



# Water Quality

3.3.6 There were four (4) water quality monitoring locations recommended in the Approved EM&A Manual Section 7.6.1.2. The locations and coordinates of water quality monitoring were listed in *Table 3-4*. Based on rationale in Section 3.3.2, the Contract-related water quality monitoring location for construction phase were summarized in *Table 3-4* and illustrated in *Appendix D*.

Table 3-4Designated Water Quality Monitoring Stations under the Project

Proposed	Co-ore	linates	Description	<b>Related Work</b>
Location ID	North	East	Description	Contract
M1	843 431	831 308	Midstream of Nam Hang Stream	Contract 2
M2	843 840	831 101	Downstream of Nam Hang Stream	Contract 2
М3	843 509	830 040	Wetland in the Conservation Area near Yuen Leng Chai	Contract 1
M4	M4 843 997 831 783		Watercourse across Lin Ma Hang Road, running from east of San Uk Ling to Man Kam To Boundary Control Point	Contract 2

# 3.4 MONITORING FREQUENCY AND PERIOD

3.4.1 The requirements of impact monitoring were stipulated in *Sections 5.8.1.1, 6.7.1.1* and *7.8.1.4* of the approved *EM&A Manual* and presented as follows.

## Air Quality Monitoring

- 3.4.2 Monitoring frequency for air quality impact monitoring is as follows:
  - 1-Hour TSP 3 sets of 1-hour TSP monitoring shall be carried out once every six days during construction periods
  - 24-Hour TSP 24-hour TSP monitoring shall be carried out every six days during construction periods

### **Noise Monitoring**

3.4.3 Noise impact monitoring shall be carried out once per week during construction periods. The noise measurement for the time period between 0700 and 1900 hours shall be measured in terms of  $L_{eq}$  (30 minutes) or 6 sets of  $L_{eq}$  (5mins).

#### Water Quality Monitoring

3.4.4 The monitoring frequency shall be 3 days per week during construction phase and the interval between two sets of monitoring shall not be less than 36 hours.

#### 3.5 MONITORING EQUIPMENT

3.5.1 The monitoring equipment using for the EM&A program as proposed by the ET shall be verified by the IEC.

# Air Quality Monitoring

- 3.5.2 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 ET proposes to use a direct reading dust meter to measure 1-hour TSP levels, it shall submit sufficient information to IEC for approval.
- 3.5.3 The filter paper of 24-hour TSP measurement shall be determined by HOKLAS accredited laboratory.
- 3.5.4 All equipment used by ET for air quality monitoring is listed in *Table 3-5*.

Table 3-5	Air Quality Monitoring Equipment
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Equipment	Model	
24-hour TSP		
High Volume Air Sampler (HVAS)	TISCH High Volume Air Sampler, HVS Model TE-5170	
Calibration Kit	TISCH Model TE-5025A	
1-Hour TSP		
Portable Dust Meter	Sibata LD-3 Laser Dust monitor Particle Mass Profiler & Counter	

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# Wind Data Monitoring Equipment

- 3.5.5 According to the approved EM&A Manual, wind data monitoring equipment shall also be provided and set up for logging wind speed and wind direction near the dust monitoring locations. The equipment installation location shall be proposed by the ET and agreed with the IEC. For installation and operation of wind data monitoring equipment, the following points shall be observed:
  - 1) The wind sensors should be installed 10 m above ground so that they are clear of obstructions or turbulence caused by buildings.
  - 2) The wind data should be captured by a data logger. The data shall be downloaded for analysis at least once a month.
  - 3) The wind data monitoring equipment should be re-calibrated at least once every six months.
  - 4) Wind direction should be divided into 16 sectors of 22.5 degrees each.
- 3.5.6 ET has liaised with the premises owners/ landlords to grant the permission for the HVS installation. However, they rejected to set up wind data monitoring equipment installation in their premises.
- 3.5.7 Under this situation, the ET proposed to obtain representative wind data from the Hong Kong Observatory Ta Kwu Ling Weather Station. Ta Kwu Ling Station is located near the Project site which situated at the sea level above 15mPD and the wind data monitoring equipment is installed 10 m above the existing ground.

# Noise Monitoring

- 3.5.8 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<sup>-1</sup> before each noise monitoring event. Noise measurements should not be made in fog, rain, wind with a steady speed exceeding 5 m s<sup>-1</sup> or wind with gusts exceeding 10 m s<sup>-1</sup>.
- 3.5.9 Noise monitoring equipment used for impact monitoring is listed in *Table 3-6*.

Equipment	Model
Integrating Sound Level Meter	Rion NL-52 Sound Level Meter
Calibrator	Rion NC-73 Acoustical Calibrator
Portable Wind Speed Indicator	Testo Anemometer

#### Table 3-6Noise Monitoring Equipment

3.5.10 Sound level meters listed above comply with the *International Electrotechnical Commission Publications 651: 1979 (Type 1)* and *804: 1985 (Type 1)* specifications, as recommended in TM issued under the NCO.

# Water Quality Monitoring

3.5.11 Water quality parameters include dissolved oxygen, water temperature & depth, turbidity, salinity, pH and stream flow velocity shall be measured *in-situ*, and suspended solids shall be analyzed by a HOKLAS-accredited testing laboratory.

# Dissolved Oxygen and Temperature Measurement

- 3.5.12 The dissolved oxygen (DO) measuring instruments should be portable and weatherproof. The equipment should also complete with cable and sensor, and DC power source. It should be capable of measuring:
  - A DO level in the range of 0 20 mg/L and 0 200% saturation; and
  - A temperature of 0 45 degree Celsius.
- 3.5.13 The equipment should have a membrane electrode with automatic temperature compensation complete with a cable.



3.5.14 Should salinity compensation not be built-in to the DO equipment, in-situ salinity should be measured to calibrate the DO measuring instruments prior to each measurement.

## Turbidity Measurement

3.5.15 The turbidity measuring instruments should be a portable and weatherproof with DC power source. It should have a photoelectric sensor capable of measuring turbidity level between 0–1000 NTU (for example, Hach model 2100Q or an approved similar instrument).

## Salinity Measurement

3.5.16 A portable salinometer capable of measuring salinity in the range of 0–40 parts per thousand (ppt) should be provided for measuring salinity of the water at each monitoring location.

#### <u>pH Measurement</u>

3.5.17 A portable pH meter capable of measuring a range between 0.0 and 14.0 should be provided to measure pH under the specified conditions accordingly to the APHA Standard Methods.

## Water Depth Measurement

3.5.18 A portable, battery-operated echo sounder or an approved similar instrument should be used for water depths determination at each designated monitoring station.

## Stream Flow Velocity Equipment

3.5.19 Since the EM&A Manuals do not specified instrument to use stream flow velocity measurement, the monitoring of stream flow velocity is therefore proposed to be conducted by using a flow probe which is a digital water velocity meter.

## Water Sampling Equipment

- 3.5.20 A water sampler is required for suspended solid (SS) monitoring. A water sampler e.g. Kahlsico Water Sampler, which is a transparent PVC cylinder with capacity not less than 2 litres, will be used for water sampling if water depth over than 0.5m.
- 3.5.21 For sampling from very shallow water depths e.g. <0.5 m, water sample will be collected from water surface below 100mm using plastic bottle to avoid inclusion of bottom sediment or humus. Moreover, Teflon/stainless steel bailer or self-made sampling buckets maybe used for water sampling. The equipment used for sampling will be depended the sampling location and depth situations.

#### Sample Containers and Storage

- 3.5.22 Water samples for suspended solid should be stored in high density polythene bottles with no preservative added, packed in ice (cooled to 4°C without being frozen) and delivered to the laboratory within 24 hours of collection and be analyzed as soon as possible after collection.
- 3.5.23 Analysis of suspended solids should be carried out in a HOKLAS or other accredited laboratory. Water samples of about 1L should be collected at the monitoring stations for carrying out the laboratory suspended solids determination. The SS determination work should start within 24 hours after collection of the water samples. The SS analyses should follow the *APHA Standard Methods* 2540D with Limit of Reporting of 2 mg/L.

3.5.24 Details of the equipment used for water quality monitoring are listed in *Table 3-7* below.

# Table 3-7Water Quality Monitoring Equipment

Equipment	Model
Water Depth Detector	Tape measures
Water Sampler	A 2-litre transparent PVC cylinder with latex cups at both ends or Teflon/stainless steel bailer or self-made sampling bucket
Thermometer & DO meter	YSI Professional DSS/ YSI 550A
pH meter	AZ8685 pH meter / YSI Professional DSS



Equipment	Model
Turbidimeter	Hach 2100Q/ YSI Professional DSS
Salinometer	Atago refractometer Atago S Salinity Meter / YSI Professional DSS
Stream Flow Velocity	FP211 Global Flow Probe
Sample Container	High density polythene bottles (provided by laboratory)
Storage Container	'Willow' 33-litter plastic cool box with Ice pad

3.5.25 Furthermore, Suspended solids (SS) analysis was carried out by *ALS Technichem (HK) Pty Ltd*. Which is one a local HOKLAS-accredited laboratory

## 3.6 EQUIPMENT CALIBRATION

- 3.6.1 The HVAS is operated and calibrated on a regular basis in accordance with the manufacturer's instruction using Tisch Calibration Kit Model TE-5025A. Calibration would carry out at fortnightly interval. The calibration data are properly documented and the records are maintained by ET for future reference. Furthermore, Tisch Calibration Kit will be calibrated by the manufacturer in yearly basis.
- 3.6.2 The 1-hour TSP meter calibrated by a local HOKLAS-accredited laboratory would be undertaken in yearly basis. Zero response of the equipment was checked before and after each monitoring event.
- 3.6.3 The sound level meter and acoustic calibrator are calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme at yearly basis.
- 3.6.4 The multi-parameter Water Quality Monitoring System is calibrated by HOKLAS accredited laboratory of three month intervals.
- 3.6.5 All updated calibration certificates of the monitoring equipment used for the impact monitoring program in this Reporting Month are attached in *Appendix E*.

#### 3.7 DATA MANAGEMENT AND DATA QA/QC CONTROL

- 3.7.1 The impact monitoring data are handled by the ET's systematic data recording and management, which complies with in-house Quality Management System. Standard Field Data Sheets (FDS) are used in the impact monitoring program.
- 3.7.2 The monitoring data recorded in the equipment e.g. 1-hour TSP meter, noise meter and Multi-parameter Water Quality Monitoring System are downloaded directly from the equipment at the end of each monitoring day. The downloaded monitoring data are input into a computerized database properly maintained by the ET. The laboratory results are input directly into the computerized database and QA/QC checked by personnel other than those who input the data. For monitoring activities require laboratory analysis, the local laboratory follows the QA/QC requirements as set out under the HOKLAS scheme for all laboratory testing.

#### 3.8 DETERMINATION OF ACTION/LIMIT (A/L) LEVELS

3.8.1 The baseline monitoring results form the basis for determining the environmental acceptance criteria for the impact monitoring. The air quality, construction noise and water quality criteria, namely Action and Limit levels were established according to Approved EM&A Manual, and they are listed in *Tables 3-8, 3-9* and *3-10* below.

Monitoring Station	Action	Level (µg /m <sup>3</sup> )	Limit Level (µg/m <sup>3</sup> )		
Monitoring Station	1-hour TSP	24-hour TSP	1-hour TSP	24-hour TSP	
ASR-1	331	181	500	260	
ASR-2	316	165	500	260	
ASR-3	307	160	500	260	

 Table 3-8
 Action and Limit Levels for Air Quality Monitoring



#### Table 3-9Action and Limit Levels for Construction Noise

Monitoring Logotion	Action Level	Limit Level in dB(A)	
Monitoring Location	Time Period: 0700-1900 hours on normal weekdays		
CN-1,CN-2, CN-3, CN-4	When one or more documented complaints are received	75 dB(A)	

*Note:* \* *Reduces to 70 dB(A) for schools and 65 dB(A) during the school examination periods.* 

#### Table 3-10 Action and Limit Levels for Water Quality

Performance		g Location			
criteria	M1	M2	M3	M4	
Action Level	3.03	4.99	4.58	3.62	
Limit Level	2.97	4.90	4.49	3.52	
Action Level	7.1	39.7	5.6	5.4	
Limit Level	7.6	42.2	5.9	5.9	
Action Level	8.5	29.0	9.3	4.8	
Limit Level	10.1	31.0	9.5	5.0	
	Performance criteriaAction LevelLimit LevelAction LevelLimit LevelAction LevelAction Level	criteriaM1Action Level3.03Limit Level2.97Action Level7.1Limit Level7.6Action Level8.5	criteriaM1M2Action Level3.034.99Limit Level2.974.90Action Level7.139.7Limit Level7.642.2Action Level8.529.0	criteriaM1M2M3Action Level3.034.994.58Limit Level2.974.904.49Action Level7.139.75.6Limit Level7.642.25.9Action Level8.529.09.3	

Notes:

For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits
For turbidity and SS, non-compliance of the water quality limits occurs when monitoring result is higher

than the limits.

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



# 4. AIR QUALITY

# 4.1 MONITORING RESULTS

- 4.1.1 In the Reporting Month, air quality monitoring was performed at all designated locations. Impact monitoring schedule provided to all relevant parties was shown in *Appendix G*.
- 4.1.2 In this Reporting Month, there were 6 sessions of 24-hour TSP and 15 sessions of 1-hour TSP undertaken at each designated station for air quality monitoring. The air quality monitoring results are summarized in *Tables 4-1* to 4-3. The database of 24-hour TSP is shown in *Appendix H* and the graphical plots of monitoring result are shown in *Appendix I*.

 Table 4-1
 Summary of Air Quality Monitoring Results at ASR-1 under Contract 1

	24-hour 1-hour TSP (μg/m <sup>3</sup> )					
Date	TSP (µg/m <sup>3</sup> )	Date	Start Time	1 <sup>st</sup> hour measured	2 <sup>nd</sup> hour measured	3 <sup>rd</sup> hour measured
2-Jan-21	26	4-Jan-21	9:28	83	71	79
7-Jan-21	46	8-Jan-21	9:25	74	71	67
13-Jan-21	170	14-Jan-21	13:47	90	92	98
19-Jan-21	175	20-Jan-21	9:31	86	84	83
25-Jan-21	103	26-Jan-21	13:28	86	89	94
30-Jan-21	70					
Average	98	Average		83		
(Range)	(26 - 175)	(Range)		(67 – 98)		

 Table 4-2
 Summary of Air Quality Monitoring Results at ASR-2 under Contract 2

	24-hour			1-hour TSP (µ	1-hour TSP (µg/m <sup>3</sup> )		
Date	TSP (µg/m <sup>3</sup> )	Date	Start Time	1 <sup>st</sup> hour measured	2 <sup>nd</sup> hour measured	3 <sup>rd</sup> hour measured	
2-Jan-21	39	4-Jan-21	9:33	79	86	84	
7-Jan-21	51	8-Jan-21	9:31	65	68	64	
13-Jan-21	88	14-Jan-21	9:18	83	92	81	
19-Jan-21	75	20-Jan-21	9:36	82	80	79	
25-Jan-21	49	26-Jan-21	9:13	79	81	77	
30-Jan-21	46						
Average	58	Average		79			
(Range)	(39 - 88)	(Range)		(64 - 92)			

Table 4-3	Summary of Air Quality Monitoring Results at ASR-3a under Contract 2
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	24-hour			1-hour TSP (μg/m <sup>3</sup> )		
Date	TSP (µg/m <sup>3</sup> )	Date	Start Time	1 <sup>st</sup> hour measured	2 <sup>nd</sup> hour measured	3 <sup>rd</sup> hour measured
2-Jan-21	128	4-Jan-21	9:43	82	77	74
7-Jan-21	72	8-Jan-21	9:36	60	64	57
13-Jan-21	90	14-Jan-21	9:33	79	81	77
19-Jan-21	82	20-Jan-21	9:41	76	74	73
25-Jan-21	65	26-Jan-21	9:31	69	75	71
30-Jan-21	59					
Average	82	Average		73		
(Range)	(59 – 128)	(Rang	ge)	(57 - 82)		

# 4.2 AIR MONITORING EXCEEDANCE

4.2.1 As shown in *Tables 4-1 to 4-3*, the monitoring results of 24-hour and 1-hour TSP monitoring in the Reporting Month were below the Action/ Limit Level. No Notification of Exceedance (NOE) of air quality monitoring criteria was issued and therefore corrective action was not required. The meteorological data during the impact monitoring days are summarized in *Appendix J*.



## 5. CONSTRUCTION NOISE

## 5.1 MONITORING RESULTS

- 5.1.1 In the Reporting Month, noise monitoring was performed at all designated locations. Impact monitoring schedule provided to all relevant parties was shown in *Appendix G*.
- 5.1.2 In this Reporting Month, 5 sessions of noise monitoring were undertaken at each designated noise monitoring location. The sound level were set in a free field situation for CN1, CN2 and CN3 and therefore a façade correction of +3dB(A) has been added according to acoustical principles and EPD guidelines. The monitoring result of noise monitoring is show in *Tables 5-1 and 5-2* and the graphical plots are shown in *Appendix I*.

 Table 5-1
 Summary of Construction Noise Monitoring Results under Contract 1

	Construction Noise Level (Leq30min), dB(A)					
Date	Start Time	CN1(*)	Start Time	CN2(*)		
4-Jan-21	9:30	69	10:10	67		
8-Jan-21	11:35	66	10:58	67		
14-Jan-21	11:22	68	10:44	66		
20-Jan-21	9:12	69	10:14	66		
26-Jan-21	13:35	65	10:39	66		
Limit Level	75 dB(A)					

(\*) A façade correction of +3dB(A) has been added according to acoustical principles and EPD guidelines.

Table 5-2	<b>Summary of Construction</b>	Noise Monitoring Results under Contract 2

	Construct	tion Noise Level	$(L_{eq30min}), dB(A)$	
Date	Start Time	CN3 <sup>(*)</sup>	Start Time	CN4
4-Jan-21	11:01	59	11:53	56
8-Jan-21	10:18	59	9:41	55
14-Jan-21	10:03	64	9:26	58
20-Jan-21	11:11	57	12:00	53
26-Jan-21	10:00	60	9:22	57
Limit Level		P	75 dB(A)	

(\*) A façade correction of +3dB(A) has been added according to acoustical principles and EPD guidelines.

5.1.3 Prior and after noise monitoring, the accuracy of the sound level meter has been checked by an acoustic calibrator to ensure the measurement within acceptance range of  $\pm 0.5$ dB. Moreover, wind speed checked by portable wind speed meter has been performed before noise monitoring. No noise measurement was performed in fog, rain, wind with a steady speed exceeding 5 m s<sup>-1</sup> or wind with gusts exceeding 10 m s<sup>-1</sup>.

#### 5.2 NOISE MONITORING EXCEEDANCE

5.2.1 As shown in *Tables 5-1 and 5-2*, no Limit Level exceedance for noise monitoring exceedance was recorded in the Reporting Month. Moreover, no noise complaint (which triggered Action Level) was received. No Notification of Exceedance (NOE) of construction noise criterion was issued and no corrective action was therefore required.



## 6. WATER QUALITY

## 6.1 MONITORING RESULTS

- 6.1.1 In the Reporting Month, water quality monitoring was performed at all designated locations. Impact monitoring schedule provided to all relevant parties was shown in *Appendix G*.
- 6.1.2 In the Reporting Month, a total of 13 monitoring days were carried out for water quality impact monitoring. The monitoring result of key parameters including Dissolved Oxygen, Turbidity and Suspended Solids are summarized in *Tables 6-1* and 6-2. Detailed monitoring results including in-situ measurements and laboratory analysis data are shown in *Appendix H* and graphical plots for monitoring result are shown in *Appendix I*.

		Parameters	
Date	DO (Averaged) (mg/L)	Turbidity (Averaged) (NTU)	Suspended Solids (Averaged) (mg/L)
2-Jan-21	6.76	1.9	3.0
4-Jan-21	6.84	1.1	2.0
6-Jan-21	7.58	1.4	<2
8-Jan-21	8.53	1.5	<2
11-Jan-21	8.95	2.5	2.0
13-Jan-21	8.99	1.5	2.5
15-Jan-21	8.56	1.8	4.0
18-Jan-21	8.35	1.5	4.0
20-Jan-21	7.72	1.6	4.0
22-Jan-21	7.71	1.4	3.5
25-Jan-21	7.76	1.2	2.5
27-Jan-21	7.38	2.7	3.5
29-Jan-21	7.75	1.0	<2

 Table 6-1
 Summary of Water Quality Monitoring Results – M3 under Contract 1

Table 6-2 Summary of Water	Onalit	v Monitoring Resul	ts (M1. M2 and M4	4) under Contract 2
Table 0 2 Summary of Water	Zuant	y monitoring resul	to (IVII) IVIA and IVI	i) unuci contract

				Pa	rametei	'S				
Date		(Average (mg/L)	d)	Turbidi	ty (Ave (NTU)	raged)	Suspended Solids (Averaged) (mg/L)			
	M1	M2	M4	M1	M1 M2 N		M1	M2	M4	
2-Jan-21	8.22	#	8.94	5.1	#	1.9	3.0	#	<2	
4-Jan-21	7.23	#	8.81	1.2	#	0.9	3.0	#	<2	
6-Jan-21	7.74	#	7.84	1.2	#	0.7	3.5	#	<2	
8-Jan-21	8.35	#	8.49	1.4	#	1.7	2.5	#	<2	
11-Jan-21	8.85	#	9.17	1.8	#	1.2	8.0	#	2.0	
13-Jan-21	8.12	#	7.95	2.0	#	0.9	4.5	#	<2	
15-Jan-21	8.55	#	7.68	2.0	#	1.0	3.5	#	3.0	
18-Jan-21	8.69	#	8.68	1.3	#	1.0	<2	#	<2	
20-Jan-21	8.37	#	8.62	1.9	#	1.2	6.0	#	2.5	
22-Jan-21	7.72	#	7.84	1.5	#	1.6	5.5	#	3.5	
25-Jan-21	8.03	#	7.53	2.5	#	2.0	3.5	#	2.5	
27-Jan-21	8.09	#	7.82	2.9	#	1.0	7.0	#	3.0	
29-Jan-21	7.82	#	7.89	1.5	#	2.2	3.5	#	4.5	

*Remarks:* (#) During the water monitoring, the channel of M2 was observed dried up and water sampling was unable be carried out;

*Note: Bold and underlined value indicated Limit Level exceedance Italic and bold value indicated Action Level exceedance.* 



6.1.3 During the Reporting Month, field measurements including temperature of stream water, salinity concentrations, pH values and the stream flow velocity for all monitoring locations are summarized in *Table 6-3*.

		Parameters of field measurements											
Monitoring Location	pH (Averaged) (unit)		Salinity (Av (ppt	-	Temp (Av (°C	-	Water Flow (Averaged) (m/s)						
	min	max	min	max	min	max	min	max					
M1	7.4	7.9	0.05	0.07	10.5	17.9	< 0.1	< 0.1					
M2	#	#	#	#	#	#	#	#					
M3	7.1	7.6	0.03	0.07	10.5	18.3	< 0.1	< 0.1					
M4	7.1	7.4	0.07	0.09	10.7	19.1	< 0.1	< 0.1					

 Table 6-3
 Summary of Field Measurements for Water Quality

*Remarks:* (#) During the water monitoring, the channel of M2 was observed dried up and water sampling was unable be carried out;

# 6.2 WATER QUALITY MONITORING EXCEEDANCE

6.2.1 In this Reporting Month, No Limit Level and Action Level water quality exceedances were recorded. The non-compliance of water quality performance is summarized in *Table 6-4*.

Station	D	0	Turbidity		SS		To Excee	tal dance	Project Related exceedance		
	Action	Limit	Action	Limit	Action	Limit	Action	Limit	Action	Limit	
M1	0	0	0	0	0	0	0	0	0	0	
M2	0	0	0	0	0	0	0	0	0	0	
M3	0	0	0	0	0	0	0	0	0	0	
M4	0	0	0	0	0	0	0	0	0	0	

 Table 6-4
 Action and Limit (A/L) Levels Exceedance Record

6.2.2 Notification of Exceedance (NOE) and the investigation for exceedance in the Reporting Month is summarized in *Table 6-5*.

	Table 6-5	Summary of Investigation of Wa	ter Quality Exceedance	in the Reporting Month
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Date of Exceedance	Exceeded Parameter	Cause of Water Quality Exceedance



# 7. ECOLOGY MONITORING

# 7.1 REQUIREMENT

- 7.1.1 According to approved EIA report (AEIAR-198/2016), habitat types within project boundary comprise of watercourse, grassland, upland grassland, plantation, woodland and developed area. Natural habitats were of moderate ecological value in terms of species diversity, species rarity, species abundance, ecological linkage as well as nursery. Moreover, 0.3ha of wet woodland on the northern side of Sandy Ridge was deemed habitat with high ecological value. Four types of habitats were regarded as ecologically sensitive habitats, namely wet woodland, watercourses, upland grassland and woodland. Considering human disturbance in upcoming construction and operation phases, ecologically sensitive habitats shall be monitored in accordance with EM&A Manual.
- 7.1.2 The objective of ecologically sensitive habitats monitoring is to evaluate the effectiveness of measures to minimize impacts on concerned habitats from disturbance and pollution. In order to monitor the effectiveness of the measures to the minimize impact on ecologically sensitive habitats from disturbance and pollution, monthly monitoring during construction and operation phases is required as specified in EM&A Manual. Standard faunal transect and sampling surveys cover both wetland habitats (*wet woodland and watercourse*) and non-wetland habitats (*upland grassland and woodland*).

## 7.2 METHODOLOGY

7.2.1 Wetland habitats include wet woodland and watercourses. Monitoring surveys using standardized quantitative methodology will conduct at fixed points. For seasonal watercourse, the survey will be conducted whenever the habitat appears. Measures to respond to decreases in numbers of aquatic fauna using the wetland habitats and Action/Limit levels to trigger these measures are detailed in *Table 7-1*.

Action Level	Response	Limit Level	Response									
		taxa diversity by	Investigate cause and if cause identified as related to the project instigate remedial action.									

 Table 7-1
 Action and Limit Levels for Wet Woodland Habitats Monitoring

Remarks: Action and Limit Levels and Responses to Evidence of Declines in Aquatic Fauna

7.2.2 Non-wetland habitats consist of upland grassland and woodland. Monthly quantitative surveys of non-aquatic fauna will be conducted using standard route transect counts. Measures to respond to decreases in numbers of non-aquatic fauna using the non-wetland habitats and Action/Limit levels to trigger these measures are detailed in *Table 7-2*.

 Table 7-2
 Action and Limit Levels for Non-Wet Woodland Habitats Monitoring

Action Level	Response	Limit Level	Response
	e	species diversity	Investigate cause and if cause identified as related to the project instigate remedial action.

Remarks: Action and Limit Levels and Responses to Evidence of Declines in Non-Aquatic Fauna

7.2.3 The ecological survey includes all taxa being investigated in accordance with EIA report. Schedule of faunal surveys in each year during construction phase is presented in *Table 7-3*.

# Table 7-3Schedule of Faunal Surveys in each year During Construction Phase

v v O												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mammals												$\checkmark$
Birds (day)								$\checkmark$				$\checkmark$



Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Birds (night)												
Herpetofauna												
Dragonflies												
Butterflies												
Aquatic fauna												$\checkmark$

## Mammal Survey

7.2.4 Mammal surveys will be conducted along the proposed transects (shown in Appendix D of the survey report) during both daytime and night time periods. Along with direct observations, other field signs, such as scats and tracks, will be searched and recorded if present.

## <u>Bird Survey</u>

7.2.5 Bird surveys will be conducted along the transects (shown in Appendix D of the survey report) during the surveys, species and their vocalizing individuals recorded will be enumerated and recorded according to the habitat(s) they are utilizing.

## Herpetofauna Survey

7.2.6 Reptile and amphibian surveys will be conducted along transects (shown in Appendix D of the survey report) during surveys careful searches of appropriate microhabitats and refugia for reptiles and their vocalizing individuals will be undertaken and all reptiles observed will be identified and counted.

## Dragonfly and Butterfly Survey

7.2.7 Dragonfly and Butterfly surveys will be conducted along transects (shown in Appendix D of the survey report) during surveys all dragonflies and Butterflies seen will be identified and counted as accurately as possible.

# <u>Aquatic Fauna Survey</u>

- 7.2.8 Freshwater fishes and macro-invertebrates will be recorded by direct observation. All species trapped/recorded will be enumerated and identified (to the lowest taxonomic level possible), and the species of conservation importance photographed.
- 7.2.9 After each ecological monitoring survey, a monthly report of the survey result and data collected will be provided with reference to EM&A Manual. An annual analysis of data will be carried out in order to study if there is any significant reduction in taxa diversity and abundance.

# 7.3 ECOLOGICAL MONITORING SURVEY FINDINGS (CONTRACT 1)

7.3.1 In the Reporting Month, ecological monitoring was undertaken on *5<sup>th</sup> January 2021* at work area of Contract 1. A sunny day. The day survey covered wetland and non-wetland areas. The survey was conducted by transect and at fixed points. All species seen will be identified and counted as accurately as possible. Results of the monitoring survey are presented below:

# Monitoring Result for Contract 1

Mammal

7.3.2 There was no mammal recorded in the monitoring area

#### **Birds**

7.3.3 There were total of 23 bird individuals from 6 species recorded in the monitoring area. Greater Coucal 褐翅鴉鵑. Golden-headed Cisticola was not observed during the bird survey.

#### <u>Herpetofauna</u>

7.3.4 There was no reptile and amphibian species recorded in the monitoring area.



# <u>Butterfly</u>

7.3.5 There were a total of 4 butterfly individuals from 4 species recorded in the monitoring area.

<u>Dragonfly</u>

7.3.6 There was no odonate recorded in the monitoring area.

Aquatic Fauna Survey (Freshwater communities)

- 7.3.7 There was no freshwater community recorded in the monitoring area.
- 7.3.8 The summaries of faunal survey result are shown in *Tables 7-4 and 7-5*.

Scientific Name	Common / Engineer Name	Chinese Name	<b>Conservation Status</b>	Non- wetland	Wetland
Mammal Survey					
Avifauna Survey					
Pycnonotus jocosus	Red-whiskered Bulbul	紅耳鵯		3	13
Pycnonotus sinensis	Chinese Bulbul	白頭鵯		2	
Phylloscopus fuscatus	Dusky Warbler	褐柳鶯			1
Prinia flaviventris	Yellow-bellied Prinia	黃腹鷦鶯		1	
Prinia inornata	Plain Prinia	純色鷦鶯			2
Orthotomus sutorius	Common Tailorbird	長尾縫葉鶯		1	
<b>Reptile Survey</b>					
Amphibian Survey					
Butterfly Survey					
Abisara echerius	Plum Judy	蛇目褐蜆蝶			1
Mycalesis zonata	South China Bush Brown	平頂眉眼蝶		1	
Pieris canidia	Indian Cabbage White	東方菜粉蝶			1
Eurema hecabe	Common Grass Yellow	寬邊黃粉蝶			1
<b>Odonate Survey</b>					

#### Table 7-4Result of Faunal Survey under Contract 1

Table 7-5	<b>Result of Freshwater Communities Survey under Contract 1</b>
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	Scientific NameCommon NameChinese NameConservation Status		5-Ja	n-21	
Scientific Name			<b>Conservation Status</b>	Non- wetland	Wetland

#### **Discussion**

7.3.9 After analysing survey results in December from 2019 to 2021, it is found that the species diversity reduced in wetland habitat but the abundance was increase. The reduction could be due to natural fluctuation. Good practice during construction is required to prevent environmental contamination as well as unnecessary site clearance. Continuous monitoring is also recommended to inspect any significant decrease in species diversity.



## 7.4 ECOLOGICAL MONITORING SURVEY FINDINGS (CONTRACT 2)

7.4.1 In the Reporting Month, ecological monitoring was undertaken on 5<sup>th</sup> January 2021 at work area of Contract 2. A sunny day. The day survey covered wetland and non-wetland areas. The survey was conducted by transect and at fixed point. All species seen will be identified and counted as accurately as possible. Results of the monitoring survey are presented below:

# Monitoring Result for Contract 2

#### <u>Mammal</u>

7.4.2 There was no mammal recorded in the monitoring area

## <u>Birds</u>

7.4.3 There were a total of 15 bird individuals from 7 species recorded in the monitoring area. Golden-headed Cisticola was not observed during the bird survey.

## <u>Herpetofauna</u>

7.4.4 There was no reptile and amphibian recorded in the monitoring area.

## *Butterfly*

7.4.5 There was total 1 butterfly individuals from 1 species recorded in the monitoring area.

## <u>Dragonfly</u>

7.4.6 There was total 1 odonate individuals from 1 species recorded in the monitoring area.

## Aquatic Fauna Survey (Freshwater communities)

7.4.7 There were two species of freshwater fish were recorded in the monitoring area.

#### 7.4.8 The summaries of faunal survey result are shown in *Tables 7-6* and 7-7.

#### Table 7-6Result of Faunal Survey under Contract 2

Scientific Name	Common / Engineer Name	Chinese Name	Conservation Status	Non- wetland	Wetland
Mammal Survey					
Avifauna Survey					
Parus cinereus	Cinereous Tit	蒼背山雀		2	
Pycnonotus jocosus	Red-whiskered Bulbul	紅耳鵯			3
Pycnonotus sinensis	Chinese Bulbul	白頭鵯			2
Prinia flaviventris	Yellow-bellied Prinia	黃腹鷦鶯			2
Orthotomus sutorius	Common Tailorbird	長尾縫葉鶯		1	
Copsychus saularis	Oriental Magpie Robin	鵲鴝		1	
Lonchura punctulata	Scaly-breasted Munia	斑文鳥			4
<b>Reptile Survey</b>				_	
Amphibian Survey					
Butterfly Survey					
Neptis hylas	Common Sailer	中環蛺蝶		1	
<b>Odonate Survey</b>					
Trithemis aurora	Crimson Dropwing	曉褐蜻			1



Table 7-7         Result of Freshwater Communities Survey under Contemporation	ntract 2
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Scientific Name	Common Name	Chinese Name	Conservation Status	5-Jan-2021
Gambusia affinis	Mosquito fish	食蚊魚		+
Puntius semifasciolatus	Chinese Barb	五線無鬚鮑		+

+: Species appeared but uncountable.

## **Discussion**

- 7.4.9 After analysing survey results in January 2019 to 2021, in the wetland, the species diversity was reduced, but no significant drop in abundance. In the non-wetland, species diversity had no significant change, but the abundance was drop, it could be due to natural fluctuation. A good practice during construction is required to prevent environmental contamination as well as unnecessary site clearance. Moreover, continuous monitoring is required to inspect any significant reduction of species diversity.
- 7.4.10 The detailed survey reports of Contract 1 and Contract 2 are attached in *Appendix K*.
- 7.4.11 The tentative ecology inspection and monitoring in the next Reporting Month (February 2021) is scheduled on 2<sup>nd</sup> February 2021.

## 7.5 MONITORING OF FLORA SPECIES OF CONSERVATION INTEREST

- 7.5.1 According to the approved vegetation survey report and transplantation proposal under FEP-01/534/2017/A, an individual of flora species of conservation interest (the transplanted T-2928) was identified and transplanted to the receptor site.
- 7.5.2 According to approved vegetation survey report and transplantation proposal, post-transplantation monitoring was conducted once per week in the first three months after the transplantation in Oct 2018 and once in each of the following month in the remaining establishment period for 12 month. During the remaining construction phase of the project, the transplanted T-2928 would be monitored on quarterly basis.
- 7.5.3 A landscape sub-contractor was employed by the Contractor to monitor the health condition of transplanted species and provide advice on necessary weeding, fertilizing and pest control. The monitoring records were submitted to ET and IEC for review and record. Moreover, inspection of the transplanted T-2928 was undertaken by ET as part of the weekly site inspection. No construction activity and disturbance were observed at the location of the transplanted T-2928. The health condition of the transplanted T-2928 was fair with normal foliage color and density.

#### 7.6 MEASURE FOR PROTECTION OF NESTING BIRD

- 7.6.1 Pursuant to FEP-01/534/2017/A condition 2.19 and EP-534/2017/A condition 2.20, precautionary checks for the presence of nesting birds shall be carried out in the breeding season (February to July) before vegetation clearance.
- 7.6.2 In the Reporting period, there was no precautionary check for the presence of nesting birds carried out for Contract 1 and Contract 2 outside the breeding season.



# 8. LANDSCAPE AND VISUAL

## 8.1 REQUIREMENT

- 8.1.1 The EIA has recommended EM&A for landscape and visual resources to be undertaken during the design, construction and operational stages of the project. The design, implementation and maintenance of landscape mitigation measures is a key aspect of this and should be checked to ensure that they are fully realized and that potential conflicts between the proposed landscape measures and any other project works let its are resolved at the earliest possible date and without compromise to the intention of the mitigation measures. In addition, implementation of the mitigation measures recommended by the EIA will be monitored through the site audit programme.
- 8.1.2 A number of mitigation measures to ameliorate the landscape and visual impacts of the Project implementation is summarized in the EMIS of *Appendix 13.1* of the EIA Report.
- 8.1.3 The landscape and visual mitigation measures proposed should be incorporated in the landscape and engineering design. Mitigation measures to be implemented during construction should be adopted from the start of construction and be in place throughout the entire construction period. Mitigation measures to be implemented during operation should be integrated into the detailed design and built as part of the construction works so that they are in place on commissioning of the Project. Tree transplantation and compensatory planting should be carried out as early as possible in the Project with transplantation carried out prior to construction starting in any particular area.
- 8.1.4 During construction phase, Landscape & Visual Monitoring of the contractor's operations should be conducted monthly and reported by ET, and countersigned by IEC.

#### 8.2 FINDINGS / DEFICIENCIES DURING SITE INSPECTION IN THE REPORTING MONTH

8.2.1 In the Reporting Month, landscape & Visual inspection was carried out by the Registered Landscape Architect (RLA) for works area of Contract 1 and Contract 2 on 20<sup>th</sup> January 2021. The findings / reminders recorded during the inspection are presented in *Tables 8-1 and 8-2*.

	Landscape & Visual hispection Finding for Contract 1				
Date	Findings and Reminder	Follow-Up Status			
20 <sup>th</sup> January 2021	1. The Contractor is reminded to set up TPZ of proper size and with appropriate material around retain trees according to approved method statement.	• Reminder only			
	2. The Contractor is reminded to prevent the construction material pile within TPZ and ensure no works is allowed within the TPZ.	• Reminder only			
	3. Transplanted trees T2465, T2468 and T2928 were in fair health condition with normal foliage color and density. Contractor is reminded to provide proper maintenance according to approved method statement.	• Reminder only			

Table 8-1 Landscape & Visual Inspection Finding for	Contract I
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#### Table 8-2Landscape & Visual Inspection Finding for Contract 2

Date	Findings and Reminder	Follow-Up Status
20 <sup>th</sup>	1. The Contractor is reminded to set up TPZ of proper	<ul> <li>Reminder only</li> </ul>
January	size and with appropriate material around retain trees	
2021	according to approved method statement. Contractor	
	should prevent any construction material pile within	
	TPZ and ensure no works is allowed within the TPZ.	

8.2.2 Inspection checklist of Landscape & Visual signed by RLA is attached in *Appendix L*.



## 9. WASTE MANAGEMENT

#### 9.1 GENERAL WASTE MANAGEMENT

9.1.1 Waste management was carried out by an on-site Environmental Officer or an Environmental Supervisor from time to time in accordance with the Waste Management Plan (WMP).

## 9.2 **RECORDS OF WASTE QUANTITIES**

- 9.2.1 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.
- 9.2.2 The quantities of waste for disposal in this Reporting Month are summarized in *Table 9-1* and *9-2* and the Monthly Summary Waste Flow Table is shown in *Appendix M*. Whenever possible, materials were reused on-site as far as practicable.

	Cont	tract 1 Contract		tract 2
Type of Waste	Quantity	Disposal Location	Quantity	Disposal Location
Total generated C&D Materials (Inert) ('000m <sup>3</sup> )	3.401		732.6 (#)	
Reused in this Contract (Inert) ('000m <sup>3</sup> )	0.525	Within Contract area	0	
Reused in other Projects (Inert) ('000m <sup>3</sup> )	0		0	
Disposal as Public Fill (Inert) ('000m <sup>3</sup> )	0.476	Tuen Mun Area 38	732.6 (#)	Tuen Mun Area 38

## Table 9-1Summary of Quantities of Inert C&D Materials

Remark: the unit is '000kg

## Table 9-2Summary of Quantities of C&D Wastes

	Con	tract 1	Contract 2	
Type of Waste	Quantity	Disposal Location	Quantity	Disposal Location
Recycled Metal ('000kg)	0		0	
Recycled Paper / Cardboard Packing ('000kg)	0		0	
Recycled Plastic ('000kg)	0		0	
Chemical Wastes ('000kg)	0		0	
General Refuses ('000m <sup>3</sup> )	0.022	NENT Landfill	8.770 (#)	NENT Landfill

Remark: the unit is '000kg

9.2.3 Since canteen and/or kitchen are not allowed setting on the Project site, no domestic wastewater was generated from the Project.



# **10. SITE INSPECTION**

# **10.1 REQUIREMENT**

10.1.1 According to the approved EM&A Manual, environmental site inspection should be led by RE and attended by the Contractor and ET at least once per week. Regular environmental site inspections shall be carried out to assess the environmental performance.

# **10.2** FINDINGS / DEFICIENCIES DURING SITE INSPECTION IN THE REPORTING MONTH

# Contract 1

- 10.2.1 In the Reporting Month, joint site inspections for Contract 1 to evaluate the site environmental performance were carried out by the RE, ET and the Contractor on 7<sup>th</sup>, 14<sup>th</sup>, 21<sup>st</sup> and 28<sup>th</sup> January 2021 and IEC attended joint site inspection on 21<sup>st</sup> January 2021. No non-compliance was noted.
- 10.2.2 The findings / deficiencies that observed during the weekly site inspection are listed in *Table 10-1*.

Table 10-1Site Observations for the Works of Contract 1

Date	Findings / Deficiencies	Follow-Up Status
7 <sup>th</sup> January 2021	<ul> <li>Drip tray should be provided for chemical containers. (CS12)</li> <li>The Contractor was reminded to provide proper mitigation measure to reduce dust emission.</li> </ul>	<ul><li> The chemical containers were removed.</li><li> Reminder only</li></ul>
14 <sup>th</sup> January 2021	• Over 20 bags of cement bags should be covered by tarpaulin sheets or other means. (CS256)	• Cement bags were covered by tarpaulin sheet.
	<ul> <li>Drip tray should be provided for any chemical containers used on site. (CS256)</li> <li>The Contractor was reminded to dispose the empty cement bags properly. (CS12)</li> </ul>	<ul><li> The chemical container was removed.</li><li> Reminder only</li></ul>
21 <sup>st</sup> January 2021	• Drip tray should be provided for chemical containers to prevent leakage. (Workshop and CS1)	Chemical containers were removed.
	• Oil stains should be cleaned and disposed properly. (Workshop)	• Oil stains was cleaned.
28 <sup>th</sup> January 2021	• The Contractor was reminded to provide drip tray for the generator at Petrol interceptor No.3.	• Reminder only.

# Contract 2

- 10.2.3 In the Reporting Month, joint site inspections for Contract 2 to evaluate the site environmental performance carried out by the RE, ET and the Contractor was on 7<sup>th</sup>, 14<sup>th</sup>, 21<sup>st</sup> and 28<sup>th</sup> January 2021 and IEC attended joint site inspection on 21<sup>st</sup> January 2021 non-compliance was noted.
- 10.2.4 The findings / deficiencies that observed during the weekly site inspection are listed in *Table 10-2*.

Table 10-2Site Observations for the Works of Contract 2

Date	Findings / Deficiencies	Follow-Up Status
7 <sup>th</sup> January 2021	<ul> <li>Construction materials should be removed. (C224)</li> <li>The Contractor was reminded to clean the U channel regularly.</li> </ul>	<ul><li> The construction materials were removed.</li><li> Reminder only</li></ul>
14 <sup>th</sup> January 2021	• Oil stains should be removed and disposed properly. (MKTR)	• Oil stains was removed.
	• The Contractor was reminded to provide drip tray for chemical containers. (CS20)	• Reminder only.
21 <sup>st</sup> January 2021	• Scattered general refuse and construction waste should be cleaned properly. (RW14)	• General refuse and construction waste were



Date	Findings / Deficiencies	Follow-Up Status	
		cleared.	
	• Drip tray should be provided for chemical containers to prevent oil leakage. (RW14)	• Drip tray was provided.	
28 <sup>th</sup> January 2021	• The Contractor should provide sand bags for public channel at MKT Road inspection pit.	• Sand bags was provided.	
	• The Contractor should clear the mud near public channel at MKT Road inspection pit.	• Mud was cleared.	



# 11. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

#### 11.1 Environmental Complaint, Summons and Prosecution

11.1.1 In the Reporting Month, no environmental complaint was received for the project. No summons and prosecution was lodged for the Contract. The statistical summary table of the environmental complaint, summons and prosecution are presented in *Tables 11-1, 11-2* and *11-3*.

## Table 11-1 Statistical Summary of Environmental Complaints

Reporting Month		Environmental Complaint Statistics		
		Frequency	Cumulative	<b>Complaint Nature</b>
1 – 31 January 2021	Contract 1	0	0	NA
1 – 31 January 2021	Contract 2	0	1	Water

#### Table 11-2 Statistical Summary of Environmental Summons

Donosting Ma	nth	<b>Environmental Summons Statistics</b>		
<b>Reporting Month</b>		Frequency	Cumulative	<b>Complaint Nature</b>
1 – 31 January 2021	Contract 1	0	0	NA
1 – 31 January 2021	Contract 2	0	0	NA

#### Table 11-3 Statistical Summary of Environmental Prosecution

Reporting Month		Environmental Prosecution Statistics		
		Frequency	Cumulative	<b>Complaint Nature</b>
1 – 31 January 2021	Contract 1	0	0	NA
1 – 31 January 2021	Contract 2	0	0	NA

11.1.2 In addition, no complaints received and emergency event relating to violation of environmental legislation for illegal dumping and landfilling were received.



# 12. IMPLEMENTATION STATUS OF MITIGATION MEASURES

## **12.1 GENERAL REQUIREMENTS**

- 12.1.1 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 N*.
- 12.1.2 The Works of Contract 1 and Contract 2 under the Project shall be implementing the required environmental mitigation measures according to the approved EM&A Manual subject to the site condition. Environmental mitigation measures implemented in this Reporting Month is summarized in *Table 12-1*.

Issues	Environmental Mitigation Measures		
Water Quality	<ul> <li>Provided efficient silt removal facilities to reduce SS level before effluent discharge.</li> <li>Provided ditches, earth bunds or sand bag barriers to minimize polluted runoff.</li> <li>Temporary drainage was provided to prevent runoff going through site surface and minimize polluted runoff.</li> <li>Provided perimeter cut-off drains at site boundaries to intercept storm runoff from crossing the site.</li> <li>Exposed slopes surface were compacted and covered with tarpaulin or similar means.</li> <li>Provided portable chemical toilets on site.</li> </ul>		
Air Quality	<ul> <li>Maintain damp / wet surface on access road.</li> <li>Maintain low vehicular speed within the works areas.</li> <li>Provided vehicle wheel washing facilities at each construction site exit;</li> <li>Provided water spraying for all active works area.</li> <li>Stockpiles of dusty material were covered with impervious sheeting.</li> <li>Provided workers to clear dusty materials at the vehicle entrance or exit regularly.</li> <li>Stockpile more than 20 bags of cement or dry pulverized fuel ash (PFA) has been covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides.</li> </ul>		
Noise	<ul> <li>Restricted operation time of plants from 07:00 to 19:00 on any working day except for Public Holiday and Sunday.</li> <li>Keep good maintenance of plants.</li> <li>Placed noisy plants away from residence and school.</li> <li>Provided noise barriers or hoarding to enclose the noisy plants or works.</li> <li>Shut down the plants when not in used.</li> </ul>		
Waste and	Provided on-site sorting prior to disposal.		
Chemical Management	<ul> <li>Followed requirements and procedures of the "Trip-ticket System"</li> <li>Predicted required quantity of concrete accurately.</li> <li>Collected the unused fresh concrete at designated locations in the sites for subsequent disposal.</li> </ul>		
Ecology	<ul> <li>Implementing water control measures (ETWB TCW No. 5/2005) to avoid direct or indirect impacts any watercourses and impact to any aquatic fauna during the construction phase.</li> <li>Demarcation fencing has been erected to prevent unauthorised encroachment into the riparian corridor by constructions works and traffic.</li> <li>The construction work and site formation have been phased in order to reduce overall noise disturbance impacts in particular areas.</li> <li>Works have been restricted to daytime and any construction lighting was designed and positioned as to not impact on adjacent ecologically sensitive areas.</li> </ul>		
General	The site was generally kept tidy and clean.		

 Table 12-1
 Environmental Mitigation Measures



## **12.2** TENTATIVE CONSTRUCTION ACTIVITIES IN THE COMING MONTH

- 12.2.1 According to the information provided by HCTYJV, the forthcoming construction activities for Contract 1 are listed below:
  - General Site Housekeeping
  - Bulk Excavation
  - Construction of cut slope, installation of soil nailing and construction of surface channel and planter wall.
  - Construction of fill slope and surface channel
  - Construction of pick-up and drop-off point near Man Kam To Road
  - Construction of sewer and storm drain
  - Laying of street lighting ducts
  - Construction of watermains
  - Construction of noise barrier
- 12.2.2 According to the information provided by Sang Hing, the forthcoming construction activities for Contract 2 are listed below:
  - Construction of Manhole, gullies, drainage pipe at Lin Ma Hang Road between CH50-160 Southbound & CH675-780 Southbound & CH1345-1377 Northbound.
  - Man Kam To Road DN800 DI Sewerage Pipe FM4.23-4.28 (250m)
  - Man Kam To Road DN400 Watermain Pipe CH510-690 at North Fast Lane and CH360-510 & 690-1040 (510m) at North Slow Lane
  - Filling works for slope FS18 (Part A1)
  - Drainage Works at Road E CH200-230
  - Retaining Wall 14 construction
  - Construction of Retaining Wall 12
  - Soil Nail Works at Lin Ma Hang Road Slope C231 & C224
  - Fanling Station Road Covered Walkway
  - Lung Sum Avenue road surface modification works

### 12.3 KEY ISSUES FOR THE COMING MONTH

- 12.3.1 Key issues to be considered in the coming month for the works of Contract 1 include:
  - Implementation of control measures for rainstorm;
  - Regular clearance of stagnant water during wet season;
  - 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;
  - Ensure dust suppression measures are implemented properly;
  - Sediment catch-pits and silt removal facilities should be regularly maintained;
  - Discharge of site effluent to the nearby wetland is prohibited;
  - Nearby wetland prohibited stockpiling and/or disposal of materials;
  - Follow-up of improvement on general waste management issues; and
  - Implementation of construction noise preventative control measures.
- 12.3.2 The Contractors are reminded to pay special attention on water quality mitigation measures and should fully implement the measures as recommended in the EM&A Manual, in particular to prevent surface runoff and other pollutants from flowing to local stream and Conservation Area. The implementation of water quality mitigation measures conducted by the Contractors is shown in *Appendix O*.
- 12.3.3 During dry season, special attention should be paid on the potential construction dust impact. The contractor should fully implement the construction dust mitigation measures as far as practicable.



### **13. CONCLUSIONS AND RECOMMENTATIONS**

### **13.1 CONCLUSIONS**

- 13.1.1 This is the 30<sup>th</sup> Monthly EM&A Report presenting the monitoring results and inspection findings for the period of 1<sup>st</sup> to 31<sup>st</sup> January 2021.
- 13.1.2 No 24-hour or 1-hour TSP monitoring result that triggered the Action or Limit Levels was recorded. No NOEs or the associated corrective action was therefore required.
- 13.1.3 No noise complaint (which is an Action Level exceedance) was received and no construction noise measurement result that exceeded the Limit Level was recorded in this Reporting Month. No NOEs or the associated corrective actions were therefore issued.
- 13.1.4 For water quality monitoring, no Action Level and Limit Level water quality exceedance was recorded.
- 13.1.5 Monthly ecological monitoring for sensitive habitat for area of Contract 1 and Contract 2 were undertaken on 5<sup>th</sup> January 2021. As advised by both Contractors, there were no vegetation clearance conducted within the site in the Reporting Month and therefore precautionary check for the presence of nesting birds was not required.
- 13.1.6 Landscape and visual inspection at both Contracts were undertaken by the RLA on 20<sup>th</sup> January 2021. The Contractor was reminded to prevent the construction material pile within TPZ and ensure no works is allowed within the TPZ.
- 13.1.7 In the Reporting Month, no environmental complaint, summons and prosecution was received. In addition, no complaints received and emergency events relating to violation of environmental legislation for illegal dumping and landfilling were received.
- 13.1.8 In the Reporting Month, joint site inspections for Contract 1 to evaluate the site environmental performance were carried out by the Resident Engineer (RE), ET and the Contractor of the Contract 1 on 7<sup>th</sup>, 14<sup>th</sup>, 21<sup>st</sup> and 28<sup>th</sup> January 2021. Moreover, joint site inspections for Contract 2 by the RE, ET and the Contractor of Contract 2 were carried out on 7<sup>th</sup>, 14<sup>th</sup>, 21<sup>st</sup> and 28<sup>th</sup> January 2021. IEC attended the both Contract joint site inspection on 21<sup>st</sup> January 2021. No non-compliance was noted during the site inspections.

### **13.2 RECOMMENDATIONS**

- 13.2.1 The Contractors are reminded to pay special attention on water quality mitigation measures and should fully implement the measures as recommended in the EM&A Manual, in particular to prevent surface runoff and other pollutants from flowing to local stream and Conservation Area.
- 13.2.2 During dry season, air quality mitigation measures such as wheel wash facilities, watering of haul roads, loose soil construction surface and covering of dusty materials with tarpaulin sheet should be implemented as far as practicable.
- 13.2.3 Construction noise would be a key environmental issue during construction phase of the Project. Noise mitigation measures such as using quiet plants and mobile noise barriers should be implemented in accordance with the EM&A requirement.
- 13.2.4 Since some of the construction site under the Project is located near villages, both Contractors should fully implement air quality mitigation measures to reduce construction dust emission.
- 13.2.5 Furthermore, daily cleaning and weekly tidiness shall be properly performed and maintained. In addition, mosquito control should be performed to prevent mosquito breeding on site.

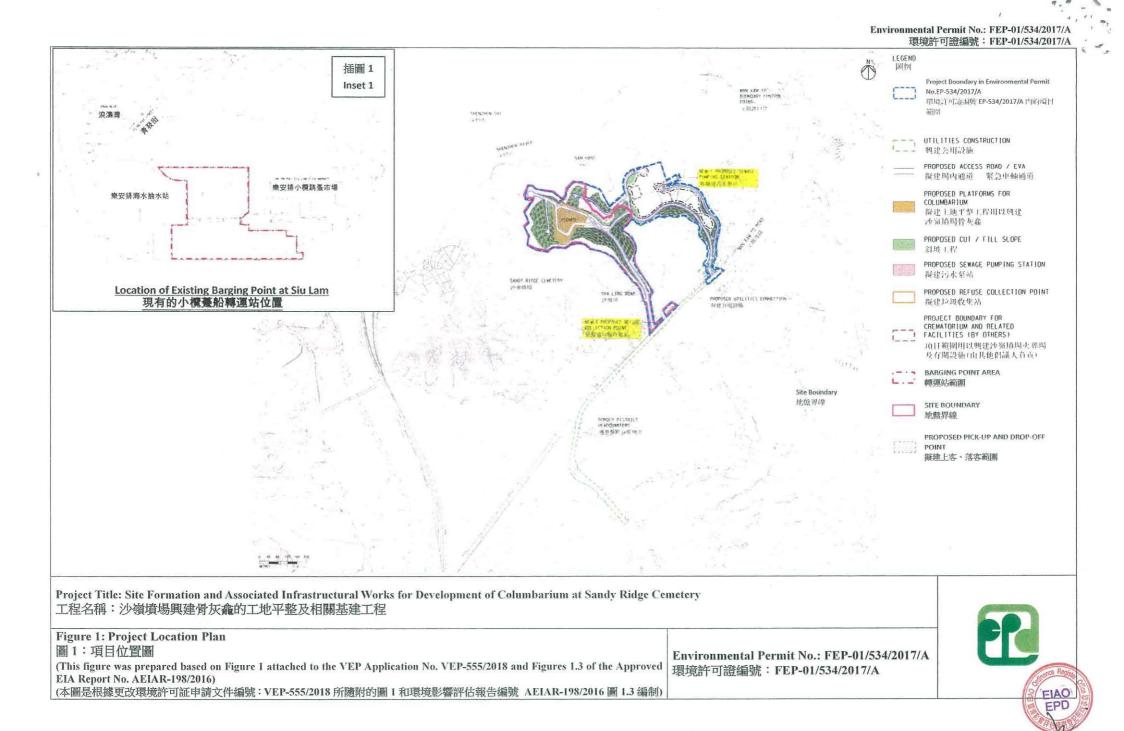


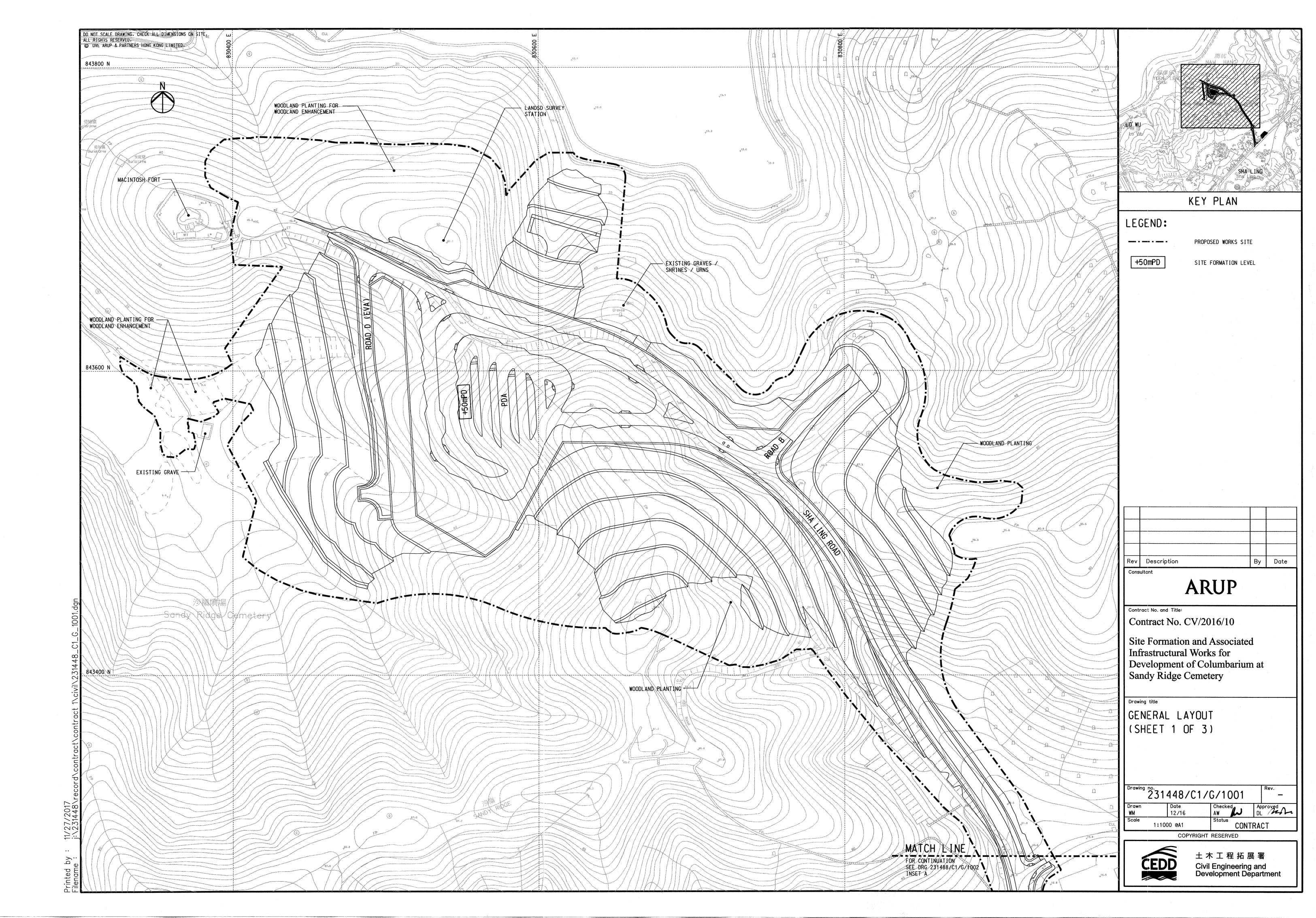
# Appendix A

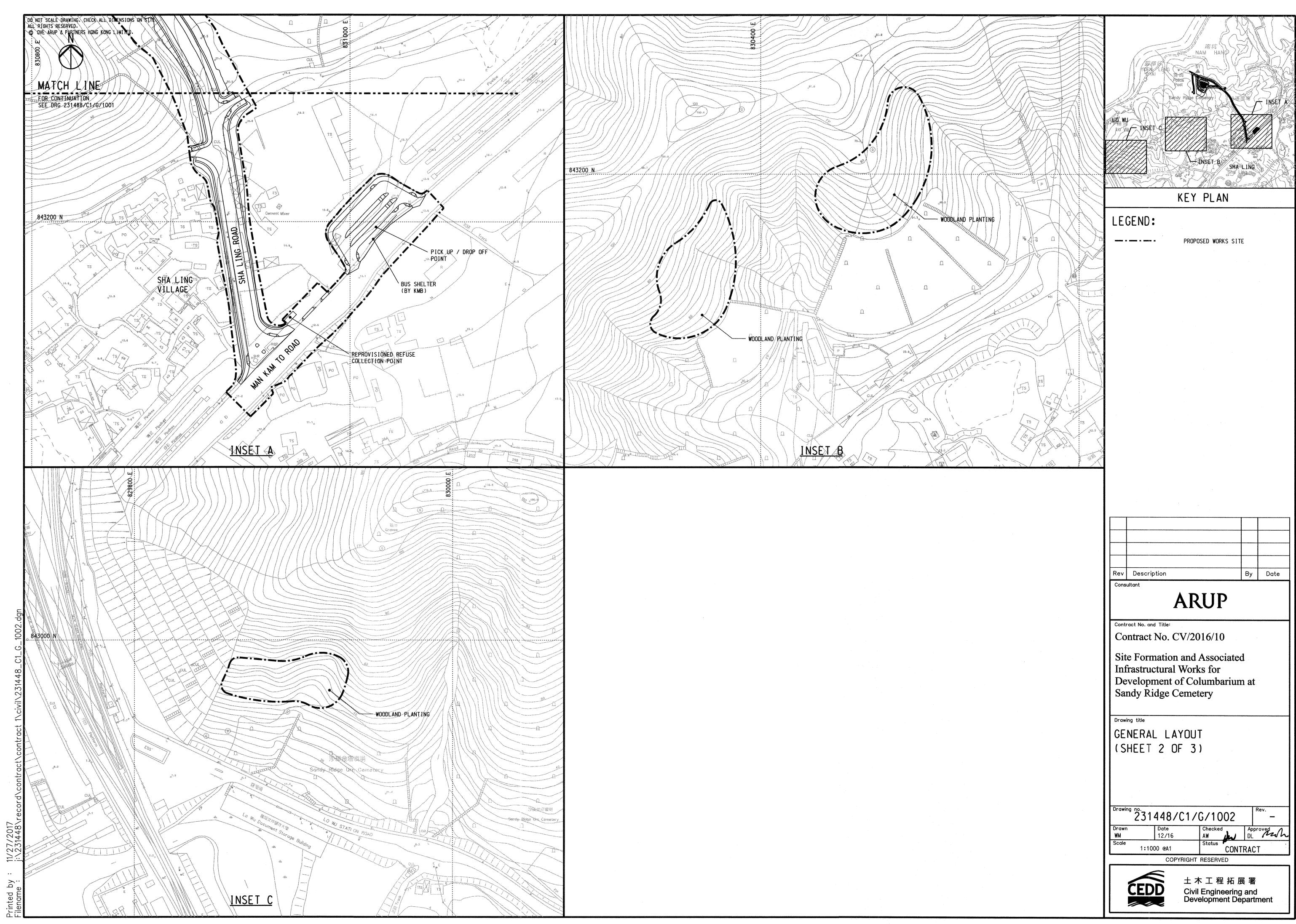
## Layout Plan of the Project



# Layout Plan of Contract CV/2016/10

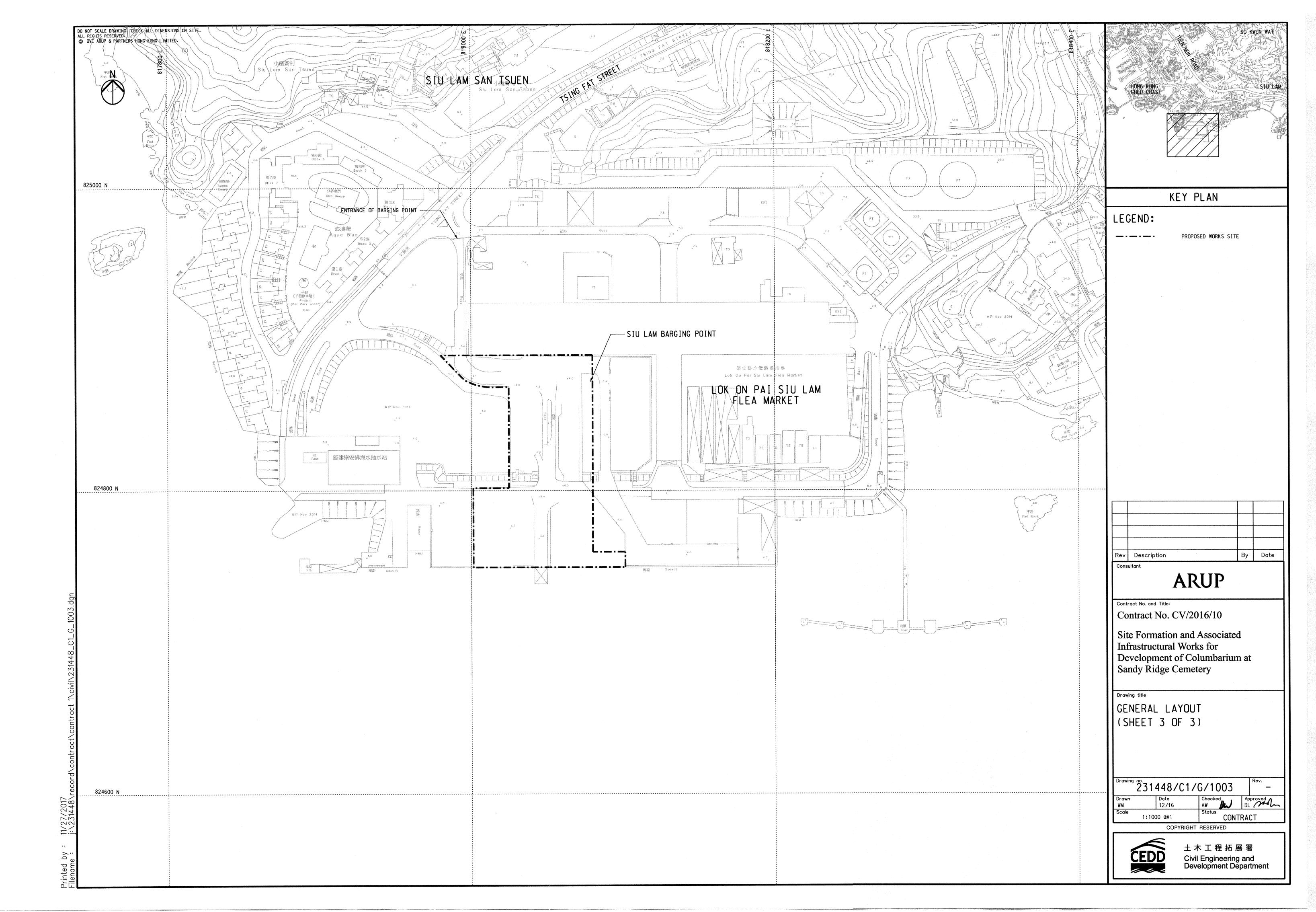






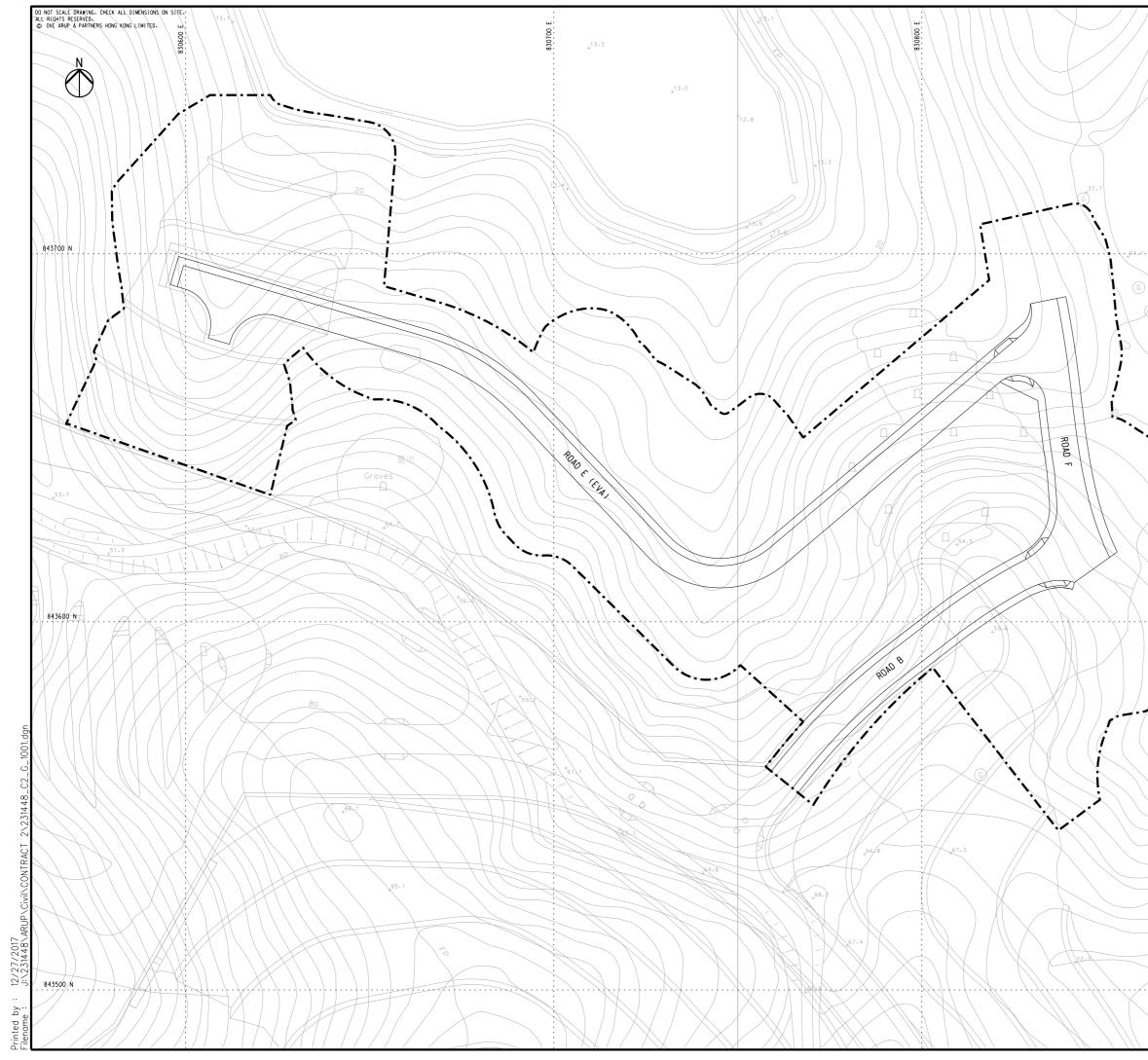
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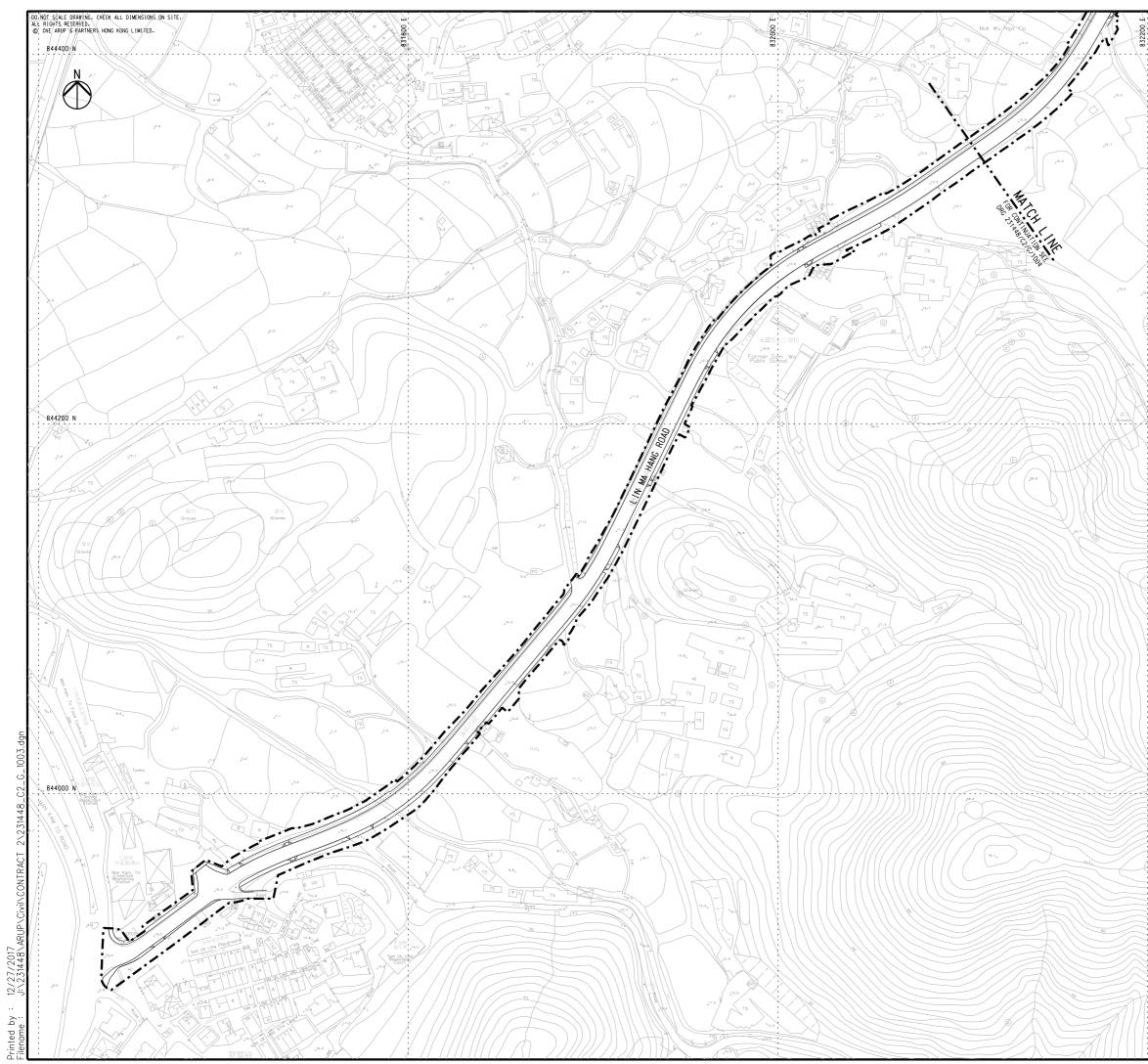


# Layout Plan of Contract CV/2017/02

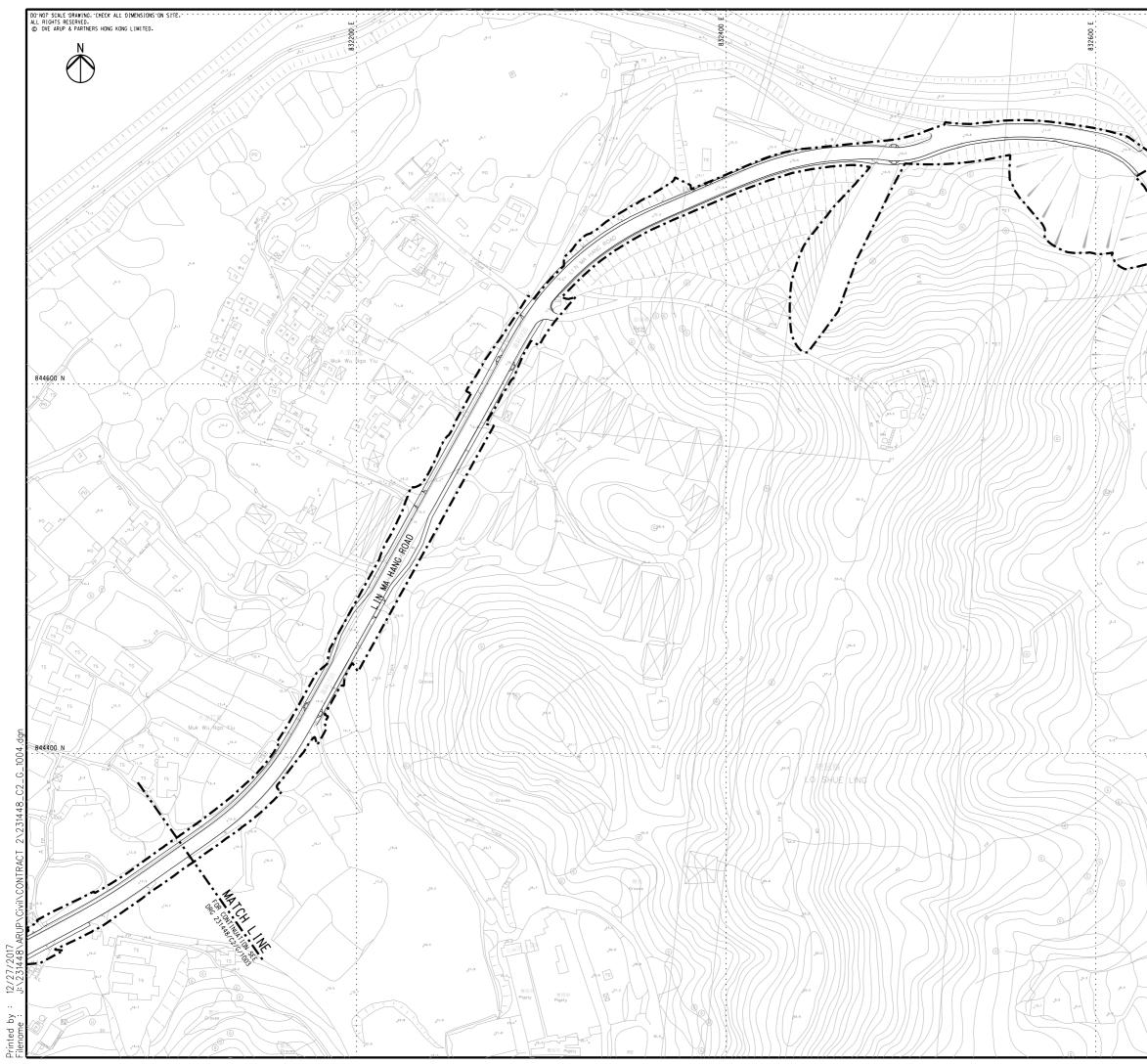


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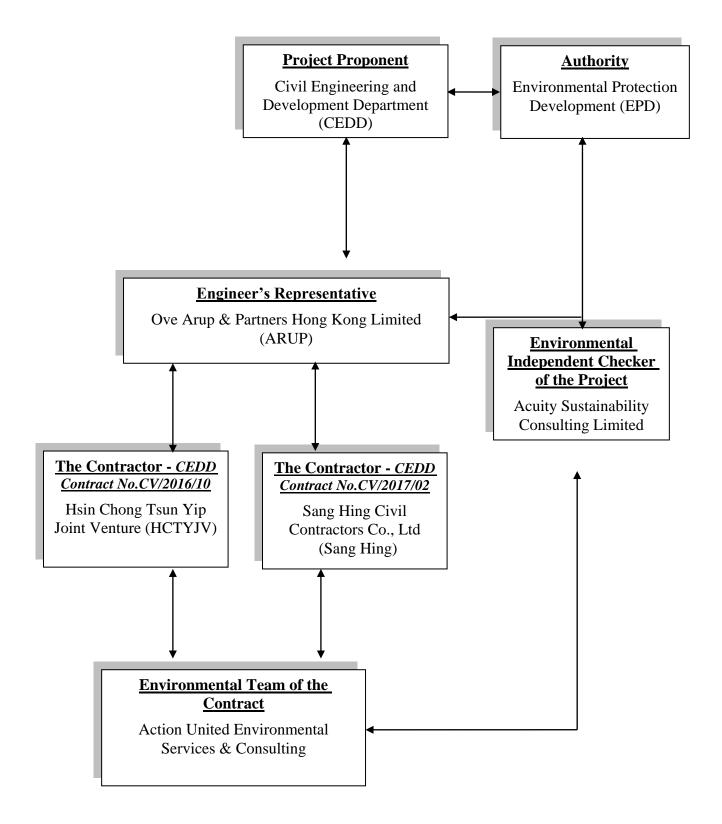


# **Appendix B**

## **Organization Structure and Contact Details of Relevant Parties**



## **The Contract's Environmental Management Organization**





Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Employer	CHOI Wing-hing	2762-5620	2714-0695
ARUP	Engineer's Representative	Steve Tang	6190-1513	2268-3950
ACUITY	Independent Environmental Checker	Ir. Leung CH Jacky	2698-6833	2698-9383
HCTYJV	Project Director	Mr. Kan Kwok Cheung	9495-2408	2633-4691
HCTYJV	Construction Manager	Mr. Keniel Kwong	9863-0020	2633-4691
HCTYJV	Site Agent	Mr. Ho Man To	9507-9634	2633-4691
HCTYJV	Environmental Officer	Mr. Chan Ming Tai	9358-7007	2633-4691
AUES	Environmental Team Leader	Mr. T.W. Tam	2959-6059	2959-6079
AUES	Environmental Consultant	Mr. Ben Tam	2959-6059	2959-6079
AUES	Environmental Consultant	Ms. Nicola Hon	2959-6059	2959-6079
AUES	Environmental Site Inspector	Mr. Martin Li	2959-6059	2959-6079

## Contact Details of Key Personnel for CV/2016/10 (Contract 1)

## Legend:

CEDD (Employer) – Civil Engineering and Development Department

ARUP (Engineer) – Ove Arup & Partners Hong Kong Limited

HCTYJV (Main Contractor) – Hsin Chong Tsun Yip Joint Venture

ACUITY (IEC) – Acuity Sustainability Consulting Limited

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



Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Employer	CHOI Wing-hing	2762-5620	2714-0695
ARUP	Engineer's Representative	Anthony Lau	6190-1513	2268-3950
ACUITY	Independent Environmental Checker	Ir. Leung CH Jacky	2698-6833	2698-9383
SANG HING	Project Director	Edwin Au	9208-7329	2403-1162
SANG HING	Construction Manager	Raymond Wong	9272-1831	2403-1162
SANG HING	Site Agent	Elvin Lam	6285-0803	2403-1162
SANG HING	Environmental Officer	Chan Ng jhon-keibi	6090-0183	2403-1162
SANG HING	Environmental Supervisor	Kenny Chan	6115-0120	2403-1162
AUES	Environmental Team Leader	Mr. T.W. Tam	2959-6059	2959-6079
AUES	Environmental Consultant	Mr. Ben Tam	2959-6059	2959-6079
AUES	Environmental Consultant	Ms. Nicola Hon	2959-6059	2959-6079
AUES	Environmental Site Inspector	Mr. Martin Li	2959-6059	2959-6079

## Contact Details of Key Personnel for CV/2017/02 (Contract 2)

### Legend:

CEDD (Employer) – Civil Engineering and Development Department

ARUP (Engineer) – Ove Arup & Partners Hong Kong Limited

Sang Hing (Main Contractor) – Sang Hing Civil Contractors Co., Ltd

ACUITY (IEC) – Acuity Sustainability Consulting Limited

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



# Appendix C

## **Three Months rolling Programme**



Three Months rolling Programme of Contract CV/2016/10

b. CV/2016/10 ion and Associated Infrastructural Works for	3-mo	nth Rolling P	Programme (Jar	2021 to Mar 2021)			Hsin Chong Tsun Yip Joint
nt of Columbarium at Sandy Ridge Cemetery Task Name	Duration	Start	Finish	tr 1,2021			Dtr 2, 2021
Key Dates		Fri 15/12/17	Fri 22/12/23	Jan	Feb	Mar	Apr
Section Completion Date		Wed 17/7/19	Fri 22/12/23				
Section 1 of the Works (Parts A1, A2 & A3)		Fri 15/12/17	Sat 11/7/20				
Fill Slope FS1	503 days	Thu 11/10/18	Fri 3/7/20				
Fill Slope FS1 South (Section 12 at Drawing C1/GE/1030)	453 days	Wed 14/11/18	Wed 3/6/20				
FS1 South Backfilling Stage 5 (~7.6m height, Section 12 up to Proposed Platform, +50mPD),	83 days	Thu 23/1/20	Sat 9/5/20				
(Filter Blanket from 42.4mPD to 44.9mPD)	000 1	T 00/5/40					
Drainage and Maintenance Access		Tue 28/5/19	Wed 3/6/20				
Geotechnical Instrumentation Works Fill Slope FS1 North (Section 14 at Drawing C1/GE/1030 )		Wed 14/8/19 Thu 11/10/18	Sat 16/5/20 Fri 3/7/20				
FS1 North Backfilling Stage 5 (~7.5 m height, Section 14 up to Proposed Platform), (Filter blank		Mon 24/2/20	Sat 6/6/20				
44.3 to 46.8mPD)	ter 05 days	101011 24/2/20	Sat 0/0/20				
Existing Slope Feature 3NW-C/F37 Upgrading Re-compaction	175 days	Tue 12/11/19	Wed 17/6/20				
Drainage and Maintenance Access	300 days	Wed 26/6/19	Fri 3/7/20				
Geotechnical Instrumentation Works		Wed 11/9/19	Sat 13/6/20				
Road D and Pickup/Drop-Off Area		Mon 23/7/18	Sat 11/7/20				
Drainage, Sewerage and Utilities Works		Mon 3/2/20	Tue 9/6/20				
Drainage at Pick-up/Drop Off	20 days	Mon 18/5/20	Tue 9/6/20				
HKT Cable Installation	19 days	Mon 18/5/20	Mon 8/6/20				
Carriageway and Footway		Mon 23/7/18	Sat 11/7/20				
Backfilling to Formation Level at Road D Carriageway, Pavement, Road Marking and Street Furniture at Road D	27 days 50 days	Fri 27/3/20 Tue 24/3/20	Tue 5/5/20 Thu 28/5/20	—			
Road Lighting Civil Works Provision	26 days	Fri 27/3/20	Mon 4/5/20				
Road Lighting E&M works, Testing and Comissioning (by others)	45 days	Wed 6/5/20	Sat 27/6/20				
Backfilling to Formation Level at Pick-up/Drop Off	21 days	Wed 10/6/20	Mon 6/7/20				
Pavement, Road Marking and Street Furniture at Pick-up/Drop Off	17 days	Sat 20/6/20	Sat 11/7/20				
Landscape Works	337 days	Tue 21/5/19	Sat 11/7/20				
Woodland Planting at Fill Slope		Wed 26/6/19	Fri 3/7/20				
Hydroseeding at Fill Slope		Tue 2/7/19	Wed 8/7/20				
Planter E2 Construction at Pick-up/Drop Off	15 days	Wed 10/6/20	Sat 27/6/20				
Shrubs Planting at Planter E2 at Pick-up/Drop Off	10 days	Mon 29/6/20	Fri 10/7/20				
Irrigation System and Water Points (Except Water Connection)	24 days	Mon 18/5/20	Sat 13/6/20				
Tree Planting Works Section 2 of the Works (Parts B1, B2, C, D, F, G1 & G2)		Tue 30/6/20 Fri 15/12/17	Sat 11/7/20 Mon 28/6/21				
Part B1		Fri 15/12/17	Mon 28/6/21				
Utilities Diversion/Protection Works		Fri 15/12/17	Wed 30/9/20				
НКТ		Fri 15/12/17	Wed 30/9/20				
Supporting / Diversion of Existing HKT Cable		Thu 17/5/18	Wed 30/9/20				
Landscape Works at Cut Slopes CS1, CS2 & CS3	199 days	Fri 31/1/20	Tue 29/9/20				
Shrub Planting at Planter W1 & W2 at CS1 & CS2	66 days	Thu 23/4/20	Mon 13/7/20				
Planter W2 Construction at CS3	98 days	Tue 4/2/20	Thu 4/6/20				
Shrub Planting at Planter W2 at CS3	98 days	Fri 5/6/20	Tue 29/9/20				
Planter E2 Construction besides CS2	27 days 27 days	Thu 23/4/20	Tue 26/5/20 Sat 27/6/20				
Shrub Planting at Planter E2 besides CS2 Cut Slopes CS11 & CS12		Wed 27/5/20 Sat 1/9/18	Thu 8/4/21				
Excavate to +49.5 mPD, Pull Out Test, Soil Nails and Raking Drains (433 nos. of Soil Nail, 65 n		Thu 12/3/20	Fri 26/6/20				l
of Raking Drain)	03. 04 days	1110 12/0/20	11120/0/20				
Excavate to Toe Level, Pull Out Test, Soil Nails and Raking Drains (168 nos. of Soil Nail, 33 no	s of 56 davs	Sat 27/6/20	Tue 1/9/20				
Raking Drain)	-						
Drainage and Maintenance Access from +72 mPD to Toe Level		Thu 24/10/19	Thu 24/12/20				
Geotechnical Instrumentation Works		Wed 27/2/19	Tue 8/9/20				
Landscape Works at Cut Slopes CS11 & CS12		Tue 22/1/19	Fri 18/6/21				
Planter W1 & W2 Construction Stage 2 from +72 mPD to Toe Level		Fri 23/8/19	Wed 4/11/20				
Shrub Planting at Planter W1 & W2 Stage 2 from +72 mPD to Toe Level Hydroseeding Stage 2 from +72 mPD tp Toe Level		Tue 10/3/20 Sat 15/2/20	Mon 24/5/21 Wed 4/11/20				
Retaining Wall RW11		Fri 29/5/20	Sat 12/6/21				
Installation of Temporary Works		Fri 29/5/20	Thu 20/8/20				
Cut Slope CS13		Fri 4/5/18	Mon 11/1/21				
Excavate to +49.5 mPD, Pull Out Test, Soil Nails and Raking Drains (152 nos. of Soil Nail, 34 n		Thu 12/3/20	Fri 26/6/20				
of Raking Drain)	-						
Excavate to +42 mPD, Pull Out Test, Soil Nails and Raking Drains (215 nos. of Soil Nail, 54 nos	s. 56 days	Sat 27/6/20	Tue 1/9/20				
of Raking Drain)							
Drainage and Maintenance Access from +72 mPD to Toe Level		Thu 7/11/19	Mon 11/1/21				
Geotechnical Instrumentation Works		Wed 10/7/19	Tue 20/10/20				
Landscape Works at Cut Slope CS13		Thu 1/8/19	Tue 15/6/21				
Planter W2 Construction Shrub Planting at Planter W2		Thu 1/8/19 Thu 28/5/20	Fri 20/11/20 Fri 29/1/21	— <u> </u>			
Hydroseeding		Mon 5/8/19	Mon 28/12/20				
Cut Slope CS15		Sat 1/9/18	Thu 18/6/20				
Drainage and Maintenance Access		Wed 25/9/19	Thu 18/6/20				
			·				
Rolling Programme Task Milestone $\diamond$ Project Summary	External Mil	estone 🔷	Critical	Progress			
020 to July 2020) Split Summary External Tasks	Deadline	+	Critical Split	11111			
te: May 2020							

No. CV/2016/10 ation and Associated Infrastructural Works for ent of Columbarium at Sandy Ridge Cemetery	3-mo	nth Rolling P	Programme (Jai	2021 to Mar	2021)					Hsin Ch	ong Tsun Yip Joi	nt V
Task Name	Duration	Start	Finish	tr 1, 2021	Jan		Feb	M	lar	Qtr 2, 2021	Anr	
Geotechnical Instrumentation Works Landscape Works at Cut Slope CS15 Planter W1 & W2 Construction Shrub Planting at Planter W1 & W2 Hydroseeding Fill Slope FS17 Existing Slope Upgrading Works Existing Feature 3NW-C/C38 Slope Upgrading Works Existing Feature 3NW-C/C258 Slope Upgrading Works Exist	460 days	Tue 23/10/18	Wed 20/5/20		5 41		100	10			Арг	
Landscape Works at Cut Slope CS15		Thu 3/1/19	Wed 3/2/21									
Planter W1 & W2 Construction		Mon 10/6/19	Mon 1/6/20									
Shrub Planting at Planter W1 & W2 Hydroseeding		Fri 31/1/20 Thu 3/1/19	Wed 3/2/21 Sat 18/7/20									
Fill Slope FS17		Thu 5/7/18	Thu 10/12/20									
Existing Slope Upgrading Works		Tue 12/11/19	Sat 13/6/20									
Existing Feature 3NW-C/F37 Upgrading Re-compaction		Tue 12/11/19	Tue 19/5/20									
Existing Feature 3NW-C/C258 Slope Upgrading Works	74 days	Thu 12/3/20	Sat 13/6/20									
Excavate to Proposed Ground Level, Pull Out Test, Soil Nails and Raking Drains (14 Nos. of Soil Nail, 8 Nos. of Raking Drain)	23 days	Wed 8/4/20	Sat 9/5/20									
Excavate to Proposed Ground Level, Pull Out Test, Soil Nails and Raking Drains (14 Nos. of Soil Nail, 8 Nos. of Raking Drain) Drainage and Maintenance Access Sha Ling Road (M001 CH +620 to +820), M011, M004 and PDA Sewerage and Drainage	67 days	Fri 20/3/20	Sat 13/6/20									
Sha Ling Road (M001 CH +620 to +820), M011, M004 and PDA		Mon 11/5/20	Fri 28/5/21									-
Sewerage and Drainage		Thu 18/6/20	Thu 22/10/20									
Drainage and Sewerage Works		Thu 18/6/20	Thu 22/10/20									
Utilities and Watermains Works Watermains Works	55 days	Thu 18/6/20 Thu 18/6/20	Sat 21/11/20 Sat 22/8/20									
Landscape Works		Mon 11/5/20	Fri 6/11/20									
Tree Planting	48 days	Mon 11/5/20	Tue 7/7/20									
Part B2		Fri 15/12/17	Wed 23/12/20									
Sha Ling Road (M001 CH +40 to +180)		Sat 1/12/18	Sat 19/12/20									
Noise Barrier		Tue 18/2/20	Wed 7/10/20									
Sub-structure of Noise Barrier Construction Bay 3 to Bay 8	69 days	Tue 18/2/20	Fri 15/5/20									
Backfilling to Road Formation Level at Noise Barrier Bay 3 to Bay 5	32 days	Fri 17/4/20	Tue 26/5/20									
Backfilling to Road Formation Level at Noise Barrier Bay 6 to Bay 8	32 days	Sat 16/5/20	Mon 22/6/20									
Superstructure of Noise Barrier Construction Bay 3 to Bay 8 Sewerage and Drainage		Sat 16/5/20 Wed 27/5/20	Wed 7/10/20 Thu 20/8/20									
Drainage and Sewerage Works	72 days 72 days	Wed 27/5/20	Thu 20/8/20									
Utilities and Watermains Works		Thu 18/7/19	Sat 26/9/20									
Watermains Works	21 days	Wed 10/6/20	Mon 6/7/20									
Town Gas Installation	29 days	Tue 7/7/20	Sat 8/8/20									
Landscape Works	138 days	Tue 7/7/20	Sat 19/12/20									
Irrigation System and Water Points	36 days	Tue 7/7/20	Mon 17/8/20									
Man Kam To Road Bus Shelter		Fri 15/12/17	Wed 21/10/20									
Road Lighting E&M works, Testing and Comissioning (by others)	45 days	Fri 17/4/20	Wed 10/6/20									
Backfilling to Formation Level	30 days	Fri 17/4/20	Sat 23/5/20									
Carraigeway, Pavement, Road Marking and Street Furniture Tree Planting	65 days 75 days	Mon 25/5/20 Fri 24/7/20	Mon 10/8/20									
Sha Ling Road (M001 CH+0 to +40), Man Kam To Road Drainage, Sewerage, Watermains and	749 days		Wed 21/10/20 Wed 23/12/20									
Other Utilities Works at Existing Sha Ling Road Sub-structure of Noise Barrier Construction Bay 1 to Bay 2	298 davs	Thu 19/12/19	Wed 23/12/20									
Sub-structure of Noise Barrier Construction Bay 1 to Bay 2		Thu 19/12/19	Fri 26/6/20									
Backfilling to Road Formation Level at Noise Barrier Bay 1 to Bay 2		Sat 27/6/20	Wed 19/8/20									
Superstructure of Noise Barrier Construction Bay 1 to Bay 2		Sat 27/6/20	Thu 13/8/20									
TTA Stage 2 - Man Kam To Road Eastbound Slow Lane		Fri 31/1/20	Wed 12/8/20									
Drainage and Sewerage Connections		Fri 31/1/20	Wed 17/6/20									
Watermains Works Backfill to Formation Level	76 days 30 days	Fri 31/1/20 Thu 18/6/20	Wed 6/5/20 Fri 24/7/20									
Carraigeway Reinstatement, Road Marking and Preparation Works for Change of TTA		Sat 25/7/20	Wed 12/8/20									
Part C		Tue 15/1/19	Wed 12/0/20									
Drainage and Sewerage Works and Connections TTA Stage 2		Thu 20/2/20	Thu 9/7/20									
Paving Works		Fri 10/7/20	Tue 25/8/20									
E&M and Waterworks		Tue 15/1/19	Wed 23/12/20									
Watermain Works and Connection TTA Stage 2		Fri 31/1/20	Wed 3/6/20									
CLP Meter Application		Thu 9/4/20	Thu 30/7/20									
CLP Cabling Works Part D		Fri 31/7/20	Wed 23/12/20 Tue 15/12/20									
Part D Parts G1 and G2		Sat 15/12/18 Thu 18/7/19	Fri 24/7/20									
Fill Slope FS13		Tue 18/2/20	Fri 24/7/20									
Backfill to Proposed Ground Level (Max. 2.5m)		Wed 29/4/20	Thu 11/6/20									
Drainage and Maintenance Access		Fri 12/6/20	Fri 24/7/20									
Sewerage and Drainage	72 days	Wed 27/5/20	Thu 20/8/20									
Utilities and Watermains Works		Wed 10/6/20	Mon 6/7/20									
Landscape Works		Tue 7/7/20	Sat 19/12/20									
Section 4 of the Works Establishment Works of Parts A1, A2 & A3		Sun 12/7/20 Sun 12/7/20	Wed 12/7/23 Wed 12/7/23									
Section 6 of the Works	1096 days	Fri 6/12/19	Mon 5/12/22			_						_
Establishment Works of Part E	1096 days	Fri 6/12/19	Mon 5/12/22									
Rolling Programme     Task     Milestone     Project Summary       2020 to July 2020)     Split     Summary     External Tasks	T External Mik	estone 🔶	Critical	Progress								
te: May 2020												

3-month Rolling Programme (May 2020 to July 2020)	Task Split	•••••	Mile stone Summary	¢ ii	Project Summary External Tasks	External Miles Deadline	one 🔶	Critical Critical Split		Progress	
Date: May 2020											
								Page	2		

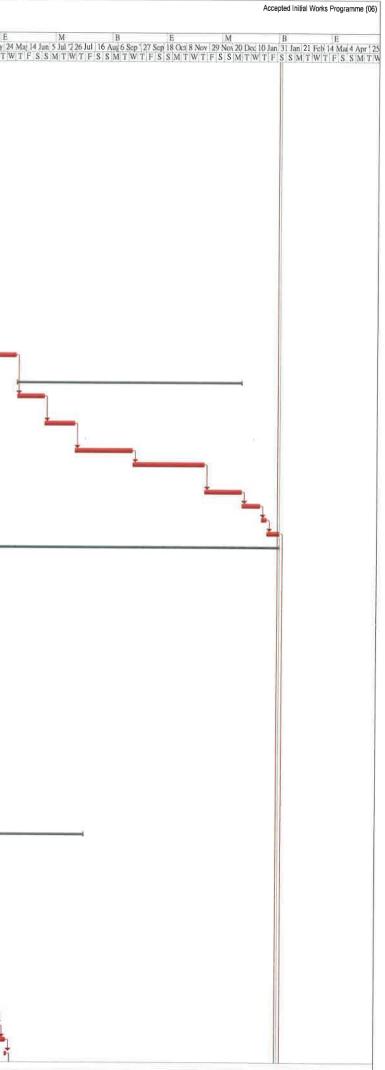


Three Months rolling Programme of Contract CV/2017/02

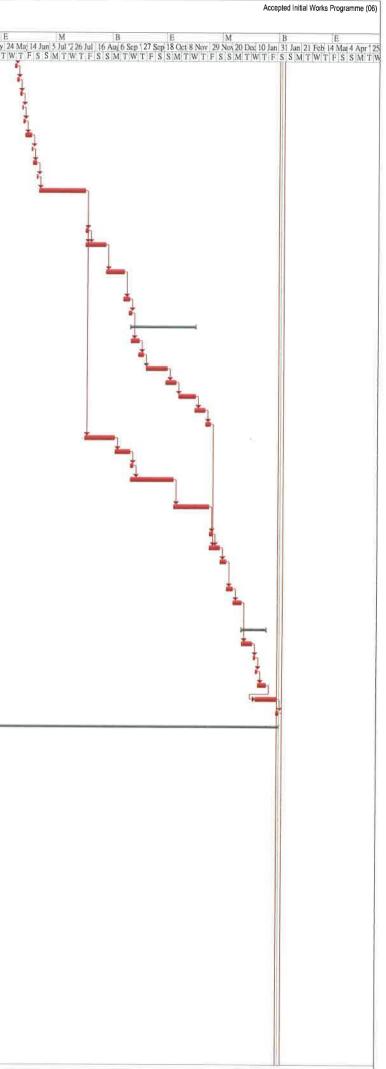
evelopme Infrastruct	o. CV/2017/02 ent of Columbariu tural Works at M	um al Sandy Ridge Cemetery Ian Kam To Road and Lin Ma Hang Road								3 Month Rolling Pro (from 26/1/2021 to 2		
WBS	Task Name		Duration	Start Date	Completion Date	Mai 10 Jun 1 Jul 122 Jul 12 Aus 2 Sen 1	E 23 Scp 14	M Oct 4 No	w 25 Nov 16 Dec 6 Jan 1 27 Jan 1	E M B	E M B	E M B E c <sup>1</sup> 29 Dec 19 Jan 9 Feb 11 Mar 22 Mai 12 April 3 May 2
2 2	Starting Da	te	0 days	Thu 31/5/18	Thu 31/5/18	WTFSSMTWTFSSMTV	WTFSS	SMTW	TFSSMTWTFSSM	MTWTFSSMTWTFSSM	T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T	F S S M T W T F S S M T W T F S S M T V
3 3	ET Submiss		9 days	Wed 26/9/18				8				
12 4	Applications	to Government Department	27 days	Mon 4/6/18	Sat 30/6/18							
20 5		s & acceptances	835 days		Tue 15/9/20	here		-	-			
4 6		Utility Undertakers	979 days		Wed 3/2/21	)						
47 97		Contract CV/2016/01 regarding Parts A1 to S Appendix A1)	979 days	Fri 1/6/18	Wed 3/2/21	(i)i		Î				
8 8	Liaison Mee	ting with Interface and associated contractors	389 days	Fri 1/6/18	Mon 24/6/19	r					+	
53 9	Tree Survey	Reporting	164 days	Fri 1/6/18	Sun 11/11/18			_				
58 10	-		671 days		Wed 1/4/20	)						
66 11	Provision of (PS1.08A(b)	Project Manager's Site Accommodation	28 days	Fri 1/6/18	Thu 28/6/18							
67 12	Design of im	igation system within the Sandy Ridge S/2021, 2041, 2042, W/1041,1011)	21 days	Fri 20/12/19	Fri 10/1/20						-	
70 13	Condition St	urvey	81 days	Thu 23/8/18	Sun 11/11/18							
77 14		f the works - Completion of all works s A1, A2 and B of the Site except ent works	979 days	Thu 31/5/18	Wed 3/2/21	)						
78 14.1	Parts A1		859 days	Fri 28/9/18	Wed 3/2/21		_					
79 14.1.1	access	date for section 1 (Parts A1) - not more than ys after the starting date	•	Fri 28/9/18	Fri 28/9/18		1					
80 14.1.2	form te Parts A	mporary haul road from the south side to	14 days	Tue 2/10/18	Mon 22/10/18		*					
81 14.1.3		l site clearance	30 days	Tue 23/10/18	Wed 28/11/18			-	-			
82 14.1.4		•		Thu 29/11/18					<b>*</b>			
83 14.1.5 84 14.1.6		iction of temporary drainage		Thu 3/1/19					ž			
14.1.6	A1)	mation works for Cut Slope CS22 (in Parts nstruction of Retaining Wall RW13 (bays 1 to				2.1						· · · ·
	5)		roz adjo		110 12 12 10							
102 14.1.7.		vation with installation of temporary soil nails behind RW13 (bays 1 to 5)	56 days	Mon 15/4/19	Tue 25/6/19							
103 14,1.7.	.2 plate	load tests	3 days	Wed 26/6/19	Fri 28/6/19						E,	
104 14.1.7		rete blinding layers for 5 bays	3 days	Sat 29/6/19	Wed 3/7/19						<b>*</b>	
105 14.1.7		work for bases of alternative first 3 bays	2 days	Wed 3/7/19	Thu 4/7/19						4	
106 14.1.7.		fixing for 3 bases	3 days	Fri 5/7/19	Mon 8/7/19		1				ι μ.	
07 14.1.7. 08 14.1.7.		rete and curing for 3 bases		Tue 9/7/19								
09 14.1.7		ove formwork work and formwork for alternative 3 walls	-	Mon 15/7/19 Thu 18/7/19	Wed 17/7/19 Mon 22/7/19						1	
10 14.1.7.		fixing for 3 walls	4 days 9 days	Tue 23/7/19	Thu 1/8/19						• • • • • • • • • • • • • • • • • • •	
11 14.1.7.		e formwork for 3 walls	3 days	Fri 2/8/19	Mon 5/8/19							
12 14.1.7		rete and curing for 3 walls	6 days	Mon 5/8/19	Sat 10/8/19							
13 14.1.7.	12 remo	ove formwork	3 days	Sat 10/8/19	Tue 13/8/19						4	
14 14,1.7.	.13 form bays	work for bases of alternative second two	2 days	Tue 13/8/19	Wed 14/8/19						5	
15 14.1.7.	.14 steel	fixing for two bases	2 days	Wed 14/8/19	Thu 15/8/19							
16 14.1.7.		rete and curing for two bases	4 days	Fri 16/8/19	Tue 20/8/19						<b>±</b> ,	
17. 14.1.7.		ve formwork	2 days	Tue 20/8/19	Wed 21/8/19						ň	
18 14.1.7.	.17 false walls	work and formwork of alternative second two	3 days	Wed 21/8/19	Fri 23/8/19						*	
19 14.1.7.		fixing for two walls	6 days	Fri 23/8/19	Thu 29/8/19						<b>i</b>	
20 14.1.7.		e formwork for two walls	2 days	Thu 29/8/19	Fri 30/8/19						1	
21 14.1.7. 22 14.1.7.		rete and curing for two walls we falsework & formwork	4 days 2 days	Sat 31/8/19 Wed 4/9/19	Wed 4/9/19 Thu 5/9/19						1	
23 14.1.7.	22 after & cor	completion of RW13 (bay 1 to 5) , backfilling mpaction behind wall to formation (A1) (Drg	2 days 66 days	Fri 6/9/19	Mon 2/12/19						1	
24 14.1.7.		101) Il instrument for RW13 (bay 1 to bay 5)	9 days	Tue 3/12/19	Thu 12/12/19							
25 14.1.8			-	Mon 15/4/19							T I	
26 14.1.8.	a excar (exte	vate top 3.5m from the existing slope profile nl to be directed by PM)(Drg.GE/2305)	15 days	Mon 15/4/19	Mon 6/5/19					-		
27 14.1.8.	2 nreps	are formation for filter blanket	2 days	Tue 7/5/19	Wed 8/5/19					-		
28 14.1.8	3 slope	backfill FS18 with 2.1m filter blanket	9 days	Wed 8/5/19						<b>1</b>		
29 14.1.8.	(GE/2 Jacki	2601) illing from top of filter blanket to formation		Thu 16/5/19						<u> </u>		
30 14.1.8		(including SRT tests) truction of 1.5m width maintenance berm	2 days	Fri 18/10/19	Mon 21/10/19							
31 14.1.8.		truction of U channel/ stepped channel and										
	calch	ipils										

Accepted Initial Works Programme	(06)
M         B         E         M         B         E           Jul "2 26 Jul 16 Aur 6 Sep "27 Sep 18 Oct 8 Nov 29 Nov 20 Dec 10 Jan 31 Jan 21 Feb 14 Mar 4 App         Af T W T F S S M T W T F S S M T W T F S S M T W T F S S M         S M T W T F S S M T W T F S S M	12
	1.2110

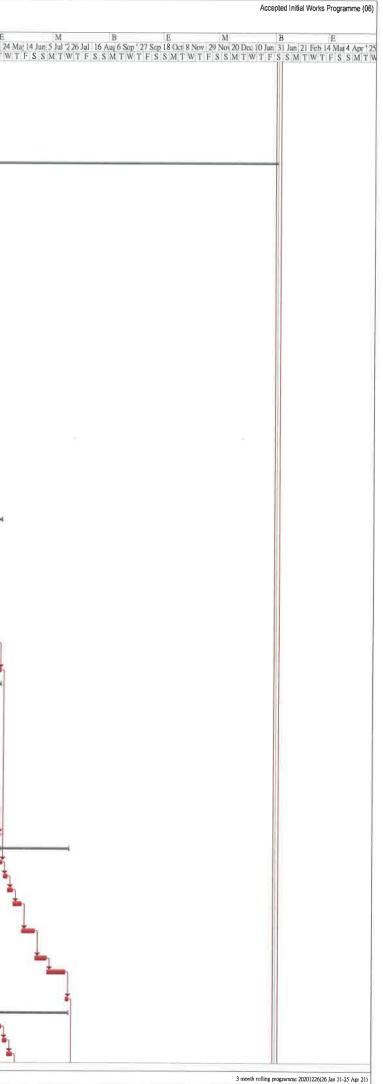
evelopmer	nt of Colum and of Colum cural Works	nbarium at Sandy Ridge Cernetery s at Man Kam To Road and Lin Ma Hang Road				3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
WBS			Duration	Start Date	Completion Date	M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B B B E M B B B E M B B E M B B B E M B B E M B B E M B B B E M B B B E M B B B E M B B B E M B B B E M B B B E M B B B B
132 14.1.8.	7	construction of U channel in front of RW13	4 days	Tue 3/12/19	Fri 6/12/19	WTFSSMTWTTFSSMTWTFSSMTWTFSSMTWTFSSMTWTFSSMTWTTFSSMTWTFSSMTWTFSSMTWTFSSMTWTFSSMTWTFSSMTWTFSSMTWTFSSMTWTFSSMTWTFSSMTWTFSSMTWTFSSMTWTFSSMTWTFSSMTWTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTW
133 14.1.8.	.8	600mm width concrete maintenance staircase with handrailing boxing out	11 days	Sat 7/12/19	Thu 19/12/19	
134 14.1.8.9	9	landscaping (hydroseeding)	27 days	Fri 20/12/19	Thu 23/1/20	
135 14.1.8.		install instrument for FS18	6 days	Fri 24/1/20	Mon 3/2/20	
36 14.1.9		CS21 - slope cutting	7 days	Fri 20/12/19		
37 14.1.10	0 ir	nstall instrument for CS21	5 days	Tue 31/12/19	Mon 6/1/20	
138 14.1.11	1 p	lacement of erosion control mat/ hydroseeding	2 days	Tue 7/1/20	Wed 8/1/20	
139 14.1.12		ninor cutting CS26 (Parts A1) (for Road E)	7 days	Thu 9/1/20	Thu 16/1/20	
40 14.1.13	_	orainage works at Road E	43 days	Fri 17/1/20	Tue 10/3/20	
14.1.13	3.1	main pipe laying	31 days	Fri 17/1/20	Tue 25/2/20	
42 14.1.13	32	gully pipe and pots	14 days	Mon 24/2/20	Tue 10/3/20	
143 14.1.14	4 V	Vaterworks at Road E	24 days	Wed 11/3/20	Tue 14/4/20	
44 14.1.15		CS23 - slope cutting & 300U channel	17 days	Wed 11/3/20		
45 14.1.16		nstall instrument for CS23 lacement of erosion control mat/ hydroseeding	5 days 2 days	Thu 2/4/20 Thu 9/4/20	Wed 8/4/20 Tue 14/4/20	
47 14.1.18	r	ackfilling of pipe trench to formation (including SRT	•	Wed 15/4/20		
		est)				
48 14.1.19	-	00U channel behind RW13	4 days	Mon 27/4/20	Sat 2/5/20	
49 14.1.20	0 3 E	00U channel and planter wall at south side of Road	30 days	Mon 4/5/20	Sat 6/6/20	
50 14.1.21	-	Roadworks of Road E (A1-ch66-243)	164 days	Mon 8/6/20	Wed 30/12/20	
151 14.1.21		ducting for road lighting (RD/2091) & construction			Thu 2/7/20	
101		of irrigation system	20 00,0			
52 14.1.21	12		24 days	Fri 3/7/20	Thu 30/7/20	
		cross road duct (RD/2061, 2081)				
153 14.1.21		concrete pavement	45 days	Fri 31/7/20	Mon 21/9/20	
193.21	1.4	traffic signs, directional signs, type 2 railing, emergency crash gate, beam barriers	48 days	Tue 22/9/20	Thu 26/11/20	
155 14.1.21	1.5	concrete footpath	27 days	Fri 27/11/20	Wed 30/12/20	
156 14.1.22	2 S	treet lighting (Drg/ RD/2091)	14 days	Thu 31/12/20		
157 14.1.23	3 la	andscaping (hydroseeding)	5 days	Mon 18/1/21	Fri 22/1/21	
158 14.1.24		andscaping (shrub planting)	10 days	Sat 23/1/21	Wed 3/2/21	
159 14.2 160 14.2.1		ts A2		Tue 31/12/19		
100 19.2.1	_	ccess date for section 1 (Parts A2) - not more than 80 days after the starting date	0 days	Tue 31/12/19	100 31/12/19	
61 14.2.2	fc	orm temporary haul road to Parts A2	6 days	Thu 2/1/20	Wed 8/1/20	
162 14.2.3		eneral site clearance	18 days	Thu 9/1/20	Sat 1/2/20	
163 14.2.4		itial survey	12 days	Mon 3/2/20	Sal 15/2/20	
164 14.2.5 165 14.2.6		onstruction of temporary drainage	20 days	Mon 17/2/20		
100 14/2/0	-	ite Formation works for Cut Slope CS22 (in Parts 2)	15 days	wed 11/3/20	Mon 30/3/20	
66 14.2.6.	1	slope excavation works	1 day	Wed 11/3/20	Wed 11/3/20	
14.2.6.	2	drill, install steel bars and grout soil nails (TB01-06, TA01-07) & 3nrs. raking drain	4 days	Thu 12/3/20	Mon 16/3/20	
68 14.2.6.3	3	TDR test allowance	1 down	Tue 17/2/00	Fri 20/3/20	
169 14.2.6.		IDR test allowance soil nail head works	4 days 2 days	Tue 17/3/20 Fri 20/3/20	Fri 20/3/20 Mon 23/3/20	
170 14.2.6.		install rest of instrument for CS22	2 days 2 days	Mon 23/3/20	Tue 24/3/20	
7] 14.2.6.		300U channel, 300 stepped channel & catchpits	7 days	Mon 16/3/20		
	2	with planter walls				
72 14.2.6.	7	600mm width concrete maintenance staircase with handrailing	2 days	Wed 25/3/20	Thu 26/3/20	
73 14.2.6.	8	5	2 days	Fri 27/3/20	Mon 30/3/20	
74 14.2.7		construction of Retaining Wall RW13 Bay 6 to Bay 8			Mon 10/8/20	
	0	the country country of bay of bay of				
175 14.2.7.	.1	temporary cutting for retaining wall RW13 Bay 6	2 days	Fri 27/3/20	Mon 30/3/20	
15=1    (100-100		to 8				
	20		45 -	Mon 30/3/20	Tue 21/4/20	
14.2.7.	2	temporary soil nails works for retaining wall RW13 Bay 6-8	15 days			
176 14.2.7.		Bay 6-8		Wed 22/4/20	Fri 24/4/20	
	3		3 days 2 days	Wed 22/4/20 Sal 25/4/20	Fri 24/4/20 Mon 27/4/20	
176 14.2.7. 177 14.2.7.	3	Bay 6-8 plate load tests	3 days			
176 14.2.7. 177 14.2.7. 178 14.2.7. 179 14.2.7. 180 14.2.7.	3 4 5 .6	Bay 6-8 plate load tests blinding concrete for bay 6 to 8	3 days 2 days	Sal 25/4/20	Mon 27/4/20	
176 14.2.7. 177 14.2.7. 178 14.2.7. 179 14.2.7. 180 14.2.7. 181 14.2.7.	3 4 5 6 7	Bay 6-8 plate load tests blinding concrete for bay 6 to 8 base formwork for bay 6 and 8 base steel fixing for bay 6 and 8 base concreting & curing for bay 6 & 8	3 days 2 days 2 days 3 days 4 days	Sal 25/4/20 Tue 28/4/20 Sat 2/5/20 Wed 6/5/20	Mon 27/4/20 Wed 29/4/20 Tue 5/5/20 Sat 9/5/20	
177 14.2.7. 177 14.2.7. 178 14.2.7. 179 14.2.7. 180 14.2.7. 181 14.2.7. 182 14.2.7.	3 4 5 6 7 8	Bay 6-8 plate load tests blinding concrete for bay 6 to 8 base formwork for bay 6 and 8 base steel fixing for bay 6 and 8 base concreting & curing for bay 6 & 8 remove base formwork	3 days 2 days 2 days 3 days 4 days 2 days	Sal 25/4/20 Tue 28/4/20 Sat 2/5/20 Wed 6/5/20 Sat 9/5/20	Mon 27/4/20 Wed 29/4/20 Tue 5/5/20 Sat 9/5/20 Mon 11/5/20	
176 14.2.7.3 177 14.2.7.3 178 14.2.7.3 179 14.2.7.3 180 14.2.7.3 181 14.2.7.3 182 14.2.7.3 183 14.2.7.5	3 4 5 6 7 8 9	Bay 6-8 plate load tests blinding concrete for bay 6 to 8 base formwork for bay 6 and 8 base steel fixing for bay 6 and 8 base concreting & curing for bay 6 & 8 remove base formwork falsework and formwork for walls bay 6&8	3 days 2 days 2 days 3 days 4 days 2 days 4 days 4 days	Sat 25/4/20 Tue 28/4/20 Sat 2/5/20 Wed 6/5/20 Sat 9/5/20 Tue 12/5/20	Mon 27/4/20 Wed 29/4/20 Tue 5/5/20 Sat 9/5/20 Mon 11/5/20 Fri 15/5/20	
177 14.2.7. 177 14.2.7. 178 14.2.7. 179 14.2.7. 180 14.2.7. 181 14.2.7. 182 14.2.7.	3 4 5 .6 7 8 9 10	Bay 6-8 plate load tests blinding concrete for bay 6 to 8 base formwork for bay 6 and 8 base steel fixing for bay 6 and 8 base concreting & curing for bay 6 & 8 remove base formwork falsework and formwork for walls bay 6&8 steel fixing for walls of bay 6 & 8	3 days 2 days 2 days 3 days 4 days 2 days 4 days 7 days	Sat 25/4/20 Tue 28/4/20 Sat 2/5/20 Wed 6/5/20 Sat 9/5/20 Tue 12/5/20 Sat 16/5/20	Mon 27/4/20 Wed 29/4/20 Tue 5/5/20 Sat 9/5/20 Mon 11/5/20 Fri 15/5/20 Sat 23/5/20	
176 14.2.7.1 177 14.2.7.1 178 14.2.7.1 179 14.2.7.1 180 14.2.7.1 181 14.2.7.1 181 14.2.7.1 182 14.2.7.1 183 14.2.7.1 184 14.2.7.1	3 4 5 6 7 8 8 9 10 11	Bay 6-8 plate load tests blinding concrete for bay 6 to 8 base formwork for bay 6 and 8 base steel fixing for bay 6 and 8 base concreting & curing for bay 6 & 8 remove base formwork falsework and formwork for walls bay 6&8	3 days 2 days 2 days 3 days 4 days 2 days 4 days 4 days	Sat 25/4/20 Tue 28/4/20 Sat 2/5/20 Wed 6/5/20 Sat 9/5/20 Tue 12/5/20	Mon 27/4/20 Wed 29/4/20 Tue 5/5/20 Sat 9/5/20 Mon 11/5/20 Fri 15/5/20	



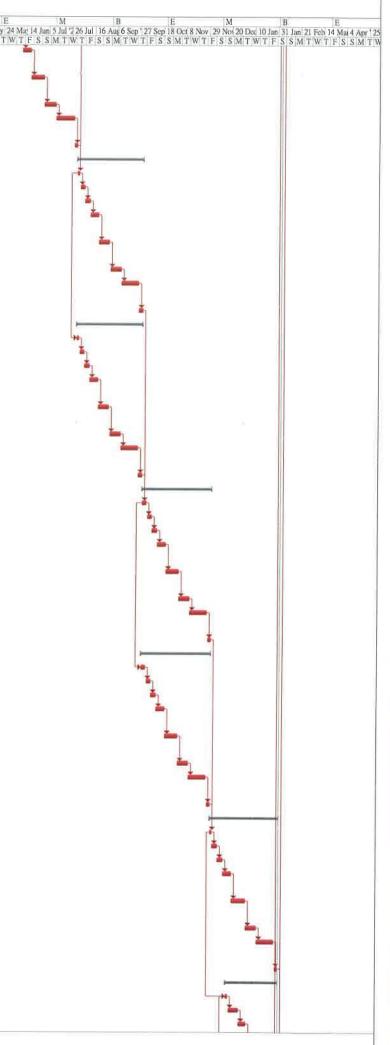
Contract No. C Development o - Infrastructural	V/2017/02 f Columbarium at Sandy Ridge Cernetery l Works at Man Kam To Road and Lin Ma Hang Roa	d			3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
ID WBS	Task Name	Duration	Start Date	Completion Date	M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B E M B B E M B E M B E M B E M B B E M B B E M B B E M B B E M B B E M B B B B
188 14.2.7.14	base formwork for bay 7	2 days	Wed 3/6/20	Thu 4/6/20	WTFSSMTWTFSS
189 14.2,7,15	base steel fixing for bay 7	2 days	Fri 5/6/20	Sat 6/6/20	
190 14.27.16	base concreting & curing for bay 7	2 days	Mon 8/6/20	Tue 9/6/20	
191 14.2.7.17	remove base formwork	1 day	Wed 10/6/20	Wed 10/6/20	
192 14.2.7.18	falsework and formwork for walls of bay 7	2 days	Thu 11/6/20	Fri 12/6/20	
193 14.2.7.19 194 14.2.7.20	steel fixing for walls of bay 7	5 days	Sat 13/6/20	Thu 18/6/20	
194 14.2.7.20	close formwork for walls of bay 7 concreting and curing for walls of bay 7	1 day 3 days	Fri 19/6/20 Sat 20/6/20	Fri 19/6/20 Tue 23/6/20	
196 14.2.7.22	remove falsework and formwork for walls	1 day	Wed 24/6/20	Wed 24/6/20	
197 14.2.7.23	after completion of structural RW13 (bay 6 to 8), backfill behind wall to formation (A2) (Drg GE/1101)		Fri 26/6/20	Fri 7/8/20	
198 14.2.7.24 199 14.2.8	install instrument for RW13 (bay 6 to bay 8) (west) drainage works at Road E (ch250 to 300)	2 days 16 days	Sat 8/8/20 Sat 8/8/20	Mon 10/8/20 Wed 26/8/20	
200 14.2.9	(west) waterworks at Road E (ch250 to 300)	15 days	Thu 27/8/20	Sat 12/9/20	
201 14.2.10	construction of Irrigation System	5 days	Sat 12/9/20	Thu 17/9/20	
202 14.2.11	U channel for Road E	3 days	Thu 17/9/20	Sal 19/9/20	
203 14.2.12	Roadworks of Road E (A2-ch243-300)	42 days		Tue 17/11/20	
204 14.2.12.1	kerbing & sub-base (include sub-base SRT test)	7 days	Sat 19/9/20	Sal 26/9/20	
205 14.2.12.2 206 14.2.12.3	ducting for road lighting & water point concrete pavement	4 days 15 days	Sat 26/9/20 Sat 3/10/20	Wed 30/9/20 Thu 22/10/20	
207 14.2.12.4	traffic signs, beam barriers	7 days	Wed 21/10/20		
208 14.2.12.5	concrete footpath	12 days		Tue 17/11/20	
209 14.2.13	street lighting for Road E (Drg/ RD/2091)	9 days	Tue 17/11/20	Thu 26/11/20	
210 14.2.14	landscaping (shrub planting)	4 days	Fri 27/11/20	Tue 1/12/20	
211 14.2.15 212 14.2.16	site formation works for Cut Slope CS26 (A2)	24 days		Fri 4/9/20	2 D D D D D D D D D D D D D D D D D D D
212 14.2.16	site formation works for Cut Slope CS25 (A2) placement of erosion control mat/ hydroseeding	12 days 2 days	Sat 5/9/20 Sat 19/9/20	Fri 18/9/20 Mon 21/9/20	
214 14.2.18	drainage works at Road B & sewerage works at Road B	28 days			
215 14.2.19	waterworks at Road B	25 days	Thu 29/10/20	Mon 30/11/20	
216 14.2.20	backfill formation for Road B	3 days	Tue 1/12/20	Thu 3/12/20	
217 14.2.21 218 14.2.22	street lighting ducts and drawpits at Road B arrange Town Gas to lay cables (NOT YET AGREED)	9 days 5 days		Thu 10/12/20 Wed 16/12/20	
219 14.2.23	planter wall for Road B	5 days	Thu 17/12/20	Tue 22/12/20	
220 14.2.24	arrange HKT to lay PCCW cables (NOT YET AGREED)			Wed 30/12/20	
221 14.2.25	Roadworks of Road B (A2-ch28.5-90)		Thu 31/12/20		
222 14.2.25.1 223 14.2.25.2	kerbing & sub-base (include sub-base SRT test) DBM (Roadbase)	8 days 2 days	Thu 31/12/20 Mon 11/1/21		
224 14.2.25.3	base course and wearing course	2 days 2 days	Wed 13/1/21		
225 14.2.25.4	directional sign, roadmarkings & footpath	7 days	Fri 15/1/21	Fri 22/1/21	
226 14.2.26	landscaping (hydroseeding)	17 days	Wed 13/1/21	Mon 1/2/21	
227 14.2.27	landscaping (shrub planting)	3 days	Mon 1/2/21	Wed 3/2/21	
228 14.3 229 14.3.1	Parts B - refer Appendix MKTR01A & Appendix MKTR01B access date for section 1 (Parts B) - the starting date		Thu 31/5/18	Wed 3/2/21 Thu 31/5/18	·
230 14.3.1	Initial Survey	104 days		Thu 4/10/18	
231 14.3.3	utility detection and submit reports	30 days		Fri 9/11/18	
232 14.3.4	Temporary Traffic Arrangement (TTA) Scheme for Man Kam Road			Fri 9/11/18	
236 14.3.5 237 14.3.5.1	Construction of Fresh Water Mains (DN400)-refer to Drawings No, MKTR Programme/W/001 & 002 Phase 1: TTA 1s				
237 14.3.5.1	Phase 1: TTA 1s Phase 1: TTA 8s		Sat 10/11/18 Wed 14/11/18		
255 14.3.5.3	Phase 1: TTA 15s		Tue 20/11/18		
264 14.3.5.4	Phase 2: TTA 2s	39 days		Mon 4/3/19	
273 14.3.5.5	Phase 2: TTA 9s	39 days		Mon 4/3/19	
282 14.3.5.6	Phase 2: TTA 16s	40 days		Mon 4/3/19	
291 14.3.5.7 300 14.3.5.8	Phase 3: TTA3s	39 days		Tue 23/4/19	
300 14.3.5.8 309 14.3.5.9	Phase 3: TTA10s Phase 3: TTA17s	39 days 39 days	Tue 5/3/19 Tue 5/3/19	Tue 23/4/19 Tue 23/4/19	
318 14.3.5.10	Phase 4: TTA4s	38 days		Fri 14/6/19	
327 14.3.5.11	Phase 4: TTA11s	38 days		Fri 14/6/19	
336 14.3.5.12	Phase 4: TTA18s	42 days		Fri 14/6/19	
345 14.3.5.13	Phase 5: TTA5s	42 days			, <u>, , , , , , , , , , , , , , , , , , </u>
354 14.3.5.14 363 14.3.5.15	Phase 5: TTA12s	45 days		Wed 7/8/19	
303 14,3,5,15	Phase 5: TTA19s	40 days	Sat 15/6/19	Wed 7/8/19	
Sang Hing Civil C	Contractors Company Limited				Page 3/20



elopment (	;∨/2017/02 of Columbarium at Sandy Ridge Cemetery al Works al Man Kam To Road and Lin Ma Hang Road	ł			3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
WBS	Task Name	Duration	Start Date	Completion Date	M         B         E         M         B
2 14.3.5.16	Phase 6: TTA6s	46 days	Fri 9/8/19	Thu 3/10/19	W 1 F S S M 1 W
1 14.3.5.17	Phase 6: TTA13s	42 days	Wed 14/8/19	Thu 3/10/19	
0 14.3,5.18	Phase 6: TTA20s	47 days		Thu 3/10/19	
9 14.3.5.19	Phase 7: TTA7s	44 days		Wed 27/11/19	
8 14.3.5.20	Phase 7: TTA14s	46 days		Wed 27/11/19	
7 14.3.5.21 7 14.3.5.22	Phase 7: additional TTA21s additional Phase 8: additional TTA 0s	'	Wed 27/11/19	Wed 27/11/19 ! Fri 17/1/20	
7 14.3.6	Construction of Sewerage (DN630) - refer to		Sat 18/1/20	Wed 3/2/21	
1) (1997 <b>8</b> 0)	Drawing No. MKTR Programme/DR/001	orr dayo	out to neo		
8 14.3,6,1	Phase A: TTA 1n	50 days	Tue 21/1/20	Sal 21/3/20	
9 14.3.6.1.1	mobilisation & set up TTA	2 days	Tue 21/1/20	Wed 22/1/20	
0 14.3.6.1.2		4 days	Thu 23/1/20	Thu 30/1/20	
1 14.3,6.1.3		4 days	Fri 31/1/20	Tue 4/2/20	
2 14.3.6.1.4	-	7 days	Wed 5/2/20	Wed 12/2/20	
3 14.3,6.1.5	excavate trench & shoring	7 days	Thu 13/2/20	Thu 20/2/20	
4 14.3.6.1.6 5 14.3.6.1.7	11-10	9 days 14 days	Fri 21/2/20 Tue 3/3/20	Mon 2/3/20 Wed 18/3/20	
6 14.3.6.1.8	reinstate trench & curing	3 days	Thu 19/3/20	Sat 21/3/20	
7 14.3.6.2	Phase A: TTA 7n	52 days		Sat 21/3/20	
8 14.3 6 2 1	mobilisation & set up TTA	2 days	Sat 18/1/20	Mon 20/1/20	
9 14,3.6.2.2		4 days	Tue 21/1/20	Fri 24/1/20	l l l l l l l l l l l l l l l l l l l
0 143623		4 days	Wed 29/1/20	Sat 1/2/20	
1 14.3.6.2.4		7 days	Mon 3/2/20	Mon 10/2/20	
2 14.3.6.2.5	<b>-</b>	9 days	Tue 11/2/20		
3 14.3.6.2.6 4 14.3.6.2.7	FF, 3	9 days 14 days	Fri 21/2/20 Tue 3/3/20	Mon 2/3/20 Wed 18/3/20	
5 14.3.6.2.8			Thu 19/3/20	Sat 21/3/20	
6 14.3.6.3	reinstate trench & cunng Phase B: TTA 2n	3 days 52 days			
7 14.3.6.3.1	mobilisation & set up TTA	2 days	Mon 23/3/20		
8 14.3.6.3.2		4 days	Wed 25/3/20		
9 14.3.6.3.3		4 days	Mon 30/3/20	Thu 2/4/20	
0 14.3.6.3.4	trench sheetpiling	7 days	Fri 3/4/20	Wed 15/4/20	
1 14.3.6.3.5	excavate trench & shoring	9 days	Thu 16/4/20	Sat 25/4/20	
2 14,3.6.3.6	ning louing 9 appatrust mash-la	0 dours	Mon 07///00	E-1 9/5/20	
3 14.3.6.3.6	FF	9 days 14 days	Mon 27/4/20 Sat 9/5/20	Fri 8/5/20 Mon 25/5/20	
-	Baskin solori a romoto silocipilo, rai a subt	. i udyo	53(0)0/20		
4 14,3.6.3.8	reinstate trench & curing	3 days	Tue 26/5/20	Thu 28/5/20	
5 14.3.6.4	Phase B: TTA 8n	-	Mon 23/3/20		
6 14.3.6.4.1					l l l l l l l l l l l l l l l l l l l
7 14.3.6.4.2	5	4 days	Wed 25/3/20		
8 14.3.6.4.3 9 14.3.6.4.4	F	4 days 7 days	Mon 30/3/20 Fri 3/4/20	Thu 2/4/20 Wed 15/4/20	
0 143645		9 days	Thu 16/4/20		
1 14.3.6.4.6					
1 14.3,6.4.6 2 14.3.6.4.7	11-3-3-	9 days 14 days	Mon 27/4/20 Sat 9/5/20	Fri 8/5/20 Mon 25/5/20	
3 14.3,6.4.8	rainstata transh P auring	3 days	Tue 26/5/20	Thu 28/5/20	
4 14.3.6.5	reinstate trench & curing Phase C: TTA 3n	3 days 52 days		Thu 28/5/20 Thu 30/7/20	
- (1 - (1 - (1 - (1 - (1 - (1 - (1 - (1		2 days	Fri 29/5/20	Sat 30/5/20	
5 14.3.6.5.1		4 days	Mon 1/6/20	Thu 4/6/20	
5 14.3.6.5.1 6 14.3.6.5.2	saw cut existing pavement and removal				
	5	4 days	Fri 5/6/20	Tue 9/6/20	
6 14.3.6.5.2	trial pits	4 days 7 days	Fri 5/6/20 Wed 10/6/20		
6 14.3.6.5.2 7 14.3.6.5.3	trial pits trench sheetpiling	7 days	Wed 10/6/20		
6 14.3.6.5.2 7 14.3.6.5.4 9 14.3.6.5.5 0 14.3.6.5.6	trial pits trench sheetpiling excavate trench & shoring pipe laying & construct manhole	7 days 9 days 9 days	Wed 10/6/20 Thu 18/6/20 Tue 30/6/20	Wed 17/6/20 Mon 29/6/20 Fri 10/7/20	
6 14.3652 14.3653 8 14.3654 9 14.3655 0 14.3655 14.3655 14.3655	trial pits trench sheetpiling excavate trench & shoring pipe laying & construct manhole backfill trench & remove sheetpile, rail & strut	7 days 9 days 9 days 14 days	Wed 10/6/20 Thu 18/6/20 Tue 30/6/20 Sat 11/7/20	Wed 17/6/20 Mon 29/6/20 Fri 10/7/20 Mon 27/7/20	
6 14.3652 7 14.3653 14.3654 9 14.3655 0 14.3656 14.3656 14.3656 14.3656	trial pits trench sheetpiling excavate trench & shoring pipe laying & construct manhole backfill trench & remove sheetpile, rail & strut reinstate trench & curing	7 days 9 days 9 days 14 days 3 days	Wed 10/6/20 Thu 18/6/20 Tue 30/6/20 Sat 11/7/20 Tue 28/7/20	Wed 17/6/20 Mon 29/6/20 Fri 10/7/20 Mon 27/7/20 Thu 30/7/20	
6 143652 77 143653 8 143655 9 143655 9 143655 11 143655 11 143655 13 143656	trial pits trench sheetpiling excavate trench & shoring pipe laying & construct manhole backfill trench & remove sheetpile, rail & strut reinstate trench & curing Phase C: TTA 9n	7 days 9 days 9 days 14 days 3 days 52 days	Wed 10/6/20 Thu 18/6/20 Tue 30/6/20 Sat 11/7/20 Tue 28/7/20 Fri 29/5/20	Wed 17/6/20 Mon 29/6/20 Fri 10/7/20 Mon 27/7/20 Thu 30/7/20 Thu 30/7/20	
6 14.3652 7 14.3653 14.3654 9 14.3655 0 14.3656 14.3656 14.3656 14.3656	trial pits trench sheetpiling excavate trench & shoring pipe laying & construct manhole backfill trench & remove sheetpile, rail & strut reinstate trench & curing Phase C: TTA 9n mobilisation & set up TTA	7 days 9 days 9 days 14 days 3 days	Wed 10/6/20 Thu 18/6/20 Tue 30/6/20 Sat 11/7/20 Tue 28/7/20	Wed 17/6/20 Mon 29/6/20 Fri 10/7/20 Mon 27/7/20 Thu 30/7/20	

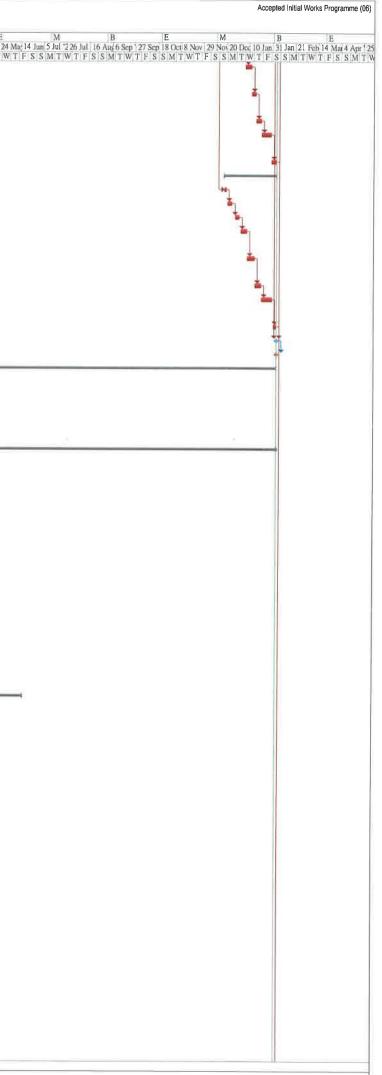


Develo	t No. CV/. oment of ( tructural V	2017/02 Columbarium at Sandy Ridge Cemetery /orks at Man Kam To Road and Lin Ma Hang Road	đ			3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
		lisk Name	Duration	Start Date	Completion Date	M B F M B F M B F M D F M D
487	4,3.6,6.4	trench sheetpiling	7 days	Wed 10/6/20	Wed 17/6/20	Ma: 10 Jun 1 Jul 1 22 Jul 12 Aug 2 Sep 12 Sep 14 Oct 4 Nov 25 Nov 16 Doc 6 Jan 27 Jan 17 Feb 10 Mar 31 Mar 21 Apr 12 Mar 2 Jun 2 Jun 14 Jul 4 Aug 25 Aug 15 Sep 6 Oct 27 Oct 17 Nov 8 Dec 29 Doc 19 Jan 9 Feb 1 Mar 22 Mar 12 Apr 3 May 2 Mar 12 Apr 3 May 2 Mar 12 Apr 3 May 2 Mar 14 Jul 4 Aug 25 Aug 15 Sep 6 Oct 27 Oct 17 Nov 8 Dec 29 Doc 19 Jan 9 Feb 1 Mar 22 Mar 12 Apr 3 May 2 Mar 15 S M T W T F S S M T W T
488	4.3.6.6.5	excavate trench & shoring	9 days	Thu 18/6/20	Mon 29/6/20	
480	43666	pipe laying & construct manhole	9 days	Tue 30/6/20	Fri 10/7/20	
	4.3.6.6.7	backfill trench & remove sheetpile, rail & strut	14 days		Mon 27/7/20	
491	4.3.6.6.8	reinstate trench & curing	3 days	Tue 28/7/20	Thu 30/7/20	
492	4.3.6.7	Phase D: TTA 4n	52 days	Fri 31/7/20	Tue 29/9/20	
= 171	4,3,6.7.1	mobilisation & set up TTA	2 days	Fri 31/7/20	Sat 1/8/20	
- 67	4.3.6.7.2	saw cut existing pavement and removal	4 days	Mon 3/8/20	Thu 6/8/20	
	4.3.6.7.3	trial pits	4 days	Fri 7/8/20	Tue 11/8/20	
496	4.3.6.7.4	trench sheetpiling	7 days	Wed 12/8/20	Wed 19/8/20	
497	4.3.6.7.5	excavate trench & shoring	9 days	Thu 20/8/20	Sat 29/8/20	
	4.3.6.7.6	pipe laying & construct manhole	9 days	Mon 31/8/20	Wed 9/9/20	
499	4.3.6.7.7	backfill trench & remove sheetpile, rail & strut	14 days	Thu 10/9/20	Fri 25/9/20	
1000	4.3.6.7.8	reinstate Irench & curing	3 days	Sat 26/9/20	Tue 29/9/20	
	4.3.6.8	Phase D: TTA 10n	52 days		Tue 29/9/20	
	4.3.6.8.1	mobilisation & set up TTA	2 days	Fri 31/7/20	Sal 1/8/20	
L. Personal	4.3.6.8.2	saw cut existing pavement and removal	4 days	Mon 3/8/20	Thu 6/8/20	
	4.3.6.8.3	trial pits	4 days	Fri 7/8/20	Tue 11/8/20	
505	4.3.6.8.4	trench sheetpiling	7 days	Wed 12/8/20	Wed 19/8/20	
506	4.3.6.8.5	excavate trench & shoring	9 days	Thu 20/8/20	Sat 29/8/20	
507	4.3.6.8.6	pipe laying & construct manhole	9 days	Mon 31/8/20	Wed 9/9/20	
508	14.3.6.8.7	backfill trench & remove sheetpile, rail & strut	14 days	Thu 10/9/20	Fri 25/9/20	
509	4.3.6.8.8	reinstate trench & curing	3 days	Sat 26/9/20	Tue 29/9/20	
510		Phase E: TTA 5n	52 days	Wed 30/9/20	Wed 2/12/20	
	4.3.6.9.1	mobilisation & set up TTA	2 days			
12265	14.3.6.9.2	saw cut existing pavement and removal	4 days			
-	4.3.6.9.3	trial pits	4 days		Tue 13/10/20	
514	14.3.6.9.4	trench sheetpiling	7 days	Wed 14/10/20	Wed 21/10/20	
515	14.3.6.9.5	excavate trench & shoring	9 days	Thu 22/10/20	Mon 2/11/20	
	4.3.6.9.6	pipe laying & construct manhole	9 days	Tue 3/11/20	Thu 12/11/20	
517	4.3.6.9.7	backfill trench & remove sheetpile, rail & strut	14 days	Fri 13/11/20	Sat 28/11/20	
518	4.3.6.9.8	reinstate trench & curing	3 days	Mon 30/11/20	Wed 2/12/20	
519	4.3.6.10	Phase E: TTA 11n	52 days	Wed 30/9/20	Wed 2/12/20	
	4.3.6.10.1	mobilisation & set up TTA	2 days	Wed 30/9/20	Sal 3/10/20	
1.520	4.3.6.10.2	saw cut existing pavement and removal	4 days	Mon 5/10/20	Thu 8/10/20	
1.2.2.012	14.3.6.10.3	trial pits	4 days		Tue 13/10/20	
523	4.3.6.10.4	trench sheetpiling	7 days	Wed 14/10/20	Wed 21/10/20	
524	4.3.6.10.5	excavate trench & shoring	9 days	Thu 22/10/20	Mon 2/11/20	
525	14.3.6.10.6	pipe laying & construct manhole	9 days	Tue 3/11/20	Thu 12/11/20	
526	14.3.6.10.7				Sat 28/11/20	
527	14.3.6.10.8	reinstate trench & curing	3 davs	Mon 30/11/20	Wed 2/12/20	
1.030	14.3.6.11	Phase F: TTA 6n		Thu 3/12/20		
529	14.3.6.11.1	mobilisation & set up TTA	2 days			
	14.3.6.11.2	saw cut existing pavement and removal	4 days			
and the state of the	14.3.6.11.3	trial pits	4 days	Thu 10/12/20	Mon 14/12/20	
532	14.3.6.11.4	trench sheetpiling	7 days	Tue 15/12/20	Tue 22/12/20	
533	14.3.6.11.5	excavate trench & shoring	8 days	Wed 23/12/20	Mon 4/1/21	
534	14.3.6.11.6	pipe laying & construct manhole	9 days	Tue 5/1/21	Thu 14/1/21	
535	14.3.6.11.7			Fri 15/1/21	Sat 30/1/21	
616						
230	14 3 6.11 8	reinstate trench & curing	3 days	Mon 1/2/21	Wed 3/2/21	
537	14 3 6 12	reinstate trench & curing Phase F: additional TTA 12s		Mon 1/2/21 Fri 18/12/20		
537 538	14 3 6 12 14 3 6 12 1	Phase F: additional TTA 12s mobilisation & set up TTA	38 days 2 days	Fri 18/12/20 Fri 18/12/20	Wed 3/2/21 Sat 19/12/20	
537 538 539	14 3 6 12	Phase F: additional TTA 12s	38 days 2 days 6 days	Fri 18/12/20 Fri 18/12/20	Wed 3/2/21 Sat 19/12/20 Tue 29/12/20	



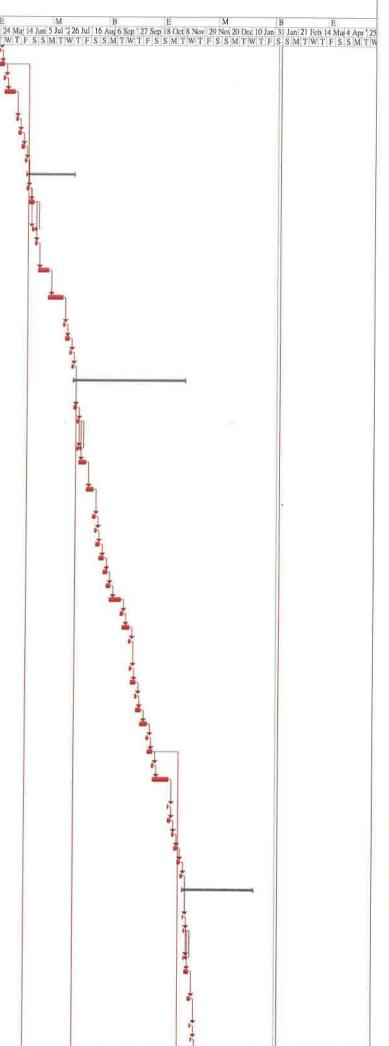
Accepted Initial Works Programme (06)

evelo Infras	tructural V	Columbarium at Sandy Ridge Cernetery Vorks at Man Kam To Road and Lin Ma Hang Road				3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
)	WBS	Fask Name	Duration	Start Date	Completion Date	M         B         E         M         B
541	14,3.6.12.4	trench sheetpiling	5 days	Wed 6/1/21	Mon 11/1/21	W 1 F 5 S M T W 1 F 5 S M T W 1 F 5 S M T W 1 F 5 S M T W 1 F 5 S M T W 1 F 5 S M T W 1 F 5 S M T W T F 5 S M T W
542	14.3.6.12.5	excavate trench & shoring	4 days	Tue 12/1/21	Fri 15/1/21	
543	4.3,6,12.6	pipe laying & construct manhole	4 days	Sat 16/1/21	Wed 20/1/21	
44	4.3,6.12.7	backfill trench & remove sheetpile, rail & strut	8 days	Thu 21/1/21	Fri 29/1/21	
	4,3,6,12.8	reinstate trench & curing	4 days	Sat 30/1/21	Wed 3/2/21	
SULTRA .	4.3,6.13	Phase F: additional TTA On	38 days	Fri 18/12/20	Wed 3/2/21	
Sec.	4.3.6.13.1	mobilisation & set up TTA	2 days	Fri 18/12/20		
	14.3,6.13.2 14.3,6.13.3	saw cut existing pavement and removal trial pits	4 days 4 days		Thu 24/12/20 Thu 31/12/20	
	4,3,6,13,4	trench sheetpiling	5 days	Sat 2/1/21	Thu 7/1/21	
551	4,3,6,13,5	excavate trench & shoring	6 days	Fri 8/1/21	Thu 14/1/21	
552	4.3,6.13.6	pipe laying & construct manhole	5 days	Fri 15/1/21	Wed 20/1/21	
	4.3,6.13,7	backfill trench & remove sheetpile, rail & strut	9 days	Thu 21/1/21	Sat 30/1/21	
554	4.3.6.13.8	reinstate trench & curing	3 days	Mon 1/2/21	Wed 3/2/21	
		Planned Completion for section 1 of the works	0 days	Wed 3/2/21	Wed 3/2/21	
556	6 (	Completion Date for section 1 of the works	0 days	Wed 3/2/21	Wed 3/2/21	
557	1	section 2 of the works - Completion of all works vithin Parts C1 and C2 of the Site except Establishment works	979 days	Thu 31/5/18	Wed 3/2/21	
558		access date for section 2 (Part C1)	0 davs	Thu 31/5/18	Thu 31/5/18	
559		Temporary Traffic Arrangement (TTA) Scheme for Lin Ma Hang Road	,	Fri 1/6/18	Fri 9/11/18	
565	17.3	works at Lin Ma Hang Road (section 2 Part C1) refer Appendice LMHR01a to d	817 days	Sat 10/11/18	Wed 3/2/21	
566		Phase I (stage 1)-south lane (chainage 240-283)	23 days	Sat 10/11/18	Thu 6/12/18	
	7.3.2	Phase I (stage 2)-north lane (chainage 240-283)	16 days		Thu 27/12/18	
- Alexandre	17.3.3 17.3.4	Phase I (stage 3)-south lane (chainage 283-335) Phase I (stage 4)-north lane (chainage 283-335)	26 days 17 days	Fri 28/12/18 Tue 29/1/19		
1.1	17.3.5	Phase I (stage 5)-south lane (chainage 200-300)	18 days	Thu 21/2/19		
	7.3,6	Phase I (stage 6)-north lane (chainage 335-380)	16 days		Mon 1/4/19	
627	17.3.7	Phase I (stage 7)-south lane (chainage 380-435)	23 days	Tue 2/4/19	Fri 3/5/19	
638		Phase I (stage 8)-north lane (chainage 380-435)	15 days	Sat 4/5/19		
648		Phase I (stage 9)-south lane (chainage 190-240)	18 days		Thu 13/6/19	
	17.3.10 17.3.11	Phase I (stage 10)-north lane (chainage 190-240) Phase II (stage 1)-south lane (chainage	16 days 95 days	Fri 14/6/19 Thu 4/7/19	Wed 3/7/19 Fri 25/10/19	
		32-85)-Noise Barrier MM6 (bays 1-3) & MM7 (bays 1-2)	55 uaya	110-111-1-5	1123/10/13	
703	7.3.12	Phase II (stage 2)-north lane (chainage 32-85)-Noise Barrier MM9 (bays 1-4)	84 days	Sat 26/10/19	Fri 7/2/20	
735		Phase II (stage 3)-south lane (chainage 85-138)	38 days	Sat 8/2/20	Mon 23/3/20	
746	17.3.14	Phase II (stage 4)-north lane (chainage 85-138)-Noise Barrier MM10 (bays 1-4)	68 days	Tue 24/3/20	Wed 17/6/20	
*****	7.3.14.1	TTA, UU detection	2 days	Tue 24/3/20	Wed 25/3/20	
748	7.3.14.2	tree felling	2 days	Thu 26/3/20	Fri 27/3/20	
749	73143	saw cut & remove existing pavement	2 days	Thu 26/3/20	Fri 27/3/20	
750	7.3.14.4	install sheetpiles	5 days	Sat 28/3/20	Thu 2/4/20	
751	17.3.14.5	excavate and install rails and struts	5 days	Fri 3/4/20	Thu 9/4/20	
752	7,3,14,6	concrete blinding layers for 4 bays	2 days	Thu 9/4/20	Tue 14/4/20	
10/201	73147	formwork for bases of alternative first two bays	2 days	Tue 14/4/20	Wed 15/4/20	
	7.3.14.8	sleel fixing for two bases	2 days	Wed 15/4/20		
	17.3.14.9 17.3.14.10	concrete and curing for two bases remove formwork	4 days 2 days	Thu 16/4/20		
	7.3.14.10	remove formwork falsework and formwork for two walls	2 days 3 days	Mon 20/4/20 Tue 21/4/20	Tue 21/4/20 Thu 23/4/20	
100	7.3.14.12	steel fixing for two walls	6 days	The 21/4/20 Thu 23/4/20	Wed 29/4/20	
	7.3.14.13	close formwork for two walls	2 days	Wed 29/4/20	Sat 2/5/20	
1993 - H	7.3,14.14	concrete and curing for two walls	4 days	Sat 2/5/20	Wed 6/5/20	
	7.3.14.15	remove formwork	2 days	Wed 6/5/20	Thu 7/5/20	
	17.3.14.16	formwork for bases of alternative second two bays	2 days	Thu 7/5/20	Fri 8/5/20	
763	7.3.14.17	sleel fixing for two bases	2 days	Fri 8/5/20	Sat 9/5/20	
72.1	17.3.14.18	concrete and curing for two bases	4 days	Sat 9/5/20	Wed 13/5/20	
		remove formwork	2 dave	Wed 13/5/00	Thu 14/5/20	1
765	17.3.14.19 17.3.14.20	remove formwork falsework and formwork for two walls	2 days 3 days	Wed 13/5/20 Thu 14/5/20	Thu 14/5/20 Sat 16/5/20	5



Dev		//2017/02 Columbarium at Sandy Ridge Cemetery Works at Man Kam To Road and Lin Ma Hang Roac	3			3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
ID	WBS	Task Name	Duration	Start Date	Completion Date	M         B         E         M         B
768	17.3.14.22	close formwork for two walls	2 days	Fri 22/5/20	Sat 23/5/20	WTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTFSSMTWTFSSMTWTFSSMTWTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSSMTWTTFSS
769	17.3.14.23	concrete and curing for two walls	4 days	Sat 23/5/20	Wed 27/5/20	1
770	17.3.14,24	remove formwork	2 days	Wed 27/5/20	Thu 28/5/20	
771	17.3.14.25	backfill formation & SRT test	9 days	Thu 28/5/20	Sat 6/6/20	
	17.3.14.26	lay kerb, sub-base	2 days	Mon 8/6/20	Tue 9/6/20	
	17.3.14.27	sub-base SRT test	3 days	Wed 10/6/20	Fri 12/6/20	
	17.3.14.28 17.3.14.29	DBM (Roadbase)	2 days	Sat 13/6/20 Tue 16/6/20	Mon 15/6/20 Wed 17/6/20	
776		base course and wearing course Phase II (stage 5)-south lane (chainage 138-190)	2 days 36 days		Fri 31/7/20	
1.101.	17.3.15.1	TTA & UU detection	2 days	Thu 18/6/20	Fri 19/6/20	
1005	17.3.15.2	tree felling	4 days	Sat 20/6/20	Wed 24/6/20	
779	17.3.15.3	saw cut & remove existing pavement	2 days	Tue 23/6/20	Wed 24/6/20	
- C.N.S	17.3.15.4	excavate pipe trench and manhole(s)	2 days	Fri 26/6/20	Sat 27/6/20	
791	17.3.15.5	lay pipes & construct manhole(s)	R dava	Mon 29/6/20	Wed 8/7/20	
			8 days			
782	17.3 15.6	backfill formation & SRT test	12 days	Wed 8/7/20	Tue 21/7/20	
	17.3 15.7	lay kerb, sub-base	2 days	Wed 22/7/20		
784		sub-base SRT test	3 days	Fri 24/7/20	Mon 27/7/20	
785	The second second	DBM (Roadbase)	2 days	Tue 28/7/20	Wed 29/7/20	
786		base course and wearing course	2 days	Thu 30/7/20	Fri 31/7/20	
187	17.3.16	Phase II (stage 6)-north lane (chainage 138-190)-Noise Barrier MM10 (bays 5-9)	85 days	Sat 1/8/20	Wed 11/11/20	
	17.3.16.1	TTA, UU detection	2 days	Sat 1/8/20	Mon 3/8/20	
789	17.3.16.2	tree felling	2 days	Tue 4/8/20	Wed 5/8/20	
790	17.3.16.3	saw cut & remove existing pavement	2 days	Tue 4/8/20	Wed 5/8/20	
791	17.3.16.4	install sheetpiles	6 days	Thu 6/8/20	Wed 12/8/20	
792	17.3.16.5	excavate and install rails and struts	6 days	Thu 13/8/20	Wed 19/8/20	
793	17.3.16.6	concrete blinding layers for 5 bays	3 days	Wed 19/8/20	Fri 21/8/20	
794	17.3.16.7	formwork for bases of alternative first 3 bays	2 days	Fri 21/8/20	Sat 22/8/20	
795		steel fixing for 3 bases	3 days	Sat 22/8/20	Tue 25/8/20	
796	21. Year and	concrete and curing for 3 bases	5 days	Tue 25/8/20	Sat 29/8/20	
797	17.3.16.10	remove formwork	3 days	Sat 29/8/20	Tue 1/9/20	
799		falsework and formwork for 3 walls steel fixing for 3 walls	4 days 9 days	Tue 1/9/20 Fri 4/9/20	Fri 4/9/20 Mon 14/9/20	
1.01.0	17.3.16.13	close formwork for 3 walls	3 days	Mon 14/9/20		
1.000	17.3.16.14	concrete and curing for 3 walls	6 days	Wed 16/9/20		
	17.3.16.15	formwork for bases of alternative second two bays	2 days		Wed 23/9/20	
803	17.3.16.16	steel fixing for two bases	2 days	Wed 23/9/20		
804	17.3,16,17	concrete and curing for two bases	4 days	Thu 24/9/20	Mon 28/9/20	
805	17.3.16.18	remove formwork	2 days	Mon 28/9/20	Tue 29/9/20	
	17.3.16.19	falsework and formwork for two walls	3 days	Tue 29/9/20	Sat 3/10/20	
-	17.3.16.20	steel fixing for two walls	6 days	Sat 3/10/20	Fri 9/10/20	
5.93	17.3.16.21	close formwork for two walls	2 days	Fri 9/10/20	Sat 10/10/20	
to the second	17.3.16.22	concrete and curing for two walls	4 days		Wed 14/10/20	
	17.3.16.24	remove formwork backfill formation & SRT test		Wed 14/10/20 Thu 15/10/20		
917	17.3.16.25					
	17.3.16.25	excavate gully trench and gully pot(s) lay& connect gully pipes& construct gully pot(s)	1 day 3 days	Thu 29/10/20 Thu 29/10/20	Thu 29/10/20 Sat 31/10/20	
20200	17.3.16.27	lay kerb, sub-base	2 days	Mon 2/11/20		
2.517	17.3.16.28	sub-base SRT test	3 days	Wed 4/11/20	Fri 6/11/20	
	17.3.16.29	DBM (Roadbase)	2 days	Sat 7/11/20		
817	17.3.16.30	base course and wearing course	2 days	Tue 10/11/20	Wed 11/11/20	
	17.3.17	Phase II (stage 7)-south lane (chainage 0-32)-Noise Barrier MM5 (bays 1-2)	53 days	Thu 12/11/20	Fri 15/1/21	
	17.3.17.1 17.3.17.2	TTA, UU detection tree felling	1 day 1 day	Thu 12/11/20 Fri 13/11/20	Thu 12/11/20 Fri 13/11/20	
.001	17.0 13.0	-	-			
1.55	17.3.17.3 17.3.17.4	saw cut & remove existing pavement install sheetpiles	1 day 3 days	Fri 13/11/20 Sat 14/11/20		
			-			
823	17.3.17.5	excavate and install rails and struts	3 days	Tue 17/11/20	Thu 19/11/20	
(1.74)	17.3.17.6 17.3.17.7	concrete blinding layers for 2 bays	1 day		Thu 19/11/20 Fri 20/11/20	
023	11.3.17.7	formwork for base of the first bay	1 day	Fri 20/11/20	FII 20/11/20	

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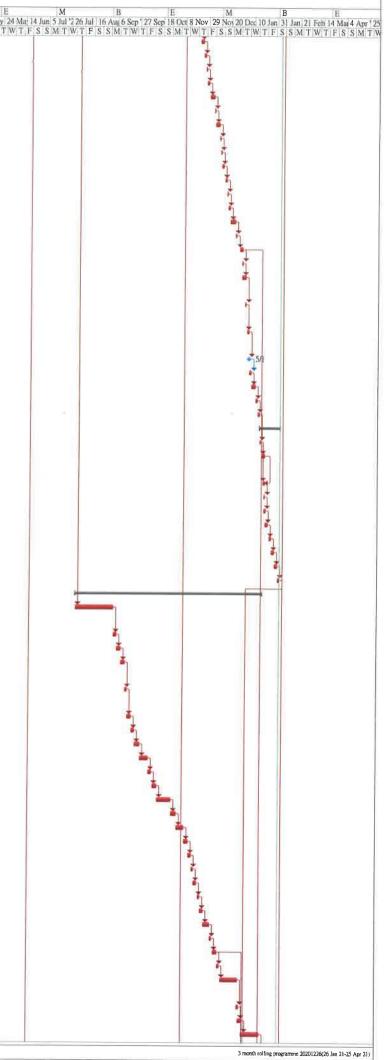


Accepted Initial Works Programme (06)

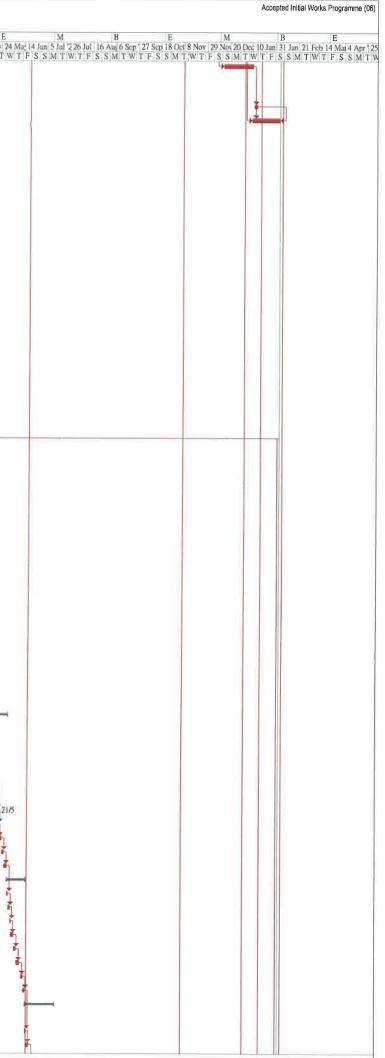
Contract No. CV/ Development of ( - Infrastructural V	/2017/02 Columbarium at Sandy Ridge Cernetery Norks at Man Kam To Road and Lin Ma Hang Roa	ad			3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
ID WBS	Task Nanz	Duration	Start Date	Completion Date	M         B         E         M         B
826 17.3.17.8	steel fixing for 1 base	2 days	Sat 21/11/20	Mon 23/11/20	W 1 F S S M 1 W 1 F S S M 1 W 1 F S S M 1 W 1 F S S M 1 W 1 F S S M 1 W T F S S M 1 W T F S S M T W
827 17.3.17.9	concrete and curing	2 days		Wed 25/11/20	
828 17.3.17.10 829 17.3.17.11	remove formwork falsework and formwork for 1 wall	1 day 2 days		Thu 26/11/20 Sat 28/11/20	
830 17.3.17.12	steel fixing	4 days	Mon 30/11/20		
831 17.3.17.13	close formwork	1 day	Fri 4/12/20	Fri 4/12/20	
832 17.3.17.14	concrete and curing	3 days	Sat 5/12/20	Tue 8/12/20	
833 17.3.17.15 834 17.3.17.16	remove formwork formwork for base of the second bay	1 day 1 day	Wed 9/12/20	Wed 9/12/20 Thu 10/12/20	
835 17 3 17 17	steel fixing	2 days		Sat 12/12/20	
836 17.3.17.18	concrete and curing		Mon 14/12/20	Tue 15/12/20	
837 17.3.17.19	remove formwork	1 day		Wed 16/12/20	
838 17.3.17.20 839 17.3.17.21	falsework and formwork steel fixing	2 days 4 days		Fri 18/12/20 Wed 23/12/20	
840 17.3.17.22	close formwork	1 days		Thu 24/12/20	
841 17.3.17.23	concrete and curing		Mon 28/12/20	Wed 30/12/20	
842 17.3.17.24	remove formwork	1 day		Wed 30/12/20	
843 17.3.17.25	backfill formation & SRT test	3 days	Wed 30/12/20	Sat 2/1/21	
844 17.3.17.26	excavate pipe trench and manhole(s)	1 day	Sat 2/1/21	Sat 2/1/21	
845 17.3.17.27	lay pipes & construct manhole(s)	2 days	Mon 4/1/21	Tue 5/1/21	
846 17.3.17.28	backfill formation & SRT test	0 days	Tue 5/1/21	Tue 5/1/21	
847 17.3.17.29	lay kerb, sub-base	2 days	Wed 6/1/21	Thu 7/1/21	
848 17.3.17.30 849 17.3.17.31	sub-base SRT test DBM (Roadbase)	3 days 2 days	Fri 8/1/21 Tue 12/1/21	Mon 11/1/21 Wed 13/1/21	
850 17.3.17.32	base course and wearing course	2 days 2 days	Thu 14/1/21	Fri 15/1/21	
851 17,3,18	Phase II (stage 8)-north lane (chainage 0-32)	16 days	Sat 16/1/21	Wed 3/2/21	
852 17,3,18,1	TTA & UU detection	1 day	Sat 16/1/21	Sat 16/1/21	
853 17.3.18.2	tree felling	3 days	Mon 18/1/21	Wed 20/1/21	
854 17.3.18.3	saw cut & remove existing pavement	2 days	Tue 19/1/21	Wed 20/1/21	
855 17.3.18.4	excavate gully trench and gully pot(s)	1 day	Wed 20/1/21		
856 17.3.18.5 857 17.3.18.6	lay& connect gully pipes& construct gully pot(s) backfill formation & SRT test	2 days 3 days	Wed 20/1/21 Thu 21/1/21	Thu 21/1/21 Sat 23/1/21	
858 17.3.18.7	lay kerb, sub-base	2 days		Tue 26/1/21	
859 17.3.18.8	sub-base SRT test	-	Wed 27/1/21		
860 17.3,18.9	DBM (Roadbase)		Sat 30/1/21		
861 17.3.18.10 862 17.3.19	base course and wearing course Noise Barrier MM8 (bays 1-3)	2 days 140 days	Tue 2/2/21 Sat 1/8/20	Wed 3/2/21 Mon 18/1/21	
863 17.3.19.1	construct alternative route to close the existing road	30 days	Sat 1/8/20	Fri 4/9/20	
864 17.3.19.2	TTA road closure, UU detection	2 days	Sat 5/9/20	Mon 7/9/20	
865 17,3,19,3	remove existing pavement	4 days	Tue 8/9/20	Fri 11/9/20	
866 17.3.19.4	install sheetpiles	3 days	Sat 12/9/20	Tue 15/9/20	
867 17,3,19.5	excavate and install rails and struts	2 days	Wed 16/9/20	Thu 17/9/20	
868 17.3.19.6	concrete blinding layers for 3 bays	3 days	Fri 18/9/20	Mon 21/9/20	
869 17,3,19,7 870 17,3,19,8	formwork for 2 bases	3 days	Tue 22/9/20	Thu 24/9/20	
870 17.3.19.8 871 17.3.19.9	steel fixing for 2 bases concrete and curing for 2 bases	4 days 5 days	Fri 25/9/20 Wed 30/9/20	Tue 29/9/20 Wed 7/10/20	
872 17.3.19.10	remove formwork for 2 bases	3 days		Sat 10/10/20	
873 17.3.19.11	falsework and formwork for 2 walls	4 days		Thu 15/10/20	
874 17,3,19,12 875 17,3,19,13	steel fixing for 2 walls			Wed 28/10/20	
875 17.3.19.13 876 17.3.19.14	close formwork for 2 walls concrete and curing for 2 walls	4 days 6 days	Thu 29/10/20 Tue 3/11/20	Mon 2/11/20 Mon 9/11/20	
877 17.3,19.15	remove formwork for 2 walls		Tue 10/11/20		
878 17.3.19.16	formwork for base of the second 1 bay	2 days		Mon 16/11/20	
879 17.3.19.17 880 17.3.19.18	steel fixing			Wed 18/11/20	
881 17.3.19.19	concrete and curing remove formwork			Sat 21/11/20 Tue 24/11/20	
882 17.3.19.20	falsework and formwork for wall	-	Wed 25/11/20		
883 17.3 19.21	steel fixing		Sat 28/11/20		
884 17.3.19.22 885 17.3.19.23	close formwork	2 days	Fri 4/12/20	Sat 5/12/20	
885 17.3.19.23 886 17.3.19.24	concrete and curing remove formwork	4 days 2 days	Mon 7/12/20 Fri 11/12/20	Thu 10/12/20 Sat 12/12/20	
887 17.3.19.25	backfill to formation		Mon 14/12/20		
888 17.3.19.26	lay kerb, sub-base	2 days	Tue 29/12/20	Wed 30/12/20	
889 17.3.19.27	sub-base SRT test	3 days	Wed 30/12/20		
Date: No.			Sat 2/1/21		

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Sang Hing Civil Contractors Company Limited

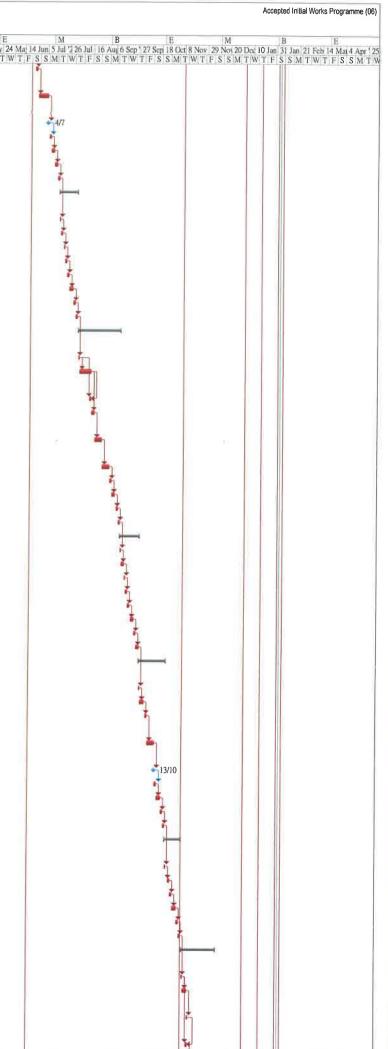


Developr	No. CV/20 ment of Co uctural Wo	orrioz olumbarium at Sandy Ridge Cernetery orks at Man Kam To Road and Lin Ma Hang Road				3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
D W	'BS Ta	sik Name	Duration	Start Date	Completion Date	M B E M B B E M B B B E M B B E M B B E M B B E M B B E M B B B E M B B E M B B B E M B B B B
891 17	.3.20	Street lighting (drawpits, abandon existing public lighting & cable, 100uPVC ducts) (ch0-435)	21 days	Mon 14/12/20		WTFSSMTWTFSSSMTWTFSSSMTWTFSSMTW
892 17	3.21	tree planting	3 days	Mon 11/1/21	Wed 13/1/21	
893 17		Street furniture & construction of footpath (ch0-435)		Sat 9/1/21	Wed 3/2/21	
894 17	3 00		00	0-140/44/40	Mar 0/40/40	
904 17		Phase Ia (stage 101)-south lane (chainage 633-685) Phase Ia (stage 102)-north lane (chainage 633-685)		Sat 10/11/18 Tue 4/12/18	Mon 3/12/18 Fri 21/12/18	
914 17	3 25	Phase Ia (stage 103)-south lane (chainage 685-740)		Sat 22/12/18	Wed 23/1/19	
925 17		Phase Ia (stage 104)-north lane (chainage 685-740)		Thu 24/1/19	Fri 15/2/19	
934 17 945 17		Phase Ia (stage 105)-south lane (chainage 740-790) Phase Ia (stage 106) north lane (chainage 740-790)		Sat 16/2/19 Sat 16/3/19	Fri 15/3/19 Thu 4/4/19	
955 17		Phase la stage 107)-south lane (chainage 790-840)		Sat 6/4/19	Sat 4/5/19	
966 17		Phase Ia (stage 108)-north lane (chainage 790-840)		Mon 6/5/19	Mon 10/6/19	
976 17 988 17		Phase la (stage 109)-south lane (chainage 840-890)	•	Tue 11/6/19 Thu 18/7/19	Wed 17/7/19 Wed 7/8/19	
998 17		Phase Ia (stage 110)-north Iane (chainage 840-890) Phase III (stage 1)-south Iane (chainage 435-490)	20 days	Thu 8/8/19	Fri 30/8/19	
1009 17	3 34	Phase III (stage 2)-north lane (chainage 435-490)	16 days	Sat 31/8/19	Thu 19/9/19	
1019 17			34 days	Fri 20/9/19	Thu 31/10/19	
1030 17 1039 17			17 days 29 days	Fri 8/11/19 Thu 28/11/19	Wed 27/11/19 Fri 3/1/20	
1049 17			22 days	Sat 4/1/20	Sat 1/2/20	
1059 17			29 days	Tue 4/2/20	Sat 7/3/20	
1069 17 1079 17		Phase III (stage 8)-north lane (chainage 590-633) Street lighting (drawpits, abandon existing public lighting & cable, 100uPVC ducts) (ch435-890)	25 days 7 days	Mon 9/3/20 Wed 8/4/20	Tue 7/4/20 Sat 18/4/20	
1080 17	3 42	tree planting	5 days	Tue 14/4/20	Sat 18/4/20	
1081 17		Street furniture & construction of footpath (ch435-890)	23 days	Mon 20/4/20	Mon 18/5/20	
1082 17 1093 17			22 days	Fri 20/9/19 Fri 18/10/19	Thu 17/10/19	
1103 17			•		Wed 6/11/19 Thu 12/12/19	
1113 17	3.47		16 days	Fri 13/12/19	Fri 3/1/20	
1122 17			17 days	Sat 4/1/20	Thu 23/1/20	
1132 17 1141 17			16 days 19 days	Fri 24/1/20 Sat 15/2/20	Fri 14/2/20 Sat 7/3/20	
1151 17		Phase V (stage 4)-north lane (chainage 1035-1087)		Mon 9/3/20	Sat 21/3/20	
1160 17		Phase V (stage 5)-south lane (chainage 1087-1139)	•	Mon 23/3/20	Sat 18/4/20	
1170 17 1171 17		Phase V (stage 6)-north lane (chainage 1087-1139) TTA & UU detection		Mon 20/4/20 Mon 20/4/20	Fri 8/5/20 Mon 20/4/20	
1172 17		saw cut & remove existing pavement	2 days	Tue 21/4/20	Wed 22/4/20	2
1173 17		excavate gully trench and gully pot(s)	1 day	Thu 23/4/20	Thu 23/4/20	
1174 17 1175 17		lay& connect gully pipes& construct gully pot(s)	2 days	Fri 24/4/20	Sat 25/4/20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1175 17		lay kerb, sub-base sub-base SRT test	2 days 3 days	Mon 27/4/20 Wed 29/4/20	Tue 28/4/20 Mon 4/5/20	
1177 17		DBM (Roadbase)	2 days	Tue 5/5/20	Wed 6/5/20	
1178 17		base course and wearing course	2 days	Thu 7/5/20	Fri 8/5/20	۲ (۲ (۲ (۲ (۲ (۲ (۲ (۲ (۲ (۲ (۲ (۲ (۲ (۲
1179 17 1180 17		Phase V (stage 7)-south lane (chainage 1139-1190) TTA & UU detection	20 days 1 day	Sat 9/5/20 Sat 9/5/20	Mon 1/6/20 Sat 9/5/20	
1181 17		saw cut & remove existing pavement	•	Mon 11/5/20	Tue 12/5/20	
1182 17	.3.54 3	excavate pipe trench and manhole(s)	2 days	Wed 13/5/20	Thu 14/5/20	t i i i i i i i i i i i i i i i i i i i
1183 17		lay pipes & construct manhole(s)	6 days	Fri 15/5/20	Thu 21/5/20	
1184 17 1185 17		backfill formation & SRT test lay kerb, sub-base	0 days 2 days	Thu 21/5/20 Fri 22/5/20	Thu 21/5/20 Sat 23/5/20	21/5
1186 17		sub-base SRT test	2 days 3 days	Mon 25/5/20	Wed 27/5/20	
1187 17	3.54.8	DBM (Roadbase)	2 days	Thu 28/5/20	Fri 29/5/20	
1188 17		base course and wearing course Dears // (stage 9) poth long (sheipage 1129, 1199)	2 days	Sat 30/5/20	Mon 1/6/20	
1189 17 1190 17		Phase V (stage 8)-north lane (chainage 1139-1190) TTA & UU detection	15 days 1 day	Tue 2/6/20 Tue 2/6/20	Thu 18/6/20 Tue 2/6/20	
1191 17		saw cut & remove existing pavement	2 days	Wed 3/6/20	Thu 4/6/20	
1192 17		excavate gully trench and gully pot(s)	1 day	Fri 5/6/20	Fri 5/6/20	
1193 17 1194 17		lay& connect gully pipes& construct gully pot(s) lay kerb, sub-base	2 days 2 days	Sal 6/6/20 Tue 9/6/20	Mon 8/6/20 Wed 10/6/20	
1194 17		sub-base SRT test	2 days 3 days	The 9/6/20 Thu 11/6/20	Sat 13/6/20	
1196 17	3.557	DBM (Roadbase)	2 days	Mon 15/6/20	Tue 16/6/20	
1197 17 1198 17		base course and wearing course Phase VI (stage 1)-south lane (chainage 1190-1240)	•	Wed 17/6/20 Fri 19/6/20	Thu 18/6/20 Wed 15/7/20	
	3 56 1	TTA & UU detection	1 day	Fri 19/6/20	Fri 19/6/20	

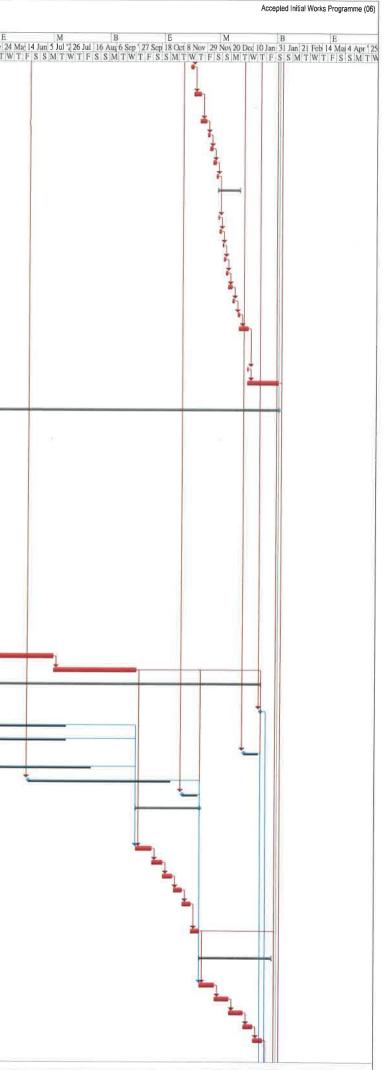


Deve	opment of	//2017/02 <sup>-</sup> Columbarium at Sandy Ridge Cernetery Works at Man Karn To Road and Lin Ma Hang Road				3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
ID	WBS	Task Name	Duration	Start Date	Completion Date	M         B         E         M         B
1201	173 56 3	excavate pipe trench and manhole(s)	2 days	Tue 23/6/20	Wed 24/6/20	W T F S S M T W
1202	17.3.56.4	lay pipes & construct manhole(s)	7 days	Fri 26/6/20	Sat 4/7/20	
1203	17.3 56 5	backfill formation & SRT test	0 days	Sat 4/7/20	Sat 4/7/20	
	17.3 56.6	lay kerb, sub-base	2 days	Mon 6/7/20	Tue 7/7/20	
1205	17,3.56.7	sub-base SRT test	3 days	Wed 8/7/20	Fri 10/7/20	
	17 3 56 8	DBM (Roadbase)	2 days	Sat 11/7/20	Mon 13/7/20	
	17 3 56.9	base course and wearing course	2 days	Tue 14/7/20	Wed 15/7/20	
1208	17.3.57	Phase VI (stage 2)-north lane (chainage 1190-1240)	15 days	Thu 16/7/20	Sat 1/8/20	
	17.3.57.1	TTA & UU detection	1 day	Thu 16/7/20	Thu 16/7/20	
	17.3.57.2	saw cut & remove existing pavement	2 days	Fri 17/7/20	Sat 18/7/20	
	17.3.57.3 17.3.57.4	excavate gully trench and gully pot(s)	1 day	Mon 20/7/20		
	17.3.57.4	lay& connect gully pipes& construct gully pot(s) lay kerb, sub-base	2 days	Tue 21/7/20 Thu 23/7/20	Wed 22/7/20 Fri 24/7/20	
	17.3.57.6	sub-base SRT test	2 days 3 days	Sat 25/7/20	Tue 28/7/20	
	17.3.57.7	DBM (Roadbase)	2 days	Wed 29/7/20		
	17.3.57.8	base course and wearing course	2 days	Fri 31/7/20	Sat 1/8/20	
1217	17.3.58	Phase VI (stage 3)-south lane (chainage 1240-1286)	34 days	Mon 3/8/20	Thu 10/9/20	
1218	17.3.58.1	TTA & UU detection	1 day	Mon 3/8/20	Mon 3/8/20	
1219	17.3.58.2	tree felling	10 days		Fri 14/8/20	
1220	17 3 58 3	saw cut & remove existing pavement	2 daws	Thu 13/8/20	Fri 14/8/20	
	17.3 58 4	excavate pipe trench and manhole(s)	2 days 2 days	Sat 15/8/20		
1222	17.3 58 5			Tue 18/8/20		
10.00	17,3,30,0	lay pipes & construct manhole(s)	6 days	100 10/0/20	NUII 24/0/20	
	17.3.58.6	backfill formation & SRT test	6 days	Tue 25/8/20		
	17.3.58.7 17.3.58.8	lay kerb, sub-base	2 days	Tue 1/9/20	Wed 2/9/20	
	17.3.58.9	sub-base SRT test DBM (Roadbase)	3 days 2 days	Thu 3/9/20 Mon 7/9/20	Sat 5/9/20 Tue 8/9/20	
	17.3.58.10	base course and wearing course	2 days 2 days	Wed 9/9/20	Thu 10/9/20	
	17,3,59	Phase VI (stage 4)-north lane (chainage 1240-1286)			Mon 28/9/20	
1229	17.3.59.1	TTA & UU detection	1 day	Fri 11/9/20	Fri 11/9/20	
1230	17.3.59.2	saw cut & remove existing pavement	2 days	Sat 12/9/20	Mon 14/9/20	
1	17,3,59.3	excavate gully trench and gully pot(s)	1 day	Tue 15/9/20		
1000	17.3.59.4		2 days		Thu 17/9/20	
1.1.1.1.1.1.1.1	17.3.59.5 17.3.59.6	lay kerb, sub-base	2 days		Sat 19/9/20 Wed 23/9/20	
	17.3.59.0	sub-base SRT test DBM (Roadbase)	3 days 2 days	Mon 21/9/20 Thu 24/9/20		
1010-0-02	17.3.59.8	base course and wearing course	2 days 2 days	Sat 26/9/20	Mon 28/9/20	
0.0552.)	17 3 60	Phase VI (stage 5)-south lane (chainage 1286-1332)				
1238	17.3.60.1	TTA & UU detection	1 day	Tue 29/9/20	Tue 29/9/20	
	17.3.60.2	saw cut & remove existing pavement	2 days	Wed 30/9/20		
1240	17.3.60.3	excavate pipe trench and manhole(s)	2 days	Mon 5/10/20	Tue 6/10/20	
1241	17 3 60 4	lay pipes & construct manhole(s)	6 days	Wed 7/10/20	Tue 13/10/20	
1242	17.3,60.5	backfill formation & SRT test	0 days	Tue 13/10/20	Tue 13/10/20	
	17.3.60.6	lay kerb, sub-base			Thu 15/10/20	
	17.3.60.7	sub-base SRT test	3 days		Mon 19/10/20	
1 Marsha	17,3.60.8	DBM (Roadbase)	2 days		Wed 21/10/20	
	17.3.60.9	base course and wearing course			Fri 23/10/20	
1247	17.3.61	Phase VI (stage 6) - north lane (chainage 1286 -1332)	12 days	Sat 24/10/20	Sat 7/11/20	
	17.3.61.1	TTA & UU detection	1 day		Sat 24/10/20	
	17.3,61.2	saw cut & remove existing pavement			Wed 28/10/20	
10.000	17.3.61.3	lay kerb, sub-base		Thu 29/10/20		
11.1.1.1.1.1.1.1.	17.3.61.4 17.3.61.5	sub-base SRT test	3 days	Sat 31/10/20		
	17.3.61.5	DBM (Roadbase)	2 days 2 days	Wed 4/11/20 Fri 6/11/20	Thu 5/11/20 Sat 7/11/20	
110.00.000	17.3.62	base course and wearing course Phase VI (stage 7)-south lane (chainage 1332-1377)	2 days 27 days			
1255	17.3.62.1	TTA & UU detection	1 day	Mon 9/11/20	Mon 9/11/20	
	17.3.62.1	tree felling	1 day 4 days		Mon 9/11/20 Fri 13/11/20	
1257	17.3.62.3	tree transplant	1 day	Sat 14/11/20	Sat 14/11/20	
1	17.3 62 4					
1238	11.3.02.4	saw cut & remove existing pavement	∠ days	rii 13/11/20	Sat 14/11/20	

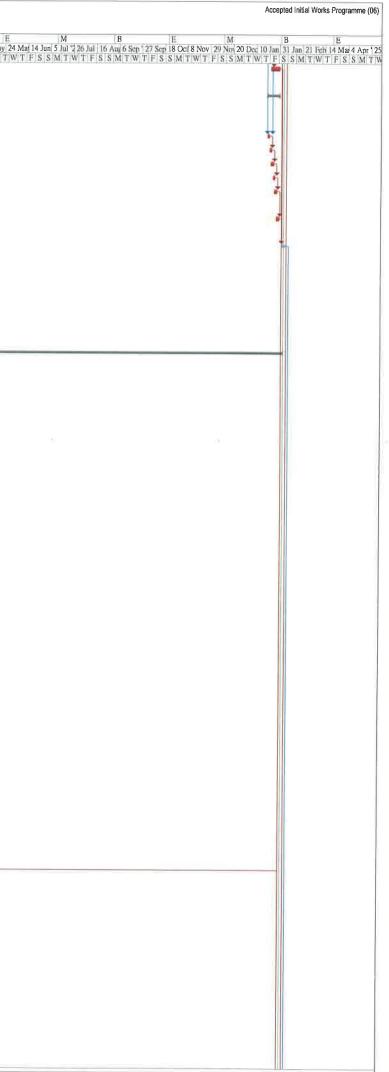
Page 10/20



		olumbarium at Sandy Ridge Cemetery orks at Man Kam To Road and Lin Ma Hang Road				3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
W	VBS Ta	sk Name	Duration	Start Date	Completion Date	M B E B M B E M B E B M B E M B E M B E M B E M B E M B E B M B E M B B E M B B B E M B B E M B B E M B B E M B B E M B B E M B B E M B B E M B B E M B B E M B B E M B B B E M B B B E M B B B E M B B B E M B B B E M B B B E M B B B B
59 17	7.3.62.5	excavate pipe trench and manhole(s)	2 days	Sat 14/11/20	Mon 16/11/20	Ma <sup>+</sup> 10 Jun 1 Jul 1 22 Jul 12 Aug 2 Sep 123 Sep 14 Oct 4 Nov 25 Nov 16 Dec 6 Jan 7 27 Jun 17 Feb 10 Mai 31 Mai 21 Apr 12 Mai 2 Jun 23 Jun 14 Jul 4 Aug 25 Aug 15 Sep 6 Oct 7 Oct 17 Nov 8 Dec 129 Dec 19 Jan 9 Feb 1 Mar 22 Mai 12 Apr 3 May 7 W T F S S M T
60 17	7.3.62.5	lay pipes & construct manhole(s)	6 days	Tue 17/11/20	Mon 23/11/20	
61 17	73627	backfill formation & SRT test	6 days	Mon 23/11/20	Sal 28/11/20	
62 17	73628	lay kerb, sub-base		Mon 30/11/20		
63 1	7.3.62.9	sub-base SRT lest	3 days	Wed 2/12/20	Fri 4/12/20	
201	7.3.62.10	DBM (Roadbase)	2 days	Sat 5/12/20	Mon 7/12/20	
S	7362.11	base course and wearing course	•	Tue 8/12/20	Wed 9/12/20	
66 17		Phase VI (stage 8)-north lane (chainage 1332-1377)	•			
(7) I.	0.004	<b>**</b> ****	4.1-	TI 40140100	TI 40/40/00	
	73631	TTA & UU detection			Thu 10/12/20	
21072-01	3.63.2	saw cut & remove existing pavement	2 days		Sat 12/12/20	
A	7.3.63.3	excavate gully trench and gully pot(s)			Mon 14/12/20	
	7.3 63 4	lay& connect gully pipes& construct gully pot(s)			Wed 16/12/20	
	7.3 63 5	lay kerb, sub-base			Fri 18/12/20	
1222	7.3.63.6	sub-base SRT test	3 days	Sat 19/12/20	Tue 22/12/20	
22 J I	73637	DBM (Roadbase)	2 days	Wed 23/12/20	Thu 24/12/20	
74 17	7.3 63.8	base course and wearing course	•		Tue 29/12/20	
75 11	3 64	Street lighting (drawpits, abandon existing public lighting & cable, 100uPVC ducts) (ch890-1377)	7 days	Tue 29/12/20	Wed 6/1/21	
76 17	73.65	tree planting	1 day	Wed 6/1/21	Wed 6/1/21	
277 15		Street furniture & construction of footpath (ch890-1377)		Wed 6/1/21	Wed 3/2/21	
278 17		Noise Barrier works above the concrete substructure of the noise barrier (section 2 Part C1)	674 days	Mon 29/10/18	Wed 3/2/21	
279 17			210 days	Man 20/10/10	Sup 06/5/40	
280 1		seek specialist subcontractor to design and build propose specialist subcontractor to PM for acceptance			Sun 26/5/19 Sun 26/5/19	
281 17	7.4.3	acceptance of propose specialist subcontractor by	0 days	Sun 16/6/19	Sun 16/6/19	
141-151		Project Manager				
82 17 83 17		prepare design & liaise with designer & PM submit a proposal detailing the changes to PM's			Mon 14/10/19 Mon 28/10/19	
504	740	design, if any	0.1	M 00/40/40	M 00/40/40	
284 17		submit 1st design for PM's comment	,		Mon 28/10/19	
285 17		PM's comments	•		Mon 18/11/19	
286 17		revise design			Mon 16/12/19	
287 17		re-submit design for PM's acceptance	'		Mon 16/12/19	· · · · · · · · · · · · · · · · · · ·
288 17	7.4.10	submit 3 sample panels for each type & colour for acceptance	7 days	Tue 17/12/19	Mon 23/12/19	
289 13	7.4.11	PM's & relevant authorities' acceptance	0 days	Mon 13/1/20	Mon 13/1/20	
290 11	74.12	ordering of noise barrier panel	•		Wed 15/1/20	
291 17		fabricating of panel and steelworks			Mon 13/7/20	1
292 1		delivery of panel and steelworks on site			Sun 27/9/20	
293 11			•	Mon 14/10/19		
293 11	7.4.10	completion of concrete curing of substructure of Nosie Barriers	463 days	Mon 14/10/19	Tue 19/1/21	
294 17	74.15.1	MM5	0 days	Tue 19/1/21	Tue 19/1/21	
Sec. 12	74.152	MM6	-		Mon 14/10/19	
	74.153	MM7				
	7.4.15.4				Mon 14/10/19	
Sec 10		MM8	,	Mon 4/1/21	Mon 4/1/21	
	7.4.15.5	MM9		Mon 10/2/20	Mon 10/2/20	
	74.15.6	MM10 (Bay 1-4)		Sun 21/6/20		
300 17		MM10 (Bay 5-9)	0 days	Mon 9/11/20	Mon 9/11/20	
301 11	7.4_16	construction works above the concrete substructure of the noise barrier MM6, MM7 & MM9 (app. 77m)	48 days	Mon 28/9/20	Wed 25/11/20	
302 17	7.4.16.1	fix posts with base plates to copings	11 days	Mon 28/9/20	Mon 12/10/20	
	7.4.16.2	install structural frames			Thu 22/10/20	
	7.4.16.3		•			
992-12-14-		fix Al. absorption noise barrier panels			Sat 31/10/20	
	7.4.16.4 7.4.16.5	fix tinted transplant noise barrier panels			Mon 9/11/20	
		fix copping the end of UC member	7 days	Tue 10/11/20	Tue 17/11/20	
307 15	7.4.16.6	fix base sealing panel	7 days	Wed 18/11/20	Wed 25/11/20	
308 17	7.4.17	construction works above the concrete substructure of the noise barrier MM10 (app. 94m)	54 days	Thu 26/11/20	Sat 30/1/21	
309 17	7.4.17.1	fix posts with base plates to copings	12 days	Thu 26/11/20	Wed 9/12/20	
310 17	7.4.17.2	install structural frames			Tue 22/12/20	
0.000		fix Al. absorption noise barrier panels		Wed 23/12/20		
11 12					······	
		fix tinted transplant noise barrier nanels	8 days	Tue 5/1/21	Wed 13/1/21	
	7.4.17.4 7.4.17.5	fix tinted transplant noise barrier panels fix copping the end of UC member	8 days 8 days	Tue 5/1/21 Thu 14/1/21	Wed 13/1/21 Fri 22/1/21	

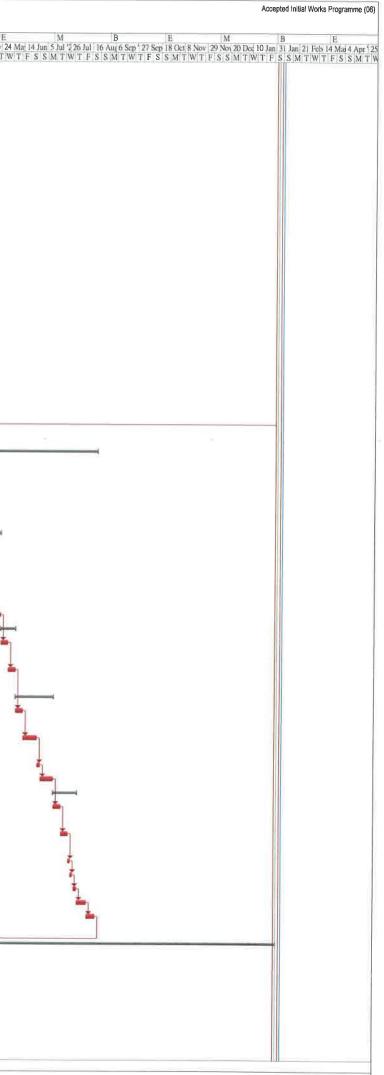


Apple         Number         Apple         Apple <t< th=""><th>No.         No.         No.<th>Develo</th><th>act No. CV/ opment of ( structural V</th><th>/2017/02 Columbarium al Sandy Ridge Cemetery Vorks at Man Kam To Road and Lin Ma Hang Road</th><th></th><th></th><th></th><th>3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)</th></th></t<>	No.         No. <th>Develo</th> <th>act No. CV/ opment of ( structural V</th> <th>/2017/02 Columbarium al Sandy Ridge Cemetery Vorks at Man Kam To Road and Lin Ma Hang Road</th> <th></th> <th></th> <th></th> <th>3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)</th>	Develo	act No. CV/ opment of ( structural V	/2017/02 Columbarium al Sandy Ridge Cemetery Vorks at Man Kam To Road and Lin Ma Hang Road				3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
No. 10         Display System         Display System         Display System         Display System           No. 10         Display System         Display System System         Display System System System System System         Display System Sy	1000         Different (MA         7.40         AUADA           1000         Different (MA         FALADA         AUADA           1000         Different (MA         Section A         Section A           1000         D			-		Start Date	Completion Date	M B F M B F M B F M D F M D
And Construction         And Construction         And Construction         And Construction           12         1000         0.0000         100000         10000         10000 </th <th>Discussion         Discussion         Discussion         Discussion           Vieweils         Advances         Advances         Advances           Vieweils         Advances</th> <th>314</th> <th>17.4.17.6</th> <th>fix base sealing panel</th> <th>7 days</th> <th>Sat 23/1/21</th> <th>Sat 30/1/21</th> <th>W 1 F 5 5 M 1 W 1 F 5 8 M 1 W T F 5 8 M 1 W T F 5 8 M T W</th>	Discussion         Discussion         Discussion         Discussion           Vieweils         Advances         Advances         Advances           Vieweils         Advances	314	17.4.17.6	fix base sealing panel	7 days	Sat 23/1/21	Sat 30/1/21	W 1 F 5 5 M 1 W 1 F 5 8 M 1 W T F 5 8 M 1 W T F 5 8 M T W
No.         No.         No.         No.         No.           10         No.         No.         No.         No.         No.           10         No.         No.         No.         No.         No.         No.           10         No.	No.         No.         No.         No.         No.           10         No.         No.         No.         No.         No.           10         No.         No.         No.         No.         No.           10         No.         No.         No.         No.         No.         No.           10         No.         No.         No.         No.         No.         No.         No.           10         No.         No.         No.         No.         No.         No.         No.         No.           10         No.         No.         No.         No.         No.         No.         No.         No.         No.           10         No.         No. <td>315</td> <td>17,4,18</td> <td></td> <td>10 days</td> <td>Wed 20/1/21</td> <td>Sat 30/1/21</td> <td></td>	315	17,4,18		10 days	Wed 20/1/21	Sat 30/1/21	
No. 10. 199         Tarin Materian Services         Apple to Materian Services         Apple to Materian Services         Apple to Materian Services           199         100         100         100         100         1000         1000           190         100         100         1000         1000         1000         1000           190         100         1000         1000         1000         1000         1000           190         1000         1000         1000         1000         1000         1000           190         1000         1000         1000         1000         1000         1000           190         1000         1000         1000         1000         1000         1000           190         10000         1000 <td>No.         No.         No.         No.         No.         No.           No.</td> <td></td> <td></td> <td>of the noise barrier MM5 &amp; MM8 (app., 42.322m)</td> <td></td> <td></td> <td></td> <td></td>	No.         No.         No.         No.         No.         No.           No.			of the noise barrier MM5 & MM8 (app., 42.322m)				
No. Proc.         B. A. Addata Kondo Lucia yang         A. Addata Kondo Lucia yang         No. Proc.         No. Pro.         No. Proc.         No. Proc.	No. Proc.         A. Australia         Australia	516	17.4.18.1	fix posts with base plates to copings	2 days	Wed 20/1/21	Thu 21/1/21	
2000         1000         1000         1000         1000           2000         1000         1000         1000         1000           2000         1000         1000         1000         1000         1000           2000         1000         1000         1000         1000         1000           2000         1000         1000         1000         1000         1000           2000         1000         1000         1000         1000         1000           2000         1000         1000         1000         1000         1000           2000         1000         1000         1000         1000         1000           2000         1000         1000         1000         1000         1000         1000           2000         1000	000000000000000000000000000000000000	317	17.4.18.2	install structural frames	2 days	Fri 22/1/21	Sat 23/1/21	
Bit Mark	Bit Mark         Buscher Schwarz         Juscher Schwarz <thjuscher schwarz<="" th="">         Juscher Schwarz<td>18</td><td>17.4.18.3</td><td>fix AI, absorption noise barrier panels</td><td>2 days</td><td>Sal 23/1/21</td><td>Mon 25/1/21</td><td></td></thjuscher>	18	17.4.18.3	fix AI, absorption noise barrier panels	2 days	Sal 23/1/21	Mon 25/1/21	
Image of the section product of the section	III         Abar Margaret         Joy         R.2002         B.2002           III         Abar Margaret         Joy         R.2002         Margaret         Joy         R.2002           III         Abar Margaret         Joy         R.2002         Margaret         Joy         R.2002           III         Contraster transmission         South State         South State         South State         Margaret         South State           III         Contraster transmission         South State         South State         South State         South State         South State           III         Contraster transmission         South State         South State         South State         South State         South State         South State           III         Contraster transmission         South State         South State         South State         South State         South State           IIII         Contraster transmission         South State	319	17.4.18.4	fix tinted transplant noise barrier panels	2 days	Mon 25/1/21	Tue 26/1/21	
No.         And Control         And Control         And Control         And Control           No.         And Control         Status         Status         Status         Status           No.         Status         Status         Status         Status         Status         Status           No.         Status         Status         Status         Status         Status         Status         Status         Status           No.         Status         Status         Status         Status         Status         Status         S	Description         Description         Operation         Description           00         10	320	17.4.18.5	fix copping the end of UC member	3 days	Tue 26/1/21	Thu 28/1/21	
Bit Character Unit for which wh	Biologram         Biologram         Biologram         Biologram         Biologram           Biologram         Biolog	321	17.4.18.6	fix base sealing panel	3 days	Thu 28/1/21	Sat 30/1/21	
Bit	Bit         Bit <td>322</td> <td>17.4.19</td> <td></td> <td>0 days</td> <td>Wed 3/2/21</td> <td>Wed 3/2/21</td> <td></td>	322	17.4.19		0 days	Wed 3/2/21	Wed 3/2/21	
Biology Bioly Weig Confer weight Wei	Number of Prise CCF 10000 Prise CCF 100000 Prise CCF 10000 Prise CCF 10000 Prise CCF 10000 Prise CCF 10	323	17.5	access date for section 2 (Part C2)	0 days	Sun 24/2/19	Sun 24/2/19	
Mathy South C2011 C2012 of 12 ACC 1         Of 24         Mathy South C2013 of 14 ACC 100 ADM	Barling Coll 14. 2017 work junks 14. 2017         Sci 100         Sci 100         Sci 100           150 170         Barly for 14. 2017 work junks 14. 14. 170 10         Sci 100         Sci 100           150 170         Barly for 14. 2017 work junks 14. 14. 11. 100         Sci 100         Sci 100           150 170         Barly for 10. 2017 work junks 14. 14. 11. 100         Sci 100         Sci 100           150 170         Barly for 10. 2017 work junks 14. 14. 11. 100         Sci 100         Sci 100           150 170         Barly for 10. 2017 work junks 14. 14. 11. 100         Sci 100         Sci 100           150 170         Barly for 10. 2017 work junks 14. 14. 11. 11. 100         Sci 100         Sci 100           150 170         Barly for 10. 2017 work junks 14. 14. 11. 100         Sci 100         Sci 100           150 170         Barly for 10. 2017 work junks 14. 14. 11. 100         Sci 100         Sci 100           150 170         Barly for 10. 2018 work 14. 11. 100         Sci 100         Sci 100           150 170         Barly for 10. 2018 work 14. 11. 100         Sci 100         Sci 100           150 170         Barly for 10. 2018 work 14. 11. 100         Sci 100         Sci 100           150 170         Barly for 10. 2018 work 14. 11. 100         Sci 100         Sci 100           150 170 <t< td=""><td>324</td><td>17.6</td><td></td><td>0 days</td><td>Sun 24/2/19</td><td>Sun 24/2/19</td><td>******</td></t<>	324	17.6		0 days	Sun 24/2/19	Sun 24/2/19	******
Service         Service         Gardine         Gardine         Gardine           Service         Service         Service         Service         Service           Servic	Bit Map         <			(existing D-DH11) & C225 new drillholes DHA1,A2 &				
Sig 107.2         intermeting to another sectors         4.6.8.8.0         h.1.9.7.9           Sig 107.2         intermeting to another sectors         4.6.8.8.9         h.1.9.7.9           Sig 107.2         intermeting to another sectors         1.6.8.8.9         h.1.9.7.9           Sig 107.2         intermeting to another sectors         1.6.8.8.9         h.1.9.7.9           Sig 107.2         intermeting to another sectors         1.6.8.8.9         h.1.9.7.9           Sig 107.2         intermeting to another sectors         1.6.8.9.9         h.1.9.7.9           Sig 107.2         intermeting to another sectors         1.6.8.9.9         h.1.9.7.9           Sig 107.2         intermeting to another sectors         1.6.8.9.9         h.1.9.9.9           Sig 107.2         intermeting to another sectors         1.6.8.9.9         h.1.9.9.9           Sig 107.2         intermeting to another sectors         1.6.8.9.9         h.1.9.9.9           Sig 107.2         intermeting to another sectors         1.6.9.9         h.1.9.9.9           Sig 107.2         intermeting to another sectors         1.6.9.9         h.1.9.9.9           Sig 107.2         intermeting to another sectors         1.6.9.9.9         h.1.9.9.9           Sig 107.2         intermeting to another sectors         1.6.9.9.9	Str. VI.         Autor.         Autor.         Autor.         Autor.           Str. VI.         Microsoften version of a microsoften version ver	325	17.7		578 days	Mon 25/2/19	Wed 3/2/21	
Diff         Diff <thdiff< th="">         Diff         Diff         <thd< td=""><td>127         127<td>326</td><td>17.7.1</td><td></td><td></td><td></td><td></td><td></td></td></thd<></thdiff<>	127         127 <td>326</td> <td>17.7.1</td> <td></td> <td></td> <td></td> <td></td> <td></td>	326	17.7.1					
198         197         addy mechan and amount         210         Mathematications         210         Mathematications           197         197         Mathematications         210         No.         No.         No.           197         197         Mathematications         197         No.         No.         No.           197         197         Mathematications         197         No.         No.         No.           197         197         Mathematications         197         No.         No.         No.           197         197         Mathematications         198         198         198         199	<ul> <li>19/17-2</li> <li>19/17-2</li></ul>	327	17.7.2	•				
No.         Old update         Old update <td>Witz         Material and Material Section 24.00         Jaine         Material Section 24.00         Jaine         Material Section 24.00         Jaine           Jin         Instrumentation 24.00         Inst</td> <td>328</td> <td>17.7.3</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Witz         Material and Material Section 24.00         Jaine         Material Section 24.00         Jaine         Material Section 24.00         Jaine           Jin         Instrumentation 24.00         Inst	328	17.7.3					
2525 D-0.4 17 - entry starting - binder - bi	Image: Provide With Weight	329	17.7.4	drilling of verification boreholes DHA1,A2 & A3	21 days	Mon 17/6/19	Thu 11/7/19	
Institution of and stammary Sign bits Project.         Institution of and stammary Sign bits Project.         Institution of and stammary Sign bits Project.           IVE         PV7.2         Stappeort::::::::::::::::::::::::::::::::::::	interfactoring de generalization vigons the Prediet           IDIC DIA         Respective XMM COM (del-Mod Mod Mod Mod Mod Mod Mod Mod Mod Mod	330	17.7.5	C225 (DH3 & 17) on existing drillholes & 3NW-C/C470 (existing D-DH7), C224 (existing D-DH11) & C225 proposed verification drillholes	30 days	Fri 12/7/19	Thu 15/8/19	
With With With With With With With With	307         70.7         remuce of analog tess         70.200         Feb 300         Feb 300           307         77.2         Renting & Renti	331	17.7.6	monitoring and preliminary logs to the Project	0 days	Thu 15/8/19	Thu 15/8/19	
Number of the state o	No.         No. Marking & Barding         No. Marking & Barding         No. Marking & Barding         No. Marking & Marking         No. Marking & Marking           No.         No. Marking & Barding         Marking & Marking         Marking         Marking <t< td=""><td>1332</td><td>17.7.7</td><td>Slopeworks: 3NW-C/C470 (ch490-540S/B)</td><td>59 days</td><td>Fri 16/8/19</td><td>Sat 26/10/19</td><td></td></t<>	1332	17.7.7	Slopeworks: 3NW-C/C470 (ch490-540S/B)	59 days	Fri 16/8/19	Sat 26/10/19	
Number of the strength	Instrument         Instrument         Instrument         Instrument         Instrument           IV 72         ispace starealities works         1 op         Work 4000         Work 4000           IV 72         ispace starealities works         0 op         Work 1000         Processing           IV 72         ispace starealities works         0 op         Stare 2000         Processing           IV 72         Prace 1         0 op         Stare 2000         Processing           IV 72         Prace 1         0 op         Stare 2000         Processing           IV 72         Prace 1         0 op         Stare 2000         Processing           IV 72         Prace 1         0 op         Stare 2000         Processing           IV 72         Prace 1         0 op         Stare 2000         Processing           IV 72         Prace 1         0 op         Stare 2000         Processing           IV 72         Processing optical stare 1000         Processing         Processing           IV 72         Processing optical stare 1000 optica	333	17.7.1	removal of existing trees	10 days	Fri 16/8/19	Tue 27/8/19	
Normalization         Normalization         Normalization         Status         The SMP         The SMP           1725         Proposed sequentings (or mappe or	With Ward Ward Ward Ward Ward Ward Ward Ward	1334	17.7.7.2	hoarding & fencing	6 days	Wed 28/8/19	Tue 3/9/19	
377       172.6       processe strepping for mapping rank and parts. ASRA, AS	377       9 reposed spippe for majority reposed repose	335	17.7.7.3	slope excavation works	1 day	Wed 4/9/19	Wed 4/9/19	t t
137         17.2         proprior spreprior s	137       17.20       proposed strengto y mapping on mapping	1336	17.7.7.4	temporary scaffolding	5 days	Thu 5/9/19	Tue 10/9/19	
No.         No.         No.         Solution         Solution </td <td>337         77.71         netal bat hal miPN02 &amp; pul out leat         6 day         Su 21091         France           347         0.77.20         dill, right bate hars and grout bal nale         2 days         Su 20091         France           347         0.77.20         dill, right bate hars and grout bal nale         2 days         Su 20091         France           347         0.77.20         dill, right bate hars and grout bal nale         2 days         France         France           347         0.77.20         dill, right bate hars and grout bal nale         2 days         France         France           347         0.77.27         rised datain         Quads         Edits         Su 210910         France           347         0.77.27         rised datain         Quads         Edits         Su 210910         Su 210910         France           347         0.77.27         rised datain         Quads         Edits         Su 210910         Su 2</td> <td>337</td> <td>17.7.7.5</td> <td>proposed slope stripping for mapping or rock and</td> <td>-</td> <td></td> <td></td> <td></td>	337         77.71         netal bat hal miPN02 & pul out leat         6 day         Su 21091         France           347         0.77.20         dill, right bate hars and grout bal nale         2 days         Su 20091         France           347         0.77.20         dill, right bate hars and grout bal nale         2 days         Su 20091         France           347         0.77.20         dill, right bate hars and grout bal nale         2 days         France         France           347         0.77.20         dill, right bate hars and grout bal nale         2 days         France         France           347         0.77.27         rised datain         Quads         Edits         Su 210910         France           347         0.77.27         rised datain         Quads         Edits         Su 210910         Su 210910         France           347         0.77.27         rised datain         Quads         Edits         Su 210910         Su 2	337	17.7.7.5	proposed slope stripping for mapping or rock and	-			
Will Nebal skel havs and yout toll nals       2 days       Sat 28919       Mon 30919         Will Nebal skel havs and yout toll nals       2 days       Sat 28919       Mon 30919         Will Nebal skel havs and yout toll nals       8 days       Wed 21019       F1117019         Will Nebal skel havs and yout toll nals       8 days       Wed 21019       F1117019         Will Nebal skel havs and yout toll nals       2 days       Tu 101019       F1117019         Will Nebal skel havs and yout toll nals       2 days       Tu 101019       F1117019         Will Nebal skel havs and yout toll nals       2 days       Tu 101019       F1117019         Will Nebal skel havs and yout toll nals       2 days       Tu 101019       F1117019         Will Nebal skel havs and yout toll nals       2 days       Tu 101019       F1117019         Will Poto King       Tu 201019       St 127019       St 127019       St 127019         Will Poto King       Tu 2011       St 127019       St 127019       St 127019         Will Poto King       St 127019       St 127019       St 127019       St 127019         Will Poto King       St 127019       St 127019       St 127019       St 127019         Will Poto King       Tu 2011       St 127019       St 20119       Tu 20119 <td>With (9):1-10       With (9):1-10       With (9):1-10       With (9):1-10       With (9):1-10       With (9):1-10         With With (9):1-10       With (9):1-10       With (9):1-10       With (9):1-10       With (9):1-10       With (9):1-10         With With With With With With With With</td> <td>1338</td> <td>17.7.7.6</td> <td>Phase I</td> <td>8 days</td> <td>Sat 21/9/19</td> <td>Mon 30/9/19</td> <td></td>	With (9):1-10       With (9):1-10       With (9):1-10       With (9):1-10       With (9):1-10       With (9):1-10         With With (9):1-10       With (9):1-10       With (9):1-10       With (9):1-10       With (9):1-10       With (9):1-10         With With With With With With With With	1338	17.7.7.6	Phase I	8 days	Sat 21/9/19	Mon 30/9/19	
(B1-12)         (B1-12)           1341         17.27         Phase II         8 days         Wed 21/019         Fn 11/10/19           1342         77.27         Phase II         8 days         Wed 21/019         Fn 11/10/19           1343         77.27         offit metal test mail pool a test         6 days         Wed 21/019         Fn 11/10/19           1344         77.27         offit metal test mail pool a test         6 days         Wed 21/019         Fn 11/10/19           1344         77.27         offit metal test mail gout a toil mails         2 days         Thu 10/101 Fn 15/10/19           1345         77.27         offit metal wail sour efsul         2 days         Shi 12/10/19         Shi 12/10/19           1346         172.7         sol all metad works         3 days         Wed 16/10/19         Fn 18/10/19           1347         172.7.1         Sol all metad works         3 days         Wed 16/10/19         Fn 12/10/19           1348         172.7.2         boolspeervise         10 days         Mn 28/10/19         Thu 24/20           1349         172.4         boolspeervise         NuC220 (ht/24/-1336EP)         10 days         Mn 28/10/19           1351         172.4         boolspa fencing         9 days         Fn	(801-12)         (801-12)           141         1272         Phase JI         8 days         Wed 20101s         Fi1 11001s           1222         1722.1         Stabl set Jall PNO1 & pull out less         2 days         Ti 11001s           1223         1272.2         off, install set Jall PNO1 & pull out less         2 days         Ti 11001s           1233         1272.2         off, install set Jall PNO1 & pull out less         2 days         Ti 11001s           1234         1272.7         roligh dains         1 days         Sat 120101s         Ti 11001s           1235         1272.9         TOR Test (including test & will issue result)         2 days         Mol 140101s         Ti 120101s           1236         1272.0         to fil and advots         3 days         Mol 10011s         Ti 120101s           1237         1272.1         to facabit [4 Rish 10]         5 days         Mol 10011s         Ti 120101s           1238         1272.1         to cacabit [4 Rish 10]         2 days         Mol 20101s         Ti 120101s           1239         172.4         biodegardable envision control mal with relici decontinuities (ASS AR, ASEA_D)         Ti 12001s         Ti 12001s           1239         172.4         biodegardable molinon control mal with relici decontinuities (ASS AR,	1339	17.7.7.6.1	install test nail PN02 & pull out test	6 days	Sat 21/9/19	Fri 27/9/19	
341       177.71       instal test nal PN01 & pul out test       6 days       Wed 91/019         342       177.72       doil, instal test nal PN01 & pul out test       6 days       Wed 91/019         343       177.27       doil, instal test nal PN01 & pul out test       2 days       Th 11/019         344       177.27       TDR Test (including test & will issue result)       2 days       Shi 12/019         345       177.29       TDR Test (including test & will issue result)       2 days       Shi 12/019         346       177.20       cold a staining a will issue result)       2 days       Shi 12/019         347       177.20       cold a staining a will issue result)       2 days       Not 14/019       Test 15/019         347       177.20       cold a staining a will issue result)       2 days       Not 24/019       Th 24/019         347       177.20       Cold A cachefic (Barding Testa)       10 days       Mon 28/019       Th 24/20         347       177.82       Stoppeor/sc: SW-Cl228 (ch/12/40-130SIB)       10 days       Mon 28/1019       Th 24/20         348       177.82       Itemporary scafolding       P days       Fi B/11/19       Mon 28/11/19         349       177.84       Itemporary scafolding       Sta days       Yil B/11/19 </td <td>42       727.21       install set ail PN01 &amp; puil out test       5 days       Wed 21019       Wed 21019         43       727.22       ddit, mistall sets bars and grout soli mails       2 days       Tou 101019       Fri 11/1018         43       727.23       raking dains       raking dains       2 days       Sal 12/1019       Sal 12/1019         43       727.3       TDR Tist (fockuling ists &amp; walt issue resul)       2 days       Mon 14/1019       Tus 15/1019         436       727.3       TDR Tist (fockuling ists &amp; walt issue resul)       2 days       Mon 14/1019       Tus 15/1019         437       102.3       TDR Tist (fockuling ists &amp; walt issue resul)       2 days       Mon 14/1019       Tus 15/1019         438       127.21       Ubd castride (focinin 1ing isst &amp; walt issue resul)       2 days       Sal 20/1019       Tus 24/1019         439       127.21       Ubd castride (focinin 1ing isst &amp; walt issue resul)       2 days       Sal 20/1019       Tus 24/1019         439       127.21       Ubd castride (focinin 1ing isst &amp; walt issue resul)       2 days       Sal 20/1019       Tus 24/2019         439       127.21       Ubd castride (focininalities (focinin</td> <td>340</td> <td>17.7.7.6,2</td> <td></td> <td>2 days</td> <td>Sat 28/9/19</td> <td>Mon 30/9/19</td> <td>a de la constante de</td>	42       727.21       install set ail PN01 & puil out test       5 days       Wed 21019       Wed 21019         43       727.22       ddit, mistall sets bars and grout soli mails       2 days       Tou 101019       Fri 11/1018         43       727.23       raking dains       raking dains       2 days       Sal 12/1019       Sal 12/1019         43       727.3       TDR Tist (fockuling ists & walt issue resul)       2 days       Mon 14/1019       Tus 15/1019         436       727.3       TDR Tist (fockuling ists & walt issue resul)       2 days       Mon 14/1019       Tus 15/1019         437       102.3       TDR Tist (fockuling ists & walt issue resul)       2 days       Mon 14/1019       Tus 15/1019         438       127.21       Ubd castride (focinin 1ing isst & walt issue resul)       2 days       Sal 20/1019       Tus 24/1019         439       127.21       Ubd castride (focinin 1ing isst & walt issue resul)       2 days       Sal 20/1019       Tus 24/1019         439       127.21       Ubd castride (focinin 1ing isst & walt issue resul)       2 days       Sal 20/1019       Tus 24/2019         439       127.21       Ubd castride (focininalities (focinin	340	17.7.7.6,2		2 days	Sat 28/9/19	Mon 30/9/19	a de la constante de
192       172.7.1       instal test nell PN01 & pul out test       6 day       Ved 910/9         193       172.7.2       drill (ristal test nell PN01 a pul out test)       6 day       Th 110/19         193       172.7.2       drill (ristal test nell PN01 a pul out test)       2 days       Th 110/19       Fill 110/19         193       172.7.2       drill (ristal test nell PN01 a pul out test)       2 days       Th 110/19       Fill 110/19         193       172.7.2       drill (ristal test nell PN01 a pul out test)       2 days       S 112/10/19       S 112/10/19         193       172.7.2       DR Test (nbuding test a wall tssue result)       2 days       Not 14/10/19       7 test 15/10/19         1936       172.7.2       DR Test (nbuding test a wall tssue result)       2 days       Not 14/10/19       7 test 15/10/19         1937       172.7.2       Disperve/nacionation mal with sour source outpoin mal with	199       1727.1       nstall set nail PN01 & put out test       6 day       Wed 21019       Wed 21019         194       172.72       ddil, mstall set nail PN01 & put out test       2 day       Tu1 101019       Fin 1170019         194       172.72       nshg drain s       1 day       Sait 127019       Sait 127019         195       172.73       TDN Test (Pockding set & wait Score result)       2 day       Mon 147019       Tue 157019         195       172.73       TDN Test (Pockding set & wait Score result)       2 day       Mon 147019       Tue 157019         196       172.70       Sol nait head works       3 day       Wed 157019       Tue 157019         196       172.73       Dick acting Light Set A wait Score result)       2 day       Mon 147019       Tue 247019         196       172.74       Dick acting Light Set A wait Score result)       2 day       Fin 257019       Tue 247019         197       172.8       Stopeworks - SW-ClC220 (dnt24-132058)       10 days       Mon 287019       Tue 247019         197       172.8       beading & fencing       9 days       Fin 87119       Tue 247019         197       172.8       beading & fencing       9 days       Wed 271119       Tue 247019         197       tresusti	1341	17.7.7.7		8 davs	Wed 2/10/19	Fri 11/10/19	
(A01-17)         (A01-17)           134         17.7         raking drains         1 day         Sal 12/1019         Sal 12/1019           136         17.7         roking drains         1 day         Sal 12/1019         Sal 12/1019           136         17.7         sol Inal head works         3 day         Wel 64/1019         Fit 18/1019           136         177.7         UC catchipti (SBn & 1 n)         5 day         Sal 19/1019         Tuz 12/1019           137         177.7         UC catchipti (SBn & 1 n)         5 day         Sal 19/1019         Tuz 22/1019           137         177.7         UC catchipti (SBn & 1 n)         5 day         Sal 29/1019         Sal 22/1019           137         177.4         UC catchipti (SBn & 1 n)         5 day         Sal 29/1019         Tuz 2/1019           137         177.4         Incarding & fencing         10 day         Mon 28/1019         Tuz 2/1019           137         177.8         Remonal of existing tees         10 day         Mon 28/1019         Tuz 2/1019           137         177.8         Incording & fencing         7 day         Wel 27/1119         Tuz 5/119           138         172.8         Sippe excavation works         1 day         Fi 61/219         F	(A01-17)         (A01-17)           1244         172.7         raking darins         1 day         Sat 12/1019           1275         172.7         raking darins         1 day         Sat 12/1019         Sat 12/1019           1264         172.7         role fast (including test & wall issue result)         2 days         Mon 14/1019         Tue 15/1019           1276         role fast (including test & wall issue result)         2 days         Weid 16/1019         Fit 18/1019           1277         up to an inhead works         3 days         Weid 16/1019         Fit 18/1019           1277         Up C & acathpil (SBn & 1 nr)         5 days         Sat 18/1019         Fit 18/1019           1277         Up C & acathpil (SBn & 1 nr)         5 days         Sat 18/1019         Tue 24/1019           1278         Ropeworks:         NW-0/C230 (ch1240-13308)E)         10 days         Mon 28/1019         Tue 24/20           1289         R72.8         barding & fencing         9 days         Fit 8/11/19         Tue 28/11/19           1281         R72.8         bardeng & fencing         7 days         Fit 8/12/19         Fit 8/12/19           1283         R72.8         bardeng & fencing         fit 8/2         Fit 8/12/19         Fit 8/12/19							
134       17.2 /r 2/s       raking drains       1 day       Sat 12/10/19       Sat 22/10/19       Thu 2/4/20       Thu 2/4	134       172.8       raking drais       1 day       Sal 12/10/19       Sal 12/10/19         1345       172.9       TDR Test (nobuling test await saue result)       2 days       Mon 14/10/19       Tue 15/10/19         1346       172.7       TDR Test (nobuling test await saue result)       3 days       Wed 16/10/19       Fin 18/10/19         1347       172.7       UC & catching test await saue       Sal 49/10/19       Fin 18/10/19         1348       172.7       biodigrafable erosion contol met with hydroceseing       Sal 49/10/19       Tue 24/10/19         1349       172.7       Stopeworks: - SNW-CIC230 (ch1240-1330SIB) hydroceseing tress       10 days       Mon 28/10/19       Tue 24/10/19         1349       177.8       Icoarding & fencing       9 days       Fit 8/11/19       Tue 24/10/19         1353       177.8       temporary scaffolding       7 days       Tue 19/11/19       Tue 29/11/19         1353       177.8       temporary scaffolding       7 days       Sal 7/12/19       Fit 6/12/19         1353       177.8       shope excavalion works       1 day       Sal 7/12/19       Wed 8/10/20         1353       177.8       Phase 1       Sal 7/12/19       Ked 8/10/20       Fit 6/12/19         1353       177.8	343	17,7.7 7 2		2 days	Thu 10/10/19	Fri 11/10/19	र विकास के बिला
1345       77.7.9       TDR Test (including test & wail issue result)       2 day       Mon 14/10/19       Tue 15/10/19         1346       77.7.10       soli nail head works       3 day       Wed 16/10/19       Fri 18/10/19         1347       77.7.11       U.C. K catchpil (38m & 1 nr)       5 day       Sal 19/10/19       Thu 24/10/19         1347       77.7.11       U.C. K catchpil (38m & 1 nr)       5 day       Sal 12/10/19       Thu 24/10/19         1348       177.7.1       U.C. K catchpil (38m & 1 nr)       5 day       Sal 26/10/19       Thu 24/10/19         1349       177.7.1       U.C. K catchpil (38m & 1 nr)       5 day       Sal 26/10/19       Thu 24/10/19         1349       177.7.1       Nopeworks: - 3WW-C/C230 (ch1240-1330S)B)       130 day       Mon 28/10/19       Thu 24/10/19         1349       17.7.8       Stopeworks: - 3WW-C/C230 (ch1240-1330S)B)       10 day       Mon 28/10/19       Thu 21/11/19         1350       17.8.4       temporary scaffolding       7 day       Tue 19/11/19       Tue 26/11/19         1353       17.8.4       temporary scaffolding       7 day       Tue 42/11/19       Tue 51/21/9         1353       17.8.6       stope excavation works       1 day       Fri 61/21/9       Fri 61/21/9	1343       17.7.9       TDR Test (including test & wait issue result)       2 days       Mon 14/10/19       Tue 15/10/19         1343       172.7.0       soil and head works       3 days       Wed 16/10/19       Tue 15/10/19         1343       172.7.1       UC & catchpit (38m & 1 n)       5 days       Sat 19/10/19       Thu 24/10/19         1344       172.7.1       UC & catchpit (38m & 1 n)       5 days       Sat 25/10/19       Sat 25/10/19         1349       172.8       Stopeworks: - 3NW-C/C230 (cht 24-0-1330SH)       13 days       Mon 18/11/19         1349       172.8.1       removal of existing trees       10 days       Mon 18/11/19         1330       172.8.1       temporary scafiolding       7 days       Tue 28/11/19         1333       172.8.1       temporary scafiolding       7 days       Tue 28/11/19         1334       172.8.1       temporary scafiolding       7 days       Tue 28/11/19         1335       172.8.4       proposed stops stipping or mapping or cock and back and biology       8 days         1335       172.8.1       stope excavation works       1 day       Fil 6/12/19         1336       172.8.1       install test nail PN22.8 pull out test       6 days       Sat 77/12/19	1711	17770	· · ·		0.1404040	0 1 40 40 40	
1346       77.7.10       soil nail head works       3 days       Wed 16/10/19       Fri 18/10/19         1347       77.7.1       UC & catchpil (38m X inr)       5 days       Sai 19/10/19       Thu 24/10/19         1348       77.7.1       bio degradable erosion control mal with hydroseeding       2 days       Fri 25/10/19       Thu 24/10/19         1349       77.7.8       Slopeworks: - 3NW-C/C230 (ch1240-13305/B)       130 days       Mon 28/10/19       Thu 24/20         1349       77.8.1       hoarding & fencing       9 days       Fri 8/11/19       Mon 28/10/19       Thu 24/20         1349       77.8.2       hoarding & fencing       9 days       Fri 8/11/19       Mon 18/11/19         1349       77.8.3       temporary scaffolding       7 days       Tu 24/21/19         1349       77.8.4       temporary scaffolding       7 days       Tu 2/11/19         1349       77.8.4       temporary scaffolding       7 days       Wed 27/11/19         1349       77.8.4       slope excavalion works       1 day       Fri 6/12/19         1355       77.8.6       Phase I       2 5 days       Sa 7/12/19       Wed 8/1/20	1346       172.7.0       soil nal head works       3 days       Wed 16/10/19       Fri 18/10/19         1347       172.7.1       U.C. Acatchpil (38m å 1 m)       5 days       Sat 19/10/19       Thu 24/10/19         1348       172.7.1       U.C. Acatchpil (38m å 1 m)       5 days       Sat 19/10/19       Thu 24/10/19         1349       172.8.1       Slopeworks: - 3NW-CIC230 (cht240-130S/B)       130 days       Mon 28/10/19       Thu 24/20         1350       172.8.1       removal of existing trees       10 days       Mon 28/10/19       Thu 24/20         1352       172.8.2       hoarding & fencing       9 days       Fil 8/11/19       Tue 24/20         1353       172.8.4       temporary scafilding       7 days       Tue 19/11/19       Tue 24/20         1353       172.8.4       temporary scafilding of mapping or rock and starting trees       10 days       Wool 28/11/19         1353       172.8.4       proposed slope stripping for mapping or rock and starting trees       1 day       Fri 6/12/19         1354       172.8.4       slope excavation works       1 day       Fri 6/12/19       Fri 13/12/19         1355       172.6.8       start lest nail PN22 & pull out test       6 days       Sta 17/12/19       Fri 13/12/19		1.00	-	•			
1347       7.7.11       UC & catchpit (38m & 1 nr)       5 days       Sat 9/10/19       Thu 2/10/19         1348       17.7.12       biodegradable erosion control mat with hydroseeding       2 days       Fri 25/10/19       Sat 26/10/19       Thu 2/4/20         1349       17.7.13       Stopeworks: - SNW-C/C230 (ch1240-1330S/P)       130 day       Mon 28/10/19       Thu 2/4/20         1350       17.7.81       Stopeworks: - SNW-C/C230 (ch1240-1330S/P)       10 days       Mon 28/10/19       Thu 2/4/20         1350       17.7.83       temporary scaffolding       7 days       Tue 19/11/19       Tue 2/6/11/19         1352       17.7.83       temporary scaffolding       7 days       Tue 19/11/19       Tue 2/2/11/19         1353       17.8.4       temporary scaffolding       7 days       Tue 19/11/19       Tue 2/2/11/19         1353       17.8.5       temporary scaffolding       7 days       Tue 19/11/19       Tue 2/2/11/19         1353       17.8.6       proposed slope stripping for mapping or rock and relicit discontinuities (AS3 A, B, AS4 A, B)       1 day       Fi di 2/19         1355       77.8.6       Phase 1       2 days       Sat 7/12/19       Wed 8/1/20	1347       17.2.1.1       UC & catchpit (38m & 1 n)       5 days       Sat [91/01]9       Thu 24/10/19         1348       172.7.1.2       biologaratable erosion control mat with hydroseeding       2 days       Fri 25/10/19       Sat 26/10/19         1349       172.8.1       Stopworks: -SW-CIC230 (ch1240-1330SH)       130 days       Mon 28/10/19       Thu 24/20         1349       177.8.2       hoarding & fencing       9 days       Fri 8/11/19       Mon 18/11/19         1352       177.8.3       temporary scaffolding       7 days       The 19/11/19       The 28/11/19         1353       177.8.4       temporary scaffolding       7 days       The 19/11/19       The 28/11/19         1354       177.8.4       temporary scaffolding       7 days       The 19/11/19       The 28/11/19         1354       177.8.4       temporary scaffolding       7 days       Star (1/2/19)       Fri 6/12/19         1355       177.8.4       temporary scaffolding       1 day       Star (1/2/19)       Fri 6/12/19         1356       177.8.4       heasl 1       Star (1/2/19)       Fri 6/12/19       Fri 6/12/19         1356       177.8.6       nistall test nail PN22 & pull out test       Star (1/2/19)       Fri 13/12/19							
1348       17.7.12       biodegradable erosion control mat with hydroseeding       2 days       Fri 25/10/19       Sat 26/10/19         1349       17.7.8       Stopsworks: - SNW-CIC230 (ch1240-1330S/B)       10 days       Mon 28/10/19       Thu 2/4/20         1350       17.7.8.1       removal of existing trees       10 days       Mon 28/10/19       Thu 2/4/20         1351       17.7.8.2       hoarding & fencing       9 days       Fri 8/11/19       Mon 18/11/19         1352       17.7.8.3       temporary scaffolding proposed slope stipping for mapping or rock and proposed slope stipping for mapping or rock and proposed slope stipping for mapping or rock and proposed slope scalpolinutities (AS3-A, B, AS4-A, B)       No 42/11/19       Tue 26/11/19         1353       17.8.4       temporary scaffolding proposed slope stipping for mapping or rock and proposed slope stiping for mapping or rock and proposed slope stipping for	1348       17.7.12       biodegradable erosion control mat with hydroseeding       2 days       Fri 25/10/19       Sat 26/10/19         1349       17.7.8       Stopeworks: 3NW-CiC230 (ch1240-1330S)B)       130 days       Mon 28/10/19       Thu 2/4/20         1350       17.7.8.1       removal of existing trees       10 days       Mon 28/10/19       Thu 2/4/20         1351       17.7.8.1       temporary scaffolding       9 days       Fri 8/11/19       Mon 18/11/19         1352       17.7.8.1       temporary scaffolding       7 days       Tue 19/11/19       Tue 26/11/19         1353       17.7.8.1       temporary scaffolding       7 days       Tue 19/11/19       Tue 26/11/19         1353       17.7.8.1       temporary scaffolding       7 days       Tue 19/11/19       Tue 26/11/19         1354       17.7.8.5       slope excavelion works       1 day       Fri 6/12/19       Fri 6/12/19         1355       17.7.8.6       Phase I       2 days       Sat 7/12/19       Wed 8/1/20         1355       77.8.6       Phase I       2 days       Sat 7/12/19       Fri 13/12/19		10.000					
1349       177.8       Supeworks: - 3NW-C/C230 (ch1240-1330S/B)       130 days       Mon 28/10/19       Thu 2/4/20         1350       177.8.1       removal of existing trees       10 days       Mon 28/10/19       Thu 7/11/19         1351       177.8.2       hoarding & lencing       9 days       Fri 8/11/19       Mon 18/11/19         1352       177.8.3       temporary scaffolding relict discontinuities (AS3-A,B, AS4-A,B)       7 days       Tue 19/11/19       Tue 26/11/19         1353       177.8.4       temporary scaffolding relict discontinuities (AS3-A,B, AS4-A,B)       7 days       Wed 27/11/19       Thu 5/12/19         1354       177.8.5       slope excavation works       1 day       Fri 6/12/19       Fri 6/12/19         1355       177.8.6       Phase I       25 days       Sat 7/12/19       Wed 8/1/20	1349       17.7.8       Stopeworks: - 3NW-C/C230 (dh1240-1330S/B)       130 days       Mon 28/10/19       Thu 2/4/20         1350       17.7.8.1       removal of existing trees       10 days       Mon 28/10/19       Thu 2/4/20         1351       17.7.8.2       hoarding & lencing       9 days       Fri 8/11/19       Mon 18/11/19         1352       17.7.8.3       temporary scaffolding       7 days       Tu e//11/19       Tu e 26/11/19         1355       17.7.8.4       temporary scaffolding       7 days       Wed 27/11/19       Thu 5/12/19         1355       17.7.8.4       proposed slope stripping for mapping or rock and predict discontinuities (AS3-A, B, AS4-A, B)       8 days       Wed 27/11/19         1355       17.7.8.6       Phase I       1 day       Fri 6/12/19       Fri 6/12/19         1355       17.7.8.6       Phase I       25 days       Sat 7/12/19       Fri 13/12/19         1356       17.2.8.1       install test nail PN22 & pull out test       6 days       Sat 7/12/19       Fri 13/12/19		1022-04	biodegradable erosion control mat with				
1330       17.7.8.1       removal of existing trees       10 days       Mon 28/10/19       Thu 7/11/19         1350       17.7.8.2       hoarding & fencing       9 days       Fit 8/11/19       Mon 18/11/19         1352       17.7.8.3       temporary scaffolding proposed slope stripping for mapping or rock and relict discontinuities (AS3-A,B, AS4-A,B)       7 days       Tue 19/11/19       Tue 26/11/19         1353       17.7.8.4       temporary scaffolding proposed slope stripping for mapping or rock and relict discontinuities (AS3-A,B, AS4-A,B)       7 days       Tue 19/11/19       Tue 26/11/19         1354       17.7.8.4       temporary scaffolding proposed slope stripping for mapping or rock and relict discontinuities (AS3-A,B, AS4-A,B)       1 day       Fri 6/12/19         1355       17.7.8.4       Phase I       25 days       Sat 7/12/19       Wed 8/1/20	133017.7.8.1removal of existing trees10 dayMon 28/10/19Thu 7/11/19133117.7.8.2hoarding & fencing9 daysFri 8/11/19Mon 18/11/19133217.7.8.3temporary scaffolding proposed slope stripping for mapping or rock and relict discontinuities (ASSA,B, AS4-A,B)7 daysTue 19/11/19133517.7.8.4proposed slope stripping for mapping or rock and relict discontinuities (ASSA,B, AS4-A,B)8 daysWed 27/11/19133517.7.8.5slope excavation works1 dayFri 6/12/19Fri 6/12/19133517.7.8.6Phase I install test nail PN22 & pull out test25 daysSat 7/12/19Fri 13/12/19	12.40		, ,	400 1	No 00/40/40	Th 0/4/00	
1352     17.78.3     temporary scaffolding     7 days     Tue 19/11/19     Tue 26/11/19       1353     17.78.4     proposed slope stripping for mapping or rock and relict discontinuities (AS3-A,B, AS4-A,B)     8 days     Wed 27/11/19     Thu 5/12/19       1354     17.78.5     slope excavation works     1 day     Fri 6/12/19     Fri 6/12/19       1355     17.78.6     Phase I     25 days     Sat 7/12/19     Wed 8/1/20	1352177.8.3temporary scaffolding proposed slope stripping for mapping or rock and relict discontinuities (AS3-A, B, AS4-A, B)7 daysTue 19/11/19Tue 26/11/191353177.8.5slope excavation works1 dayFri 6/12/19Fri 6/12/191355177.8.6Phase I25 daysSat 7/12/19Wed 8/1/201356177.8.61install test nail PN22 & pull out test6 daysSat 7/12/19		and the second s					
1353       17.7.8.4       proposed slope stripping for mapping or rock and grays       8 days       Wed 27/11/19       Thu 5/12/19         1354       17.7.8.5       slope excavation works       1 day       Fri 6/12/19       Fri 6/12/19         1355       17.7.8.6       Phase I       25 days       Sat 7/12/19       Wed 8/1/20	133317.7.8.4proposed slope stripping or mapping or rock and relict discontinuities (AS3-A,B, AS4-A,B)8 daysWed 27/11/19Thu 5/12/19133417.7.8.5slope excavation works1 dayFri 6/12/19Fri 6/12/19133517.7.8.6Phase I25 daysSat 7/12/19Wed 8/1/20133617.7.8.6.1install test nail PN22 & pull out test6 daysSat 7/12/19	1351	17.7.8.2	hoarding & fencing	9 days	Fri 8/11/19	Mon 18/11/19	
1353       17.7.8.4       proposed slope stripping for mapping or rock and grays       8 days       Wed 27/11/19       Thu 5/12/19         1354       17.7.8.5       slope excavation works       1 day       Fri 6/12/19       Fri 6/12/19         1355       17.7.8.6       Phase I       25 days       Sat 7/12/19       Wed 8/1/20	133317.7.8.4proposed slope stripping or mapping or rock and relict discontinuities (AS3-A,B, AS4-A,B)8 daysWed 27/11/19Thu 5/12/19133417.7.8.5slope excavation works1 dayFri 6/12/19Fri 6/12/19133517.7.8.6Phase I25 daysSat 7/12/19Wed 8/1/20133617.7.8.6.1install test nail PN22 & pull out test6 daysSat 7/12/19	1975	and the second s			-	-	
1354       17.8.5       slope excavation works       1 day       Fri 6/12/19       Fri 6/12/19         1355       17.8.6       Phase I       25 days       Sat 7/12/19       Wed 8/1/20	1354     177.8.5     slope excavation works     1 day     Fri 6/12/19     Fri 6/12/19       1355     177.8.6     Phase I     25 days     Sat 7/12/19     Wed 8/1/20       1356     177.8.6.1     install test nail PN22 & pull out test     6 days     Sat 7/12/19     Fri 13/12/19		and the second	proposed slope stripping for mapping or rock and				
	1356 17.7.8.6.1 install test nail PN22 & pull out test 6 days Sat 7/12/19 Fri 13/12/19	1354	17.7.8.5		1 day	Fri 6/12/19	Fri 6/12/19	t,
1356 17.7.8.6.1 install test nail PN22 & pull out test 6 days Sat 7/12/19 Fri 13/12/19				Phase I	25 days	Sat 7/12/19	Wed 8/1/20	
		1356	17.7.8.6.1	install test nail PN22 & pull out test	6 days	Sat 7/12/19	Fri 13/12/19	



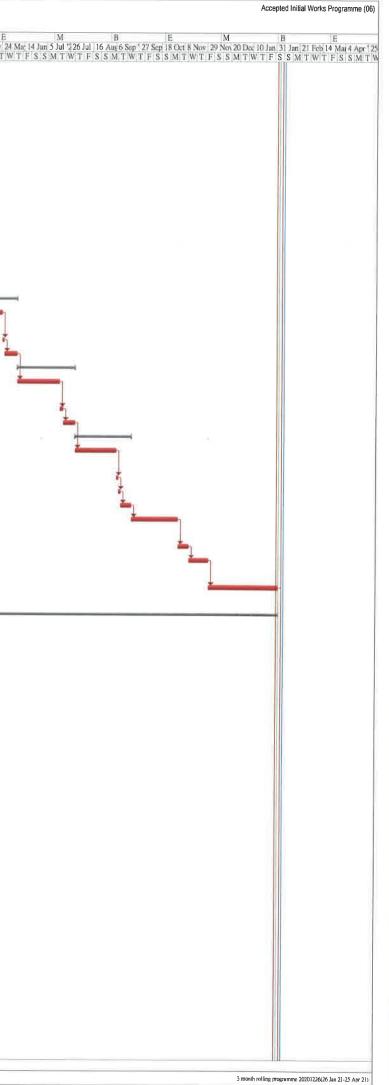
Intract No. CV/2017/02 velopment of Columbarium at Sandy Ridge Cemetery ifrastructural Works at Man Kam To Road and Lin Ma Hang Road WBS Task Name Duration Start Date Completion						3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)		
WBS	Task	Name	Duration	Start Date	Completion Date	M         B         E         M         B		
17.7.8	3.6.2	drill, install steel bars and grout soil nails (K01-22, N01-05, M01-11, J01-25)	10 days	Sat 14/12/19	Fri 27/12/19			
17.7.8.	6.3	TDR Test (including test & wait issue result)	2 days	Sal 28/12/19	Mon 30/12/19			
17.7.8.	6.4	soil nail head works	7 days	Tue 31/12/19	Wed 8/1/20			
17.7.8		Phase II	22 days	Thu 9/1/20	Thu 6/2/20			
17,7.8	7.1	install test nail PN21 & pull out test	6 days	Thu 9/1/20	Wed 15/1/20			
17.7.8	7.2	drill, install steel bars and grout soil nails	8 days	Thu 16/1/20	Fri 24/1/20			
		(H01-25, L01-16)						
17.7.8		raking drains	2 days	Wed 29/1/20		1 T		
17.7.8. 17.7.8.		TDR Test (including test & wait issue result) soil nail head works	2 days	Fri 31/1/20 Mon 3/2/20	Sat 1/2/20 Thu 6/2/20			
17.7.8.		225UC, 300SC & catchpits	4 days 21 days	Fri 7/2/20	Mon 2/3/20			
			,					
17.7.8	1.9	600mm width concrete maintenance staircase with handrailing	9 days	Tue 3/3/20	Thu 12/3/20			
17.7.8	1,10	soil replacement by no-fines concrete	6 days	Fri 13/3/20	Thu 19/3/20			
17.7.8.		stage 1	2 days	Fri 13/3/20	Sat 14/3/20			
17.7.8		temporary cut & excavation of soil	1 day	Fri 13/3/20	Fri 13/3/20	the second se		
17.7.8		placement of no-fine concrete	1 day	Sat 14/3/20	Sat 14/3/20			
17.7.8. 17.7.8		stage 2	2 days	Mon 16/3/20 Mon 16/3/20	Tue 17/3/20 Mon 16/3/20			
17.7.8		temporary cut & excavation of soil placement of no-fine concrete	1 day 1 day	Tue 17/3/20	Tue 17/3/20			
17.7.8.		stage 3	2 days	Wed 18/3/20				
17.7.8	10.3.1	temporary cut & excavation of soil	1 day	Wed 18/3/20	Wed 18/3/20			
17.7.8.		placement of no-fine concrete	1 day	Thu 19/3/20	Thu 19/3/20			
17.7.8	8,11	biodegradable erosion control mat with hydroseeding & shrub planting	12 days	Fri 20/3/20	Thu 2/4/20			
17.7.9	)	Slopeworks: - 3NW-C/C224 (ch1040-1120N/B)	117 days	Tue 31/3/20	Sat 22/8/20			
17.7.9.	9.1	hoarding & fencing	10 days	Tue 31/3/20	Wed 15/4/20			
17.7.9	12	temporary scaffolding	10 days	Thu 16/4/20	Mon 27/4/20			
17.7.9.		slope excavation works	1 day	Tue 28/4/20	Tue 28/4/20			
17.7.9.		Phase I	22 days	Wed 29/4/20				
17.7.9	9,4,1	install test nail PN14 & pull out test	6 days	Wed 29/4/20	Thu 7/5/20			
17.7.9	9,4.2	drill, install steel bars and grout soil nails	8 days	Fri 8/5/20	Sat 16/5/20			
		(G01-21, F01-31)	0.1	Mr - Animine	T 40/2/00			
17.7.9		TDR Test (including test & wait issue result) soil nail head works	2 days 6 days					
17.7.9		Phase II	12 days					
17.7.9		install test nail PN13 & pull out test	-	Wed 27/5/20				
17.7.9.	9.5.2	drill, install steel bars and grout soil nails	6 days	Wed 3/6/20	Tue 9/6/20			
17.7.9	16	(E01-46)	2P down	Wed 10/6/20	Tue 14/7/00			
17.7.9		Phase III install test nail PN12 & pull out test		Wed 10/6/20 Wed 10/6/20				
		and war to be read to the to pain that to be	2 0070					
17.7.9.	9.6.2	drill, install steel bars and grout soil nails (D01-D51)	10 days	Wed 17/6/20	Mon 29/6/20			
17.7.9	6.3	TDR Test (including test & wait issue result)	2 davs	Tue 30/6/20	Thu 2/7/20			
177.9		soil nail head works	10 days		Tue 14/7/20			
17.7.9		Phase IV	19 days	Wed 15/7/20	Wed 5/8/20			
17.7.9	9.7.1	install test nail PN11 & pull out test	6 days	Wed 15/7/20	Tue 21/7/20			
17,7.9.	97.2	drill, install steel bars and grout soil nails	6 days	Wed 22/7/20	Tue 28/7/20			
17.7.9.	9.7.3	(C01-26) raking drains	2 days	Wed 29/7/20	Thu 30/7/20			
17.7.9		raking drains TDR Test (including lest & wait issue result)	2 days 2 days	Fri 31/7/20	Sat 1/8/20			
17.7.9		soil nail head works	3 days	Mon 3/8/20	Wed 5/8/20			
17,7.9.		UC & catchpit	8 days	Thu 6/8/20	Fri 14/8/20			
17.7.9	99	75mm thick shotcrete with a layer of A252 wire mesh (380m2)	7 days	Sat 15/8/20	Sat 22/8/20			
17.7.10	10	Slopeworks: - 3NW-C/C225 (ch1300-1376N/B)	348 days	Tue 3/12/19	Wed 3/2/21			
17.7.10		tree transplant		Tue 3/12/19		×,		
Jan	121211			_	-			
17,7,1	10.2	removal of existing trees	5 days	Thu 5/12/19	Tue 10/12/19			
17.7.1	10.3	hoarding & fencing	12 days	Wed 11/12/19	Tue 24/12/19			
3 17.7.10	10.4	slope excavation works	4 .de	Fri 27/12/19	Ed 07/40/40			

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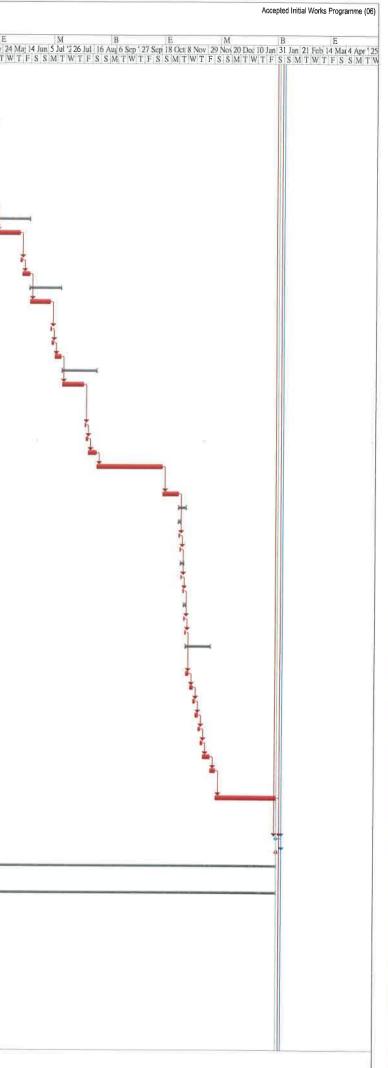


ntract No. CV/20 velopment of Col frastructural Wor	17/02 umbarium at Sandy Ridge Cemetery rks at Man Kam To Road and Lin Ma Hang Road				3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
	k Name	Duration	Start Date	Completion Date	M B E M B E M B E M B M B B B M B M B B M B M
09 17.7.10.5	temporary scaffolding	10 days	Sat 28/12/19	Thu 9/1/20	WTFSSMTWTFSS
10 17.7.10.6	install test nail PN31-PN33, grout & pull out tests	6 days	Fri 10/1/20	Thu 16/1/20	
17,7,10,7	install test nail PN34-PN36, grout & pull out tests	6 days	Fri 17/1/20	Thu 23/1/20	
12 17.7.10.8	install test nail PN37-PN39, grout & pull out tests	6 days	Fri 24/1/20	Mon 3/2/20	
13 17.7.10.9	Phase I	15 days	Tue 4/2/20	Thu 20/2/20	
4 17.7.10.9.1	drill, install steel bars and grout soil nails (AJ01-18, Y01-07, AH01-18, X01-08)	8 days	Tue 4/2/20	Wed 12/2/20	
15 17.7.10.9.2	TDR Test (including test & wait issue result)	2 days	Thu 13/2/20	Fri 14/2/20	۲
16 17.7.10.9.3	soil nail head works	5 days	Sat 15/2/20	Thu 20/2/20	
7 17.7.10.10	Phase II	43 days		Wed 15/4/20	
17.7.10.10.1	drill, install steel bars and grout soil nails (AJ01-18, Y01-07, AH01-18, X01-08)	32 days	Fri 21/2/20	Sat 28/3/20	
19 17.7.10.10.2	TDR Test (including test & wait issue result)	2 days	Mon 30/3/20	Tue 31/3/20	
20 17.7.10.10.3	soil nail head works	9 days	Wed 1/4/20	Wed 15/4/20	
21 17.7.10.11	Phase III	44 days		Mon 8/6/20	
22 17.7.10.11.1	drill, install steel bars and grout soil nails (AJ01-18, Y01-07, AH01-18, X01-08)	32 days	Thu 16/4/20	Mon 25/5/20	
23 17.7.10.11.2	TDR Test (including lest & wait issue result)	2 days	Tue 26/5/20	Wed 27/5/20	
24 17.7.10.11.3	soil nail head works	10 days	Thu 28/5/20	Mon 8/6/20	
25 17.7.10.12	Phase IV	44 days	Tue 9/6/20	Fri 31/7/20	
26 17.7.10.12.1	drill, install steel bars and grout soil nails (AJ01-18, Y01-07, AH01-18, X01-08)	32 days	Tue 9/6/20	Fri 17/7/20	
27 17.7.10.12.2	TDR Test (including test & wait issue result)	2 days	Sat 18/7/20	Mon 20/7/20	
28 17.7.10.12.3	soil nail head works	10 days	Tue 21/7/20	Fri 31/7/20	
29 17.7.10.13	Phase V	44 days	Sat 1/8/20	Mon 21/9/20	
30 17.7.10.13.1	drill, install steel bars and grout soil nails (AJ01-18, Y01-07, AH01-18, X01-08)	32 days	Sat 1/8/20	Mon 7/9/20	
31 17.7.10.13.2	raking drains	2 days	Tue 8/9/20	Wed 9/9/20	
32 17.7.10.13.3	TDR Test (including test & wait issue result)	2 days	Thu 10/9/20	Fri 11/9/20	
33 17.7.10.13.4 34 17.7.10.14	soil nail head works	8 days	Sat 12/9/20	Mon 21/9/20	
4 162.10.14	300UC (192m), 300SC (135m) & 2 catchpit	34 days	Tue 22/9/20	Tue 3/11/20	
35 17.7.10.15	berm with handrailing C2409H	9 days	Wed 4/11/20	Fri 13/11/20	
36 17.7.10.16	600mm width concrete maintenance staircase with handrailing	15 days	Sat 14/11/20	Tue 1/12/20	
37 17.7.10.17	biodegradable erosion control mat with hydroseeding (2550m2)	52 days	Wed 2/12/20	Wed 3/2/21	
38 17.7.11		415 davs	Thu 12/9/19	Wed 3/2/21	
39 17.7.11.1	hoarding & fencing	-	Thu 12/9/19		
40 17.7.11.2	temporary scaffolding	14 days	Fri 27/9/19	Tue 15/10/19	
41 17.7.11.3	proposed slope stripping for mapping or rock and				
4 NOALA	relict discontinuities (AS1-A,B, AS2-A,B)				
42 17.7.11.4	trial pits (A1, A2, A3)		Mon 28/10/19		
43 17.7.11.5	slope excavation works	1 day	Wed 6/11/19	Wed 6/11/19	1
11 177440	Dhara I	00 davia	Thu 7/44/40	E- 00/44/40	
44 17.7.11.6 45 17.7.11.6.1	Phase I install test nails PN41-42 & pull out tests		Thu 7/11/19 Thu 7/11/19		
Torre Well	וווסנמו נסט וזמוס דיזיא ואיצ מ 1011 טענ נפטנט	r uays	110 11 11 3	rnu (m/ r1/ 13	
46 17.7.11.6.2	drill, install steel bars and grout soil nails (BP01-08, BT01-05, BN01-08, BS01-08))	8 days	Fri 15/11/19	Sat 23/11/19	<b>→</b>
47 17.7.11.6.3	TDR Test (including test & wait issue result)	2 days	Mon 25/11/19	Tue 26/11/19	
48 17.7.11.6.4	soil nail head works		Wed 27/11/19		
49 17.7.11.7	Phase II	28 days	Sat 30/11/19	Sat 4/1/20	<b>b</b>
50 17.7.11.7.1	install test nails PN43-44 & pull out tests	6 days	Sal 30/11/19	Fri 6/12/19	
51 17.7.11.7.2	drill, install steel bars and grout soil nails (BM01-09, BR01-13, BL01-09, BQ01-22)	14 days	Sat 7/12/19	Mon 23/12/19	
52 17.7.11.7.3		0	Tuo 04/40/40	E-1 07/40/40	
52 17.7.11.7.3	TDR Test (including test & wait issue result) soil nail head works		Tue 24/12/19 Sat 28/12/19		
54 17.7.11.8	Phase III	29 days		Tue 11/2/20	
55 17.7.11.8.1	install test nails PN45-46 & pull out tests		Mon 6/1/20	Sat 11/1/20	
1 i i	drill, install steel bars and grout soil nails (BJ01-09, BK01-27, BG01-12, BH01-20)	14 days	Mon 13/1/20	Fri 31/1/20	
56 177.11.8.2					
	TDR Test (including test & wait issue result)	2 davs	Sat 1/2/20	Mon 3/2/20	
56 177.11.8.2 57 17.7.11.8.3 58 17.7.11.8.4	TDR Test (including test & wait issue result) soil nail head works	2 days 7 days	Sat 1/2/20 Tue 4/2/20	Mon 3/2/20 Tue 11/2/20	
57 17.7.11.8.3		7 days		Tue 11/2/20	
57 17.7.11.8.3 58 17.7.11.8.4	soil nail head works	7 days 41 days	Tue 4/2/20	Tue 11/2/20 Mon 30/3/20	

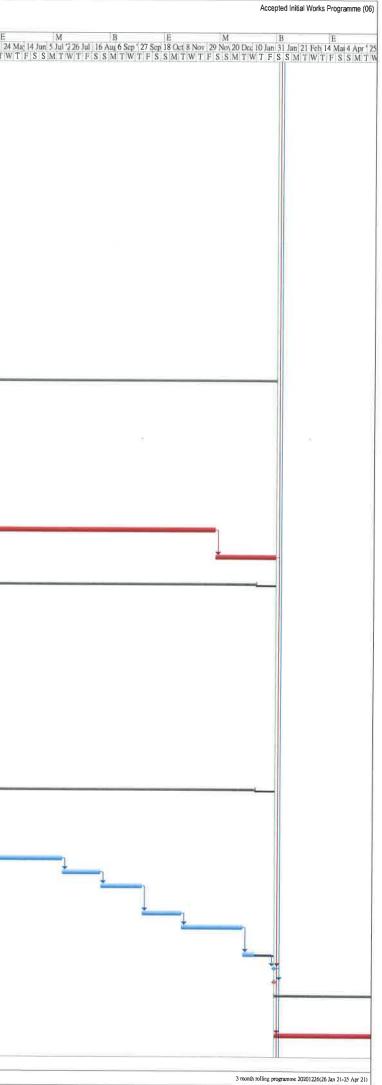
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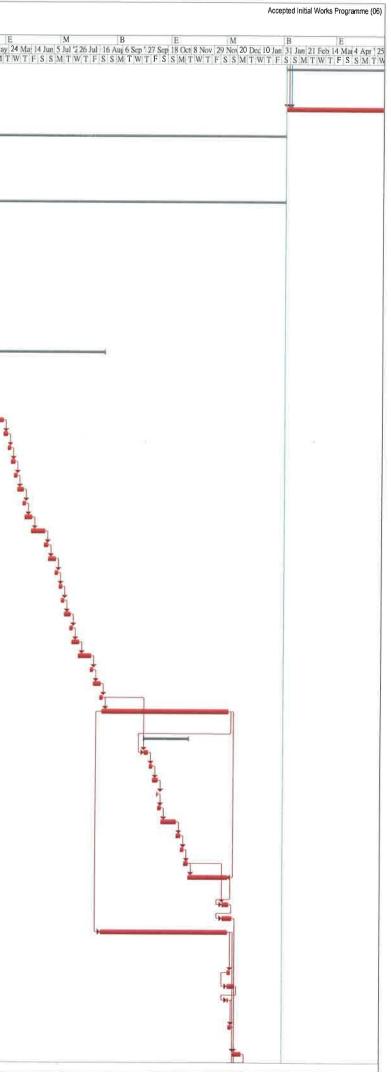
Develop	pment of	V/2017/02 f Columbarium at Sandy Ridge Cernetery Works at Man Kam To Road and Lin Ma Hang Road		3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)												
		Task Name	Duration	Start Date	Completion Date	M B E M B E M D E M I E M I E M										
1461 1	77.11.9.2	drill, install steel bars and grout soil nails	26 days	Wed 19/2/20	Thu 19/3/20	Ma 10 Jun 1 Jul 1 22 Jul 12 Aug 2 Sep 1 23 Sep 14 Oct 4 Nov 25 Noi 16 Dec 6 Jan 1 27 Jan 17 Feb 10 Mai 31 Mat 21 Apt 12 Mar 2 Jun 23 Jun 14 Jul 4 Aug 25 Aug 15 Sep 6 Oct 27 Oct 17 Nov 8 Dec 29 Dec 19 Jan 9 Feb 1 Mar 22 Mai 12 Apt 3 Max W T F S S M T W T										
		(BE01-13, BF01-19, BC01-11, BD01-20)	,													
555.052	7.7.11 9 3	· · · · · · · · · · · · · · · · · · ·	2 days	Fri 20/3/20	Sal 21/3/20	1 j										
120.20	7.7.1194 771110	soil nail head works Phase V	7 days 36 days	Mon 23/3/20 Tue 31/3/20												
922	7 7 11 10.1		6 days	Tue 31/3/20	Tue 7/4/20											
1466 1	7.7.11.10.2	drill, install steel bars and grout soil nails (BA01-24, BB01-06, AY01-24, AZ01-06)	22 days	Wed 8/4/20	Fri 8/5/20											
1467 1	7.7 11 10 3		2 days	Sat 9/5/20	Mon 11/5/20											
42210	7.7.11.10		6 days	Tue 12/5/20												
	771111	Phase VI	28 days													
1470 1	7.7 11 11 1	drill, install steel bars and grout soil nails (AW01-24, AX01-05, AU01-21, AV01-08)	20 days	Tue 19/5/20	Wed 10/6/20											
1471 1	7711112		2 days	Thu 11/6/20	Fri 12/6/20											
1472 1	7.7 11 11 3		6 days	Sat 13/6/20	Fri 19/6/20											
23,55	7.7.11.12		23 days	Sat 20/6/20	Sat 18/7/20											
1474 1	7711121	drill, install steel bars and grout soil nails (AS01-18, AT01-11, AQ01-19, AR01-07)	14 days	Sat 20/6/20	Wed 8/7/20											
1475 1	7.7.11.122		1 day	Thu 9/7/20	Thu 9/7/20											
1476 1	7.7 11 12 3		2 days	Fri 10/7/20	Sal 11/7/20											
	7,7,11,12,4		6 days	Mon 13/7/20												
-010-01	77 11 13 77 11 13		28 days 18 days	Mon 20/7/20 Mon 20/7/20												
1419 1		(AN01-15, AP01-08, AL01-15, AM01-08, AK01-18)	To days	WOIT 2017120	Sal 0/0/20											
1480 1	7.7.11.13.2	2 raking drains	1 day	Mon 10/8/20	Mon 10/8/20											
	7,7.11.13.	, ,	2 days	Tue 11/8/20												
102012	17.7.11.13.4 17.7.11.14	4 soil nail head works 300UC (240m) (with upstand (C2509A)), 300SC (160m) & catchpit 9 nos.	7 days 50 days	Thu 13/8/20 Fri 21/8/20												
1484 1	7.7.11.15	berm with handrailing C2409H	12 days	Wed 21/10/20	Wed 4/11/20											
	17.7.11.16	soil replacement by no-fine concrete	6 days		Wed 11/11/20											
	177 11.16 <sup>.</sup> 177 11 16 <sup>.</sup>		2 days	Thu 5/11/20												
	177 11 16	·····, ····	1 day 1 day	Thu 5/11/20 Fri 6/11/20	Thu 5/11/20 Fri 6/11/20											
227.12	7.7.11.16.	9 E E E E E E E E E E E E E E E E E E E	2 days	Sat 7/11/20	Mon 9/11/20											
111-1-11-1	7.7.11.16.2		1 day	Sat 7/11/20												
12 C 12 C 14 C	177 11 16. 17.7 11 16.		1 day		Mon 9/11/20											
	17.7 11 16:				Wed 11/11/20 Tue 10/11/20											
	177.11.16.3	······································			Wed 11/11/20											
	17.7.11.17	with handrailing (C2101D)		Thu 12/11/20												
	77.11.17				Sat 14/11/20											
	17.7.11.173 17.7.11.173				Wed 18/11/20 Fri 20/11/20											
	177.11.17.4		2 days		Mon 23/11/20											
1.964 T	17.7.11.17.8				Wed 25/11/20											
	17.7.11.17.6 17.7.11.17.5			Thu 26/11/20												
1	17.7.11.17.		6 days 4 days	Sat 28/11/20 Sat 5/12/20	Fri 4/12/20 Wed 9/12/20											
1504 1	17.7.11.19	75mm thick shotcrete with water base color paints and a layer of A252 wire mesh together with planter hole & shrub planting	45 days	Thu 10/12/20	Wed 3/2/21											
1505 1	18	Planned Completion for section 2 of the works	0 days	Wed 3/2/21	Wed 3/2/21											
1506 1		Completion Date for section 2 of the works	0 days	Wed 3/2/21	Wed 3/2/21											
1507 2		within Parts D and E of the Site		Thu 31/5/18												
1508 2 1509 2		Parts D access date for section 3 (Parts D) - not more than		Mon 26/11/18 Mon 26/11/18												
1510 2	20.1.2	180 days after the starting date seek specialist for design, supply and installation of														
1521	90 4 2	the covered walkway	0	Th: 40040	The datate											
1511 2 1512 2		acceptance of specialist design for approval for lighting system for the		Thu 14/2/19 Fri 15/2/19												
1513 2		covered walkway submit for approval for lighting system for the	0 days		Sun 14/7/19											
1		covered walkway														



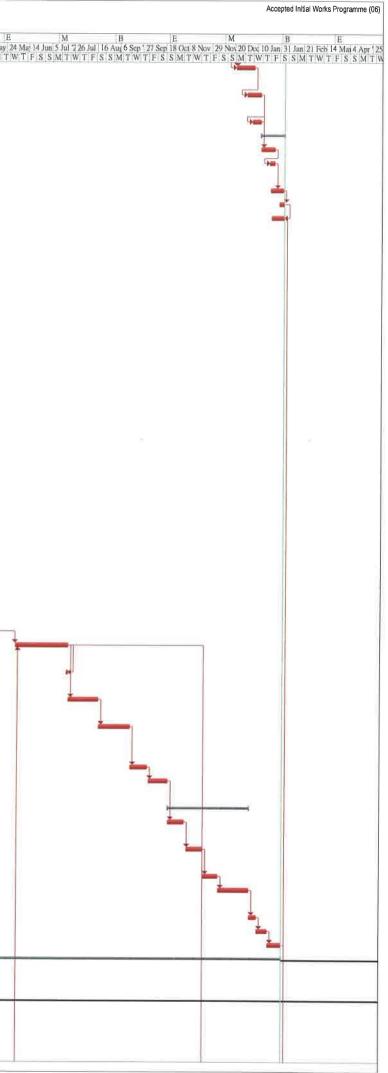
Infrastructura	of Columbarium al Sandy Ridge Cemetery I Works at Man Kam To Road and Lin Ma Hang Road	A			3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
WBS	Task Name	Duration	Start Date	Completion Date	M         B         E         M         B         Z         M         B         Z         M         B
515 20.1.7	Coordination with CLP to obtain the electricity supply for the street lighting system (Design for Road B, Road E, Road F(part), Lin Ma Hang Road and Sheung Shui Landmark PTI & Lighting system for the covered walkway)	168 days	Mon 5/8/19	Sun 19/1/20	
516 20.1.8	design for glazing system of the proposed covered walkway at Fanling Station Road	150 days	Fri 15/2/19	Sun 14/7/19	
517 20.1.9 518 20.1.10	submission of glazing system acceptance of glazing system and fall arrest system	0 days 0 days	Sun 14/7/19 Sun 4/8/19	Sun 14/7/19 Sun 4/8/19	
519 20.1.11	by Project Manager design for fall arrest system of the proposed covered walkway at Fanling Station Road	150 days	Fri 15/2/19	Sun 14/7/19	
520 20.1.12	submission of fall arrest system	0 days	Sun 14/7/19	Sun 14/7/19	
521 20.1.13	acceptance of fall arrest system by Project Manager	•	Sun 4/8/19	Sun 4/8/19	
522 20.1.14	Liaison with MTRC for the works arrangement	30 days	Mon 5/8/19	Tue 3/9/19	
523 20.1.15	general site clearance	12 days	Wed 4/9/19	Wed 18/9/19	
524 20.1.16	initial survey	12 days	Thu 19/9/19	Thu 3/10/19	
525 20.1.17	utility detection and submit reports	8 days		Mon 14/10/19	
526 20.1.18	Fabrication of Steelworks & glass panel		Mon 5/8/19	Mon 2/12/19	
527 20,1,19	delivery steelworks & glass panel to site	•		Sat 18/1/20	
528 20.1.20	application of XP (for Parts D)			Thu 29/11/18	
529 20.1.21 530 20.1.22	acceptance of XP (for Parts D) Construction of Covered Walkway at Fanling Station		Thu 30/5/19 Tue 15/10/19		
531 20.1.22.1	construct the concrete foundation of covered walkway (first 20m)	20 days	Tue 15/10/19	Wed 6/11/19	
532 20.1.22.2	construct the concrete foundation of covered walkway (2nd 20m)	20 days	Thu 7/11/19	Fri 29/11/19	
533 20.1.22.3	construct the concrete foundation of covered walkway (3rd 20m)	20 days	Sat 30/11/19	Mon 23/12/19	
534 20.1.22.4	demolished existing planter (drg.WY/1051)	20 days	Sat 30/11/19	Mon 23/12/19	
535 20.1.22.5	construct the concrete foundation of covered walkway (4th 20m)		Tue 24/12/19		
536 20.1.22.6 537 20.1.22.7	construction of covered walkway including steelworks, glass panel and electrical works Reinstatement of the pavement and street		Mon 20/1/20 Thu 10/12/20		
538 20.2	furniture		Thu 31/5/18		
539 20.2.1	Parts E access date for section 3 (Parts E)	0 days		Thu 31/5/18	
540 20.2.2	application of XP (for Parts E)	0 days		Thu 30/5/19	
541 20.2.3	acceptance of XP (for Parts E)	0 days		Thu 28/11/19	
542 20.2.4	Temporary Traffic Arrangement (TTA) Scheme for Sheung Shui Landmark North PTI and Fanling Station Road			Mon 27/1/20	
543 20.2.4.1	Preparation of TTA for TMLG and acceptance from TD and RMO	120 days	Fri 31/5/19	Fri 27/9/19	
544 20.2 4.2	Comment & acceptance of TTA scheme by TD & RMO	60 days	Sat 28/9/19	Tue 26/11/19	±
545 20.2.4.3	Obtain roadwork advice from RMO	60 days	Fri 29/11/19	Mon 27/1/20	**
546 20.2.5	general site clearance	12 days	Wed 29/1/20		*
547 20.2.6	initial Survey	•	Wed 12/2/20	Thu 27/2/20	
548 20.2.7 549 20.2.8	utility detection and submit reports Road Improvement works at Sheung Shui Landmark	14 days 250 days	Fri 28/2/20 Mon 16/3/20	Sat 14/3/20 Sat 16/1/21	
550 20.2.8.1	North PTI saw cut and remove existing pavement	10 days	Mon 16/3/20	Thu 26/3/20	
551 20.2.8.2	remove existing kerb and railings	14 days	Fri 27/3/20	Thu 16/4/20	
552 20.2.8.3	demolish existing slope planter wall	21 days	Fri 17/4/20	Wed 13/5/20	
553 20.2.8.4	construct slope planter wall	60 days	Thu 14/5/20	Fri 24/7/20	
554 20.2.8.5	construct kerb backing & lay kerb	30 days	Sat 25/7/20	Fri 28/8/20	
555 20.2.8.6	construct concrete & bituminous pavement for road and central refuge	30 days	Sat 29/8/20	Mon 5/10/20	
556 20.2.8.7	relocate existing street lighting (DD0398)	30 davs	Tue 6/10/20	Tue 10/11/20	
20.2.8.8	install type 2 railing, traffic & directional signs		Wed 11/11/20		
558 20.2.8.9	road markings	10 days	Wed 6/1/21	Sat 16/1/21	
1559 21	Planned Completion for section 3 of the works	0 days	Wed 3/2/21	Wed 3/2/21	
1560 22	Completion Date for section 3 of the works	0 days	Wed 3/2/21	Wed 3/2/21	
1561 23	section 4 of the works - Completion of Establishment works for the Landscape Softworks within Parts A1, A2 and B of the Site	1095 days	Thu 4/2/21	Sat 3/2/24	
562 23.1	Establishment works for the Landscape Softworks within Parts A1, A2 and B of the Site	1095 days	Thu 4/2/21	Sat 3/2/24	



65 26 SK Wai 66 25.1 59 29 SK C Si UI N	Task Name section 5 of the works - Completion of Establishment works for the Landscape Softworks within Parts C1 and C2 of the Site Establishment works for the Landscape Softworks within Parts C1 and C2 of the Site section 6 of the works (section Subject to Excision) - Completion of all works within Parts A3 and A4 of the Site except Establishment works. Extent of works under section 6 of the works is defined in Drawing	1095 days		Completion Date Sat 3/2/24	M         B         E         M         B
w al 66 25.1 59 29 Sr C S S U U N N 70 29.1	works for the Landscape Softworks within Parts C1 and C2 of the Site Establishment works for the Landscape Softworks within Parts C1 and C2 of the Site section 6 of the works (section Subject to Excision) - completion of all works within Parts A3 and A4 of the Site except Establishment works. Extent of works	1095 days			
56 26.1 59 29 SC C Si U N 70 29.1	Establishment works for the Landscape Softworks within Parts C1 and C2 of the Site section 6 of the works (section Subject to Excision) - completion of all works within Parts A3 and A4 of the Site except Establishment works. Extent of works		Thu 4/2/24		
C Si UI N 70 29,1	section 6 of the works (section Subject to Excision) - Completion of all works within Parts A3 and A4 of the Site except Establishment works. Extent of works		(110 4/2/21	Sat 3/2/24	
121 1 1 1 1	No.: 231448/C2/G/1031	859 days	Fri 28/9/18	Wed 3/2/21	
112	Parts A3	859 days	Fri 28/9/18	Wed 3/2/21	
		0 days	Fri 28/9/18	Fri 28/9/18	*
72 29.1.2	The time for ordering the "section Subject to Excision" for section 6 and 7 is within 390 days commencing from and including the starting date	0 days	Mon 24/6/19	Mon 24/6/19	
73 29.1.3	form temporary haul road from the south side to Parts A3	5 days	Tue 25/6/19	Sat 29/6/19	
74 29.1.4	parts A3 general site clearance & tree felling	12 days	Tue 2/7/19	Mon 15/7/19	
75 29,1,5	initial survey	12 days	Tue 2/7/19	Mon 15/7/19	
76 29.1.6	construction of temporary drainage		Mon 15/7/19	Tue 30/7/19	
77 29.1.7	Construction of Retaining Wall RW14 (Bay 1-Bay 6)	312 days	Fri 26/7/19	Sat 22/8/20	
78 29.1.7.1	excavation (open cut) to formation (bays 1 to 4)	5 days	Fri 26/7/19	Wed 31/7/19	l 🐜
79 29.1.7.2	temporary soil nails (bays 5 to 7)		Wed 31/7/19		
80 29.1.7.3 81 29.1.7.4	predrilling for socketed H-Piling construction of socketed H-Pile		Tue 27/8/19 Tue 24/9/19	Thu 26/9/19 Thu 21/5/20	
82 29.1.7.5	post drilling for socketed H-Piling	3 days	Fri 22/5/20	Mon 25/5/20	The second se
83 29.1.7.6	blinding concrete for bays 1 to 7		Tue 26/5/20	Thu 28/5/20	
\$4 29.1.7.7	base formwork for bay 2, 4 & 6	3 days	Fri 29/5/20	Mon 1/6/20	tion to the second s
85 29.1.7.8 86 29.1.7.9	base steel fixing for bay 2, 4 & 6 base concreting & curing for bay 2, 4 & 6	3 days 5 days	Mon 1/6/20 Thu 4/6/20	Wed 3/6/20 Tue 9/6/20	
87 29.1.7.10	remove base formwork	3 days	Tue 9/6/20	Thu 11/6/20	
88 29.1.7.11	falsework and formwork for walls of bay 2, 4 & 6	6 days	Thu 11/6/20	Wed 17/6/20	
89 29.1.7.12	steel fixing for walls of bay 2, 4 & 6		Wed 17/6/20	Mon 29/6/20	
90 29.1.7.13 91 29.1.7.14	close formwork for walls of bay 2, 4 & 6 concreting and curing for walls of bay 2, 4 & 6		Mon 29/6/20 Fri 3/7/20	Thu 2/7/20 Thu 9/7/20	
92 29.1.7.15	remove falsework and formwork for walls	6 days 3 days	Thu 9/7/20	Sat 11/7/20	
3 29.1.7.16	base formwork for bay 1, 3 & 5	3 days	Mon 13/7/20	Wed 15/7/20	
94 29.1.7.17	base steel fixing for bay 1, 3 & 5		Wed 15/7/20	Fri 17/7/20	
5 29.1.7.18 6 29.1.7.19	base concreting & curing for bay 1, 3 & 5	5 days	Sat 18/7/20 Thu 23/7/20	Thu 23/7/20 Sat 25/7/20	
90 29.1.7.19 97 29.1.7.20	remove base formwork falsework and formwork for walls of bay 1, 3 & 5	3 days 6 days	Sat 25/7/20	Fri 31/7/20	
98 29.1.7.21	steel fixing for walls of bay 1, 3 & 5	10 days	Fri 31/7/20	Tue 11/8/20	
99 29.1.7.22	close formwork for walls of bay 1, 3 & 5	3 days	Tue 11/8/20	Thu 13/8/20	
00 29.1.7.23	concreting and curing for walls of bay 1, 3 & 5	6 days	Fri 14/8/20	Thu 20/8/20	
01 29.1.7.24 02 29.1.8	remove falsework and formwork for walls backfilling works behind Retaining Wall RW14 (bay1 to 6) (include SRT tests)	3 days 90 days	Thu 20/8/20 Sat 22/8/20	Sat 22/8/20 Tue 15/12/20	
03 29.1.9	Construction of Retaining Wall RW14 Bay 7				
04 29.1.9.1 05 29.1.9.2	base formwork	-	Wed 30/9/20 Mon 5/10/20		
05 291.9.2	base steel fixing base concreting & curing			Wed 7/10/20 Mon 12/10/20	
07 29.1.9.4	remove base formwork			Mon 12/10/20	
08 29.1.9.5	falsework and formwork for wall	•		Thu 15/10/20	
09 29.1.9.6 10 29.1.9.7	steel fixing for wall	•	Fri 16/10/20 Fri 30/10/20	Thu 29/10/20 Mon 2/11/20	
00 29.1.9.7 011 29.1.9.8	close formwork for wall concreting and curing for wall	2 days 3 days	Tue 3/11/20	Mon 2/11/20 Thu 5/11/20	
12 29.1.9.9	remove falsework and formwork	2 days	Fri 6/11/20	Mon 9/11/20	
13 29.1.10	backfilling works behind RW14 (bay 7) (include SRT tests)				
014 291.11 015 29.1.12	install instrument for RW14 construct 300U channel & catchpit in front of RW14			Wed 16/12/20 Sat 19/12/20	
16 28.1.13	site formation works for fill slope FS19 and FS20 (including in "backfilling works behind Retaining Wall RW14 (bay1 to 6)")	•		Tue 15/12/20	
17 29.1.14	300U channel & stepped channel for FS19 & 20	3 days	Wed 16/12/20	Fri 18/12/20	
18 29.1.15	install instrument for FS19 & FS20	•		Mon 21/12/20	
519 29.1.16	minor site formation works for cut slope CS25	1 day	Wed 16/12/20	Wed 16/12/20	
520 29.1.17	minor site formation works for cut slope CS26	3 days	Thu 17/12/20	Sat 19/12/20	
521 29.1.18	install instruments for CS25 & CS26	5 days	Mon 21/12/20	Mon 28/12/20	



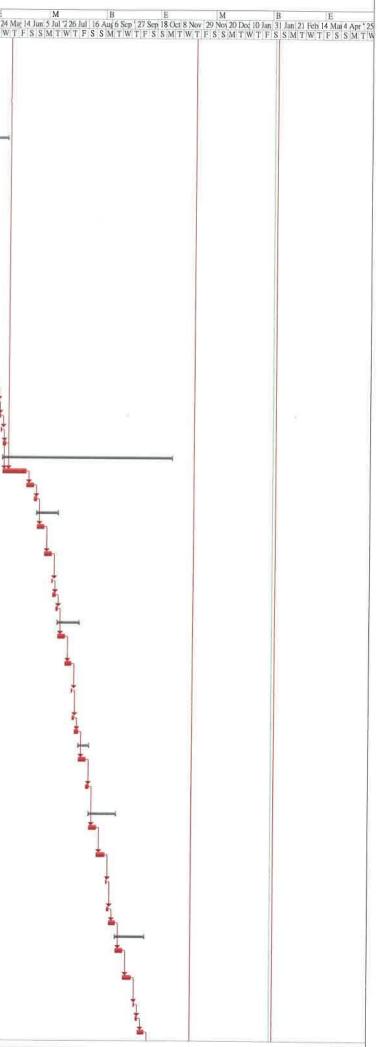
Contract No. C Development o - Infrastructural	//2017/02 f Columbarium at Sandy Ridge Cernetery Works at Man Kam To Road and Lin Ma Hang Road				3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)									
D WBS	Task Name	Duration	Start Date	Completion Date	M         B         E         M         B									
1622 29,1.19	waterworks at Road E	12 days	Mon 21/12/20	Wed 6/1/21	u 11 o o fuit u 11 o o o fuit u 11 o o o o o o o o o o o o o o o o o									
1623 29.1.20	drainage works at Road E	10 days	Thu 31/12/20	Tue 12/1/21										
1624 29,1,21	U channels at Road E	7 days	Tue 5/1/21	Tue 12/1/21										
1625 29.1.22	Roadworks of Road E (ch20-60)	19 days		Wed 3/2/21										
1626 291221 1627 291222	kerbing & sub-base & cross road ducts for UU ducting for road lighting & construction of	11 days 4 days	Wed 13/1/21 Thu 21/1/21											
1021 23,1222	irrigation system	4 uays	110 21/1121	1011 20/1721										
1628 29,1.22.3	concrete pavement	10 days		Tue 2/2/21										
1629 29.1.22.4 1630 29.1.22.5	street lighting (Drg/ RD/2091) traffic signs, directional signs, emergency crash	4 days 10 days	Sat 30/1/21 Sat 23/1/21	Wed 3/2/21 Wed 3/2/21										
10.07 20.1126.9	gate, type 2 railing & footpath	io daya	00(20/1/21	TTOG OFENET										
1631 29.1,23	Sile Formation works for Cut Slope CS24 (include temporary cutting from top of RW12 to toe of CS24) (for RW12 bays 1-3)	4 days	Tue 17/9/19	Fri 20/9/19										
1632 29.1.24	install instrument for CS24	5 days	Mon 23/9/19	Fri 27/9/19										
1633 29.1.25	temporary soil nails between CS20 & RW12 (for RW12 bays 1-3)	30 days	Mon 23/9/19	Mon 4/11/19										
1634 29.1.26	Construction of Retaining Wall RW12 CH 0-20	67 days	Tue 5/11/19	Fri 24/1/20										
1635 29.1.26.1	plate load tests	3 days	Tue 5/11/19		<b>*</b>									
1636 29.1.26.2	blinding concrete for bay 1 to 3	2 days	Fri 8/11/19	Sat 9/11/19	t i i i i i i i i i i i i i i i i i i i									
1637 29.1.26.3	base formwork for bay 1 & 3	2 days		Tue 12/11/19	5 L									
1638 29.1.26.4 1639 29.1.26.5	base steel fixing for bay 1 & 3	4 days		Sat 16/11/19 Thu 21/11/19										
1640 29.1.26.5	base concreting & curing for bay 1 & 3 remove base formwork	4 days 1 day		Fri 22/11/19										
1641 29.1.26.7	falsework and formwork for walls of bay 1 & 3	4 days		Wed 27/11/19										
1642 29.1.26.8	steel fixing for walls of bay 1 & 3	10 days	Thu 28/11/19	Mon 9/12/19										
1643 29.1.26.9	close formwork for walls of bay 1 & 3	2 days		Wed 11/12/19										
1644 29.1.26.10	concreting & curing for walls of bay 1 & 3	4 days		Mon 16/12/19 Tue 17/12/19										
1645 29.1.26.11 1646 29.1.26.12	remove falsework and formwork for walls blinding concrete for bay 2	2 days 1 day		Wed 18/12/19	2									
1647 29.1.26.13		1 day		Thu 19/12/19	t l									
1648 29.1.26.14	base steel fixing for bay 2	2 days	Fri 20/12/19	Sat 21/12/19	ž,									
1649 29.1.26.15	base concreting & curing for bay 2	3 days		Fri 27/12/19										
1650 29.1.26.16 1651 29.1.26.17	remove base formwork	1 day		Sat 28/12/19										
1651 29.1.26.17	falsework & formwork for walls of bay 2 steel fixing for walls of bay 2	2 days 7 days	Thu 2/1/20	Tue 31/12/19 Thu 9/1/20										
1653 29.1.26.19		2 days	Fri 10/1/20											
1654 29.1.26.20	concreting & curing for walls of bay 2	4 days	Mon 13/1/20	Thu 16/1/20	a la companya de la c									
1655 29.1.26.21	remove falsework and formwork for walls	2 days		Sat 18/1/20	<u>も</u>									
1656 29.1.26.22 1657 29.1.27	install instrument for RW12	5 days		Fri 24/1/20 Wed 22/7/20										
1037 29.1.27	backfilling along Retaining Wall RW12	40 days	1110 4/0/20	Weu 22///20										
1658 29.1.28	Completion of Site Formation works for Cut Slope 24			Wed 22/7/20										
1659 29.1.29	Waterworks at Road F		Thu 23/7/20											
1660 29.1.30	Drainage works at Road F	25 days	Thu 20/8/20	Thu 17/9/20										
1661 29.1.31	planter wall for Road E and Road F in Parts A3		Fri 18/9/20	Sat 3/10/20										
1662 29.1.32 1663 29.1.33	UU-Arrange Town Gas & PCCW to lay across Road F (not yet agree) Roadworks of Road F (60m)		Mon 5/10/20 Fri 23/10/20											
1664 29.1.33.1	kerbing and cross road duct (RD/2061, 2081)		Fri 23/10/20											
1665 29,1,33,2	ducting for road lighting & construction of irrigation system		Mon 9/11/20											
1666 29.1.33.3	bituminous pavement	12 days	Tue 24/11/20	Mon 7/12/20										
1667 291.33.4	traffic signs, directional signs, type 2 railing &		Tue 8/12/20											
	footpath													
1668 29.1.34	street lighting (Drg/ RD/2091)	6 days		Mon 11/1/21										
1669 29.1.35 1670 29.1.36	landscaping (hydroseeding) landscaping (shrub planling)	9 days 11 days		Thu 21/1/21 Wed 3/2/21										
1671 29.2	Parts A4	590 days												
1672 29.2.1	access date for section 6 (Parts A4) - nol more than 580 days after the starting date													
1673 292.2	The time for ordering the "section Subject to Excision" for section 6 and 7 is within 390 days commencing from and including the starting date	0 days	Mon 24/6/19	Mon 24/6/19	17									
1674 29.2.3	general site clearance	15 days												
1675 29.2.4	initial survey	11 days	Sat 11/1/20	Thu 23/1/20										



3 month rolling programme 20201226(26 Jan 21-25 Apr 21)

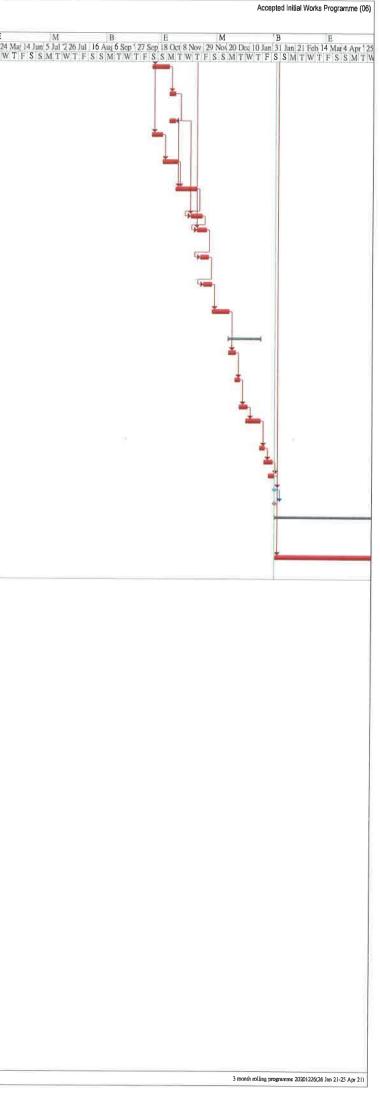
<ul> <li>Infrastructural</li> </ul>	f Columbarium at Sandy Ridge Cemetery I Works at Man Kam To Road and Lin Ma Hang Road				3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)
D WBS	Task Name	Duration	Start Date	Completion Date	M         B         E         M         B
1676 29.2.5	construction of temporary drainage	15 days	Thu 16/1/20	Wed 5/2/20	
1677 29.2.6	Site Formation works for Cut Slope CS24 (include temporary cutting from top of RW12 to toe of CS24) (for RW12 bays 4-6)	7 days	Wed 29/1/20	Wed 5/2/20	
1678 29.2.7 1679 29.2.8	install instrument for CS24 temporary soil nails between CS20 & RW12 (for RW12 bays 4-6)	3 days 35 days	Thu 6/2/20 Thu 6/2/20	Sat 8/2/20 Tue 17/3/20	
1680 29.2.9 1681 29.2.9.1	Construction of Retaining Wall RW12 CH 21-40 plate load tests	58 days 3 days			
1682 29.2.9.2	blinding concrete for bay 4 to 6	2 days	Mon 23/3/20		T C C C C C C C C C C C C C C C C C C C
1683 29.2.9.3	base formwork for bay 4 & 6	2 days 2 days	Wed 25/3/20		
1684 29.2.9.4	base steel fixing for bay 4 & 6	4 days	Fri 27/3/20	Wed 1/4/20	
1685 29.2.9.5	base concreting & curing for bay 4 & 6	3 days	Thu 2/4/20	Mon 6/4/20	
1686 29.2.9.6	remove base formwork	1 day	Tue 7/4/20	Tue 7/4/20	
1687 29.2.9.7	falsework and formwork for walls of bay 4 & 6	3 days	Wed 8/4/20	Tue 14/4/20	
1688 29.2.9.8	steel fixing for walls of bay 4 & 6	8 days	Wed 15/4/20		
1689 29.2.9.9	close formwork for walls of bay 4 & 6	2 days	Sat 25/4/20	Mon 27/4/20	ž,
1690 29.2.9.10 1691 29.2.9.11	concreting & curing for walls of bay 4 & 6 remove falsework and formwork for walls	4 days	Tue 28/4/20		
1692 29.2.9.12	blinding concrete for bay 5	2 days 1 day	Mon 4/5/20 Wed 6/5/20	Tue 5/5/20 Wed 6/5/20	۸. International Activity of
1693 29.2.9.13	base formwork for bay 5	1 day	Thu 7/5/20	Thu 7/5/20	1
1694 29.2.9.14	base steel fixing for bay 5	2 days	Fri 8/5/20	Sat 9/5/20	1
1695 29.2.9.15	base concreting & curing for bay 5	3 days	Mon 11/5/20		1
1696 29.2.9.16	remove base formwork	1 day	Thu 14/5/20	Thu 14/5/20	
1697 29.2.9.17	falsework & formwork for walls of bay 5	2 days	Fri 15/5/20	Sat 16/5/20	
1698 29.2.9.18	steel fixing for walls of bay 5	7 days	Mon 18/5/20		
1699 29.2.9.19	close formwork for walls of bay 5	1 day	Tue 26/5/20	Tue 26/5/20	r i
1700 29.2.9.20 1701 29.2.9.21	concreting & curing for walls of bay 5	3 days	Wed 27/5/20		
1702 29.2.9.21	remove falsework and formwork for walls install instrument for RW12	1 day 3 days	Sat 30/5/20 Mon 1/6/20	Sat 30/5/20 Wed 3/6/20	r i i i i i i i i i i i i i i i i i i i
1703 29.2.10	Site Formation works for Cut Slope CS20	125 days		Tue 3/11/20	
1704 29.2.10.1	slope excavation work	19 days	Mon 1/6/20	Mon 22/6/20	
1705 29.2.10.2	temporary scaffolding	5 days	Tue 23/6/20	Mon 29/6/20	
1706 29.2.10.3	trial pit TP11	2 days	Tue 30/6/20	Thu 2/7/20	
1707 29.2.10.4	Phase i	17 days	Fri 3/7/20	Wed 22/7/20	
1708 29.2.10.4.1	install test nail PN03 & pull out test	6 days	Fri 3/7/20	Thu 9/7/20	
1709 29.2.10.4.2	drill, install steel bars and grout soil nails (RL01, RK01-06, RJ01-10)	6 days	Fri 10/7/20	Thu 16/7/20	
1710 29.2.10.4.3	raking drains	1 day	Fri 17/7/20	Fri 17/7/20	
1711 29.2.10.4.4	TDR Test (including test & wait issue result)	2 days	Sat 18/7/20	Mon 20/7/20	
1712 29.2.10.4.5 1713 29.2.10.5		2 days	Tue 21/7/20		
1713 29.2.10.5	Phase II	17 days	Thu 23/7/20		
1715 29.2.10.5.2		6 days 5 days	Thu 23/7/20 Thu 30/7/20	Wed 29/7/20 Tue 4/8/20	
1716 29.2.10.5.3	(RH01-12, RG01-12, SF01-04) raking drains	1 day	Wed 5/8/20	Wed 5/8/20	
1717 29.2.10.5.4	TDR Test (including test & wait issue result)	2 days	Thu 6/8/20	Fri 7/8/20	
1718 29.2.10.5.5	soil nail head works	3 days	Sat 8/8/20	Tue 11/8/20	
1719 29.2.10.6 1720 29.2.10.6.1	Phase III	9 days 6 days	Wed 12/8/20	Fri 21/8/20	
1721 29.2.10.6.2	install test nail PN02 & pull out test drill, install steel bars and grout soil nails	6 days 3 days	Wed 12/8/20 Wed 19/8/20		
1000	(RF01-13, SE01-07)				
1722 29.2.10.7	Phase IV	21 days	Sat 22/8/20	Tue 15/9/20	
1723 29.2.10.7.1	install test nail PN04 & pull out test	6 days	Sat 22/8/20	Fri 28/8/20	
1724 29,210.7.2	drill, install steel bars and grout soil nails (RE01-14, SD01-08, RC01-15, SC01-03)	7 days	Sat 29/8/20	Sat 5/9/20	
1725 29.2.10.7.3	raking drains	1 day	Mon 7/9/20	Mon 7/9/20	
1726 29.2.10.7.4	TDR Test (including test & wait issue result)	2 days	Tue 8/9/20	Wed 9/9/20	
1727 29.2.10.7.5	soil nail head works	5 days	Thu 10/9/20	Tue 15/9/20	
1728 29.2.10.8	Phase V	20 days		Mon 12/10/20	
1729 29.2.10.8.1	install test nail PN01 & pull out test	6 days	Wed 16/9/20	Tue 22/9/20	
1730 29.2.10.8.2	drill, install steel bars and grout soil nails (RB01-16, SB01-02, RA01-18)	7 days	Wed 23/9/20		
1731 29,2,10,8,3 1732 29,2,10,8,4	raking drains	1 day	Sal 3/10/20	Sat 3/10/20	
1732 29.2.10.8.4	TDR Test (including test & wait issue result) soil nail head works	2 days 4 days	Mon 5/10/20 Wed 7/10/20	Tue 6/10/20 Mon 12/10/20	
	oui nail liedu WUNS	4 days	weu //10/20	WOIT 12/10/20	
0	ontractors Company Limited				

Sang Hing Civil Contractors Company Limited



Devel	coment of	//2017/02 Columbarium at Sandy Ridge Cemelery Works at Man Kam To Road and Lin Ma Hang Road	ł			3 Month Rolling Programme (from 26/1/2021 to 25/4/2021)										
1D	WBS	Task Nante	Duration	Start Date	Completion Date	M         B         E         M         B										
1734	29.2.10.9	300U channel, 300 stepped channel & catchpits	11 days	Tue 13/10/20	Wed 28/10/20											
1735	29.2.10.10	600mm width concrete maintenance staircase with handrailing	4 days	Thu 29/10/20	Tue 3/11/20											
1736	29.2.10.11	install instrument for CS20	4 days	Thu 29/10/20	Tue 3/11/20											
1737	29.2.11	Site Formation works for Cut Slope CS26 (A4)	8 days	Tue 13/10/20	Thu 22/10/20											
1738	29.2.12	Site Formation works for Cut Slope CS25 (A4)	9 days	Fri 23/10/20	Thu 5/11/20											
1739	29.2.13	complete the construction of U channel at CS 25 and 26	15 days	Wed 4/11/20	Mon 23/11/20											
1740	29.2.14	planter wall	10 days	Wed 18/11/20	Sat 28/11/20											
	29.2.15	Waterworks at Road B	8 days	Tue 24/11/20	Wed 2/12/20											
1742	29.2.16	Sewerage works at Road B	7 days	Fri 27/11/20	Fri 4/12/20											
1743	29.2.17	Drainage works at Road B	7 days	Mon 30/11/20	Mon 7/12/20											
1744	29.2.18	UU - Arrange Town Gas & PCCW to lay cables (not agreed yet)	14 days	Tue 8/12/20	Wed 23/12/20											
1745	29.2.19	Roadworks of Road B (A4-ch90-130)	23 days	Wed 23/12/20	Thu 21/1/21											
1746	29.2.19.1	kerbing, sub-base & cross road duct (RD/2061, 2081)	4 days	Wed 23/12/20	Tue 29/12/20											
1747	29,2,19,2	ducting for road lighting & construction of irrigation system	4 days	Tue 29/12/20	Sat 2/1/21											
1748	29.2.19.3	biluminous pavement	7 days	Sat 2/1/21	Sat 9/1/21											
1749	29.2.19.4	traffic signs, directional signs, type 2 railing & footpath	12 days	Fri 8/1/21	Thu 21/1/21											
1750	29.2.20	street lighting (Drg/ RD/2091)	4 days	Thu 21/1/21	Mon 25/1/21											
	29.2.21	landscaping (hydroseeding)	7 days	Mon 25/1/21												
1752	29.2.22	landscaping (shrub planting)	5 days	Fri 29/1/21	Wed 3/2/21											
1753	30	Planned Completion for section 6 of the works	0 days	Wed 3/2/21	Wed 3/2/21											
1754	31	Completion Date for section 6 of the works	0 days	Wed 3/2/21	Wed 3/2/21											
1755	32	section 7 of the works (section Subject to Excision) - Completion of Establishment works for the Landscape Softworks within Parts A3 and A4 of the	1095 days	s Thu 4/2/21	Sat 3/2/24											
1756	32.1	Site Establishment works for the Landscape Softworks within Parts A3 and A4 of the Site	1095 days	s Thu 4/2/21	Sat 3/2/24											

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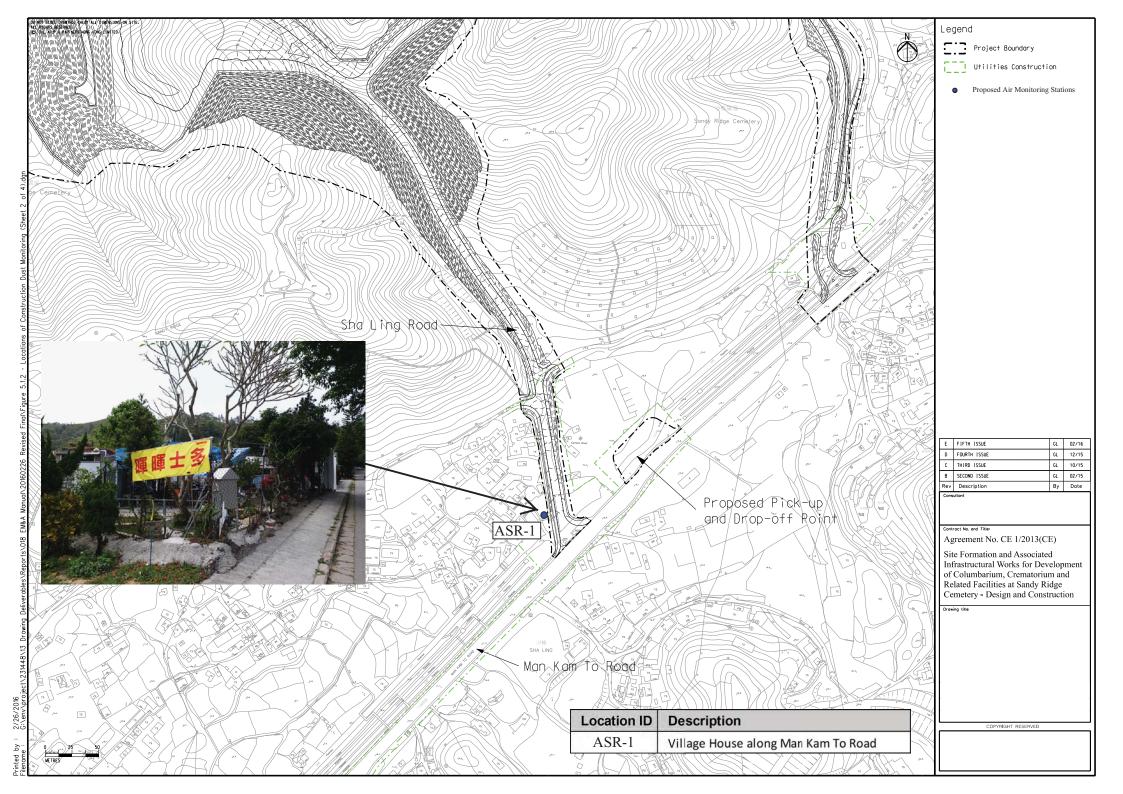
# Appendix D

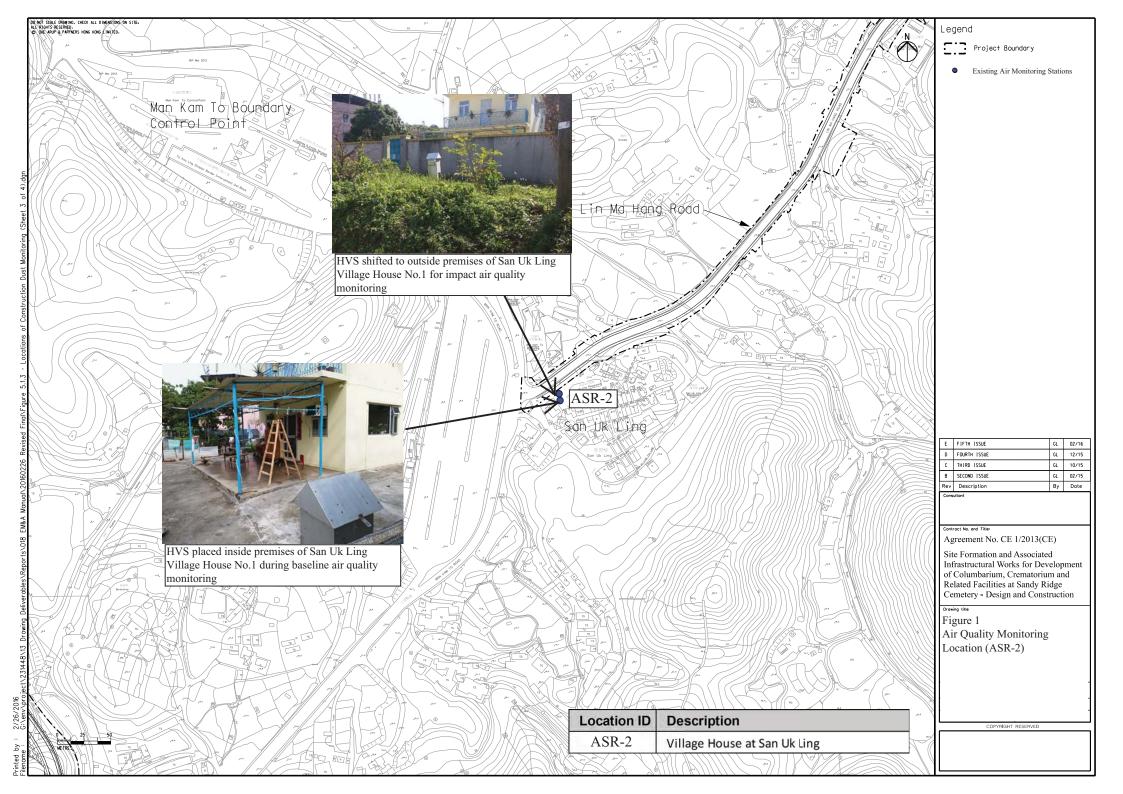
# **Monitoring Locations**

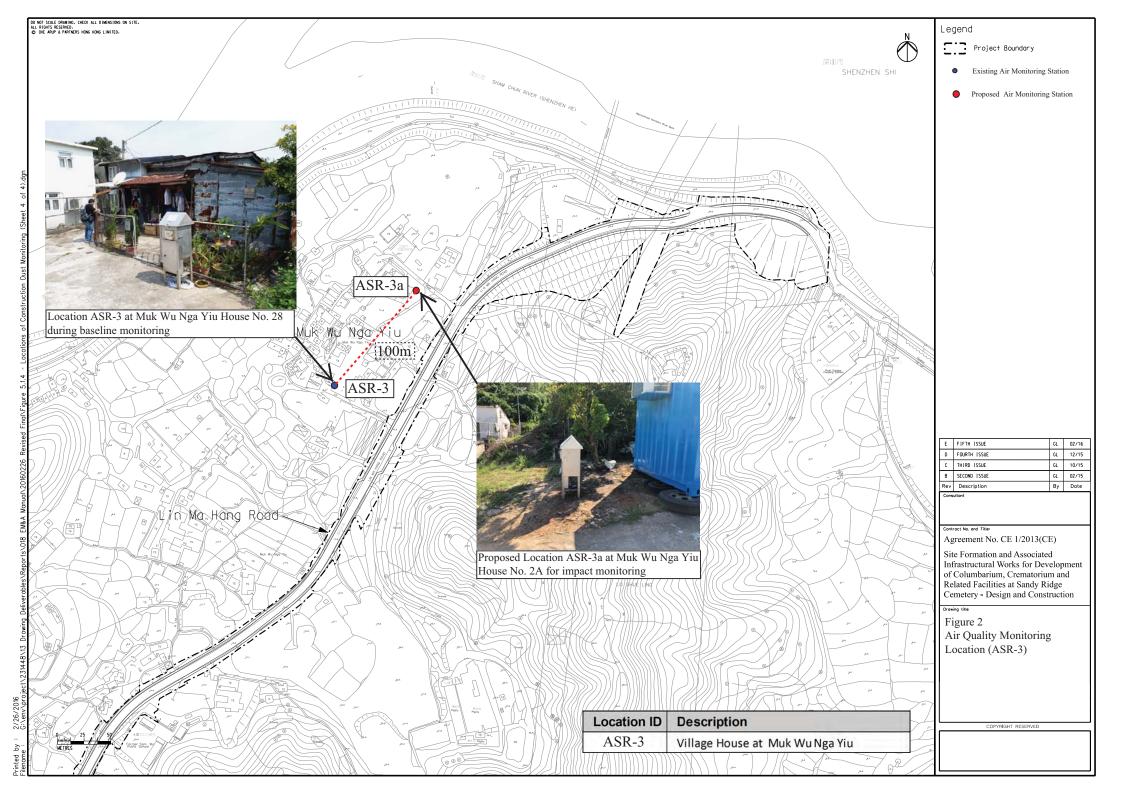
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# **Air Quality Monitoring Location**





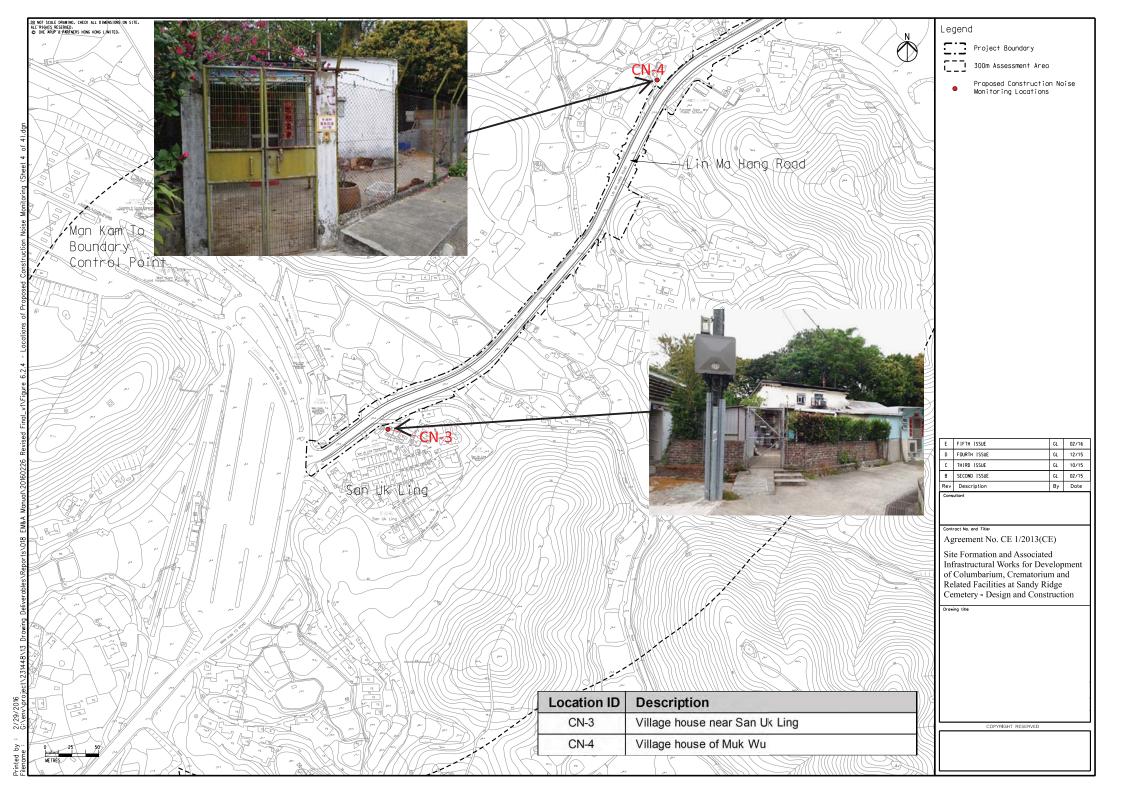




**Noise Monitoring Location** 

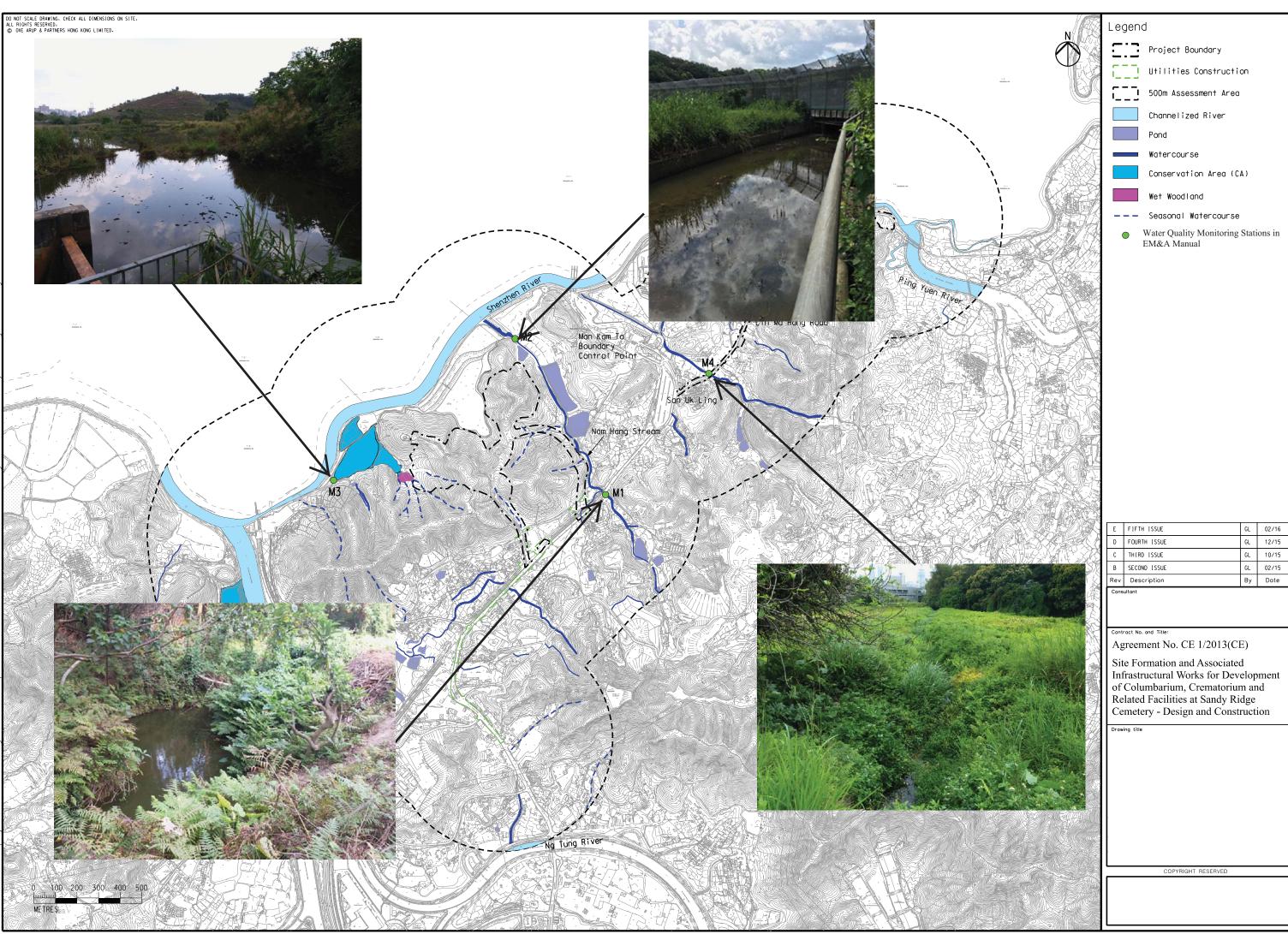








# Water Quality Monitoring Station



Ε	FIFTH ISSUE	GL	02/16								
D	FOURTH ISSUE	GL	12/15								
С	THIRD ISSUE	GL	10/15								
В	SECOND ISSUE	GL	02/15								
Rev	Description	By	Date								
Cons	Consultant										



# Appendix E

### Calibration Certificate of Monitoring Equipment and Laboratory Certificate



#### CALIBRATION CERTIFICATES FOR MONITORING EQUIPMENT USED IN THE REPORTING MONTH

Items	Aspect	Description of Equipment	Date of Calibration	Date of Next Calibration
1		TISCH High Volume Air Sampler, HVS Model TE-5170 TSP Sampler Calibration Spreadsheet for ASR-1	31 Dec 20	14 Jan 21
1a		TISCH High Volume Air Sampler, HVS Model TE-5170 TSP Sampler Calibration Spreadsheet for ASR-1	14 Jan 21	28 Jan 21
1b		TISCH High Volume Air Sampler, HVS Model TE-5170 TSP Sampler Calibration Spreadsheet for ASR-1	28 Jan 21	4 Feb 21
2		TISCH High Volume Air Sampler, HVS Model TE-5170 TSP Sampler Calibration Spreadsheet for ASR-2	31 Dec 20	14 Jan 21
2a		TISCH High Volume Air Sampler, HVS Model TE-5170 TSP Sampler Calibration Spreadsheet for ASR-2	14 Jan 21	28 Jan 21
2b		TISCH High Volume Air Sampler, HVS Model TE-5170 TSP Sampler Calibration Spreadsheet for ASR-2	28 Jan 21	4 Feb 21
3		TISCH High Volume Air Sampler, HVS Model TE-5170 TSP Sampler Calibration Spreadsheet for ASR-3a	31 Dec 20	14 Jan 21
3a	Air	TISCH High Volume Air Sampler, HVS Model TE-5170 TSP Sampler Calibration Spreadsheet for ASR-3a	14 Jan 21	28 Jan 21
3b		TISCH High Volume Air Sampler, HVS Model TE-5170 TSP Sampler Calibration Spreadsheet for ASR-3a	28 Jan 21	4 Feb 21
4		Calibration Kit TISCH Model TE-5025A Orifice ID 1941 and Rootsmeter S/N 438320	7 Feb 20	7 Feb 21
6		Laser Dust Monitor, Model LD-3B (Serial No. 366407) – EQ107 Laser Dust Monitor, Model LD-3B	16 Mar 20	16 Mar 21
7		Laser Dust Monitor, Model LD-3B (Serial No. 366418) – EQ108	16 Mar 20	16 Mar 21
8		Laser Dust Monitor, Model AM510 (Serial No. 11008060) – EQ101	6 Jul 20	6 Jul 21
9		Laser Dust Monitor, Model LD-3B (Serial No. 3Y6501) – EQ111	16 Mar 20	16 Mar 21
10		Laser Dust Monitor, Model LD-3B (Serial No. 456662) – EQ118	16 Mar 20	16 Mar 21
11		Rion NL- 52 Sound Level Meter (Serial No. 00921191) – EQ013	11 Aug 20	11 Aug 21
12	Noise	Rion NL- 52 Sound Level Meter (Serial No. 00142581) – EQ015	30 Sep 20	30 Sep 21
13		Rion NC - 73 Acoustical Calibrator (Serial No. 10655561) – EQ085	10 Mar 20	10 Mar 21
14	Weter	YSI Pro DSS (Serial No.17B102764)	15 Dec 20	15 Mar 21
15	Water	Global Water FP211 Flow Meter (Serial No. 1449006330)	2 Sep 20	2 Sep 21

r										_			
Location :			House	No.6			Date of Calibration: 31-Dec-20						
Location I		ASR-1				1	Next (		ation Date: 14-Jan-21				
Name and	Model:	TISCH H	IVS Mod	del TE-517(					echnician: Leung Ka Wai				
					CO	NDI	TIONS	S					
	C	. T 1 1	D	$(1 \mathbf{D}_{1})$	1	007	1		C (1) (1) 770.05	1			
	56	ea Level I		. ,		1027			Corrected Pressure (mm Hg) 770.25				
		Temp	berature	$(\mathcal{C})$		10.9			Temperature (K) 284				
				C	ALIBR	ATIC	N OF	RIFICE					
				Make->	TISCI	Н	1		Qstd Slope -> 2.03014	1			
				Model->			1		Qstd Intercept -> -0.04616	1			
				Serial # ->		-				4			
					0.41			NI		_			
					CAL	LIBR	ATIO	N					
Plate	H20 (L)	H2O (R)	H20	Qstd	Ι		Ι	C	LINEAR				
No.	(in)	(in)	(in)	(m3/min)	(cha	urt)	corr	ected	REGRESSION				
18	6.30	6.30	12.6	1.826	59	)	62	.35	Slope = 36.1246				
13	5.50	5.50	11.0	1.708	53	3	56	5.01	Intercept = $-4.9367$				
10	4.50	4.50	9.0	1.547	47			.67	Corr. coeff. = 0.9972				
7	2.40	2.40	4.8	1.136	35			5.99					
5	1.40	1.40	2.8	0.873	25	5	26	6.42					
Calculatio	ons :								FLOW RATE CHART				
Qstd = 1/r	n[Sqrt(H	20(Pa/Ps	td)(Tstd/	'Ta))-b]									
IC = I[Sqr	t(Pa/Pstd	)(Tstd/Ta	a)]			70.00							
									•				
Qstd = sta	ndard flo	w rate				6	60.00 -						
IC = corrections	cted chai	t respone	es			_			y = 36.125x - 4.937				
I = actual	-	-				<u>ີ</u>	50.00 -		y = 30.120x 4.337				
m = calibr	-	-				onse							
b = calibra					\	resp	40.00 -						
	-		-	pration ( deg		hart							
Pstd = act	ual pressi	ure durin	g calıbra	tion ( mm I	lg)	aal cl	50.00 - 40.00 - 30.00 -						
For subs	auont o	alculatio	n of sam	pler flow:		Actı			•				
1/m(( I )[S	-			-			20.00 -						
	541(2)0/	1 av A1 av	1100)]-0	)									
m = samp	ler slope					1	10.00 -						
b = samp	_	ept											
I = chart r		-					0.00 - 0.0		0.500 1.000 1.500 2.000				
Tav = dail	-	e tempera	ature				0.0	00	Standard Flow Rate (m3/min)				
Pav = dail					L					Ц			

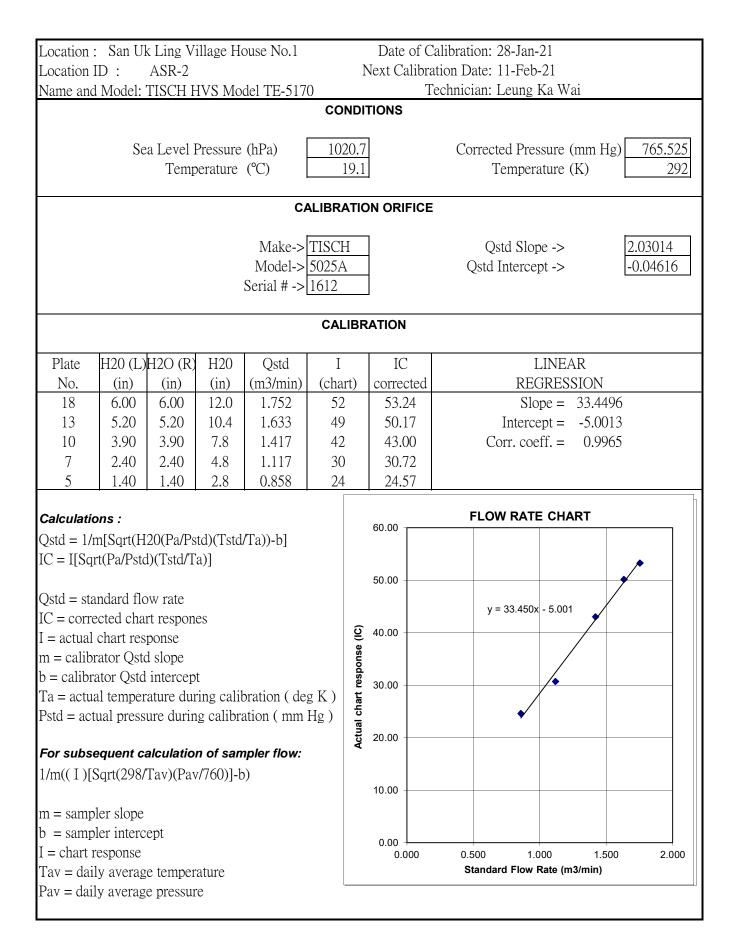
r												
Location :			House	No.6			Date of Calibration: 14-Jan-21					
Location I		ASR-1				1	Next (		ation Date: 28-Jan-21			
Name and	Model:	TISCH H	IVS Mod	del TE-517(					Sechnician: Leung Ka Wai			
					CO	NDI	TION	S				
	C	. T 1 1	D	$(1 \mathbf{D}_{1})$	10	170	1					
	Se	ea Level I		. ,		017.8			Corrected Pressure (mm Hg) 763.35			
		Temp	berature	$(^{\circ}\mathrm{C})$		15.2			Temperature (K) 288			
				C	ALIBR	ATIC	)N OF	RIFICE				
				Make->	TISCI	H	]		Qstd Slope -> 2.03014			
				Model->			1		Qstd Intercept -> -0.04616			
				Serial # ->		-						
								N				
					CA		Ano					
Plate	H20 (L)	H2O (R)	H20	Qstd	Ι		I	С	LINEAR			
No.	(in)	(in)	(in)	(m3/min)	(cha	urt)	corr	rected	REGRESSION			
18	6.30	6.30	12.6	1.805	59	)	61	.14	Slope = 32.2427			
13	5.50	5.50	11.0	1.688	53	3	54	.92	Intercept = $1.8331$			
10	4.20	4.20	8.4	1.478	48	3	49	9.74	Corr. coeff. = 0.9975			
7	2.50	2.50	5.0	1.145	37	7	38	3.34				
5	1.30	1.30	2.6	0.832	28	8 29.02						
Calculatio	ons :								FLOW RATE CHART			
Qstd = 1/r	n[Sqrt(H	20(Pa/Ps	td)(Tstd/	'Ta))-b]								
IC = I[Sqn						70.00						
Qstd = sta	ndard flo	w rate				6	60.00 -					
IC = corrections	cted char	rt respone	es			_			▲			
I = actual	-	-				( <u>)</u>	50.00 -		y = 32.243x + 1.833			
m = calibr	-	-				onse						
b = calibra						resp	40.00 -					
	-		-	pration ( deg		าลrt						
Pstd = act	ual pressi	ure durin	g calıbra	ation ( mm I	lg)	al cl	50.00 - 40.00 - 30.00 -					
For subs	auont c	alculation	n of sam	pler flow:		Actı						
1/m(( I )[S	-			•			20.00 -					
	5q1(270/	1 av A1 av	1100)]-0	)								
m = samp	ler slope					1	10.00 -					
b = samp	_	ept										
I = chart r		-					0.00 -					
Tav = dail	-	e tempera	ature				0.0	000	0.500 1.000 1.500 2.000 Standard Flow Rate (m3/min)			
Pav = dail					L							
	_											

Location :	: Sha Lin	g Village	e House	No.6			Date of Calibration: 28-Jan-21						
Location ]	ID :	ASR-1				N	Next C	lalibra	tion Da	te: 11-Fe.	b-21		
Name and	l Model: '	TISCH H	IVS Mo	del TE-517	0			Te	echnicia	an: Leung	g Ka Wa	ui	
					CO	NDI.	TIONS	5					
							_						
	Se	a Level I	Pressure	(hPa)	102	20.7			Cor	rected Pr	essure (1	mm Hg)	765.525
		Temp	berature	(°C)		19.1				Tempe	rature (	K)	292
							-						
				C	ALIBR/	ΑΤΙΟ	N OR	IFICE					
							_						
				Make->	TISCI	Η				Qstd Slo	ope ->		2.03014
				Model->	5025A	A			Q	std Interc	ept ->		-0.04616
				Serial # ->	1612								
CALIBRATION													
DI					Ŧ			a [				D	
Plate	H20 (L)			Qstd	Ι		I		LINEAR				
No.	(in)	(in)	(in)	(m3/min)	(cha	-	corre			REGRESSION			
18	6.60	6.60	13.2	1.837	54		55.				-	32.3345	
13	5.20	5.20	10.4	1.633	48		49.				-	-3.7621	
10	3.80	3.80	7.6	1.399	41		41.			Corr. co	eff. =	0.9996	
7	2.60	2.60	5.2	1.161	33		33.						
5	1.60	1.60	3.2	0.916	25	)	25.	.60					
Calculatio													
		20/D <sub>2</sub> /D <sub>2</sub>	+-1)(T-+-1	/T)) <b>[_</b> ]					F	LOW RA		RT	
Qstd = 1/r IC = I[Sqr				/1a))-0]			60.00						
IC – 1[54]		1)(1510/1	a)]										▶
Qstd = sta	ndard flo	w rota					50.00						
Q stu = sta IC = corre			<b>e</b> c				50.00 -			y = 32	2.334x - 3.1	762 🖊	
I = actual		-	03			Û							
m = calibr		-				se (I	40.00 -					<b>/</b>	
b = calibr	-	-	t			uod							
	-	-		bration ( de	σK)	t res	00.00						
	-		-	ation ( mm	- ´	char	30.00 -						
1 500 – 001	uur press	ure durm			115 /	ual	40.00 - 30.00 - 20.00 -			*			
For subse	equent ca	alculatio	n of san	npler flow:		Act	20.00 -						
1/m((I)[S	-			-									
1/111((1)[)	5911(2)0/	14)/14	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				10.00						
m = samp	ler slope						10.00 -						
b = samp		ept											
I = chart r		-pr					0.00						
Tav = dai	-	e temper	ature				0.0	000	0.500 Sta	0 1 andard Flow	.000 / Rate (m3	1.500 <b>3/min)</b>	2.000
Pav = dai		-										,	
	_,, crug		-										

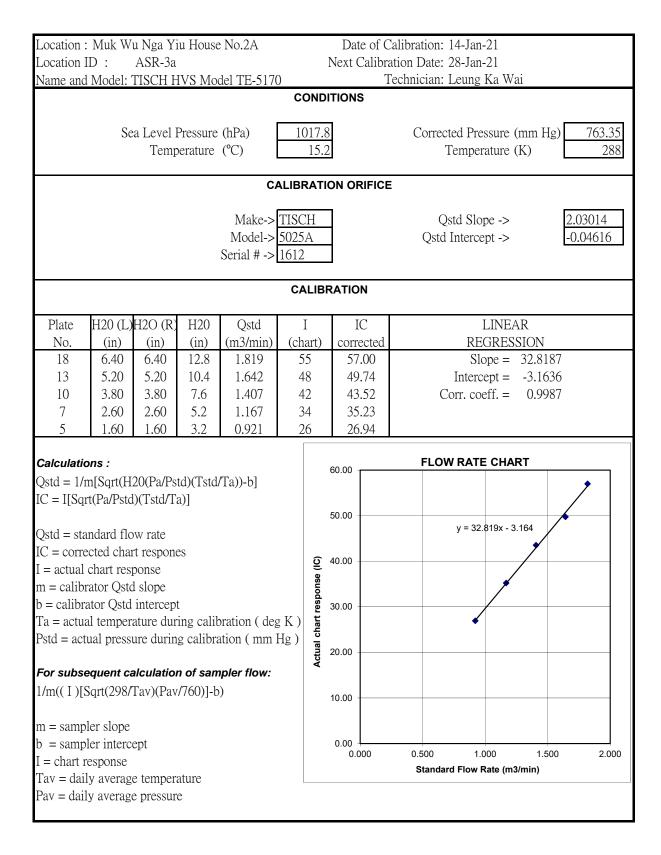
I

r											
Location		-	illage H	ouse No.1				Calibration: 31-			
Location		ASR-2				]		ation Date: 14-			
Name and	l Model: '	TISCH H	HVS Mo	del TE-517				echnician: Leu	ıng Ka Wai		
					cc	ONDI	TIONS				
	G	T 1	D	(1 D )		1007	T	0 1	D (		770.05
	Se	a Level I		. ,		1027	†		Pressure (mr		770.25
		Temp	berature	(°C)		10.9	ļ	Tem	perature (K)	1	284
				C	ALIBR	RATIC					
				Make->	TISC	H	]	Qstd	Slope ->	2.0	3014
				Model->	5025	А	]	Qstd Inte	ercept ->	-0.(	04616
				Serial # ->	1612						
					CA	LIBR	ATION				
			1100	0.11	T		IC				
Plate		H2O (R)		Qstd	I (ah)		IC		LINEAR		
<u>No.</u> 18	(in) 6.40	(in) 6.40	(in) 12.8	(m3/min) 1.840	(cha 50	,	corrected 59.18		$\frac{\text{REGRESSIC}}{\text{Slope} = 32}$	2.8733	
18	4.80	4.80	12.8 9.6	1.840	48		50.72	In	tercept = -1		
10	3.70	3.70	7.4	1.405	42		44.38		-	).9984	
7	2.40	2.40	4.8	1.136	3:		36.99	C011.	00011. – 0		
5	1.60	1.60	3.2	0.932	2		28.53				
							·				]
Calculatio							70.00	FLOW R	ATE CHART		
Qstd = 1/1				/Ta))-b]							
IC = I[Sq;	rt(Pa/Pstd	l)(Tstd/T	'a)]				60.00				_
	1 1 9						00.00				*
Qstd = sta							50.00				
IC = correction		-	es			<u>ତ</u>	50.00	y = :	32.873x - 1.468		
I = actual m = calibi	-	-				) əsı				*	
b = calibr	_	-	t			spor	40.00				
	-			oration ( de	σK)	rt re					
	-		-	ation ( mm		cha	30.00		•		
1.500 000	press.					Actual chart response (IC)					
For subsequent calculation of sampler flow:					٩	20.00					
1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)											
							10.00				
m = sampler slope											
b = samp		ept					0.00				
I = chart I	-						0.000	0.500	1.000	1.500	2.000
Tav = dai		-						Standard F	low Rate (m3/mi	in)	
Pav = dai	ly average	e pressui	re								

Location : San Uk Ling Village House No.1								Calibration: 14-Jan-21				
Location 1		ASR-2				]		ation Date: 28-Jan-21				
Name and	l Model: '	TISCH H	IVS Mo	del TE-517				Cechnician: Leung Ka Wai				
					cc	ONDI	TIONS					
	Sa	o Loval I	Dragatira	$(hD_{0})$	10	170	1	Corrected Dressure (mm Ha)	762.25			
	26	a Level I	erature	. ,	П	) <u>17.8</u> 15.2	1	Corrected Pressure (mm Hg) Temperature (K)	763.35 288			
		TCIIIÌ		$(\mathbf{C})$		13.2	Ţ		200			
				C	ALIBR	RATIC		1				
				Make->	TISC	Η	]	Qstd Slope -> 2.	03014			
				Model->		А	+	Qstd Intercept -> -0	0.04616			
				Serial # ->	1612							
					СА	LIBR	ATION					
Plate	H20(L)	H2O (R)	H20	Qstd	I		IC	LINEAR				
No.	(in)	(in)	(in)	(m3/min)	(cha	-	corrected	REGRESSION				
18	6.40	6.40	12.8	1.819	5		58.03	Slope = 30.3290				
13	5.20	5.20	10.4	1.642	4	9	50.78	Intercept = $1.9621$				
10	3.70	3.70	7.4	1.388	42	2	43.52	Corr. coeff. = 0.9976				
7	2.50	2.50	5.0	1.145	3	6	37.31					
5	1.50	1.50	3.0	0.892	2	8	29.02					
Calculatio	one i							FLOW RATE CHART				
Qstd = $1/1$		$2 \Omega (P_2/P_2)$	htd)(Tetd	/Ta))_b]			70.00					
IC = I[Squ				/1 <i>a))</i> -0]								
10 – 1[04		1)(1500/1	u)]				60.00		•			
Qstd = sta	undard flo	w rate										
IC = corrections			es				50.00	<b>^</b>				
I = actual	chart res	ponse				(C)		y = 30.329x + 1.962				
m = calibr	rator Qsto	l slope				onse	40.00					
b = calibration	-	-				resp		<b>*</b>				
	-		-	oration ( de	- ·	hart	30.00					
Pstd = act	ual press	ure durir	ig calibra	ation ( mm	Hg)	Actual chart response (IC)	00.00	•				
For subsequent calculation of sampler flow:						Acti	20.00					
1/m(( I )[Sqrt(298/Tav)(Pav/760)]-b)												
							10.00					
m = sampler slope												
b = sampler intercept							0.00					
I = chart r	-						0.000	0.500 1.000 1.500 Standard Elaw Bata (m2/min)	2.000			
Tav = dai								Standard Flow Rate (m3/min)				
Pav = dail	iy average	e pressui	C									
1												



Location :		-		No.2A					alibration					
Location ID: ASR-3a Name and Model: TISCH HVS Model TE-5170						Next (		tion Date echnician						
						DND	ITIONS	6						
						1027 10.9			Corre		ssure (mm ature (K)	Hg)	770.2	25 84
				C	ALIBR	ATI	ON OF	RIFICE						
				Make-> Model-> Serial # ->	50257		]			Qstd Slor d Interce			03014 ).04616	<u>,</u>
					CA	LIB	RATIO	N						
		H2O (R)		Qstd (m3/min)	I (cha			C			LINEAR GRESSION	T		
No. 18 13	(in) 6.40 4.90	(in) 6.40 4.90	(in) 12.8 9.8	1.840 1.613	(Cha 5: 48	5	58	ected .12 .72			pe = 32.0			
10 7	3.80 2.60	3.80 2.60	7.6 5.2	1.423 1.181	42 34	2	44	.72 .38 .93		Corr. coe	-	9990		
5	1.40	1.40	2.8	0.873	20			.47						
Calculatio	ns :						70.00 -		FLC	W RATE	CHART			
Qstd = 1/n IC = I[Sqr				'Ta))-b]			60.00 -							
Qstd = star IC = corre			es				50.00 -					•	<b>^</b>	
I = actual of m = calibration	chart resp ator Qsto	ponse I slope				response (IC)	40.00 -			y = 32.	035x - 1.082			
	l temper	ature dur	ing calib	oration ( deg tion ( mm ]		chart	30.00 -			•				
For subse	quent ca	alculation	n of sam	pler flow:		Actual	20.00 -							
<pre>1/m(( I )[Sqrt(298/Tav)(Pav/760)]-b) m = sampler slope b = sampler intercept</pre>					10.00 -									
						0.00								
I = chart respectively.	esponse	-	-				0.00 - 0.0	000	0.500 Stand	1.0 ard Flow R	00 1 ate (m3/min)	.500	2.0	000
Tav = daily Pav = daily		_			L									
	_													



Location : Location I		u Nga Yi ASR-3a	u House	No.2A		N			ation: 28- Date: 11-			
Name and Model: TISCH HVS Model TE-5170						1	Next Call		nician: Leu		ai	
					cc	DNDI	TIONS					
						)20.7 19.1			Corrected Tem	Pressure ( pperature (		765.525 292
				CA	LIBR	RATIC	ON ORIFI	CE				
				Make-> Model-> Serial # ->	5025	А			Qstd Qstd Into	Slope -> ercept ->		03014 0.04616
					CA	LIBR	ATION					
Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (cha	-	IC correcte	bd		LINEA REGRESS		
18 13	6.10 5.20	6.10 5.20	12.2 10.4	1.767 1.633	5: 4	2	53.24 49.15		In	Slope = tercept =	31.4622	
10 7 5	3.60 2.60 1.30	3.60 2.60 1.30	7.2 5.2 2.6	1.363 1.161 0.828	4) 3. 2:	4	40.96 34.81 23.55		Corr.	coeff. =	0.9996	
Calculatio		1.50	2.0	0.020	L.				FLOW R	RATE CHA	RT	
Qstd = 1/r IC = I[Sqr	n[Sqrt(H			/Ta))-b]			60.00					*
Qstd = sta							50.00			21.4022 - 2.4	42	
IC = correct I = actual	chart resp	ponse	es			se (IC)	40.00		y =	31.462x - 2.1	43	
m = calibr b = calibra Ta = actua	ator Qstd	intercept		oration ( deg	у К )	art response (IC)	30.00					
Pstd = act	ual press	ure durin	g calibra	ation ( mm		Actual cha	20.00		•			
<b>For subse</b> 1/m(( I )[S	-			npler flow: )			10.00					
m = samp	-	ont					0.00					
b = sample I = chart r		ερι					0.00		0.500 Standard E	1.000	1.500 3/min)	2.000
Tav = dail		_							Standard F	low Rate (m	ərmin)	
Pav = dail	y average	e pressur	e									

# ALS Technichem (HK) Pty Ltd

#### **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES





CONTACT	: MR BEN TAM	WORK ORDER HK2012980
CLIENT	ACTION UNITED ENVIRONMENT	
	SERVICES AND CONSULTING	
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41	SUB-BATCH : 1
	TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG	DATE RECEIVED : 6-APR-2020
	KONG	DATE OF ISSUE : 7-APR-2020
PROJECT	:	NO. OF SAMPLES : 1
		CLIENT ORDER

#### **General Comments**

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

#### Signatories

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

Signatories	Position
Kichard Jong .	
Richard Fung	Managing Director

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

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

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

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

CLIENT

PROJECT

: HK2012980

<sup>1</sup> ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING : \_\_\_\_



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2012980-001	S/N: 366407	AIR	06-Apr-2020	S/N: 366407

### **Equipment Verification Report (TSP)**

#### **Equipment Calibrated:**

Туре:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	366407
Equipment Ref:	EQ107
Job Order	HK2012980

#### **Standard Equipment:**

Standard Equipment:	Higher Volume Sampler
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	9 March 2020
Last Calibration Date.	

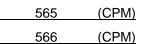
### **Equipment Verification Results:**

Verification Date:

13 March 2020

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m <sup>3</sup> (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr	09:20 ~ 11:20	21.4	1015.7	0.044	2247	18.7
2hr01min	11:25 ~ 13:26	21.4	1015.7	0.045	2518	20.9
2hr01min	13:42 ~ 15:43	21.4	1015.7	0.046	2699	22.4

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



y = 0.0022x + 0.0005  $R^2 = 0.9892$ 

20

25

0.06 0.05 0.04 0.03 0.02

0.01

0

0

5

10

15

#### Linear Regression of Y or X

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

0.0022
0.9946
16 March 2020

#### Remarks:

#### 1. Strong Correlation (R>0.8)

2. Factor 0.0022 should be apply for TSP monitoring

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



Location : Gold King Industrial Building, K Location ID : Calibration Room	Date of Calibration: 9-Mar-20 Next Calibration Date: 9-Jun-20			
	COND	ITIONS		
Sea Level Pressure (hPa) Temperature (°C)	<u>1008.5</u> 23.4		Corrected Pressure (mm Hg)756.375Temperature (K)296	
CAL	IBRATI	ON ORIFICE		
Model-> 50	SCH 25A eb-20		Qstd Slope ->2.03014Qstd Intercept ->-0.04616Expiry Date->7-Feb-21	
	CALIB	RATION		
No.         (in)         (in)         (in)         (m3/min)         (cl           18         6.1         6.1         12.2         1.744         2           13         4.9         4.9         9.8         1.565         4           10         3.8         3.8         7.6         1.381         4           8         2.4         2.4         4.8         1.102         2	I hart) 55 49 42 32 22	IC corrected 55.02 49.01 42.01 32.01 22.01	LINEAR <u>REGRESSION</u> Slope = 36.8508 Intercept = -8.9222 Corr. coeff. = 0.9997	
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	00 90 90 90 90 90 90 90 90 90 90 90 90 9	.00 .00 .00 .00 .00 .00 .00 .00 .00	FLOW RATE CHART	

								ALIBRATION
							D	UE DATE:
					)		Febru	uary 7, 202
nvir	o n m	ent	al	- Construction of the Article				
	Ø		2 .		0	0.0	<b>6</b> •	
	0e	rtifa	çate	01	Oal	ibra	tion	
			Calibration	Certificatio	on Informat	ion		
Cal. Date:	February 7	2020	Roots	meter S/N:	438320	Ta:	295	°К
Operator:	Jim Tisch					Pa:	745.5	mm Hg
Calibration	Model #:	TE-5025A	Calil	prator S/N:	1612			
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔΗ	]
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.3730	3.2	2.00	
	2	3	4	1	0.9820	6.4	4.00	-
	3	5	6	1	0.8780	8.0	5.00	-
	4	7	8	1	0.8340	8.8	5.50	
	5	9	10	1	0.6900	12.8	8.00	
			Data Tabulatio					]
	Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)}$	)( <u>Tstd</u> )		Qa	√∆H(Ta/Pa)	
	(m3)	(x-axis)	(y-ax		Va	(x-axis)	(y-axis)	
	0.9866	0.7186	1.40		0.9957	0.7252	0.8896	-
	0.9824	1.0004	1.99	09	0.9914	1.0096	1.2581	-
	0.9802	1.1165	2.22	59	0.9893	1.1267	1.4066	
	0.9792	1.1741	2.33	45	0.9882	1.1849	1.4753	-
	0.9739	1.4114	2.81		0.9828	1.4244	1.7792	-
	OCTD		2.030		0.4		1.27124	
	QSTD	b= r=	-0.04		QA	b= r=	-0.02917 0.99995	
		1-	0.555					
	Calculatio Vstd= ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)					-		
	Qstd= Vstd/∆Time				Va= ΔVol((Pa-ΔP)/Pa) Qa= Va/ΔTime			-
	For subsequent flow rat							
	<b>Qstd=</b> $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$				<b>Qa=</b> $1/m\left(\left(\sqrt{\Delta H(Ta/Pa)}\right)-b\right)$			
[		Conditions	rstu /\ la	///		// V	· // /	]
Tstd:				Г		RECA	LIBRATION	]
Pstd:		mm Hg						
	ŀ	(ey					nnual recalibrati	
$\Delta H: calibrato$							Regulations Part	
ΔP: rootsme		eter reading perature (°K)			Appendix B to Part 50, Reference Method for the			
					Determination of Suspended Particulate Matter in			
	parometric pressure (mm Hg)				th	e Atmosphe	ere, 9.2.17, page	30
b: intercept			1	1				1

Tisch Environmental, Inc. 145 South Miami Avenue

Village of Cleves, OH 45002

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

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# ALS Technichem (HK) Pty Ltd

#### **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES





CONTACT	: MR BEN TAM	WORK ORDER HK2012985			
CLIENT	ACTION UNITED ENVIRONMENT				
	SERVICES AND CONSULTING				
	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41	SUB-BATCH : 1			
	TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG	DATE RECEIVED : 6-APR-2020			
	KONG	DATE OF ISSUE : 7-APR-2020			
PROJECT	:	NO. OF SAMPLES : 1			
		CLIENT ORDER +			

#### **General Comments**

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

#### Signatories

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

Signatories	Position
Kichard Jong.	
Richard Fung	Managing Director

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

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

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

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

CLIENT

PROJECT

: HK2012985

<sup>1</sup> ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING : \_\_\_\_



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2012985-001	S/N: 366418	AIR	06-Apr-2020	S/N: 366418

### **Equipment Verification Report (TSP)**

#### **Equipment Calibrated:**

Туре:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	366418
Equipment Ref:	EQ108
Job Order	HK2012985

#### **Standard Equipment:**

Higher Volume Sampler
AUES office (calibration room)
HVS 018
9 March 2020

#### **Equipment Verification Results:**

Verification Date:

13 March 2020

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m <sup>3</sup> (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr	09:20 ~ 11:20	21.4	1015.7	0.044	2297	19.1
2hr01min	11:25 ~ 13:26	21.4	1015.7	0.045	2498	20.7
2hr01min	13:42 ~ 15:43	21.4	1015.7	0.046	2647	21.9

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

#### Linear Regression of Y or X

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

0.9975	
16 March 2020	

0.0022

#### Remarks:

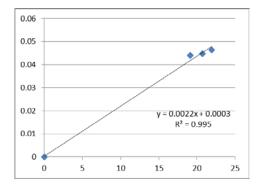
1. Strong Correlation (R>0.8)

2. Factor 0.0022 should be apply for TSP monitoring

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



<u>685 (CPM)</u> 685 (CPM)



### TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industrial Building, K Location ID : Calibration Room	ung	Date of Calibration: 9-Mar-20 Next Calibration Date: 9-Jun-20	
	COND	ITIONS	
Sea Level Pressure (hPa) Temperature (°C)	1008.5 23.4		Corrected Pressure (mm Hg) 756.375 Temperature (K) 296
CAL	IBRATI	ON ORIFICE	
Model-> 50	SCH 25A eb-20		Qstd Slope ->2.03014Qstd Intercept ->-0.04616Expiry Date->7-Feb-21
	CALIB	RATION	
No.         (in)         (in)         (in)         (m3/min)         (cl           18         6.1         6.1         12.2         1.744         2           13         4.9         4.9         9.8         1.565         4           10         3.8         3.8         7.6         1.381         4           8         2.4         2.4         4.8         1.102         2	I hart) 55 49 42 32 22	IC corrected 55.02 49.01 42.01 32.01 22.01	LINEAR <u>REGRESSION</u> Slope = 36.8508 Intercept = -8.9222 Corr. coeff. = 0.9997
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	00 90 90 90 90 90 90 90 90 90 90 90 90 9	.00 .00 .00 .00 .00 .00 .00 .00 .00	FLOW RATE CHART

								ALIBRATION
							D	UE DATE:
					)		Febru	uary 7, 202
nvir	o n m	ent	al	- Construction of the Article				
	0		2 .		0	0.0		
	0e	rtifa	çate	01	Oal	ibra	tion	
			Calibration	Certificatio	on Informat	ion		
Cal. Date:	February 7	2020	Roots	meter S/N:	438320	Ta:	295	°К
Operator:	Jim Tisch					Pa:	745.5	mm Hg
Calibration	Model #:	TE-5025A	Calil	prator S/N:	1612			
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔΗ	]
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.3730	3.2	2.00	
	2	3	4	1	0.9820	6.4	4.00	-
	3	5	6	1	0.8780	8.0	5.00	-
	4	7	8	1	0.8340	8.8	5.50	
	5	9	10	1	0.6900	12.8	8.00	
			[	Data Tabula	ntion			]
	Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)}$	)( <u>Tstd</u> )		Qa	√∆H(Ta/Pa)	
	(m3)	(x-axis)	(y-ax		Va	(x-axis)	(y-axis)	
	0.9866	0.7186	1.40		0.9957	0.7252	0.8896	-
	0.9824	1.0004	1.99	09	0.9914	1.0096	1.2581	-
	0.9802	1.1165	2.22	59	0.9893	1.1267	1.4066	
	0.9792	1.1741	2.33	45	0.9882	1.1849	1.4753	-
	0.9739	1.4114	2.81		0.9828	1.4244	1.7792	-
	OCTD		2.030		0.4		1.27124	
	QSTD	b= r=	-0.04		QA	b= r=	-0.02917 0.99995	
		1-	0.555			1	0.33333	]
	Vstd=	AVol((Pa-AP)	/Pstd)(Tstd/Ta	Calculation		ΔVol((Pa-Δl	P)/Pa)	-
		Vstd/ATime	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Va/ATime	,,,	-
			For subsequ	ient flow rat	te calculatio			1
	Qstd=	1/m (( _ \[ \[ \] \[ \] \[ \] H (	Pa (Tstd Pstd Ta	-))-b)		11	н(Та/Ра))-b)	
[		Conditions	rstu /\ la	///		// V	· // /	]
Tstd:				Г		RECA	LIBRATION	]
Pstd:		mm Hg						
	ŀ	(ey					nnual recalibrati	
ΔH: calibrate							Regulations Part	
ΔP: rootsme		eter reading perature (°K)					, Reference Met	
		essure (mm					ended Particulat	
		cooure (min			th	e Atmosphe	ere, 9.2.17, page	30
b: intercept			1	1				1

Tisch Environmental, Inc. 145 South Miami Avenue Village of Cleves, OH 45002 <u>www.tisch-env.com</u> TOLL FREE: (877)263-7610 FAX: (513)467-9009

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## ALS Technichem (HK) Pty Ltd

## ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

#### SUB-CONTRACTING REPORT



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

#### General Comments

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

#### Signatories

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

Signatories	Position	
Kidard Jong.		
Richard Fung	Managing Director	

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

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

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

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

WORK ORDER SUB-BATCH

CLIENT PROJECT : HK2025133

: 1 ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING : ----



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

### **Equipment Verification Report (TSP)**

#### **Equipment Calibrated:**

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

#### **Standard Equipment:**

Higher Volume Sampler (TSP)
Calibration Room
HVS 018
30 June 2020

#### **Equipment Verification Results:**

Testing Date:

30 June 2020

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

#### Linear Regression of Y or X

Slope (factor):	0.8273
Correlation Coefficient (R)	0.9948
Date of Issue	6 July 2020

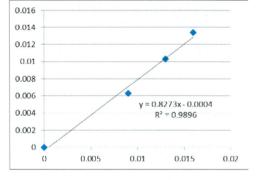
Remarks:

1. **Strong** Correlation (R>0.8)

2. Factor 0.8273 should be apply for TSP monitoring

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





### TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industria Location ID : Calibration Room	Date of Calibration: 30-Jun-20 Next Calibration Date: 30-Sep-20						
CONDITIONS							
Sea Level Pressure (hF Temperature (°C			Corrected Pressure (mm Hg) 753.45 Temperature (K) 304				
CALIBRATION ORIFICE							
N	Make-> TISCH Iodel-> 5025A Date-> 7-Feb-20		Qstd Slope ->2.03014Qstd Intercept ->-0.04616Expiry Date->7-Feb-21				
	CALIB	RATION					
No.         (in)         (in)         (in)         (m)           18         6.4         6.4         12.8         12         12           13         4.9         4.9         9.8         12         12	Qstd         I           3/min)         (chart)           1.761         56           1.544         49	IC corrected 55.23 48.33	LINEAR REGRESSION Slope = 38.2549 Intercept = -10.8486				
8         2.4         2.4         4.8         2.4           5         1.5         1.5         3.0         0	1.344         43           1.087         32           0.864         21	42.41 31.56 20.71	Corr. coeff. = 0.9947				
Calculations : Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta) 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 calibrate Pstd = actual pressure during calibration For subsequent calculation of sample 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	ion ( deg K ) n ( mm Hg ) <b>r flow:</b> 10	0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00	FLOW RATE CHART				



RECALIBRATION DUE DATE: February 7, 2021

Certificate of Calibration

			Calibration	Certificatio	on Informat	ion		
Cal. Date:	February 7	February 7, 2020 Rootsmeter S/N: 4				Ta:	295	°К
Operator:	Jim Tisch					Pa:	745.5	mm Hg
Calibration	Model #:	TE-5025A	Calib	orator S/N:	1612			
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔP	ΔH	1
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.3730	3.2	2.00	
	2	3	4	1	0.9820	6.4	4.00	
	3	5	6	1	0.8780	8.0	5.00	-
	4	7	8	1	0.8340	8.8	5.50	4
	5	9	10	1	0.6900	12.8	8.00	4
			C	Data Tabula	tion			]
	Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)}$	)( <u>Tstd</u> )		Qa	√∆H(Ta/Pa)	
	(m3)	(x-axis)	(y-ax		Va	(x-axis)	(y-axis)	
	0.9866	0.7186	1.407		0.9957	0.7252	0.8896	
	0.9824	1.0004	1.990		0.9914	1.0096	1.2581	
	0.9802	1.1165	2.225	59	0.9893	1.1267	1.4066	
	0.9792	1.1741	2.334	45	0.9882	1.1849	1.4753	
	0.9739	1.4114	2.81	55	0.9828	1.4244	1.7792	1
		m=	2.030	14		m=	1.27124	1
	QSTD	b=	-0.046		QA	b=	-0.02917	
		r=	0.999	95		r=	0.99995	
				Calculatio	ns			]
	and the second s		)/Pstd)(Tstd/Ta	а)	Va= ΔVol((Pa-ΔP)/Pa)			]
	Qstd=	Vstd/∆Time			<b>Qa=</b> Va/ΔTime			]
			For subsequ	ent flow ra	te calculatio	ns:		
	<b>Qstd=</b> $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$					$1/m\left(\sqrt{\Delta H}\right)$	H(Ta/Pa))-b)	
	Standard	Conditions						-
Tstd:	298.15	°К				RECA	LIBRATION	
Pstd:		mm Hg			110 504	1	1 11	
Alle and then the		(ey	1120)				nnual recalibrati	
		ter reading (i eter reading			40 Code of Federal Regulations Part 50 to 51,			
		perature (°K)			Appendix B to Part 50, Reference Method for the			
		ressure (mm			Determination of Suspended Particulate Matter in			
b: intercept					th	e Atmosphe	ere, 9.2.17, page	30
m: slope					L			

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## ALS Technichem (HK) Pty Ltd

#### **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES





CONTACT	: MR BEN TAM	WORK ORDER HK2012986
CLIENT	ACTION UNITED ENVIRONMENT	
	SERVICES AND CONSULTING	
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41	SUB-BATCH : 1
	TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG	DATE RECEIVED : 6-APR-2020
	KONG	DATE OF ISSUE : 7-APR-2020
PROJECT	:	NO. OF SAMPLES : 1
		CLIENT ORDER ÷

#### **General Comments**

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

#### Signatories

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

Signatories	Position
Kichard Jong.	
Richard Fung	Managing Director

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CLIENT

PROJECT

: HK2012986

<sup>1</sup> ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING : \_\_\_\_



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2012986-001	S/N: 3Y6501	AIR	06-Apr-2020	S/N: 3Y6501

### **Equipment Verification Report (TSP)**

#### **Equipment Calibrated:**

Туре:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	3Y6501
Equipment Ref:	EQ111
Job Order	HK2012986

#### **Standard Equipment:**

Standard Equipment:	Higher Volume Sampler	
Location & Location ID:	AUES office (calibration room)	
Equipment Ref:	HVS 018	
Last Calibration Date:	9 March 2020	
Last Calibration Date.		

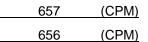
#### **Equipment Verification Results:**

Verification Date:

13 March 2020

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m <sup>3</sup> (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr	09:20 ~ 11:20	21.4	1015.7	0.044	2250	18.8
2hr01min	11:25 ~ 13:26	21.4	1015.7	0.045	2711	22.5
2hr01min	13:42 ~ 15:43	21.4	1015.7	0.046	2311	19.2

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



#### 0.06 0.05 0.04 0.03 y = 0.0022x + 0.0009 0.02 $R^2 = 0.9693$ 0.01 0

5

10

15

20

25

0

4

### Linear Regression of Y or X

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

0.0022
0.9845
16 March 2020
10 March 2020

0 0022

#### Remarks:

#### 1. Strong Correlation (R>0.8)

2. Factor 0.0022 should be apply for TSP monitoring

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



### TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industrial Building, K Location ID : Calibration Room	Date of Calibration: 9-Mar-20 Next Calibration Date: 9-Jun-20		
	COND	ITIONS	
Sea Level Pressure (hPa) Temperature (°C)	1008.5 23.4		Corrected Pressure (mm Hg) 756.375 Temperature (K) 296
CAL	IBRATI	ON ORIFICE	
Model-> 50	SCH 25A eb-20		Qstd Slope ->2.03014Qstd Intercept ->-0.04616Expiry Date->7-Feb-21
	CALIB	RATION	
No.         (in)         (in)         (in)         (m3/min)         (cl           18         6.1         6.1         12.2         1.744         2           13         4.9         4.9         9.8         1.565         4           10         3.8         3.8         7.6         1.381         4           8         2.4         2.4         4.8         1.102         2	I hart) 55 49 42 32 22	IC corrected 55.02 49.01 42.01 32.01 22.01	LINEAR <u>REGRESSION</u> Slope = 36.8508 Intercept = -8.9222 Corr. coeff. = 0.9997
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	00 90 90 90 90 90 90 90 90 90 90 90 90 9	.00 .00 .00 .00 .00 .00 .00 .00 .00	FLOW RATE CHART

								ALIBRATION
							D	UE DATE:
					)		Febru	uary 7, 202
nvir	o n m	ent	al	- Construction of the Article				
	0		2 .		O	0.0		
	0e	rtifa	çate	01	Oal	ibra	tion	
			Calibration	Certificatio	on Informat	ion		
Cal. Date:	February 7	2020	Roots	meter S/N:	438320	Ta:	295	°К
Operator:	Jim Tisch					Pa:	745.5	mm Hg
Calibration	Model #:	TE-5025A	Calil	prator S/N:	1612			
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔΗ	]
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.3730	3.2	2.00	
	2	3	4	1	0.9820	6.4	4.00	-
	3	5	6	1	0.8780	8.0	5.00	-
	4	7	8	1	0.8340	8.8	5.50	
	5	9	10	1	0.6900	12.8	8.00	
			[	Data Tabula	tion			]
	Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)}$	)( <u>Tstd</u> )		Qa	√∆H(Ta/Pa)	
	(m3)	(x-axis)	(y-ax		Va	(x-axis)	(y-axis)	
	0.9866	0.7186	1.40		0.9957	0.7252	0.8896	-
	0.9824	1.0004	1.99	09	0.9914	1.0096	1.2581	-
	0.9802	1.1165	2.22	59	0.9893	1.1267	1.4066	
	0.9792	1.1741	2.33	45	0.9882	1.1849	1.4753	-
	0.9739	1.4114	2.81		0.9828	1.4244	1.7792	-
	OCTD		2.030		0.4		1.27124	
	QSTD	b= r=	-0.04		QA	b= r=	-0.02917 0.99995	
		1-	0.555			1	0.33333	]
	Vstd=	AVol((Pa-AP)	/Pstd)(Tstd/Ta	Calculation		ΔVol((Pa-Δl	P)/Pa)	-
		Vstd/ATime	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Va/ATime	,,,	-
			For subsequ	ient flow rat	te calculatio			1
	Qstd=	1/m (( _ \[ \[ \] \[ \] \[ \] H (	Pa (Tstd Pstd Ta	-))-b)		11	н(Та/Ра))-b)	
[		Conditions	rstu /\ la	///		// V	· // /	]
Tstd:				Г		RECA	LIBRATION	]
Pstd:		mm Hg						
	ŀ	(ey					nnual recalibrati	
$\Delta H:$ calibrate							Regulations Part	
ΔP: rootsme		eter reading perature (°K)					, Reference Met	
		essure (mm					ended Particulat	
		cooure (min			th	e Atmosphe	ere, 9.2.17, page	30
b: intercept			1	1				1

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## ALS Technichem (HK) Pty Ltd

#### **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES





CONTACT	: MR BEN TAM	WORK ORDER HK2012997
CLIENT	ACTION UNITED ENVIRONMENT	
	SERVICES AND CONSULTING	
ADDRESS	: RM A 20/F., GOLD KING IND BLDG, NO. 35-41	SUB-BATCH : 1
	TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG	DATE RECEIVED : 6-APR-2020
	KONG	DATE OF ISSUE : 7-APR-2020
PROJECT	:	NO. OF SAMPLES : 1
		CLIENT ORDER

#### **General Comments**

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

#### Signatories

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

Signatories	Position
Kichard Jong.	
Richard Fung	Managing Director

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

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

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

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

CLIENT

PROJECT

: HK2012997

<sup>1</sup> ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING : .....



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2012997-001	S/N: 456662	AIR	06-Apr-2020	S/N: 456662

### **Equipment Verification Report (TSP)**

#### **Equipment Calibrated:**

Туре:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	456662
Equipment Ref:	EQ118
Job Order	HK2012997

#### **Standard Equipment:**

Higher Volume Sampler
AUES office (calibration room)
HVS 018
9 March 2020

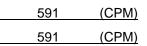
#### **Equipment Verification Results:**

Verification Date:

9 March 2020

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m <sup>3</sup> (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr01min	09:17 ~ 11:18	23.4	1008.5	0.037	2011	16.7
2hr	11:22 ~ 13:22	23.4	1008.5	0.045	2471	20.6
2hr01min	13:27 ~ 15:28	23.4	1008.5	0.028	1807	15.0

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



#### Linear Regression of Y or X

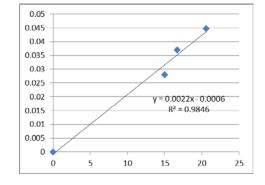
0.0022
0.9923
16 March 2020

#### Remarks:

#### 1. Strong Correlation (R>0.8)

2. Factor 0.0022 should be apply for TSP monitoring

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





### TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industrial Building, K Location ID : Calibration Room	wai Ch	ung	Date of Calibration: 9-Mar-20 Next Calibration Date: 9-Jun-20
	COND	ITIONS	
Sea Level Pressure (hPa) Temperature (°C)	1008.5 23.4		Corrected Pressure (mm Hg) 756.375 Temperature (K) 296
CAL	IBRATI	ON ORIFICE	
Model-> 50	SCH 25A eb-20		Qstd Slope ->2.03014Qstd Intercept ->-0.04616Expiry Date->7-Feb-21
	CALIB	RATION	
No.         (in)         (in)         (in)         (m3/min)         (cl           18         6.1         6.1         12.2         1.744         2           13         4.9         4.9         9.8         1.565         4           10         3.8         3.8         7.6         1.381         4           8         2.4         2.4         4.8         1.102         2	I hart) 55 49 42 32 22	IC corrected 55.02 49.01 42.01 32.01 22.01	LINEAR <u>REGRESSION</u> Slope = 36.8508 Intercept = -8.9222 Corr. coeff. = 0.9997
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	00 90 90 90 90 90 90 90 90 90 90 90 90 9	.00 .00 .00 .00 .00 .00 .00 .00 .00	FLOW RATE CHART

								ALIBRATION
							D	UE DATE:
					)		Febru	uary 7, 202
nvir	o n m	ent	al	- Construction of the Article				
	0		2 .		O	0.0	<b>6</b> •	
	0e	rtifa	çate	01	Oal	ibra	tion	
			Calibration	Certificatio	on Informat	ion		
Cal. Date:	February 7	2020	Roots	meter S/N:	438320	Ta:	295	°К
Operator:	Jim Tisch					Pa:	745.5	mm Hg
Calibration	Model #:	TE-5025A	Calil	prator S/N:	1612			
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔΗ	]
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.3730	3.2	2.00	
	2	3	4	1	0.9820	6.4	4.00	-
	3	5	6	1	0.8780	8.0	5.00	-
	4	7	8	1	0.8340	8.8	5.50	
	5	9	10	1	0.6900	12.8	8.00	
			[	Data Tabula	tion			]
	Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)}$	)( <u>Tstd</u> )		Qa	√∆H(Ta/Pa)	
	(m3)	(x-axis)	(y-ax		Va	(x-axis)	(y-axis)	
	0.9866	0.7186	1.40		0.9957	0.7252	0.8896	-
	0.9824	1.0004	1.99	09	0.9914	1.0096	1.2581	-
	0.9802	1.1165	2.22	59	0.9893	1.1267	1.4066	
	0.9792	1.1741	2.33	45	0.9882	1.1849	1.4753	-
	0.9739	1.4114	2.81		0.9828	1.4244	1.7792	-
	OCTD		2.030		0.4		1.27124	
	QSTD	b= r=	-0.04		QA	b= r=	-0.02917 0.99995	
		1-	0.555			1	0.33333	]
	Vstd=	AVol((Pa-AP)	/Pstd)(Tstd/Ta	Calculation		ΔVol((Pa-Δl	P)/Pa)	-
		Vstd/ATime	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Va/ATime	,,,	-
			For subsequ	ient flow rat	te calculatio			1
	Qstd=	1/m (( _ \[ \[ \] \[ \] \[ \] H (	Pa (Tstd Pstd Ta	-))-b)		11	н(Та/Ра))-b)	
[		Conditions	rstu /\ la	///		// V	· // /	]
Tstd:				Г		RECA	LIBRATION	1
Pstd:		mm Hg						
	ŀ	(ey					nnual recalibrati	
$\Delta H:$ calibrate							Regulations Part	
ΔP: rootsme		eter reading perature (°K)					, Reference Met	
		essure (mm					ended Particulat	
		cooure (min			th	e Atmosphe	ere, 9.2.17, page	30
b: intercept			1	1				1

Tisch Environmental, Inc. 145 South Miami Avenue Village of Cleves, OH 45002 <u>www.tisch-env.com</u> TOLL FREE: (877)263-7610 FAX: (513)467-9009

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Sun Creation Engineering Limited

Calibration & Testing Laboratory

## Certificate of Calibration 校正證書

Certificate No. : C204359 證書編號

ITEM TESTED / 送檢马	百百	(Job No. / 序引編號:IC20-1324)	Date of Receipt / 收件日期: 30 July 2020
Description / 儀器名稱	:	Sound Level Meter (EQ013)	
Manufacturer / 製造商	:	Rion	
Model No. / 型號	:	NL-52	
Serial No. / 編號	:	00921191	
Supplied By / 委託者	:	Action-United Environmental Services and Co	onsulting
		Unit A, 20/F., Gold King Industrial Building,	
		35-41 Tai Lin Pai Road, Kwai Chung, N.T.	

#### TEST CONDITIONS / 測試條件

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

#### TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 5 August 2020

#### TEST RESULTS / 測試結果

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

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- The Bruel & Kjaer Calibration Laboratory, Denmark
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試

K P Cheuk

Assistant Engineer

K C Lee Engineer

Certified By 核證 Date of Issue 簽發日期 :

11 August 2020

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

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

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



Sun Creation Engineering Limited

Calibration & Testing Laboratory

## Certificate of Calibration 校正證書

Certificate No. : C204359 證書編號

- 1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- 2. Self-calibration was performed before the test.
- 3. The results presented are the mean of 3 measurements at each calibration point.
- 4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C200258
CL281	Multifunction Acoustic Calibrator	CDK1806821

- 5. Test procedure : MA101N.
- 6. Results :
- 6.1 Sound Pressure Level
- 6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT	IEC 61672
Range	Function	Frequency	Time	Level	Freq.	Reading	Class 1 Spec.
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)	(dB)
30 - 130	L <sub>A</sub>	Α	Fast	94.00	1	93.6	± 1.1

#### 6.1.2 Linearity

	UU	Г Setting	Applie	d Value	UUT	
Range	Function	Frequency	Frequency Time		Freq.	Reading
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)
30 - 130	L <sub>A</sub>	А	Fast	94.00	1	93.6 (Ref.)
				104.00		103.6
				114.00		113.6

IEC 61672 Class 1 Spec. :  $\pm$  0.6 dB per 10 dB step and  $\pm$  1.1 dB for overall different.

#### 6.2 Time Weighting

	UUT Setting			Applied Value		UUT	IEC 61672
Range	Function	Frequency	Time	Level	Freq.	Reading	Class 1 Spec.
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)	(dB)
30 - 130	L <sub>A</sub>	А	Fast	94.00	1	93.6	Ref.
			Slow			93.6	± 0.3

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



Certificate of Calibration 校正證書

Certificate No. : C204359 證書編號

#### 6.3 Frequency Weighting

#### 6.3.1 <u>A-Weighting</u>

	UUT Setting			Appl	ied Value	UUT	IEC 61672
Range	Function	Frequency	Time	Level	Freq.	Reading	Class 1 Spec.
(dB)		Weighting	Weighting	(dB)		(dB)	(dB)
30 - 130	$L_A$	A	Fast	94.00	63 Hz	67.3	$-26.2 \pm 1.5$
					125 Hz	77.4	$-16.1 \pm 1.5$
					250 Hz	84.9	$-8.6 \pm 1.4$
					500 Hz	90.3	$-3.2 \pm 1.4$
					1 kHz	93.6	Ref.
					2 kHz	94.8	$+1.2 \pm 1.6$
					4 kHz	94.6	$+1.0 \pm 1.6$
					8 kHz	92.5	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.1	-4.3 (+3.0 ; -6.0)

#### 6.3.2 C-Weighting

	UUT Setting			Applied Value		UUT	IEC 61672
Range	Function	Frequency	Time	Level	Freq.	Reading	Class 1 Spec.
(dB)		Weighting	Weighting	(dB)		(dB)	(dB)
30 - 130	L <sub>C</sub>	С	Fast	94.00	63 Hz	92.8	$-0.8 \pm 1.5$
					125 Hz	93.4	$-0.2 \pm 1.5$
					250 Hz	93.6	$0.0 \pm 1.4$
					500 Hz	93.6	$0.0 \pm 1.4$
					1 kHz	93.6	Ref.
					2 kHz	93.4	$-0.2 \pm 1.6$
					4 kHz	92.8	$-0.8 \pm 1.6$
					8 kHz	90.6	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.2	-6.2 (+3.0 ; -6.0)

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



## Certificate of Calibration 校正證書

Certificate No. : C204359 證書編號

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

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value :	94 dB :	63 Hz - 125 Hz	: ± 0.35 dB
			$\pm 0.30 \text{ dB}$
		1 kHz	$\pm 0.20 \text{ dB}$
		2 kHz - 4 kHz	$\pm 0.35 \text{ dB}$
		8 kHz	$\pm 0.45 \text{ dB}$
		12.5 kHz	$\pm 0.70 \text{ dB}$
	104 dB :	1 kHz	$\pm 0.10 \text{ dB}$ (Ref. 94 dB)
	114 dB :	1 kHz	$\pm 0.10 \text{ dB}$ (Ref. 94 dB)

- 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 is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.



Sun Creation Engineering Limited Calibration & Testing Laboratory

Calibration & lesting Laboratory

## Certificate of Calibration 校正證書

Certificate No. : C205469 證書編號

ITEM TESTED / 送檢項目	(Job No. / 序引編號: IC20-1324) Date of Receipt / 收件日期: 22 September 2020
Description / 儀器名稱 :	Sound Level Meter (EQ015)
Manufacturer / 製造商 :	Rion
Model No. / 型號 :	NL-52
Serial No. / 編號 :	00142581
Supplied By / 委託者 :	Action-United Environmental Services and Consulting
	Unit A, 20/F., Gold King Industrial Building,
	35-41 Tai Lin Pai Road, Kwai Chung, N.T.

#### TEST CONDITIONS / 測試條件

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

#### TEST SPECIFICATIONS / 測試規範

Calibration

DATE OF TEST / 測試日期 : 29 September 2020

#### TEST RESULTS / 測試結果

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

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA
- The Bruel & Kjaer Calibration Laboratory, Denmark

Tested By 測試

K P Cheuk Assistant Engineer

Certified By 核證

Un H C Chan Engineer

Date of Issue 簽發日期 ÷

30 September 2020

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

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

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



Sun Creation Engineering Limited

Calibration & Testing Laboratory

## Certificate of Calibration 校正證書

Certificate No. : C205469 證書編號

- 1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- 2. Self-calibration using the internal standard (After Adjustment) was performed before the test 6.1.1.2 to 6.3.2.
- 3. The results presented are the mean of 3 measurements at each calibration point.
- 4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C200258
CL281	Multifunction Acoustic Calibrator	CDK1806821

- 5. Test procedure : MA101N.
- 6. Results :
- 6.1 Sound Pressure Level
- 6.1.1 Reference Sound Pressure Level
- 6.1.1.1 Before Adjustment

	UUT Setting				Applied Value		IEC 61672
Range	Function	Frequency	Time	Level	Freq.	Reading	Class 1 Spec.
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)	(dB)
30 - 130	L <sub>A</sub>	Α	Fast	94.00	1	* 92.4	$\pm 1.1$
* Out of IEC	61672 Class	1 Spec					

\* Out of IEC 61672 Class 1 Spec.

#### 6.1.1.2 After Adjustment

	UUT Setting			Applied Value		UUT	IEC 61672
Range	Function	Frequency	Time	Level	Freq.	Reading	Class 1 Spec.
(dB)	(dB) Weighting Weighting				(kHz)	(dB)	(dB)
30 - 130	L <sub>A</sub>	А	Fast	94.00	1	94.0	± 1.1

#### 6.1.2 Linearity

	UU	Г Setting	Applie	d Value	UUT	
Range	Function	Frequency Time		Level	Freq.	Reading
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)
30 - 130	L <sub>A</sub>	Α	Fast	94.00	1	94.0 (Ref.)
				104.00		104.0
				114.00		114.2

IEC 61672 Class 1 Spec. :  $\pm$  0.6 dB per 10 dB step and  $\pm$  1.1 dB for overall different.

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



Sun Creation Engineering Limited

Calibration & Testing Laboratory

## Certificate of Calibration 校正證書

Certificate No. : C205469 證書編號

#### 6.2 Time Weighting

	UUT Setting				Applied Value		IEC 61672
Range	Function	Frequency	Time	Level	Freq.	Reading	Class 1 Spec.
(dB)		Weighting	Weighting	(dB)	(kHz)	(dB)	(dB)
30 - 13	0 L <sub>A</sub>	A	Fast	94.00	1	94.0	Ref.
			Slow			94.0	± 0.3

#### 6.3 Frequency Weighting

#### 6.3.1 A-Weighting

		Setting		Appl	ied Value	UUT	IEC 61672
Range	Function	Frequency	Time	Level	Freq.	Reading	Class 1 Spec.
(dB)		Weighting	Weighting	(dB)		(dB)	(dB)
30 - 130	L <sub>A</sub>	А	Fast	94.00	63 Hz	67.7	$-26.2 \pm 1.5$
					125 Hz	77.8	$-16.1 \pm 1.5$
					250 Hz	85.3	$-8.6 \pm 1.4$
					500 Hz	90.7	$-3.2 \pm 1.4$
					1 kHz	94.0	Ref.
					2 kHz	95.2	$+1.2 \pm 1.6$
					4 kHz	95.0	$+1.0 \pm 1.6$
					8 kHz	93.0	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.6	-4.3 (+3.0 ; -6.0)

#### 6.3.2 C-Weighting

		Setting		Appli	ed Value	UUT	IEC 61672
Range	Function	Frequency	Time	Level	Freq.	Reading	Class 1 Spec.
(dB)		Weighting	Weighting	(dB)		(dB)	(dB)
30 - 130	L <sub>C</sub>	С	Fast	94.00	63 Hz	93.1	$-0.8 \pm 1.5$
					125 Hz	93.8	$-0.2 \pm 1.5$
					250 Hz	94.0	$0.0 \pm 1.4$
					500 Hz	94.0	$0.0 \pm 1.4$
					1 kHz	94.0	Ref.
					2 kHz	93.8	$-0.2 \pm 1.6$
					4 kHz	93.2	$-0.8 \pm 1.6$
					8 kHz	91.1	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.6	-6.2 (+3.0 ; -6.0)

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



Sun Creation Engineering Limited Calibration & Testing Laboratory

## Certificate of Calibration 校正證書

Certificate No. : C205469 證書編號

Remarks : - UUT Microphone Model No. : UC-59 & S/N : 15585

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value :	250 Hz - 500 Hz 1 kHz 2 kHz - 4 kHz 8 kHz 12.5 kHz 104 dB : 1 kHz	: ± 0.20 dB : ± 0.35 dB : ± 0.45 dB : ± 0.70 dB : ± 0.10 dB (Ref. 94 dB)
	114 dB : 1 kHz	$\pm 0.10 \text{ dB} (\text{Ref. 94 dB})$

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

Note :

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

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

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



Sun Creation Engineering Limited

Calibration & Testing Laboratory

# Certificate of Calibration 校正證書

Certificate No. : C201348 證書編號

ITEM TESTED / 送檢項	目目	(Job No. / 序引編號:IC19-1098)	Date of Receipt / 收件日期: 27 February 2020
Description / 儀器名稱	:	Sound Level Calibrator (EQ085)	
Manufacturer / 製造商	:	Rion	
Model No. / 型號	:	NC-73	
Serial No. / 編號	:	10655561	
Supplied By / 委託者	:	Action-United Environmental Services a	nd Consulting
		Unit A, 20/F., Gold King Industrial Build	ding,
		35-41 Tai Lin Pai Road, Kwai Chung, N	.Т.

#### TEST CONDITIONS / 測試條件

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

#### TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 7 March 2020

#### TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.

The results do not exceed manufacturer's specification & user's specified acceptance criteria. The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- The Bruel & Kjaer Calibration Laboratory, Denmark
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試

H T Wong

Technical Officer

K C Lee Engineer

2

Certified By 核證

Date of Issue 簽發日期 ÷

10 March 2020

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

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

Sun Creation Engineering Limited – Calibration & Testing Laboratory c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong 輝創工程有限公司 - 校正及檢測實驗所 c/o 香港新界屯門與安里—號四樓 Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com Page 1 of 2



Sun Creation Engineering Limited

Calibration & Testing Laboratory

## Certificate of Calibration 校正證書

Certificate No. : C201348 證書編號

- 1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.
- 2. The results presented are the mean of 3 measurements at each calibration point.
- 3. Test equipment :

Equipment ID CL130 CL281 TST150A Description Universal Counter Multifunction Acoustic Calibrator Measuring Amplifier

<u>Certificate No.</u> C193756 CDK1806821 C201309

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

UUT	Measured Value	Mfr's Spec.	Uncertainty of Measured Value
Nominal Value	(dB)	(dB)	(dB)
94 dB, 1 kHz	94.2	$\pm 0.5$	± 0.2

#### 5.2 Frequency Accuracy

UUT Nominal Value	Measured Value	User's	Uncertainty of Measured Value
(kHz)	(kHz)	Spec.	(Hz)
1	0.958	1 kHz ± 6 %	± 1

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

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

Note :

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

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

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



ALS Technichem (HK) Pty Ltd 11/F, Chung Shun Knitting Centre 1-3 Wing Yip Street, Kwai Chung N.T., Hong Kong T: +852 2610 1044 | F: +852 2610 2021

## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT: CLIENT:	BEN TAM ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING	WORK ORDER:	HK2047209
ADDRESS:	RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG	SUB-BATCH: LABORATORY: DATE RECEIVED: DATE OF ISSUE:	0 HONG KONG 07-Dec-2020 16-Dec-2020

### SPECIFIC COMMENTS

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client. The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the laboratory or quoted from relevant international standards.

The "Next Calibration Date" is recommended according to best practice principle as practised by the laboratory or quoted from relevant international standards.

The validity of equipment/ meter performance only applies to the result(s) stated in the report.

Equipment Type:	Multifunctional Meter
Service Nature:	Performance Check
Scope:	Conductivity, Dissolved Oxygen, pH Value, Turbidity, Salinity and Temperature
Brand Name/ Model No.:	YSI Professional DSS
Serial No./ Equipment No.:	17B102764/17B100758 (EQW019)
Date of Calibration:	15-December-2020

### **GENERAL COMMENTS**

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

Ms. Lin Wai Yu, Iris Assistant Manager - Inorganic

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WORK ORDER:	HK2047209			ALS
SUB-BATCH: DATE OF ISSUE: CLIENT:	0 16-Dec-2020 ACTION UNITED ENVIRONMEN	T SERVICES AND CONSULTING		( · · /
Equipment Type:	Multifunctional Meter			
Brand Name/ Model No.:	YSI Professional DSS			
Serial No./ Equipment No.:	17B102764/17B100758 (EQW	019)		
Date of Calibration:	15-December-2020	Date of Next Calibration:	15-March-2021	

PARAMETERS:

Conductivity

Method Ref: APHA (21st edition), 2510B

Expected Reading (µS/cm)	Displayed Reading ( <b>µ</b> S/cm)	Tolerance (%)		
146.9	147.3	+0.3		
6667	6742	+1.1		
12890	13050	+1.2		
58670	54437	-7.2		
	Tolerance Limit (%)	±10.0		

#### Dissolved Oxygen

#### en Method Ref: APHA (21st edition), 45000: G

, ,		
Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.77	3.71	-0.06
5.63	5.51	-0.12
8.18	8.22	+0.04
	Tolerance Limit (mg/L)	±0.20

pH Value

#### Method Ref: APHA (21st edition), 4500H: B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)			
4.0	4.07	+0.07			
7.0	7.12	+0.12			
10.0	10.01	+0.01			
	Tolerance Limit (pH unit)	±0.20			

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris Assistant Manager - Inorganic

WORK ORDER:	HK2047209			ALS
SUB-BATCH: DATE OF ISSUE: CLIENT:	0 16-Dec-2020 ACTION UNITED ENVIRONMEN	T SERVICES AND CONSULTING		
Equipment Type:	Multifunctional Meter			
Brand Name/ Model No.:	YSI Professional DSS			
Serial No./ Equipment No.:	17B102764/17B100758 (EQW	019)		
Date of Calibration:	15-December-2020	Date of Next Calibration:	15-March-2021	

PARAMETERS:

Turbidity

Method Ref: APHA (21st edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.18	
4	4.08	+2.0
40	42.18	+5.5
80	79.02	-1.2
400	412.86	+3.2
800	793.47	-0.8
	Tolerance Limit (%)	±10.0

Salinity

#### Method Ref: APHA (21st edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	
10	10.86	+8.6
20	21.69	+8.5
30	32.83	+9.4
	Tolerance Limit (%)	±10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

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Ms. Lin Wai Yu, Iris Assistant Manager - Inorganic

WORK ORDER:	HK2047209		ALS	
SUB-BATCH: DATE OF ISSUE: CLIENT:	0 16-Dec-2020 ACTION UNITED ENVIRONMENT	SERVICES AND CONSULTING		
Equipment Type:	Multifunctional Meter			
Brand Name/ Model No.:	YSI Professional DSS			
Serial No./ Equipment No.:	17B102764/17B100758 (EQW019)			
Date of Calibration:	15-December-2020	Date of Next Calibration:	15-March-2021	
PARAMETERS:				
Temperature	Method Ref: Section 6 of International Accreditation New Zealand Technical			
	Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.			
	Even $a = a = a = a = a = a = a = a = a = a $	Displaying Decision $(^{0}C)$	$T_{oloropoo}$	

Expected Reading (°C)	Displayed Reading ( <sup>o</sup> C)	Tolerance (°C)
10.5	10.3	-0.2
20.0	20.1	+0.1
39.5	39.4	-0.1
	Tolerance Limit (°C)	±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris Assistant Manager - Inorganic



ALS Technichem (HK) Pty Ltd 11/F, Chung Shun Knitting Centre 1-3 Wing Yip Street, Kwai Chung N.T., Hong Kong T: +852 2610 1044 | F: +852 2610 2021

## **REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION**

CONTACT: CLIENT:	MR BEN TAM ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING	WORK ORDER: SUB-BATCH:	HK2035809 0
ADDRESS:	RM A 20/F., GOLD KING IND BLDG,	LABORATORY:	HONG KONG
	NO. 35-41 TAI LIN PAI ROAD,	DATE RECEIVED:	18-Sep-2020
	KWAI CHUNG, N.T. HONG KONG	DATE OF ISSUE:	05-Oct-2020

#### SPECIFIC COMMENTS

The calibration of flow rate performed by AUES staff on 02 September 2020.

Scope of Test:	Flow rate
Equipment Type:	Flow Meter
Brand Name:	Global Water
Model No.:	FP211
Serial No.:	1449006330
Equipment No.:	
Calibration Factor:	314
Date of Calibration:	02 September, 2020

#### **GENERAL COMMENTS**

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

Mr. Fung Lim Chee, Richard Managing Director, Life Sciences Hong Kong

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Page 1 of 2

Work Order:	HK2035809
Sub-batch:	0
Date of Issue:	05-Oct-2020
Client:	ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING

#### **Reference Equipment:**

Model: SonTek IQ Standard Serial Number : IQ1217004

#### Equipment to be calibrated:

Equipment Type:	Flow Meter
Brand Name:	Global Water
Model No.:	FP211
Serial No.:	1449006330
Equipment No.:	
Calibration Factor:	314

Date of Calibration: 02 September, 2020

Parameters: The calibration of flow meter is verified with standard flow meter on site by AUES Staff.

#### Flow rate

Trial	<b>Reading of Reference</b> <b>Equipment (m/s)</b> SonTek IQ Standard Serial No: IQ1217004	Reading of Equipment to be calibrated (m/s) Global Water FP211 Serial No. 1449006330	
	0.09	0.1	
2	0.22	0.2	
3	0.43	0.4	
5	0.98	1.0	
6	1.13	1.1	

Mr. Fung Lim Cheer Richard Managing Director, Life Sciences Hong Kong



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 : HCKLAS 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

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## Appendix F

## Event and Action Plan of Air Quality, Noise and Water Quality

### **Event and Action Plan for air quality**

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

Note: ET – Environmental Team IEC – Independent Environmental Checker ER – Engineer's Representative

### **Event and Action Plan for Construction Noise**

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

Note:

ET – Environmental Team

IEC – Independent Environmental Checker

ER – Engineer's Representative

#### **Event and Action Plan for Water Quality**

Event			Action	
Event	ET	IEC	ER	Contractor
Action level exceedance for one sampling day	<ol> <li>Inform IEC, Contractor and ER;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods; and</li> <li>Discuss remedial measures with IEC and Contractor and ER.</li> </ol>	<ol> <li>Discuss with ET, ER and Contractor on the implemented mitigation measures;</li> <li>Review proposals on remedial measures submitted by Contractor and advise the ER accordingly; and</li> <li>Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.</li> </ol>	<ol> <li>Discuss with IEC, ET and Contractor on the implemented mitigation measures;</li> <li>Make agreement on the remedial measures to be implemented;</li> <li>Supervise the implementation of agreed remedial measures.</li> </ol>	<ol> <li>Identify source(s) of impact;</li> <li>Inform the ER and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment;</li> <li>Consider changes of working methods;</li> <li>Discuss with ER, ET and IEC and purpose remedial measures to IEC and ER; and</li> <li>Implement the agreed mitigation measures.</li> </ol>
Action level exceedance for more than one consecutive sampling days	<ol> <li>Repeat in-situ measurement on next day of exceedance to confirm findings;</li> <li>Inform IEC, contractor and ER;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>Discuss remedial measures with IEC, contractor and ER</li> <li>Ensure remedial measures are implemented</li> </ol>	<ol> <li>Discuss with ET, Contractor and ER on the implemented mitigation measures;</li> <li>Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and</li> <li>Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.</li> </ol>	<ol> <li>Discuss with ET, IEC and Contractor on the proposed mitigation measures;</li> <li>Make agreement on the remedial measures to be implemented; and</li> <li>Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures.</li> </ol>	<ol> <li>Identify source(s) of impact;</li> <li>Inform the ER and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment and consider changes of working methods;</li> <li>Discuss with ET, IEC and ER and submit proposal of remedial measures to ER and IEC within 3 working days of notification; and</li> <li>Implement the agreed mitigation measures.</li> </ol>
Limit level exceedance for one sampling day	<ol> <li>Repeat measurement on next day of exceedance to confirm findings;</li> <li>Inform IEC, contractor and ER;</li> <li>Rectify unacceptable practice;</li> <li>Check monitoring data, all plant,</li> <li>equipment and Contractor's working methods;</li> <li>Consider changes of working methods;</li> <li>Discuss mitigation measures with IEC, ER and Contractor; and</li> <li>Ensure the agreed remedial measures are implemented</li> </ol>	<ol> <li>Discuss with ET, Contractor and ER on the implemented mitigation measures;</li> <li>Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and</li> <li>Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.</li> </ol>	<ol> <li>Discuss with ET, IEC and Contractor on the implemented remedial measures;</li> <li>Request Contractor to critically review the working methods;</li> <li>Make agreement on the remedial measures to be implemented; and</li> <li>Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures.</li> </ol>	<ol> <li>Identify source(s) of impact;</li> <li>Inform the ER and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment and consider changes of working methods;</li> <li>Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of notification; and</li> <li>Implement the agreed remedial measures.</li> </ol>
Limit level exceedance for more than one consecutive sampling days	<ol> <li>Inform IEC, contractor and ER;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>Discuss mitigation measures with IEC, ER and Contractor;</li> <li>Ensure mitigation measures are implemented; and</li> <li>Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days</li> </ol>	<ol> <li>Discuss with ET, Contractor and ER on the implemented mitigation measures;</li> <li>Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and</li> <li>Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.</li> </ol>	<ol> <li>Discuss with ET, IEC and Contractor on the implemented remedial measures;</li> <li>Request Contractor to critically review the working methods;</li> <li>Make agreement on the remedial measures to be implemented;</li> <li>Discuss with ET and IEC on the effectiveness of the implemented mitigation measures; and</li> <li>Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit level.</li> </ol>	<ol> <li>Identify source(s) of impact;</li> <li>Inform the ER and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment and consider changes of working methods;</li> <li>Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of notification; and</li> <li>Implement the agreed remedial measures; and</li> <li>As directed by the ER, to slow down or stop all or part of the construction activities until no exceedance of Limit level.</li> </ol>

Note: ET - Environmental Team IEC - Independent Environmental Checker ER - Engineer's Representative Each step of actions required shall be implemented within 1 working day unless otherwise specified or agreed with EPD.



# Appendix G

Monitoring Schedules of the Reporting Month and Coming Month



Date           Fri         1-Jan-21           Sat         2-Jan-21           Sun         3-Jan-21           Mon         4-Jan-21           Tue         5-Jan-21           Wed         6-Jan-21           Thu         7-Jan-21           Fri         8-Jan-21           Sat         9-Jan-21           Sat         9-Jan-21           Sat         9-Jan-21           Mon         11-Jan-21           Tue         12-Jan-21           Mon         11-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Mon         14-Jan-21           Fri         15-Jan-21           Sat         16-Jan-21           Mon         18-Jan-21           Mon         18-Jan-21           Wed         20-Jan-21           Wed         20-Jan-21           Sat         23-Jan-21           Sat         23-Jan-21           Sun         24-Jan-21           Mon         25-Jan-21           Mon         25-Jan-21	✓ ✓	1-Hour TSP	24-Hour TSP ✓	Water Quality ✓
Sat         2-Jan-21           Sun         3-Jan-21           Mon         4-Jan-21           Tue         5-Jan-21           Wed         6-Jan-21           Thu         7-Jan-21           Fri         8-Jan-21           Sat         9-Jan-21           Sat         9-Jan-21           Sun         10-Jan-21           Mon         11-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Fri         15-Jan-21           Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Mon         18-Jan-21           Mue         20-Jan-21           Wed         20-Jan-21           Wed         20-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Mon         25-Jan-21           Mon         25-Jan-21           Mon         25-Jan-21           Mon         2	✓ ✓	✓	✓ ✓	
Sun         3-Jan-21           Mon         4-Jan-21           Tue         5-Jan-21           Wed         6-Jan-21           Thu         7-Jan-21           Fri         8-Jan-21           Sat         9-Jan-21           Sun         10-Jan-21           Mon         11-Jan-21           Tue         12-Jan-21           Mon         11-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Fri         15-Jan-21           Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Mon         18-Jan-21           Mon         18-Jan-21           Wed         20-Jan-21           Wed         20-Jan-21           Fri         22-Jan-21           Wed         20-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Mon         24-Jan-21           Mon         25-Jan-21           Mon         25-Jan-21           Mon         26-Jan-21	✓ ✓	✓	✓	
Mon         4-Jan-21           Tue         5-Jan-21           Wed         6-Jan-21           Thu         7-Jan-21           Fri         8-Jan-21           Sat         9-Jan-21           Sun         10-Jan-21           Mon         11-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Fri         15-Jan-21           Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Wed         20-Jan-21           Wed         20-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Mon         24-Jan-21           Mon         25-Jan-21           Mon         25-Jan-21           Mon         26-Jan-21	✓ 	✓		
Tue         5-Jan-21           Wed         6-Jan-21           Thu         7-Jan-21           Fri         8-Jan-21           Sat         9-Jan-21           Sun         10-Jan-21           Mon         11-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Wed         13-Jan-21           Fri         15-Jan-21           Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Mon         18-Jan-21           Wed         20-Jan-21           Wed         20-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Mon         24-Jan-21           Mon         25-Jan-21           Mon         25-Jan-21           Mon         26-Jan-21		✓		1
Wed         6-Jan-21           Thu         7-Jan-21           Fri         8-Jan-21           Sat         9-Jan-21           Sun         10-Jan-21           Mon         11-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Thu         14-Jan-21           Fri         15-Jan-21           Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Sun         17-Jan-21           Sun         12-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Sat         20-Jan-21           Sat         23-Jan-21           Sat         23-Jan-21           Sat         23-Jan-21           Mon         25-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21				•
Thu         7-Jan-21           Fri         8-Jan-21           Sat         9-Jan-21           Sun         10-Jan-21           Mon         11-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Thu         14-Jan-21           Fri         15-Jan-21           Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Wed         20-Jan-21           Tue         12-Jan-21           Wed         20-Jan-21           Sat         23-Jan-21           Sat         23-Jan-21           Sat         23-Jan-21           Mon         25-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21				
Fri         8-Jan-21           Sat         9-Jan-21           Sun         10-Jan-21           Mon         11-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Thu         14-Jan-21           Fri         15-Jan-21           Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Wed         20-Jan-21           Thu         21-Jan-21           Sat         23-Jan-21           Sat         23-Jan-21           Mon         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21				$\checkmark$
Sat         9-Jan-21           Sun         10-Jan-21           Mon         11-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Thu         14-Jan-21           Fri         15-Jan-21           Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Wed         20-Jan-21           Tue         12-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Sun         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21			✓	
Sun         10-Jan-21           Mon         11-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Thu         14-Jan-21           Fri         15-Jan-21           Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Wed         20-Jan-21           Thu         21-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Sun         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21		$\checkmark$		$\checkmark$
Mon         11-Jan-21           Tue         12-Jan-21           Wed         13-Jan-21           Thu         14-Jan-21           Fri         15-Jan-21           Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Wed         20-Jan-21           Thu         21-Jan-21           Fri         22-Jan-21           Fri         23-Jan-21           Sat         23-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21				
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Wed         13-Jan-21           Thu         14-Jan-21           Fri         15-Jan-21           Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Wed         20-Jan-21           Thu         21-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Sun         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21	1			$\checkmark$
Thu         14-Jan-21           Fri         15-Jan-21           Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Wed         20-Jan-21           Thu         21-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Sun         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21	1			
Fri         15-Jan-21           Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Wed         20-Jan-21           Thu         21-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Sun         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21	1		✓	$\checkmark$
Sat         16-Jan-21           Sun         17-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Wed         20-Jan-21           Thu         21-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Sun         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21	1 🖌	✓		
Sun         17-Jan-21           Mon         18-Jan-21           Tue         19-Jan-21           Wed         20-Jan-21           Thu         21-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Sun         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21	1			$\checkmark$
Mon         18-Jan-21           Tue         19-Jan-21           Wed         20-Jan-21           Thu         21-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Sun         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21	1			
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Wed         20-Jan-21           Thu         21-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Sun         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21	1			$\checkmark$
Thu         21-Jan-21           Fri         22-Jan-21           Sat         23-Jan-21           Sun         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21	1		✓	
Fri         22-Jan-21           Sat         23-Jan-21           Sun         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21	1 🗸	$\checkmark$		$\checkmark$
Sat         23-Jan-21           Sun         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21	1			
Sun         24-Jan-21           Mon         25-Jan-21           Tue         26-Jan-21	1			$\checkmark$
Mon25-Jan-21Tue26-Jan-21	1			
Tue 26-Jan-21	1			
			✓	√
W. 1 07 1 01	,	$\checkmark$		
Wed 27-Jan-21	1			$\checkmark$
Thu 28-Jan-21				
Fri 29-Jan-21				$\checkmark$
Sat 30-Jan-21			√	
Sun 31-Jan-21				
			]	
	Monitoring Day	liday	1	



|--|

	Data	Noice Manitoning	Air Quality	y Monitoring	Water Onelity
	Date	Noise Monitoring	1-Hour TSP	24-Hour TSP	Water Quality
Mon	1-Feb-21	✓	✓		$\checkmark$
Tue	2-Feb-21				
Wed	3-Feb-21				$\checkmark$
Thu	4-Feb-21				
Fri	5-Feb-21			✓	$\checkmark$
Sat	6-Feb-21		✓		
Sun	7-Feb-21				
Mon	8-Feb-21				$\checkmark$
Tue	9-Feb-21				
Wed	10-Feb-21			✓	$\checkmark$
Thu	11-Feb-21	✓	✓		
Fri	12-Feb-21				
Sat	13-Feb-21				
Sun	14-Feb-21				
Mon	15-Feb-21				
Tue	16-Feb-21			✓	$\checkmark$
Wed	17-Feb-21	✓	✓		
Thu	18-Feb-21				$\checkmark$
Fri	19-Feb-21				
Sat	20-Feb-21		✓		$\checkmark$
Sun	21-Feb-21				
Mon	22-Feb-21			✓	✓
Tue	23-Feb-21				
Wed	24-Feb-21	✓	✓		$\checkmark$
Thu	25-Feb-21				
Fri	26-Feb-21				$\checkmark$
Sat	27-Feb-21			✓	
Sun	28-Feb-21				

Remark: There will be no construction activity during Chinese New Year on 12 to 15 Feb 2021.

✓	Monitoring Day
	Sunday or Public Holiday



# Appendix H

## **Monitoring Data**

- 24-hour TSP Air Quality
- Noise
- Water Quality



Air Quality (24-hour TSP)



	24-Hour TSP Monitoring Data for ASR-1														
DATE	SAMPLE NUMBER		APSED TI	CHART READING			AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE		$_{\rm E}$ FILTER WEIGHT (g)		DUST WEIGHT COLLECTED	24-Hr TSP (μg/m <sup>3</sup> )	
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(°C)	(hPa)	(m <sup>3</sup> /min)	(std m <sup>3</sup> )	INITIAL	FINAL	(g)	
2-Jan-21	26631	23456.71	23480.71	1440.00	46	46	46.0	14	1022.9	1.44	2074	2.6992	2.7526	0.0534	26
7-Jan-21	26340	23480.71	23504.72	1440.60	48 48 48.0		15.3	1020.8	1.49	2150	2.6677	2.7662	0.0985	46	
13-Jan-21	26638	23504.72	23528.72	1440.00	55	55 55 55.0		16.4	1020.1	1.69	2429	2.6737	3.0876	0.4139	170
19-Jan-21	26657	23528.72	23552.72	1440.00	50	50	50.0	15.4	1020.3	1.52	2196	2.6308	3.0160	0.3852	175
25-Jan-21	26705	23552.72	23576.72	1440.00	46 46 46.0		15.4	1020.6	1.40	2014	2.7789	2.9857	0.2068	103	
30-Jan-21	26711	23576.72	23600.72	1440.00	45 45 45.0		16.1	1020.4	1.53	2209	2.7767	2.9312	0.1545	70	

	24-Hour TSP Monitoring Data for ASR-2														
DATE SAMPLI NUMBE			APSED TI	ME	CHART READING			AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE		FILTER WEIGHT (g)		DUST WEIGHT COLLECTED	24-Hr TSP (μg/m <sup>3</sup> )
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(°C)	(hPa)	(m <sup>3</sup> /min)	(std m <sup>3</sup> )	INITIAL	FINAL	(g)	
2-Jan-21	26539	20860.30	20884.30	1440.00	36	36	36.0	14	1022.9	1.17	1679	2.6593	2.7243	0.0650	39
7-Jan-21	26637	20884.30	20908.30	1440.00	40	40	40.0	15.3	1020.8	1.29	1852	2.6841	2.7785	0.0944	51
13-Jan-21	26654	20908.30	20932.30	1440.00	33	34	33.5	16.4	1020.1	1.08	1558	2.6549	2.7927	0.1378	88
19-Jan-21	26656	20932.30	932.30 20956.30 1440.00		36	36	36.0	15.4	1020.3	1.15	1650	2.6314	2.7545	0.1231	75
25-Jan-21	26706	20957.30 20981.30 1440.00		1440.00	35	36	35.5	15.4	1020.6	1.13	1626	2.7743	2.8546	0.0803	49
30-Jan-21	26712			1440.00	35	36	35.5	16.1	1020.4	1.23	1772	2.7697	2.8512	0.0815	46

	24-Hour TSP Monitoring Data for ASR-3a														
DATE	SAMPLE NUMBER		APSED TI	ME	CHA	RT REA	DING	AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WEIGHT (g)		DUST WEIGHT COLLECTED	24-Hr TSP (μg/m <sup>3</sup> )
	INITIAL F		FINAL	(min)	MIN	MAX	AVG	(°C)	(hPa)	(m <sup>3</sup> /min)	(std m <sup>3</sup> )	INITIAL	FINAL	(g)	
2-Jan-21	26630	14653.65	14677.68	1441.80	36 36 36		36.0	14	1022.9	1.22	1758	2.7068	2.9311	0.2243	128
7-Jan-21	26636	14677.68	14701.68	1440.00	38	38	38.0	15.3	1020.8	1.28	1840	2.6854	2.8184	0.1330	72
13-Jan-21	26655	14701.68	14725.68	1440.00	34	35	34.5	16.4	1020.1	1.17	1680	2.6295	2.7803	0.1508	90
19-Jan-21	26696	14725.68	14749.68	1440.00	36 36 3		36.0	15.4	1020.3	1.22	1750	2.9140	3.0571	0.1431	82
25-Jan-21	26703	14748.68	14772.68	1440.00	34 35 34.5		34.5	15.4	1020.6	1.17	1683	2.6872	2.7962	0.1090	65
30-Jan-21	26723			1440.60	34	35	34.5	16.1	1020.4	1.19	1708	2.7813	2.8817	0.1004	59



Noise

	Noise Measurement Results (dB(A)) of CN-1																				
Date	Start Time	1 <sup>st</sup> Leq <sub>5min</sub>	L10	L90	2 <sup>nd</sup> Leq5min	L10	L90	3 <sup>nd</sup> Leq5min	L10	L90	4 <sup>th</sup> Leq5 <sub>min</sub>	L10	L90	5 <sup>th</sup> Leq <sub>5min</sub>	L10	L90	6 <sup>th</sup> Leq5 <sub>min</sub>	L10	L90	Leq <sub>30min</sub>	Façade Collection (*)
4-Jan-21	9:30	66.6	70.1	62.4	67.9	71.3	63.2	64.5	66.2	62.5	67.5	72.6	62.8	65.9	69.8	61.9	64.4	65.8	60.6	66	69
8-Jan-21	11:35	61.5	64.9	55.3	63.6	65.1	56	62.5	65.3	55.5	62.7	64.2	56.6	61.4	63.3	55.6	64.1	66.2	57.7	63	66
14-Jan-21	11:22	67.4	70.1	62.3	66.5	69.6	62.8	64.4	66.5	60	65.6	67.6	60	65.5	69.6	59.4	60	63.2	55.6	65	68
20-Jan-21	9:12	68.1	70.7	65	67.6	69.7	65.4	66.6	69	62.3	64.4	66.3	61.7	66.2	68.3	62.5	64.5	66.2	62.3	66	69
26-Jan-21	13:35	61.9	62.4	57.7	61.1	62.7	57.5	65.7	59.1	57.6	59.5	62.2	55.6	61.8	65.1	57.1	60.7	63.1	57.6	62	65

(\*) A façade correction of +3dB(A) has been added according to acoustical principles and EPD guidelines.

								Noi	se Meast	urement	Results (	dB(A)) o	of CN-2								
Date	Time       Leqsmin       Ref       Ref <t< th=""></t<>																				
4-Jan-21	10:10	64.6	66.7	53.8	65.5	68.2	55	63.2	65.8	52.3	62.4	64.8	54	66.1	68.6	56.8	63.5	66.2	52.8	64	67
8-Jan-21	Jan-21       10:44       60.8       65       48.9       63.4       67       50.5       63.2       67.6       50.2       63.5       66       49.7       62.2       65.7       47.2       61.2       64.6       45.7       63       66         Jan-21       10:14       63.3       65       61.6       61.7       62.8       60.5       64.7       66.3       62.6       63.1       64.7       61.4       62.9       61       62.9       64.1       60.8       63       66																				
14-Jan-21	Jan-21       10:44       60.8       65       48.9       63.4       67       50.5       63.2       67.6       50.2       63.5       66       49.7       62.2       65.7       47.2       61.2       64.6       45.7       63       66         Jan-21       10:14       63.3       65       61.6       61.7       62.8       60.5       64.7       66.3       62.6       63.1       64.7       61.4       62.9       61       62.9       64.1       60.8       63       66         Jan-21       10:39       64.5       69       49.3       63.5       67.7       50.4       61.4       65.9       47       63.5       67.5       49       63       67.8       49.7       61.5       65       47.5       63       66																				
20-Jan-21	10:14	63.3	65	61.6	61.7	62.8	60.5	64.7	66.3	62.6	63.1	64.7	61.4	62.1	62.9	61	62.9	64.1	60.8	63	66
26-Jan-21	10:39	64.5	69	49.3	63.5	67.7	50.4	61.4	65.9	47	63.5	67.5	49	63	67.8	49.7	61.5	65	47.5	63	66
(*) A fa	Jan-21       10:39       64.5       69       49.3       63.5       67.7       50.4       61.4       65.9       47       63.5       67.5       49       63       67.8       49.7       61.5       65       47.5       63       66         (*) A façade correction of $+3dB(A)$ has been added according to acoustical principles and EPD guidelines.       67.5       49       63       67.8       49.7       61.5       65       47.5       63       66																				
	Noise Measurement Results (dB(A)) of CN-3																				
Date		1 <sup>st</sup> Leq5min	L10	L90	2 <sup>nd</sup> Leq5min	L10	L90	3 <sup>nd</sup> Leq5min	L10	L90	4 <sup>th</sup> Leq5 <sub>min</sub>	L10	L90	5 <sup>th</sup> Leq <sub>5min</sub>	L10	L90	6 <sup>th</sup> Leq <sub>5min</sub>	L10	L90	Leq <sub>30min</sub>	
4-Jan-21	11:01	55.5	57.2	49.2	56.8	60.7	50.8	54.8	56.1	48.6	53.8	57.9	47.5	56.8	60.4	48	55.7	59.6	48.5	56	59
8-Jan-21	10:18	54	57.1	49.6	56.2	60.5	51.5	56	59.7	51.6	57.5	59.6	51.9	57.6	60.9	51	55.1	58.8	49.8	56	59
14-Jan-21	10:03	60.9	61.3	51.2	57.5	60.1	51.6	62.7	61.5	51	58	60.6	50.5	63	62.6	53	59.3	61.5	51.5	61	64
20-Jan-21	11:11	54.1	54.9	52.4	54.4	55.5	53	54	54.8	52.6	55.9	56.2	52	52.7	53.8	51.6	52.7	53.6	51.6	54	57
26-Jan-21	10:00	56.5	59.4	51.8	57.1	59.7	51.6	58.8	62	53.6	56.6	59.6	52.7	57.5	60.2	53.9	56.7	59.1	52.7	57	60
(*) A fa	çade co	rrection o	f + 3dB(A	A) has be	en added	accordin	g to acou	ustical pri	nciples a	nd EPD	guidelines	<i>.</i>									

								Noi	se Meası	urement	Results (	dB(A)) o	of CN-4							
Date	Start Time	1 <sup>st</sup> Leq <sub>5min</sub>	L10	L90	2 <sup>nd</sup> Leq <sub>5min</sub>	L10	L90	3 <sup>nd</sup> Leq <sub>5min</sub>	L10	L90	4 <sup>th</sup> Leq <sub>5min</sub>	L10	L90	5 <sup>th</sup> Leq <sub>5min</sub>	L10	L90	6 <sup>th</sup> Leq <sub>5min</sub>	L10	L90	Leq <sub>30min</sub>
4-Jan-21	11:53	53.5	55.6	45.8	55.1	58	47.6	57.5	61.7	49.8	58.3	62.4	50.2	56.2	59	48.3	55.4	58.2	46.1	56
8-Jan-21	9:41	55.7	59.8	43.2	57.7	60.7	42.1	53.5	56.7	39.7	55	58.5	41.5	56	59.1	42.7	52.5	56.1	40.7	55
14-Jan-21	9:26	58.5	60.5	43.6	56.4	58.9	42.1	55.5	56.8	43.6	58.7	58.7	42.6	57.6	57.4	42.9	58.2	58	42	58
20-Jan-21	12:00	53	54.2	51.3	51.3	53.6	49.1	53.2	53.9	51.8	52.5	53.3	51.7	54.6	56	52.2	54.6	55.2	52.7	53
26-Jan-21	9:22	57.6	60.2	42.6	55.5	58.5	42.9	56.7	59.7	42.9	57.5	60.6	43.9	55.2	58.3	42.4	58	60.2	43.7	57



Water Quality



Monthly Environmental Monitoring & Audit Report (No.30) – January 2021

### Water Quality Impact Monitoring Result for M1

Date	2-Jan-21					· · ·	· · ·		· · · ·	· ·
Location	Time	Depth (m)	Temp (oC)	Flow Velocity (m/s)	DO (mg/L)	<b>DO</b> (%)	<b>Turbidity (NTU)</b>		Salinity	SS(mg/L)
M1	9:00	0.13	<u>13.5</u> <u>13.5</u> 13.5	<u>&lt;0.1</u> <0.1 <0.1	8.2 8.23 8.22	87.1 87.3 87.2	<u>5</u> 5.24 5.1	7.53 7.53 7.5	0.06 0.06 0.06	$\frac{3}{3}$ 3.0
Date	4-Jan-21									
Location	Time	Depth (m)	Temp (oC)	Flow Velocity (m/s)	DO (mg/L)	<b>DO</b> (%)	<b>Turbidity (NTU)</b>	pН	Salinity	SS(mg/L)
M1	9:25	0.13	<u>15.7</u> 15.7 15.7	<u>&lt;0.1</u> <0.1 <0.1	7.26 7.2 7.23	77.1 76.4 76.8	$\begin{array}{c c} 1.16 \\ \hline 1.31 \end{array}  1.2 \\ \end{array}$	7.44 7.4	0.06 0.06	$\frac{3}{3}$ 3.0
Date	6-Jan-21					· · ·	<u> </u>		<u> </u>	
Location	Time	Depth (m)	Temp (oC)	Flow Velocity (m/s)		<b>DO</b> (%)	<b>Turbidity (NTU)</b>		Salinity	SS(mg/L)
M1	9:30	0.13	15.8 15.8 15.8	<u>&lt;0.1</u> <0.1 <0.1	7.88 7.6 7.74	87.1 83.9 85.5	1.13 1.2 1.2	7.55 7.6	$\begin{array}{c} 0.05 \\ 0.05 \end{array}$ 0.05	$\frac{3}{4}$ 3.5
Date	8-Jan-21									-
Location	Time	Depth (m)	Temp (oC)	Flow Velocity (m/s)	DO (mg/L)	DO (%)	Turbidity (NTU)	pН	Salinity	SS(mg/L)
M1	9:35	0.13	<u>11.8</u> 11.8 11.8	<u>&lt;0.1</u> <0.1 <0.1	8.35 8.35 8.35	83.8 83.7 83.8	1.43 1.4 1.4	7.55 7.55 7.6	0.06 0.06	$\frac{2}{3}$ 2.5
Date	11-Jan-21			· · ·						·
Location	Time	Depth (m)	Temp (oC)	Flow Velocity (m/s)	DO (mg/L)	<b>DO</b> (%)	Turbidity (NTU)	pH	Salinity	SS(mg/L)
M1	9:45	0.13	10.7 10.7 10.7	<u>&lt;0.1</u> <0.1 <0.1	8.8 8.9 8.85	86.5 87.4 87.0	$\begin{array}{c c} 1.95 \\ \hline 1.7 \\ \hline 1.8 \\ \hline \end{array}$	7.58 7.58 7.6	0.06 0.06 0.06	8 8 8 8.0
Date	13-Jan-21	<u>.</u>				·	<u>.      .                             </u>		<u>.                                    </u>	<u> </u>
Location	Time	Depth (m)	Temp (oC)	Flow Velocity (m/s)	DO (mg/L)	<b>DO</b> (%)	<b>Turbidity (NTU)</b>		Salinity	SS(mg/L)
M1	9:30	0.13	10.5 10.5 10.5	<u>&lt;0.1</u> <0.1 <0.1	<u>8.02</u> 8.22 8.12	79.4 81.4 80.4	$\frac{2.2}{1.78}$ 2.0	7.73 7.7	$\begin{array}{c} 0.07 \\ 0.07 \end{array}  0.07 \end{array}$	$\frac{4}{5}$ 4.5
Date	15-Jan-21						-			
Location	Time	Depth (m)	Temp (oC)	Flow Velocity (m/s)	DO (mg/L)	DO (%)	Turbidity (NTU)	pH	Salinity	SS(mg/L)
M1	9:35	0.13	<u>12.7</u> 12.7 12.7	<u>&lt;0.1</u> <0.1 <0.1	8.54 8.56 8.55	90.5 90.5 90.5	$\begin{array}{c c} 2.11 \\ \hline 1.97 \end{array}$ 2.0	7.71 7.7	$ \begin{array}{c c} 0.06 \\ 0.06 \end{array} 0.06 $	3 3.5
Date	18-Jan-21	-						-		

Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery



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M1	9:35	0.13	13.2 13.2	13.2	<0.1 <0.1	< 0.1	8.67 8.7	8.69	90.8 91.0	90.9	1.35 1.32	1.3	7.69 7.69	7.7	0.06	0.06	<2 <2	<2

Date	20-Jan-21																	
Location	Time	Depth (m)	Temp	( <b>oC</b> )	Flow V	elocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ty (NTU)	р	H	Sali	nity	SS(1	mg/L)
M1	0.20	0.12	15.8	15.9	< 0.1	<0.1	8.37	Q 27	90.1	90.1	1.89	1.0	7.71	77	0.05	0.05	10	60
M1	9:30	0.15	15.8	13.8	< 0.1	<0.1	8.37	0.37	90.0	90.1	1.94	1.9	7.71	1.1	0.05	0.05	2	6.0

Date	22-Jan-21	•								-				-				
Location	Time	Depth (m)	Temp	( <b>oC</b> )	Flow V	elocity (m/s)	DO (r	ng/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(1	mg/L)
M1	0.45	0.12	17.8	170	< 0.1	<0.1	7.72	7 70	88.2	00 7	1.56	15	7.60	76	0.05	0.05	9	5 5
111	9:45	0.15	17.8	17.0	< 0.1	<0.1	7.72	1.12	88.1	00.2	1.49	1.5	7.60	/.6	0.05	0.05	2	5.5

Date	25-Jan-21	-								-	-			-				-
Location	Time	Depth (m)	Temp	( <b>oC</b> )	Flow V	elocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ty (NTU)	р	H	Sali	nity	SS(1	mg/L)
M1	9:30	0.13	17.4 17.4	17.4	<0.1 <0.1	<0.1	8.18 7.88	8.03	92.6 89.2	90.9	2.35 2.65	2.5	7.91 7.91	7.9	0.05	0.05	4 3	3.5

Date	27-Jan-21	-											-	-	-		-	
Location	Time	Depth (m)	Temp	( <b>oC</b> )	Flow V	elocity (m/s)	DO (r	ng/L)	DO	(%)	Turbidi	ty (NTU)	р	H	Sali	nity	SS(1	ng/L)
M1	15:00	0.12	17.9	17.0	< 0.1	<0.1	7.97	8.09	91.2	02.8	2.76	2.0	7.83	70	0.05	0.05	2	7.0
MI	13.00	0.15	17.9	17.9	< 0.1	<0.1	8.2	0.09	94.4	92.0	3.02	2.9	7.83	7.8	0.05	0.05	12	7.0

Date	29-Jan-21	-							•				-	-	-			
Location	Time	Depth (m)	Temp	) (0C)	Flow V	elocity (m/s)	DO (r	ng/L)	DO	(%)	Turbidi	ty (NTU)	р	H	Sali	nity	SS(1	mg/L)
M1	0.40	0.12	15.4	15 /	< 0.1	<0.1	7.8	7 82	86.8	87.0	1.41	15	7.40	74	0.06	0.06	3	2.5
MI	9:40	0.15	15.4	13.4	< 0.1	<0.1	7.83	1.02	87.1	87.0	1.57	1.5	7.40	7.4	0.06	0.00	4	5.5



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### Water Quality Impact Monitoring Result for M2

Date	2-Jan-21																	
Location	Time	Depth (m)	Temp	) (oC)	Flow V	elocity (m/s)	DO (I	ng/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(1	ng/L)
M2	12:50	0.00 (#)																

Date	4-Jan-21		· · · · · · · · · · · · · · · · · · ·		-		•	•	•	
Location	Time	Depth (m)	Temp (oC)	Flow Velocity (m/s)	DO (mg/L)	<b>DO</b> (%)	<b>Turbidity (NTU)</b>	pH	Salinity	SS(mg/L)
M2	10:00	0.00 (#)								

Date	6-Jan-21	-													-			
Location	Time	Depth (m)	Temp (	( <b>oC</b> )	Flow Ve	elocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(r	ng/L)
M2	10:25	0.00 (#)		_														

Date	8-Jan-21																	
Location	Time	Depth (m)	Temp	o (oC)	Flow V	velocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ty (NTU)	р	H	Sali	nity	SS(1	ng/L)
M2	10:20	0.00 (#)																

Date	11-Jan-21	-									-			•	•	-		
Location	Time	Depth (m)	Temp	) (oC)	Flow V	elocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(1	ng/L)
M2	10:30	0.00 (#)																

Date	13-Jan-21																	
Location	Time	Depth (m)	Temp	<b>o</b> (oC)	Flow V	elocity (m/s)	DO (r	ng/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(1	ng/L)
M2	10:05	0.00 (#)																

Date	15-Jan-21																	
Location	Time	Depth (m)	Temp	( <b>oC</b> )	Flow V	elocity (m/s)	DO (r	ng/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(r	ng/L)
M2	10:20	0.00 (#)																

Date	18-Jan-21	-						-	-		-						-	
Location	Time	Depth (m)	Temp	(oC)	Flow V	velocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(1	ng/L)
M2	10:20	0.00 (#)																

# Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery



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0.00 (#)

M2

10:05

Date	20-Jan-21	-																
Location	Time	Depth (m)	Temp	) (0C)	Flow V	velocity (m/s)	DO (r	ng/L)	DO	(%)	Turbidi	ty (NTU)	pl	H	Sali	nity	SS(n	ng/L)

Date	22-Jan-21	-								
Location	Time	Depth (m)	Temp (oC)	Flow Velocity (m/s)	DO (mg/L)	DO (%)	<b>Turbidity (NTU)</b>	pН	Salinity	SS(mg/L)
M2	10:30	0.00 (#)								

Date	25-Jan-21																	
Location	Time	Depth (m)	Temp	(oC)	Flow V	elocity (m/s)	DO (r	ng/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(1	ng/L)
M2	10:20	0.00 (#)																

Date	27-Jan-21	-						-	-		-							
Location	Time	Depth (m)	Temp	) (oC)	Flow V	elocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(n	ng/L)
M2	10:10	0.00 (#)																

Date	29-Jan-21																	
Location	Time	Depth (m)	Temp (	( <b>oC</b> )	Flow Veloc	city (m/s)	DO (n	ng/L)	DO	(%)	Turbidi	ty (NTU)	pl	H	Sali	nity	SS(r	ng/L)
M2	10:30	0.00 (#)				_												

Remarks: (#) During the water monitoring, the channel of M2 was observed dried up and water sampling was unable be carried out



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### Water Quality Impact Monitoring Result for M3

Date	2-Jan-21																	
Location	Time	Depth (m)	Temp	( <b>oC</b> )	Flow V	elocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(1	ng/L)
M3	13:00	2.45	13.7 13.7	13.7	<0.1 <0.1	<0.1	6.8 6.71	6.76	72.6	72.1	1.74 2.02	1.9	7.60 7.60	7.6	0.04 0.04	0.04	3 3	3.0

Date	4-Jan-21	•							-		-					-		
Location	Time	Depth (m)	Temp	( <b>oC</b> )	Flow V	elocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ity (NTU)	p	H	Sali	nity	SS(	mg/L)
M3	10.10	2.45	16.2	16.0	< 0.1	<0.1	6.88	691	73.3	72.0	1.09	1 1	7.07	7 1	0.04	0.04	<2	2.0
M15	10:10	2.45	16.2	10.2	< 0.1	<0.1	6.79	6.84	72.3	12.0	1.09	1.1	7.07	/.1	0.04	0.04	2	2.0

Date	6-Jan-21																	
Location	Time	Depth (m)	Temp	(oC)	Flow V	elocity (m/s)	DO (r	ng/L)	DO	(%)	Turbidi	ty (NTU)	р	H	Sali	nity	SS(r	ng/L)
M3	10:35	2.45	16.4 16.4	16.4	<0.1	<0.1	7.44	7.58	84.2 85.3	84.8	1.27 1.61	1.4	7.51 7.51	7.5	0.03	0.03	<2 <2	<2

Date	8-Jan-21																	
Location	Time	Depth (m)	Temp	) (oC)	Flow V	elocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(r	ng/L)
M3	10:30	2.45	12.2 12.2	12.2	<0.1 <0.1	<0.1	8.53 8.52	8.53	86.6 86.5	86.6	1.54 1.43	1.5	7.48 7.48	7.5	0.04 0.04	0.04	<2 <2	<2

Date	11-Jan-21	-									-							•
Location	Time	Depth (m)	Temp	( <b>oC</b> )	Flow V	elocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(1	mg/L)
M3	10:40	2.45	10.5 10.5	10.5	<0.1 <0.1	<0.1	8.95 8.94	8.95	88.8 88.7	88.8	2.42 2.59	2.5	7.47 7.47	7.5	0.04 0.04	0.04	2 2	2.0

Date	13-Jan-21																	
Location	Time	Depth (m)	Temp	(oC)	Flow V	elocity (m/s)	DO (1	mg/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(1	ng/L)
M3	10:15	2.45	10.7 10.7	10.7	<0.1 <0.1	<0.1	8.98 9	8.99	89.4 89.6	89.5	1.57 1.48	1.5	7.46 7.46	7.5	0.03	0.03	23	2.5

Date	15-Jan-21	-							-		-	-						
Location	Time	Depth (m)	Temp	( <b>oC</b> )		elocity (m/s)	DO (r	ng/L)	DO	(%)	Turbidi	ity (NTU)	p	H	Sali	nity	SS(1	ng/L)
M3	10.20	2.45	12.9	12.0	< 0.1	<0.1	8.54	8 56	90.3	90.5	1.72	1 0	7.40	74	0.03	0.03	4	4.0
IVI S	10:30	2.45	12.9	12.9	< 0.1	<0.1	8.57	0.50	90.7	90.5	1.96	1.0	7.40	7.4	0.03	0.05	4	4.0

Date	18-Jan-21	-							-		-					-	-	
Location	Time	Depth (m)	Temp	) (0C)	Flow V	velocity (m/s)	DO (1	mg/L)	DO	(%)	Turbidi	ty (NTU)	p	H	Sali	nity	SS(1	ng/L)
M3	10:30	2.45	13.9	13.9	< 0.1	< 0.1	8.34	8.35	87.9	88.0	1.55	1.5	7.51	7.5	0.04	0.04	4	4.0

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		.0.1	0.2	5	88.1		7 5 1	0.04	4	

Date	20-Jan-21																	
Location	Time	Depth (m)	Temp	( <b>oC</b> )	Flow V	elocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ty (NTU)	р	H	Sali	nity	SS(1	ng/L)
M3	10:15	2.45	15 15	15.0	<0.1	<0.1	7.36 8.08	7.72	79.4 87.1	83.3	1.53 1.67	1.6	7.48 7.48	7.5	0.03	0.03	4	4.0

Date	22-Jan-21	-							-		-	-						
Location	Time	Depth (m)	Temp	( <b>oC</b> )	Flow V	elocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ity (NTU)	p	H	Sali	nity	SS(1	mg/L)
M3	10":40	2.45	18.3 18.3	18.3	<0.1 <0.1	<0.1	7.7	7.71	88.0 88.1	88.1	1.68 1.19	1.4	7.43 7.43	7.4	0.07	0.07	3 4	3.5

Date	25-Jan-21																	
Location	Time	Depth (m)	Temp	(oC)	Flow V	elocity (m/s)	DO (I	ng/L)	DO	(%)	Turbidi	ty (NTU)	р	H	Sali	nity	SS(1	ng/L)
M3	10:30	2.45	18 18	18.0	<0.1 <0.1	<0.1	7.73 7.78	7.76	87.7 88.3	88.0	1.22 1.2	1.2	7.43 7.43	7.4	0.03	0.03	23	2.5

Date	27-Jan-21	-							-		-			•		-		
Location	Time	Depth (m)	Temp	(oC)		elocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ty (NTU)	р	H	Sali	nity	SS(r	ng/L)
M3	10:20	2.45	17.5 17.5	17.5	<0.1 <0.1	<0.1	7.46 7.3	7.38	86.7 85.5	86.1	2.84 2.57	2.7	7.45 7.45	7.5	0.03	0.03	5 2	3.5

Date	29-Jan-21																	
Location	Time	Depth (m)	Temp	(oC)	Flow V	elocity (m/s)	DO (1	ng/L)	DO	(%)	Turbidi	ty (NTU)	р	H	Sali	nity	SS(n	ng/L)
M3	10:40	2.45	17.3 17.3	17.3	<0.1 <0.1	<0.1	7.74	7.75	86.6 86.7	86.7	0.97	1.0	7.37 7.37	7.4	0.03	0.03	<2 <2	<2



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### Water Quality Impact Monitoring Result for M4

Date	2-Jan-21																	
Location	Time	Depth (m)	Temp	( <b>oC</b> )	Flow Velo	city (m/s)	DO (I	mg/L)	DO	(%)	Tur	bidity	p	H	Sali	nity	SS(1	ng/L)
M4	9:15	0.42	13.9 13.9	13.9	<0.1 <0.1	<0.1	8.87 9.01	8.94	95.4 96.9	96.2	1.7 2.0	1.9	7.44	7.4	0.09	0.09	<2 <2	<2

Date	4-Jan-21	•							-	-			-		-	-		
Location	Time	Depth (m)	Temp	(oC)	Flow Veloc	city (m/s)	DO (r	ng/L)	DO	(%)	Tur	bidity	p	H	Sali	nity	SS(1	mg/L)
<b>M</b> 4	10.20	0.40	16.7	167	< 0.1	<0.1	8.83	0 0 1	94.5	04.4	1.0	0.0	7.09	71	0.08	0.09	<2	~2
M4	10:30	0.40	16.7	16.7	< 0.1	<0.1	8.79	0.01	94.2	94.4	0.9	0.9	7.09	/.1	0.08	0.08	<2	<2

Date	6-Jan-21																	
Location	Time	Depth (m)	Temp	) (0C)	Flow Velo	city (m/s)	DO (1	ng/L)	DO	(%)	Tur	bidity	p	H	Sali	nity	SS(1	ng/L)
M4	10:50	0.42	16.7 16.7	16.7	<0.1 <0.1	<0.1	7.7 7.97	7.84	85.1 88.1	86.6	0.9 0.6	0.7	7.30	7.3	0.08	0.08	<2 <2	<2

8-Jan-21																	
Time	Depth (m)	Temp	( <b>oC</b> )	Flow Veloc	city (m/s)	DO (r	ng/L)	DO	(%)	Tur	bidity	p	H	Sali	nity	SS(r	ng/L)
10:45	0.45	12.1	12.1	<0.1	< 0.1	8.48	8.49	85.0 85.1	85.1	1.7	1.7	7.37	7.4	0.07	0.07	<2	<2
-	Time	Time Depth (m)	TimeDepth (m)Temp12 1	Time         Depth (m)         Temp (oC)           10:45         0.45         12.1         12.1	Time         Depth (m)         Temp (oC)         Flow Veloc           10:45         0.45         12.1         12.1         <0.1	Time         Depth (m)         Temp (oC)         Flow Velocity (m/s)           10:45         0.45         12.1         12.1         <0.1         <0.1	Time         Depth (m)         Temp (oC)         Flow Velocity (m/s)         DO (n           10:45         0.45         12.1         12.1         <0.1         8.48	Time         Depth (m)         Temp (oC)         Flow Velocity (m/s)         DO (mg/L) $10:45$ $0.45$ $12.1$ $12.1$ $<0.1$ $<0.1$ $8.48$ $8.49$	Time         Depth (m)         Temp (oC)         Flow Velocity (m/s)         DO (mg/L)         DO           10:45         0.45         12.1         12.1         <0.1         <0.1         8.48         8.49         85.0	Time         Depth (m)         Temp (oC)         Flow Velocity (m/s)         DO (mg/L)         DO (%)           10:45         0.45         12.1         12.1         <0.1         <0.1         8.48         8.49         85.0         85.1	Time         Depth (m)         Temp (oC)         Flow Velocity (m/s)         DO (mg/L)         DO (%)         Tur           10:45         0.45         12.1         12.1         <0.1         8.48         8.49         85.0         85.1         1.7	Time         Depth (m)         Temp (oC)         Flow Velocity (m/s)         DO (mg/L)         DO (%)         Turbidity           10:45         0.45         12.1         12.1         <0.1         <0.1         8.48         8.49         85.0         85.1         1.7           10:45         0.45         12.1         12.1         <0.1         <0.1         8.48         8.49         85.1         1.7	Time         Depth (m)         Temp (oC)         Flow Velocity (m/s)         DO (mg/L)         DO (%)         Turbidity         pl           10:45         0.45         12.1         12.1         <0.1         <0.1         8.48         8.49         85.0         85.1         1.7         7.37           10:45         0.45         12.1         12.1         <0.1         <0.1         8.49         85.0         85.1         1.7         7.37	Time         Depth (m)         Temp (oC)         Flow Velocity (m/s)         DO (mg/L)         DO (%)         Turbidity         pH           10:45         0.45         12.1         12.1         <0.1         <0.1         8.48         8.49         85.0         85.1         1.7         7.37         7.4	Time         Depth (m)         Temp (oC)         Flow Velocity (m/s)         DO (mg/L)         DO (%)         Turbidity         pH         Sali           10:45         0.45 $12.1$ $12.1$ $12.1$ $<0.1$ $<0.1$ $8.48$ $8.49$ $85.0$ $85.1$ $1.7$ $7.37$ $7.4$ $0.07$	Time         Depth (m)         Temp (oC)         Flow Velocity (m/s)         DO (mg/L)         DO (%)         Turbidity         pH         Salinity           10:45         0.45         12.1         12.1         <0.1         <0.1         8.48         8.49         85.0         85.1         1.7         1.7         7.37         7.4         0.07         0.07	Time         Depth (m)         Temp (oC)         Flow Velocity (m/s)         DO (mg/L)         DO (%)         Turbidity         pH         Salinity         SS(r           10:45         0.45         12.1         12.1         <0.1         <0.1         <0.1         <0.1         8.48         8.49         85.0         85.1         1.7         1.7         7.37         7.4         0.07         0.07         <2

Date	11-Jan-21	•							-				_					
Location	Time	Depth (m)	Temp	) (oC)	Flow Velo	city (m/s)	DO (1	ng/L)	DO	(%)	Tur	bidity	p	H	Sali	nity	SS(1	mg/L)
M4	11.00	0.42	11	11.0	< 0.1	<0.1	9.16	0.17	90.5	90.5	1.2	1.0	7.34	72	0.08	0.08	2	2.0
1014	11:00	0.42	11	11.0	< 0.1	<0.1	9.17	9.17	90.5	90.5	1.2	1.2	7.34	1.5	0.08	0.08	2	2.0

Date	13-Jan-21																	
Location	Time	Depth (m)	Temp	( <b>oC</b> )	Flow Veloc	city (m/s)	DO (1	ng/L)	DO	(%)	Tur	bidity	p	H	Sali	nity	SS(n	ng/L)
M4	10:35	0.41	10.7 10.7	10.7	<0.1 <0.1	< 0.1	7.8 8.1	7.95	77.7 80.7	79.2	0.9 0.8	0.9	7.30 7.30	7.3	0.07	0.07	<2 <2	<2

Date	15-Jan-21												-		_			
Location	Time	Depth (m)	Temp	(0C)	Flow Veloc	city (m/s)	DO (r	ng/L)	DO	(%)	Tur	bidity	p	H	Sali	nity	SS(r	mg/L)
M4	10:50	0.43	13.2 13.2	13.2	<0.1 <0.1	< 0.1	7.67 7.68	7.68	81.2 81.4	81.3	1.0 0.9	1.0	7.20	7.2	0.07	0.07	2 4	3.0

Date	18-Jan-21	•					-	•	-	-	-							
Location	Time	Depth (m)	Tem	) (oC)	Flow Veloc	city (m/s)	DO (1	ng/L)	DO	(%)	Tur	bidity	p	H	Sali	nity	SS(1	ng/L)
M4	10:45	0.43	13.8	13.8	< 0.1	< 0.1	8.67	8.68	91.4	91.5	1.0	1.0	7.29	7.3	0.08	0.08	<2	<2

Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery



Monthly Environmental Monitoring & Audit Report (No.30) – January 2021

			13.8		< 0.1		8.68		91.5		1.1		7.29		0.08		<2	
Date	20-Jan-21	· · · · ·							· · · · ·	<u>_</u>			<u> </u>					
			m	( ( ( )		•• • • •	DO (			(0)()				-	<b>a</b> 11	•.	aa.	/ <b>T</b> \
Location	Time	Depth (m)	Temp	(0C)	Flow Velo	city (m/s)	<b>DO</b> (1	ng/L)	DO	(%)		bidity	pH		Sali	nity		ng/L)
M4	10:35	0.41	16.2 16.2	16.2	<0.1 <0.1	< 0.1	8.61 8.62	8.62	92.9 93.0	93.0	1.3	1.2	7.29	7.3	0.08	0.08	2	2.5
I		Į	10.2		<b>\0.1</b>		0.02		75.0	l	1.1		1.2)		0.00			
Date	22-Jan-21																	
Location	Time	Depth (m)	Temp	( <b>oC</b> )	Flow Velo	city (m/s)	DO (1	ng/L)	DO	(%)	Turl	bidity	pН	[	Sali	nity	SS(1	ng/L)
M4	11:00	0.41	19.1	19.1	< 0.1	< 0.1	7.84	7.84	89.8	89.8	1.8	1.6	7.19	7.2	0.07	0.07	4	3.5
i			19.1		< 0.1		7.83		89.7		1.4		7.19		0.07		3	
Date	25-Jan-21																	
Location	Time	Depth (m)	Temp	$(0\mathbf{C})$	Flow Velo	rity (m/s)	DO (1	ma/I)	DO	$(0/\mathbf{)}$	Tum	bidity	T1					
ľ			1 cmp				<b>D</b> U (1	IIg/L)	DO	(%)	1 ur	Diaity	pH	L	Sali	nity	SS(1	ng/L)
3.4.4	10.70									` <i>`</i>		•/					<b>SS(1</b> 2	
M4	10:50	0.43	18.6	18.6	< 0.1	<0.1	7.27	7.53	82.2	(%) 85.2	2.1	2.0	7.19	7.2	0.07	nity 0.07	2	<b>ng/L)</b> 2.5
M4	10:50									` ´		•/						
			18.6		< 0.1		7.27		82.2	` ´	2.1	•/	7.19		0.07		2	
Date	27-Jan-21	0.43	18.6 18.6	18.6	<0.1 <0.1	<0.1	7.27 7.79	7.53	82.2 88.1	85.2	2.1 1.9	2.0	7.19 7.19	7.2	0.07 0.07	0.07	2 3	2.5
Date Location	27-Jan-21 Time	0.43 <b>Depth (m)</b>	18.6 18.6 <b>Temp</b>	18.6	<0.1 <0.1 Flow Veloc	<0.1	7.27 7.79 <b>DO</b> (1	7.53 ng/L)	82.2 88.1 <b>DO</b>	85.2 (%)	2.1 1.9 <b>Tur</b>	2.0	7.19 7.19 <b>p</b> H	7.2	0.07 0.07 Salin	0.07	2 3 SS(1	2.5 ng/L)
Date	27-Jan-21	0.43	18.6 18.6	18.6	<0.1 <0.1	<0.1	7.27 7.79	7.53	82.2 88.1	85.2	2.1 1.9	2.0	7.19 7.19	7.2	0.07 0.07	0.07	2 3	2.5
Date Location	27-Jan-21 Time	0.43 <b>Depth (m)</b>	18.6 18.6 <b>Temp</b> 18.5	18.6	<0.1 <0.1 <b>Flow Veloc</b> <0.1	<0.1	7.27 7.79 <b>DO (1</b> 7.81	7.53	82.2 88.1 <b>DO</b> 90.7	85.2 (%)	2.1 1.9 <b>Tur</b> 1.1	2.0	7.19 7.19 <b>pH</b> 7.22	7.2	0.07 0.07 Salii 0.08	0.07	2 3 <b>SS(1</b> 3	2.5 ng/L)
Date Location	27-Jan-21 Time	0.43 <b>Depth (m)</b>	18.6 18.6 <b>Temp</b> 18.5	18.6	<0.1 <0.1 <b>Flow Veloc</b> <0.1	<0.1	7.27 7.79 <b>DO (1</b> 7.81	7.53	82.2 88.1 <b>DO</b> 90.7	85.2 (%)	2.1 1.9 <b>Tur</b> 1.1	2.0	7.19 7.19 <b>pH</b> 7.22	7.2	0.07 0.07 Salii 0.08	0.07	2 3 <b>SS(1</b> 3	2.5 ng/L)

7.89

88.0

88.0

88.0

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2.1

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7.14

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4

5

4.5

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7.89

< 0.1

< 0.1

< 0.1

17.6

17.6

17.6

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M4

10:55

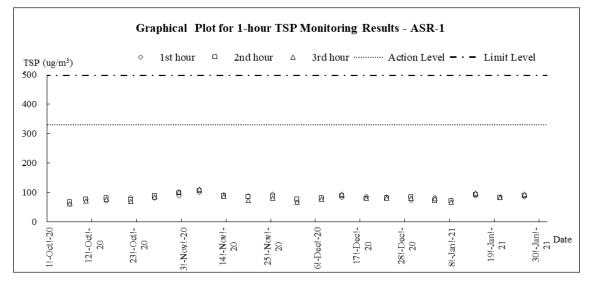


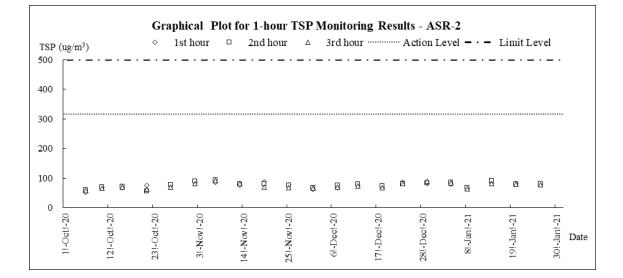
## Appendix I

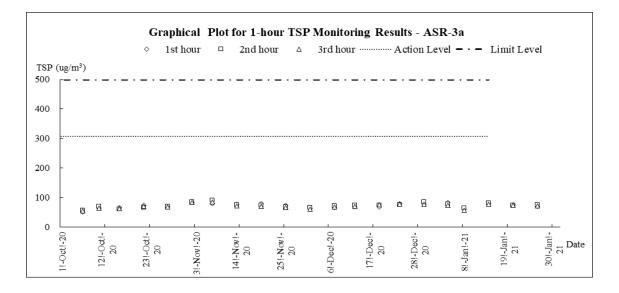
### Graphical Plots of Air Quality, Noise and Water Quality



#### Air Quality Impact Monitoring – 1-hour TSP

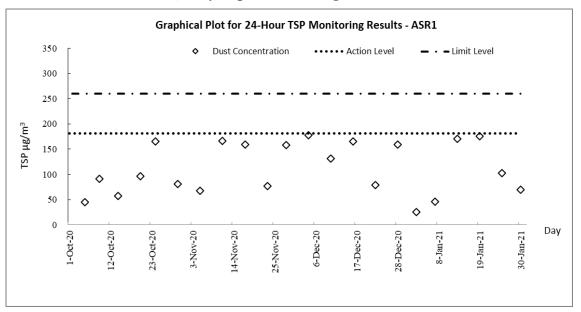


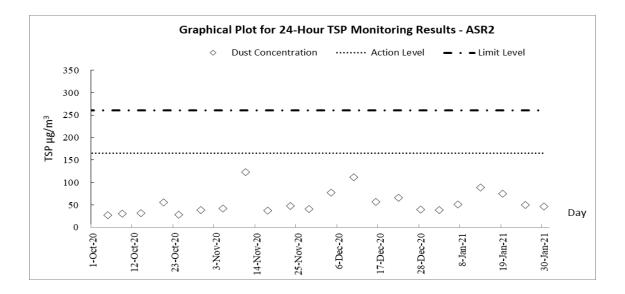


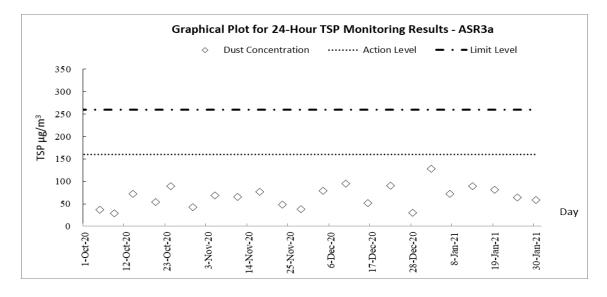




#### Air Quality Impact Monitoring – 24-hour TSP

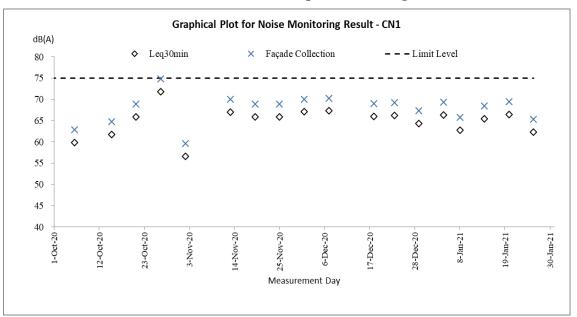


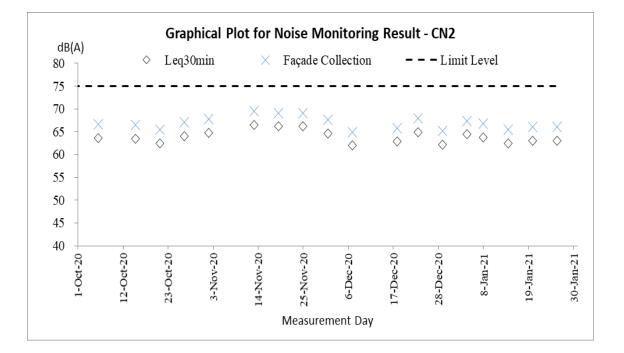






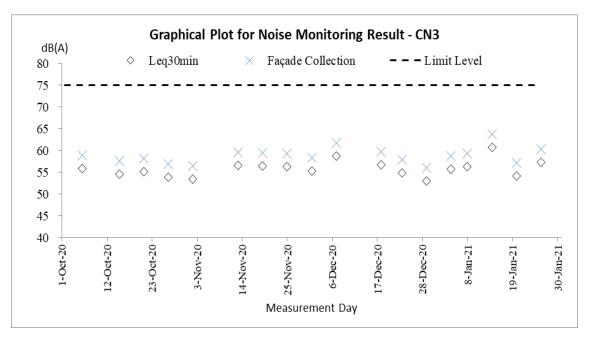
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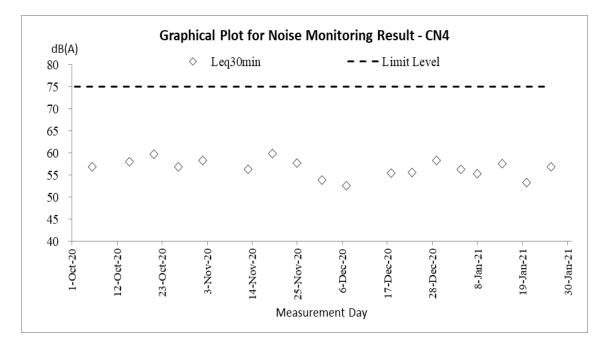




Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery Monthly Environmental Monitoring & Audit Report (No.30) – January 2021



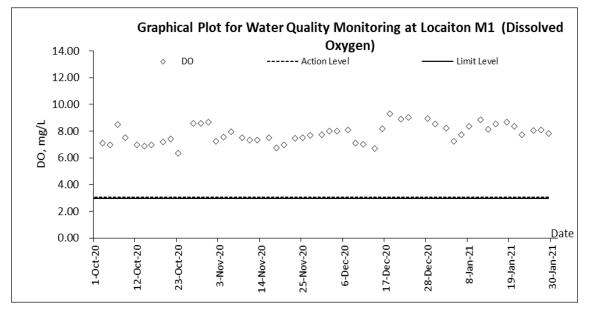


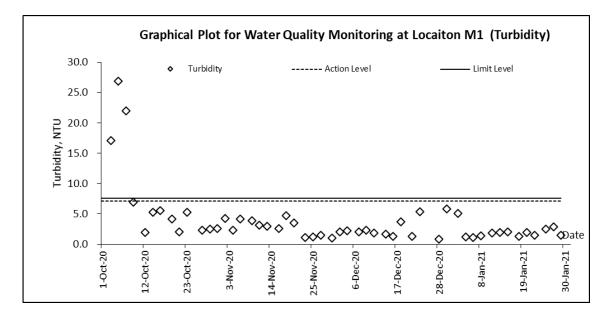


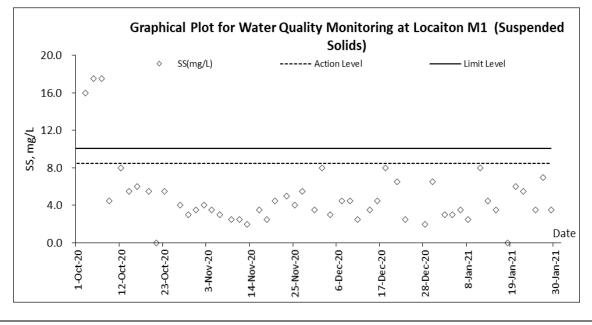
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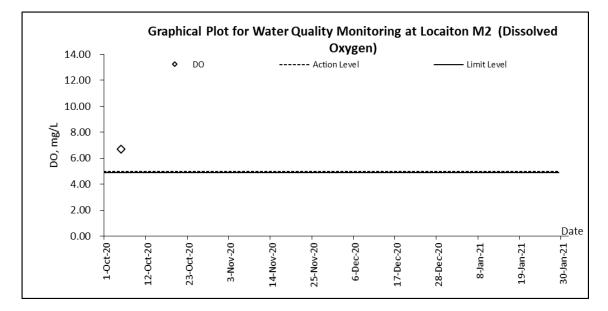
#### Water Quality Impact Monitoring

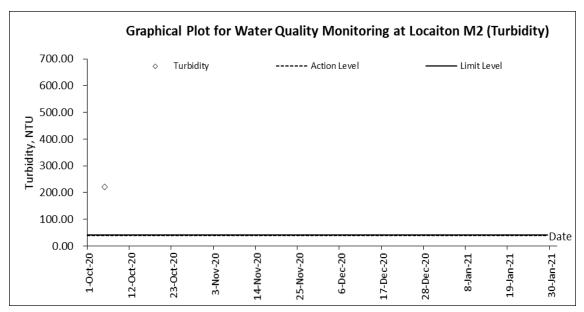


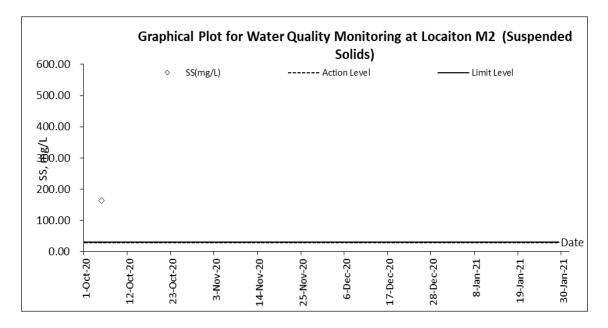




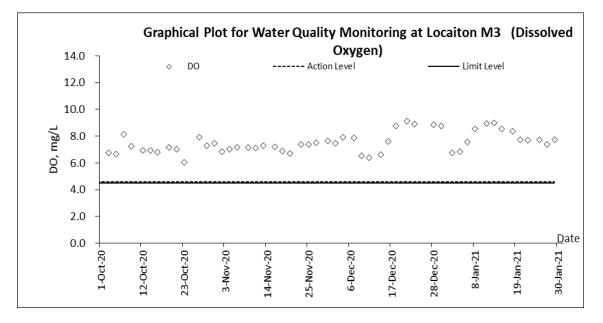


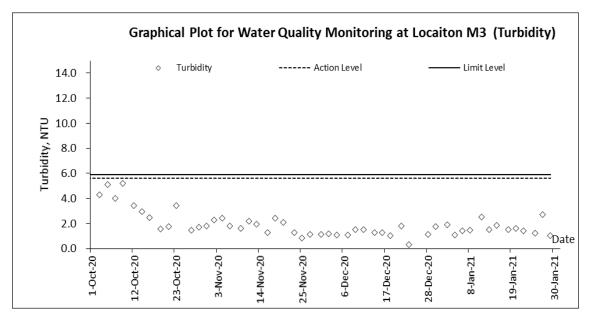


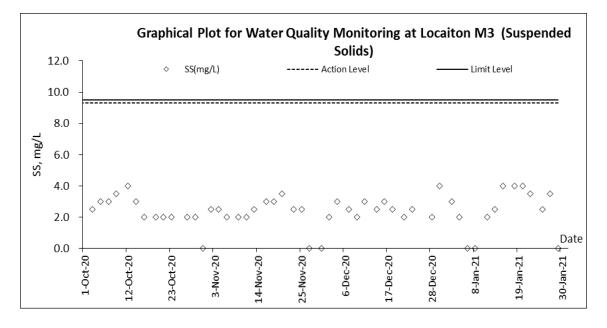




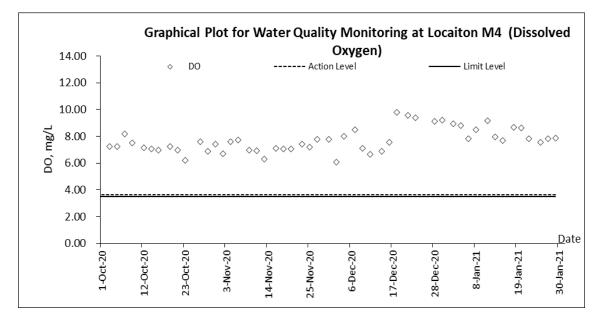


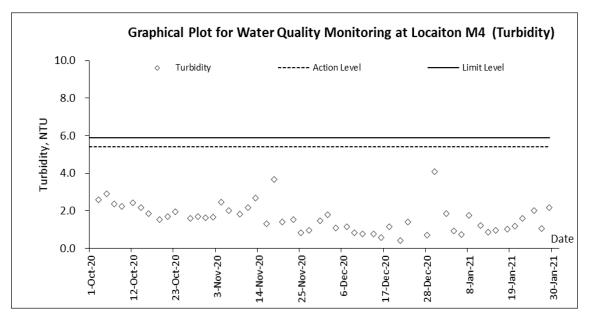


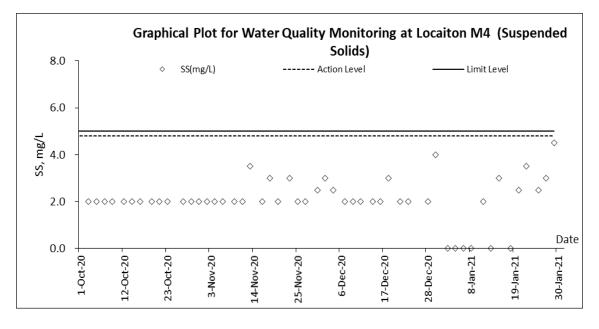














# Appendix J

## Meteorological Data of the Reporting Month

 $Z: \label{eq:loss} 2018 \ CV-2016-10) \ 600 \ EM\&A \ Report \ Submission \ Monthly \ Report \ 2021 \ 30th \ Month \ (Jan \ 2021) \ Ro524v2. doc \ Ro524v2. doc \ Ro524v2. \ Ro$ 



				r	Fa Kwu	Ling Statio	ı
Date		Weather	Total Rainfall (mm)	Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
1-Jan-21	Fri	Sunny periods in the afternoon.	0	9	5	61	N/NW
2-Jan-21	Sat	Moderate northeasterly winds.	0	10.4	7	57.5	N/NW
3-Jan-21	Sun	Dry with sunny periods.	0	14.5	6.7	54.2	N
4-Jan-21	Mon	Dry with sunny periods.	0	18.7	5	60.7	N/NW
5-Jan-21	Tue	The weather is dry.	0	19.5	6.2	58.5	N
6-Jan-21	Wed	Dry with sunny periods in the afternoon.	0	16.4	6.2	67.5	N/NW
7-Jan-21	Thu	Mainly cloudy tonight. Moderate northeasterly winds.	0	12.5	11.2	72.5	Ν
8-Jan-21	Fri	Cold. Mainly cloudy with bright periods.	0	6.8	20.5	57.5	N/NE
9-Jan-21	Sat	Very dry. Moderate to fresh northerly winds	0	9.5	15	49.0	N/NE
10-Jan-21	Sun	Mainly cloudy. Fresh northerly winds, strong offshore.	0	12.1	10.7	30	N/NE
11-Jan-21	Mon	Cold and very dry.	0	9.5	13	41	N/NE
12-Jan-21	Tue	Fine and dry with cold morning tomorrow.	0	8.9	13	30.5	N/NE
13-Jan-21	Wed	Fine. Very dry in the afternoon.	0	9.7	7	52.5	E/SE
14-Jan-21	Thu	Light to moderate northeasterly winds.	0	12.2	7.5	60.5	E/SE
15-Jan-21	Fri	Fine. Very dry in the afternoon.	0	16.3	10.5	47	N/NE
16-Jan-21	Sat	Fine and dry with cold morning tomorrow.	0	16.5	9	51	N/NE
17-Jan-21	Sun	Light to moderate northeasterly winds.	0	16	11.5	44	N/NE
18-Jan-21	Mon	Moderate to fresh easterly winds	0	13.1	9.2	49	N/NE
19-Jan-21	Tue	One or two light rain patches at night.	0	13.8	7.5	64	E/NE
20-Jan-21	Wed	Mainly cloudy. Sunny intervals during the day.	0	19.2	8.2	62.2	E/SE
21-Jan-21	Thu	Warm with sunny periods and some haze in the afternoon.	0	20.7	8	69	E/SE
22-Jan-21	Fri	Mainly cloudy tonight. Light winds.	0	21	6.2	73.5	NW
23-Jan-21	Sat	Mainly fine and dry.	0	20.1	7	71	NW
24-Jan-21	Sun	Moderate to fresh east to northeasterly winds	Trace	18.2	10	69.2	E/SE
25-Jan-21	Mon	Mainly fine and dry.	0	19.7	7.5	71	E/SE
26-Jan-21	Tue	Mainly fine and dry.	0	20.7	5.5	73.5	S/SE
27-Jan-21	Wed	Warm with some haze during the day.	0	18.6	7.5	72	E
28-Jan-21	Thu	Moderate northerly winds, fresh tonight. Becoming cool.	0	18.6	8.7	69.2	Ν
29-Jan-21	Fri	Fine and dry. Moderate to fresh northeasterly winds	0	14.9	8.7	60.5	Е
30-Jan-21	Sat	Light to moderate easterly winds.	0	16.8	10.5	61.0	E/SE
31-Jan-21	Sun	Mainly fine. Warm during the day.	0	17.3	10.7	58	E/SE



# Appendix K

## **Ecological Survey Report**

 $Z: Jobs \ 2018 \ TCS 00881 (CV-2016-10) \ 600 \ EM\&A \ Report \ Submission \ Monthly \ Report \ 2021 \ 30th \ Month \ (Jan \ 2021) \ Ro524v2. doc \ Ro524v2. \ And \ And$ 



Ecological Survey Report for Contract CV/2016/10



# Contract No. CV/2016/10 Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery

# Monthly Report of Ecologically Sensitive Habitats Monitoring – January 2021

Revision Date of issue	0 28 Jan 2021	
Prepared by	Alan Lam	R
Reviewed by	Edwina Yeung	and a
Verified by	Mike Leung	A



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Agreement No. CE1/2013 (CE) Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery – Design and Construction Monthly Report of Ecologically Sensitive Habitats Monitoring

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# **1** INTRODUCTION

### 1.1 <u>BACKGROUND</u>

- 1.1.1 The main objective of the proposed site formation and associated infrastructural works for development of columbarium, crematorium (C&C) and related facilities at Sandy Ridge Cemetery is to increase the public cremation services and supply of public niches to meet the future demand.
- 1.1.2 The project includes site formation and associated works for development of C&C facilities at the Sandy Ridge Cemetery, road works within Sandy Ridge Cemetery, widening a section of Lin Ma Hang Road (from 6.5m to 7.3m), provision of off-site pick-up/drop-off points for shuttle buses as well as barging point at Siu Lam, Lok On Pai.
- 1.1.3 The Environmental Impact Assessment (EIA) report, including Environmental Monitoring and Audit Manual (EM&A Manual), was approved with conditions on 8 August 2016 (Register No.: AEIAR-198/2016). EPD issued an Environmental Permit (EP) for the Project (EP-534/2017) on 7 April 2017. A Further Environment Permit (FEP) for the Project (FEP-01/534/2017) was issued on 23 February 2018, variation of EP (EP-534/2017/A) and variation of FEP (FEP-01/534/2017/A) were issued on 24 December 2018.
- 1.1.4 According to Clause 3.1 of the FEP (FEP-01/534/2017/A), "The Permit Holder shall implement the EM&A programme in accordance with the procedures and requirements as set out in the EM&A Manual. Any changes to the programme shall be justified by the ET Leader and verified by the IEC as conforming to the information and requirements contained in the EM&A Manual before submission to the Director for approval".
- 1.1.5 This Ecologically Sensitive Habitats Monitoring Methodology articulates the protocol of monitoring the ecology of concerned habitats as specified in EM&A Manual.

#### 1.2 <u>OBJECTIVE</u>

- 1.2.1 According to approved EIA report (AEIAR-198/2016), habitat types within project boundary comprise of watercourse, grassland, upland grassland, plantation, woodland and developed area. Natural habitats were of moderate ecological value in terms of species diversity, species rarity, species abundance, ecological linkage as well as nursery. Moreover, 0.3ha of wet woodland on the northern side of Sandy Ridge was deemed habitat with high ecological value. Four types of habitats were regarded as ecologically sensitive habitats, namely wet woodland, watercourses, upland grassland and woodland. Considering human disturbance in upcoming construction and operation phases, ecologically sensitive habitats shall be monitored in accordance with EM&A Manual.
- 1.2.2 The objective of ecologically sensitive habitats monitoring is to evaluate the effectiveness of measures to minimize impacts on concerned habitats from disturbance and pollution.



# 2 ECOLOGICALLY SENSITIVE HABITATS

### 2.1 DESCRIPTION OF HABITATS

2.1.1 In order to monitor the effectiveness of the measures to the minimise impact on ecologically sensitive habitats from disturbance and pollution, monthly monitoring during construction and operation phases is required as specified in EM&A Manual. Standard faunal transect and sampling surveys cover both wetland and non-wetland habitats:

Wetland habitats	Non-wetland habitats	
Wet Woodland	Upland Grassland	
Watercourses	Woodland	

- 2.1.2 Wet woodland is small patch present on northwest of the project boundary, and is confined by the marsh area to the north and the secondary woodland to the east, south and south-west parts. A number of mature trees *Cleistocalyx nervosum* and *Acronychia pedunculata* form the tree canopy, with other self-sown shrubs (including *Psychotria asiatica, Ligustrum sinense* and *Glochidion lanceolarium*) and trees (*Aporosa dioica* and *Litsea monopetala*). Whilst botanically it comprises of naturally regenerated secondary woodland and ground level are a series of small braided streams and weep points which even during the dry season remain wet. This creates a rather uncommon habitat in Hong Kong offering suitable conditions for a good assemblage of common wetland species. The wet woodland provides a good assemblage of micro-habitats, which is relatively undisturbed and has good linkages to other natural habitat: East Asian Porcupine, Leopard Cat, Red Muntjac, Two-striped Grass Frog, Small Snakehead, *Somanniathelphusa zanklon*, Dancing Shadow-emerald.
- 2.1.3 Seasonal watercourse running west to east in the eastern part of the area inside the Project boundary is shallower in gradient than those running off the hillside. This seasonal watercourse is heavily vegetated with wetland-associated herbs including *Commelina diffusa*, *Polygonum chinense*, *Colocasia esculenta* and *Dracaena sanderiana*. A mature tree of *Aquilaria sinensis* was recorded at the bank of the seasonal watercourse to the west of the Sandy Ridge Cemetery Office. Seasonal watercourses are restricted to the steeper slopes within the project boundary and are characterised by being entirely dry for much of the dry season. However, endemic crab *S. zanklon* population is supported by ephemeral watercourses close to the project boundary.
- 2.1.4 Upland grassland is the major habitat within the project boundary. The semi-natural habitat is dominated by typical upland grassland species: fern *Dicranopteris pedata*, grass *Neyraudia reynaudiana*, *Miscanthus floridulus*, climbing vines *Smilax china*, *Smilax glabra*, and shrubs such as *Rhodomyrtus tomentosa*, *Breynia fruticosa* and *Helicteres angustifolia*. Approximately 30 flowering spikes of two orchid species Bamboo Orchid and Toothed Habenaria were recorded near the hill top in the northern part of this upland grassland. Golden-headed Cisticola, which is considered as Local Concern by Fellowes *et al.* (2002), was also recorded in upland grassland on Sandy Ridge, including a proved breeding record of fledged young in September 2013. In addition, numerous species of conservation interest were recorded in EIA report, such as East Asian Porcupine, Leopard Cat, Red Muntjac, Great Swift, Tamil Grass Dart, Small Three-ring and Small Grass Yellow.



2.1.5 Scattered patches of woodland are present throughout the assessment area, with the largest contiguous block located immediately to the east of the project boundary. These woodlands are relatively young with single-layered of canopy dominants (~10 – 15m tall) including *A. dioica, Bridelia tomentosa, Cinnamomum burmannii, Daphniphyllum calycinum, Litsea glutinosa, Rhus succedanea,* and *Zanthoxylum avicennae*. Such areas comprise secondary woodland which is largely derived from natural regeneration and colonisation of trees as a result of seed dispersal by birds and/or bats. A mature tree of *A. sinensis* is located at the woodland edge at the central part of the Project according to EIA report.

#### 2.2 MONITORING MEASURES OF WETLAND HABITATS

- 2.2.1 Wetland habitats include wet woodland and watercourses. Monitoring surveys using standardised quantitative methodology will be conducted at fixed points. For seasonal watercourse, survey shall be conducted whenever the habitat appears.
- 2.2.2 Measures to respond to decreases in numbers of aquatic fauna using the wetland habitats and action and limit levels to trigger these measures are detailed in Table 1.

Action Level	Response	Limit Level	Response
Reduction in	Investigate cause and if	Reduction	Investigate cause and if
taxa diversity	cause identified as related	in taxa	cause identified as related
by 30%	to the project instigate	diversity	to the project instigate
	remedial action to remove	by 50%	remedial action.
	or reduce source of		
	disturbance.		

Table 1 Action and Limit Levels and Responses to Evidence of Declines in Aquatic Fauna

### 2.3 MONITORING MEASURES OF NON-WETLAND HABITATS

- 2.3.1 Non-wetland habitats consist of upland grassland and woodland. Monthly quantitative surveys of non-aquatic fauna will be conducted using standard route transect counts.
- 2.3.2 Measures to respond to decreases in numbers of non-aquatic fauna using the non-wetland habitats and action and limit levels to trigger these measures are detailed in Table 2.

Action Level	Response	Limit Level	Response
Reduction in	Investigate cause and if	Reduction	Investigate cause and if
species diversity	cause identified as related	in species	cause identified as related
by 30%	to the project instigate	diversity by	to the project instigate
	remedial action to remove	50%	remedial action.
	or reduce source of		
	disturbance.		

Table 2 Action and Limit Levels and Responses to Evidence of Declines in Non-Aquatic Fauna



# 3 METHODOLOGY

The ecological survey includes all taxa being investigated in EIA report. Table 3 summarizes schedule of faunal surveys.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mammals	$\checkmark$											
Birds (day)		$\checkmark$										
Birds (night)				$\checkmark$								
Herpetofau na				$\checkmark$								
Dragonflies			$\checkmark$									
Butterflies			$\checkmark$									
Aquatic fauna	V	$\checkmark$										

Table 3 Survey Schedule

#### 3.1 MAMMAL SURVEY

3.1.1 Mammal surveys will be conducted along the transects shown in Appendix 1 during both daytime and night time periods. Along with direct observations, other field signs, such as scats and tracks, will be searched and recorded if present.

#### **3.2 BIRD SURVEY**

3.2.1 Bird surveys will be conducted along the transects shown in Appendix 1 during the surveys, species and their vocalizing individuals recorded will be enumerated and recorded according to the habitat(s) they are utilising.

#### 3.3 HERPETOFAUNA SURVEY

3.3.1 Reptile and amphibian surveys will be conducted along transects shown in Appendix 1 during surveys careful searches of appropriate microhabitats and refugia for reptiles and their vocalizing individuals will be undertaken and all reptiles observed will be identified and counted.

#### **3.4 DRAGONFLY SURVEY**

3.4.1 Dragonfly surveys will be conducted along transects shown in Appendix 1 during surveys all dragonflies seen will be identified and counted as accurately as possible.



#### 3.5 BUTTERFLY SURVEY

3.5.1 Butterfly surveys will be conducted along transects shown in Appendix 1 during surveys all dragonflies seen will be identified and counted as accurately as possible.

### 3.6 AQUATIC FAUNA SURVEY

3.6.1 Freshwater fishes and macro-invertebrates will be recorded by direct observation. All species trapped/recorded will be enumerated and identified (to the lowest taxonomic level possible), and the species of conservation importance photographed.



# 4 RESULT

This monitoring survey started on 5<sup>th</sup> January 2021. A sunny day. The day survey covered wetland and non-wetland areas. The survey was conducted by transect and at fixed points. All species seen will be identified and counted as accurately as possible.

#### Mammal

There was no mammal recorded in the monitoring area.

#### Bird

There were a total of 23 bird individuals from 6 species recorded in the monitoring area. No Golden-headed Cisticola was observed during the bird survey.

#### Herpetofauna

There was no reptile species recorded in the monitoring area. There was no amphibian species recorded in the monitoring area.

■ Butterfly

There were 4 butterfly individuals from 4 species recorded in the monitoring area.

Dragonfly

There was no odonate found in the monitoring area.

#### Freshwater communities

There was no freshwater community recorded in the monitoring area.



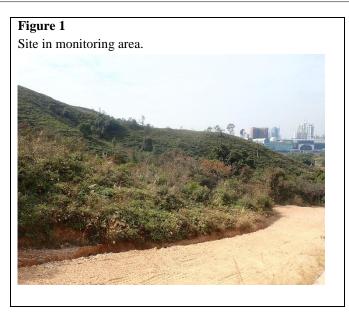


Figure 2 Mycalesis zonata South China Bush Brown 平頂眉眼蝶





### Table 4Result of mammal in survey

Scientific Name	English Name	Chinese	Conservation	5-1	5-1-2021	
Scientific Name		Name	Status	Non- wetland	Wetland	
N/A						

#### Table 5Result of Avifauna in survey

Scientific Name	English Name	Chinese	Conservation	5-1-2021		
		Name	Status	Non-wetland	Wetland	
Pycnonotus jocosus	Red-whiskered Bulbul	紅耳鵯		3	13	
Pycnonotus sinensis	Chinese Bulbul	白頭鵯		2		
Phylloscopus fuscatus	Dusky Warbler	褐柳鶯			1	
Prinia flaviventris	Yellow-bellied Prinia	黃腹鷦鶯		1		
Prinia inornata	Plain Prinia	純色鷦鶯			2	
Orthotomus sutorius	Common Tailorbird	長尾縫葉鶯		1		

### Table 6Result of reptile in survey

Scientific Name	Common Name	Chinese Name	5-1-2021			
			Non-wetland	Wetland		
N/A						

### Table 7Result of amphibian in survey

Scientific Name	Common Name	Chinese Name	Conservation	5-1-2021		
			Status	Non- wetland	Wetland	
N/A						



#### Table 8Result of butterfly in survey

Scientific Name	Common Name	Chinese Name	5-1	5-1-2021		
			Non-wetland	Wetland		
Abisara echerius	Plum Judy	蛇目褐蜆蝶		1		
Mycalesis zonata	South China Bush Brown	平頂眉眼蝶	1			
Pieris canidia	Indian Cabbage White	東方菜粉蝶		1		
Eurema hecabe	Common Grass Yellow	寬邊黃粉蝶		1		

#### Table 9Result of Odonate in survey

Scientific Name	Common Name	Chinese Name	Conservation Status	5-1-2021		
				Non-	Wetland	
				wetland	wenanu	
N/A						

#### Table 10Result of freshwater communities in survey

	Common Name		Conconvision	5-1-2021		
Scientific Name		Chinese Name	Conservation Status	Non- wetland	Wetland	
N/A						



# **5 DISUSSION**

Data analysis was carried out to compare with the biodiversity within the site boundary in the same month over years. General description of the ecological conditions is first revealed in terms of abundance as well as species richness, following by statistical analysis of the existing database. The result is considered as significant whenever the drop of diversity indexes exceeds the percentages mentioned in previous sections 2.2 and 2.3.

5.1

Total abundances and species richness in January over years were compared to show the trend. Figures 1 and 2 indicate total species richness and total abundance with the site boundary respectively.

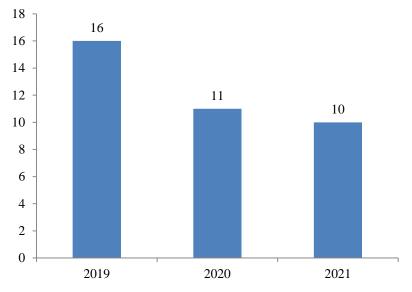


Figure 1: bar chart showing the total species richness from 2019 to 2021 (Actual quantity annotated at the top of each bar)

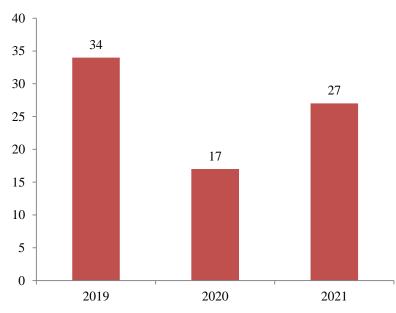
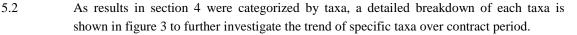


Figure 2: bar chart showing the total abundance from 2019 to 2021 (Actual quantity annotated at the top of each bar)



5.3



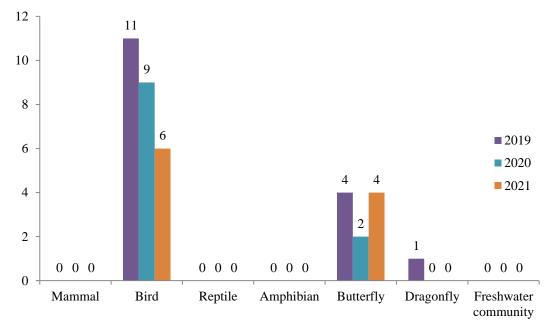


Figure 3: bar chart showing the species richness by taxa from 2019 to 2021 (Actual quantity annotated at the top of each bar)

According to EM&A Manual, monitoring measures was determined by the species diversity of types of sensitive habitats, i.e. non-wetland and wetland habitats. Abundance and species richness by habitat type in January over years were compared in figures 4 and 5.

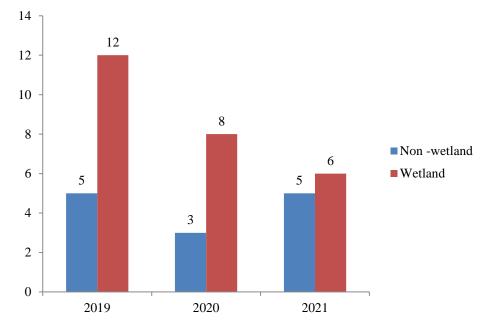


Figure 4: bar chart showing the species richness based on habitat type from 2019 to 2021 (Actual quantity annotated at the top of each bar)



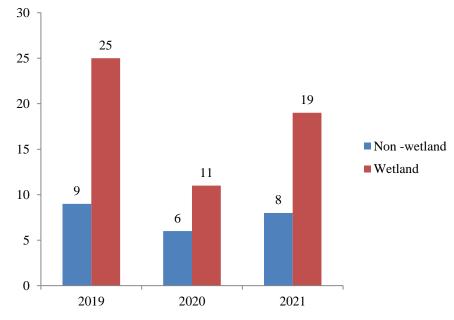


Figure 5: bar chart showing the abundance based on habitat type from 2019 to 2021 (Actual quantity annotated at the top of each bar)

5.4

After analysing survey results in January from 2019 to 2021, it is found that the species diversity reduced in wetland habitat but the abundance was increase. The reduction could be due to natural fluctuation. . Good practice during construction is required to prevent environmental contamination as well as unnecessary site clearance. Continuous monitoring is also recommended to inspect any significant decrease in species diversity.

# Appendix I – Transect Routes for Contract CV/2016/10





Ecological Survey Report for Contract CV/2017/02



# Contract No. CV/2017/02

Development of Columbarium at Sandy Ridge Cemetery – Infrastructural Works at Man Kam To Road and Lin Ma Hang Road

# Monthly Report of Ecologically Sensitive Habitats Monitoring – January 2021

Revision	0	
Date of issue	28 Jan 2021	
Prepared by	Alan Lam	未
Reviewed by	Edwina Yeung	- Animo
Verified by	Mike Leung	it



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	from 2018 to 2020
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	2018 to 2020



# **1** INTRODUCTION

### 1.1 <u>BACKGROUND</u>

- 1.1.1 The main objective of the proposed site formation and associated infrastructural works for development of columbarium, crematorium (C&C) and related facilities at Sandy Ridge Cemetery is to increase the public cremation services and supply of public niches to meet the future demand.
- 1.1.2 The project includes site formation and associated works for development of C&C facilities at the Sandy Ridge Cemetery, road works within Sandy Ridge Cemetery, widening a section of Lin Ma Hang Road (from 6.5m to 7.3m), provision of off-site pick-up/drop-off points for shuttle buses as well as barging point at Siu Lam, Lok On Pai.
- 1.1.3 The Environmental Impact Assessment (EIA) report, including Environmental Monitoring and Audit Manual (EM&A Manual), was approved with conditions on 8 August 2016 (Register No.: AEIAR-198/2016). EPD issued an Environmental Permit (EP) for the Project (EP-534/2017) on 7 April 2017, variation of EP (EP-534/2017/A) were issued on 24 December 2018.
- 1.1.4 According to Clause 3.1 of the EP (EP-534/2017/A), "The Permit Holder shall implement the EM&A programme in accordance with the procedures and requirements as set out in the EM&A Manual. Any changes to the programme shall be justified by the ET Leader and verified by the IEC as conforming to the information and requirements contained in the EM&A Manual before submission to the Director for approval".
- 1.1.5 This Ecologically Sensitive Habitats Monitoring Methodology articulates the protocol of monitoring the ecology of concerned habitats as specified in EM&A Manual.

#### 1.2 <u>OBJECTIVE</u>

- 1.2.1 According to approved EIA report (AEIAR-198/2016), habitat types within project boundary comprise of watercourse, grassland, upland grassland, plantation, woodland and developed area. Natural habitats were of moderate ecological value in terms of species diversity, species rarity, species abundance, ecological linkage as well as nursery. Moreover, 0.3ha of wet woodland on the northern side of Sandy Ridge was deemed habitat with high ecological value. Four types of habitats were regarded as ecologically sensitive habitats, namely wet woodland, watercourses, upland grassland and woodland. Considering human disturbance in upcoming construction and operation phases, ecologically sensitive habitats shall be monitored in accordance with EM&A Manual.
- 1.2.2 The objective of ecologically sensitive habitats monitoring is to evaluate the effectiveness of measures to minimize impacts on concerned habitats from disturbance and pollution.



# 2 ECOLOGICALLY SENSITIVE HABITATS

### 2.1 DESCRIPTION OF HABITATS

2.1.1 In order to monitor the effectiveness of the measures to the minimise impact on ecologically sensitive habitats from disturbance and pollution, monthly monitoring during construction and operation phases is required as specified in EM&A Manual. Standard faunal transect and sampling surveys cover both wetland and non-wetland habitats:

Wetland habitats	Non-wetland habitats
Wet Woodland	Upland Grassland
Watercourses	Woodland

- 2.1.2 Wet woodland is small patch present on northwest of the project boundary, and is confined by the marsh area to the north and the secondary woodland to the east, south and south-west parts. A number of mature trees *Cleistocalyx nervosum* and *Acronychia pedunculata* form the tree canopy, with other self-sown shrubs (including *Psychotria asiatica, Ligustrum sinense* and *Glochidion lanceolarium*) and trees (*Aporosa dioica* and *Litsea monopetala*). Whilst botanically it comprises of naturally regenerated secondary woodland and ground level are a series of small braided streams and weep points which even during the dry season remain wet. This creates a rather uncommon habitat in Hong Kong offering suitable conditions for a good assemblage of common wetland species. The wet woodland provides a good assemblage of micro-habitats, which is relatively undisturbed and has good linkages to other natural habitat: East Asian Porcupine, Leopard Cat, Red Muntjac, Two-striped Grass Frog, Small Snakehead, *Somanniathelphusa zanklon*, Dancing Shadow-emerald.
- 2.1.3 Seasonal watercourse running west to east in the eastern part of the area inside the Project boundary is shallower in gradient than those running off the hillside. This seasonal watercourse is heavily vegetated with wetland-associated herbs including *Commelina diffusa*, *Polygonum chinense*, *Colocasia esculenta* and *Dracaena sanderiana*. A mature tree of *Aquilaria sinensis* was recorded at the bank of the seasonal watercourse to the west of the Sandy Ridge Cemetery Office. Seasonal watercourses are restricted to the steeper slopes within the project boundary and are characterised by being entirely dry for much of the dry season. However, endemic crab *S. zanklon* population is supported by ephemeral watercourses close to the project boundary.
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2.1.5 Scattered patches of woodland are present throughout the assessment area, with the largest contiguous block located immediately to the east of the project boundary. These woodlands are relatively young with single-layered of canopy dominants (~10 – 15m tall) including *A. dioica, Bridelia tomentosa, Cinnamomum burmannii, Daphniphyllum calycinum, Litsea glutinosa, Rhus succedanea,* and *Zanthoxylum avicennae*. Such areas comprise secondary woodland which is largely derived from natural regeneration and colonisation of trees as a result of seed dispersal by birds and/or bats. A mature tree of *A. sinensis* is located at the woodland edge at the central part of the Project according to EIA report.

#### 2.2 MONITORING MEASURES OF WETLAND HABITATS

- 2.2.1 Wetland habitats include wet woodland and watercourses. Monitoring surveys using standardised quantitative methodology will be conducted at fixed points. For seasonal watercourse, survey shall be conducted whenever the habitat appears.
- 2.2.2 Measures to respond to decreases in numbers of aquatic fauna using the wetland habitats and action and limit levels to trigger these measures are detailed in Table 1.

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Reduction in	Investigate cause and if	Reduction	Investigate cause and if
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	remedial action to remove	by 50%	remedial action.
	or reduce source of		
	disturbance.		

Table 1 Action and Limit Levels and Responses to Evidence of Declines in Aquatic Fauna

### 2.3 MONITORING MEASURES OF NON-WETLAND HABITATS

- 2.3.1 Non-wetland habitats consist of upland grassland and woodland. Monthly quantitative surveys of non-aquatic fauna will be conducted using standard route transect counts.
- 2.3.2 Measures to respond to decreases in numbers of non-aquatic fauna using the non-wetland habitats and action and limit levels to trigger these measures are detailed in Table 2.

Action Level	Response	Limit Level	Response
Reduction in	Investigate cause and if	Reduction	Investigate cause and if
species diversity	cause identified as related	in species	cause identified as related
by 30%	to the project instigate	diversity by	to the project instigate
	remedial action to remove	50%	remedial action.
	or reduce source of		
	disturbance.		

Table 2 Action and Limit Levels and Responses to Evidence of Declines in Non-Aquatic Fauna



# **3 METHODOLOGY**

The ecological survey includes all taxa being investigated in EIA report. Table 3 summarizes schedule of faunal surveys.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mammals		$\checkmark$										
Birds (day)	$\checkmark$											
Birds (night)				$\checkmark$								
Herpetofau na				$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$		
Dragonflies			$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		
Butterflies			$\checkmark$									
Aquatic fauna	V		$\checkmark$									

Table 3 Survey Schedule

#### 3.1 MAMMAL SURVEY

3.1.1 Mammal surveys will be conducted along the transects shown in Appendix 1 during both daytime and night time periods. Along with direct observations, other field signs, such as scats and tracks, will be searched and recorded if present.

#### **3.2 BIRD SURVEY**

3.2.1 Bird surveys will be conducted along the transects shown in Appendix 1 during the surveys, species and their vocalizing individuals recorded will be enumerated and recorded according to the habitat(s) they are utilising.

#### 3.3 HERPETOFAUNA SURVEY

3.3.1 Reptile and amphibian surveys will be conducted along transects shown in Appendix 1 during surveys careful searches of appropriate microhabitats and refugia for reptiles and their vocalizing individuals will be undertaken and all reptiles observed will be identified and counted.

#### **3.4 DRAGONFLY SURVEY**

3.4.1 Dragonfly surveys will be conducted along transects shown in Appendix 1 during surveys all dragonflies seen will be identified and counted as accurately as possible.



#### 3.5 BUTTERFLY SURVEY

3.5.1 Butterfly surveys will be conducted along transects shown in Appendix 1 during surveys all dragonflies seen will be identified and counted as accurately as possible.

#### 3.6 AQUATIC FAUNA SURVEY

3.6.1 Freshwater fishes and macro-invertebrates will be recorded by direct observation. All species trapped/recorded will be enumerated and identified (to the lowest taxonomic level possible), and the species of conservation importance photographed.



# 4 RESULT

This monitoring survey started on 5<sup>th</sup> January 2021. A sunny day. The day survey covered wetland and non-wetland areas. The survey was conducted by transect and at fixed point. All species seen will be identified and counted as accurately as possible.

#### Mammal

There was no mammal recorded in the monitoring area.

#### Bird

There were total of 15 bird individuals from 7 species recorded in the monitoring area. No Golden-headed Cisticola was observed during the bird survey.

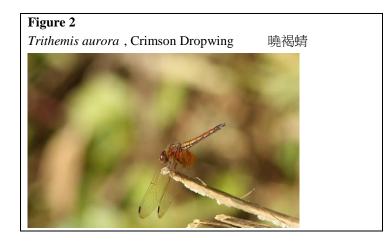
#### Herpetofauna

There was no reptile recorded in the monitoring area. There was no amphibian recorded in the monitoring area.

- Butterfly There was total 1 butterfly individuals from 1 species recorded in the monitoring area.
  - Dragonfly There was no total 1 odonate individuals from 1 species recorded in the monitoring area.
- Freshwater communities There were two species of freshwater fish recorded in the monitoring area.









#### Table 4Result of mammal in survey

Scientific Name	ne English Name	Chinese Name	Conservation	5-Ja	5-Jan-2021		
Scientific Maine	Linghish Funk			Non- wetland	Wetland		
N/A							

### Table 5Result of Avifauna in survey

Scientific Name	English Name	Chinese Name	Conservation	5-Jan-2021		
			Status	Non- wetland	Wetland	
Parus cinereus	Cinereous Tit	蒼背山雀		2		
Pycnonotus jocosus	Red-whiskered Bulbul	紅耳鵯			3	
Pycnonotus sinensis	Chinese Bulbul	白頭鵯			2	
Prinia flaviventris	Yellow-bellied Prinia	黃腹鷦鶯			2	
Orthotomus sutorius	Common Tailorbird	長尾縫葉鶯		1		
Copsychus saularis	Oriental Magpie Robin	鵲鴝		1		
Lonchura punctulata	Scaly-breasted Munia	斑文鳥			4	

### Table 6Result of reptile in survey

Scientific Name	Common Name	Chinese Name	5-Jan-2021		
			Non-wetland	Wetland	
N/A					

#### Table 7Result of amphibian in survey

Scientific Name	Common Name	Chinese Name	Conservation Status	5-Jan-2021				
				Non- wetland	Wetland			
N/A								



### Table 8Result of butterfly in survey

Scientific Name	Common Name	Chinese Name	5-Jan-2021		
			Non-wetland	Wetland	
Neptis hylas	Common Sailer	中環蛺蝶	1		

#### Table 9Result of Odonate in survey

Scientific Name	Common Name	Chinese Name	Conservation Status	5-Jan-2021	
				Non- wetland	Wetland
Trithemis aurora	Crimson Dropwing	曉褐蜻			1

#### Table 10Result of freshwater communities in survey

Scientific Name	Common Name	Chinese Name	Conservation Status	5-Jan-2021
Gambusia affinis	Mosquito fish	食蚊魚		+
Puntius semifasciolatus	Chinese Barb	五線無鬚鮑		+

+:

Species appeared but uncountable

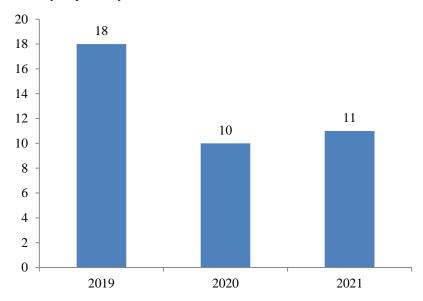


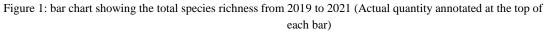
# **5** DISUSSION

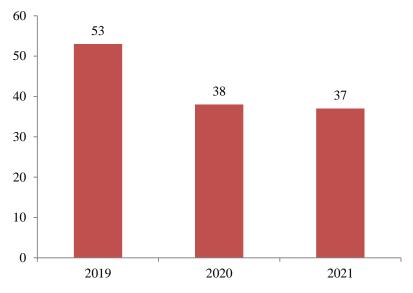
Data analysis was carried out to compare with the biodiversity within the site boundary in the same month over years. General description of the ecological conditions is first revealed in terms of abundance as well as species richness, following by statistical analysis of the existing database. The result is considered as significant whenever the drop of diversity indexes exceeds the percentages mentioned in previous sections 2.2 and 2.3.

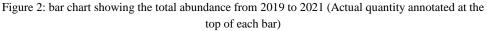
5.1

Total abundances and species richness in January over years were compared to show the trend. Figures 1 and 2 indicate total species richness and total abundance with the site boundary respectively.

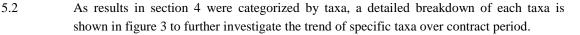












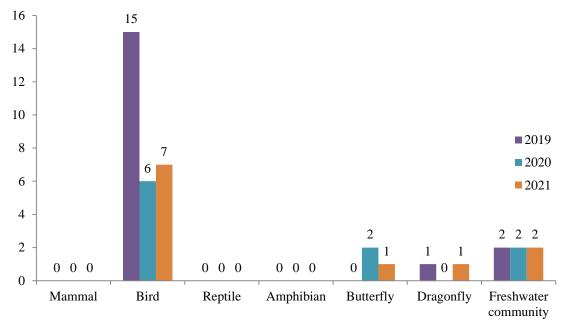


Figure 3: bar chart showing the species richness by taxa from 2019 to 2021 (Actual quantity annotated at the top of each bar)

5.3 According to EM&A Manual, monitoring measures was determined by the species diversity of types of sensitive habitats, i.e. non-wetland and wetland habitats. Abundance and species richness by habitat type in January over years were compared in figures 4 and 5.

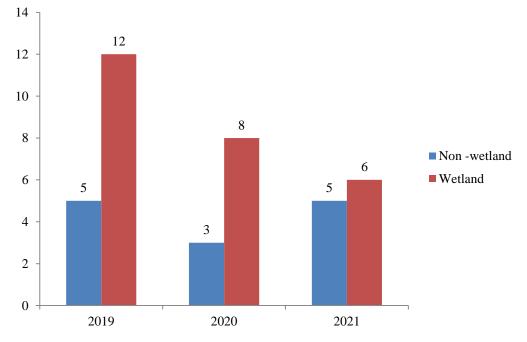


Figure 4: bar chart showing the species richness based on habitat type from 2019 to 2021 (Actual quantity annotated at the top of each bar)



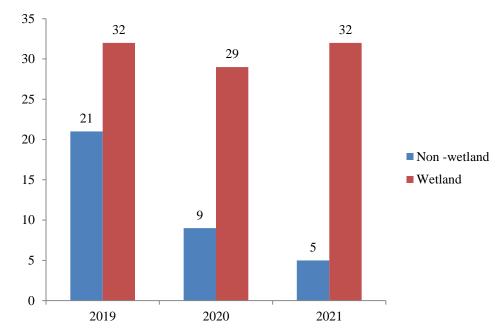
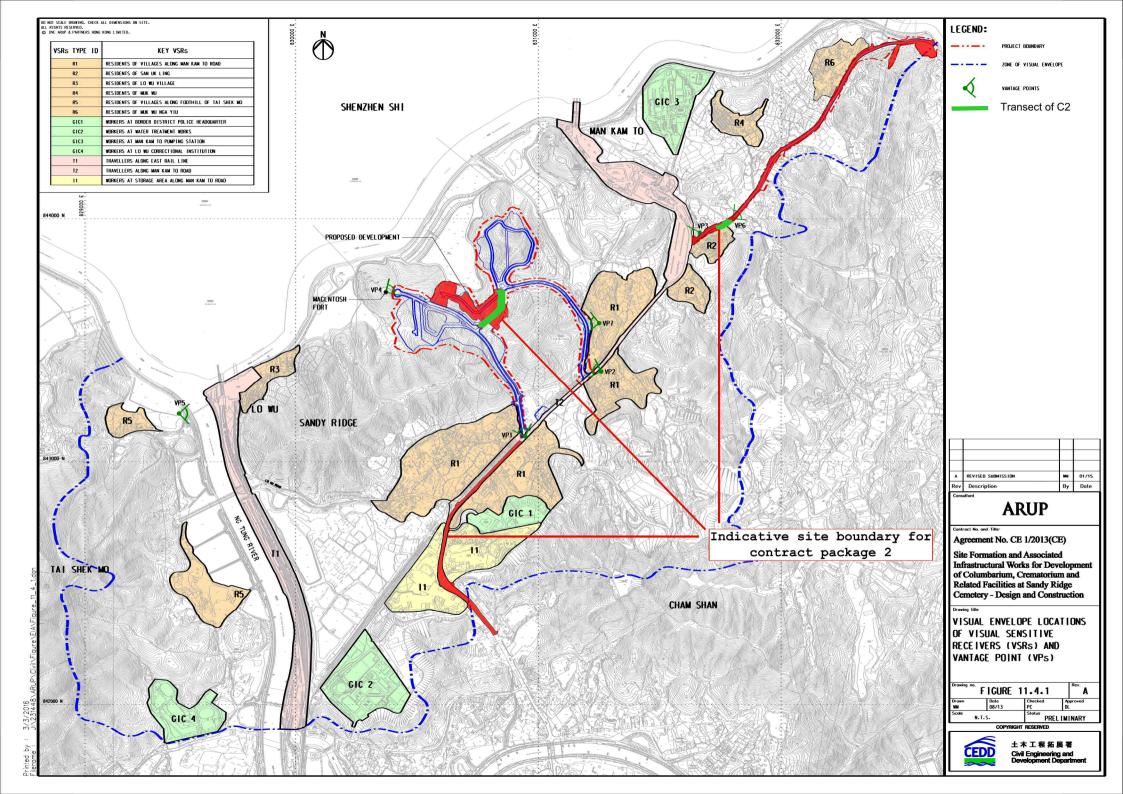


Figure 5: bar chart showing the abundance based on habitat type from 2019 to 2021 (Actual quantity annotated at the top of each bar)

5.4 After analysing survey results in January 2019 to 2021, in the wetland, the species diversity was reduced, but no significant drop in abundance. In the non-wetland, species diversity had no significant change, but the abundance was drop, it could be due to natural fluctuation. A good practice during construction is required to prevent environmental contamination as well as unnecessary site clearance. Moreover, continuous monitoring is required to inspect any significant reduction of species diversity.



# Appendix I – Transect Routes for Contract CV/2017/02





# Appendix L

# Landscape & Visual Inspection Checklist



Contract No. CV/2016/10

Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery Landscape and Visual Impact Assessment Checklist for Site Audit

### Date/ Time: 20/1/2021 09:30 Weather: Fine/ Overcast/ Rain/ Windy

Item	Mitigation Measures	Implementation			Actions/ Remarks	
			No	N/A	_	
1	Landscape and Visual			•		
1.1	Is the construction period become shortened?			$\checkmark$	Under review.	
1.2	Is the work site confined within site boundaries and without encroaching into the landscape resources offsite?	~				
1.3	Is the site kept clean and tidy (E.g. storage of materials, location and appearance of site accommodation being well positioned)	~				
1.4	Is the construction site screened properly by hoardings or noise barriers in visually unobstructed colours?	~				
1.5	Is the erosion and dust control for exposed soil well performed during excavation work? (E.g. Exposed soil shall be covered or "camouflaged" and watered frequently. Areas that are expected to be left with bare soil for a long period of time should be hydro seeded and / or covered with suitable protective fabrics.)	~				
1.6	Are the woodland, plantation and other vegetation being protected and preserved in accordance with DEVB TC(W) No. 07/2015(E.g. Set up Tree Protection Zone)?	~				
1.7	Are the trees which are in direct conflict with the development proposal being transplanted as far as practical in accordance with and DEVB TC(W) No. 07/2015?	~				
1.8	Are compensatory planting for trees being provided to compensate the trees felled in accordance with DEVB TC(W) No. 07/2015?			~	Tree planting works have not yet been commenced.	
1.9	Are precautionary control measures to protect natural streams and rivers from adverse impact being implemented in accordance with ETWWB TCW No. 5/2005? (E.g. Construction debris and spoil should be covered up and properly disposed)	~				
1.10	Is light and glare control such as hooding being implemented during construction and operation to minimize light pollution and night time glare? (E.g. All security floodlights for construction sites should be equipped with adjustable shield, frosted diffusers and reflective covers)	~				

#### Summary / Remarks:

Follow up actions taken by Contractor for previous comments:

N/A

#### New observation:

N/A

#### **Reminders:**

- 1. Contractor is reminded to set up TPZ of proper size and with appropriate material around retain trees according to approved method statement.
- 2. Contractor is reminded to prevent the construction material pile within TPZ and ensure no works is allowed within the TPZ.
- 3. Transplanted trees T2465, T2468 and T2928 were in fair health condition with normal foliage color and density. Contractor is reminded to provide proper maintenance according to approved method statement.

#### Photo Record:



General view (1)

General view (2)



General view (3)

Tree Protection Zone







Transplanted tree (T-2465)

20/01/202

Fig F.

Transplanted tree (T-2468)

Fig H.



Tree protection zone (T-2468)



Transplanted tree (T-2928)



Contract No. CV/2017/02

Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery Development of Columbarium at Sandy Ridge Cemetery – Infrastructural Works at Man Kam To Road and Lin Ma Hang Road Landscape and Visual Impact Assessment Checklist for Site Audit

#### Date/ Time: 20/1/2021 10:30 Weather: Fine/ Overcast/ Rain/ Windy

Item	Mitigation Measures	Im	olemei	ntation	Actions/ Remarks
		Yes	No	N/A	
1	Landscape and Visual				
1.1	Is the construction period become shortened?			$\checkmark$	Under review
1.2	Is the work site confined within site boundaries and without encroaching into the landscape resources offsite?	~			
1.3	Is the site kept clean and tidy (E.g. storage of materials, location and appearance of site accommodation being well positioned)	~			
1.4	Is the construction site screened properly by hoardings or noise barriers in visually unobstructed colours?	~			
1.5	Is the erosion and dust control for exposed soil well performed during excavation work? (E.g. Exposed soil shall be covered or "camouflaged" and watered frequently. Areas that are expected to be left with bare soil for a long period of time should be hydro seeded and / or covered with suitable protective fabrics.)	~			
1.6	Are the woodland, plantation and other vegetation being protected and preserved in accordance with DEVB TC(W) No. 07/2015(E.g. Set up Tree Protection Zone)?	~			
1.7	Are the trees which are in direct conflict with the development proposal being transplanted as far as practical in accordance with and DEVB TC(W) No. 07/2015?			~	Tree transplanting works have not yet been commenced
1.8	Are compensatory planting for trees being provided to compensate the trees felled in accordance with DEVB TC(W) No. 07/2015?			~	
1.9	Are precautionary control measures to protect natural streams and rivers from adverse impact being implemented in accordance with ETWWB TCW No. 5/2005? (E.g. Construction debris and spoil should be covered up and properly disposed)			~	
1.10	Is light and glare control such as hooding being implemented during construction and operation to minimize light pollution and night time glare? (E.g. All security floodlights for construction sites should be equipped with adjustable shield, frosted diffusers and reflective covers)			~	

#### Summary / Remarks:

#### Follow up actions taken by Contractor for previous comments:



N/A

#### **New Observation:**

N/A

#### **Reminders:**

1. Contractor is reminded to set up TPZ of proper size and with appropriate material around retain trees according to approved method statement. Contractor should prevent any construction material pile within TPZ and ensure no works is allowed within the TPZ.

#### **Photo Record:**



General view (1)

General view (2)



General view (3)

Fig D.

Construction works near Tree Protection Zones



## Signature:

		Signature Registration Be	Date
Recorded by	Registered Landscape Architect	SHIU, AUBUN SHIU, AUBUN MARKAN R-142	20 Jan 2021
Checked by	Environmental Team Leader	- And	8 Feb 2021
	Independent Environmental Checker	h	11 Feb 2021



# Appendix M

## Monthly Summary Waste Flow Table

## Monthly Summary Waste Flow Table for January 2021

Department:	Civil Engineering and Deve	elopment Department	Contract No.:	CV/2016/1	0	
Contract Title:	Site Formation and Assoica	ted Infrastructural Works	s for Developme	ent of Columb	arium at Sandy Ridge Cemete	ery
Commencement Date	15-Dec-2017	Estimated completio	n Date22-l	Dec-2023	Estimated Contract Sum:	780M

		Actual Quantities	s of Inert C&D N	Iaterials Generate	d Monthly			Actual Quantities	s of C&D Wastes	Generated Monthl	у
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan	3.401	0.000	0.525	0.000	0.476	2.400	0.000	0.000	0.000	0.000	0.022
Feb											
Mar											
Apr											
May											
June											
Sub-total	3.401	0.000	0.525	0.000	0.476	2.400	0.000	0.000	0.000	0.000	0.022
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	3.401	0.000	0.525	0.000	0.476	2.400	0.000	0.000	0.000	0.000	0.022

Notes: (1) The waste flow table should cover the whole construction period of the Contract.

(2) The original estimates of the C&D materials should be the estimates at contract commencement and should not be altered during construction.

(3) Inert C&D materials that are specified in the Contract to be imported for use at the Site shall be separately indicated.

(4) The yearly estimates of the C&D materials should be updated as appropriate taking into account the latest works programme etc.

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

(6) Broken concrete for recycling into aggregates.

Contract No. CV/2017/02 Particular Specification Appendix H3

Name of Department: CEDD

# Monthly Summary Waste Flow Table for 2021

	A	ctual Quantities	of Inert C&D N	Iaterials Gener	ated Monthl	у	Actual Q	uantities of C	C&D Wastes	Generated	Monthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)
JAN	732.600	0.000	0.000	0.000	732.6	0.000	0.000	0.000	0.000	0.000	8.770
FEB											
MAR											
APRIL											
MAY											
JUN											
Sub Total	732.600	0.000	0.000	0.000	732.600	0.000	0.000	0.000	0.000	0.000	8.770
JUL											
AUG											
SEP											
ОСТ											
NOV											
DEC											
Total	732.600	0.000	0.000	0.000	732.600	0.000	0.000	0.000	0.000	0.000	8.770

Notes: \* estimated quantity (pending from EPD NENT (soil) to update the actual quantity)

#### Name of Department: CEDD

	Forecast of Total Quantities of C&D Materials to be Generated from the Contract (see Note 4)										
Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in Other Projects	Disposed as Public Fill	Imported Fill	Metal	Paper / cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse	
(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )	
0	0	0	0	0	0	0	0	0	1	0	

Notes:

(1) The performance targets are given in PS clause 6(14) above.

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

(3) Plastic 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

- Hard Rocks and Large Broken Concrete = Cannot be defined at this stage
- Imported Fill = Estimated by the Contractor
- Metal = Estimated by the Contractor
- Paper/cardboard packaging = Estimated by the Contractor
- Plastics = Estimated by the Contractor

- Chemical Waste = Estimated by the Contractor (Spent lubricating oil, assume density 0.9kg/L)

- Other, e.g. general refuse = Estimated by the Contractor



# Appendix N

## **Implementation Schedule for Environmental Mitigation Measures**

Note: Chapters 1 to 3 of the EIA report present the background information of the Project, identified concurrent projects, objectives and scope for various environmental aspects, and description on alternative options and construction description. Chapters 4 to 12 of the EIA report present the EIA findings and mitigation measures are described below with cross-reference to the EIA report. Chapters 13 to 15 describe the environmental monitoring requirements and conclusion.

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
Common Mitig	ation Measures (Applicable to ALL Project Components, including D	Ps and Non-DPS)				
Construction D	ust Impact					
S4.4.5.2	The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation	Minimise dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	APCO     To control the dusi impact to meet HKAQO and TM-EIAC criteria
S4.4.5.3	Water spraying every hour for all active works area.	Minimise dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	APCO     To control the dust impact to meet HKAQO and TM-EIAO criteria
S4.4.5.2	<ul> <li>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;</li> <li>Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;</li> <li>A stockpile of dusty material should not be extended beyond the pedestrian barriers, fencing or traffic cones;</li> <li>The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle;</li> <li>Vehicle wheel washing facilities should be provided at each construction</li> </ul>	Minimise dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	APCO     To control the dust impact to meet HKAQO and TM-EIAO criteria

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
	site exit. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels;					
	• 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. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period;					
	• The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials;					
	• Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously;					
	• Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet;					
	• 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;					
	• Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system;					
	• Exposed earth should be properly treated by compaction, 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.					

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
S4.4.5.1	Implement regular dust monitoring under EM&A programme during the construction stage.	Monitoring of dust impact	Contractor	Selected representative dust monitoring station	Construction phase	• TM-EIAO
S4.4.5.3	<ul> <li>All road surface within the barging facilities will be paved.</li> <li>Dust enclosures will be provided for the loading ramp, installation of 3-sided screen with top cover and the provision of water sprays at the discharge point would be provided.</li> <li>Vehicles will be required to pass through designated wheel wash facilities.</li> <li>Continuous water spray at the loading point.</li> </ul>	Minimise dust impact at the nearby sensitive receivers	Contractor	Barging point at Siu Lam	Construction phase	• TM-EIAO

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
Construction Noise						
\$5.5.5.3	<ul> <li>Implement the following good site management practices:</li> <li>only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme;</li> <li>machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;</li> <li>plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs;</li> <li>silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works;</li> <li>mobile plant should be sited as far away from NSRs as possible and practicable;</li> <li>material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from onsite construction activities.</li> </ul>	Control construction noise	Contractor	All construction sites	Construction phase	• Annex 5, TM-EIAO
S5.5.5.5	Adopt quiet plants during the construction of viaduct, widening of Sha Ling Road, construction of platform for crematorium and widening of Lin Ma Hang Road. The quiet plants should be made reference to the PME listed in the TM or the QPME/ other commonly used PME listed in EPD web pages or taken from BS5228: Part 1: 2009 Noise Control on Construction and Open Sites as far as possible.	Reduce the noise levels of plant items	Contractor	Works area for construction of viaduct, widening of Sha Ling Road, construction of platform for crematorium and widening of Lin Ma Hang Road		• Annex 5, TM-EIAO

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
S5.5.5.6	Install temporary noise barriers (in the form of site hoardings, approx. 2.4m 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 noise levels at low-level zone of NSRs through partial screening.	Contractor	All construction sites where practicable	Construction phase	• Annex 5, TM-EIAO
S5.5.5.7 – S5.5.5.12	Install movable noise barriers (typical design is wooden framed barrier with a small-cantilevered upper portion of superficial density no less than $7 \text{kg/m}^2$ on a skid footing with 25mm thick internal sound absorptive lining), acoustic mat or full enclosure, screen the noisy plants including air compressors, generators etc.	Screen the noisy plant items to be used at all construction sites	Contractor	All construction sites where practicable	Construction phase	• Annex 5, TM-EIAO
\$5.5.5.13	Sequencing operation of construction plants where practicable.	Operate sequentially within the same work site to reduce the construction noise	Contractor	All construction sites where practicable	Construction phase	• Annex 5, TM-EIAO
S13.2.1.1 – S13.4.1.2	Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected representative locations	Contractor	Selected representativ e noise monitoring station	Construction phase	• TM-EIAO
Operational Noise (Road	d Traffic Noise)			1	L	
S5.6.6.4	<ul> <li>Provide a series of noise mitigation measures including absorptive noise barriers and low noise road surfacing materials along Lin Ma Hang Road and Sha Ling Road before operation of the proposed project for existing and planned representative NSRs. Locations of noise mitigation measures are stated as following:</li> <li><i>For existing representative NSRs</i></li> <li>Approx. 12m of absorptive noise barrier 2.5m above road level along Sha Ling Road (MM1);</li> <li>Approx. 92m of absorptive noise barrier 2.5m above road level along Sha Ling Road (MM2);</li> </ul>	Reduce operation noise from road traffic	Contractor	Refer to Figures 5.6.9 – 5.6.13 of the EIA Report	Prior to operation of the Project for existing representative NSRs. While for barriers to protect planned representative NSRs, it should constructed before intake of planned representative NSRs.	

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
	• Approx. 28m of absorptive noise barrier 3m above road level along Project Road near Sha Ling Road (MM3);					
	• Approx. 51m of absorptive noise barrier 3m above road level along Project Road near Sha Ling Road (MM4);					
	• Approx. 25m of absorptive noise barrier 4m above road level along Lin Ma Hang Road near San Uk Ling (MM5);					
	<ul> <li>Approx. 21m of absorptive noise barrier 4m above road level along Lin Ma Hang Road near San Uk Ling (MM6);</li> </ul>					
	• Approx. 14m of absorptive noise barrier 4m above road level along Lin Ma Hang Road near San Uk Ling (MM7);					
	<ul> <li>Approx. 18m of absorptive noise barrier 3m above road level along Lin Ma Hang Road near San Uk Ling (MM8);</li> </ul>					
	• Approx. 42m of absorptive noise barrier 3m above road level along temporary pullover space opposite San Uk Ling (MM9);					
	<ul> <li>Approx. 93m of absorptive noise barrier 3m above road level along Lin Ma Hang Road opposite San Uk Ling (MM10);</li> </ul>					
	• Approx. 185m of low noise surfacing materials along Lin Ma Hang Road near San Uk Ling (MM11);					
	For planned representative NSRs					
	<ul> <li>Approx. 36m of absorptive noise barrier 5m above road level along Lin Ma Hang Road near Muk Wu Nga Yiu (MM12);</li> </ul>					
	<ul> <li>Approx. 47m of absorptive noise barrier 5m above road level along Lin Ma Hang Road near Muk Wu Nga Yiu (MM13);</li> </ul>					
	<ul> <li>Approx. 31m of absorptive noise barrier 5m above road level along Lin Ma Hang Road near Muk Wu Nga Yiu (MM14);</li> </ul>					
	<ul> <li>Approx. 31m of absorptive noise barrier 5m above road level along Lin Ma Hang Road near Muk Wu Nga Yiu (MM15);</li> </ul>					
	<ul> <li>Approx. 41m of absorptive noise barrier 5m above road level along Lin Ma Hang Road near Muk Wu Nga Yiu (MM16);</li> </ul>					

EIA Ref.	Recommended Mitigation Measures	ObjectivesoftheRecommendedMeasures &Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
	• Approx. 340m of low noise surfacing materials along Lin Ma Hang Road near Muk Wu Nga Yiu (MM17).					

EIA Ref.	Recommended Mitigation Measures	ObjectivesoftheRecommendedMeasures&Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved				
Water Quality (Construc	ater Quality (Construction Phase)									
S6.4.4.1 – S6.4.4.3	<ul> <li>In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN1/94), construction phase mitigation measures shall include the following:</li> <li>General Site Operation</li> <li>At the start of site establishment, perimeter cut-off drains to direct offsite water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. 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. The design of the temporary on-site drainage system will be undertaken by the contractor prior to the commencement of construction;</li> <li>Diversion of natural stormwater should be avoided 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 minimise polluted runoff. Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m<sup>3</sup> capacities, are recommended as a general mitigation measure which can be used for settling 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;</li> <li>The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be incorporated in the permanent drainage channels to enhance deposition rates;</li> <li>The design of efficient silt removal facilities should be based on the</li> </ul>	To minimise water quality impact from construction site runoff and general construction activities	Contractor	All construction sites where applicable	Construction phase	• Water Pollution Control Ordinance • ProPECC PN1/94 • TM-EIAO • TM-DSS				
	guidelines in Appendix A1 of ProPECC PN 1/94. The detailed design of									

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
	the sand/silt traps shall be undertaken by the contractor prior to the commencement of construction;					
	• Construction works should be programmed to minimise 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;					
	• If the excavation of trenches in wet periods is necessary, it should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;					
	• All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas;					
	• All open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m <sup>3</sup> should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system;					
	• Manholes (including newly constructed ones) should always be covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers;					
	• Precautions be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes;					

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	<ul> <li>All vehicles and plant should be cleaned before leaving a construction 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 site exit where practicable. Washwater should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains;</li> <li>Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain;</li> <li>Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts;</li> <li>All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds 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;</li> <li>Regular environmental audit on the construction site should be carried out in order to prevent any malpractices. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the water bodies, marsh and ponds;</li> <li>Adopt best management practices.</li> </ul>					
S6.4.4.4 – S6.4.4.5	<ul> <li>Sewage from workforce</li> <li>Portable chemical toilets and sewage holding tanks are recommended for handling the construction sewage generated by the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance;</li> </ul>	To minimise water quality from sewage effluent	Contractor	All construction sites where practicable	Construction phase	Water Pollution Control Ordinance     TM-DSS

Environmental Mitigation Implementation Sc	chedule – Sandy Ridge
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EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
	<ul> <li>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 phase of the Project;</li> <li>Regular environmental audit on the construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site.</li> </ul>					
S6.4.4.6	<ul> <li>Operation of Barging Point at Siu Lam</li> <li>All barges should be fitted with tight bottom seals to prevent leakage of materials during transport;</li> <li>Barges or hoppers should not be filled to a level that will cause overflow of materials or polluted water during loading or transportation;</li> <li>All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; and</li> <li>Loading of barges and hoppers should be controlled to prevent splashing of material into the surrounding water.</li> <li>Mitigation measures for land-based activities as outlined in Section 6.4.4 should be applied to minimise water quality impacts from site runoff and open stockpile spoils at the proposed barging facilities where appropriate.</li> </ul>	To minimise water quality from operation of barging point at Siu Lam	Contractor	All construction sites where practicable	Construction phase	Water Pollution Control Ordinance     TM-DSS
Water Quality (Operat	tional Phase)					
S6.5.4.1 – S6.5.4.6	<ul> <li>The following mitigation measures during operational phase are recommended:</li> <li>Sewage and wastewater discharge should be connected to foul sewerage system;</li> <li>Proper drainage systems with silt traps and oil interceptors should be installed;</li> </ul>	To minimise the road runoff, wastewater discharge and erosion of seasonal watercourse during the operational phase	Highways Department / Contractors	Whole alignment	Construction / Operational Phase	Water Pollution Control Ordinance     TM-DSS

EIA Ref.	Recommended Mitigation Measures	ObjectivesoftheRecommendedMeasures&Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
	<ul> <li>The design of road gullies with silt traps should be incorporated especially for the catchment leading to the existing wet woodland area located at the north of the site;</li> <li>The silt traps and oil interceptors should be cleaned and maintained regularly, especially before peak seasons of the visitors in Ching Ming Festival and Chung Yeung Festival;</li> <li>Energy dissipaters should be installed at the seasonally wet watercourses to reduce the magnitude of the first flush in order to minimise the erosion impact to the wet woodland.</li> </ul>					

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved				
Waste Management	aste Management (Construction Waste)									
\$7.3.3.8	Construction & Demolition Material Management Plan (C&DMMP)	To enhance the management of	Contractor	All	Construction phase	Project				
	• A C&DMMP shall be submitted to the Public Fill Committee for approval in the case of C&D materials disposal exceeding 50,000m <sup>3</sup> .	construction and demolition (C&D) material including rock in public works projects		construction sites		Administrative Handbook for Civil Engineering Works, 2012 Edition				
\$7.3.4.2	Good Site Practice	Minimise waste generation	Contractor	All	Construction phase	• Waste Disposal				
	The following good site practices are recommended throughout the construction activities:	during construction		construction sites		Ordinance				
	• nomination of an approved personnel, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site;									
	<ul> <li>training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling;</li> </ul>									
	• provision of sufficient waste disposal points and regular collection for disposal;									
	• appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;									
	• regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;									
	• a Waste Management Plan (WMP) should be prepared by the contractor and submitted to the Engineer for approval.									
\$7.3.4.3	Waste Reduction Measures	Reduce waste generation	Contractor	All	Construction phase	• Waste Disposal				
	Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve reduction:			construction sites		Ordinance				
	• segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal;									

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
	<ul> <li>proper storage and site practices to minimise the potential for damage and contamination of construction materials;</li> <li>plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste;</li> <li>sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc.);</li> <li>provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.</li> </ul>					
S7.3.4.5	Storage of Waste         The following recommendation should be implemented to minimise the impacts:         • non-inert C&D materials 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;	Good site practice to minimise the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal	Contractor	All construction sites	Construction phase	<ul> <li>Land (Miscellaneous Provisions) Ordinance</li> <li>Waste Disposal Ordinance</li> <li>ETWB TCW No. 19/2005</li> </ul>
\$7.3.4.6	Collection and Transportation of Waste         The following recommendation should be implemented to minimise 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.	Minimise waste impacts from storage	Contractor	All construction sites	Construction phase	• Waste Disposal Ordinance
S7.3.4.8 – S7.3.4.15	<ul> <li><u>Excavated and C&amp;D Materials</u></li> <li>Wherever practicable, C&amp;D materials should be segregated from other wastes to avoid contamination and ensure acceptability at public filling areas or reclamation sites. The following mitigation measures should be implemented in handling the excavated and C&amp;D materials:</li> <li>maintain temporary stockpiles and reuse excavated fill material for</li> </ul>	Minimise waste impacts from excavated and C&D materials	Contractor	All construction sites	Construction phase	Land (Miscellaneous Provisions) Ordinance Waste Disposal Ordinance

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
	backfilling;					• ETWB TCW No.
	• carry out on-site sorting;					19/2005
	• make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; and					Project     Administrative
	• implement a recording system for the amount of waste generated, recycled and disposed of for checking.					Handbook for Civil Engineering Works,
	The recommended C&D materials handling should include:					2012 Edition
	• On-site sorting of C&D materials;					
	• Reuse of C&D materials; and					
	• Use of Standard Formwork and Planning of Construction Materials purchasing.					
S7.3.4.17 – S7.3.4.18	Chemical Waste	Control the chemical waste and	Contractor	All	Construction phase	• Waste Disposal
	If chemical wastes are produced at the construction 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 Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	ensure proper storage, handling and disposal.		construction sites		<ul> <li>(Chemical Waste) General) Regulation</li> <li>Code of Practice on the Packaging, Labelling and Storage of Chemical Waste</li> </ul>
\$7.3.4.19	<ul> <li><u>General Refuse</u></li> <li>General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling.</li> <li>Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean.</li> <li>A reputable waste collector should be employed to remove general refuse on a daily basis.</li> </ul>	Minimise production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction phase	• Waste Disposal Ordinance
\$7.3.4.20	<ul> <li>Sewage</li> <li>The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability,</li> </ul>	Minimise production of sewage impacts	Contractor	All construction sites	Construction phase	• Waste Disposal Ordinance

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
	<ul> <li>site condition and activities.</li> <li>Regularly collection by licensed collectors should be arranged to minimise potential environmental impacts.</li> </ul>					
Waste Management (Opera	ational Waste)					
S7.4.4.1	General Refuse A reputable waste collector should be employed to remove general refuse on a daily basis.	Remove general refuse during routine road cleaning activities on the roads network and avoid odour, pest and litter impacts	Contractor	Roads network for the C&C facilities and Lin Ma Hang Road	Operational phase	• Waste Disposal Ordinance

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
Land Contamination						
S8.9.1.1	Re-appraisal of the potentially contaminated site (SRC-1)	Identify any hot spots for SI within the southeast and western portions of SRC-1	• •	Potentially contaminated site (SRC-1)	Once the works area for the Project is confirmed and site access is available (e.g. after land resumption)	• Annex 19 of the TM- EIAO, Guidelines for Assessment of Impact On Sites of Cultural Heritage and Other Impacts (Section 3 : Potential Contaminated Land Issues);
						Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management;
						• Guidance Notes for Contaminated Land Assessment and Remediation; and
						• Practice Guide for Investigation and Remediation of Contaminated Land
						• Recommendations in Health Risk Assessment
S8.11.1.1	Preparation and submission of Contamination Assessment Plan (CAP) to EPD for review and approval, if required	Present the findings of the re- appraisal and strategy of the recommended SI, if required		Potentially contaminated site (SRC-1)	After land resumption and prior to the construction phase	Ditto
\$8.11.1.2	Preparation and submission of Contamination Assessment Report (CAR) to EPD for review and approval, if required	Present the findings of SI, if any, and evaluate the level and extent of potential contamination	Project Proponent / Detailed Design Consultant	Potentially contaminated site (SRC-1)	Prior to the construction phase	Ditto

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
S8.11.1.2	Preparation and submission of Remediation Action Plan (RAP) to EPD for review and approval if contamination is identified	Recommend appropriate mitigation measures for the contaminated soil and groundwater identified in the assessment if remediation is required	Detailed Design Consultant	Potentially contaminated site (SRC-1)	Prior to the construction phase	Ditto
S8.11.1.2	Preparation and submission of Remediation Report (RR) to EPD for review and approval following the completion of any necessary remediation works	Demonstrate that the decontamination work is adequate and is carried out in accordance with the endorsed CAR and RAP	Detailed Design	Potentially contaminated site (SRC-1)	Prior to the construction phase	Ditto

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EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
Ecology (Construction	Phase)					
\$9.7.2.3	Preparation and submission of Upland Grassland Reinstatement Plan to EPD for agreement.	An Upland Grassland Reinstatement Plan will be prepared by a qualified ecologist/botanist with full details of the findings of a baseline grassland survey, the practical details and methodology of the physical excavation, transport and storage or turves/topsoil and their subsequent reinstatement once the receptor sites have been established, along with an implementation programme of reinstatement, post- reinstatement monitoring and maintenance programme. A contingency plan should be proposed in the Grassland Reinstatement Plan so as to describe the action and limit levels and the action plan if certain performance criteria (such as area of preferred habitat) are not met during the monitoring and maintenance period.	Project Proponent/ Detailed Design Consultant (qualified ecologist/ botanist) for Upland Grassland Reinstatement Plan	Engineered slopes of Crematorium Indicative locations for Grassland Reinstatement should be referred to <b>Figure 9.11</b> of the EIA Report	Prior to construction phase	<ul> <li>Reinstatement and establishment requirements to be detailed in Upland Grassland Reinstatement Plan</li> <li>TM-EIAO</li> </ul>
S9.7.2.5 – S9.7.2.6	Preparation and submission of a Vegetation Survey Report and Transplantation Proposal (if needed as concluded in the Vegetation Survey Report) to EPD for agreement.	The Vegetation Survey will report the presence, as well as update the conditions, number, locations and habitat types of any identified floral species of conservation importance to be impacted by the development,	Project Proponent/ Detailed Design Consultant (qualified ecologist/ botanist) for	Within the Project Area where applicable	Prior to construction phase	• Survey findings and transplantation methodology to be detailed in Vegetation Survey Report and Transplantation Plan

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
		and evaluate suitability and/or practicality of transplantation. The Transplantation Proposal will recommend locations of the receptor site(s), transplantation methodology, implementation programme of transplantation and post-transplantation monitoring and maintenance programme.	Vegetation Survey Report and Transplantation Proposal.			respectively. • TM-EIAO.
\$9.7.5.3 – \$9.7.5.5, \$9.8.1.6	Preparation and submission of Enhancement Woodland Proposal to EPD for agreement.	Recommend appropriate enhancement planting programme, planting and post-transplantation monitoring methodology, action plan for monitoring the enhancement planting and maintenance programme.	Project Proponent/ Detailed Design Consultant (qualified ecologist/ botanist) for Wooded Area Proposal.	Filled slope west of the platform, and north west of the platform in the valley below MacIntosh Fort Indicative locations for Enhancement Woodland should be referred to <b>Figure 9.11</b> of the EIA Report	Prior to construction phase	<ul> <li>Enhancement planting and establishment requirements to be detailed in Wooded Enhancement Proposal.</li> <li>TM-EIAO</li> </ul>
S9.7.3.1 – S9.7.3.3	Indirect impacts due to potential changes in water quality, hydrology and sedimentation could occur to a series of downstream watercourses and wetland systems (including the wet woodland, marsh and mitigation ponds) during both the construction (for the Platform and LMHR widening works) and operational stages. Generally, indirect water impact to any aquatic fauna during the construction phase should easily be avoided by implementing water control measures (ETWB TCW No. 5/2005) to avoid direct or indirect impacts any watercourses and good site practices (further details are discussed in Section 6 of the EIA Report).	Minimise the indirect impacts to Water Quality and Hydrology	Contractor /detailed design consultant.	On the edge of any active works area, 30m from the watercourse	Prior to commencement and during construction phase	• ETWB TCW No. 5/2005 • TM-EIAO

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
	In addition, construction phase impacts on the watercourses, riparian corridor and fauna using these areas will be minimised by erection of a 2m high, solid, dull green site boundary fence on the edge of any active works area, 30m from the watercourse. Where this is not practicable due to site constraints, demarcation fencing will need to be erected to prevent unauthorised encroachment into the riparian corridor by constructions works and traffic. Detailed mitigation measures will be designed at the detailed design stage.					
S9.7.3.4 – S9.7.3.6	Mitigation for noise disturbance (details refer to \$5.5.5 to \$5.6.6 of this table). Site formation and construction are tentatively proposed to cover a 65-month period from mid 2017 to late 2022. As a precautionary approach, consideration should be given at the detailed design stage to avoid the use of highly reflective materials in the design and implementing the use of opaque materials, fritting, breaking up external reflections with stickers or plastic wrap and/or any other bird-friendly design for noise barriers. Works will be restricted to daytime and any construction lighting should be designed and positioned as to not impact on adjacent ecologically sensitive areas.	The construction work and site formation will be phased in order to reduce overall noise disturbance impacts in particular areas. Collisions usually occurs as a result of birds perceiving a clear path through an object that is transparent or appears to be transparent at some distance, or if the noise barrier is highly reflective which would appear to be composed of the adjacent natural vegetation. Furthermore, mitigation measures to control noise disturbance during this phase will involve the selection of quieter plant, use of movable noise barriers and erection of hoarding and fencing to demarcate the site boundary	Contractor Project Proponent	All construction sites	Prior to commencement and during construction phase	• TM-EIAO.

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
\$.9.7.3.7	<ul> <li>In order to demonstrate ecological awareness and to minimise the risk of indirect impacts from water pollution and hill fires, a series of good site practices should be adopted by site staff throughout the construction phase at each works site. These are as follows:</li> <li>Put up signs to alert site staff about any locations which are ecologically sensitive and measures to prevent accidental impacts;</li> <li>Erection of temporary geotextile silt or sediment fences/oil traps around any earth-moving works to trap any sediments and prevent them from entering watercourses;</li> <li>Prohibition of soil storage against trees or close to waterbodies;</li> <li>Delineation of works site to prevent encroachment onto adjacent habitats and fence off areas which have some ecological value;</li> <li>No smoking, hot works or sources of fire close to upland grassland;</li> <li>No on-site burning of waste; and</li> <li>Waste and refuse in appropriate receptacles.</li> </ul>	Minimise impacts on hydrological condition and water quality of hillside watercourses and reduce chances of hillfires.	Contractor	All construction sites	Prior to commencement and during construction phase	• TM-EIAO.
S.9.7.3.9	Precautionary checks by a suitably experienced ecologist of the vegetation for the presence of nesting birds should be carried out in the breeding season (February to July) before vegetation clearance. These impacts can be avoided by conducting vegetation clearance during the non-breeding season (tentatively August-January) and phased through the project period to minimise impacts.	Minimise the impacts to breeding birds within the works areas.	Contractor	All construction sites	Prior to site clearance	• TM-EIAO • WAPO

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
S9.7.2	Establishment, maintenance and monitoring of a Upland Grassland Reinstatement Area	Reinstatement of upland grassland and to maintain connectivity in Sandy Ridge.	Project Proponent / Contractor / Maintenance Authority	Engineered slopes of Crematorium Indicative locations for Grassland Reinstatement should be referred to <b>Figure 9.11</b> of the EIA Report	Operational phase	<ul> <li>Monitoring methodology and successfulness of survival of upland grassland should follow Upland Grassland Reinstatement Plan.</li> <li>TM-EIAO.</li> </ul>
S9.7.5.3 – S9.7.5.6	Establishment, maintenance and monitoring of an enhancement woodland	Recommend appropriate enhancement planting programme, planting and post- transplantation monitoring methodology, action plan for monitoring the enhancement planting and maintenance programme.	Project Proponent/ Detailed Design Consultant (qualified ecologist/ botanist) for Wooded Area Proposal.	Filled slope west of the platform, and north west of the platform in the valley below MacIntosh Fort Indicative locations for Enhancement Woodland should be referred to <b>Figure 9.11</b> of the EIA Report	Operational phase	<ul> <li>Enhancement planting and establishment requirements to be detailed in Wooded Area Proposal.</li> <li>TM-EIAO.</li> </ul>
S9.7.4.1 – S9.7.4.5	<ul> <li>Mitigation for Impacts to Water Quality and Hydrology (Operational Phase)</li> <li>Stormwater drainage system will be further developed in detailed design stage to collect dusty materials from water collected from the platform and associated road system. Silt traps will be installed to ensure removal of dusty materials. Regular cleaning will be conducted to avoid debris entering downstream rivers during first flush; and</li> <li>The proposed small diameter bore pile system at the foundation of the proposed platform structure.</li> </ul>	Specific mitigation measures will be implemented to prevent indirect impacts wetland habitats and fauna. Mitigation measures are to be further developed in the detailed design stage to address any water quality impacts due to the drainage from the proposed platform, and any erosion issues due to the drainage from the	Detailed Design Consultant	Wet woodland (and further down the marsh and mitigation ponds) and the seasonal watercourse to the east of the Project boundary	Detailed Design phase/Operational phase	• TM-EIAO

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
		proposed platform. The surface runoff collected on the platform will be captured by a stormwater drainage system, which will be further developed at the detailed design stage The proposed small diameter bore pile system at the foundation of the proposed platform structure would allow a notional free area of about 87 – 91% for groundwater to pass through				
\$9.7.4.6 – \$9.7.4.7	<ul> <li><u>Minimise the potential indirect light disturbance on the Street Lighting on</u> <u>fireflies surrounding the Project Site during operational phase</u></li> <li>It is considered that at the detailed design stage, street lighting of similar lux/light intensity as to what is currently present is utilised. Furthermore, as a precautionary measure, it is suggested that deflectors are fixed to the back of the street lights to prevent additional light reaching the marsh and causing adverse impacts to fireflies.</li> </ul>	Reduce light pollution and impact on the nearby habitats and their associated wildlife groups, particularly nocturnal fireflies.	Detailed Design/ Consultant/ Operator	The whole Project area	Detailed Design phase/Operational phase	• TM-EIAO
S9.7.4.9 – S9.7.4.9	The increase in visitors to the columbarium allows greater public access to the upland grassland of Sandy Ridge and in turn, the potential for hill fires is also increased. Fires may emanate from discarded cigarettes and from specific practices during festivals or grave-sweeping. In order to reduce the risk of hill fires, sufficient educational signage should be displayed throughout the columbarium warning people of the risks of fire and strictly prohibits practices that could cause hill fires. This will require input in the detailed design phase.	Minimise the risk of hill fires.	Detailed Design/ Consultant/ Operator	The whole Project area	Detailed Design phase/Operational phase	• TM-EIAO

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation	Location / Timing	Implementation	Requirements and / or standards to be achieved
Fisheries						
S10.5.1.1	No loss of fish ponds is anticipated and no <i>in situ</i> mitigation is required. However, mitigation measures for water quality (S6.4.4 – S6.5.4 in this table) proposed are also pertinent in ensuring that fisheries impacts of the Project do not occur downstream of the Project area either locally or in Inner Deep Bay.	-	-	-	-	-

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
Landscape & Visual						
S11.8.1.3, Table 11.9	CM1 – The construction area and contractor's temporary works areas should be minimised to avoid impacts on adjacent landscape, and the reliance on off-site construction.	Minimise landscape impact and visual impact	Funded by CEDD and implemented by Contractor	Work site/ during construction	Construction phase	-
S11.8.1.3, Table 11.9	CM3 – Screening of construction works by hoardings/noise barriers around works area in visually unobtrusive colours and to screen construction works. It is proposed that screening be compatible with the surrounding environment and non-reflective, recessive colours be used. Hoarding should be taken down at the end of the construction period.	Minimise visual impact	Funded by CEDD and implemented by Contractor	Work site/ during construction	Construction phase	-
S11.8.1.3, Table 11.9	CM4 – Dust and Erosion Control for Exposed Soil - Excavation works and demolition of existing building blocks shall be well planned with precautions to suppress dust. Exposed soil shall be covered or watered often. Areas that are expected to be left with bare soil for a long period of time after excavation shall be properly covered with suitable protective fabric. Suitable drainage shall be provided around construction sites to avoid discharge of contaminants and sediments into sensitive water-based habitat.	Minimise indirect landscape impact	Funded by CEDD and implemented by Contractor	Work site/ during construction	Construction phase	-
S11.8.1.3, Table 11.9	CM5 – Control night-time lighting and glare by hooding all lights.	Minimise visual impact	Funded by CEDD and implemented by Contractor	Work site/ during construction	Construction phase	-

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
S11.8.1.3, Table 11.9	CM6 – Tree Protection and Preservation – Woodland, plantation and other vegetation within the Study Area will be protected and preserved as far as possible in accordance with ETWB TCW No. 29/2004 - Registration of Old and Valuable Trees, and Guidelines for their Preservation and DEVB TCW No.07/2015 – Tree Preservation. Detailed Design Considerations are made to avoid impacts to trees, e.g. proper viaduct/ bridge design routing to avoid majority of the woodland, locating the columbarium buildings in areas with less trees and ensuring design of the buildings has as small a footprint as practical.	Minimise landscape impact and visual impact	Funded by CEDD and implemented by Contractor	Work site/ during construction	Construction phase	<ul> <li>DEVB TC(W) 07/2015</li> <li>Latest recommended horticultural practices from Greening, Landscape and Tree Management (GLTM) Section, DevB</li> </ul>
S11.8.1.3, Table 11.9	CM7 – Tree Transplantation – Tree(s) will be affected according to the Tree Preservation and Removal Proposal to be carried out in a later stage. Established trees of value are to be re-located where practically feasible.	Minimise landscape and visual impact	Funded by CEDD and implemented by Contractor	Work site/ during construction	Design and Construction phase	<ul> <li>'Guidelines for Tree Risk Management and Assessment Arrangement on an Area Basis and on a Tree Basis', issued January 2011, Greening, Landscape and Tree Management (GLTM) Section, DevB</li> <li>Latest recommended horticultural practices from GLTM Section, DevB</li> </ul>

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
S11.8.1.3, Table 11.9	CM8 - Implementing precautionary control measures during construction stage accordingly to ETWB TCW No. 5/2005 – Protection of natural streams/rivers from adverse impacts arising from construction works to avoid direct or indirect impacts any watercourses and good site practices.	Minimize landscape impact	Funded by CEDD and implemented by Contractor	Work site/ during construction	Design and Construction phase	• ETWB TCW No. 5/2005 – Protection of natural streams/rivers from adverse impacts arising from construction works
S11.8.1.3, Table 11.9	OM1 – Compensatory Woodland Planting - The arrangement of compensatory planting (e.g. areas of woodland to be compensated and space to be allowed within the Project Site) will be subject to detailed engineering design, landscape design and planting plan, and is recommended to be implemented prior to the construction activities as far as practical.	Compensate the loss of landscape greenery and enhance the overall visual value of the site.	Funded by CEDD and implemented by Contractor	Within Project Site	Prior to Construction phase	<ul> <li>DEVB TC(W) 07/2015 – Tree Preservation</li> <li>Latest recommended horticultural practices from Greening, Landscape and Tree Management (GLTM) Section, DevB</li> <li>DEVB TCW No. 06/2015 – Maintenance of Vegetation and Hard Landscape Features</li> </ul>

EIA Ref.	Recommended Mitigation Measures	ObjectivesoftheRecommendedMeasures&Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
S11.8.1.3, Table 11.9	OM2 – Compensatory Tree Planting for Plantation and Other Vegetated Areas - Compensatory planting should be provided in accordance with DEVB TCW No. 07/2015 to compensate for those trees felled. According to the preliminary design, compensatory trees will be planted on the cut/fill slopes, along new roads and in car parks. The selection of planting species shall be made with reference to the species identified in the future Detailed Tree Survey and be native to Hong Kong or the South China region.	Compensate the loss of landscape greenery and enhance the overall visual value of the site.	Funded by CEDD and implemented by Contractor	Within Project Site	Construction phase	<ul> <li>DEVB TC(W) 07/2015 – Tree Preservation</li> <li>Latest recommended horticultural practices from Greening, Landscape and Tree Management (GLTM) Section, DevB</li> <li>DEVB TCW No. 06/2015 – Maintenance of Vegetation and Hard Landscape Features</li> </ul>
S11.8.1.3, Table 11.9	OM3 – Amenity Planting and aesthetic streetscape design of hard landscaping for Pedestrian Walkway, Roadside - Roadside amenity planting should be provided along Sha Ling Road, Lin Ma Hang Road, as well as the internal road within Sandy Ridge columbarium and crematorium site; to enhance the landscape quality of the existing and proposed transport routes. Climbers are proposed to cover vertical, hard surfaces of the piers of the proposed viaducts, and also the newly formed retaining wall within the site. Shade tolerant plants will be planted, where light is sufficient, to improve aesthetic value of areas under viaducts.	Minimise visual impact and also enhance landscape.	Funded by CEDD and implemented by Contractor	Within Project Site	Construction phase	<ul> <li>Guidelines on Greening of Noise Barriers, issued April 2012, GLTMS, DevB</li> <li>DEVB TCW No. 06/2015 – Maintenance of Vegetation and Hard Landscape Features</li> </ul>
S11.8.1.3, Table 11.9	OM4 – Greening Works and Contour Grading Works on Cut/ Fill Slopes - Greening works such as hydroseeding/ terraces of shrub or tree planting will be provided where slope gradient allows, according to Geotechnical Engineering Office (GEO) Publication No.1/2011 Technical Guidelines on Landscape Treatment for Slopes.	Minimise landscape and visual impact	Funded by CEDD and implemented by Contractor	Within Project Site	Construction phase	Geotechnical Engineering Office (GEO) Publication No.1/2011 Technical Guidelines on Landscape Treatment for Slopes.

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
S11.8.1.3, Table 11.9	OM5 – Landscape design treatment to be provided by relevant government department.	Mitigate the loss of greenery and enhance the overall landscape and visual value	Funded by FEHD and implemented by Contractor	Within Project Site	After handover to the relevant department	-
S11.8.1.3, Table 11.9	OM6 – Architectural and chromatic treatment of the hard architectural and engineering structures and facilities.	Mitigate the loss of greenery and enhance the overall landscape and visual value	Funded by FEHD and implemented by Contractor	Within Project Site	After handover to the relevant department	-
S11.8.1.3, Table 11.9	OM7 – Aesthetic design of the proposed noise barriers.	Mitigate the visual impact	Funded by CEDD and implemented by Contractor	Along Sha Ling Road and Lin Ma Hang Road	Construction phase	• WBTC No. 36/2004 - ACABAS - submission is required to ACABAS for approval of any bridges and associated structures within the public highway system.
S11.8.1.3, Table 11.9	OM8 - Silt traps should also be incorporated into design of road gullies for the natural water stream(s).	Minimise the landscape impact on natural stream	Funded by CEDD and implemented by Contractor	Within Project Site	Construction Phase	

Notes:

(a) A detailed Tree Survey Report showing all identified valuable trees and OVT will be undertaken in a separate Tree Preservation and Removal Proposal.

(b) Wood resulting from tree removal should be recycled as mulch or soil conditioner for re-use within the Project or in other projects as far as possible e.g. for the construction of soft landscape work, were practical.

(c) Contractor is responsible for landscaping during the agreed establishment and maintenance period. Other designated management and maintenance agents to take up maintenance and management of landscaping after end of agreed period.

(d) Highways Department (HyD) is responsible for maintenance and management of landscaping of public road side slope, Leisure and Cultural Services Department (LCSD) is responsible for the management and maintenance of soft landscapes along non-expressway public roads outside Country Park and Food and Environmental Hygiene Department (FEHD) is responsible for maintenance and management of landscaping of other areas allocated to FEHD.

(e) The landscape mitigation treatment of the future development site shall follow the below frameworks:

- Buffer planting shall be provided to soften the edge of the site.

- Aesthetic landscape treatment including both soft and hard landscape features shall be provided.
- Vertical greening shall be provided as far as practicable.
- At-grade tree planting shall be provided as far as possible while planting space is allowed, to enhance the overall environment.
- Architectural design shall blend in with the surrounding environment.
- Overall greening ratio shall comply with TC(W) No.3/2012 Site coverage of Greenery for Government Building Projects.

Recommended Mitigation Measures     Recommended Measures & Main Concerns to address     Agent     Timing     Stage     / or standards to be achieved
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The compensatory woodland planting shall be included woodland mixed whips, seeding, and shrubs. The principle of the location shall be the extension of the existing woodland, as well as the original lost woodland location. The proposal will be agreed with AFCD, the woodland enhancement planting shall refer to Chapter 9.

EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and / or standards to be achieved
EM&A Project						
S13.1.1.1, S13.2.1.2	An Independent Environmental Checker needs to be employed as per the EM&A Manual.	Control EM&A Performance	Highways Department	All construction sites	Construction phase	<ul> <li>• EIAO Guidance</li> <li>Note No.4/2010</li> <li>• TM-EIAO</li> </ul>
S13.2.1.1 – S13.4.1.2	<ol> <li>An Environmental Team needs to be employed as per the EM&amp;A Manual.</li> <li>Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures.</li> <li>An environmental impact monitoring needs to be implementing by the Environmental Team to ensure all the requirements given in the EM&amp;A Manual are fully complied with.</li> </ol>	Perform environmental monitoring & auditing	Highways Department / Contractor	All construction sites	Construction phase	<ul> <li>• EIAO Guidance Note No.4/2010</li> <li>• TM-EIAO</li> </ul>



# Appendix O

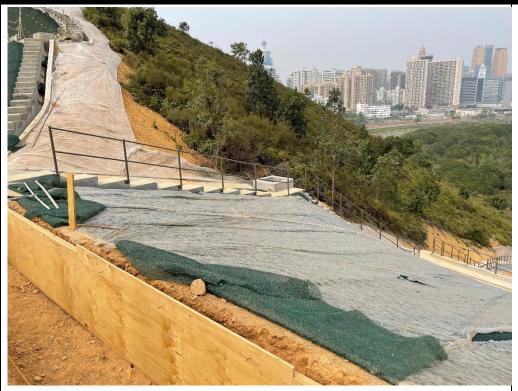
## Implementation of Water Quality Mitigation Measures

## Water Quality Mitigation Measures under CV/2016/10 (Contract 1)



# Water Quality Mitigation Measures under CV/2016/10 (Contract 1) Hydro-seeding was applied on the slope to minimize muddy runoff. Hydro-seeding was applied on the slope to minimize muddy runoff.

## Water Quality Mitigation Measures under CV/2016/10 (Contract 1)



Hydro-seeding was applied on the slope to minimize muddy runoff.





Hydro-seeding was applied on the slope to minimize muddy runoff.