**Civil Engineering and Development Department** 

# Trunk Road T2 (under EP-458/2013/C)

# Monthly Environmental Monitoring and Audit Report for October 2020

(version 1.0)

Approved By	
	(Mr. KS Lee,
	Environmental Team Leader)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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18 November 2020

By Post and E-mail

Hyder-Meinhardt Joint Venture 17/F, Two Harbour Square 180 Wai Yip Street, Kwun Tong Kowloon, Hong Kong

Attention: Mr. Edwin Ching

Dear Mr. Ching,

#### Re: Agreement No. EDO 01/2019 Independent Environmental Checker for Contract No. ED/2018/04 – Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron

# Monthly EM&A Report (October 2020) for EP-458/2013/C

Reference is made to the Environmental Team's submission of the Monthly EM&A Report for October 2020 (Version 1.0) certified by the ET Leader and provided to us via e-mail on 18 November 2020.

We are pleased to inform you that we have no adverse comment on the captioned submission. We write to verify the captioned submission in accordance with Condition 4.4 of EP-458/2013/C.

The ET Leader is reminded that it is the ET's responsibility to ensure the report be timely submitted to the Director of Environmental Protection as per Condition 4.4 of EP-458/2013/C.

Thank you for your attention. Please do not hesitate to contact the undersigned should you have any queries.

Yours sincerely, For and on behalf of Ramboll Hong Kong Limited

Manson Yeung Independent Environmental Checker

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# EXECUTIVE SUMMARY

#### Introduction

1. This is the 6<sup>th</sup> Environmental Monitoring and Audit (EM&A) Report prepared by the Environmental Team (ET), Cinotech Consultants Ltd., for Contract No. ED/2018/04 "Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron". This report summarized the monitoring results and audits findings of the EM&A programme under the issued Environmental Permit (EP) No. EP-458/2013/C and in accordance with the EM&A Manual (AEIAR-173/2013) during the reporting month of October 2020.

#### Summary of Main Works Undertaken and Key Measures Implemented

- 2. The main works undertaken during the reporting period are as follows:
  - East Portal Blast Door Installation
  - East Portal Horizontal Ground Investigation
  - West Bound Drill & Break Tunnel
  - East Bound Drill & Blast Tunnel
- 3. Implementation of the key mitigation measures during the reporting period are as follows:

#### Construction Noise

- Construction activities were scheduled to minimize noise nuisance to the nearby sensitive receiver.
- Use of Quality Powered Mechanical Equipment (QPME) on site.
- Erected the noise barrier on site.

#### Air Quality

• Regularly watering on site to avoid dust generation.

# Landscape and Visual

• Tree protection zones were fenced off to protect the existing trees on site.

# **Environmental Monitoring Works**

- 4. Environmental monitoring for the Project was performed in accordance with the EM&A Manual and the monitoring results were checked and reviewed. Site Inspections/Audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.
- 5. Summary of the non-compliance (exceedance) in the reporting month for the Project is tabulated in **Table I**.

Environment al Monitoring	No. of Non-compliance (Exceedance)		No. of Non-compliance (Exceedance) due to Construction Activities of this Project		Action Taken	
	Action Level	Limit Level	Action Level	Limit Level		
Air Quality	0	0	0	0	N/A	
Noise	0	0	0	0	N/A	
Marine Water Quality	N/A	N/A	N/A	N/A	N/A	
Groundwater Level Monitoring (Piezometer Monitoring)	N/A	N/A	N/A	N/A	N/A	
Ecological	N/A	N/A	N/A	N/A	N/A	
Cultural Heritage	N/A	N/A	N/A	N/A	N/A	
Landfill Gas	0	0	0	0	N/A	

 Table I
 Non-compliance (exceedance) Record for the Project in the Reporting Month

# Air Quality Monitoring

- 6. No Action/Limit Level exceedance for 1-hour TSP monitoring was recorded.
- 7. No Action/Limit Level exceedance for 24-hour TSP monitoring was recorded.

#### Construction Noise Monitoring

- 8. No Action Level exceedance was recorded in this reporting month. The Summary of Documented Complaints in Reporting Month is tabulated in Table III.
- 9. No Limit Level exceedance for day time construction noise monitoring were recorded in the reporting month.

#### Water Quality Monitoring

- 10. Groundwater quality monitoring had been suspended since October 2019 upon the agreement by EPD. Further details should be founded at **Section 4.1**.
- 11. No marine water quality monitoring is required as no marine works will be conducted at the Cha Kwo Ling and Lam Tin areas for this project.
- 12. As the construction activity is approximately 120m away from the piezometer gate, no piezometer monitoring is required.

Waste Management

13. Wastes generated from this Project include inert construction and demolition (C&D) materials, and non-inert C&D materials. Details of waste management data is presented in **Appendix H**.

# Ecological Monitoring

14. No coral monitoring is required as no marine works will be conducted at the Cha Kwo Ling and Lam Tin areas for this project.

# Fisheries Impact Monitoring

15. No specific fisheries monitoring programme is required during the construction phase.

Monitoring on Cultural Heritage

16. As the construction works of Cha Kwo Ling Tunnel from the end of Trunk Road T2 to the TKOLTT at the Eastern Ventilation Building are located more than 100m away from the Cha Kwo Ling Tin Hau temple, no monitoring on cultural heritage is required.

Landscape and Visual Monitoring and Audit

17. The implementation of landscape and visual mitigation measures was checked by a registered landscape architect. Recommended follow-up actions have been discharged by the Contractor. Details of the audit findings and implementation status are presented in **Section 12**.

Landfill Gas Monitoring

18. Monitoring of landfill gases was commenced in December 2016. Such monitoring was conducted by the Contractor of Agreement No. CE 59/2015 (EP). No Limit Level exceedance was recorded.

Hazard to Life Monitoring

19. No environmental monitoring and audit is required as no hazard assessment was conducted.

Environmental Site Inspection

19. Joint weekly site inspections were conducted by representatives of the Contractor, Engineer and Environmental Team. Details of the audit findings and implementation status are presented in **Section 12**.

# Key Information in the Reporting Month

20. Summary of key information in the reporting month is tabulated in Table II

 Table II
 Summary of Complaints, Notifications of Summons and Successful Prosecutions in the Reporting Month

Event	<b>Event Details</b>		Action Taken	Status	
Event	Number	Nature	Action Taken	Status	
Complaints Received	1	Noise	Details refer to App M	Closed	
Notifications of any summons & prosecutions received	0		N/A	N/A	

21. Summary of complaints received in the reporting month is tabulated in Table III.

Table III Sum	mary of Compl	laints Details in [	<b>Reporting Month</b>
---------------	---------------	---------------------	------------------------

Complaint Type		Investigation Findings	Follow-up Action / Mitigation Measure
<ol> <li>Noise Nuisance Portion T1 ar night-time pe (Before 07:00</li> <li>Effectiveness o erected noise ba</li> </ol>	e from r t the 2 eriod ) am) 2. f arrier.	Based on the information provided rom contractor and verified by RE, no excavating works conducted during night-time period of 9 and 10 October 2020. Details shall be referred to CIR- N02 Since the complaint location stated in part II is situated out of the project boundary and within the other construction site, no investigation shall be conducted for non-project related complaint.	• Contractor was recommended to scheduled noisy works to less sensitive hours (e.g. normal weekdays between 08:00-19:00) to minimize noise nuisance.

#### **Reporting Changes**

22. No reporting change in the reporting month.

#### **Future Key Issues**

23. The key works or activities will be anticipated in the next reporting period are as follows:

#### Table IV Summary Table for Site Activities in the next Reporting Period

Site Activities (November 2020)	Key Environmental Issues
<ol> <li>West Bound – Drill &amp; Break Tunnel</li> <li>East Bound – Dill &amp; Blast Tunnel</li> </ol>	(A) / (B) / (C) / (D)

Note:

(A) Dust generation from haul road, stockpile of dusty materials, exposed site area, excavation works and rock breaking activities;

(B) Noisy construction activity such as rock-breaking activities and piling works;

(C) Runoff from exposed slope or site area; and

 $(D) \ \ Wastewater \ and \ runoff \ discharge \ from \ site.$ 

## **1 INTRODUCTION**

#### Background

- 1.1 In 2009, Civil Engineering and Development Department (CEDD) commissioned a Kai Tak Development (KTD) Trunk Road T2 and Infrastructure at South Apron Investigation. The assignment covers the provision of the Trunk Road T2 and its connections with the Central Kowloon Route (CKR) at the north apron area and the Tseung Kwan O Lam Tin Tunnel (TKOLTT) to the south in the Cha Kwo Ling area.
- 1.2 The Trunk Road T2 Project is one of the designated Projects under Schedule 2 of the EIAO proposed in the KTD. CEDD submitted the Project Profile (No. PP-379/2009) on 24 March 2009 for application for an EIA study brief for the Trunk Road T2 Project under the EIAO. Accordingly, an EIA Study Brief (ESB-203/2009) for the Trunk Road T2 Project was issued on 30 April 2009. The Environmental Impact Assessment (EIA) Report for the Trunk Road T2 Project was approved under the Environmental Impact Assessment Ordinance (EIAO) on 19 September 2013. The corresponding Environmental Permit (EP) was issued on 19 September 2013 (EP no.: EP-451/2013).
- 1.3 The Contract No. ED/2018/04 is the main contract of Trunk Road T2 ("T2 Main Works") which comprises mainly the design and construction of a dual two-lane trunk road of approximately 3.0km long with about 2.7km of the trunk road in form of tunnel; ventilation and administration buildings, environmental protection and mitigation works and etc. The EM&A programme under this Contract is governed by the two EPs (EP-451/2013 and EP-458/2013/C) and two EM&A Manuals (AEIAR-174/2013 and AEIAR-173/2013). The work areas of the T2 Main Works are shown in **Figure 1** and the works to be executed under this Contract and corresponding EPs are summarized as follows:

Environmental Permit	Works Description
EP-451/2013 – Trunk Road T2	<u>Trunk Road T2</u>
	• Construction of highway and sub-sea tunnel connecting between
	Central Kowloon Route and Cha Kwo Ling Tunnel
	Western & Eastern Ventilation Buildings
EP-458/2013/C - Tseung Kwan O -	<u>Cha Kwo Ling Tunnel</u>
Lam Tin Tunnel (TKOLTT) and	Construction of Cha Kwo Ling Tunnel from the end of Trunk Road T2
Associated Works	to the TKOLTT at the Eastern Ventilation Building

#### Monitoring Works in Lam Tin under EP-458/2013/C

- 1.4 Under Agreement No. CE 59/2015 (EP) Tseung Kwan O Lam Tin Tunnel (TKOLLT) and Associated Works, the baseline monitoring works in Lam Tin under the EM&A Manual (AEIAR-173/2013) were conducted by the Environmental Team (ET) for the Agreement No. CE 59/2015 (EP) at the approved monitoring locations, namely AM1, AM2, AM3, AM4, AM4 (A) CM1, CM2, CM3, CM4 and CM5. Impact monitoring within the Lam Tin area shall be conducted by the ET of Contract No. ED/2018/04 upon cessation of Agreement No. CE 59/2015 (EP). The data obtained from the impact monitoring works completed by the ET of Agreement No. CE 59/2015 (EP) will be adopted in this report.
- 1.5 Cinotech Consultants Ltd. was designated as the Environmental Team (ET) to undertake the EM&A works for "Trunk Road T2 and Infrastructure Works for Developments at the Former

South Apron" (hereinafter called the "Project").

# **Purpose of the Report**

1.6 This is the 6<sup>th</sup> Monthly EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period in October 2020.

## **Project Organizations**

- 1.7 Different Parties with different levels of involvement in the Project organization include:
  - Permit Holder Civil Engineering and Development Department (CEDD)
  - Supervisor Representative Hyder-Meinhardt Joint Venture (HMJV)
  - Environmental Team (ET) Cinotech Consultants Limited (Cinotech)
  - Independent Environmental Checker (IEC) Ramboll Hong Kong Limited (Ramboll)
  - Contractor Bouygues Travaux Publics (BTP)
- 1.8 The key contacts of the Project are shown in **Table 1.1**.

1 abic 1.1	Key Hojeet Contacts			
Party	Role	Contact Person	Phone No.	
CEDD	Permit Holder	Mr. Wong Chi Wai, Tommy	3842 7111	
HMJV	Supervisor Representative	Mr. Joe Nam	5183 0830	
Cinotech	Environmental Team	Mr. KS Lee (ETL)	2151 2091	
		Ms. Karina Chan	2157 3880	
Ramboll	Independent Environmental Checker	Mr. Manson Yeung	3465 2888	
BTP	Contractor	Mr. Bryan Lee	5588 3891	

#### Table 1.1Key Project Contacts

1.9 The Organizational Structure for Environmental Management is shown in Figure 1.2.

#### Construction Activities undertaken during the Reporting Month

- 1.10 The major site activities undertaken in the reporting month included:
  - East Portal Blast Door Installation
  - East Portal Horizontal Ground Investigation
  - West Bound Drill & Break Tunnel
  - East Bound Drill & Blast Tunnel

#### **Summary of EM&A Requirements**

- 1.11 The EM&A programme requires construction noise, air quality monitoring and environmental site audit, etc. The EM&A requirements for each parameter are described in the following sections, including:
  - All monitoring parameters;
  - Action and Limit levels for all environmental parameters;

- Event Action Plans;
- Environmental mitigation measures, as recommended in the Project EIA Report.
- 1.12 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in **Section 12** of this report.
- 1.13 This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the monitoring parameters of the required environmental monitoring works and audit works for the Project in October 2020.

#### Status of Environmental Licensing and Permitting

1.14 All permits/licenses obtained for the Project are summarized in Table 1.2.

 Table 1.2
 Summary of Environmental License and Permit

Downit / Licongo No	Valid	Status				
Permit / License No.	From	То	Status			
Environmental Permit (EP)						
EP-451/2013	19 Sep 2013	N/A	Valid			
EP-458/2013/C	Valid					
Notification pursuant to Air Pollution (Construction Dust) Regulation						
Ref. No.: 451120         20 Nov 2019         N/A         V						
Billing Account for Construction Waste Disposal						
A/C No.: 7036016 09 Dec 2019 N/A Valid						
Construction Noise Permit						
CNP No. (For Portion T1): GW-RE0668-20         20 Aug 2020         19Nov 2020         Valid						
CNP No. (For Portion Q): GW-RE0337-20	08 May 2020	07 Nov 2020	Valid			
CNP No. (For Portion Q): GW-RE0917-20	08 Nov 2020	07 May 2021	Valid			
Wastewater Discharge License						
Nil						
Chemical Waste Producer License						
WPN: 5213-286-B2557-03	09 Mar 2020	N/A	Valid			

# 2 AIR QUALITY

# **Monitoring Requirement**

2.1 According to Section 2.2.4 of the EM&A Manual (AEIAR-173/2013), 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring was conducted to monitor the air quality for this Project. For regular impact monitoring, a sampling frequency of at least once in every six days at all of the monitoring stations for 1-hour and 24-hour TSP monitoring. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

# **Monitoring Locations**

2.2 Five designated monitoring stations were selected for air quality monitoring programme. Table2.1 describes the air quality monitoring locations, which are also depicted in Figure 2.

<b>Monitoring Stations</b>	Location	Location of Measurement
AM1	Tin Hau Temple	Ground Level
AM2	Sai Tso Wan Recreation Ground	Ground Level
AM3	Yau Lai Estate Bik Lai House	Rooftop (41/F)
AM4 <sup>(1)</sup>	Sitting-out Area at Cha Kwo Ling Village	Ground Level
AM4(A) <sup>(2) (*)</sup>	Cha Kwo Ling Public Cargo Working Area Administrative Office	Rooftop (3/F)

Table 2.1	Air Quality	Monitoring	Locations
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Remarks:

(1) For 1-hour TSP monitoring;

(2) For 24-hour TSP monitoring

(\*) Air quality monitoring at designated station AM4 (24-hr TSP) was rejected by the premise owners.

Therefore, baseline and impact air quality monitoring works were carried out at alternative air quality monitoring stations AM4 (A) (24-hr TSP only)

# **Monitoring Parameters and Frequency**

2.3 **Table 2.2** summarizes the monitoring parameters, monitoring period and frequencies of impact air quality monitoring. The monitoring schedule is shown in **Appendix D**.

# Table 2.2 Frequency and Parameters of Air Quality Monitoring

Monitoring Stations	Parameter	Period	Frequency
AM1, AM2, AM3, AM4	1-hour TSP	0700 - 1900	3 times per 6 days
AM1, AM2, AM3, AM4(A)	24-hour TSP	24 hours	Once every 6 days

# **Monitoring Equipment**

2.4 High Volume Samplers (HVS) in compliance with the specification stipulated in the EM&A Manual (AEIAR-173/2013), Section 2.3.1, were used to carry out 24-hour TSP monitoring. Direct reading dust meter were also used to measure 1-hour average TSP levels. The 1-hour sampling was determined by HVS to check the validity and accuracy of the results measured

by direct reading method.

- 2.5 Wind data monitoring equipment was set at rooftop (about 41/F) of Yau Lai Estate Bik Lai House for logging wind speed and wind direction such that the wind sensors are clear of obstructions or turbulence caused by building. The wind data monitoring equipment is recalibrated at least once every six months and the wind directions are divided into 16 sectors of 22.5 degrees each. The location is shown in **Figure 2**. This weather information for the reporting month is summarized in **Appendix C**.
- 2.6 **Table 2.3** summarizes the equipment used for air quality monitoring by the ET for Contract No. CE 59/2015 (EP). Copies of calibration certificates are attached in **Appendix B**.

Table 2.5 All Quality N		
Equipment	Model	Quantity
1-hour TSP Dust Meter	Sibata Model No. LD-5R	3
1-liour ISF Dust Weter	(Serial No.: 972778, 972779, 972777)	5
	TISCH Model: TE-5170 (Serial No.: 1536)	1
HVS Sampler	GMW model: GS2310	3
	(Serial No.: 1287, 10379, 10599)	5
Calibrator	TISCH Model: TE-5025A	1
Calibrator	(Serial No.: 3746)	1
Wind Anemometer	Davis Weather Monitor II, Model no. 7440	1
white Alternometer	(Serial No.: MC01010A44)	1

Table 2.3Air Quality Monitoring Equipment

# **Monitoring Methodology**

# **1-hour TSP Monitoring**

# Measuring Procedures

2.7 The measuring procedures of the 1-hour dust meter are in accordance with the Manufacturer's Instruction Manual as follows:

(Sibata Model No.: LD-5R)

- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Set POWER to "ON" and make sure that the battery level was not flash or in low level.
- Allow the instrument to stand for about 3 minutes and then the cap of the air sampling inlet has been released.
- Push the knob at MEASURE position.
- Set time/mode setting to [BG] by pushing the time setting switch. Then, start the background measurement by pushing the start/stop switch once. It will take 6 sec. to complete the background measurement.
- Push the time setting switch to change the time setting display to [MANUAL] at the bottom left of the liquid crystal display. Finally, push the start/stop switch to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, count value and site condition were recorded during the monitoring period.

#### Maintenance/Calibration

- 2.8 The following maintenance/calibration is required for the 1-hour dust meter:
  - Check and calibrate the meter by HVS to check the validity and accuracy of the results measured by direct reading method at 2-month intervals throughout all stages of the air quality monitoring.

# 24-hour TSP Monitoring

#### Instrumentation

- 2.9 High volume samplers (HVS) (TISCH Model: TE-5170 and GMW Model: GS2310) completed with appropriate sampling inlets were employed for 24-hour TSP monitoring. The sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).
- 2.10 The positioning of the HVS samplers are as follows:
  - A horizontal platform with appropriate support to secure the samplers against gusty wind shall be provided;
  - No two samplers shall be placed less than 2 meter apart;
  - The distance between the sampler and an obstacle, such as buildings, must be at least twice the height that the obstacle protrudes above the sampler;
  - A minimum of 2 metres of separation from walls, parapets and penthouses is required for rooftop samplers;
  - A minimum of 2 metres of separation from any supporting structure, measured horizontally is required;
  - No furnace or incinerator flue is nearby;
  - Airflow around the sampler is unrestricted;
  - The sampler is more than 20 metres from the dripline;
  - Any wire fence and gate, to protect the sampler, shall not cause any obstruction during monitoring;
  - Permission must be obtained to set up the samplers and to obtain access to the monitoring stations; and
  - A secured supply of electricity is needed to operate the samplers.

# Operating/analytical procedures for the operation of HVS

- 2.11 Operating/analytical procedures for the air quality monitoring are highlighted as follows:
  - Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 0.6 m<sup>3</sup>/min. and 1.7 m<sup>3</sup>/min.) in accordance with the EM&A manual (AEIAR-173/2013). The flow rate shall be indicated on the flow rate chart.
  - For TSP sampling, fiberglass filters with a collection efficiency of > 99% for particles of 0.3µm diameter were used.
  - The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.

- The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.
- The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.
- The shelter lid was closed and secured with the aluminum strip.
- The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- After sampling, the filter was removed and sent to the HOKLAS laboratory (Wellab Ltd.) for weighing. The elapsed time was also recorded.
- Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than  $\pm$ 3°C; the relative humidity (RH) should be < 50% and not vary by more than  $\pm$ 5%. A convenient working RH is 40%.

#### Maintenance/Calibration

- 2.12 The following maintenance/calibration is required for the HVS:
  - The high volume motors and their accessories were properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply are in good working condition.

High volume samplers were calibrated at bi-monthly intervals using TE-5025A Calibration Kit throughout all stages of the air quality monitoring.

# **Results and Observations**

- 2.13 The impact monitoring works for air quality monitoring locations AM1, AM2, AM3, AM4 and AM4 (A) are completed by the ET of Agreement No. CE 59/2015 (EP), and the data will be adopted in this report.
- 2.14 Impact air quality monitoring was conducted at five monitoring stations as scheduled. The monitoring schedule is shown in **Appendix D**.
- 2.15 No Action/Limit Level exceedance was recorded for all 1-hour and 24-hour TSP monitoring in the reporting month.
- 2.16 The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix E** and **Appendix F** respectively.
- 2.17 According to field observations by ET for Agreement No. CE 59/2015 (EP) in the reporting period, the major dust source identified at the designated air quality monitoring stations are as follows:

Monitoring Stations	Major Dust Source
AM1 – Tin Hau Temple	Road Traffic at Cha Kwo Ling Road
AM2 – Sai Tso Wan Recreation Ground	N/A
AM3 – Yau Lai Estate Bik Lai House	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza
AM4 - Sitting-out Area at Cha Kwo Ling Village	Road Traffic at Cha Kwo Ling Road
AM4(A) - Cha Kwo Ling Public Cargo Working Area Administrative Office	Road Traffic at Cha Kwo Ling Road

 Table 2.4
 Major Dust Source during Air Quality Monitoring

2.18 Measurement cannot be carried out for AM1 between 12 Sep 2020 to 7 Oct 2020 as no power supply due to technical problems in the system of the Temple.

# Comparison of EM&A Result with EIA Prediction

2.19 The air monitoring data was compared with the predictions (with the assessment height of 1.5 mAG) in Table 3.17 of EIA Report, AEIAR-173/2013 (as approved in 2013) as summarised in Table 2.5 and Table 2.6.

Table 2.5         Comparison of 1-hr TSP Monitoring Data with Predictions in EIA Report
---

Monitoring Stations	ASR ID	Predicted Maximum 1-hr TSP Concentration in EIA Report (AEIAR- 173/2013), μg/m <sup>3</sup>	Maximum 1-hr TSP Concentration in the Reporting Month (October 2020), µg/m <sup>3</sup>
AM1 – Tin Hau Temple	CL1	707	89.3
AM2 – Sai Tso Wan Recreation Ground	CL6	266	92.4
AM3 – Yau Lai Estate Bik Lai House	CL9	507	88.4
AM4 - Sitting-out Area at Cha Kwo Ling Village	CL16	430	67.6

Monitoring Stations	ASR ID	Predicted Maximum 24-hr TSP Concentration in EIA Report (AEIAR- 173/2013), μg/m <sup>3</sup>	Maximum 24-hr TSP Concentration in the Reporting Month (October 2020), µg/m <sup>3</sup>
AM1 – Tin Hau Temple	CL1	199	117.7
AM2 – Sai Tso Wan Recreation Ground	CL6	109	115.1
AM3 – Yau Lai Estate Bik Lai House	CL9	123	147.4
AM4(A) - Cha Kwo Ling Public Cargo Working Area Administrative Office <sup>(*)</sup>	N/A <sup>(1)</sup>	N/A <sup>(1)</sup>	41.5

#### Table 2.6 Comparison of 24-hr TSP Monitoring Data with Predictions in EIA Report

Remarks:

(1) No 24-hr TSP concentration was predicted in EIA Report (AEIAR-173/2013)

(\*) Air quality monitoring at designated station AM4 (24-hr TSP) was rejected by the premise owners. Therefore, baseline and impact air quality monitoring works were carried out at alternative air quality monitoring stations AM4 (A) (24-hr TSP only)

- 2.20 In the reporting month, the 1-hour TSP concentrations at AM1, AM2, AM3 and AM4 were lower than the prediction in the EIA Report, AEIAR-173/2013 (as approved in 2013). No Action/Limit level exceedance was recorded in the reporting period.
- 2.21 In the reporting month, the 24-hour TSP concentrations at AM1 was lower than the prediction in the EIA Report, AEIAR-173/2013 (as approved in 2013). The 24-hour TSP concentrations at AM2 and AM3 were higher than the prediction in the EIA Report, AEIAR-173/2013 (as approved in 2013), this may due to the fluctuation of road traffic near Eastern Cross Harbour Tunnel Toll Plaza which affected the result of 24-hour TSP concentrations at AM2; and, the result of 24-hour TSP concentrations at AM2 may be affected due to the approaching of dry weather. No Action/Limit level exceedance was recorded in the reporting period.

# 3 NOISE

# **Monitoring Requirements**

3.1 According to Section 3.2.1 of the EM&A Manual (AEIAR-173/2013), construction noise monitoring was conducted to monitor the construction noise arising from the construction activities. The regular monitoring frequency for each monitoring station shall be on a weekly basis and conduct one set of measurements between 0700 and 1900 hours on normal weekdays. Appendix A shows the established Action and Limit Levels for the environmental monitoring works.

# **Monitoring Locations**

3.2 Noise monitoring was conducted at five designated monitoring stations, namely CM1, CM2, CM3, CM4 and CM5 in the reporting period. **Table 3.1** and **Figure 2** show the locations of these stations.

Monitoring Stations	Location	Location of Measurement
CM1	Nga Lai House, Yau Lai Estate Phase 1, Yau Tong	Rooftop (41/F)
CM2	Bik Lai House, Yau Lai Estate Phase 1, Yau Tong	Rooftop (41/F)
CM3	Block S, Yau Lai Estate Phase 5, Yau Tong	Rooftop (40/F)
CM4	Tin Hau Temple, Cha Kwo Ling	Ground Level
CM5	CCC Kei Faat Primary School, Yau Tong	Rooftop (6/F)

#### Table 3.1 Noise Monitoring Stations

# Monitoring Parameters, Frequency and Duration

3.3 **Table 3.2** summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix D**.

Table 3.2Frequency and Parameters of Noise Monitoring

Monitoring Stations	Time Period	Duration	Frequency	Parameter	Measurement
CM1				L (20 min)	Façade Measurement
CM2				L <sub>10</sub> (30 min.) dB(A)	Façade Measurement
CM3	0700-1900 hrs on normal weekdays	30 minutes	Once per week	L <sub>90</sub> (30 min.) dB(A)	Façade Measurement
CM4	weekuays			$L_{eq}(30 \text{ min.})$	Façade Measurement
CM5				dB(A)	Façade Measurement

# **Monitoring Equipment**

3.4 Integrating Sound Level Meter was used for impact noise monitoring. The meters were Type 1 sound level meter capable of giving a continuous readout of the noise level readings including equivalent continuous sound pressure level ( $L_{eq}$ ) and percentile sound pressure level ( $L_x$ ) that also complied with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. **Table 3.3** summarizes the noise monitoring equipment being used by the ET for Agreement No. CE 59/2015 (EP) within the reporting period. Copies of calibration certificates are attached in **Appendix B**.

Table 5.5 Tollse Montoring Equipment				
Equipment	Model	Quantity		
Integrating Sound Loval Mater	SVAN 957 (Serial No.: 23851, 23852)	2		
Integrating Sound Level Meter	SVAN 979 (Serial No.: 27189, 27190)	2		
Calibrator	SV30A (Serial No.: 10965)	1		
Canbrator	B&K 4231 (Serial No.: 2326353)	1		

#### Table 3.3Noise Monitoring Equipment

# Monitoring Methodology and QA/QC Procedure

- 3.5 The monitoring procedures are as follows:
  - The monitoring station was normally be at a point 1m from the exterior of the sensitive receivers building façade and be at a position 1.2m above the ground.
  - For free field measurement, the meter was positioned away from any nearby reflective surfaces. All records for free field noise levels were adjusted with a correction of +3 dB(A).
  - The battery condition was checked to ensure the correct functioning of the meter.
  - Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
    - Frequency weighting: A
    - Time weighting: Fast
    - Time measurement: 30 minutes
  - Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.
  - The wind speed was frequently checked with the portable wind meter.
  - At the end of the monitoring period, the L<sub>eq</sub>, L<sub>90</sub> and L<sub>10</sub> were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
  - Noise monitoring would be cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s. Supplementary monitoring would be provided to ensure sufficient data would be obtained.

# Maintenance and Calibration

- 3.6 The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- 3.7 The sound level meter and calibrator were checked and calibrated at yearly intervals.

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

## **Results and Observations**

- 3.9 The data obtained from the impact monitoring works completed by the ET of Agreement No. CE 59/2015 (EP) will be adopted in this report.
- 3.10 No Action/ Limit Level exceedance was recorded for all construction noise monitoring in the reporting month.
- 3.11 Noise monitoring results and graphical presentations are shown in Appendix G.
- 3.12 According to field observations by ET for Agreement No. CE 59/2015 (EP) in the reporting period, the major noise sources identified at the noise monitoring stations are shown in Table 3.4.

 Table 3.4
 Other Noise Source Identified during Noise Monitoring

Monitoring Stations	Major Noise Source
CM1	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza
CM2	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza
CM3	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza
CM4	Road Traffic at Cha Kwo Ling Road
CM5	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza

 Table 3.5
 Baseline Noise Level and Noise Limit Level for Monitoring Stations

Monitoring Stations	Baseline Noise Level, dB (A) (at 0700 – 1900 hrs on normal weekdays)	Noise Limit Level, dB (A) (at 0700 – 1900 hrs on normal weekdays)
CM1	65.5	
CM2	63.6	75
CM3	65.6	15
CM4	62.0	
CM5	68.2	70*

(\*) Noise Limit Level is 65 dB(A) during school examination periods.

# Comparison of EM&A Result with EIA Prediction

3.13 The noise monitoring data was compared with the predictions in Table 4.15 of EIA Report (AEIAR-173/2013) as summarised in **Table 3.6**.

# Table 3.6 Maximum Predicted Mitigated Construction Noise Levels in EIA Report

Monitoring Stations	NSR ID	Maximum Predicted Mitigated Construction Noise Levels in EIA Report (AEIAR- 173/2013), dB(A)	Maximum Construction Noise Levels in the Reporting Month (October 2020), Leq (30min) dB(A)
CM1 – Nga Lai House, Yau Lai Estate Phase 1, Yau Tong	N1102	73	74.1
CM2 – Bik Lai House, Yau Lai Estate Phase 1, Yau Tong	N1204	75	74.7
CM3 – Block S, Yau Lai Estate Phase 5, Yau Tong	N2105	75	73.2
CM4 – Tin Hau Temple, Cha Kwo Ling	N3101a	73	73.2
CM5 – CCC Kei Faat Primary School, Yau Tong	N4101	71	71.8

3.14 The results at CM1, CM5 and CM4 were higher than the maximum predicted mitigated construction noise level in the EIA Report, AEIAR-173/2013 (as approved in 2013), this may be due to the traffic noise near Eastern Cross Harbour Tunnel Toll Plaza and at Cha Kwo Ling Road. The results at CM2 and CM3were lower than the maximum predicted noise level in the EIA Report. No Limit level exceedance was recorded in the reporting period.

# 4 WATER QUALITY

## **Monitoring Requirement**

Groundwater Quality

4.1 The existing groundwater quality monitoring programme has been suspended as the monitoring results had been deemed non-representative of the impact from the project justified by two major factors: (1) influence on the monitoring results from non-project related factors, such as anthropogenic activities and natural phenomenon; and (2) large separation between the monitoring stations and works area. In addition, as no alternative locations for the groundwater quality monitoring were available, the groundwater quality monitoring has been suspended since October 2019 upon the agreement by EPD.

#### Marine Water Quality

4.2 According to Section 4.4.3 of EM&A Manual (AEIAR-173/2013), marine water quality impact monitoring stations is carried out during marine construction for TKOLTT reclamation. Since the construction of Cha Kwo Ling Tunnel from the end of Trunk Road T2 to the TKOLTT at the Eastern Ventilation Building does not involve reclamation, the marine water quality monitoring programme stated in Section 4.4 of the EM&A Manual (AEIAR-173/2013) is therefore not applicable to Contract No. ED/2018/04.

#### Groundwater Level Monitoring (Piezometer Monitoring)

4.3 According to Section 4.1.2 of EM&A Manual (AEIAR-173/2013), daily piezometer monitoring will be carried out on a daily basis when any tunnel construction activities are carried out within +/- 50m of the piezometer gate in plan. As the construction works of Cha Kwo Ling Tunnel from the end of Trunk Road T2 to the TKOLTT at the Eastern Ventilation Building is approximately 120m away from the piezometer gate in plan, the piezometer monitoring programme stated in Section 4.2 of the EM&A Manual (AEIAR-173/2013) is therefore not applicable to Contract No. ED/2018/04.

# 5 WASTE MANAGEMENT

- 5.1 According to Section 5.1.2 of the EM&A Manual (AEIAR-173/2013), Waste materials generated during construction activities, such as construction and demolition (C&D) materials and general refuse, are recommended to be audited at regular intervals (at least quarterly) to ensure that proper storage, transportation and disposal practices are being implemented by the Contractor. To fulfil this requirement, site audits are carried out on a weekly basis. The summaries of site audits are attached in **Appendix I**.
- 5.2 With reference to relevant handling records of this Project, the quantities of different types of waste generated in the reporting month are summarised and presented in **Appendix H**.

# 6 ECOLOGY

#### **Post-Translocation Coral Monitoring**

6.1 Post-translocation monitoring survey is recommended in Section 6.2.5 of the EM&A Manual (AEIAR-173/2013), to audit the success of coral translocation. Since the construction of Cha Kwo Ling Tunnel from the end of Trunk Road T2 to the TKOLTT at the Eastern Ventilation Building does not involve any marine works in the concerned area mentioned in Section 6.1.2 of the EM&A Manual (AEIAR-173/2013), the post-translocation monitoring survey stated in Section 6.2.5 of the EM&A Manual (AEIAR-173/2013) is therefore not applicable to Contract No. ED/2018/04.

# 7 FISHERIES

- 7.1 According to Section 7.1.3 of EM&A Manual (AEIAR-173/2013), no specific fisheries monitoring programme is required during the construction phase.
- 7.2 The implementation of the mitigation measures stated in the Water Quality Impact Assessment (Refer to Section 5 of EIA Report (AEIAR-173/2013)) will be audited as part of the EM&A procedures during the construction period. The summaries of site audits are attached in **Appendix I**.

# 8 CULTURAL HERITAGE

- 8.1 According to Condition 3.7 of EP-458/2013/C and Section 8.2.1 of the EM&A Manual (AEIAR-173/2013), monitoring of vibration impacts was conducted when the construction works are less than 100m from the Built Heritage in close proximity of the worksite, namely the Cha Kwo Ling Tin Hau temple. Tilting and settlement monitoring should be applied on the Cha Kwo Ling Tin Hau Temple.
- 8.2 As the construction works of Cha Kwo Ling Tunnel from the end of Trunk Road T2 to the TKOLTT at the Eastern Ventilation Building are located more than 100m away from the Cha Kwo Ling Tin Hau temple, the vibration impact monitoring stated in Section 8.3.1 of the EM&A Manual (AEIAR-173/2013) is not applicable to Contract No. ED/2018/04.

#### Mitigation Measures for Cultural Heritage

8.3 According to Condition 3.6 of EP-458/2013/C, to prevent damage to Cha Kwo Ling Tin Hau Temple and its Fung Shui rocks (Child-given rocks) during the construction phase, a temporarily fenced-off buffer zone (Rocks buffer zone is 5 m from the edge of Rocks and 15m from the edge of Rocks alter) with allowance for public access (minimum 1 m) around the temple and the Fung Shui rocks shall be provided. The open yard in front of the temple should be kept as usual for annual Tin Hau festival.

8.4 As there is a large buffer distance from the current works to Cha Kwo Ling Tin Hau Temple and the Fung Shui rocks (Child-given rocks), the temporarily fenced-off rocks buffer zone and from the edge of Rocks alter is not required. The fenced-off rocks buffer zone would be implemented when there is construction activities in vicinity of the cultural heritage.

# 9 LANDSCAPE AND VISUAL IMPACT

- 9.1 According to Section 9.3 of the EM&A Manual (AEIAR-173/2013), landscape and visual mitigation measures during the construction phase shall be checked to ensure that they are fully realized and implemented on site.
- 9.2 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of landscape and visual mitigation measures listed in "Environmental Mitigation Implementation Schedule (EMIS)" (shown in **Appendix J**).
- 9.3 The implementation of landscape and visual mitigation measures was checked by a registered landscape architect. No non-compliance of the landscape and visual impact was recorded in the reporting month. Details of the audit findings and implementation status are presented in **Appendix I**.

# 10 LANDFILL GAS MONITORING

# **Monitoring Requirement**

- 10.1 In accordance with Section 10.1.1 of the EM&A Manual (AEIAR-173/2013), monitoring of landfill gas is required for construction works within the Sai Tso Wan Landfill Consultation Zone during the construction phase. This section presents the results of landfill gas measurements performed by the Contractor of Agreement No. CE 59/2015 (EP). Appendix A shows the Limit Levels for the monitoring works.
- 10.2 The "Landfill Gas Monitoring Proposal", including the monitoring programme and detailed actions, is submitted to the EPD for approval. Details of monitoring in this Proposal is in line with the monitoring requirements stipulated in the EM&A Manual.

# **Monitoring Parameters and Frequency**

- 10.3 Monitoring parameters for Landfill gas monitoring include Methane, Carbon dioxide and Oxygen.
- 10.4 According to the implementation schedule and recommended mitigation measures of the EM&A Manual, measurements of the following frequencies should be carried out:

Excavations deeper than 1m

• at the ground surface before excavation commences;

- immediately before any worker enters the excavation;
- at the beginning of each working day for the entire period the excavation remains open; and
- periodically throughout the working day whilst workers are in the excavation.

Excavations between 300mm and 1m deep

- directly after the excavation has been completed; and
- periodically whilst the excavation remains open.

For excavations less than 300mm deep

• monitoring may be omitted, at the discretion of the Safety Officer or other appropriately qualified person

#### **Monitoring Locations**

10.5 Monitoring of oxygen, methane and carbon dioxide was performed for excavations at 1m depth or more within the Consultation Zone.

#### **Monitoring Equipment**

10.6 **Table 10.1** summarizes the equipment employed by the Contractor of Agreement No. CE 59/2015 (EP) for the landfill gas monitoring.

#### Table 10.1Landfill Gas Monitoring Equipment

Equipment	Model and Make	Quantity
	ALTAIR 5X	
Portable gas detector	Multigas Detector	1
	(Serial No. 152097)	

#### **Results and Observations**

10.7 In the reporting month, landfill gas monitoring was carried out by the Contractor of Agreement No. CE 59/2015 (EP) on 46 occasions. No Limit Level exceedance for landfill gas monitoring was recorded in the reporting month. The monitoring results are provided in Appendix K. Copies of calibration certificates are attached in Appendix B.

# 11 HAZARD TO LIFE

11.1 According to Section 11.1.1 of EM&A Manual (AEIAR-173/2013), as no overnight storage of explosive on site is required for the construction of the Project, the hazard assessment is deemed not necessary. Thus, environmental monitoring and audit is not required.

# 12 ENVIRONMENTAL AUDIT

#### Site Audits

- 12.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix I**.
- 12.2 Site audits were conducted on 08, 15, 22 and 29 October 2020 in the reporting month. Site inspection of the IEC was conducted on 15 October 2020. No non-compliance was observed during the site audit.

#### **Implementation Status of Environmental Mitigation Measures**

- 12.3 According to Environmental Permits, the approved EIA Reports (Register No.: AEIAR-174/2013 and AEIAR-173/2013), and the EM&A Manuals of the Project (AEIAR-174/2013 and AEIAR-173/2013), the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An Environmental Mitigation Implementation Schedule (EMIS) is provided in **Appendix J**.
- 12.4 The ET weekly site inspections were carried out during the reporting month and the observations and recommendations are summarized in **Table 12.1**. Refer to **Appendix I** for the site inspection summary reports in the reporting month.

Parameters	Date	Observations and Recommendations	Follow-up
Air Quality	N/A	There was no observation in the reporting period.	N/A
Noise	N/A	There was no observation in the reporting period.	N/A
Water Quality	N/A	There was no observation in the reporting period.	N/A
Ecology	N/A	There was no observation in the reporting period.	N/A
Landscape and Visual	N/A	There was no observation in the reporting period.	N/A
Waste /	22 October	Storage area of the chemical waste should be labelled.	Notice has been attached.
Chemical Management	2020	Contractor was reminded the chemical/ fuel area should be provided with lock	The chemical/ fuel area was provided with lock.
Permits /Licences	N/A	There was no observation in the reporting period.	N/A

 Table 12.1
 Observations and Recommendations of Site Audit

#### **Implementation Status of Event and Action Plans**

12.5 The Event and Action Plans for air quality and construction noise monitoring, and the Limit Levels and Action Plan for landfill gas monitoring are presented in **Appendix L**.

Air Quality Monitoring

- No Action/Limit Level exceedance for 1-hour TSP monitoring was recorded.
- No Action/Limit Level exceedance for 24-hour TSP monitoring was recorded.

Construction Noise Monitoring

• No Action/ Limit Level exceedance for construction noise monitoring was recorded in the reporting month.

Landfill Gas Monitoring

• No Limit Level exceedance for landfill gas monitoring was recorded.

#### 13 ENVIRONMENTAL NON-CONFORMANCE

# Summary of Complaint, Warning, Notification of any Summons and Successful Prosecution

13.1 The summaries of environmental complaint, warning, summon and notification of successful prosecution for the Project is presented in **Appendix M**.

#### **Summary of Exceedance**

13.2 The summary of exceedance record in the reporting month is shown in Appendix N.

#### **14 FUTURE KEY ISSUES**

- 14.1 Tentative construction programmes for the next three months are provided in Appendix O.
- 14.2 Major site activities undertaken for the coming months are summarized as follows:
  - West Bound Drill & Break Tunnel
  - East Bound Drill & Blast Tunnel
- 14.3 Key environmental issues in the coming months include:
  - Make sure noise mitigation measures are implemented accordingly; and
  - Make sure drainage system is adequately designed to prevent flooding during periods of heavy rain.

#### **Monitoring Schedule**

14.4 The tentative environmental monitoring schedule for the next month is shown in Appendix D.

#### **15 CONCLUSIONS AND RECOMMENDATIONS**

#### Conclusions

15.1 This is the 6<sup>th</sup> Monthly EM&A Report which presents the EM&A works undertaken during the reporting month in accordance with the EM&A Manual (AEIAR-173/2013) and the requirement under EP.

#### Air Quality Monitoring

15.2 No Action/Limit Level exceedance was recorded for 1-hour TSP and 24-hour TSP monitoring in the reporting month.

#### Construction Noise Monitoring

15.3 No Action/ Limit Level exceedance for construction noise monitoring was recorded in the reporting month.

#### Landfill Gas Monitoring

15.4 Monitoring of landfill gases in the reporting month was carried out by the Contractor of Agreement No. CE 59/2015 (EP). No Limit Level exceedance was recorded.

Site Audit

15.5 4 ET joint weekly environmental site inspections were conducted in the reporting month.

#### Complaint, Notification of Summons and Successful Prosecution

15.6 One (1) environmental complaints regarding noise nuisance was received in the reporting month. And No environmental notifications of summons and successful prosecutions were received in the reporting month.

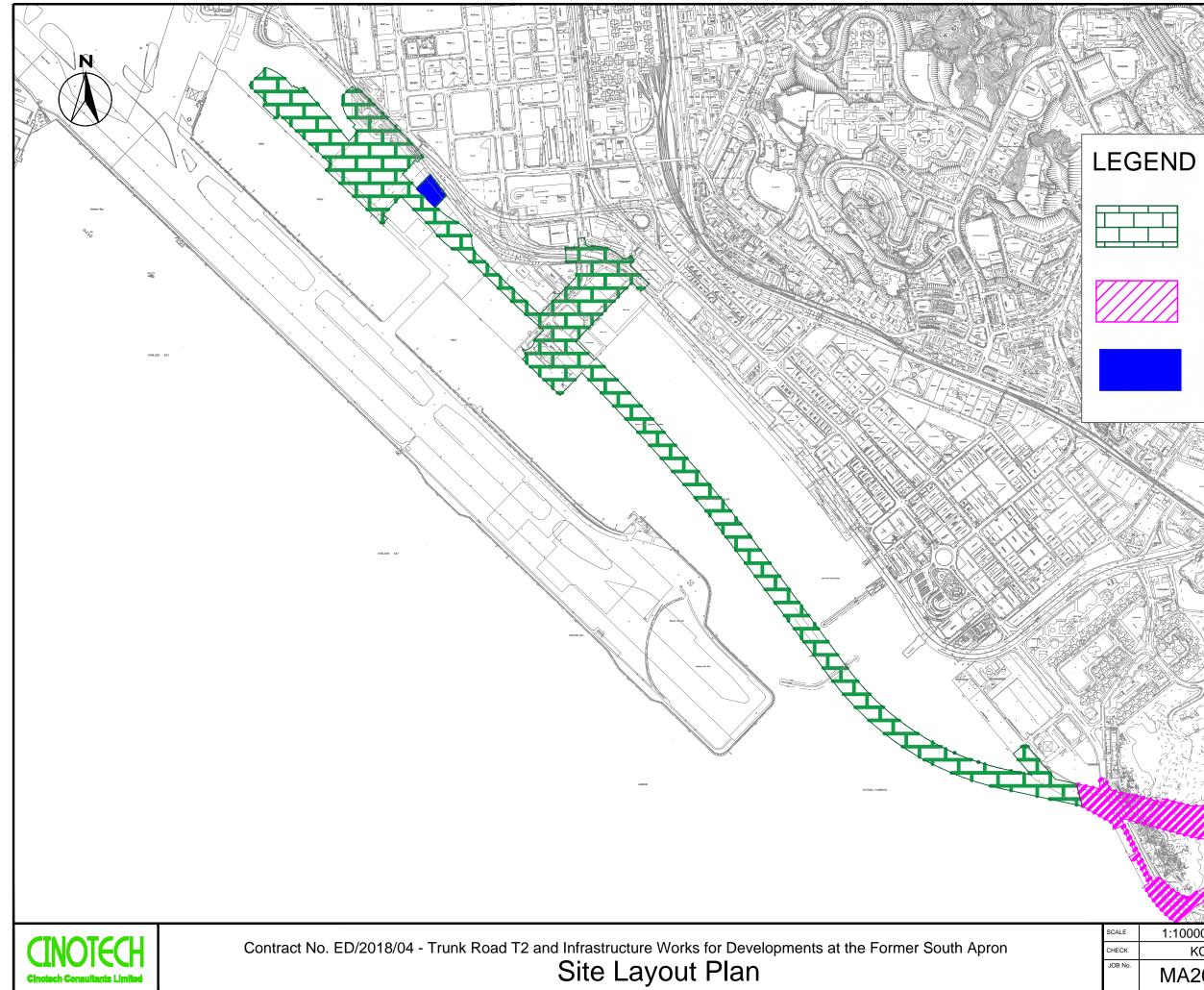
#### Recommendations

15.7 According to the environmental audit performed in the reporting month, the following recommendations were made:

#### Waste/ Chemical Management

- All fuel tanks and storage areas should be provided with locks and be located 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 the coastal waters.
- Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents

FIGURES



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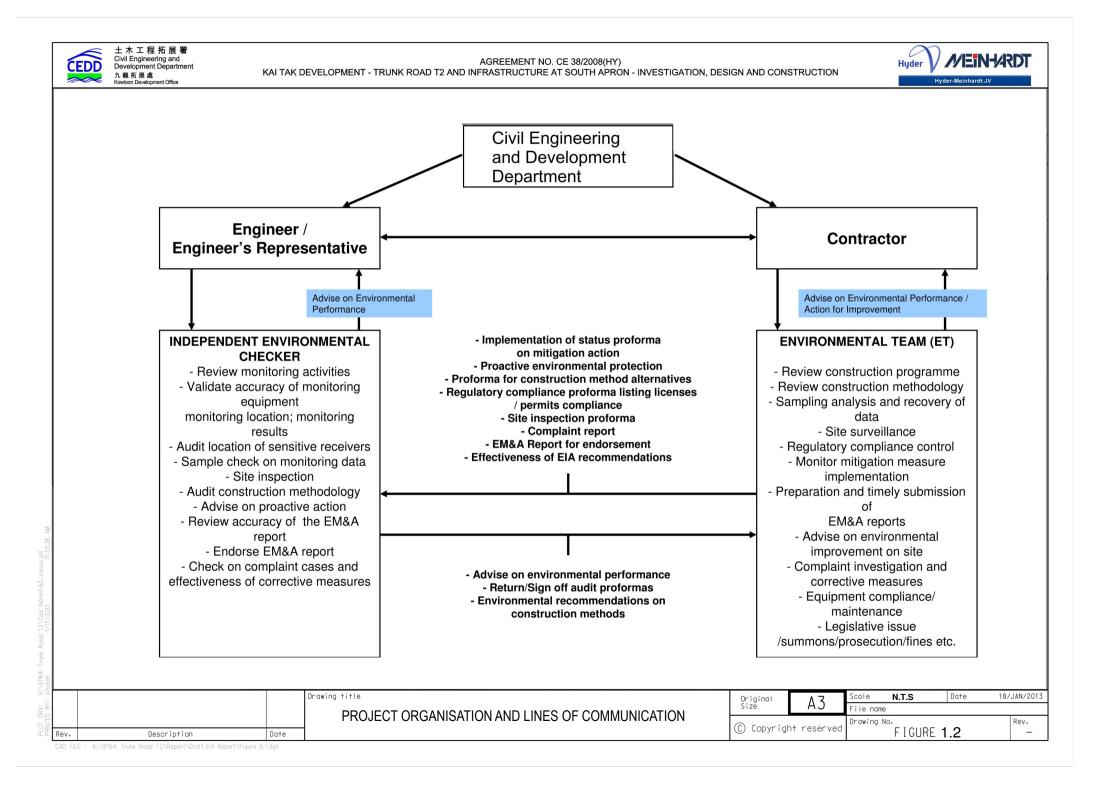
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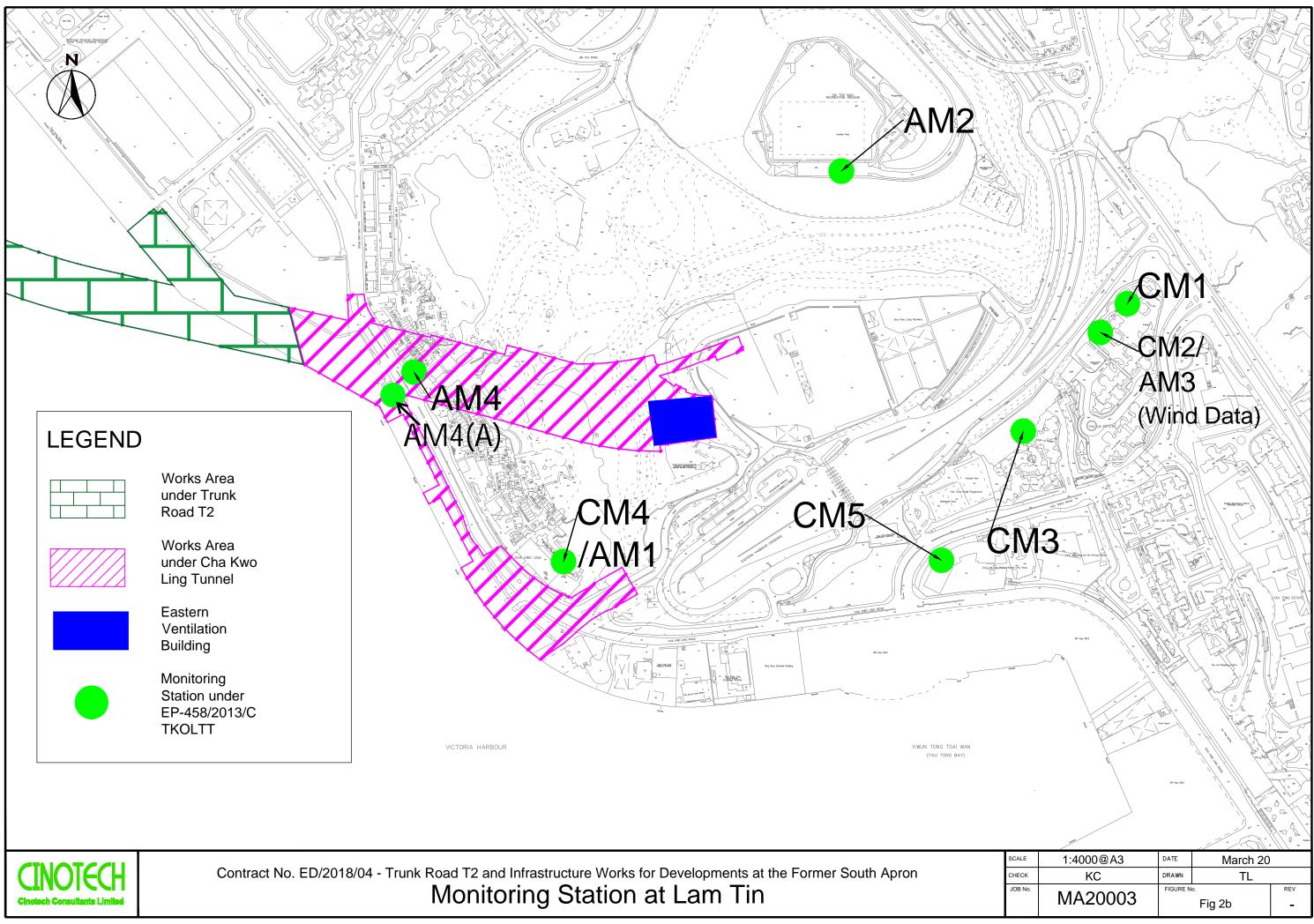
Works Area under Trunk Road T2

Works Area under Cha Kwo Ling Tunnel

Ventilation Building

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APPENDIX A ACTION AND LIMIT LEVELS

# **APPENDIX A – Action and Limit Levels**

## Air Quality

## 1-hr TSP

Monitoring Stations	Location	Action Level, µg/m <sup>3</sup>	Limit Level, µg/m <sup>3</sup>
AM1	Tin Hau Temple	275	
AM2	Sai Tso Wan Recreation Ground	273	500
AM3	Yau Lai Estate Bik Lai House	271	500
AM4	Sitting-out Area at Cha Kwo Ling Village	278	

#### 24-hr TSP

Monitoring Stations	Location	Action Level, μg/m <sup>3</sup>	Limit Level, µg/m <sup>3</sup>
AM1	Tin Hau Temple	173	
AM2	Sai Tso Wan Recreation Ground	192	
AM3	Yau Lai Estate Bik Lai House	167	260
AM4(A)	Cha Kwo Ling Public Cargo Working Area Administrative Office	210	

#### <u>Noise</u>

Time Period	Action Level	Limit Level
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A) <sup>(1)</sup>

 <sup>1</sup>70 dB(A) for schools and 65 dB(A) for schools during examination period.
 <sup>2</sup> Acceptable Noise Levels for Area Sensitivity Rating of A/B/C
 <sup>3</sup> If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.

# **Landfill Gas Monitoring**

Parameter	Limit Level
Oxygen	<19%
	<18%
Methane	>10% LEL (i.e. > 0.5% by volume)
	>20% LEL (i.e. > 1% by volume)
Carbon	>0.5%
Dioxide	>1.5%

APPENDIX B COPIES OF CALIBRATION CERTIFICATES

I



#### File No. MA16034/05/0025

Project No.	AM1 - Tin Hau Temple						
Date:	10-2	Aug-20	Next Due Date:	10-Oct-20	Operator:	SK	
Equipment No.:	A-	01-05	Model No.:	GS2310	Serial No.	10599	
			Ambient Condit	ion			
Temperatu	ıre, Ta (K)	304	Pressure, Pa (mml	Hg)	760		

Orifice Transfer Standard Information						
Serial No. 3746 Slope, mc 0.0592 Intercept, bc -0.02740						
Last Calibration Date:	17-Jan-20	1	mc x Qstd + bo	$c = [\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]$	] <sup>1/2</sup>	
Next Calibration Date: 17-Jan-21 $Qstd = \{[\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2} - bc\} / mc$						

		Calibration of	TSP Sampler				
Calibration		Orfice			HVS		
Point	ΔH (orifice), in. of water	$[\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)] <sup>1/2</sup> <b>Y-axis</b>		
1	12.9	3.56	60.53	8.5	2.89		
2	9.4	3.04	51.74	6.3	2.49		
3	7.5	2.71	46.26	4.8	2.17		
4	4.8	2.17	37.10	3.2	1.77		
5	2.6	1.60	27.43	1.8	1.33		
By Linear Regression of Y on X Slope , mw = 0.0472 Intercept, bw : 0.0206 Correlation coefficient* = *If Correlation Coefficient < 0.990, check and recalibrate.							
		<b>Set Point C</b> urve, take Qstd = 43 CFM e "Y" value according to	alculation				
Therefore, Se	et Point; W = ( mv	$\mathbf{mw} \mathbf{x} \mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W} \mathbf{x}]$ v x Qstd + bw ) <sup>2</sup> x ( 760 / Pa ) x (					
Remarks:							
Conducted by:	SK Wong	Signature:	<u>'</u>		Date: 10 August 2020		
Checked by:	Henry Leung	Signature:	kog		Date: 10 August 2020		



#### File No. MA16034/08/0025

Project No.	AM2 - Sai Tso	Wan Recreation					
Date:	10-4	Aug-20	Next Due Date:	10-Oct-20	Operator:	SK	
Equipment No.:	D.:A-01-08		Model No.:	Model No.: GS2310		1287	
			Ambient Condit	ion			
Temperatu	ıre, Ta (K)	304	Pressure, Pa (mml	Hg)	760		

Orifice Transfer Standard Information						
Serial No. 3746 Slope, mc 0.0592 Intercept, bc -0.02740						
Last Calibration Date:	17-Jan-20	1	mc x Qstd + bo	$c = [\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]$	] <sup>1/2</sup>	
Next Calibration Date:						

	Calibration of TSP Sampler							
Calibration		Orfice			HVS			
Point	ΔH (orifice), in. of water	$[\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$[\Delta W \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}$ Y-axis			
1	12.9	3.56	60.53	8.5	2.89			
2	9.8	3.10	52.82	6.1	2.45			
3	7.8	2.77	47.17	4.8	2.17			
4	4.8	2.17	37.10	3.0	1.71			
5	2.8	1.66	28.45	1.9	1.36			
Slope , mw = Correlation	By Linear Regression of Y on X Slope , mw =0.0471 Intercept, bw =0.0112 Correlation coefficient* =0.9977 *If Correlation Coefficient < 0.990, check and recalibrate.							
		Set Point C	alculation					
		urve, take Qstd = 43 CFM						
		<b>w</b> x Qstd + bw = $[\Delta W]$ v x Qstd + bw ) <sup>2</sup> x (760 / Pa) x (		98/Ta)] <sup>1/2</sup> 4.13				
Remarks:								
Conducted by:	SK Wong	Signature:	L X.o. j		Date: <u>10 August 2020</u>			
Checked by:	Henry Leung	Signature: <u>lemy</u>	Xoz		Date: 10 August 2020			

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#### File No. MA16034/03/0025

Project No.	AM3 - Yau La	i Estate, Bik Lai					
Date:	10-2	Aug-20	Next Due Date:	10-Oct-20	Operator:	SK	
Equipment No.:	.: A-01-03		Model No.:	GS2310	10 Serial No.		
			Ambient Condit	ion			_
Temperatu	ıre, Ta (K)	304	Pressure, Pa (mml		760		

Orifice Transfer Standard Information						
Serial No. 3746 Slope, mc 0.0592 Intercept, bc -0.02740						
Last Calibration Date:	17-Jan-20	1	mc x Qstd + bo	c = [ΔH x (Pa/760) x (298/Ta)	] <sup>1/2</sup>	
Next Calibration Date:	pration Date: 17-Jan-21 $Qstd = \{ [\Delta H \ x \ (Pa/760) \ x \ (298/Ta) ]^{1/2} - bc \} / mc$					

	Calibration of TSP Sampler							
Calibration		Orfice			HVS			
Point	ΔH (orifice), in. of water	$[\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$\frac{[\Delta W \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}}{Y-axis}$			
1	13.0	3.57	60.76	8.6	2.90			
2	9.4	3.04	51.74	6.4	2.50			
3	7.7	2.75	46.87	5.1	2.24			
4	5.1	2.24	38.23	3.3	1.80			
5	2.5	1.57	26.91	2.0	1.39			
By Linear Regression of Y on X Slope , mw =0.0455 Intercept, bw :0.1241 Correlation coefficient* =0.9973 *If Correlation Coefficient < 0.990, check and recalibrate.								
		Set Point C	alculation					
		urve, take Qstd = 43 CFM						
	-	w x Qstd + bw = [ΔW x w x Qstd + bw ) <sup>2</sup> x (760 / Pa) x (		98/Ta)] <sup>1/2</sup> 4.42				
Remarks:								
Conducted by:	SK Wong	Signature:	<u></u>		Date: 10 August 2020			
Checked by:	Henry Leung	Signature:	Xoz		Date: 10 August 2020			

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File No. MA16034/54/0025

Project No.	AM4(A) - Cha	Kwo Ling Public	ce			
Date:	10-4	Aug-20	Next Due Date:	10-Oct-20	Operator:	SK
Equipment No.:	A-	01-54	Model No.:	TE-5170	Serial No.	1536
			<b>Ambient Condit</b>	ion		
Temperatu	re, Ta (K)	304	Pressure, Pa (mmI	Hg)	760	

Orifice Transfer Standard Information						
Serial No. 3746 Slope, mc 0.0592 Intercept, bc -0.02740						
Last Calibration Date:	17-Jan-20	1	mc x Qstd + bo	$c = [\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]$	] <sup>1/2</sup>	
Next Calibration Date:	17-Jan-21	17-Jan-21 Qstd = { $[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$ -bc} / mc				

		Calibration of	TSP Sampler					
Calibration		Orfice			HVS			
Point	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)] <sup>1/2</sup>	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water		0) x (298/Ta)] <sup>1/2</sup> -axis		
1	12.8	3.54	60.30	8.6	2	2.90		
2	9.8	3.10	52.82	6.3	2	2.49		
3	7.4	2.69	45.96	5.0	2	2.21		
4	5.2	2.26	38.60	3.2	1	.77		
5	2.9	1.69	28.94	1.8	1	.33		
Slope, mw =								
	coefficient* =	0.9987	_					
*If Correlation C	Coefficient < 0.990	), check and recalibrate.						
		Set Point C	Calculation					
From the TSP Fi	eld Calibration Cu	urve, take Qstd = 43 CFM						
From the Regres	sion Equation, the	e "Y" value according to						
		$\mathbf{mw} \mathbf{x} \mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W}]$		98/Ta)] <sup>1/2</sup>				
Therefore, Se	et Point; W = ( mv	$(x + bw)^2 x (760 / Pa) x ($	Ta / 298 ) =	4.18				
Remarks:								
		 م						
Conducted by:	SK Wong	Signature:	A.		Date: 10	0 August 2020		
Checked by:	Henry Leung	Signature: <u>n</u> Signature: <u>lemp</u>	Xng		Date: 10	0 August 2020		

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#### File No. MA16034/05/0026

Project No.	AM1 - Tin Hau	1 Temple					
Date:	10-0	Oct-20	Next Due Date:	10-Dec-20	Operator:	SK	
Equipment No.:	A-	01-05	Model No.:	GS2310	Serial No.	10599	
			Ambient Condit	ion			
Temperatu	ıre, Ta (K)	299.5	Pressure, Pa (mm	Hg)	759.5		

Orifice Transfer Standard Information						
Serial No.	3746	Slope, mc 0.0592 Intercept, bc -0.02740				
Last Calibration Date:	17-Jan-20	mc x Qstd + bc = $[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$				
Next Calibration Date:	17-Jan-21	Qstd = { $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ -bc} / mc				

		Calibration of	TSP Sampler			
Calibration		Orfice			HVS	
Point	$\Delta H$ (orifice), in. of water	$[\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	[ΔW x (Pa/760) <b>Y-a</b>	
1	13.0	3.60	61.19	8.6	2.9	2
2	9.5	3.07	52.38	6.4	2.5	52
3	7.6	2.75	46.90	4.8	2.1	8
4	4.8	2.18	37.37	3.2	1.7	'8
5	2.6	1.61	27.62	1.8	1.3	4
Slope, mw =	ression of Y on X 0.0474 coefficient* =		Intercept, bw	0.012	9	
Correlation	coefficient* =	0.9988	_			
		Set Point C	alculation			
From the TSP Fi	ield Calibration C	urve, take Qstd = 43 CFM				
From the Regres	sion Equation, the	"Y" value according to				
	· D · · · W /	mw x Qstd + bw = $[\Delta W]$				
Therefore, Se	et Point; W = ( my	$(x + bw)^2 x (760 / Pa) x ($	Ta / 298 ) =	4.23		
Remarks:						
Conducted by:	SK Wong	Signature: <u>H</u>		-	Date: 10 C	October 2020
Checked by:	Henry Leung	Signature: \-lem	Xa7	_	Date: 10 C	October 2020

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#### File No. MA16034/08/0026

Project No.	AM2 - Sai Tso	Wan Recreation					
Date:	10-0	Oct-20	Next Due Date:	10-Dec-20	Operator:	SK	
Equipment No.:	A-01-08		Model No.:	GS2310	Serial No.	1287	
			Ambient Condit	ion			
Temperatu	ıre, Ta (K)	299.5	Pressure, Pa (mm	Hg)	759.5		

Orifice Transfer Standard Information						
Serial No.	3746	Slope, mc 0.0592 Intercept, bc -0.02740				
Last Calibration Date:	17-Jan-20	mc x Qstd + bc = $[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$				
Next Calibration Date:	17-Jan-21	Qstd = { $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ -bc} / mc				

		Calibration of	TSP Sampler		
Calibration		Orfice			HVS
Point	ΔH (orifice), in. of water	$[\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	$\frac{[\Delta W \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}}{Y-axis}$
1	13.0	3.60	61.19	8.6	2.92
2	9.9	3.14	53.46	6.2	2.48
3	7.9	2.80	47.81	4.8	2.18
4	4.8	2.18	37.37	3.0	1.73
5	2.8	1.67	28.65	1.9	1.37
Slope, mw =	ession of Y on X 0.0472 coefficient* =	0.9972	Intercept, bw	-0.019	01
*If Correlation C	Coefficient < 0.990	), check and recalibrate.	_		
		Set Point (	Calculation		
From the TSP Fi	eld Calibration Cu	urve, take Qstd = 43 CFM			
From the Regres	sion Equation, the	"Y" value according to			
Therefore, Se	et Point; W = ( mv	$\mathbf{mw} \mathbf{x} \mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W}]$ w x Qstd + bw ) <sup>2</sup> x ( 760 / Pa ) x (		98/Ta)] <sup>1/2</sup> 4.07	
Remarks:					
Conducted by:	SK Wong	Signature:	<u>.</u>		Date: 10 October 2020
Checked by:	Henry Leung	Signature:	Xoy		Date: 10 October 2020

299.5

Temperature, Ta (K)



759.5

#### File No. MA16034/03/0026

		Ambient Condit	tion			
Equipment No.:	A-01-03	Model No.:	GS2310	Serial No.	10379	
Date:	10-Oct-20	Next Due Date:	10-Dec-20	Operator:	SK	
Project No.	AM3 - Yau Lai Estate, Bik I	Lai House				

Pressure, Pa (mmHg)

Orifice Transfer Standard Information						
Serial No.	3746	Slope, mc 0.0592 Intercept, bc -0.02740				
Last Calibration Date:	17-Jan-20	mc x Qstd + bc = $[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$				
Next Calibration Date:	17-Jan-21	Qstd = { $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ -bc} / mc				

		Calibration of	TSP Sampler				
Calibration		Orfice			HVS		
Point	ΔH (orifice), in. of water	$[\Delta H \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	[ΔW x (Pa	/760) x (298/Ta)] <sup>1/2</sup> Y-axis	
1	13.1	3.61	61.43	8.7		2.94	
2	9.5	3.07	52.38	6.5		2.54	
3	7.7	2.77	47.20	5.2		2.27	
4	5.2	2.27	38.87	3.4		1.84	
5	2.6	1.61	27.62	2.0		1.40	
By Linear Regression of Y on X Slope , mw =0.0463 Intercept, bw :0.0915 Correlation coefficient* =0.9984 *If Correlation Coefficient < 0.990, check and recalibrate.							
		Set Point C	alculation				
From the TSP Fi	eld Calibration Cu	urve, take Qstd = 43 CFM					
From the Regres	sion Equation, the	e "Y" value according to					
Therefore, Se	$mw \ x \ Qstd + bw = [\Delta W \ x \ (Pa/760) \ x \ (298/Ta)]^{1/2}$ Therefore, Set Point; W = ( mw x Qstd + bw ) <sup>2</sup> x ( 760 / Pa ) x ( Ta / 298 ) =						
Remarks:							
Conducted by:	SK Wong	Signature:			Date:	10 October 2020	
Checked by:	Henry Leung	Signature:	Xoy		Date:	10 October 2020	

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299.5

Temperature, Ta (K)

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759.5

File No. MA16034/54/0026

	Ambient Condition								
Equipment No.:	A-01-54	Model No.:	TE-5170	Serial No.	1536				
Date:	10-Oct-20	Next Due Date:	10-Dec-20	Operator:	SK				
Project No.	AM4(A) - Cha Kwo Ling Pu								

Pressure, Pa (mmHg)

Orifice Transfer Standard Information						
Serial No.	3746	Slope, mc 0.0592 Intercept, bc -0.02740				
Last Calibration Date:	17-Jan-20	mc x Qstd + bc = $[\Delta H x (Pa/760) x (298/Ta)]^{1/2}$				
Next Calibration Date:	17-Jan-21	Qstd = { $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ -bc} / mc				

		Calibration of	TSP Sampler			
Calibration		Orfice			HVS	
Point	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)] <sup>1/2</sup>	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of water	[ΔW x (Pa	/760) x (298/Ta)] <sup>1/2</sup> <b>Y-axis</b>
1	12.9	3.58	60.96	8.7		2.94
2	9.9	3.14	53.46	6.4		2.52
3	7.5	2.73	46.59	5.1		2.25
4	5.4	2.32	39.60	3.3		1.81
5	3.0	1.73	29.64	1.9		1.37
By Linear Regression of Y on X Slope , mw =0.0502 Intercept, bw = Correlation coefficient* =0.9982 *If Correlation Coefficient < 0.990, check and recalibrate.						
		Set Point C	alculation			
		urve, take Qstd = 43 CFM				
From the Regression Equation, the "Y" value according to $\mathbf{mw} \mathbf{x} \mathbf{Qstd} + \mathbf{bw} = \left[\Delta \mathbf{W} \mathbf{x} \left(\mathbf{Pa}/760\right) \mathbf{x} \left(298/\mathbf{Ta}\right)\right]^{1/2}$ Therefore, Set Point; W = (mw x Qstd + bw) <sup>2</sup> x (760 / Pa) x (Ta / 298) =						
Remarks:						
Conducted by:	SK Wong	Signature:			Date:	10 October 2020
Checked by:	Henry Leung	Signature:	hay		Date:	10 October 2020

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## **<u>Cerificate of Calibration</u>**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description:	Digital Dust Indicator		Date	of Calibration	5-Oct-20
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibr	ration Record	5-Dec-20
Model No.:	LD-5R				
Serial No.:	972777				
Equipment No.:	SA-01-06	Sensitivity	0.001 mg/m3		
High Volume Sa	mpler No.: A-01-03	Before Sensitiv	vity Adjustment	645	
Tisch Calibratio	n Orifice No.: 3607	After Sensitivi	ty Adjustment	645	
	Ca	alibration of 1 h	r TSP		
Calibration	Laser Dust Monito	r		HVS	
Point	Mass Concentration (µg	/m3)	Mas	ss concentration (µ	g/m <sup>3</sup> )
	X-axis			Y-axis	
1	43.0		78.9		
2	36.0		75.2		
3	29.0			70.8	
Average	36.0			75.0	
	ession of Y on X	_	_		
-	0.5786		ept, bw =	54.1381	
Correlation co	Defficient* = 0.9988	8			
	S	et Correlation F	actor		
Particaulate Con	centration by High Volume Sampler	- 1		75.0	
Particaulate Concentration by Dust Meter ( $\mu g/m^3$ )		36.0			
Measureing time	e, (min)			60.0	
Set Correlation					
SCF = [K=Hig	h Volume Sampler / Dust Meter, (µ	ıg/m3) ]	2.1		

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (Wellab Litimed)

## **<u>Cerificate of Calibration</u>**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description:	Digital Dust Indicator		Date	of Calibration	5-Oct-20
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibr	ration Record	5-Dec-20
Model No.:	LD-5R				
Serial No.:	972778				
Equipment No.:	SA-01-07	Sensitivity	0.001 mg/m3		
High Volume Sa	ampler No.: A-01-01A	Before Sensiti	vity Adjustment	735 CPM	
Tisch Calibratio	n Orifice No.: <u>3607</u>	After Sensitivi	ty Adjustment	735 CPM	
	Ca	libration of 1 h	r TSP		
Calibration	Laser Dust Monitor	ſ		HVS	
Point	Mass Concentration (µg/ X-axis	(m3)	Mas	ss concentration (μ <b>Y-axis</b>	g/m <sup>3</sup> )
1	45.0			78.9	
2	34.0			75.2	
3	23.0			70.8	
Average	34.0			75.0	
	ression of Y on X				
Slope, mw =		Intero	cept, bw =	62.4485	
Correlation co	<b>Defficient* = 0.9988</b>				
	Se	t Correlation F	actor		
Particaulate Con	centration by High Volume Sampler (	-		75.0	
Particaulate Concentration by Dust Meter ( $\mu g/m^3$ )		34.0			
Measureing time, (min)			60.0		
Set Correlation 1	Factor, SCF				
SCF = [K=Hig	h Volume Sampler / Dust Meter, (µ	g/m3) ]	2.2		

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (Wellab Litimed)

Calibrated by: \_\_\_\_\_\_\_\_\_ Wong Shing Kwai

## **<u>Cerificate of Calibration</u>**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description:	Digital Dust Indicator		Date	of Calibration	5-Oct-20
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calib	ration Record	5-Dec-20
Model No.:	LD-5R				
Serial No.:	972779				
Equipment No.:	SA-01-08	Sensitivity	0.001 mg/m3	_	
High Volume Sa	mpler No.: <u>A-01-01A</u>	Before Sensiti	vity Adjustment	744 CPM	
Tisch Calibration	n Orifice No.: <u>3607</u>	After Sensitivi	ity Adjustment	744 CPM	
	Ca	libration of 1 h	r TSP		
Calibration	Laser Dust Monitor	r		HVS	
Point	Mass Concentration (µg/ X-axis	/m3)	Mas	ss concentration (μ <b>Y-axis</b>	g/m <sup>3</sup> )
1	49.0			78.9	
2	38.0			75.2	
3	28.0			70.8	
Average	38.3			75.0	
	ression of Y on X				
Slope, mw =	0.3849		cept, bw =	60.2124	
Correlation co	Defficient* = 0.9970				
	Se	t Correlation F	actor		
Particaulate Con	centration by High Volume Sampler (			75.0	
Particaulate Concentration by Dust Meter ( $\mu g/m^3$ )		38.3			
Measureing time				60.0	
Set Correlation I					
	h Volume Sampler / Dust Meter, (μ	g/m3) ]	2.0		

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (Wellab Litimed)

Approved by: <u>leng</u> X27 Henry Leung



0023156

Customer : Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong	Object 1 :SVAN979 SLMSerial No. /Ref. No. :27190 / SN-01-02Object 2 :MicrophoneSerial No. /Ref. No. :25202
Customer Code : SVEC09005	Manufacturer : BSWAtech
Date of calibration:08/01/2020Date of the recommended re-calibration:08/01/2021	Certificate No.:0023156Handle by:E0002

#### Measuring results

	Reference value	Indication value	Deviation	Allowed deviation	Object
Γ	94.0dB	94.0dB	0.0dB	+/- 1.5dB	1
	114.0dB	113.9dB	-0.1dB	+/- 1 5dB	1

#### Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949, sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

#### **Ambient conditions**

Temperature (20...26)°C

Humidity (20...60)%RH

#### Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

#### **Uncertainty**

+/- 0.2 dB for probability not less than 95%.

#### **Conformity**

1. The resulted values were those obtained at the time of test and applies only to the item calibrated.

2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains

the uncertainty of the measuring procedure and the uncertainty of the measuring system.

3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.

4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories. 5.The calibrations certificate may not be reproduced.

Measured value(s) within the allowable deviation.	
Performed by	Approved by
Calibration Technician	Quality Manager



0023155

Customer : Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong	Object 1 :SVAN979 SLMSerial No. /Ref. No. :27189 / SN-01-01Object 2 :MicrophoneSerial No. /Ref. No. :25204
Customer Code : SVEC09005	Manufacturer : BSWAtech
Date of calibration:08/01/2020Date of the recommended re-calibration:08/01/2021	Certificate No.:0023155Handle by:E0002

#### **Measuring results**

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	93.7dB	-0.3dB	+/- 1.5dB	1
114.0dB	113.6dB	-0.4dB	+/- 1 5dB	1

#### Measuring equipment

index	Calibrator / Master	Traceability	
1	Master Sound Meter, SVAN949,sn:8571	IEC61672	
2	Sound Calibrator, SV30A sn:32580	IEC60942	

#### **Ambient conditions**

Temperature (20...26)°C

Humidity (20...60)%RH

#### Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

#### **Uncertainty**

+/- 0.2 dB for probability not less than 95%.

#### Conformity

1. The resulted values were those obtained at the time of test and applies only to the item calibrated.

2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains

the uncertainty of the measuring procedure and the uncertainty of the measuring system.

3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.

4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.

Measured value(s) within the allowable deviation.	
Performed by	Approved by
Calibration Technician	Quality Manager



0022999

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Customer : Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong		Object 1 :SVAN957 SLMSerial No. /Ref. No. :23851 / N-08-12Object 2 :MicrophoneSerial No. /Ref. No. :43676	
Customer Code : SVEC09005		Manufacturer : Svantek	
Date of calibration: Date of the recommended re-calibration:	19/12/2019 19/12/2020	Certificate No.:         0022999           Handle by:         E0002	

#### Measuring results

	Reference value	Indication value	Deviation	Allowed deviation	Object	
Г	94.0dB	94.0dB	0.0dB	+/- 1.5dB	1	
	114.0dB	114.0dB	0.0dB	+/- 1.5dB	1	

#### Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

#### **Ambient conditions**

Temperature (20...26)°C

Humidity (20...60)%RH

#### Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

#### **Uncertainty**

+/- 0.2 dB for probability not less than 95%.

#### Conformity

1. The resulted values were those obtained at the time of test and applies only to the item calibrated.

2.The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains

the uncertainty of the measuring procedure and the uncertainty of the measuring system.

3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.

4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.

Measured value(s) within the allowable deviation.	
Performed by	Approved by
Calibration Technician	Quality Manager



0023002

Customer : Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong	Object 1 :SV30A sound calibratorSerial No. /Ref. No. :10965 / N-09-02Object 2 :Serial No. /Ref. No. :
Customer Code : SVEC09005	Manufacturer : Svantek
Date of calibration:19/12/2019Date of the recommended re-calibration:19/12/2020	Certificate No.:         0023002           Handle by:         E0002

#### Measuring results

	Reference value	Indication value	Deviation	Allowed deviation	Object
Γ	94.0dB	93.9dB	-0.1dB	+/- 0.3dB	1
Γ	114.0dB	114.2dB	+0.2dB	+/- 0.3dB	1

#### Measuring equipment

index	Calibrator / Master	Traceability	
1         Master Sound Meter, SVAN949,sn:8571		IEC61672	
2	Sound Calibrator, SV30A sn:32580	IEC60942	

#### **Ambient conditions**

Temperature (20...26)°C

Humidity (20...60)%RH

#### Measuring procedure

Calibrated by Type 1 Sound Level Meter and 1kHz Sound Source .

#### **Uncertainty**

+/- 0.2 dB for probability not less than 95%.

#### **Conformity**

1. The resulted values were those obtained at the time of test and applies only to the item calibrated.

2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains

the uncertainty of the measuring procedure and the uncertainty of the measuring system.

3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.

4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.

Measured value(s) within the allowable deviation.	
Performed by	Approved by
Calibration Technician	Quality Manager



0023001

Customer : Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong		Object 1 : Serial No. /Ref. No. : Object 2 : Serial No. /Ref. No. :	B&K4231 sound calibrator 2326353 / N-02-01
Customer Code : SVEC09005		Manufacturer : Bru	el & Kjaer
Date of calibration: Date of the recommended re-calibration:	19/12/2019 19/12/2020	Certificate No.: Handle by:	0023001 E0002

#### Measuring results

	Reference value	Indication value	Deviation	Allowed deviation	Object
Γ	94.0dB	94.2dB	+0.2dB	+/- 0.2dB	1
Γ	114.0dB	114.1dB	+0.1dB	+/- 0.2dB	1

#### Measuring equipment

index	Calibrator / Master	Traceability	
1	Master Sound Meter, SVAN949,sn:8571	IEC61672	
2	Sound Calibrator, SV30A sn:32580	IEC60942	

#### **Ambient conditions**

Temperature (20...26)°C

Humidity (20...60)%RH

#### Measuring procedure

Calibrated by Type 1 Sound Level Meter and 1kHz Sound Source .

#### **Uncertainty**

+/- 0.2 dB for probability not less than 95%.

#### **Conformity**

1. The resulted values were those obtained at the time of test and applies only to the item calibrated.

2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains

the uncertainty of the measuring procedure and the uncertainty of the measuring system.

3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.

4.HKAS has accredited this laboratory (HOKLAS 267) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.

Measured value(s) within the allowable deviation.	
Performed by	Approved by
Calibration Technician	Quality Manager



0023000

Customer : Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong		Object 1 :SVAN957 SLSerial No. /Ref. No. :23852 / N-08-Object 2 :MicrophoneSerial No. /Ref. No. :35989	
Customer Code : SVEC09005		Manufacturer : Svantek	
Date of calibration: Date of the recommended re-calibration:	19/12/2019 19/12/2020	Certificate No.:         0023000           Handle by:         E0002	

#### **Measuring results**

Reference value	Indication value	Deviation	Allowed deviation	Object
94.0dB	93.4dB	-0.6dB	+/- 1.5dB	1
114.0dB	113.4dB	-0.6dB	+/- 1.5dB	1

#### Measuring equipment

index	Calibrator / Master	Traceability
1	Master Sound Meter, SVAN949,sn:8571	IEC61672
2	Sound Calibrator, SV30A sn:32580	IEC60942

#### **Ambient conditions**

Temperature (20...26)°C

Humidity (20...60)%RH

#### Measuring procedure

Calibrated by Type 1 Sound Calibrator with Master Sound Level Meter under 1kHz Frequency.

#### Uncertainty

+/- 0.2 dB for probability not less than 95%.

#### Conformity

1. The resulted values were those obtained at the time of test and applies only to the item calibrated.

2. The measurement uncertainty was calculated according to the regulations of GUM with the coverage factor k=2 and contains

the uncertainty of the measuring procedure and the uncertainty of the measuring system.

3. The equipment being used in this calibration are regularly calibrated by laboratory according to ISO/IEC17025.

dited this laboratory (HOKLAS 267) fo ALUKACE oifio otivitic a listed in the LIOKLAC d م الله م مألا م

5. The calibrations certificate may not be reproduced.	for specific calibration activities as listed in the HOKLAS directory of accredited laboratories.
Measured value(s) within the allow	vable deviation.
Performed by	Approved by
An	(
Calibration Technician	Quality Manager



#### MSA Hong Kong Ltd.

25/F Jupiter Tower, 9 Jupiter Street, Hong Kong Tel 852-22587588 Fax 25478780 Email info.hk@msasafety.com Website www.msasafety.com

Date: 22-May-20

# Ref.2020/05/008CustomerLeighton China State Joint Venture

#### CERTIFICATE FOR CALIBRATION CHECK TEST

Model	Serial No.	Calibration Check Gas	Regulator	Full Scale	Response
		1.45% Methane,	1	100% LEL	29%LEL
	1 152097	15% Oxygen		30% Vol	15% O2
Altair 5X		60ppm Carbon Monoxide	.25litre/min	1999 ppm	60ppm CO
Anali JA		20ppm Hydrogen Sulfide	1	200 ppm	20ppm H2S
		2.5% Carbon Dioxide	-l	10% Vol	2.5% CO2
		25ppm Ammonia	Demand	100 ppm	25ppm NH3

#### Remarks: Regular inspection completed. Calibration passed

MSA Hong Kong Ltd. certify that instrument/s listed above has/have been calibrated check tested on: 22-May-20

This instrument was calibrated in accordance with all requirements of the specifications of MSA.

This instrument must be calibration checked prior to use in accordance with the instruction manual.

This instrument was calibrated using NIST traceable equipment and was in accordance with all requirements of the drawings and specifications of MSA.

For and on behalf of MSA Hong Kong Ltd.

Authorised Signature



RECALIBRATION DUE DATE:

January 17, 2021

nmental Certificate of Calibration

	Calibration Certification Information								
Cal. Date:	January 17	, 2020	Roots	meter S/N:	438320	Ta:	295	°K	
Operator:	Jim Tisch					Pa:	744.2	mm Hg	
Calibration	Model #:	TE-5025A	Cali	brator S/N:	3746				
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔН	]	
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)		
	1	1	2	1	1.4340	3.2	2.00		
	2	3	4	1	1.0180	6.4	4.00		
	3	5	6	1	0.9080	7.9	5.00		
	4	7	8	1	0.8700	8.7	5.50		
	5	9	10	1	0.7150	12.6	8.00		
			l	Data Tabula	Tabulation				
	Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)}$	)( <u>Tstd</u> )		Qa	$\sqrt{\Delta H (Ta/Pa)}$		
	(m3)	(x-axis)	(y-ax	is)	Va	(x-axis)	(y-axis)		
	0.9849	0.6868	1.40	66	0.9957	0.6944	0.8904		
	0.9807	0.9633	1.98		0.9914	0.9739	1.2592		
	0.9787	1.0779	2.224		0.9894	1.0896	1.4078		
	0.9776	1.1237	2.332		0.9883	1.1360	1.4765		
	0.9724	1.3601	2.813		0.9831	1.3749	1.7808		
	OCTD	m= b=	2.092				1.31010		
	QSTD	r=	-0.027		QA	b= r=	-0.01759 0.99994		
				Calculatio					
	Vstd=	ΔVol((Pa-ΔP)	/Pstd)(Tstd/Ta			ΔVol((Pa-Δl	P)/Pa)		
	Lawrence and the second s	Vstd/∆Time	, , , , , , , , , , , , , , , , , , , ,	,	the second se	Va/ATime	// /		
			For subsequ	ent flow ra	te calculation	าร:			
	Qstd=	$1/m\left(\sqrt{\Delta H\left(-\frac{1}{2}\right)}\right)$	Pa Pstd / Tstd Ta	) )-b)	Qa=	$1/m\left(\sqrt{\Delta H}\right)$	І(Та/Ра))-b)		
		Conditions							
Tstd:		°K		[		RECA	IBRATION		
Pstd:		mm Hg Key			US EPA reco	ommends ar	nual recalibratio	n per 1998	
AH: calibrat		er reading (in	n H2O)				Regulations Part 5		
		eter reading (					Reference Meth		
		perature (°K)					ended Particulate		
	arometric pr	essure (mm	Hg)				re, 9.2.17, page 3		
o: intercept				l			, , , , , , , , , , , , , , , , , , , ,		
m: slope									

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

#### **Cerificate of Calibration - Wind Monitoring Station**

Yau Lai Estate, Bik Lai House
Davis Instruments
<u>Davis7440</u>
<u>MC01010A44</u>
<u>SA-03-04</u>
<u>21-Aug-2020</u>
<u>21-Feb-2021</u>

#### 1. Performance check of Wind Speed

Wind Sp	beed, m/s	Difference D (m/s)
Wind Speed Reading (V1)	Anemometer Value (V2)	D = V1 - V2
0.0	0.0	0.0
1.5	1.5	0.0
2.2	2.3	-0.1
3.5	3.4	0.1

#### 2. Performance check of Wind Direction

Wind Di	rection (°)	Difference D (°)
Wind Direction Reading (W1)	Marine Compass Value (W2)	$\mathbf{D} = \mathbf{W1} - \mathbf{W2}$
0	0	0.0
90	90	0.0
180	180	0.0
270	270	0.0

#### **Test Specification:**

1. Performance Wind Speed Test - The wind meter was on-site calibrated against the anemometer

2. Performance Wind Direction Test - The wind meter was on-site calibrated against the marine compass at four direction

Calibrated by:	tol.	Approved by:	-long than
	Wong Shing Kwai		Henry Leung

# **Cerificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description: Digital Dust Indicator			Date of Calibration 5-Aug-20		
Manufacturer:	Sibata Scientific Technology LT	D.	Validity of Calibi	ation Record	5-Oct-20
Model No.:	LD-5R				
Serial No.:	972777				
Equipment No.:	SA-01-06	Sensitivity	0.001 mg/m3		
High Volume Sa	ampler No.: <u>A-01-03</u>	Before Sensitiv	vity Adjustment	645	
Tisch Calibratio	n Orifice No.: 3607	After Sensitivit	y Adjustment	645	
		Calibration of 1 hr	TSP		
Calibration	Laser Dust Mon	nitor		HVS	
Point	Mass Concentration	(µg/m3)	Mas	ss concentration (µ	g/m <sup>3</sup> )
	X-axis			Y-axis	
1	36.0		65.8		
2	30.0		62.7		
3	24.0		59.0		
Average	30.0			62.5	
	ession of Y on X	<b>-</b> .			
Slope, mw =	0.5667		ept, bw =	45.5000	
Correlation co	$oefficient^* = 0.9$	987			
		Set Correlation Fa	octor		
Particaulate Concentration by High Volume Sampler ( $\mu g/m^3$ )				62.5	
Particaulate Concentration by Dust Meter ( $\mu g/m^3$ )				30.0	
Measureing time, (min)				60.0	
Set Correlation 1					
	h Volume Sampler / Dust Meter	r, (μg/m3) ]	2.1	_	
		-			

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (Wellab Litimed)

Calibrated by: \_\_\_\_\_\_\_ Wong Shing Kwai

Approved by: <u>leng</u> X27 Henry Leung

# **Cerificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description: Digital Dust Indicator			Date	of Calibration	5-Aug-20	
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calibi	ration Record	5-Oct-20	
Model No.:	LD-5R					
Serial No.:	972778					
Equipment No.:	SA-01-07	Sensitivity	0.001 mg/m3	_		
High Volume Sa	ampler No.: A-01-01A	Before Sensiti	vity Adjustment	735 CPM		
Tisch Calibratic	on Orifice No.: 3607	After Sensitivi	ity Adjustment	735 CPM		
	Ca	libration of 1 h	r TSP			
Calibration	Laser Dust Monitor	r	HVS			
Point	Mass Concentration (µg/m3)		Mas	ss concentration (µ	ıg/m <sup>3</sup> )	
	X-axis		Y-axis			
1	41.0		65.8			
2	31.0			62.7		
3	21.0		59.0			
Average	31.0		62.5			
By Linear Reg Slope , mw = Correlation c			cept, bw =	51.9600		
	Se	t Correlation F	actor			
Particaulate Concentration by High Volume Sampler (µg/m <sup>3</sup> )				62.5		
Particaulate Con	ncentration by Dust Meter ( $\mu g/m^3$ )	31.0				
Measureing time	e, (min)		60.0			
Set Correlation	Factor, SCF					
SCF =   K=Hig	h Volume Sampler / Dust Meter, (μ	.g/m3)	2.0			

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (Wellab Litimed)

Calibrated by: \_\_\_\_\_\_\_\_\_ Wong Shing Kwai

Approved by: <u>lemy Kang</u> Henry Leung

# **Cerificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler

Description: Digital Dust Indicator			Date of Calibration 5-Aug-20					
Manufacturer:	Sibata Scientific Technology LTD.	_	Validity of Calib	ration Record	5-Oct-20			
Model No.:	LD-5R							
Serial No.:	972779							
Equipment No.:	SA-01-08	Sensitivity	0.001 mg/m3	_				
High Volume Sa	ampler No.: <u>A-01-01A</u>	Before Sensiti	vity Adjustment	744 CPM				
Tisch Calibratio	on Orifice No.: <u>3607</u>	After Sensitivi	ivity Adjustment 744 CPM					
	Ca	libration of 1 h	r TSP					
Calibration	Laser Dust Monitor		HVS					
Point	Mass Concentration (µg/m3)			$(g/m^3)$				
	X-axis		Y-axis					
1	41.0		65.8					
2	32.0			62.7				
3	23.0		59.0					
Average	32.0		62.5					
By Linear Regression of Y on X Slope , mw = <u>0.3778</u> I Correlation coefficient* = <u>0.9987</u>			cept, bw =	50.4111				
	Set Correlation Factor							
	ncentration by High Volume Sampler (		62.5					
Particaulate Cor	ncentration by Dust Meter ( $\mu g/m^3$ )		32.0					
Measureing time	e, (min)		60.0					
Set Correlation	Factor, SCF							
SCF = [ K=Hig	gh Volume Sampler / Dust Meter, (μ	g/m3) ]	2.0					

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Those filter papers are weighted by HOKLAS laboratory (Wellab Litimed)

APPENDIX C WEATHER INFORMATION

Date	Mean Air Temperature (°C) <sup>1</sup>	Mean Relative Humidity	<b>Precipitation</b> (mm) <sup>3</sup>
		$(\%)^2$	
1-Oct-20	26.7	77	0.1
2-Oct-20	27.6	75	0.0
3-Oct-20	28.3	75	0.0
4-Oct-20	28.4	78	0.0
5-Oct-20	28.0	79	106.1
6-Oct-20	25.9	78	2.7
7-Oct-20	24.9	70	0.0
8-Oct-20	25.2	67	0.0
9-Oct-20	26.0	64	Trace
10-Oct-20	26.1	69	Trace
11-Oct-20	27.0	73	0.0
12-Oct-20	28.0	72	0.6
13-Oct-20	24.9	86	26.0
14-Oct-20	25.5	80	1.2
15-Oct-20	26.5	73	0.0
16-Oct-20	27.0	71	Trace
17-Oct-20	25.6	72	0.2
18-Oct-20	24.9	73	0.7
19-Oct-20	24.6	70	0.0
20-Oct-20	25.0	68	0.0
21-Oct-20	24.5	63	0.0
22-Oct-20	24.7	60	0.0
23-Oct-20	23.5	51	0.0
24-Oct-20	23.8	55	Trace
25-Oct-20	24.2	69	0.0
26-Oct-20	24.6	76	0.0
27-Oct-20	25.1	73	0.0
28-Oct-20	24.4	78	4.7
29-Oct-20	24.7	74	0.1
30-Oct-20	24.4	78	Trace
31-Oct-20	23.4	71	0.0

### Appendix C - Weather Conditions During Impact Monitoring Period

#### (Reporting Month: October 2020) Remarks:

Source - Hong Kong Observatory

<sup>1-3</sup>Retrieved from Manned Weather Station (Hong Kong Observatory) (22°18'07" N, 114°10'27" E)

October 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
1 Oct 2020	12:00 AM	0.5	ENE	
1 Oct 2020	1:00 AM	0.3	NE	
1 Oct 2020	2:00 AM	0.2	NNE	
1 Oct 2020	3:00 AM	0.2	ENE	
1 Oct 2020	4:00 AM	0.3	ENE	
1 Oct 2020	5:00 AM	0.2	ENE	
1 Oct 2020	6:00 AM	0.2	ENE	
1 Oct 2020	7:00 AM	0.3	ENE	
1 Oct 2020	8:00 AM	1.8	E	
1 Oct 2020	9:00 AM	0.4	E	
1 Oct 2020	10:00 AM	0.5	ENE	
1 Oct 2020	11:00 AM	0.4	E	
1 Oct 2020	12:00 PM	0.3	ENE	
1 Oct 2020	1:00 PM	0.4	E	
1 Oct 2020	2:00 PM	0.4	ENE	
1 Oct 2020	3:00 PM	0.2	E	
1 Oct 2020	4:00 PM	0.2	ENE	
1 Oct 2020 1 Oct 2020	5:00 PM 6:00 PM	0.2	NE SSE	
1 Oct 2020	7:00 PM	0.2	ENE	
1 Oct 2020	8:00 PM	0.3	ENE	
1 Oct 2020	9:00 PM	0.3	ENE	
1 Oct 2020	10:00 PM	0.3	ENE	
1 Oct 2020	11:00 PM	0.3	ENE	
2 Oct 2020	12:00 AM	0.4	E	
2 Oct 2020	1:00 AM	0.2	E	
2 Oct 2020	2:00 AM	0.2	ENE	
2 Oct 2020	3:00 AM	0.2	ENE	
2 Oct 2020	4:00 AM	0.2	ENE	
2 Oct 2020	5:00 AM	0.2	ENE	
2 Oct 2020	6:00 AM	0.2	ENE	
2 Oct 2020	7:00 AM	0.2	ENE	
2 Oct 2020	8:00 AM	0.2	ENE	
2 Oct 2020	9:00 AM	0.2	ENE	
2 Oct 2020	10:00 AM	0.2	NE	
2 Oct 2020	11:00 AM	0.2	NNW	
2 Oct 2020	12:00 PM	0.3	ENE	
2 Oct 2020	1:00 PM	0.3	ESE	
2 Oct 2020	2:00 PM	0.2	ENE	
2 Oct 2020	3:00 PM	0.2	ESE	
2 Oct 2020	4:00 PM	0.1	SE	
2 Oct 2020	5:00 PM	0.3	S	
2 Oct 2020	6:00 PM	0.2	SE	
2 Oct 2020	7:00 PM	0.3	ENE	

October 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
2 Oct 2020	8:00 PM	0.6	Е	
2 Oct 2020	9:00 PM	0.2	ENE	
2 Oct 2020	10:00 PM	0.1	ENE	
2 Oct 2020	11:00 PM	0.1	E	
3 Oct 2020	12:00 AM	0.1	E	
3 Oct 2020	1:00 AM	0.1	NE	
3 Oct 2020	2:00 AM	0.1	NE	
3 Oct 2020	3:00 AM	0.1	NE	
3 Oct 2020	4:00 AM	0.1	NNE	
3 Oct 2020	5:00 AM	0.1	ENE	
3 Oct 2020	6:00 AM	0.1	NE	
3 Oct 2020	7:00 AM	0.1	ENE	
3 Oct 2020	8:00 AM	0.1	NNE	
3 Oct 2020	9:00 AM	0.1	NE	
3 Oct 2020	10:00 AM	0.1	E	
3 Oct 2020	11:00 AM	0.2	ENE	
3 Oct 2020	12:00 PM	0.2	NE	
3 Oct 2020	1:00 PM	0.2	ENE	
3 Oct 2020	2:00 PM	0.3	SW	
3 Oct 2020	3:00 PM	0.3	S SE	
3 Oct 2020	4:00 PM 5:00 PM	0.1	ESE	
3 Oct 2020 3 Oct 2020	6:00 PM	0.1	ESE	
3 Oct 2020	7:00 PM	0.1	NE	
3 Oct 2020	8:00 PM	0.1	NE	
3 Oct 2020	9:00 PM	0.1	NE	
3 Oct 2020	10:00 PM	0.1	ENE	
3 Oct 2020	11:00 PM	0.1	ENE	
4 Oct 2020	12:00 AM	0.1	ENE	
4 Oct 2020	1:00 AM	0.1	ENE	
4 Oct 2020	2:00 AM	0.1	ENE	
4 Oct 2020	3:00 AM	0.1	ENE	
4 Oct 2020	4:00 AM	0.1	NE	
4 Oct 2020	5:00 AM	0.1	ENE	
4 Oct 2020	6:00 AM	0.1	ENE	
4 Oct 2020	7:00 AM	0.1	ENE	
4 Oct 2020	8:00 AM	0.1	NE	
4 Oct 2020	9:00 AM	0.1	ENE	
4 Oct 2020	10:00 AM	0.1	WNW	
4 Oct 2020	11:00 AM	0.1	W	
4 Oct 2020	12:00 PM	0.1	SE	
4 Oct 2020	1:00 PM	0.7	WSW	
4 Oct 2020	2:00 PM	0.3	SW	
4 Oct 2020	3:00 PM	0.5	SW	

October 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
4 Oct 2020	4:00 PM	0.1	W	
4 Oct 2020	5:00 PM	0.1	W	
4 Oct 2020	6:00 PM	0.1	SW	
4 Oct 2020	7:00 PM	0.1	SSW	
4 Oct 2020	8:00 PM	0.1	E	
4 Oct 2020	9:00 PM	0.1	WSW	
4 Oct 2020	10:00 PM	0.1	SW	
4 Oct 2020	11:00 PM	0.1	SW	
5 Oct 2020	12:00 AM	0.1	NNE	
5 Oct 2020	1:00 AM	0.1	NE	
5 Oct 2020	2:00 AM	0.1	NE	
5 Oct 2020	3:00 AM	0.1	NE	
5 Oct 2020	4:00 AM	0.1	NE	
5 Oct 2020	5:00 AM	0.1	N	
5 Oct 2020	6:00 AM	0.1	SSW	
5 Oct 2020	7:00 AM	0.1	NE	
5 Oct 2020	8:00 AM	0.1	S	
5 Oct 2020	9:00 AM	0.1	NE	
5 Oct 2020	10:00 AM	0.1	SSE	
5 Oct 2020	11:00 AM	0.2	ESE	
5 Oct 2020	12:00 PM	0.3	NE	
5 Oct 2020	1:00 PM	0.2	ENE	
5 Oct 2020	2:00 PM	0.3	ENE	
5 Oct 2020	3:00 PM	0.2	ENE	
5 Oct 2020	4:00 PM	0.1	E	
5 Oct 2020	5:00 PM	0.1	ENE E	
5 Oct 2020 5 Oct 2020	6:00 PM 7:00 PM	0.2	ENE	
5 Oct 2020	8:00 PM	0.1	ENE	
5 Oct 2020	9:00 PM	0.1	NE	
5 Oct 2020	10:00 PM	0.1	ENE	
5 Oct 2020	10:00 PM 11:00 PM	0.1	ENE	
6 Oct 2020	12:00 AM	0.1	ENE	
6 Oct 2020	1:00 AM	0.1	NE	
6 Oct 2020	2:00 AM	0.1	NNE	
6 Oct 2020	3:00 AM	0.1	NNE	
6 Oct 2020	4:00 AM	0.4	NNE	
6 Oct 2020	5:00 AM	0.1	NE	
6 Oct 2020	6:00 AM	0.2	NNE	
6 Oct 2020	7:00 AM	0.9	NE	
6 Oct 2020	8:00 AM	0.1	E	
6 Oct 2020	9:00 AM	0.2	ESE	
6 Oct 2020	10:00 AM	0.3	NW	
6 Oct 2020	11:00 AM	0.3	NE	

October 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
6 Oct 2020	12:00 PM	0.1	NE	
6 Oct 2020	1:00 PM	0.1	ENE	
6 Oct 2020	2:00 PM	0.1	NNE	
6 Oct 2020	3:00 PM	0.1	NNE	
6 Oct 2020	4:00 PM	0.2	NNE	
6 Oct 2020	5:00 PM	0.1	ENE	
6 Oct 2020	6:00 PM	0.4	E	
6 Oct 2020	7:00 PM	0.2	NE	
6 Oct 2020	8:00 PM	0.2	NE	
6 Oct 2020	9:00 PM	0.2	N	
6 Oct 2020	10:00 PM	0.8	E	
6 Oct 2020	11:00 PM	0.2	NE	
7 Oct 2020	12:00 AM	0.5	N	
7 Oct 2020	1:00 AM	0.9	ENE	
7 Oct 2020	2:00 AM	0.4	NE	
7 Oct 2020	3:00 AM	0.2	NNE	
7 Oct 2020	4:00 AM	0.3	ENE	
7 Oct 2020	5:00 AM	0.2	N	
7 Oct 2020	6:00 AM	0.4	NE	
7 Oct 2020	7:00 AM	0.1	N	
7 Oct 2020	8:00 AM	0.4	NNE	
7 Oct 2020	9:00 AM	0.2	NE N	
7 Oct 2020	10:00 AM	0.6		
7 Oct 2020	11:00 AM	0.5	ENE	
7 Oct 2020	12:00 PM	0.2 0.3	ENE	
7 Oct 2020 7 Oct 2020	1:00 PM 2:00 PM	0.3	N NW	
7 Oct 2020	3:00 PM	1	NNE	
7 Oct 2020	4:00 PM	0.1	NNE	
7 Oct 2020	5:00 PM	0.3	NNE	
7 Oct 2020	6:00 PM	0.1	ENE	
7 Oct 2020	7:00 PM	0.4	NE	
7 Oct 2020	8:00 PM	0.7	N	
7 Oct 2020	9:00 PM	0.2	NNE	
7 Oct 2020	10:00 PM	0.1	NNE	
7 Oct 2020	11:00 PM	0.1	ENE	
8 Oct 2020	12:00 AM	0.1	NE	
8 Oct 2020	1:00 AM	0.2	NNE	
8 Oct 2020	2:00 AM	1.5	ENE	
8 Oct 2020	3:00 AM	0.1	ENE	
8 Oct 2020	4:00 AM	1.5	NE	
8 Oct 2020	5:00 AM	0.9	N	
8 Oct 2020	6:00 AM	0.1	NE	
8 Oct 2020	7:00 AM	0.2	NE	

October 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
8 Oct 2020	8:00 AM	0.2	SE	
8 Oct 2020	9:00 AM	0.2	E	
8 Oct 2020	10:00 AM	0.3	ENE	
8 Oct 2020	11:00 AM	0.7	ENE	
8 Oct 2020	12:00 PM	2.5	NNW	
8 Oct 2020	1:00 PM	0.8	NNE	
8 Oct 2020	2:00 PM	0.2	ENE	
8 Oct 2020	3:00 PM	0.1	NNE	
8 Oct 2020	4:00 PM	0.3	NE	
8 Oct 2020	5:00 PM	0.7	NE	
8 Oct 2020	6:00 PM	0.5	ENE	
8 Oct 2020	7:00 PM	0.1	ENE	
8 Oct 2020	8:00 PM	0.4	NNE	
8 Oct 2020	9:00 PM	0.1	ENE	
8 Oct 2020	10:00 PM	0.1	N	
8 Oct 2020	11:00 PM	0.6	NNE	
9 Oct 2020 9 Oct 2020	12:00 AM 1:00 AM	0.1	E N	
9 Oct 2020 9 Oct 2020	2:00 AM	0.0	ESE	
9 Oct 2020	3:00 AM	0.1	NE	
9 Oct 2020	4:00 AM	0.2	ENE	
9 Oct 2020	5:00 AM	2.1	ENE	
9 Oct 2020	6:00 AM	0.1	E	
9 Oct 2020	7:00 AM	1	ENE	
9 Oct 2020	8:00 AM	0.1	NNE	
9 Oct 2020	9:00 AM	1.4	N	
9 Oct 2020	10:00 AM	0.1	NE	
9 Oct 2020	11:00 AM	0.3	NNE	
9 Oct 2020	12:00 PM	0.3	N	
9 Oct 2020	1:00 PM	0.4	N	
9 Oct 2020	2:00 PM	0.1	Ν	
9 Oct 2020	3:00 PM	0.2	ENE	
9 Oct 2020	4:00 PM	0.1	NE	
9 Oct 2020	5:00 PM	0.1	NE	
9 Oct 2020	6:00 PM	0.1	ENE	
9 Oct 2020	7:00 PM	0.1	NNE	
9 Oct 2020	8:00 PM	0.3	ENE	
9 Oct 2020	9:00 PM	0.2	E	
9 Oct 2020	10:00 PM	0.1	NNE	
9 Oct 2020	11:00 PM	0.2	NNE	
10 Oct 2020	12:00 AM	0.1	NNE	
10 Oct 2020	1:00 AM	0.1	NNE	
10 Oct 2020	2:00 AM	0.1	NNE	
10 Oct 2020	3:00 AM	0.1	NE	

October 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
10 Oct 2020	4:00 AM	0.1	NNE	
10 Oct 2020	5:00 AM	0.2	NNE	
10 Oct 2020	6:00 AM	0.1	NNE	
10 Oct 2020	7:00 AM	0.1	NE	
10 Oct 2020	8:00 AM	0.1	NE	
10 Oct 2020	9:00 AM	0.4	N	
10 Oct 2020	10:00 AM	0.1	ENE	
10 Oct 2020	11:00 AM	0.1	NE	
10 Oct 2020	12:00 PM	0.1	NNE	
10 Oct 2020	1:00 PM	0.3	WNW	
10 Oct 2020	2:00 PM	0.1	NE	
10 Oct 2020	3:00 PM	0.1	NE	
10 Oct 2020	4:00 PM	0.1	ENE	
10 Oct 2020	5:00 PM	0.1	ENE	
10 Oct 2020	6:00 PM	0.1	ENE	
10 Oct 2020	7:00 PM	0.1	ENE	
10 Oct 2020	8:00 PM	0.1	NE	
10 Oct 2020	9:00 PM	0.1	E	
10 Oct 2020	10:00 PM	0.1	ENE	
10 Oct 2020	11:00 PM	0.1	ENE	
11 Oct 2020	12:00 AM	0.1	ENE	
11 Oct 2020	1:00 AM	0.1	NE	
11 Oct 2020 11 Oct 2020	2:00 AM 3:00 AM	0.1	SSW NE	
11 Oct 2020	4:00 AM	0.1	NE	
11 Oct 2020	5:00 AM	0.1	NE	
11 Oct 2020	6:00 AM	0.1	ENE	
11 Oct 2020	7:00 AM	0.1	ENE	
11 Oct 2020	8:00 AM	0.2	E	
11 Oct 2020	9:00 AM	0.5	N N	
11 Oct 2020	10:00 AM	0.1	ESE	
11 Oct 2020	11:00 AM	0.2	ENE	
11 Oct 2020	12:00 PM	0.3	N	
11 Oct 2020	1:00 PM	0.1	NE	
11 Oct 2020	2:00 PM	0.1	ENE	
11 Oct 2020	3:00 PM	0.1	SSE	
11 Oct 2020	4:00 PM	0.1	Е	
11 Oct 2020	5:00 PM	0.3	ENE	
11 Oct 2020	6:00 PM	0.1	ENE	
11 Oct 2020	7:00 PM	0.1	NE	
11 Oct 2020	8:00 PM	0.1	ENE	
11 Oct 2020	9:00 PM	0.1	NE	
11 Oct 2020	10:00 PM	0.1	ENE	
11 Oct 2020	11:00 PM	0.1	ENE	

October 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
12 Oct 2020	12:00 AM	0.1	ENE	
12 Oct 2020	1:00 AM	0.1	ENE	
12 Oct 2020	2:00 AM	0.1	NE	
12 Oct 2020	3:00 AM	0.1	E	
12 Oct 2020	4:00 AM	0.1	E	
12 Oct 2020	5:00 AM	0.1	NNE	
12 Oct 2020	6:00 AM	0.1	ENE	
12 Oct 2020	7:00 AM	0.1	NE	
12 Oct 2020	8:00 AM	0.1	NE	
12 Oct 2020	9:00 AM	0.3	NNE	
12 Oct 2020	10:00 AM	0.2	ENE	
12 Oct 2020	11:00 AM	0.1	NE	
12 Oct 2020	12:00 PM	0.1	ENE	
12 Oct 2020	1:00 PM	0.2	ENE	
12 Oct 2020	2:00 PM	0.1	ENE	
12 Oct 2020	3:00 PM	0.1	E	
12 Oct 2020	4:00 PM	0.3	E	
12 Oct 2020	5:00 PM	0.5	ENE	
12 Oct 2020	6:00 PM	0.1	ENE	
12 Oct 2020	7:00 PM	0.1	NE	
12 Oct 2020	8:00 PM	0.1	NE	
12 Oct 2020 12 Oct 2020	9:00 PM 10:00 PM	0.1	ENE E	
12 Oct 2020	10:00 PM 11:00 PM	0.1	ESE	
12 Oct 2020	12:00 AM	0.1	NE	
13 Oct 2020	1:00 AM	0.4	ENE	
13 Oct 2020	2:00 AM	0.6	ENE	
13 Oct 2020	3:00 AM	0.6	NE	
13 Oct 2020	4:00 AM	0.4	NE	
13 Oct 2020	5:00 AM	0.5	NNE	
13 Oct 2020	6:00 AM	0.7	ENE	
13 Oct 2020	7:00 AM	0.8	Е	
13 Oct 2020	8:00 AM	0.9	ENE	
13 Oct 2020	9:00 AM	0.8	Е	
13 Oct 2020	10:00 AM	1.2	ENE	
13 Oct 2020	11:00 AM	1.1	NE	
13 Oct 2020	12:00 PM	1.2	ESE	
13 Oct 2020	1:00 PM	1.3	SE	
13 Oct 2020	2:00 PM	1.1	NE	
13 Oct 2020	3:00 PM	0.9	ENE	
13 Oct 2020	4:00 PM	1.1	NE	
13 Oct 2020	5:00 PM	0.8	NE	
13 Oct 2020	6:00 PM	1.7	E	
13 Oct 2020	7:00 PM	1.9	ESE	

October 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
13 Oct 2020	8:00 PM	1.2	ENE	
13 Oct 2020	9:00 PM	1.6	ENE	
13 Oct 2020	10:00 PM	1.5	S	
13 Oct 2020	11:00 PM	0.3	SE	
14 Oct 2020	12:00 AM	0.5	ESE	
14 Oct 2020	1:00 AM	0.8	SSE	
14 Oct 2020	2:00 AM	0.3	ENE	
14 Oct 2020	3:00 AM	0.3	ESE	
14 Oct 2020	4:00 AM	0.3	ENE	
14 Oct 2020	5:00 AM	0.4	E	
14 Oct 2020	6:00 AM	1.5	NE	
14 Oct 2020	7:00 AM	0.6	E	
14 Oct 2020	8:00 AM	0.8	ESE	
14 Oct 2020	9:00 AM	0.9	ENE	
14 Oct 2020	10:00 AM	0.4	ESE	
14 Oct 2020	11:00 AM	1.2	ENE	
14 Oct 2020	12:00 PM	1.3	ENE	
14 Oct 2020	1:00 PM	1.5	SE	
14 Oct 2020	2:00 PM	0.5	E	
14 Oct 2020	3:00 PM	1.3	ESE	
14 Oct 2020	4:00 PM	0.2	NE	
14 Oct 2020	5:00 PM	1.1	ENE	
14 Oct 2020	6:00 PM	0.5	E	
14 Oct 2020	7:00 PM	0.9	NNW	
14 Oct 2020	8:00 PM	0.5	ENE	
14 Oct 2020	9:00 PM	0.4	N	
14 Oct 2020	10:00 PM	0.3	ENE	
14 Oct 2020	11:00 PM	0.2	E	
15 Oct 2020	12:00 AM	0.1	E	
15 Oct 2020	1:00 AM	0.1	E	
15 Oct 2020	2:00 AM	0.8	ENE	
15 Oct 2020	3:00 AM	0.1	ENE	
15 Oct 2020	4:00 AM	0.1	E	
15 Oct 2020	5:00 AM	0.2	NNE	
15 Oct 2020	6:00 AM	0.2	ENE	
15 Oct 2020	7:00 AM	0.2	ENE	
15 Oct 2020	8:00 AM	0.1	ENE	
15 Oct 2020	9:00 AM	0.1	ESE	
15 Oct 2020	10:00 AM	0.4	NE	
15 Oct 2020	11:00 AM	1.5	ENE	
15 Oct 2020	12:00 PM	0.2	ENE	
15 Oct 2020	1:00 PM	1.2	E	
15 Oct 2020	2:00 PM	0.2	WSW	
15 Oct 2020	3:00 PM	0.2	Ν	

October 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
15 Oct 2020	4:00 PM	0.1	SW	
15 Oct 2020	5:00 PM	0.6	NE	
15 Oct 2020	6:00 PM	0.2	NE	
15 Oct 2020	7:00 PM	0.2	SE	
15 Oct 2020	8:00 PM	0.1	NE	
15 Oct 2020	9:00 PM	0.1	NE	
15 Oct 2020	10:00 PM	0.1	NE	
15 Oct 2020	11:00 PM	0.1	ENE	
16 Oct 2020	12:00 AM	0.2	NE	
16 Oct 2020	1:00 AM	0.1	ENE	
16 Oct 2020	2:00 AM	0.1	E	
16 Oct 2020	3:00 AM	0.2	E	
16 Oct 2020	4:00 AM	0.1	NE	
16 Oct 2020	5:00 AM	0.1	E	
16 Oct 2020	6:00 AM	0.1	NNE	
16 Oct 2020	7:00 AM	0.2	ENE	
16 Oct 2020	8:00 AM	0.2	NE	
16 Oct 2020	9:00 AM	0.5	ESE	
16 Oct 2020	10:00 AM	0.2	NNE	
16 Oct 2020	11:00 AM	0.1	SSE	
16 Oct 2020	12:00 PM	0.1	ENE	
16 Oct 2020	1:00 PM	0.2	ENE	
16 Oct 2020	2:00 PM	0.1	E	
16 Oct 2020	3:00 PM	0.1	ENE ENE	
16 Oct 2020 16 Oct 2020	4:00 PM 5:00 PM	0.1		
16 Oct 2020	6:00 PM	0.1	ENE ESE	
16 Oct 2020	7:00 PM	0.1	SE	
16 Oct 2020	8:00 PM	0.1	E	
16 Oct 2020	9:00 PM	0.1	ESE	
16 Oct 2020	10:00 PM	0.1	ENE	
16 Oct 2020	10:00 PM	0.1	NE	
17 Oct 2020	12:00 AM	0.2	ENE	
17 Oct 2020	1:00 AM	0.4	NE	
17 Oct 2020	2:00 AM	2.8	NE	
17 Oct 2020	3:00 AM	0.5	NE	
17 Oct 2020	4:00 AM	0.1	NNE	
17 Oct 2020	5:00 AM	0.1	NNE	
17 Oct 2020	6:00 AM	0.1	NNE	
17 Oct 2020	7:00 AM	0.4	E	
17 Oct 2020	8:00 AM	0.2	NNE	
17 Oct 2020	9:00 AM	0.6	NNE	
17 Oct 2020	10:00 AM	0.1	E	
17 Oct 2020	11:00 AM	0.2	NNE	

October 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
17 Oct 2020	12:00 PM	0.2	NNW	
17 Oct 2020	1:00 PM	0.1	NE	
17 Oct 2020	2:00 PM	0.1	NE	
17 Oct 2020	3:00 PM	0.1	WNW	
17 Oct 2020	4:00 PM	0.1	NE	
17 Oct 2020	5:00 PM	0.1	ENE	
17 Oct 2020	6:00 PM	0.1	ENE	
17 Oct 2020	7:00 PM	0.1	E	
17 Oct 2020	8:00 PM	0.1	NE	
17 Oct 2020	9:00 PM	0.6	NNE	
17 Oct 2020	10:00 PM	0.2	N	
17 Oct 2020	11:00 PM	0.2	ENE	
18 Oct 2020	12:00 AM	0.2	NE	
18 Oct 2020	1:00 AM	1.6	N	
18 Oct 2020 18 Oct 2020	2:00 AM 3:00 AM	0.4 0.3	E ENE	
18 Oct 2020	4:00 AM	0.3	NE	
18 Oct 2020	5:00 AM	0.4	E	
18 Oct 2020	6:00 AM	0.3	NE	
18 Oct 2020	7:00 AM	0.2	NE	
18 Oct 2020	8:00 AM	0.1	ENE	
18 Oct 2020	9:00 AM	0.2	NE	
18 Oct 2020	10:00 AM	0.2	E	
18 Oct 2020	11:00 AM	0.7	ENE	
18 Oct 2020	12:00 PM	0.1	NNW	
18 Oct 2020	1:00 PM	0.2	NE	
18 Oct 2020	2:00 PM	0.2	NE	
18 Oct 2020	3:00 PM	0.4	NNE	
18 Oct 2020	4:00 PM	0.2	ENE	
18 Oct 2020	5:00 PM	0.2	ENE	
18 Oct 2020	6:00 PM	0.2	ESE	
18 Oct 2020	7:00 PM	0.1	ENE	
18 Oct 2020	8:00 PM	0.2	ESE	
18 Oct 2020	9:00 PM	1.8	NNE	
18 Oct 2020	10:00 PM	0.8	NE	
18 Oct 2020	11:00 PM	0.7	NNE	
19 Oct 2020	12:00 AM	0.1	NE	
19 Oct 2020	1:00 AM	0.1	NE	
19 Oct 2020	2:00 AM	0.3	NE	
19 Oct 2020	3:00 AM	0.2	ENE	
19 Oct 2020	4:00 AM	0.2	ESE	
19 Oct 2020	5:00 AM	0.1	SSE	
19 Oct 2020	6:00 AM	0.6	NE	
19 Oct 2020	7:00 AM	0.2	NE	

October 2020					
	Wind Speed a	and Directions			
Date	Time	Wind Speed m-s	Direction		
19 Oct 2020	8:00 AM	0.7	ENE		
19 Oct 2020	9:00 AM	0.4	ENE		
19 Oct 2020	10:00 AM	1.5	ESE		
19 Oct 2020	11:00 AM	0.1	NE		
19 Oct 2020	12:00 PM	0.4	N		
19 Oct 2020	1:00 PM	0.1	NE		
19 Oct 2020	2:00 PM	0.1	NW		
19 Oct 2020	3:00 PM	0.1	NE		
19 Oct 2020	4:00 PM	0.6	ENE		
19 Oct 2020	5:00 PM	0.2	NW		
19 Oct 2020	6:00 PM	0.4	ENE		
19 Oct 2020	7:00 PM	0.1	NNW		
19 Oct 2020	8:00 PM	0.1	NE		
19 Oct 2020	9:00 PM	0.3	NE		
19 Oct 2020	10:00 PM	0.6	ENE		
19 Oct 2020	11:00 PM	0.2	NNE		
20 Oct 2020	12:00 AM	0.1	E		
20 Oct 2020	1:00 AM	0.7	NE		
20 Oct 2020	2:00 AM	0.7	NE NNE		
20 Oct 2020 20 Oct 2020	3:00 AM 4:00 AM	1.4	NINE		
20 Oct 2020 20 Oct 2020	5:00 AM	0.1	NL N		
20 Oct 2020	6:00 AM	0.3	NE		
20 Oct 2020	7:00 AM	0.9	NNW		
20 Oct 2020	8:00 AM	0.2	ENE		
20 Oct 2020	9:00 AM	0.2	NNE		
20 Oct 2020	10:00 AM	0.3	NW		
20 Oct 2020	11:00 AM	0.1	NNE		
20 Oct 2020	12:00 PM	0.1	NE		
20 Oct 2020	1:00 PM	0.1	Е		
20 Oct 2020	2:00 PM	1	NNW		
20 Oct 2020	3:00 PM	0.1	N		
20 Oct 2020	4:00 PM	0.3	NNE		
20 Oct 2020	5:00 PM	0.1	N		
20 Oct 2020	6:00 PM	0.5	N		
20 Oct 2020	7:00 PM	0.6	W		
20 Oct 2020	8:00 PM	0.3	NE		
20 Oct 2020	9:00 PM	1.7	ENE		
20 Oct 2020	10:00 PM	0.1	NE		
20 Oct 2020	11:00 PM	0.2	NE		
21 Oct 2020	12:00 AM	0.1	ENE		
21 Oct 2020	1:00 AM	0.2	NE		
21 Oct 2020	2:00 AM	0.3	NE		
21 Oct 2020	3:00 AM	0.4	Ν		

October 2020					
	Wind Speed	and Directions			
Date	Time	Wind Speed m-s	Direction		
21 Oct 2020	4:00 AM	0.3	NE		
21 Oct 2020	5:00 AM	0.1	NNE		
21 Oct 2020	6:00 AM	0.2	ESE		
21 Oct 2020	7:00 AM	0.2	ENE		
21 Oct 2020	8:00 AM	0.1	NNE		
21 Oct 2020	9:00 AM	1.4	E		
21 Oct 2020	10:00 AM	0.4	N		
21 Oct 2020	11:00 AM	1	ENE		
21 Oct 2020	12:00 PM	0.1	ENE		
21 Oct 2020	1:00 PM	0.2	NNE		
21 Oct 2020	2:00 PM	1.6	NE		
21 Oct 2020	3:00 PM	0.5	N		
21 Oct 2020	4:00 PM	0.2	NE		
21 Oct 2020	5:00 PM	0.2	NNE		
21 Oct 2020	6:00 PM	0.1	ENE		
21 Oct 2020	7:00 PM	0.1	N		
21 Oct 2020	8:00 PM	0.1	NW		
21 Oct 2020	9:00 PM	0.1	N		
21 Oct 2020	10:00 PM	0.2	NNE		
21 Oct 2020	11:00 PM	0.2	NE		
22 Oct 2020	12:00 AM	0.3	ENE		
22 Oct 2020	1:00 AM	0.1	NE		
22 Oct 2020	2:00 AM	1.2	NNE		
22 Oct 2020	3:00 AM	0.1	NNE		
22 Oct 2020	4:00 AM	0.1	NNE		
22 Oct 2020	5:00 AM	1.2	NE SE		
22 Oct 2020	6:00 AM 7:00 AM	0.1	SE		
22 Oct 2020 22 Oct 2020	7:00 AM 8:00 AM	0.1	NE S		
22 Oct 2020 22 Oct 2020		0.3	ENE		
22 Oct 2020 22 Oct 2020	9:00 AM 10:00 AM	0.2	NE NE		
22 Oct 2020 22 Oct 2020	10:00 AM 11:00 AM	1.4	E		
22 Oct 2020 22 Oct 2020	12:00 PM	0.9	NNE		
22 Oct 2020	1:00 PM	4.2	NNW		
22 Oct 2020	2:00 PM	0.9	NE		
22 Oct 2020	3:00 PM	0.9	ENE		
22 Oct 2020	4:00 PM	1.4	NNE		
22 Oct 2020	5:00 PM	0.7	N		
22 Oct 2020	6:00 PM	0.7	ENE		
22 Oct 2020	7:00 PM	0.1	N		
22 Oct 2020	8:00 PM	0.1	ENE		
22 Oct 2020	9:00 PM	0.1	E		
22 Oct 2020	10:00 PM	0.4	NNE		
22 Oct 2020	11:00 PM	0.4	N		

October 2020							
	Wind Speed and Directions						
Date	Time	Wind Speed m-s	Direction				
23 Oct 2020	12:00 AM	0.3	NNE				
23 Oct 2020	1:00 AM	0.1	ENE				
23 Oct 2020	2:00 AM	2.3	E				
23 Oct 2020	3:00 AM	0.3	NE				
23 Oct 2020	4:00 AM	0.1	ENE				
23 Oct 2020	5:00 AM	1.2	E				
23 Oct 2020	6:00 AM	0.1	NE				
23 Oct 2020	7:00 AM	0.3	ENE				
23 Oct 2020	8:00 AM	1.6	NE				
23 Oct 2020	9:00 AM	0.4	E				
23 Oct 2020	10:00 AM	0.5	NE				
23 Oct 2020	11:00 AM	1.1	NE				
23 Oct 2020	12:00 PM	1.7	ENE				
23 Oct 2020	1:00 PM	0.7	NE				
23 Oct 2020	2:00 PM	0.1	E				
23 Oct 2020	3:00 PM	0.5	NE				
23 Oct 2020	4:00 PM	0.8	E				
23 Oct 2020	5:00 PM	0.4	E				
23 Oct 2020	6:00 PM	0.2	NNE				
23 Oct 2020	7:00 PM	1.3	NNE				
23 Oct 2020	8:00 PM	0.2	ESE				
23 Oct 2020	9:00 PM	0.1	ENE				
23 Oct 2020 23 Oct 2020	10:00 PM 11:00 PM	0.1	NNE NE				
23 Oct 2020 24 Oct 2020	11:00 PM 12:00 AM	0.1	ENE				
24 Oct 2020 24 Oct 2020	12.00 AM 1:00 AM	0.1	NE				
24 Oct 2020 24 Oct 2020	2:00 AM	0.1	NW				
24 Oct 2020	3:00 AM	0.2	NE				
24 Oct 2020	4:00 AM	0.1	NE				
24 Oct 2020	5:00 AM	0.3	ENE				
24 Oct 2020	6:00 AM	0.3	ENE				
24 Oct 2020	7:00 AM	0.1	NE				
24 Oct 2020	8:00 AM	0.6	ENE				
24 Oct 2020	9:00 AM	0.2	ESE				
24 Oct 2020	10:00 AM	0.4	NE				
24 Oct 2020	11:00 AM	0.5	ENE				
24 Oct 2020	12:00 PM	0.2	ENE				
24 Oct 2020	1:00 PM	0.2	NNE				
24 Oct 2020	2:00 PM	0.5	ENE				
24 Oct 2020	3:00 PM	0.1	ENE				
24 Oct 2020	4:00 PM	0.1	ENE				
24 Oct 2020	5:00 PM	0.1	NE				
24 Oct 2020	6:00 PM	0.1	ENE				
24 Oct 2020	7:00 PM	0.1	ENE				

October 2020					
	Wind Speed a	and Directions			
Date	Time	Wind Speed m-s	Direction		
24 Oct 2020	8:00 PM	0.1	N		
24 Oct 2020	9:00 PM	0.1	NE		
24 Oct 2020	10:00 PM	0.1	NNE		
24 Oct 2020	11:00 PM	0.1	E		
25 Oct 2020	12:00 AM	0.1	ENE		
25 Oct 2020	1:00 AM	0.1	ENE		
25 Oct 2020	2:00 AM	0.1	E		
25 Oct 2020	3:00 AM	0.1	E		
25 Oct 2020	4:00 AM	0.1	ENE		
25 Oct 2020	5:00 AM	0.1	ENE		
25 Oct 2020	6:00 AM	0.1	NE		
25 Oct 2020	7:00 AM	0.1	NE		
25 Oct 2020 25 Oct 2020	8:00 AM 9:00 AM	0.1	E E		
25 Oct 2020	9:00 AM 10:00 AM	0.1	ENE		
25 Oct 2020	10:00 AM 11:00 AM	0.4	ENE		
25 Oct 2020	12:00 PM	0.6	ENE		
25 Oct 2020	12.00 PM	0.1	ENE		
25 Oct 2020	2:00 PM	0.1	ENE		
25 Oct 2020	3:00 PM	0.4	SE		
25 Oct 2020	4:00 PM	0.4	ENE		
25 Oct 2020	5:00 PM	0.1	ENE		
25 Oct 2020	6:00 PM	0.1	ENE		
25 Oct 2020	7:00 PM	0.1	S		
25 Oct 2020	8:00 PM	0.1	Е		
25 Oct 2020	9:00 PM	0.1	Е		
25 Oct 2020	10:00 PM	0.1	Е		
25 Oct 2020	11:00 PM	0.1	ESE		
26 Oct 2020	12:00 AM	0.1	Е		
26 Oct 2020	1:00 AM	0.1	ENE		
26 Oct 2020	2:00 AM	0.1	ENE		
26 Oct 2020	3:00 AM	0.1	ENE		
26 Oct 2020	4:00 AM	0.1	ENE		
26 Oct 2020	5:00 AM	0.1	NE		
26 Oct 2020	6:00 AM	0.1	E		
26 Oct 2020	7:00 AM	0.1	NE		
26 Oct 2020	8:00 AM	0.1	ENE		
26 Oct 2020	9:00 AM	0.2	ENE		
26 Oct 2020	10:00 AM	0.1	W		
26 Oct 2020	11:00 AM	0.9	ENE		
26 Oct 2020	12:00 PM	0.1	NNE		
26 Oct 2020	1:00 PM	0.1	SE		
26 Oct 2020	2:00 PM	0.1	SSE		
26 Oct 2020	3:00 PM	0.1	E		

October 2020					
	Wind Speed a	and Directions			
Date	Time	Wind Speed m-s	Direction		
26 Oct 2020	4:00 PM	0.1	ENE		
26 Oct 2020	5:00 PM	0.1	ENE		
26 Oct 2020	6:00 PM	0.1	ENE		
26 Oct 2020	7:00 PM	0.1	ESE		
26 Oct 2020	8:00 PM	0.1	ESE		
26 Oct 2020	9:00 PM	0.1	ENE		
26 Oct 2020	10:00 PM	0.1	ENE		
26 Oct 2020	11:00 PM	0.1	E		
27 Oct 2020	12:00 AM	0.1	ENE		
27 Oct 2020	1:00 AM	0.1	E		
27 Oct 2020	2:00 AM	0.1	ENE		
27 Oct 2020 27 Oct 2020	3:00 AM 4:00 AM	0.2	NE E		
27 Oct 2020 27 Oct 2020	4:00 AM 5:00 AM	0.1	E NNE		
27 Oct 2020 27 Oct 2020	6:00 AM	0.1	NNE		
27 Oct 2020	7:00 AM	0.2	E		
27 Oct 2020	8:00 AM	0.2	ESE		
27 Oct 2020	9:00 AM	0.1	ENE		
27 Oct 2020	10:00 AM	0.1	ENE		
27 Oct 2020	11:00 AM	0.1	NE		
27 Oct 2020	12:00 PM	0.1	WSW		
27 Oct 2020	1:00 PM	0.1	SE		
27 Oct 2020	2:00 PM	0.1	ENE		
27 Oct 2020	3:00 PM	0.2	ENE		
27 Oct 2020	4:00 PM	0.1	ENE		
27 Oct 2020	5:00 PM	0.1	Е		
27 Oct 2020	6:00 PM	0.2	E		
27 Oct 2020	7:00 PM	0.1	ENE		
27 Oct 2020	8:00 PM	0.1	SSE		
27 Oct 2020	9:00 PM	0.1	ENE		
27 Oct 2020	10:00 PM	0.1	ENE		
27 Oct 2020	11:00 PM	0.1	SSE		
28 Oct 2020	12:00 AM	0.2	ENE		
28 Oct 2020	1:00 AM	0.1	E		
28 Oct 2020	2:00 AM	0.1	NE		
28 Oct 2020	3:00 AM	0.1	ENE		
28 Oct 2020	4:00 AM	0.1	NE		
28 Oct 2020	5:00 AM	0.1	ENE		
28 Oct 2020	6:00 AM	0.1	NNE ENE		
28 Oct 2020 28 Oct 2020	7:00 AM 8:00 AM	0.1	ENE NE		
28 Oct 2020 28 Oct 2020	9:00 AM	0.1	NE		
28 Oct 2020 28 Oct 2020	10:00 AM	0.1	ENE		
28 Oct 2020	11:00 AM	0.1	ENE		
20 001 2020	11.00 AW	0.1	LINE		

October 2020					
	Wind Speed a	and Directions			
Date	Time	Wind Speed m-s	Direction		
28 Oct 2020	12:00 PM	0.1	Е		
28 Oct 2020	1:00 PM	0.1	N		
28 Oct 2020	2:00 PM	0.3	E		
28 Oct 2020	3:00 PM	0.1	ENE		
28 Oct 2020	4:00 PM	0.1	ENE		
28 Oct 2020	5:00 PM	0.1	ENE		
28 Oct 2020	6:00 PM	0.1	ESE		
28 Oct 2020	7:00 PM	0.1	E		
28 Oct 2020	8:00 PM	0.1	ESE		
28 Oct 2020	9:00 PM	0.2	NE		
28 Oct 2020	10:00 PM	0.1	ENE		
28 Oct 2020	11:00 PM	0.2	ENE		
29 Oct 2020	12:00 AM	0.2	ENE		
29 Oct 2020	1:00 AM	0.2	ENE		
29 Oct 2020	2:00 AM	0.2	ENE		
29 Oct 2020	3:00 AM	0.2	NE		
29 Oct 2020	4:00 AM	0.2	NE		
29 Oct 2020	5:00 AM	0.2	ENE		
29 Oct 2020	6:00 AM	0.2	NE		
29 Oct 2020	7:00 AM	0.3	E		
29 Oct 2020	8:00 AM	0.2	ENE		
29 Oct 2020	9:00 AM 10:00 AM	0.2	E NNE		
29 Oct 2020			E		
29 Oct 2020 29 Oct 2020	11:00 AM 12:00 PM	0.2	E WSW		
29 Oct 2020 29 Oct 2020	12.00 PM 1:00 PM	0.3	NNE		
29 Oct 2020 29 Oct 2020	2:00 PM	0.0	NNE		
29 Oct 2020	3:00 PM	0.3	ENE		
29 Oct 2020	4:00 PM	0.2	N N		
29 Oct 2020	5:00 PM	0.4	NE		
29 Oct 2020	6:00 PM	0.2	ENE		
29 Oct 2020	7:00 PM	0.4	N		
29 Oct 2020	8:00 PM	0.1	NE		
29 Oct 2020	9:00 PM	0.1	NE		
29 Oct 2020	10:00 PM	0.1	N		
29 Oct 2020	11:00 PM	0.1	NNW		
30 Oct 2020	12:00 AM	0.1	NNE		
30 Oct 2020	1:00 AM	0.1	NE		
30 Oct 2020	2:00 AM	0.1	NNE		
30 Oct 2020	3:00 AM	0.1	ENE		
30 Oct 2020	4:00 AM	0.1	NE		
30 Oct 2020	5:00 AM	0.1	ENE		
30 Oct 2020	6:00 AM	0.1	NE		
30 Oct 2020	7:00 AM	0.1	NNE		

October 2020					
	Wind Speed a	nd Directions			
Date	Time	Wind Speed m-s	Direction		
30 Oct 2020	8:00 AM	0.1	NE		
30 Oct 2020	9:00 AM	0.1	NNE		
30 Oct 2020	10:00 AM	0.2	Е		
30 Oct 2020	11:00 AM	0.2	NE		
30 Oct 2020	12:00 PM	0.2	ENE		
30 Oct 2020	1:00 PM	0.1	E		
30 Oct 2020	2:00 PM	0.1	Е		
30 Oct 2020	3:00 PM	0.1	NNE		
30 Oct 2020	4:00 PM	0.2	E		
30 Oct 2020	5:00 PM	0.1	ENE		
30 Oct 2020	6:00 PM	0.1	ENE		
30 Oct 2020	7:00 PM	0.1	ENE		
30 Oct 2020	8:00 PM	0.1	ENE		
30 Oct 2020	9:00 PM	0.1	E		
30 Oct 2020	10:00 PM	0.1	ENE		
30 Oct 2020	11:00 PM	0.1	E		
31 Oct 2020	12:00 AM	0.1	ESE		
31 Oct 2020	1:00 AM	0.1	NNE		
31 Oct 2020	2:00 AM	0.1	NE		
31 Oct 2020	3:00 AM	0.1	ENE		
31 Oct 2020	4:00 AM	0.1	ENE		
31 Oct 2020	5:00 AM	0.1	E		
31 Oct 2020	6:00 AM	0.1	ESE		
31 Oct 2020	7:00 AM	0.1	NE		
31 Oct 2020	8:00 AM	0.1	SE		
31 Oct 2020	9:00 AM	0.2	NE		
31 Oct 2020	10:00 AM	0.1	NNE		
31 Oct 2020	11:00 AM	0.1	E		
31 Oct 2020	12:00 PM	0.3	E		
31 Oct 2020	1:00 PM	0.1	SE		
31 Oct 2020	2:00 PM	0.1	S		
31 Oct 2020	3:00 PM	0.5	SE		
31 Oct 2020	4:00 PM	0.1	ENE		
31 Oct 2020	5:00 PM	0.1	E		
31 Oct 2020	6:00 PM	0.1	ESE		
31 Oct 2020	7:00 PM	0.1	ENE		
31 Oct 2020	8:00 PM	0.1	SSE		
31 Oct 2020	9:00 PM	0.1	ESE		
31 Oct 2020	10:00 PM	0.1	E		
31 Oct 2020	11:00 PM	0.1	NNE		

APPENDIX D ENVIRONMENTAL MONITORING SCHEDULES

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Sa
				1-Oct	2-Oct	
						24-1
						24-1
4-Oct	5-Oct	6-Oct	7-Oct	8-Oct	9-Oct	
	1-hr TSP X3				1-hr TSP X3	
	Noise					
				24-hrs TSP		
				24-115 151		
11-Oct	12-Oct	13-Oct	14-Oct	15-Oct	16-Oct	
				1-hr TSP X3		
				Noise		
			24-hrs TSP			
			24-IIIS 15P			
18-Oct	19-Oct	20-Oct	21-Oct	22-Oct	23-Oct	
			1-hr TSP X3			
			Noise			
		24-hrs TSP				24-1
25-Oct	26-Oct	27-Oct	28-Oct	29-Oct	30-Oct	
25 000	20 000	27 000	20 000	29 000	50 000	
		1-hr TSP X3				
		Noise				
					24-hrs TSP	

#### Contract No. ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron Tentative Impact Air and Noise Monitoring Schedule (October 2020)

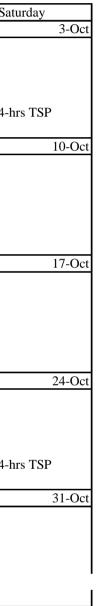
The schedule may be changed due to unforeseen circumstances (adverse weather, safety concerns, etc.)

Air Quality Monitoring Station 1-hr TSP / 24-hrs TSP AM1 - Tin Hau Temple AM2 - Sai Tso Wan Recreation Ground AM3 - Yau Lai Estate Bik Lai House AM4<sup>(1)</sup> - Sitting-out Area at Cha Kwo Ling Village AM4(A)<sup>(2)</sup> - Cha Kwo Ling Public Cargo Working Area Administrative Office

Notes: (1) For 1-hour TSP monitoring; (2) For 24-hours TSP monitoring

#### **Noise Monitoring Station**

CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong CM4 - Tin Hau Temple, Cha Kwo Ling CM5 - CCC Kei Faat Primary School, Yau Tong



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Sa
1-Nov	2-Nov	3-Nov	4-Nov	5-Nov	6-Nov	
	1-hr TSP X3 Noise			1-hr TSP X3		
			24-hrs TSP			
8-Nov	9-Nov	10-Nov	11-Nov	12-Nov	13-Nov	
			1-hr TSP X3 Noise			
		24-hrs TSP				
15-Nov	16-Nov	17-Nov	18-Nov	19-Nov	20-Nov	
		1-hr TSP X3 Noise				
	24-hrs TSP					24-1
22-Nov	23-Nov	24-Nov	25-Nov	26-Nov	27-Nov	
	1-hr TSP X3 Noise				1-hr TSP X3	
				24-hrs TSP		
29-Nov	30-Nov	`				

#### Contract No. ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron Tentative Impact Air and Noise Monitoring Schedule (November 2020)

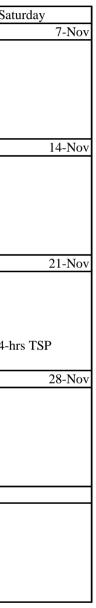
The schedule may be changed due to unforeseen circumstances (adverse weather, safety concerns, etc.)

Air Quality Monitoring Station 1-hr TSP / 24-hrs TSP AM1 - Tin Hau Temple AM2 - Sai Tso Wan Recreation Ground AM3 - Yau Lai Estate Bik Lai House AM4<sup>(1)</sup> - Sitting-out Area at Cha Kwo Ling Village AM4(A)<sup>(2)</sup> - Cha Kwo Ling Public Cargo Working Area Administrative Office

Notes: (1) For 1-hour TSP monitoring; (2) For 24-hours TSP monitoring

#### Noise Monitoring Station

CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong CM4 - Tin Hau Temple, Cha Kwo Ling CM5 - CCC Kei Faat Primary School, Yau Tong



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Sa
		1-Dec	2-Dec	3-Dec	4-Dec	
				1-hr TSP X3 Noise		
			24-hrs TSP			
6-Dec	7-Dec	8-Dec	9-Dec	10-Dec	11-Dec	
			1-hr TSP X3 Noise			
		24-hrs TSP				
13-Dec	14-Dec	15-Dec	16-Dec	17-Dec	18-Dec	
		1-hr TSP X3 Noise				
	24-hrs TSP					24-1
20-Dec	21-Dec	22-Dec	23-Dec	24-Dec	25-Dec	
	1-hr TSP X3 Noise				1-hr TSP X3	
				24-hrs TSP		
27-Dec	28-Dec	29-Dec	30-Dec	31-Dec		
				1-hr TSP X3 Noise		
			24-hrs TSP			

#### Contract No. ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron Tentative Impact Air and Noise Monitoring Schedule (December 2020)

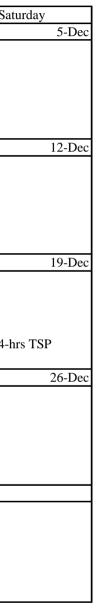
The schedule may be changed due to unforeseen circumstances (adverse weather, safety concerns, etc.)

Air Quality Monitoring Station 1-hr TSP / 24-hrs TSP AM1 - Tin Hau Temple AM2 - Sai Tso Wan Recreation Ground AM3 - Yau Lai Estate Bik Lai House AM4<sup>(1)</sup> - Sitting-out Area at Cha Kwo Ling Village AM4(A)<sup>(2)</sup> - Cha Kwo Ling Public Cargo Working Area Administrative Office

Notes: (1) For 1-hour TSP monitoring; (2) For 24-hours TSP monitoring

#### Noise Monitoring Station

CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong CM4 - Tin Hau Temple, Cha Kwo Ling CM5 - CCC Kei Faat Primary School, Yau Tong



#### Contract No. ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron Tentative Impact Air and Noise Monitoring Schedule (January 2021)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Sa
					1-Jan	
3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	8-Jan	
			1-hr TSP X3			
			Noise			
		24 has TCD				
		24-hrs TSP				
10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	
10-5 <b>a</b> n	11 5411	12 Juli	15 541	1+ Juli	15 Juli	
		1-hr TSP X3				
		Noise				
	24-hrs TSP					24-1
17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	
	1-hr TSP X3				1-hr TSP X3	
	Noise					
				24-hrs TSP		
24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	
27-9an	25 Juli	20 Juli	27 541	20 Juli	2) Juli	
				1-hr TSP X3		
				Noise		
			24-hrs TSP			
31-Jan						

The schedule may be changed due to unforeseen circumstances (adverse weather, safety concerns, etc.)

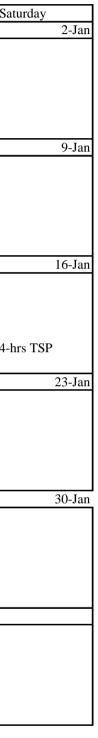
#### Air Quality Monitoring Station

1-hr TSP / 24-hrs TSP
AM1 - Tin Hau Temple
AM2 - Sai Tso Wan Recreation Ground
AM3 - Yau Lai Estate Bik Lai House
AM4<sup>(1)</sup> - Sitting-out Area at Cha Kwo Ling Village
AM4(A)<sup>(2)</sup> - Cha Kwo Ling Public Cargo Working Area Administrative Office

#### Noise Monitoring Station

CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong CM4 - Tin Hau Temple, Cha Kwo Ling CM5 - CCC Kei Faat Primary School, Yau Tong

Notes: (1) For 1-hour TSP monitoring; (2) For 24-hours TSP monitoring



APPENDIX E 1-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

# APPENDIX E - 1-HOUR TSP MONITORING RESULTS

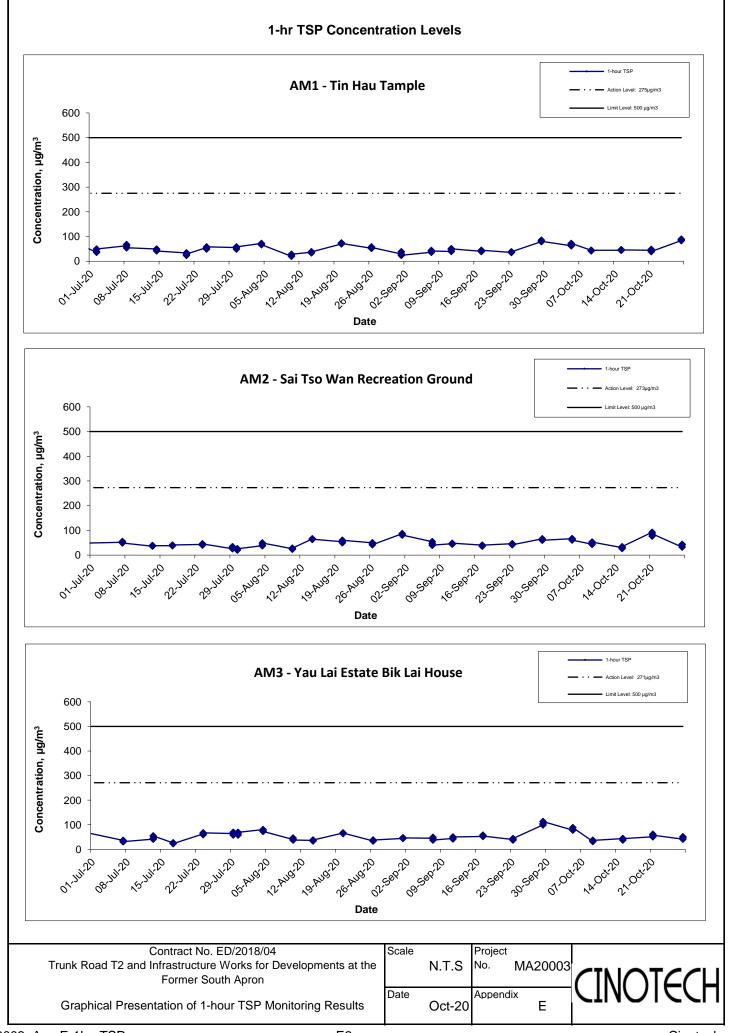
Location AM1 -	Location AM1 - Tin Hau Temple					
Date	Time	Weather	Particulate Concentration ( µg/m <sup>3</sup> )			
05-Oct-20	13:00	Sunny	62.4			
05-Oct-20	14:00	Sunny	69.6			
05-Oct-20	15:00	Sunny	72.0			
09-Oct-20	13:00	Sunny	44.0			
09-Oct-20	14:00	Sunny	42.0			
09-Oct-20	15:00	Sunny	44.0			
15-Oct-20	9:00	Sunny	44.0			
15-Oct-20	10:00	Sunny	46.0			
15-Oct-20	11:00	Sunny	46.0			
21-Oct-20	13:00	Sunny	44.2			
21-Oct-20	14:00	Sunny	47.6			
21-Oct-20	15:00	Sunny	39.1			
27-Oct-20	9:00	Sunny	83.6			
27-Oct-20	10:00	Sunny	89.3			
27-Oct-20	11:00	Sunny	85.5			
		Average	57.3			
		Maximum	89.3			
		Minimum	39.1			

Location AM2 -	Sai Tso War	Recreation Grou	nd
Date	Time	Weather	Particulate Concentration ( $\mu g/m^3$ )
05-Oct-20	9:00	Sunny	66.7
05-Oct-20	10:00	Sunny	63.8
05-Oct-20	11:00	Sunny	60.9
09-Oct-20	9:00	Sunny	43.7
09-Oct-20	10:00	Sunny	48.3
09-Oct-20	11:00	Sunny	52.9
15-Oct-20	9:00	Sunny	30.4
15-Oct-20	10:00	Sunny	26.6
15-Oct-20	11:00	Sunny	34.2
21-Oct-20	16:00	Sunny	92.4
21-Oct-20	17:00	Sunny	77.0
21-Oct-20	18:00	Sunny	85.8
27-Oct-20	13:00	Sunny	32.3
27-Oct-20	14:00	Sunny	41.8
27-Oct-20	15:00	Sunny	43.7
		Average	53.4
		Maximum	92.4
		Minimum	26.6

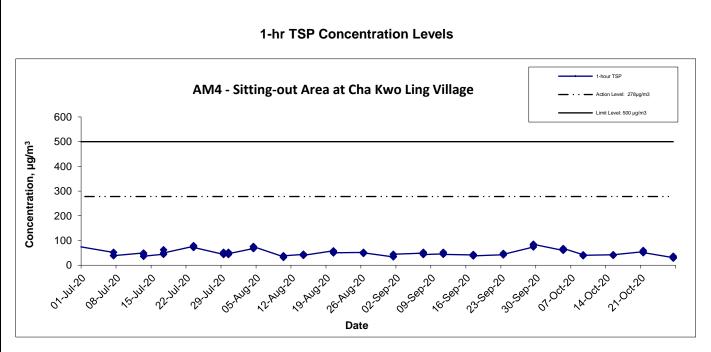
# Location AM3 - Yau Lai Estate Bik Lai House

05-Oct-20         05-Oct-20         09-Oct-20         09-Oct-20         09-Oct-20         15-Oct-20         15-Oct-20         15-Oct-20         21-Oct-20         21-Oct-20         21-Oct-20         27-Oct-20         27-Oct-20         27-Oct-20	16:00         17:00         18:00         16:00         17:00         18:00         9:00         10:00         11:00         16:00         17:00         18:00         10:00         11:00         16:00         17:00         18:00         18:00         18:00	Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny	Particulate Concentration ( µg/m <sup>3</sup> )           78.0           80.6           88.4           32.3           36.1           36.1           38.0           43.7           51.0           61.2           57.8           41.8           51.3
05-Oct-20           09-Oct-20           09-Oct-20           15-Oct-20           15-Oct-20           15-Oct-20           21-Oct-20           21-Oct-20           21-Oct-20           21-Oct-20           21-Oct-20           21-Oct-20           21-Oct-20           21-Oct-20           21-Oct-20           21-Oct-20	18:00         16:00         17:00         18:00         9:00         10:00         11:00         16:00         17:00         18:00         17:00         18:00         17:00	Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny	88.4         32.3         36.1         36.1         43.7         38.0         43.7         51.0         61.2         57.8         41.8
09-Oct-20         09-Oct-20         09-Oct-20         15-Oct-20         15-Oct-20         21-Oct-20	16:00         17:00         18:00         9:00         10:00         11:00         16:00         17:00         18:00         16:00         17:00         18:00         16:00	Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny	32.3 36.1 36.1 43.7 38.0 43.7 51.0 61.2 57.8 41.8
09-Oct-20         09-Oct-20         15-Oct-20         15-Oct-20         21-Oct-20	17:00         18:00         9:00         10:00         11:00         16:00         17:00         18:00         16:00	Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny	36.1 36.1 43.7 38.0 43.7 51.0 61.2 57.8 41.8
09-Oct-20 15-Oct-20 15-Oct-20 21-Oct-20 21-Oct-20 21-Oct-20 27-Oct-20 27-Oct-20	18:00         9:00         10:00         11:00         16:00         17:00         18:00         16:00         17:00	Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny	36.1 43.7 38.0 43.7 51.0 61.2 57.8 41.8
15-Oct-20 15-Oct-20 21-Oct-20 21-Oct-20 21-Oct-20 21-Oct-20 27-Oct-20 27-Oct-20	9:00 10:00 11:00 16:00 17:00 18:00 16:00 17:00	Sunny Sunny Sunny Sunny Sunny Sunny Sunny Sunny	43.7 38.0 43.7 51.0 61.2 57.8 41.8
15-Oct-20         15-Oct-20         21-Oct-20         21-Oct-20         21-Oct-20         27-Oct-20         27-Oct-20	10:00 11:00 16:00 17:00 18:00 16:00 17:00	Sunny Sunny Sunny Sunny Sunny Sunny Sunny	38.0 43.7 51.0 61.2 57.8 41.8
15-Oct-20         21-Oct-20         21-Oct-20         21-Oct-20         27-Oct-20         27-Oct-20	11:00 16:00 17:00 18:00 16:00 17:00	Sunny Sunny Sunny Sunny Sunny Sunny	43.7 51.0 61.2 57.8 41.8
21-Oct-20 21-Oct-20 21-Oct-20 27-Oct-20 27-Oct-20	16:00 17:00 18:00 16:00 17:00	Sunny Sunny Sunny Sunny Sunny	51.0 61.2 57.8 41.8
21-Oct-20 21-Oct-20 27-Oct-20 27-Oct-20	17:00 18:00 16:00 17:00	Sunny Sunny Sunny Sunny	61.2 57.8 41.8
21-Oct-20 27-Oct-20 27-Oct-20	18:00 16:00 17:00	Sunny Sunny Sunny	57.8 41.8
27-Oct-20 27-Oct-20	16:00 17:00	Sunny Sunny Sunny	41.8
27-Oct-20	17:00	Sunny Sunny	
		1	51.2
27-Oct-20	18:00	*	01.0
		Sunny	45.6
		Average	52.4
	Г	Maximum	88.4
	Г	Minimum	32.3
Date	Time	ea at Cha Kwo Li Weather	Particulate Concentration ( µg/m <sup>3</sup>
05-Oct-20	9:00	Rainy	59.8
05-Oct-20	10:00	Rainy	65.0
05-Oct-20	11:00	Rainy	67.6
09-Oct-20	9:00	Sunny	42.0
09-Oct-20	10:00	Sunny	38.0
09-Oct-20	11:00	Sunny	40.0
15-Oct-20	9:00	Sunny	42.0
15-Oct-20	10:00	Sunny	40.0
15-Oct-20	11:00	Sunny	42.0
21-Oct-20	9:00	Sunny	54.4
21-Oct-20	10:00	Sunny	59.5
21-Oct-20	11:00	Sunny	51.0
27-Oct-20	10:00	Sunny	30.4
27-Oct-20	11:00	Sunny	36.1
27-Oct-20	12:00	Sunny	28.5
		Average	46.4
	Г	Maximum	67.6

## **APPENDIX E - 1-HOUR TSP MONITORING RESULTS**



## **APPENDIX E - 1-HOUR TSP MONITORING RESULTS**



#### Notes:

- 1. The major activitie(s) being carried out on site during the reporting period is/are presented in Section 1.10
- 2. The weather conditions during the reporting month are presented in Appendix C.
- 3. Other factors which might affect the monitoring results are presented in Section 2.17.

Contract No. ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron	Scale		Project No.	MA20003	
Graphical Presentation of 1-hour TSP Monitoring Results	Date	Oct-20	Append	lix E	

APPENDIX F 24-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

# Appendix F - 24-hour TSP Monitoring Results

Start Date	Weather	Air	Atmospheric	Filter W	Filter Weight (g)		Elapse	Time	Sampling	Flow Rate (m <sup>3</sup> /min.)		Av. flow	Total vol.	Conc.
Start Date	Condition	Temp. (K)	Pressure, Pa (mmHg)	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m <sup>3</sup> /min)	(m <sup>3</sup> )	(µg/m <sup>3</sup> )
08-Oct-20	Sunny	298.6	762.2	3.4889	3.5303	0.0414	7446.5	7470.5	24.0	1.22	1.22	1.22	1757.9	23.6
14-Oct-20	Sunny	299.0	760.9	3.5040	3.7106	0.2066	7470.5	7494.5	24.0	1.22	1.22	1.22	1755.2	117.7
20-Oct-20	Sunny	297.8	761.1	3.4516	3.6165	0.1649	7494.5	7518.5	24.0	1.22	1.22	1.22	1759.1	93.7
24-Oct-20	Sunny	297.0	761.8	3.5179	3.7029	0.1850	7518.5	7542.5	24.0	1.22	1.22	1.22	1762.2	105.0
30-Oct-20	Cloudy	296.9	764.5	3.5197	3.6913	0.1716	7542.5	7566.5	24.0	1.23	1.24	1.24	1779.1	96.5
													Min	23.6
													Max	117.7

Location AM1 - Tin Hau Temple

\*Measurement cannot be carried out for AM1 between 12 Sep 2020 - 7 Oct 2020 as no power supply due to technical problems in the system of the Temple. The measurement resumed on the second week of October

Start Date	Weather	Air	Atmospheric	Filter W	'eight (g)	Particulate	Elapse	e Time	Sampling	Flow Rate	e (m <sup>3</sup> /min.)	Av. flow	Total vol.	Conc.
Start Date	Condition	Temp. (K)	Pressure, Pa (mmHg)	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m <sup>3</sup> /min)	(m <sup>3</sup> )	(µg/m <sup>3</sup> )
03-Oct-20	Sunny	301.4	758.9	3.4793	3.5484	0.0691	28432.8	28456.8	24.0	1.22	1.22	1.22	1757.0	39.3
08-Oct-20	Sunny	298.6	762.2	3.4627	3.5453	0.0826	28456.8	28480.8	24.0	1.23	1.23	1.23	1768.8	46.7
14-Oct-20	Sunny	299.0	760.9	3.504	3.6204	0.1164	28480.8	28504.8	24.0	1.22	1.22	1.22	1756.4	66.3
20-Oct-20	Sunny	297.8	761.1	3.4982	3.6010	0.1028	28504.8	28528.8	24.0	1.22	1.22	1.22	1760.2	58.4
24-Oct-20	Sunny	297.0	761.8	3.4998	3.7027	0.2029	28528.8	28552.8	24.0	1.22	1.22	1.22	1763.3	115.1
30-Oct-20	Cloudy	296.9	764.5	3.4673	3.5963	0.1290	28552.8	28576.8	24.0	1.23	1.23	1.23	1766.7	73.0
								•					Min	39.3
													Max	115.1
													Average	66.5

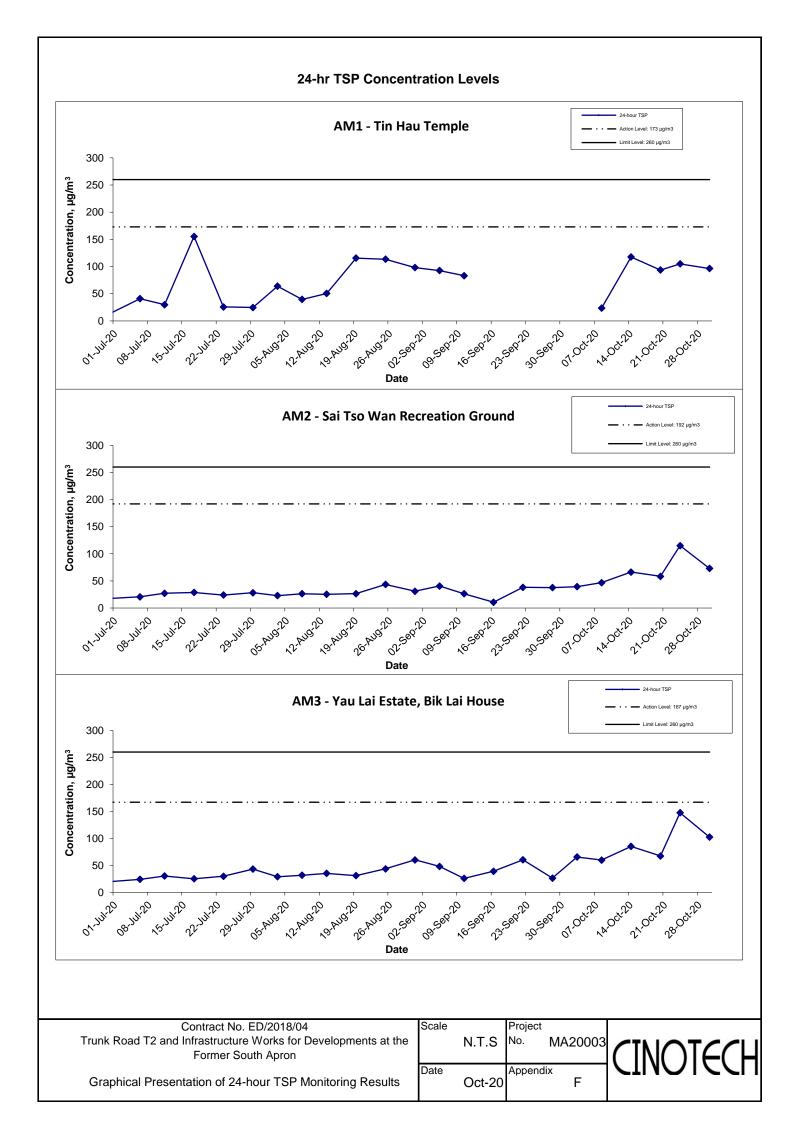
Location AM3 - Yau Lai Estate, Bik Lai House

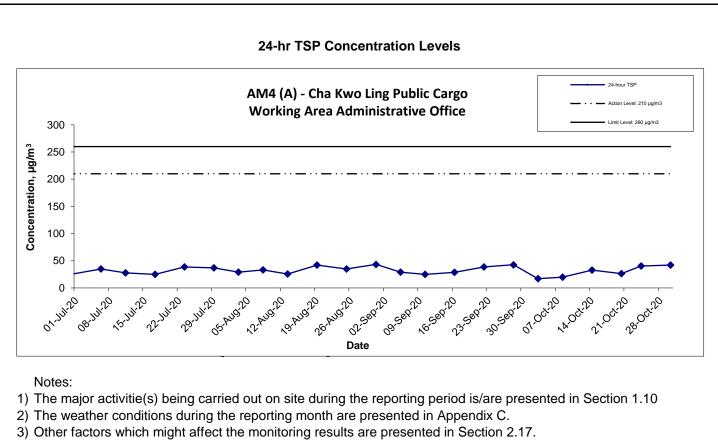
Start Data	Weather	Air	Atmospheric	Filter W	Filter Weight (g)		Elapse	e Time	Sampling	Sampling Flow Rate (m <sup>3</sup> /min.)		Av. flow	Total vol.	Conc.
Start Date	Condition	Temp. (K)	Pressure, Pa (mmHg)	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m <sup>3</sup> /min)	(m <sup>3</sup> )	(µg/m <sup>3</sup> )
03-Oct-20	Sunny	301.4	758.9	3.4897	3.6049	0.1152	2788.0	2812.0	24.0	1.22	1.22	1.22	1760.1	65.5
08-Oct-20	Sunny	298.6	762.2	3.4925	3.5976	0.1051	2812.0	2836.0	24.0	1.22	1.22	1.22	1760.3	59.7
14-Oct-20	Sunny	299.0	760.9	3.5236	3.6730	0.1494	2836.0	2860.0	24.0	1.22	1.22	1.22	1757.4	85.0
20-Oct-20	Sunny	297.8	761.1	3.4947	3.6133	0.1186	2860.0	2884.0	24.0	1.22	1.22	1.22	1761.5	67.3
24-Oct-20	Sunny	297.0	761.8	3.4882	3.7483	0.2601	2884.0	2908.0	24.0	1.23	1.23	1.23	1764.7	147.4
30-Oct-20	Cloudy	296.9	764.5	3.4801	3.6609	0.1808	2908.0	2932.0	24.0	1.23	1.23	1.23	1768.3	102.2
													Min	59.7
													Max	147.4
													Average	87.9

# Location AM4(A) - Cha Kwo Ling Public Cargo Working Area Administrative Office

Start Date	Weather	Air	Atmospheric	Filter W	eight (g)	Particulate	Elapse	e Time	Sampling	Flow Rate	e (m <sup>3</sup> /min.)	Av. flow	Total vol.	Conc.
Start Date	Condition	Temp. (K)	Pressure, Pa (mmHg)	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m <sup>3</sup> /min)	(m <sup>3</sup> )	(µg/m <sup>3</sup> )
03-Oct-20	Sunny	302.1	756.1	3.4971	3.5572	0.0601	13674.8	13698.8	24.0	1.22	1.22	2.43	3503.2	17.2
08-Oct-20	Sunny	301.2	756.8	3.5112	3.5797	0.0685	13698.8	13722.8	24.0	1.22	1.22	2.43	3503.2	19.6
14-Oct-20	Sunny	302.1	756.5	3.5223	3.6361	0.1138	13722.8	13746.8	24.0	1.23	1.23	2.43	3503.2	32.5
20-Oct-20	Sunny	301.8	758.8	3.4883	3.5789	0.0906	13746.8	13770.8	24.0	1.24	1.24	2.43	3503.2	25.9
24-Oct-20	Sunny	300.0	758.1	3.4822	3.6214	0.1392	13770.8	13794.8	24.0	1.24	1.24	2.43	3503.2	39.7
30-Oct-20	Cloudy	296.9	764.5	3.4857	3.6312	0.1455	13794.8	13818.8	24.0	1.22	1.23	2.40	3458.4	42.1
													Min	17.2
													Max	42.1
													Average	29.5

Average 87.3





4) Measurement cannot be carried out for AM1 between 12 Sep 2020 - 7 Oct 2020 as no power supply due to technical problems in the system of the Temple.

	Scale		Project	
Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron		N.T.S	No. MA20003	
Graphical Presentation of 24-hour TSP Monitoring Results	Date	Oct-20	Appendix F	

APPENDIX G NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

# Appendix G - Noise Monitoring Results

Location CM1	Location CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong											
				Unit: dB (A) (30-min)								
Date	Date Time		Meas	sured Noise	Level	Baseline Level	Construction Noise Level					
Dale	Time	Weather	L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>					
5 Oct 2020	15:00	Sunny	74.1	77.5	70.6	65.5	73					
15 Oct 2020	14:00	Sunny	73.0	76.3	69.5	65.5	72					
21 Oct 2020	15:22	Sunny	71.3	72.6	69.4	65.5	70					
27 Oct 2020	15:15	Sunny	72.2	75.4	69.4	65.5	71					

# Location CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong

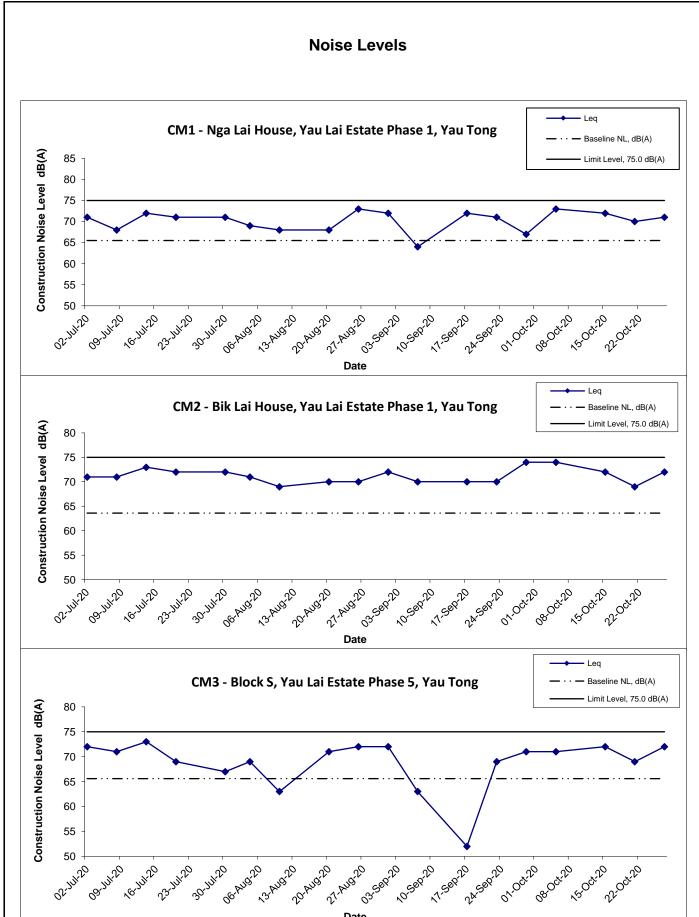
			Unit: dB (A) (30-min)							
Date	Time	Weather	Meas	sured Noise	Level	Baseline Level	Construction Noise Level			
Date	Time	weather								
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>			
5 Oct 2020	15:30	Sunny	74.7	77.6	70.4	63.6	74			
15 Oct 2020	14:40	Sunny	72.6	74.9	68.5	63.6	72			
21 Oct 2020	14:40	Sunny	70.4	71.8	68.6	63.6	69			
27 Oct 2020	16:00	Sunny	72.7	75.8	67.5	63.6	72			

Location CM3 ·	Location CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong											
				Unit: dB (A) (30-min)								
Date	Date Time V		Meas	sured Noise I	_evel	Baseline Level	Construction Noise Level					
Dale	TIME	Weather	_	_	_		_					
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>					
5 Oct 2020	16:00	Sunny	71.8	74.1	68.5	65.6	71					
15 Oct 2020	15:20	Sunny	72.9	75.1	69.8	65.6	72					
21 Oct 2020	14:09	Sunny	70.7	72.2	68.9	65.6	69					
27 Oct 2020	16:50	Sunny	73.2	76.7	70.5	65.6	72					

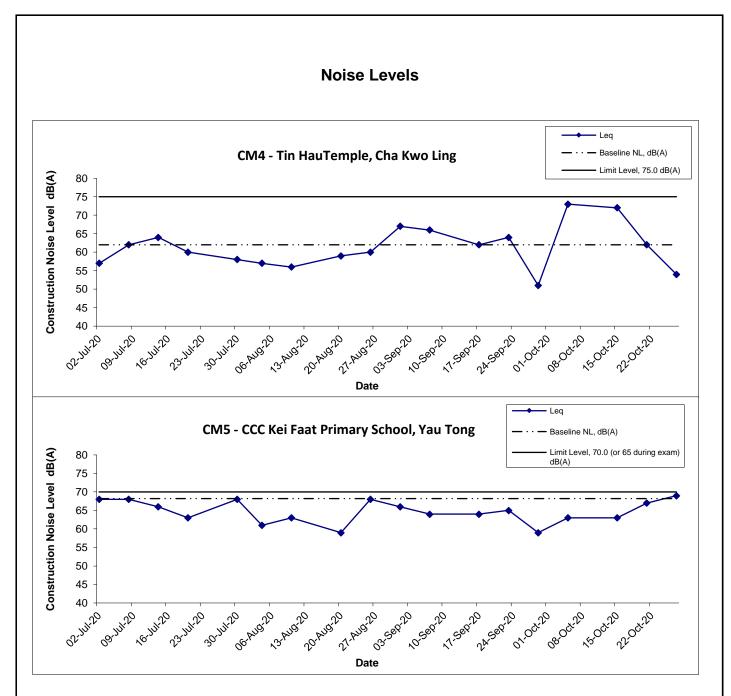
_ocation CM4 - Tin Hau Temple, Cha Kwo Ling									
				Unit: dB (A) (30-min)					
Date	Time	Weather	Measured Noise Level			Baseline Level	Construction Noise Level		
Dale	TIME	vveatilei							
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>		
5 Oct 2020	14:00	Sunny	73.2	75.7	69.2	62.0	73		
15 Oct 2020	9:30	Sunny	72.0	74.5	68.5	62.0	72		
21 Oct 2020	10:16	Sunny	61.9	62.5	54.0	62.0	62 Measured $\leq$ Baseline		
27 Oct 2020	10:15	Sunny	62.6	66.2	58.1	62.0	54		

Location CM5 - CCC Kei Faat Primary School, Yau Tong							
					Unit:	dB (A) (30-min)	
Date	Time	Weather	Measured Noise Level			Baseline Level	Construction Noise Level
Dale	TIME	vveatrier		-			
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
5 Oct 2020	13:00	Sunny	62.6	65.8	57.9	68.2	63 Measured $\leq$ Baseline
15 Oct 2020	11:00	Sunny	63.0	66.2	58.3	68.2	63 Measured $\leq$ Baseline
21 Oct 2020	11:13	Sunny	66.6	68.1	62.8	68.2	67 Measured $\leq$ Baseline
27 Oct 2020	11:00	Sunny	71.8	74.3	68.1	68.2	69

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	Date				
Title	Contract No. ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron	Scale	N.T.S	Project No. MA20003	
	Graphical Presentation of Construction Noise Monitoring Results	Date	Oct 20	Appendix G	



#### Notes:

1. The major activitie(s) being carried out on site during the reporting period is/are presented in Section 1.10

2. The weather conditions during the reporting month are presented in Appendix C.

3. Other factors which might affect the monitoring results are presented in Section 3.13.

Title	Contract No. ED/2018/04	Scale		Project		
	Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron		N.T.S	No.	MA20003	CINICICU
	Graphical Presentation of Construction Noise Monitoring Results	Date	Oct 20	Appendi	G G	

APPENDIX H WASTE GENERATION IN THE REPORTING MONTH



Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron Contract No. ED/2018/04

Name of Department: CEDD

Monthly Summary Waste Flow Table for 2020 (CKL)

	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
Month	a.Total Quantity Generated (a=b+c+d+e )	b. Hard Rock and Large Broken Concrete	c. Reused in the Contract	d. Reused in Other Projects	e. Disposed as Public Fill	f. Imported Fill	g. Metals	h. Paper / Cardboard Packaging		j. Chemical Waste	k. 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> )
January											
February											
March											
April											
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009
June	0.002	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.005
Sub-total	0.002	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.014
July	0.024	0.000	0.000	0.000	0.024	0.000	0.000	0.000	0.000	0.000	0.002
August	0.050	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.600	0.003
September	0.042	0.000	0.000	0.000	0.042	0.000	0.000	0.000	0.000	1.400	0.010
October	0.029	0.000	0.000	0.000	0.029	0.000	0.000	0.000	0.000	0.000	0.010
November											
December											
Total	0.146	0.000	0.000	0.000	0.146	0.000	0.000	0.000	0.000	2.000	0.040

Total C&D waste generated = a+b+f+g+h+i+j+k

Total C&D waste generated (excluded excavated material) = g+h+i+j+k

Total C&D waste recycled = c+d+g+h+i

Monthly Summary Waste Flow Table

APPENDIX I SITE AUDIT SUMMARY

### Environmental Team for Trunk Road T2 and Infrastructure Works at the Former South Apron

# Weekly Site Inspection Record Summary Inspection Information 201008 Checklist Reference Number 201008 Date 08 October 2020 (Thursday) Time 09:30 – 12:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No		
	<ul><li><i>B. Water Quality</i></li><li>No environmental deficiency was identified during site inspection.</li></ul>			
<ul><li><i>C. Air Quality</i></li><li>No environmental deficiency was identified during site inspection.</li></ul>				
	<ul><li><i>D. Construction Noise Impact</i></li><li>No environmental deficiency was identified during site inspection.</li></ul>			
	<ul><li><i>E. Waste/Chemical Management</i></li><li>No environmental deficiency was identified during site inspection</li></ul>			
	<ul><li><i>F. Visual and Landscape</i></li><li>No environmental deficiency was identified during site inspection.</li></ul>			
	<ul><li><i>G. Permits/Licences</i></li><li>No environmental deficiency was identified during site inspection.</li></ul>			
	<ul><li><i>H. Marine Ecology</i></li><li>No environmental deficiency was identified during site inspection.</li></ul>			
	<ul> <li><i>I. Others</i></li> <li>Follow-up on the previous audit session (Ref No.:200930), all items have been rectified.</li> </ul>			

	Name	Signature	Date
Recorded by	Tim Lui	Cyli	08 October 2020
Checked by	Checked by Karina Chan		08 October 2020

### Environmental Team for Trunk Road T2 and Infrastructure Works at the Former South Apron

# Weekly Site Inspection Record Summary Inspection Information 201015 Checklist Reference Number 201015 Date 15 October 2020 (Thursday) Time 09:30 – 12:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No
	<ul><li><i>B. Water Quality</i></li><li>No environmental deficiency was identified during site inspection.</li></ul>	
	<ul><li><i>C. Air Quality</i></li><li>No environmental deficiency was identified during site inspection.</li></ul>	
	D. Construction Noise Impact	
	<ul> <li>No environmental deficiency was identified during site inspection.</li> <li><i>E. Waste/Chemical Management</i></li> </ul>	
	<ul> <li>No environmental deficiency was identified during site inspection</li> </ul>	
	<ul><li><i>F. Visual and Landscape</i></li><li>No environmental deficiency was identified during site inspection.</li></ul>	
	<ul><li><i>G. Permits/Licences</i></li><li>No environmental deficiency was identified during site inspection.</li></ul>	
	<ul><li><i>H. Marine Ecology</i></li><li>No environmental deficiency was identified during site inspection.</li></ul>	
	<ul><li><i>I. Others</i></li><li>No environmental deficiency was identified on previous inspection session (Ref No.: 201008).</li></ul>	

	Name	Signature	Date
Recorded by	Tim Lui	Cyli	15 October 2020
Checked by	Checked by Karina Chan		15 October 2020

## Environmental Team for Trunk Road T2 and Infrastructure Works at the Former South Apron

#### Weekly Site Inspection Record Summary Inspection Information

Checklist Reference Number	201022				
Date	22 October 2020 (Thursday)				
Time	09:30 – 12:00				

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	<ul> <li>B. Water Quality</li> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
	<ul> <li><i>C. Air Quality</i></li> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
	<ul> <li>D. Construction Noise Impact</li> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
201022 - R1 201022 - R2	<ul> <li><i>E. Waste/Chemical Management</i></li> <li>Storage area of the chemical waste should be labelled.</li> <li>Contractor was reminded the chemical/ fuel area should be provided with lock.</li> </ul>	E2i E3iii
	<ul><li><i>F. Visual and Landscape</i></li><li>No environmental deficiency was identified during site inspection.</li></ul>	
	<ul> <li><i>G. Permits/Licences</i></li> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
	<ul><li><i>H. Marine Ecology</i></li><li>No environmental deficiency was identified during site inspection.</li></ul>	
	<ul><li><i>I. Others</i></li><li>No environmental deficiency was identified on previous inspection session (Ref No.: 201015)</li></ul>	

	Name	Signature	Date
Recorded by	Tim Lui	Cyli	22 October 2020
Checked by	Karina Chan	Julle	22 October 2020

### Environmental Team for Trunk Road T2 and Infrastructure Works at the Former South Apron

# Weekly Site Inspection Record Summary Inspection Information 201029 Checklist Reference Number 29 October 2020 (Thursday) Date 29 October 2020 (Thursday) Time 09:30 – 12:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No
	B. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	D. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	E. Waste/Chemical Management	
	• No environmental deficiency was identified during site inspection	
	F. Visual and Landscape	
	• No environmental deficiency was identified during site inspection.	
	G. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	H. Marine Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on the previous audit session (Ref No.:201022), all items have been rectified.	

	Name	Signature	Date
Recorded by	Tim Lui	Cyli	29 October 2020
Checked by	Karina Chan	Julle	29 October 2020

APPENDIX J ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

# App J - ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

# Table I - Recommended Mitigation Measures stipulated in EM&A Manual for the Project

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?		
Air Quality	Air Quality							
S3.8.1	Watering eight times a day on active works areas, exposed areas and paved haul roads	To minimize the dust impact	Contractor	All Active Work Sites	Construction phase	APCO		
\$3.8.1	Enclosing the unloading process at barging point by a 3-sided screen with top tipping hall / mixing area in Work Area A, provision of water spraying and flexible dust curtains	To minimize the dust impact	Contractor	Barging Points	Construction phase	АРСО		
S3.8.7	<ul> <li>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.</li> <li>Use of frequent watering for particularly dusty construction areas and areas close to ASRs</li> <li>Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.</li> <li>Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.</li> <li>Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.</li> <li>Establishment and use of vehicle wheel and body washing facilities at the exit points of the site.</li> <li>Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading area of barging point, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods.</li> <li>Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit.</li> <li>Imposition of speed controls for vehicles on site haul roads.</li> <li>Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be at the maximum possible distance from ASRs</li> <li>Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.</li> </ul>	To minimize the dust impact	Contractor	All Construction Work Sites	Construction phase	APCO and Air Pollution Control (Construction Dust) Regulation		
1	<ul> <li>Emission from Vehicles and Plants</li> <li>All vehicles shall be shut down in intermittent use.</li> <li>Only well-maintained plant should be operated on-site and plant should be serviced regularly to avoid emission of black smoke.</li> <li>All diesel fuelled construction plant within the works areas shall be powered by ultra low sulphur diesel fuel (ULSD)</li> </ul>	Reduce air pollution emission from construction vehicles and plants	Contractor	All construction sites	Construction stage	АРСО		

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?		
/	Valid No-road Mobile Machinery (NRMM) labels should be provided to regulated machines	Reduce air pollution emission from construction vehicles and plants	Contractor	All construction sites	Construction stage	АРСО		
Noise Impact (Const	ise Impact (Construction Phase)							
S4.8	• Use of quiet PME. Use of movable noise barriers for Excavator, Lorry, Dump Truck, Mobile Crane, Compactor, Concrete Mixer Truck, Concrete Lorry Mixer, Breaker, Mobile Crusher, Backhoe, Vibratory Poker, Saw, Asphalt Paver, Vibratory Roller, Vibrolance, Hydraulic Vibratory Lance and Piling (Vibration Hammer). Use of full enclosure for Air Compressor, Compressor, Bar Bender, Generator, Drilling Rig, Chisel, Large Diameter Bore Piling, Grout Mixer & Pump and Concrete Pump.	To minimize construction noise impact arising from the Project at the affected NSRs	Contractor	Work Sites	Construction phase	EIAO-TM, NCO		
Noise Mitigation Plan	Use of Temporary Noise Barriers (i.e Acoustic box, SilentUp and etc.) or Full Enclosure for PME according to the approved Noise Mitigation Plan	To minimize construction noise impact arising from the Project at the affected NSRs	Contractor	Work Sites	Construction phase	EIAO-TM, NCO		
S4.9	<ul> <li>Good Site Practice</li> <li>Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program</li> <li>Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program.</li> <li>Mobile plant, if any, should be sited as far away from NSRs as possible.</li> <li>Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum.</li> <li>Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.</li> <li>Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.</li> </ul>	To minimize construction noise impact arising from the Project at the affected NSRs	Project Proponent	Work sites	Construction Period	EIAO-TM, NCO		
S4.9	Scheduling of Construction Works during School Examination Period	To minimize construction noise impact arising from the Project at the affected NSRs	Contractor	Work site near school	Construction phase	EIAO-TM, NCO		
Water Quality Impa	ct (Construction Phase)							
<b>S</b> 5.6.24	The dry density of filling material for the TKO-LT Tunnel reclamation should be $1,900$ kg/m <sup>3</sup> , with fine content of 25% or less	Control potential impacts from filling activities	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO		
S5.8.1	Non-dredged method by constructing steel cellular caisson structure with stone column shall be adopted for construction of seawall foundation. During the stone column installation (also including the installation of steel cellular caisson), silt curtain shall be employed around the active stone column installation points.	Control potential impacts from filling activities	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO		
\$5.8.2	Formation of seawall enclosing the reclamation for Road P2 (notwithstanding an opening of about 50m for marine access) shall be completed prior to the filling activities. The seawall opening of about 50m wide for marine access shall be selected at a location as indicatively shown in Appendix 5.10. No more than 3 filling barge trips per day shall be made with a maximum daily rate of 3,000m <sup>3</sup> (i.e. 1,000 m <sup>3</sup> per trip) for the filling operation at the reclamation area for Road P2. All filling works shall be carried out behind the seawall with the use of single silt curtain at the marine access.	Control potential impacts from filling activities	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO		
Silt Curtain Deployment Plan	<ul> <li>Silt curtains should be deployed properly to surround the works area.</li> <li>Maintenance of silt curtain should be provided.</li> <li>Sufficient stock of silt curtain should be provided on site.</li> </ul>	Control potential impacts from marine woroks	Contractor	NE/2015/01	Construction stage	EIAO		
	Other good site practices should be undertaken during filling operations include:							
	<ul> <li>all marine works should adopt the environmental friendly construction methods as far as practically possible including the use of cofferdams to cover the construction area to separate the construction works from the sea;</li> <li>floating single silt curtain shall be employed for all marine works;</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;</li> </ul>							

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
\$5.8.3	<ul> <li>all hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material;</li> <li>excess material shall be cleaned from the decks and exposed fittings of barges before the vessel is moved;</li> <li>adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action;</li> <li>loading of barges and hoppers should be controlled to prevent splashing of filling material</li> </ul>	Control potential impacts from filling activities and marine-based construction	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO, Waste Disposal Ordinance (WDO)
	<ul> <li>Inducting of barges and hoppers should be controlled to prevent splashing of mining inaterial into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation;</li> <li>any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes;</li> <li>construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site or dumping grounds; and</li> <li>before commencement of the reclamation works, the holder of Environmental Permit has to submit plans showing the phased construction of the reclamation, design and operation of the silt curtain.</li> </ul>					
S5.8.4	Site specific mitigation plan for reclamation areas using public fill materials should be submitted for EPD agreement before commencement of construction phase with due consideration of good site practices.	Control potential impacts from filling activities and marine based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
ERR S5.6.1	<ul> <li>To minimize water quality impact arising from the dredging and filling works for Reclamation for Road P2, the following mitigation measures shall be implemented: <ul> <li>Before carrying out any dredging and underwater filling works, a temporary barrier shall first be constructed to a height above the high water mark to completely enclose the works site (without any opening at the barrier wall)</li> <li>The temporary barrier fully enclosing the dredging and underwater filling works.</li> <li>Water quality sampling and testing shall be carried out to demonstrate that the water</li> </ul> </li> </ul>	Control potential impacts from dredging and filling works for Reclamation for Road P2	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
	<ul> <li>quality inside the enclosed barrier is comparable to the ambient or baseline levels prior to the removal of the fully enclosed barrier.</li> <li>Silt curtains shall be deployed for the installation and removal of the temporary barrier and at the double water gates marine access opening during its operation.</li> </ul>					
S5.8.5	It is important that appropriate measures are implemented to control runoff and drainage and prevent high loading of SS from entering the marine environment. Proper site management is essential to minimise surface water runoff, soil erosion and sewage effluents.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
	Any practical options for the diversion and realignment of drainage should comply with both engineering and environmental requirements in order to ensure adequate hydraulic capacity of all drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Design Stage and Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO, TM- DSS
S5.8.7	Construction site runoff and drainage should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). Good housekeeping and stormwater best management practices, as detailed in below, should be implemented to ensure that all construction runoff complies with WPCO standards and no unacceptable impact on the WSRs arises due to construction of the TKO-LT Tunnel. All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the corresponding WCZ under the TM-DSS.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO, TM- DSS
	Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include: <ul> <li>use of sediment traps; and</li> </ul>	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
\$5.8.8	<ul> <li>adequate maintenance of drainage systems to prevent flooding and overflow.</li> </ul>					

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S5.8.9	Construction site should be provided with adequately designed perimeter channel and pretreatment facilities and proper maintenance. The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.10	Ideally, construction works should be programmed to minimise surface excavation works during the rainy season (April to September). All exposed earth areas should be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. 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.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.11	Sedimentation tanks of sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8m <sup>3</sup> capacity, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity is flexible and able to handle multiple inputs from a variety of sources and particularly suited to applications where the influent is pumped.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
\$5.8.12	Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
\$5.8.13	Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.14	Open stockpiles of construction materials (for examples, 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.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.15	Manholes (including newly constructed ones) should always be adequately 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. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
\$5.8.16	Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, 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.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.17	Oil interceptors should be provided in the drainage system and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.18	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 located wheel washing bay should be provided at every site exit, and 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 wheelwash 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.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.19	Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.20	It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There shall be no direct discharge of effluent from the site into the sea.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO

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\$5.8.21	All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment control measures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage should be reinstated to its original condition when the construction work has finished or the temporary diversion is no longer required.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
\$5.8.22	All fuel tanks and storage areas should be provided with locks and be located 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 the coastal waters.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.23	Minimum distances of 100m shall be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes during construction and operational phases	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO, TMDSS
S5.8.24	Under normal circumstances, groundwater pumped out of wells, etc. for the lowering of ground water level in basement or foundation construction, and groundwater seepage pumped out of tunnels or caverns under construction should be discharged into storm drains after the removal of silt in silt removal facilities.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.25 - S5.8.27 & Table 5.18	Grouting would be adopted as measure to reduce the groundwater inflow into the tunnel. During the tunnel excavation, the inflow rate of groundwater into the tunnel will be measured during the excavation. The groundwater levels above the tunnel will also be monitored by piezometers. If the inflow rate exceeds the pre-determined groundwater control criteria or the groundwater drawdown exceeds the required limit, pre-excavation grouting will be required to reduce the groundwater inflow. No significant change of groundwater levels would therefore be expected. Any chemicals/ foaming agents which would be entrained to the groundwater quality impact would be minimal as the used material is non-toxic and biodegradable. No adverse groundwater quality would therefore be expected. Prescriptive measures in the form of an Action Plan with pre-emptive and re-active to preserve the groundwater levels at all times during the tunnel construction are set out in Table 5.18.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO, Buildings Ordinance
S5.8.28	Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be recirculated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Design Stage and Construction Phas	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.29 - S5.8.31	Wastewater generated from the washing down of mixing trucks and drum mixers and similar equipment should whenever practicable be recycled. The discharge of wastewater should be kept to a minimum. To prevent pollution from wastewater overflow, the pump sump of any water recycling system should be provided with an online standby pump of adequate capacity and with automatic alternating devices. Under normal circumstances, surplus wastewater may be discharged into foul sewers after treatment in silt removal and pH adjustment facilities (to within the pH range of 6 to 10). Disposal of wastewater into storm drains will require more elaborate treatment.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
\$5.8.32	All vehicles and plant should be cleaned before they leave a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfall to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
\$5.8.33	Bentonite slurries used in diaphragm wall and borepile construction should be reconditioned and reused wherever practicable. If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil grounds subject to obtaining a marine dumping licence from EPD on a case-by-case basis.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.34	If the used bentonite slurry is intended to be disposed of through the public drainage system, it should be treated to the respective effluent standards applicable to foul sewer, storm drains or the receiving waters as set out in the WPCO Technical Memorandum on Effluent Standards.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.35	Water used in water testing to check leakage of structures and pipes should be reused for other purposes as far as practicable. Surplus unpolluted water could be discharged into storm drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.36	Sterilization is commonly accomplished by chlorination. Specific advice from EPD should be sought during the design stage of the works with regard to the disposal of the sterilizing water. The sterilizing water should be reused wherever practicable.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Design Stage and Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO

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\$5.8.37	Before commencing any demolition works, all sewer and drainage connections should be sealed to prevent building debris, soil, sand etc. from entering public sewers/drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO	
\$5.8.38	Wastewater generated from building construction activities including concreting, plastering, internal decoration, cleaning of works and similar activities should not be discharged into the stormwater drainage system. If the wastewater is to be discharged into foul sewers, it should undergo the removal of settleable solids in a silt removal facility, and pH adjustment as necessary	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO	
55.0.57	Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10 before discharging into foul sewers. If there is no public foul sewer in the vicinity, the neutralized wastewater should be tinkered off site for disposal into foul sewers or treated to a standard acceptable to storm drains and the receiving waters	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO	
S5.8.40	Wastewater collected from canteen kitchens, including that from basins, sinks and floor drains, should be discharged into foul sewer via grease traps capable of providing at least 20 minutes retention during peak flow.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO	
\$5.8.41	Drainage serving an open oil filling point should be connected to storm drains via a petrol interceptor with peak storm bypass.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO	
\$5.8.42	Vehicle and plant servicing areas, vehicle wash bays and lubrication bays should as far as possible be located within roofed areas. The drainage in these covered areas should be connected to foul sewers via a petrol interceptor. Oil leakage or spillage should be contained and cleaned up immediately. Waste oil should be collected and stored for recycling or disposal in accordance with the Waste Disposal Ordinance.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO	
\$5.8.43	Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage may need to be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor shall also be responsible for waste disposal and maintenance practices.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO	
\$5.8.44	Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	Control potential impacts from accidental spillage of chemicals	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO, WDO	
\$5.8.45	Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	Control potential impacts from accidental spillage of chemicals	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO	
	<ul> <li>Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance.</li> <li>The "Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes" published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: <ul> <li>suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport;</li> <li>chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents; and</li> <li>storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.</li> </ul> </li> </ul>	Control potential impacts from accidental spillage of chemicals	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO, WDO	
S5.8.47	Collection and removal of floating refuse should be performed at regular intervals on a daily basis. The contractor should be responsible for keeping the water within the site boundary and the neighbouring water free from rubbish.	Control potential impacts from floating refuse and debris	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO,	
Ecological Impact							
S6.8.4	<ul> <li>Measures to Minimize Disturbance</li> <li>Use of Quiet Mechanical Plant during the construction phase should be adopted wherever possible.</li> <li>Hoarding or fencing should be erected around the works area boundaries during the construction phase. The hoarding would screen adjacent habitats from construction phase activities, reduce noise disturbance to these habitats and also to restrict access to habitats adjacent to works areas by site workers;</li> </ul>	Minimize noise, human and traffic disturbance to terrestrial habitat and wildlife; and reduce dust generation	Design Team / Contractor	Land-based works are	Construction Phase	N/A	

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	<ul> <li>Regular spraying of haul roads to minimize impacts of dust deposition on adjacent vegetation and habitats during the construction activities</li> </ul>					
S6.8.5	<ul> <li>Standard Good Site Practice</li> <li>Placement of equipment or stockpile in designated works areas and access routes selected on existing disturbed land to minimise disturbance to natural habitats.</li> <li>Construction activities should be restricted to works areas that should be clearly demarcated. The works areas should be reinstated after completion of the works.</li> <li>Waste skips should be provided to collect general refuse and construction wastes. The wastes should be properly disposed off-site in a timely manner.</li> <li>General drainage arrangements should include sediment and oil traps to collect and control construction site run-off.</li> <li>Open burning on works sites is illegal, and should be strictly prohibited.</li> <li>Measures should also be put into place so that litter, fuel and solvents do not enter the nearby watercourses.</li> </ul>	Reduce disturbance to surrounding habitats	Contractor	Land-based works are	Construction Phase	N/A
S6.8.6	<ul> <li>Measure to Minimize Groundwater Inflow</li> <li>The drained tunnel construction method with groundwater inflow control measures would generally be adopted.</li> <li>During the tunnel excavation, pre-excavation grouting could be adopted to reduce the groundwater inflow and ensure that the tunnel would meet the long term water tightness requirements.</li> </ul>	Minimize groundwater inflow	Contractor	Tunnel	Construction Phase	N/A
S6.8.8	<ul> <li>Measure to Minimize Impact on Corals         <u>Coral translocation</u> <ul> <li>It is recommended to translocate the affected coral colonies, except the locally common <i>Oulastrea crispata</i>, within the reclamation area and bridge footprint to the other suitable locations as far as practicable.             <li>The coral translocation should be conducted during the winter months (November-March) in order to avoid disturbance during their spawning period (i.e. July to October).</li> <li>A detailed coral translocation plan with a description on the methodology for pretranslocation coral survey, translocation methodology, identification/proposal of coral recipient site, monitoring methodology for posttranslocation should be prepared during the detailed design stage.</li> <li>The coral translocation plan should be subject to approval by relevant authorities (e.g. EPD and AFCD) before commencement of the coral translocation. All the translocation exercises should be conducted by experienced marine ecologist(s) who is/are approved by AFCD prior to commencement of coral translocation.</li> </li></ul> </li> <li>Post translocation Monitoring         <ul> <li>Information gathered during each posttranslocation monitoring survey should include observations on the presence, survival, health condition and growth of the translocated coral colonies. These parameters should then be compared with the baseline results collected from the pre-translocation survey.</li> </ul> </li> </ul>	Minimize loss of coral	Design team, contractor, project operator	Within reclamation areas and pier footprint	Prior construction	N/A
S6.8.9 S6.8.10	<ul> <li>Measure to Control Water Quality Impact</li> <li>Deployment of silt curtains around the active stone column installation points, opening of newly installed seawall and marine works area.</li> <li>Diverting of the site runoff to silt trap facilities before discharging into storm drain;</li> <li>Proper waste and dumping management; and</li> <li>Standard good-site practice for land-based construction.</li> </ul>	Control water quality impact, especially on suspended solid level; minimize the contamination of wastewater discharge, accidental chemical spillage and construction site runoff to the receiving water bodies	Design Team, contractor	Marine and landbased works area	Construction phase	WQO

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?			
S6.8.11	• Felling of mature trees should be compensated by planting of standard or heavy standard trees within or in vicinity of the affected area as far as practicable. Such compensatory planting for trees should be provided with at least a 1:1 ratio. In addition, vegetation at the temporarily affected area should be reinstated with species similar to the existing condition.	Compensate for the vegetation loss	Design Team, contractor	Land-based works area	Construction phase	N/A			
Fisheries Impact	sheries Impact								
S7.7.3	<ul> <li>Measure to Control Water Quality Impact</li> <li>Deployment of silt curtains around the active stone column installation points, opening of newly installed seawall and marine works area.</li> </ul>	Control water quality impact, especially on suspended solid level	Design Team / Contractor	Marine work area	Construction phase	WQO			
Waste Management									
S8.6.3	<ul> <li>Good Site Practices and Waste Reduction Measures</li> <li>Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site;</li> <li>Training of site personnel in site cleanliness, proper waste management and chemical handling procedures;</li> <li>Provision of sufficient waste disposal points and regular collection of waste;</li> </ul>	To reduce waste management impacts	Contractor	All work sites	Construction Phase	Waste Disposal Ordinance (Cap. 354) Land (Miscellaneous Provisions) Ordinance			
	<ul> <li>Appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; and</li> <li>Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.</li> </ul>					(Cap. 28)			
S8.6.4	<ul> <li>Good Site Practices and Waste Reduction Measures (con't)</li> <li>Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;</li> <li>Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the workforce;</li> <li>Proper storage and site practices to minimize the potential for damage or contamination of construction materials; and</li> <li>Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste.</li> </ul>	To achieve waste reduction	Contractor	All work sites	Construction Phase	Waste Disposal Ordinance (Cap. 354) Land (Miscellaneous Provisions) Ordinance (Cap. 28)			
S8.6.5	Good Site Practices and Waste Reduction Measures (con't) The Contractor shall prepare and implement a WMP as part of the EMP in accordance with ETWB TCW No. 19/2005 which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities. Such a management plan should incorporate site specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP should be submitted to the Engineer for approval. The Contractor should implement the waste management practices in the EMP throughout the construction stage of the Project. The EMP should be reviewed regularly and updated by the Contractor.	To achieve waste reduction	Contractor	All work sites	Construction Phase	ETWB TCW No. 19/2005			
S8.6.6	<ul> <li>Good Site Practices and Waste Reduction Measures (con't)</li> <li>C&amp;D materials would be reused in the project and other local concurrent projects as far as possible.</li> </ul>	To achieve waste reduction	Contractor	All work sites	Construction Phase	ETWB TCW No. 19/2005			
<b>S</b> 8 6 7	<ul> <li>Storage, Collection and Transportation of Waste</li> <li>Should any temporary storage or stockpiling of waste is required, recommendations to minimize the impacts include: <ul> <li>Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution;</li> </ul> </li> </ul>	To minimize potential adverse environmental	Contractor	All work cites	Construction Phase	FTWR TOW No. 10/2005			

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
30.0.7	<ul> <li>Maintain and clean storage areas routinely;</li> <li>Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and</li> </ul>	impacts arising from waste storage	Contractor	All WOLK SILES	COnstruction 1 mase	E1 wB 1C w 1(0, 17/2005
	• Different locations should be designated to stockpile each material to enhance reuse.					
	<ul> <li>Storage, Collection and Transportation of Waste (con't)</li> <li>Remove waste in timely manner;</li> </ul>					
S8.6.8/ Waste Management Plan	<ul> <li>Waste collectors should only collect wastes prescribed by their permits;</li> <li>Impacts during transportation, such as dust and odour, should be mitigated by the use of covered trucks or in enclosed containers;</li> <li>Obtain relevant waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28);</li> <li>Waste should be disposed of at licensed waste disposal facilities/ alternative disposal ground approved by RE and DEP; and</li> <li>Maintain records of quantities of waste generated, recycled and disposed.</li> </ul>	To minimize potential adverse environmental impacts arising from waste collection and disposal	Contractor	All work sites	Construction Phase	ETWB TCW No. 19/2005
S8.6.9/ Waste Management Plan	<ul> <li>Storage, Collection and Transportation of Waste (con't)</li> <li>Implementation of trip ticket system with reference to DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction &amp; Demolition Materials, to monitor disposal of waste and to control fly-tipping at PFRFs or landfills. A recording system for the amount of waste generated, recycled and disposed (including disposal sites) should be proposed.</li> </ul>	To minimize potential adverse environmental impacts arising from waste collection and disposal	Contractor	All work sites	Construction Phase	DEVB TCW No. 6/2010
	wate generated, recycled and apposed (mending disposal sites) should be proposed.					
S8.6.11 - S8.6.13/ Waste Management Plan	<ul> <li>Sorting of C&amp;D Materials</li> <li>Sorting to be performed to recover the inert materials, reusable and recyclable materials before disposal off-site.</li> <li>Specific areas shall be provided by the Contractors for sorting and to provide temporary storage areas for the sorted materials.</li> <li>The C&amp;D materials should at least be segregated into inert and non-inert materials, in which the inert portion could be reused and recycled in the reclamation as far as practicable before delivery to PFRFs. While opportunities for reusing the non-inert portion should be investigated before disposal of at designated landfills</li> </ul>	To minimize potential adverse environmental	Contractor	All work sites	Construction Phase	DEVB TCW No. 6/2010 ETWB TCW No. 33/2002 ETWB TCW No. 19/2005
S8.6.17 – S8.6.20	<ul> <li>Sediments (con't)</li> <li>Requirements of the Air Pollution Control (Construction Dust) Regulation, where relevant, shall be adhered to during boring, excavation, transportation and disposal of sediments or cement stabilization of sediment.</li> <li>A treatment area should be confined for carrying out the cement stabilization mixing and temporary stockpile. The area should be designed to prevent leachate from entering the ground. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO).</li> <li>In order to minimise the potential odour / dust emissions during boring, excavation and transportation of the sediment, the excavated sediments should be kept wet during excavation/boring and should be properly covered when placed on barges/trucks. Loading of the sediment to the barge should be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water.</li> <li>In order to minimise the exposure to contaminated materials, workers should, when necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities should also be provided on site.</li> </ul>	To determine the best handling and treatment of sediment	Contractor	All works areas with sediments concern	Construction Phase	ETWB TCW No. 19/2005
	<ul> <li>Sediments (con't)</li> <li>The excavated sediments is expected to be loaded onto the barge and transported to the designated disposal sites allocated by the MFC. The excaveted sediment would be disposed of according to its determined disposal options and ETWB TC(W) No. 34/2002.</li> </ul>					

S8.6.24 - S8.6.28/ Waste Management Plan	<ul> <li>Stockpiling of contaminated sediments should be avoided as far as possible. If temporary stockpiling of contaminated sediments is necessary, the excavated sediment should be covered by tarpaulin and the area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The stockpiling areas should be completely paved or covered by linings in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO).</li> <li>In order to minimise the potential odour / dust emissions during boring and transportation of the sediment, the excavated sediments should be kept wet during excavation/boring and should be properly covered when placed on barges. Loading of the excavated sediment to the barge should be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water.</li> </ul>					
	<ul> <li>The barge transporting the sediments to the designated disposal sites should be equipped with tight fitting seals to prevent leakage and should not be filled to a level that would cause overflow of materials or laden water during loading or transportation. In addition, monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP.</li> <li>In order to minimise the exposure to contaminated materials, workers should, when necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities should also be provided on site.</li> <li>Another possible arrangement for Type 3 disposal is by geosynthetic containment. A geosynthetic containment method is a method whereby the sediments are sealed in geosynthetic containment method is a method whereby the sediments are sealed in geosynthetic containment method is a method whereby the disposal and later by the mud pit capping, thereby meeting the requirements for fully confined mud disposal.</li> </ul>	To ensure handling of sediments are in accordance to statutory requirements	Contractor	All works areas with sediments concern	Construction Phase	ETWB TC(W) No. 34/2002 & Dumping a Sea Ordinance
S8.6.26/ Waste Management Plan Gen	<ul> <li>If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the Chemical Waste Treatment Centre at Tsing Yi, or other licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</li> </ul>	To ensure proper management of chemical waste	Contractor	All works sites	Construction Phase	Code of Practice on the Packaging, Labelling and Storage of Chemical Waste Waste Disposal (Chemical Waste) (General) Regulation
S8.6.27/ Waste Management Plan	material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	To ensure proper management of general refuse	Contractor	All works sites	Construction Phase	Public Health and Municipal Services Ordinance (Cap. 132)

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
S9.6.4	<ul> <li>Temporarily fenced off buffer zone with allowance for public access (minimum 1 m) should be provided;</li> <li>The open yard in front of the temple should be kept as usual for annual Tin Hau festival;</li> <li>Monitoring of vibration impacts should be conducted when the construction works are less than 100m from the temple.</li> </ul>	To prevent dust and visual impacts	Contractors	Work areas	Construction Phase	EIAO; GCHIA; AMO
S9.6.4	<ul> <li>Indirect vibration impact</li> <li>Vibration level is suggest to be controlled within a peak particle velocity (ppv) limit of 5mm/s measured inside the historical buildings;</li> <li>Monitoring of vibration should be carried out during construction phase.</li> <li>Tilting and settlement monitoring should will be applied on the Cha Kwo Ling Tin Hau Temple as well.</li> <li>A proposal with details for the mitigation measures and monitoring of impacts on built heritage shall be submitted to AMO for comments before commencement of work.</li> </ul>	To prevent indirect vibration impact	Contractors	Work areas	Construction Phase	Vibration Limits on Heritage Buildings by CEDD; GCHIA; AMO.
Built Heritage Mitigation Plan	<ul> <li>Established Alert, Alarm and Action Level for the monitoring parameters.</li> <li>To increase the instrumentation monitoring and reporting frequency.</li> <li>To propose detailed action plan or contingency plan for the Engineer's approval when AAA Level is reached or exceeded.</li> </ul>	To prevent vibration impacts	NE/2015/01	Tin Hau Temple	Construction Phase	Vibration Limits on Heritage Buildings by CEDD; GCHIA; AMO.
Landscape and Visua	al Impact (Construction Phase)					
1	CM1 - Construction area and contractor's temporary works areas to be minimised to avoid impacts on adjacent landscape.	Avoid impact on adjacent landscape areas	CEDD (via Contractor)	General	Construction planning and during construction period	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM2 - Reduction of construction period to practical minimum.	Minimise duration of impact	CEDD (via Contractor)	N/A	Construction planning	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM3 - Topsoil, where the soil material meets acceptable criteria and where practical, to be stripped and stored for re-use in the construction of the soft landscape works. The Contract Specification shall include storage and reuse of topsoil as appropriate.	To allow re-use of topsoil	CEDD (via Contractor)	General	Site clearance	As per the Particular Specification
Table 10.8.1/ Landscape Mitigation Plan	CM4 - Existing trees at boundary of site and retained trees within site boundary to be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification, under which the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in contractor's works areas. (Tree protection measures will be detailed at Tree Removal Application stage).	To minimize tree loss	CEDD (via Contractor)	As per approved Tree Removal Application(s)	Site clearance and throughout construction period	ETWB TC 3/2006 and as per tree protection measures in Particular Specification
Table 10.8.1/ Landscape Mitigation Plan	CM5 - Trees unavoidably affected by the works shall be transplanted where practicable. Where possible, trees should be transplanted direct to permanent locations rather than temporary holding nurseries. A detailed tree transplanting specification shall be provided in the Contract Specification and sufficient time for preparation shall be allowed in the construction programme.	To maximize preservation of existing trees	CEDD (via Contractor)	As per approved Tree Removal Application(s)	Site clearance	ETWB TC 3/2006 and as per tree protection measures in Particular Specification
<u>^</u>	CM6 - Advance screen planting of fast growing tree and shrub species to noise barriers and hoardings. Trees shall be capable of reaching a height >10m within 10 years.	To maximize screening of the works	CEDD (via Contractor)	At Lam Tin Interchange and edge of Road P2 landscape deck, TKO	Beginning of construction period	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM7 - Hydroseeding or sheeting of soil stockpiles with visually unobtrusive material	To reduce visual intrusion	CEDD (via Contractor)	General	Throughout construction period	As per Particular Specification
	CM8 - Control of night-time lighting by hooding all lights and through minimisation of night working periods.	To reduce visual intrusion	CEDD (via Contractor)	General	Throughout construction period	N/A
	CM9 - Screening of works areas with hoardings with appropriate colours compatible with the surrounding area	Reduction of visual intrusion	CEDD (via Contractor)	Project site Boundary	Excretion of site hoarding	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM10 - Avoidance of excessive height and bulk of site buildings and structure	Reduction of visual intrusion and integration with environment	CEDD (via Contractor)	Built structures	Design and construction stage	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM11 - Limitation of run-off into freshwater streams, ponds and sea areas	Avoidance of contamination of water courses and water bodie	CEDD (via Contractor)	TKO reclamation, TKO tunnel portal, Cha Kwo Ling roadworks	Throughout construction period	N/A

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
Table 10.8.1	CM12 - Minimise area of reclamation and design the edges sensitively to tie in with adjacent coastline characte	Minimise loss of Junk Bay and integration with existing coastlin	CEDD (via Contractor)	Temporary reclamation for barging points at TKO and Lam Tin and permanent reclamation for TKO Interchange slip roads and Road P2	Construction planning and reclamation stages	N/A
Landfill Gas Hazard	(Design and Construction Phase)				-	
S11.5.9	A Safety Officer, trained in the use of gas detection equipment and landfill gas-related hazards, should be present on site throughout the groundworks phase. The Safety Officer should be provided with an intrinsically safe portable instrument, which is appropriately calibrated and able to measure the following gases in the ranges indicated below: Methane 0-100% LEL and 0100% v/v Carbon dioxide 0-100% Oxygen 0-21%	Protect the workers from landfill gas hazards	Contractor	Project sites within the Sai Tso Wan Landfill Consultation Zone	Construction phase	EPD's Landfill Gas Hazard Assessment Guidance Note
\$11.5.10 \$11.5.25	<ul> <li>Safety Measures</li> <li>For staff who work in, or have responsibility for "at risk" area, such as all excavation workers, supervisors and engineers working within the Consultation Zone, should receive appropriate training on working in areas susceptible to landfill gas, fire and explosion hazards.</li> <li>An excavation procedure or code of practice to minimize landfill gas related risk should be devised and carried out.</li> <li>No worker should be allowed to work alone at any time in or near to any excavation. At least one other worker should be available to assist with a rescue if needed.</li> <li>Smoking, naked flames and all other sources of ignition should be prohibited within 15m of any excavation or ground-level confined space. "No smoking" and "No naked flame" notices should be posted prominently on the construction site and, if necessary, special areas should be designed for smoking.</li> <li>Welding, flame-cutting or other hot works should be confined to open areas at least 15m from any trench or excavation.</li> <li>Welding, flame-cutting or other hot works may only be carried out in trenches or confined spaces. When controlled by a "permit to work" procedure, properly authorized by the Safety Officer (or, in the case of small developments, other appropriately qualified person).</li> <li>The permit to work procedure should also require the presence of an appropriately qualified person, in attendance outside the 'confined area', who should have executive responsibility for suspending the work in the event of unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise should be permitted to carry out hot works in confined areas.</li> <li>Where there are any temporary site offices, or any other buildings located within the Sai Tso Wan Landfill gas, then they should either be located in an area which has been proven to be free of landfill gas, then they should be ither be located in an area which</li></ul>	Protect the workers from landfill gas hazards	Contractor	Project sites within the Sai Tso Wan Landfill Consultation Zone	Construction phase	EPD's Landfill Gas Hazard Assessment Guidance Note Labour Department's Code of Practice for Safety and Health at Work in Confined Space

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
	<ul> <li>During construction, adequate fire extinguishing equipment, fire-resistant clothing and breathing apparatus (BA) sets should be made available on site.</li> <li>Fire drills should be organized at not less than six monthly intervals.</li> <li>The contractor should formulate a health and safety policy, standards and instructions for site personnel to follow.</li> <li>All personnel who work on the site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of excavations. Safety notices (in Chinese and English) should be posted at prominent position around the site warning danger of the potential hazards.</li> <li>Service runs within the Consultation Zone should be designated as "special routes"; utilities companies should be informed of this and precautionary measures should be implemented. Precautionary measures should include ensuring that staff members are aware of the potential hazards of working in confined spaces such as manholes and service chambers, and that appropriate monitoring procedures are in place to prevent hazards due to asphyxiating atmospheres in confined spaces. Detailed guidance on entry into confined spaces is given in Code of Practice on Safety and Health at Work in Confined Spaces (Labour Department, Hong Kong).</li> <li>Periodically during ground-works construction within the 250m Consultation Zone, the works area should be monitored for methane, carbon dioxide and oxygen using appropriately calibrated portable gas detection equipment. The monitoring frequency and areas to be monitored should be set down prior to commencement of ground-works either by the Safety Officer or an approved and appropriately qualified person.</li> </ul>					
\$11.5.26 - \$11.5.31	<ul> <li>Monitoring <ul> <li>Routine monitoring should be carried out in all excavations, manholes, chambers, relocation of monitoring wells and any other confined spaces that may have been created. All measurements in excavations should be made with the extended monitoring tube located not more than 10 mm from the exposed ground surface. Monitoring should be performed properly to make sure that the area is free of landfill gas before any man enters into the area.</li> <li>For excavations deeper than 1m, measurements should be carried out: <ul> <li>at the ground surface before excavation commences;-</li> <li>immediately before any worker enters the excavation;</li> <li>at the beginning of each working day for the entire period the excavation remains open; and</li> <li>periodically throughout the working day whilst workers are in the excavation.</li> </ul> </li> <li>For excavations between 300mm and 1m deep, measurements should be carried out: <ul> <li>directly after the excavation has been completed; and</li> <li>periodically whilst the excavation remains open.</li> <li>For excavations less than 300mm deep, monitoring may be omitted, at the discretion of the Safety Officer or other appropriately qualified person.</li> <li>Depending on the results of the measurements, actions required will vary and should be set down by the Safety Officer or other appropriately qualified person.</li> <li>The exact frequency of monitoring should be determined prior to the commencement of works, but should be at least once per day, and be carried out by a suitably qualified or qualified person before starting the work of the day. Measurements shall be recorded and kept as a record of safe working conditions with copies of the site diary and submitted to the Engineer for approval. The Contractor may elect to carry out monitoring via an automated metatorine directive returned.</li> </ul> </li> </ul></li></ul>	Protect the workers from landfill gas hazards	Contractor	Project sites within the Sai Tso Wan Landfill Consultation Zone	Construction phase	EPD's Landfill Gas Hazard Assessment Guidance Note
\$11.5.32	monitoring system. The hazards from landfill gas during the construction stage within the Sai Tso Wan Landfill Consultation Zone should be minimized by suitable precautionary measures recommended in Chapter 8 of the Landfill Gas Hazard Assessment Guidance Note	construction stage within the Sai Tso Wan Protect the workers from landfill gas hazards	Contractor	Project sites within the Sai Tso Wan Landfill Consultation Zone	Construction phase	EPD's Landfill Gas Hazard Assessment Guidance Note

#### Table II - Observation / Reminder / Non-compliance made during Site Audit

Key: ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit

X Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit

# Follow up action will be reported in next reporting month

\* Non-compliance of mitigation measure

· Non-compliance but improved by the contractor

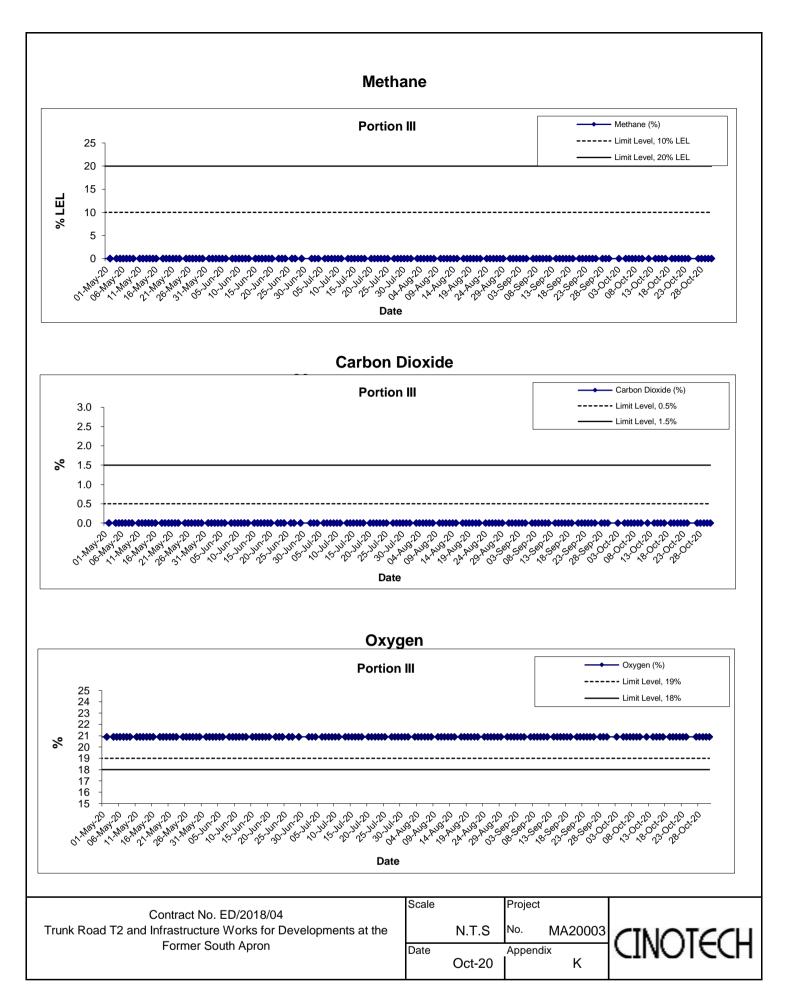
EIA Ref	Recommended Mitigation Measures	Details of Reminder/Observation	<b>Recorded Date</b>	Status
Air Quality				
Construction	Noise Impact			
Water Quality	y Impact			
<b>Ecological Im</b>	pact			
Fisheries Imp	act			
Waste Manag	ement			
\$5.8.22	All fuel tanks and storage areas should be provided with locks and be located 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 the coastal waters.	Contractor was reminded the chemical/ fuel storage area should be provided with lock.	22-Oct-20	V
<b>S</b> 5.8.46	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The "Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes" published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows:	Storage area of the chemical waste should be labelled.	22-Oct-20	~
Landscape an	d Visual Impact			
Landfill Gas I	Hazards			

APPENDIX K RECORD OF LANDFILL GAS MONITORING BY CONTRACTOR

# APPENDIX K - RECORD OF LANDFILL GAS MONITORING BY THE CONTRACTOR

Location	Date of Measurement	Sampling time	Weather Condition	Temperature (°C)	Methane (%)	Carbon dioxide (%)	Oxygen (%)
Portion III	3-Oct-20	8:28	Sunny	27	0	0	20.9
Portion III	3-Oct-20	13:00	Sunny	31	0	0	20.9
Portion III	5-Oct-20	8:31	Cloudy	25	0	0	20.9
Portion III	5-Oct-20	13:00	Rainy	30	0	0	20.9
Portion III	6-Oct-20	8:30	Cloudy	25	0	0	20.9
Portion III	6-Oct-20	13:02	Cloudy	27	0	0	20.9
Portion III	7-Oct-20	8:29	Cloudy	24	0	0	20.9
Portion III	7-Oct-20	13:03	Cloudy	26	0	0	20.9
Portion III	8-Oct-20	8:29	Cloudy	23	0	0	20.9
Portion III	8-Oct-20	13:10	Cloudy	28	0	0	20.9
Portion III	9-Oct-20	8:28	Sunny	23	0	0	20.9
Portion III	9-Oct-20	13:02	Sunny	30	0	0	20.9
Portion III	10-Oct-20	8:30	Sunny	24	0	0	20.9
Portion III	10-Oct-20	13:15	Sunny	29	0	0	20.9
Portion III	12-Oct-20	8:27	Cloudy	26	0	0	20.9
Portion III	12-Oct-20	13:04	Cloudy	30	0	0	20.9
Portion III	14-Oct-20	8:29	Rainy	25	0	0	20.9
Portion III	14-Oct-20	13:02	Cloudy	26	0	0	20.9
Portion III	15-Oct-20	8:28	Cloudy	25	0	0	20.9
Portion III	15-Oct-20	13:00	Cloudy	29	0	0	20.9
Portion III	16-Oct-20	8:27	Cloudy	25	0	0	20.9
Portion III	16-Oct-20	13:00	-	31	0	0	20.9
			Cloudy				
Portion III	17-Oct-20	8:25	Cloudy	24	0	0	20.9
Portion III	17-Oct-20	13:03	Cloudy	28	0	0	20.9
Portion III	19-Oct-20	8:27	Cloudy	23	0	0	20.9
Portion III	19-Oct-20	12:58	Cloudy	27	0	0	20.9
Portion III	20-Oct-20	8:30	Cloudy	23	0	0	20.9
Portion III	20-Oct-20	13:01	Sunny	29	0	0	20.9
Portion III	21-Oct-20	8:29	Cloudy	22	0	0	20.9
Portion III	21-Oct-20	12:58	Sunny	28	0	0	20.9
Portion III	22-Oct-20	8:29	Cloudy	23	0	0	20.9
Portion III	22-Oct-20	13:00	Cloudy	28	0	0	20.9
Portion III	23-Oct-20	8:30	Cloudy	22	0	0	20.9
Portion III	23-Oct-20	13:02	Cloudy	24	0	0	20.9
Portion III	24-Oct-20	8:30	Rainy	23	0	0	20.9
Portion III	24-Oct-20	13:01	Cloudy	26	0	0	20.9
Portion III	27-Oct-20	8:30	Sunny	23	0	0	20.9
Portion III	27-Oct-20	13:01	Sunny	28	0	0	20.9
Portion III	28-Oct-20	8:28	Cloudy	23	0	0	20.9
Portion III	28-Oct-20	13:01	Cloudy	26	0	0	20.9
Portion III	29-Oct-20	8:27	Cloudy	23	0	0	20.9
Portion III	29-Oct-20	13:04	Cloudy	26	0	0	20.9
Portion III	30-Oct-20	8:27	Cloudy	24	0	0	20.9
Portion III	30-Oct-20	13:04	Cloudy	27	0	0	20.9
Portion III	31-Oct-20	8:29	Cloudy	22	0	0	20.9
Portion III	31-Oct-20	12:59	Sunny	26	0	0	20.9

## APPENDIX K - RECORD OF LANDFILL GAS MONITORING BY THE CONTRACTOR



APPENDIX L EVENT AND ACTION PLANS

#### **Event and Action Plan for Air Quality (Dust)**

		ACT	TION	
EVENT	ET	IEC	ER	CONTRACTOR
Action level being exceeded by one sampling	<ol> <li>Identify source, investigate the causes of complaint 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 being exceeded by two or more consecutive sampling	<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> </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 exceedance in writing;</li> <li>Notify Contractor;</li> <li>Ensure remedial measures properly implemented.</li> </ol>	<ol> <li>Submit proposals for remedial actions to IEC within three working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if appropriate.</li> </ol>

		ACT	TION	
EVENT	ET	IEC	ER	CONTRACTOR
	8. If exceedance stops, cease additional monitoring.			
Limit level being exceeded by one sampling	<ol> <li>Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>Inform Contractor ,IEC, ER, 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 exceedance 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 three working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if appropriate.</li> </ol>
Limit level being exceeded by two or more consecutive sampling	<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> </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> </ol>	<ol> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Notify Contractor;</li> <li>In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> </ol>	<ol> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IEC within three working days of notification;</li> <li>Implement the agreed proposals;</li> </ol>

		ACTION														
EVENT		ET		IEC		ER	C	ONTRACTOR								
	5.	Carry out analysis of Contractor's	3.	Supervise the implementation of	4.	Ensure remedial measures	4.	Resubmit proposals if problem still								
		working procedures to determine		remedial measures.		properly implemented;		not under control;								
		possible mitigation to be			5.	If exceedance continues, consider	5.	Stop the relevant portion of works								
		implemented;				what portion of the work is		as determined by the ER until the								
	6.	Arrange meeting with IEC and				responsible and instruct the		exceedance is abated.								
		ER to discuss the remedial actions				Contractor to stop that portion of										
		to be taken;				work until the exceedance is										
	7.	Assess effectiveness of				abated.										
		Contractor's remedial actions and														
		keep IEC, EPD and ER informed														
		of the results;														
	8.	If exceedance stops, cease														
		additional monitoring.														

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

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

Limit Levels and Action Plan for Landfill Gas

Parameter	Limit Level	Action								
	<19%	• Ventilate to restore oxygen to >19%								
Owngon		• Stop works								
Oxygen	<18%	• Evacuate personnel/prohibit entry								
		• Increase ventilation to restore oxygen to >19%								
	> 100/ LEL (i.e. $> 0.50/$ by volume)	Prohibit hot works								
	>10% LEL (i.e. > 0.5% by volume)	• Ventilate to restore methane to <10% LEL								
Methane		• Stop works								
	>20% LEL (i.e. > 1% by volume)	• Evacuate personnel / prohibit entry								
		• Increase ventilation to restore methane to <10% LEL								
	>0.5%	• Ventilate to restore carbon dioxide to $< 0.5\%$								
Carbon		• Stop works								
Dioxide	>1.5%	• Evacuate personnel / prohibit entry								
		• Increase ventilation to restore carbon dioxide to <0.5%								

APPENDIX M SUMMARIES OF ENVIRONMENTAL COMPLAINT, WARNING, SUMMON AND NOTIFICATION OF SUCCESSFUL PROSECUTION

## Contract No. ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron

 $\label{eq:spectral_system} \begin{array}{l} \textbf{Appendix} \ \textbf{M} - \textbf{Summary of environmental complaint, warning, summon and notification of successful prosecution} \end{array}$ 

Reporting Month: October2020

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Investigation/Mitigation Action	Status
#N02	Portion T1	10-Oct- 2020	Resident of Yau Lai Estate complained that i) an excavator operated before 7 am on 9 and 10 October 2020; and, ii) the height of noise barriers are not sufficient for noise reduction.	<ul> <li>Contractor was recommended to scheduled noisy works to less sensitive hours (e.g. normal weekdays between 08:00-19:00) to minimize noise nuisance.</li> <li>Since the complaint location stated in part II is situated out of the project boundary and within the other construction site, no investigation shall be conducted for non-project related complaint.</li> </ul>	Closed

**Remarks**: No environmental warning/summon and prosecution were received in the reporting period.

APPENDIX N SUMMARY OF EXCEEDANCE

#### Contract No. ED/2018/04

Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron

### **Appendix N – Summary of Exceedance**

#### **Reporting Period: October 2020**

- (A) Exceedance Report for Air Quality (NIL in the reporting month)
- (B) Exceedance Report for Construction Noise (NIL in the reporting month)
- (C) Exceedance Report for Landfill Gas (NIL in the reporting month)

APPENDIX O TENTATIVE CONSTRUCTION PROGRAMME

Activity Name	Dur	01V3 Start	01V3 Finish	Dur	Early Start	Early Finish	2020 2021
							September         October         November         December         January           30         06         13         20         27         04         11         18         25         01         08         15         22         29         06         13         20         27         03         10         17         24
WORKS PROGRAMME (01V3)	615	07-Feb-20	04-Mar-22	299 0	1-Aug-20 A	04-Aug-21	
DESIGN SUBMISSION & APPROVAL	615	07-Feb-20	04-Mar-22	178 0 <sup>°</sup>	1-Aug-20 A	06-Mar-21	
GENERAL	340	02-Mar-20	27-Apr-21		0-Aug-20 A		
Design Memorandum	0	02-Mar-20	02-Mar-20		7-Aug-20 A	10-Dec-20	V Design Memorandum
Design Memorandum - Approval	0		02-Mar-20	0	,	10-Dec-20	Design Memorandum - Approval
Design Memorandum - 3rd Sub	0			10 2	7-Aua-20 A	07-Sep-20 A	Design Memorandum -/3rd Sub
Design Memorandum - 3rd Review	0				8-Sep-20 A	· · · · · · · · · · · · · · · · · · ·	Design Memorandum - 3rd Review
Design Memorandum - 4th Sub	0				3-Oct-20 A		Design Memoraridum - 4th Sub
Design Memorandum - 4th Review	0				09-Nov-20	10-Dec-20	Design Memorandum - 4th Review
Ground Investigation Report - Kai Tak Area	141	04-May-20	19-Oct-20		1-Aug-20 A	08-Feb-21	
Ground Investigation Report Vol 1 - Prepare & submit 1st draft	48	04-May-20	29-Jun-20			10-Sep-20 A	Ground Investigation Report Vol 1 - Prepare & submit 1st draft
Ground Investigation Report Vol 1 - 1st Sub	0	01 110 20	29-Jun-20	0	1 //ug 20 //	10-Sep-20 A	◆ Ground Investigation Report Vol 1 - 1st Sub
Ground Investigation Report Vol 1 - Review	28	30-Jun-20	27-Jul-20	-	1-Sep-20 A	12-Nov-20	Ground Investigation Report Vol 1 - Review
Ground Investigation Report Vol 1 - Resubmission	48	28-Jul-20	21-Sep-20		13-Nov-20	11-Jan-21	Ground Investigation Re
Ground Investigation Report Vol 1 - 2nd Sub	40	20 Jui 20	21-Sep-20 21-Sep-20	0	10 100 20	11-Jan-21	♦ Ground Investigation R€
Ground Investigation Report Vol 1 - 2nd Sub Ground Investigation Report Vol 1 - 2nd Sub Review	28	22-Sep-20	19-Oct-20		12-Jan-21	08-Feb-21	
Ground Investigation Report - Tunnel	20 59	06-Oct-20	19-0ct-20		6-Sep-20 A	02-Jan-21	Ground: Investigation Report - Tunne
Ground Investigation Report Vol 2 - Prepare & submit 1st draft	59 12	06-Oct-20	14-Dec-20 19-Oct-20		6-Sep-20 A	02-Jan-21 07-Nov-20	Ground: Investigation Report Vol 2 - Prepare & submit 1st draft
Ground Investigation Report Vol 2 - Prepare & submit 1st draft Ground Investigation Report Vol 2 - 1st Sub	0	00-001-20	19-Oct-20	43 10	0-36h-50 M	07-Nov-20 07-Nov-20	♦ Ground Investigation Report Vol 2 - I repair & submit ist diant
	Ű	20. Oct 20			00 Nov 20		Ground: Investigation Report Vol 2 - Review 1st Sub
Ground Investigation Report Vol 2 - Review 1st Sub	28	20-Oct-20	16-Nov-20		08-Nov-20	05-Dec-20	
Ground Investigation Report Vol 2 - 2nd Sub	0	17 Nov 20	16-Nov-20	0	D	05-Dec-20	♦ Ground: Investigation Report Vol 2 - 2nd Sub Ground: Investigation Report Vol 2 - 2nd Sub Ground: Investigation Report Vol 2 - 2nd Sub
Ground Investigation Report Vol 2 - Review 2nd Sub	28	17-Nov-20	14-Dec-20		06-Dec-20	02-Jan-21	
Ground Investigation Report Vol 2 - Approval	0	10 14	14-Dec-20	0		02-Jan-21	Ground: Investigation Report Vol 2
Construction Traffic Impact Assessment - Kai Tak Area	24	13-May-20	10-Jun-20		3-Sep-20 A	05-Dec-20	Construction Traffic Impact Assessment - Kai; Tak Area
CTIA Kai Tak Area - 2nd Sub	0	44.14 00	13-May-20	0		23-Sep-20 A	◆ CTIA Kai Tak Area - 2nd Sub
CTIA Kai Tak Area - 2nd Review	28	14-May-20	10-Jun-20		4-Sep-20 A	05-Oct-20 A	CTIA Kai Tak Area - 2nd Review
CTIA Kai Tak Area - Approval	0		10-Jun-20	0		05-Dec-20	CTIA Kai Tak Area - Approval
CTIA Kai Tak Area - Resubmission	0				6-Oct-20 A	07-Nov-20	CTIA Kai Tak Area - Resubmission
CTIA Kai Tak Area - 3rd Sub	0			0		07-Nov-20	◆ CTIA Kai Tak Area - 3rd Sub
CTIA Kai Tak Area - 3rd Review	0				08-Nov-20	05-Dec-20	CTIA Kai Tak Area - 3rd Review
Construction Traffic Impact Assessment - Lam Tin Area	0	26-Jun-20	26-Jun-20		7-Aug-20 A		struction Traffic Impact Assessment - Lam Tin Area
CTIA Lam Tin Area - Approval	0		26-Jun-20	0		0	A Lam' Tin Area: Approval
Durability As sessment Report	0	07-May-20	07-May-20		3-Sep-20 A		▼ Durability Assessment Report
Durability Assessment Report - Approval	0		07-May-20	0		03-Dec-20	Durability Assessment Report - Approval
Durability Assessment Report - Resubmission	0			8 03	3-Sep-20 A	11-Sep-20 A	Durability Assessment Report - Resubmission
Durability Assessment Report - 4th Sub	0			0		11-Sep-20 A	◆ Durability Assessment Report - 4th Sub
Durability Assessment Report - 4th Review	0				•		Durability Assessment Report - 4th Review
Durability Assessment Report - Resubmission	0			22 1	3-Oct-20 A		Durability Assessment Report - Resubmission
Durability Assessment Report - 5th Sub	0			0		07-Nov-20	Durability Assessment Report - 5th Sub
Durability Assessment Report - 5th Review	0				09-Nov-20	03-Dec-20	Durability Assessment Report - 5th Review
ACABAS - Western Tunnel Portal and Concrete Finishes for Retaini	98	12-Jun-20	08-Oct-20		9-Sep-20 A		ACABAS + Western Tunnel Portal and
DDA - Draft - Final Review and prepare for 1st Sub	24	12-Jun-20	11-Jul-20	6 19	9-Sep-20 A		DDA - Draft - Final Review and prepare for 1s Sub
DDA - 1st Sub	0		11-Jul-20	0		25-Sep-20 A	◆ DDA - 1st Sub
DDA - Review by IP / DC	28	12-Jul-20	08-Aug-20	37 20	6-Sep-20 A	01-Nov-20	DDA - Review by IP / DC
DDA - Review by SO	28	12-Jul-20	08-Aug-20	37 20	6-Sep-20 A	01-Nov-20	DDA - Review by SO
DDA - Further information required by SO	22	10-Aug-20	03-Sep-20	22 0	02-Nov-20	26-Nov-20	DDA - Further information required by SO
DDA - 2nd Sub	0		03-Sep-20	0		26-Nov-20	♦ DDA - 2nd Sub
DDA - 2nd Review by SO	35	04-Sep-20	08-Oct-20	35 2	27-Nov-20	31-Dec-20	DDA - 2nd Review by SO
DDA - SO Consent for Construction	0		08-Oct-20	0		31-Dec-20	◆ DDA - SO/Consent for Construction

Page 1 of 20 Data Date: 31-Oct-20

Summary Planned Bar

Milestone

icalActivity

tual Milestone tual Work seline Milestone

Baseline Bar

ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at South Apron

BOUYGUES

S	)	
0		

Date	Revision	Checked	Approved
05-Nov-19	00V0	WYu	
18-Dec-19	00V1	WYu	
22-Feb-20	01V0	SPa/LLo	WYu
09-Apr-20	01V1	SPa/LLo	WYu
17-Jul-20	01V2	SPa/LLo	WYu
09-Oct-20	01V3	SPa/LLo	WYu

Activity Name Dur			01V3 Finish	Dur	Early Start	Early Finish	2020 2021
							September         October         November         December         January           30         06         13         20         27         04         11         18         25         01         08         15         22         29         06         13         20         27         03         10         17         24
ACABAS- Footbridge FB-02	48	09-Oct-20	04-Dec-20	48	02-Jan-21	02-Mar-21	
DDA - Draft - Preparation by Designer	48	09-Oct-20	04-Dec-20	48	02-Jan-21	02-Mar-21	
CLP Substation - Building Services and Underground Utilities Design	0	01-Jun-20	01-Jun-20	68	26-Sep-20 A	18-Dec-20	CLP Substation - Building Services and Underground Ut
DDA - Further information required by SO	0			22	13-Oct-20 A	07-Nov-20	DDA - Eurther information required by SO
DDA - 4th Review by SO	0			35	09-Nov-20	18-Dec-20	DDA - 4th Review by SO
DDA - 4th Sub	0			0		07-Nov-20	◆ DDA - 4th Sub
DDA - SO Consent for Construction	0		01-Jun-20	0		18-Dec-20	◆ DDA - SÒ Consent for Construction
DDA - 3rd Sub	0			0		26-Sep-20 A	DDA - 3rd Sub
DDA - 3rd Review by SO	0					12-Oct-20 A	DDA- 3rd Review by SD
CLP Substation - ABWF	30	15-May-20	19-Jun-20		21-Sep-20 A	02-Nov-20	✓ CLP:Substation - ABWF ■ DDA: 2 nd Review by SO
DDA - 2nd Review by SO	35	16-May-20	19-Jun-20		22-Sep-20 A	02-Nov-20	
DDA - 2nd Sub	0		15-May-20	0		21-Sep-20 A	◆ DDA - 2nd Sub
DDA - SO Consent for Construction	0		19-Jun-20	0		02-Nov-20	◆ DDA - SO Consent for Construction
DDA Project Alignment	40	28-Mar-20	20-May-20		27-Aug-20 A	02-Nov-20	▼ DDA Project Alignment
DDA - Further information required by SO	12	28-Mar-20	15-Apr-20		27-Aug-20 A	•	DDA - Further information required by SO
DDA - 2nd Sub	0 25	16 Apr 20	15-Apr-20	0	05 5 00 4	04-Sep-20 A	◆ DDA - 2nd Sub
DDA - 2nd Review by SO DDA - SO Consent for Construction	35	16-Apr-20	20-May-20	58 0	05-Sep-20 A	01-Nov-20 02-Nov-20	J DDA - 2nd Review by SQ ♦ DDA - SO Consent for Construction
AIP Roadworks and Street Furniture	120	02-Jul-20	20-May-20 21-Nov-20		19-Sep-20 A	02-NoV-20 23-Feb-21	
AIP - Draft - Preparation by Designer	36	02-Jul-20 02-Jul-20	12-Aug-20		19-Sep-20 A	14-Nov-20	AIP - Draft - Preparation by Designer
AIP - Draft - Final Review and prepare for 1st Sub	18	13-Aug-20	02-Sep-20		16-Nov-20	05-Dec-20	→ All - Draft - Final Review and prepare for 1st Sub
AIP - Review by SO	28	03-Sep-20	· · ·		06-Dec-20	02-Jan-21	AIP - Review by SO
AIP - 1st Sub	0	00 000 20	02-Sep-20	0	00 DCC 20	05-Dec-20	♦ AIP - 1st Sub
AIP - Further information required by SO	24	01-Oct-20	24-Oct-20	-	03-Jan-21	26-Jan-21	
AIP - 2nd Review by SO	28	25-Oct-20	21-Nov-20		27-Jan-21	23-Feb-21	
AIP - 2nd Sub	0		24-Oct-20	0		26-Jan-21	◆ AIP
AIP - Review by IP / DC	28	03-Sep-20	30-Sep-20	28	06-Dec-20	02-Jan-21	AIP - Review by IP / DC
AIP Traffic Sign, Road Marking & Sign Gantry	44	25-Feb-21	21-Apr-21	47	12-Sep-20 A	09-Nov-20	▼ AIP Traffic Sign, Road Marking & Sign Gantry
AIP - Further information required by SO	24	25-Feb-21	24-Mar-21	24	12-Sep-20 A	12-Oct-20 A	
AIP - 2nd Review by SO	28	25-Mar-21	21-Apr-21	28	13-Oct-20 A	09-Nov-20	
AIP - 2nd Sub	0		24-Mar-21	0		12-Oct-20 A	
AIP - SO Consent for DDA Submission	0		21-Apr-21	0		09-Nov-20	
AIP Street Lighting (AGR/ DPR/ S20/ L10/ L18)	23	23-Oct-20	20-Nov-20	23	15-Oct-20 A	12-Nov-20	AIP Street Lighting (AGR/ DPR/ S20/ L10/ L18)
AIP - 2nd Review by SO	28	24-Oct-20	20-Nov-20	28	16-Oct-20 A	12-Nov-20	AIP - 2nd Review by SO
AIP - 2nd Sub	0		23-Oct-20	0		15-Oct-20 A	◆ ◆ AIP - 2n <mark>a</mark> Sub
AIP - SO Consent for DDA Submission	0		20-Nov-20	0		12-Nov-20	AIP - SO Consent for DDA Submission
DDA Street Lighting (AGR/DPR/S20/L10/L18)	125	21-Nov-20	27-Apr-21		20-Aug-20 A	02-Jan-21	▼ DDA Street Lighting (AGR/ DPR/ S2
DDA - Draft - Final Review and prepare for 1st Sub	24	13-Jan-21	09-Feb-21			24-Sep-20 A	
DDA - Review by SO	28	10-Feb-21	09-Mar-21	26	25-Sep-20 A	20-Oct-20 A	
DDA - 1st Sub	0		09-Feb-21	0		24-Sep-20 A	
DDA - Further information required by SO	12	10-Mar-21	23-Mar-21		21-Oct-20 A	27-Nov-20	
DDA - 2nd Review by SO	35	24-Mar-21	27-Apr-21		28-Nov-20	01-Jan-21	
DDA - 2nd Sub	0		23-Mar-21	0		27-Nov-20	
DDA - SO Consent for DDA Submission	0	01 Mar 00	27-Apr-21	0	20 4.1.4 20 4	02-Jan-21	DDA - Draft - Preparat
DDA - Draft - Preparation by Designer DDA - Review by IP / DC	42 28	21-Nov-20 10-Feb-21	12-Jan-21 09-Mar-21		20-Aug-20 A 25-Sep-20 A	19-Sep-20 A 13-Nov-20	
AIP Structural Health Monitoring System (SHMS)	28 95	31-Aug-20	22-Dec-20		25-Sep-20 A 19-Sep-20 A	13-100V-20 16-Jan-21	AIP Structural He
AIP - Draft - Final Review and prepare for 1st Sub	12	28-Sep-20	13-Oct-20		20-Oct-20 A	07-Nov-20	AIP Succularine
AIP - Review by SO	28	14-Oct-20	10-Nov-20		08-Nov-20	05-Dec-20	
AIP - 1st Sub	0		13-Oct-20	0	55 . 101 20	07-Nov-20	◆ AIP - 1st Sub
Page 2 of 20 ♦ ♦ Milestone ▼ Summary				、	<b>_</b>		T2 and Infractry at use Marke
Data Date: 31-Oct-20		ED/	2018/0	)4 T	runk	Road	12 and Initastructure vvorks
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Activity Name	Dur	01V3 Start	01V3 Finish	Dur	Early Start	Early Finish	2020 2021	
							September         October         November         December         January           30         06         13         20         27         04         11         18         25         01         08         15         22         29         06         13         20         27         03         10         17	24
AIP - Further information required by SO	12	11-Nov-20	24-Nov-20	12	07-Dec-20	19-Dec-20	AIP - Further information required by SO	
AIP - 2nd Review by SO	28	25-Nov-20	22-Dec-20	28	20-Dec-20	16-Jan-21	AIP - 2nd	Review
AIP - 2nd Sub	0		24-Nov-20	0		19-Dec-20	AIP - 2nd Sub	
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AIP - Draft - Preparation by Designer	24	31-Aug-20	26-Sep-20	24	19-Sep-20 A	19-Oct-20 A	AIP - Draft - Preparation by Designer	
AIP - Review by IP / DC	28	14-Oct-20	10-Nov-20	28	08-Nov-20	05-Dec-20	AIP - Review by IP / DC	·
DDA Structural Health Monitoring System (SHMS)	36	23-Dec-20	05-Feb-21	36	18-Jan-21	03-Mar-21		·
DDA - Draft - Preparation by Designer	36	23-Dec-20	05-Feb-21	36	18-Jan-21	03-Mar-21		·
AIP Landscape Design	93	01-Aug-20	20-Nov-20	135	01-Sep-20 A	13-Feb-21		·
AIP - Draft - Final Review and prepare for 1st Sub	12	29-Aug-20	11-Sep-20	12	23-Nov-20	05-Dec-20	AIP - Draft - Final Review and prepare for 1st Sub	·
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AIP - Review by IP / DC	28	12-Sep-20	09-Oct-20	28	06-Dec-20	02-Jan-21		
MISC. TEMP WORKS	140	07-Feb-20	28-Jul-20	163	01-Aug-20 A	17-Feb-21		
Temporary works and Dewatering Measures for Excavation < 7m	0	08-May-20	08-May-20	49	02-Sep-20 A	02-Nov-20	▼ Temporary works and Dewatering Measures for Excavation < 7m	
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Seawall checkings for temporary cases (Loading / Unloading)	28	04-Jun-20	08-Jul-20	0	01-Aug-20 A	18-Dec-20	Seawall checkings for temporary cases (Loading	/1100/02
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Barging Point design at Portion P	0	28-Jul-20	28-Jul-20	0	26-Aug-20 A		ng Point design; at Portion P	
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Barging Point design at Portion Q	88	07-Feb-20	26-May-20	87	02-Nov-20	17-Feb-21		·
DDA - Draft - Final Review and prepare for 1st Sub	18	03-Apr-20	28-Apr-20	18	30-Dec-20	20-Jan-21		A - Draft
DDA - Review by SO	28	29-Apr-20	26-May-20	28	21-Jan-21	17-Feb-21		
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DDA - Tst Sub DDA - Draft - Preparation by Designer	48	07-Feb-20	02-Apr-20	48	02-Nov-20*	20-Jan-21 29-Dec-20	DDA - Draft - Preparation by Desi	
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DDA- Review by in 7 DC DEPRESSED ROAD [DPR]	170	04-Jun-20	25-Dec-20	140	18-Aug-20 A	03-Feb-21		·
DDA DPR - Horizontal Element + Pump Test + DCRA	46	04-Jun-20	29-Jul-20	54	27-Aug-20 A	02-Nov-20	▼ DDA DPR - Horizontal Element + Pump Test + DCRA	·
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Activity Name	Dur	01V3 Start	01V3 Finish	Dur	Early Start	Early Finish	2020	2021
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DDA DPR - Permanent Structure	85	29-Aug-20	09-Dec-20	104	18-Aug-20 A	19-Dec-20		ermanent Structure
DDA - Draft - Final Review and prepare for 1st Sub	21	29-Aug-20	22-Sep-20	34	18-Aug-20 A	25-Sep-20 A	DDA - Draft - Final Review and prepare for 1s Sub	
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DDA - SO Consent for Construction	0		09-Dec-20	0		19-Dec-20	DDA - SO Con	sent for Construction
DDA DPR - Portal Structure	77	23-Sep-20	25-Dec-20	78	02-Nov-20	03-Feb-21		
DDA - Draft - Preparation by Designer	30	23-Sep-20	30-Oct-20	30	02-Nov-20	05-Dec-20	DDA - Draft - Preparation by Des	gner
DDA - Draft - Final Review and prepare for 1st Sub	24	31-Oct-20	27-Nov-20	24	07-Dec-20	06-Jan-21		DDA - Draft - Final Review and
DDA - 1st Sub	0		27-Nov-20	0		06-Jan-21		◆ DDA - 1st Sub
DDA - Review by IP / DC	28	28-Nov-20	25-Dec-20	28	07-Jan-21	03-Feb-21		
DDA - Review by SO	28	28-Nov-20	25-Dec-20	28	07-Jan-21	03-Feb-21		
WEST VENTILATION BUILDING [WVB]	298	06-Jul-20	07-Jul-21	158	25-Aug-20 A	06-Mar-21		
AIP WVB - ELS Design & PCRA	48	06-Jul-20	29-Aug-20	71	25-Aug-20 A	18-Nov-20	▼ AlP WVB - ELS Design & PCRA	
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AIP WVB - Permanent Structure	0	15-Jul-20	15-Jul-20	56	25-Aug-20 A	02-Nov-20	▼ AIP WVB - Permanent Structure	
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DDA WVB - Permanent Structure	78	16-Oct-20	19-Jan-21	81	02-Nov-20	06-Feb-21		
Page 4 of 20				<b>.</b>	<b>_</b> .	<b>_</b> .	Date Revision 05-Nov-19 00V0	Checked Approved
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DDA Road S20 - Permanent Utility Design 0	09-Jun-20	09-Jun-20	22	07-Aug-20 A	02-Sep-20 A	DDA Road S20 - Permanent Utility Desi	gn	÷							
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Page 5 of 20 Data Date: 31-Oct-20	ED/2018/04 Trunk Road T2 and Infrastructure Works ad Adivity ad Miestone all Work eine Miestone and Miestone												WYu SPa/LLo SPa/LLo SPa/LLo	Approved WYu WYu WYu	
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AIP - Draft - Preparation by Designer	24	10-Jun-20	09-Jul-20	17	01-Aug-20 A	20-Aug-20 A	Preparation by Designer			 ,	¦   
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Page 6 of 20 Data Date: 31-Oct-20 Milestone
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ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at South Apron

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Page 7 of 20 Data Date: 31-Oct-20

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ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at South Apron

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DDA - Review by SO	28	27-Aug-20	23-Sep-20	65	03-Oct-20 A	06-Dec-20		;						DDA - Review	w by SO		
DDA - 1st Sub	0		26-Aug-20	0		30-Sep-20 A	+	•	DDA - 1st S	ub	 						
DDA - Further information required by SO	6	24-Sep-20	30-Sep-20	6	07-Dec-20	12-Dec-20				;				DDA	- Further information	n required by SO	
DDA - 2nd Review by SO	35	01-Oct-20	04-Nov-20	35	13-Dec-20	16-Jan-21			,		· · · · · · · · · · · · · · · · · · ·						DDA - 2nd Revie
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DDA - Draft - Preparation by Designer	42	23-Jun-20	12-Aug-20	21	01-Sep-20 A	24-Sep-20 A			Draft - Prepa		Designer						
DDA - Review by IP / DC	28	27-Aug-20	23-Sep-20	65	03-Oct-20 A	06-Dec-20		i						DDA - Reviev	wby IP / DC		
[STE] AIP District Cooling System Temporary Works	88	02-May-20	14-Aug-20	90	20-Aug-20 A	05-Dec-20				;	, , , ,	1		STE] AIP Dist	rict Cooling System	Temporary Works	i i i
AIP - Draft - Preparation by Designer	24	02-May-20	29-May-20	8	20-Aug-20 A	28-Aug-20 A	P - Draft - Preparation by Designer	+ <b> </b> -	·		· · · · · · · · · · · · · · · · · · ·						
AIP - Draft - Final Review and prepare for 1st Sub	6	30-May-20	05-Jun-20	6	29-Aug-20 A		AIP - Draft - Final Review ar	ndpr∉	epare for 1st 🕄	Sub :					, , , , , , , , , , , , , , , , , , ,		
AIP - 1st Sub	0		05-Jun-20	0		04-Sep-20 A	♦ AIP - 1st¦Sub			1			v by IP / DC	·····			
AIP - Review by IP / DC	28	06-Jun-20	03-Jul-20	58	05-Sep-20 A			<u>.</u>					v bý IP / DC			- <del> </del>	
AIP - Review by SO	28	06-Jun-20	03-Jul-20	40	05-Sep-20 A	14-Oct-20 A			iii	Al	P - Review by SO						
Page 8 of 20   Milestone   Summary														Date	Revision	Checked	Approved
Data Date: 31-Oct-20			/2018/0	<u>)</u> 4 <sup>·</sup>	Trunk	Road	T2 and Infrast	ru	cture	Wo	rks 🖊			05-Nov-19	00V0	WYu	ļ
CriticalAdivity				-								RO	UYGUES	18-Dec-19	00V1	WYu	
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Baseline Milestone			<b>_</b>	-		<b>–</b>	-			•				17-Jul-20	01V1	SPa/LL0	WYu
Baseline Bar			Ihre	e∿	<i>lonths</i>	Rollin	g Programme	; ((	Jct-20	J)				09-Oct-20	01V2	SPa/LLo	WYu
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Activity Name	Dur	01V3 Start	01V3 Finish	Dur	Early Start	Early Finish	2020 2021
							September         October         November         December         January           30         0.6         1.3         2.0         2.7         0.4         1.1         1.8         2.5         0.1         0.8         1.5         2.2         2.9         0.6         1.3         2.0         2.7         0.3         1.0         1.7         2.4
AIP - Further information required by SO	12	04-Jul-20	17-Jul-20	20	15-Oct-20 A	07-Nov-20	30         06         13         20         27         04         11         18         25         01         08         15         22         29         06         13         20         27         03         10         17         24
AIP - 2nd Sub	0	0100.20	17-Jul-20	0	10 000 20 70	07-Nov-20	◆ AIP - 2nd Sub
AIP - 2nd Review by SO	28	18-Jul-20	14-Aug-20	28	08-Nov-20	05-Dec-20	AIP - 2nd Review by SO
AIP - SO Consent for DDA Submission	0	10 0 01 20	14-Aug-20	0	00110120	05-Dec-20	♦ AIP - SD Consent for DDA Submission
[STE] DDA District Cooling System Temporary Works	113	26-Jun-20	09-Nov-20		19-Aug-20 A	21-Dec-20	▼ [STE] DDA District Cooling System Temporary Work
DDA - Draft - Preparation by Designer	42	26-Jun-20	14-Aug-20		19-Aug-20 A		DDA - Draft - Prenaration by Designer
DDA - Draft - Final Review and prepare for 1st Sub	12	15-Aug-20	28-Aug-20		26-Sep-20 A	•	DDA- Draft - Final Review and prepare for 1st Sub
DDA - 1st Sub	0		28-Aug-20	0		12-Oct-20 A	◆ DDA'- 1st Sub
DDA - Review by IP / DC	28	29-Aug-20	25-Sep-20	28	13-Oct-20 A	09-Nov-20	DDA:- Review, by IP / DC
DDA - Review by SO	28	29-Aug-20	25-Sep-20	28	13-Oct-20 A	09-Nov-20	DDA- Review by SO
DDA - Further information required by SO	6	26-Sep-20	05-Oct-20	6	10-Nov-20	16-Nov-20	DDA: - Further; information required by SO
DDA - 2nd Sub	0		05-Oct-20	0		16-Nov-20	◆ DDA;- 2nd Sub
DDA - 2nd Review by SO	35	06-Oct-20	09-Nov-20	35	17-Nov-20	21-Dec-20	DDA:- 2nd Review by SO
DDA - SO Consent for Construction	0		09-Nov-20	0		21-Dec-20	◆ DDA,- SO ¢ on sent for ¢ on struction
[STE] AIP Kai Hing Road / Lam Chak Street Modification	81	12-Nov-21	21-Feb-22	81	02-Nov-20	06-Feb-21	
AIP - Draft - Preparation by Designer	24	12-Nov-21	09-Dec-21	24	02-Nov-20	28-Nov-20	
AIP - Draft - Final Review and prepare for 1st Sub	12	10-Dec-21	23-Dec-21	12	30-Nov-20	12-Dec-20	
AIP - 1st Sub	0		23-Dec-21	0		12-Dec-20	
AIP - Review by IP / DC	28	24-Dec-21	20-Jan-22	28	13-Dec-20	09-Jan-21	
AIP - Further information required by SO	24	21-Jan-22	21-Feb-22	24	11-Jan-21	06-Feb-21	
AIP - Review by SO	28	24-Dec-21	20-Jan-22	28	13-Dec-20	09-Jan-21	
[STE] AIP Hoi Bun Road Junction	36	19-Oct-20	30-Nov-20	98	11-Aug-20 A	05-Dec-20	T [STE] AIP Hoi Bun Road Junction
AIP - Further information required by SO	12	19-Oct-20	02-Nov-20	40	11-Aug-20 A	25-Sep-20 A	AIP - Eurther information required by SO
AIP - 2nd Sub	0		02-Nov-20	0		25-Sep-20 A	♦ AIP 2nd Sub;
AIP - 2nd Review by SO	28	03-Nov-20	30-Nov-20	17	26-Sep-20 A	12-Oct-20 A	AIP 2nd Review by SQ
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AIP - 3rd Review by SO	0			28	08-Nov-20	05-Dec-20	AIP - 3rd Review, by SO
AIP - SO Consent for DDA Submission	0		30-Nov-20	0		05-Dec-20	♦ AIP - SD Consent for DDA Submission
[STE] DDA Hoi Bun Road Junction - Permanent Utility Design	72	01-Dec-20	01-Mar-21	108	07-Sep-20 A		v (STE) DDA Hoi B
DDA - Draft - Preparation by Designer	6	01-Dec-20	07-Dec-20	11	07-Sep-20 A	18-Sep-20 A	DDA: - Draft - Preparation by Designer
DDA - Draft - Final Review and prepare for 1st Sub	6	08-Dec-20	14-Dec-20	6	19-Sep-20 A	•	DDA:- Draft - Final Review and prepare for 1st Sub
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DDA - Review by IP / DC	28	15-Dec-20	11-Jan-21	72	26-Sep-20 A	06-Dec-20	DDA:- Review, by IP / D/
DDA - Review by SO	28	15-Dec-20	11-Jan-21		26-Sep-20 A	15-Oct-20 A	DDA- Review, by SO
DDA - Further information required by SO	12	12-Jan-21	25-Jan-21	49	16-Oct-20 A	12-Dec-20	
DDA - 2nd Sub	0		25-Jan-21	0		12-Dec-20	◆ DDA
DDA - 2nd Review by SO	35	26-Jan-21	01-Mar-21	35	13-Dec-20	16-Jan-21	
DDA - SO Consent for Construction	0		01-Mar-21	0		16-Jan-21	
[STE] DDA Hoi Bun Road Junction - Alignment, Traffic Sign, Road Ma	72	01-Dec-20	01-Mar-21	115	07-Sep-20 A	25-Jan-21	
DDA - SO Consent for Construction	0		01-Mar-21	0		25-Jan-21	
DDA - Draft - Final Review and prepare for 1st Sub	6	08-Dec-20	14-Dec-20	5	28-Sep-20 A	05-Oct-20 A	DDA- Draft - Final Review and prepare for 1st Sub
DDA - Review by SO	28	15-Dec-20	11-Jan-21	63	06-Oct-20 A	07-Dec-20	DDA:- Review,by SO
DDA - 1st Sub	0		14-Dec-20	0		05-Oct-20 A	◆ DDA- 1st Sub
DDA - Further information required by SO	12	12-Jan-21	25-Jan-21	12	08-Dec-20	21-Dec-20	
DDA - 2nd Review by SO	35	26-Jan-21	01-Mar-21	35	22-Dec-20	25-Jan-21	
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DDA - Draft - Preparation by Designer	6	01-Dec-20	07-Dec-20	18	07-Sep-20 A	26-Sep-20 A	DDA - Draft - Preparation by Designer
DDA - Review by IP / DC	28	15-Dec-20	11-Jan-21	63	06-Oct-20 A	07-Dec-20	DDA:- Review, by IP / D
[STE] DDA Hoi Bun Road Junction - Roadworks and Street Furniture	72	01-Dec-20	01-Mar-21	118	01-Sep-20 A	22-Jan-21	✓ [STE] DC
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Page 9 of 20 ♦ ♦ Milestone ▼ Summary				~ 4 -	- I		
Data Date: 31-Oct-20		ED/	2018/	04	I runk	Road	I Z and Inirastructure vvorks
Actual Miestone				for	Devel	opmer	ts at South Aprop BOUYGUES 22-Feb-20 01V0 SPallo WYu
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Baseline Bar			Thro	/۸ م	Ionthe	Rollin	g Programme (Oct-20)
							g Programme (Oct-20) 09-Oct-20 01V3 SPa/LLo WYu

Page 9 of 20
Data Date: 31-Oct-2

Activity Name	Dur	01V3 Start	01V3 Finish	Dur	Early Start	Early Finish					20	20						2021	
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DDA - Review by SO	28	15-Dec-20	11-Jan-21	14	16-Sep-20 A	29-Sep-20 A									· · · · · · · · · · · · · · · · · · ·			DA - Review	oy SO
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[STE] DDA Hoi Bun Road Junction - Street Lighting	72	01-Dec-20	01-Mar-21	118	01-Sep-20 A	22-Jan-21				1							1 1		(STE) DC
DDA - Draft - Preparation by Designer	6	01-Dec-20	07-Dec-20	10	01-Sep-20 A	11-Sep-20 A		, , , , , , , , , , , , , , , , , , ,			   		· · · · · · · · · · · · · · · · · · ·		DDA - Draft	Preparation by D	Designer		
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DDA - SO Consent for Construction	0		01-Mar-21	0		22-Jan-21		·····	·									•	
[STE] AIP Slip Road S5	81	12-Nov-20	20-Feb-21	81	12-Nov-20	20-Feb-21	····											····	
AIP - Further information required by SO	24	21-Jan-21	20-Feb-21	24	21-Jan-21	20-Feb-21								<u> </u>			Deciment	·	
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AIP - Draft - Final Review and prepare for 1st Sub	12	10-Dec-20	23-Dec-20	12	10-Dec-20	23-Dec-20											aft - Final Review	and prepare to	r ist Suk
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AIP - Review by IP / DC	28	24-Dec-20	20-Jan-21	28	24-Dec-20	20-Jan-21													- Kevie
	28	24-Dec-20	20-Jan-21	28	24-Dec-20	20-Jan-21						<b>V</b>							<ul> <li>Kevie;</li> </ul>
SUPPORTING UNDERGROUND STRUCTURE [SUS]	86	04-May-20	13-Aug-20	86	02-Nov-20	16-Feb-21						V					<del>-</del>		
AIP SUS - Internal Structure	80	04-May-20	13-Aug-20	86	02-Nov-20	16-Feb-21 27-Jan-21						· · · · · · · · · · · · · · · · · · ·					<del>1</del> <del>1</del>		
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C&C TUNNEL / LAUNCHING SHAFT [C&C / LS]	14 259	29-Jul-20	13-Aug-20	14	28-Jan-21 05-Aug-20 A	16-Feb-21 03-Mar-21	<u> </u>	·	·								·	·	
TN - C&C/LS King Post	209	03-Aug-20 15-Aug-20	18-Jun-21 19-Sep-20	1/1	5	21-Aug-20 A	S King Post											· · · · · · · · · · · · · · · · · · ·	
DDA - 2nd Review by SO	30	15-Aug-20 16-Aug-20	19-Sep-20 19-Sep-20	14	05-Aug-20 A 06-Aug-20 A	<u> </u>		DDA - 2nd I	Review hy SO				 				·		
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DDA- SO CONSENT OF CONSTRUCTOR DDA- C&C/LS ELS Strutting & Dewatering+DCRA	42	03-Aug-20	19-Sep-20	73	26-Aug-20 A	21-Nov-20		· · · · · · · · · · · · · · · · · · ·			·			- C&C/LS EL	S Struttina & De	watering +DCRA			
DDA - Further information required by SO	12	03-Aug-20	15-Aug-20	11		07-Sep-20 A	DDA - I	urther, information re	equired by SO				5						
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DDA - 2nd Review by SO	35	16-Aug-20	19-Sep-20	18	08-Sep-20 A	25-Sep-20 A		DD/	A - 2nd Review	by SO									
DDA - SO Consent for Construction	0		19-Sep-20	0		21-Nov-20		<b>♦</b>	+				DDA	-\$OConser	nt for Constructio	-¦ n; ;			
DDA - Further information required by SO	0		· ·	11	26-Sep-20 A	10-Oct-20 A				DDA - F	urther information	roquirod by SO						·	
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DDA - C&C/LS Base Slab & Associated Cast-in for TBM Launching	102	17-Aug-20	16-Dec-20	99	02-Nov-20	03-Mar-21						▼	¦					·¦	
DDA - Draft - Preparation by Designer	25	17-Aug-20	14-Sep-20	25	02-Nov-20	30-Nov-20	·····				·			DDA	- Draft - Preparat	ion by Designer	·		
DDA - Draft - Final Review and prepare for 1st Sub	12	15-Sep-20	28-Sep-20	12	01-Dec-20	14-Dec-20							;		DD	A - Draft - Final R	eview and prepare		
DDA - 1st Sub	0		28-Sep-20	0		14-Dec-20		<b>♦</b>							♦ DD	A¦-1stSub			
DDA - Review by IP / DC	28	29-Sep-20	26-Oct-20	28	15-Dec-20	11-Jan-21												)DA <sup>:</sup> - Review	nv IP / Dί
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DDA - Review by SO	28	29-Sep-20	26-Oct-20	28	15-Dec-20	11-Jan-21				i			,		·····	<u> </u>		DA Review	oy SO
Page 10 of 20   Milestone   Summary	;]				J		- <u> </u>	·	· ·						Date	Revision	Checked	Appro	oved
Data Date: 31-Oct-20		ED	/2018/	04	Trunk	Road	T2 and	Infrastru	lcture	Wo	rks 🏼 🖊				05-Nov-19	00V0	WYu		
Critical A divity												BOU	YGUES		18-Dec-19 22-Feb-20	00V1 01V0	WYu SPa/LLo	WYu	
Actual Work				IOL	Develo	phuel	its at S	outh Apr	011			TRAVAU	X PUBLICS	/	22-Feb-20 09-Apr-20	01V0 01V1	SPa/LLo SPa/LLo	WYu	
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Activity Name	Dur	01V3 Start	01V3 Finish	Dur	Early Start	Early Finish	2020	2021	
							September         October           0         13         20         27         04         11         18         25         01	November         December         January           08         15         22         29         06         13         20         27         03         10         17	24
DDA - Further information required by SO	14	27-Oct-20	11-Nov-20	14	12-Jan-21	27-Jan-21			
DDA - 2nd Sub	0		11-Nov-20	0		27-Jan-21		◆ · · · · · · · · · · · · · · · · · · ·	♦ Dt
DDA - 2nd Review by SO	35	12-Nov-20	16-Dec-20	35	28-Jan-21	03-Mar-21			
DDA - LS Tympanum Structure for TBM Launching	109	17-Aug-20	26-Dec-20	108	06-Oct-20 A	16-Feb-21			
DDA - Draft - Preparation by Designer	63	17-Aug-20	31-Oct-20	63	06-Oct-20 A	18-Dec-20	······································	DDA - Draft - Preparation by Designer	
DDA - Draft - Final Review and prepare for 1st Sub	24	02-Nov-20	28-Nov-20	24	19-Dec-20	19-Jan-21			DA - Draft
DDA - 1st Sub	0		28-Nov-20	0		19-Jan-21		DE 🔶	DA - 1st Su
DDA - Review by IP / DC	28	29-Nov-20	26-Dec-20	28	20-Jan-21	16-Feb-21			
DDA - Review by GEO via SO	28	29-Nov-20	26-Dec-20	28	20-Jan-21	16-Feb-21			
DDA - Review by SO	28	29-Nov-20	26-Dec-20	28	20-Jan-21	16-Feb-21		······································	
DDA - C&C/LS Permanent Structure	160	30-Nov-20	18-Jun-21	143	01-Sep-20 A	24-Feb-21	······································	······································	
DDA - Draft - Preparation by Designer	48	30-Nov-20	27-Jan-21			05-Oct-20 A		······································	Dį
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DDA - Review by IP / DC	28	28-Feb-21	27-Mar-21	28	08-Nov-20	05-Dec-20	n		
DDA - Review by GEO via SO	28	28-Feb-21	27-Mar-21	28	08-Nov-20	05-Dec-20			
DDA - Review by SO	28	28-Feb-21	27-Mar-21	28	08-Nov-20	05-Dec-20	····		}}
DDA - Further information required by SO	36	29-Mar-21	14-May-21	36	07-Dec-20	20-Jan-21			
DDA - 2nd Sub	0		14-May-21	0		20-Jan-21			
DDA - 2nd Review by SO	35	15-May-21	18-Jun-21	35	21-Jan-21	24-Feb-21			
DDA - LS Thrust Frame / Blocks for TBM Launching	63	15-Sep-20	30-Nov-20	60	01-Dec-20	15-Feb-21			
DDA - Draft - Preparation by Designer	30	15-Sep-20	21-Oct-20	30	01-Dec-20	07-Jan-21		DDA - Draft - Prepa	paration by
DDA - Draft - Final Review and prepare for 1st Sub	9	22-Oct-20	02-Nov-20	9	08-Jan-21	18-Jan-21			DA - Draft - F
DDA - 1st Sub	0		02-Nov-20	0		18-Jan-21	♦	◆ DD/	DA - 1st Sub
DDA - Review by IP / DC	28	03-Nov-20	30-Nov-20	28	19-Jan-21	15-Feb-21			
DDA - Review by SO	28	03-Nov-20	30-Nov-20	28	19-Jan-21	15-Feb-21			
SUB-SEA TBM TUNNEL	192	26-Jun-20	16-Feb-21		12-Aug-20 A	26-Feb-21			
DDA - Sub-sea Tunnel - Precast Segment Lining + DCRA	0	29-Jul-20	29-Jul-20	57	12-Aug-20 A		▼ DDA - Sub-sea Tunnel	- Precast Segment Lining + DCRA	
DDA - SO Consent for Construction	0	2, 04, 20	29-Jul-20	0	12 / lag 20 / l	20-Oct-20 A	◆ DDA - SO Consent for 0		
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DDA - Special Segment for CP construction	83	30-Jul-20	06-Nov-20	84	21-Oct-20 A	30-Jan-21			
DDA - Draft - Preparation by Designer	36	30-Jul-20	09-Sep-20	36	21-Oct-20 A	02-Dec-20		DDA - Draft - Preparation by Designer	
DDA - Draft - Final Review and prepare for 1st Sub	24	10-Sep-20	09-Oct-20	24	03-Dec-20	02-Jan-21		DDA - Draft - Final Review	ew and prep
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DDA - Review by IP / DC	28	10-Oct-20	06-Nov-20	28	03-Jan-21	30-Jan-21			
DDA - Review by SO	28	10-Oct-20	06-Nov-20	28	03-Jan-21	30-Jan-21			
DDA - Sub-sea Tunnel - TBM Confinement	36	02-Jan-21	16-Feb-21	36	02-Jan-21	16-Feb-21			
DDA - Draft - Preparation by Designer	36	02-Jan-21	16-Feb-21	36	02-Jan-21*	16-Feb-21	····		
DDA - Sub-sea Tunnel - Internal Structure	96	26-Jun-20	19-Oct-20	95	02-Nov-20	26-Feb-21			
DDA - Draft - Preparation by Designer	36	26-Jun-20	07-Aug-20	36	02-Nov-20	12-Dec-20		DDA - Draft - Preparation by Designer	
DDA - Draft - Final Review and prepare for 1st Sub	12	08-Aug-20	21-Aug-20	12	14-Dec-20	29-Dec-20		DDA - Draft - Final Review and	id prepare fo
DDA - 1st Sub	0		21-Aug-20	0		29-Dec-20	···	◆ DDA - 1st Sub	
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Data Date: 31-Oct-20		FD	/2018/	<u>04</u> '	Trunk	Boad .	nd Infrastructure Works	05-Nov-19 00V0 WYu	
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Baseline Bar

01V2

01V3

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	DDA - Further information required by SO	24	19-Sep-20	19-Oct-20	24	27-Jan-21	26-Feb-21				· <del>;</del>	+				¦   
	CROSS PASSAGE	48	10-Oct-20	05-Dec-20	48	04-Jan-21	03-Mar-21					+ 				¦
	DDA - Cross Passage - CP TBM Jacking Pipes	48	10-Oct-20	05-Dec-20	48	04-Jan-21	03-Mar-21					+				¦
	DDA - Draft - Preparation by Designer	48	10-Oct-20	05-Dec-20	48	04-Jan-21	03-Mar-21				+	+			·	+
	DDA - Cross Passage - Traditional (CP28, 29 & 30) - Temp Support fu	42	10-Oct-20	28-Nov-20	42	04-Jan-21	24-Feb-21					+ !				
	DDA - Draft - Preparation by Designer	42	10-Oct-20	28-Nov-20	42	04-Jan-21	24-Feb-21				·	+			·	 -
	CHA KWO LING ROAD WORKS	81	14-May-20	19-Aug-20	47	06-Aug-20 A	30-Sep-20 A		CHAKWO	LING RC	AD WOR	ks				
	DDA CKL Junction - Permanent Utility Design	0	14-May-20	14-May-20	0	06-Aug-20 A	•	Utility Design				+				
	DDA - SO Consent for Construction	0		14-May-20	0		06-Aug-20 A	+				+				
	DDA CKL Junction - Allignment, Traffic Sign, Road Marking and Traff	0	14-May-20	14-May-20	0	06-Aug-20 A	06-Aug-20 A	Traffic Sign, Road Marking and Traffic	light			+ 				
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	DDA Wai Yip Street / Wai Fat Road Junction - MOC Modification	0	19-Aug-20	19-Aug-20	0	30-Sep-20 A	30-Sep-20 A		DDA Wai	, Vip Street	/ Wai Fat	koad Jur	ction - M	OC Modi	fication	
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	DRILL & BREAK [D&BR] / DRILL & BLAST TUNNEL [D&BL]	127	22-Apr-20	22-Sep-20	93	01-Aug-20 A	20-Nov-20								<u> </u>	DR
	AIP - D&BR / D&BL Permanent Structure	0	25-May-20	25-May-20	0	02-Sep-20 A	02-Sep-20 A	▼ AIP - D&BR / D&BL Permanent Str	icture			+				
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	DDA - Construction Blasting Assessment Report	0	22-Apr-20	22-Apr-20	17	18-Aug-20 A	07-Sep-20 A		Assessment	Report		+				
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	DDA - D&BR / D&BL Tunnel - Temp Support for Excavation + DCRA	0	24-Jun-20	24-Jun-20	44	01-Aug-20 A	21-Sep-20 A	DDA - D8	1	unnel - Te	emp Subn	ort for Ex	cavation -	DCRA		
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Page 12 of 20 Data Date: 31-Oct-20

Vilestone V Summary Planned Bar

Actual Milestone
 Actual Work

Baseline Milestone
 Baseline Bar

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ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at South Apron

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DDA - Draft - Final Review and prepare for 1st Sub	24	05-Nov-20	02-Dec-20	24	26-Jan-21	25-Feb-21										
DDA - Draft - Preparation by Designer	36	21-Sep-20	04-Nov-20	36	11-Dec-20	25-Jan-21			·	<del>i</del>					<u>;</u>	DD
DDA - EVB - Aesthetic Design	48	21-Sep-20	18-Nov-20	48	11-Dec-20	08-Feb-21							V		+	
DDA - Draft - Preparation by Designer	48	21-Sep-20	18-Nov-20	48	11-Dec-20	08-Feb-21				<del> </del>	·					
TUNNEL E&M INSTALLATION & COMMISSIONING	145	10-Aug-20	01-Feb-21	163	12-Aug-20 A	27-Feb-21									;;;;	·
AIP - Overall E&M Design	24	11-Aug-20	08-Sep-20	33	25-Sep-20 A	06-Nov-20		V				Overall E&M Design				
AIP - 2nd Sub	0		11-Aug-20	0		25-Sep-20 A		♦ AIP 2n	d Sub						÷	
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AIP - SO Consent for DDA Submission	0		08-Sep-20	0		06-Nov-20	<b>♦</b>				🔶 AIP - S	SO Consent for DDA				
AIP - E&M Tunnel Ventilation Design	24	22-Aug-20	19-Sep-20	33	25-Sep-20 A	06-Nov-20		V	;;	<del>i</del>	V AIP - E	&M Tunnel Ventilat	lion Design		÷	
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DDA - E&M Tunnel Ventilation Design	72	21-Sep-20	16-Dec-20	72	07-Nov-20	02-Feb-21					V.			1 1	÷ii	;; ! !
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AIP - E&M Air Purification System (WVB)	22	04-Sep-20	03-Oct-20	33	25-Sep-20 A	06-Nov-20		▼		<del>i</del>	AIP - E	&M Air Purification	System (WVB)		·····	·····
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DDA - E&M Air Purification System (WVB)	81	03-Oct-20	09-Jan-21	81	07-Nov-20	16-Feb-21						1 1	<u>-+</u>	1 1	÷	
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DDA - Review by IP / DC	28	13-Dec-20	09-Jan-21	28	20-Jan-21	16-Feb-21								;;	;;;; 	
AIP - E&M Fire Services Installation	96	12-Aug-20	04-Dec-20	115	12-Aug-20 A	29-Dec-20			· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·			▼ AIF	- E&M Fire Servic	es Installation
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AIP - SO Consent for DDA Submission	0		04-Dec-20	0		29-Dec-20		· · · · · · · · · · · · · · · · · · ·					<b>♦</b>		- SO Consent for	
DDA - E&M Fire Services Installation	30	05-Dec-20	12-Jan-21	30	30-Dec-20	03-Feb-21		· · · · · · · · · · · · · · · · · · ·						V	+	·
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AIP - E&M MVAC	84	12-Aug-20	20-Nov-20	109	12-Aug-20 A	19-Dec-20					·			AIP - E&M MVA	· · · · · · · · · · · · · · · · · · ·	
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AIP - E&M Plumbing & Drainage System	87	10-Aug-20	21-Nov-20	79	21-Sep-20 A	24-Dec-20		V		<del>;</del>	·			AIP - E&N	I Plumbing & Drair	age System
AIP - Draft - Final Review and prepare for 1st Sub	18	10-Aug-20	29-Aug-20	5	21-Sep-20 A	25-Sep-20 A		AIP Dr	aft - Final Review and prep	are for 1st	Sub					
	Summary	-	-				<u>1</u> 1		<u>, 1 l</u>	<u> </u>			Date	Revision	Checked	Approved
Page 13 of 20 ♦ ♦ Milestone Planned Bar			12010/	∩ ⁄I '	Truck	Dood .		fractruct	turo Marles				05-Nov-19	00V0	WYu	
Data Date: 31-Oct-20			2010/0	04	ITUNK	Road	i z and in	mastruc	ture Works	»  /			18-Dec-19		WYu	
Actual Milestone				for	Devel	opmer	nts at Sou	ith Aproi	า		BOU		22-Feb-20			WYu
Actual Work		1				1						UA FUDLILO	00 Apr 20	011/1		1474

Baseline Bar

 $\diamond$ 

🔷 Baseline Milestone

TRAVAUX PUBLICS

09-Apr-20

17-Jul-20 09-Oct-20

01V1

01V2

01V3

SPa/LLo

SPa/LLo

SPa/LLo

WYu

WYu

WYu

Activity Name	Dur	01V3 Start	01V3 Finish	Dur	Early Start	Early Finish	2020 2021
							September         October         November         December         January           30         06         13         20         27         04         11         18         25         01         08         15         22         29         06         13         20         27         03         10         17         24
AIP - 1st Sub	0		29-Aug-20	0		25-Sep-20 A	♦ AIP 1st Sub
AIP - Review by IP / DC	28	30-Aug-20	26-Sep-20	37	26-Sep-20 A	01-Nov-20	AIP - Review by IP / DC
AIP - Review by SO	28	30-Aug-20	26-Sep-20	37	26-Sep-20 A	01-Nov-20	AIP - Review by SO
AIP - Update & prepare for 2nd Sub	22	28-Sep-20	24-Oct-20	22	02-Nov-20	26-Nov-20	AIP - Update & prepare for 2nd Sub
AIP - 2nd Sub	0		24-Oct-20	0		26-Nov-20	AIP - 2nd Sub
AIP - 2nd Review by SO	28	25-Oct-20	21-Nov-20	28	27-Nov-20	24-Dec-20	AIP - 2hd Review by SO
AIP - SO Consent for DDA Submission	0		21-Nov-20	0		24-Dec-20	AIP - SD Consent for DDA Submission
DDA - E&M Plumbing & Drainage System	41	23-Nov-20	12-Jan-21	41	28-Dec-20	17-Feb-21	
DDA - Draft - Preparation by Designer	24	23-Nov-20	19-Dec-20	24	28-Dec-20*	25-Jan-21	
DDA - Draft - Final Review and prepare for 1st Sub	17	21-Dec-20	12-Jan-21	17	26-Jan-21	17-Feb-21	
AIP - E&M Electrical Installation	101	24-Aug-20	22-Dec-20	128	24-Aug-20 A	26-Jan-21	
AIP - Draft - Preparation by Designer	24	24-Aug-20	19-Sep-20	48	24-Aug-20 A	20-Oct-20 A	AIP - Draft - Preparation by Designer AIP - Draft - Preparation by Designer AIP - Draft - Final Review and prepare for 1st Sub
AIP - Draft - Final Review and prepare for 1st Sub	12	21-Sep-20	06-Oct-20	15	21-Oct-20 A	07-Nov-20	
AIP - 1st Sub	0		06-Oct-20	0		07-Nov-20	AIP - 1st Sub
AIP - Review by IP / DC	28	07-Oct-20	03-Nov-20	28	08-Nov-20	05-Dec-20	AIP - Review by IP / DC
AIP - Review by SO	28	07-Oct-20	03-Nov-20	28	08-Nov-20	05-Dec-20	
AIP - Update & prepare for 2nd Sub	18	04-Nov-20	24-Nov-20	18	07-Dec-20	29-Dec-20	AIP - Update & prepare for 2nd Sub
AIP - 2nd Sub	0	05.11	24-Nov-20	0		29-Dec-20	AIP - 2nd Sub
AIP - 2nd Review by SO	28	25-Nov-20	22-Dec-20	28	30-Dec-20	26-Jan-21	
AIP - SO Consent for DDA Submission	0		22-Dec-20	0		26-Jan-21	♦ AP
DDA - E&M Electrical Installation	25	23-Dec-20	23-Jan-21	25	27-Jan-21	27-Feb-21	
DDA - Draft - Preparation by Designer	25	23-Dec-20	23-Jan-21	25	27-Jan-21*	27-Feb-21	
AIP CLP Submission - Power Supply to EVB & WVB	91	05-Sep-20	23-Dec-20	93	26-Sep-20 A	19-Jan-21	AIP CLP Sut
AIP - Draft - Preparation by Designer	18	05-Sep-20	25-Sep-20	19	26-Sep-20 A	20-Oct-20 A	AIP - Draft - Preparation by Designer
AIP - Draft - Final Review and prepare for 1st Sub	12	26-Sep-20	12-Oct-20	15	21-Oct-20 A	07-Nov-20	
AIP - 1st Sub	0		12-Oct-20	0		07-Nov-20	AIP - 1st Sub
AIP - Review by IP / DC	28	13-Oct-20	09-Nov-20	28	08-Nov-20	05-Dec-20	
AIP - Review by SO	28	13-Oct-20	09-Nov-20	28	08-Nov-20	05-Dec-20	
AIP - Update & prepare for 2nd Sub	14	10-Nov-20	25-Nov-20	14	07-Dec-20	22-Dec-20	AIP - Update & prepare for 2nd Sub
AIP - 2nd Sub	0		25-Nov-20	0		22-Dec-20	◆ AIP - 2nd Sub
AIP - 2nd Review by SO	28	26-Nov-20	23-Dec-20	28	23-Dec-20	19-Jan-21	
AIP - SO Consent for DDA Submission	0		23-Dec-20	0		19-Jan-21	◆ AIP - SO Cor
DDA CLP Submission - Power Supply to EVB & WVB	24	24-Dec-20	23-Jan-21	24	20-Jan-21	19-Feb-21	
DDA - Draft - Preparation by Designer	24	24-Dec-20	23-Jan-21	24	20-Jan-21*	19-Feb-21	
AIP - E&M Tunnel Lighting Design	127	31-Aug-20	01-Feb-21	124	26-Sep-20 A	27-Feb-21	
AIP - Draft - Preparation by Designer	34	31-Aug-20	10-Oct-20	34	26-Sep-20 A	07-Nov-20	AIP - Draft - Preparation by Designer
AIP - Draft - Final Review and prepare for 1st Sub	24	12-Oct-20	09-Nov-20	24	09-Nov-20	05-Dec-20	AIP - Draft - Final Review and prepare for 1st Sub
AIP - 1st Sub	0	10 Nov 20	09-Nov-20	0	06 000 00	05-Dec-20	
AIP - Review by IP / DC	28	10-Nov-20	07-Dec-20	28	06-Dec-20	02-Jan-21	AIP - Review by IP / DC
AIP - Review by SO	28	10-Nov-20	07-Dec-20	28	06-Dec-20	02-Jan-21 27-Feb-21	
AIP - Update & prepare for 2nd Sub AIP - E&M CMCS	45	08-Dec-20	01-Feb-21	45 59	04-Jan-21		
	<u>59</u> 41	10-Nov-20	20-Jan-21		07-Dec-20	19-Feb-21	
AIP - Draft - Preparation by Designer		10-Nov-20	29-Dec-20	41 10	07-Dec-20 27-Jan-21	26-Jan-21	
AIP - Draft - Final Review and prepare for 1st Sub	18 262	30-Dec-20 01-Jun-20	20-Jan-21 19-Apr-21	18 171		19-Feb-21	
SOUTH APRON EXTERNAL WORKS					•	30-Mar-21	
Road S20	166	01-Jun-20	16-Dec-20	150	02-Sep-20 A		
	86	30-Jul-20	10-Nov-20	49	02-Sep-20 A		CUE CUE CUE
CUE Typical Section ELS (Preboring)	36	30-Jul-20	09-Sep-20	1	02-Sep-20 A	02-Sep-20 A	
CUE Typical Section ELS (Sheet pile)	50	10-Sep-20	10-Nov-20	49	02-Sep-20 A		CUE Typical Section EL\$ (Sheet pile)
Road & Drain	166	01-Jun-20	16-Dec-20	150	02-Sep-20 A	05-Mar-21	
Page 14 of 20 <ul> <li>Milestone</li> <li>Planned Bar</li> <li>Critical A divity</li> <li>Actual Milestone</li> </ul>		ED/					T2 and Infrastructure Works Its at South Apron
Baseline Milestone     Baseline Bar			Thre	e N	/lonths	Rollin	g Programme (Oct-20)

Activity Name	Dur	01V3 Start	01V3 Finish	Dur	Early Start	Early Finish	2020 2021	
							September         October         November         December         January           30         06         13         20         27         04         11         18         25         01         08         15         22         29         06         13         20         27         03         10         17         24	
Stage 1	114	01-Jun-20	15-Oct-20	98	02-Sep-20 A	30-Dec-20	▼ Stage 1	
S20 Stage 1 (Sewerage)	8	08-Jul-20	16-Jul-20	26	21-Sep-20 A	22-Oct-20 A	\$20 Stage 1 (Sewerage)	
S20 Stage 1 (Drainage)	27	17-Jul-20	17-Aug-20	28	23-Sep-20 A	28-Oct-20 A	S20 Stage 1 (Drainage)	
S20 Stage 1 (U channel, Catchpit, Gully)	24	19-Aug-20	15-Sep-20	24	03-Nov-20	30-Nov-20	S20 Stage 1 (U channel, Catchpit, Gully)	
S20 Stage 1 (Roadworks)	24	16-Sep-20	15-Oct-20	24	01-Dec-20	30-Dec-20	S20 Stage 1 (Roadworks)	
S20 Site Clearance / Trial pit / UU diversion	24	01-Jun-20	29-Jun-20	14	02-Sep-20 A	17-Sep-20 A	\$20 Site Clearance / Trial pit/ UU diversion	
S20 Stage 1 Open cut excavation	6	30-Jun-20	07-Jul-20	2	18-Sep-20 A	19-Sep-20 A	S20 Stage 1 Open cut excavation	
S20 Stage 1 (U channel, Catchpit, Gully)	0			24	03-Nov-20	30-Nov-20	S20 Stage 1 (U channel, Catchpit, Gully)	
S20 Stage 1 (U channel, Catchpit, Gully) 50%	0			12	03-Nov-20	16-Nov-20	S20 Stage 1 (U channel, Catchpit, Gully) 50%	
S20 Stage 1 (U channel, Catchpit, Gully) 100%	0			12	17-Nov-20	30-Nov-20	S20 Stage 1 (U channel, Catchpit, Gully) 100%	
S20 Stage 1 (Roadworks)	0			24	01-Dec-20	30-Dec-20	V S20 Stage 1 (Roadworks)	
S20 Stage 1 (Roadworks) 50%	0			12	01-Dec-20	14-Dec-20	S20 Stage 1 (Roadworks) 50%	
S20 Stage 1 (Roadworks) 100%	0			12	15-Dec-20	30-Dec-20	S20 Stage 1 (Roadworks) 100%	
Stage 2	52	16-Oct-20	16-Dec-20	52	31-Dec-20	05-Mar-21		
S20 Stage 2 (Sewerage)	16	23-Oct-20	11-Nov-20	16	08-Jan-21	26-Jan-21		
S20 Stage 2 (Drainage)	30	12-Nov-20	16-Dec-20	30	27-Jan-21	05-Mar-21		
S20 Stage 2 Open cut excavation	6	16-Oct-20	22-Oct-20	6	31-Dec-20	07-Jan-21	\$20 Stage 2 Open cut excava	
S20 Stage 2 (Sewerage)	0			16	08-Jan-21	26-Jan-21	S20	
S20 Stage 2 (Sewerage) 50 %	0			8	08-Jan-21	16-Jan-21	S20 Stage 2 (Sev	
S20 Stage 2 (Sewerage) 100 %	0			8	18-Jan-21	26-Jan-21		
S20 Stage 2 (Drainage)	0			12	27-Jan-21	09-Feb-21		
S20 Stage 2 (Drainage) 40%	0			12	27-Jan-21	09-Feb-21		
[STE] District Cooling System for AMAWBC Section 6B	144	10-Aug-20	30-Jan-21	144	03-Oct-20 A	27-Mar-21		
DCS Section 6B	144	10-Aug-20	30-Jan-21	144	03-Oct-20 A	27-Mar-21		
DCS - Material Procurement for Section 6B	96	10-Aug-20	02-Dec-20	96	03-Oct-20 A	27-Jan-21		
DCS - Section D part 1	48	03-Dec-20	30-Jan-21	48	28-Jan-21	27-Mar-21		
DCS - Section C part 1	48	03-Dec-20	30-Jan-21	48	28-Jan-21	27-Mar-21		
[STE] District Cooling System - Remaining Section 7B	96	17-Dec-20	19-Apr-21	96	02-Nov-20	27-Feb-21		
Road L10S	96	17-Dec-20	19-Apr-21	96	02-Nov-20	27-Feb-21		
DCS - Material Procurement for Section 7B	96	17-Dec-20	19-Apr-21	96	02-Nov-20	27-Feb-21		
Foot Bridge FB-02	72	02-Jan-21	30-Mar-21	72	02-Jan-21	30-Mar-21		
Temporary Ramp provision	72	02-Jan-21	30-Mar-21	72	02-Jan-21*	30-Mar-21		
[STE] Hoi Bun Road / Cheung Yip Street / Wang Chiu Road Junction	40	05-Dec-20	25-Jan-21	40	05-Dec-20	25-Jan-21	v [STE	
TTA Phasing	0		05-Dec-20	0		05-Dec-20*	◆ TTA Phasing	
TMLG for XP validation	0		24-Dec-20	0		24-Dec-20	◆ TMLG for XP validation	
XP validated	0		25-Jan-21	0		25-Jan-21	♦ XP v	
[STE] Road L10 (Northern)	0			72	16-Nov-20	10-Feb-21		
CUE	0			72	16-Nov-20	10-Feb-21		
CUE under Section 13	0			72	16-Nov-20	10-Feb-21		
CUE L10(N) ELS (Sheet pile) 12%	0			12	16-Nov-20*	28-Nov-20	¢UE L 10(N) ELS (Sheet pile) 12%	
CUE L10(N) ELS (Sheet pile) 24%	0			12	30-Nov-20*	12-Dec-20	CUE L10(N) ELS; (Sheet pile) 24%	
CUE L10(N) ELS (Sheet pile) 36%	0			12	14-Dec-20*	29-Dec-20	CUE L10(N) ELS (Sheet pile) 36%	
CUE L10(N) ELS (Sheet pile) 50%	0			12	30-Dec-20*	13-Jan-21		
CUE L10(N) ELS (Sheet pile) 60%	0			12	14-Jan-21*	27-Jan-21		
CUE L10(N) ELS (Sheet pile) 72%	0			12	28-Jan-21*	10-Feb-21		
DEPRESSED ROAD [DPR]	223	04-May-20	27-Jan-21	115		10-Feb-21		
ELS system & Foundation	123	04-May-20	25-Sep-20	43	23-Sep-20 A	14-Nov-20	▼ ELS system & Foundation	
DPR - Predrill for H-piles foundation	24	04-May-20	30-May-20	0	23-Sep-20 A	23-Sep-20 A	I DPR - Predtill for H-piles foundation	
DPR - H-pile Drilling / Installation / Grouting	24	01-Aug-20	28-Aug-20	0	23-Sep-20 A	-	I DPR - H-pile Drilling / Installation / Grouting	
DPR - Pile Load Test	10	29-Aug-20	09-Sep-20	0	23-Sep-20 A	23-Sep-20 A	I DPR - Pile Load Test	
Page 15 of 20   Milestone   Summary							Date Revision Checked Approved	
Data Date: 31-Oct-20			12018/	<u>۸</u>	Trunk	Road	T2 and Infrastructure Works	
CriticalAdivity	ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at South Aprop							
Actual Milestone				for	Devel	opmer		
Actual voix						•	09-Apr-20 01V1 SPa/LLo WYu	
Baseline Bar			Thre	e٨	/lonths	Rollin	g Programme (Oct-20)	

Activity Name	Dur	01V3 Start	01V3 Finish	Dur	Early Start	Early Finish				0-4-1	20			Derend			2021
							September 30 06 13	20 27	04	Octobe 11	er 18 25	01 08 15	22 29	Decembe			anuary 17 24
DPR - King Post for ELS	24	29-Aug-20	25-Sep-20	42	24-Sep-20 A	14-Nov-20							- King Post for ELS				
Excavation & Strutting	78	24-Oct-20	27-Jan-21	114	24-Sep-20 A	10-Feb-21		V					1 1				
DPR - CH6008-6080 - Excavation to Strut S1	21	24-Oct-20	18-Nov-20	6	10-Dec-20	16-Dec-20					· · · · · · · · · · · · · · · · · · ·					80 - Excavation to	
DPR - CH6008-6080 - Strut S1 Installation	12	19-Nov-20	02-Dec-20	14	22-Dec-20	09-Jan-21						<b>-</b>				DPI	R - ¢H6008-6080 - Stru
DPR - CH6008-6080 - Excavation to Strut S3	20	03-Dec-20	28-Dec-20	12	06-Jan-21	19-Jan-21								;; !	·///////		DPR - CH60
DPR - CH6008-6080 - Strut S3 Installation	12	29-Dec-20	12-Jan-21	10	18-Jan-21	28-Jan-21											
DPR - CH6008-6080 - Excavation to FEL	7	13-Jan-21	20-Jan-21	7	29-Jan-21	05-Feb-21										+	
DPR - CH5962-6008 - Excavation S1	24	24-Oct-20	21-Nov-20	12	28-Jan-21	10-Feb-21					· +						
DPR - CH6080-6150 - Excavation to S1	18	24-Oct-20	14-Nov-20	9	30-Nov-20	09-Dec-20					·			DPR - CH	5080-6150; - Exca	vation to S1	
DPR - CH6080-6150 - Strut S1 Installation	12	16-Nov-20	28-Nov-20	20	04-Dec-20	29-Dec-20					·			į	·	DPR - CH6080-61	50 - Strut S1 Installatio
DPR - CH6080-6150 - Excavation to S2	12	30-Nov-20	12-Dec-20	12	16-Dec-20	31-Dec-20											
DPR - CH6080-6150 - Strut S2 Installation	12	14-Dec-20	29-Dec-20	16	02-Jan-21	20-Jan-21									·		DPR - CH6
DPR - CH6080-6150 - Excavation to S3	12	30-Dec-20	13-Jan-21	12	14-Jan-21	27-Jan-21									·		
DPR - CH6080-6150 - Strut S3 Installation	12	14-Jan-21	27-Jan-21	12	21-Jan-21	03-Feb-21									·		
Middle Section Ch6008 - Ch6045	0	14-Jd11-21	27-Jd1-21								·		1 1 1 				
					24-Sep-20 A	28-Jan-21						King Post Installation					
King Post Installation	0			32	24-Sep-20 A	03-Nov-20	+										
Dewatering Well Installation	0			10	27-Oct-20 A	06-Nov-20						Dewatering We	Il Installation			1	
Excavation Stage 1 - below strut S1	0			3	14-Dec-20	16-Dec-20	l							; 🗖 E ;		1 - below strut S1	
Strut S1 installation (5 nos)	0			10	22-Dec-20	05-Jan-21					·			¦ 			
Excavation Stage 2 - below strut S3	0			8	06-Jan-21	14-Jan-21						· · · · · · · · · · · · · · · · · · ·	i i 				Excavation Stage 2
Strut S3 installation (5 nos)	0			10	06-Jan-21	16-Jan-21											Strut S3 installati
Excavation Stage 3 - FEL	0			10	18-Jan-21	28-Jan-21											
Deep Section Part 1 Ch6045 - Ch6070	0			85	13-Oct-20 A	23-Jan-21											V Deep S
King Post Installation	0			19	13-Oct-20 A	04-Nov-20			1			King Post Installat	ion				
Dewatering Well Installation	0			4	05-Nov-20*	09-Nov-20						Dewatering	WellInstallation				
Excavation Stage 1 - below strut S1	0			3	10-Dec-20	12-Dec-20											
Strut S1 installation (2 nos)	0			4	06-Jan-21	09-Jan-21										📕 Stri	t S1 installation (2 nos
Excavation Stage 2 - below strut S3	0			4	15-Jan-21	19-Jan-21											Excavation S
Strut S3 installation (4 nos)	0			4	20-Jan-21	23-Jan-21					·						Strut S
Deep Section Part 2 Ch6070 - Ch6115	0			73	23-Oct-20 A	20-Jan-21					V .						▼ Deep Section
King Post Installation	0			10	23-Oct-20 A	04-Nov-20					·	King Post Installat	ion				
Dewatering WellInstallation	0			6	05-Nov-20*	11-Nov-20						Dewater	ing Well Installation				
Excavation Stage 1 - below strut S1	0			5	04-Dec-20	09-Dec-20								<b>Excavation</b>	Stage 1 - below	strut S1	
Strut S1 installation (5 nos)	0			10	16-Dec-20	29-Dec-20											ı (5 nos)
Excavation Stage 2 - below strut S2	0			5	02-Jan-21	07-Jan-21											ation Stage 2 - below s
Strut S2 installation (3 nos)	0			5	14-Jan-21	20-Jan-21											Strut S2 ins
Deep Section Part 3 Ch6115 - Ch6150	0			69	05-Nov-20	20-Jan-21 27-Jan-21									· · · · · · · · · · · · · · · · · · ·		
	0			09 Q	05-Nov-20*	14-Nov-20						King			·		• D
King Post Installation	0			9										Installation			
Dewatering Well Installation	0			0	16-Nov-20	21-Nov-20								Excavation Stage			
Excavation Stage 1 - below strut S1	0			4	30-Nov-20	03-Dec-20											
Strut S1 installation (5 nos)	0			10	04-Dec-20	15-Dec-20									ut S1 installation	<u> </u>	
Excavation Stage 2 - below strut S2	0			12	16-Dec-20	31-Dec-20								· · · · · · · · · · · · · · · · · · ·			je 2 - below strut S2
SUS BH	0			12	16-Dec-20	31-Dec-20	l							;		\$US BH	
Strut S2 installation (5 nos)	0			10	02-Jan-21	13-Jan-21	l							¦ 			Strut S2 installation (
Excavation Stage 3 - below strut S3	0			12	14-Jan-21	27-Jan-21					·····			¦			Ex
SUS BH	0			12	14-Jan-21	27-Jan-21	l								·		S
WEST VENTILATION BUILDING [WVB]	180	23-Oct-20	04-Jun-21	85	02-Nov-20	11-Feb-21								· · · · · · · · · · · · · · · · · · ·			
ELS system & Foundation	180	23-Oct-20	04-Jun-21	85	02-Nov-20	11-Feb-21						V		· · · · · · · · · · · · · · · · · · ·			
WVB - Slurry Wall Construction	0			19	09-Nov-20	30-Nov-20								3 - Slurry Wall Con			
Mobilization & Predrilling for H-piles Foundation	48	23-Oct-20	18-Dec-20	25	02-Nov-20	30-Nov-20									Mobilization & F	Predrilling for H-pil	es Foundation
Page 16 of 20 ♦ ♦ Milestone ▼ Summary	-	1			11			• • •						Date	Revision	Checked	Approved
			100401	<b>~</b> 4	<b>T</b>									05-Nov-19	00V0	WYu	7,00100
Data Date: 31-Oct-20			/2018/	04	Irunk	Koad	T2 and Inf	rastruct	lure	VVO	rks  /				00V1	WYu	
Actual Milestone				for	Develo	opmer	nts at Sout	th Apror	า			BOUYG	JES		01V0	SPa/LLo	WYu
									•			TRAVAUX PU	BLICS	09-Apr-20	01V1	SPa/LLo	WYu
Baseline Milestone			Thra	۵ N	lontha	Dallin	a Drogram	$nma$ ( $\cap$	<u>_t 20</u>	))					01V2	SPa/LLo	WYu
			nne				ng Program		<b>υι-</b> ΖΟ	リ				09-Oct-20	01V3	SPa/LLo	WYu
											I						

Activity Name	Dư	01V3 Start	01V3 Finish	Dur	Early Start	Early Finish	2020 2021 September October November December January
							30         06         13         20         27         04         11         18         25         01         08         15         22         29         06         13         20         27         03         10         17         24
WVB - H-piles Drilling / Installation / Grouting 100% completion	66	13-Mar-21	04-Jun-21	66	02-Nov-20	20-Jan-21	
WVB - Sheet Piles Installation 50% completion	48	03-Dec-20	30-Jan-21	36	01-Dec-20	14-Jan-21	
WVB - Sheet Piles Installation 100% completion	48	01-Feb-21	31-Mar-21	48	15-Dec-20	11-Feb-21	
ELS System & Foundation	0			85	02-Nov-20	11-Feb-21	Mobilization for Slurry Wal
Mobilization for Slurry Wall	0			6	02-Nov-20*	07-Nov-20	Mobilization for Slurry Wall WVB - Slurry Wall Construction learning curve
WVB - Slurry Wall Construction learning curve	0			7	09-Nov-20	16-Nov-20	WVB - Sturry Wall Construction learning curve
Mobilization for Sheet Pile Installation	0			19	09-Nov-20	30-Nov-20	
WVB - Slurry Wall Construction remaining	0			12	17-Nov-20	30-Nov-20	WVB - Slurry Wall Construction remaining
WVB - Sheet Pile Installation 18%	0			12	01-Dec-20	14-Dec-20	WVB - Sheet Pile Installation 18%
WVB - Sheet Pile Installation 35%	0			12	15-Dec-20	30-Dec-20	WVB - Sheet Pile Installation 33%
WVB - Sheet Pile Installation 53%	0			12	31-Dec-20	14-Jan-21	
WVB - Sheet Pile Installation 71%       WVB - Sheet Pile Installation 88%	0			12 12	15-Jan-21 29-Jan-21	28-Jan-21 11-Feb-21	
C&C TUNNEL / LAUNCHING SHAFT [C&C / LS]	129	12-Oct-20	18-Mar-21		24-Aug-20 A	06-Feb-21	
Dwall & Ground Treatment		12-Oct-20	10-Mar-21		24-Aug-20 A	06-Feb-21	
Shaft Dwall	122 75	12-0ct-20	10-ivial-21 11-Jan-21	91	0	10-Dec-20	Shaft Dwall
C&C/LS - Dwall & Barrettes 80%	20	12-Oct-20	25-Nov-20	37	24-Aug-20 A 24-Aug-20 A		C&C/LS - Dwall & Barrettes 80%
C&C/LS - Dwall & Barrettes 100%	38	26-Nov-20	25-100V-20 11-Jan-21	54	24-Aug-20 A 08-Oct-20 A	10-Dec-20 A	C&C/LS - Dwall & Barret
Cut & Cover / Cell 1 & 2	0	20 100 - 20	in Jan Z I		28-Sep-20 A	30-Jan-21	
Dwall	0				28-Sep-20 A		Dwall
C2S-03	0			8	02-Nov-20	10 Dec 20	$\sim$
Grab Excavation	0			3	02-Nov-20	04-Nov-20	Grab Excavation
Cutter Excavation	0			2	05-Nov-20	06-Nov-20	□ Cutter Excavation
Cage Installation & Concrete	0			3	07-Nov-20	10-Nov-20	Cade Installátion & Concrete
C2N-05	0			19	23-Oct-20 A	14-Nov-20	✓ ✓ ✓ C2N-05
Grab Excavation	0			6	23-Oct-20 A		Grab Excavation
Cutter Excavation	0			10	31-Oct-20 A		Cútter Excavation
Cage Installation & Concrete	0			3	12-Nov-20	14-Nov-20	Cage Iristallation & Concréte
C2S-05	0			17	21-Nov-20	10-Dec-20	▼ C2S-05
Grab Excavation	0			4	21-Nov-20	25-Nov-20	Grab Excavation
Cutter Excavation	0			10	26-Nov-20	07-Dec-20	Cutter Excavation
Cage Installation & Concrete	0			3	08-Dec-20	10-Dec-20	Cage Installation & Concrete
C1-01	0			16	16-Nov-20	03-Dec-20	▼────▼ ¢1-01
Grab Excavation	0			4	16-Nov-20	19-Nov-20	Grab Excavation
Cutter Excavation	0			9	20-Nov-20	30-Nov-20	Cutter Excavation
Cage Installation & Concrete	0			3	01-Dec-20	03-Dec-20	Cage Installation & Concrete
C1-16	0			18	31-Oct-20 A	20-Nov-20	▼ C1-16
Grab Excavation	0			5	31-Oct-20 A	05-Nov-20	Grab Excavation
Cutter Excavation	0			10	06-Nov-20	17-Nov-20	Cutter Excavation
Cage Installation & Concrete	0			3	18-Nov-20	20-Nov-20	Cage Installation & Concrete
C1-08	0			30	28-Sep-20 A	04-Nov-20	▼ C1-08
Grab Excavation	0			4	28-Sep-20 A		Grab Excavation
Cutter Excavation	0			3	29-Oct-20 A		Cutter Excavation Cage Installation & Concrete
Cage Installation & Concrete	0			3	02-Nov-20	04-Nov-20	Cáge Installation & Concrete
C1-09	0			10	07-Nov-20	18-Nov-20	
Grab Excavation	0			4	07-Nov-20	11-Nov-20	Grab Excavation
Cutter Excavation	0			3	12-Nov-20	14-Nov-20	Cutter Excavation
Cage Installation & Concrete DN-01	0			3	16-Nov-20	18-Nov-20	Cage Installation & Concrete
Excavation	0 0			4	03-Nov-20 03-Nov-20*	06-Nov-20 04-Nov-20	
	0			2	03-1107-20	UV-2U	
Page 17 of 20   Milestone   Summary							Date Revision Checked Approved
Data Date: 31-Oct-20		ED.	/2018/	04	Trunk	Road	T2 and Infrastructure Works
							BOUYGUES BOUYGUES
Actual Work					Develo	phile	TIS AT SOUTH APTON 09-Apr-20 01V1 SPa/LLo WYu
♦ Baseline Milestone     Baseline Bar			<b>Th</b>	~ ^	lanthe		
			inre	e N	nonins	ROIIIU	ig Programme (Oct-20)



Activity Name	Dur	01V3 Start	01V3 Finish	Dur	Early Start	Early Finish			-	2020					2021	
							September 30 06 13 20	27	October 7 04 11 18 25	01	November 08 15	22 29	December 06 13 20 27	03	January 10 17	24
Cage Installation & Concrete	0			2	05-Nov-20	06-Nov-20					Cage Installation	& Concrete				
BP-02	0			6	02-Nov-20	07-Nov-20				▼	<b>V</b> BP-02					
Excavation	0			4	02-Nov-20	05-Nov-20					Ęxcavatioh		JLLLLL		J 	
Cage Installation & Concrete	0			2	06-Nov-20	07-Nov-20					Cage Installation	n & Concrète	J			
ELS	0			41	11-Dec-20	30-Jan-21							V			
Sheet Pile installation part 3	0			5	11-Dec-20	16-Dec-20				· <mark>-</mark>			Sheet Pile install	ation part 3	     	
Dwall Breaking & Excavation	0			6	17-Dec-20	23-Dec-20							Dwall E			i
Capping Beam	0				24-Dec-20	02-Jan-21									g Beam	
Cell 1& 2 Excavation to -1.5mPD	0				04-Jan-21	16-Jan-21	· · · · · · · · · · · · · · · · · · ·									2 Excava
SUS Bulkhead removal	0				07-Jan-21	20-Jan-21	· · · · · · · · · · · · · · · · · · ·								SI	US Bulkh∉
Cell 1& 2 Excavation to -7.0mPD	0			12	18-Jan-21	30-Jan-21				· <mark>·</mark>						· · · · · · · · · · · · · · · · · · ·
Break-in Plug	47	12-Jan-21	10-Mar-21		11-Dec-20	06-Feb-21				· · · <mark>·</mark> · · · · · · ·						
B/I Plug - Perimeter Wall + Separation Wall	47	12-Jan-21	10-Mar-21		11-Dec-20	06-Feb-21				· · · <mark>·</mark> · · · · · · ·					· · · · · · · · · · · · · · · · · · ·	i
Shaft Excavation & Strutting	91	26-Nov-20	18-Mar-21		08-Oct-20 A	03-Feb-21	· · · · · · · · · · · · · · · · · · ·			<mark>.</mark>		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		4	
C&C / LS - Interface Coring / Guide Wall Removal	48	26-Nov-20	23-Jan-21		08-Oct-20 A	19-Dec-20	· · · · · · · · · · · · · · · · · · ·					· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	C&C/L
SI Submission & Approval	24	04-Jan-21	30-Jan-21		04-Jan-21*	30-Jan-21										
C&C / LS Capping Beam / Pump Test - Lead Time	30								<u> </u>						· · · · · · · · · · · · · · · · · · ·	
		12-Jan-21	18-Feb-21		30-Nov-20	06-Jan-21					 	······				
Double Cells Shaft - Excavation - Stage 1 to below Concrete Strut	24	19-Feb-21	18-Mar-21		07-Jan-21	03-Feb-21	······		<b>├</b>			· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	
Cut & Cover	0				31-Oct-20 A	30-Jan-21									,	
Remaining Interface Core	0			-	13-Nov-20	16-Nov-20					Ren	naining Interface C	ore		· · · · · · · · · · · · · · · · · · ·	
Pumping Test	0				23-Nov-20	28-Nov-20						Pumpi				
Excavation to below strut S2	0				03-Dec-20	16-Dec-20							Excavation to be	ow strut S2		
S2 Strutting Slab	0				17-Dec-20	02-Jan-21	· · · · · · · · · · · · · · · · · · ·							S2 Stru	tting Slab	
Excavation to below strut S3	0			12	04-Jan-21	16-Jan-21									Excava	tion to be
S3 Strutting Slab	0			12	18-Jan-21	30-Jan-21										
Stage 1	0			18	02-Nov-20	21-Nov-20						1 Oncto				
Guide Wall Breaking	0			3	02-Nov-20	04-Nov-20					Luido Wall Broaking	n! !				
Dwall Breaking & Excavation	0			6	05-Nov-20	11-Nov-20					Dwall Brea	iking & Excavation				
Capping & Strutting Slab S1 part 1	0			9	12-Nov-20	21-Nov-20						Capping & Strut	ting Slab \$1 part 1			
Stage 2	0			28	31-Oct-20 A	02-Dec-20				<b>V</b>			tage 2			
Guide Wall Breaking	0			3	31-Oct-20 A	03-Nov-20				G	uide Wall Breaking				· · · · · · · · · · · · · · · · · · ·	
Sheet Pile Installation	0			5	04-Nov-20	09-Nov-20					茾 Sheet Pile Ins		JLLLLLLL_		   	
Dwall Breaking & Excavation	0			6	10-Nov-20	16-Nov-20					Dwa	all Breaking & Exca	vation			
Remaining Capping Beam & West Gantry Beam	0			6	17-Nov-20	23-Nov-20						🔁 Remaining C	apping Beam & West Gantry Beam			
Strutting Slab S1 part 2	0			8	24-Nov-20	02-Dec-20				· <mark>-</mark>		S	trutting Slab S1 part 2			
SUB-SEA TBM TUNNEL - WESTBOUND	302	29-Jul-20	04-Aug-21	286	17-Aug-20 A	04-Aug-21			·····	· <mark>-</mark>						t
TBM Design / Fabrication / FAT / Delivery	168	05-Sep-20	30-Mar-21		25-Aug-20 A	15-Apr-21	·····		····	<mark>.</mark>						
Fabrication	168	05-Sep-20	30-Mar-21		25-Aug-20 A	15-Apr-21										
Precast Fabrication	204	12-Sep-20	25-May-21		01-Sep-20 A	13-Mar-21	/			· · · <mark>·</mark> · · · · · · ·						
TBM Precast Segments	204	12-Sep-20	25-May-21		01-Sep-20 A	13-Mar-21	· · · · · · · · · · · · · · · · · · ·		<u> </u>	<mark>.</mark>						
Concrete Mix - Plant Trial	72	12-Sep-20	08-Dec-20		01-Sep-20 A		·····		<u> </u>		<u></u>		Concrete Mix - Plant Trial			
Precast TBM Segment - Mould Fabrication & Setup	72	12-Sep-20	08-Dec-20		•	21-Sep-20 A 21-Sep-20 A			<u> </u>				Precast TBM Segment - Mo	uld Fabricativ	n & Setun	
					-	-										ment Ma
Precast TBM Segment - Master Ring Erection & Inspection	24	09-Dec-20	08-Jan-21		22-Sep-20 A	20-001-20 A									Precast TBM Seg	
Precast TBM Segment - Mass Production Start	0	09-Jan-21	10 E-1 01		24-Oct-20 A	10 D = 20			<b>-</b>							jinent - IVI≩ ¦¦
Precast TBM Segment - 3%	36	09-Jan-21	23-Feb-21		24-Oct-20 A	12-Dec-20			<u>⊢</u>						,	;
Precast TBM Segment - 6%	36	24-Feb-21	10-Apr-21		14-Dec-20	27-Jan-21			····		÷					
Precast TBM Segment - 10%	36	12-Apr-21	25-May-21		28-Jan-21	13-Mar-21			<u> </u>				· · · · · · · · · · · · · · · · · · ·			
Site Establishment	302	29-Jul-20	04-Aug-21		17-Aug-20 A	04-Aug-21										
Temporary CLP 132kV Substation	264	11-Sep-20	04-Aug-21		17-Aug-20 A	04-Aug-21			· · · · · · · · · · · · · · · · · · ·							
Temp CLP 132kV Substation - ABWF & E&M for CLP Access	72	11-Sep-20	07-Dec-20	41	17-Aug-20 A	05-Oct-20 A					, 1 1 1 1		Temp CLP 132kV Substation	ABWF & E	&M for CLP Access	2
Page 18 of 20 <ul> <li>Milestone</li> <li>Planned Bar</li> <li>Critical Activity</li> <li>Actual Milestone</li> <li>Actual Work</li> <li>Baseline Milestone</li> <li>Baseline Bar</li> </ul>		ED	1	for I	Devel	opmer	T2 and Infrast nts at South Ap g Programme	oro	on		BOUYGU Ravaux pub	ES	Date         Revision           05-Nov-19         00V0           18-Dec-19         00V1           22-Feb-20         01V0           09-Apr-20         01V1           17-Jul-20         01V2           09-Oct-20         01V3	Che WYu WYu SPa/LL SPa/LL SPa/LL SPa/LL	o WYu o WYu o WYu	roved

Activity Name	Dur	01V3 Start	01V3 Finish	Dur	Early Start	Early Finish						2020				20	
							Se 30 06	ptember 13 20 27	04	Octobe	er 18 25	01 08	Vovember 15 22	Decem 2 29 06 13		Janu 03 10	uary 17 24
Temp CLP 132kV Substation - CLP Access	0	08-Dec-20		0	05-Oct-20 A				<b>♦</b>		1				9 132kV Substation	- CLP Access	
Temp CLP 132kV Substation - CLP Transformer Setup & Final Fix	192	08-Dec-20	04-Aug-21	228	27-Oct-20 A	04-Aug-21				1			· · · · ·			· · ·	
Mortar Plant	0			69	16-Nov-20	06-Feb-21				1	1		V		1 1		
Mortar Plant	0			69	16-Nov-20	06-Feb-21					, , , ,		V	· · · · · · · · · · · · · · · · · · ·	1 1	· · ·	
Mixer Foundation civil works	0			12	16-Nov-20*	28-Nov-20								Mixer Foundation civil			
Silos Foundation civil works	0			12	30-Nov-20	12-Dec-20	ļ								Foundation civil wo		
Mixer & Silos Assembly 33%	0			12	14-Dec-20	29-Dec-20	ļ									/lixer & Silos Asseml	
Mixer & Silos Assembly 66%	0			12	30-Dec-20	13-Jan-21					·····					N	Vixer & Silos Assemi
Mixer & Silos Assembly 100%	0			12	14-Jan-21	27-Jan-21					·····						M
Batchers Foundation civil works	0			9	18-Jan-21	27-Jan-21					·····						Batter Ba
Conveyors Foundation civil works	0			9	28-Jan-21	06-Feb-21											
Amenities	0			45	14-Dec-20	06-Feb-21								·····			
Foundation civil works 50%	0			9	14-Dec-20	23-Dec-20								· · · · · · · · · · · · · · · · · · ·	Foundatio	on civil works 50%	
Foundation civil works 100%	0			9	24-Dec-20	06-Jan-21					·····					Foundatio	n civil works 100%
Amenities Assembly 33%	0			9	07-Jan-21	16-Jan-21					·····						Amenities Assem
Amenities Assembly 66%	0			9	18-Jan-21	27-Jan-21	·····	·····			·····						Ar
Amenities Assembly 100%	0			9	28-Jan-21	06-Feb-21	<b> </b>	·····.									
Workshop	0			30	07-Jan-21	10-Feb-21	····.	·····			·····					V	
Foundation civil works 50%	0			9	07-Jan-21	16-Jan-21	·····										Foundation civil v
Foundation civil works 100%	0			9	18-Jan-21	27-Jan-21								·			FC
Workshop Assembly 33%	0			12	28-Jan-21	10-Feb-21	·			, , ,	· · · · · · · · · · · · · · · · · · ·			·			
DG Store / Medical Lock	144	01-Dec-20	31-May-21	144	01-Dec-20	31-May-21								·····			
Hyperbaric Intervention - LD consultation & Approval	144	01-Dec-20	31-May-21	144	01-Dec-20*	31-May-21					, , , , , , , , , , , , , , , , , , ,			·			
Barging Point at Portion P	96	29-Jul-20	20-Nov-20	64	14-Oct-20 A	30-Dec-20				····					···	Barging Point at Po	rtion P
Barging Point - Foundation preparation	36	29-Jul-20	08-Sep-20	10		26-Oct-20 A				;		rging Point - Foun	dation preparation				
Barging Point - Spoil Ramp Installation	36	09-Sep-20	22-Oct-20	30	27-Oct-20 A	30-Nov-20	+				¦			Barging Point - Spoi		Barging Point - Con	
Barging Point - Commissioning	24	23-Oct-20	20-Nov-20	24	01-Dec-20	30-Dec-20							¦			'	nmissioning
Barging Point Spoil Ramp Instalation (3 Months Forecast)	0			30	27-Oct-20 A	30-Nov-20					·····	Doraina	Doint Foundation	Barging Point Spoil	Ramp Instalation (3	Wonths Forecast)	
Barging Point - Foundation civil works	0			8	27-Oct-20 A								Point - Foundation	el Column Installation			
Barging Point - Steel Column Installation	0			4	05-Nov-20	09-Nov-20											
Barging Point - Steel Ramp Installation Barging Point - Noise Cover Frame Installation	0			0 9	10-Nov-20	16-Nov-20					·····			oint - Steel Ramp Installation	or Framo Installatio		
Barging Point - Noise Cover Frame Installation Barging Point - Cover Installation	0			3	17-Nov-20	26-Nov-20					·····			Barging Point - Noise Co		"" 	
CHA KWO LING ROAD WORKS	108	22 Jun 20	31-Oct-20	181	27-Nov-20 01-Aug-20 A	30-Nov-20					· · · · · · · · · · · · · · · · · · ·					i i 	
		23-Jun-20				11-Mar-21		·····	· · · · · · · · · · · · · · · · · · ·	   	: : :		     		, , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , ,	
Wai Yip Street / Cha Kwo Ling Road Junction	108	23-Jun-20	31-Oct-20	181	01-Aug-20 A	11-Mar-21				 				WYS/CKLI	Diversion of Dede	ation Wallukay, role	option of Fire Lludrot
WYS/CKLR Diversion of Pedestrian Walkway, relocation of Fire Hydrant	24	23-Jun-20	22-Jul-20	106	01-Aug-20 A	07-Dec-20		++						WY 5/CKL		+	LR Demolition of Isla
WYS/CKLR Demolition of Island, Laying of Gully Pipes & Street Light Ducting	21	23-Jul-20	15-Aug-20	42	17-Nov-20	07-Jan-21				         	·····			· +			
WYS/CKLR Construiction of New Road Crossing	18	17-Aug-20	05-Sep-20	18	08-Jan-21	28-Jan-21					·····						V 
WYS/CKLR Setting of Oil Drum & Laying of Ducting for ATC WYS/CKLR Removal of Planter, Set back road Kerb and relocation of gully	15	07-Sep-20 24-Sep-20	23-Sep-20 16-Oct-20	15 18	29-Jan-21 19-Feb-21	18-Feb-21 11-Mar-21											
EMSD coordination & MOC Modification at Junction of Wai Fat Road and WYS	18 60	24-Sep-20 20-Aug-20	31-Oct-20	70		24-Oct-20 A						FMSD coordin	ation & MOC Mor	dification at Junction of Wai F	at Road and MVS		
TTA Stage 3-2 part 1	0	20-Aug-20	51-ULI-2U	70 9	03-Aug-20 A 17-Nov-20*	24-001-20 A 26-Nov-20								TTA Stage 3-2 part 1			
TTA Stage 3-2 part 2	0			9	27-Nov-20*	07-Dec-20									3-2 nart 2		
TTA Stage 4	0			6	17-Nov-20*	23-Nov-20								TTA Stage 4			
TTA Stage 5	0			6	24-Nov-20	30-Nov-20	+							TTA Stage 5			
TTA Stage 5	0			6	01-Dec-20	07-Dec-20	+								6		
TTA Stage 7 part 1	0			12	08-Dec-20	21-Dec-20									TTA Stage	7 part 1	
TTA Stage 7 part 2	0			12	22-Dec-20	07-Jan-21					·····					+	gé 7 part 2
TTA Stage 8 part 1	0			9	08-Jan-21	18-Jan-21					· · · · · · · · · · · · · · · · · · ·						TTA Stage 8 p
TTA Stage 8 part 2	0			9	19-Jan-21	28-Jan-21											
	Ť						<u> </u>	1 1			<u> </u>		<u> </u>		Revision	Chaolicad	
Page 19 of 20    Data Date: 31-Oct-20        Planned Bar       Oritical Activity		ED	/2018/	04	Trunk	Road	T2 and	Infrastru	cture	Wo	rks			05-Nov-19 18-Dec-19	00V0 00V1	Checked WYu WYu	Approved
Actual Milestone				for	Develo	opmei	nts at S	outh Apr	on			BOU	JYGUES	22-Feb-20	01V0	SPa/LLo	WYu
Actual Work									~			TRAVA	UX PUBLICS	09-Api-20	01V1	SPa/LLo	WYu
Baseline Bar			Thre	۸ ۵	Ionthe	Rollin	a Prog	ramme (0	<u> </u>	าา				17-Jul-20	01V2	SPa/LLo	WYu
							iy i iuy			)				09-Oct-20	01V3	SPa/LLo	WYu

Activity Name	Dur	01V3 Start	01V3 Finish	Dur	Early Start	Early Finish	2020 2021
					,	,	September         October         November         December         January           06         13         20         27         04         11         18         25         01         08         15         22         29         06         13         20         27         03         10         17         24
TTA Stage 9	0			7	29-Jan-21	05-Feb-21	
DRILL & BLAST TUNNEL [D&BL]	165	07-Jul-20	21-Jan-21	164	03-Aug-20 A	19-Feb-21	
Tunnel Excavation	165	07-Jul-20	21-Jan-21	164	03-Aug-20 A	19-Feb-21	
Eastbound	135	10-Aug-20	21-Jan-21	158	10-Aug-20 A	19-Feb-21	
EB - Noise Measurement & CNP	0		10-Aug-20	0		10-Aug-20 A	NP
Full Face Drill & Blast	127	20-Aug-20	21-Jan-21	134	07-Sep-20 A	19-Feb-21	
EB - D&BI Tunnel - CH9240-9220 Type A - Excavation	30	20-Aug-20	23-Sep-20	48	07-Sep-20 A	04-Nov-20	EB - D&BI Tunnel - CH9240-9220 Type A - Excavation
Probe hole at CH9220	1	24-Sep-20	24-Sep-20	1	05-Nov-20	05-Nov-20	Probe holę at CH9220
EB - D&BI Tunnel - CH9220-9190 Type A - Excavation	42	25-Sep-20	16-Nov-20	30	06-Nov-20	10-Dec-20	EB - D&BI Tunnel - CH9220-9190 Type A - Excavation
Probe hole at CH9190	1	17-Nov-20	17-Nov-20	1	12-Dec-20	12-Dec-20	Probe hole at CH9190
EB - D&BI Tunnel - CH9190-9160 Type A - Excavation	13	18-Nov-20	02-Dec-20	13	14-Dec-20	30-Dec-20	EB - D&BI Tunnel - CH9190-9160 Ty
Probe hole at CH9160	1	03-Dec-20	03-Dec-20	1	31-Dec-20	31-Dec-20	Probe hole at CH9160
EB - D&BI Tunnel - CH9160-9130 Type A&B&C - Excavation	18	04-Dec-20	24-Dec-20	18	02-Jan-21	22-Jan-21	EB-D
Probe hole at CH9130	1	28-Dec-20	28-Dec-20	1	23-Jan-21	23-Jan-21	I Prob
EB - D&BI Tunnel - CH9130-9100 Type C - Excavation	20	29-Dec-20	21-Jan-21	20	25-Jan-21	19-Feb-21	
EB - D&BI Tunnel - CH9220-9190 Type A - Excavation	0			31	06-Nov-20	11-Dec-20	EB - D&BI Tunnel - CH9220-9190 Type A - Excavation
EB - D&BI Tunnel - CH9220-9210 Type A - Excavation 40%	0			12	06-Nov-20	19-Nov-20	EB - D&BI Tunnel - CH9220-9210 Type A - Excavation 40%
EB - D&BI Tunnel - CH9210-9200 Type A - Excavation 80%	0			12	20-Nov-20	03-Dec-20	EB - D&BI Tunnel - CH9210-9200 Type A - Excavation 80%
EB - D&BI Tunnel - CH9200-9190 Type A - Excavation 100%	0			6	04-Dec-20	10-Dec-20	EB - D&Bl Tunnel - CH9200-9190 Type A - Excavation 100%
Probe hole at CH9190	0			1	11-Dec-20	11-Dec-20	Probe hdle at CH9190
EB - D&BI Tunnel - CH9190-9160 Type A - Excavation	0			14	14-Dec-20	31-Dec-20	<b>V EB - D&amp;B</b> Tunnel - CH9190-9160 T
EB - D&BI Tunnel - CH9190-9175 Type A - Excavation 50%	0			7	14-Dec-20	21-Dec-20	EB - D&BI Tunnel - CH9190-9175 Type A - Excav
EB - D&BI Tunnel - CH9175-9160 Type A - Excavation 100%	0			6	22-Dec-20	30-Dec-20	EB - D&BI Tunnel - CH9175-9160 Ty
Probe hole at CH9160	0			1	31-Dec-20	31-Dec-20	Probe hole at CH9160
EB - D&BI Tunnel - CH9160-9130 Type A&B&C - Excavation	0			18	02-Jan-21	22-Jan-21	EB-D
EB - D&BI Tunnel - CH9160-9145 Type A - Excavation 50%	0			9	02-Jan-21	12-Jan-21	EB- D&BI Tunnel -
EB - D&BI Tunnel - CH9145-9130 Type A - Excavation 100%	0			9	13-Jan-21	22-Jan-21	EB-D
Westbound	86	07-Jul-20	16-Oct-20	159	03-Aug-20 A	10-Feb-21	
Full Face Drill & Break	62	07-Jul-20	16-Sep-20	135	03-Aug-20 A	13-Jan-21	▼ Full Face Drill & Br
WB - Install 1st arch rib	6	07-Jul-20	13-Jul-20	4	03-Aug-20 A	06-Aug-20 A	
WB - D&Br & Install arch rib (2nd - 5th)	28	14-Jul-20	14-Aug-20	36	07-Aug-20 A	17-Sep-20 A	WB - D&Br & Install arch rib (2nd - 5th)
WB - D&Br CH9257-9250 Type A - Excavation	28	15-Aug-20	16-Sep-20	34	18-Sep-20 A	31-Oct-20 A	WB - D&Br CH9257-9250 Type A - Excavation
Full Face Drill & Break	0			60	02-Nov-20	13-Jan-21	▼ Full Face Drill & Br
WB - D&Br CH9250-9249 Type A - Excavation	0			12	02-Nov-20	14-Nov-20	WB - D&Br CH9250-9249 Type A - Excavation
WB - D&Br CH9249-9248 Type A - Excavation	0			12	16-Nov-20	28-Nov-20	WB - D&Br CH9249-9248 Type A - Excavation
WB - D&Br CH9248-9247 Type A - Excavation	0			12	30-Nov-20	12-Dec-20	WB - D&Br CH9248-9247 Type A - Excavation
WB - D&Br CH9247-9246 Type A - Excavation	0			12	14-Dec-20	29-Dec-20	WB - D&Br CH9247-9246 Type A - Exc
WB - D&Br CH9246-9245 Type A - Excavation	0			12	30-Dec-20	13-Jan-21	WB - D&Br/CH924
Full Face Drill & Blast	24	17-Sep-20	16-Oct-20	24	14-Jan-21	10-Feb-21	
WB- Blast Door Installation	24	17-Sep-20	16-Oct-20	24	14-Jan-21	10-Feb-21	
Blast Door Installation	0			24	14-Jan-21	10-Feb-21	
WB- Blast Door Installation 50%	0			12	14-Jan-21	27-Jan-21	
WB- Blast Door Installation 100%	0			12	28-Jan-21	10-Feb-21	

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Critical A divity

lanned Bar

ctual Work aseline Milestone

Baseline Bar

Milestone

ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at South Apron



	0
	18
S	22
cs /	0
	17
	0

Date	Revision	Checked	Approved
05-Nov-19	00V0	WYu	
18-Dec-19	00V1	WYu	
22-Feb-20	01V0	SPa/LLo	WYu
09-Apr-20	01V1	SPa/LLo	WYu
17-Jul-20	01V2	SPa/LLo	WYu
09-Oct-20	01V3	SPa/LLo	WYu