## **Civil Engineering and Development Department**

## Contract No. ED/2018/04

## Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron Monthly Environmental Monitoring and Audit Report

(under EP-451/2013)

June 2020

(Version 1.0)

Approved By	after .
	(Environmental Team Leader:
	Mr. KS Lee)

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

CINOTECH CONSULTANTS LTD Room 1710, Technology Park, 18 On Lai Street, Shatin, NT, Hong Kong Tel: (852) 2151 2083 Fax: (852) 3107 1388 Email: info@cinotech.com.hk

Prepared by	Tim LUI	- Je	16 Fuly 2020
Checked by	Bric Yan	with	16 July 2020



Ref.: CEDKTDT2EM00\_0\_0081L.20

16 July 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 (June 2020) for EP-451/2013

Reference is made to the Environmental Team's submission of the Monthly EM&A Report for June 2020 (Version 1.0) certified by the ET Leader and provided to us via e-mail on 16 July 2020.

We are pleased to inform you that we have no further comments on the captioned submission. We write to verify the captioned submission in accordance with Condition 3.4 of EP-451/2013.

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 and the reported information be true, valid and correct as per Conditions 3.4 and 3.5 of EP-451/2013.

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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Ramboll Hong Kong Limited 英環香港有限公司 21/F, BEA Harbour View Centre, 56 Gloucester Road, Wanchai, Hong Kong Tel: 852.3465 2888 Fax: 852.3465 2899 www.Ramboll.com

c.c.	CEDD	Attn.: Mr. Tommy Wong	Fax: 2739 0076
	BTP	Attn.: Mr. Ivan Chau	Fax: 2293 7499
	Cinotech	Attn.: Mr. K S Lee	Fax: 3107 1388

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## **EXECUTIVE SUMMARY**

## Introduction

1. This is the 4<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-451/2013 and in accordance with the EM&A Manual (AEIAR-174/2013) during the reporting month of June 2020.

## Summary of Main Works Undertaken and Key Measures Implemented

2. The main works undertaken during the reporting period are as follows:

#### Kai Tak:

- Contractor's and SOR(MIC) Site Offices in Portion A3
- CLC building fabrication
- GI Works for the D-wall works at the Depressed Road
- Depressed Road Sheet Piling
- Depressed Road Diaphragm Wall
- Launching Shaft / C&C Tunnel CSM
- Launching Shaft / C&C Tunnel Diaphragm Wall
- Ground improvement works for PWCL at Portion N3
- Road S20 Road & Drain

## Cha Kwo Ling:

- CKL Junction Improvement works
- 3. Implementation of the key mitigation measures during the reporting period are as follows:

#### Air Quality

- Water spraying regularly on construction site area to avoid dust generation.
- Excavated dusty materials were covered by impervious sheets.

#### Noise

• Air compressor was operated with door closed and have valid noise labels.

#### Water Quality

• WetSep was constructed to treat the surface runoff prior to discharge.

#### Landscape and Visual

• Tree protection zone were fenced off to protect the existing tree.

#### Summary of Exceedances, Investigation and Follow-up

4. Exceedance of Action/Limit levels during the reporting month (June 2020) and the investigation results and/or follow-up actions:

#### Air Quality Monitoring

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

#### Construction Noise Monitoring

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

#### Landscape and Visual Monitoring and Audit

• No non-compliance of the landscape and visual impact was recorded in the reporting month. The implementation of landscape and visual and mitigation measures was checked by a Registered Landscape Architect (RLA) during the environmental site inspections.

#### **Complaint Handling, Prosecution and Public Engagement**

#### Table I Summary of Complaint/Summons/Prosecution in the Reporting Month

Errort	Ev	ent Details	Follow-up/ Remedial	Status/
Event	Number	Brief Description	Actions	Remarks
Complaints Received 1		Dust nuisance possibly caused by the construction works at the Launching Shaft area.	t Under investigation Under	
Notification of Summons and Prosecutions Received	0	-	-	-
Public Engagement Activities	0	-	-	-

2

#### Future Key Issues

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

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

	Site Activities (July 2020)	Key Environmental Issues
1.	132kV substation ELS and Structure Construction at	
	Portion M1	
2.	Pre-boring and Sheet Piling Works	
3.	Guide wall Construction and D-wall Construction	(A) / (B) / (C) / (D)
4.	Pump Test and Dewatering Well	
5.	TAM Grouting Works	
6.	Existing Slab Breaking	

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 –	Cha Kwo Ling Tunnel	
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 Kai Tak under EP-451/2013

1.4 Under Contract No. KL/2014/03 - Kai Tak Development - Stage 3 Infrastructure Works for Development at the Southern Part of the Former Runway ("T2 Advance Works"), the baseline monitoring works in Kai Tak under the EM&A Manual (AEIAR-174/2013) were conducted by the Environmental Team (ET) for the Contract No. KL/2014/03 at the approved relocated monitoring locations (EPD reference: EP2/K19/A/21 pt.5), namely KTD1a, KTD2a & KER1a. During the impact monitoring period, monitoring locations KTD 2a and KER 1a were relocated to new locations, i.e. KTD 2b and KER 1b (EPD reference: () in EP2/K19/A/21 pt. 6 and () in EP2/K19/A/21 pt. 5) respectively. Location KTD2b was then further relocated to location KTD2c, the proposal of such relocation was submitted to EPD on 24 March 2020 and was approved by EPD on 6 April 2020 (EPD reference: () in EP2/K19/A/21 pt.7). The aforementioned relocation was effective from 9 April 2020. Impact monitoring within the Kai

Tak area shall be conducted by the ET of Contract No. ED/2018/04 upon cessation of such monitoring by Contract No. KL/2014/03. The data obtained from the impact monitoring works completed by the ET of Contract No. KL/2014/03 will be adopted in this report.

## Monitoring Works in Cha Kwo Ling under EP-451/2013

- 1.5 The environmental impact of the remaining works in Cha Kwo Ling, under EP-451/2013, shall be monitored at the two proposed stations, namely CKL1, CKL2, in accordance to the EM&A Manual (AEIAR-174/2013). The impact monitoring for the two proposed stations shall be conducted by the ET of T2 Main Works.
- 1.6 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**

1.7 This is the 4<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 June 2020.

## **Project Organizations**

- 1.8 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)
- 1.9 The key contacts of the Project are shown in **Table 1.1**.

Party	Role	Contact Person	Phone No.
CEDD	Permit Holder	Mr. Wong Chi Wai, Tommy	3842 7111
HMJV	Supervisor Representative	Mr. Joe Nam	3742 3820
Cinotech	Environmental Team	Mr. KS Lee (ETL)	2151 2091
Chlotech		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

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

## **Construction Activities undertaken during the Reporting Month**

1.11 The major site activities undertaken in the reporting month included:

#### Kai Tak:

- Contractor's and SOR(MIC) Site Offices in Portion A3
- CLC building fabrication
- GI Works for the D-wall works at the Depressed Road
- Depressed Road Sheet Piling
- Depressed Road Diaphragm Wall
- Launching Shaft / C&C Tunnel CSM
- Launching Shaft / C&C Tunnel Diaphragm Wall
- Ground improvement works for PWCL at Portion N3
- Road S20 Road & Drain

Cha Kwo Ling:

• CKL Junction Improvement works

### Summary of EM&A Requirements

- 1.12 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.
- 1.13 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in **Section 10** of this report.
- 1.14 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 June 2020.

#### **Status of Environmental Licensing and Permitting**

1.15 All permits/licenses obtained for the Project are summarized in Table 1.3.

#### Table 1.3 Summary of Environmental License and Permit

Permit / License No.	Valid Period		Status	
Fermit / License No.	From	То	Status	
<b>Environmental Permit (EP)</b>				
EP-451/2013	19 Sep 2013	N/A	Valid	
EP-458/2013/C	20 Jan 2017	N/A	Valid	
Notification pursuant to Air Pollution (Construction Dust) Regulation				
Ref. No.: 451120	20 Nov 2019	N/A	Valid	
Billing Account for Construction Waste Disposal				
A/C No.: 7036016	09 Dec 2019	N/A	Valid	
Construction Noise Permit				

Permit / License No.	Valid Period		Status		
Permit / License No.	From	То	Status		
CNP No. (For Portion Depressed Road): GW-RE0287-20	28 Apr 2020	24 Oct 2020	Valid		
CNP No. (For Portion A3): GW-RE0293-20	28 Apr 2020	25 Oct 2020	Valid		
CNP No. (For Launching Shaft and Barging Point): GW-RE0326-20	11 May 2020	25 Oct 2020	Valid		
CNP No. (For Launching Shaft and Barging Point): GW-RE0459-20	15 Jun 2020	10 Dec 2020	Valid		
Wastewater Discharge License					
Nil					
Chemical Waste Producer License					
WPN: 5213-286-B2557-03	09 Mar 2020	N/A	Valid		

1.16 According to the information provided by contractor and confirmed by RE, contractor has applied the wastewater discharge license for site office and supporting area on 17 January; and, Launching shaft and Depressed road on 26 February. However, they are still awaiting for the reply from EPD as the application progresses maybe effected due to the Coronavirus pandemic. ET has chased the contractor up about the progression of wastewater discharge licences application.

## 2 AIR QUALITY

## **Monitoring Requirement**

2.1 According to the EM&A Manual (AEIAR-174/2013), 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 24-hour TSP monitoring. In case of complaints, 1-hour TSP monitoring should be conducted at least three times in every six days when the highest dust impacts are likely to occur. 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.
- 2.3 According to the approved alternative baseline air quality monitoring locations (EPD reference: EP2/K19/A/21 pt.5), the original monitoring locations (KTD1, KTD2 and KER1) are proposed to be replaced by alternative monitoring locations (KTD1a, KTD2a and KER1a) for air quality monitoring. During the impact monitoring period, monitoring locations KTD 2a and KER 1a were relocated to new locations, i.e. KTD2b and KER 1b (EPD reference: ( ) in EP2/K19/A/21 pt. 6 and ( ) in EP2/K19/A/21 pt. 5) respectively. Location KTD2b was then further relocated to location KTD2c, the proposal of such relocation was submitted to EPD on 24 March 2020 and was approved by EPD on 6 April 2020 (EPD reference: ( ) in EP2/K19/A/21 pt.7). The aforementioned relocation was effective from 9 April 2020.

<b>Monitoring Stations</b>	Location		
KTD1a	Centre of Excellence in Paediatrics (Children's Hospital)		
KTD2c	G/IC Zone next to Kwun Tong Bypass (Next to the Kowloon Bay Sewage Interception Station)		
KER1b	Site Boundary at Cheung Yip Street		
CKL1	Flat 121 Cha Kwo Ling Village		
CKL2	Flat 103 Cha Kwo Ling Village		

## Table 2.1 Air Quality Monitoring Locations

## **Monitoring Parameters and Frequency**

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

Table 2.2 Frequency and Parameters of Air Quanty Monitoring				
<b>Monitoring Stations</b>	Parameter	Period	Frequency	
KTD1a, KTD2c, KER1b, CKL1 & CKL2	1-hour TSP	0700 - 1900	3 times per 6 days (as required in case of complaints)	
KTD1a, KTD2c, KER1b, CKL1 & CKL2	24-hour TSP	24 hours	Once every 6 days	

## Table 2.2 Frequency and Parameters of Air Quality Monitoring

## **Monitoring Equipment**

- 2.5 High Volume Samplers (HVS) in compliance with the specification stipulated in the EM&A Manual (AEIAR-174/2013), Section 2.2.1.4, 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.
- 2.6 Wind data monitoring equipment was set at rooftop (about 41/F) of Yau Lai Estate Bik Lai House, Lam Tin for logging wind speed and wind direction such that the wind sensors were clear of obstructions or turbulence caused by building. The wind data monitoring equipment was recalibrated at least once every six months and the wind directions were divided into 16 sectors of 22.5 degrees each. Wind data is attached in **Appendix D**.
- 2.7 **Table 2.3** summarizes the equipment used for air quality monitoring by the ET for Contract No. ED/2018/04 only. Copies of calibration certificates are attached in **Appendix C**.

Table 2.3Air Quality Monitoring Equipment

Equipment	Model	Quantity
1-hour TSP Dust Meter	Sibata Model No. LD-3B/ LD-5R	N/A <sup>(1)</sup>
HVS Sampler	TISCH Model: TE-5170 (Serial no. 0723, 1956)	2
Calibrator	TISCH Model: TE-5025A (Serial no. 3746)	1
Wind Anemometer	Davis Weather Monitor II, Model no. 7440	1

Remarks:

(1) As no complaint of air quality was received, no impact 1-hour TSP monitoring was conducted.

## **Monitoring Methodology**

## **1-hour TSP Monitoring**

Measuring Procedures

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

(Sibata Model No.: LD-3B/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

- 2.9 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**

- 2.10 High volume samplers (HVS) (TISCH Model: TE-5170) complete with appropriate sampling inlets was 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). Moreover, the HVS also met all the requirements in Section 2.2 of the Annex II Specification.
- 2.11 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

#### 2.12 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-174/2013). 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 (ALS Technichem (HK) Pty Ltd. and 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

- 2.13 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**

- 2.14 The impact monitoring works for air quality monitoring locations KTD1a, KTD2c and KER1b are completed by the ET of Contract No. KL/2014/03, and the data will be presented in the relevant EM&A Report.
- 2.15 Impact air quality monitoring was conducted at five monitoring stations as scheduled. The monitoring schedule is shown in **Appendix B**.
- 2.16 One (1) complaint of air quality was received in the reporting month and therefore the impact 1hour TSP monitoring should be conducted to check the mitigation effectiveness. Since the investigation of the complaint is undergone, such monitoring detail and result will be presented

in the next reporting period.

- 2.17 No Action/Limit Level exceedance was recorded for all 24-hour TSP monitoring in the reporting month.
- 2.18 The air temperature, relative humidity, and the precipitation data were obtained from daily extracts of Hong Kong Observatory Climate Information Service. This weather information for the reporting month is summarized in **Appendix D**.
- 2.19 The monitoring data and graphical presentations of 24-hour TSP monitoring results are shown in **Appendix F**.
- 2.20 According to field observations by ET for Contract No. ED/2018/04 in the reporting period, the major dust source identified at the designated air quality monitoring stations are as follows:

 Table 2.4
 Major Dust Source during Air Quality Monitoring

Monitoring Stations	Major Dust Source
CKL1 - Flat 121 Cha Kwo Ling Village	Road Traffic along Cha Kwo Ling Road
CKL2 - Flat 103 Cha Kwo Ling Village	Road Traffic along Cha Kwo Ling Road

## Comparison of EM&A Result with EIA Prediction

2.21 The air monitoring data was compared with the predictions in Table 4.14 of EIA Report, AEIAR-174/2013 (as approved in 2013) as summarised in **Table 2.6**.

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

Monitoring Stations	ASR ID	Predicted Maximum 24-hr TSP Concentration in EIA Report (AEIAR- 174/2013), μg/m <sup>3</sup>	Maximum 24-hr TSP Concentration in the Reporting Month (June 2020), µg/m <sup>3</sup>
CKL1 - Flat 121 Cha Kwo Ling Village	N/A <sup>(1)</sup>	N/A <sup>(1)</sup>	67.7
CKL2 - Flat 103 Cha Kwo Ling Village	N/A <sup>(1)</sup>	N/A <sup>(1)</sup>	49.0

Remarks:

(1) No 24-hr TSP concentration was predicted in EIA Report (AEIAR-174/2013)

2.22 No Action/Limit level exceedance was recorded in the reporting period.

## 3 NOISE

## **Monitoring Requirements**

3.1 According to the EM&A Manual (AEIAR-174/2013), 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 KTD1a, KTD2c, KER1b, CKL1 and CKL2 in the reporting period. **Table 3.1** and **Figure 2** show the locations of these stations.
- 3.3 According to the approved alternative baseline noise monitoring locations (EPD reference: EP2/K19/A/21 pt.5), the original monitoring locations (KTD1, KTD2 and KER1) are proposed to be replaced by alternative monitoring locations (KTD1a, KTD2a and KER1a) for noise monitoring. During the impact monitoring period, monitoring locations KTD 2a and KER 1a were relocated to new locations, i.e. KTD 2b and KER 1b (EPD reference: () in EP2/K19/A/21 pt. 6 and () in EP2/K19/A/21 pt. 5) respectively. Location KTD2b was then further relocated to location KTD2c, the proposal of such relocation was submitted to EPD on 24 March 2020 and was approved by EPD on 6 April 2020 (EPD reference: () in EP2/K19/A/21 pt.7).

Monitoring Stations	Location		
KTD1a	Centre of Excellence in Paediatrics (Children's Hospital)		
KTD2c	G/IC Zone next to Kwun Tong Bypass (Next to the Kowloon Bay Sewage		
KID2C	Interception Station)		
KER1b	Site Boundary at Cheung Yip Street		
CKL1	Flat 121 Cha Kwo Ling Village		
CKL2	Flat 103 Cha Kwo Ling Village		

 Table 3.1
 Noise Monitoring Stations

## **Monitoring Parameters, Frequency and Duration**

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

				e	
Monitoring Stations	Time Period	Duration	Frequency	Parameter	Measurement
KTD1a					Façade Measurement
KTD2c				L <sub>10</sub> (30 min.) dB(A)	Free Field Measurement
KER1b	0700-1900 hrs on normal weekdays	30 minutes	Once per week	L <sub>90</sub> (30 min.) dB(A)	Free Field Measurement
CKL1	Weekduys			$L_{eq}(30 \text{ min.})$	Free Field Measurement
CKL2				dB(A)	Free Field Measurement

 Table 3.2
 Frequency and Parameters of Noise Monitoring

## **Monitoring Equipment**

3.5 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 Contract No. ED/2018/04 only within the reporting period. Copies of calibration certificates are attached in **Appendix G**.

Table 3.3	Noise Monitoring Equipment
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Equipment	Model	Quantity
Integrating Sound Loval Mater	BSWA308 (Serial no. 570187)	1
Integrating Sound Level Meter	SVAN 957 (Serial no. 21455)	1
Calibrator	ST-120 (Serial no. 181001637)	1
Canorator	SV30A (Serial no. 10965)	1

## Monitoring Methodology and QA/QC Procedure

- 3.6 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

- 3.7 The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- 3.8 The sound level meter and calibrator were checked and calibrated at yearly intervals.
- 3.9 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**

- 3.10 The data obtained from the impact monitoring works completed by the ET of Contract No. KL/2014/03 will be presented in the relevant EM&A Report.
- 3.11 Impact noise monitoring was conducted at five monitoring stations as scheduled. The monitoring schedule is shown in **Appendix B**. No Action/Limit Level exceedance was recorded for all construction noise monitoring in the reporting month.
- 3.12 Noise monitoring results and graphical presentations are shown in Appendix H.
- 3.13 According to field observations by ET for Contract No. ED/2018/04 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
CKL1	Road Traffic along Cha Kwo Ling Road
CKL2	Road Traffic along Cha Kwo Ling Road

3.14 The baseline noise level and the Noise Limit Level at each designated noise monitoring station are presented in **Table 3.5**.

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)
CKL1	72.4	75
CKL2	71.4	13

#### Comparison of EM&A Result with EIA Prediction

3.15 The noise monitoring data was compared with the predictions in Table 5.13 of EIA Report (AEIAR-174/2013) 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- 174/2013), dB(A)	Maximum Construction Noise Levels in the Reporting Month (June 2020), Leq (30min) dB(A)
CKL1 - Flat 121 Cha Kwo Ling Village	CKL4	71	69.5
CKL2 - Flat 103 Cha Kwo Ling Village	CKL5	69	70.1

Remarks:

(1) No Maximum Predicted Mitigated Construction Noise Levels was predicted in EIA Report (AEIAR-174/2013)

3.16 The results at CKL2 was higher than the maximum predicted mitigated construction noise level in the EIA Report, AEIAR-174/2013 (as approved in 2013), this may be due to fluctuations of traffic flow along Cha Kwo Ling Road throughout the day. The results at CKL1 was lower than the maximum predicted noise level in the EIA Report. No Action / Limit level exceedance was recorded in the reporting period.

## 4 WATER QUALITY

## **Monitoring Requirement**

- 4.1 According to Section 4.3.1.1 of EM&A Manual (AEIAR-174/2013), no water quality monitoring is required during the construction phase.
- 4.2 According to Section 4.3.1.5 of EM&A Manual (AEIAR-174/2013), compliance site audits are to be undertaken by the Engineer and ET and escorted by the Contractor to ensure that a valid discharge license has been issued by the EPD prior to the discharge of the effluent from the construction activities of the Project site. Monitoring of the quality of the treated effluent from the works areas should be carried out in accordance with the Water Pollution Control Ordinance (WPCO) license. The audit results reflect whether the effluent quality is in compliance with the discharge license requirements, the summaries of site audits are attached in **Appendix I**.
- 4.3 In the event of non-compliance the responsibilities of the relevant parties is detailed in the Event / Action plan attached in **Appendix J**.

## 5 MARINE ECOLOGY

- 5.1 According to Section 5.3.1.1 of EM&A Manual (AEIAR-174/2013), ET will be required to undertake audit of good site practice for habitat protection as detailed below. The summaries of site audits are attached in **Appendix I**.
  - Avoid damage and disturbance to the remaining and surrounding natural habitat;
  - Ensure placement of equipment is within designated areas within the existing disturbed land;
  - Ensure construction activities are restricted to within the proposed works boundary;
  - Ensure spoil heaps are be covered at all times;
  - Ensure that disturbed areas are reinstated immediately after completion of the works; and
  - Ensure enhancement planting works undertaken.

## 6 FISHERIES

- 6.1 According to Section 6.3.1.2 of EM&A Manual (AEIAR-174/2013), no specific fisheries monitoring and audit programme is required during the construction phase.
- 6.2 The implementation of the water quality mitigation measures stated in the Water Quality Impact Assessment (Refer to Section 6 of the EIA Report (AEIAR-174/2013)) will be audited as part of the EM&A procedures during the construction period and the details are presented in Section 4.2 of this Report. The summaries of site audits are attached in Appendix I.

## 7 LANDSCAPE AND VISUAL

7.1 According to the EM&A Manual (AEIAR-174/2013), a series of mitigation measures were recommended to ameliorate the landscape and visual impacts of the Project. The mitigation measures for construction stage are summarized in Table 7.1 below and provided in Appendix K:

ID No.	Landscape and Visual Mitigation Measure
CM1	All works shall be carefully designed to minimize impacts on existing landscape resources and visually sensitive receivers. Existing trees within works area shall be retained and protected.
CM2	Existing trees of good quality and condition that are unavoidably affected by the works should be transplanted.
CM3	Not used.
CM4	Not used.
CM5	Large temporary stockpiles of excavated material shall be covered with unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance.
CM6	Construction plant and building material shall be orderly and carefully stored in order to create a neat and tidy visual appearance
CM7	Erection of decorative screen hoarding should be designed to be compatible with the existing urban context.
CM8	All lighting in construction site shall be carefully controlled to minimize light pollution and night-time glare to nearby residences and GIC user. The contractor shall consider other security measures, which shall minimize the visual impacts.

 Table 7.1
 Construction Phase Landscape and Visual Mitigation Measures

- 7.2 A specialist Landscape Sub-Contractor should be employed by the Contractor for the implementation of landscape construction works and subsequent maintenance operations during the establishment period. It is proposed that the planting works will be on-site and the planting should be completed during the construction contract. The monitoring of the planting establishment should be undertaken for a 12 month period which could extend throughout the Contractor's one-year maintenance period, which will be within the first operational year of the Project.
- 7.3 All measures undertaken by both the Contractor and the specialist Landscape Sub-Contractor during the construction phase and first year of the operational phase shall be audited by a Registered Landscape Architect (RLA), as a member of the Environmental Team (ET), on a regular basis to ensure compliance with the intended aims of the measures. To fulfil the aforementioned requirements, on-site landscape and visual mitigation measures were audited by

RLA in the reporting month.

- 7.4 According to Section 7.3.1.2 of the EM&A Manual (AEIAR-174/2013), site audits shall be undertaken at least once every two weeks throughout the construction period to monitor and audit the timely implementation of landscape and visual mitigation measures within the site boundaries of this Project.
- 7.5 The broad scope of the audit is detailed below but should also be undertaken with reference to the more specific checklist provided in **Table 7.2**. The summaries of site audits are attached in **Appendix I**:
  - The extent of the agreed works areas should be regularly checked during the construction phase. Any trespass by the Contractor outside the limit of the works, including any damage to existing trees and soft landscape areas shall be prohibited;
  - the progress of the engineering works should be regularly reviewed on site to identify the earliest practical opportunities for the landscape works to be undertaken;
  - all existing trees and vegetation within the study area which are not directly affected by the works are retained and protected;
  - the methods of protecting existing vegetation proposed by the Contractor are acceptable and enforced;
  - preparation, lifting transport and re-planting operations for any transplanted trees;
  - all landscaping works are carried out in accordance with the specifications;
  - the planting of new trees, shrubs, groundcover, climbers, ferns, grasses and other plans, together with the replanting of any transplanted trees are carried out properly and within the right season; and
  - all necessary horticultural operations and replacement planting are undertaken throughout the Establishment Period to ensure the healthy establishment and growth of both transplanted trees and all newly established plants.

# Table 7.2Construction Phase Audit Checklist for Landscape and Visual Mitigation<br/>Measures

Area of Works	Items to be Monitored
Advance planting	Monitoring of implementation and maintenance of planting, and against possible incursion, physical damage, fire, pollution, surface erosion, etc.

Area of Works	Items to be Monitored
Protection of all trees and existing soft landscape areas to be retained	Identification and demarcation of trees / vegetation to be retained, erection of physical protection (e.g. fencing), monitoring against possible incursion, physical damage, fire, pollution, surface erosion, etc.
Clearance of existing vegetation	Identification and demarcation of trees / vegetation to be cleared, checking of extent of works to minimise damage, monitoring of adjacent areas against possible incursion, physical damage, fire, pollution, surface erosion, etc.
Pruning of trees	Identification and demarcation of trees / vegetation to be pruned, monitoring of extent of pruning to minimise damage, timing of operations, implementation of all stages of preparatory and pruning works, and maintenance of pruned vegetation, etc.
Plant supply	Monitoring of operations relating to the supply of specialist plant material (including the collecting, germination and growth of plants from seed) to ensure that plants will be available in time to be used within the construction works.
Soiling, planting, etc.	Monitoring of implementation and maintenance of soiling and planting works and against possible incursion, physical damage, fire, pollution, surface erosion, etc.
Site fencing and hoarding	Implementation and maintenance, to ensure compliance with agreed designs and check that it matches the surrounding environment and does not cause visual intrusion.
Architectural treatment of engineering works.	Implementation and maintenance of mitigation measures, to ensure compliance with agreed designs as applicable.
Establishment Works	Monitoring of implementation of maintenance operations during Establishment Period.

- 7.6 In the event of non-compliance the responsibilities of the relevant parties is detailed in the Event / Action plan attached in **Appendix J**.
- 7.7 In the reporting month, no non-compliance of the landscape and visual mitigation measures was recorded. According to the observation remarked by RLA, the Contractor has made the follow-up action, for example implementation of the mitigation measure like fencing off the tree protection zone, in order to reify the environmental deficiency and fulfil the aforementioned requirement.

## 8 CULTURAL HERITAGE

- 8.1 According to Section 8.3.1.1 of EM&A Manual (AEIAR-174/2013), as a precautionary measure, it is recommended that if any antiquity or supposed antiquity is discovered during the course of the excavation works undertaken by the Contractor, the discovery shall be reported to the AMO immediately and all necessary measures taken to preserve it.
- 8.2 According to Section 8.3.1.2 of EM&A Manual (AEIAR-174/2013), no EM&A is required during the construction and operational phase.

### 9 WASTE MANAGEMENT

- 9.1 According to Section 9.3.1.1 of EM&A Manual (AEIAR-174/2013), the effective management of waste arisings during the construction phase will be monitored through the site audit programme. Regular audits and site inspections should be carried out by the Engineer, ET and Contractor to ensure that the recommended good site practices and other mitigation measures are implemented by the Contractor. The summaries of site audits are attached in Appendix I.
- 9.2 According to Sections 9.3.1.3 and 9.3.1.4 of EM&A Manual (AEIAR-174/2013), documents including licenses, permits, disposal and recycling records should be reviewed and audited during site audits for the compliance with the legislation and contract requirements to ensure proper records are being maintained and procedures undertaken in accordance with the Waste Management Plan.

#### **10 ENVIRONMENTAL AUDIT**

#### Site Audits

- 10.1 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**.
- 10.2 Site audits were conducted on 04, 11, 18 and 23 June 2020 in the reporting month. Site inspection of the IEC was conducted on 18 June 2020. No non-compliance was observed during the site audit.

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

- 10.3 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 K**.
- 10.4 The ET weekly site inspections were carried out during the reporting month and the observations and recommendations are summarized in **Table 10.1**. 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	23 June 2020	Bund wall should be provided to surround the water discharge point at Depressed Road's section. Still water and accumulation of muddy water were observed at storage area and Depressed Road respectively.	To be followed up in the next reporting period.
Ecology	N/A	There was no observation in the reporting period.	N/A
Landscape and Visual	21 May 2020	Existing tree to be retained on site (CKL portion) should be protected carefully.	It was observed that tree protection zone had fenced off to protect the existing tree on site on 4 June 2020.

 Table 10.1
 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
Waste /	11 1 2020	Accumulation of water within the drip tray was observed.	No drip tray was observed at the concerned area during site inspection on 18 June 2020.
Chemical Management	11 June 2020	Construction waste within the skip should be sorted before waste disposal.	No waste was identified inside the skip during site inspection on 18 June 2020.
Permits /Licences	N/A	There was no observation in the reporting period.	N/A

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

10.5 The Event and Action Plans for air quality, construction noise, and landscape and visual are presented in **Appendix J**.

### Air Quality Monitoring

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

### Construction Noise Monitoring

- No documented complaint on construction noise was received; no Action Level exceedance for construction noise was recorded.
- No Action/Limit Level exceedance for construction noise monitoring was recorded in the reporting month.

#### Landscape and Visual

• No landscape and visual non-conformity was recorded.

#### Status of Required Submission under Environmental Permit

10.6 According the Section 11.3.2.1 (c) of the EM&A Manual (AEIAR-174/2013), status of required submission under EP-451/2013 and EP-458/2013/C during the reporting period are summarized in **Table 10.2**.

#### Table 10.2 Status of Required Submission under Environmental Permit

<b>EP</b> Condition	Submission	Submission Date
EP-451/2013		
Condition 2.3	Management Organization of Main Construction Companies	20 January 2020
Condition 2.4	Design Drawing of the Project	20 January 2020
Condition 2.5	Landscape Mitigation Plan(s)	7 May 2020

EP Condition	Submission	Submission Date
Condition 2.10 (a)	Supplementary Contamination Assessment Plan	18 December 2015
Condition 2.10 (b)	Supplementary Contamination Assessment Report	6 December 2016
Condition 3.3	Baseline Monitoring Report (at Kai Tak Area)	22 February 2016
Condition 3.3	Baseline Monitoring Report (at Cha Kwo Ling Area)	3 April 2020
Condition 3.4	Monthly EM&A Report (May 2020)	15 June 2020
EP-458/2013/C		
Condition 2.4	Management Organization of Main Construction Companies	3 March 2020
Condition 2.5	Noise Mitigation Plan	10 June 2020
Condition 2.6	Waste Management Plan	25 April 2020
Condition 2.7	Landscape Mitigation Plan	7 May 2020
Condition 2.10	Construction Programme	11 May 2020
Condition 4.3	Baseline Monitoring Report	27 October 2016
Condition 4.4	Monthly EM&A Report (May 2020)	15 June 2020

## 11 ENVIRONMENTAL NON-CONFORMANCE

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

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

## **Summary of Exceedance**

- 11.2 The summary of exceedance record in the reporting month is shown in Appendix M.
- 11.3 No non-conformity was recorded for landscape and visual inspections conducted in the reporting month.

## **12 FUTURE KEY ISSUES**

Tentative construction programmes for the next three months are provided in Appendix N.

12.1 Major site activities undertaken for the coming months are summarized as follows:

- 132kV substation ELS and Structure Construction at Portion M1
- Pre-boring and Sheet Piling Works
- Guide wall Construction and D-wall Construction
- Pump Test and Dewatering Well
- TAM Grouting Works
- Existing Slab Breaking
- 12.2 Key environmental issues in the coming months include:
  - Wheel washing bay at site exits;
  - Temporary noise barriers for PMEs;
  - Sedimentation tank for settling muddy water;
  - Make sure open stockpiles are covered during rainstorm; and
  - Make sure bypass is provided in the drainage system to prevent flooding during periods of heavy rain.

#### **Monitoring Schedule**

12.3 The tentative environmental monitoring schedule for the next three months are shown in Appendix B.

## **13 CONCLUSIONS AND RECOMMENDATIONS**

#### Conclusions

13.1 This is the 4<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-174/2013) and the requirement under EP.

#### Air Quality Monitoring

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

Construction Noise Monitoring

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

Site Audit

13.4 4 ET joint weekly environmental site inspections were conducted in the reporting month.

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

13.5 One (1) environmental complaint was received in the reporting month. No notifications of summons and successful prosecutions were received in the reporting month.

#### Recommendations

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

#### Air Quality

• Construction areas should be watered regularly.

#### Noise

• Noise mitigation measure, such as noise barriers erection between the noise source and the sensitive receiver, should be implemented on site.

#### Water Quality

- Surface runoff should be treated to meet the requirement prior to discharge; and
- Conducting a regular inspection, especially after heavy rain, in order to avoid accumulation of water/ muddy water on site area or drip tray;

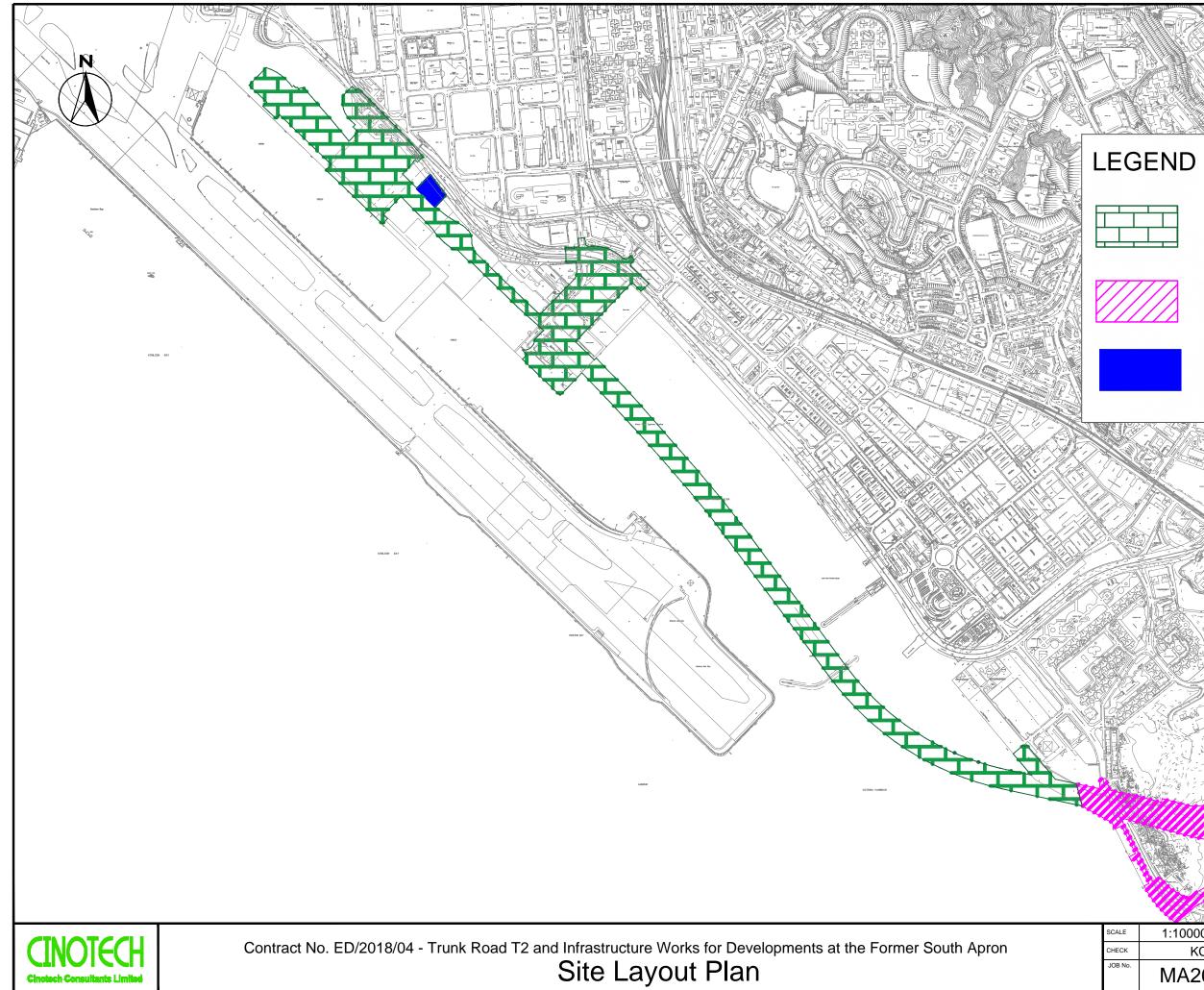
#### Landscape and Visual

• Existing trees should be protected properly (e.g. via fencing).

#### Waste/ Chemical Management

• Construction waste should be sorted before disposing.

FIGURES



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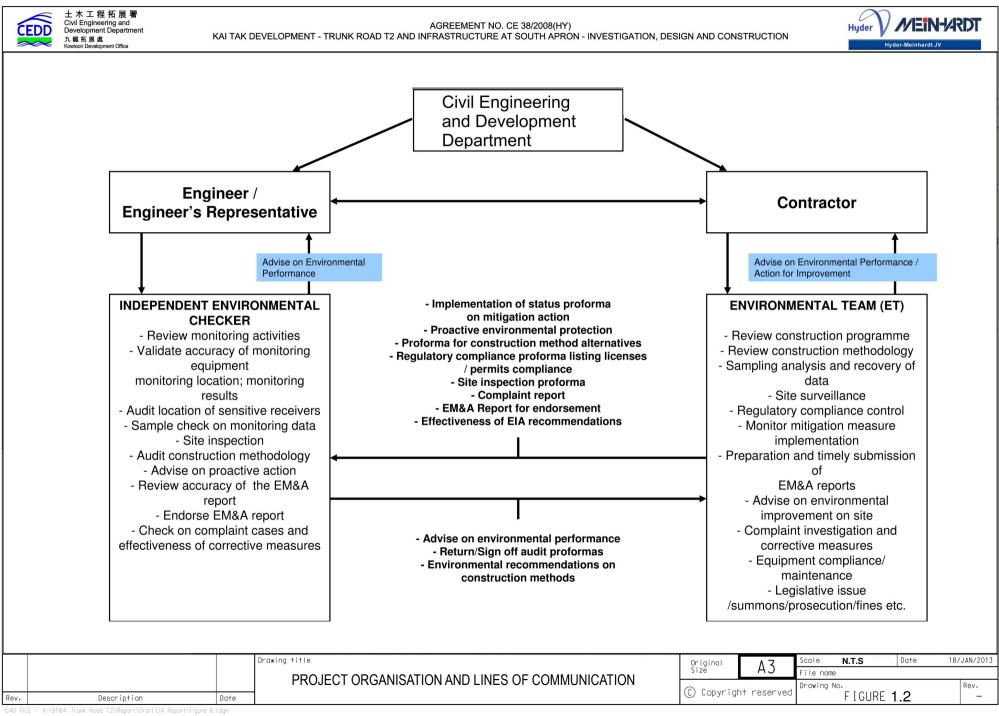
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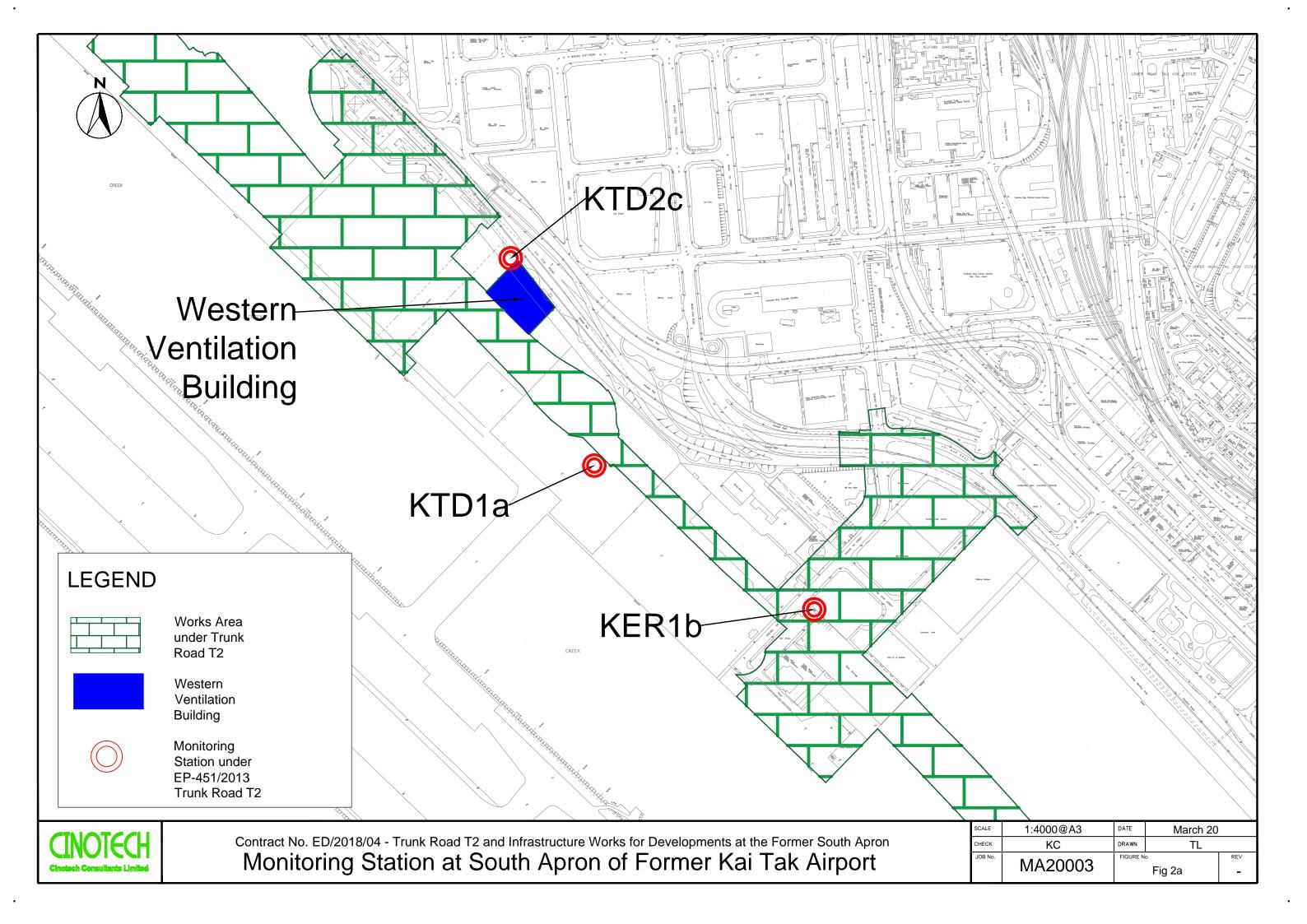
Works Area under Trunk Road T2

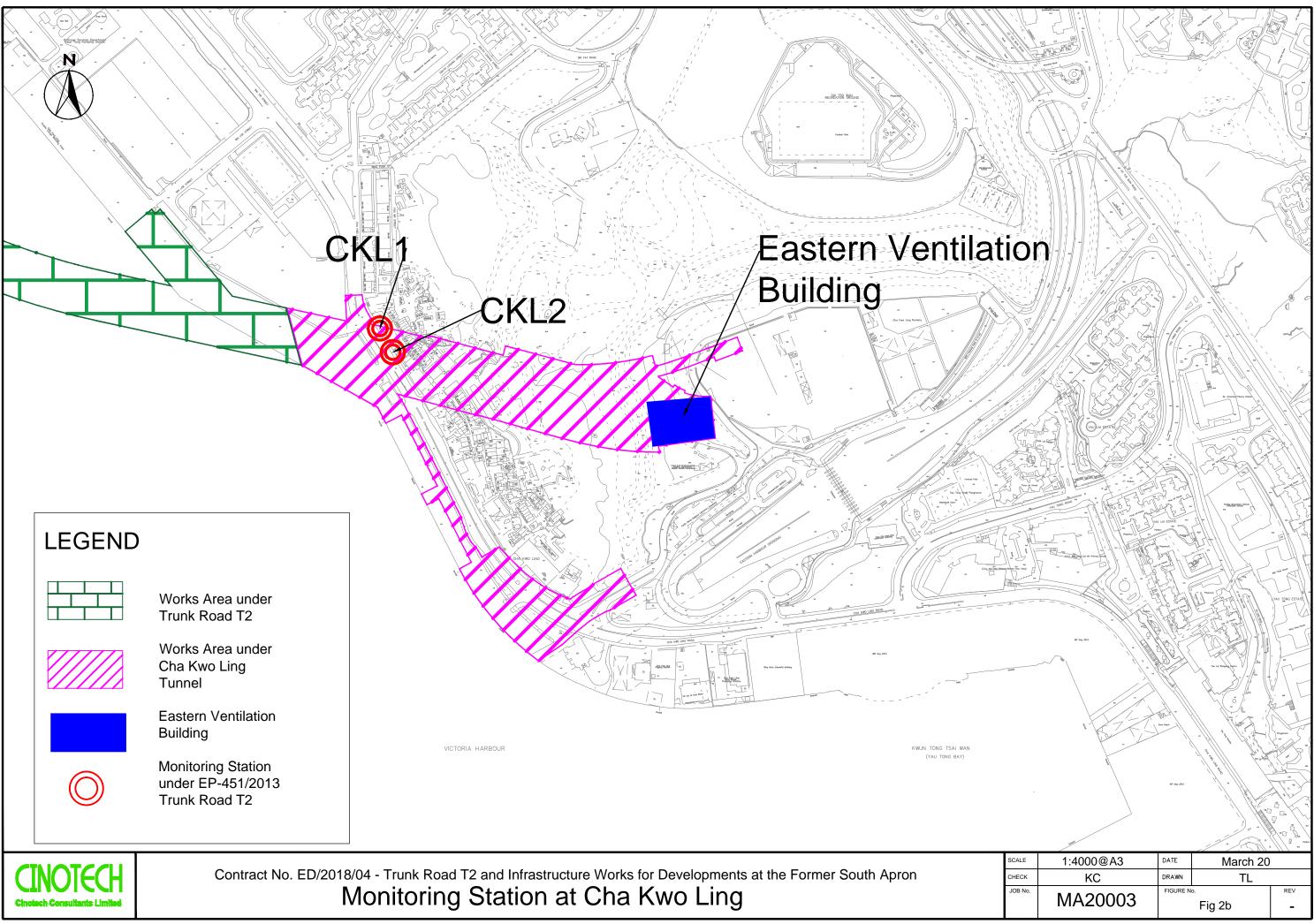
Works Area under Cha Kwo Ling Tunnel

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APPENDIX A ACTION AND LIMIT LEVELS

# **Appendix A - Action and Limit Levels**

Location	Action Level, μg/m <sup>3</sup>	Limit Level, µg/m <sup>3</sup>
KTD1a	285	
KTD2c	279	
KER1b	295	500
CKL1	323	
CKL2	327	

 Table A-1
 Action and Limit Levels for 1-hour TSP (in case of complaints)

## Table A-2Action and Limit Levels for 24-hour TSP

Location	Action Level, µg/m <sup>3</sup>	Limit Level, µg/m <sup>3</sup>
KTD1a	177	
KTD2c	157	
KER1b	172	260
CKL1	191	
CKL2	183	

## Table A-3 Action and Limit Levels for Noise during Construction Period

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

Note:

(1) If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed.

APPENDIX B ENVIRONMENTAL MONITORING SCHEDULES

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-Jun	2-Jun	3-Jun	4-Jun	5-Jun	6-Jun
	24-hr TSP (KT) Noise (KT)		24-hr TSP (CKL)	Noise (CKL)		24-hr TSP (KT) Noise (KT)
7-Jun	8-Jun	9-Jun	10-Jun	11-Jun	12-Jun	13-Jun
		24-hr TSP (CKL)	Noise (CKL)		24-hr TSP (KT) Noise (KT)	
14-Jun	15-Jun	16-Jun	17-Jun	18-Jun	19-Jun	20-Jun
	24-hr TSP (CKL)	Noise (CKL)		24-hr TSP (KT) Noise (KT)		24-hr TSP (CKL)
21-Jun	22-Jun	23-Jun	24-Jun	25-Jun	26-Jun	27-Jun
	Noise (CKL)		24-hr TSP (KT) Noise (KT) 24-hr TSP (CKL)			
28-Jun	29-Jun	30-Jun				
		24-hr TSP (KT) Noise (KT) 24-hr TSP (CKL)				

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

\*KT: Monitoring works in Kai Tak (KTD1a, KTD2c and KER1b)

\*\*CKL: Monitoring works in Cha Kwo Ling (CKL1, CKL2)

### Air Quality Monitoring Station

24-hr TSP KTD1a - Centre of Excellence in Paediatrics (Children's Hospital) KTD2c - G/IC Zone next to Kwun Tong Bypass (Next to the Kowloon Bay Sewage Interception Station) KER1b - Site Boundary at Cheung Yip Street CKL1 - Flat 121 Cha Kwo Ling Village CKL2 - Flat 103 Cha Kwo Ling Village

### Noise Monitoring Station

## 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 (July 2020)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Jul	2-Jul	3-Jul	4-Jul
				Noise (CKL)		
5-Jul	6-Jul	7-Jul	8-Jul	9-Jul	10-Jul	11-Jul
	24-hr TSP (KT) Noise (KT) 24-hr TSP (CKL)		Noise (CKL)			24-hr TSP (KT) Noise (KT) 24-hr TSP (CKL)
12-Jul	13-Jul	14-Jul	15-Jul	16-Jul	17-Jul	18-Jul
		Noise (CKL)			24-hr TSP (KT) Noise (KT) 24-hr TSP (CKL)	
19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul
	Noise (CKL)			24-hr TSP (KT) Noise (KT) 24-hr TSP (CKL)		
26-Jul	27-Jul	` 28-Jul	29-Jul	30-Jul	31-Jul	
			24-hr TSP (KT) Noise (KT) 24-hr TSP (CKL)	Noise (CKL)		

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

\*KT: Monitoring works in Kai Tak (KTD1a, KTD2b, KTD2c and KER1b)

\*\*CKL: Monitoring works in Cha Kwo Ling (CKL1, CKL2)

### Air Quality Monitoring Station

24-hr TSP KTD1a - Centre of Excellence in Paediatrics (Children's Hospital) KTD2c - G/IC Zone next to Kwun Tong Bypass (Next to the Kowloon Bay Sewage Interception Station) KER1b - Site Boundary at Cheung Yip Street CKL1 - Flat 121 Cha Kwo Ling Village CKL2 - Flat 103 Cha Kwo Ling Village

### Noise Monitoring Station

### 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 (August 2020)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1-Aug
2-Aug	3-Aug	4-Aug	5-Aug	6-Aug	7-Aug	8-Aug
	Noise (CKL)	Noise (KT) 24-hr TSP (KT) 24-hr TSP (CKL)				
9-Aug	10-Aug	11-Aug	12-Aug	13-Aug	14-Aug	15-Aug
	Noise (KT) 24-hr TSP (KT) 24-hr TSP (CKL)			Noise (CKL)		Noise (KT) 24-hr TSP (KT) 24-hr TSP (CKL)
16-Aug	17-Aug	18-Aug	19-Aug	20-Aug	21-Aug	22-Aug
			Noise (CKL)		Noise (KT) 24-hr TSP (KT) 24-hr TSP (CKL)	
23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug
		Noise (CKL)		Noise (KT) 24-hr TSP (KT) 24-hr TSP (CKL)		
30-Aug	31-Aug					
	Noise (CKL)					

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

\*KT: Monitoring works in Kai Tak (KTD1a, KTD2b, KTD2c and KER1b)

\*\*CKL: Monitoring works in Cha Kwo Ling (CKL1, CKL2)

Air Quality Monitoring Station

24-hr TSP KTD1a - Centre of Excellence in Paediatrics (Children's Hospital) KTD2c - G/IC Zone next to Kwun Tong Bypass (Next to the Kowloon Bay Sewage Interception Station) KER1b - Site Boundary at Cheung Yip Street CKL1 - Flat 121 Cha Kwo Ling Village CKL2 - Flat 103 Cha Kwo Ling Village

### Noise Monitoring Station

### 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 (September 2020)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Sep	2-Sep	3-Sep	4-Sep	5-Sep
			24-hr TSP (CKL) Noise (KT) 24-hr TSP (KT)			
6-Sep	7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep
	Noise (CKL)	24-hr TSP (CKL) Noise (KT) 24-hr TSP (KT)				
13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep
	24-hr TSP (CKL) Noise (KT) 24-hr TSP (KT)	Noise (CKL)				24-hr TSP (CKL) Noise (KT) 24-hr TSP (KT)
20-Sep	21-Sep	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep
	Noise (CKL)				24-hr TSP (CKL) Noise (KT) 24-hr TSP (KT)	
27-Sep	28-Sep	29-Sep	30-Sep			
			Noise (CKL)			

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

\*KT: Monitoring works in Kai Tak (KTD1a, KTD2b, KTD2c and KER1b)

\*\*CKL: Monitoring works in Cha Kwo Ling (CKL1, CKL2)

### Air Quality Monitoring Station

24-hr TSP

KTD1a - Centre of Excellence in Paediatrics (Children's Hospital)

KTD2c - G/IC Zone next to Kwun Tong Bypass (Next to the Kowloon Bay Sewage Interception Station)

KER1b - Site Boundary at Cheung Yip Street

CKL1 - Flat 121 Cha Kwo Ling Village

CKL2 - Flat 103 Cha Kwo Ling Village

### Noise Monitoring Station

APPENDIX C COPIES OF CALIBRATION CERTIFICATES FOR AIR QUALITY MONITORING



RECALIBRATION DUE DATE:

January 17, 2021

nmental Certificate of Calibration

			Calibration	Certificati	on Informat	tion		
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	tion			
	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	ns			
	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

# CIN@TECH 🤳

## **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-Feb-2020</u>
<u>21-Aug-2020</u>

## 1. Performance check of Wind Speed

Wind Sp	beed, m/s	Difference D (m/s)
Wind Speed Reading (V1)	Anemometer Value (V1)	D = V1 - V2
0.0	0.0	0.0
1.2	1.3	-0.1
2.0	2.1	-0.1
3.0	3.2	-0.2

## 2. Performance check of Wind Direction

Wind Di	rection (°)	Difference D (°)
Wind Direction Reading (V1)	Marine Compass Value (V1)	$\mathbf{D} = \mathbf{W1} - \mathbf{W2}$
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: Kwai Approved by: Henry Leung

# **High-Volume TSP Sampler** 5-POINT CALIBRATION DATA SHEET

302.3

Temperature, Ta (K)



756.3

## File No. <u>MA20003/18/0002</u>

Ambient Condition							
Equipment No.:	A-01-18	Model No.:	TE 5170	Serial No.	0723		
Date:	8-May-20	Next Due Date:	8-Jul-20	Operator:	SK		
Project No.	CKL 1 - Flat 121 Cha Kwo						

Pressure, Pa (mmHg)

Orifice Transfer Standard Information						
Serial No.	Serial No. 3746 Slope, mc 0.0592 Intercept, bc -0.0274					
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	5
Point	$\Delta H$ (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> Y-axis
1	12.7	3.53	60.09	8.6		2.90
2	9.3	3.02	51.48	6.0		2.43
3	7.1	2.64	45.04	4.7		2.15
4	4.6	2.12	36.35	3.1		1.74
5	3.0	1.72	29.44	1.9		1.37
	0.0492 coefficient* = Coefficient < 0.990	<b>0.9991</b> 0, check and recalibrate.	Intercept, bw -	-0.072	25	_
Enous the TOD D	ald Calibration C	<b>Set Point C</b> urve, take Qstd = 43 CFM	alculation			
		e "Y" value according to $mw x Qstd + bw = [\Delta W y]$	x (Pa/760) x (2)	98/Ta)  <sup>1/2</sup>		
Therefore, So	et Point; W = ( mv	$(x + bw)^2 x (760 / Pa) x ($	Ta / 298 ) =	4.26		_
Remarks:						
Conducted by:	SK Wong	Signature:			Date:	8 May 2020
Checked by:	Henry Leung	Signature:	X~~~~		Date:	8 May 2020

1

J

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# **High-Volume TSP Sampler** 5-POINT CALIBRATION DATA SHEET

302.3

Temperature, Ta (K)



756.3

## File No. <u>MA20003/55/0002</u>

			Ambient Cond	lition				
Equipment No.:	A-01-	-55	Model No.:	TE	5170	Serial No.	1956	
Date:	8-May	-20	Next Due Date:	8-Jı	ul-20	Operator:	SK	
Project No.	CKL 2 - Flat 103	Cha Kwo Ling	g Village					

Pressure, Pa (mmHg)

Orifice Transfer Standard Information						
Serial No.	3746	Slope, mc	0.0592	Intercept, bc	-0.0274	
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> <b>Y-axis</b>
1	12.7	3.53	60.09	7.3		2.68
2	9.9	3.12	53.10	6.0		2.43
3	7.2	2.66	45.36	4.4		2.08
4	4.3	2.05	35.16	3.3		1.80
5	2.6	1.60	27.44	2.3		1.50
Slope, mw =	By Linear Regression of Y on X Slope , mw =0.0356 Intercept, bw :0.5214					
Correlation	coefficient* =	0.9974	_			
*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				
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:	U.		Date:	8 May 2020
Checked by:	Henry Leung	Signature:	Xoj		Date:	8 May 2020

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APPENDIX D WEATHER INFORMATION

Date	Mean Air Temperature (°C) <sup>1</sup>	Mean Relative Humidity	Precipitation (mm) <sup>3</sup>
	•	$(\%)^2$	
1-Jun-20	29.9	78	Trace
2-Jun-20	29.0	82	6.4
3-Jun-20	29.8	76	Trace
4-Jun-20	30.1	75	Trace
5-Jun-20	30.0	78	2.6
6-Jun-20	26.8	89	183.8
7-Jun-20	27.7	91	107.4
8-Jun-20	28.6	88	40.9
9-Jun-20	29.4	83	1.3
10-Jun-20	29.8	78	0.2
11-Jun-20	30.2	76	Trace
12-Jun-20	30.4	75	0.0
13-Jun-20	29.8	81	11.7
14-Jun-20	28.0	84	29.3
15-Jun-20	29.3	79	0.2
16-Jun-20	28.6	81	9.4
17-Jun-20	29.1	77	0.9
18-Jun-20	29.5	77	0.1
19-Jun-20	29.9	74	Trace
20-Jun-20	30.0	74	0.0
21-Jun-20	30.2	76	Trace
22-Jun-20	30.4	77	Trace
23-Jun-20	30.3	77	0.0
24-Jun-20	30.4	77	0.0
25-Jun-20	30.2	76	0.1
26-Jun-20	30.3	77	1.3
27-Jun-20	30.2	77	1.2
28-Jun-20	30.4	75	Trace
29-Jun-20	30.5	74	0.4
30-Jun-20	30.7	74	Trace

## Appendix D - Weather Conditions During Impact Monitoring Period

## (Reporting Month: June 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)

June 2020						
	Wind Speed a	nd Directions				
Date	Time	Wind Speed m-s	Direction			
1 Jun 2020	12:00 AM	0.4	N			
1 Jun 2020	1:00 AM	0.4	NNE			
1 Jun 2020	2:00 AM	0.4	ENE			
1 Jun 2020	3:00 AM	0.4	ENE			
1 Jun 2020	4:00 AM	0.4	ENE			
1 Jun 2020	5:00 AM	0.9	ENE			
1 Jun 2020	6:00 AM	0	W			
1 Jun 2020	7:00 AM	0	WSW			
1 Jun 2020	8:00 AM	0.4	N			
1 Jun 2020	9:00 AM	1.3	NE			
1 Jun 2020	10:00 AM	1.3	ENE			
1 Jun 2020	11:00 AM	0.9	ENE			
1 Jun 2020	12:00 PM	0.9	ENE			
1 Jun 2020	1:00 PM	0.4	NE			
1 Jun 2020	2:00 PM	0.9	ENE			
1 Jun 2020	3:00 PM	1.3	ENE			
1 Jun 2020	4:00 PM	0.9	ENE			
1 Jun 2020	5:00 PM	0.4	NNE			
1 Jun 2020	6:00 PM	0.4	NNE			
1 Jun 2020	7:00 PM	0.4	SSE			
1 Jun 2020	8:00 PM	0.4	NNE			
1 Jun 2020	9:00 PM	0.9	NE			
1 Jun 2020	10:00 PM	0.4	NE			
1 Jun 2020	11:00 PM	1.3	ENE			
2 Jun 2020	12:00 AM	2.2	ENE			
2 Jun 2020	1:00 AM	1.8	ENE			
2 Jun 2020	2:00 AM	0.9	NNE			
2 Jun 2020	3:00 AM	0.4	ENE			
2 Jun 2020	4:00 AM	1.8	ENE			
2 Jun 2020	5:00 AM	1.3	ENE			
2 Jun 2020	6:00 AM	0.9	ENE			
2 Jun 2020	7:00 AM	1.3	ENE			
2 Jun 2020	8:00 AM	1.8	ENE			
2 Jun 2020	9:00 AM	2.2	ENE			
2 Jun 2020	10:00 AM	3.1	ENE			
2 Jun 2020	11:00 AM	2.7	ENE			
2 Jun 2020	12:00 PM	2.7	ENE			
2 Jun 2020	1:00 PM	3.1	ENE			
2 Jun 2020	2:00 PM	3.6	ENE			
2 Jun 2020	3:00 PM	3.6	ENE			
2 Jun 2020	4:00 PM	3.1	ENE			
2 Jun 2020	5:00 PM	1.8	ENE			
2 Jun 2020	6:00 PM	2.2	ENE			
2 Jun 2020	0.001 1/1	2.2				

June 2020					
	Wind Speed a	and Directions			
Date	Time	Wind Speed m-s	Direction		
2 Jun 2020	7:00 PM	2.7	ENE		
2 Jun 2020	8:00 PM	1.8	ENE		
2 Jun 2020	9:00 PM	1.8	ENE		
2 Jun 2020	10:00 PM	0.9	ENE		
2 Jun 2020	11:00 PM	0.9	SW		
3 Jun 2020	12:00 AM	0.9	NNE		
3 Jun 2020	1:00 AM	1.8	ENE		
3 Jun 2020	2:00 AM	1.8	ENE		
3 Jun 2020	3:00 AM	1.8	ENE		
3 Jun 2020	4:00 AM	3.1	ENE		
3 Jun 2020	5:00 AM	0.4	NNE		
3 Jun 2020	6:00 AM	0	WSW		
3 Jun 2020	7:00 AM	0.4	ESE		
3 Jun 2020	8:00 AM	0.9	SW		
3 Jun 2020	9:00 AM	1.3	SW		
3 Jun 2020	10:00 AM	0.9	NE		
3 Jun 2020	11:00 AM	1.3	Е		
3 Jun 2020	12:00 PM	1.3	ENE		
3 Jun 2020	1:00 PM	1.8	SW		
3 Jun 2020	2:00 PM	1.3	Е		
3 Jun 2020	3:00 PM	1.3	ESE		
3 Jun 2020	4:00 PM	1.3	SW		
3 Jun 2020	5:00 PM	1.3	SW		
3 Jun 2020	6:00 PM	0.9	SW		
3 Jun 2020	7:00 PM	0.4	SW		
3 Jun 2020	8:00 PM	0.9	ESE		
3 Jun 2020	9:00 PM	0.9	ESE		
3 Jun 2020	10:00 PM	0.9	SW		
3 Jun 2020	11:00 PM	0.9	SW		
4 Jun 2020	12:00 AM	0.9	ENE		
4 Jun 2020	1:00 AM	1.8	ENE		
4 Jun 2020	2:00 AM	1.8	ENE		
4 Jun 2020	3:00 AM	0.9	Е		
4 Jun 2020	4:00 AM	0.9	ENE		
4 Jun 2020	5:00 AM	1.3	ENE		
4 Jun 2020	6:00 AM	0.9	ENE		
4 Jun 2020	7:00 AM	0.4	SE		
4 Jun 2020	8:00 AM	0.9	SW		
4 Jun 2020	9:00 AM	1.3	ENE		
4 Jun 2020	10:00 AM	1.3	ESE		
4 Jun 2020	11:00 AM	1.3	E		
4 Jun 2020	12:00 PM	1.8	ESE		
4 Jun 2020	1:00 PM	1.3	ESE		

June 2020					
	Wind Speed a	and Directions			
Date	Time	Wind Speed m-s	Direction		
4 Jun 2020	2:00 PM	1.3	S		
4 Jun 2020	3:00 PM	1.3	SW		
4 Jun 2020	4:00 PM	0.9	SW		
4 Jun 2020	5:00 PM	1.3	ENE		
4 Jun 2020	6:00 PM	1.3	SW		
4 Jun 2020	7:00 PM	0.9	SW		
4 Jun 2020	8:00 PM	0.9	NE		
4 Jun 2020	9:00 PM	1.8	ENE		
4 Jun 2020	10:00 PM	2.2	ENE		
4 Jun 2020	11:00 PM	1.8	ENE		
5 Jun 2020	12:00 AM	2.2	ENE		
5 Jun 2020	1:00 AM	2.2	ENE		
5 Jun 2020	2:00 AM	2.7	ENE		
5 Jun 2020	3:00 AM	2.2	ENE		
5 Jun 2020	4:00 AM	2.2	ENE		
5 Jun 2020	5:00 AM	2.2	ENE		
5 Jun 2020	6:00 AM	2.2	ENE		
5 Jun 2020	7:00 AM	1.8	ENE		
5 Jun 2020	8:00 AM	1.8	ENE		
5 Jun 2020	9:00 AM	2.2	ENE		
5 Jun 2020	10:00 AM	2.2	ENE		
5 Jun 2020	11:00 AM	1.3	ENE		
5 Jun 2020	12:00 PM	1.3	ENE		
5 Jun 2020	1:00 PM	1.3	ESE		
5 Jun 2020	2:00 PM	1.3	ENE		
5 Jun 2020	3:00 PM	1.8	ENE		
5 Jun 2020	4:00 PM	1.8	ENE		
5 Jun 2020	5:00 PM	2.2	ENE		
5 Jun 2020	6:00 PM	1.8	ENE		
5 Jun 2020	7:00 PM	1.8	ENE		
5 Jun 2020	8:00 PM	1.8	ENE		
5 Jun 2020	9:00 PM	2.2	ENE		
5 Jun 2020	10:00 PM	1.8	ENE		
5 Jun 2020	11:00 PM	1.8	ENE		
6 Jun 2020	12:00 AM	2.7	ENE		
6 Jun 2020	1:00 AM	2.2	ENE		
6 Jun 2020	2:00 AM	2.7	ENE		
6 Jun 2020	3:00 AM	2.7	ENE		
6 Jun 2020	4:00 AM	2.7	ENE		
6 Jun 2020	5:00 AM	2.2	ENE		
6 Jun 2020	6:00 AM	1.8	ENE		
6 Jun 2020	7:00 AM	1.8	ENE		
6 Jun 2020	8:00 AM	1.8	ENE		

June 2020						
Wind Speed and Directions						
Date	Time	Wind Speed m-s	Direction			
6 Jun 2020	9:00 AM	2.7	ENE			
6 Jun 2020	10:00 AM	2.2	ENE			
6 Jun 2020	11:00 AM	1.3	ENE			
6 Jun 2020	12:00 PM	3.1	ENE			
6 Jun 2020	1:00 PM	2.7	ENE			
6 Jun 2020	2:00 PM	1.3	ENE			
6 Jun 2020	3:00 PM	2.7	ENE			
6 Jun 2020	4:00 PM	2.7	ENE			
6 Jun 2020	5:00 PM	3.1	ENE			
6 Jun 2020	6:00 PM	1.3	ENE			
6 Jun 2020	7:00 PM	2.7	ENE			
6 Jun 2020	8:00 PM	2.7	ENE			
6 Jun 2020	9:00 PM	2.7	ENE			
6 Jun 2020	10:00 PM	2.7	ENE			
6 Jun 2020	11:00 PM	3.1	ENE			
7 Jun 2020	12:00 AM	3.6	ENE			
7 Jun 2020	1:00 AM	2.2	ENE			
7 Jun 2020	2:00 AM	2.2	ENE			
7 Jun 2020	3:00 AM	2.2	ENE			
7 Jun 2020	4:00 AM	2.2	ENE			
7 Jun 2020	5:00 AM	2.2	ENE			
7 Jun 2020	6:00 AM	2.2	ENE			
7 Jun 2020	7:00 AM	2.7	ENE			
7 Jun 2020	8:00 AM	2.2	ENE			
7 Jun 2020	9:00 AM	1.3	Е			
7 Jun 2020	10:00 AM	1.8	ENE			
7 Jun 2020	11:00 AM	1.8	ESE			
7 Jun 2020	12:00 PM	1.3	ENE			
7 Jun 2020	1:00 PM	1.3	ESE			
7 Jun 2020	2:00 PM	1.8	Е			
7 Jun 2020	3:00 PM	1.8	ENE			
7 Jun 2020	4:00 PM	1.8	ESE			
7 Jun 2020	5:00 PM	1.8	ENE			
7 Jun 2020	6:00 PM	1.3	SE			
7 Jun 2020	7:00 PM	1.8	ENE			
7 Jun 2020	8:00 PM	1.3	ENE			
7 Jun 2020	9:00 PM	0.9	ESE			
7 Jun 2020	10:00 PM	0.9	Е			
7 Jun 2020	11:00 PM	0.9	ENE			
8 Jun 2020	12:00 AM	0.9	ENE			
8 Jun 2020	1:00 AM	0.4	ESE			
8 Jun 2020	2:00 AM	0.9	SE			
8 Jun 2020	3:00 AM	1.3	ENE			

June 2020					
	Wind Speed a	nd Directions			
Date	Time	Wind Speed m-s	Direction		
8 Jun 2020	4:00 AM	0.9	SW		
8 Jun 2020	5:00 AM	0.9	ENE		
8 Jun 2020	6:00 AM	0.9	E		
8 Jun 2020	7:00 AM	0.4	SW		
8 Jun 2020	8:00 AM	0.9	ENE		
8 Jun 2020	9:00 AM	0.9	ENE		
8 Jun 2020	10:00 AM	1.8	SW		
8 Jun 2020	11:00 AM	0.4	SW		
8 Jun 2020	12:00 PM	0.9	SSW		
8 Jun 2020	1:00 PM	0.9	SW		
8 Jun 2020	2:00 PM	0.9	SW		
8 Jun 2020	3:00 PM	1.8	SW		
8 Jun 2020	4:00 PM	0.9	SW		
8 Jun 2020	5:00 PM	0.4	SW		
8 Jun 2020	6:00 PM	0	SSE		
8 Jun 2020	7:00 PM	0.9	NE		
8 Jun 2020	8:00 PM	0.4	NE		
8 Jun 2020	9:00 PM	0.9	NE		
8 Jun 2020	10:00 PM	0.9	NE		
8 Jun 2020	11:00 PM	0.9	ENE		
9 Jun 2020	12:00 AM	0.9	SW		
9 Jun 2020	1:00 AM	0.4	SSW		
9 Jun 2020	2:00 AM	0.9	SW		
9 Jun 2020	3:00 AM	0	SW		
9 Jun 2020	4:00 AM	0.4	SW		
9 Jun 2020	5:00 AM	0.4	SW		
9 Jun 2020	6:00 AM	0.9	SW		
9 Jun 2020	7:00 AM	0	SSW		
9 Jun 2020	8:00 AM	0			
9 Jun 2020	9:00 AM	0.9	NE		
9 Jun 2020	10:00 AM	1.3	ENE		
9 Jun 2020	11:00 AM	2.2	ENE		
9 Jun 2020	12:00 PM	1.8	SW		
9 Jun 2020	1:00 PM	0.9	ENE		
9 Jun 2020	2:00 PM	3.1	ENE		
9 Jun 2020	3:00 PM	2.7	ENE		
9 Jun 2020	4:00 PM	2.2	ENE		
9 Jun 2020	5:00 PM	2.2	ENE		
9 Jun 2020	6:00 PM	2.2	ENE		
9 Jun 2020	7:00 PM	0.9	ENE		
9 Jun 2020	8:00 PM	0.4	SW		
9 Jun 2020	9:00 PM	0.4	NNE		
9 Jun 2020	10:00 PM	1.3	ENE		

June 2020					
	Wind Speed a	nd Directions			
Date	Time	Wind Speed m-s	Direction		
9 Jun 2020	11:00 PM	1.3	ENE		
10 Jun 2020	12:00 AM	1.3	ENE		
10 Jun 2020	1:00 AM	1.3	ENE		
10 Jun 2020	2:00 AM	1.3	NE		
10 Jun 2020	3:00 AM	1.3	ENE		
10 Jun 2020	4:00 AM	0.9	ENE		
10 Jun 2020	5:00 AM	1.3	ENE		
10 Jun 2020	6:00 AM	1.3	ENE		
10 Jun 2020	7:00 AM	1.8	ENE		
10 Jun 2020	8:00 AM	2.7	ENE		
10 Jun 2020	9:00 AM	3.1	ENE		
10 Jun 2020	10:00 AM	3.1	ENE		
10 Jun 2020	11:00 AM	2.7	ENE		
10 Jun 2020	12:00 PM	1.8	ENE		
10 Jun 2020	1:00 PM	1.3	SE		
10 Jun 2020	2:00 PM	2.7	ENE		
10 Jun 2020	3:00 PM	2.2	ENE		
10 Jun 2020	4:00 PM	2.7	ENE		
10 Jun 2020	5:00 PM	3.1	ENE		
10 Jun 2020	6:00 PM	2.2	ENE		
10 Jun 2020	7:00 PM	1.3	ENE		
10 Jun 2020	8:00 PM	2.2	ENE		
10 Jun 2020	9:00 PM	1.8	ENE		
10 Jun 2020	10:00 PM	2.2	ENE		
10 Jun 2020	11:00 PM	3.1	ENE		
11 Jun 2020	12:00 AM	3.1	ENE		
11 Jun 2020	1:00 AM	3.6	ENE		
11 Jun 2020	2:00 AM	2.7	ENE		
11 Jun 2020	3:00 AM	2.2	ENE		
11 Jun 2020	4:00 AM	2.2	ENE		
11 Jun 2020	5:00 AM	2.2	ENE		
11 Jun 2020	6:00 AM	1.3	ENE		
11 Jun 2020	7:00 AM	1.3	ENE		
11 Jun 2020	8:00 AM	2.2	ENE		
11 Jun 2020	9:00 AM	2.7	ENE		
11 Jun 2020	10:00 AM	1.3	E		
11 Jun 2020	11:00 AM	1.3	ESE		
11 Jun 2020	12:00 PM	1.3	ENE		
11 Jun 2020	1:00 PM	1.8	ENE		
11 Jun 2020	2:00 PM	1.3	E		
11 Jun 2020	3:00 PM	1.3	SE		
11 Jun 2020	4:00 PM	1.8	ESE		
11 Jun 2020	5:00 PM	1.3	E		

June 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
11 Jun 2020	6:00 PM	0.9	ESE	
11 Jun 2020	7:00 PM	0.9	ESE	
11 Jun 2020	8:00 PM	0.9	ESE	
11 Jun 2020	9:00 PM	1.3	ENE	
11 Jun 2020	10:00 PM	2.2	ENE	
11 Jun 2020	11:00 PM	2.2	ENE	
12 Jun 2020	12:00 AM	2.2	ENE	
12 Jun 2020	1:00 AM	2.2	ENE	
12 Jun 2020	2:00 AM	2.7	ENE	
12 Jun 2020	3:00 AM	2.7	ENE	
12 Jun 2020	4:00 AM	1.8	ENE	
12 Jun 2020	5:00 AM	1.3	ENE	
12 Jun 2020	6:00 AM	2.2	ENE	
12 Jun 2020	7:00 AM	1.8	ENE	
12 Jun 2020	8:00 AM	1.8	ENE	
12 Jun 2020	9:00 AM	1.8	ENE	
12 Jun 2020	10:00 AM	0.9	ENE	
12 Jun 2020	11:00 AM	1.3	ENE	
12 Jun 2020	12:00 PM	1.8	ENE	
12 Jun 2020	1:00 PM	1.8	ENE	
12 Jun 2020	2:00 PM	1.3	E	
12 Jun 2020	3:00 PM	1.3	ESE	
12 Jun 2020	4:00 PM	1.3	ENE	
12 Jun 2020	5:00 PM	1.3	ENE	
12 Jun 2020	6:00 PM	0.9	E	
12 Jun 2020	7:00 PM	0.9	Е	
12 Jun 2020	8:00 PM	0.4	ENE	
12 Jun 2020	9:00 PM	0.9	SW	
12 Jun 2020	10:00 PM	0.4	SW	
12 Jun 2020	11:00 PM	1.3	ENE	
13 Jun 2020	12:00 AM	1.3	NNE	
13 Jun 2020	1:00 AM	0.9	NNE	
13 Jun 2020	2:00 AM	1.3	NE	
13 Jun 2020	3:00 AM	0.4	NNE	
13 Jun 2020	4:00 AM	0.4	NE	
13 Jun 2020	5:00 AM	0.4	NE	
13 Jun 2020	6:00 AM	0.4	NNE	
13 Jun 2020	7:00 AM	0.9	NE	
13 Jun 2020	8:00 AM	1.8	ENE	
13 Jun 2020	9:00 AM	1.8	ENE	
13 Jun 2020	10:00 AM	0.9	SW	
13 Jun 2020	11:00 AM	1.3	ENE	
13 Jun 2020	12:00 PM	1.3	ENE	
10 5411 2020		110		

June 2020 Wind Speed and Directions				
13 Jun 2020	1:00 PM	0.9	ENE	
13 Jun 2020	2:00 PM	1.3	SW	
13 Jun 2020	3:00 PM	1.8	ENE	
13 Jun 2020	4:00 PM	3.6	ENE	
13 Jun 2020	5:00 PM	3.1	ENE	
13 Jun 2020	6:00 PM	3.1	ENE	
13 Jun 2020	7:00 PM	2.7	ENE	
13 Jun 2020	8:00 PM	1.3	ENE	
13 Jun 2020	9:00 PM	1.3	ENE	
13 Jun 2020	10:00 PM	0.9	ENE	
13 Jun 2020	11:00 PM	1.3	ENE	
14 Jun 2020	12:00 AM	1.3	ENE	
14 Jun 2020	1:00 AM	0.9	NNE	
14 Jun 2020	2:00 AM	0.4	SW	
14 Jun 2020	3:00 AM	1.3	SW	
14 Jun 2020	4:00 AM	1.3	SW	
14 Jun 2020	5:00 AM	0.9	SW	
14 Jun 2020	6:00 AM	0.4	Е	
14 Jun 2020	7:00 AM	0.9	SW	
14 Jun 2020	8:00 AM	0.4	ENE	
14 Jun 2020	9:00 AM	0.9	SW	
14 Jun 2020	10:00 AM	1.3	ENE	
14 Jun 2020	11:00 AM	2.2	ENE	
14 Jun 2020	12:00 PM	1.8	ENE	
14 Jun 2020	1:00 PM	1.8	ENE	
14 Jun 2020	2:00 PM	1.8	SW	
14 Jun 2020	3:00 PM	1.3	SW	
14 Jun 2020	4:00 PM	1.8	SW	
14 Jun 2020	5:00 PM	1.3	ENE	
14 Jun 2020	6:00 PM	1.3	SW	
14 Jun 2020	7:00 PM	1.3	SW	
14 Jun 2020	8:00 PM	0.9	SSW	
14 Jun 2020	9:00 PM	1.8	SW	
14 Jun 2020	10:00 PM	1.3	SW	
14 Jun 2020	11:00 PM	1.8	SW	
15 Jun 2020	12:00 AM	0.9	SW	
15 Jun 2020	1:00 AM	1.3	SW	
15 Jun 2020	2:00 AM	0.9	SW	
15 Jun 2020	3:00 AM	0.9	SW	
15 Jun 2020	4:00 AM	0.9	SW	
15 Jun 2020	5:00 AM	0.9	SW	
15 Jun 2020	6:00 AM	0.9	ENE	
15 Jun 2020	7:00 AM	0.4	NE	
15 Jun 2020	/:00 AM	U	INE	

June 2020 Wind Speed and Directions				
15 Jun 2020	8:00 AM	0.9	SSW	
15 Jun 2020	9:00 AM	0.9	SSW	
15 Jun 2020	10:00 AM	1.3	S	
15 Jun 2020	11:00 AM	0.9	ENE	
15 Jun 2020	12:00 PM	0.9	ENE	
15 Jun 2020	1:00 PM	3.6	ENE	
15 Jun 2020	2:00 PM	2.2	ENE	
15 Jun 2020	3:00 PM	1.3	ENE	
15 Jun 2020	4:00 PM	2.2	SW	
15 Jun 2020	5:00 PM	1.8	SW	
15 Jun 2020	6:00 PM	2.2	SW	
15 Jun 2020	7:00 PM	2.7	SW	
15 Jun 2020	8:00 PM	1.8	SW	
15 Jun 2020	9:00 PM	0.9	SSW	
15 Jun 2020	10:00 PM	0.9	SSW	
15 Jun 2020	11:00 PM	1.3	SW	
16 Jun 2020	12:00 AM	1.3	SW	
16 Jun 2020	1:00 AM	0.9	SW	
16 Jun 2020	2:00 AM	0.9	SW	
16 Jun 2020	3:00 AM	1.3	SW	
16 Jun 2020	4:00 AM	0.4	WSW	
16 Jun 2020	5:00 AM	0.9	ENE	
16 Jun 2020	6:00 AM	0.4	SSE	
16 Jun 2020	7:00 AM	0.9	ENE	
16 Jun 2020	8:00 AM	0.9	ENE	
16 Jun 2020	9:00 AM	0.9	ENE	
16 Jun 2020	10:00 AM	2.2	ENE	
16 Jun 2020	11:00 AM	4	ENE	
16 Jun 2020	12:00 PM	4.5	ENE	
16 Jun 2020	1:00 PM	4	ENE	
16 Jun 2020	2:00 PM	3.6	ENE	
16 Jun 2020	3:00 PM	2.7	ENE	
16 Jun 2020	4:00 PM	1.3	ENE	
16 Jun 2020	5:00 PM	2.2	SW	
16 Jun 2020	6:00 PM	3.6	SW	
16 Jun 2020	7:00 PM	1.3	SW	
16 Jun 2020	8:00 PM	0.9	SW	
16 Jun 2020	9:00 PM	0.4	SW	
16 Jun 2020	10:00 PM	0.4	SW	
16 Jun 2020	11:00 PM	0.4	SW	
17 Jun 2020	12:00 AM	1.8	SW	
17 Jun 2020	1:00 AM	0.9	SW	
17 Jun 2020	2:00 AM	0	SW	

June 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
17 Jun 2020	3:00 AM	1.3	SW	
17 Jun 2020	4:00 AM	1.8	SW	
17 Jun 2020	5:00 AM	0.4	SW	
17 Jun 2020	6:00 AM	0.9	SW	
17 Jun 2020	7:00 AM	1.3	SW	
17 Jun 2020	8:00 AM	0.9	SW	
17 Jun 2020	9:00 AM	0.9	SW	
17 Jun 2020	10:00 AM	0.9	SW	
17 Jun 2020	11:00 AM	1.3	SW	
17 Jun 2020	12:00 PM	1.3	SW	
17 Jun 2020	1:00 PM	2.2	SW	
17 Jun 2020	2:00 PM	1.3	SW	
17 Jun 2020	3:00 PM	0.9	NE	
17 Jun 2020	4:00 PM	0.4	SW	
17 Jun 2020	5:00 PM	1.3	SW	
17 Jun 2020	6:00 PM	1.3	SW	
17 Jun 2020	7:00 PM	1.3	SW	
17 Jun 2020	8:00 PM	0.4	NNE	
17 Jun 2020	9:00 PM	0.4	NNE	
17 Jun 2020	10:00 PM	0.4	SW	
17 Jun 2020	11:00 PM	0.9	SW	
18 Jun 2020	12:00 AM	0.4	SW	
18 Jun 2020	1:00 AM	0.9	SW	
18 Jun 2020	2:00 AM	0.9	SW	
18 Jun 2020	3:00 AM	0.9	SW	
18 Jun 2020	4:00 AM	0.4	SSW	
18 Jun 2020	5:00 AM	0.4	SW	
18 Jun 2020	6:00 AM	0.9	SW	
18 Jun 2020	7:00 AM	0.9	Е	
18 Jun 2020	8:00 AM	0.4	SW	
18 Jun 2020	9:00 AM	0.9	SW	
18 Jun 2020	10:00 AM	1.3	SW	
18 Jun 2020	11:00 AM	0.9	SW	
18 Jun 2020	12:00 PM	1.3	SW	
18 Jun 2020	1:00 PM	1.8	SW	
18 Jun 2020	2:00 PM	0.9	ENE	
18 Jun 2020	3:00 PM	0.4	ENE	
18 Jun 2020	4:00 PM	0.4	SW	
18 Jun 2020	5:00 PM	0.9	SW	
18 Jun 2020	6:00 PM	1.3	ENE	
18 Jun 2020	7:00 PM	0.4	ENE	
18 Jun 2020	8:00 PM	1.3	ENE	
18 Jun 2020	9:00 PM	0.9	SW	

June 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
18 Jun 2020	10:00 PM	0.4	SW	
18 Jun 2020	11:00 PM	0.4	SW	
19 Jun 2020	12:00 AM	0.4	SW	
19 Jun 2020	1:00 AM	0.9	SW	
19 Jun 2020	2:00 AM	0	SW	
19 Jun 2020	3:00 AM	0.3	ENE	
19 Jun 2020	4:00 AM	0.8	ENE	
19 Jun 2020	5:00 AM	0.2	ENE	
19 Jun 2020	6:00 AM	0	NE	
19 Jun 2020	7:00 AM	0.9	ENE	
19 Jun 2020	8:00 AM	0.4	NNE	
19 Jun 2020	9:00 AM	0.9	SW	
19 Jun 2020	10:00 AM	1.3	SW	
19 Jun 2020	11:00 AM	0.4	NNE	
19 Jun 2020	12:00 PM	0.9	ENE	
19 Jun 2020	1:00 PM	1.8	SW	
19 Jun 2020	2:00 PM	2.2	SW	
19 Jun 2020	3:00 PM	2.2	SW	
19 Jun 2020	4:00 PM	2.2	SW	
19 Jun 2020	5:00 PM	1.8	SW	
19 Jun 2020	6:00 PM	1.8	SW	
19 Jun 2020	7:00 PM	0.9	SW	
19 Jun 2020	8:00 PM	1.3	SW	
19 Jun 2020	9:00 PM	1.8	SW	
19 Jun 2020	10:00 PM	0.9	SW	
19 Jun 2020	11:00 PM	0.9	SW	
20 Jun 2020	12:00 AM	0.4	NNE	
20 Jun 2020	1:00 AM	0	ENE	
20 Jun 2020	2:00 AM	0.4	NNE	
20 Jun 2020	3:00 AM	0.4	NE	
20 Jun 2020	4:00 AM	0.4	N	
20 Jun 2020	5:00 AM	0.9	SW	
20 Jun 2020	6:00 AM	1.3	SW	
20 Jun 2020	7:00 AM	0.9	SW	
20 Jun 2020	8:00 AM	1.3	SW	
20 Jun 2020	9:00 AM	0.9	SW	
20 Jun 2020	10:00 AM	1.3	ENE	
20 Jun 2020	11:00 AM	1.3	ENE	
20 Jun 2020	12:00 PM	0.9	ENE	
20 Jun 2020	1:00 PM	1.3	SW	
20 Jun 2020	2:00 PM	1.8	ENE	
20 Jun 2020	3:00 PM	2.2	ENE	
20 Jun 2020	4:00 PM	3.1	ENE	

June 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
20 Jun 2020	5:00 PM	3.1	ENE	
20 Jun 2020	6:00 PM	3.1	ENE	
20 Jun 2020	7:00 PM	2.7	ENE	
20 Jun 2020	8:00 PM	0.9	ENE	
20 Jun 2020	9:00 PM	1.8	SW	
20 Jun 2020	10:00 PM	0.9	ENE	
20 Jun 2020	11:00 PM	0.4	NNE	
21 Jun 2020	12:00 AM	0.4	ENE	
21 Jun 2020	1:00 AM	0.4	ENE	
21 Jun 2020	2:00 AM	0.4	ENE	
21 Jun 2020	3:00 AM	0.4	SE	
21 Jun 2020	4:00 AM	0.9	ENE	
21 Jun 2020	5:00 AM	1.3	ENE	
21 Jun 2020	6:00 AM	1.3	ENE	
21 Jun 2020	7:00 AM	0.9	ENE	
21 Jun 2020	8:00 AM	1.3	ENE	
21 Jun 2020	9:00 AM	1.3	ENE	
21 Jun 2020	10:00 AM	1.8	ENE	
21 Jun 2020	11:00 AM	2.2	ENE	
21 Jun 2020	12:00 PM	3.1	ENE	
21 Jun 2020	1:00 PM	2.7	ENE	
21 Jun 2020	2:00 PM	3.1	ENE	
21 Jun 2020	3:00 PM	4.5	ENE	
21 Jun 2020	4:00 PM	4	ENE	
21 Jun 2020	5:00 PM	4	ENE	
21 Jun 2020	6:00 PM	4	ENE	
21 Jun 2020	7:00 PM	2.7	ENE	
21 Jun 2020	8:00 PM	2.7	ENE	
21 Jun 2020	9:00 PM	2.7	ENE	
21 Jun 2020	10:00 PM	1.8	ENE	
21 Jun 2020	11:00 PM	1.3	ENE	
22 Jun 2020	12:00 AM	1.8	ENE	
22 Jun 2020	1:00 AM	1.3	ENE	
22 Jun 2020	2:00 AM	0.9	ENE	
22 Jun 2020	3:00 AM	0.9	ENE	
22 Jun 2020	4:00 AM	0.9	ENE	
22 Jun 2020	5:00 AM	0.9	ENE	
22 Jun 2020	6:00 AM	0.4	ENE	
22 Jun 2020	7:00 AM	0.9	ENE	
22 Jun 2020	8:00 AM	0.9	ENE	
22 Jun 2020	9:00 AM	2.2	ENE	
22 Jun 2020	10:00 AM	3.1	ENE	
22 Jun 2020	11:00 AM	1.3	NE	

June 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
22 Jun 2020	12:00 PM	2.7	ENE	
22 Jun 2020	1:00 PM	3.1	ENE	
22 Jun 2020	2:00 PM	3.1	ENE	
22 Jun 2020	3:00 PM	2.7	ENE	
22 Jun 2020	4:00 PM	2.2	ENE	
22 Jun 2020	5:00 PM	2.7	ENE	
22 Jun 2020	6:00 PM	1.8	ENE	
22 Jun 2020	7:00 PM	1.8	ENE	
22 Jun 2020	8:00 PM	2.2	ENE	
22 Jun 2020	9:00 PM	1.3	ENE	
22 Jun 2020	10:00 PM	1.3	ENE	
22 Jun 2020	11:00 PM	1.3	ENE	
23 Jun 2020	12:00 AM	1.3	ENE	
23 Jun 2020	1:00 AM	0.9	NE	
23 Jun 2020	2:00 AM	0.9	ENE	
23 Jun 2020	3:00 AM	0.9	ENE	
23 Jun 2020	4:00 AM	0.9	ENE	
23 Jun 2020	5:00 AM	0.4	ENE	
23 Jun 2020	6:00 AM	0.4	NNE	
23 Jun 2020	7:00 AM	0.4	NE	
23 Jun 2020	8:00 AM	1.3	ENE	
23 Jun 2020	9:00 AM	1.3	NE	
23 Jun 2020	10:00 AM	0.9	NNE	
23 Jun 2020	11:00 AM	1.3	ENE	
23 Jun 2020	12:00 PM	0.9	SW	
23 Jun 2020	1:00 PM	0.9	ENE	
23 Jun 2020	2:00 PM	1.3	ENE	
23 Jun 2020	3:00 PM	1.3	ESE	
23 Jun 2020	4:00 PM	1.3	Е	
23 Jun 2020	5:00 PM	0.9	Е	
23 Jun 2020	6:00 PM	1.3	SW	
23 Jun 2020	7:00 PM	0.9	SW	
23 Jun 2020	8:00 PM	0.9	Е	
23 Jun 2020	9:00 PM	0.4	ENE	
23 Jun 2020	10:00 PM	1.3	ENE	
23 Jun 2020	11:00 PM	1.8	ENE	
24 Jun 2020	12:00 AM	0.9	ENE	
24 Jun 2020	1:00 AM	0.9	SW	
24 Jun 2020	2:00 AM	0.9	SW	
24 Jun 2020	3:00 AM	0.4	SW	
24 Jun 2020	4:00 AM	0.4	SW	
24 Jun 2020	5:00 AM	0.9	SW	
24 Jun 2020	6:00 AM	1.3	SW	

June 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
24 Jun 2020	7:00 AM	1.3	SW	
24 Jun 2020	8:00 AM	1.3	SW	
24 Jun 2020	9:00 AM	0.9	SW	
24 Jun 2020	10:00 AM	1.3	SW	
24 Jun 2020	11:00 AM	3.1	SW	
24 Jun 2020	12:00 PM	2.7	SW	
24 Jun 2020	1:00 PM	3.1	SW	
24 Jun 2020	2:00 PM	2.2	SW	
24 Jun 2020	3:00 PM	2.7	SW	
24 Jun 2020	4:00 PM	2.2	SW	
24 Jun 2020	5:00 PM	2.2	SW	
24 Jun 2020	6:00 PM	2.7	SW	
24 Jun 2020	7:00 PM	0.9	SW	
24 Jun 2020	8:00 PM	1.3	ENE	
24 Jun 2020	9:00 PM	1.3	ENE	
24 Jun 2020	10:00 PM	0.9	ENE	
24 Jun 2020	11:00 PM	0.9	SW	
25 Jun 2020	12:00 AM	1.8	SW	
25 Jun 2020	1:00 AM	0.9	SW	
25 Jun 2020	2:00 AM	0.9	SW	
25 Jun 2020	3:00 AM	0.9	SW	
25 Jun 2020	4:00 AM	0.9	SW	
25 Jun 2020	5:00 AM	0.9	SW	
25 Jun 2020	6:00 AM	0.9	SW	
25 Jun 2020	7:00 AM	1.8	SW	
25 Jun 2020	8:00 AM	1.8	SW	
25 Jun 2020	9:00 AM	1.8	SW	
25 Jun 2020	10:00 AM	2.2	SW	
25 Jun 2020	11:00 AM	0.9	ESE	
25 Jun 2020	12:00 PM	1.3	ESE	
25 Jun 2020	1:00 PM	1.3	ESE	
25 Jun 2020	2:00 PM	1.8	SW	
25 Jun 2020	3:00 PM	2.2	SW	
25 Jun 2020	4:00 PM	2.7	SW	
25 Jun 2020	5:00 PM	2.7	SW	
25 Jun 2020	6:00 PM	3.1	SW	
25 Jun 2020	7:00 PM	2.7	SW	
25 Jun 2020	8:00 PM	0.9	ENE	
25 Jun 2020	9:00 PM	0.9	ENE	
25 Jun 2020	10:00 PM	1.3	ENE	
25 Jun 2020	11:00 PM	0.9	ENE	
26 Jun 2020	12:00 AM	1.3	NE	
26 Jun 2020	1:00 AM	0.4	ENE	

June 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
26 Jun 2020	2:00 AM	0.9	NNE	
26 Jun 2020	3:00 AM	0.9	ENE	
26 Jun 2020	4:00 AM	0.4	ESE	
26 Jun 2020	5:00 AM	1.3	SW	
26 Jun 2020	6:00 AM	0.9	SW	
26 Jun 2020	7:00 AM	0.9	NE	
26 Jun 2020	8:00 AM	1.3	NE	
26 Jun 2020	9:00 AM	2.2	SW	
26 Jun 2020	10:00 AM	0.4	ENE	
26 Jun 2020	11:00 AM	0.4	NE	
26 Jun 2020	12:00 PM	0.4	ENE	
26 Jun 2020	1:00 PM	0.9	ENE	
26 Jun 2020	2:00 PM	1.8	ENE	
26 Jun 2020	3:00 PM	0.9	SW	
26 Jun 2020	4:00 PM	0.4	Е	
26 Jun 2020	5:00 PM	0.9	ENE	
26 Jun 2020	6:00 PM	2.7	ENE	
26 Jun 2020	7:00 PM	1.3	ENE	
26 Jun 2020	8:00 PM	1.3	ENE	
26 Jun 2020	9:00 PM	0.9	ENE	
26 Jun 2020	10:00 PM	0.9	SSW	
26 Jun 2020	11:00 PM	1.3	NNE	
27 Jun 2020	12:00 AM	1.3	NNE	
27 Jun 2020	1:00 AM	1.3	NNE	
27 Jun 2020	2:00 AM	1.8	NNE	
27 Jun 2020	3:00 AM	1.8	NNE	
27 Jun 2020	4:00 AM	1.3	NNE	
27 Jun 2020	5:00 AM	1.8	NE	
27 Jun 2020	6:00 AM	1.8	NNE	
27 Jun 2020	7:00 AM	1.8	NNE	
27 Jun 2020	8:00 AM	2.2	NNE	
27 Jun 2020	9:00 AM	2.2	NNE	
27 Jun 2020	10:00 AM	2.2	NNE	
27 Jun 2020	11:00 AM	1.8	NNE	
27 Jun 2020	12:00 PM	2.2	NNE	
27 Jun 2020	1:00 PM	1.8	NE	
27 Jun 2020	2:00 PM	1.8	NNE	
27 Jun 2020	3:00 PM	2.2	NNE	
27 Jun 2020	4:00 PM	2.2	NNE	
27 Jun 2020	5:00 PM	2.7	NNE	
27 Jun 2020	6:00 PM	2.7	NE	
27 Jun 2020	7:00 PM	2.7	NE	
27 Jun 2020	8:00 PM	2.2	NNE	

June 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
27 Jun 2020	9:00 PM	2.7	NNE	
27 Jun 2020	10:00 PM	2.7	NNE	
27 Jun 2020	11:00 PM	2.2	NNE	
28 Jun 2020	12:00 AM	1.8	NE	
28 Jun 2020	1:00 AM	1.3	NNE	
28 Jun 2020	2:00 AM	1.8	NNE	
28 Jun 2020	3:00 AM	1.3	SSE	
28 Jun 2020	4:00 AM	2.2	NNE	
28 Jun 2020	5:00 AM	2.2	NNE	
28 Jun 2020	6:00 AM	2.2	NNE	
28 Jun 2020	7:00 AM	2.2	NNE	
28 Jun 2020	8:00 AM	1.8	NE	
28 Jun 2020	9:00 AM	1.8	SSW	
28 Jun 2020	10:00 AM	2.7	NNE	
28 Jun 2020	11:00 AM	2.2	SW	
28 Jun 2020	12:00 PM	2.2	W	
28 Jun 2020	1:00 PM	2.7	W	
28 Jun 2020	2:00 PM	3.1	W	
28 Jun 2020	3:00 PM	3.1	W	
28 Jun 2020	4:00 PM	3.6	W	
28 Jun 2020	5:00 PM	2.2	WNW	
28 Jun 2020	6:00 PM	3.1	W	
28 Jun 2020	7:00 PM	2.7	W	
28 Jun 2020	8:00 PM	2.7	W	
28 Jun 2020	9:00 PM	2.2	W	
28 Jun 2020	10:00 PM	2.7	WNW	
28 Jun 2020	11:00 PM	2.2	W	
29 Jun 2020	12:00 AM	2.2	W	
29 Jun 2020	1:00 AM	1.8	W	
29 Jun 2020	2:00 AM	1.8	WNW	
29 Jun 2020	3:00 AM	2.2	W	
29 Jun 2020	4:00 AM	2.7	WNW	
29 Jun 2020	5:00 AM	2.2	W	
29 Jun 2020	6:00 AM	2.7	W	
29 Jun 2020	7:00 AM	2.7	W	
29 Jun 2020	8:00 AM	3.6	NW	
29 Jun 2020	9:00 AM	2.2	WNW	
29 Jun 2020	10:00 AM	2.2	W	
29 Jun 2020	11:00 AM	2.7	W	
29 Jun 2020	12:00 PM	2.2	WNW	
29 Jun 2020	1:00 PM	0		
29 Jun 2020	2:00 PM	1.8	ENE	
29 Jun 2020	3:00 PM	1.8	NE	

June 2020				
Wind Speed and Directions				
Date	Time	Wind Speed m-s	Direction	
29 Jun 2020	4:00 PM	2.2	NE	
29 Jun 2020	5:00 PM	2.2	NE	
29 Jun 2020	6:00 PM	2.7	NNE	
29 Jun 2020	7:00 PM	2.7	N	
29 Jun 2020	8:00 PM	2.7	NNE	
29 Jun 2020	9:00 PM	2.2	NNE	
29 Jun 2020	10:00 PM	2.7	NNE	
29 Jun 2020	11:00 PM	2.7	NNE	
30 Jun 2020	12:00 AM	2.2	NNE	
30 Jun 2020	1:00 AM	1.8	NNE	
30 Jun 2020	2:00 AM	1.3	NNE	
30 Jun 2020	3:00 AM	1.8	N	
30 Jun 2020	4:00 AM	1.3	NNE	
30 Jun 2020	5:00 AM	2.2	NNE	
30 Jun 2020	6:00 AM	2.2	NE	
30 Jun 2020	7:00 AM	2.2	ENE	
30 Jun 2020	8:00 AM	2.2	NE	
30 Jun 2020	9:00 AM	1.8	NNE	
30 Jun 2020	10:00 AM	1.8	NNE	
30 Jun 2020	11:00 AM	2.7	NE	
30 Jun 2020	12:00 PM	2.2	WNW	
30 Jun 2020	1:00 PM	2.2	NE	
30 Jun 2020	2:00 PM	0.4	NE	
30 Jun 2020	3:00 PM	0.9	NE	
30 Jun 2020	4:00 PM	0.4	NE	
30 Jun 2020	5:00 PM	0.4	NNE	
30 Jun 2020	6:00 PM	0.4	NNE	
30 Jun 2020	7:00 PM	0.4	NNE	
30 Jun 2020	8:00 PM	0.4	NE	
30 Jun 2020	9:00 PM	0	ENE	
30 Jun 2020	10:00 PM	0.4	NNE	
30 Jun 2020	11:00 PM	0	ENE	

APPENDIX F 24-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

# Appendix F - 24-hour TSP Impact Monitoring Results

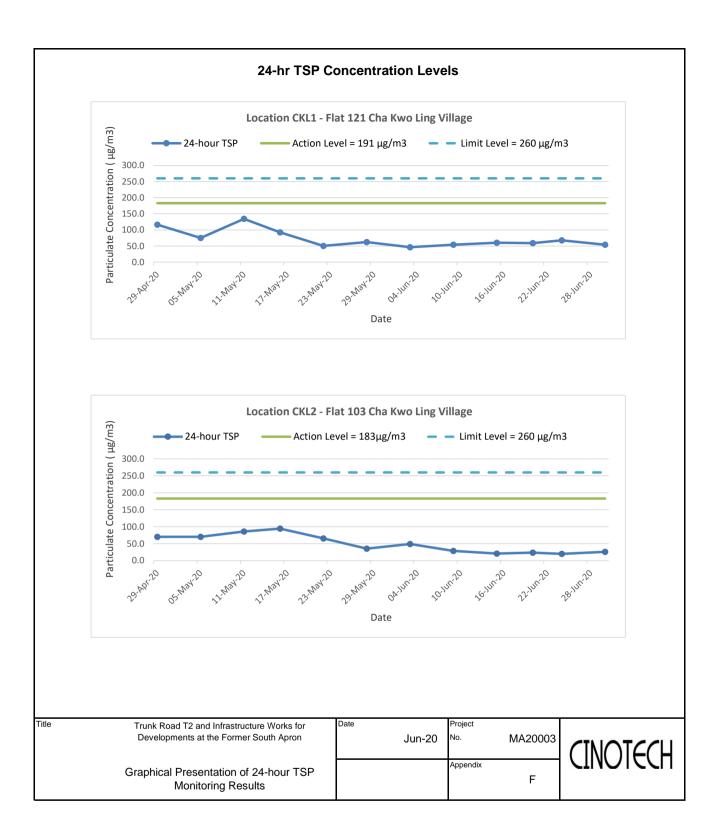
## Location CKL1 - Flat 121 Cha Kwo Ling Village

Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Dortiouloto	Elapse Time		Sompling	Flow Rate (m <sup>3</sup> /min.)			Total vol.	Conc.	Action	Limit
				Initial	Final	Particulate weight (g)	Initial	Final	Sampling Time (hrs.)	Initial	Final	(m <sup>3</sup> /min)	(m <sup>3</sup> )	(μg/m <sup>3</sup> )	Level (µg/m3)	Level (µg/m3)
3-Jun-20	Cloudy	303.0	757.2	3.5237	3.6049	0.0812	807.1	831.1	24.0	1.22	1.22	1.22	1752.5	46.3		
9-Jun-20	Sunny	302.6	757.4	3.4499	3.5445	0.0946	831.1	855.1	24.0	1.22	1.22	1.22	1753.6	53.9		
15-Jun-20	Sunny	302.0	758.8	3.5804	3.6862	0.1058	855.1	879.1	24.0	1.22	1.22	1.22	1757.1	60.2	191.0	260.0
20-Jun-20	Sunny	303.2	756.6	3.4926	3.5957	0.1031	879.1	903.1	24.0	1.22	1.22	1.22	1751.1	58.9	191.0	200.0
24-Jun-20	Sunny	303.4	756.4	3.4414	3.5599	0.1185	903.1	927.1	24.0	1.22	1.22	1.22	1750.5	67.7		
30-Jun-20	Sunny	303.5	754.6	3.4511	3.5452	0.0941	927.1	951.1	24.0	1.21	1.21	1.21	1748.2	53.8		
													Min	46.3		
													Max	67.7		
													Average	57.4		

## Location CKL2 - Flat 103 Cha Kwo Ling Village

Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate	Elapse Time		Sampling	Flow Rate (m <sup>3</sup> /min.)		Av Flow	Total vol.	Conc.	Action	Limit
				Initial	Final	weight (g)	Initial	Final	Time (hrs.)	Initial	Final	(m <sup>3</sup> /min)	(m <sup>3</sup> )	(µg/m <sup>3</sup> )	Level (µg/m3)	Level (µg/m3)
3-Jun-20	Cloudy	303.0	757.2	3.5062	3.5919	0.0857	12944.4	12968.4	24.0	1.22	1.21	1.22	1750.4	49.0		
9-Jun-20	Sunny	302.6	757.4	3.4998	3.5543	0.0545	12968.4	12994.4	26.0	1.22	1.22	1.22	1898.0	28.7		
15-Jun-20	Sunny	302.0	758.8	3.5137	3.5504	0.0367	12992.4	13016.4	24.0	1.22	1.22	1.22	1756.7	20.9	183.0	260.0
20-Jun-20	Sunny	303.2	756.6	3.4731	3.5140	0.0409	13016.4	13040.4	24.0	1.22	1.21	1.21	1748.4	23.4	4	200.0
24-Jun-20	Sunny	303.4	756.4	3.4859	3.5205	0.0346	13040.4	13064.4	24.0	1.21	1.21	1.21	1747.5	19.8		
30-Jun-20	Sunny	303.5	754.6	3.4822	3.5275	0.0453	13064.4	13088.4	24.0	1.21	1.21	1.21	1744.4	26.0		
													Min	19.8		
													Max	49.0		

Average 28.4



APPENDIX G COPIES OF CALIBRATION CERTIFICATES FOR NOISE MONITORING Equipment no.: N-12-02



# **Calibration Certificate**

0022522

Customer		Object 1 : BSWA 308 SLM
Cinotech Consultants Limited		Serial No. /Ref. No. : 570187 / 550841
RM 1710, Technology Park,		Object 2 :
18 On Lai Street, Shatin, N.T.		Serial No. /Ref. No.
Hong Kong		
Customer Code : SVEC09005		Manufacturer : BSWAtech
Date of calibration:	23/09/2019	Certificate No.: 0022522
Date of the recommended re-calibration:	23/09/2020	Handle 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.

E The collingations contificate as

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



# **Calibration Certificate**

0022675

Customer :		Object 1 :	ST-120 sound calibrator
Cinotech Consultants Limited		Serial No. /Ref. No. :	181001637
RM 1710, Technology Park,		Object 2 :	
18 On Lai Street, Shatin, N.T.		Serial No. /Ref. No. :	
Hong Kong			
Customer Code : SVEC09005		Manufacturer : Sour	ndtek
Date of calibration:	24/10/2019	Certificate No .:	0022675
Date of the recommended re-calibration:	24/10/2020	Handle by:	E0002

#### **Measuring results**

	Reference value	Indication value	Deviation	Allowed deviation	Object
Γ	94.0dB	94.0dB	0.0dB	+/- 0.3dB	1
Γ	114.0dB	114.0dB	0.0dB	+/- 0.5dB	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 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

The calibrations certificate may not be reproduced.					
Measured value(s) within the allowa	ble deviation.				
Performed by	Approved by				
Calibration Technician	Quality Manager				



**ATTN:** 

WELLAB LIMITED Rms 1214, 1502, 1516, 1701 & 1716, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong. Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

1 of 1

## **TEST REPORT**

#### **APPLICANT: Cinotech Consultants Limited** Test Report No.: 32151 Date of Issue: Room 1710, Technology Park, 2019-09-27 2019-09-26 Date Received: 18 On Lai Street, Shatin, NT, Hong Kong Date Tested: 2019-09-26 Date Completed: 2019-09-27 Next Due Date: 2020-09-26

Mr. Henry Leung

# **Certificate of Calibration**

#### Item for calibration:

Description Manufacturer Model No. Serial No. Microphone No. Equipment No.

#### **Test conditions:**

Room Temperatre Relative Humidity : 'SVANTEK' Integrating Sound Level Meter : SVANTEK : SVAN 957 : 21455 : 43730 : N-08-07

: 17-22 degree Celsius : 40-70%

Page:

#### **Test Specifications:**

Performance checking at 94 and 114 dB

#### **Methodology:**

In-house method, according to manufacturer instruction manual

#### **Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY: For and On Behalf of **WELLAB Ltd.** 

PATRICK TSE Laboratory Manager



# Calibration Certificate

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.

5. The calibrations certificate may not be reproduced.

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

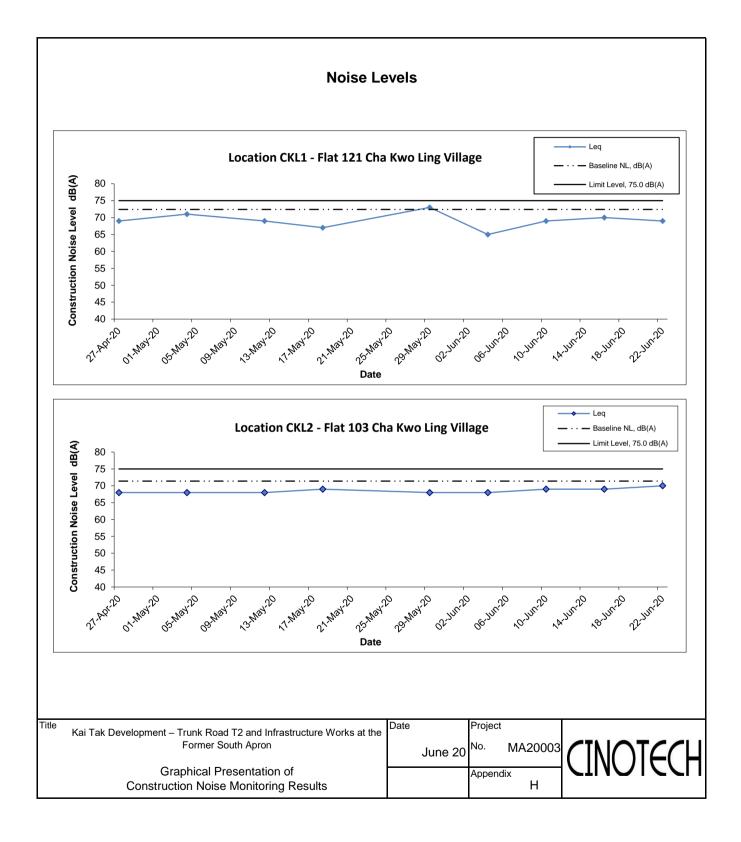
APPENDIX H NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

## Appendix H - Noise Monitoring Results

#### (0700-1900 hrs on Normal Weekdays)

Location CKL1	Location CKL1 - Flat 121 Cha Kwo Ling Village					
				Unit: dB	6 (A) (30-min)	
Date	Time	Weather	Meas	Measured Noise Level		
Date	Time	Weather	L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>
4-Jun-20	23:30	Sunny	64.7	66.7	54.5	72.4
10-Jun-20	10:55	Sunny	68.5 72.2 59.3		72.4	
16-Jun-20	11:30	Sunny 69.5 73.1 58.8		72.4		
22-Jun-20	13:50	Sunny	69.3	72.1	59.3	72.4

Location CKL2	Location CKL2 - Flat 103 Cha Kwo Ling Village					
	Unit: dB (A) (30-min)					
Date	Time	Time Weather Measu	Measured Noise Level			Baseline Level
Bulo	Time		L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	
4-Jun-20	13:00	Sunny	67.7	71.8	56.3	71.4
10-Jun-20	11:30	Sunny	69.4	73.1	59.4	71.4
16-Jun-20	10:52	Sunny	69.3	72.6	62.1	71.4
22-Jun-20	13:15	Sunny	70.1	73.1	62.4	71.4



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 200604 Checklist Reference Number 200604 Date 04 June 2020 (Thursday) Time 13:30 – 16:00

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 previous audit session (Ref No.:200528), item 200521 – R2 has been rectified.	

	Name	Signature	Date
Recorded by	Tim Lui	Cyli	05 June 2020
Checked by	Karina Chan	Julle	05 June 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	200611
Date	11 June 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>	
200611 – R3	<ul><li><i>D. Construction Noise Impact</i></li><li>Mitigation measure for noise reducing should be implemented on CKL site.</li></ul>	D5, D7
200611 – R2 200611 – R1	<ul> <li><i>E. Waste/Chemical Management</i></li> <li>Construction waste within the skip should be sorted before disposed.</li> <li>Accumulation of waster within the drip tray was observed.</li> </ul>	E4ii E9
	<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 previous audit session (Ref No.:200604), no major environmental deficiency was identified during previous audit session (Ref No.:200604).</li> </ul>	

	Name	Signature	Date
Recorded by	Tim Lui	Cyli	12 June 2020
Checked by	Karina Chan	Julle	12 June 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 200618 Date 18 June 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 previous audit session (Ref No.:200611), items 200611 – R1 and 200611 – R2 has been rectified, and the item 200611 – R3 needs to be followed on the next session, as CKL's site wasn't inspected this times.	

	Name	Signature	Date
Recorded by	Tim Lui	Cyli	19 June 2020
Checked by	Karina Chan	Julle	19 June 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	200623
Date	23 June 2020 (Tuesday)
Time	09:30 - 12:00

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

Ref. No.	Remarks/Observations	Related Item No.
200623 - R1 200623 - R2	<ul> <li>B. Water Quality</li> <li>Bund wall should be provided to surround the water discharge point at Depressed Road's portion.</li> <li>Still water and accumulation of muddy water were observed at storage area and Depressed Road respectively.</li> </ul>	B3ii B9
	<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. Others</li> <li>Follow-up on previous audit session (Ref No.:200618), item 200611 – R3 has been rectified.</li> </ul>	

	Name	Signature	Date
Recorded by	Tim Lui	Cyli	24 June 2020
Checked by	Karina Chan	Julle	24 June 2020

APPENDIX J EVENT AND ACTION PLANS

<b>.</b>		Construction Dust Monitor Ac	tion	
Event	ET	IEC	ER	Contractor
Action Level				
<ol> <li>Exceedance for one sample</li> </ol>	<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.</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 agreed with the ER as appropriate.</li> </ol>
2. Exceedance by two or more consecutive samples	<ol> <li>Identify source;</li> <li>Inform IEC and ER;</li> <li>Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>Repeat measurements to confirm findings;</li> <li>Increase monitoring frequency to daily;</li> <li>Discuss with IEC, ER and Contractor on remedial actions required;</li> </ol>	<ol> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with ET, ER and Contractor on possible remedial measures if required;</li> <li>Advise the ER on the effectiveness of the proposed remedial measures;</li> </ol>	<ol> <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>

# Table J-1Event/Action Plan for Air Construction Dust Monitoring

	Action			
Event	ET	IEC	ER	Contractor
Limit level 1. Exceedance for one sample	<ul> <li>7. If exceedance continues, arrange meeting with IEC, Contractor and ER;</li> <li>8. If exceedance stops, cease additional monitoring.</li> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>2. Inform the IEC, ER, and Contractor;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Assess effectiveness of</li> </ul>	<ol> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with ET, ER and Contractor on possible remedial measures;</li> <li>Advise the ER and ET on the effectiveness of the proposed remedial measures;</li> </ol>	1. Confirm receipt of notification of exceedance in writing;       2. Notify Contractor;       3. Ensure remedial measures properly implemented.	<ol> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to the ER and copy to the ET and IEC within three working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if</li> </ol>
	Contractor's remedial actions and keep IEC and ER informed of the results.	5. Supervise implementation of remedial measures.		appropriate.
2. Exceedance for two or more	1. Notify IEC, ER and Contractor;	1. Discuss amongst ER, ET, and Contractor on the potential	1. Confirm receipt of notification of exceedance in	<ol> <li>Take immediate action to avoid further exceedance;</li> </ol>
consecutive	2. Identify source;	remedial actions;	writing;	2. Submit proposals for remedial

E	Action				
Event	ET	IEC	ER	Contractor	
samples	3. Repeat measurement to	2. Review Contractor's	2. Notify Contractor;	actions to ER and copy to the	
	confirm findings;	remedial actions whenever	3. In consolidation with the IEC	IEC and ET within three	
	4. Increase monitoring	necessary to assure their	and ET, agree with the	working days of notification;	
	frequency to daily;	effectiveness and advise the	Contractor on the remedial	3. Implement the agreed	
	5. Carry out analysis of	ER and ET accordingly;	measures to be implemented;	proposals;	
	Contractor's working	3. Supervise the	4. Ensure remedial measures	4. Resubmit proposals if	
	procedures with the ER to	implementation of remedial	properly implemented;	problem still not under	
	determine possible mitigation	measures.	5. If exceedance continues,	control;	
	to be implemented;		consider what portion of the	5. Stop the relevant portion of	
	6. Arrange meeting with IEC		work is responsible and	works as determined by the	
	and ER to discuss the		instruct the Contractor to	ER until the exceedance is	
	remedial actions to be taken;		stop that portion of work	abated.	
	7. Assess effectiveness of		until the exceedance is		
	Contractor's remedial actions		abated.		
	and keep IEC, EPD and ER				
	informed of the results;				
	8. If exceedance stops, cease				
	additional monitoring.				

Table J-2		struction Noise Monitoring		
Event	Action			
Event	ET	IEC	ER	Contractor
Action Level	1. Notify IEC, ER and	1. Review the monitoring data	1. Notify Contractor;	1. Submit noise mitigation
	Contractor;	submitted by the ET;	2. Require Contractor to propose	proposals to the ER and copy
	2. Carry out investigation;	2. Review the construction	remedial measures for	to the IEC and ET;
	3. Report the results of	methods and proposed redial	implementation if required.	2. Implement noise mitigation
	investigation to the IEC and	measures by the Contractor,		proposals.
	Contractor;	and advise the ET and ER if		
	4. Discuss jointly with the ER	the proposed remedial		
	and formulate remedial	measures would be		
	measures;	sufficient.		
	5. Increase monitoring			
	frequency to check			
	mitigation effectiveness.			
Limit Level	1. Notify IEC, ER and	1. Discuss amongst ER, ET, and	1. Confirm receipt of	1. Take immediate action to
	Contractor;	Contractor on the potential	notification of failure in	avoid further exceedance;
	2. Identify source;	remedial actions;	writing;	2. Submit proposals for
	3. Repeat measurements to	2. Review the Contractor's	2. Notify Contractor;	remedial actions to the ER
	confirm findings;	remedial actions whenever	3. Require Contractor to	and copy to the ET and IEC
	4. Carry out analysis of	necessary to assure their	propose remedial measures	within 3 working days of
	Contractor's working	effectiveness and advise the	for the analysed noise	notification;

# Table J-2Event/Action Plan for Construction Noise Monitoring

E	Action				
Event	ET	IEC	ER	Contractor	
	procedures to determine	ER accordingly;	problem;	3. Implement the agreed	
	possible mitigation to be	3. Supervise the	4. Ensure remedial measures	proposals;	
	implemented;	implementation of remedial	properly implemented;	4. Resubmit proposals if	
	5. Record the causes and action	measures.	5. If exceedance continues,	problem still not under	
	taken for the exceedances;		consider what portion of the	control;	
	6. Increase the monitoring		work is responsible and	5. Stop the relevant portion of	
	frequency;		instruct the Contractor to stop	works as determined by the	
	7. Assess the effectiveness of		that portion of work until the	ER until the exceedance is	
	the Contractor's remedial		exceedance is abated.	abated.	
	action with the ER and keep				
	the IEC informed of the				
	results;				
	8. If exceedance stops, cease				
	additional monitoring.				

Event	Action				
	ET	IEC	ER	Contractor	
Non-conformity	1. Identify Source;	1. Check report;	1. Notify Contractor;	1. Amend working methods;	
on one occasion	2. Inform the IEC and the ER;	2. Check Contractor's working	2. Ensure remedial measures	2. Rectify damage and undertake	
	3. Discuss remedial actions with	method;	are properly implemented.	any necessary replacement.	
	IEC, ER and Contractor	3. Discuss with ET and the			
	4. Monitor remedial actions until	Contractor on possible			
	rectification has been	remedial measures;			
	completed.	4. Advise ER on effectiveness			
		of proposed remedial			
		measures;			
		5. Check implementation of			
		remedial measures			

# Table J-3Event/Action Plan for Landscape and Visual

Event	Action				
	ET	IEC	ER	Contractor	
Repeated	1. Identify source;	1. Check monitoring report;	1. Notify Contractor;	1. Amend working methods;	
Non-conformity	2. Inform the IEC and the ER;	2. Check Contractor's working	2. Ensure remedial measures	2. Rectify damage and undertake	
	3. Increase monitoring frequency;	method;	are properly implemented.	any necessary replacement.	
	4. Discuss remedial actions with	3. Discuss with ET and the			
	the IEC, the ER and the	Contractor on possible			
	Contractor;	remedial measures;			
	5. Monitor remedial actions until	4. Advise ER on effectiveness			
	rectification has been	of proposed remedial			
	completed;	measures;			
	6. If exceedance stops, cease	5. Check implementation of			
	additional monitoring.	remedial measures			

APPENDIX K ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stage       D       C			Status
						D	С	0	
Air Quality Imp	act	<u> </u>		<u> </u>					
S2.3.1.1	The specific mitigation comprises the following:	emission during construction works	· · · · · · · ·	Contractor and Sub- contractors	APCO / EIAO	Y	Y		^
	Dust enclosures with watering would be provided along the loading ramps and conveyor belts for unloading the C&D materials to the barge for dust suppression; and								N/A(1)
	3-sided barriers around the stockpiling areas WA3 and WA4.								^
\$2.3.1.2	The dust control measures detailed below shall also be incorporated into the Contract Specification where practicable as an integral part of good construction practice: Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather;	To minimize dust emission during construction works		Contractor and Sub- contractors	APCO / EIAO	Y	Y		Λ
	Use of frequent watering for particularly dusty construction areas and areas close to ASRs;								٨
	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;								٨
	Open stockpiles shall be avoided or covered. Prevent placing dusty material storage piles near ASRs;								^
	Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations;								۸

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement	Implen	mplementation Stages		Status
						D	С	0	
	Establishment and use of vehicle wheel and body washing facilities at the exit points of the site;								٨
	Imposition of speed controls for vehicles on unpaved site roads, 8 km per hour is the recommended limit;								N/A(1)
	Routing of vehicles and position of construction plant should be at the maximum possible distance from ASRs;								^
	Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides;								^
	Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; and								N/A(1)
	Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system.								N/A(1)

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement			n Stages	Status
						D	C	0	
Noise Impact									
S3.4.1.1	The use of quieter plant, including Quality Powered Mechanical Equipment (QPME) is specified for the list of equipment: - Concrete lorry mixer - Dump Truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne - Generator, Super Silenced, 70 dB(A) at 7m - Poker, vibratory, Hand-held (electric) - Water Pump, Submersible (Electric) - Mobile Crane - KOBELCO CKS900 - Excavator, wheeled/tracked - HYUNDAI R80CR-9	To minimise air- borne noise impacts	All relevant works sites	Contractor and Sub- contractors	NCO / EIAO		Y		Λ
S3.4.1.1	Use of temporary or fixed noise barriers with a surface density of at least $10 \text{kg/m}^2$ to screen noise from movable and stationary plant.	To minimise air- borne noise impacts	All relevant works sites	Contractor and Sub- contractors	NCO / EIAO		Y		N/A(1)
S3.4.1.1	Use of enclosures with covers at top and three sides and a surface density of at least $10 \text{kg/m}^2$ to screen noise from generally static noisy plant such as air compressors.	To minimise air- borne noise impacts	All relevant works sites	Contractor and Sub- contractors	NCO / EIAO		Y		N/A(1)
S3.4.1.1	Use of acoustic fabric for the silent piling system, drill rigs, rock drills etc.	To minimise air- borne noise impacts	All relevant works sites	Contractor and Sub-contractors	NCO / EIAO		Y		N/A(1)
\$3.4.1.1	Proper fitting of silencers and mufflers on the ventilation fans.	To minimise air- borne noise impacts	All relevant works sites	Contractor and Sub-contractors	NCO / EIAO		Y		N/A(1)
S3.4.1.1	<ul> <li>Implementation of good site practice:</li> <li>Only well-maintained plant should be operated on-site and plants should be serviced regularly during the construction period;</li> <li>Mobile plant, if any, should be sited as far from NSRs as possible;</li> <li>Plant known to emit noise strongly in one direction should, wherever possible, be properly orientated so that the noise is directed away from the nearby NSRs;</li> <li>Use of site hoarding as a noise barrier to screen noise at low level NSRs;</li> <li>Machines and plant that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum; and</li> </ul>	To minimise air- borne noise impacts	All relevant works sites	Contractor and Sub- contractors	NCO / EIAO		Y		^           ^           ^           ^           ^           ^           ^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement			n Stages	Status
						D	C	0	
	Any material stockpiles and other structures should be effectively utilised, wherever practicable, to screen the noise from on-site construction activities.								Λ
	The advancing speed of the TBM should be restricted to 2m/hr in order to ensure compliance with the daytime ground-borne noise limits.								N/A
Water Quality						1	1		
S4.2.1.1	In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures shall include the following: Surface run-off from the construction site, including all Works Areas, will be discharged into storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sedimentation basins. At the establishment of works sites and works areas including the barging point, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided to divert the storm water to the silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction and the catch-pits and perimeter channels would be constructed in advance of site formation works and earthworks;	To control water quality impact from construction site runoff and general construction activities	All works sites	Contractor and Sub- contractors	Water Pollution Control Ordinance / ProPECC PN 1/94		Y		#
	Dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas and Works Areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a site/sediment trap;								#
	The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/sand traps should be 5 minutes under maximum flow conditions. The sizes may vary depending upon the flow rate, but for a flow rate of $0.1 \text{m}^3$ /s, a sedimentation basin of $30\text{m}^3$ would be required and for a flow rate of $0.5 \text{m}^3$ /s the basin would be $150\text{m}^3$ . All effluent discharged from the construction site should comply with the standards stipulated in the TM-DSS. The detailed design of the sand/silt traps shall be undertaken by the Contractor prior to the commencement of construction;								N/A(1)

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement			n Stages	Status
						D	C	0	
	In accordance with ProPECC PN 1/94, the construction works should be programmed to minimise surface excavation works during rainy seasons (April to September), as far as practicable. All exposed earth areas should be completed and vegetated as soon as possible after the 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;								Λ
	The overall slope of works sites should be kept to a minimum to reduce the erosive potential of surface water flows, and all trafficked areas and access roads should be protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during the prolonged periods of inclement weather and the reduction of surface sheet flows;								^
	All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure their proper and efficient operation at all times particularly following rainstorms. Deposited silts and grits should be removed regularly and disposed of by spreading evenly over stable, vegetated areas;								٨
	Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet season is inevitable, they should be dug and backfilled in short sections wherever practicable. The water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;								N/A(1)
	Open stockpiles of construction materials (for example, aggregates, sand and fill material) 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;								^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages		n Stages	Status
						D	С	0	
	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;								^
	Precautions to be taken at any time of the year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted and 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;								N/A(1)
	All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at the exit of every construction site where practicable. Wash- water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-washing bay to public roads should be paved with sufficient backfall toward the wheel- washing bay to prevent vehicle tracking of soil and silty water to public roads and drains;								Λ
	Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources, specifically Works Areas WA1, WA2, WA4 and WA5 where plant maintenance is proposed. Oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for oil interceptors to prevent flushing during heavy rain;								N/A(1)
	The construction solid waste, debris and rubbish on-site should be collected, handled and disposed of properly to avoid causing any water quality impacts. The requirements for solid waste management are detailed in Section 11 Waste Management of this EIA report; and								^
	All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching the nearby WSRs.								^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	d Agent	Implementation Agent	or Requirement		n Stages	Status	
						D	С	0	
	meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas should be treated so that it satisfies	quality impact from effluent discharge from construction site	All works sites	Contractor and Sub- contractors	Water Pollution Control Ordinance		Y		N/A(1)
S4.2.1.1	Specific mitigation measures for the tunnelling works using TBM, soft ground and mechanical excavation techniques should include the following: The cut-and-cover tunnelling works should be conducted sequentially as far as practicable to limit the amount of construction wastewater generated from the exposed areas during the wet season (April to September);		All tunnelling and excavation portion	Contractor and Sub- contractors	TMEIA TMwater ProPECC PN 1/94 WPCO		Y		N/A
	Uncontaminated discharge should pass through settlement tanks prior to discharge;								N/A
	If contaminated groundwater is found during the course of the works, no direct discharge of groundwater from contaminated areas should be adopted. Any contaminated groundwater should be properly treated in compliance with the requirements of the TM-DSS. If wastewater treatment is to be deployed for treating the contaminated groundwater, the wastewater treatment unit should deploy suitable treatment processes (e.g. oil interceptor/activated carbon) to reduce the pollution level to an acceptable standard and remove any prohibited substances (such as TPH) to an undetectable range;								N/A
	If groundwater recharging wells are deployed, recharging wells should be installed as appropriate for recharging the contaminated groundwater back into the ground. The recharging wells should be selected at places where the groundwater quality will not be affected by the recharge operation as indicated in the Section 2.3 of TM-DSS;								N/A

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement	Implen	nentatio	n Stages	Status
						D	С	0	
	The baseline groundwater quality shall be determined prior to the selection of the recharge wells, and submit a working plan (including the laboratory analytical results showing the quality of groundwater at the proposed recharge location(s) as well as the pollutant levels of groundwater to be recharged) to EPD for agreement. Pollution levels of groundwater to be recharged shall not be higher than pollutant levels of ambient groundwater at the recharge well. Prior to recharge, any prohibited substances such as TPH products should be removed as necessary by installing the petrol interceptor;								N/A
	The wastewater with high concentrations of SS should be treated such as by settlement in tanks with sufficient retention time before discharge. Oil interceptors would also be required to remove the oil, lubricants and grease from the wastewater.								N/A
S4.2.1.1	In order to prevent any accidental release of bentonite slurry from getting into the surrounding environment, the following specific control measures shall be followed to reduce the risk and impacts of accidental spillage:	To control water quality impact from bentonite slurry	All relevant works sites	Contractor and Sub- contractors	WPCO		Y		^
	All bentonite slurry should be stored in a container that resistant to corrosion, maintained in good conditions and securely closed; The container should be labelled in English and Chinese and note that the container is for storage of bentonite slurry only;								^
	The storage container should be placed on an area of impermeable flooring and bunded with capacity to accommodate 110% of the volume of the container size or 20% by volume stored in the area and enclosed with at least 3 sides;								N/A(1)
	The storage container should be sufficiently covered to prevent rainfall entering the container or bunded area (water collected within the bund must be tested and disposed of as chemical waste, if necessary);								^
	An emergency clean up kit shall be readily available where bentonite fluid will be stored or used; and								N/A(1)

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement			n Stages	Status
						D	C	0	
	The handling and disposal of bentonite slurries should be undertaken in accordance within ProPECC PN 1/94. Surplus bentonite slurries used in construction works shall be reconditioned and reused wherever practicable. Residual bentonite slurry shall be disposed of from the site as soon as possible as stipulated in Clause 8.56 of the General Specification for Civil Engineering Works. The Contractor should explore alternative disposal outlets for the residual bentonite slurry (dewatered bentonite slurry to be disposed to a public filling area and liquid bentonite slurry, if mixed with inert fill material, to be disposed to a public filling area) and disposal at landfill should be the last resort.								N/A(1)
	The proposed barging point at South Apron will not involve marine works like dredging or modifying the submerged portion of the existing seawall. As such, no direct adverse water quality impacts are anticipated during its construction or operation. However, mitigation measures as outlined above should be applied to minimise water quality impacts from site run-off and temporary open stockpiles of spoil at the proposed barging point, where appropriate. Other good site practices include: 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		Barging Point	Contractor and Sub- contractors	EIAO-TM WPCO		Y		N/A(1)
	<ul> <li>vessels and the seased in an date containing, to ensure that and the tarbitry is not generated by turbulence from vessel movement or propeller wash;</li> <li>All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material;</li> <li>Construction activities should not cause foam, oil, grease, scum, litter or other</li> </ul>	-							^ N/A(1)
	Loading of barges and hoppers should be controlled to prevent splashing of material 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.								N/A(1)
S4.2.1.1	If chemical toilets and sewage holding tanks are required for handling sewage generated by the construction workforce, a licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	To minimize construction water quality impact from sewage and effluent	All works sites	Contractor	WPCO		Y		٨

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	n	Implementation Agent	Relevant Standard or Requirement	I Implementation Stages			Status
						D	C	0	
S4.2.1.1	In order to protect against impacts to the surrounding marine waters of the KTTS and Victoria Harbour in the event of an accidental spillage of fuel or oil, the Contractor will be required to prepare a spill response plan to the satisfaction of AFCD, EPD, FSD, Police, TD and WSD to define procedures for the control, containment and clean-up of any spillage that could occur on the construction site.		All works sites	Contractor	EIAO-TM WPCO WDO		Y		N/A(1)
\$4.2.1.1	The Contractor must, also, 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.	To control water quality impact from accidental chemical spillage	All works sites	Contractor	EIAO-TM WPCO WDO		Y		N/A(1)
S4.2.1.1	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.	To control water quality impact from accidental chemical spillage	All works sites	Contractor	EIAO-TM WPCO WDO		Y		N/A(1)
S4.2.1.1	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:	To control water quality impact from accidental chemical spillage	All works sites	Contractor	EIAO-TM WPCO WDO		Y		N/A(1)
	Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport;								
	Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents; and								N/A(1)
	Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.								N/A(1)

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	-	Implementation Agent	-	-	-	Relevant Standard or Requirement	Impler	nentatio	n Stages	Status
						D	С	0				
S4.2.1.1	The road drainage in the tunnel should pass through oil interceptors to remove oil, and grease before being discharged into the public storm water drainage system;	To mitigate runoff from tunnel during the operational phase	Tunnel	CEDD	WPCO			Y	N/A			
	Silt traps and oil interceptors should be cleaned and maintained regularly; and								N/A			
	The oily contents of oil interceptors should be transferred to an appropriate disposal facility, or to be collected for reuse, if possible.								N/A			
Marine Ecology							-					
\$5.3.1.1	Good construction practice measures have been recommended to be implemented as follows: Avoid damage and disturbance to the remaining and surrounding natural habitat;	Minimize waste generation during construction	Contractor		Construction phase of Main Works Stage 1, Stage 2 and Stage 3		Y		N/A(1)			
	Placement of equipment in designated areas within the existing disturbed land;								N/A(1)			
	Spoil heaps should be covered at all times;								N/A(1)			
	Construction activities should be restricted to the designated works areas; and								N/A(1)			
	Disturbed areas to be reinstated immediately after completion of the works.								N/A(1)			
Fisheries												
\$6.2.1.2	No fisheries specific mitigation measures.											

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement	Implen	nentatio	n Stages	Status
						D	C	0	
Landscape and V	Visual			1	<u> </u>				
\$7.2.1.2	All works shall be carefully designed to minimize impacts on existing landscape resources and visually sensitive receivers. Existing trees within works area shall be retained and protected.		All relevant works sites	CEDD's Contractor	EIAO TM	Y	Y		*
\$7.2.1.2	Existing trees of good quality and condition that are unavoidably affected by the works should be transplanted.	To minimise impact on existing trees	All relevant works sites	CEDD's Contractor	EIAO TM	Y	Y		N/A
\$7.2.1.2	Large temporary stockpiles of excavated material shall be covered with unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance.	To prevent unnecessary dust and dirt contaminating the air and adjacent areas.	All relevant works sites	CEDD's Contractor	EIAO TM		Y		^
\$7.2.1.2	Construction plant and building material shall be orderly and carefully stored in order to create a neat and tidy visual appearance.	To mitigate potential visually obtrusive areas	All relevant works sites	CEDD's Contractor	EIAO TM		Y		^
\$7.2.1.2	Erection of decorative screen hoarding should be designed to be compatible with the existing urban context.	To mitigate and screen any potential visually obtrusive areas and enhance urban environment	All relevant works sites	CEDD's Contractor	EIAO TM		Y		^
\$7.2.1.2	All lighting in construction site shall be carefully controlled to minimize light pollution and night-time glare to nearby residences and GIC user. The contractor shall consider other security measures, which shall minimize the visual impacts.	To mitigate light pollution and adverse visual impacts on surrounding environment	All relevant works sites	CEDD's Contractor	EIAO TM		Y		^
\$7.2.1.2	Compensatory tree planting shall be incorporated along all roadside amenity areas affected by the construction works. The required numbers and locations of compensatory trees shall be determined and agreed with the Government during Tree Removal Application process under ETWB TCW No. 3/2006.		All relevant works sites	CEDD's Contractor	EIAO TM		Y		N/A(1)

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	0	
\$7.2.1.2	Compensatory tree planting shall be incorporated by the Project. The required numbers of compensatory trees shall follow the requirements of ETWB TCW No. 3/2006. Loss of amenity area adjacent to the Kwun Tong By-pass and planting areas in KTD South Apron will be mitigated by the creation of the Kai Tak South Apron: Amenity Area, which will be equal to or larger than the current provision.	To reinstate and maximise compensatory tree	All relevant works sites	CEDD's Contractor	EIAO TM		Y		N/A(1)
\$7.2.1.2	Trees and shrubs and climbers etc. shall be planted to soften and screen proposed roads, central strip and associated structure, and to enhance streetscape greening effect where appropriate.	To mitigate hard surfaces and hard standing landscape areas and to soften and enhance proposed design features	All relevant works sites	CEDD's Contractor	EIAO TM	Y		Y	N/A
\$7.2.1.2	All works area, excavated area and disturbed area for tunnel construction and temporary road diversion or any other proposed works shall be reinstated to former conditions or better, with reasonable landscape treatment and to the satisfaction of the relevant Government departments.	To reinstate and maximise hard and soft landscape areas to equal or greater conditions	All relevant works sites	CEDD's Contractor	EIAO TM	Y		Y	N/A
\$7.2.1.2	Tunnel portals and all above ground structures shall be sensitively designed to ensure the element with colour, texture and tonal quality being compatible to the existing urban context. Trees and shrub planting to minimize the potential adverse landscape and visual impacts shall be included where space permits. Roof top greening and vertical greening shall also be provided.	To mitigate hard surfaces and hard standing landscape areas and to soften and enhance proposed design features	All relevant works sites	CEDD's Contractor	EIAO TM	Y		Y	N/A
\$7.2.1.2	All works shall be carefully designed to minimize impacts on existing landscape resources and visually sensitive receivers. Existing trees within works area shall be retained and protected.	To minimise impact on existing trees	All relevant works sites	CEDD's Contractor	EIAO TM	Y		Y	N/A
\$7.2.1.2	Existing trees of good quality and condition that are unavoidably affected by the works should be transplanted.	To minimise impact on existing trees	All relevant works sites	CEDD's Contractor	EIAO TM	Y		Y	N/A
<b>Cultural Heritag</b>	e				-				
	No culture heritage specific mitigation measures								

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
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Waste Managen	nent Implication								
\$9.2.1.2	The requirements as stipulated in the ETWB TC(W) No.19/2005 Environmental Management on Construction Sites and the other relevant guidelines should be	generation, minimization, reuse and disposal of C&D	construction period	Contractor	ETWB TC(W) No.19/2005		Y		N/A
\$9.2.1.2	The future contractor should be requested to submit an outline Waste Management Plan (WMP) prior to the commencement of construction work, in accordance with the ETWB TC(W) No.19/2005 so as to provide an overall framework of waste management and reduction. The WMP should include: - Waste management policy; - Record of generated waste; - Waste reduction target; - Waste reduction programme; - Role and responsibility of waste management team; - Benefit of waste management; - Analysis of waste materials; - Reuse, recycling and disposal plans; - Transportation process of waste products; and - Monitoring and action plan.	materials To keep trace of the generation, minimization, reuse and disposal of C&D	All areas / throughout construction period	Contractor	ETWB TC(W) No.19/2005		Y		N/A(1)
\$9.2.1.2	The waste management hierarchy should be strictly followed. This hierarchy should be adopted to evaluate the waste management options in order to maximise the extent of waste reduction and cost reduction. The records of quantities of waste generated, recycled and disposed (locations) should be properly documented.	To keep trace of the generation, minimization, reuse and disposal of C&D	All areas / throughout construction period	Contractor	ETWB TC(W) No.19/2005		Y		N/A(1)
\$9.2.1.2	A trip-ticket system should be established in accordance with DevB TC(W) No. 6/2010 and Waste Disposal (Charges for Disposal of Construction Waste) Regulation to monitor the disposal of public fill and solid wastes at public filling facilities and landfills, and to control fly-tipping. A trip-ticket system would be included as one of the contractual requirements for the future contractor to strictly implement. The Engineer would also regularly audit the effectiveness of the system.		All areas / throughout construction period	Contractor	DEVB TC(W) No. 6/2010		Y		N/A(1)

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement	Implen	nentatio	n Stages	Status
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\$9.2.1.2	A recording system for the amount of waste generated, recycled and disposed (locations) should be established. The future contractor should also provide proper training to workers regarding the appropriate concepts of site cleanliness and waste management procedures, e.g. waste reduction, reuse and recycling all the time.	To monitor disposal of waste and control fly-tipping	All areas / throughout construction period	Contractor	DEVB TC(W) No. 6/2010		Y		N/A(1)
S9.2.1.2	The CEDD should be timely notified of the estimated spoil volumes to be generated and the PFC should be notified and agreement sort on the disposal of surplus inert C&D materials e.g. good quality rock during detailed design of the Trunk Road T2 Project. Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and to ensure acceptability at public filling areas or reclamation sites.	To monitor disposal of waste and control fly-tipping	All areas / throughout construction period	Contractor	DEVB TC(W) No. 6/2010		Y		N/A(1)
\$9.2.1.2	The extent of cutting operation should be optimised where possible. Earth retaining structures and bored pile walls should be proposed to minimise the extent of cutting.	To minimize, reuse and disposal of C&D materials	All areas / throughout construction period	Contractor	DevB TC(W) No.6/2010		Y		N/A(1)
\$9.2.1.2	Inert C&D materials from road pavement would be reused for backfilling where possible	To minimize, reuse	All areas / throughout	Contractor	DevB TC(W) No.6/2010		Y		N/A(1)
\$9.2.1.2	TBM generated alluvium and other C&D materials should be treated at a slurry treatment plant prior to transferring to Public Fill Reception Facilities.	To minimize, reuse and disposal of C&D materials	TMB works area / during TBM works	Contractor	DevB TC(W) No.6/2010		Y		N/A
\$9.2.1.2	The site and surroundings should be kept tidy and litter free.	To implement good site practice for handling, sorting reuse and recycling of wastes	All areas / throughout construction period	Contractor	WDO, Land (Miscellaneous Provisions) Ordinance, DevB TC(W) No. 6/2010		Y		*

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement	Implen	nentation	n Stages	Status
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\$9.2.1.2		To implement good site practice for handling, sorting reuse and recycling of wastes	All areas / throughout construction period	Contractor	WDO, Land (Miscellaneous Provisions) Ordinance, DevB TC(W) No. 6/2010		Y		۸
\$9.2.1.2		To implement good site practice for handling, sorting reuse and recycling of wastes	Detailed Design	Design Consultant	WDO, Land (Miscellaneous Provisions) Ordinance, DevB TC(W) No. 6/2010	Y			N/A(1)
\$9.2.1.2	disposal sites in the WMP for approval before implementation.	To implement good site practice for handling, sorting reuse and recycling of wastes	All areas / throughout construction period	Contractor	WDO, Land (Miscellaneous Provisions) Ordinance, DevB TC(W) No. 6/2010		Y		N/A(1)
\$9.2.1.2	Stockpiled C&D materials should be covered by tarpaulin and/or watered as appropriate to prevent windblown dust and surface run off.	To implement good site practice for handling, sorting reuse and recycling of wastes	All areas / throughout construction period	Contractor	WDO, Land (Miscellaneous Provisions) Ordinance, DevB TC(W) No. 6/2010		Y		۸
\$9.2.1.2	Excavated C&D materials in trucks should be covered by tarpaulins to reduce the potential for spillage and dust generation.	To implement good site practice for handling, sorting reuse and recycling of wastes	All areas / throughout construction period	Contractor	WDO, Land (Miscellaneous Provisions) Ordinance, DevB TC(W) No. 6/2010		Y		۸
\$9.2.1.2	Wheel washing facilities should be used by all trucks leaving the site to prevent transferring mud trails onto public roads.	To implement good site practice for handling, sorting reuse and recycling of wastes	All areas / throughout construction period	Contractor	WDO, Land (Miscellaneous Provisions) Ordinance, DevB TC(W) No. 6/2010		Y		۸
\$9.2.1.2	Excavated marine deposit (sediment) should be disposed of in a gazetted marine disposal ground under the requirements of the DASO or treated for backfilling.	To ensure proper disposal of marine sediment	All areas / throughout construction period	Contractor	ETWB TC(W) No.34/2002		Y		N/A(1)

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement	Implen	nentatio	Status	
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89.2.1.2	Standard formwork or pre-fabrication should be used as far as practicable to minimise the C&D materials arising. The use of more durable formwork or plastic facing for construction works should also be considered. The use of wooden hoardings should be avoided and metal hoarding should be used to facilitate recycling. Purchasing of construction materials should be carefully planned in order to avoid over-ordering and wastage.	To minimize, reuse and disposal of C&D materials	All areas / throughout construction period	Contractor	WDO, Land (Miscellaneous Provisions) Ordinance, DevB TC(W) No. 6/2010		Y		N/A(1)
\$9.2.1.2		To minimize, reuse and disposal of C&D materials	All areas / throughout construction period	Contractor	WDO, Land (Miscellaneous Provisions) Ordinance, DevB TC(W) No. 6/2010		Y		*
\$9.2.1.2	All falsework should be steel instead of wood as far as practicable.	To minimize, reuse and disposal of C&D materials	All areas / throughout construction period	Contractor	DevB TC(W) No.6/2010		Y		N/A(1)

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement	Impler	nentatio	Status	
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\$9.2.1.2	Chemical waste producers should register with the EPD and chemical waste should be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows: - Suitable for the substance to be held, resistant to corrosion, maintained in good conditions and securely closed; - Having a capacity of <450L unless the specifications have been approved by the EPD; and - Displaying a label in English and Chinese according to the instructions prescribed in Schedule 2 of the Regulations. - Clearly labelled and used solely for the storage of chemical wastes; - Enclosed with at least 3 sides; - Impermeable floor and bund with capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in the area, whichever is greatest; - Adequate ventilation; - Sufficiently covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and - Incompatible materials are adequately separated.	chemical waste within works sites and works areas	All areas / throughout construction period	Contractor	Code of Practice on the Packaging, Handling and Storage of Chemical Wastes		Y		N/A(1)
\$9.2.1.2	Waste oils, chemicals or solvents should not be disposed of to drain.	To implement good site practice for handling, sorting reuse and recycling of wastes	All areas / throughout construction period	Contractor	EIAO TM		Y		Λ

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Location/Timing	Implementation Agent	Relevant Standard or Requirement	Implen	nentatio	Status	
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\$9.2.1.2	Adequate numbers of portable toilets should be provided for on-site workers. Portable toilets should be maintained in reasonable states, which will not deter the workers from utilising them. Night soil should be regularly collected by licensed collectors.	To ensure proper disposal of sewage sludge	All areas / throughout construction period	Contractor	WDO, Land (Miscellaneous Provisions) Ordinance, DevB TC(W) No. 6/2010		Y		N/A(1)
\$9.2.1.2	• •	To separate the general refuse from other waste types and proper disposal of the refuse	All areas / throughout construction period	Contractor	WDO, Land (Miscellaneous Provisions) Ordinance		Y		^
\$9.2.1.2	All waste containers should be in a secure area on hardstanding.	To implement good site practice for handling, sorting reuse and recycling of wastes	All areas / throughout construction period	Contractor	WDO, Land (Miscellaneous Provisions) Ordinance		Y		۸
\$9.2.1.2		To implement on-site sorting facilitating reuse and recycling of materials as well as proper disposal of waste	All areas / throughout construction period	Contractor	WDO, Land (Miscellaneous Provisions) Ordinance		Y		N/A(1)
\$9.2.1.2	future contractor should be advocated. Waste separation facilities for paper, aluminium cans, plastic bottles, etc should be provided on-site.	To separate the general refuse from other waste types and proper disposal of the refuse	/ throughout construction	Contractor	WDO, Land (Miscellaneous Provisions) Ordinance		Y		N/A(1)

EM&A Ref.	Recommended Mitigation MeasuresObjectives of the Recommended Measures & Main Concern to AddressLocation/Timing AgentImplementation AgentRelevant Standard or Requirement						nentatio	n Stages	Status
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\$9.2.1.2	Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including waste reduction, reuse and recycling.	To implement good site practice for handling, sorting reuse and recycling of wastes	Contract Mobilisation		WDO, Land (Miscellaneous Provisions) Ordinance		Y		N/A(1)
\$9.2.1.2	During construction phase, regular site inspections and supervision of the waste management procedures shall be undertaken as part of the EM&A procedures.	To ensure proper control, all waste is removed from site areas as appropriate and illegal disposal of waste is not being undertaken	All areas / throughout construction period	Contractor	EIAO TM		Y		Λ

Remarks: EM	&A Programme under EP-451/2013
D	Design
С	Construction
Y	Yes
0	Operation
^	Compliance of mitigation measure;
N/A N/A(1)	Not applicable at this stage; Not observed;
*	Recommendation was made during site audit but improved/retified by the contractor;
#	Recommendation was made during site audit but not yet improved/retified by the contractor;
Х	Non-compliance of mitigation measure;
•	Non-compliance but rectified by the contractor.

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

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

Appendix L – Summary of environmental complaint, warning, summon and notification of successful prosecution

Reporting Month: June 2020

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Investigation/Mitigation Action	Status
N/A	N/A	N/A	N/A	N/A	N/A

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

APPENDIX M SUMMARY OF EXCEEDANCE

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

## **Appendix M – Summary of Exceedance**

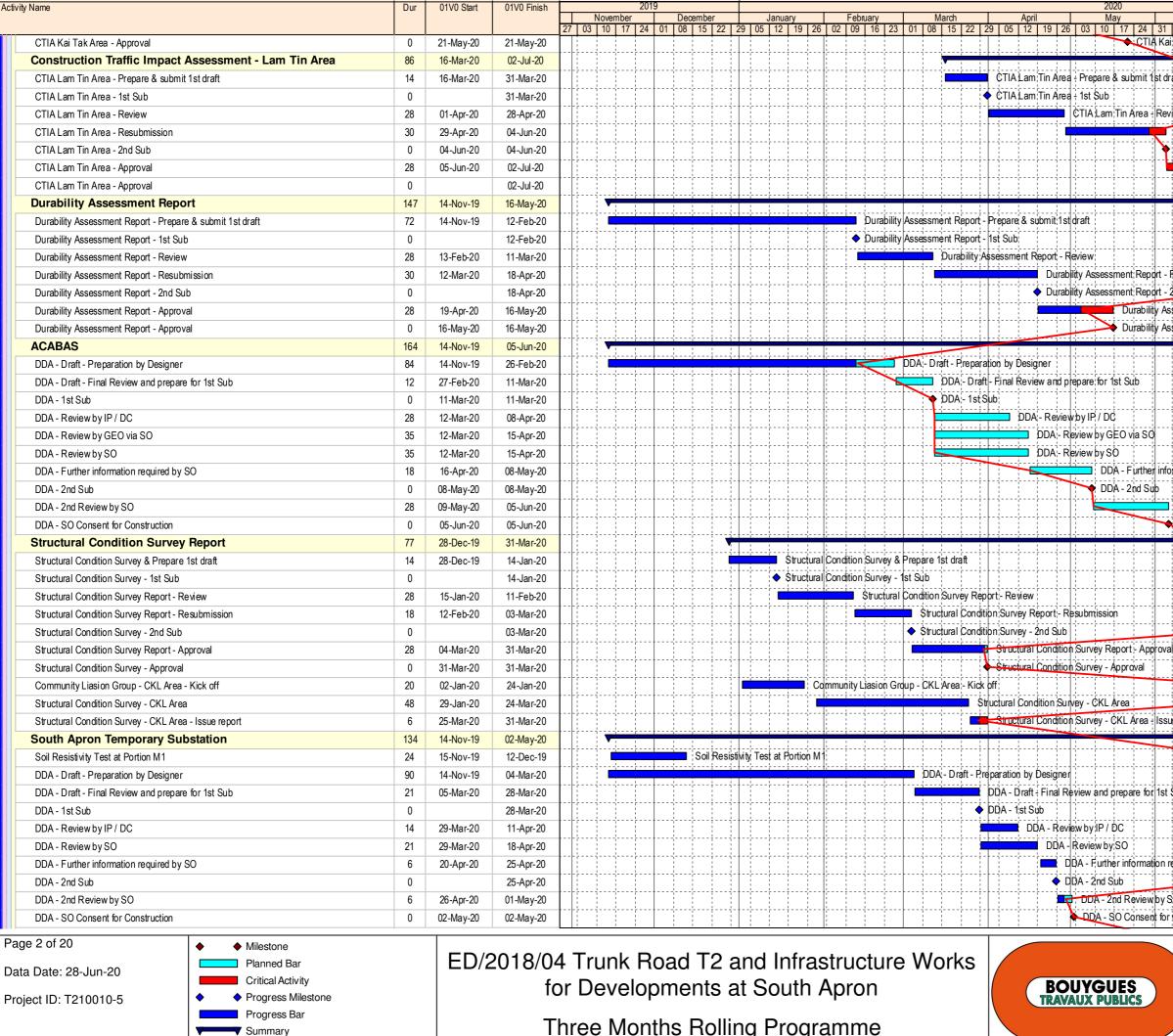
Reporting Month: June 2020

- (A) Exceedance Report for Air Quality (NIL in the reporting month)
- (B) Exceedance Report for Construction Noise (NIL in the reporting month)
- (C) Summary of Landscape and Visual Non-Conformity No non-compliance of the landscape and visual mitigation measures was observed in the reporting month –

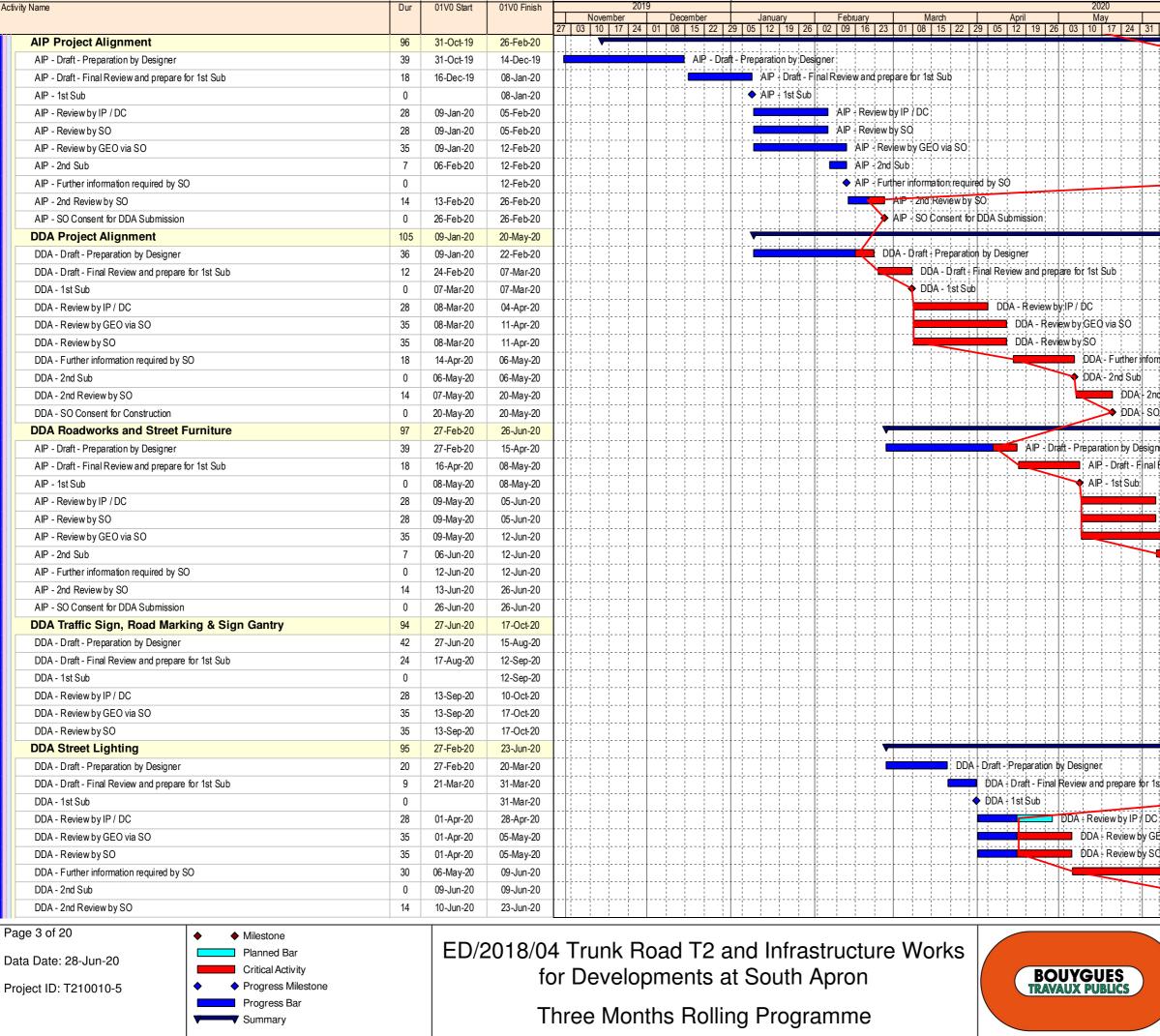
According to the observation remarked by RLA, the Contractor has made the follow-up action, for example implementation of the mitigation measure like fencing off the tree protection zone, in order to rectify the environmental deficiency recorded in the last reporting month (May 2020).

APPENDIX N TENTATIVE CONSTRUCTION PROGRAMME

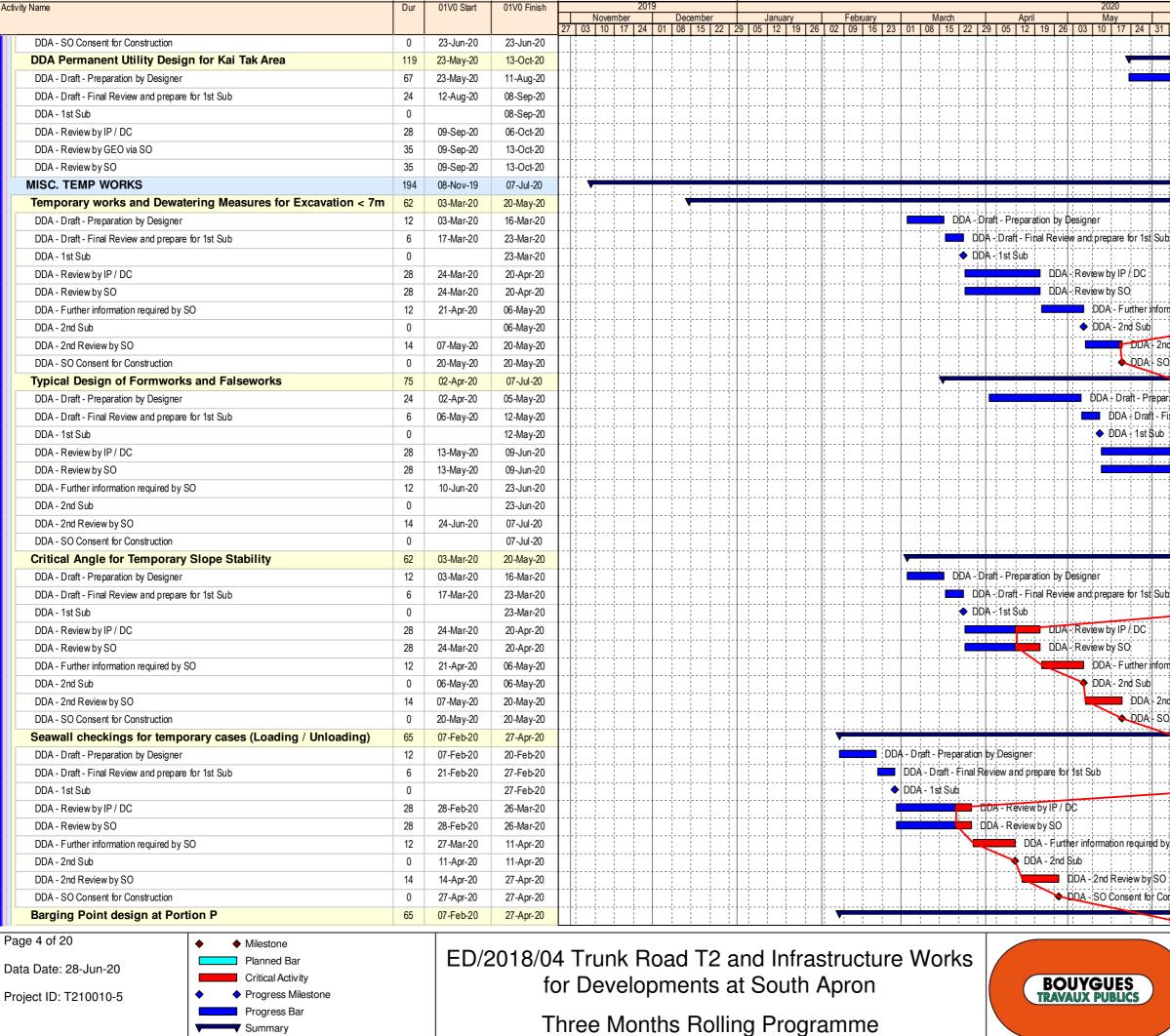
Activity Name	Dur	01V0 Start	01V0 Finish	2019         2020           November         December         January         February         March         April         May         June         July         August         September           27         02         04
WORKS PROGRAMME (01V0)	377	31-Oct-19	04-Feb-21	27 03 10 17 24 01 08 15 22 29 05 12 19 26 02 09 16 23 01 08 15 22 29 05 12 19 26 02 09 16 23 01 08 15 22 29 05 12 19 26 03 10 17 24 31 07 14 21 28 05 12 19 26 02 09 16 23 30 06 13 20 27
DESIGN SUBMISSION & APPROVAL	313	31-Oct-19	18-Nov-20	
GENERAL	287	31-Oct-19	17-Oct-20	
Project Design Plan	71	31-Oct-19	29-Jan-20	v Project Design Plan
Project Design Plan - Prepare & submit 1st draft	14	31-Oct-19	13-Nov-19	Project Design:Plan - Prepare & submit:1st draft
Project Design Plan - 1st Sub	0		13-Nov-19	◆ Project Dęsign/Plan - 1st Sub/
Project Design Plan - Review	28	14-Nov-19	11-Dec-19	Project Design/Plan - Review
Project Design Plan - 2nd Sub	15	12-Dec-19	31-Dec-19	Project Design Plan - 2nd Sub
Project Design Plan - 2nd Review	28	01-Jan-20	28-Jan-20	Project Design Plan - 2nd Review
Project Design Plan - Approval	0		29-Jan-20	◆ Project Design Plan - Approval
Design Memorandum	78	14-Nov-19	19-Feb-20	▼ Design Memorandum
Design Memorandum - Prepare & submit 1st draft	24	14-Nov-19	11-Dec-19	Design Memorandum - Prepare & submit 1st draft
Design Memorandum - 1st Sub	0		11-Dec-19	◆ Design Memorandum - 1ist Sub
Design Memorandum - Review	28	12-Dec-19	08-Jan-20	Design Memorandum - Review
Design Memorandum - 2nd Sub	12	09-Jan-20	22-Jan-20	Desgr Memorandum - 2nd Sub
Design Memorandum - Final Review	28	23-Jan-20	19-Feb-20	Design Memorandum - Final Review
Design Memorandum - Approval	0	19-Feb-20	19-Feb-20	◆ Design Memorandum - Approval
Ground Investigation Report - Kai Tak Area	174	14-Nov-19	17-Jun-20	
Ground Investigation - Procurement	24	14-Nov-19	11-Dec-19	Ground Investigation - Procurement
Ground Investigation - Mobilization	6	12-Dec-19	18-Dec-19	Ground Investigation - Mobilization
Ground Investigation - South Apron Area	48	19-Dec-19	19-Feb-20	Ground Investigation - South Apron Area
Ground Investigation Report Vol 1 - Prepare & submit 1st draft	21	20-Feb-20	14-Mar-20	Ground Investigation Report Vol.1 - Prepare & submit 1st draft
Ground Investigation Report Vol 1 - 1st Sub	0	14-Mar-20	14-Mar-20	Ground:Investigation Report Vol:1 - 1st Sub
Ground Investigation Report Vol 1 - Review	28	15-Mar-20	11-Apr-20	Ground:Investigation Report Vol:1 - Review
Ground Investigation Report Vol 1 - Resubmission	30	14-Apr-20	20-May-20	Ground Investigation Report Vol 1 - Resubmission
Ground Investigation Report Vol 1 - 2nd Sub	0	20-May-20	20-May-20	Ground Investigation Report Vol 1 - 2nd Sub
Ground Investigation Report Vol 1 - 2nd Sub Review	28	21-May-20	17-Jun-20	Ground Investigation Report Vol 1 - 2nd Sub Review
Ground Investigation Report Vol 1 - Approval	0	17-Jun-20	17-Jun-20	Ground Investigation Report Vol 1 - Approval
Ground Investigation Report - Tunnel	130	28-Apr-20	02-Oct-20	
Ground Investigation - Marine Gl	72	28-Apr-20	24-Jul-20	Ground Investigation - Marine Gl
Ground Investigation Report Vol 2 - Prepare & submit 1st draft	12	25-Jul-20	07-Aug-20	Ground Investigation Report Vol 2
Ground Investigation Report Vol 2 - 1st Sub	0	00 Auro 00	07-Aug-20	Ground Investigation Report Vol 2 -
Ground Investigation Report Vol 2 - Review 1st Sub	28	08-Aug-20	04-Sep-20	Ground Investig
Ground Investigation Report Vol 2 - 2nd Sub Ground Investigation Report Vol 2 - Review 2nd Sub	0 28	05-Sep-20	04-Sep-20 02-Oct-20	
Utilities Report	147	14-Nov-19	16-May-20	V
Utilities Report - Prepare & submit 1st draft	72	14-Nov-19	12-Feb-20	Utilities Réport- Prépare; & submit :1st draft
Utilities Report - 1st Sub	0	14-140 - 15	12-Feb-20	◆ Utilities Report- 1st Sub
Utilities Report - 1st Sub Review	28	13-Feb-20	11-Mar-20	Utilities Report- 1st Sub:Review
Utilities Report - Resubmission	30	12-Mar-20	18-Apr-20	Utilities:Report - Resubmission
Utilities Report - 2nd Sub	0	18-Apr-20	18-Apr-20	◆ Utilities;Report - 2nd Sub
Utilities Report - 2nd Sub Review	28	19-Apr-20	16-May-20	Utilities Report - 2nd Sub Review
Utilities Report - Approval	0	16-May-20	16-May-20	↓ Utilities Report - Approval
Construction Traffic Impact Assessment - Kai Tak Area	151	14-Nov-19	21-May-20	▼ Construction Traffic Impact Asses
CTIA Kai Tak Area - Prepare & submit 1st draft	99	14-Nov-19	14-Mar-20	CTIA Kai Tak Area - Prepare & submit 1st draft
CTIA Kai Tak Area - 1st Sub	0		14-Mar-20	◆ CTIA Kai Tak Area - 1st Sub
CTIA Kai Tak Area - Review	28	15-Mar-20	11-Apr-20	CTIA Kai Tak Area - Review
CTIA Kai Tak Area - Resubmission	9	14-Apr-20	23-Apr-20	CTIA Kai: Tak Area: - Resubmission
CTIA Kai Tak Area - 2nd Sub	0	23-Apr-20	23-Apr-20	CTIA Kai: Tak 'Area: - 2nd Sub
CTIA Kai Tak Area - Approval	28	24-Apr-20	21-May-20	CTIA Kai: Tak Area - Approval
Page 1 of 20   Milestone	1			Date Revision Checked Approved
Planned Bar		ED/2	2018/04	Trunk Road T2 and Infrastructure Works
Data Date: 28-Jun-20 Critical Activity		,		r Dovelopmente et South Aprop
Project ID: T210010-5 Progress Milestone			IC	r Developments at South Apron BOUYGUES 22-Feb-20 01V0 SPa/LLo WYu
Progress Bar			-	
Summary			1	nree Months Rolling Programme



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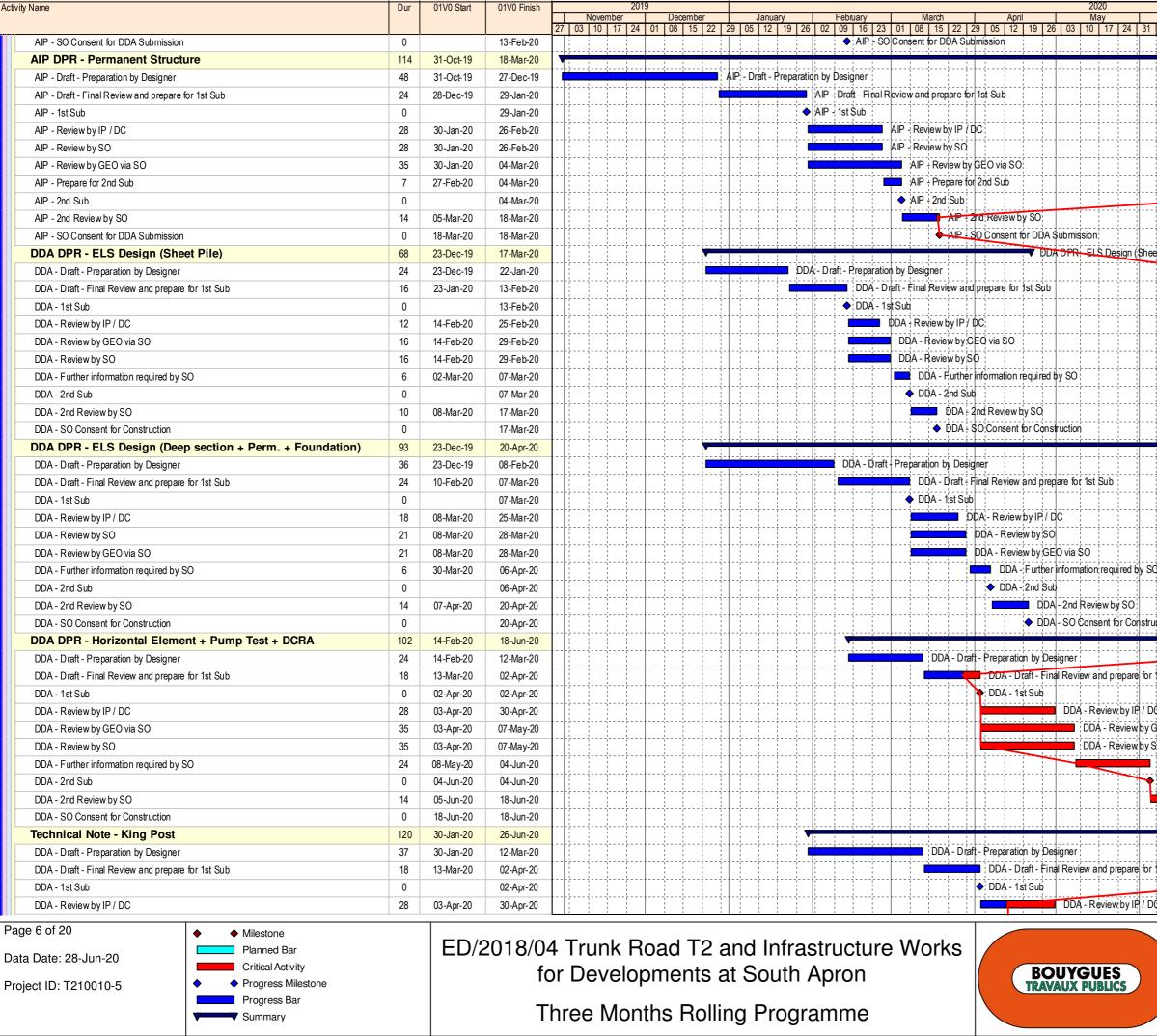


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Activity Name	Dur	01V0 Start	01V0 Finish	2019	2020
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DDA - Draft - Preparation by Designer	12	07-Feb-20	20-Feb-20		29 05 12 19 26 02 09 16 23 01 08 15 22 29 05 12 19 26 03 10 17 24 31 07 14 21 28 05 12 19 26 02 09 16 23 30 06 13 20 2
DDA - Draft - Final Review and prepare for 1st Sub	6	21-Feb-20	27-Feb-20		DDA - Draft - Final Review and prepare for 1st Sub
DDA - 1st Sub	0		27-Feb-20		◆ DDA - 1st Sub
DDA - Review by IP / DC	28	28-Feb-20	26-Mar-20		CDA - Review by IP / ΦC
DDA - Review by SO	28	28-Feb-20	26-Mar-20		DDA - Review by SO
DDA - Further information required by SO	12	27-Mar-20	11-Apr-20		DDA - Further information required by SO
DDA - 2nd Sub	0	11-Apr-20	11-Apr-20		DDA - 2nd Sub
DDA - 2nd Sub DDA - 2nd Review by SO	14	14-Apr-20	27-Apr-20		DDA - 2nd Review by SO
DDA - SO Consent for Construction	0	27-Apr-20	27-Apr-20 27-Apr-20		DDA-SO Consent for Construction
Temporary Hoarding and foundation	48	08-Nov-19	06-Jan-20		Temporary Hoarding and foundation
DDA - Draft - Preparation by Designer	18	08-Nov-19	28-Nov-19	DDA - Draft - Prepa	
DDA - Draft - Final Review and prepare for 1st Sub	3	29-Nov-19	02-Dec-19		Review and prepare for 1st Sub
DDA - Drart - Final Review and prepare for 1st Sub	0	23-1101-13	02-Dec-19 02-Dec-19	DDA - 1st Sub	
DDA - 1st Sub DDA - Review by DC	28	10-Dec-19	02-Dec-19 06-Jan-20		DDA - Review by DC
DDA - Review by DC DDA - Review by SO	28 35	03-Dec-19	06-Jan-20 06-Jan-20		DDA - Review by SO
DDA - Review by SO DDA - SO Consent for Construction	0	00-Dec-18	06-Jan-20 06-Jan-20		DDA - SO Consent for Construction
AT-GRADE ROAD [AGR]	201	31-Oct-19	06-Jan-20 07-Jul-20		
DDA AGR - Roadworks	-				
	161	31-Oct-19	19-May-20		DDA AGR-Roac
AIP - Draft - Preparation by Designer	95	31-Oct-19	25-Feb-20		
AIP - Draft - Final Review and prepare for 1st Sub	30	26-Feb-20	31-Mar-20		AIP - Draft - Final Review, and prepare for 1st Sub
AIP - 1st Sub	0	31-Mar-20	31-Mar-20		ÀIP - 1st Sub AIP - Review by IP /:DC
AIP - Review by IP / DC	28	01-Apr-20	28-Apr-20		
AIP - Review by SO	28	01-Apr-20	28-Apr-20		
AIP - Review by GEO via SO	35	01-Apr-20	05-May-20		AIP - Review by GEO via SO
AIP - Prepare for 2nd Sub	7	29-Apr-20	05-May-20		
AIP - 2nd Sub	0	05-May-20	05-May-20		ÀIP - 2nd Sub
AIP - 2nd Review by SO	14	06-May-20	19-May-20		AIP - 2nd Review by SO
AIP - SO Consent for DDA Submission	0	19-May-20	19-May-20		AIP - SO Consent for DDA Submission
DDA AGR - Permanent Utility Design	201	31-Oct-19	07-Jul-20		
DDA - Draft - Preparation by Designer	95	31-Oct-19	25-Feb-20		DDA - Draft - Preparation by Designer DDA - Draft - Preparation by Designer DDA - Draft - Final Review and prepare for 1st Sub
DDA - Draft - Final Review and prepare for 1st Sub	30	26-Feb-20	31-Mar-20		
DDA - 1st Sub	0		31-Mar-20		◆ DDA + 1st Sub
DDA - Review by IP / DC	28	01-Apr-20	28-Apr-20		DDA - Review by IP/ DC
DDA - Review by GEO via SO	35	01-Apr-20	05-May-20		DDA - Review by GEO via SO
DDA - Review by SO	35	01-Apr-20	05-May-20		DDA - Review by SO
DDA - Further information required by SO	30	06-May-20	09-Jun-20		DDA - Further information required by SO
DDA - 2nd Sub	0	09-Jun-20	09-Jun-20		DDA - 2nd Sub
DDA - 2nd Review by SO	28	10-Jun-20	07-Jul-20		DDA - 2nd Review by SO
DDA - SO Consent for Construction	0		07-Jul-20		◆ DDA - SO Consent for Construction
DEPRESSED ROAD [DPR]	274	31-Oct-19	30-Sep-20		
AIP DPR - ELS & PCRA	85	31-Oct-19	13-Feb-20		AIP DPR - ELS & PCRA
AIP - Draft - Preparation by Designer	33	31-Oct-19	07-Dec-19		eparation by Designer
AIP - Draft - Final Review and prepare for 1st Sub	12	09-Dec-19	21-Dec-19		Draft - Final Review and prepare for 1st Sub
AIP - 1st Sub	0		21-Dec-19		1st Sub
AIP - Review by IP / DC	28	22-Dec-19	18-Jan-20		AIP - Review by IP / DC
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AIP - Update & prepare for 2nd Sub	7	20-Jan-20	30-Jan-20		AIP - Update & prepare for 2nd Sub
AIP - 2nd Sub	0		30-Jan-20		AIP - 2nd Sub;
AIP - 2nd Review by SO	14	31-Jan-20	13-Feb-20		AIP - 2nd Review by SO
Page 5 of 20   Milestone					Date Revision Checked Approved
Planned Bar			018/0/	1 Trunk Road T2	and Infrastructure Works
Data Date: 28-Jun-20					
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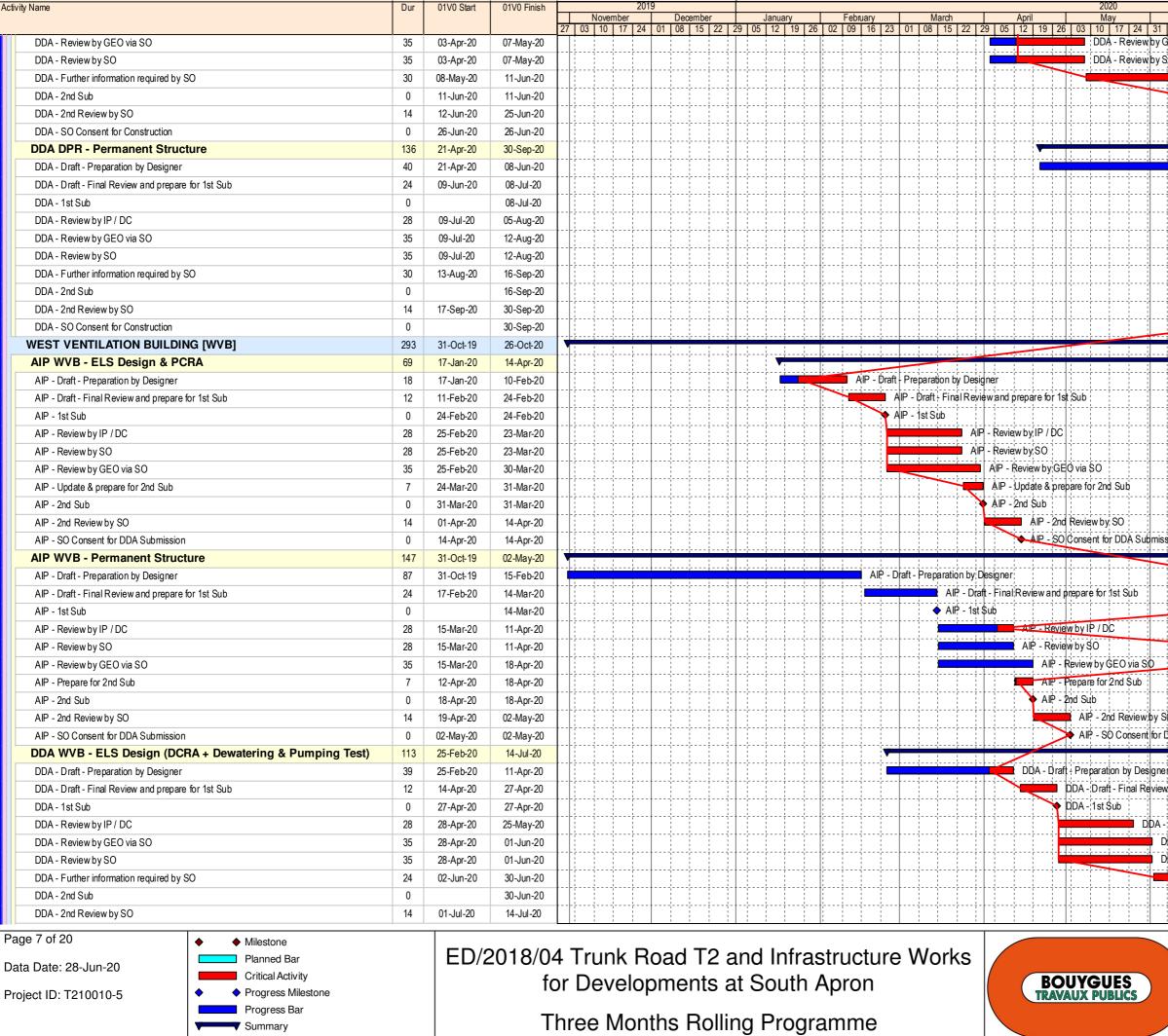
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Progress Bar Summary



01V0 Finish

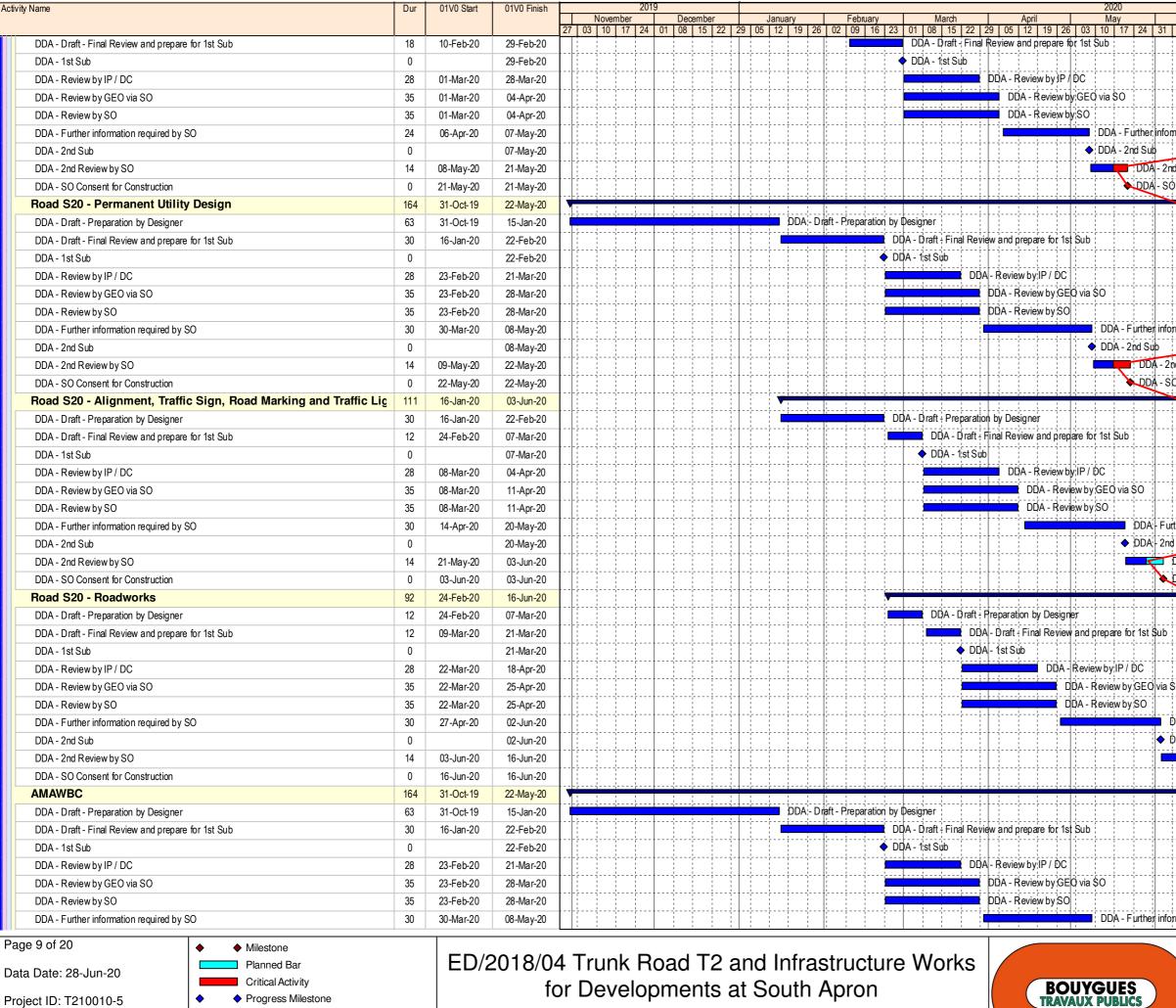
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DDA WVB - Foundation Design	119	16-Mar-20	10-Aug-20					<b>V</b>						
DDA - Draft - Preparation by Designer	30	16-Mar-20	22-Apr-20						DD/	A - Draft - Preparatio	n by Designer			
DDA - Draft - Final Review and prepare for 1st Sub	18	23-Apr-20	15-May-20									nd prepare for 1st Sub		
DDA - 1st Sub	0	15-May-20	15-May-20							• DDA - 1	-9			
DDA - Review by IP / DC	28	16-May-20	12-Jun-20								-9	eview by IP / DC		
DDA - Review by GEO via SO	35	16-May-20	19-Jun-20								.4	Review by GEO via SO		
DDA - Review by SO	35	16-May-20	19-Jun-20									- Review by SO		
DDA - Further information required by SO	30	20-Jun-20	27-Jul-20										A - Further informat	ion required by SO
DDA - 2nd Sub	0	20 0020	27-Jul-20								· · · · · · · · · · · · · · · · · · ·		A - 2nd Sub	
DDA - 2nd Review by SO	14	28-Jul-20	10-Aug-20										DDA - 2nd R	eview by SO
DDA - SO Consent for Construction	0	20 00. 20	10-Aug-20										◆ DDA - SO C	onsent for Construction
DDA WVB - Accommodation (SoA)	135	16-May-20	26-Oct-20			+				·····	· · · · · · · · · · · · · · · · · · ·			
DDA - Draft - Preparation by Designer	52	16-May-20	17-Jul-20								- <u> </u> <u> </u>	DDA - Dra	t - Preparation by I	Desianer
DDA - Draft - Final Review and prepare for 1st Sub	24	18-Jul-20	14-Aug-20											ft - Final Review and
DDA - 1st Sub	0		14-Aug-20										DDA - 1st	
DDA - Review by IP / DC	28	15-Aug-20	11-Sep-20											DDA - Rev
DDA - Review by GEO via SO	35	15-Aug-20	18-Sep-20											DDA -
DDA - Review by SO	35	15-Aug-20	18-Sep-20					<u> </u> ¦¦¦- -¦- -						DDA -
DDA - Further information required by SO	30	19-Sep-20	26-Oct-20					└						
DDA WVB - Permanent Structure	45	15-Aug-20	08-Oct-20											
DDA - Draft - Preparation by Designer	45	15-Aug-20	08-Oct-20											····
SOUTH APRON ADIT	166	16-Mar-20	06-Oct-20					····						
AIP South Apron Adit - ELS & PCRA	67	16-Jul-20	03-Oct-20											·····
AIP - Draft - Preparation by Designer	24	16-Jul-20	12-Aug-20										AIP - Draft	Preparation by Desi
AIP - Draft - Final Review and prepare for 1st Sub	12	13-Aug-20	26-Aug-20										A	IP - Draft - Final Rev
AIP - 1st Sub	0		26-Aug-20											IP - 1st \$ub
AIP - Review by IP / DC	28	27-Aug-20	23-Sep-20											AI
AIP - Review by SO	28	27-Aug-20	23-Sep-20											All
AIP - Review by GEO via SO	35	27-Aug-20	30-Sep-20											
AIP - Update & prepare for 2nd Sub	7	24-Sep-20	03-Oct-20											
AIP South Apron Adit - Permanent Structure	97	16-Mar-20	15-Jul-20											→ AIP
AIP - Draft - Preparation by Designer	34	16-Mar-20	27-Apr-20							AIP - Draft - Prepara	ation by Designer			
AIP - Draft - Final Review and prepare for 1st Sub	24	28-Apr-20	27-May-20								AIP - Draft - Final R	eview and prepare for 1st S	Sub	
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AIP - Review by IP / DC	28	28-May-20	24-Jun-20								-:	AIP - Review by IP / DC		
AIP - Review by SO	28	28-May-20	24-Jun-20								-:	AIP - Review by SO		
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AIP - Prepare for 2nd Sub	7	25-Jun-20	01-Jul-20									AIP - Prepare for 2hd	Sub	
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AIP - 2nd Review by SO	14	02-Jul-20	15-Jul-20									AIP - 2nd R	eview by SO	
AIP - SO Consent for DDA Submission	0		15-Jul-20									◆ AIP - SO Co	onsent for DDA Sub	mission
DDA South Apron Adit - ELS Design / Pumping Te	est 30	27-Aug-20	30-Sep-20											
DDA - Draft - Preparation by Designer	30	27-Aug-20	30-Sep-20											
DDA South Apron Adit - Permanent Structure	69	16-Jul-20	06-Oct-20											
DDA - Draft - Preparation by Designer	45	16-Jul-20	05-Sep-20											DDA - Draft - P
DDA - Draft - Final Review and prepare for 1st Sub	24	07-Sep-20	06-Oct-20											
SOUTH APRON ROAD WORKS	296	31-Oct-19	29-Oct-20	V			+							
General ELS Design for Underground Utilities	163	31-Oct-19	21-May-20	V			+	▶			-diiiii	General ELS Desigr	n for Underground U	/tilities
DDA - Draft - Preparation by Designer	81	31-Oct-19	08-Feb-20				DDA - Draft	Preparation by Designer						
Page 8 of 20   Milestone											Da		Checked	Approved
Data Date: 28-Jun-20		ED/2	2018/04	Trunk	Road T2 a	and Infra	structure	e Works   🖊			05-Nov		WYu	_ <b>_</b>
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Activity Name	Dur	r 01V0 Start	/0 Start 01V0 Finish													
					vember 0   17   2	December 24 01 08 15 22	January 29 05 12 19 26	February	March 01 08 15 22 29	April	May 26 03 10 17 2	June 4 31 07 14 2	Ju 1 28 05 12	ly 19 26 02	August 09 16 23	September 30 06 13 20 27
DDA - 2nd Sub	0		08-May-20		•						DDA - 2nd					
DDA - 2nd Review by SO	14	09-May-20	22-May-20									DA - 2nd Review b	y SO			
DDA - SO Consent for Construction	0	22-May-20	22-May-20									DA - SO Consent f	or Construction			
Road L10 / L10 (Southern) / L18	42	09-Sep-20	29-Oct-20													
DDA - Draft - Preparation by Designer	42	09-Sep-20	29-Oct-20													
Foot Bridge FB-02	30	09-Sep-20	15-Oct-20													
DDA - Draft - Preparation by Designer	30	09-Sep-20	15-Oct-20													
[STE] District Cooling System	66	10-Aug-20	27-Oct-20												V , , ,	
DDA - Draft - Preparation by Designer	42	10-Aug-20	26-Sep-20													·
DDA - Draft - Final Review and prepare for 1st Sub	24	28-Sep-20	27-Oct-20													
[STE] Hoi Bun Road / Cheung Yip Street / Wang Chiu Road Junc	57	10-Aug-20	16-Oct-20												<b>V</b>	
DDA - Draft - Preparation by Designer	39	10-Aug-20	23-Sep-20													,DI
DDA - Draft - Final Review and prepare for 1st Sub	18	24-Sep-20	16-Oct-20													
SUPPORTING UNDERGROUND STRUCTURE [SUS]	186	02-Mar-20	15-Oct-20						V · · · · · · · · · · · · · · · · · · ·							· · · · · · ·
Inspection Report of Existing SUS	47	02-Mar-20	29-Apr-20								Inspection Report	of Existing SUS				
Prepare & Submit Inspection Report	48	02-Mar-20	29-Apr-20								Prepare & Submi	Inspection Report				
Submit Inspection Report	0		29-Apr-20				+				<ul> <li>Submit Inspectior</li> </ul>	Report				
AIP SUS - Internal Structure	86	02-May-20	12-Aug-20								······································					AIP SUS - I
AIP - Draft - Preparation by Designer	33	02-May-20	09-Jun-20									AIP - Di	aft - Preparation	by Designer		
AIP - Draft - Final Review and prepare for 1st Sub	12	10-Jun-20	23-Jun-20										AIP - Draft - F	inal Review and	prepare for 1st	Sub
AIP - 1st Sub	0	23-Jun-20	23-Jun-20										AIP - 1st Sub			
AIP - Review by IP / DC	28	24-Jun-20	21-Jul-20				• • • • • • • • • • • • • • • • • • • •							AIP - Revie	w by IP / DC	
AIP - Review by SO	28	24-Jun-20	21-Jul-20					-					· - <b>;</b>			
AIP - Review by GEO via SO	35	24-Jun-20	28-Jul-20												Review by GEC	via SO
AIP - Update & prepare for 2nd Sub	7	22-Jul-20	29-Jul-20				•	•					N		1 1 1	are for 2nd Sub
AIP - 2nd Sub	0		29-Jul-20				••••••							◆ AIP -		
AIP - 2nd Review by SO	14	30-Jul-20	12-Aug-20					-								Review by SO
AIP - SO Consent for DDA Submission	0		12-Aug-20				•••••••••••••••••••••••••••••••••••••••									onsent for DDA Subr
DDA SUS - Internal Structure	94	24-Jun-20	15-Oct-20					-								
DDA - Draft - Preparation by Designer	42	24-Jun-20	13-Aug-20					-						- <u>-</u> <u>-</u>	DDA - Dra	ft - Preparation by De
DDA - Draft - Final Review and prepare for 1st Sub	24	14-Aug-20	10-Sep-20				•	-								ft - Preparation by De
DDA - 1st Sub	0		10-Sep-20					-								◆ DDA - 1st S
DDA - Review by IP / DC	28	11-Sep-20	08-Oct-20				•	-								
DDA - Review by GEO via SO	35	11-Sep-20	15-Oct-20													
DDA - Review by SO	35	11-Sep-20	15-Oct-20				•	-								
C&C TUNNEL / LAUNCHING SHAFT [C&C / LS]	293	31-Oct-19	24-Oct-20	V				· · · · · · ·								
AIP - C&C/LS ELS & PCRA	90	31-Oct-19	19-Feb-20	V				A⊫	P - C&C/LS ELS & PCRA							
AIP - Draft - Preparation by Designer	33	31-Oct-19	07-Dec-19			AllP - Draft - F	reparation by Designe									
AIP - Draft - Final Review and prepare for 1st Sub	12	09-Dec-19	21-Dec-19				- Draft - Final Review	1 1 1 1	Sub							
AIP - 1st Sub	0		21-Dec-19				- 1st Sub									
AIP - Review by IP / DC	28	22-Dec-19	18-Jan-20					Review by IP / DC								
AIP - Review by SO	28	22-Dec-19	18-Jan-20					Review by \$O								
AIP - Review by GEO via SO	35	22-Dec-19	25-Jan-20					ALP - Review by GEO	via SO							
AIP - Update & prepare for 2nd Sub	7	20-Jan-20	30-Jan-20					AIP - Update & pre								
AIP - 2nd Sub	0	20 0011 20	30-Jan-20					AIP - 2nd Sub								
AIP - 2nd Review by SO	14	31-Jan-20	13-Feb-20				+		d Review by SO							
All - SO Consent for DDA Submission	0	01 001 20	19-Feb-20				+		SO Consent for DDA Su	bmission						
AIP - C&C/LS Permanent Structure	111	31-Oct-19	14-Mar-20	<b>V</b>			+	· · · · · · · · · · · · · · · · · · ·		<b></b>	AIP - C&C/LS Perma	nent Structure				
AIP - Draft - Preparation by Designer	57	31-Oct-19	08-Jan-20				AIP - Draft - I	Preparation by Desig	her							
All - Draft - Final Review and prepare for 1st Sub	18	09-Jan-20	01-Feb-20						Review and prepare for	1st Sub						
			0110020		: :											
Page 10 of 20   Milestone				-					\ <b>\</b>					Revision	Checked	Approved
Data Date: 28-Jun-20		ED/2	2018/04	Iru	nk I	Road T2 a	and Infra	structure	e VVorks 🛛				lov-19 00 Dec-19 00		WYu WYu	

- Data Date: 28-Jun-20
- Project ID: T210010-5

Progress Bar Summary

Critical Activity

Progress Milestone

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

BOUYGUES TRAVAUX PUBLICS

Date	Revision	Checked	Approved
05-Nov-19	00V0	WYu	
18-Dec-19	00V1	WYu	
22-Feb-20	01V0	SPa/LLo	WYu
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Activity Name	Dur	01V0 Start	01V0 Finish		2019		2020			
				November 27   03   10   17	December 24 01 08 15 22 29 0	January         February         March           05         12         19         26         02         09         16         23         01         08         15         22         1	April May 29 05 12 19 26 03 10 17 24 31	June July July 07 14 21 28 05 12 19 26 0	August 2 09 16 23 3	September 30 06 13 20 27
AIP - 1st Sub	0		01-Feb-20			AIP - 1st Sub				
AIP - Review by IP / DC	21	02-Feb-20	22-Feb-20			AlP - Review by IP / DC		·····		
AIP - Review by SO	21	02-Feb-20	22-Feb-20			AIP - Review by SO				
AIP - Review by GEO via SO	28	02-Feb-20	29-Feb-20			AlP - Review by G	EO via SO	·····		
AIP - Prepare for 2nd Sub	7	23-Feb-20	29-Feb-20			AIP - Prepare for 2	2nd \$ub			
AIP - 2nd Sub	0		29-Feb-20			AIP - 2nd Sub				
AIP - 2nd Review by SO	14	01-Mar-20	14-Mar-20			AlP - 2n	d Review by SO			
AIP - SO Consent for DDA Submission	0		14-Mar-20			🔶 AIP - SC	Consent for DDA Submission			
TN - C&C/LS Ground Improvement Works - EBS	101	23-Dec-19	02-May-20		V	······································	TN - C&C/LS Ground Improvement Work	(s - EBS		
DDA - Draft - Preparation by Designer	41	23-Dec-19	14-Feb-20			DDA - Draft - Preparation by				
DDA - Draft - Final Review and prepare for 1st Sub	12	15-Feb-20	28-Feb-20			DDA - Draft - Finat	Review and prepare for 1st Sub			
DDA - 1st Sub	0		28-Feb-20			DDA - 1st Sub				
DDA - Review by IP / DC	28	29-Feb-20	27-Mar-20				DDA - Review by IP / DC			
DDA - Review by GEO via SO	35	29-Feb-20	03-Apr-20			····	DDA - Review by GEO via SO			
DDA - Review by SO	35	29-Feb-20	03-Apr-20				DDA - Review by SO			
DDA - Further information required by SO	9	06-Apr-20	17-Apr-20				DDA - Further information required	by SO		
DDA - 2nd Sub	0		17-Apr-20				DDA - 2nd Sub			
DDA - 2nd Review by SO	14	18-Apr-20	01-May-20				DDA - 2nd Review by SC	)		
DDA - SO Consent for Construction	0		02-May-20				DDA - SO Consent for Consen	Construction		
DDA - C&C/LS ELS Dwall (Temp Dwall)	118	23-Dec-19	21-May-20		V		DDA - C&C/LS	ELS Dwall (Temp Dwall)		
DDA - Draft - Preparation by Designer	36	23-Dec-19	08-Feb-20			DDA - Draft Preparation by Des	igner			
DDA - Draft - Final Review and prepare for 1st Sub	18	10-Feb-20	29-Feb-20			DDA - Draft - Final	Review and prepare for 1st Sub	······································		
DDA - 1st Sub	0		29-Feb-20			DDA - 1 st Sub				
DDA - Review by IP / DC	28	01-Mar-20	28-Mar-20				DDA - Review by IP / DC			
DDA - Review by GEO via SO	35	01-Mar-20	04-Apr-20				DDA - Review by GEO via SO			
DDA - Review by SO	35	01-Mar-20	04-Apr-20				DDA - Review by SO			
DDA - Further information required by SO	24	06-Apr-20	07-May-20				DDA - Further inform	nation required by SO		
DDA - 2nd Sub	0		07-May-20				DDA - 2nd Sub			
DDA - 2nd Review by SO	14	08-May-20	21-May-20				DDA - 2nd	Review;by Si0		
DDA - SO Consent for Construction	0		21-May-20				◆ DDA - SO	Consent for Construction		
DDA - C&C/LS Foundation (Perm. Dwall + Foundation within Sha	104	03-Feb-20	09-Jun-20			····	<u>та стали и при с</u>	DA - C&C/LS Foundation (Perm. Dwall +	Foundation within	Shaft)
DDA - Draft - Preparation by Designer	24	03-Feb-20	29-Feb-20			DDA - Draft - Prep	varation by Designer			
DDA - Draft - Final Review and prepare for 1st Sub	12	02-Mar-20	14-Mar-20			DDA - D	raft Final Review and prepare for 1st Sub			
DDA - 1st Sub	0		14-Mar-20			◆ DDA - 1:	stSub			
DDA - Review by IP / DC	28	15-Mar-20	11-Apr-20				DDA - Review by IP / DC			
DDA - Review by GEO via SO	35	15-Mar-20	18-Apr-20				DDA - Review by GEO via SO			;;;
DDA - Review by SO	35	15-Mar-20	18-Apr-20				DDA - Review by SO			
DDA - Further information required by SO	30	20-Apr-20	26-May-20				DDA -	Further information required by SO		
DDA - 2nd Sub	0		26-May-20				◆ DDA -	2nd;Sub		
DDA - 2nd Review by SO	14	27-May-20	09-Jun-20					DDA - 2nd Review by SO		
DDA - SO Consent for Construction	0		09-Jun-20					DDA - SO Consent for Construction		
DDA - C&C/LS Ground Treatment for TBM Break-in	81	23-Dec-19	01-Apr-20		V		DDA - C&C/LS Ground Treatment fo	or TBM Break in		
DDA - Draft - Preparation by Designer	18	23-Dec-19	15-Jan-20			DDA - Draft - Preparation by Designer				
DDA - Draft - Final Review and prepare for 1st Sub	6	16-Jan-20	22-Jan-20			DDA - Draft - Final Review and prepare for 1s	st Sub			
DDA - 1st Sub	0		22-Jan-20			◆ DDA - 1stSub				
DDA - Review by IP / DC	28	23-Jan-20	19-Feb-20			DDA - Review by IP / DC				
DDA - Review by GEO via SO	35	23-Jan-20	26-Feb-20			DDA- Review by GE	ΕΦ via SO			
DDA - Review by SO	35	23-Jan-20	26-Feb-20			DDA- Review by SC				
DDA - Further information required by SO	18	27-Feb-20	18-Mar-20				- Further information required by SO			
DDA - 2nd Sub	0		18-Mar-20			◆ DDA	- 2nd Sub			
Page 11 of 20				· · · ·				Date Revision	Checked	Approved
				Trunk	Road TO and	d Infrastructure Works		05-Nov-19 00V0	WYu	
Data Date: 28-Jun-20								18-Dec-19 00V1	WYu	
Critical Activity			fo	r Devel	opments at 9	South Apron	BOUYGUES	18-Dec-19 00V1	SPo/LLo	

Project ID: T210010-5

Critical Activity Progress Milestone Progress Bar

Summary

for Developments at South Apron

BOUYGUES TRAVAUX PUBLICS

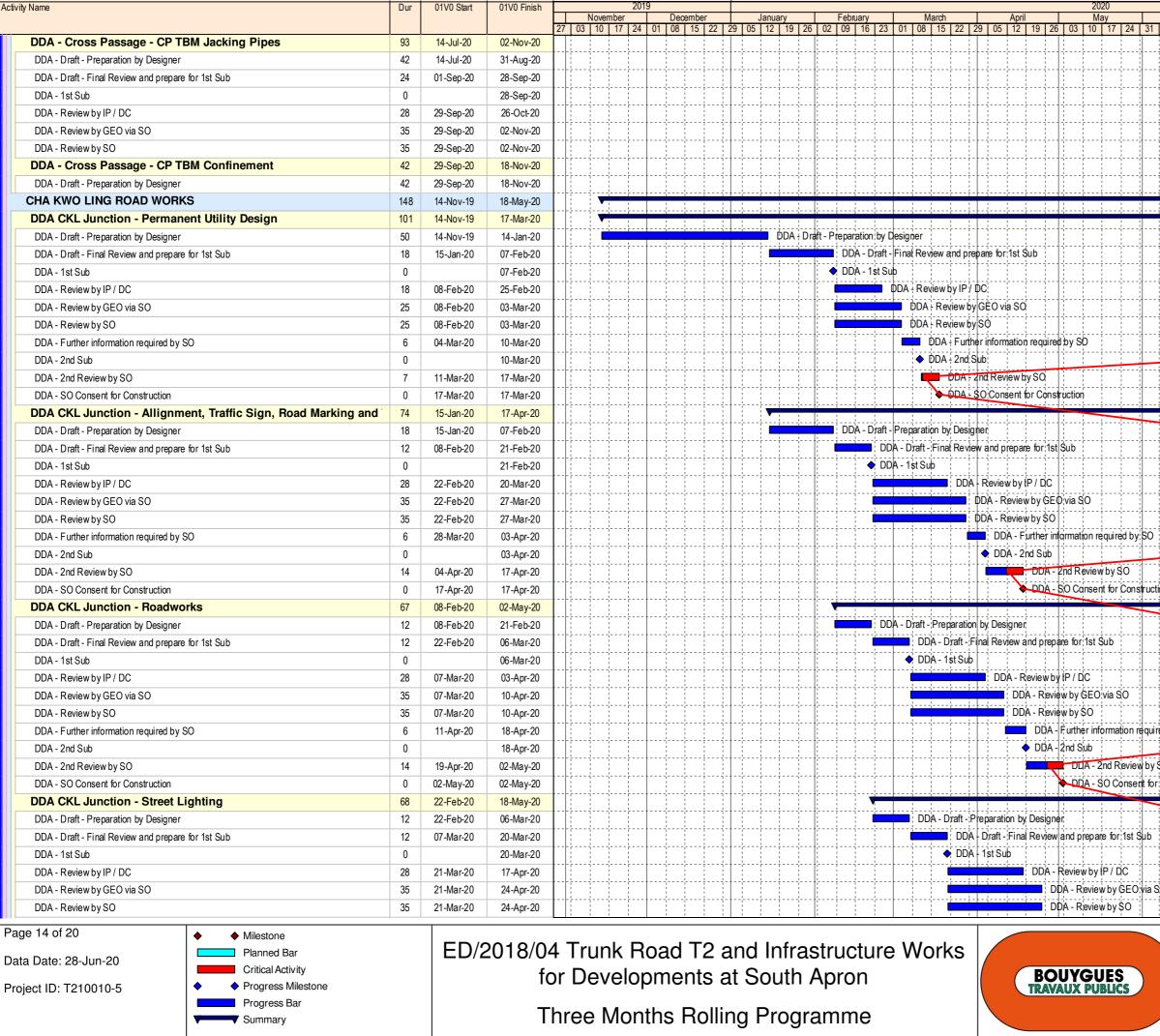
22-Feb-20 01V0

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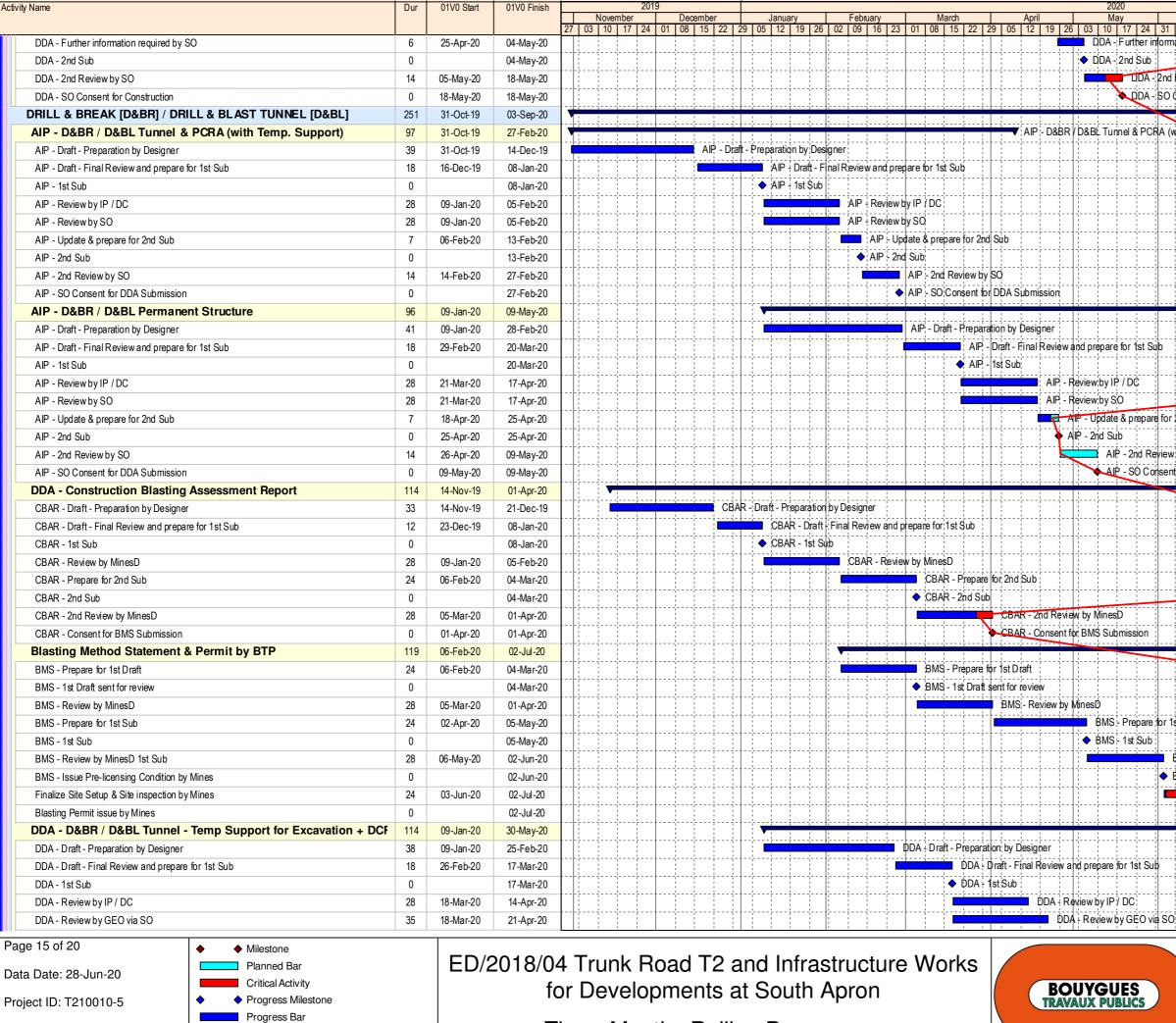
Activity Name	01V0 Start	01V0 Finish		19	2020	
				November 27 03 10 17 2	December	January         February         March         April         May         June         July         August         September           29         05         12         19         26         02         09         16         23         01         08         12         19         24         31         07         14         21         28         05         12         19         26         02         09         16         23         30         06         13         20         27
DDA - 2nd Review by SO	14	19-Mar-20	01-Apr-20			DDA- 2nd Review by SQ
DDA - SO Consent for Construction	0		01-Apr-20			DDA-SQ Consent for Construction
DDA - C&C/LS ELS Strutting & Dewatering +DCRA	114	10-Jun-20	24-Oct-20			
DDA - Draft - Preparation by Designer	36	10-Jun-20	23-Jul-20			DDA - Draft - Preparation by Designer
DDA - Draft - Final Review and prepare for 1st Sub	12	24-Jul-20	06-Aug-20			DDA - Draft - Final;Review and prep
		24-JUI-20	-			◆ DDA - 1st Sub
DDA - 1st Sub	0	07.4 00	06-Aug-20			DDA - Isi Sub DDA - Review by
DDA - Review by IP / DC	28	07-Aug-20	03-Sep-20			
DDA - Review by GEO via SO	35	07-Aug-20	10-Sep-20			
DDA - Review by SO	35	07-Aug-20	10-Sep-20			
DDA - Further information required by SO	36	11-Sep-20	24-Oct-20			
DDA - C&C/LS Base Slab & Associated Cast-in for TBM Launching	<b>g</b> 48	07-Aug-20	03-Oct-20			
DDA - Draft - Preparation by Designer	36	07-Aug-20	17-Sep-20			DDA -
DDA - Draft - Final Review and prepare for 1st Sub	12	18-Sep-20	03-Oct-20			
DDA - LS Tympanum Structure for TBM Launching	63	07-Aug-20	21-Oct-20			
DDA - Draft - Preparation by Designer	63	07-Aug-20	21-Oct-20			
DDA - LS Gantry Crane Foundation & Load Test	167	16-Mar-20	07-Oct-20			
DDA - Draft - Preparation by Designer	78	16-Mar-20	19-Jun-20			Draft - Preparation by Designer
DDA - Draft - Final Review and prepare for 1st Sub	24	20-Jun-20	20-Jul-20			DDA Draft - Final Review and prepare for 1st S
DDA - 1st Sub	0		20-Jul-20			◆ DDA 1st \$ub
DDA - Review by IP / DC	28	21-Jul-20	17-Aug-20			DDA - Review by IP // DC
DDA - Review by GEO via SO	35	21-Jul-20	24-Aug-20			DDA -; Review by GEO
DDA - Review by SO	35	21-Jul-20	24-Aug-20			DDA -; Review by SO;
DDA - Further information required by SO	36	25-Aug-20	07-Oct-20			
DDA - LS Thrust Frame / Blocks for TBM Launching	30	18-Sep-20	24-Oct-20			
DDA - Draft - Preparation by Designer	30	18-Sep-20	24-Oct-20			┟╌┊╌┊╴┊╴┊╴┊╴┊╴┊╴┊╴┊╴┊╴┊╴┊╴┊╴┊┝╶┊╴┊╴┊╴┊╴┊╴┊╴┊
SUB-SEA TBM TUNNEL	283	31-Oct-19	13-Oct-20			
AIP - Sub-sea Tunnel & PCRA	116	31-Oct-19 31-Oct-19	20-Mar-20			V AIP - Sub-sea Tunne) & PCRA
	-					AIP - Draft - Preparation by Designer
AIP - Draft - Preparation by Designer	56	31-Oct-19	07-Jan-20			Air - Drait - Preparation by Designer
AIP - Draft - Final Review and prepare for 1st Sub	18	08-Jan-20	31-Jan-20			
AIP - 1st Sub	0		31-Jan-20			AIP - 1st Sub;
AIP - Review by IP / DC	28	01-Feb-20	28-Feb-20			
AIP - Review by SO	28	01-Feb-20	28-Feb-20			AIP - Review by SO
AIP - Review by GEO via SO	35	01-Feb-20	06-Mar-20			AIP - Reviewbý GEO via SÓ
AIP - Prepare for 2nd Sub	7	29-Feb-20	06-Mar-20			AIP - Prepare for 2nd Sub
AIP - 2nd Sub	0		06-Mar-20			AIP - 2nd Sub
AIP - 2nd Review by SO	14	07-Mar-20	20-Mar-20			AIP - 2nd Review by SO
AIP - SO Consent for DDA Submission	0		20-Mar-20			AIP - SO Consent for DDA Submission
DDA - Sub-sea Tunnel - Precast Segment Lining + DCRA	115	01-Feb-20	20-Jun-20			V DDA - Sub-
DDA - Draft - Preparation by Designer	37	01-Feb-20	14-Mar-20			DDA - Draft + Preparation by Designer
DDA - Draft - Final Review and prepare for 1st Sub	12	16-Mar-20	28-Mar-20			DDA - Draft + Final Review and prepare for 1st Sub
DDA - 1st Sub	0		28-Mar-20			◆ DDA - 1;st Sub
DDA - Review by IP / DC	28	29-Mar-20	25-Apr-20			DDA - Review by IP / DC
DDA - Review by GEO via SO	35	29-Mar-20	02-May-20			DDA - Review by \$EQ via \$O
DDA - Review by SO	35	29-Mar-20	02-May-20			DDA - Review by \$O
DDA - Further information required by SO	30	04-May-20	06-Jun-20			DDA - Further information required by SO
DDA - 2nd Sub	0	06-Jun-20	06-Jun-20			DDA - 2nd Sub
DDA - 2nd Review by SO	14	07-Jun-20	20-Jun-20			DDA - 2nd Review by SO
DDA - SO Consent for Construction	0	20-Jun-20	20-Jun-20			DDA - SO Consent for Construction
DDA - Special Segment for CP construction	135	30-Mar-20	11-Sep-20			
DDA - Draft - Preparation by Designer	42	30-Mar-20	22-May-20			DDA - Draft - Preparation by Designer
Page 12 of 20   Milestone				<u>ļi i i i</u>	<u> </u>	Date Revision Checked Approved
Planned Bar		ED/2	2018/04	Trunk F	Road T2 a	and Infrastructure Works
Data Date: 28-Jun-20		,				POUVCIES 18-Dec-19 00V1 WYu
Project ID: T210010-5			TC		pments a	at South Apron BOUYGUES TRAVAUX PUBLICS BOUYGUES 22-Feb-20 01V0 SPa/LLo WYu
Progress Bar			T	nree Mor	ths Rollin	ng Programme

Activity Name	Dur	01V0 Start	01V0 Finish	2019		2020
				November         December           27         03         10         17         24         01         08         15         22         1	January         February         March           29         05         12         19         26         02         09         16         23         01         08         15         22         2	April         May         June         July         August         September           29         05         12         19         26         03         10         17         24         31         07         14         21         28         05         12         19         26         02         09         16         23         30         06         13         20         27
DDA - Draft - Final Review and prepare for 1st Sub	24	23-May-20	19-Jun-20			DDA Draft - Final Review and prepare for 1st Sub
DDA - 1st Sub	0	19-Jun-20	19-Jun-20			DDA 1st Sub
DDA - Review by IP / DC	28	20-Jun-20	17-Jul-20			DDA - Review by IP / DC
DDA - Review by GEO via SO	35	20-Jun-20	24-Jul-20			DDA - Review by GEO via SO
DDA - Review by SO	35	20-Jun-20	24-Jul-20			DDA - Review by SO
DDA - Further information required by SO	30	25-Jul-20	28-Aug-20			DDA - F urther inform
DDA - 2nd Sub	0		28-Aug-20			DDA - 2nd Sub
DDA - 2nd Review by SO	14	29-Aug-20	11-Sep-20			DDA - 2nd
DDA - SO Consent for Construction	0		11-Sep-20			DDA - SO (
DDA - Sub-sea Tunnel - TBM Confinement	135	30-Mar-20	11-Sep-20			
DDA - Draft - Preparation by Designer	42	30-Mar-20	22-May-20			DDA - Draft - Preparation by Designer
DDA - Draft - Final Review and prepare for 1st Sub	24	23-May-20	19-Jun-20			DDA Draft - Final Review and prepare for 1st Sub
DDA - 1st Sub	0	19-Jun-20	19-Jun-20			DDA - 1st Sub
DDA - Review by IP / DC	28	20-Jun-20	17-Jul-20			DDA - Review by IP / DC
DDA - Review by GEO via SO	35	20-Jun-20	24-Jul-20			DDA - Review by GEO via SO
DDA - Review by SO	35	20-Jun-20	24-Jul-20			DDA - Review by \$0
DDA - Further information required by SO	30	25-Jul-20	28-Aug-20			DDA - F urther inform
DDA - 2nd Sub	0		28-Aug-20			◆ DDA - 2nd Sub
DDA - 2nd Review by SO	14	29-Aug-20	11-Sep-20			DDA - 2nd
DDA - SO Consent for Construction	0		11-Sep-20			◆ DDA - SO (
DDA - Sub-sea Tunnel - Internal Structure	94	22-Jun-20	13-Oct-20			
DDA - Draft - Preparation by Designer	42	22-Jun-20	11-Aug-20			DDA + Draft - Preparation by Des
DDA - Draft - Final Review and prepare for 1st Sub	24	12-Aug-20	08-Sep-20			DDA + Draft -
DDA - 1st Sub	0		08-Sep-20			◆ DDA - 1st Su
DDA - Review by IP / DC	28	09-Sep-20	06-Oct-20			
DDA - Review by GEO via SO	35	09-Sep-20	13-Oct-20			
DDA - Review by SO	35	09-Sep-20	13-Oct-20			
CROSS PASSAGE	197	21-Mar-20	18-Nov-20			
AIP - Cross Passage & PCRA	77	21-Mar-20	26-Jun-20			AlP - ¢ross Passage & P¢RA
AIP - Draft - Preparation by Designer	25	21-Mar-20	22-Apr-20			AIP + Draft - Preparation by Designer
AIP - Draft - Final Review and prepare for 1st Sub	12	23-Apr-20	08-May-20			AIP - Draft - Final Review and prepare for 1st Sub
AIP - 1st Sub	0		08-May-20			◆ AIP - 1st Sub
AIP - Review by IP / DC	28	09-May-20	05-Jun-20			AIP - Review by IP / DC
AIP - Review by SO	28	09-May-20	05-Jun-20	<b> </b> - <b>  ,</b>		AIP - Review by SO
AIP - Review by GEO via SO	35	09-May-20	12-Jun-20	<b>  </b> , <b>   </b>		AIP - Reviewby GEO via SO
AIP - Prepare for 2nd Sub	7	06-Jun-20	12-Jun-20	<b>  </b> <i>}  </i>		AIP - Preparé for 2nd Sub
AIP - 2nd Sub	0		12-Jun-20	<b>  </b>		◆ AP - 20 Sub
AIP - 2nd Review by SO	14	13-Jun-20	26-Jun-20	<b>  </b> <i>-</i> <b>  </b>		
AIP - SO Consent for DDA Submission	0	26-Jun-20	26-Jun-20			AIP - SO Consent for DDA Submission
DDA - Cross Passage - CP Tympanum	120	09-May-20	28-Sep-20			
DDA - Draft - Preparation by Designer	36	09-May-20	19-Jun-20			DDA - Draft - Preparation by Designer,
DDA - Draft - Final Review and prepare for 1st Sub	18	20-Jun-20	13-Jul-20		······································	
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Page 13 of 20   Milestone				· - · - ·		Date Revision Checked Approved
Data Data: 28- Jun-20		ED/2	2018/04	4 Trunk Road 12 a	and Infrastructure Works	05-Nov-19 00V0 WYu
Data Date: 28-Jun-20 Planned Bar Critical Activity		ED/2				18-Dec-19 00V1 WYU
Data Date: 28-Jun-20   Critical Activity     Project ID: T210010-5		ED/2		or Developments a		
Data Date: 28-Jun-20		ED/2	fc		at South Apron	18-Dec-19 00V1 WYU



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Summary

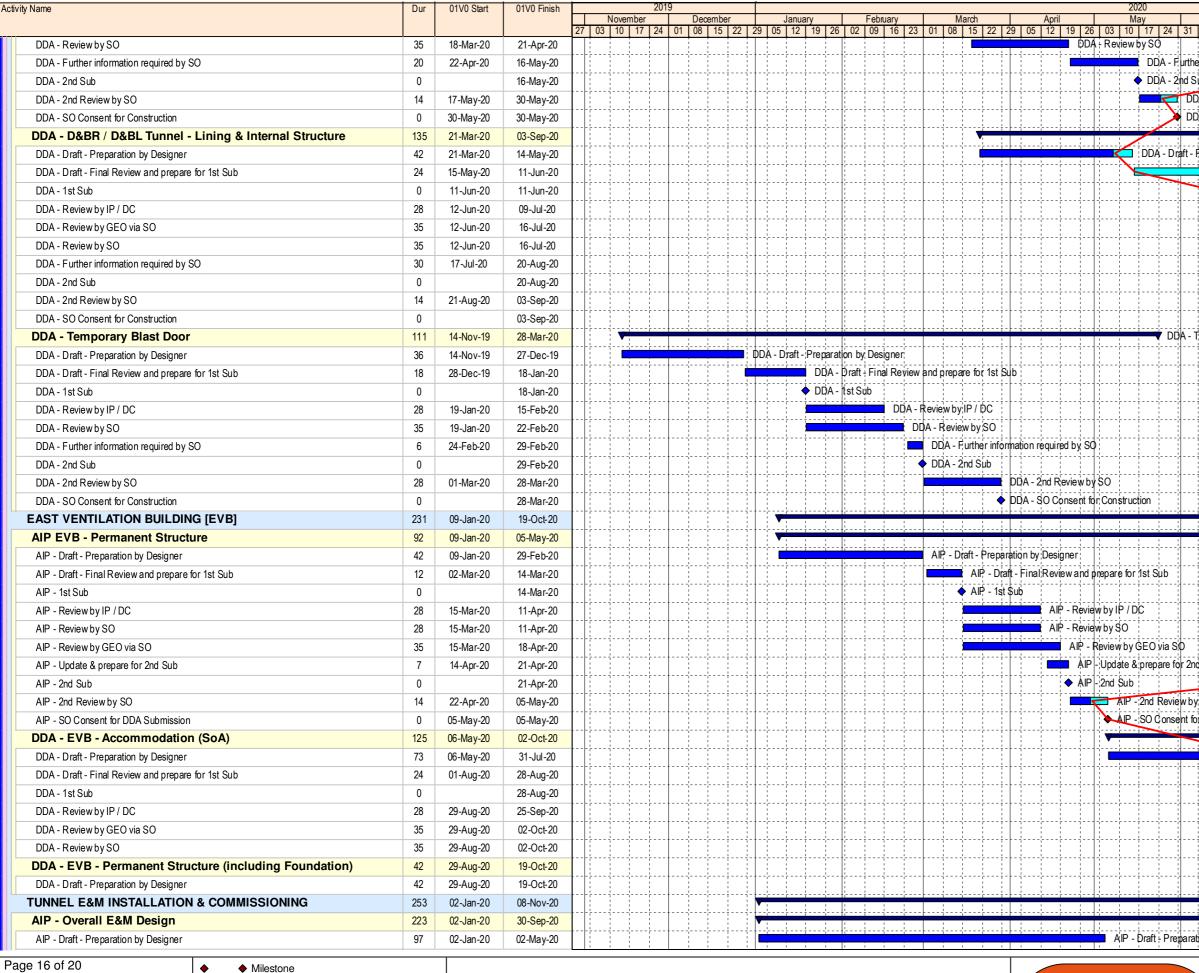
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Data Date: 28-Jun-20

Project ID: T210010-5

Critical Activity

Progress Milestone
Progress Bar

Summary

Planned Bar

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

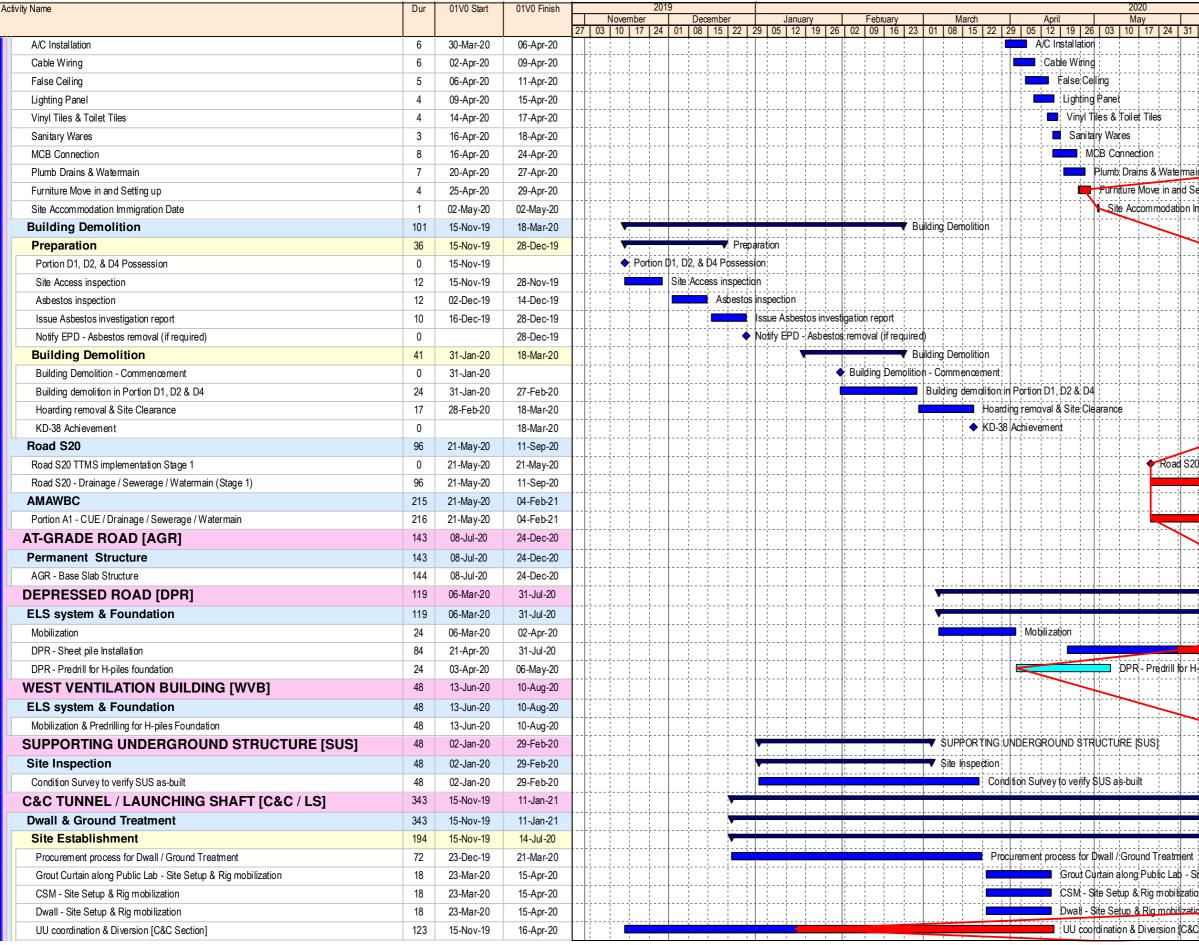


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AIP - Draft - Final Review and prepare for 1st Sub	24	04-May-20	30-May-20			AIP - Draft - Final Review and prepare for 1st Sub
AIP - 1st Sub	0		30-May-20			AIP - 1st Sub
AIP - Review by IP / DC	42	31-May-20	11-Jul-20			AlP - Review by IP / DC
AIP - Review by SO	42	31-May-20	11-Jul-20			AlP - Review by SO
AIP - Review by GEO via SO	48	31-May-20	17-Jul-20			AIP - Review by GEO via SO
AIP - Update & prepare for 2nd Sub	36	13-Jul-20	22-Aug-20			AIP - Update & prepare
AIP - 2nd Sub	0		22-Aug-20			♦ AIP - 2nd Sub
AIP - 2nd Review by SO	39	23-Aug-20	30-Sep-20			
AIP - SO Consent for DDA Submission	0		30-Sep-20			
AIP - E&M Tunnel Ventilation Design	223	02-Jan-20	30-Sep-20			
AIP - Draft - Preparation by Designer	97	02-Jan-20	02-May-20			AIP - Draft - Preparation by Designer
AIP - Draft - Final Review and prepare for 1st Sub	24	04-May-20	30-May-20			AIP - Draft - Final Review and prepare for 1st Sub
AIP - 1st Sub	0		30-May-20			AIP - 1st Sub
AIP - Review by IP / DC	42	31-May-20	11-Jul-20			AIP - Review by IP / DC
AIP - Review by SO	42	31-May-20	11-Jul-20			AIP - Review by SO
AIP - Review by GEO via SO	48	31-May-20	17-Jul-20			AIP - Review by GEO via SO
AIP - Update & prepare for 2nd Sub	36	13-Jul-20	22-Aug-20			AIP - Update & prepare
AIP - 2nd Sub	0		22-Aug-20			♦ AIP - 2nd Sub
AIP - 2nd Review by SO	39	23-Aug-20	30-Sep-20			
AIP - SO Consent for DDA Submission	0		30-Sep-20			
AIP - E&M Air Purification System (WVB)	223	02-Jan-20	30-Sep-20			
AIP - Draft - Preparation by Designer	97	02-Jan-20	02-May-20			AIP - Draft - Preparation by Designer
AIP - Draft - Final Review and prepare for 1st Sub	24	04-May-20	30-May-20			AIP - Draft - Final Review and prepare for 1st Sub
AIP - 1st Sub	0		30-May-20			AIP - 1st Sub
AIP - Review by IP / DC	42	31-May-20	11-Jul-20			AIP - Review by IP / DC
AIP - Review by SO	42	31-May-20	11-Jul-20			AIP - Review by SO
AIP - Review by GEO via SO	48	31-May-20	17-Jul-20			AIP - Review by GEO via SØ
AIP - Update & prepare for 2nd Sub	36	13-Jul-20	22-Aug-20			AIP - Update & prepare
AIP - 2nd Sub	0	00.4.00	22-Aug-20			◆ AIP - 2nd Sub
AIP - 2nd Review by SO	39	23-Aug-20	30-Sep-20			
AIP - SO Consent for DDA Submission	0	04 1 00	30-Sep-20			
AIP - E&M Fire Services Installation	123	01-Jun-20	27-Oct-20			
AIP - Draft - Preparation by Designer	51	01-Jun-20	31-Jul-20			AIP - Draft - Preparation by Designer
AIP - Draft - Final Review and prepare for 1st Sub AIP - 1st Sub	24	01-Aug-20	28-Aug-20			AIP - 1st Sub
AIP - ISI SUD AIP - Review by IP / DC	0	20 4.00 20	28-Aug-20			
AIP - Review by SO	28 28	29-Aug-20 29-Aug-20	25-Sep-20 25-Sep-20			··∲· <mark>│</mark> ·∲···∲···∲···∲···∲···∲···∲···∲···∲··· <mark></mark> │··∲··· <mark></mark> │· <mark>·</mark> ∲···∲···∳···∳···∳···∳···∳···∳···
AIP - Review by SO AIP - Review by GEO via SO	35	29-Aug-20 29-Aug-20	02-Oct-20			··∲· <mark>│</mark> ·∲···∲···∲···∲···∲···∲···∲···∲···∲··· <mark></mark> │··∲··· <mark></mark> │· <mark>·</mark> ∲···∲···∳···∳···∳···∳···∳···∳···∳···
AIP - Update & prepare for 2nd Sub	25	25-Aug-20 26-Sep-20	27-Oct-20			╌┊╴┟╴┊╴╴┊╴╴┊╴╴┊╴╴┊╴╴┊╴╴┊╴╴┊╴╴┊╴╴┊╴╴┊╴╴┊╴╴
AIP - E&M MVAC	123	01-Jun-20	27-Oct-20			··∲· <mark> ·</mark> ∲··∲···∲···∲···∲···∲···∲···∲··· <mark>↓</mark> ·· <b>↓···</b> ∳··· <mark>↓</mark> ·· <b>↓</b> ···↓···∳···∳···∳···∳···∳···∳···∳···∳··
AIP - Draft - Preparation by Designer	51	01-Jun-20	31-Jul-20		<u> </u>	AIP; - Draft - Preparation by Designer
AIP - Draft - Final Review and prepare for 1st Sub	24	01-Aug-20	28-Aug-20		$\left\{ \begin{array}{c} \\ \end{array}\right\} \rightarrow \left\{ \end{array}\right\} \rightarrow \left\{ \begin{array}{c} \\ \end{array}\right\} \rightarrow \left\{ \begin{array}{c} \\ \end{array}\right\} \rightarrow \left\{ \end{array}\right\} \rightarrow \left\{ \end{array}\right\} \rightarrow \left\{ \begin{array}{c} \\ \end{array}\right\} \rightarrow \left\{ \end{array}\right\} \rightarrow \left\{ \end{array}\right\} \rightarrow \left\{ \begin{array}{c} \\ \end{array}\right\} \rightarrow \left\{ \right$	AIP - Draft - Final I
AIP - 1st Sub	0	21 / Wg 20	28-Aug-20		$\left\{ \begin{array}{c} \\ \end{array}\right\} \rightarrow \left\{ \end{array}\right\} \rightarrow \left\{ \begin{array}{c} \\ \end{array}\right\} \rightarrow \left\{ \begin{array}{c} \\ \end{array}\right\} \rightarrow \left\{ \end{array}\right\} \rightarrow \left\{ \begin{array}{c} \\ \end{array}\right\} \rightarrow \left\{ \end{array}\right\} \rightarrow \left\{ \begin{array}{c} \\ \end{array}\right\} \rightarrow \left\{ \begin{array}{c} \\ \end{array}\right\} \rightarrow \left\{ \right$	◆ AIP - 1st Sub
AIP - Review by IP / DC	28	29-Aug-20	25-Sep-20		+	
AIP - Review by SO	28	29-Aug-20	25-Sep-20			
AIP - Review by GEO via SO	35	29-Aug-20	02-Oct-20		+	
AIP - Update & prepare for 2nd Sub	25	26-Sep-20	27-Oct-20			
AIP - E&M Plumbing & Drainage System	123	01-Jun-20	27-Oct-20			╶╴┇╽╴┇╴╴┇╶╴┇╴╴┇╴╴┇╴╴┇╴╴┇╴╴┇ <u>╴╴┇╴╴┇╴╴</u> ┇ <mark>╽┊┇╴╴┊╴╴┊╶╴┇╴╴┇╴╴┇╴╴┇╴╴┇╴╴┊╴╴</mark>
AIP - Draft - Preparation by Designer	51	01-Jun-20	31-Jul-20			AIP - Draft - Preparation by Designer
AIP - Draft - Final Review and prepare for 1st Sub	24	01-Aug-20	28-Aug-20			AIP - Draft - Final I
Page 17 of 20    Milestone					μι ι ι μ ι ι <u>μ</u> ι ι <u>ι</u> ι ι ι	Date Revision Checked Approved
Pata Data: 28 Jun 20		ED/2	2018/04	Trunk Road T2 a	and Infrastructure Works	05-Nov-19 00V0 WYu
Data Date: 28-Jun-20				r Developments a		
Project ID: T210010-5 • Progress Milestone			10			BOUYGUES TRAVAUX PUBLICS 22-Feb-20 01V0 SPa/LLo WYu
Progress Bar ▼ Summary			Tł	ree Months Rollin	ng Programme	



Activity Name	Dur	01V0 Start	01V0 Finish	2019 2020
				November         December         January         February         March         April         May         June         July         August         September           27         03         10         17         24         01         08         15         22         29         05         12         19         26         02         09         16         23         01         08         15         22         29         05         12         19         26         02         09         16         23         00         13         20         27
AIP - 1st Sub	0		28-Aug-20	
AIP - Review by IP / DC	28	29-Aug-20	25-Sep-20	
AIP - Review by SO	28	29-Aug-20	25-Sep-20	
AIP - Review by GEO via SO	35	29-Aug-20	02-Oct-20	
AIP - Update & prepare for 2nd Sub	25	26-Sep-20	27-Oct-20	
AIP - E&M Electrical Installation	63	24-Aug-20	08-Nov-20	
AIP - Draft - Preparation by Designer	19	24-Aug-20	14-Sep-20	AIP - Dra
AIP - Draft - Final Review and prepare for 1st Sub	12	15-Sep-20	28-Sep-20	
AIP - 1st Sub	0	10 000 20	28-Sep-20	
AIP - Review by IP / DC	34	29-Sep-20	01-Nov-20	
AIP - Review by SO		29-Sep-20 29-Sep-20	01-Nov-20	
	34			
AIP - Review by GEO via SO	41	29-Sep-20	08-Nov-20	
AIP CLP Submission - Power Supply to EVB & WVB	63	24-Aug-20	08-Nov-20	
AIP - Draft - Preparation by Designer	19	24-Aug-20	14-Sep-20	AIP - Dra
AIP - Draft - Final Review and prepare for 1st Sub	12	15-Sep-20	28-Sep-20	
AIP - 1st Sub	0		28-Sep-20	
AIP - Review by IP / DC	34	29-Sep-20	01-Nov-20	
AIP - Review by SO	34	29-Sep-20	01-Nov-20	
AIP - Review by GEO via SO	41	29-Sep-20	08-Nov-20	
AIP - E&M Tunnel Lighting Design	34	29-Aug-20	09-Oct-20	
AIP - Draft - Preparation by Designer	34	29-Aug-20	09-Oct-20	
SOUTH APRON EXTERNAL WORKS	364	15-Nov-19	04-Feb-21	
Temporary Covered Walkway Construction (TEW)	115	09-Jan-20	01-Jun-20	Temporarý Covered Walkway Construction (TEW)
Walkway Alignment Submission	1	09-Jan-20	09-Jan-20	Walkway Alignment Submission
Walkway Desin Submission (Internal)	13	09-Jan-20	23-Jan-20	Walkway Desin Submission (Internal)
Walkway Desin Submission (ICE Temp Works Cert.) & Approval	29	24-Jan-20	29-Feb-20	Walkway Desin Submission (ICE Temp Works Cert.) & Approval
Coordination with interface parties	18	24-Jan-20	17-Feb-20	Coordination with interface parties
Walkway Construction Method Statement Submission & Approval	23	18-Feb-20	14-Mar-20	Walkway Construction Method Statement Submission & Approval
Clearance for Walkway Construction & Preparation works	26	02-Mar-20	31-Mar-20	Clearance for Walkway Construction & Preparation works
Installation of Steel Walkway Structure (By Subcontractor)	47	01-Apr-20	30-May-20	Installation of Steel Walkway Structure (By Subcontractor)
Temporary Works Certification (By ICE)	1	01-Jun-20	01-Jun-20	Tempórary;Works (Cértification (By ICE)
Planned Completion Date	0	01-001-20	01-Jun-20	<ul> <li>Plannéd Cómpletion Date</li> </ul>
BTP's & SOR's Site Accomodation (Traditional Method)	134	15-Nov-19	02-May-20	▼ BTP's & SOR's Site Accomódation (Traditional Method)
Tendering Process of Site Accommodation	57	15-Nov-19	23-Jan-20	Tendering Process of Site Accommodation
Confirmation BTP Office Construction Sub-contractor	1	24-Jan-20	23-Jan-20 24-Jan-20	I Confirmation BTP Office Construction Sub-contr/actor
Design Calclation and IDC Design Checking	9	24-Jan-20 29-Jan-20	07-Feb-20	Design Calclation and IDC Desigh Checking
Design and Method Statement Submission	9	08-Feb-20	07-Feb-20 08-Feb-20	Design and Method Statement Submission
Approval of Design and MS Submission	6			Approval of Design and MS Submission
	-	10-Feb-20	15-Feb-20	
Accomodation Basement Construction	11	17-Feb-20	28-Feb-20	Accomodation Basement Construction
Material Procement, Fabrication and Delivery	17	10-Feb-20	28-Feb-20	Material Procement, Fabrication and Delivery
Crane Mobilisation and equipment delivery	1	29-Feb-20	29-Feb-20	Crane Mobilisation and equipment delively
Columns Erection	4	02-Mar-20	05-Mar-20	Colúmns:Erectión
1/F Floor Beam Erection	2	06-Mar-20	07-Mar-20	₿ 1/F Floġr Beam Erectiġn
Roof Truss, Roof Beam & Roof Joist Erection	4	09-Mar-20	12-Mar-20	Roof Beam & Roof Joist Erection
External Wall, Windows, Door & Gutter Installation	5	13-Mar-20	18-Mar-20	External Wall, Windows, Dobt & Gutter Installation
Roof Panel Installation	7	14-Mar-20	21-Mar-20	Roof Pánel Ihstallation
1/F Floor Joist and Wooden Board Laying	1	19-Mar-20	19-Mar-20	■ 1/F Floor Joist and Wooden Board Laying
Floor Screeding	8	16-Mar-20	24-Mar-20	FldoriScreeding
Internal Walls Erection	5	21-Mar-20	26-Mar-20	Internal Walls Erection
Trucking & Socket Installation	10	23-Mar-20	02-Apr-20	Tru¢king & Socket Installation
Page 18 of 20   Milestone				Date Revision Checked Approved
Planned Bar		ED/2	2018/04	04 Trunk Road T2 and Infrastructure Works
Data Date: 28-Jun-20				Pouvolonmente et South Anron
Project ID: T210010-5			IC	or Developments at South Apron BOUYGUES 22-Feb-20 01V0 SPa/LLo WYu
Progress Bar				
Summary				Three Months Rolling Programme



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- Data Date: 28-Jun-20
- Project ID: T210010-5
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Progress Bar Summary

Milestone

Planned Bar

Critical Activity

Progress Milestone

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

BOUYGUES TRAVAUX PUBLICS

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Date	Revision	Checked	Approved
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18-Dec-19	00V1	WYu	
22-Feb-20	01V0	SPa/LLo	WYu

Activity Name		01V0 Start	01V0 Finish			2019											20	20				-				
				27 03	Novembe 3 10 17		December	22   29   05	January		February 09   16   23	3 01 1	March 08   15   2	22   29   0	April 5   12	19 26	M 03   10		June 31 07 14		July 05   12	/	August 02   09   16	23 30	Septem	
Site setup at Portion M2	37	02-Mar-20	16-Apr-20														up at Porti									
UU coordination & Diversion [TBM B/I Plug]	72	17-Apr-20	14-Jul-20																-iiii	<b></b>	$\rightarrow$	UU coordina	tion & Divers	ion [TBM	B/I Plug]	
Grout Curtain along Public Lab	55	17-Apr-20	22-Jun-20												▼-			🔻 Grou	t Curtain along I	Public Lat	b			;;- 		
Rig mobilization at Portion N1,N2,N3	12	17-Apr-20	02-May-20																at Portion N1,N	12,N3						
Grout Curtain along Public Lab	43	04-May-20	22-Jun-20																	🗖 Grout	t Curtain a	ong Public I	ab			
Shaft Dwall	221	17-Apr-20	11-Jan-21												▼-											
C&C/LS - Guide Wall Construction	97	17-Apr-20	12-Aug-20																				<b>C</b> &C	/LS - Guio	te Wall C	onstructi
Rig mobilization at Portion N1,N2,N3	12	08-May-20	21-May-20															🗖 Rig	mobilization at	Portion A	1.N2,N3					
C&C/LS - Dwall & Barrettes	194	22-May-20	11-Jan-21	-																						
Break-in Plug	66	15-Jul-20	29-Sep-20												▼								Break-in Plug			
B/I Plug - CSM	66	15-Jul-20	29-Sep-20																							
SUB-SEA TBM TUNNEL - WESTBOUND	192	29-Feb-20	21-Oct-20											-												
TBM Design / Fabrication / FAT / Delivery	143	29-Feb-20	22-Aug-20											<b>V</b>										T	BM Desi	jn / Fabr
Place Order	72	29-Feb-20	28-May-20														1 1		Place Order							
Design	72	29-May-20	22-Aug-20																					Design		
Site Establishment	165	01-Apr-20	21-Oct-20																							
Temporary CLP 132kV Substation	144	02-May-20	21-Oct-20															· · · · · · · · · · · · · · · · · · ·			1 1		1 1		1 1	
Temp CLP 132kV Substation - Earth works & Civil works	72	02-May-20	27-Jul-20														 	+			· ·	Ter	np CLP 132k	VSubsta	tion - Earl	h works
Temp CLP 132kV Substation - ABWF & E&M for CLP Access	72	28-Jul-20	21-Oct-20														· · ·			_	· · ·				1 1	
Precast Elements Storage Yard	71	01-Apr-20	30-Jun-20																						Precas	st Elemeı
Precast Storage Preparation	36	01-Apr-20	18-May-20												_		I I	Prec	ast Storage Pre							
Precast Storage Gantry Crane Setup	36	19-May-20	30-Jun-20																L		Precast S	brage Ganti	y Crane Setu	ip		
CHA KWO LING ROAD WORKS	203	25-Feb-20	31-Oct-20		<u>.</u>						▼						  J	· · ·			· · ·					
TTA Phasing	0		25-Feb-20								•	► TTA P					· · ·									
TMLG for XP validation	0		14-Mar-20										🔶 TML	G for XP v	alidation	h	  									
XP validated	0		15-Apr-20													XP valida	Jaarahaaa					· · · · · · · · · · · · · · · · · · ·				
TMLG to TD for Approval	0		21-Apr-20													♦ TML	G to TD fo	1	-4						ļļ	
TMLG Approved	0		09-May-20														🔶 TN	/ILG App	.4							
Roadworks advice from RMO for TTA Implementation	0		19-May-20															🔶 Roa	dworks advice f	rom PMO	) for TTA Ir	nplementatio	on		ļ	
Wai Yip Street / Cha Kwo Ling Road Junction	137	20-May-20	31-Oct-20	_														- <u></u>		V						4
WYS/CKLR Junction modification	138	20-May-20	31-Oct-20																							4
Wai Fat Street / Wai Yip Street Junction	137	20-May-20	31-Oct-20															<u>/</u>			V					
WFS/WYS Junction modification	138	20-May-20	31-Oct-20															ļ.,	- <u> </u>							· · · · · ·
DRILL & BLAST TUNNEL [D&BL]	206	01-Apr-20	09-Dec-20																					; ;		
Tunnel Excavation	206	01-Apr-20	09-Dec-20																					, , , , , , , , , , , , , , , , , , ,		
Temporary Blast Door - Installation	25	02-May-20	30-May-20															÷;	Temporary E			on				
Noise Measurement	7	01-Jun-20	08-Jun-20																Noise	Measure	. +					
CNP Application	18	09-Jun-20	30-Jun-20																		CNP Appl					
East Portal - Blast Door Installation for Blasting Permit	72	01-Apr-20	30-Jun-20							1								÷				I - Blast Doo	or Installation	tor Blasti	ng Permit	
Main Equipment Mobilization	0		30-May-20							1									<ul> <li>Main Equips</li> </ul>	nent Mobi						
Temp Support at Tunnel Portal	25	01-Jun-20	30-Jun-20															÷		····· • • • • • • • • • • • • • • • • •	i empi Sup	port at Tunr	ei Portal			
WB - D&BI Tunnel - CH9268-9140 Type A - Excavation	135	03-Jul-20	09-Dec-20							1											1 1	1 1 1	1 1	1 1	1	1 1



- Data Date: 28-Jun-20
- Project ID: T210010-5
- Planned Bar
   Critical Activity
   Progress Milestone
   Progress Bar
   Summary

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Milestone

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



Date	Revision	Checked	Approved
05-Nov-19	00V0	WYu	
18-Dec-19	00V1	WYu	
22-Feb-20	01V0	SPa/LLo	WYu