Civil Engineering and Development Department

Trunk Road T2

Monthly Environmental Monitoring and Audit Report

(under EP-458/2013/C)

October 2022

(Version 1.0)

Approved By 

(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

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Ref.: CEDKTDT2EM00_0_0399L.22

14 November 2022

By Post and Email

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

Attention: Mr. Edwin Ching

Dear Mr. Ching,

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

Monthly EM&A Report (October 2022) for EP-458/2013/C

Reference is made to the Environmental Team's submission of the Monthly EM&A Report for October 2022 (Version 1.0) certified by the ET Leader and provided to us via email on 14 November 2022. We are pleased to inform you that we have no adverse comments on the captioned submission. We write to verify the captioned submission in accordance with Condition 4.4 of EP-458/2013/C.

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

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

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

Y H Hui
Independent Environmental Checker

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

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EXECUTIVE SUMMARY

Introduction

1. This is the 30th Environmental Monitoring and Audit (EM&A) Report prepared by the Environmental Team (ET), Cinotech Consultants Ltd., for Contract No. ED/2018/04 "Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron". This report summarized the monitoring results and audits findings of the EM&A programme under the issued Environmental Permit (EP) No. EP-458/2013/C and in accordance with the EM&A Manual (AEIAR-173/2013) during the reporting month of October 2022.

Summary of Main Works Undertaken and Key Measures Implemented

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

- East Bound – RC Structure Construction, Service Gallery Drill & Blast, Service Gallery A Installation.
- East Ventilation Building – WB Blinding & Waterproofing, EB Excavation and RC Structure.
- West Bound – Extension & Blast Tunnel, RC Structure Construction.

3. Implementation of the key mitigation measures during the reporting period are as follows:

Construction Noise

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

Air Quality

- Regularly watering on site to avoid dust generation.

Landscape and Visual

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

Environmental Monitoring Works

4. Environmental monitoring for the Project was performed in accordance with the EM&A Manual and the monitoring results were checked and reviewed. Site Inspections/Audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.

5. Summary of the non-compliance (exceedance) in the reporting month for the Project is tabulated in **Table I**.

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

Environmental Monitoring	No. of Non-compliance (Exceedance)		No. of Non-compliance (Exceedance) due to Construction Activities of this Project		Action Taken
	Action Level	Limit Level	Action Level	Limit Level	
Air Quality	0	0	0	0	N/A
Noise	2	0	0	0	Detail refer to App. M
Marine Water Quality	N/A	N/A	N/A	N/A	N/A
Groundwater Level Monitoring (Piezometer Monitoring)	N/A	N/A	N/A	N/A	N/A
Ecological	N/A	N/A	N/A	N/A	N/A
Cultural Heritage	N/A	N/A	N/A	N/A	N/A
Landfill Gas	N/A(1)	N/A	N/A(1)	N/A	N/A

Note: (1): No Action Level for Landfill Gas Monitoring.

Air Quality Monitoring

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

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

Construction Noise Monitoring

8. Two (2) Action Level exceedance was recorded due to documented complaint in the reporting month. The Summary of Documented Complaints in the Reporting Month is tabulated in **Table III**.

9. No Limit Level exceedance for day time construction noise monitoring were recorded in the reporting month. Detail shall refer to **Appendix N**.

Water Quality Monitoring

10. Groundwater quality monitoring had been suspended since October 2019 upon the agreement by EPD. Further details should be founded at **Section 4.1**.

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

12. As the construction activity is approximately 120m away from the piezometer gate, no piezometer monitoring is required.

Waste Management

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

Ecological Monitoring

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

Fisheries Impact Monitoring

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

Monitoring on Cultural Heritage

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

Landscape and Visual Monitoring and Audit

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

Landfill Gas Monitoring

18. Monitoring of landfill gases was commenced in December 2016. Since no excavation activity for this Project was carried out within the Sai Tso Wan Landfill Consultation Zone in the reporting month, no landfill gas monitoring is required

Hazard to Life Monitoring

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

Environmental Site Inspection

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

Key Information in the Reporting Month

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

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

Event	Event Details		Action Taken	Status
	Number	Nature		
Complaints Received	2	Noise	Detail refer to App M	Closed
Notifications of any summons & prosecutions received	0	--	N/A	N/A

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

Table III Summary of Complaints Details in Reporting Month

Complaint Type	Investigation Findings	Follow-up Action / Mitigation Measure
Noise nuisance generated from the construction activities at Portion T1. (8-14 October 2022)	According to the investigation result, the construction activities of Trunk Road T2 conducted inside the tunnel area and the construction activities of TKO-LT Tunnel conducted inside the tunnel section at Kwun Tong Side are considered as one of the potential noise source of the ground borne noise nuisance	• A valid CNP was hold and construction activities being taken were complied with the relevant CNP • Blast door was fully enclosed when construction activities were carried out within tunnel area to prevent, reduce or minimize the emission of airborne noise • In addition, the Contractor should still maintain good site practices, such as schedule noisy work to the less sensitive hours and provide regularly maintenance for PMEs. • Contractor is recommended to continue to strictly follow the requirements in the relevant CNP and the approved CNMP. • According to the condition 3.d point 5 of the CNP (GW-RE0997-22), the immediate remedial action shall be implemented in case adverse ground-borne noise impact on any noise sensitive receiver is received
Noise nuisance generated from the construction activities at Portion T1. (17-23 October 2022)	According to the investigation result, the construction activities of Trunk Road T2 conducted inside the tunnel area and the construction activities of TKO-LT Tunnel conducted inside the tunnel section at Kwun Tong Side are considered as one of the	• A valid CNP was hold and construction activities being taken were complied with the relevant CNP • Blast door was fully enclosed when construction activities were carried out within tunnel area to prevent, reduce or minimize the emission of airborne noise • In addition, the Contractor should still maintain good site practices, such as schedule noisy work to the less

Complaint Type	Investigation Findings	Follow-up Action / Mitigation Measure
	potential noise source of the ground borne noise nuisance	sensitive hours and provide regularly maintenance for PMEs. • Contractor is recommended to continue to strictly follow the requirements in the relevant CNP and the approved CNMP. • According to the condition 3.d point 5 of the CNP (GW-RE0997-22), the immediate remedial action shall be implemented in case adverse ground-borne noise impact on any noise sensitive receiver is received

Reporting Changes

23. No reporting change is recorded in the reporting months.

Future Key Issues

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

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

Site Activities (November 2022)	Key Environmental Issues
1. East Bound – RC Structure Construction, Service Gallery Frill & Blast. Service Gallery A Installation 2. East Ventilation Building – WB Blinding & Waterproofing, EB Excavation, RC Structure 3. West Bound – Extension & Blast Tunnel, RC Structure Construction	(A) / (B) / (C) / (D)

Note:
(A) Dust generation from haul road, stockpile of dusty materials, exposed site area, excavation works and rock breaking activities;
(B) Noisy construction activity such as rock-breaking activities and piling works;
(C) Runoff from exposed slope or site area; and
(D) Wastewater and runoff discharge from site.

1 INTRODUCTION

Background

1.1 In 2009, Civil Engineering and Development Department (CEDD) commissioned a Kai Tak Development (KTD) – Trunk Road T2 and Infrastructure at South Apron Investigation. The assignment covers the provision of the Trunk Road T2 and its connections with the Central Kowloon Route (CKR) at the north apron area and the Tseung Kwan O – Lam Tin Tunnel (TKOLTT) to the south in the Cha Kwo Ling area.

1.2 The Trunk Road T2 Project is one of the designated Projects under Schedule 2 of the EIAO proposed in the KTD. CEDD submitted the Project Profile (No. PP-379/2009) on 24 March 2009 for application for an EIA study brief for the Trunk Road T2 Project under the EIAO. Accordingly, an EIA Study Brief (ESB-203/2009) for the Trunk Road T2 Project was issued on 30 April 2009. The Environmental Impact Assessment (EIA) Report for the Trunk Road T2 Project was approved under the Environmental Impact Assessment Ordinance (EIAO) on 19 September 2013. The corresponding Environmental Permit (EP) was issued on 19 September 2013 (EP no.: EP-451/2013).

1.3 The Contract No. ED/2018/04 is the main contract of Trunk Road T2 ("T2 Main Works") which comprises mainly the design and construction of a dual two-lane trunk road of approximately 3.0km long with about 2.7km of the trunk road in form of tunnel; ventilation and administration buildings, environmental protection and mitigation works and etc. The EM&A programme under this Contract is governed by the two EPs (EP-451/2013 and EP-458/2013/C) and two EM&A Manuals (AEIAR-174/2013 and AEIAR-173/2013). The work areas of the T2 Main Works are shown in **Figure 1** and the works to be executed under this Contract and corresponding EPs are summarized as follows:

Environmental Permit	**Works Description**
EP-451/2013 – Trunk Road T2	*Trunk Road T2* • 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 – Lam Tin Tunnel (TKOLTT) and Associated Works	*Cha Kwo Ling Tunnel* Construction of Cha Kwo Ling Tunnel from the end of Trunk Road T2 to the TKOLTT at the Eastern Ventilation Building

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

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

1.5 Cinotech Consultants Ltd. was designated as the Environmental Team (ET) to undertake the EM&A works for "Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron" (hereinafter called the "Project").

Purpose of the Report

1.6 This is the 30th Monthly EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period in October 2022.

Project Organizations

1.7 Different Parties with different levels of involvement in the Project organization include:

- Permit Holder – Civil Engineering and Development Department (CEDD)
- Supervisor Representative – Hyder-Meinhardt Joint Venture (HMJV)
- Environmental Team (ET) – Cinotech Consultants Limited (Cinotech)
- Independent Environmental Checker (IEC) – Ramboll Hong Kong Limited (Ramboll)
- Contractor – Bouygues Travaux Publics (BTP)

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

Table 1.1 Key Project Contacts

Party	Role	Contact Person	Phone No.
CEDD	Permit Holder	Mr. Wong Chi Wai, Tommy	3842 7111
HMJV	Supervisor Representative	Ms. Hazel Tang	2149 8524
Cinotech	Environmental Team	Mr. KS Lee (ETL)	2151 2091
		Ms. Karina Chan	2157 3880
Ramboll	Independent Environmental Checker	Mr. YH Hui	3465 2850
BTP	Contractor	Ms. Ality Chan	5185 4462

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

Construction Activities undertaken during the Reporting Month

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

- East Bound – RC Structure Construction, Service Gallery Drill & Blast, Service Gallery A Installation.
- East Ventilation Building – WB Blinding & Waterproofing, EB Excavation and RC Structure.
- West Bound – Extension & Blast Tunnel, RC Structure Construction.

Summary of EM&A Requirements

1.11 The EM&A programme requires construction noise, air quality monitoring and environmental site audit, etc. The EM&A requirements for each parameter are described in the following sections, including:

- All monitoring parameters;
- Action and Limit levels for all environmental parameters;
- Event Action Plans;
- Environmental mitigation measures, as recommended in the Project EIA Report.

1.12 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in **Section 12** of this report.

1.13 This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the monitoring parameters of the required environmental monitoring works and audit works for the Project in October 2022.

Status of Environmental Licensing and Permitting

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

Table 1.2 Summary of Environmental License and Permit

Permit / License No.	Valid Period		Status
	From	To	
Environmental Permit (EP)			
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			
CNP No. (For Portion T1): GW-RE0622-22	07 Jul 2022	06 Oct 2022	Expired on 6 Oct 2022
CNP No. (For Portion Q): GW-RE0919-22	23 Sep 2022	23 Mar 2023	Valid
CNP No. (For Portion T1): GW-RE0997-22	6 Oct 2022	23 Dec 2022	Valid
Wastewater Discharge License			
WT00036699-2020	14 Jan 2021	31 Jan 2026	Valid
Chemical Waste Producer License			
WPN: 5213-286-B2557-03	09 Mar 2020	N/A	Valid

2 AIR QUALITY

Monitoring Requirement

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

Monitoring Locations

2.2 Five designated monitoring stations were selected for air quality monitoring programme. **Table 2.1** describes the air quality monitoring locations, which are also depicted in **Figure 2**.

Table 2.1 Air Quality Monitoring Locations

Monitoring Stations	Location	Location of Measurement
AM1	Tin Hau Temple	Ground Level
AM2	Sai Tso Wan Recreation Ground	Ground Level
AM3	Yau Lai Estate Bik Lai House	Rooftop (41/F)
AM4(1)	Sitting-out Area at Cha Kwo Ling Village	Ground Level
AM4(B)(2) (*)(**)	Flat 103 Cha Kwo Ling Village	Ground Level

Remarks:
(1) For 1-hour TSP monitoring;
(2) For 24-hour TSP monitoring
(*) Air quality monitoring at designated station AM4 (24-hr TSP) was rejected by the premise owners. Therefore, baseline and impact air quality monitoring works were carried out at alternative air quality monitoring stations AM4 (A) (24-hr TSP only)
(**) AM4(A) is not available for conducing monitoring due to the demolition of administrative office.

Monitoring Parameters and Frequency

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

Table 2.2 Frequency and Parameters of Air Quality Monitoring

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

Monitoring Equipment

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

2.5 Wind data monitoring equipment was set at rooftop (about 41/F) of Yau Lai Estate Bik Lai House for logging wind speed and wind direction such that the wind sensors are clear of obstructions or turbulence caused by building. The wind data monitoring equipment is re-calibrated at least once every six months and the wind directions are divided into 16 sectors of 22.5 degrees each. The location is shown in **Figure 2**. This weather information for the reporting month is summarized in **Appendix C**.

2.6 **Table 2.3** summarizes the equipment used for air quality monitoring by the ET for Contract No. CE 59/2015 (EP). Copies of calibration certificates are attached in **Appendix B**.

Table 2.3 Air Quality Monitoring Equipment

Equipment	Model	Quantity
1-hour TSP Dust Meter	Sibata Model No. LD-5R (Serial No.: 972781, 972778, 972779, 972780, 8Y2374) Sibata Model No. LD-3B (Serial No.2Y6194)	6
HVS Sampler	GMW model: GS2310 (Serial No.: 1287, 10379, 10599)	3
	TE 5170 (Serial No.: 1956)	1
Calibrator	TISCH Model: TE-5025A (Serial No.: 3864)	1
Wind Anemometer	Davis Weather Monitor II, Model no. 7440 (Serial No.: MC01010A44)	1

Monitoring Methodology

1-hour TSP Monitoring

Measuring Procedures

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

(Sibata Model No.: LD-5R)

- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Set POWER to "ON" and make sure that the battery level was not flash or in low level.
- Allow the instrument to stand for about 3 minutes and then the cap of the air sampling inlet has been released.
- Push the knob at MEASURE position.

- Set time/mode setting to [BG] by pushing the time setting switch. Then, start the background measurement by pushing the start/stop switch once. It will take 6 sec. to complete the background measurement.
- Push the time setting switch to change the time setting display to [MANUAL] at the bottom left of the liquid crystal display. Finally, push the start/stop switch to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, count value and site condition were recorded during the monitoring period.

Maintenance/Calibration

2.8 The following maintenance/calibration is required for the 1-hour dust meter:

- Check and calibrate the meter by HVS to check the validity and accuracy of the results measured by direct reading method at 2-month intervals throughout all stages of the air quality monitoring.

24-hour TSP Monitoring

Instrumentation

2.9 High volume samplers (HVS) (TISCH Model: TE-5170 and GMW Model: GS2310) completed with appropriate sampling inlets were employed for 24-hour TSP monitoring. The sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).

2.10 The positioning of the HVS samplers are as follows:

- A horizontal platform with appropriate support to secure the samplers against gusty wind shall be provided;
- No two samplers shall be placed less than 2 meter apart;
- The distance between the sampler and an obstacle, such as buildings, must be at least twice the height that the obstacle protrudes above the sampler;
- A minimum of 2 metres of separation from walls, parapets and penthouses is required for rooftop samplers;
- A minimum of 2 metres of separation from any supporting structure, measured horizontally is required;
- No furnace or incinerator flue is nearby;
- Airflow around the sampler is unrestricted;
- The sampler is more than 20 metres from the dripline;
- Any wire fence and gate, to protect the sampler, shall not cause any obstruction during monitoring;
- Permission must be obtained to set up the samplers and to obtain access to the monitoring stations; and
- A secured supply of electricity is needed to operate the samplers.

Operating/analytical procedures for the operation of HVS

2.11 Operating/analytical procedures for the air quality monitoring are highlighted as follows:

- Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 0.6 m^3/min. and 1.7 m^3/min.) in accordance with the EM&A manual (AEIAR-173/2013). The flow rate shall be indicated on the flow rate chart.
- For TSP sampling, fiberglass filters with a collection efficiency of > 99% for particles of 0.3μm diameter were used.
- The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.
- The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.
- The shelter lid was closed and secured with the aluminum strip.
- The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- After sampling, the filter was removed and sent to the HOKLAS laboratory (ALS Technichem (HK) Pty 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 ±3°C; the relative humidity (RH) should be < 50% and not vary by more than ±5%. A convenient working RH is 40%.

Maintenance/Calibration

2.12 The following maintenance/calibration is required for the HVS:

- The high volume motors and their accessories were properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply are in good working condition.
  High volume samplers were calibrated at bi-monthly intervals using TE-5025A Calibration Kit throughout all stages of the air quality monitoring.

Results and Observations

2.13 The impact monitoring works for air quality monitoring locations AM1, AM2, AM3 and AM4 are completed by the ET of Agreement No. CE 59/2015 (EP), and the data will be adopted in this report. As the proposal for relocation approved, the monitoring at AM4(A) will conducted at AM4(B). For the time being, as the station CKL2 for the 24 hr TSP monitoring, carried out under EM&A works for Trunk Road T2 Project (EP- 451/2013), is located in close proximity to AM4(B); the results from CKL2 are adopted as reference for the 24 TSP monitoring at AM4(B), which has similar environment when compared with that for CKL2. The location of monitoring station CKL2 is shown in **Figure 2**.

2.14 The impact air quality monitoring was conducted at all five monitoring stations as scheduled.

The monitoring schedule is shown in **Appendix D**.

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

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

2.17 The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix E** and **Appendix F** respectively.

2.18 According to field observations by ET for Agreement No. CE 59/2015 (EP) in the reporting period, the major dust source identified at the designated air quality monitoring stations are as follows:

Table 2.4 Major Dust Source during Air Quality Monitoring

Monitoring Stations	Major Dust Source
AM1 – Tin Hau Temple	Road Traffic at Cha Kwo Ling Road, non-project related influence and the construction activity from other construction site
AM2 – Sai Tso Wan Recreation Ground	Road Traffic along Sin Fat Road
AM3 – Yau Lai Estate Bik Lai House	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza, non-project related influence and the construction activity from other construction site
AM4 - Sitting-out Area at Cha Kwo Ling Village	Road Traffic at Cha Kwo Ling Road
AM4(B) (**) - Flat 103 Cha Kwo Ling Village	Road Traffic at Cha Kwo Ling Road(*)

(*): Field observation observed at CKL2 during monitoring is presented. Detail refer to S2.13.

(**) AM4(A) is not available for conducing monitoring due to the demolition of administrative office.

Comparison of EM&A Result with EIA Prediction

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

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

Monitoring Stations	ASR ID	Predicted Maximum 1-hr TSP Concentration in EIA Report (AEIAR-173/2013), µg/m^3	Maximum 1-hr TSP Concentration in the Reporting Month (October 2022), µg/m^3
AM1 – Tin Hau Temple	CL1	707	112.7
AM2 – Sai Tso Wan Recreation Ground	CL6	266	228.9
AM3 – Yau Lai Estate Bik Lai House	CL9	507	85.0
AM4 - Sitting-out Area at Cha Kwo Ling Village	CL16	430	95.0

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-173/2013), µg/m^3	Maximum 24-hr TSP Concentration in the Reporting Month (October 2022), µg/m^3
AM1 – Tin Hau Temple	CL1	199	145.7
AM2 – Sai Tso Wan Recreation Ground	CL6	109	107.8
AM3 – Yau Lai Estate Bik Lai House	CL9	123	34.3
AM4(B) – Flat 103 Cha Kwo Ling Village (*)	N/A(1)	N/A(1)	206.1 (**)

Remarks:
(1) No 24-hr TSP concentration was predicted in EIA Report (AEIAR-173/2013)
(*) Air quality monitoring at designated station AM4 (24-hr TSP) was rejected by the premise owners. Therefore, baseline and impact air quality monitoring works were carried out at alternative air quality monitoring stations AM4 (B) (24-hr TSP only)

(**): Monitoring results at CKL2 is presented. Detail refer to S2.13

2.20 In the reporting month, the 1-hour TSP concentrations at AM1, AM2, AM3 and AM4 were lower than the prediction in the EIA Report, AEIAR-173/2013 (as approved in 2013). No Action/Limit level exceedance was recorded in the reporting period.

2.21 In the reporting month, the 24-hour TSP concentrations at AM1, AM2 and AM3 were lower than the prediction in the EIA Report, AEIAR-173/2013 (as approved in 2013). No Action / Limit Level exceedance was recorded for 24-hour TSP monitoring in the reporting month.

3 NOISE

Monitoring Requirements

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

Monitoring Locations

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

Table 3.1 Noise Monitoring Stations

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

Monitoring Parameters, Frequency and Duration

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

Table 3.2 Frequency and Parameters of Noise Monitoring

Monitoring Stations	Time Period	Duration	Frequency	Parameter	Measurement
CM1	0700-1900 hrs on normal weekdays	30 minutes	Once per week	L_{10}(30 min.) dB(A) L_{90}(30 min.) dB(A) L_{eq}(30 min.) dB(A)	Façade Measurement
CM2					Façade Measurement
CM3					Façade Measurement
CM4					Façade Measurement
CM5					Façade Measurement

Monitoring Equipment

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

Table 3.3 Noise Monitoring Equipment

Equipment	Model	Quantity
Integrating Sound Level Meter	SVAN 957 (Serial No.: 23852, 21455) BSWA 308 (Serial No.: 570183)	3
Calibrator	ST-120 (Serial No.: 181001608)	1

Monitoring Methodology and QA/QC Procedure

3.5 The monitoring procedures are as follows:

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

Maintenance and Calibration

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

3.7 The sound level meter and calibrator were checked and calibrated at yearly intervals.

3.8 Immediately prior to and following each noise measurement the accuracy of the sound level

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

Results and Observations

3.9 The data obtained from the impact monitoring works completed by the ET of Agreement No. CE 59/2015 (EP) will be adopted in this report.

3.10 Two (2) Action Level exceedance was recorded due to the documented complaint in the reporting month.

3.11 No Limit Level exceedance was recorded for day-time construction noise monitoring in the reporting month.

3.12 Noise monitoring results and graphical presentations are shown in **Appendix G**.

3.13 According to field observations by ET for Agreement No. CE 59/2015 (EP) in the reporting period, the major noise sources identified at the noise monitoring stations are shown in **Table 3.4**.

Table 3.4 Other Noise Source Identified during Noise Monitoring

Monitoring Stations	Major Noise Source
CM1	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza, non-project related construction activities
CM2	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza, non-project related construction activities
CM3	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza non-project related construction activities
CM4	Road Traffic at Cha Kwo Ling Road, non-project related construction activities
CM5	Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza, Construction activity from other construction site, Road Traffic at Yau Tong Road

.

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

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

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

Comparison of EM&A Result with EIA Prediction

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

Table 3.6 Maximum Predicted Mitigated Construction Noise Levels in EIA Report

Monitoring Stations	NSR ID	Maximum Predicted Mitigated Construction Noise Levels in EIA Report (AEIAR-173/2013), dB(A)	Maximum Construction Noise Levels in the Reporting Month (October 2022), Leq (30min) dB(A)
CM1 – Nga Lai House, Yau Lai Estate Phase 1, Yau Tong	N1102	73	75.3
CM2 – Bik Lai House, Yau Lai Estate Phase 1, Yau Tong	N1204	75	73.8
CM3 – Block S, Yau Lai Estate Phase 5, Yau Tong	N2105	75	71.8
CM4 – Tin Hau Temple, Cha Kwo Ling	N3101a	73	72.7
CM5 – CCC Kei Faat Primary School, Yau Tong	N4101	71	68.8

3.15 The results at CM2, CM3, CM4 and CM5 were lower than the maximum predicted mitigated construction noise level in the EIA Report, AEIAR-173/2013 (as approved in 2013). However, the result at CM1 was higher than the maximum predicted mitigated concentration noise level in the EIA Report, AEIAR-173/2013 (as approved in 2013), which may due to the traffic activity along the Lei Yue Mun Road and the Kwun Tong Bypass (Toll road). No Limit level exceedance was recorded in the reporting period.

4 WATER QUALITY

Monitoring Requirement

Groundwater Quality

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

Marine Water Quality

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

Groundwater Level Monitoring (Piezometer Monitoring)

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

5 WASTE MANAGEMENT

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

5.2 With reference to relevant handling records of this Project, the quantities of different types of waste generated in the reporting month are summarised and presented in **Appendix H**.

6 ECOLOGY

Post-Translocation Coral Monitoring

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

7 FISHERIES

7.1 According to Section 7.1.3 of EM&A Manual (AEIAR-173/2013), no specific fisheries monitoring programme is required during the construction phase.

7.2 The implementation of the mitigation measures stated in the Water Quality Impact Assessment (Refer to Section 5 of EIA Report (AEIAR-173/2013)) will be audited as part of the EM&A procedures during the construction period. The summaries of site audits are attached in **Appendix I**.

8 CULTURAL HERITAGE

8.1 According to Condition 3.7 of EP-458/2013/C and Section 8.2.1 of the EM&A Manual (AEIAR-173/2013), monitoring of vibration impacts was conducted when the construction works are less than 100m from the Built Heritage in close proximity of the worksite, namely the Cha Kwo Ling Tin Hau temple. Tilting and settlement monitoring should be applied on the Cha Kwo Ling Tin Hau Temple.

8.2 As the construction works of Cha Kwo Ling Tunnel from the end of Trunk Road T2 to the TKOLTT at the Eastern Ventilation Building are located more than 100m away from the Cha Kwo Ling Tin Hau temple, the vibration impact monitoring stated in Section 8.3.1 of the EM&A Manual (AEIAR-173/2013) is not applicable to Contract No. ED/2018/04.

Mitigation Measures for Cultural Heritage

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

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

9 LANDSCAPE AND VISUAL IMPACT

9.1 According to Section 9.3 of the EM&A Manual (AEIAR-173/2013), landscape and visual mitigation measures during the construction phase shall be checked to ensure that they are fully realized and implemented on site.

9.2 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of landscape and visual mitigation measures listed in "Environmental Mitigation Implementation Schedule (EMIS)" (shown in **Appendix J)**.

9.3 The implementation of landscape and visual mitigation measures was checked by a registered landscape architect. No non-compliance of the landscape and visual impact was recorded in the reporting month. Details of the audit findings and implementation status are presented in **Appendix I**.

10 LANDFILL GAS MONITORING

Monitoring Requirement

10.1 In accordance with Section 10.1.1 of the EM&A Manual (AEIAR-173/2013), monitoring of landfill gas is required for construction works within the Sai Tso Wan Landfill Consultation Zone during the construction phase. Since no excavation activity for this Project was carried out within the Sai Tso Wan Landfill Consultation Zone in the reporting month, no landfill gas monitoring is required.

11 HAZARD TO LIFE

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

12 ENVIRONMENTAL AUDIT

Site Audits

12.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix I**.

12.2 Site audits were conducted on 06, 13, 20 and 27 October 2022 in the reporting month. Site inspection of the IEC was conducted on 20 October 2022. No non-compliance was observed during the site audit.

Implementation Status of Environmental Mitigation Measures

12.3 According to Environmental Permits, the approved EIA Reports (Register No.: AEIAR-174/2013 and AEIAR-173/2013), and the EM&A Manuals of the Project (AEIAR-174/2013 and AEIAR-173/2013), the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An Environmental Mitigation Implementation Schedule (EMIS) is provided in **Appendix J**.

12.4 The ET weekly site inspections were carried out during the reporting month and the observations and recommendations are summarized in **Table 12.1**. Refer to **Appendix I** for the site inspection summary reports in the reporting month.

Table 12.1 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
Air Quality	20 Oct 2022	Unclear NRMM label was observed on the vehicle.	The contractor has replaced the new NRMM label.
Noise	N/A	There was no observation in the reporting period.	N/A
Water Quality	N/A	There was no observation in the reporting period.	N/A
Ecology	N/A	There was no observation in the reporting period.	N/A
Landscape and Visual	N/A	There was no observation in the reporting period.	N/A
Waste / Chemical Management	29 Sep 2022	Drip tray which prevent the leaked oil from entering drainage was not observed.	The oil container was removed to avoid the oil leakage.
	29 Sep 2022	The accumulated waste was found in the bin.	The contractor had removed the accumulated waste
	6 Oct 2022	Drip tray which prevent the leaked oil from entering drainage was not observed.	The contractor removed the oil container to avoid oil leakage.
	20 Oct 2022	The waste oil was observed on the floor.	The contractor has cleaned the waste oil on the floor.

Parameters	Date	Observations and Recommendations	Follow-up
Permits /Licences	N/A	There was no observation in the reporting period.	N/A

Implementation Status of Event and Action Plans

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

Air Quality Monitoring

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

Construction Noise Monitoring

- Two (2) Action Level exceedance was recorded due to the documented complaint in the reporting month.
- No Limit Level exceedance for construction noise monitoring was recorded in the reporting month.

13 ENVIRONMENTAL NON-CONFORMANCE

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

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

Summary of Exceedance

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

14 FUTURE KEY ISSUES

14.1 Tentative construction programmes for the next three months are provided in **Appendix O**.

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

- East Bound – RC Structure Construction, Service Gallery Frill & Blast, Service Gallery A Installation.
- East Ventilation Building – WB Blinding & Waterproofing, EB Excavation, RC Structure.
- West Bound- Extension & Blast Tunnel, RC Structure Construction.

14.3 Key environmental issues in the coming months include:

- Make sure noise mitigation measures are implemented accordingly;
- Make sure drainage system is adequately designed to prevent flooding during periods of heavy rain; and,
- Make sure mitigation measure for dust suppression are implemented on site.

Monitoring Schedule

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

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

14.5 This is the 30th Monthly EM&A Report which presents the EM&A works undertaken during the reporting month in accordance with the EM&A Manual (AEIAR-173/2013) and the requirement under EP.

Air Quality Monitoring

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

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

Construction Noise Monitoring

14.8 Two (2) Action Level exceedance was recorded due to documented complaint in the reporting month.

14.9 No Limit Level exceedance for construction noise monitoring was recorded in the reporting month.

Site Audit

14.10 4 ET joint weekly environmental site inspections were conducted in the reporting month.

Complaint, Notification of Summons and Successful Prosecution

14.11 Two (2) environmental complaint was received in the reporting period. No notifications of summons and successful prosecutions were received in the reporting month.

Recommendations

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

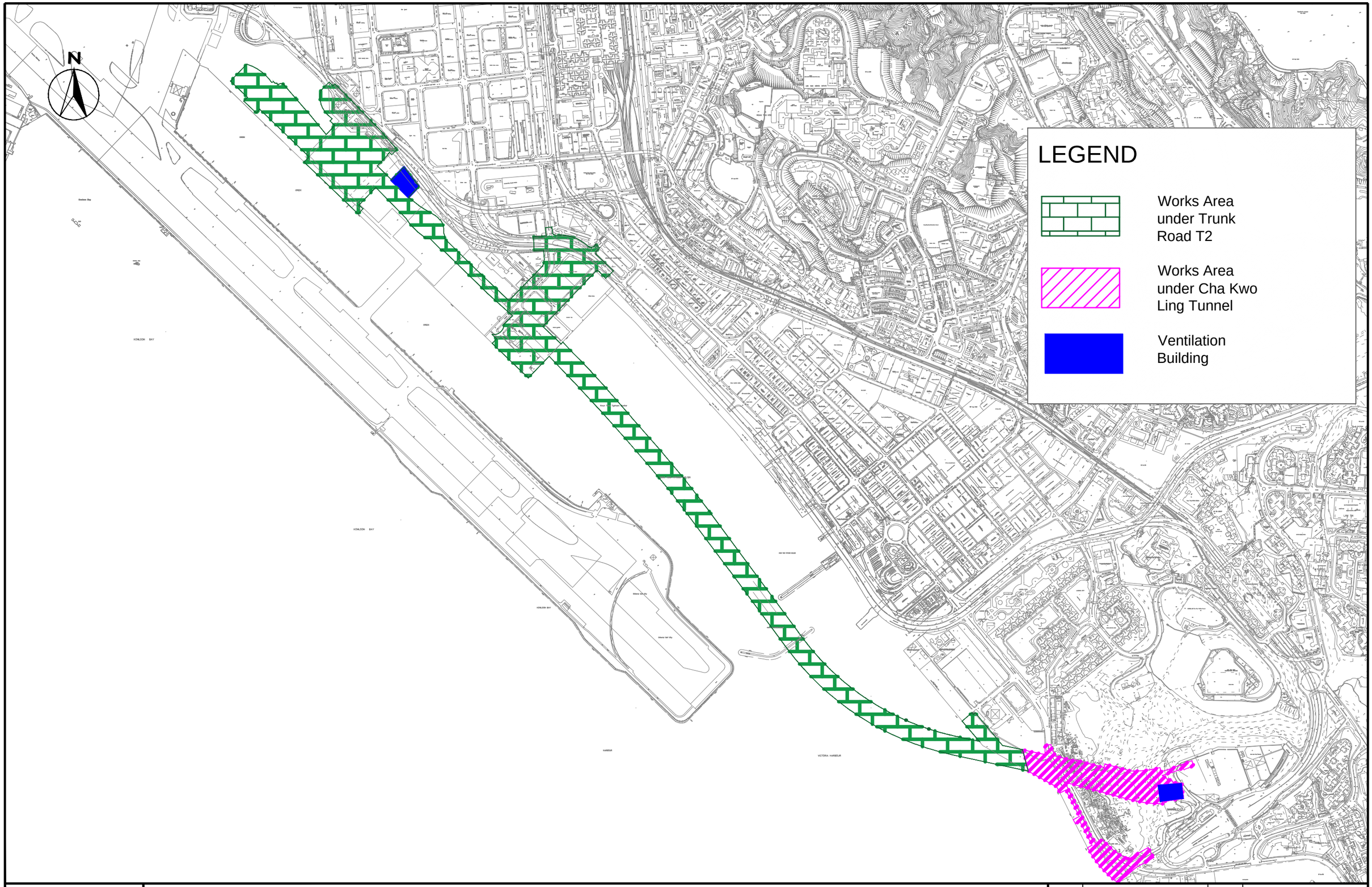
Air quality:

- The valid NRMM labels should be displayed at a conspicuous position on PME.

Waste / Chemical Management

- The general refuse should be stored in the enclosed bin and removed regularly.
- Drip tray should be provided to prevent leaked oil from entering drainage system during handling of chemical.
- Waste, such as oil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution

FIGURES



CINOTECH
Cinotech Consultants Limited

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

Site Layout Plan

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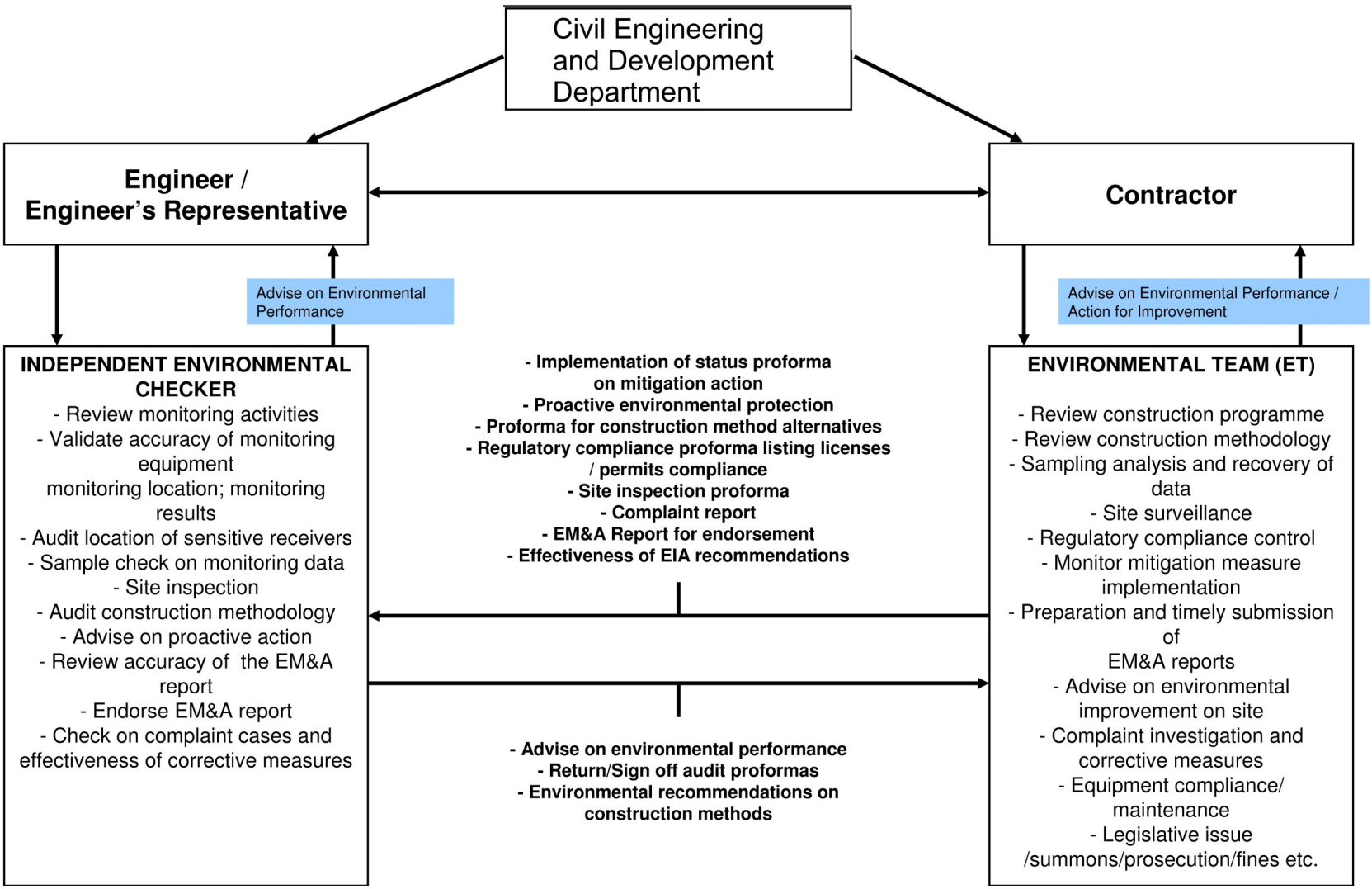
CHECK	KC	DRAWN	TL
JOB No.	MA20003	FIGURE No. Fig 1	REV -



Rev.	Description	Date

Drawing title

PROJECT ORGANISATION AND LINES OF COMMUNICATION

Original Size A3

Scale N.T.S

Date 18/JAN/2013

File name

Drawing No. FIGURE 1.2

Rev. –

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PRINTED BY: kitchan 1/17/2013 11:33:36 AM

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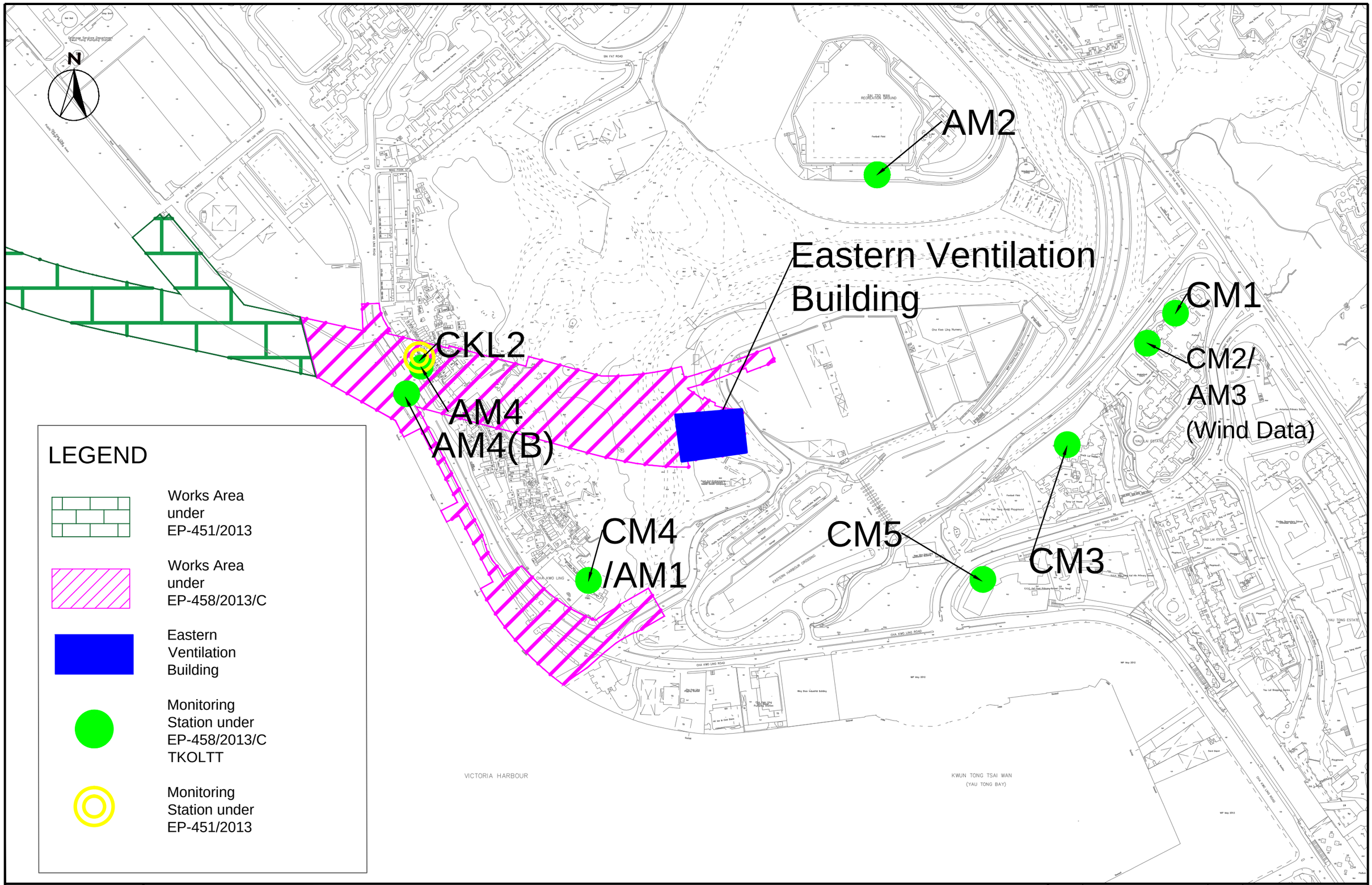

CINOTECH
Cinotech Consultants Limited

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

Monitoring Station at Lam Tin

SCALE	1:4000@A3	DATE	Jul 22
CHECK	KC	DRAWN	TL
JOB No.	MA20003	FIGURE No.	Fig 2b
		REV	-

APPENDIX A
ACTION AND LIMIT LEVELS

APPENDIX A – Action and Limit Levels

Air Quality

1-hr TSP

Monitoring Stations	Location	Action Level, µg/m³	Limit Level, µg/m³
AM1	Tin Hau Temple	275	500
AM2	Sai Tso Wan Recreation Ground	273	
AM3	Yau Lai Estate Bik Lai House	271	
AM4	Sitting-out Area at Cha Kwo Ling Village	278	

24-hr TSP

Monitoring Stations	Location	Action Level, µg/m³	Limit Level, µg/m³
AM1	Tin Hau Temple	173	260
AM2	Sai Tso Wan Recreation Ground	192	
AM3	Yau Lai Estate Bik Lai House	167	
AM4(B)	Flat 103 Cha Kwo Ling Village	210	

Noise

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

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

Landfill Gas Monitoring

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

APPENDIX B
COPIES OF CALIBRATION CERTIFICATES

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. MA16034/05/0037

Project No. AM1 - Tin Hau Temple

Date: 9-Aug-22 Next Due Date: 9-Oct-22 Operator: SK

Equipment No.: A-01-05 Model No.: GS2310 Serial No. 10599

Ambient Condition			
Temperature, Ta (K)	299.7	Pressure, Pa (mmHg)	752.8

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05922	Intercept, bc	-0.02420
Last Calibration Date:	31-Jan-22	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	31-Jan-23	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

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Calibration of TSP Sampler					
Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)]$^{1/2}$ **Y-axis**
1	13.2	3.61	61.29	9.7	3.09
2	10.1	3.15	53.67	7.2	2.66
3	7.7	2.75	46.91	5.4	2.31
4	5.3	2.28	38.99	3.3	1.80
5	3.1	1.75	29.91	2.0	1.40

By Linear Regression of Y on X

Slope , mw = **0.0546** **Intercept, bw =** **-0.2665**

Correlation coefficient* = **0.9986**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.40**

Remarks:

Conducted by: Wong Shing Kwai Signature: Date: 9-Aug-22

Checked by: Henry Leung Signature: Date: 9-Aug-22

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. MA16034/08/0037

Project No. AM2 - Sai Tso Wan Recreation Ground

Date: 9-Aug-22 Next Due Date: 9-Oct-22 Operator: SK

Equipment No.: A-01-08 Model No.: GS2310 Serial No. 1287

Ambient Condition			
Temperature, Ta (K)	299.7	Pressure, Pa (mmHg)	752.8

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05922	Intercept, bc	-0.02420
Last Calibration Date:	31-Jan-22	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	31-Jan-23	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

.

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)]$^{1/2}$ **Y-axis**
1	13.2	3.61	61.29	9.5	3.06
2	10.4	3.20	54.45	6.8	2.59
3	7.8	2.77	47.21	5.2	2.26
4	5.4	2.31	39.35	3.6	1.88
5	3.1	1.75	29.91	2.1	1.44

By Linear Regression of Y on X

Slope , mw = **0.0505** **Intercept, bw =** **-0.0998**

Correlation coefficient* = **0.9971**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.36**

Remarks:

Conducted by: Wong Shing Kwai Signature: Date: 9-Aug-22

Checked by: Henry Leung Signature: Date: 9-Aug-22

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. MA16034/03/0037

Project No. AM3 - Yau Lai Estate, Bik Lai House

Date: 9-Aug-22 Next Due Date: 9-Oct-22 Operator: SK

Equipment No.: A-01-03 Model No.: GS2310 Serial No. 10379

Ambient Condition			
Temperature, Ta (K)	299.7	Pressure, Pa (mmHg)	752.8

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05922	Intercept, bc	-0.02420
Last Calibration Date:	31-Jan-22	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	31-Jan-23	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

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Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)]$^{1/2}$ **Y-axis**
1	12.7	3.54	60.13	8.8	2.94
2	10.0	3.14	53.40	6.7	2.57
3	7.9	2.79	47.51	5.1	2.24
4	4.8	2.17	37.12	3.0	1.72
5	2.6	1.60	27.43	1.7	1.29

By Linear Regression of Y on X

Slope , mw = **0.0505** **Intercept, bw =** **-0.1273**

Correlation coefficient* = **0.9988**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.25**

Remarks:

Conducted by: Wong Shing Kwai Signature: Date: 9-Aug-22

Checked by: Henry Leung Signature: Date: 9-Aug-22

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. MA16034/05/0038

Project No. AM1 - Tin Hau Temple

Date: 9-Oct-22 Next Due Date: 9-Dec-22 Operator: SK

Equipment No.: A-01-05 Model No.: GS2310 Serial No. 10599

Ambient Condition			
Temperature, Ta (K)	300.1	Pressure, Pa (mmHg)	762.4

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05922	Intercept, bc	-0.02420
Last Calibration Date:	31-Jan-22	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	31-Jan-23	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

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Calibration of TSP Sampler					
Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	13.3	3.64	61.87	9.8	3.12
2	10.4	3.22	54.76	7.3	2.70
3	7.6	2.75	46.87	5.4	2.32
4	5.5	2.34	39.93	3.4	1.84
5	3.3	1.81	31.02	1.9	1.38

By Linear Regression of Y on X

Slope , mw = **0.0568** **Intercept, bw =** **-0.3939**

Correlation coefficient* = **0.9989**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.22**

Remarks:

Conducted by: Wong Shing Kwai Signature: Date: 10-Oct-22

Checked by: Henry Leung Signature: Date: 10-Oct-22

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. MA16034/08/0038

Project No. AM2 - Sai Tso Wan Recreation Ground

Date: 9-Oct-22 Next Due Date: 9-Dec-22 Operator: SK

Equipment No.: A-01-08 Model No.: GS2310 Serial No. 1287

Ambient Condition			
Temperature, Ta (K)	300.1	Pressure, Pa (mmHg)	762.4

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05922	Intercept, bc	-0.02420
Last Calibration Date:	31-Jan-22	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	31-Jan-23	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

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Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)]$^{1/2}$ **Y-axis**
1	13.5	3.67	62.33	9.5	3.08
2	10.7	3.26	55.54	7.0	2.64
3	7.9	2.81	47.78	5.4	2.32
4	5.5	2.34	39.93	3.7	1.92
5	3.3	1.81	31.02	2.2	1.48

By Linear Regression of Y on X

Slope , mw = **0.0499** **Intercept, bw =** **-0.0761**

Correlation coefficient* = **0.9984**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.31**

Remarks:

Conducted by: Wong Shing Kwai Signature: Date: 10-Oct-22

Checked by: Henry Leung Signature: Date: 10-Oct-22

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. MA16034/03/0038

Project No. AM3 - Yau Lai Estate, Bik Lai House

Date: 9-Oct-22 Next Due Date: 9-Dec-22 Operator: SK

Equipment No.: A-01-03 Model No.: GS2310 Serial No. 10379

Ambient Condition			
Temperature, Ta (K)	300.1	Pressure, Pa (mmHg)	762.4

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05922	Intercept, bc	-0.02420
Last Calibration Date:	31-Jan-22	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	31-Jan-23	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

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Calibration of TSP Sampler					
Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)]$^{1/2}$ **Y-axis**
1	12.9	3.58	60.94	9.0	2.99
2	10.3	3.20	54.50	6.8	2.60
3	8.2	2.86	48.67	5.2	2.28
4	5.1	2.25	38.47	3.2	1.79
5	2.8	1.67	28.61	1.9	1.38

By Linear Regression of Y on X

Slope , mw = **0.0498** **Intercept, bw =** **-0.0959**

Correlation coefficient* = **0.9972**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.20**

Remarks:

Conducted by: Wong Shing Kwai Signature: Date: 10-Oct-22

Checked by: Henry Leung Signature: Date: 10-Oct-22

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

File No. MA20003/55/0016

Project No. CKL 2 - Flat 103 Cha Kwo Ling Village

Date: 5-Sep-22 Next Due Date: 5-Nov-22 Operator: SK

Equipment No.: A-01-55 Model No.: TE 5170 Serial No. 1956

Ambient Condition			
Temperature, Ta (K)	304.1	Pressure, Pa (mmHg)	753.4

Orifice Transfer Standard Information					
Serial No.	3864	Slope, mc	0.05922	Intercept, bc	-0.02420
Last Calibration Date:	31-Jan-22	**mc x Qstd + bc = [ΔH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	31-Jan-23	**Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)]$^{1/2}$ **Y-axis**
1	12.7	3.51	59.72	9.7	3.07
2	10.7	3.22	54.85	7.5	2.70
3	8.5	2.87	48.93	5.7	2.35
4	5.2	2.25	38.36	3.1	1.74
5	2.8	1.65	28.26	1.7	1.29

By Linear Regression of Y on X

Slope , mw = **0.0564** **Intercept, bw =** **-0.3683**

Correlation coefficient* = **0.9966**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = [ΔW x (Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.36**

Remarks:

Conducted by: Wong Shing Kwai Signature: Date: 5-Sep-22

Checked by: Henry Leung Signature: Date: 5-Sep-22

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 00160 Issue Date : 10 Jan 2022
Application No. : HP00040

Certificate of Calibration

Applicant : Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Integrating Sound Level Meter.

Equipment No.: : N-08-07

Manufacturer: : SVANTEK

Other information :

Model No.	SVAN 957
Serial No.	21455
Microphone No.	22391

Date Received : 03 Jan 2022

Test Period : 10 Jan 2022 to 10 Jan 2022

Test Requested : Performance checking for Sound Level Meter

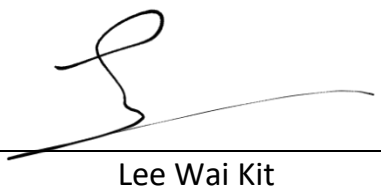
Test Method : The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard and instrument which are recommended by the manufacturer, or equivalent.

Test conditions : Room Temperature: 22-25 degree Celsius
Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark : 1. Information of the sample description provided by the Applicant.
2. The result(s) relate only to the items tested or calibrated.

For and on behalf of
HIGH PRECISION CHEMICAL TESTING LIMITED



Lee Wai Kit
Laboratory Manager

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 00160 Issue Date : 10 Jan 2022
Application No. : HP00040

Certificate of Calibration

Measuring equipment :

Description	Sound Calibrator
Manufacturer	Brüel & Kjær
Model No.	TYPE 4231
Serial No.	2326353
Equipment No.	N-02-01

Test Result :

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	93.9	-0.1	± 1.5
114.0	113.8	-0.2	± 1.5

Note : 1. "Instrument Readings" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.
2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 00168 Issue Date : 25 Jan 2022
Application No. : HP00044

Certificate of Calibration

Applicant : Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Integrating Sound Level Meter.

Equipment No.: : N-08-11

Manufacturer: : SVANTEK

Other information :

Model No.	SVAN 957
Serial No.	23852
Microphone No.	22454

Date Received : 20 Jan 2022

Test Period : 21 Jan 2022 to 21 Jan 2022

Test Requested : Performance checking for Sound Level Meter

Test Method : The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard and instrument which are recommended by the manufacturer, or equivalent.

Test conditions : Room Temperature: 22-25 degree Celsius
Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark : 1. Information of the sample description provided by the Applicant.
2. The result(s) relate only to the items tested or calibrated.

For and on behalf of
HIGH PRECISION CHEMICAL TESTING LIMITED

Lee Wai Kit
Laboratory Manager

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 00168 Issue Date : 25 Jan 2022
Application No. : HP00044

Certificate of Calibration

Measuring equipment :

Description	Sound Calibrator
Manufacturer	Brüel & Kjær
Model No.	TYPE 4231
Serial No.	2326353
Equipment No.	N-02-01

Test Result :

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	94.1	+0.1	± 1.5
114.0	114.2	+0.2	± 1.5

Note : 1. "Instrument Readings" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.
2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 00152 Issue Date : 19 Nov 2021
Application No. : HP00034

Certificate of Calibration

Applicant : Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Integrating Sound Level Meter.

Equipment No.: : N-12-01

Manufacturer: : BSWA Technology

Other information :

Model No.	BSWA 308
Serial No.	570183
Microphone No.	570605

Date Received : 10 Nov 2021

Test Period : 10 Nov 2021 to 17 Nov 2021

Test Requested : Performance checking for Sound Level Meter

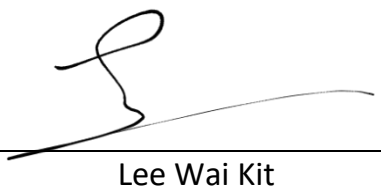
Test Method : The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard and instrument which are recommended by the manufacturer, or equivalent.

Test conditions : Room Temperature: 22-25 degree Celsius
Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark : 1. Information of the sample description provided by the Applicant.
2. The result(s) relate only to the items tested or calibrated.

For and on behalf of
HIGH PRECISION CHEMICAL TESTING LIMITED



Lee Wai Kit
Laboratory Manager

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 00152 Issue Date : 19 Nov 2021
Application No. : HP00034

Certificate of Calibration

Measuring equipment :

Description	Sound Calibrator
Manufacturer	Brüel & Kjær
Model No.	TYPE 4231
Serial No.	2326353
Equipment No.	N-02-01

Test Result :

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	94.1	+0.1	± 1.5
114.0	114.0	0.0	± 1.5

Note : 1. "Instrument Readings" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.
2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 00150 Issue Date : 16 Nov 2021
Application No. : HP00032

Certificate of Calibration

Applicant : Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Sound Level Calibrator.

Equipment No.: : N-13-01

Manufacturer: : SOUNDTEK

Other information :

Model No.	ST-120
Serial No.	181001608

Date Received : 05 Nov 2021

Test Period : 08 Nov 2021 to 12 Nov 2021

Test Requested : Performance checking for Sound Level Calibrator

Test Method : The Sound Level Meter and Calibrator has been calibrated in accordance with the documented procedures and using standard and instrument which are recommended by the manufacturer, or equivalent.

Test conditions : Room Temperature: 22-25 degree Celsius
Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark : 1. Information of the sample description provided by the Applicant.
2. The result(s) relate only to the items tested or calibrated.

For and on behalf of
HIGH PRECISION CHEMICAL TESTING LIMITED

Lee Wai Kit
Laboratory Manager

High Precision Chemical Testing Ltd.
Rm 1904, Technology Park
18 On Lai Street, Shatin
NT, Hong Kong
Tel: +852 3841 4388 Website: https://www.hpct.com.hk

Report No. : 00150 Issue Date : 16 Nov 2021
Application No. : HP00032

Certificate of Calibration

Measuring equipment :

Description	Sound Calibrator
Manufacturer	Brüel & Kjær
Model No.	TYPE 4231
Serial No.	2326353
Equipment No.	N-02-01

Description	Sound Meter
Manufacturer	BSWA Technology
Model No.	BSWA 308
Serial No.	570188
Microphone No.	570608
Equipment No.	N-12-03

Test Result :

Reference value, dB	Indication value, dB	Deviation, dB	Allowed deviation, dB
94.0	94.1	+0.1	± 0.3
114.0	114.0	0.0	± 0.5

Note : 1. "Instrument Readings" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.
2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

CINOTECH CONSULTANTS LIMITED

Certificate of Calibration

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

Description: Digital Dust Indicator — Date of Calibration 29-Sep-22

Manufacturer: Sibata Scientific Technology LTD. — Validity of Calibration Record 29-Nov-22

Model No.: LD-5R

Serial No.: 972778

Equipment No.: SA-01-07 — Sensitivity 0.001 mg/m3

High Volume Sampler No.: A-01-03 — Before Sensitivity Adjustment 735 CPM

Tisch Calibration Orifice No.: 3864 — After Sensitivity Adjustment 735 CPM

Calibration of 1 hr TSP		
Calibration Point	**Laser Dust Monitor** Mass Concentration (µg/m3) **X-axis**	**HVS** Mass concentration (µg/m^3) **Y-axis**
1	74.0	156.0
2	65.0	135.0
3	52.0	110.0
Average	**63.7**	**133.7**

By Linear Regression of Y on X

Slope , mw = **2.0790** **Intercept, bw =** **1.3025**

Correlation coefficient* = **0.9985**

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	133.7
Particaulate Concentration by Dust Meter (µg/m^3)	63.7
Measureing time, (min)	60.0

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m3)] **2.1**

In-house method in according to the instruction manual:

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

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

Calibrated by: _____

Technical Officer (Wong Shing Kwai)

Approved by: _____

Project Manager (Henry Leung)

CINOTECH CONSULTANTS LIMITED

Certificate of Calibration

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

Description: Digital Dust Indicator
Date of Calibration 29-Sep-22
Manufacturer: Sibata Scientific Technology LTD.
Validity of Calibration Record 29-Nov-22
Model No.: LD-5R
Serial No.: 972779
Equipment No.: SA-01-08
Sensitivity 0.001 mg/m3
High Volume Sampler No.: A-01-03
Before Sensitivity Adjustment 744 CPM
Tisch Calibration Orifice No.: 3864
After Sensitivity Adjustment 744 CPM

Calibration of 1 hr TSP		
Calibration Point	**Laser Dust Monitor**	**HVS**
	Mass Concentration (µg/m3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	75.0	158.0
2	64.0	136.0
3	52.0	111.0
Average	**63.7**	**135.0**

By Linear Regression of Y on X

Slope , mw = **2.0441** **Intercept, bw =** **4.8602**

Correlation coefficient* = **0.9999**

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	135.0
Particaulate Concentration by Dust Meter (µg/m^3)	63.7
Measureing time, (min)	60.0

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m3)] **2.1**

In-house method in according to the instruction manual:

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

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

Calibrated by: _____
Technical Officer (Wong Shing Kwai)

Approved by: _____
Project Manager (Henry Leung)

CINOTECH CONSULTANTS LIMITED

Certificate of Calibration

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

Description: Digital Dust Indicator — Date of Calibration 29-Sep-22

Manufacturer: Sibata Scientific Technology LTD. — Validity of Calibration Record 29-Nov-22

Model No.: LD-5R

Serial No.: 972780

Equipment No.: SA-01-09 — Sensitivity 0.001 mg/m3

High Volume Sampler No.: A-01-03 — Before Sensitivity Adjustment 739 CPM

Tisch Calibration Orifice No.: 3864 — After Sensitivity Adjustment 739 CPM

Calibration of 1 hr TSP		
Calibration Point	**Laser Dust Monitor** Mass Concentration (µg/m3) **X-axis**	**HVS** Mass concentration (µg/m^3) **Y-axis**
1	74.0	162.0
2	65.0	146.0
3	52.0	116.0
Average	**63.7**	**141.3**

By Linear Regression of Y on X

Slope , mw = **2.1063** **Intercept, bw =** **7.2343**

Correlation coefficient* = **0.9976**

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	141.3
Particaulate Concentration by Dust Meter (µg/m^3)	63.7
Measureing time, (min)	60.0

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m3)] **2.2**

In-house method in according to the instruction manual:

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

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

Calibrated by: _____

Technical Officer (Wong Shing Kwai)

Approved by: _____

Project Manager (Henry Leung)

CINOTECH CONSULTANTS LIMITED

Certificate of Calibration

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

Description: Digital Dust Indicator
Date of Calibration 29-Sep-22
Manufacturer: Sibata Scientific Technology LTD.
Validity of Calibration Record 29-Nov-22
Model No.: LD-5R
Serial No.: 972781
Equipment No.: SA-01-10
Sensitivity 0.001 mg/m3
High Volume Sampler No.: A-01-03
Before Sensitivity Adjustment 734 CPM
Tisch Calibration Orifice No.: 3864
After Sensitivity Adjustment 734 CPM

Calibration of 1 hr TSP		
Calibration Point	**Laser Dust Monitor** Mass Concentration (µg/m3) **X-axis**	**HVS** Mass concentration (µg/m^3) **Y-axis**
1	77.0	159.0
2	65.0	135.0
3	52.0	110.0
Average	**64.7**	**134.7**

By Linear Regression of Y on X

Slope , mw = **1.9595** **Intercept, bw =** **7.9531**

Correlation coefficient* = **0.9999**

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	134.7
Particaulate Concentration by Dust Meter (µg/m^3)	64.7
Measureing time, (min)	60.0

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m3)] **2.1**

In-house method in according to the instruction manual:

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

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

Calibrated by: _____
Technical Officer (Wong Shing Kwai)

Approved by: _____
Project Manager (Henry Leung)

TISCH Environmental

RECALIBRATION DUE DATE:
January 31, 2023

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	January 31, 2022	**Rootsmeter S/N:** 438320	**Ta:** 294	°K
Operator:	Jim Tisch		**Pa:** 752.6	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **3864**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4490	3.2	2.00
2	3	4	1	1.0320	6.4	4.00
3	5	6	1	0.9160	7.9	5.00
4	7	8	1	0.8730	8.8	5.50
5	9	10	1	0.7230	12.7	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9995	0.6898	1.4169	0.9957	0.6872	0.8839
0.9952	0.9643	2.0037	0.9915	0.9608	1.2500
0.9932	1.0843	2.2402	0.9895	1.0802	1.3976
0.9920	1.1363	2.3496	0.9883	1.1321	1.4658
0.9868	1.3649	2.8337	0.9831	1.3598	1.7678
QSTD	**m=**	**2.09281**	**QA**	**m=**	**1.31048**
	b=	**-0.02426**		**b=**	**-0.01514**
	r=	**0.99993**		**r=**	**0.99993**

Calculations			
Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime
For subsequent flow rate calculations:			
Qstd=	$1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	**Qa=**	$1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg
Key	
ΔH: calibrator manometer reading (in H2O)	
ΔP: rootsmeter manometer reading (mm Hg)	
Ta: actual absolute temperature (°K)	
Pa: actual barometric pressure (mm Hg)	
b: intercept	
m: slope	

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

isch Environmental, Inc.
45 South Miami Avenue
illage of Cleves, OH 45002

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

Certificate of Calibration - Wind Monitoring Station

Description:	Yau Lai Estate, Bik Lai House
Manufacturer:	Davis Instruments
Model No.:	Davis7440
Serial No.:	MC01010A44
Equipment No.:	SA-03-04
Date of Calibration	19-Aug-2022
Next Due Date	19-Feb-2023

1. Performance check of Wind Speed

Wind Speed, m/s		Difference D (m/s)
Wind Speed Reading (V1)	Anemometer Value (V2)	D = V1 – V2
0.0	0.0	0.0
1.5	1.5	0.0
2.5	2.6	-0.1
4.0	4.0	0.0

2. Performance check of Wind Direction

Wind Direction (^{o})		Difference D (^{o})
Wind Direction Reading (W1)	Marine Compass Value (W2)	D = W1 - 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: Wong Shing Kwai

Approved by: Henry Leung

CINOTECH CONSULTANTS LIMITED

Certificate of Calibration

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

Description: Digital Dust Indicator — Date of Calibration 29-Sep-22

Manufacturer: Sibata Scientific Technology LTD. — Validity of Calibration Record 29-Nov-22

Model No.: LD-5R

Serial No.: 8Y2374

Equipment No.: SA-01-04 — Sensitivity 0.001 mg/m3

High Volume Sampler No.: A-01-03 — Before Sensitivity Adjustment 652

Tisch Calibration Orifice No.: 3864 — After Sensitivity Adjustment 652

Calibration of 1 hr TSP		
Calibration Point	**Laser Dust Monitor**	**HVS**
	Mass Concentration (µg/m3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	72.0	153.0
2	65.0	135.0
3	54.0	116.0
Average	**63.7**	**134.7**

By Linear Regression of Y on X

Slope , mw = **2.0263** **Intercept, bw =** **5.6579**

Correlation coefficient* = **0.9937**

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	134.7
Particaulate Concentration by Dust Meter (µg/m^3)	63.7
Measureing time, (min)	60.0

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m3)] **2.1**

In-house method in according to the instruction manual:

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

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

Calibrated by: _____ Approved by: _____

Technical Officer (Wong Shing Kwai) Project Manager (Henry Leung)

CINOTECH CONSULTANTS LIMITED

Certificate of Calibration

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

Description: Laser Dust Monitor

Date of Calibration 29-Sep-22

Manufacturer: Sibata Scientific Technology LTD.

Validity of Calibration Record 29-Nov-22

Model No.: LD-3B

Serial No.: 2Y6194

Equipment No.: SA-01-02

Sensitivity 0.001 mg/m3

High Volume Sampler No.: A-01-03

Before Sensitivity Adjustment 578

Tisch Calibration Orifice No.: 3864

After Sensitivity Adjustment 578

Calibration of 1 hr TSP			
Calibration Point	**Laser Dust Monitor**		**HVS**
	Total Count	Count / Minute **X-axis**	Mass concentration ($\mu g/m^3$) **Y-axis**
1	4150	69.2	173.0
2	3650	60.8	153.0
3	2950	49.2	128.0
Average		**59.7**	**151.3**

By Linear Regression of Y on X

Slope , mw = **2.2431** **Intercept, bw =** **17.3693**

Correlation coefficient* = **0.9995**

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μ g/m3)] **2.5**

In-house method in according to the instruction manual:

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

Those filter papers are weighted by HOKLAS laboratory (HPCT Limited)

Calibrated by: _____

Technical Officer (Wong Shing Kwai)

Approved by: _____

Project Manager (Henry Leung)

APPENDIX C
WEATHER INFORMATION

Appendix C - Weather Conditions During Impact Monitoring Period

Date	Mean Air Temperature (°C)[1]	Mean Relative Humidity (%)[2]	Precipitation (mm)[3]
1-Oct-22	27.7	86	2.6
2-Oct-22	28.9	81	Trace
3-Oct-22	29.5	76	0.0
4-Oct-22	29.4	76	0.0
5-Oct-22	29.1	75	Trace
6-Oct-22	28.9	74	Trace
7-Oct-22	28.3	77	22.8
8-Oct-22	27.7	71	Trace
9-Oct-22	27.1	71	4.8
10-Oct-22	24.0	51	0.0
11-Oct-22	24.1	48	0.0
12-Oct-22	25.2	50	0.0
13-Oct-22	26.0	60	0.0
14-Oct-22	26.9	66	0.0
15-Oct-22	27.5	53	0.0
16-Oct-22	28.3	46	0.0
17-Oct-22	27.2	45	Trace
18-Oct-22	20.9	67	19.7
19-Oct-22	23.0	54	0.0
20-Oct-22	24.3	64	0.0
21-Oct-22	25.2	68	0.0
22-Oct-22	26.6	67	Trace
23-Oct-22	26.5	71	0.0
24-Oct-22	25.2	68	0.0
25-Oct-22	23.8	63	0.0
26-Oct-22	23.9	66	0.0
27-Oct-22	24.6	70	0.0
28-Oct-22	25.5	68	0.0
29-Oct-22	25.7	65	0.0
30-Oct-22	25.4	57	0.0
31-Oct-22	25.4	50	0.0

(Reporting Month:October 2022)

Remarks:

Source - Hong Kong Observatory

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

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
1 Oct 2022	12:00 AM	NE	0.3
1 Oct 2022	1:00 AM	ENE	0.4
1 Oct 2022	2:00 AM	ENE	0.4
1 Oct 2022	3:00 AM	E	0.2
1 Oct 2022	4:00 AM	NE	0.2
1 Oct 2022	5:00 AM	NNE	0.2
1 Oct 2022	6:00 AM	NNE	0.2
1 Oct 2022	7:00 AM	NNE	0.3
1 Oct 2022	8:00 AM	NE	1.2
1 Oct 2022	9:00 AM	NNE	0.4
1 Oct 2022	10:00 AM	NE	0.5
1 Oct 2022	11:00 AM	E	0.4
1 Oct 2022	12:00 PM	ESE	0.3
1 Oct 2022	1:00 PM	NW	0.4
1 Oct 2022	2:00 PM	NE	0.4
1 Oct 2022	3:00 PM	NE	0.2
1 Oct 2022	4:00 PM	ENE	0.2
1 Oct 2022	5:00 PM	NNE	0.2
1 Oct 2022	6:00 PM	NNE	0.2
1 Oct 2022	7:00 PM	NNE	0.3
1 Oct 2022	8:00 PM	ENE	0.3
1 Oct 2022	9:00 PM	E	0.3
1 Oct 2022	10:00 PM	NE	0.3
1 Oct 2022	11:00 PM	ENE	0.3
2 Oct 2022	12:00 AM	E	0.4
2 Oct 2022	1:00 AM	E	0.2
2 Oct 2022	2:00 AM	ENE	0.2
2 Oct 2022	3:00 AM	ENE	0.2
2 Oct 2022	4:00 AM	ENE	0.2
2 Oct 2022	5:00 AM	ENE	0.2
2 Oct 2022	6:00 AM	ENE	0.2
2 Oct 2022	7:00 AM	ENE	0.2
2 Oct 2022	8:00 AM	ENE	0.2
2 Oct 2022	9:00 AM	ENE	0.2
2 Oct 2022	10:00 AM	NE	0.2
2 Oct 2022	11:00 AM	NNW	0.2
2 Oct 2022	12:00 PM	ENE	0.3
2 Oct 2022	1:00 PM	ESE	0.3
2 Oct 2022	2:00 PM	ENE	0.2
2 Oct 2022	3:00 PM	ESE	0.2
2 Oct 2022	4:00 PM	SE	0.1
2 Oct 2022	5:00 PM	S	0.3
2 Oct 2022	6:00 PM	SE	0.2
2 Oct 2022	7:00 PM	ENE	0.3
2 Oct 2022	8:00 PM	E	0.6
2 Oct 2022	9:00 PM	ENE	0.2
2 Oct 2022	10:00 PM	ENE	0.1
2 Oct 2022	11:00 PM	E	0.1
3 Oct 2022	12:00 AM	E	0.1
3 Oct 2022	1:00 AM	NE	0.1
3 Oct 2022	2:00 AM	NE	0.1
3 Oct 2022	3:00 AM	NE	0.1
3 Oct 2022	4:00 AM	NNE	0.1
3 Oct 2022	5:00 AM	ENE	0.1
3 Oct 2022	6:00 AM	NE	0.1
3 Oct 2022	7:00 AM	ENE	0.1
3 Oct 2022	8:00 AM	NNE	0.1

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
3 Oct 2022	9:00 AM	NE	0.1
3 Oct 2022	10:00 AM	E	0.1
3 Oct 2022	11:00 AM	ENE	0.2
3 Oct 2022	12:00 PM	NE	0.2
3 Oct 2022	1:00 PM	ENE	0.2
3 Oct 2022	2:00 PM	SW	0.3
3 Oct 2022	3:00 PM	S	0.3
3 Oct 2022	4:00 PM	SE	0.1
3 Oct 2022	5:00 PM	ESE	0.1
3 Oct 2022	6:00 PM	ESE	0.1
3 Oct 2022	7:00 PM	NE	0.1
3 Oct 2022	8:00 PM	NE	0.1
3 Oct 2022	9:00 PM	NE	0.1
3 Oct 2022	10:00 PM	ENE	0.2
3 Oct 2022	11:00 PM	ENE	1.1
4 Oct 2022	12:00 AM	ENE	0.8
4 Oct 2022	1:00 AM	ENE	0.7
4 Oct 2022	2:00 AM	ENE	0.1
4 Oct 2022	3:00 AM	ENE	0.1
4 Oct 2022	4:00 AM	NE	0.3
4 Oct 2022	5:00 AM	ENE	0.2
4 Oct 2022	6:00 AM	ENE	0.2
4 Oct 2022	7:00 AM	ENE	0.1
4 Oct 2022	8:00 AM	NE	0.6
4 Oct 2022	9:00 AM	ENE	0.2
4 Oct 2022	10:00 AM	WNW	0.7
4 Oct 2022	11:00 AM	W	0.1
4 Oct 2022	12:00 PM	SE	0.1
4 Oct 2022	1:00 PM	WSW	0.7
4 Oct 2022	2:00 PM	SW	0.3
4 Oct 2022	3:00 PM	SW	0.5
4 Oct 2022	4:00 PM	W	0.1
4 Oct 2022	5:00 PM	W	0.1
4 Oct 2022	6:00 PM	SW	0.1
4 Oct 2022	7:00 PM	SSW	0.1
4 Oct 2022	8:00 PM	E	0.1
4 Oct 2022	9:00 PM	WSW	0.1
4 Oct 2022	10:00 PM	SW	0.1
4 Oct 2022	11:00 PM	SW	0.1
5 Oct 2022	12:00 AM	NNE	0.1
5 Oct 2022	1:00 AM	NE	0.1
5 Oct 2022	2:00 AM	NE	0.1
5 Oct 2022	3:00 AM	NE	0.1
5 Oct 2022	4:00 AM	NE	0.1
5 Oct 2022	5:00 AM	N	0.1
5 Oct 2022	6:00 AM	SSW	0.1
5 Oct 2022	7:00 AM	NE	0.1
5 Oct 2022	8:00 AM	S	0.1
5 Oct 2022	9:00 AM	NE	0.1
5 Oct 2022	10:00 AM	SSE	0.1
5 Oct 2022	11:00 AM	ESE	0.2
5 Oct 2022	12:00 PM	NE	0.3
5 Oct 2022	1:00 PM	ENE	0.2
5 Oct 2022	2:00 PM	ENE	0.3
5 Oct 2022	3:00 PM	ENE	0.2
5 Oct 2022	4:00 PM	E	0.1
5 Oct 2022	5:00 PM	ENE	0.1

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
5 Oct 2022	6:00 PM	E	0.2
5 Oct 2022	7:00 PM	ENE	0.1
5 Oct 2022	8:00 PM	ESE	0.1
5 Oct 2022	9:00 PM	NE	0.1
5 Oct 2022	10:00 PM	ENE	0.1
5 Oct 2022	11:00 PM	ENE	0.1
6 Oct 2022	12:00 AM	E	0.1
6 Oct 2022	1:00 AM	NE	0.1
6 Oct 2022	2:00 AM	NNE	0.1
6 Oct 2022	3:00 AM	NNE	0.1
6 Oct 2022	4:00 AM	NNE	0.4
6 Oct 2022	5:00 AM	NE	0.1
6 Oct 2022	6:00 AM	NNE	0.2
6 Oct 2022	7:00 AM	NE	0.9
6 Oct 2022	8:00 AM	E	0.1
6 Oct 2022	9:00 AM	ESE	0.2
6 Oct 2022	10:00 AM	NW	0.3
6 Oct 2022	11:00 AM	NE	0.3
6 Oct 2022	12:00 PM	NE	0.1
6 Oct 2022	1:00 PM	ENE	0.1
6 Oct 2022	2:00 PM	NNE	0.1
6 Oct 2022	3:00 PM	NNE	0.1
6 Oct 2022	4:00 PM	NNE	0.2
6 Oct 2022	5:00 PM	ENE	0.1
6 Oct 2022	6:00 PM	E	0.4
6 Oct 2022	7:00 PM	NE	0.2
6 Oct 2022	8:00 PM	NE	0.2
6 Oct 2022	9:00 PM	N	0.2
6 Oct 2022	10:00 PM	E	0.8
6 Oct 2022	11:00 PM	NE	0.2
7 Oct 2022	12:00 AM	N	0.5
7 Oct 2022	1:00 AM	ENE	0.9
7 Oct 2022	2:00 AM	NE	0.4
7 Oct 2022	3:00 AM	NNE	0.2
7 Oct 2022	4:00 AM	ENE	0.3
7 Oct 2022	5:00 AM	N	0.2
7 Oct 2022	6:00 AM	NE	0.2
7 Oct 2022	7:00 AM	N	1.8
7 Oct 2022	8:00 AM	NNE	0.8
7 Oct 2022	9:00 AM	NE	0.7
7 Oct 2022	10:00 AM	N	0.1
7 Oct 2022	11:00 AM	ENE	0.1
7 Oct 2022	12:00 PM	ENE	0.3
7 Oct 2022	1:00 PM	N	0.2
7 Oct 2022	2:00 PM	NW	0.2
7 Oct 2022	3:00 PM	NNE	0.1
7 Oct 2022	4:00 PM	NNE	0.6
7 Oct 2022	5:00 PM	NNE	0.2
7 Oct 2022	6:00 PM	ENE	0.7
7 Oct 2022	7:00 PM	NE	0.4
7 Oct 2022	8:00 PM	N	0.7
7 Oct 2022	9:00 PM	NNE	0.2
7 Oct 2022	10:00 PM	NNE	0.1
7 Oct 2022	11:00 PM	ENE	0.1
8 Oct 2022	12:00 AM	NE	0.1
8 Oct 2022	1:00 AM	NNE	0.2
8 Oct 2022	2:00 AM	ENE	1.5

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
8 Oct 2022	3:00 AM	ENE	0.1
8 Oct 2022	4:00 AM	NE	1.5
8 Oct 2022	5:00 AM	N	0.9
8 Oct 2022	6:00 AM	NE	0.1
8 Oct 2022	7:00 AM	NE	0.2
8 Oct 2022	8:00 AM	SE	0.2
8 Oct 2022	9:00 AM	E	0.2
8 Oct 2022	10:00 AM	ENE	0.3
8 Oct 2022	11:00 AM	ENE	0.7
8 Oct 2022	12:00 PM	NNW	2.5
8 Oct 2022	1:00 PM	NNE	0.8
8 Oct 2022	2:00 PM	ENE	0.2
8 Oct 2022	3:00 PM	NNE	0.1
8 Oct 2022	4:00 PM	NE	0.3
8 Oct 2022	5:00 PM	NE	0.2
8 Oct 2022	6:00 PM	ENE	1.8
8 Oct 2022	7:00 PM	ENE	0.8
8 Oct 2022	8:00 PM	NNE	0.7
8 Oct 2022	9:00 PM	ENE	0.1
8 Oct 2022	10:00 PM	N	0.1
8 Oct 2022	11:00 PM	NNE	0.3
9 Oct 2022	12:00 AM	E	0.2
9 Oct 2022	1:00 AM	N	0.2
9 Oct 2022	2:00 AM	ESE	0.1
9 Oct 2022	3:00 AM	NE	0.6
9 Oct 2022	4:00 AM	ENE	0.2
9 Oct 2022	5:00 AM	ENE	0.7
9 Oct 2022	6:00 AM	E	0.1
9 Oct 2022	7:00 AM	NE	1.0
9 Oct 2022	8:00 AM	NNE	0.1
9 Oct 2022	9:00 AM	NNE	1.4
9 Oct 2022	10:00 AM	NNE	0.1
9 Oct 2022	11:00 AM	NE	0.3
9 Oct 2022	12:00 PM	NNE	0.3
9 Oct 2022	1:00 PM	NE	0.4
9 Oct 2022	2:00 PM	E	0.1
9 Oct 2022	3:00 PM	ESE	0.2
9 Oct 2022	4:00 PM	NW	0.1
9 Oct 2022	5:00 PM	NE	0.1
9 Oct 2022	6:00 PM	NE	0.1
9 Oct 2022	7:00 PM	ENE	0.1
9 Oct 2022	8:00 PM	NNE	0.3
9 Oct 2022	9:00 PM	NNE	0.2
9 Oct 2022	10:00 PM	NNE	0.1
9 Oct 2022	11:00 PM	ENE	0.2
10 Oct 2022	12:00 AM	E	0.1
10 Oct 2022	1:00 AM	NE	0.1
10 Oct 2022	2:00 AM	NNE	0.1
10 Oct 2022	3:00 AM	NE	0.1
10 Oct 2022	4:00 AM	NNE	0.1
10 Oct 2022	5:00 AM	NNE	0.2
10 Oct 2022	6:00 AM	NNE	0.1
10 Oct 2022	7:00 AM	NE	0.1
10 Oct 2022	8:00 AM	NE	0.1
10 Oct 2022	9:00 AM	N	0.4
10 Oct 2022	10:00 AM	ENE	0.1
10 Oct 2022	11:00 AM	NE	0.1

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
10 Oct 2022	12:00 PM	NNE	0.1
10 Oct 2022	1:00 PM	WNW	0.3
10 Oct 2022	2:00 PM	NE	0.1
10 Oct 2022	3:00 PM	NE	0.1
10 Oct 2022	4:00 PM	ENE	0.1
10 Oct 2022	5:00 PM	ENE	0.1
10 Oct 2022	6:00 PM	ENE	0.1
10 Oct 2022	7:00 PM	ENE	0.2
10 Oct 2022	8:00 PM	NE	1.8
10 Oct 2022	9:00 PM	E	0.8
10 Oct 2022	10:00 PM	ENE	0.7
10 Oct 2022	11:00 PM	ENE	0.1
11 Oct 2022	12:00 AM	ENE	0.1
11 Oct 2022	1:00 AM	NE	0.3
11 Oct 2022	2:00 AM	SSW	0.2
11 Oct 2022	3:00 AM	NE	0.2
11 Oct 2022	4:00 AM	NE	0.1
11 Oct 2022	5:00 AM	NE	0.6
11 Oct 2022	6:00 AM	ENE	0.2
11 Oct 2022	7:00 AM	ENE	0.7
11 Oct 2022	8:00 AM	E	0.2
11 Oct 2022	9:00 AM	N	0.5
11 Oct 2022	10:00 AM	ESE	0.1
11 Oct 2022	11:00 AM	ENE	0.2
11 Oct 2022	12:00 PM	N	0.3
11 Oct 2022	1:00 PM	NE	0.1
11 Oct 2022	2:00 PM	ENE	0.1
11 Oct 2022	3:00 PM	SSE	0.1
11 Oct 2022	4:00 PM	E	0.1
11 Oct 2022	5:00 PM	ENE	0.3
11 Oct 2022	6:00 PM	ENE	0.1
11 Oct 2022	7:00 PM	NE	0.1
11 Oct 2022	8:00 PM	ENE	0.1
11 Oct 2022	9:00 PM	NE	0.1
11 Oct 2022	10:00 PM	ENE	0.1
11 Oct 2022	11:00 PM	ENE	0.1
12 Oct 2022	12:00 AM	ENE	0.1
12 Oct 2022	1:00 AM	ENE	0.1
12 Oct 2022	2:00 AM	NE	0.1
12 Oct 2022	3:00 AM	E	0.1
12 Oct 2022	4:00 AM	E	0.1
12 Oct 2022	5:00 AM	NNE	0.1
12 Oct 2022	6:00 AM	ENE	0.1
12 Oct 2022	7:00 AM	NE	0.1
12 Oct 2022	8:00 AM	NE	0.1
12 Oct 2022	9:00 AM	NNE	0.3
12 Oct 2022	10:00 AM	ENE	0.2
12 Oct 2022	11:00 AM	NE	0.1
12 Oct 2022	12:00 PM	ENE	0.1
12 Oct 2022	1:00 PM	ENE	0.2
12 Oct 2022	2:00 PM	ENE	0.1
12 Oct 2022	3:00 PM	E	0.1
12 Oct 2022	4:00 PM	E	0.3
12 Oct 2022	5:00 PM	ENE	0.5
12 Oct 2022	6:00 PM	ENE	0.1
12 Oct 2022	7:00 PM	NE	0.1
12 Oct 2022	8:00 PM	NE	0.1

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
12 Oct 2022	9:00 PM	ENE	0.1
12 Oct 2022	10:00 PM	E	0.1
12 Oct 2022	11:00 PM	ESE	0.2
13 Oct 2022	12:00 AM	NE	1.8
13 Oct 2022	1:00 AM	ENE	0.8
13 Oct 2022	2:00 AM	ENE	0.7
13 Oct 2022	3:00 AM	NE	0.1
13 Oct 2022	4:00 AM	NE	0.1
13 Oct 2022	5:00 AM	NNE	0.3
13 Oct 2022	6:00 AM	ENE	0.2
13 Oct 2022	7:00 AM	E	0.2
13 Oct 2022	8:00 AM	ENE	0.1
13 Oct 2022	9:00 AM	E	0.6
13 Oct 2022	10:00 AM	ENE	0.2
13 Oct 2022	11:00 AM	NE	0.7
13 Oct 2022	12:00 PM	ESE	1.2
13 Oct 2022	1:00 PM	SE	1.3
13 Oct 2022	2:00 PM	NE	1.1
13 Oct 2022	3:00 PM	ENE	0.9
13 Oct 2022	4:00 PM	NE	1.1
13 Oct 2022	5:00 PM	NE	0.8
13 Oct 2022	6:00 PM	E	1.7
13 Oct 2022	7:00 PM	ESE	1.9
13 Oct 2022	8:00 PM	ENE	1.2
13 Oct 2022	9:00 PM	ENE	1.6
13 Oct 2022	10:00 PM	S	1.5
13 Oct 2022	11:00 PM	SE	0.3
14 Oct 2022	12:00 AM	ESE	0.5
14 Oct 2022	1:00 AM	SSE	0.8
14 Oct 2022	2:00 AM	ENE	0.3
14 Oct 2022	3:00 AM	ESE	0.3
14 Oct 2022	4:00 AM	ENE	0.3
14 Oct 2022	5:00 AM	E	0.4
14 Oct 2022	6:00 AM	NE	1.5
14 Oct 2022	7:00 AM	E	0.6
14 Oct 2022	8:00 AM	ESE	0.8
14 Oct 2022	9:00 AM	ENE	0.9
14 Oct 2022	10:00 AM	ESE	0.4
14 Oct 2022	11:00 AM	ENE	1.2
14 Oct 2022	12:00 PM	ENE	0.2
14 Oct 2022	1:00 PM	SE	1.8
14 Oct 2022	2:00 PM	E	0.8
14 Oct 2022	3:00 PM	ESE	0.7
14 Oct 2022	4:00 PM	NE	0.1
14 Oct 2022	5:00 PM	ENE	0.1
14 Oct 2022	6:00 PM	E	0.3
14 Oct 2022	7:00 PM	NNW	0.2
14 Oct 2022	8:00 PM	ENE	0.2
14 Oct 2022	9:00 PM	N	0.1
14 Oct 2022	10:00 PM	ENE	0.6
14 Oct 2022	11:00 PM	E	0.2
15 Oct 2022	12:00 AM	E	0.7
15 Oct 2022	1:00 AM	E	0.1
15 Oct 2022	2:00 AM	ENE	0.8
15 Oct 2022	3:00 AM	ENE	0.1
15 Oct 2022	4:00 AM	E	0.1
15 Oct 2022	5:00 AM	NNE	0.2

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
15 Oct 2022	6:00 AM	ENE	0.2
15 Oct 2022	7:00 AM	ENE	0.2
15 Oct 2022	8:00 AM	ENE	0.1
15 Oct 2022	9:00 AM	ESE	0.1
15 Oct 2022	10:00 AM	NE	0.4
15 Oct 2022	11:00 AM	ENE	1.5
15 Oct 2022	12:00 PM	ENE	0.2
15 Oct 2022	1:00 PM	E	1.2
15 Oct 2022	2:00 PM	WSW	0.2
15 Oct 2022	3:00 PM	N	0.2
15 Oct 2022	4:00 PM	SW	0.1
15 Oct 2022	5:00 PM	NE	0.6
15 Oct 2022	6:00 PM	NE	0.2
15 Oct 2022	7:00 PM	SE	0.2
15 Oct 2022	8:00 PM	NE	0.1
15 Oct 2022	9:00 PM	NE	0.2
15 Oct 2022	10:00 PM	NE	1.8
15 Oct 2022	11:00 PM	ENE	0.8
16 Oct 2022	12:00 AM	NE	0.7
16 Oct 2022	1:00 AM	ENE	0.1
16 Oct 2022	2:00 AM	E	0.1
16 Oct 2022	3:00 AM	E	0.3
16 Oct 2022	4:00 AM	NE	0.2
16 Oct 2022	5:00 AM	E	0.2
16 Oct 2022	6:00 AM	NNE	0.1
16 Oct 2022	7:00 AM	ENE	0.6
16 Oct 2022	8:00 AM	NE	0.2
16 Oct 2022	9:00 AM	ESE	0.7
16 Oct 2022	10:00 AM	NNE	0.2
16 Oct 2022	11:00 AM	SSE	0.1
16 Oct 2022	12:00 PM	ENE	0.1
16 Oct 2022	1:00 PM	ENE	0.2
16 Oct 2022	2:00 PM	E	0.1
16 Oct 2022	3:00 PM	ENE	0.1
16 Oct 2022	4:00 PM	ENE	0.1
16 Oct 2022	5:00 PM	ENE	0.1
16 Oct 2022	6:00 PM	ESE	0.1
16 Oct 2022	7:00 PM	SE	0.1
16 Oct 2022	8:00 PM	E	0.1
16 Oct 2022	9:00 PM	ESE	0.1
16 Oct 2022	10:00 PM	ENE	0.1
16 Oct 2022	11:00 PM	NE	0.1
17 Oct 2022	12:00 AM	ENE	0.2
17 Oct 2022	1:00 AM	NE	0.4
17 Oct 2022	2:00 AM	NE	2.8
17 Oct 2022	3:00 AM	NE	0.5
17 Oct 2022	4:00 AM	NNE	0.1
17 Oct 2022	5:00 AM	NNE	0.1
17 Oct 2022	6:00 AM	NNE	0.1
17 Oct 2022	7:00 AM	E	0.4
17 Oct 2022	8:00 AM	NNE	0.2
17 Oct 2022	9:00 AM	NNE	0.6
17 Oct 2022	10:00 AM	E	0.2
17 Oct 2022	11:00 AM	NNE	1.8
17 Oct 2022	12:00 PM	NNW	0.8
17 Oct 2022	1:00 PM	NE	0.7
17 Oct 2022	2:00 PM	NE	0.1

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
17 Oct 2022	3:00 PM	WNW	0.1
17 Oct 2022	4:00 PM	NE	0.3
17 Oct 2022	5:00 PM	ENE	0.2
17 Oct 2022	6:00 PM	ENE	0.2
17 Oct 2022	7:00 PM	E	0.1
17 Oct 2022	8:00 PM	NE	0.6
17 Oct 2022	9:00 PM	NNE	0.2
17 Oct 2022	10:00 PM	N	0.7
17 Oct 2022	11:00 PM	ENE	0.2
18 Oct 2022	12:00 AM	NE	0.2
18 Oct 2022	1:00 AM	N	1.6
18 Oct 2022	2:00 AM	E	0.4
18 Oct 2022	3:00 AM	ENE	0.3
18 Oct 2022	4:00 AM	NE	0.4
18 Oct 2022	5:00 AM	E	0.3
18 Oct 2022	6:00 AM	NE	0.3
18 Oct 2022	7:00 AM	NE	0.2
18 Oct 2022	8:00 AM	ENE	0.1
18 Oct 2022	9:00 AM	NE	0.2
18 Oct 2022	10:00 AM	E	0.2
18 Oct 2022	11:00 AM	ENE	0.7
18 Oct 2022	12:00 PM	NNW	0.1
18 Oct 2022	1:00 PM	NE	0.2
18 Oct 2022	2:00 PM	NE	0.2
18 Oct 2022	3:00 PM	NNE	0.4
18 Oct 2022	4:00 PM	ENE	0.2
18 Oct 2022	5:00 PM	ENE	0.2
18 Oct 2022	6:00 PM	ESE	0.2
18 Oct 2022	7:00 PM	ENE	0.1
18 Oct 2022	8:00 PM	ESE	0.2
18 Oct 2022	9:00 PM	NNE	1.8
18 Oct 2022	10:00 PM	NE	0.8
18 Oct 2022	11:00 PM	NNE	0.7
19 Oct 2022	12:00 AM	NE	0.1
19 Oct 2022	1:00 AM	NE	0.1
19 Oct 2022	2:00 AM	NE	0.3
19 Oct 2022	3:00 AM	ENE	0.2
19 Oct 2022	4:00 AM	ESE	0.2
19 Oct 2022	5:00 AM	SSE	0.1
19 Oct 2022	6:00 AM	NE	0.6
19 Oct 2022	7:00 AM	NE	0.2
19 Oct 2022	8:00 AM	ENE	0.7
19 Oct 2022	9:00 AM	ENE	0.4
19 Oct 2022	10:00 AM	ESE	1.5
19 Oct 2022	11:00 AM	NE	0.1
19 Oct 2022	12:00 PM	N	0.4
19 Oct 2022	1:00 PM	NE	0.1
19 Oct 2022	2:00 PM	NW	0.1
19 Oct 2022	3:00 PM	NE	0.1
19 Oct 2022	4:00 PM	ENE	0.6
19 Oct 2022	5:00 PM	NW	0.2
19 Oct 2022	6:00 PM	ENE	0.4
19 Oct 2022	7:00 PM	NNW	0.1
19 Oct 2022	8:00 PM	NE	0.1
19 Oct 2022	9:00 PM	NE	0.3
19 Oct 2022	10:00 PM	ENE	0.6
19 Oct 2022	11:00 PM	NNE	0.1

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
20 Oct 2022	12:00 AM	E	0.1
20 Oct 2022	1:00 AM	NE	0.1
20 Oct 2022	2:00 AM	NE	0.1
20 Oct 2022	3:00 AM	NNE	0.1
20 Oct 2022	4:00 AM	NE	0.1
20 Oct 2022	5:00 AM	N	0.2
20 Oct 2022	6:00 AM	NE	0.1
20 Oct 2022	7:00 AM	NNW	0.1
20 Oct 2022	8:00 AM	ENE	0.2
20 Oct 2022	9:00 AM	NNE	0.1
20 Oct 2022	10:00 AM	NW	0.1
20 Oct 2022	11:00 AM	NNE	0.1
20 Oct 2022	12:00 PM	NE	0.1
20 Oct 2022	1:00 PM	E	0.1
20 Oct 2022	2:00 PM	NNW	0.2
20 Oct 2022	3:00 PM	N	0.1
20 Oct 2022	4:00 PM	NNE	0.1
20 Oct 2022	5:00 PM	N	0.1
20 Oct 2022	6:00 PM	N	0.5
20 Oct 2022	7:00 PM	W	0.6
20 Oct 2022	8:00 PM	NE	0.3
20 Oct 2022	9:00 PM	ENE	1.7
20 Oct 2022	10:00 PM	NE	0.1
20 Oct 2022	11:00 PM	NE	0.2
21 Oct 2022	12:00 AM	ENE	0.1
21 Oct 2022	1:00 AM	NE	0.2
21 Oct 2022	2:00 AM	NE	0.3
21 Oct 2022	3:00 AM	N	0.4
21 Oct 2022	4:00 AM	NE	0.3
21 Oct 2022	5:00 AM	NNE	0.1
21 Oct 2022	6:00 AM	ESE	0.2
21 Oct 2022	7:00 AM	ENE	0.2
21 Oct 2022	8:00 AM	NNE	0.1
21 Oct 2022	9:00 AM	E	1.4
21 Oct 2022	10:00 AM	N	0.4
21 Oct 2022	11:00 AM	ENE	1.0
21 Oct 2022	12:00 PM	ENE	0.1
21 Oct 2022	1:00 PM	NNE	0.2
21 Oct 2022	2:00 PM	NE	1.6
21 Oct 2022	3:00 PM	N	0.5
21 Oct 2022	4:00 PM	NE	0.2
21 Oct 2022	5:00 PM	NNE	0.2
21 Oct 2022	6:00 PM	ENE	0.1
21 Oct 2022	7:00 PM	N	0.1
21 Oct 2022	8:00 PM	NW	0.1
21 Oct 2022	9:00 PM	N	0.1
21 Oct 2022	10:00 PM	NNE	0.2
21 Oct 2022	11:00 PM	NE	0.2
22 Oct 2022	12:00 AM	ENE	0.3
22 Oct 2022	1:00 AM	NE	0.1
22 Oct 2022	2:00 AM	NNE	1.2
22 Oct 2022	3:00 AM	NNE	0.1
22 Oct 2022	4:00 AM	NNE	0.1
22 Oct 2022	5:00 AM	NE	1.2
22 Oct 2022	6:00 AM	SE	0.1
22 Oct 2022	7:00 AM	NE	0.1
22 Oct 2022	8:00 AM	S	0.3

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
22 Oct 2022	9:00 AM	ENE	0.2
22 Oct 2022	10:00 AM	NE	1.0
22 Oct 2022	11:00 AM	E	1.4
22 Oct 2022	12:00 PM	NNE	0.9
22 Oct 2022	1:00 PM	NNW	4.2
22 Oct 2022	2:00 PM	NE	0.9
22 Oct 2022	3:00 PM	ENE	0.9
22 Oct 2022	4:00 PM	NNE	1.4
22 Oct 2022	5:00 PM	N	0.7
22 Oct 2022	6:00 PM	ENE	0.7
22 Oct 2022	7:00 PM	N	0.1
22 Oct 2022	8:00 PM	ENE	0.1
22 Oct 2022	9:00 PM	E	0.1
22 Oct 2022	10:00 PM	NNE	0.1
22 Oct 2022	11:00 PM	N	0.1
23 Oct 2022	12:00 AM	NNE	0.1
23 Oct 2022	1:00 AM	ENE	0.1
23 Oct 2022	2:00 AM	E	0.2
23 Oct 2022	3:00 AM	NE	0.1
23 Oct 2022	4:00 AM	ENE	0.1
23 Oct 2022	5:00 AM	E	0.2
23 Oct 2022	6:00 AM	NE	0.1
23 Oct 2022	7:00 AM	ENE	0.1
23 Oct 2022	8:00 AM	NE	0.1
23 Oct 2022	9:00 AM	E	0.1
23 Oct 2022	10:00 AM	NE	0.1
23 Oct 2022	11:00 AM	NE	0.2
23 Oct 2022	12:00 PM	ENE	0.1
23 Oct 2022	1:00 PM	NE	0.1
23 Oct 2022	2:00 PM	E	0.1
23 Oct 2022	3:00 PM	NE	0.5
23 Oct 2022	4:00 PM	E	0.8
23 Oct 2022	5:00 PM	E	0.4
23 Oct 2022	6:00 PM	NNE	0.2
23 Oct 2022	7:00 PM	NNE	1.3
23 Oct 2022	8:00 PM	ESE	0.2
23 Oct 2022	9:00 PM	ENE	0.1
23 Oct 2022	10:00 PM	NNE	0.1
23 Oct 2022	11:00 PM	NE	0.1
24 Oct 2022	12:00 AM	ENE	0.1
24 Oct 2022	1:00 AM	NE	0.1
24 Oct 2022	2:00 AM	NW	0.1
24 Oct 2022	3:00 AM	NE	0.2
24 Oct 2022	4:00 AM	NE	0.1
24 Oct 2022	5:00 AM	ENE	0.3
24 Oct 2022	6:00 AM	ENE	0.3
24 Oct 2022	7:00 AM	NE	0.1
24 Oct 2022	8:00 AM	ENE	0.1
24 Oct 2022	9:00 AM	ESE	0.1
24 Oct 2022	10:00 AM	NE	0.1
24 Oct 2022	11:00 AM	ENE	0.1
24 Oct 2022	12:00 PM	ENE	0.1
24 Oct 2022	1:00 PM	NNE	0.1
24 Oct 2022	2:00 PM	ENE	0.2
24 Oct 2022	3:00 PM	ENE	0.1
24 Oct 2022	4:00 PM	ENE	0.1
24 Oct 2022	5:00 PM	NE	0.2

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
24 Oct 2022	6:00 PM	ENE	0.1
24 Oct 2022	7:00 PM	ENE	0.1
24 Oct 2022	8:00 PM	N	0.1
24 Oct 2022	9:00 PM	NE	0.1
24 Oct 2022	10:00 PM	NNE	0.1
24 Oct 2022	11:00 PM	E	0.2
25 Oct 2022	12:00 AM	ENE	0.1
25 Oct 2022	1:00 AM	ENE	0.1
25 Oct 2022	2:00 AM	E	0.1
25 Oct 2022	3:00 AM	E	0.1
25 Oct 2022	4:00 AM	ENE	0.1
25 Oct 2022	5:00 AM	ENE	0.1
25 Oct 2022	6:00 AM	NE	0.1
25 Oct 2022	7:00 AM	NE	0.1
25 Oct 2022	8:00 AM	E	0.1
25 Oct 2022	9:00 AM	E	0.1
25 Oct 2022	10:00 AM	ENE	0.4
25 Oct 2022	11:00 AM	ENE	0.3
25 Oct 2022	12:00 PM	ENE	0.6
25 Oct 2022	1:00 PM	ESE	0.1
25 Oct 2022	2:00 PM	ENE	0.1
25 Oct 2022	3:00 PM	SE	0.4
25 Oct 2022	4:00 PM	ENE	0.4
25 Oct 2022	5:00 PM	ENE	0.1
25 Oct 2022	6:00 PM	ENE	0.1
25 Oct 2022	7:00 PM	S	0.1
25 Oct 2022	8:00 PM	E	0.1
25 Oct 2022	9:00 PM	E	0.1
25 Oct 2022	10:00 PM	E	0.1
25 Oct 2022	11:00 PM	ESE	0.1
26 Oct 2022	12:00 AM	E	0.1
26 Oct 2022	1:00 AM	ENE	0.1
26 Oct 2022	2:00 AM	ENE	0.1
26 Oct 2022	3:00 AM	ENE	0.1
26 Oct 2022	4:00 AM	ENE	0.1
26 Oct 2022	5:00 AM	NE	0.1
26 Oct 2022	6:00 AM	E	0.1
26 Oct 2022	7:00 AM	NE	0.1
26 Oct 2022	8:00 AM	ENE	0.2
26 Oct 2022	9:00 AM	ENE	0.1
26 Oct 2022	10:00 AM	NE	0.1
26 Oct 2022	11:00 AM	ENE	0.3
26 Oct 2022	12:00 PM	ESE	0.1
26 Oct 2022	1:00 PM	NE	0.1
26 Oct 2022	2:00 PM	ENE	0.5
26 Oct 2022	3:00 PM	ENE	0.1
26 Oct 2022	4:00 PM	NNE	0.1
26 Oct 2022	5:00 PM	ENE	0.1
26 Oct 2022	6:00 PM	ENE	0.1
26 Oct 2022	7:00 PM	ENE	0.1
26 Oct 2022	8:00 PM	NE	0.1
26 Oct 2022	9:00 PM	ENE	0.1
26 Oct 2022	10:00 PM	ENE	0.1
26 Oct 2022	11:00 PM	E	0.1
27 Oct 2022	12:00 AM	ENE	0.1
27 Oct 2022	1:00 AM	E	0.1
27 Oct 2022	2:00 AM	ENE	0.1

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
27 Oct 2022	3:00 AM	NE	0.2
27 Oct 2022	4:00 AM	E	0.1
27 Oct 2022	5:00 AM	NNE	0.1
27 Oct 2022	6:00 AM	NNE	0.1
27 Oct 2022	7:00 AM	E	0.2
27 Oct 2022	8:00 AM	ESE	0.1
27 Oct 2022	9:00 AM	ENE	0.1
27 Oct 2022	10:00 AM	ENE	0.1
27 Oct 2022	11:00 AM	NE	0.1
27 Oct 2022	12:00 PM	WSW	0.1
27 Oct 2022	1:00 PM	SE	0.1
27 Oct 2022	2:00 PM	ENE	0.1
27 Oct 2022	3:00 PM	ENE	0.2
27 Oct 2022	4:00 PM	ENE	0.1
27 Oct 2022	5:00 PM	E	0.1
27 Oct 2022	6:00 PM	E	0.2
27 Oct 2022	7:00 PM	ENE	0.1
27 Oct 2022	8:00 PM	SSE	0.1
27 Oct 2022	9:00 PM	ENE	0.1
27 Oct 2022	10:00 PM	ENE	0.1
27 Oct 2022	11:00 PM	SSE	0.1
28 Oct 2022	12:00 AM	ENE	0.2
28 Oct 2022	1:00 AM	E	0.1
28 Oct 2022	2:00 AM	NE	0.1
28 Oct 2022	3:00 AM	ENE	0.1
28 Oct 2022	4:00 AM	NE	0.1
28 Oct 2022	5:00 AM	ENE	0.1
28 Oct 2022	6:00 AM	NNE	0.1
28 Oct 2022	7:00 AM	ENE	0.1
28 Oct 2022	8:00 AM	NE	0.1
28 Oct 2022	9:00 AM	NE	0.1
28 Oct 2022	10:00 AM	ENE	0.2
28 Oct 2022	11:00 AM	ENE	0.1
28 Oct 2022	12:00 PM	E	0.1
28 Oct 2022	1:00 PM	N	0.3
28 Oct 2022	2:00 PM	E	0.1

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
28 Oct 2022	3:00 PM	ENE	0.1
28 Oct 2022	4:00 PM	ENE	0.5
28 Oct 2022	5:00 PM	ENE	0.1
28 Oct 2022	6:00 PM	NE	0.1
28 Oct 2022	7:00 PM	ENE	0.1
28 Oct 2022	8:00 PM	ESE	0.1
28 Oct 2022	9:00 PM	NE	0.2
28 Oct 2022	10:00 PM	ENE	0.1
28 Oct 2022	11:00 PM	ENE	0.2
29 Oct 2022	12:00 AM	NNE	0.2
29 Oct 2022	1:00 AM	ENE	0.2
29 Oct 2022	2:00 AM	ENE	0.2
29 Oct 2022	3:00 AM	ENE	0.2
29 Oct 2022	4:00 AM	NE	0.2
29 Oct 2022	5:00 AM	ENE	0.2
29 Oct 2022	6:00 AM	NE	0.2
29 Oct 2022	7:00 AM	E	0.3
29 Oct 2022	8:00 AM	ENE	0.2
29 Oct 2022	9:00 AM	E	0.2
29 Oct 2022	10:00 AM	NNE	0.2
29 Oct 2022	11:00 AM	E	0.2
29 Oct 2022	12:00 PM	WSW	0.1
29 Oct 2022	1:00 PM	NNE	0.1
29 Oct 2022	2:00 PM	NNE	0.1
29 Oct 2022	3:00 PM	ENE	0.1
29 Oct 2022	4:00 PM	N	0.1
29 Oct 2022	5:00 PM	NE	0.1
29 Oct 2022	6:00 PM	ENE	0.1
29 Oct 2022	7:00 PM	N	0.1
29 Oct 2022	8:00 PM	NE	0.2
29 Oct 2022	9:00 PM	NE	0.1
29 Oct 2022	10:00 PM	N	0.1
29 Oct 2022	11:00 PM	NNW	0.3
30 Oct 2022	12:00 AM	NNE	0.1
30 Oct 2022	1:00 AM	NE	0.1
30 Oct 2022	2:00 AM	NNE	0.5
30 Oct 2022	3:00 AM	ENE	0.1
30 Oct 2022	4:00 AM	NE	0.1
30 Oct 2022	5:00 AM	ENE	0.1
30 Oct 2022	6:00 AM	NE	0.1
30 Oct 2022	7:00 AM	NNE	0.1
30 Oct 2022	8:00 AM	NE	0.1
30 Oct 2022	9:00 AM	NNE	0.1
30 Oct 2022	10:00 AM	E	0.2
30 Oct 2022	11:00 AM	NE	0.2
30 Oct 2022	12:00 PM	ENE	0.2
30 Oct 2022	1:00 PM	E	0.1
30 Oct 2022	2:00 PM	E	0.1
30 Oct 2022	3:00 PM	NNE	0.1
30 Oct 2022	4:00 PM	E	0.2
30 Oct 2022	5:00 PM	ENE	0.1
30 Oct 2022	6:00 PM	ENE	0.1
30 Oct 2022	7:00 PM	ENE	0.1
30 Oct 2022	8:00 PM	ENE	0.1
30 Oct 2022	9:00 PM	ENE	0.1
30 Oct 2022	10:00 PM	NE	0.1
30 Oct 2022	11:00 PM	ENE	0.1

October 2022			
Wind Speed and Directions			
Date	**Time**	**Direction**	**Wind Speed m-s**
31 Oct 2022	12:00 AM	ESE	0.1
31 Oct 2022	1:00 AM	NE	0.1
31 Oct 2022	2:00 AM	ENE	0.1
31 Oct 2022	3:00 AM	ENE	0.1
31 Oct 2022	4:00 AM	NNE	0.1
31 Oct 2022	5:00 AM	ENE	0.1
31 Oct 2022	6:00 AM	ENE	0.1
31 Oct 2022	7:00 AM	ENE	0.1
31 Oct 2022	8:00 AM	NE	0.1
31 Oct 2022	9:00 AM	NE	0.2
31 Oct 2022	10:00 AM	NNE	0.1
31 Oct 2022	11:00 AM	E	0.1
31 Oct 2022	12:00 PM	E	0.3
31 Oct 2022	1:00 PM	SE	0.1
31 Oct 2022	2:00 PM	S	0.1
31 Oct 2022	3:00 PM	SE	0.5
31 Oct 2022	4:00 PM	ENE	0.1
31 Oct 2022	5:00 PM	E	0.1
31 Oct 2022	6:00 PM	ESE	0.1
31 Oct 2022	7:00 PM	ENE	0.1
31 Oct 2022	8:00 PM	E	0.1
31 Oct 2022	9:00 PM	ESE	0.1
31 Oct 2022	10:00 PM	ENE	0.1
31 Oct 2022	11:00 PM	NNE	0.1

APPENDIX D
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 (October 2022)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1-Oct
2-Oct	3-Oct	**4-Oct**	5-Oct	6-Oct	7-Oct	8-Oct
			24-hrs TSP	1-hr TSP X3 Noise		
9-Oct	10-Oct	11-Oct	12-Oct	13-Oct	14-Oct	15-Oct
		24-hrs TSP	1-hr TSP X3 Noise			
16-Oct	17-Oct	18-Oct	19-Oct	20-Oct	21-Oct	22-Oct
	24-hrs TSP	1-hr TSP X3 Noise				24-hrs TSP
23-Oct	24-Oct	` 25-Oct	26-Oct	27-Oct	28-Oct	29-Oct
	1-hr TSP X3 Noise			24-hrs TSP	1-hr TSP X3	
30-Oct	31-Oct	`				

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

Air Quality Monitoring Station

1-hr TSP / 24-hrs TSP

AM1 - Tin Hau Temple
AM2 - Sai Tso Wan Recreation Ground
AM3 - Yau Lai Estate Bik Lai House
AM4[(1)] - Sitting-out Area at Cha Kwo Ling Village
AM4(A)[(2)(3)] - Cha Kwo Ling Public Cargo Working Area Administrative Office

Noise Monitoring Station

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

Notes: (1) For 1-hour TSP monitoring; (2) For 24-hours TSP monitoring; (3) Monitoring at AM4(A) is suspended and under application for relocation

Contract No. ED/2018/04
Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron
Tentative Impact Air and Noise Monitoring Schedule (November 2022)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Nov	2-Nov	3-Nov	4-Nov	5-Nov
			24-hrs TSP	1-hr TSP X3 Noise		
6-Nov	7-Nov	8-Nov	9-Nov	10-Nov	11-Nov	12-Nov
		24-hrs TSP	1-hr TSP X3 Noise			
13-Nov	14-Nov	15-Nov	16-Nov	17-Nov	18-Nov	19-Nov
	24-hrs TSP	1-hr TSP X3 Noise				24-hrs TSP
20-Nov	21-Nov	22-Nov	23-Nov	24-Nov	25-Nov	26-Nov
	1-hr TSP X3 Noise			24-hrs TSP	1-hr TSP X3	
27-Nov	28-Nov	` 29-Nov	30-Nov			
			24-hrs TSP			

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

Air Quality Monitoring Station

1-hr TSP / 24-hrs TSP

AM1 - Tin Hau Temple
AM2 - Sai Tso Wan Recreation Ground
AM3 - Yau Lai Estate Bik Lai House
AM4[(1)] - Sitting-out Area at Cha Kwo Ling Village
AM4(A)[(2)(3)] - Cha Kwo Ling Public Cargo Working Area Administrative Office

Noise Monitoring Station

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

Notes: (1) For 1-hour TSP monitoring; (2) For 24-hours TSP monitoring; (3) Monitoring at AM4(A) is suspended and under application for relocation

Contract No. ED/2018/04
Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron
Tentative Impact Air and Noise Monitoring Schedule (December 2022)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-Dec	2-Dec	3-Dec
				1-hr TSP X3 Noise		
4-Dec	5-Dec	6-Dec	7-Dec	8-Dec	9-Dec	10-Dec
		24-hrs TSP	1-hr TSP X3 Noise			
11-Dec	12-Dec	13-Dec	14-Dec	15-Dec	16-Dec	17-Dec
	24-hrs TSP	1-hr TSP X3 Noise				24-hrs TSP
18-Dec	19-Dec	20-Dec	21-Dec	22-Dec	23-Dec	24-Dec
	1-hr TSP X3 Noise			24-hrs TSP	1-hr TSP X3 Noise	
25-Dec	26-Dec	` 27-Dec	28-Dec	29-Dec	30-Dec	31-Dec
			24-hrs TSP	1-hr TSP X3 Noise		

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

Air Quality Monitoring Station

1-hr TSP / 24-hrs TSP

AM1 - Tin Hau Temple
AM2 - Sai Tso Wan Recreation Ground
AM3 - Yau Lai Estate Bik Lai House
AM4[(1)] - Sitting-out Area at Cha Kwo Ling Village
AM4(A)[(2)(3)] - Cha Kwo Ling Public Cargo Working Area Administrative Office

Noise Monitoring Station

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

Notes: (1) For 1-hour TSP monitoring; (2) For 24-hours TSP monitoring; (3) Monitoring at AM4(A) is suspended and under application for relocation

Contract No. ED/2018/04
Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron
Tentative Impact Air and Noise Monitoring Schedule (January 2023)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Jan	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan
		24-hrs TSP	1-hr TSP X3 Noise			
8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan
	24-hrs TSP	1-hr TSP X3 Noise				24-hrs TSP
15-Jan	16-Jan	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan
	1-hr TSP X3 Noise				24-hrs TSP	1-hr TSP X3
22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan
				24-hrs TSP	1-hr TSP X3 Noise	
29-Jan	30-Jan	` 31-Jan				

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

Air Quality Monitoring Station

1-hr TSP / 24-hrs TSP

AM1 - Tin Hau Temple
AM2 - Sai Tso Wan Recreation Ground
AM3 - Yau Lai Estate Bik Lai House
AM4[(1)] - Sitting-out Area at Cha Kwo Ling Village
AM4(A)[(2)(3)] - Cha Kwo Ling Public Cargo Working Area Administrative Office

Noise Monitoring Station

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

Notes: (1) For 1-hour TSP monitoring; (2) For 24-hours TSP monitoring; (3) Monitoring at AM4(A) is suspended and under application for relocation

APPENDIX E
1-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

APPENDIX E - 1-HOUR TSP MONITORING RESULTS

Location AM1 - Tin Hau Temple			
Date	Time	Weather	Particulate Concentration (μg/m^3)
6-Oct-22	13:00	Sunny	55.0
6-Oct-22	14:00	Sunny	107.8
6-Oct-22	15:00	Sunny	81.4
12-Oct-22	13:00	Sunny	97.5
12-Oct-22	14:00	Sunny	92.5
12-Oct-22	15:00	Sunny	102.5
18-Oct-22	12:30	Cloudy	60.0
18-Oct-22	13:30	Cloudy	55.0
18-Oct-22	14:30	Cloudy	67.5
24-Oct-22	11:45	Cloudy	65.0
24-Oct-22	12:45	Cloudy	57.5
24-Oct-22	13:45	Cloudy	45.0
28-Oct-22	13:15	Sunny	54.6
28-Oct-22	14:15	Sunny	58.8
28-Oct-22	15:15	Sunny	63.0
		Average	70.9
		Maximum	107.8
		Minimum	45.0

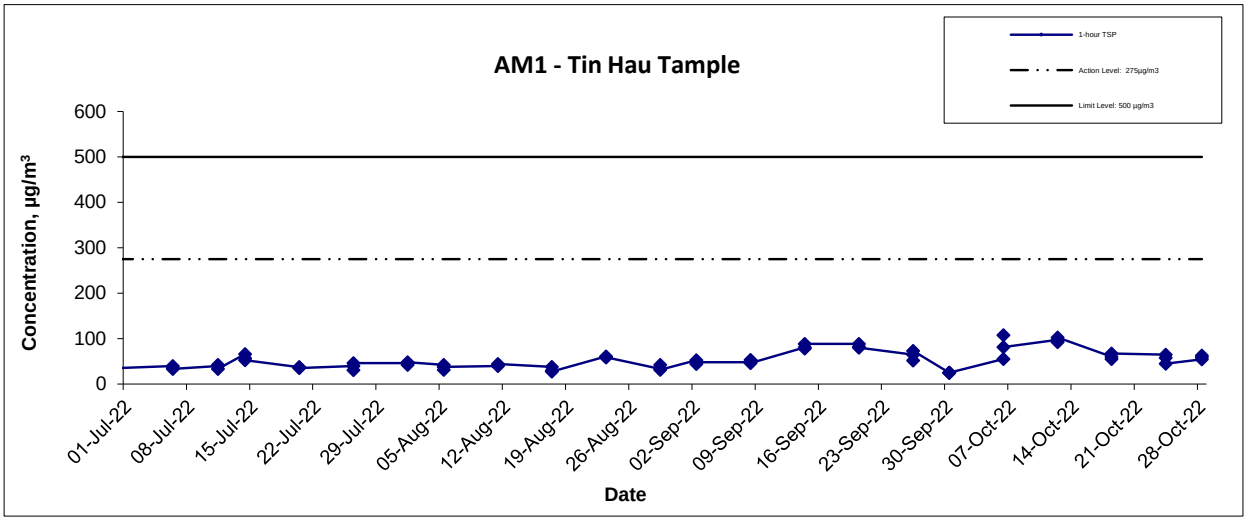
Location AM2 - Sai Tso Wan Recreation Ground			
Date	Time	Weather	***Particulate Concentration (μg/m^3)***
6-Oct-22	11:02	Sunny	23.1
6-Oct-22	12:02	Sunny	31.5
6-Oct-22	13:02	Sunny	16.8
12-Oct-22	10:00	Sunny	21.0
12-Oct-22	11:00	Sunny	25.2
12-Oct-22	12:00	Sunny	33.6
18-Oct-22	16:30	Rainy	222.6
18-Oct-22	17:30	Rainy	226.8
18-Oct-22	18:30	Rainy	228.9
24-Oct-22	9:00	Sunny	46.2
24-Oct-22	10:00	Sunny	58.8
24-Oct-22	11:00	Sunny	52.5
28-Oct-22	15:40	Sunny	27.3
28-Oct-22	16:40	Sunny	23.1
28-Oct-22	17:40	Sunny	21.0
		Average	70.6
		Maximum	228.9
		Minimum	16.8

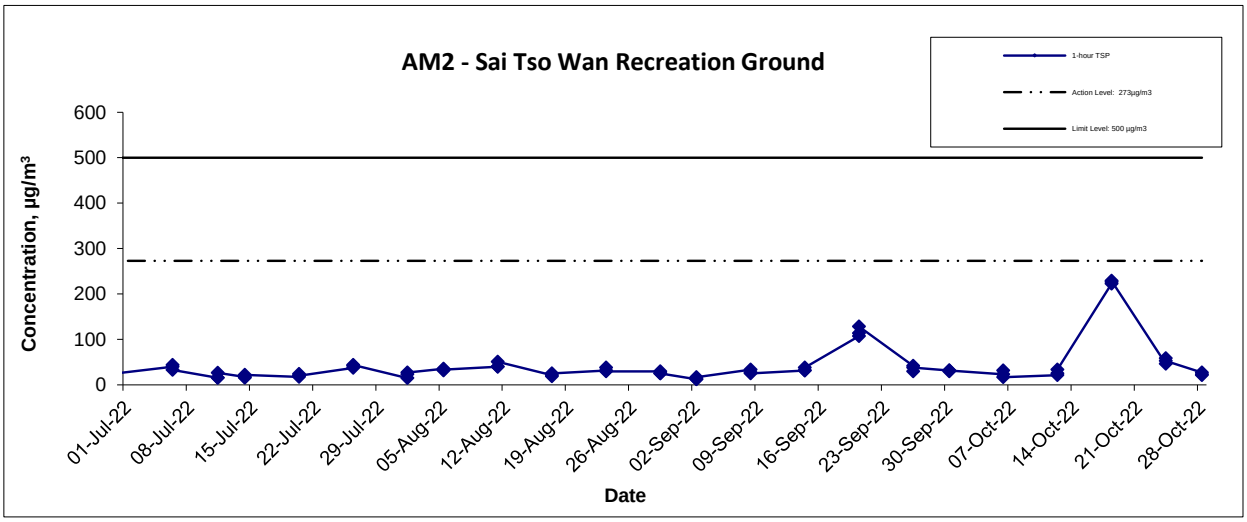
APPENDIX E - 1-HOUR TSP MONITORING RESULTS

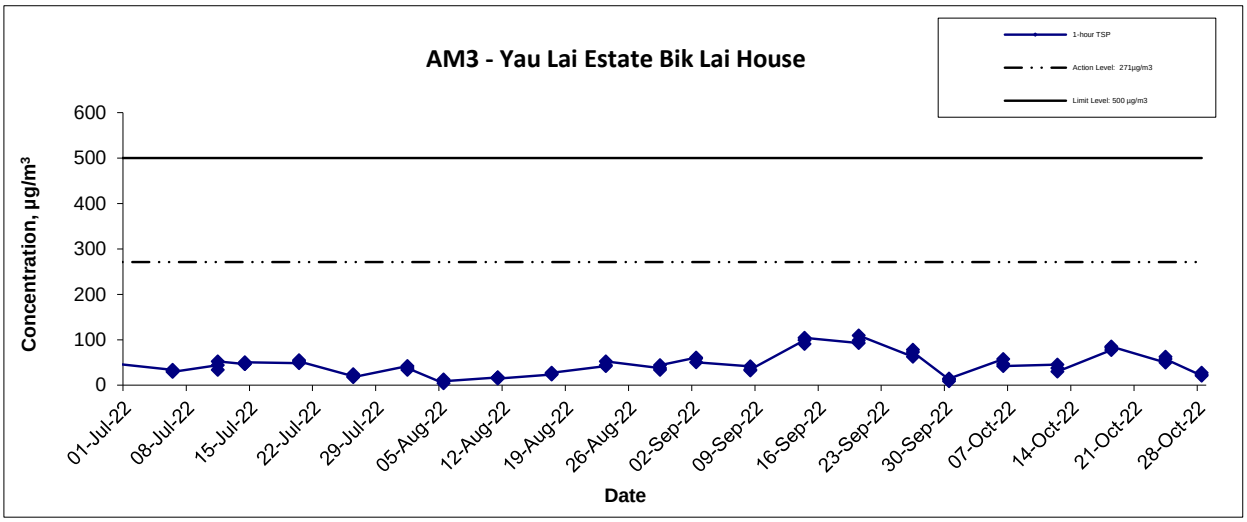
Location AM3 - Yau Lai Estate Bik Lai House			
Date	Time	Weather	***Particulate Concentration (µg/m^3)***
6-Oct-22	16:00	Sunny	57.2
6-Oct-22	17:00	Sunny	46.2
6-Oct-22	18:00	Sunny	41.8
12-Oct-22	10:00	Sunny	45.0
12-Oct-22	11:00	Sunny	37.5
12-Oct-22	12:00	Sunny	30.0
18-Oct-22	9:30	Sunny	77.5
18-Oct-22	10:30	Sunny	82.5
18-Oct-22	11:30	Sunny	85.0
24-Oct-22	14:00	Cloudy	50.0
24-Oct-22	15:00	Cloudy	62.5
24-Oct-22	16:00	Cloudy	57.5
28-Oct-22	11:55	Sunny	21.0
28-Oct-22	12:55	Sunny	27.3
28-Oct-22	13:55	Sunny	23.1
		Average	49.6
		Maximum	85.0
		Minimum	21.0

Location AM4 - Sitting-out Area at Cha Kwo Ling Village			
Date	Time	Weather	***Particulate Concentration (µg/m^3)***
6-Oct-22	9:00	Sunny	26.4
6-Oct-22	10:00	Sunny	28.6
6-Oct-22	11:00	Sunny	30.8
12-Oct-22	16:00	Sunny	52.5
12-Oct-22	17:00	Sunny	62.5
12-Oct-22	18:00	Sunny	52.5
18-Oct-22	15:45	Rainy	57.5
18-Oct-22	16:45	Rainy	55.0
18-Oct-22	17:45	Rainy	50.0
24-Oct-22	9:00	Cloudy	80.0
24-Oct-22	10:00	Cloudy	87.5
24-Oct-22	11:00	Cloudy	95.0
28-Oct-22	14:35	Sunny	37.8
28-Oct-22	15:35	Sunny	39.9
28-Oct-22	16:35	Sunny	37.8
		Average	52.9
		Maximum	95.0
		Minimum	26.4

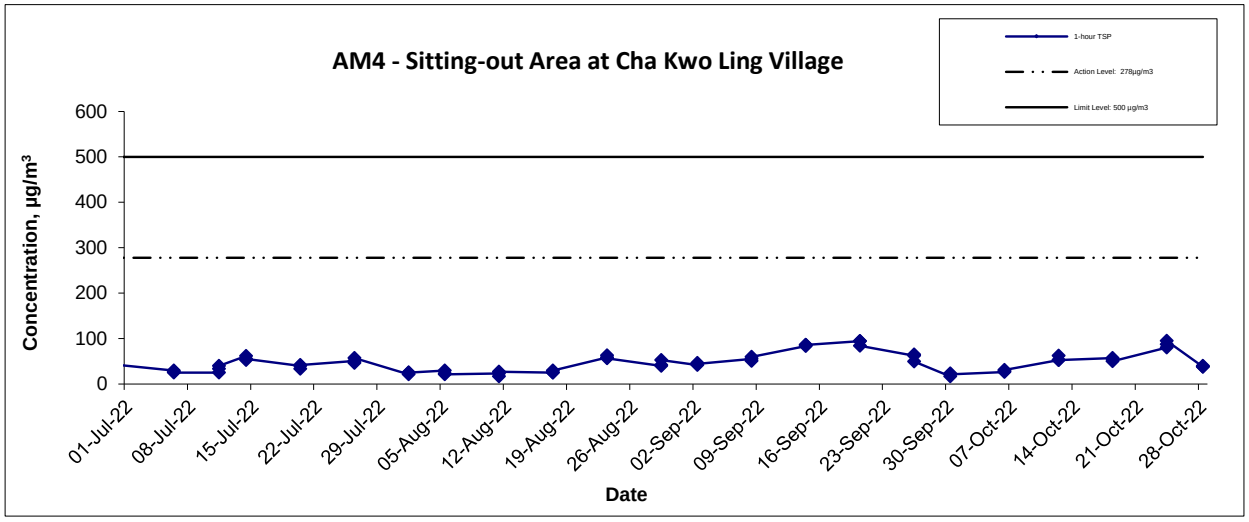
1-hr TSP Concentration Levels







Contract No. ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S	Project No. MA20003	CINOTECH
	Date Oct-22	Appendix E	



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

Contract No. ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S Date Oct-22	Project No. MA20003 Appendix E	CINOTECH

APPENDIX F
24-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

Appendix F - 24-hour TSP Monitoring Results

Location AM1 - Tin Hau Temple

Start Date	Weather	Filter Weight (g)		Particulate	Elapse Time		Sampling	Flow Rate (m^3/min.)		Av. flow	Total vol	Conc.
	Condition	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m^3/min)	(m^3)	($\mu g/m^3$)
5-Oct-22	Sunny	3.3804	3.4460	0.0656	10698.5	10722.5	24.0	1.22	1.22	1.22	1756.2	37.4
11-Oct-22	Fine	3.3535	3.4633	0.1098	10728.5	10752.5	24.0	1.22	1.22	1.22	1760.3	62.4
17-Oct-22	Cloudy	3.3758	3.6320	0.2562	10752.5	10776.5	24.0	1.21	1.23	1.22	1758.2	145.7
22-Oct-22	Cloudy	3.3805	3.5095	0.1290	10776.5	10800.5	24.0	1.22	1.22	1.22	1755.0	73.5
27-Oct-22	Cloudy	3.3038	3.3939	0.0901	10800.5	10824.5	24.0	1.22	1.22	1.22	1760.3	51.2
											Min	37.4
											Max	145.7
											Average	74.0

Location AM2 - Sai Tso Wan Recreation Ground

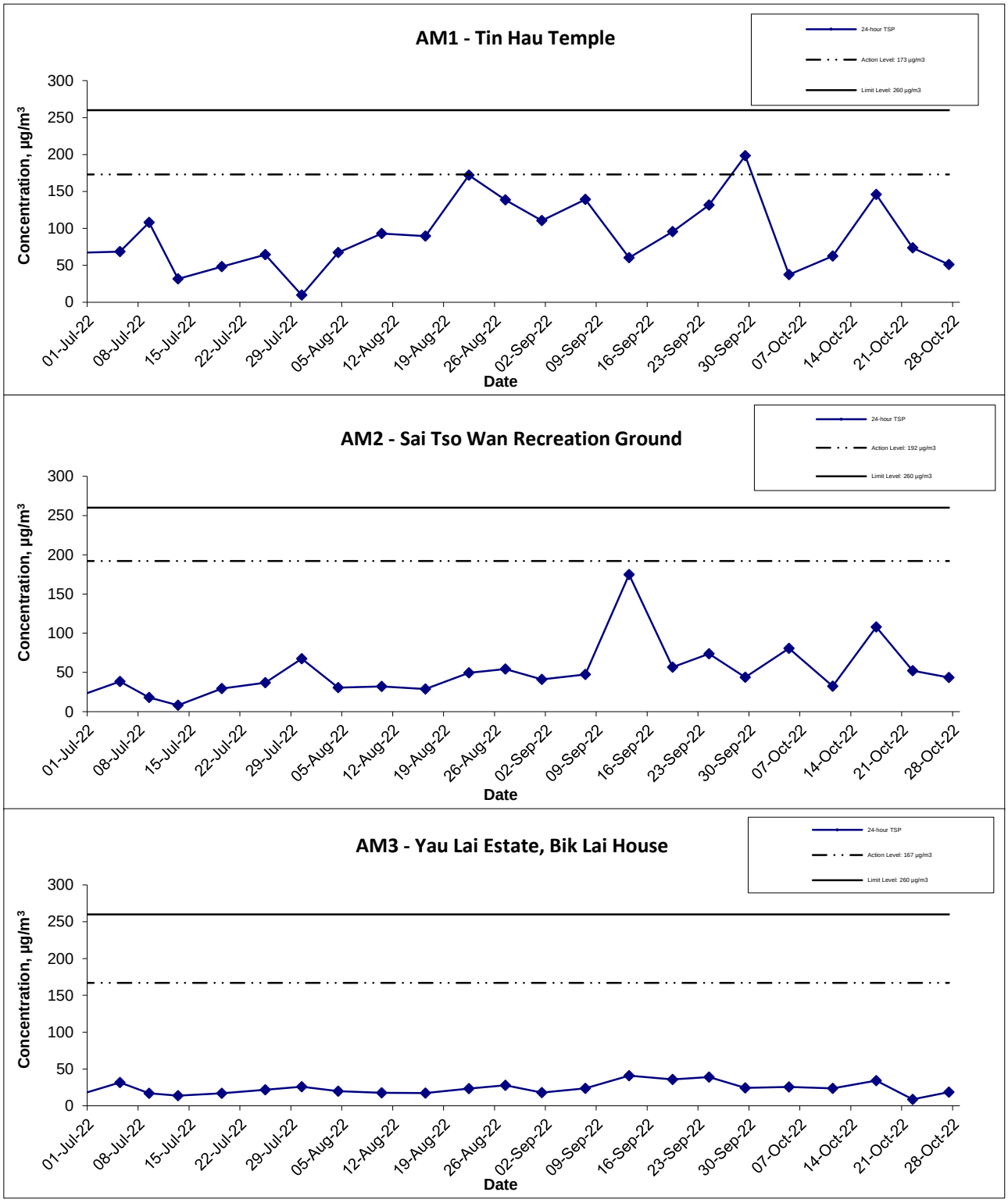
Start Date	Weather	Filter Weight (g)		Particulate	Elapse Time		Sampling	Flow Rate (m^3/min.)		Av. flow	Total vol.	Conc.
	Condition	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m^3/min)	(m^3)	($\mu g/m^3$)
5-Oct-22	Sunny	3.3129	3.4547	0.1418	31831.2	31855.2	24.0	1.22	1.22	1.22	1756.6	80.7
11-Oct-22	Sunny	3.3127	3.3700	0.0573	31888.6	31912.6	24.0	1.23	1.22	1.22	1762.0	32.5
17-Oct-22	Fine	3.2888	3.4786	0.1898	31936.6	31960.6	24.0	1.21	1.23	1.22	1760.4	107.8
22-Oct-22	Fine	3.3700	3.4616	0.0916	31960.6	31984.6	24.0	1.22	1.22	1.22	1755.9	52.2
27-Oct-22	Sunny	3.3780	3.4547	0.0767	31984.6	32008.6	24.0	1.22	1.22	1.22	1762.0	43.5
											Min	32.5
											Max	107.8
											Average	63.4

Location AM3 - Yau Lai Estate, Bik Lai House

Start Date	Weather	Filter Weight (g)		Particulate	Elapse Time		Sampling	Flow Rate (m^3/min.)		Av. flow	Total vol.	Conc.
	Condition	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m^3/min)	(m^3)	($\mu g/m^3$)
5-Oct-22	Sunny	3.3022	3.3474	0.0452	6113.7	6137.7	24.0	1.22	1.22	1.22	1757.5	25.7
11-Oct-22	Sunny	3.3299	3.3718	0.0419	6137.7	6161.7	24.0	1.22	1.22	1.22	1759.9	23.8
17-Oct-22	Sunny	3.3541	3.4144	0.0603	6161.7	6185.7	24.0	1.21	1.23	1.22	1757.5	34.3
22-Oct-22	Cloudy	3.3694	3.3848	0.0154	6185.7	6209.7	24.0	1.22	1.22	1.22	1753.8	8.8
27-Oct-22	Sunny	3.3585	3.3911	0.0326	6209.7	6233.7	24.0	1.22	1.22	1.22	1759.9	18.5
											Min	8.8
											Max	34.3
											Average	22.2

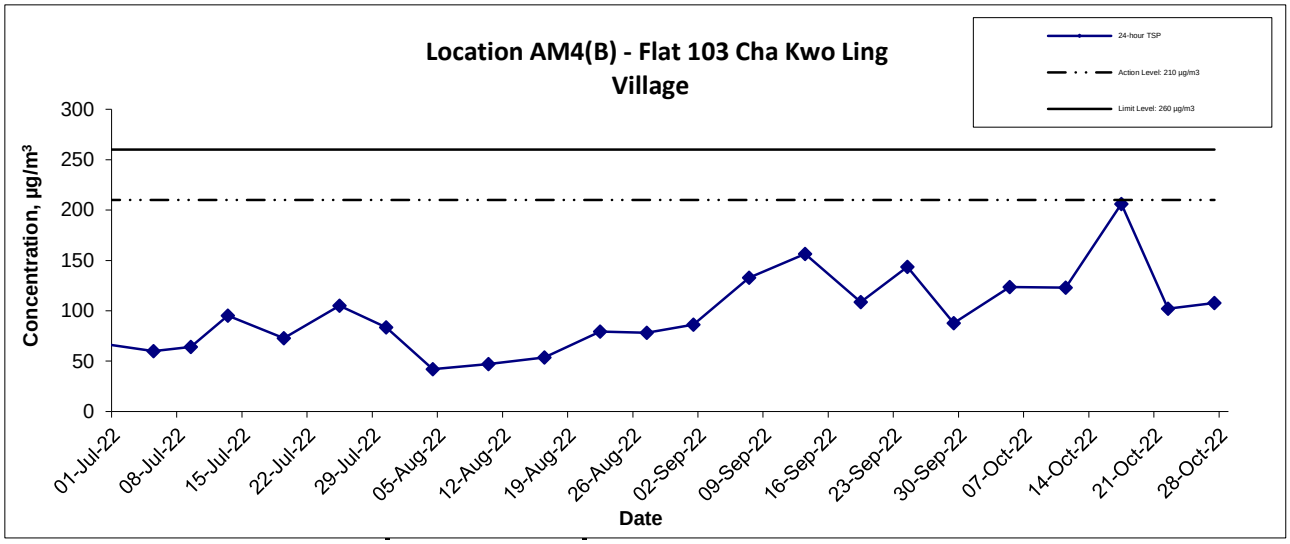
Location AM4(B) - Flat 103 Cha Kwo Ling Village

Start Date	Weather	Filter Weight (g)		Particulate	Elapse Time		Sampling	Flow Rate (m^3/min.)		Av. flow	Total vol.	Conc.
	Condition	Initial	Final	Weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m^3/min)	(m^3)	($\mu g/m^3$)
5-Oct-22	Sunny	3.3000	3.5186	0.2186	17127.9	17151.9	24.0	1.23	1.23	1.23	1766.8	123.7
11-Oct-22	Sunny	3.3109	3.5296	0.2187	17151.9	17175.9	24.0	1.24	1.23	1.24	1778.8	122.9
17-Oct-22	Fine	3.3010	3.6672	0.3662	17175.9	17199.9	24.0	1.23	1.24	1.23	1776.7	206.1
22-Oct-22	Cloudy	3.3239	3.5050	0.1811	17199.9	17223.9	24.0	1.23	1.23	1.23	1773.3	102.1
27-Oct-22	Sunny	3.3725	3.5640	0.1915	17223.9	17247.9	24.0	1.24	1.24	1.24	1778.8	107.7
											Min	102.1
											Max	206.1
											Average	132.5



Contract No. ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron Graphical Presentation of 24-hour TSP Monitoring Results	Scale N.T.S Date Oct-22	Project No. MA20003 Appendix F	CINOTECH

24-hr TSP Concentration Levels



Notes:

1) The major activitie(s) being carried out on site during the reporting period is/are presented in Section 1.10
2) The weather conditions during the reporting month are presented in Appendix C.
3) Other factors which might affect the monitoring results are presented in Section 2.18.

Contract No. ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron Graphical Presentation of 24-hour TSP Monitoring Results	Scale N.T.S Date Oct-22	Project No. MA20003 Appendix F	CINOTECH

APPENDIX G
NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

Appendix G - Noise Monitoring Results

(0700-1900 hrs on Normal Weekdays)

Location CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
6 Oct 2022	15:00	Sunny	73.4	76.3	71.3	65.5	73
12 Oct 2022	10:35	Sunny	75.3	78.7	67.3	65.5	75
18 Oct 2022	11:32	Cloudy	67.0	68.4	65.3	65.5	62
24 Oct 2022	15:39	Cloudy	71.3	72.5	69.9	65.5	70

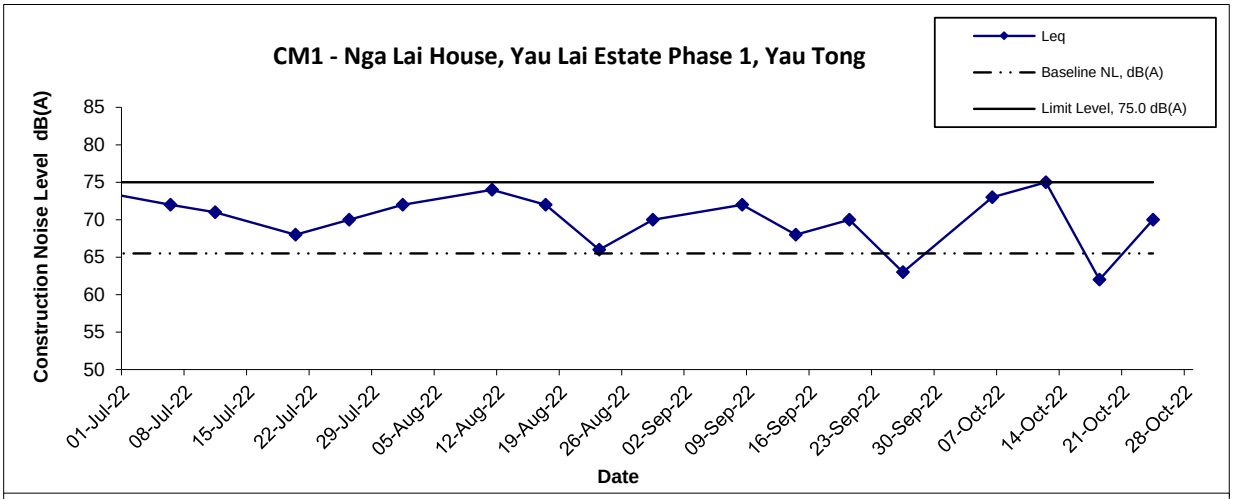
Location CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
6 Oct 2022	16:00	Sunny	73.8	76.1	70.7	63.6	73
12 Oct 2022	11:20	Sunny	67.7	69.1	65.8	63.6	66
18 Oct 2022	22:50	Cloudy	73.7	77.1	68.2	63.6	73
24 Oct 2022	14:59	Cloudy	72.8	74.7	70.5	63.6	72

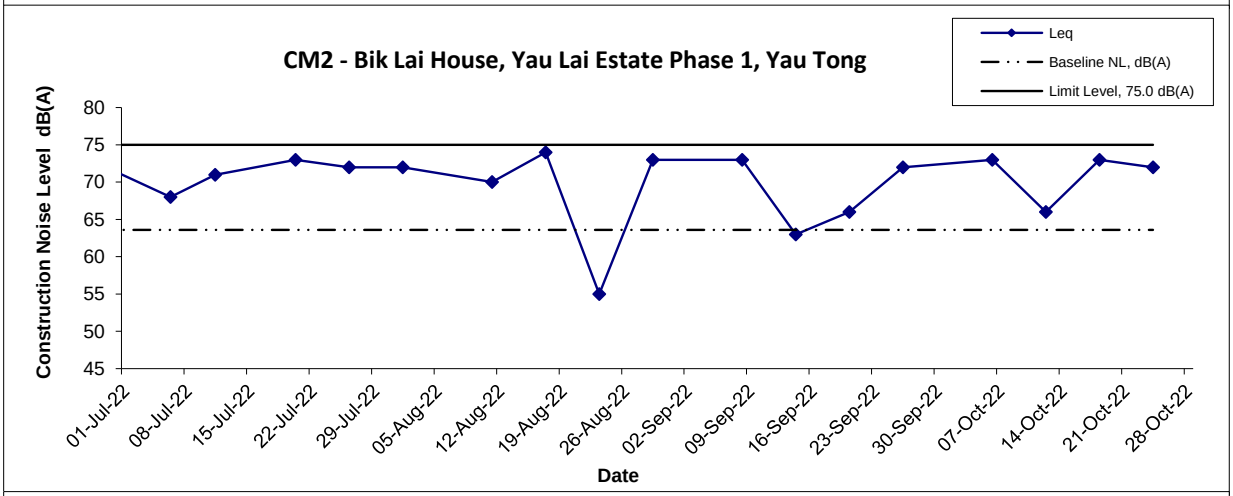
Location CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
6 Oct 2022	14:00	Sunny	71.1	73.6	70.2	65.6	70
12 Oct 2022	9:50	Sunny	70.3	72.1	68.1	65.6	69
18 Oct 2022	10:05	Cloudy	70.7	73.0	67.4	65.6	69
24 Oct 2022	14:13	Cloudy	71.8	73.4	70.1	65.6	71

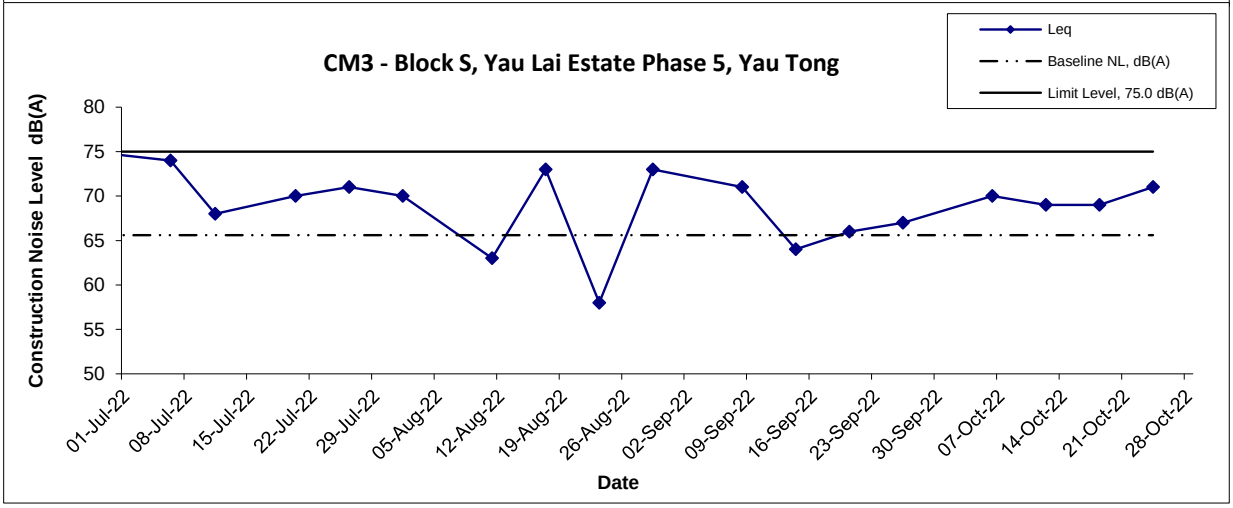
Location CM4 - Tin Hau Temple, Cha Kwo Ling							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
6 Oct 2022	9:00	Sunny	62.6	65.5	58.8	62.0	54
12 Oct 2022	13:44	Sunny	59.7	61.7	55.5	62.0	60 Measured ≦ Baseline
18 Oct 2022	13:32	Sunny	67.3	69.3	59.3	62.0	66
24 Oct 2022	10:35	Cloudy	72.7	74.6	69.2	62.0	72

Location CM5 - CCC Kei Faat Primary School, Yau Tong							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
6 Oct 2022	13:00	Sunny	68.4	70.4	65.6	68.2	55
12 Oct 2022	9:10	Sunny	67.2	69.2	64.1	68.2	67 Measured ≦ Baseline
18 Oct 2022	9:20	Cloudy	67.0	69.3	63.7	68.2	67 Measured ≦ Baseline
24 Oct 2022	13:30	Cloudy	68.8	71.2	64.9	68.2	60

Noise Levels



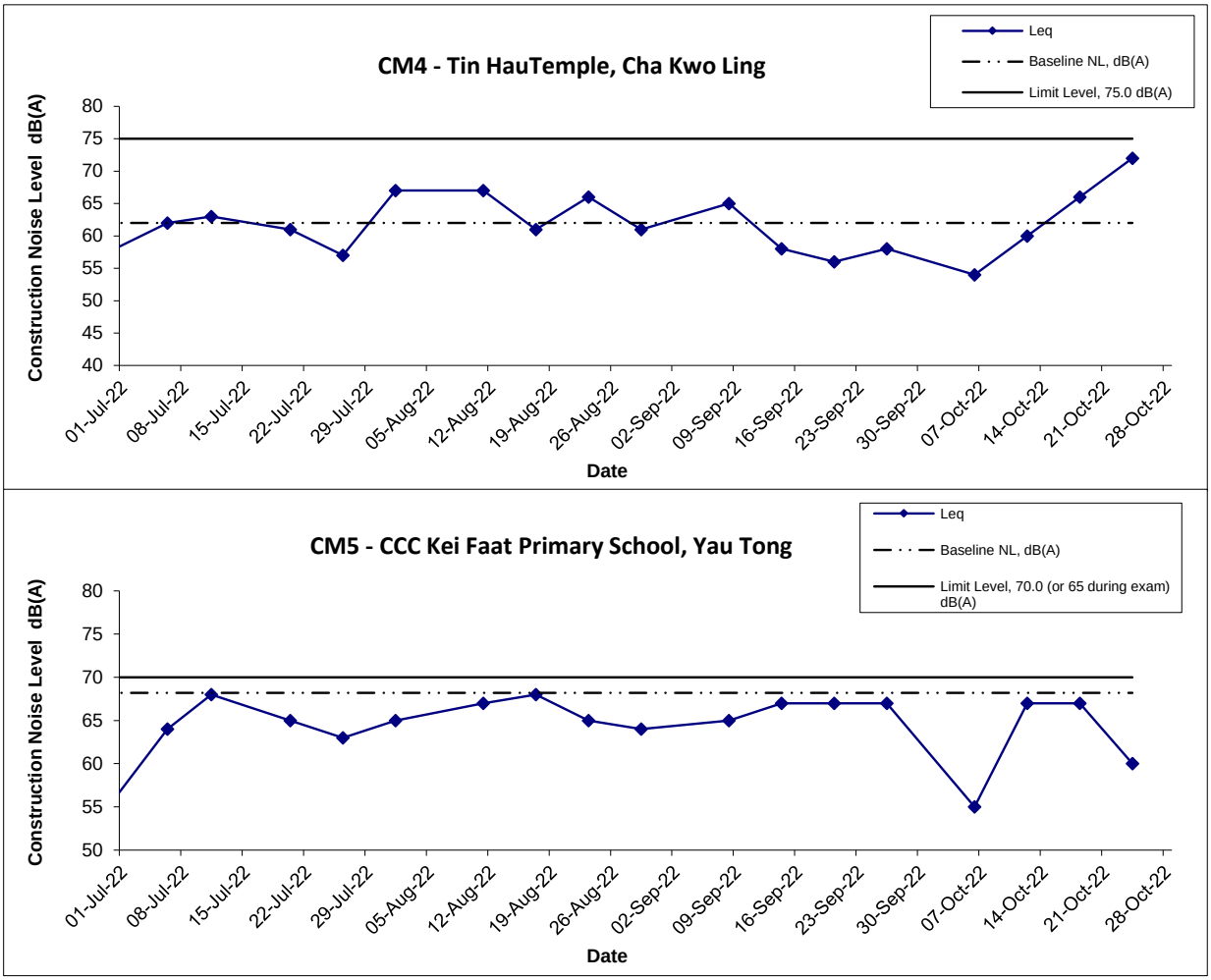




Title	Scale	Project
Contract No. ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron Graphical Presentation of Construction Noise Monitoring Results	N.T.S	No. MA20003
	Date Oct 22	Appendix G

CINOTECH

Noise Levels



Notes:

1) The major activitie(s) being carried out on site during the reporting period is/are presented in Section 1.10
2) The weather conditions during the reporting month are presented in Appendix C.
3) Other factors which might affect the monitoring results are presented in Section 3.13.

Title	Scale	Project
Contract No. ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron Graphical Presentation of Construction Noise Monitoring Results	N.T.S	No. MA20003
	Date: Oct 22	Appendix: G

APPENDIX H
WASTE GENERATION IN THE REPORTING MONTH

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

Name of Department: CEDD

Monthly Summary Waste Flow Table for 2022 (CKL)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	a.Total Quantity Generated (a=c+d+e)	b. Hard Rock and Large Broken Concrete	c. Reused in the Contract	d. Reused in Other Projects	e. Disposed as Public Fill	f. Imported Fill	g. Metals	h. Paper / Cardboard Packaging	i. Plastics	j. Chemical Waste	k. Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
January	4.615	4.615	0.000	4.615	0.000	0.000	0.000	0.000	0.000	0.000	0.031
February	1.374	1.374	0.000	1.374	0.000	0.000	0.000	0.000	0.000	0.000	0.005
March	2.227	2.227	0.000	2.227	0.000	0.000	0.000	0.000	0.000	0.000	0.009
April	2.249	2.249	0.000	2.249	0.000	0.000	0.000	0.000	0.000	0.000	0.019
May	4.334	4.334	0.000	4.334	0.000	0.000	0.000	0.000	0.000	3.200	0.024
June	3.429	3.429	0.000	3.429	0.000	0.000	0.000	0.000	0.000	0.000	0.026
Sub-total	18.228	18.228	0.000	18.228	0.000	0.000	0.000	0.000	0.000	3.200	0.114
July	3.158	3.158	0.000	3.158	0.000	0.000	0.000	0.000	0.000	0.000	0.019
August	4.160	4.160	0.000	4.160	0.000	0.000	0.000	0.000	0.000	3.810	0.021
September	4.112	4.112	0.000	4.112	0.000	0.000	0.000	0.000	0.000	0.000	0.021
October	4.206	4.206	0.000	4.206	0.000	0.000	0.000	0.000	0.000	0.000	0.021
November											
December											
Total	33.864	33.864	0.000	33.864	0.000	0.000	0.000	0.000	0.000	7.010	0.196

Monthly Summary Waste Flow Table

Notes:

(1)The performance targets are given in ER Appendix 8I Clause 14 and the EM&A Manual(s).

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

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

(4)The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m3. (ER Part 8 Clause 8.8.5 (d) (ii) refers).

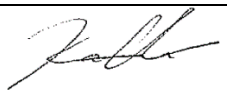
APPENDIX I
SITE AUDIT SUMMARY

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	221006
Date	6 October 2022 (Thursday)
Time	09:20 – 12:00

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

Ref. No.	Remarks/Observations	Related Item No.
221006 – R1	***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*** • Drip tray should be provided to prevent leaked oil from entering drainage system. ***F. Visual and Landscape*** • No environmental deficiency was identified during site inspection. ***G. Permits/Licences*** • No environmental deficiency was identified during site inspection. ***H. Marine Ecology*** • No environmental deficiency was identified during site inspection. ***I. Others*** • Follow up on the previous session (Ref No.:220929), no major environmental deficiency was identified.	*E9*

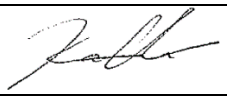
	Name	Signature	Date
Recorded by	Alex Ng	Alex NG	6 October 2022
Checked by	Karina Chan		7 October 2022

Inspection Information

Checklist Reference Number	221013
Date	13 October 2022 (Thursday)
Time	09:20 – 12:00

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

Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality • No environmental deficiency was identified during site inspection. ***C. Air Quality*** • No environmental deficiency was identified during site inspection. ***D. Construction Noise Impact*** • No environmental deficiency was identified during site inspection. ***E. Waste/Chemical Management*** • No environmental deficiency was identified during site inspection. ***F. Visual and Landscape*** • No environmental deficiency was identified during site inspection. ***G. Permits/Licences*** • No environmental deficiency was identified during site inspection. ***H. Marine Ecology*** • No environmental deficiency was identified during site inspection. ***I. Others*** • Follow up on the previous session (Ref No.:221006), no major environmental deficiency was identified.	

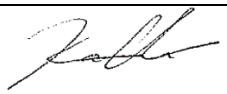
	Name	Signature	Date
Recorded by	Alex Ng	Alex NG	13 October 2022
Checked by	Karina Chan		14 October 2022

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	221020
Date	20 October 2022 (Thursday)
Time	09:20 – 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.	
221020 – R2	***C. Air Quality*** • Unclear NRMM label was observed on the vehicle.	*C21*
	D. Construction Noise Impact • No environmental deficiency was identified during site inspection.	
221020 – R1	***E. Waste/Chemical Management*** • The waste oil was observed on the floor.	*E8*
	F. Visual and Landscape • No environmental deficiency was identified during site inspection.	
	G. Permits/Licences • No environmental deficiency was identified during site inspection.	
	H. Marine Ecology • No environmental deficiency was identified during site inspection.	
	I. Others • Follow up on the previous session (Ref No.:221013), no major environmental deficiency was identified.	

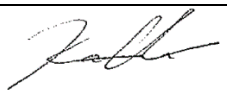
	Name	Signature	Date
Recorded by	Alex Ng	Alex NG	20 October 2022
Checked by	Karina Chan		21 October 2022

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	221027
Date	27 October 2022 (Thursday)
Time	09:20 – 12:00

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

Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality • No environmental deficiency was identified during site inspection. ***C. Air Quality*** • No environmental deficiency was identified during site inspection. ***D. Construction Noise Impact*** • No environmental deficiency was identified during site inspection. ***E. Waste/Chemical Management*** • No environmental deficiency was identified during site inspection. ***F. Visual and Landscape*** • No environmental deficiency was identified during site inspection. ***G. Permits/Licences*** • No environmental deficiency was identified during site inspection. ***H. Marine Ecology*** • No environmental deficiency was identified during site inspection. ***I. Others*** • Follow up on the previous session (Ref No.:221020), no major environmental deficiency was identified.	

	Name	Signature	Date
Recorded by	Alex Ng	Alex NG	27 October 2022
Checked by	Karina Chan		28 October 2022

APPENDIX J
ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

App J - ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

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

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

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
	Valid No-road Mobile Machinery (NRMM) labels should be provided to regulated machines	Reduce air pollution emission from construction vehicles and plants	--			APCO
Noise Mitigation Plan	Use of Temporary Noise Barriers (i.e Acoustic box, SilentUp and etc.) or Full Enclosure for PME according to the approved Noise Mitigation Plan	To minimize construction noise impact arising from the Project at the affected NSRs	Contractor	Work Sites	Construction phase	EIAO-TM, NCO
S4.9	**Good Site Practice** • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program • Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program. • Mobile plant, if any, should be sited as far away from NSRs as possible. • Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. • Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs. • Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.	To minimize construction noise impact arising from the Project at the affected NSRs	Project Proponent	Work sites	Construction Period	EIAO-TM, NCO
S4.9	Scheduling of Construction Works during School Examination Period	To minimize construction noise impact arising from the Project at the affected NSRs	Contractor	Work site near school	Construction phase	EIAO-TM, NCO
Water Quality Impact (Construction Phase)						
S5.6.24	The dry density of filling material for the TKO-LT Tunnel reclamation should be 1,900kg/m^3, with fine content of 25% or less	Control potential impacts from filling activities	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO
S5.8.1	Non-dredged method by constructing steel cellular caisson structure with stone column shall be adopted for construction of seawall foundation. During the stone column installation (also including the installation of steel cellular caisson), silt curtain shall be employed around the active stone column installation points.	Control potential impacts from filling activities	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO
S5.8.2	Formation of seawall enclosing the reclamation for Road P2 (notwithstanding an opening of about 50m for marine access) shall be completed prior to the filling activities. The seawall opening of about 50m wide for marine access shall be selected at a location as indicatively shown in Appendix 5.10. No more than 3 filling barge trips per day shall be made with a maximum daily rate of 3,000m^3 (i.e. 1,000 m^3 per trip) for the filling operation at the reclamation area for Road P2. All filling works shall be carried out behind the seawall with the use of single silt curtain at the marine access.	Control potential impacts from filling activities	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO
Silt Curtain Deployment Plan	• Silt curtains should be deployed properly to surround the works area. • Maintenance of silt curtain should be provided. • Sufficient stock of silt curtain should be provided on site.	Control potential impacts from marine woroks	Contractor	NE/2015/01	Construction stage	EIAO

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
S5.8.3	Other good site practices should be undertaken during filling operations include: • all marine works should adopt the environmental friendly construction methods as far as practically possible including the use of cofferdams to cover the construction area to separate the construction works from the sea; • floating single silt curtain shall be employed for all marine works; • all vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; • all hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; • excess material shall be cleaned from the decks and exposed fittings of barges before the vessel is moved; • adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action; • loading of barges and hoppers should be controlled to prevent splashing of filling 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; • any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes; • construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site or dumping grounds; and • before commencement of the reclamation works, the holder of Environmental Permit has to submit plans showing the phased construction of the reclamation, design and operation of the silt curtain.	Control potential impacts from filling activities and marine-based construction	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO, Waste Disposal Ordinance (WDO)
S5.8.4	Site specific mitigation plan for reclamation areas using public fill materials should be submitted for EPD agreement before commencement of construction phase with due consideration of good site practices.	Control potential impacts from filling activities and marine based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
ERR S5.6.1	To minimize water quality impact arising from the dredging and filling works for Reclamation for Road P2, the following mitigation measures shall be implemented: - Before carrying out any dredging and underwater filling works, a temporary barrier shall first be constructed to a height above the high water mark to completely enclose the works site (without any opening at the barrier wall) - The temporary barrier fully enclosing the dredging and underwater filling works site shall not be removed before completion of all dredging and underwater filling works. - Water quality sampling and testing shall be carried out to demonstrate that the water quality inside the enclosed barrier is comparable to the ambient or baseline levels prior to the removal of the fully enclosed barrier. - Silt curtains shall be deployed for the installation and removal of the temporary barrier and at the double water gates marine access opening during its operation.	Control potential impacts from dredging and filling works for Reclamation for Road P2	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.5	It is important that appropriate measures are implemented to control runoff and drainage and prevent high loading of SS from entering the marine environment. Proper site management is essential to minimise surface water runoff, soil erosion and sewage effluents.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.6	Any practical options for the diversion and realignment of drainage should comply with both engineering and environmental requirements in order to ensure adequate hydraulic capacity of all drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Design Stage and Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO, TM-DSS

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
S5.8.7	Construction site runoff and drainage should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). Good housekeeping and stormwater best management practices, as detailed in below, should be implemented to ensure that all construction runoff complies with WPCO standards and no unacceptable impact on the WSRs arises due to construction of the TKO-LT Tunnel. All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the corresponding WCZ under the TM-DSS.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO, TM-DSS
S5.8.8 S5.8.8 S5.8.8	Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include: • use of sediment traps; and • adequate maintenance of drainage systems to prevent flooding and overflow.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.9	Construction site should be provided with adequately designed perimeter channel and pretreatment facilities and proper maintenance. The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.10	Ideally, construction works should be programmed to minimise surface excavation works during the rainy season (April to September). All exposed earth areas should be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.11	Sedimentation tanks of sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8m^3 capacity, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity is flexible and able to handle multiple inputs from a variety of sources and particularly suited to applications where the influent is pumped.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.12	Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.13	Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.14	Open stockpiles of construction materials (for examples, aggregates, sand and fill material) of more than 50m^3 should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.15	Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.16	Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
S5.8.17	Oil interceptors should be provided in the drainage system and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.18	All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and located wheel washing bay should be provided at every site exit, and washwater should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheelwash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.19	Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.20	It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There shall be no direct discharge of effluent from the site into the sea.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.21	All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment control measures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage should be reinstated to its original condition when the construction work has finished or the temporary diversion is no longer required.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.22	All fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.23	Minimum distances of 100m shall be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes during construction and operational phases	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO, TMDSS
S5.8.24	Under normal circumstances, groundwater pumped out of wells, etc. for the lowering of ground water level in basement or foundation construction, and groundwater seepage pumped out of tunnels or caverns under construction should be discharged into storm drains after the removal of silt in silt removal facilities.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.25 - S5.8.27 & Table 5.18	Grouting would be adopted as measure to reduce the groundwater inflow into the tunnel. During the tunnel excavation, the inflow rate of groundwater into the tunnel will be measured during the excavation. The groundwater levels above the tunnel will also be monitored by piezometers. If the inflow rate exceeds the pre-determined groundwater control criteria or the groundwater drawdown exceeds the required limit, pre-excavation grouting will be required to reduce the groundwater inflow. No significant change of groundwater levels would therefore be expected. Any chemicals/ foaming agents which would be entrained to the groundwater should be biodegradable and non-toxic throughout the tunnel construction. Potential groundwater quality impact would be minimal as the used material is non-toxic and biodegradable. No adverse groundwater quality would therefore be expected. Prescriptive measures in the form of an Action Plan with pre-emptive and re-active to preserve the groundwater levels at all times during the tunnel construction are set out in Table 5.18.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO, Buildings Ordinance
S5.8.28	Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be recirculated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Design Stage and Construction Phas	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.29 - S5.8.31	Wastewater generated from the washing down of mixing trucks and drum mixers and similar equipment should whenever practicable be recycled. The discharge of wastewater should be kept to a minimum. To prevent pollution from wastewater overflow, the pump sump of any water recycling system should be provided with an online standby pump of adequate capacity and with automatic alternating devices. Under normal circumstances, surplus wastewater may be discharged into foul sewers after treatment in silt removal and pH adjustment facilities (to within the pH range of 6 to 10). Disposal of wastewater into storm drains will require more elaborate treatment.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO

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S5.8.32	All vehicles and plant should be cleaned before they leave a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfall to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.33	Bentonite slurries used in diaphragm wall and borepile construction should be reconditioned and reused wherever practicable. If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil grounds subject to obtaining a marine dumping licence from EPD on a case-by-case basis.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.34	If the used bentonite slurry is intended to be disposed of through the public drainage system, it should be treated to the respective effluent standards applicable to foul sewer, storm drains or the receiving waters as set out in the WPCO Technical Memorandum on Effluent Standards.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.35	Water used in water testing to check leakage of structures and pipes should be reused for other purposes as far as practicable. Surplus unpolluted water could be discharged into storm drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.36	Sterilization is commonly accomplished by chlorination. Specific advice from EPD should be sought during the design stage of the works with regard to the disposal of the sterilizing water. The sterilizing water should be reused wherever practicable.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Design Stage and Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.37	Before commencing any demolition works, all sewer and drainage connections should be sealed to prevent building debris, soil, sand etc. from entering public sewers/drains.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.38	Wastewater generated from building construction activities including concreting, plastering, internal decoration, cleaning of works and similar activities should not be discharged into the stormwater drainage system. If the wastewater is to be discharged into foul sewers, it should undergo the removal of settleable solids in a silt removal facility, and pH adjustment as necessary	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.39	Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10 before discharging into foul sewers. If there is no public foul sewer in the vicinity, the neutralized wastewater should be tinkered off site for disposal into foul sewers or treated to a standard acceptable to storm drains and the receiving waters	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO

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S5.8.40	Wastewater collected from canteen kitchens, including that from basins, sinks and floor drains, should be discharged into foul sewer via grease traps capable of providing at least 20 minutes retention during peak flow.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.41	Drainage serving an open oil filling point should be connected to storm drains via a petrol interceptor with peak storm bypass.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.42	Vehicle and plant servicing areas, vehicle wash bays and lubrication bays should as far as possible be located within roofed areas. The drainage in these covered areas should be connected to foul sewers via a petrol interceptor. Oil leakage or spillage should be contained and cleaned up immediately. Waste oil should be collected and stored for recycling or disposal in accordance with the Waste Disposal Ordinance.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.43	Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage may need to be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor shall also be responsible for waste disposal and maintenance practices.	Control potential impacts from construction site runoff and land-based construction	CEDD's Contractors	Work site	Construction Phase	ProPECC PN 1/94, EIAOTM, WPCO
S5.8.44	Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	Control potential impacts from accidental spillage of chemicals	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO, WDO
S5.8.45	Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	Control potential impacts from accidental spillage of chemicals	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO
S5.8.46	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The "Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes" published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: • 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 • storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.	Control potential impacts from accidental spillage of chemicals	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO, WDO
S5.8.47	Collection and removal of floating refuse should be performed at regular intervals on a daily basis. The contractor should be responsible for keeping the water within the site boundary and the neighbouring water free from rubbish.	Control potential impacts from floating refuse and debris	CEDD's Contractors	Work site	Construction Phase	EIAO-TM, WPCO,
Ecological Impact						
S6.8.4	**Measures to Minimize Disturbance** • Use of Quiet Mechanical Plant during the construction phase should be adopted wherever possible. • Hoarding or fencing should be erected around the works area boundaries during the construction phase. The hoarding would screen adjacent habitats from construction phase activities, reduce noise disturbance to these habitats and also to restrict access to habitats adjacent to works areas by site workers; • Regular spraying of haul roads to minimize impacts of dust deposition on adjacent vegetation and habitats during the construction activities	Minimize noise, human and traffic disturbance to terrestrial habitat and wildlife; and reduce dust generation	Design Team / Contractor	Land-based works are	Construction Phase	N/A

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S6.8.5	**Standard Good Site Practice** • Placement of equipment or stockpile in designated works areas and access routes selected on existing disturbed land to minimise disturbance to natural habitats. • Construction activities should be restricted to works areas that should be clearly demarcated. The works areas should be reinstated after completion of the works. • Waste skips should be provided to collect general refuse and construction wastes. The wastes should be properly disposed off-site in a timely manner. • General drainage arrangements should include sediment and oil traps to collect and control construction site run-off. • Open burning on works sites is illegal, and should be strictly prohibited. • Measures should also be put into place so that litter, fuel and solvents do not enter the nearby watercourses.	Reduce disturbance to surrounding habitats	Contractor	Land-based works are	Construction Phase	N/A
S6.8.6	**Measure to Minimize Groundwater Inflow** • The drained tunnel construction method with groundwater inflow control measures would generally be adopted. • During the tunnel excavation, pre-excavation grouting could be adopted to reduce the groundwater inflow and ensure that the tunnel would meet the long term water tightness requirements.	Minimize groundwater inflow	Contractor	Tunnel	Construction Phase	N/A
S6.8.8	**Measure to Minimize Impact on Corals** <u>Coral translocation</u> • It is recommended to translocate the affected coral colonies, except the locally common *Oulastrea crispata* , within the reclamation area and bridge footprint to the other suitable locations as far as practicable. • The coral translocation should be conducted during the winter months (November-March) in order to avoid disturbance during their spawning period (i.e. July to October). • A detailed coral translocation plan with a description on the methodology for pretranslocation coral survey, translocation methodology, identification/proposal of coral recipient site, monitoring methodology for posttranslocation should be prepared during the detailed design stage. • The coral translocation plan should be subject to approval by relevant authorities (e.g. EPD and AFCD) before commencement of the coral translocation. All the translocation exercises should be conducted by experienced marine ecologist(s) who is/are approved by AFCD prior to commencement of coral translocation. <u>Post translocation Monitoring</u> • A coral monitoring programme is recommended to assess any adverse and unacceptable impacts to the translocated coral communities • Information gathered during each posttranslocation monitoring survey should include observations on the presence, survival, health condition and growth of the translocated coral colonies. These parameters should then be compared with the baseline results collected from the pre-translocation survey.	Minimize loss of coral	Design team, contractor, project operator	Within reclamation areas and pier footprint	Prior construction	N/A

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S6.8.9 S6.8.10	**Measure to Control Water Quality Impact** • Deployment of silt curtains around the active stone column installation points, opening of newly installed seawall and marine works area. • Diverting of the site runoff to silt trap facilities before discharging into storm drain; • Proper waste and dumping management; and • Standard good-site practice for land-based construction.	Control water quality impact, especially on suspended solid level; minimize the contamination of wastewater discharge, accidental chemical spillage and construction site runoff to the receiving water bodies	Design Team, contractor	Marine and landbased works area	Construction phase	WQO
S6.8.11	**Compensation for Vegetation Loss** • Felling of mature trees should be compensated by planting of standard or heavy standard trees within or in vicinity of the affected area as far as practicable. Such compensatory planting for trees should be provided with at least a 1:1 ratio. In addition, vegetation at the temporarily affected area should be reinstated with species similar to the existing condition.	Compensate for the vegetation loss	Design Team, contractor	Land-based works area	Construction phase	N/A
Fisheries Impact						
S7.7.3	**Measure to Control Water Quality Impact** • Deployment of silt curtains around the active stone column installation points, opening of newly installed seawall and marine works area.	Control water quality impact, especially on suspended solid level	Design Team / Contractor	Marine work area	Construction phase	WQO
Waste Management (Construction Phase)						
S8.6.3	**Good Site Practices and Waste Reduction Measures** • Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; • Training of site personnel in site cleanliness, proper waste management and chemical handling procedures; • Provision of sufficient waste disposal points and regular collection of waste; • Appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; and • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.	To reduce waste management impacts	Contractor	All work sites	Construction Phase	Waste Disposal Ordinance (Cap. 354) Land (Miscellaneous Provisions) Ordinance (Cap. 28)
S8.6.4	***Good Site Practices and Waste Reduction Measures (con't)*** • Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; • Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the workforce; • Proper storage and site practices to minimize the potential for damage or contamination of construction materials; and • Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste.	To achieve waste reduction	Contractor	All work sites	Construction Phase	Waste Disposal Ordinance (Cap. 354) Land (Miscellaneous Provisions) Ordinance (Cap. 28)
S8.6.5	**Good Site Practices and Waste Reduction Measures (con't)** The Contractor shall prepare and implement a WMP as part of the EMP in accordance with ETWB TCW No. 19/2005 which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities. Such a management plan should incorporate site specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP should be submitted to the Engineer for approval. The Contractor should implement the waste management practices in the EMP throughout the construction stage of the Project. The EMP should be reviewed regularly and updated by the Contractor.	To achieve waste reduction	Contractor	All work sites	Construction Phase	ETWB TCW No. 19/2005

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S8.6.6	**Good Site Practices and Waste Reduction Measures (con't)** • C&D materials would be reused in the project and other local concurrent projects as far as possible.	To achieve waste reduction	Contractor	All work sites	Construction Phase	ETWB TCW No. 19/2005
S8.6.7	**Storage, Collection and Transportation of Waste** Should any temporary storage or stockpiling of waste is required, recommendations to minimize the impacts include: • Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution; • Maintain and clean storage areas routinely; • Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and • Different locations should be designated to stockpile each material to enhance reuse.	To minimize potential adverse environmental impacts arising from waste storage	Contractor	All work sites	Construction Phase	ETWB TCW No. 19/2005
S8.6.8/ Waste Management Plan	**Storage, Collection and Transportation of Waste (con't)** • Remove waste in timely manner; • Waste collectors should only collect wastes prescribed by their permits; • Impacts during transportation, such as dust and odour, should be mitigated by the use of covered trucks or in enclosed containers; • Obtain relevant waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28); • Waste should be disposed of at licensed waste disposal facilities/ alternative disposal ground approved by RE and DEP; and • Maintain records of quantities of waste generated, recycled and disposed.	To minimize potential adverse environmental impacts arising from waste collection and disposal	Contractor	All work sites	Construction Phase	ETWB TCW No. 19/2005
S8.6.9/ Waste Management Plan	**Storage, Collection and Transportation of Waste (con't)** • Implementation of trip ticket system with reference to DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials, to monitor disposal of waste and to control fly-tipping at PFRFs or landfills. A recording system for the amount of waste generated, recycled and disposed (including disposal sites) should be proposed.	To minimize potential adverse environmental impacts arising from waste collection and disposal	Contractor	All work sites	Construction Phase	DEVB TCW No. 6/2010
S8.6.11 - S8.6.13/ Waste Management Plan	**Sorting of C&D Materials** • Sorting to be performed to recover the inert materials, reusable and recyclable materials before disposal off-site. • Specific areas shall be provided by the Contractors for sorting and to provide temporary storage areas for the sorted materials. • The C&D materials should at least be segregated into inert and non-inert materials, in which the inert portion could be reused and recycled in the reclamation as far as practicable before delivery to PFRFs. While opportunities for reusing the non-inert portion should be investigated before disposal of at designated landfills	To minimize potential adverse environmental	Contractor	All work sites	Construction Phase	DEVB TCW No. 6/2010 ETWB TCW No. 33/2002 ETWB TCW No. 19/2005
S8.6.17 – S8.6.20	**Sediments (con't)** • Requirements of the Air Pollution Control (Construction Dust) Regulation, where relevant, shall be adhered to during boring, excavation, transportation and disposal of sediments or cement stabilization of sediment. • A treatment area should be confined for carrying out the cement stabilization mixing and temporary stockpile. The area should be designed to prevent leachate from entering the ground. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO). • In order to minimise the potential odour / dust emissions during boring, excavation and transportation of the sediment, the excavated sediments should be kept wet during excavation/boring and should be properly covered when placed on barges/trucks. Loading of the excavated sediment to the barge should be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water. • In order to minimise the exposure to contaminated materials, workers should, when necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities should also be provided on site.	To determine the best handling and treatment of sediment	Contractor	All works areas with sediments concern	Construction Phase	ETWB TCW No. 19/2005

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

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S8.6.27/ Waste Management Plan	**General Refuse** • General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	To ensure proper management of general refuse	Contractor	All works sites	Construction Phase	Public Health and Municipal Services Ordinance (Cap. 132)
Impact on Cultural Heritage (Construction Phase)						
S9.6.4	**Dust and visual impacts** • Temporarily fenced off buffer zone with allowance for public access (minimum 1 m) should be provided; • The open yard in front of the temple should be kept as usual for annual Tin Hau festival; • Monitoring of vibration impacts should be conducted when the construction works are less than 100m from the temple.	To prevent dust and visual impacts	Contractors	Work areas	Construction Phase	EIAO; GCHIA; AMO
S9.6.4	**Indirect vibration impact** • Vibration level is suggest to be controlled within a peak particle velocity (ppv) limit of 5mm/s measured inside the historical buildings; • Monitoring of vibration should be carried out during construction phase. • Tilting and settlement monitoring should will be applied on the Cha Kwo Ling Tin Hau Temple as well. • A proposal with details for the mitigation measures and monitoring of impacts on built heritage shall be submitted to AMO for comments before commencement of work.	To prevent indirect vibration impact	Contractors	Work areas	Construction Phase	Vibration Limits on Heritage Buildings by CEDD; GCHIA; AMO.
Built Heritage Mitigation Plan	• Established Alert, Alarm and Action Level for the monitoring parameters. • To increase the instrumentation monitoring and reporting frequency. • To propose detailed action plan or contingency plan for the Engineer's approval when AAA Level is reached or exceeded.	To prevent vibration impacts	NE/2015/01	Tin Hau Temple	Construction Phase	Vibration Limits on Heritage Buildings by CEDD; GCHIA; AMO.
Landscape and Visual Impact (Construction Phase)						
Table 10.8.1/ Landscape Mitigation Plan	CM1 - Construction area and contractor's temporary works areas to be minimised to avoid impacts on adjacent landscape.	Avoid impact on adjacent landscape areas	CEDD (via Contractor)	General	Construction planning and during construction period	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM2 - Reduction of construction period to practical minimum.	Minimise duration of impact	CEDD (via Contractor)	N/A	Construction planning	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM3 - Topsoil, where the soil material meets acceptable criteria and where practical, to be stripped and stored for re-use in the construction of the soft landscape works. The Contract Specification shall include storage and reuse of topsoil as appropriate.	To allow re-use of topsoil	CEDD (via Contractor)	General	Site clearance	As per the Particular Specification
Table 10.8.1/ Landscape Mitigation Plan	CM4 - Existing trees at boundary of site and retained trees within site boundary to be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification, under which the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in contractor's works areas. (Tree protection measures will be detailed at Tree Removal Application stage).	To minimize tree loss	CEDD (via Contractor)	As per approved Tree Removal Application(s)	Site clearance and throughout construction period	ETWB TC 3/2006 and as per tree protection measures in Particular Specification

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Table 10.8.1/ Landscape Mitigation Plan	CM5 - Trees unavoidably affected by the works shall be transplanted where practicable. Where possible, trees should be transplanted direct to permanent locations rather than temporary holding nurseries. A detailed tree transplanting specification shall be provided in the Contract Specification and sufficient time for preparation shall be allowed in the construction programme.	To maximize preservation of existing trees	CEDD (via Contractor)	As per approved Tree Removal Application(s)	Site clearance	ETWB TC 3/2006 and as per tree protection measures in Particular Specification
Table 10.8.1/ Landscape Mitigation Plan	CM6 - Advance screen planting of fast growing tree and shrub species to noise barriers and hoardings. Trees shall be capable of reaching a height >10m within 10 years.	To maximize screening of the works	CEDD (via Contractor)	At Lam Tin Interchange and edge of Road P2 landscape deck, TKO	Beginning of construction period	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM7 - Hydroseeding or sheeting of soil stockpiles with visually unobtrusive material	To reduce visual intrusion	CEDD (via Contractor)	General	Throughout construction period	As per Particular Specification
Table 10.8.1/ Landscape Mitigation Plan	CM8 - Control of night-time lighting by hooding all lights and through minimisation of night working periods.	To reduce visual intrusion	CEDD (via Contractor)	General	Throughout construction period	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM9 - Screening of works areas with hoardings with appropriate colours compatible with the surrounding area	Reduction of visual intrusion	CEDD (via Contractor)	Project site Boundary	Excretion of site hoarding	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM10 - Avoidance of excessive height and bulk of site buildings and structure	Reduction of visual intrusion and integration with environment	CEDD (via Contractor)	Built structures	Design and construction stage	N/A
Table 10.8.1/ Landscape Mitigation Plan	CM11 - Limitation of run-off into freshwater streams, ponds and sea areas	Avoidance of contamination of water courses and water bodie	CEDD (via Contractor)	TKO reclamation, TKO tunnel portal, Cha Kwo Ling roadworks	Throughout construction period	N/A
Table 10.8.1	CM12 - Minimise area of reclamation and design the edges sensitively to tie in with adjacent coastline characte	Minimise loss of Junk Bay and integration with existing coastlin	CEDD (via Contractor)	Temporary reclamation for barging points at TKO and Lam Tin and permanent reclamation for TKO Interchange slip roads and Road P2	Construction planning and reclamation stages	N/A
Landfill Gas Hazard (Design and Construction Phase)						
S11.5.9	A Safety Officer, trained in the use of gas detection equipment and landfill gas-related hazards, should be present on site throughout the groundworks phase. The Safety Officer should be provided with an intrinsically safe portable instrument, which is appropriately calibrated and able to measure the following gases in the ranges indicated below: Methane 0-100% LEL and 0100% v/v Carbon dioxide 0-100% Oxygen 0-21%	Protect the workers from landfill gas hazards	Contractor	Project sites within the Sai Tso Wan Landfill Consultation Zone	Construction phase	EPD's Landfill Gas Hazard Assessment Guidance Note

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
S11.5.10 S11.5.25	**Safety Measures** • For staff who work in, or have responsibility for "at risk" area, such as all excavation workers, supervisors and engineers working within the Consultation Zone, should receive appropriate training on working in areas susceptible to landfill gas, fire and explosion hazards. • An excavation procedure or code of practice to minimize landfill gas related risk should be devised and carried out. • No worker should be allowed to work alone at any time in or near to any excavation. At least one other worker should be available to assist with a rescue if needed. • Smoking, naked flames and all other sources of ignition should be prohibited within 15m of any excavation or ground-level confined space. "No smoking" and "No naked flame" notices should be posted prominently on the construction site and, if necessary, special areas should be designed for smoking. • Welding, flame-cutting or other hot works should be confined to open areas at least 15m from any trench or excavation. • Welding, flame-cutting or other hot works may only be carried out in trenches or confined spaces when controlled by a "permit to work" procedure, properly authorized by the Safety Officer (or, in the case of small developments, other appropriately qualified person). • The permit to work procedure should set down clearly the requirements for continuous monitoring for methane, carbon dioxide and oxygen throughout the period during which the hot works are in progress. The procedure should also require the presence of an appropriately qualified person, in attendance outside the 'confined area', who should be responsible for reviewing the gas measurements as they are made, and who should have executive responsibility for suspending the work in the event of unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise should be permitted to carry out hot works in confined areas. • Where there are any temporary site offices, or any other buildings located within the Sai Tso Wan Landfill Consultation Zone which have enclosed spaces with the capacity to accumulate landfill gas, then they should either be located in an area which has been proven to be free of landfill gas (by survey using portable gas detectors); or be raised clear of the ground by a minimum of 500mm. This aims to create a clear void under the structure which is ventilated by natural air movement such that emission of gas from the ground are mixed and diluted by air. • Any electrical equipment, such as motors and extension cords, should be intrinsically safe. During piping assembly or conduiting construction, all valves/seals should be closed immediately after installation. As construction progresses, all valves/seals should be closed to prevent the migration of gases through the pipeline/conduit. All piping /conduiting should be capped at the end of each working day. • During construction, adequate fire extinguishing equipment, fire-resistant clothing and breathing apparatus (BA) sets should be made available on site. • Fire drills should be organized at not less than six monthly intervals.	Protect the workers from landfill gas hazards	Contractor	Project sites within the Sai Tso Wan Landfill Consultation Zone	Construction phase	EPD's Landfill Gas Hazard Assessment Guidance Note Labour Department's Code of Practice for Safety and Health at Work in Confined Space

EIA Ref. / EP Submission	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?
S11.5.10 S11.5.25	• The contractor should formulate a health and safety policy, standards and instructions for site personnel to follow. • All personnel who work on the site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of excavations. Safety notices (in Chinese and English) should be posted at prominent position around the site warning danger of the potential hazards. • Service runs within the Consultation Zone should be designated as "special routes"; utilities companies should be informed of this and precautionary measures should be implemented. Precautionary measures should include ensuring that staff members are aware of the potential hazards of working in confined spaces such as manholes and service chambers, and that appropriate monitoring procedures are in place to prevent hazards due to asphyxiating atmospheres in confined spaces. Detailed guidance on entry into confined spaces is given in Code of Practice on Safety and Health at Work in Confined Spaces (Labour Department, Hong Kong). • Periodically during ground-works construction within the 250m Consultation Zone, the works area should be monitored for methane, carbon dioxide and oxygen using appropriately calibrated portable gas detection equipment. The monitoring frequency and areas to be monitored should be set down prior to commencement of ground-works either by the Safety Officer or an approved and appropriately qualified person.					
S11.5.26 - S11.5.31	**Monitoring** ● Routine monitoring should be carried out in all excavations, manholes, chambers, relocation of monitoring wells and any other confined spaces that may have been created. All measurements in excavations should be made with the extended monitoring tube located not more than 10 mm from the exposed ground surface. Monitoring should be performed properly to make sure that the area is free of landfill gas before any man enters into the area. ● For excavations **deeper than 1m**, measurements should be carried out: • at the ground surface before excavation commences;- • immediately before any worker enters the excavation; • at the beginning of each working day for the entire period the excavation remains open; and • periodically throughout the working day whilst workers are in the excavation. ● For excavations **between 300mm and 1m deep**, measurements should be carried out: • directly after the excavation has been completed; and • periodically whilst the excavation remains open. ● For excavations less than 300mm deep, monitoring may be omitted, at the discretion of the Safety Officer or other appropriately qualified person. ● Depending on the results of the measurements, actions required will vary and should be set down by the Safety Officer or other appropriately qualified person. ● The exact frequency of monitoring should be determined prior to the commencement of works, but should be at least once per day, and be carried out by a suitably qualified or qualified person before starting the work of the day. Measurements shall be recorded and kept as a record of safe working conditions with copies of the site diary and submitted to the Engineer for approval. The Contractor may elect to carry out monitoring via an automated monitoring system.	Protect the workers from landfill gas hazards	Contractor	Project sites within the Sai Tso Wan Landfill Consultation Zone	Construction phase	EPD's Landfill Gas Hazard Assessment Guidance Note
S11.5.32	The hazards from landfill gas during the construction stage within the Sai Tso Wan Landfill Consultation Zone should be minimized by suitable precautionary measures recommended in Chapter 8 of the Landfill Gas Hazard Assessment Guidance Note.	construction stage within the Sai Tso Wan Protect the workers from landfill gas hazards	Contractor	Project sites within the Sai Tso Wan Landfill Consultation Zone	Construction phase	EPD's Landfill Gas Hazard Assessment Guidance Note

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

Key:
- ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit
- ✕ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit
- # Follow up action will be reported in next reporting month
- ✻ Non-compliance of mitigation measure
- · Non-compliance but improved by the contractor

EIA Ref	Recommended Mitigation Measures	Details of Reminder/Observation	Recorded Date	Status
Air Quality				
--	Damaged NRMM label was observed on the PME	The damaged NRMM label should be replaced by the valid NRMM label	**20 Oct 2022**	✓
Construction Noise Impact				
--	--	--		
Water Quality Impact				
--	--	--		
Ecological Impact				
--	--	--		
Fisheries Impact				
--	--	--		
Waste Management				
S8.6.8	Refuse should be removed regularly	The waste was accumulated in the bin	**29 Sep 2022**	✓
--	Drip tray should be provided to prevent leaked oil	Drip tray was not observed around the oil container	**29 Sep 2022**	✓
--	Drip tray should be provided to prevent leaked oil	Drip tray was not observed around the oil container	**6 Oct 2022**	✓
S8.6.3	Regular cleaning and maintenance the oil interceptor	The waste oil was observed on the floor.	**20 Oct 2022**	✓
Landscape and Visual Impact				
--	--	--		
Landfill Gas Hazards				
--	--	--		

APPENDIX L
EVENT AND ACTION PLANS

Event and Action Plan for Air Quality (Dust)

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
Action level being exceeded by one sampling	1. Identify source, investigate the causes of complaint and propose remedial measures; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
Action level being exceeded by two or more consecutive sampling	1. Identify source; 2. Inform IEC and ER; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required;	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial actions to IEC within three working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.

	7. If exceedance continues, arrange meeting with IEC and ER; 8. If exceedance stops, cease additional monitoring.			
Limit level being exceeded by one sampling	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform Contractor ,IEC, ER, and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
Limit level being exceeded by two or more consecutive sampling	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily;	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals;

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

Event and Action Plan for Construction Noise

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

Limit Levels and Action Plan for Landfill Gas

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

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

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

Appendix M – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Reporting Month: October 2022

Table M1 Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution Received in the Reporting Period

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Nature	Investigation/Mitigation Action	Status
Complaint #N08	Portion T1	19-Oct-22	Complainant informed that the groundborne noise was heard at his/her residence (near Cha Kwo Ling Main Road) everyday, including the public holiday. Also, the complainant further informed that recently they continued to hear groudborne noise which had caused serious noise nuisance to the residents	Noise	• A valid CNP was hold and construction activities being taken were complied with the relevant CNP • Blast door was fully enclosed when construction activities were carried out within tunnel area to prevent, reduce or minimize the emission of airborne noise • In addition, the Contractor should still maintain good site practices, such as schedule noisy work to the less sensitive hours and provide regularly maintenance for PMEs. • Contractor is recommended to continue to strictly follow the requirements in the relevant CNP and the approved CNMP. • According to the condition 3.d point 5 of the CNP (GW-RE0997-22), the immediate remedial action shall be implemented in case adverse ground-borne noise impact on any noise sensitive receiver is received	Closed

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

Appendix M – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Reporting Month: October 2022

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Nature	Investigation/Mitigation Action	Status
Complaint #N09	Portion T1	28-Oct-22	Complainant informed that the underground breaking noise was heard at her residence (near Cha Kwo Ling Main Road) after the blasting work every day.	Noise	• A valid CNP was hold and construction activities being taken were complied with the relevant CNP • Blast door was fully enclosed when construction activities were carried out within tunnel area to prevent, reduce or minimize the emission of airborne noise • In addition, the Contractor should still maintain good site practices, such as schedule noisy work to the less sensitive hours and provide regularly maintenance for PMEs. • Contractor is recommended to continue to strictly follow the requirements in the relevant CNP and the approved CNMP. • According to the condition 3.d point 5 of the CNP (GW-RE0997-22), the immediate remedial action shall be implemented in case adverse ground-borne noise impact on any noise sensitive receiver is received	Closed

Remarks: Two (2) environmental complaint were received in the reporting period, no environmental warning/ summon and prosecution were received in the reporting period.

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

Appendix M – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Reporting Month: October 2022

Table M2 Cumulative Log for Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Nature	Investigation/Mitigation Action	Status
Complaint #N02	Portion T1	10-Oct-2020	Resident of Yau Lai Estate complained that i) an excavator operated before 7 am on 9 and 10 October 2020; and, ii) the height of noise barriers are not sufficient for noise reduction.	Noise	• Contractor was recommended to scheduled noisy works to less sensitive hours (e.g. normal weekdays between 08:00-19:00) to minimize noise nuisance. • Since the complaint location stated in part II is situated out of the project boundary and within the other construction site, no investigation shall be conducted for non-project related complaint.	Closed
Complaint #N04	Portion T1	9-Feb-2021	Resident of Cha Kwo Ling village revealed that some breaking noise was heard at his/her residence (near Cha kwo Ling Main Street) from the ground at about 20:00 on 08 Feb, 2021	Noise	• The construction activities of Trunk Road T2 conducted inside the tunnel area and the construction activities of TKO-LT Tunnel conducted inside the tunnel section at Kwun Tong Side on the evening time and night-time of the date of complaint are considered as one of the potential noise source of the ground borne noise nuisance.	Closed
		6 March 2021	The complainant informed that they continues to hear breaking noise during 3-4 a.m. and caused serious noise nuisance to the residents.			

Appendix M – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Reporting Month: October 2022

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Nature	Investigation/Mitigation Action	Status
					• A valid CNP was hold and the construction activities being taken were complied with the relevant CNP. • Blast door was fully enclosed when construction activities were carried out within tunnel area to prevent, reduce or minimize the emission of airborne noise • In addition, the Contractor should still maintain good site practices, such as schedule noisy work to the less sensitive hours and provide regularly maintenance for PMEs. • Contractor is recommended to continue to strictly follow the requirements in the relevant CNP. • According to the condition 3.d point 5 of the CNP (GW-RE0071-21), the immediate remedial action shall be implemented in case adverse ground-borne noise impact on any noise sensitive receiver is received.	

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

Appendix M – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Reporting Month: October 2022

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Nature	Investigation/Mitigation Action	Status
Complaint #N05	Portion T1	18 July 2021	Complainant informed that breaking noise was heard at his/her residence (near Cha Kwo Ling Main Road) from the ground during 3-4 a.m. on 17 Jul and 18 Jul 2021.	Noise	• The construction activities of Trunk Road T2 conducted inside the tunnel area and the construction activities of TKO-LT Tunnel conducted inside the tunnel section at Kwun Tong Side on the evening time and night-time of the date of complaint are considered as one of the potential noise source of the ground borne noise nuisance. • A valid CNP was hold and the construction activities being taken were complied with the relevant CNP. • Blast door was fully enclosed when construction activities were carried out within tunnel area to prevent, reduce or minimize the emission of airborne noise • In addition, the Contractor should still maintain good site practices, such as schedule noisy work to the less sensitive hours and provide regularly maintenance for PMEs. • Contractor is recommended to	Closed
		27 July 2021	Complainant further informed that they continued to hear underground breaking noise during 3-5 a.m. on 27 July 2021.			

Appendix M – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Reporting Month: October 2022

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Nature	Investigation/Mitigation Action	Status
					continue to strictly follow the requirements in the relevant CNP. • According to the condition 3.d point 5 of the CNP (GW-RE0399-21), the immediate remedial action shall be implemented in case adverse ground-borne noise impact on any noise sensitive receiver is received.	
Complaint #N06	Portion T1	03-Nov-2021	Complainant informed that underground breaking noise was heard at his/her residence (near Cha Kwo Ling Main Road) at about 10 p.m. on 03 Nov 2021. Also, the complainant further informed that recently they continued to hear underground breaking noise which had caused serious noise nuisance to the residents.	Noise	• No major construction noise related environmental deficiency was identified during ad-hoc inspection carried out by ET, RE and the Contractor representative on 12 November 2021. • The construction activities of Trunk Road T2 conducted inside the tunnel area and the construction activities of TKO-LT Tunnel conducted inside the tunnel section at Kwun Tong Side on the evening time and night-time of the date of complaint are considered as one of the potential noise source of the ground borne noise nuisance.	Closed

Appendix M – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Reporting Month: October 2022

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Nature	Investigation/Mitigation Action	Status
Complaint #N06	Portion T1	25-Nov-2021	Follow up complaint from the same complainant which informed that there was still ground bound noise nuisance after 10 p.m occasionally. The complainant further requested if the relevant works that may contribute to ground bound noise nuisance could be stopped after 10 p.m.	Noise	• A valid CNP was hold and the investigation is still undertaken in order to investigate the construction activities being taken were complied with the relevant CNP. • Blast door was fully enclosed when construction activities were carried out within tunnel area to prevent, reduce or minimize the emission of airborne noise • In addition, the Contractor should still maintain good site practices, such as schedule noisy work to the less sensitive hours and provide regularly maintenance for PMEs. • Contractor is recommended to continue to strictly follow the requirements in the relevant CNP. • According to the condition 3.d point 5 of the CNP (GW-RE1035-21), the immediate remedial action shall be implemented in case adverse ground-borne noise impact on any noise sensitive receiver is received.	Closed

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

Appendix M – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Reporting Month: October 2022

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Nature	Investigation/Mitigation Action	Status
Complaint #N07	Portion T1	17-Feb-22	Complainant informed that noise from drilling activities near Tin Hau Temple was perceived all day.	Noise	• The construction activities of Trunk Road T2 conducted inside the tunnel area and the construction activities of TKO-LT Tunnel conducted inside the tunnel section at Kwun Tong Side are considered as one of the potential noise source of the ground borne noise nuisance. • A valid CNP was hold and the construction activities being taken were complied with the relevant CNP. • Blast door was fully enclosed when construction activities were carried out within tunnel area to prevent, reduce or minimize the emission of airborne noise • In addition, the Contractor should still maintain good site practices, such as schedule noisy work to the less sensitive hours and provide	Closed
		24-March-22	Follow up complaint from the same complainant was received and he/she informed that the day time ground-borne noise nuisance had deteriorated this week.			

Appendix M – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Reporting Month: October 2022

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Nature	Investigation/Mitigation Action	Status
		12-April-22	3rd complaint from the same complainant was received again, he/ she complained that his/ her family were affected by the noise from construction site of T2 at the night-time period and felt no improvement on this issues.		regularly maintenance for PMEs. • Contractor is recommended to continue to strictly follow the requirements in the relevant CNP and the approved CNMP. • According to the condition 3.d point 5 of the CNP (GW-RE1201-21, GW-RE0199-22), the immediate remedial action shall be implemented in case adverse ground-borne noise impact on any noise sensitive receiver is received.	

APPENDIX N
SUMMARY OF EXCEEDANCE

Appendix N – Summary of Exceedance

Reporting Period: October 2022

(A) Exceedance Report for Air Quality

No Action/ Limit Level exceedance of 24hr TSP monitoring was recorded in this reporting month.

No Action/ Limit Level exceedance of 1hr TSP monitoring was recorded in this reporting month.

(B) Exceedance Report for Construction Noise

Two (2) Action Level exceedance was recorded due to the documented complaint in the reporting month.

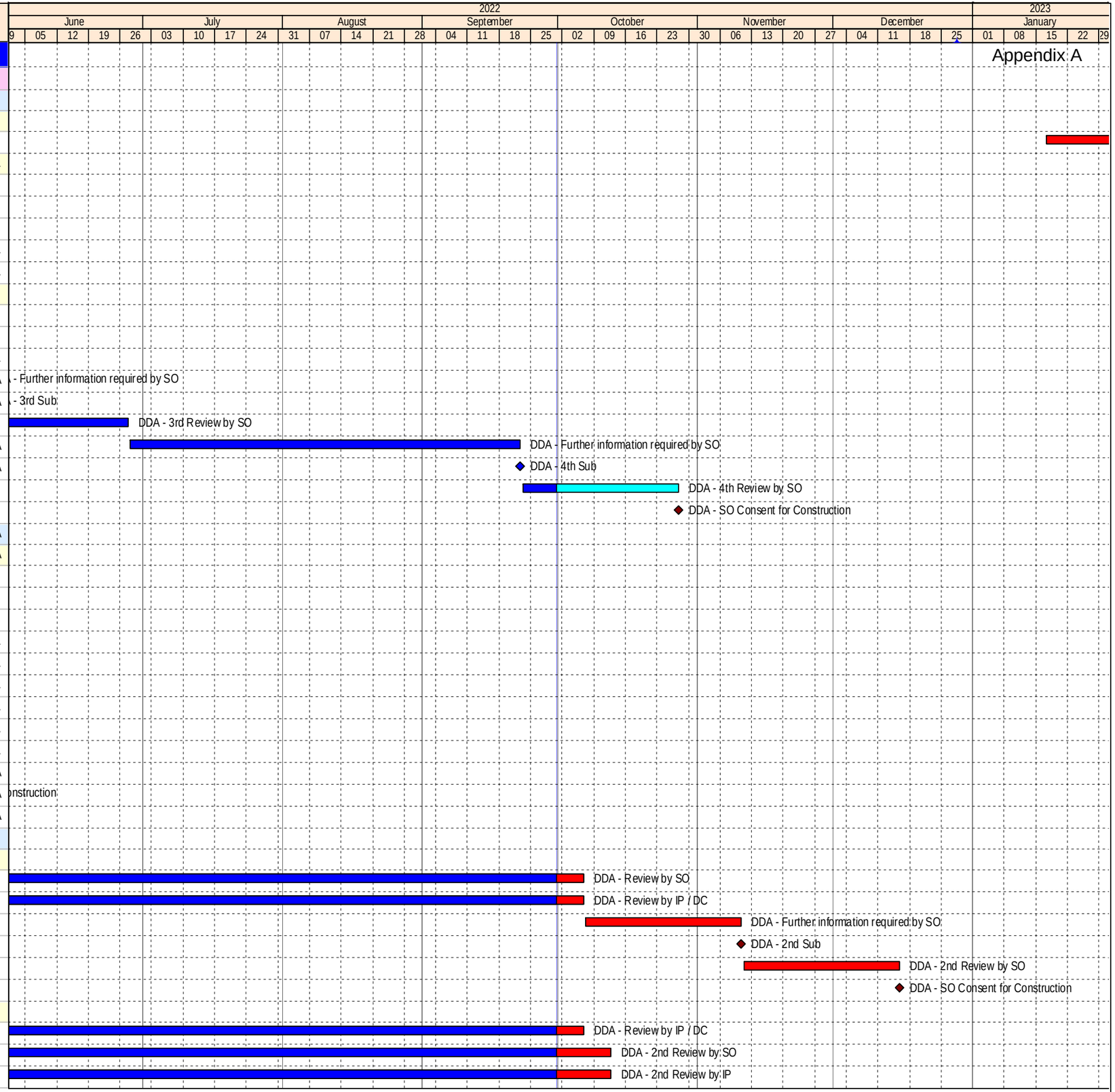
No Limit Level exceedance for construction noise monitoring was recorded in the reporting month.

(C) Exceedance Report for Landfill Gas

(NIL in the reporting month).

APPENDIX O
TENTATIVE CONSTRUCTION PROGRAMME

Activity Name	Dur	Start	Finish
ED/2018/04 - Trunk Road T2	974	13-Mar-21 A	21-Oct-24
DESIGN SUBMISSION & APPROVAL	474	15-Mar-21 A	13-Feb-23
GENERAL	389	10-Sep-21 A	02-Feb-23
DAP - WVB	12	17-Jan-23	02-Feb-23
DDA - Draft - Final Review and prepare for 1st Sub	12	17-Jan-23	02-Feb-23
DDA Street Lighting (AGR/ DPR/ S20/ L10/ L18)	81	22-Dec-21 A	29-Mar-22 A
DDA - 7th Review by SO	35	22-Dec-21 A	07-Jan-22 A
DDA - Further information required by SO	12	08-Jan-22 A	27-Jan-22 A
DDA - 8th Sub	0		27-Jan-22 A
DDA - 8th Review by SO	35	28-Jan-22 A	29-Mar-22 A
DDA - SO Consent for DDA Submission	0		29-Mar-22 A
DDA Landscape Design	326	10-Sep-21 A	27-Oct-22
DDA - Further information required by SO	24	10-Sep-21 A	05-Jan-22 A
DDA - 2nd Sub	0		05-Jan-22 A
DDA - 2nd Review by SO	35	06-Jan-22 A	14-Mar-22 A
DDA - Further information required by SO	24	15-Mar-22 A	25-May-22 A
DDA - 3rd Sub	0		25-May-22 A
DDA - 3rd Review by SO	35	26-May-22 A	27-Jun-22 A
DDA - Further information required by SO	24	28-Jun-22 A	22-Sep-22 A
DDA - 4th Sub	0		22-Sep-22 A
DDA - 4th Review by SO	35	23-Sep-22 A	27-Oct-22
DDA - SO Consent for Construction	0		27-Oct-22
DEPRESSED ROAD [DPR]	199	09-Sep-21 A	04-May-22 A
DDA DPR - Portal Structure	199	09-Sep-21 A	04-May-22 A
DDA - Review by IP / DC	28	09-Sep-21 A	07-Jan-22 A
DDA - Further information required by SO	12	06-Oct-21 A	07-Jan-22 A
DDA - 2nd Sub	0		07-Jan-22 A
DDA - 2nd Review by SO	35	08-Jan-22 A	21-Feb-22 A
DDA - Further information required by SO	12	22-Feb-22 A	10-Mar-22 A
DDA - 3rd Sub	0		10-Mar-22 A
DDA - 3rd Review by SO	35	11-Mar-22 A	31-Mar-22 A
DDA - Further information required by SO	12	01-Apr-22 A	06-Apr-22 A
DDA - 4th Sub	0		06-Apr-22 A
DDA - 4th Review by SO	35	07-Apr-22 A	04-May-22 A
DDA - SO Consent for Construction	0		04-May-22 A
Stage 1A Completion	0		04-May-22 A
WEST VENTILATION BUILDING [WVB]	429	14-May-21 A	15-Dec-22
DDA WVB - ABWF	346	11-Sep-21 A	15-Dec-22
DDA - Review by SO	28	11-Sep-21 A	06-Oct-22
DDA - Review by IP / DC	28	11-Sep-21 A	06-Oct-22
DDA - Further information required by SO	30	07-Oct-22	10-Nov-22
DDA - 2nd Sub	0		10-Nov-22
DDA - 2nd Review by SO	35	11-Nov-22	15-Dec-22
DDA - SO Consent for Construction	0		15-Dec-22
DDA WVB - Aesthetic Design	428	14-May-21 A	14-Dec-22
DDA - Review by IP / DC	28	14-May-21 A	06-Oct-22
DDA - 2nd Review by SO	35	20-Jun-21 A	12-Oct-22
DDA - 2nd Review by IP	35	20-Jun-21 A	12-Oct-22



Milestone
Planned Bar
Critical Activity
Actual Milestone
Actual Work

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

Three Months Rolling Programme (Sep-22)

BOUYGUES TRAVAUX PUBLICS

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18-Dec-19	00V1	WYu	
22-Feb-20	01V0	SPa/LLo	WYu
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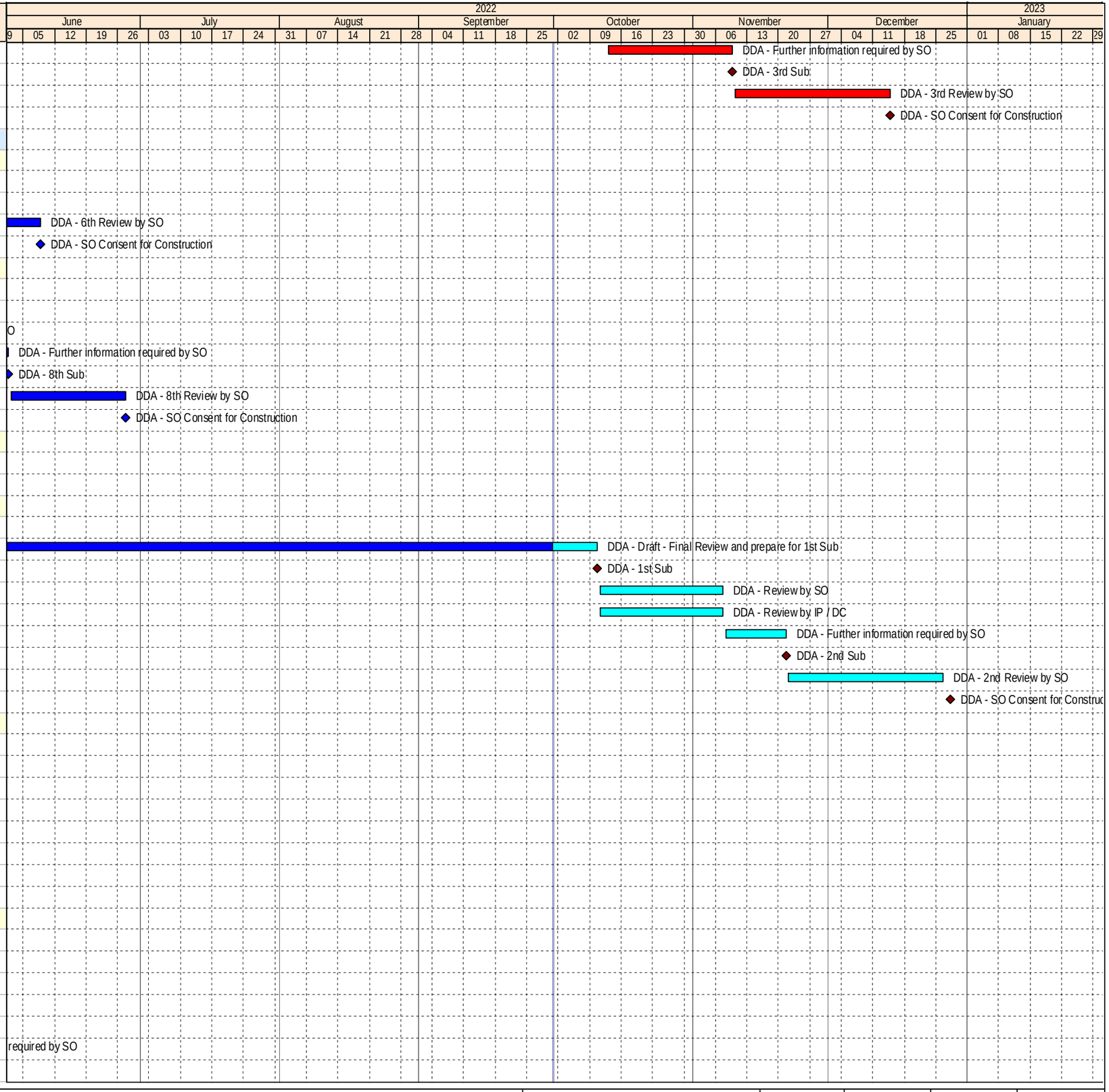
17-Jul-20	01V2	SPa/LLo	WYu
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
DDA - Further information required by SO	24	13-Oct-22	09-Nov-22
DDA - 3rd Sub	0		09-Nov-22
DDA - 3rd Review by SO	35	10-Nov-22	14-Dec-22
DDA - SO Consent for Construction	0		14-Dec-22
SOUTH APRON ROAD WORKS	343	29-Oct-21 A	28-Dec-22
DDA Road L10 (S) - Alignment, Traffic Sign, Road Marking and Traffic	172	11-Nov-21 A	08-Jun-22 A
DDA - Further information required by SO	12	11-Nov-21 A	01-Apr-22 A
DDA - 6th Sub	0		01-Apr-22 A
DDA - 6th Review by SO	35	02-Apr-22 A	08-Jun-22 A
DDA - SO Consent for Construction	0		08-Jun-22 A
DDA Road L10 (S) - Roadworks and Street Furniture	209	18-Nov-21 A	27-Jun-22 A
DDA - Further information required by SO	12	18-Nov-21 A	31-Mar-22 A
DDA - 7th Sub	0		31-Mar-22 A
DDA - 7th Review by SO	35	01-Apr-22 A	06-May-22 A
DDA - Further information required by SO	13	07-May-22 A	01-Jun-22 A
DDA - 8th Sub	0		01-Jun-22 A
DDA - 8th Review by SO	35	02-Jun-22 A	27-Jun-22 A
DDA - SO Consent for Construction	0		27-Jun-22 A
AIP - Kiosk	21	04-Dec-21 A	03-Jan-22 A
AIP - 3rd Review by SO	28	04-Dec-21 A	03-Jan-22 A
AIP - SO Consent for DDA Submission	0		03-Jan-22 A
DDA - Kiosk	268	04-Jan-22 A	28-Dec-22
DDA - Draft - Preparation by Designer	36	04-Jan-22 A	15-Feb-22 A
DDA - Draft - Final Review and prepare for 1st Sub	14	16-Feb-22 A	10-Oct-22
DDA - 1st Sub	0		10-Oct-22
DDA - Review by SO	28	11-Oct-22	07-Nov-22
DDA - Review by IP / DC	28	11-Oct-22	07-Nov-22
DDA - Further information required by SO	12	08-Nov-22	21-Nov-22
DDA - 2nd Sub	0		21-Nov-22
DDA - 2nd Review by SO	35	22-Nov-22	26-Dec-22
DDA - SO Consent for Construction	0		28-Dec-22
[STE] AIP Kai Hing Road / Lam Chak Street Modification	115	29-Oct-21 A	21-Mar-22 A
AIP - Review by IP / DC	28	29-Oct-21 A	17-Jan-22 A
AIP - Further information required by SO	24	20-Nov-21 A	20-Jan-22 A
AIP - 2nd Sub	0		20-Jan-22 A
AIP - 2nd Review by SO	28	21-Jan-22 A	04-Feb-22 A
AIP - Further information required by SO	24	05-Feb-22 A	18-Feb-22 A
AIP - 2nd Sub	0		18-Feb-22 A
AIP - 2nd Review by SO	28	19-Feb-22 A	21-Mar-22 A
AIP - SO Consent for DDA Submission	0		21-Mar-22 A
[STE] DDA KHR Modification - Permanent Utility Design	184	28-Dec-21 A	23-Aug-22 A
DDA - Draft - Preparation by Designer	6	28-Dec-21 A	20-Jan-22 A
DDA - Draft - Final Review and prepare for 1st Sub	6	21-Jan-22 A	31-Jan-22 A
DDA - 1st Sub	0		31-Jan-22 A
DDA - Review by SO	28	01-Feb-22 A	11-Mar-22 A
DDA - Review by IP / DC	28	01-Feb-22 A	27-Apr-22 A
DDA - Further information required by SO	12	12-Mar-22 A	03-May-22 A
DDA - 2nd Sub	0		03-May-22 A



Milestone
Planned Bar
Critical Activity
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ED/2018/04 Trunk Road T2 and Infrastructure Works for Developments at South Apron

Three Months Rolling Programme (Sep-22)

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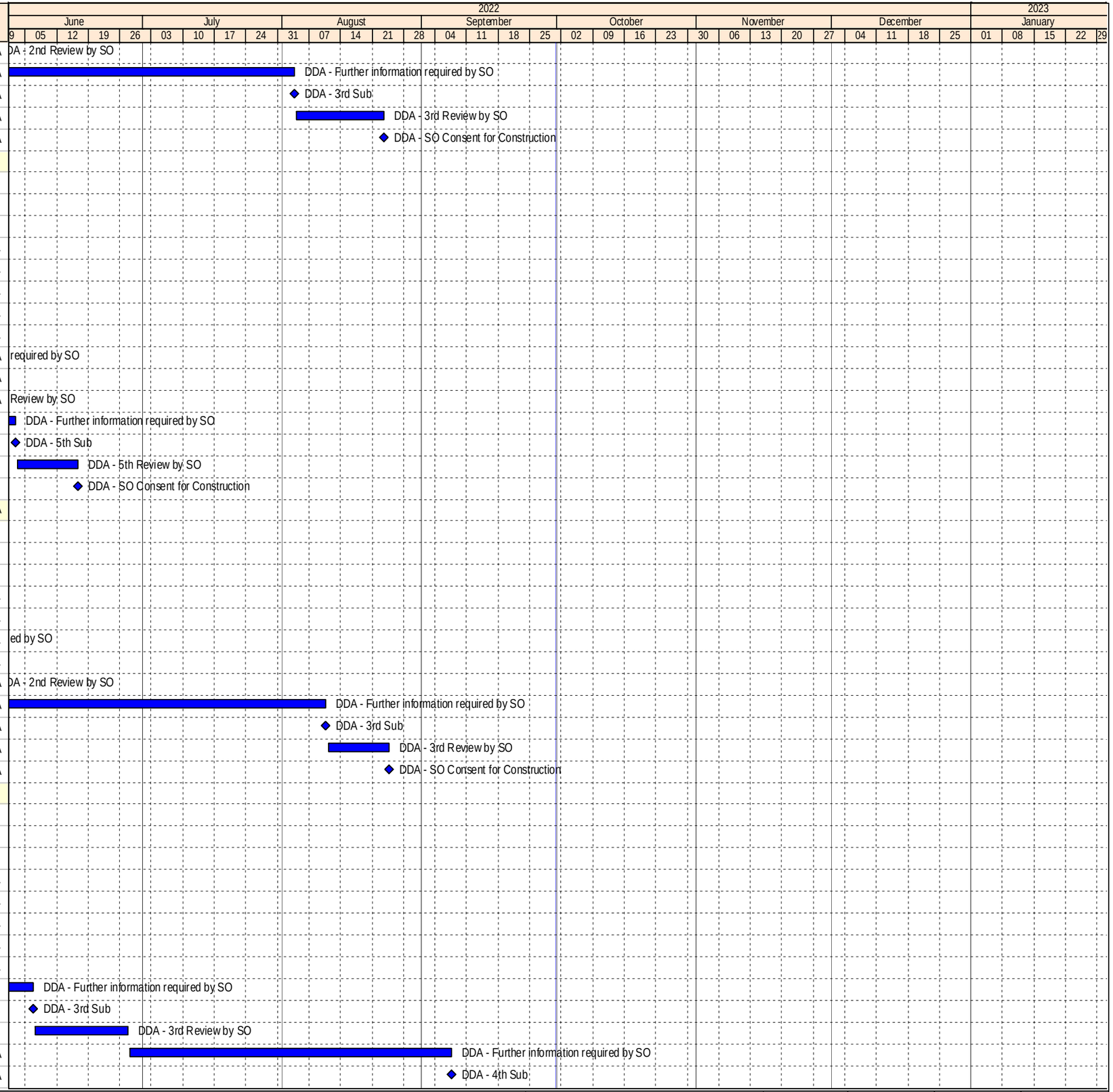
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
DDA - 2nd Review by SO	35	04-May-22 A	27-May-22 A
DDA - Further information required by SO	24	28-May-22 A	03-Aug-22 A
DDA - 3rd Sub	0		03-Aug-22 A
DDA - 3rd Review by SO	35	04-Aug-22 A	23-Aug-22 A
DDA - SO Consent for Construction	0		23-Aug-22 A
[STE] DDA KHR Modification - Alignment, Traffic Sign, Road Marking a	160	03-Jan-22 A	16-Jun-22 A
DDA - Draft - Preparation by Designer	6	03-Jan-22 A	12-Jan-22 A
DDA - Draft - Final Review and prepare for 1st Sub	6	13-Jan-22 A	17-Jan-22 A
DDA - 1st Sub	0		17-Jan-22 A
DDA - Review by SO	28	18-Jan-22 A	21-Mar-22 A
DDA - Review by IP / DC	28	18-Jan-22 A	24-Mar-22 A
DDA - Further information required by SO	12	22-Mar-22 A	24-Mar-22 A
DDA - 3rd Sub	0		24-Mar-22 A
DDA - 3rd Review by SO	35	25-Mar-22 A	13-Apr-22 A
DDA - Further information required by SO	12	14-Apr-22 A	03-May-22 A
DDA - 4th Sub	0		03-May-22 A
DDA - 4th Review by SO	35	04-May-22 A	19-May-22 A
DDA - Further information required by SO	12	20-May-22 A	02-Jun-22 A
DDA - 5th Sub	0		02-Jun-22 A
DDA - 5th Review by SO	35	03-Jun-22 A	16-Jun-22 A
DDA - SO Consent for Construction	0		16-Jun-22 A
[STE] DDA KHR Modification - Roadworks and Street Furniture	228	03-Jan-22 A	24-Aug-22 A
DDA - Draft - Preparation by Designer	9	03-Jan-22 A	12-Jan-22 A
DDA - Draft - Final Review and prepare for 1st Sub	4	13-Jan-22 A	17-Jan-22 A
DDA - 1st Sub	0		17-Jan-22 A
DDA - Review by SO	28	18-Jan-22 A	11-Mar-22 A
DDA - Review by IP / DC	28	18-Jan-22 A	02-Mar-22 A
DDA - Further information required by SO	12	12-Mar-22 A	27-Apr-22 A
DDA - 2nd Sub	0		27-Apr-22 A
DDA - 2nd Review by SO	35	28-Apr-22 A	27-May-22 A
DDA - Further information required by SO	12	28-May-22 A	10-Aug-22 A
DDA - 3rd Sub	0		10-Aug-22 A
DDA - 3rd Review by SO	35	11-Aug-22 A	24-Aug-22 A
DDA - SO Consent for Construction	0		24-Aug-22 A
[STE] DDA KHR Modification - Street Lighting	261	28-Dec-21 A	12-Oct-22
DDA - Draft - Preparation by Designer	20	28-Dec-21 A	20-Jan-22 A
DDA - Draft - Final Review and prepare for 1st Sub	9	21-Jan-22 A	31-Jan-22 A
DDA - 1st Sub	0		31-Jan-22 A
DDA - Review by SO	28	01-Feb-22 A	12-Mar-22 A
DDA - Review by IP / DC	28	01-Feb-22 A	30-Mar-22 A
DDA - Further information required by SO	12	14-Mar-22 A	30-Mar-22 A
DDA - 2nd Sub	0		30-Mar-22 A
DDA - 2nd Review by SO	35	31-Mar-22 A	06-Apr-22 A
DDA - Further information required by SO	12	07-Apr-22 A	06-Jun-22 A
DDA - 3rd Sub	0		06-Jun-22 A
DDA - 3rd Review by SO	35	07-Jun-22 A	27-Jun-22 A
DDA - Further information required by SO	12	28-Jun-22 A	07-Sep-22 A
DDA - 4th Sub	0		07-Sep-22 A



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

Three Months Rolling Programme (Sep-22)

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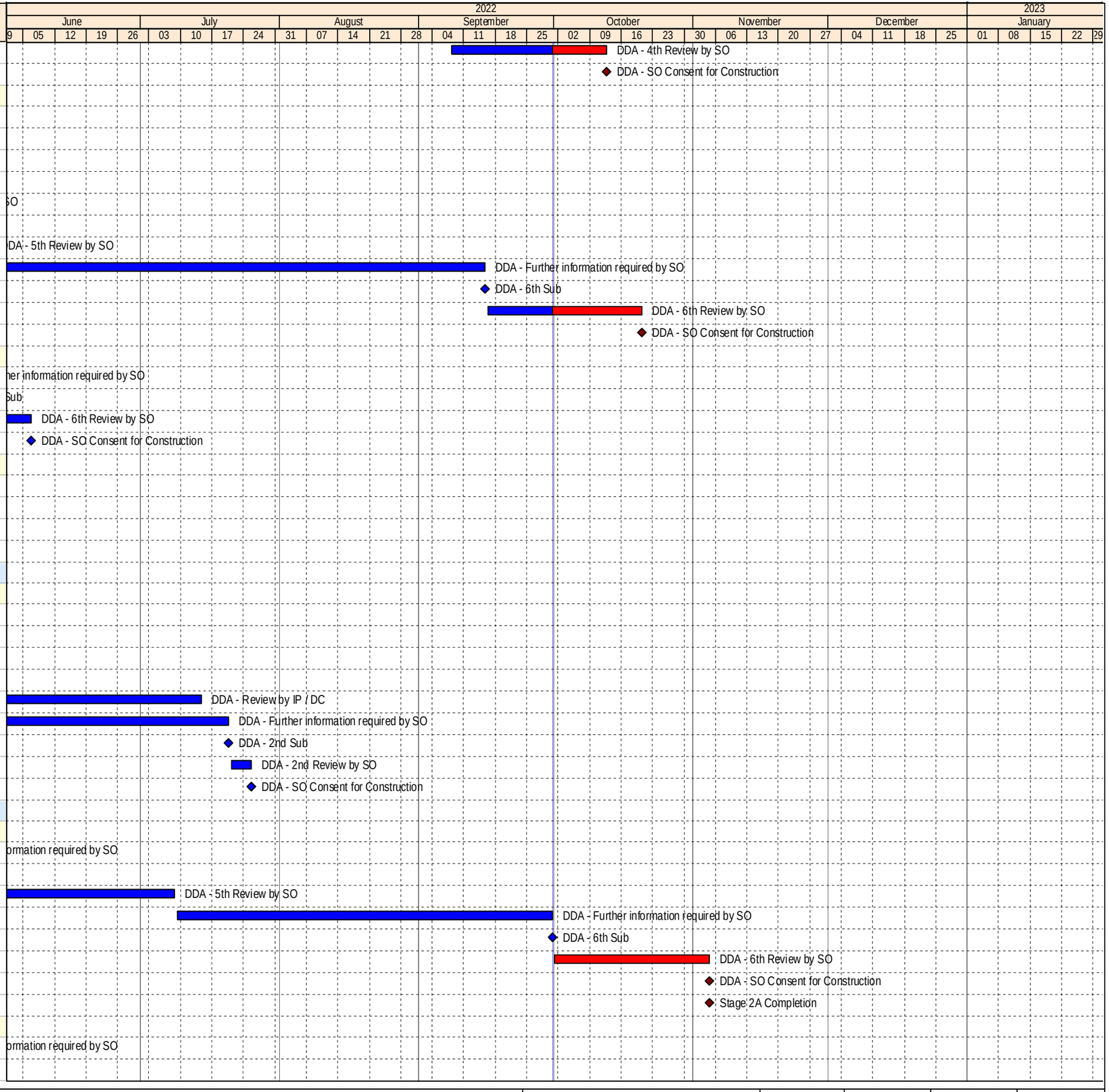
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
DDA - 4th Review by SO	35	08-Sep-22 A	12-Oct-22
DDA - SO Consent for Construction	0		12-Oct-22
[STE] DDA Road L10 (N) - Permanent Utility Design	251	18-Dec-21 A	20-Oct-22
DDA - 3rd Review by SO	35	18-Dec-21 A	05-Jan-22 A
DDA - Further information required by SO	12	06-Jan-22 A	25-Feb-22 A
DDA - 4th Sub	0		25-Feb-22 A
DDA - 4th Review by SO	35	26-Feb-22 A	23-Mar-22 A
DDA - Further information required by SO	12	24-Mar-22 A	20-Apr-22 A
DDA - 5th Sub	0		20-Apr-22 A
DDA - 5th Review by SO	35	21-Apr-22 A	28-May-22 A
DDA - Further information required by SO	12	30-May-22 A	15-Sep-22 A
DDA - 6th Sub	0		15-Sep-22 A
DDA - 6th Review by SO	35	16-Sep-22 A	20-Oct-22
DDA - SO Consent for Construction	0		20-Oct-22
[STE] DDA Road L10 (N) - Alignment, Traffic Sign, Road Marking and T	211	02-Dec-21 A	06-Jun-22 A
DDA - Further information required by SO	12	02-Dec-21 A	18-May-22 A
DDA - 6th Sub	0		18-May-22 A
DDA - 6th Review by SO	35	19-May-22 A	06-Jun-22 A
DDA - SO Consent for Construction	0		06-Jun-22 A
[STE] DDA Road L10 (N) - Roadworks and Street Furniture	108	07-Dec-21 A	11-Apr-22 A
DDA - Further information required by SO	12	07-Dec-21 A	16-Mar-22 A
DDA - 7th Sub	0		16-Mar-22 A
DDA - 7th Review by SO	35	17-Mar-22 A	11-Apr-22 A
DDA - SO Consent for Construction	0		11-Apr-22 A
SUPPORTING UNDERGROUND STRUCTURE [SUS]	201	17-Dec-21 A	25-Jul-22 A
DDA SUS - Internal Structure	201	17-Dec-21 A	25-Jul-22 A
DDA - Draft - Preparation by Designer	36	17-Dec-21 A	15-Feb-22 A
DDA - Draft - Final Review and prepare for 1st Sub	24	16-Feb-22 A	29-Mar-22 A
DDA - 1st Sub	0		29-Mar-22 A
DDA - Review by SO	28	30-Mar-22 A	13-Apr-22 A
DDA - Review by IP / DC	28	30-Mar-22 A	14-Jul-22 A
DDA - Further information required by SO	30	14-Apr-22 A	20-Jul-22 A
DDA - 2nd Sub	0		20-Jul-22 A
DDA - 2nd Review by SO	35	21-Jul-22 A	25-Jul-22 A
DDA - SO Consent for Construction	0		25-Jul-22 A
C&C TUNNEL / LAUNCHING SHAFT [C&C / LS]	375	17-Jul-21 A	04-Nov-22
DDA - C&C/LS Permanent Structure (C&C) (SG Scheme)	375	17-Jul-21 A	04-Nov-22
DDA - Further information required by SO	39	17-Jul-21 A	12-May-22 A
DDA - 5th Sub	0		12-May-22 A
DDA - 5th Review by SO	35	13-May-22 A	08-Jul-22 A
DDA - Further information required by SO	24	09-Jul-22 A	30-Sep-22 A
DDA - 6th Sub	0		30-Sep-22 A
DDA - 6th Review by SO	35	01-Oct-22	04-Nov-22
DDA - SO Consent for Construction	0		04-Nov-22
Stage 2A Completion	0		04-Nov-22
DDA - C&C/LS Permanent Structure (Cell 1 & 2) (SG Scheme)	375	17-Jul-21 A	04-Nov-22
DDA - Further information required by SO	39	17-Jul-21 A	12-May-22 A
DDA - 5th Sub	0		12-May-22 A



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Three Months Rolling Programme (Sep-22)

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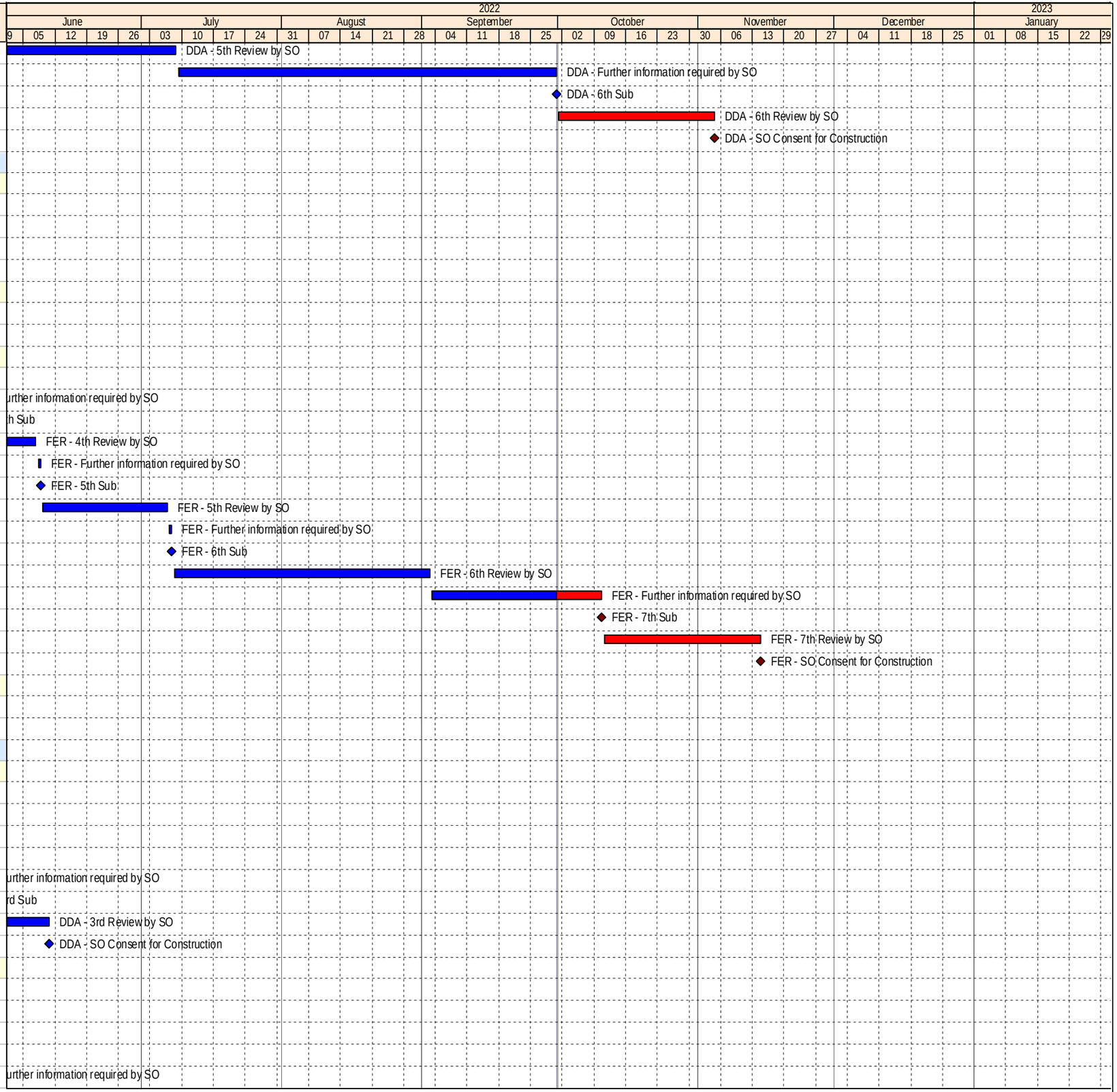
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
DDA - 5th Review by SO	6	13-May-22 A	08-Jul-22 A
DDA - Further information required by SO	24	09-Jul-22 A	30-Sep-22 A
DDA - 6th Sub	0		30-Sep-22 A
DDA - 6th Review by SO	35	01-Oct-22	04-Nov-22
DDA - SO Consent for Construction	0		04-Nov-22
SUB-SEA TBM TUNNEL	336	29-May-21 A	14-Nov-22
DDA - Sub-sea Tunnel - Internal Structure (Corbel & OHVD)	134	29-May-21 A	09-Feb-22 A
DDA - Further information required by SO	24	29-May-21 A	06-Jan-22 A
DDA - 2nd Sub	0		06-Jan-22 A
DDA - 2nd Review by SO	35	07-Jan-22 A	09-Feb-22 A
DDA - SO Consent for Construction	0		09-Feb-22 A
DDA Tunnel - General Building Plan	35	16-Dec-21 A	05-Jan-22 A
DDA - 2nd Review by SO	35	16-Dec-21 A	05-Jan-22 A
DDA - SO Consent for Construction	0		05-Jan-22 A
FER - Fire Engineering Report (SG Scheme)	251	29-Dec-21 A	14-Nov-22
FER - 3rd Review by SO	45	29-Dec-21 A	11-Jan-22 A
FER - Further information required by SO	48	12-Jan-22 A	21-May-22 A
FER - 4th Sub	0		21-May-22 A
FER - 4th Review by SO	45	23-May-22 A	07-Jun-22 A
FER - Further information required by SO	48	08-Jun-22 A	08-Jun-22 A
FER - 5th Sub	0		08-Jun-22 A
FER - 5th Review by SO	45	09-Jun-22 A	06-Jul-22 A
FER - Further information required by SO	48	07-Jul-22 A	07-Jul-22 A
FER - 6th Sub	0		07-Jul-22 A
FER - 6th Review by SO	45	08-Jul-22 A	02-Sep-22 A
FER - Further information required by SO	24	03-Sep-22 A	10-Oct-22
FER - 7th Sub	0		10-Oct-22
FER - 7th Review by SO	35	11-Oct-22	14-Nov-22
FER - SO Consent for Construction	0		14-Nov-22
DDA - Sub-sea Tunnel - Internal Structure (SG & Parapet) (SG Schem	47	06-Nov-21 A	05-Jan-22 A
DDA - 4th Review by SO	35	06-Nov-21 A	05-Jan-22 A
DDA - SO Consent for Construction	0		05-Jan-22 A
CROSS PASSAGE	260	01-Sep-21 A	10-Jun-22 A
DDA - Cross Passage - CP TBM Confinement	224	01-Sep-21 A	10-Jun-22 A
DDA - Review by IP / DC	28	01-Sep-21 A	26-Jan-22 A
DDA - Further information required by SO	30	07-Oct-21 A	28-Jan-22 A
DDA - 2nd Sub	0		28-Jan-22 A
DDA - 2nd Review by SO	35	29-Jan-22 A	26-Mar-22 A
DDA - Further information required by SO	30	28-Mar-22 A	21-May-22 A
DDA - 3rd Sub	0		21-May-22 A
DDA - 3rd Review by SO	35	23-May-22 A	10-Jun-22 A
DDA - SO Consent for Construction	0		10-Jun-22 A
DDA - Cross Passage - CP TBM - DCRA	260	01-Sep-21 A	10-Jun-22 A
DDA - Review by IP / DC	28	01-Sep-21 A	26-Jan-22 A
DDA - Further information required by SO	30	07-Oct-21 A	28-Jan-22 A
DDA - 2nd Sub	0		28-Jan-22 A
DDA - 2nd Review by SO	35	29-Jan-22 A	26-Mar-22 A
DDA - Further information required by SO	30	28-Mar-22 A	21-May-22 A



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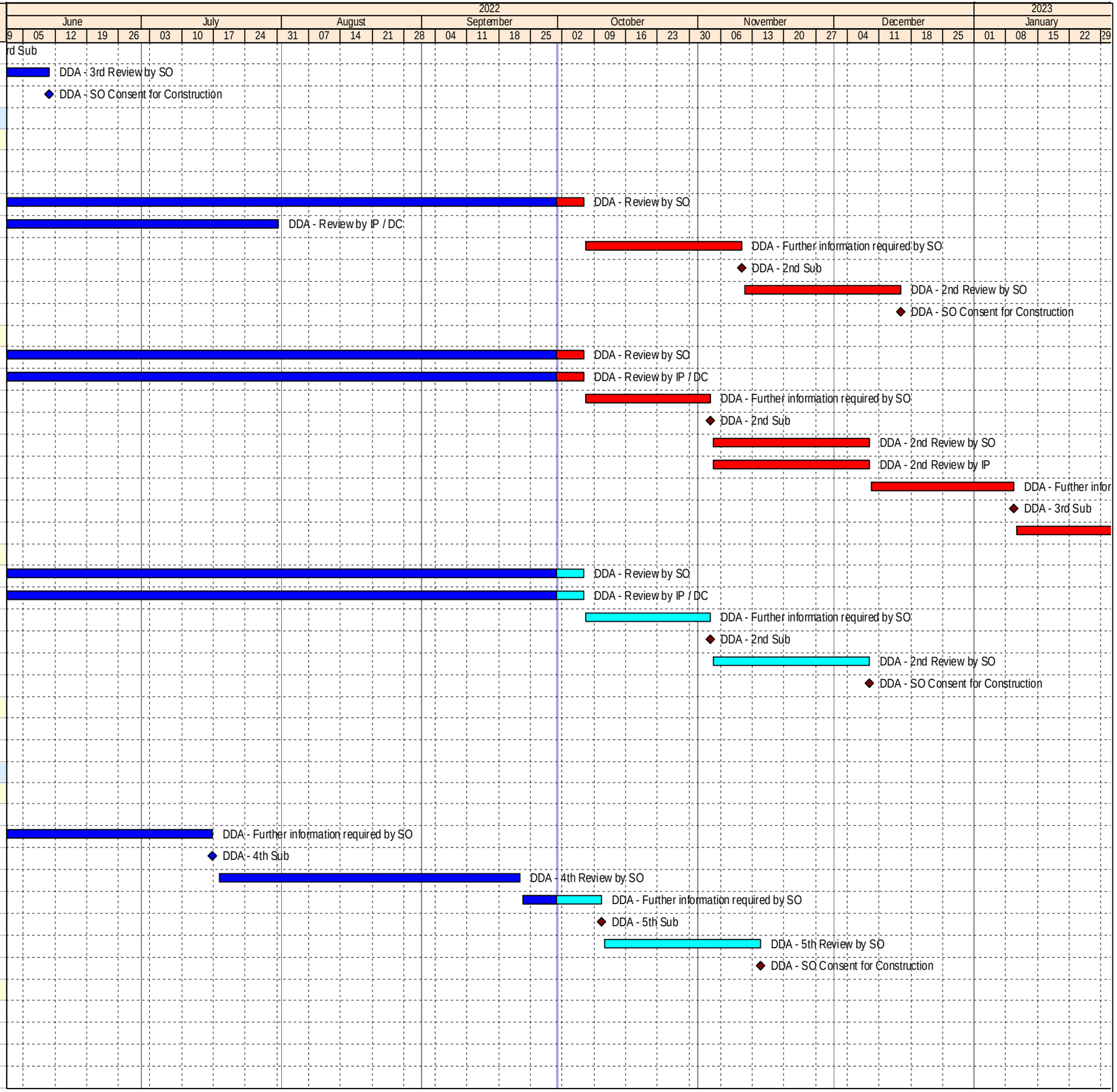
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
DDA - 3rd Sub	0		21-May-22 A
DDA - 3rd Review by SO	35	23-May-22 A	10-Jun-22 A
DDA - SO Consent for Construction	0		10-Jun-22 A
EAST VENTILATION BUILDING [EVB]	380	26-Oct-21 A	13-Feb-23
DDA - EVB - ABWF	278	14-Dec-21 A	15-Dec-22
DDA - Draft - Final Review and prepare for 1st Sub	24	14-Dec-21 A	04-Feb-22 A
DDA - 1st Sub	0		04-Feb-22 A
DDA - Review by SO	28	05-Feb-22 A	06-Oct-22
DDA - Review by IP / DC	28	05-Feb-22 A	31-Jul-22 A
DDA - Further information required by SO	30	07-Oct-22	10-Nov-22
DDA - 2nd Sub	0		10-Nov-22
DDA - 2nd Review by SO	35	11-Nov-22	15-Dec-22
DDA - SO Consent for Construction	0		15-Dec-22
DDA - EVB - Aesthetic Design	346	05-Nov-21 A	13-Feb-23
DDA - Review by SO	28	05-Nov-21 A	06-Oct-22
DDA - Review by IP / DC	28	05-Nov-21 A	06-Oct-22
DDA - Further information required by SO	24	07-Oct-22	03-Nov-22
DDA - 2nd Sub	0		03-Nov-22
DDA - 2nd Review by SO	35	04-Nov-22	08-Dec-22
DDA - 2nd Review by IP	35	04-Nov-22	08-Dec-22
DDA - Further information required by SO	24	09-Dec-22	09-Jan-23
DDA - 3rd Sub	0		09-Jan-23
DDA - 3rd Review by SO	35	10-Jan-23	13-Feb-23
DDA Foot Bridge FT-03 [NEW]	329	26-Oct-21 A	08-Dec-22
DDA - Review by SO	28	26-Oct-21 A	06-Oct-22
DDA - Review by IP / DC	28	26-Oct-21 A	06-Oct-22
DDA - Further information required by SO	24	07-Oct-22	03-Nov-22
DDA - 2nd Sub	0		03-Nov-22
DDA - 2nd Review by SO	35	04-Nov-22	08-Dec-22
DDA - SO Consent for Construction	0		08-Dec-22
DDA - EVB - General Building Plan (including SoA) (SG Scheme)	79	04-Dec-21 A	28-Feb-22 A
DDA - 3rd Review by SO	35	04-Dec-21 A	28-Feb-22 A
DDA - SO Consent for Construction	0		28-Feb-22 A
TUNNEL E&M INSTALLATION & COMMISSIONING	462	15-Mar-21 A	30-Jan-23
DDA - E&M Tunnel Ventilation Design (SG Scheme)	240	08-Dec-21 A	14-Nov-22
DDA - 3rd Review by SO	35	08-Dec-21 A	24-Feb-22 A
DDA - Further information required by SO	42	25-Feb-22 A	16-Jul-22 A
DDA - 4th Sub	0		16-Jul-22 A
DDA - 4th Review by SO	35	18-Jul-22 A	22-Sep-22 A
DDA - Further information required by SO	42	23-Sep-22 A	10-Oct-22
DDA - 5th Sub	0		10-Oct-22
DDA - 5th Review by SO	35	11-Oct-22	14-Nov-22
DDA - SO Consent for Construction	0		14-Nov-22
DDA - E&M Air Purification System (WVB)	402	15-Mar-21 A	14-Nov-22
DDA - Review by IP / DC	28	15-Mar-21 A	03-Mar-22 A
DDA - Further information required by SO	42	12-May-21 A	10-Mar-22 A
DDA - 2nd Sub	0		10-Mar-22 A
DDA - 2nd Review by SO	35	11-Mar-22 A	12-Apr-22 A



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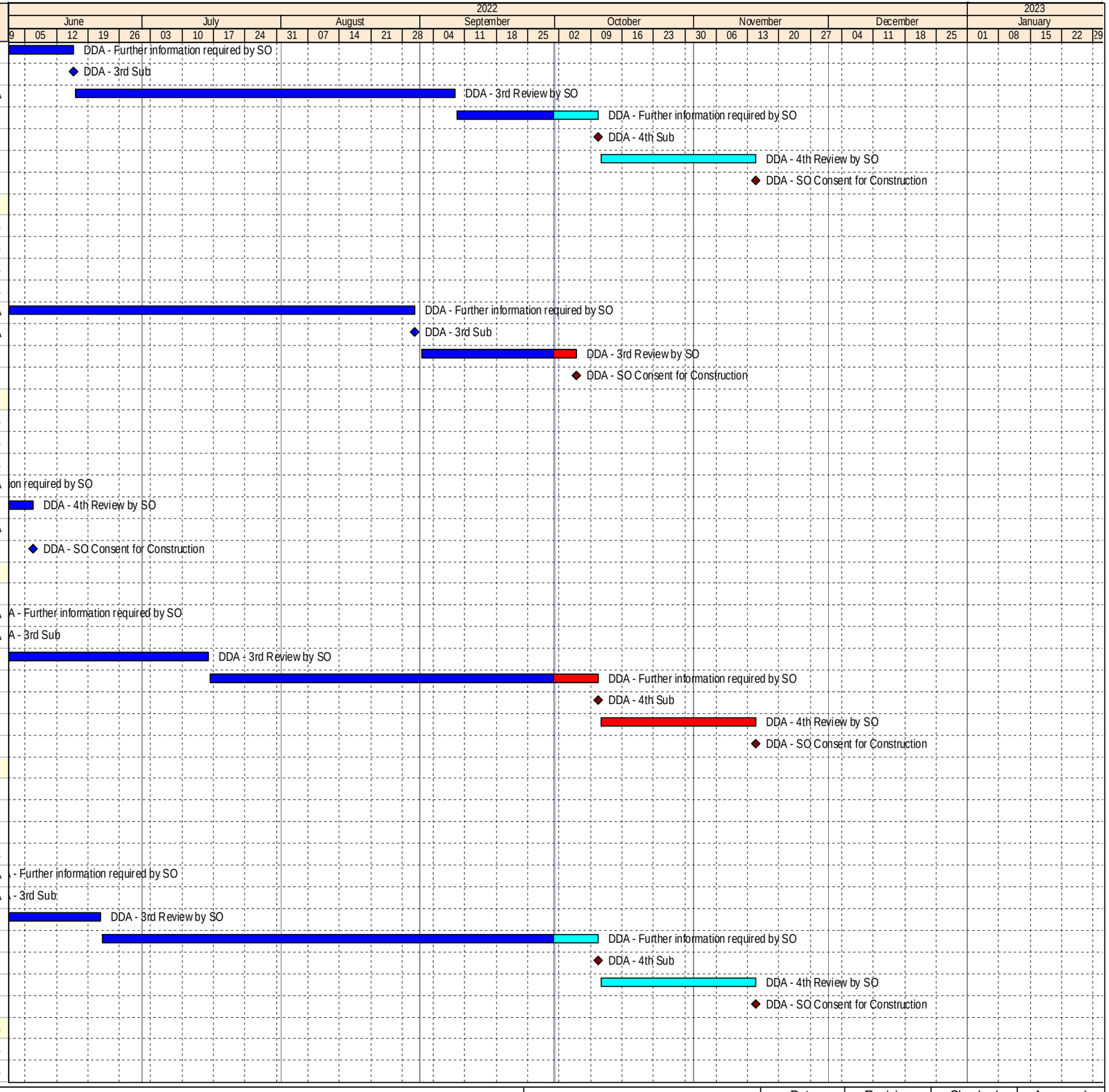
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
DDA - Further information required by SO	42	13-Apr-22 A	15-Jun-22 A
DDA - 3rd Sub	0		15-Jun-22 A
DDA - 3rd Review by SO	35	16-Jun-22 A	08-Sep-22 A
DDA - Further information required by SO	42	09-Sep-22 A	10-Oct-22
DDA - 4th Sub	0		10-Oct-22
DDA - 4th Review by SO	35	11-Oct-22	14-Nov-22
DDA - SO Consent for Construction	0		14-Nov-22
DDA - E&M Fire Services Installation	325	09-Jun-21 A	05-Oct-22
DDA - Review by IP / DC	28	09-Jun-21 A	10-Feb-22 A
DDA - Further information required by SO	32	07-Jul-21 A	11-Feb-22 A
DDA - 2nd Sub	0		11-Feb-22 A
DDA - 2nd Review by SO	35	12-Feb-22 A	26-Mar-22 A
DDA - Further information required by SO	32	28-Mar-22 A	30-Aug-22 A
DDA - 3rd Sub	0		30-Aug-22 A
DDA - 3rd Review by SO	35	01-Sep-22 A	05-Oct-22
DDA - SO Consent for Construction	0		05-Oct-22
DDA - E&M MVAC	278	17-Dec-21 A	06-Jun-22 A
DDA - Further information required by SO	32	17-Dec-21 A	21-Feb-22 A
DDA - 3rd Sub	0		21-Feb-22 A
DDA - 3rd Review by SO	35	22-Feb-22 A	23-Mar-22 A
DDA - Further information required by SO	32	24-Mar-22 A	06-May-22 A
DDA - 4th Review by SO	35	05-May-22 A	06-Jun-22 A
DDA - 4th Sub	0		06-May-22 A
DDA - SO Consent for Construction	0		06-Jun-22 A
DDA - E&M Plumbing & Drainage System	248	24-Dec-21 A	14-Nov-22
DDA - 2nd Review by SO	35	24-Dec-21 A	24-Jan-22 A
DDA - Further information required by SO	32	25-Jan-22 A	26-May-22 A
DDA - 3rd Sub	0		26-May-22 A
DDA - 3rd Review by SO	35	27-May-22 A	15-Jul-22 A
DDA - Further information required by SO	32	16-Jul-22 A	10-Oct-22
DDA - 4th Sub	0		10-Oct-22
DDA - 4th Review by SO	35	11-Oct-22	14-Nov-22
DDA - SO Consent for Construction	0		14-Nov-22
DDA - E&M Electrical Installation	348	16-Jul-21 A	14-Nov-22
DDA - Review by IP / DC	28	16-Jul-21 A	19-Jan-22 A
DDA - Further information required by SO	33	25-Aug-21 A	19-Jan-22 A
DDA - 2nd Sub	0		19-Jan-22 A
DDA - 2nd Review by SO	35	20-Jan-22 A	24-Feb-22 A
DDA - Further information required by SO	33	25-Feb-22 A	25-May-22 A
DDA - 3rd Sub	0		25-May-22 A
DDA - 3rd Review by SO	35	26-May-22 A	21-Jun-22 A
DDA - Further information required by SO	33	22-Jun-22 A	10-Oct-22
DDA - 4th Sub	0		10-Oct-22
DDA - 4th Review by SO	35	11-Oct-22	14-Nov-22
DDA - SO Consent for Construction	0		14-Nov-22
DDA CLP Submission - Power Supply to EVB & WVB	63	11-Dec-21 A	28-Feb-22 A
DDA - Further information required by SO	34	11-Dec-21 A	10-Feb-22 A
DDA - 4th Sub	0		10-Feb-22 A



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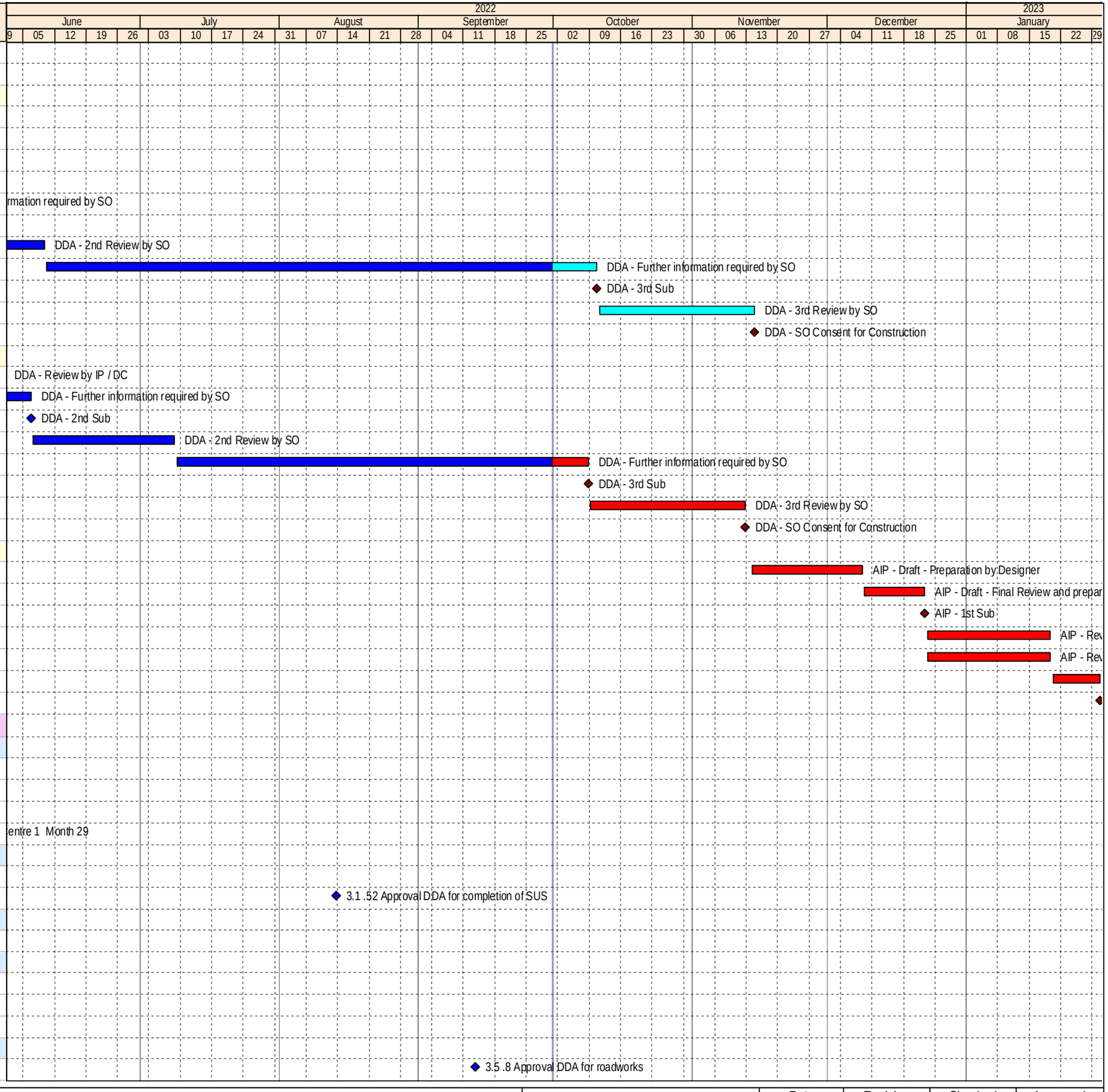
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
DDA - 4th Review by SO	35	11-Feb-22 A	28-Feb-22 A
DDA - SO Consent for Construction	0		28-Feb-22 A
DDA - E&M Tunnel Lighting Design	272	29-Nov-21 A	14-Nov-22
DDA - Draft - Final Review and prepare for 1st Sub	12	29-Nov-21 A	13-Jan-22 A
DDA - 1st Sub	0		13-Jan-22 A
DDA - Review by SO	28	14-Jan-22 A	07-Feb-22 A
DDA - Review by IP / DC	28	14-Jan-22 A	07-Feb-22 A
DDA - Further information required by SO	24	08-Feb-22 A	11-May-22 A
DDA - 2nd Sub	0		11-May-22 A
DDA - 2nd Review by SO	35	12-May-22 A	09-Jun-22 A
DDA - Further information required by SO	24	10-Jun-22 A	10-Oct-22
DDA - 3rd Sub	0		10-Oct-22
DDA - 3rd Review by SO	35	11-Oct-22	14-Nov-22
DDA - SO Consent for Construction	0		14-Nov-22
DDA - E&M CMCS	251	04-Dec-21 A	12-Nov-22
DDA - Review by IP / DC	36	04-Dec-21 A	31-May-22 A
DDA - Further information required by SO	24	23-Dec-21 A	06-Jun-22 A
DDA - 2nd Sub	0		06-Jun-22 A
DDA - 2nd Review by SO	35	07-Jun-22 A	08-Jul-22 A
DDA - Further information required by SO	24	09-Jul-22 A	08-Oct-22
DDA - 3rd Sub	0		08-Oct-22
DDA - 3rd Review by SO	35	09-Oct-22	12-Nov-22
DDA - SO Consent for Construction	0		12-Nov-22
AIP - Civil Provision for TCSS	61	14-Nov-22	30-Jan-23
AIP - Draft - Preparation by Designer	22	14-Nov-22	08-Dec-22
AIP - Draft - Final Review and prepare for 1st Sub	12	09-Dec-22	22-Dec-22
AIP - 1st Sub	0		22-Dec-22
AIP - Review by SO	28	23-Dec-22	19-Jan-23
AIP - Review by IP / DC	28	23-Dec-22	19-Jan-23
AIP - Update & prepare for 2nd Sub	6	20-Jan-23	30-Jan-23
AIP - 2nd Sub	0		30-Jan-23
PAYMENT MILESTONE	568	13-Jan-22 A	30-Jan-23
1.1 Preliminaries and General Requirements	98	13-Jan-22 A	13-Apr-22 A
1.1.42 Monthly Remaining value of this Cost Centre 1 Month 26	0		13-Jan-22 A
1.1.42 Monthly Remaining value of this Cost Centre 1 Month 27	0		14-Feb-22 A
1.1.42 Monthly Remaining value of this Cost Centre 1 Month 28	0		14-Mar-22 A
1.1.42 Monthly Remaining value of this Cost Centre 1 Month 29	0		13-Apr-22 A
3.1 for Trunk Road T2	175	13-Jan-22 A	13-Aug-22 A
3.1 .50 Approval AIP for completion of SUS	0		13-Jan-22 A
3.1 .52 Approval DDA for completion of SUS	0		13-Aug-22 A
3.3 for the Remaining Stage 5 Infrastructure Works - Road L10 (Southe	0	13-Jan-22 A	13-Jan-22 A
3.3 .16 Approval DDA for waterworks	0		13-Jan-22 A
3.4 for the Remaining Stage 5 Infrastructure Works - FT02	51	13-Jan-22 A	14-Mar-22 A
3.4 .10 Approval DDA for modification of existing footbridge	0		13-Jan-22 A
3.4 .12 Approval Demolition plan for existing footbridge	0		14-Mar-22 A
3.4 .13 Complete whole activities of this cost centre	0		14-Mar-22 A
3.5 for Lam Chak Street and Kai Hing Road	0	13-Sep-22 A	30-Sep-22
3.5 .8 Approval DDA for roadworks	0		13-Sep-22 A



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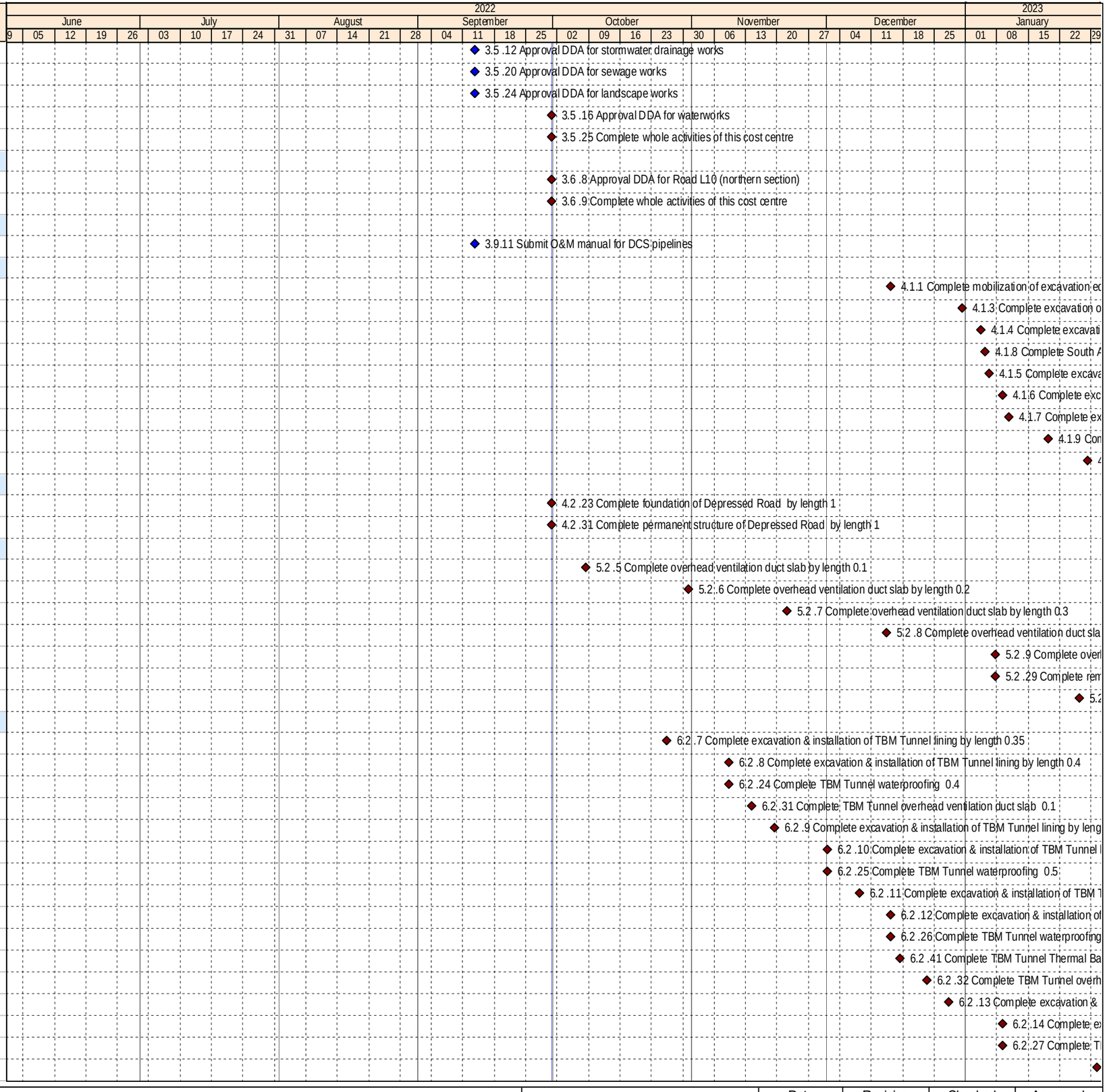
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
3.5 .12 Approval DDA for stormwater drainage works	0		13-Sep-22 A
3.5 .20 Approval DDA for sewage works	0		13-Sep-22 A
3.5 .24 Approval DDA for landscape works	0		13-Sep-22 A
3.5 .16 Approval DDA for waterworks	0		30-Sep-22
3.5 .25 Complete whole activities of this cost centre	0		30-Sep-22
3.6 for Road L10 (Northern Section)	0	30-Sep-22	30-Sep-22
3.6 .8 Approval DDA for Road L10 (northern section)	0		30-Sep-22*
3.6 .9 Complete whole activities of this cost centre	0		30-Sep-22*
3.9 for the Pipelines for District Cooling System for Commissioning of A	0	13-Sep-22 A	13-Sep-22 A
3.9.11 Submit O&M manual for DCS pipelines	0		13-Sep-22 A
4.1 South Apron Adits from Interface with the Depressed Road to the In	32	15-Dec-22	28-Jan-23
4.1.1 Complete mobilization of excavation equipment 0.5	0		15-Dec-22
4.1.3 Complete excavation of South Apron Adist 0.2	0		31-Dec-22
4.1.4 Complete excavation of South Apron Adist 0.4	0		04-Jan-23
4.1.8 Complete South Apron Adist permanent structure 0.2	0		05-Jan-23
4.1.5 Complete excavation of South Apron Adist 0.6	0		06-Jan-23
4.1.6 Complete excavation of South Apron Adist 0.8	0		09-Jan-23
4.1.7 Complete excavation of South Apron Adist 1	0		10-Jan-23
4.1.9 Complete South Apron Adist permanent structure 0.4	0		19-Jan-23
4.1.13 Complete backfill at South Apron Adist 0.2	0		28-Jan-23
4.2 Depressed Road and Remaining Ventilation Adits at the South Aprc	0	30-Sep-22	30-Sep-22
4.2 .23 Complete foundation of Depressed Road by length 1	0		30-Sep-22*
4.2 .31 Complete permanent structure of Depressed Road by length 1	0		30-Sep-22*
5.2 Completion of SUS	88	08-Oct-22	26-Jan-23
5.2 .5 Complete overhead ventilation duct slab by length 0.1	0		08-Oct-22
5.2 .6 Complete overhead ventilation duct slab by length 0.2	0		31-Oct-22
5.2 .7 Complete overhead ventilation duct slab by length 0.3	0		22-Nov-22
5.2 .8 Complete overhead ventilation duct slab by length 0.4	0		14-Dec-22
5.2 .9 Complete overhead ventilation duct slab by length 0.5	0		07-Jan-23
5.2 .29 Complete remaining works in SUS by length 0.5	0		07-Jan-23
5.2 .15 Complete Thermal barrier by length 0.1	0		26-Jan-23
6.2 TBM Tunnel	76	26-Oct-22	30-Jan-23
6.2 .7 Complete excavation & installation of TBM Tunnel lining by length 0.35	0		26-Oct-22
6.2 .8 Complete excavation & installation of TBM Tunnel lining by length 0.4	0		09-Nov-22
6.2 .24 Complete TBM Tunnel waterproofing 0.4	0		09-Nov-22
6.2 .31 Complete TBM Tunnel overhead ventilation duct slab 0.1	0		14-Nov-22
6.2 .9 Complete excavation & installation of TBM Tunnel lining by length 0.45	0		19-Nov-22
6.2 .10 Complete excavation & installation of TBM Tunnel lining by length 0.5	0		01-Dec-22
6.2 .25 Complete TBM Tunnel waterproofing 0.5	0		01-Dec-22
6.2 .11 Complete excavation & installation of TBM Tunnel lining by length 0.55	0		08-Dec-22
6.2 .12 Complete excavation & installation of TBM Tunnel lining by length 0.6	0		15-Dec-22
6.2 .26 Complete TBM Tunnel waterproofing 0.6	0		15-Dec-22
6.2 .41 Complete TBM Tunnel Thermal Barrier to tunnel lining 0.1	0		17-Dec-22
6.2 .32 Complete TBM Tunnel overhead ventilation duct slab 0.2	0		23-Dec-22
6.2 .13 Complete excavation & installation of TBM Tunnel lining by length 0.65	0		28-Dec-22
6.2 .14 Complete excavation & installation of TBM Tunnel lining by length 0.7	0		09-Jan-23
6.2 .27 Complete TBM Tunnel waterproofing 0.7	0		09-Jan-23
6.2 .15 Complete excavation & installation of TBM Tunnel lining by length 0.75	0		30-Jan-23



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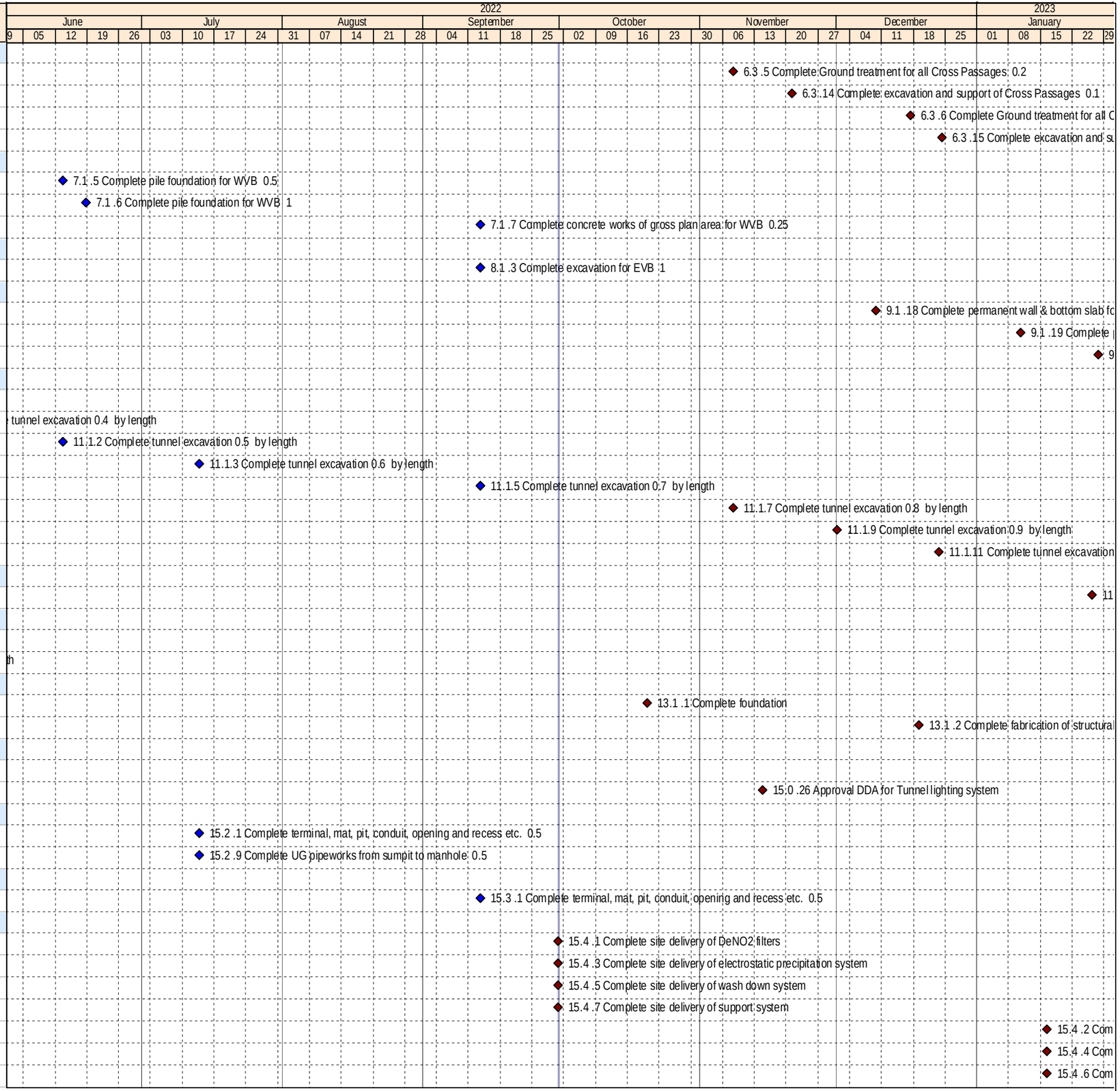
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
6.3 Cross Passages for TBM Tunnel	40	08-Nov-22	24-Dec-22
6.3 .5 Complete Ground treatment for all Cross Passages 0.2	0		08-Nov-22
6.3 .14 Complete excavation and support of Cross Passages 0.1	0		21-Nov-22
6.3 .6 Complete Ground treatment for all Cross Passages 0.3	0		17-Dec-22
6.3 .15 Complete excavation and support of Cross Passages 0.2	0		24-Dec-22
7.1 Western Ventilation Building	97	13-Jun-22 A	13-Sep-22 A
7.1 .5 Complete pile foundation for WVB 0.5	0		13-Jun-22 A
7.1 .6 Complete pile foundation for WVB 1	0		18-Jun-22 A
7.1 .7 Complete concrete works of gross plan area for WVB 0.25	0		13-Sep-22 A
8.1 Eastern Ventilation Building	0	13-Sep-22 A	13-Sep-22 A
8.1 .3 Complete excavation for EVB 1	0		13-Sep-22 A
9.1 Launching Shaft	36	09-Dec-22	27-Jan-23
9.1 .18 Complete permanent wall & bottom slab for Launching Shaft by length 0.2	0		09-Dec-22
9.1 .19 Complete permanent wall & bottom slab for Launching Shaft by length 0.4	0		10-Jan-23
9.1 .20 Complete permanent wall & bottom slab for Launching Shaft by length 0.6	0		27-Jan-23
11.1 Drill and Break Tunnel	246	12-Feb-22 A	23-Dec-22
11.1.2 Complete tunnel excavation 0.3 by length	0		12-Feb-22 A
11.1.2 Complete tunnel excavation 0.4 by length	0		13-May-22 A
11.1.2 Complete tunnel excavation 0.5 by length	0		13-Jun-22 A
11.1.3 Complete tunnel excavation 0.6 by length	0		13-Jul-22 A
11.1.5 Complete tunnel excavation 0.7 by length	0		13-Sep-22 A
11.1.7 Complete tunnel excavation 0.8 by length	0		08-Nov-22
11.1.9 Complete tunnel excavation 0.9 by length	0		01-Dec-22
11.1.11 Complete tunnel excavation 1 by length	0		23-Dec-22
11.2 Cross Passages for Drill and Break Tunnel	0	26-Jan-23	26-Jan-23
11.2.1 Complete cross passages structure 0.1 by length	0		26-Jan-23
12.1 Drill and Blast Tunnel	177	14-Mar-22 A	13-Apr-22 A
12.1.10 Complete tunnel excavation 0.9 by length	0		14-Mar-22 A
12.1.11 Complete tunnel excavation 1 by length	0		13-Apr-22 A
13.1 Lam Tin Interchange Works	51	20-Oct-22	19-Dec-22
13.1 .1 Complete foundation	0		20-Oct-22*
13.1 .2 Complete fabrication of structural frame	0		19-Dec-22*
15.0 E&M Design Works	212	13-Jan-22 A	14-Nov-22
15.0 .25 Submit DDA for Tunnel lighting system	0		13-Jan-22 A
15.0 .26 Approval DDA for Tunnel lighting system	0		14-Nov-22
15.2 E&M Works for Western Ventilation Building	2	13-Jul-22 A	13-Jul-22 A
15.2 .1 Complete terminal, mat, pit, conduit, opening and recess etc. 0.5	0		13-Jul-22 A
15.2 .9 Complete UG pipeworks from sumpit to manhole 0.5	0		13-Jul-22 A
15.3 E&M Works for Eastern Ventilation Building	0	13-Sep-22 A	13-Sep-22 A
15.3 .1 Complete terminal, mat, pit, conduit, opening and recess etc. 0.5	0		13-Sep-22 A
15.4 APS Works for Western Ventilation Building	86	30-Sep-22	16-Jan-23
15.4 .1 Complete site delivery of DeNO2 filters	0		30-Sep-22*
15.4 .3 Complete site delivery of electrostatic precipitation system	0		30-Sep-22*
15.4 .5 Complete site delivery of wash down system	0		30-Sep-22*
15.4 .7 Complete site delivery of support system	0		30-Sep-22*
15.4 .2 Complete installation of DeNO2 filters	0		16-Jan-23*
15.4 .4 Complete installation of electrostatic precipitation system	0		16-Jan-23*
15.4 .6 Complete installation of wash down system	0		16-Jan-23*



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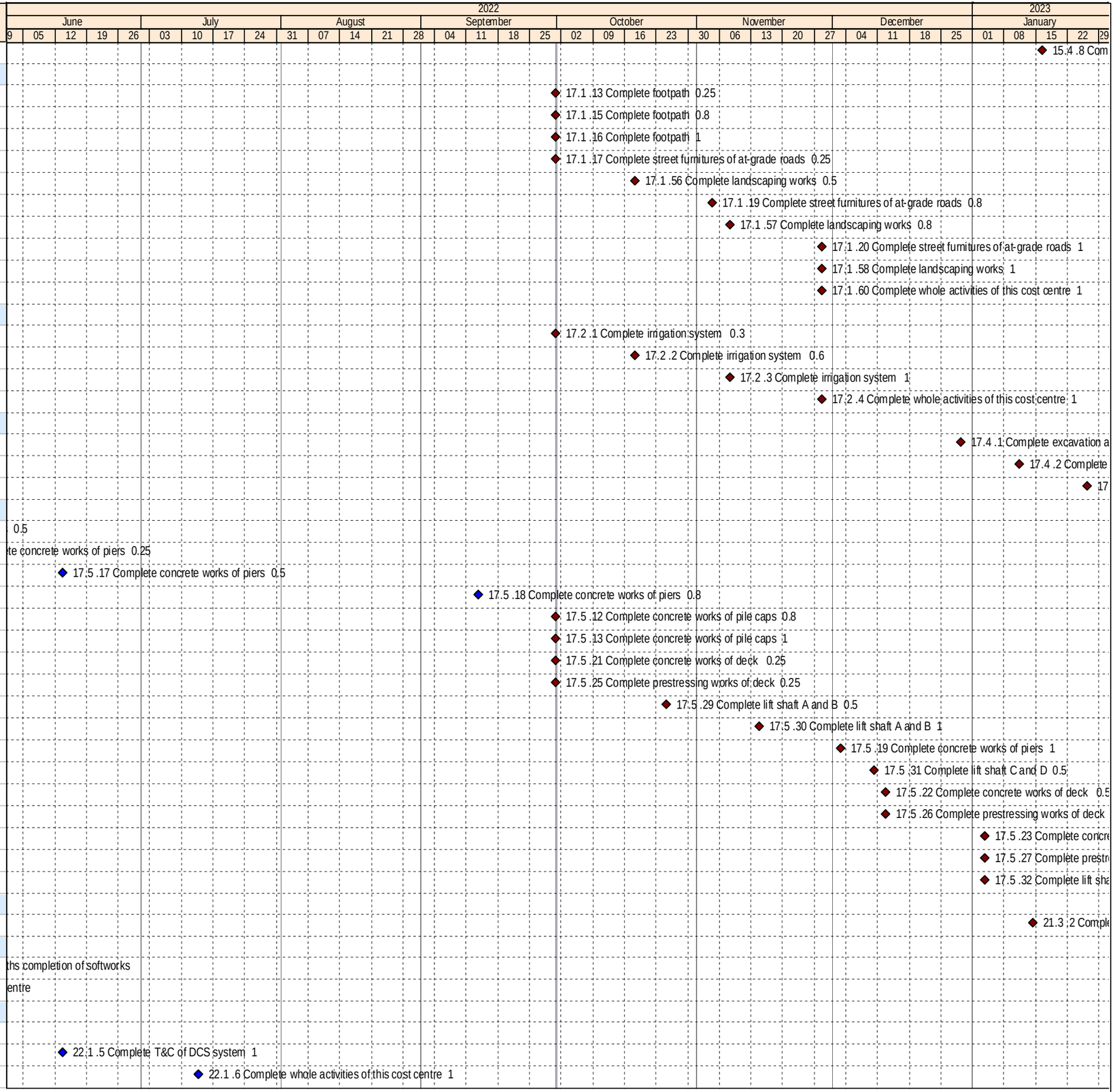
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
15.4 .8 Complete installation of support system	0		16-Jan-23*
**17.1 Works under Sections 6A, 6C and 12 and Associated Landscape **	48	30-Sep-22	28-Nov-22
17.1 .13 Complete footpath 0.25	0		30-Sep-22
17.1 .15 Complete footpath 0.8	0		30-Sep-22
17.1 .16 Complete footpath 1	0		30-Sep-22
17.1 .17 Complete street furnitures of at-grade roads 0.25	0		30-Sep-22
17.1 .56 Complete landscaping works 0.5	0		18-Oct-22
17.1 .19 Complete street furnitures of at-grade roads 0.8	0		04-Nov-22
17.1 .57 Complete landscaping works 0.8	0		08-Nov-22
17.1 .20 Complete street furnitures of at-grade roads 1	0		28-Nov-22
17.1 .58 Complete landscaping works 1	0		28-Nov-22
17.1 .60 Complete whole activities of this cost centre 1	0		28-Nov-22
17.2 Irrigation System for Works under Sections 6A, 6C and 12 and As	48	30-Sep-22	28-Nov-22
17.2 .1 Complete irrigation system 0.3	0		30-Sep-22
17.2 .2 Complete irrigation system 0.6	0		18-Oct-22
17.2 .3 Complete irrigation system 1	0		08-Nov-22
17.2 .4 Complete whole activities of this cost centre 1	0		28-Nov-22
17.4 Remaining Stage 5 Infrastructure Works - Road L10 (Southern Se	20	29-Dec-22	26-Jan-23
17.4 .1 Complete excavation and disposal of material works 0.25	0		29-Dec-22
17.4 .2 Complete excavation and disposal of material works 0.5	0		11-Jan-23
17.4 .3 Complete excavation and disposal of material works 0.8	0		26-Jan-23
17.5 Remaining Stage 5 Infrastructure Works - Landscaped Elevated V	175	13-Apr-22 A	03-Jan-23
17.5 .11 Complete concrete works of pile caps 0.5	0		13-Apr-22 A
17.5 .16 Complete concrete works of piers 0.25	0		13-May-22 A
17.5 .17 Complete concrete works of piers 0.5	0		13-Jun-22 A
17.5 .18 Complete concrete works of piers 0.8	0		13-Sep-22 A
17.5 .12 Complete concrete works of pile caps 0.8	0		30-Sep-22
17.5 .13 Complete concrete works of pile caps 1	0		30-Sep-22
17.5 .21 Complete concrete works of deck 0.25	0		30-Sep-22
17.5 .25 Complete prestressing works of deck 0.25	0		30-Sep-22
17.5 .29 Complete lift shaft A and B 0.5	0		25-Oct-22
17.5 .30 Complete lift shaft A and B 1	0		14-Nov-22
17.5 .19 Complete concrete works of piers 1	0		02-Dec-22
17.5 .31 Complete lift shaft C and D 0.5	0		10-Dec-22
17.5 .22 Complete concrete works of deck 0.5	0		12-Dec-22
17.5 .26 Complete prestressing works of deck 0.5	0		12-Dec-22
17.5 .23 Complete concrete works of deck 0.8	0		03-Jan-23
17.5 .27 Complete prestressing works of deck 0.8	0		03-Jan-23
17.5 .32 Complete lift shaft C and D 1	0		03-Jan-23
21.3 Establishment Works for Improvement Works at the Junction of H	0	14-Jan-23	14-Jan-23
21.3 .2 Complete establishment works for 6 mths completion of softworks	0		14-Jan-23
21.5 Establishment Works for Improvement Works at the Junctions of	72	13-Apr-22 A	13-Apr-22 A
21.5 .3 Complete establishment works for 9 mths completion of softworks	0		13-Apr-22 A
21.5 .4 Complete whole activities of this cost centre	0		13-Apr-22 A
22.1 Pipelines for District Cooling System for Commissioning of AMAV	415	13-Jan-22 A	13-Jul-22 A
22.1 .3 Complete DCS installation length 0.8	0		13-Jan-22 A
22.1 .5 Complete T&C of DCS system 1	0		13-Jun-22 A
22.1 .6 Complete whole activities of this cost centre 1	0		13-Jul-22 A



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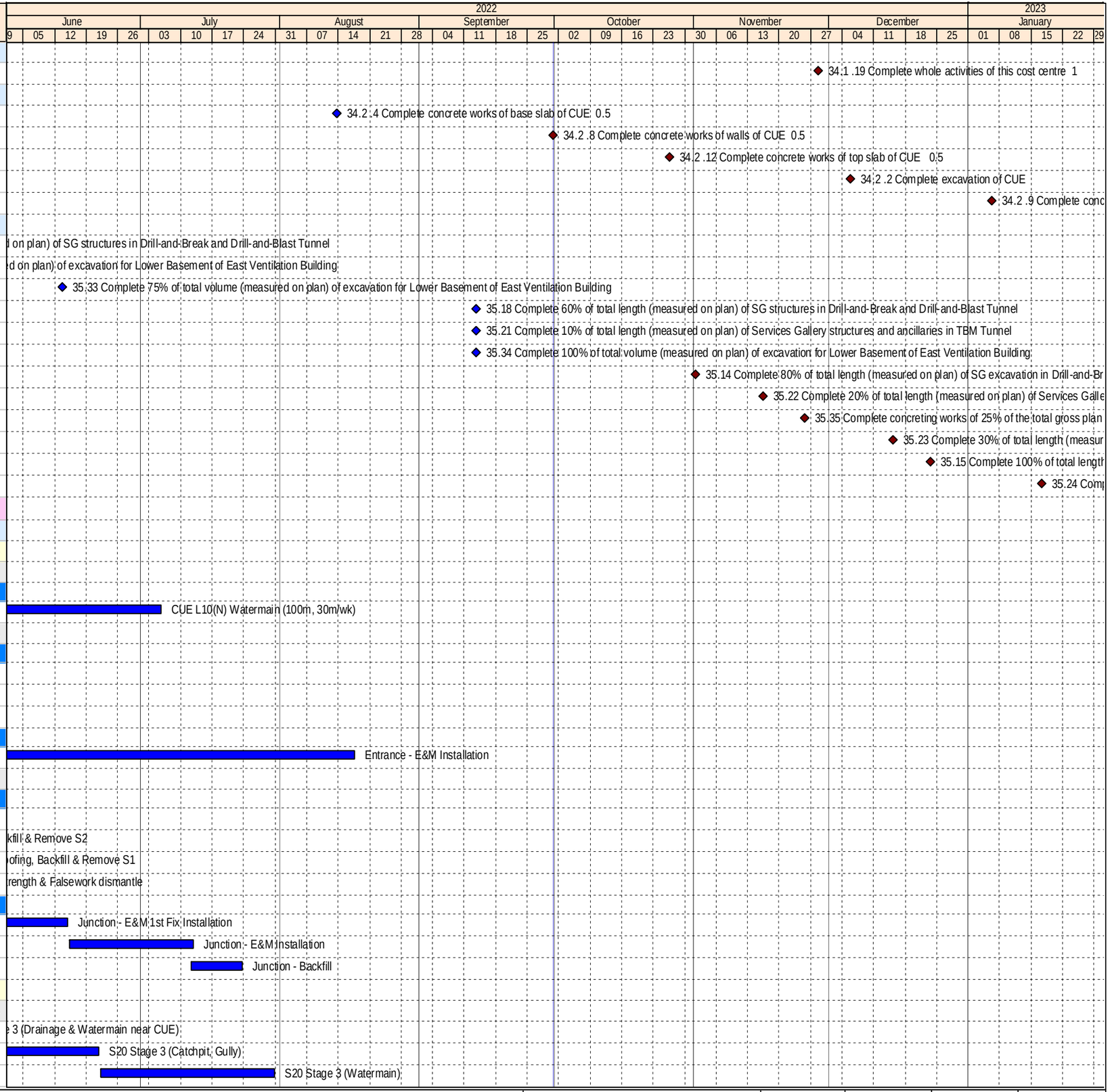
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
34.1 Common Utilities Enclosure (CUE) under Section 6A of the Works	0	28-Nov-22	28-Nov-22
34.1 .19 Complete whole activities of this cost centre 1	0		28-Nov-22
34.2 Common Utilities Enclosure (CUE) under Section 13 of the Works	88	13-Aug-22 A	06-Jan-23
34.2 .4 Complete concrete works of base slab of CUE 0.5	0		13-Aug-22 A
34.2 .8 Complete concrete works of walls of CUE 0.5	0		30-Sep-22
34.2 .12 Complete concrete works of top slab of CUE 0.5	0		26-Oct-22
34.2 .2 Complete excavation of CUE	0		05-Dec-22
34.2 .9 Complete concrete works of walls of CUE 0.75	0		06-Jan-23
35 Services Gallery	292	13-Apr-22 A	17-Jan-23
35.16 Complete 20% of total length (measured on plan) of SG structures in Drill-and-Break	0		13-Apr-22 A
35.32 Complete 50% of total volume (measured on plan) of excavation for Lower Basemen	0		13-Apr-22 A
35.33 Complete 75% of total volume (measured on plan) of excavation for Lower Basemen	0		13-Jun-22 A
35.18 Complete 60% of total length (measured on plan) of SG structures in Drill-and-Break	0		13-Sep-22 A
35.21 Complete 10% of total length (measured on plan) of Services Gallery structures and	0		13-Sep-22 A
35.34 Complete 100% of total volume (measured on plan) of excavation for Lower Baseme	0		13-Sep-22 A
35.14 Complete 80% of total length (measured on plan) of SG excavation in Drill-and-Breal	0		01-Nov-22
35.22 Complete 20% of total length (measured on plan) of Services Gallery structures and	0		16-Nov-22
35.35 Complete concreting works of 25% of the total gross plan area for the Lower Baseme	0		25-Nov-22
35.23 Complete 30% of total length (measured on plan) of Services Gallery structures and	0		15-Dec-22
35.15 Complete 100% of total length (measured on plan) of SG excavation in Drill-and-Brea	0		23-Dec-22
35.24 Complete 40% of total length (measured on plan) of Services Gallery structures and	0		17-Jan-23
SOUTH APRON EXTERNAL WORKS	889	21-Oct-21 A	21-Oct-24
Road S20	694	21-Oct-21 A	23-Feb-24
CUE (Section 6A)	213	28-Dec-21 A	17-Aug-22 A
CKR Crossing	40	30-May-22 A	05-Jul-22 A
BS/E&M	40	30-May-22 A	05-Jul-22 A
CUE L10(N) Watermain (100m, 30m/wk)	40	30-May-22 A	05-Jul-22 A
Entrance	188	28-Dec-21 A	17-Aug-22 A
Structure	30	28-Dec-21 A	11-Apr-22 A
Entrance - Waterproofing, Backfill & Remove S1	9	28-Dec-21 A	07-Jan-22 A
Entrance - Structure (Wall & Top Slab)	15	08-Jan-22 A	25-Jan-22 A
Entrance - Strength & Falsework dismantle	6	26-Jan-22 A	11-Apr-22 A
BS/E&M	72	11-Apr-22 A	17-Aug-22 A
Entrance - E&M Installation	72	11-Apr-22 A	17-Aug-22 A
Junction	194	28-Dec-21 A	23-Jul-22 A
Structure	147	28-Dec-21 A	17-May-22 A
Junction - Structure (Wall & Top Slab)	12	28-Dec-21 A	19-Apr-22 A
Junction - Waterproofing, Backfill & Remove S2	9	20-Apr-22 A	30-Apr-22 A
Junction - Waterproofing, Backfill & Remove S1	9	30-Apr-22 A	10-May-22 A
Junction - Strength & Falsework dismantle	6	11-May-22 A	17-May-22 A
BS/E&M	45	24-May-22 A	23-Jul-22 A
Junction - E&M 1st Fix Installation	18	24-May-22 A	14-Jun-22 A
Junction - E&M Installation	24	15-Jun-22 A	12-Jul-22 A
Junction - Backfill	12	12-Jul-22 A	23-Jul-22 A
S20 (Section 6A)	694	21-Oct-21 A	23-Feb-24
Future Carriageway - Stage 3	289	21-Oct-21 A	27-Aug-22 A
S20 Stage 3 (Drainage & Watermain near CUE)	30	21-Oct-21 A	20-May-22 A
S20 Stage 3 (Catchpit, Gully)	24	24-May-22 A	21-Jun-22 A
S20 Stage 3 (Watermain)	36	22-Jun-22 A	30-Jul-22 A



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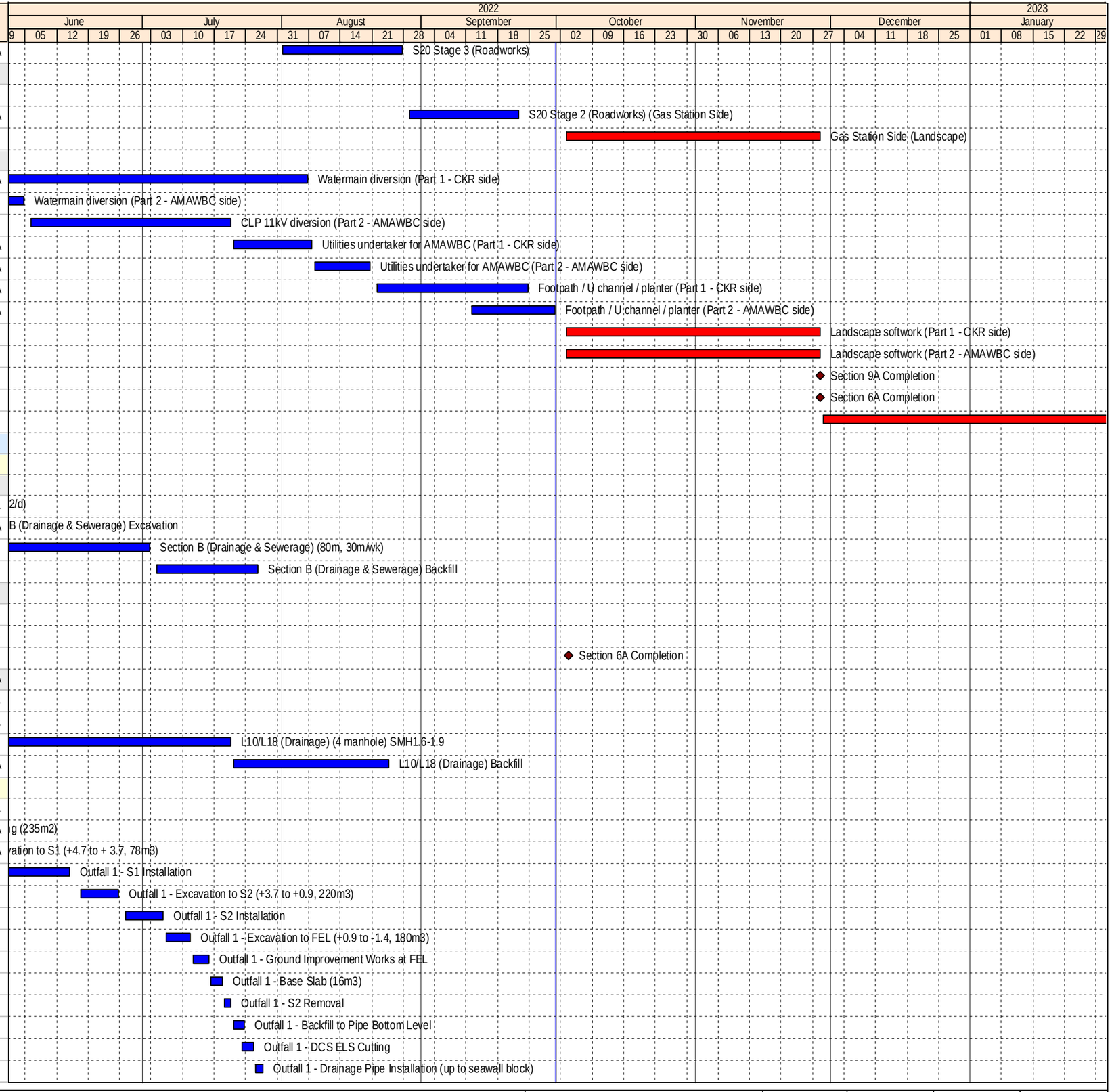
17-Jul-20	01V2	SPa/LLo	WYu
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
S20 Stage 3 (Roadworks)	24	01-Aug-22 A	27-Aug-22 A
Future Amenity Area (Gas Station Side)	329	21-Oct-21 A	28-Nov-22
Gas Station Side (Gully & Planter)	36	21-Oct-21 A	07-Jan-22 A
S20 Stage 2 (Roadworks) (Gas Station Side)	24	29-Aug-22 A	22-Sep-22 A
Gas Station Side (Landscape)	48	03-Oct-22	28-Nov-22
Future Footpath	636	18-Mar-22 A	23-Feb-24
Watermain diversion (Part 1 - CKR side)	24	18-Mar-22 A	06-Aug-22 A
Watermain diversion (Part 2 - AMAWBC side)	24	03-Apr-22 A	04-Jun-22 A
CLP 11kV diversion (Part 2 - AMAWBC side)	24	06-Jun-22 A	20-Jul-22 A
Utilities undertaker for AMAWBC (Part 1 - CKR side)	24	21-Jul-22 A	07-Aug-22 A
Utilities undertaker for AMAWBC (Part 2 - AMAWBC side)	24	08-Aug-22 A	20-Aug-22 A
Footpath / U channel / planter (Part 1 - CKR side)	36	22-Aug-22 A	24-Sep-22 A
Footpath / U channel / planter (Part 2 - AMAWBC side)	36	12-Sep-22 A	30-Sep-22 A
Landscape softwork (Part 1 - CKR side)	48	03-Oct-22	28-Nov-22
Landscape softwork (Part 2 - AMAWBC side)	48	03-Oct-22	28-Nov-22
Section 9A Completion	0		28-Nov-22
Section 6A Completion	0		28-Nov-22
Road S20 - Establishment Period	365	29-Nov-22	23-Feb-24
AMAWBC	297	26-Nov-21 A	03-Oct-22
Drainage & Sewerage	274	26-Nov-21 A	03-Oct-22
Section B	169	11-Feb-22 A	26-Jul-22 A
Section B (Drainage & Sewerage) Sheetpile (180m2, 55m2/d)	29	11-Feb-22 A	01-Apr-22 A
Section B (Drainage & Sewerage) Excavation	26	02-Apr-22 A	21-May-22 A
Section B (Drainage & Sewerage) (80m, 30m/wk)	16	13-Apr-22 A	02-Jul-22 A
Section B (Drainage & Sewerage) Backfill	10	04-Jul-22 A	26-Jul-22 A
Section D	274	26-Nov-21 A	03-Oct-22
L18 (Drainage) (3 manhole) SMH1.10-1.12	18	26-Nov-21 A	07-Jan-22 A
L18 (Drainage) Backfill	10	15-Jan-22 A	26-Jan-22 A
Section 6A Completion	0		03-Oct-22
Overall	191	03-Jan-22 A	24-Aug-22 A
L10/L18 (Drainage) Sheet pile	35	03-Jan-22 A	15-Feb-22 A
L10/L18 (Drainage) Excavation	36	16-Feb-22 A	29-Mar-22 A
L10/L18 (Drainage) (4 manhole) SMH1.6-1.9	24	30-Mar-22 A	20-Jul-22 A
L10/L18 (Drainage) Backfill	10	21-Jul-22 A	24-Aug-22 A
Outfall 1	122	10-Mar-22 A	03-Oct-22
Slab Breaking	4	10-Mar-22 A	15-Mar-22 A
Outfall 1 - Sheetpiling (235m2)	4	28-Mar-22 A	10-May-22 A
Outfall 1 - Excavation to S1 (+4.7 to + 3.7, 78m3)	4	11-May-22 A	14-May-22 A
Outfall 1 - S1 Installation	4	16-May-22 A	14-Jun-22 A
Outfall 1 - Excavation to S2 (+3.7 to +0.9, 220m3)	8	17-Jun-22 A	25-Jun-22 A
Outfall 1 - S2 Installation	7	27-Jun-22 A	05-Jul-22 A
Outfall 1 - Excavation to FEL (+0.9 to -1.4, 180m3)	8	06-Jul-22 A	11-Jul-22 A
Outfall 1 - Ground Improvement Works at FEL	4	12-Jul-22 A	15-Jul-22 A
Outfall 1 - Base Slab (16m3)	2	16-Jul-22 A	18-Jul-22 A
Outfall 1 - S2 Removal	4	19-Jul-22 A	20-Jul-22 A
Outfall 1 - Backfill to Pipe Bottom Level	2	21-Jul-22 A	23-Jul-22 A
Outfall 1 - DCS ELS Cutting	2	23-Jul-22 A	25-Jul-22 A
Outfall 1 - Drainage Pipe Installation (up to seawall block)	2	26-Jul-22 A	27-Jul-22 A



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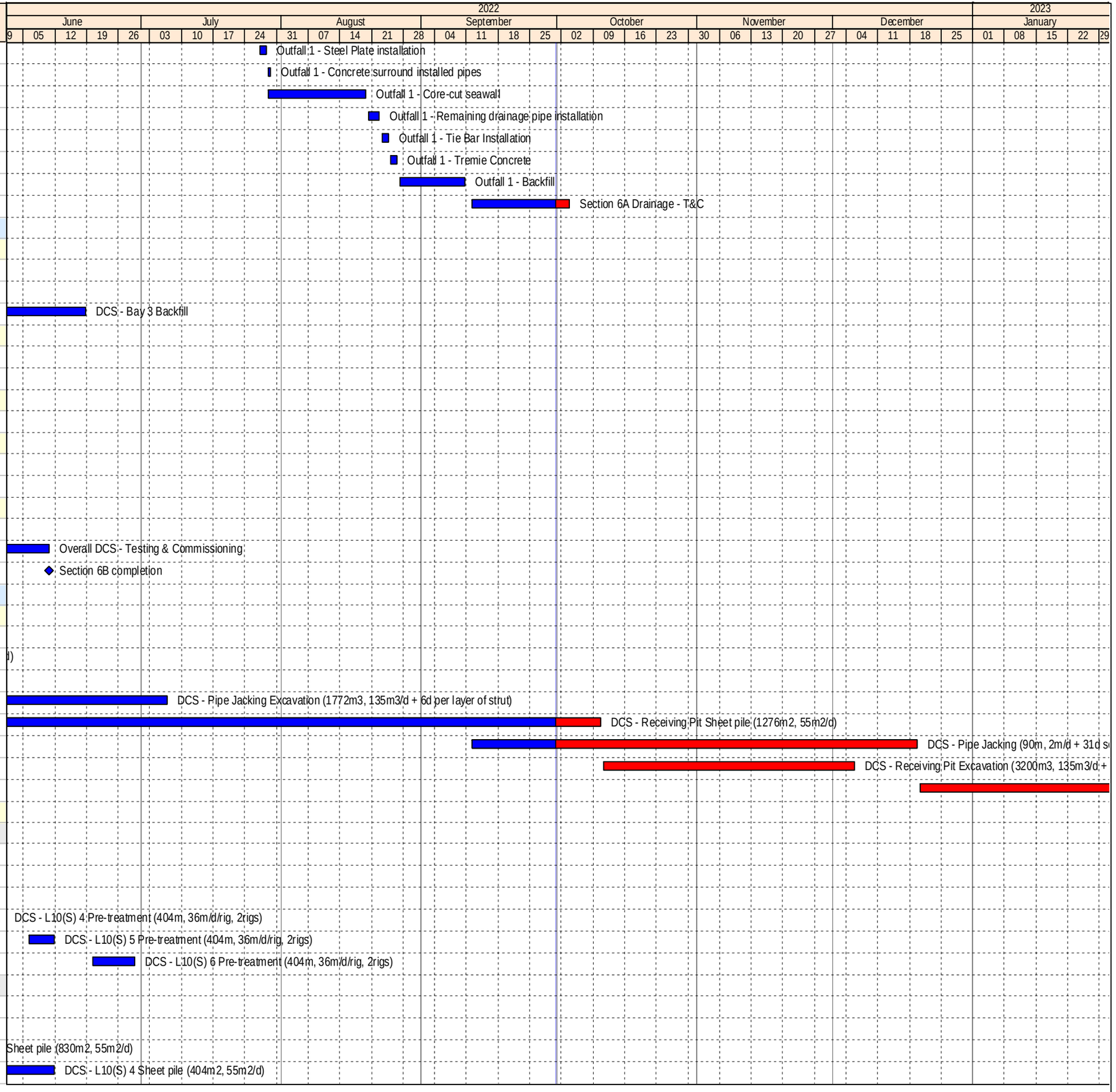
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
Outfall 1 - Steel Plate installation	2	27-Jul-22 A	28-Jul-22 A
Outfall 1 - Concrete surround installed pipes	3	29-Jul-22 A	29-Jul-22 A
Outfall 1 - Core-cut seawall	10	29-Jul-22 A	19-Aug-22 A
Outfall 1 - Remaining drainage pipe installation	2	20-Aug-22 A	22-Aug-22 A
Outfall 1 - Tie Bar Installation	2	23-Aug-22 A	24-Aug-22 A
Outfall 1 - Tremie Concrete	2	25-Aug-22 A	26-Aug-22 A
Outfall 1 - Backfill	6	27-Aug-22 A	10-Sep-22 A
Section 6A Drainage - T&C	24	12-Sep-22 A	03-Oct-22
[STE] District Cooling System for AMAWBC Section 6B	160	11-Dec-21 A	18-Jun-22 A
Section 1 - Bay 3	98	23-Dec-21 A	18-Jun-22 A
DCS - Bay 3 Pipe Installation - Pipe welding	9	23-Dec-21 A	17-Feb-22 A
DCS - Bay 3 Pipe Installation - Jointing (15nos)	10	18-Feb-22 A	28-Feb-22 A
DCS - Bay 3 Backfill	10	24-Mar-22 A	18-Jun-22 A
Section 2 - Bay 5	88	14-Dec-21 A	02-Mar-22 A
DCS - Bay 5 Pipe Installation - Jointing (30nos)	15	14-Dec-21 A	21-Feb-22 A
DCS - Bay 5 Backfill	12	22-Feb-22 A	02-Mar-22 A
Section 2 - S20	14	21-Dec-21 A	06-Jan-22 A
DCS - S20 Pipe Installation - Jointing (27nos)	14	21-Dec-21 A	06-Jan-22 A
Section 2 - CUE	46	11-Dec-21 A	19-Jan-22 A
DCS - CUE - Pipe welding	18	11-Dec-21 A	15-Jan-22 A
DCS - CUE - Jointing (42nos)	21	17-Jan-22 A	19-Jan-22 A
Testing & Commissioning	79	11-Feb-22 A	10-Jun-22 A
Section 6B Substantial Completion - Agreed with HMJV	0		11-Feb-22 A
Overall DCS - Testing & Commissioning	48	01-Mar-22 A	10-Jun-22 A
Section 6B completion	0		10-Jun-22 A
[STE] District Cooling System - Remaining Section 7B	374	17-Jan-22 A	25-Apr-23
DCS (Pipe Jacking)	374	17-Jan-22 A	25-Apr-23
DCS - Pipe Jacking Pre-treatment	12	17-Jan-22 A	29-Jan-22 A
DCS - Pipe Jacking Sheet pile (1571m2, 55m2/d)	57	31-Jan-22 A	11-Apr-22 A
DCS - Receiving Pit Pre-treatment	12	01-Apr-22 A	19-Apr-22 A
DCS - Pipe Jacking Excavation (1772m3, 135m3/d + 6d per layer of strut)	37	12-Apr-22 A	06-Jul-22 A
DCS - Receiving Pit Sheet pile (1276m2, 55m2/d)	24	20-Apr-22 A	10-Oct-22
DCS - Pipe Jacking (90m, 2m/d + 31d set up & demob)	76	12-Sep-22 A	19-Dec-22
DCS - Receiving Pit Excavation (3200m3, 135m3/d + 6d per layer of strut)	48	11-Oct-22	05-Dec-22
DCS - Pipe Jacking Pipe Install (90m, 6m/5d) & Valve Pit (24d)	99	20-Dec-22	25-Apr-23
DCS (L10(S))	292	10-Feb-22 A	04-Feb-23
Pre-bored	133	10-Feb-22 A	29-Jun-22 A
DCS - L10(S) 1 Pre-treatment (576m, 36m/d/rig, 2rigs)	8	10-Feb-22 A	18-Feb-22 A
DCS - L10(S) 2 Pre-treatment (576m, 36m/d/rig, 2rigs)	8	19-Feb-22 A	28-Feb-22 A
DCS - L10(S) 3 Pre-treatment (576m, 36m/d/rig, 2rigs)	8	01-Mar-22 A	09-Mar-22 A
DCS - L10(S) 4 Pre-treatment (404m, 36m/d/rig, 2rigs)	6	24-May-22 A	31-May-22 A
DCS - L10(S) 5 Pre-treatment (404m, 36m/d/rig, 2rigs)	6	06-Jun-22 A	11-Jun-22 A
DCS - L10(S) 6 Pre-treatment (404m, 36m/d/rig, 2rigs)	6	20-Jun-22 A	29-Jun-22 A
Sheet piles	191	19-Feb-22 A	22-Sep-22 A
DCS - L10(S) 1 Sheet pile (576m2, 55m2/d)	18	19-Feb-22 A	11-Mar-22 A
DCS - L10(S) 2 Sheet pile (576m2, 55m2/d)	24	12-Mar-22 A	09-Apr-22 A
DCS - L10(S) 3 Sheet pile (830m2, 55m2/d)	24	11-Apr-22 A	13-May-22 A
DCS - L10(S) 4 Sheet pile (404m2, 55m2/d)	8	31-May-22 A	11-Jun-22 A



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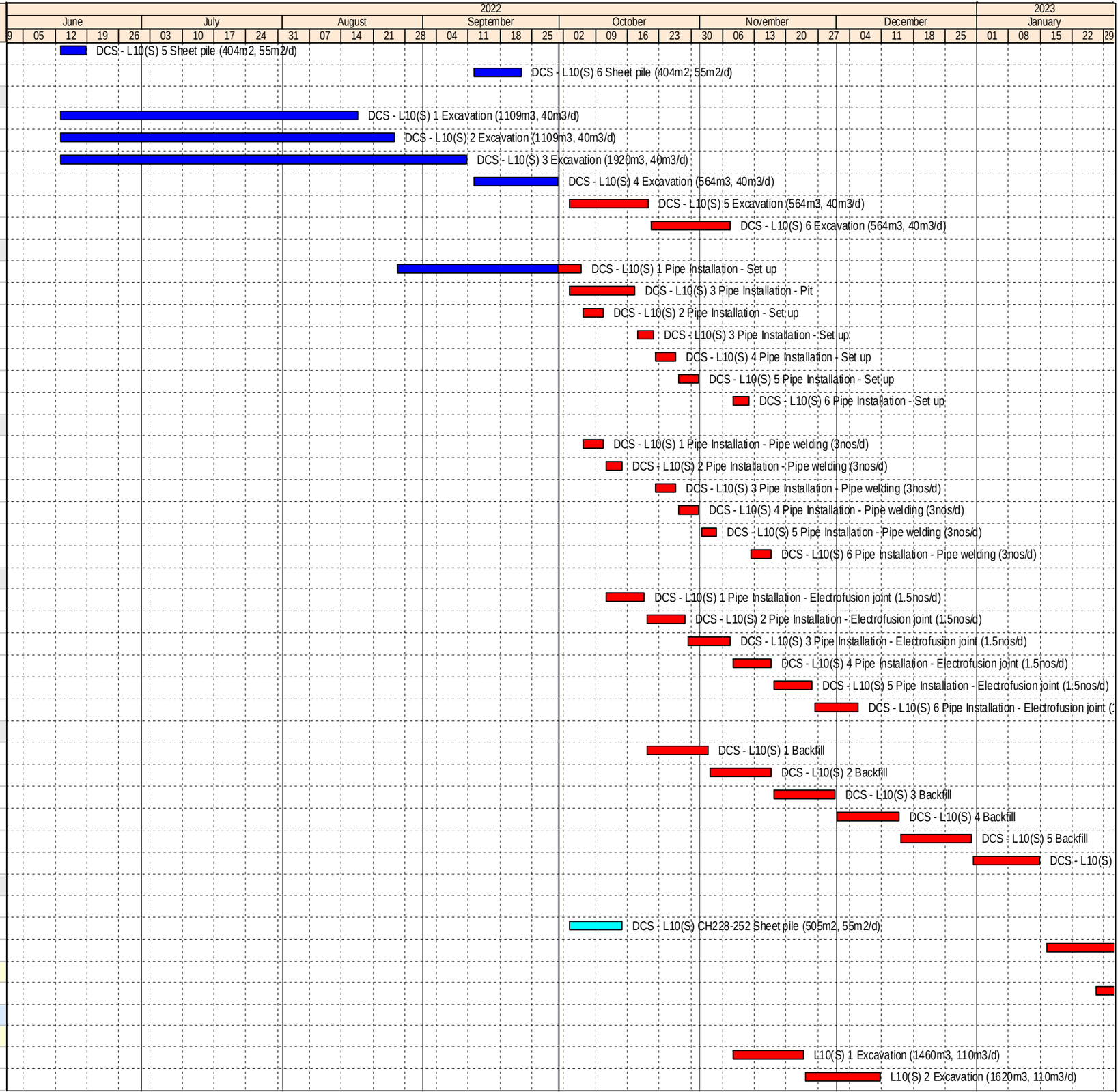
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
DCS - L10(S) 5 Sheet pile (404m2, 55m2/d)	8	13-Jun-22 A	18-Jun-22 A
DCS - L10(S) 6 Sheet pile (404m2, 55m2/d)	8	12-Sep-22 A	22-Sep-22 A
Excavation	106	13-Jun-22 A	07-Nov-22
DCS - L10(S) 1 Excavation (1109m3, 40m3/d)	28	13-Jun-22 A	17-Aug-22 A
DCS - L10(S) 2 Excavation (1109m3, 40m3/d)	28	13-Jun-22 A	25-Aug-22 A
DCS - L10(S) 3 Excavation (1920m3, 40m3/d)	48	13-Jun-22 A	10-Sep-22 A
DCS - L10(S) 4 Excavation (564m3, 40m3/d)	15	12-Sep-22 A	30-Sep-22 A
DCS - L10(S) 5 Excavation (564m3, 40m3/d)	15	03-Oct-22	20-Oct-22
DCS - L10(S) 6 Excavation (564m3, 40m3/d)	15	21-Oct-22	07-Nov-22
DCS Set up	56	26-Aug-22 A	11-Nov-22
DCS - L10(S) 1 Pipe Installation - Set up	4	26-Aug-22 A	05-Oct-22
DCS - L10(S) 3 Pipe Installation - Pit	12	03-Oct-22	17-Oct-22
DCS - L10(S) 2 Pipe Installation - Set up	4	06-Oct-22	10-Oct-22
DCS - L10(S) 3 Pipe Installation - Set up	4	18-Oct-22	21-Oct-22
DCS - L10(S) 4 Pipe Installation - Set up	4	22-Oct-22	26-Oct-22
DCS - L10(S) 5 Pipe Installation - Set up	4	27-Oct-22	31-Oct-22
DCS - L10(S) 6 Pipe Installation - Set up	4	08-Nov-22	11-Nov-22
DCS welding	36	06-Oct-22	16-Nov-22
DCS - L10(S) 1 Pipe Installation - Pipe welding (3nos/d)	4	06-Oct-22	10-Oct-22
DCS - L10(S) 2 Pipe Installation - Pipe welding (3nos/d)	4	11-Oct-22	14-Oct-22
DCS - L10(S) 3 Pipe Installation - Pipe welding (3nos/d)	4	22-Oct-22	26-Oct-22
DCS - L10(S) 4 Pipe Installation - Pipe welding (3nos/d)	4	27-Oct-22	31-Oct-22
DCS - L10(S) 5 Pipe Installation - Pipe welding (3nos/d)	4	01-Nov-22	04-Nov-22
DCS - L10(S) 6 Pipe Installation - Pipe welding (3nos/d)	4	12-Nov-22	16-Nov-22
Electrofusion	48	11-Oct-22	05-Dec-22
DCS - L10(S) 1 Pipe Installation - Electrofusion joint (1.5nos/d)	8	11-Oct-22	19-Oct-22
DCS - L10(S) 2 Pipe Installation - Electrofusion joint (1.5nos/d)	8	20-Oct-22	28-Oct-22
DCS - L10(S) 3 Pipe Installation - Electrofusion joint (1.5nos/d)	8	29-Oct-22	07-Nov-22
DCS - L10(S) 4 Pipe Installation - Electrofusion joint (1.5nos/d)	8	08-Nov-22	16-Nov-22
DCS - L10(S) 5 Pipe Installation - Electrofusion joint (1.5nos/d)	8	17-Nov-22	25-Nov-22
DCS - L10(S) 6 Pipe Installation - Electrofusion joint (1.5nos/d)	8	26-Nov-22	05-Dec-22
Backfill	72	20-Oct-22	14-Jan-23
DCS - L10(S) 1 Backfill	12	20-Oct-22	02-Nov-22
DCS - L10(S) 2 Backfill	12	03-Nov-22	16-Nov-22
DCS - L10(S) 3 Backfill	12	17-Nov-22	30-Nov-22
DCS - L10(S) 4 Backfill	12	01-Dec-22	14-Dec-22
DCS - L10(S) 5 Backfill	12	15-Dec-22	30-Dec-22
DCS - L10(S) 6 Backfill	12	31-Dec-22	14-Jan-23
Steel platform area	210	08-Apr-22 A	04-Feb-23
Steel platform	22	08-Apr-22 A	11-May-22 A
DCS - L10(S) CH228-252 Sheet pile (505m2, 55m2/d)	10	03-Oct-22	14-Oct-22
DCS - L10(S) CH228-252 Excavation (576m3, 40m3/d)	15	16-Jan-23	04-Feb-23
DCS (Slip Road S5)	36	27-Jan-23	09-Mar-23
DCS - S5 Pre-bored (1303m, 36m/d)	36	27-Jan-23	09-Mar-23
Road L10 (Southern)	75	08-Nov-22	09-Feb-23
Excavation	75	08-Nov-22	09-Feb-23
L10(S) 1 Excavation (1460m3, 110m3/d)	14	08-Nov-22	23-Nov-22
L10(S) 2 Excavation (1620m3, 110m3/d)	15	24-Nov-22	10-Dec-22



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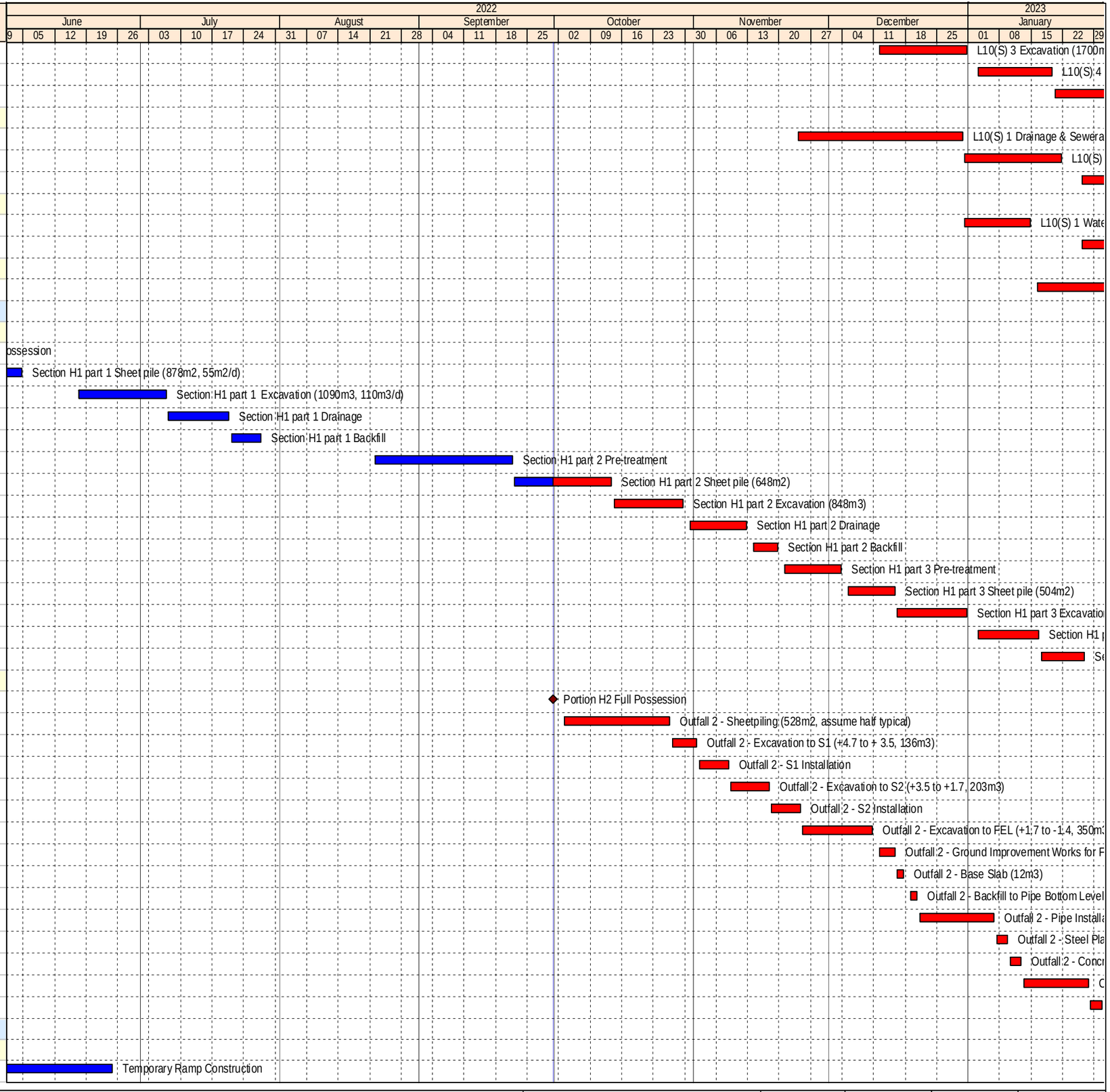
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
L10(S) 3 Excavation (1700m3, 110m3/d)	16	12-Dec-22	31-Dec-22
L10(S) 4 Excavation (960m3, 110m3/d) & Strutting (6d)	15	03-Jan-23	19-Jan-23
L10(S) 5 Excavation (960m3, 110m3/d) & Strutting (6d)	15	20-Jan-23	09-Feb-23
Drainage	54	24-Nov-22	01-Feb-23
L10(S) 1 Drainage & Sewerage (5 manhole, 6d/nos)	30	24-Nov-22	30-Dec-22
L10(S) 2 Drainage & Sewerage (3 manhole, 6d/nos)	18	31-Dec-22	21-Jan-23
L10(S) 3 Drainage & Sewerage (1 manhole, 6d/nos)	6	26-Jan-23	01-Feb-23
Watermain	30	31-Dec-22	08-Feb-23
L10(S) 1 Watermain (30m/6d)	12	31-Dec-22	14-Jan-23
L10(S) 2 Watermain (30m/6d)	12	26-Jan-23	08-Feb-23
Backfill	12	16-Jan-23	01-Feb-23
L10(S) 1 Backfill	12	16-Jan-23	01-Feb-23
Outfall 2 & Branch Drainage	162	17-May-22 A	30-Jan-23
Portion H1	159	17-May-22 A	26-Jan-23
Portion H1 Possession	0		17-May-22 A
Section H1 part 1 Sheet pile (878m2, 55m2/d)	16	17-May-22 A	04-Jun-22 A
Section H1 part 1 Excavation (1090m3, 110m3/d)	16	17-Jun-22 A	06-Jul-22 A
Section H1 part 1 Drainage	12	07-Jul-22 A	20-Jul-22 A
Section H1 part 1 Backfill	6	21-Jul-22 A	27-Jul-22 A
Section H1 part 2 Pre-treatment	12	22-Aug-22 A	21-Sep-22 A
Section H1 part 2 Sheet pile (648m2)	12	22-Sep-22 A	13-Oct-22
Section H1 part 2 Excavation (848m3)	14	14-Oct-22	29-Oct-22
Section H1 part 2 Drainage	12	31-Oct-22	12-Nov-22
Section H1 part 2 Backfill	6	14-Nov-22	19-Nov-22
Section H1 part 3 Pre-treatment	12	21-Nov-22	03-Dec-22
Section H1 part 3 Sheet pile (504m2)	10	05-Dec-22	15-Dec-22
Section H1 part 3 Excavation (660m3)	12	16-Dec-22	31-Dec-22
Section H1 part 3 Drainage	12	03-Jan-23	16-Jan-23
Section H1 part 3 Backfill	6	17-Jan-23	26-Jan-23
Outfall 2	96	30-Sep-22	30-Jan-23
Portion H2 Full Possession	0		30-Sep-22*
Outfall 2 - Sheetpiling (528m2, assume half typical)	20	03-Oct-22	26-Oct-22
Outfall 2 - Excavation to S1 (+4.7 to + 3.5, 136m3)	5	27-Oct-22	01-Nov-22
Outfall 2 - S1 Installation	6	02-Nov-22	08-Nov-22
Outfall 2 - Excavation to S2 (+3.5 to +1.7, 203m3)	8	09-Nov-22	17-Nov-22
Outfall 2 - S2 Installation	6	18-Nov-22	24-Nov-22
Outfall 2 - Excavation to FEL (+1.7 to -1.4, 350m3)	14	25-Nov-22	10-Dec-22
Outfall 2 - Ground Improvement Works for FEL	4	12-Dec-22	15-Dec-22
Outfall 2 - Base Slab (12m3)	2	16-Dec-22	17-Dec-22
Outfall 2 - Backfill to Pipe Bottom Level	2	19-Dec-22	20-Dec-22
Outfall 2 - Pipe Installation up to seawall block	12	21-Dec-22	06-Jan-23
Outfall 2 - Steel Plate Installation	2	07-Jan-23	09-Jan-23
Outfall 2 - Concrete surround installed pipes	3	10-Jan-23	12-Jan-23
Outfall 2 - Core-cut seawall	10	13-Jan-23	27-Jan-23
Outfall 2 - Remaining pipes installation	2	28-Jan-23	30-Jan-23
Foot Bridge FB-02	380	07-Dec-21 A	21-Mar-23
Temp Ramp	196	05-Feb-22 A	20-Aug-22 A
Temporary Ramp Construction	24	05-Feb-22 A	24-Jun-22 A



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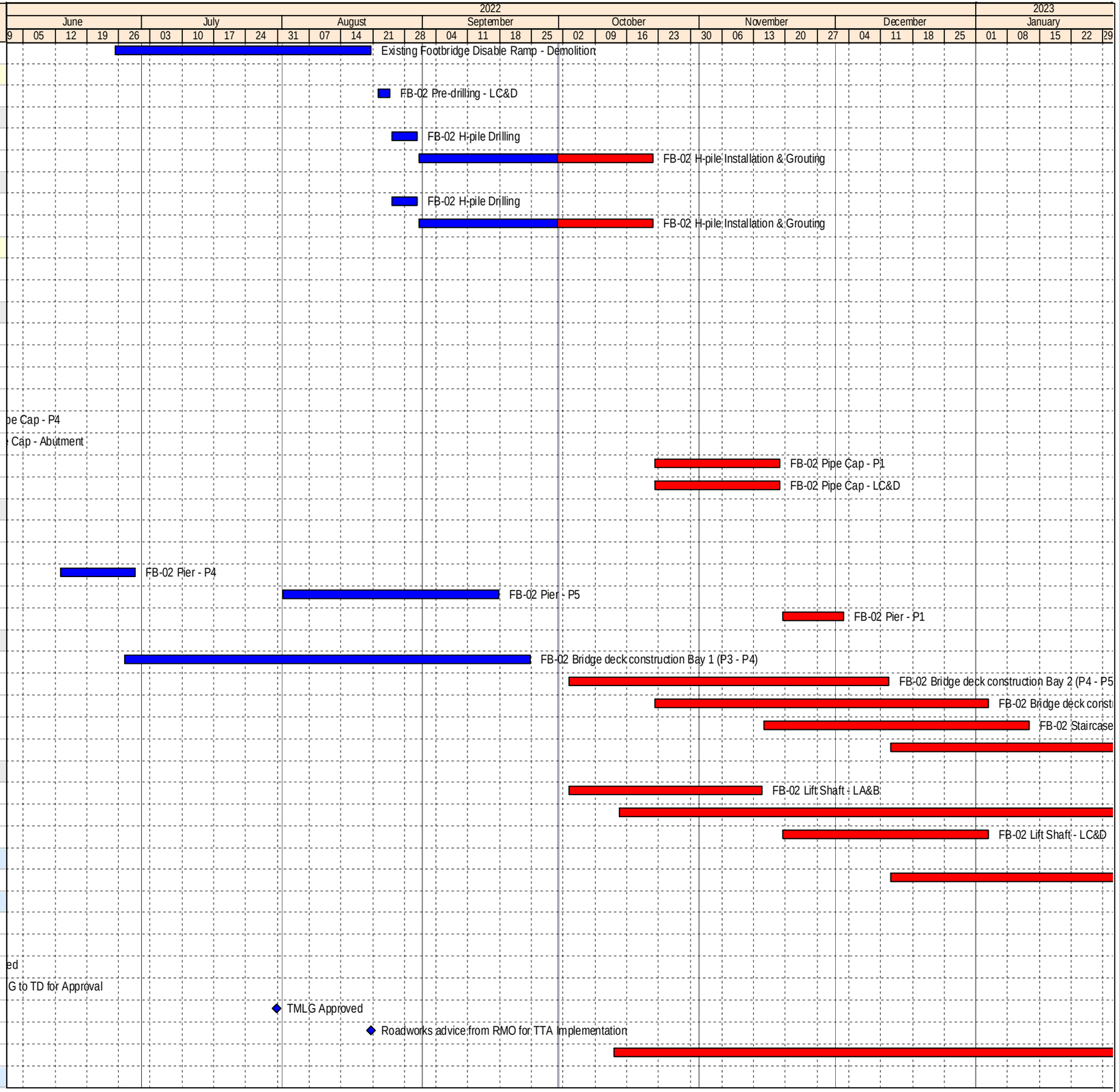
17-Jul-20	01V2	SPa/LLo	WYu
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
Existing Footbridge Disable Ramp - Demolition	36	25-Jun-22 A	20-Aug-22 A
Foundation	66	22-Aug-22 A	21-Oct-22
FB-02 Pre-drilling - LC&D	6	22-Aug-22 A	24-Aug-22 A
Lift C&D	9	25-Aug-22 A	21-Oct-22
FB-02 H-pile Drilling	6	25-Aug-22 A	30-Aug-22 A
FB-02 H-pile Installation & Grouting	3	31-Aug-22 A	21-Oct-22
P1	9	25-Aug-22 A	21-Oct-22
FB-02 H-pile Drilling	6	25-Aug-22 A	30-Aug-22 A
FB-02 H-pile Installation & Grouting	3	31-Aug-22 A	21-Oct-22
Structure	380	07-Dec-21 A	21-Mar-23
FB-02 Pile load test (Tension)	14	30-Dec-21 A	14-Jan-22 A
FB-02 Pile load test (Compression)	4	17-Jan-22 A	20-Jan-22 A
Pile Cap	281	07-Dec-21 A	18-Nov-22
FB-02 Pipe Cap - LA&B	24	07-Dec-21 A	17-Jan-22 A
FB-02 Pipe Cap - P5	24	30-Dec-21 A	12-Mar-22 A
FB-02 Pipe Cap - P2	24	14-Jan-22 A	12-Feb-22 A
FB-02 Pipe Cap - P3	24	10-Feb-22 A	19-Mar-22 A
FB-02 Pipe Cap - P4	24	11-Apr-22 A	21-May-22 A
FB-02 Pipe Cap - Abutment	24	13-Apr-22 A	19-May-22 A
FB-02 Pipe Cap - P1	24	22-Oct-22	18-Nov-22
FB-02 Pipe Cap - LC&D	24	22-Oct-22	18-Nov-22
Pier	262	17-Mar-22 A	02-Dec-22
FB-02 Pier - P2	36	17-Mar-22 A	07-Apr-22 A
FB-02 Pier - P3	36	04-Apr-22 A	14-Apr-22 A
FB-02 Pier - P4	36	13-Jun-22 A	29-Jun-22 A
FB-02 Pier - P5	54	01-Aug-22 A	17-Sep-22 A
FB-02 Pier - P1	12	19-Nov-22	02-Dec-22
Bridge Deck / Staircase	172	27-Jun-22 A	27-Feb-23
FB-02 Bridge deck construction Bay 1 (P3 - P4)	60	27-Jun-22 A	24-Sep-22 A
FB-02 Bridge deck construction Bay 2 (P4 - P5)	60	03-Oct-22	12-Dec-22
FB-02 Bridge deck construction Bay 3 (P2 - P3)	60	22-Oct-22	03-Jan-23
FB-02 Staircase A	48	15-Nov-22*	12-Jan-23
FB-02 Bridge deck construction Bay 4 (P1 - P2)	60	13-Dec-22	27-Feb-23
Lift Shaft	139	03-Oct-22	21-Mar-23
FB-02 Lift Shaft - LA&B	36	03-Oct-22*	14-Nov-22
Lift Procurement	130	14-Oct-22*	21-Mar-23
FB-02 Lift Shaft - LC&D	36	19-Nov-22	03-Jan-23
Road L10 / Road L18	42	13-Dec-22	06-Feb-23
L10 Roundabout Drainage (7 manhole)	42	13-Dec-22	06-Feb-23
[STE] Kai Hing Road / Lam Chak Street Modification	734	26-Mar-22 A	21-Oct-24
TTA Phasing	0		26-Mar-22 A
TMLG for XP validation	0		19-Apr-22 A
XP validated	0		19-May-22 A
TMLG to TD for Approval	0		25-May-22 A
TMLG Approved	0		30-Jul-22 A
Roadworks advice from RMO for TTA Implementation	0		20-Aug-22 A
LCS / KHR - Public Road TTMS stages	600	13-Oct-22	21-Oct-24
[STE] Hoi Bun Road / Cheung Yip Street / Wang Chiu Road Junction	417	26-Feb-22 A	15-Jun-23



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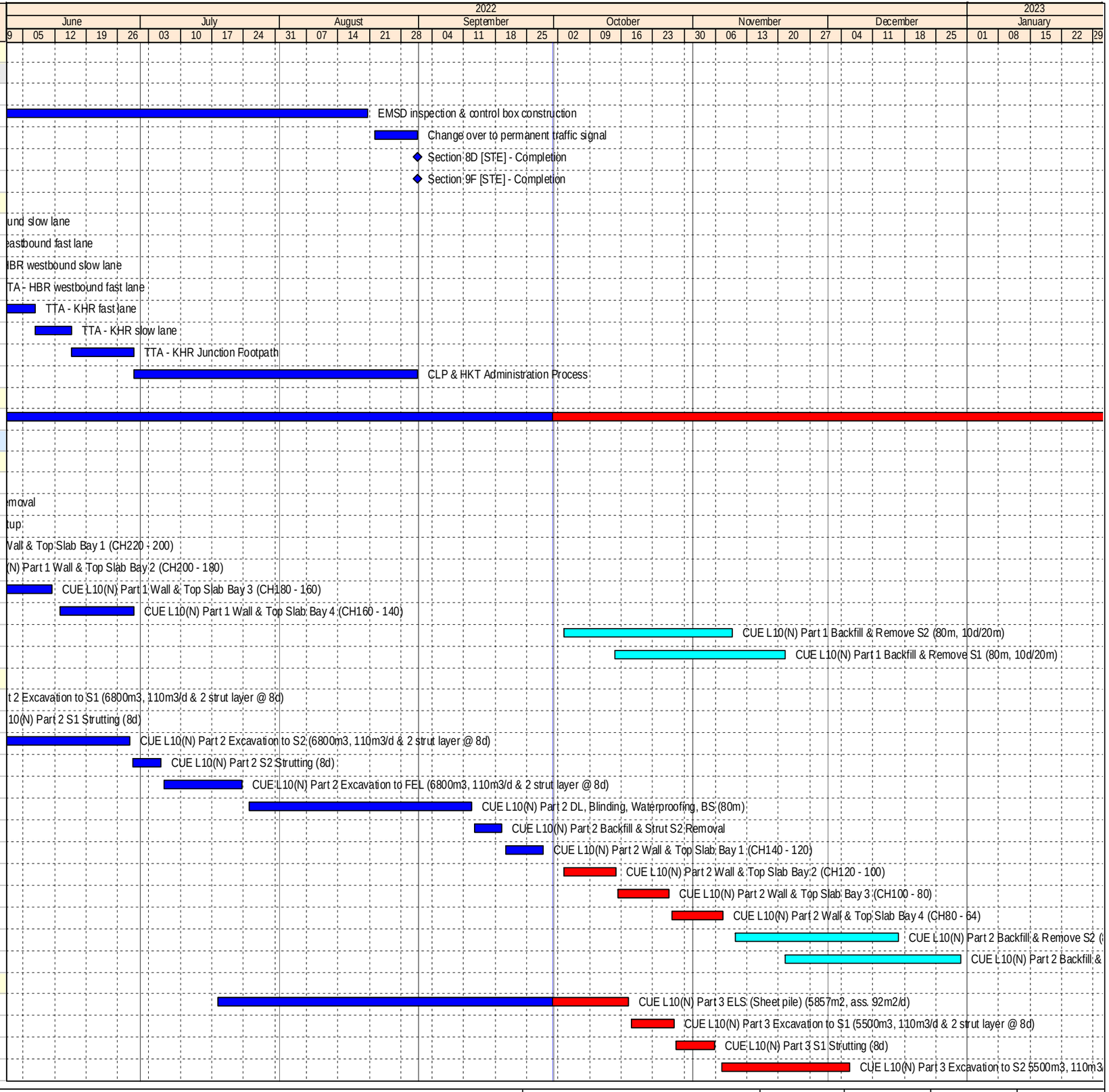
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
Stage 5 (Gas Station & HBR)	139	26-Feb-22 A	31-Aug-22 A
Stage 5D (HBR Left Turn Lane 2)	139	26-Feb-22 A	31-Aug-22 A
Reinstatement of carriageway	9	26-Feb-22 A	25-Mar-22 A
EMSD inspection & control box construction	9	07-Mar-22 A	20-Aug-22 A
Change over to permanent traffic signal	9	22-Aug-22 A	31-Aug-22 A
Section 8D [STE] - Completion	0		31-Aug-22 A
Section 9F [STE] - Completion	0		31-Aug-22 A
Kai Hing Road and Lam Chak Street Re-routing	240	03-May-22 A	31-Aug-22 A
TTA - HBR eastbound slow lane	12	03-May-22 A	11-May-22 A
TTA - HBR eastbound fast lane	12	11-May-22 A	17-May-22 A
TTA - HBR westbound slow lane	12	17-May-22 A	22-May-22 A
TTA - HBR westbound fast lane	12	22-May-22 A	28-May-22 A
TTA - KHR fast lane	12	28-May-22 A	07-Jun-22 A
TTA - KHR slow lane	12	07-Jun-22 A	15-Jun-22 A
TTA - KHR Junction Footpath	72	15-Jun-22 A	29-Jun-22 A
CLP & HKT Administration Process	96	29-Jun-22 A	31-Aug-22 A
Establishment	365	26-Mar-22 A	15-Jun-23
HBR / CYS / WCR Junction Moditication - Establishment works	365	26-Mar-22 A	15-Jun-23
[STE] Road L10 (Northern)	318	24-Dec-21 A	02-Feb-23
CUE L10(N) Phase 1	261	24-Dec-21 A	21-Nov-22
CUE L10(N) Part 1 DL, Blinding, Waterproofing, BS (80m)	21	24-Dec-21 A	08-Mar-22 A
CUE L10(N) Part 1 Backfill & Strut S3 Removal	7	29-Mar-22 A	19-Apr-22 A
CUE L10(N) Travelling Formwork Setup	4	07-Apr-22 A	23-Apr-22 A
CUE L10(N) Part 1 Wall & Top Slab Bay 1 (CH220 - 200)	32	26-Apr-22 A	09-May-22 A
CUE L10(N) Part 1 Wall & Top Slab Bay 2 (CH200 - 180)	10	10-May-22 A	20-May-22 A
CUE L10(N) Part 1 Wall & Top Slab Bay 3 (CH180 - 160)	10	20-May-22 A	11-Jun-22 A
CUE L10(N) Part 1 Wall & Top Slab Bay 4 (CH160 - 140)	10	13-Jun-22 A	29-Jun-22 A
CUE L10(N) Part 1 Backfill & Remove S2 (80m, 10d/20m)	32	03-Oct-22	09-Nov-22
CUE L10(N) Part 1 Backfill & Remove S1 (80m, 10d/20m)	32	14-Oct-22	21-Nov-22
CUE L10(N) Phase 2	203	28-Apr-22 A	30-Dec-22
CUE L10(N) Part 2 Excavation to S1 (6800m3, 110m3/d & 2 strut layer @ 8d)	12	28-Apr-22 A	13-May-22 A
CUE L10(N) Part 2 S1 Strutting (8d)	8	14-May-22 A	23-May-22 A
CUE L10(N) Part 2 Excavation to S2 (6800m3, 110m3/d & 2 strut layer @ 8d)	30	24-May-22 A	28-Jun-22 A
CUE L10(N) Part 2 S2 Strutting (8d)	8	29-Jun-22 A	05-Jul-22 A
CUE L10(N) Part 2 Excavation to FEL (6800m3, 110m3/d & 2 strut layer @ 8d)	20	06-Jul-22 A	23-Jul-22 A
CUE L10(N) Part 2 DL, Blinding, Waterproofing, BS (80m)	21	25-Jul-22 A	12-Sep-22 A
CUE L10(N) Part 2 Backfill & Strut S2 Removal	7	13-Sep-22 A	19-Sep-22 A
CUE L10(N) Part 2 Wall & Top Slab Bay 1 (CH140 - 120)	8	20-Sep-22 A	28-Sep-22 A
CUE L10(N) Part 2 Wall & Top Slab Bay 2 (CH120 - 100)	10	03-Oct-22	14-Oct-22
CUE L10(N) Part 2 Wall & Top Slab Bay 3 (CH100 - 80)	10	15-Oct-22	26-Oct-22
CUE L10(N) Part 2 Wall & Top Slab Bay 4 (CH80 - 64)	10	27-Oct-22	07-Nov-22
CUE L10(N) Part 2 Backfill & Remove S2 (80m, 10d/20m)	32	10-Nov-22	16-Dec-22
CUE L10(N) Part 2 Backfill & Remove S1 (80m, 10d/20m)	32	21-Nov-22	30-Dec-22
CUE L10(N) Phase 3	151	18-Jul-22 A	02-Feb-23
CUE L10(N) Part 3 ELS (Sheet pile) (5857m2, ass. 92m2/d)	64	18-Jul-22 A	17-Oct-22
CUE L10(N) Part 3 Excavation to S1 (5500m3, 110m3/d & 2 strut layer @ 8d)	9	18-Oct-22	27-Oct-22
CUE L10(N) Part 3 S1 Strutting (8d)	8	28-Oct-22	05-Nov-22
CUE L10(N) Part 3 Excavation to S2 5500m3, 110m3/d & 2 strut layer @ 8d)	25	07-Nov-22	05-Dec-22



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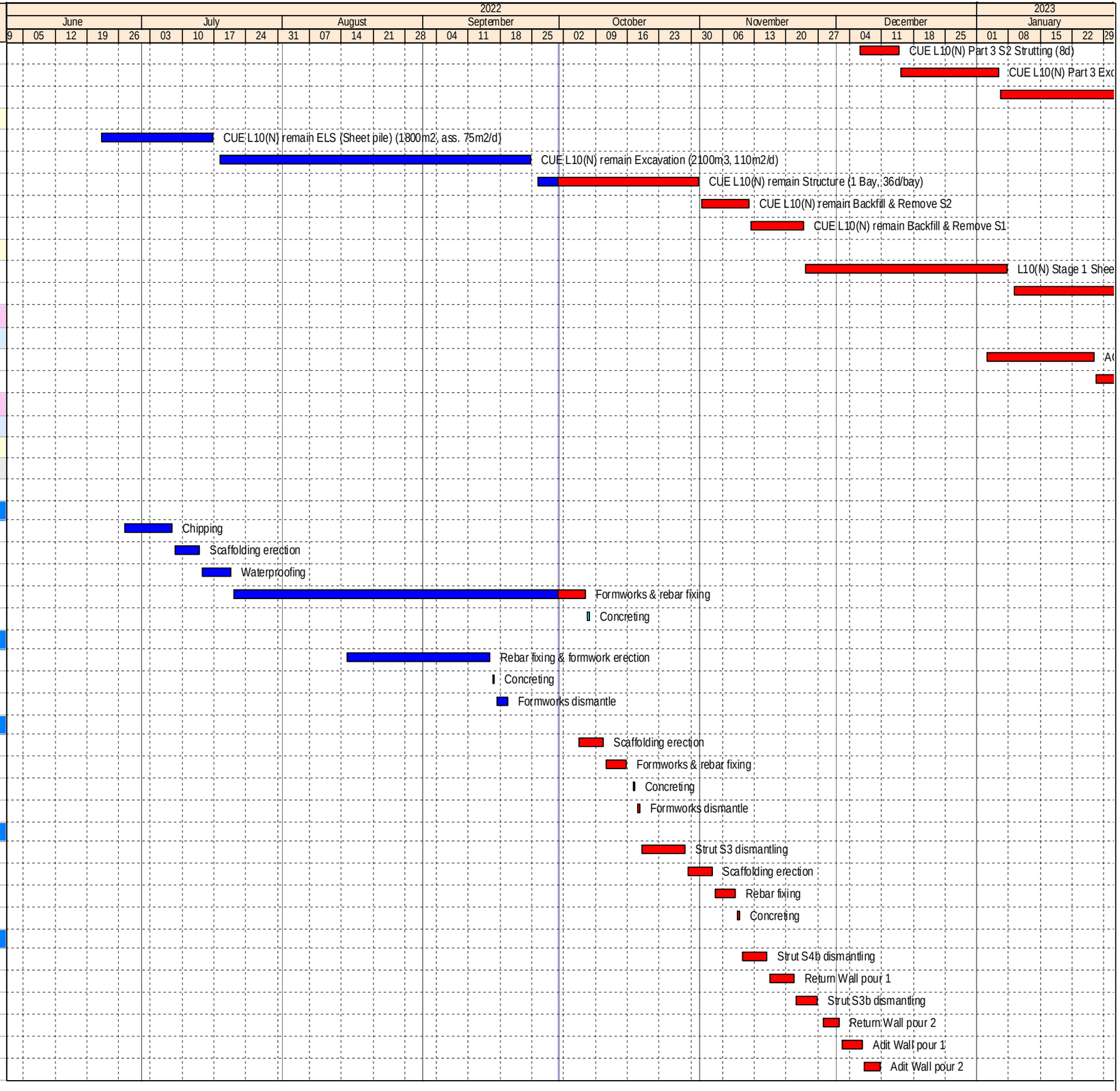
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
CUE L10(N) Part 3 S2 Strutting (8d)	8	06-Dec-22	14-Dec-22
CUE L10(N) Part 3 Excavation to FEL (5500m3, 110m3/d & 2 strut layer @ 8d)	16	15-Dec-22	05-Jan-23
CUE L10(N) Part 3 DL, Blinding, Waterproofing, BS (60m)	21	06-Jan-23	02-Feb-23
CUE L10(N) Remaining	120	22-Jun-22 A	23-Nov-22
CUE L10(N) remain ELS (Sheet pile) (1800m2, ass. 75m2/d)	24	22-Jun-22 A	16-Jul-22 A
CUE L10(N) remain Excavation (2100m3, 110m2/d)	20	18-Jul-22 A	24-Sep-22 A
CUE L10(N) remain Structure (1 Bay, 36d/bay)	36	26-Sep-22 A	31-Oct-22
CUE L10(N) remain Backfill & Remove S2	10	01-Nov-22	11-Nov-22
CUE L10(N) remain Backfill & Remove S1	10	12-Nov-22	23-Nov-22
L10(N) Utilities	54	24-Nov-22	01-Feb-23
L10(N) Stage 1 Sheet pile (1900m2, 55m2/d)	36	24-Nov-22	07-Jan-23
L10(N) Stage 1 Excavation (2000m3, 110m3/d)	18	09-Jan-23	01-Feb-23
AT-GRADE ROAD [AGR]	36	03-Jan-23	16-Feb-23
Permanent Structure	36	03-Jan-23	16-Feb-23
AGR - Formation to required level + SRT	18	03-Jan-23*	26-Jan-23
AGR - Sub-base + SRT	18	27-Jan-23	16-Feb-23
DEPRESSED ROAD [DPR]	346	13-Dec-21 A	03-Feb-23
Portal Structure	346	13-Dec-21 A	03-Feb-23
Forecast	346	13-Dec-21 A	03-Feb-23
Remaining DPR Structure	328	13-Dec-21 A	10-Jan-23
Breaking remaining SUS Bulkhead Dwall	60	13-Dec-21 A	19-Mar-22 A
External Wall	85	27-Jun-22 A	07-Oct-22
Chipping	7	27-Jun-22 A	07-Jul-22 A
Scaffolding erection	2	08-Jul-22 A	13-Jul-22 A
Waterproofing	4	14-Jul-22 A	20-Jul-22 A
Formworks & rebar fixing	7	21-Jul-22 A	06-Oct-22
Concreting	1	07-Oct-22	07-Oct-22
Internal Wall	29	15-Aug-22 A	19-Sep-22 A
Rebar fixing & formwork erection	8	15-Aug-22 A	15-Sep-22 A
Concreting	1	16-Sep-22 A	16-Sep-22 A
Formworks dismantle	2	17-Sep-22 A	19-Sep-22 A
Concrete Strut	12	05-Oct-22	18-Oct-22
Scaffolding erection	5	05-Oct-22	10-Oct-22
Formworks & rebar fixing	5	11-Oct-22	15-Oct-22
Concreting	1	17-Oct-22	17-Oct-22
Formworks dismantle	1	18-Oct-22	18-Oct-22
Base Slab	19	19-Oct-22	09-Nov-22
Strut S3 dismantling	9	19-Oct-22	28-Oct-22
Scaffolding erection	5	29-Oct-22	03-Nov-22
Rebar fixing	4	04-Nov-22	08-Nov-22
Concreting	1	09-Nov-22	09-Nov-22
Adit Wall	50	10-Nov-22	10-Jan-23
Strut S4b dismantling	5	10-Nov-22	15-Nov-22
Return Wall pour 1	5	16-Nov-22	21-Nov-22
Strut S3b dismantling	5	22-Nov-22	26-Nov-22
Return Wall pour 2	4	28-Nov-22	01-Dec-22
Adit Wall pour 1	4	02-Dec-22	06-Dec-22
Adit Wall pour 2	4	07-Dec-22	10-Dec-22



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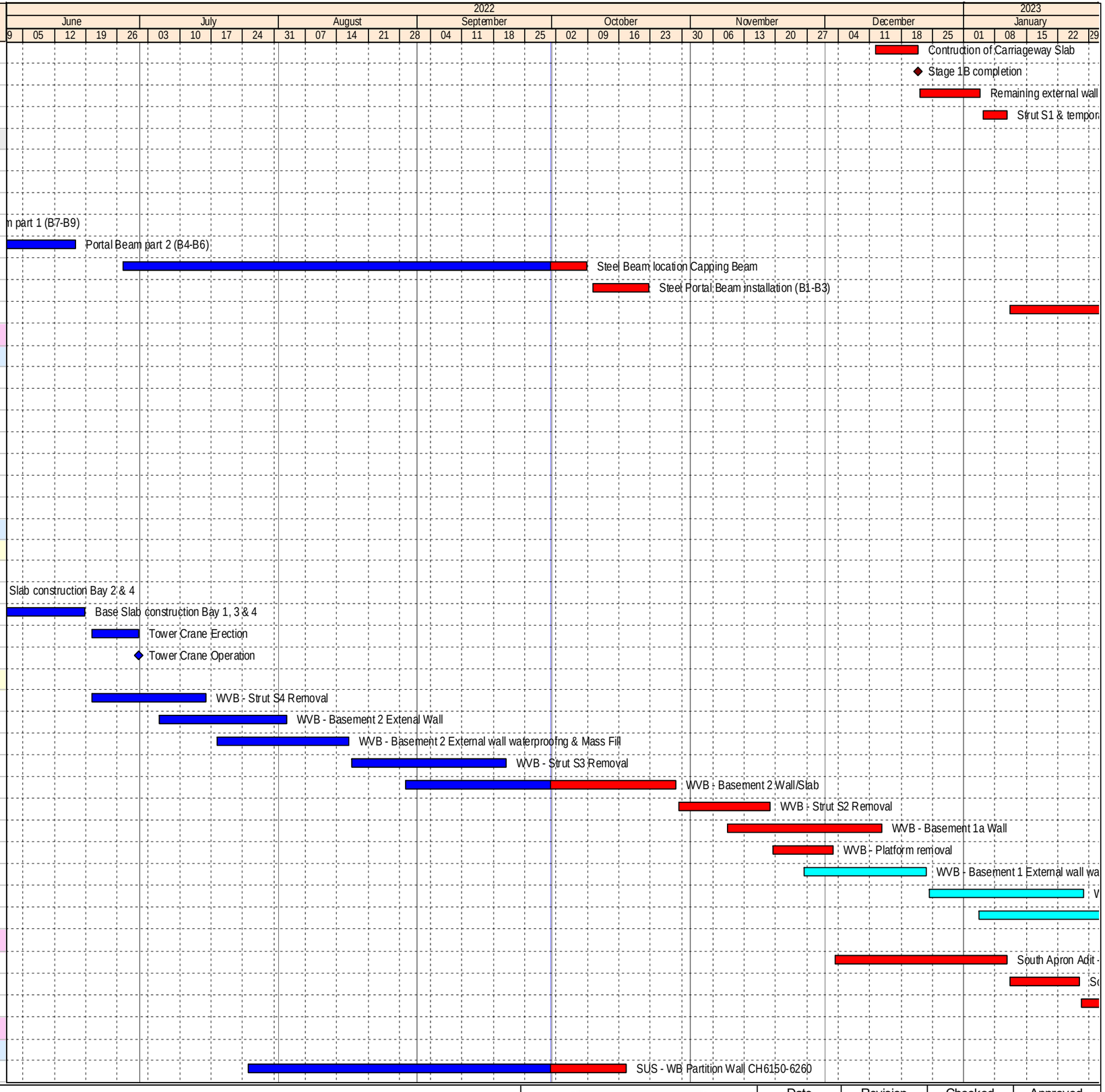
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
Contruction of Carriageway Slab	9	12-Dec-22	21-Dec-22
Stage 1B completion	0		21-Dec-22
Remaining external wall + Gain strength	9	22-Dec-22	04-Jan-23
Strut S1 & temporary steel bridge removal	6	05-Jan-23	10-Jan-23
Portal Structure	297	03-Jan-22 A	03-Feb-23
Falsework erection	15	03-Jan-22 A	19-Mar-22 A
West side Capping Beam (B4-B9)	18	28-Mar-22 A	02-Apr-22 A
East side Capping Beam (B4-B9)	18	31-Mar-22 A	07-Apr-22 A
Portal Beam part 1 (B7-B9)	18	08-Apr-22 A	18-May-22 A
Portal Beam part 2 (B4-B6)	18	09-May-22 A	16-Jun-22 A
Steel Beam location Capping Beam	12	27-Jun-22 A	08-Oct-22
Steel Portal Beam installation (B1-B3)	12	10-Oct-22	22-Oct-22
Capping Beam + Portal Beam	18	11-Jan-23	03-Feb-23
WEST VENTILATION BUILDING [WVB]	340	20-Dec-21 A	28-Feb-23
Excavation & Strutting	113	20-Dec-21 A	04-Apr-22 A
Excavation to below Strut S3 11,905m³	20	20-Dec-21 A	12-Jan-22 A
Strut S3 Installation	24	03-Jan-22 A	19-Jan-22 A
Strut S3 Pre-loading	2	20-Jan-22 A	21-Jan-22 A
Excavation to below Strut S4 8,930m³	15	22-Jan-22 A	18-Feb-22 A
Strut S4 Installation	20	10-Feb-22 A	15-Mar-22 A
Strut S4 Pre-loading	2	16-Mar-22 A	17-Mar-22 A
Excavation to FEL 9,230m³	20	19-Mar-22 A	04-Apr-22 A
Building Structure	247	05-Apr-22 A	28-Feb-23
WVB - Base Slab	67	05-Apr-22 A	30-Jun-22 A
WVB - Earth Mat Installation	24	05-Apr-22 A	22-Apr-22 A
Base Slab construction Bay 2 & 4	20	23-Apr-22 A	24-May-22 A
Base Slab construction Bay 1, 3 & 4	20	19-May-22 A	18-Jun-22 A
Tower Crane Erection	7	20-Jun-22 A	30-Jun-22 A
Tower Crane Operation	0		30-Jun-22 A
Basement Structure	197	20-Jun-22 A	28-Feb-23
WVB - Strut S4 Removal	18	20-Jun-22 A	15-Jul-22 A
WVB - Basement 2 Extenal Wall	21	05-Jul-22 A	02-Aug-22 A
WVB - Basement 2 External wall waterproofng & Mass Fill	18	18-Jul-22 A	16-Aug-22 A
WVB - Strut S3 Removal	18	17-Aug-22 A	20-Sep-22 A
WVB - Basement 2 Wall/Slab	36	29-Aug-22 A	28-Oct-22
WVB - Strut S2 Removal	18	29-Oct-22	18-Nov-22
WVB - Basement 1a Wall	30	09-Nov-22	13-Dec-22
WVB - Platform removal	12	19-Nov-22	02-Dec-22
WVB - Basement 1 External wall waterproofng & Mass Fill	24	26-Nov-22	23-Dec-22
WVB - Strut S1 Removal	24	24-Dec-22	27-Jan-23
WVB - Basement 1b Wall/Slab	45	04-Jan-23	28-Feb-23
SOUTH APRON ADIT	52	03-Dec-22	08-Feb-23
South Apron Adit - ELS & Pump Test & Strut Installation	30	03-Dec-22	10-Jan-23
South Apron Adit - Base Slab & Wall Kicker	11	11-Jan-23	26-Jan-23
South Apron Adit - Strut S2 Removal	11	27-Jan-23	08-Feb-23
SUPPORTING UNDERGROUND STRUCTURE [SUS]	240	25-Jul-22 A	23-May-23
Permanent Structure	89	25-Jul-22 A	15-Nov-22
SUS - WB Partition Wall CH6150-6260	24	25-Jul-22 A	17-Oct-22



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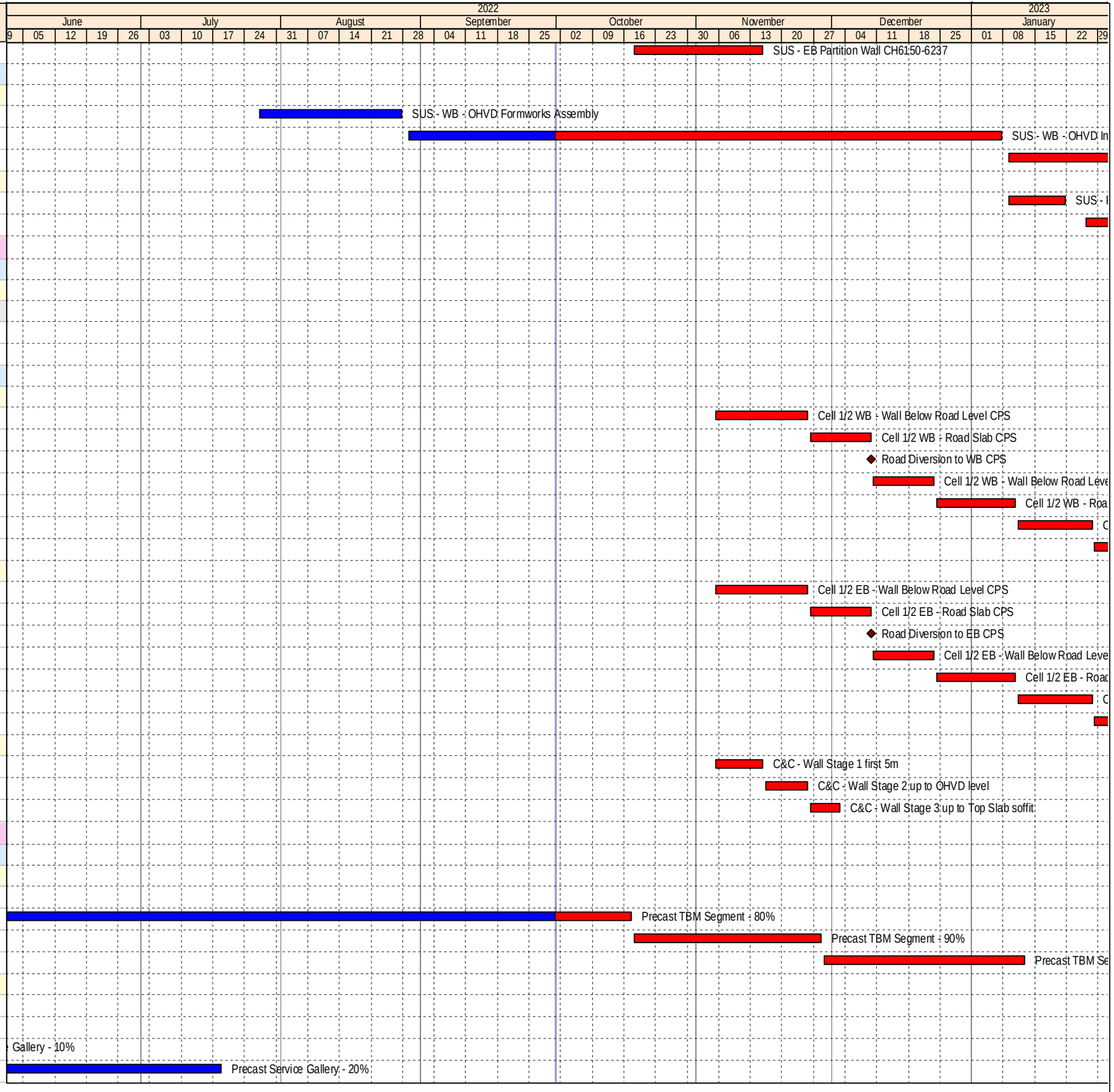
Activity Name	Dur	Start	Finish
SUS - EB Partition Wall CH6150-6237	25	18-Oct-22	15-Nov-22*
Tunnel Internal Structure & Finishing	191	27-Jul-22 A	23-May-23
Westbound	111	27-Jul-22 A	13-Feb-23
SUS - WB - OHVD Formworks Assembly	18	27-Jul-22 A	27-Aug-22 A
SUS - WB - OHVD In-situ 320m	96	29-Aug-22 A	07-Jan-23
SUS - WB - Fire Board - Tunnel crown	28	09-Jan-23	13-Feb-23
Eastbound	108	09-Jan-23	23-May-23
SUS - Formworks transfer to EB	12	09-Jan-23	21-Jan-23
SUS - EB - OHVD In-situ	96	26-Jan-23	23-May-23
C&C TUNNEL / LAUNCHING SHAFT [C&C / LS]	338	05-Feb-22 A	10-Feb-23
Civil Works for TBM Assembly	79	05-Feb-22 A	23-Feb-22 A
Cell 1 & 2	79	05-Feb-22 A	23-Feb-22 A
Tympanum	79	05-Feb-22 A	23-Feb-22 A
Westbound Additional Mass Fill	15	05-Feb-22 A	12-Feb-22 A
Eastbound Additional Mass Fill	7	14-Feb-22 A	23-Feb-22 A
Tunnel Permanent Works	78	05-Nov-22	10-Feb-23
Cell 1/2 Westbound	76	05-Nov-22	08-Feb-23
Cell 1/2 WB - Wall Below Road Level CPS	18	05-Nov-22	25-Nov-22
Cell 1/2 WB - Road Slab CPS	12	26-Nov-22	09-Dec-22
Road Diversion to WB CPS	0		09-Dec-22
Cell 1/2 WB - Wall Below Road Level NCPS	12	10-Dec-22	23-Dec-22
Cell 1/2 WB - Road Slab CPS	12	24-Dec-22	10-Jan-23
Cell 1/2 WB - Wall Road Level	12	11-Jan-23	27-Jan-23
Cell 1/2 WB - Wall Above Road Level	10	28-Jan-23	08-Feb-23
Cell 1/2 Eastbound	78	05-Nov-22	10-Feb-23
Cell 1/2 EB - Wall Below Road Level CPS	18	05-Nov-22	25-Nov-22
Cell 1/2 EB - Road Slab CPS	12	26-Nov-22	09-Dec-22
Road Diversion to EB CPS	0		09-Dec-22
Cell 1/2 EB - Wall Below Road Level NCPS	12	10-Dec-22	23-Dec-22
Cell 1/2 EB - Road Slab NCPS	12	24-Dec-22	10-Jan-23
Cell 1/2 EB - Wall Road Level	12	11-Jan-23	27-Jan-23
Cell 1/2 EB - Wall Above Road Level	12	28-Jan-23	10-Feb-23
Cut & Cover	24	05-Nov-22	02-Dec-22
C&C - Wall Stage 1 first 5m	9	05-Nov-22	15-Nov-22
C&C - Wall Stage 2 up to OHVD level	9	16-Nov-22	25-Nov-22
C&C - Wall Stage 3 up to Top Slab soffit	6	26-Nov-22	02-Dec-22
SUB-SEA TBM TUNNEL - WESTBOUND	373	27-Sep-21 A	13-Feb-23
Precast Fabrication	330	29-Nov-21 A	13-Feb-23
TBM Precast Segments	306	29-Nov-21 A	12-Jan-23
Precast TBM Segment - 70%	36	29-Nov-21 A	26-Feb-22 A
Precast TBM Segment - 80%	36	28-Feb-22 A	17-Oct-22
Precast TBM Segment - 90%	36	18-Oct-22	28-Nov-22
Precast TBM Segment - 100%	36	29-Nov-22	12-Jan-23
Service Gallery	324	28-Dec-21 A	13-Feb-23
Precast Service Gallery - 3%	24	28-Dec-21 A	01-Mar-22 A
Precast Service Gallery - 6%	24	02-Mar-22 A	02-Apr-22 A
Precast Service Gallery - 10%	24	03-Apr-22 A	14-May-22 A
Precast Service Gallery - 20%	24	16-May-22 A	18-Jul-22 A



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

Three Months Rolling Programme (Sep-22)

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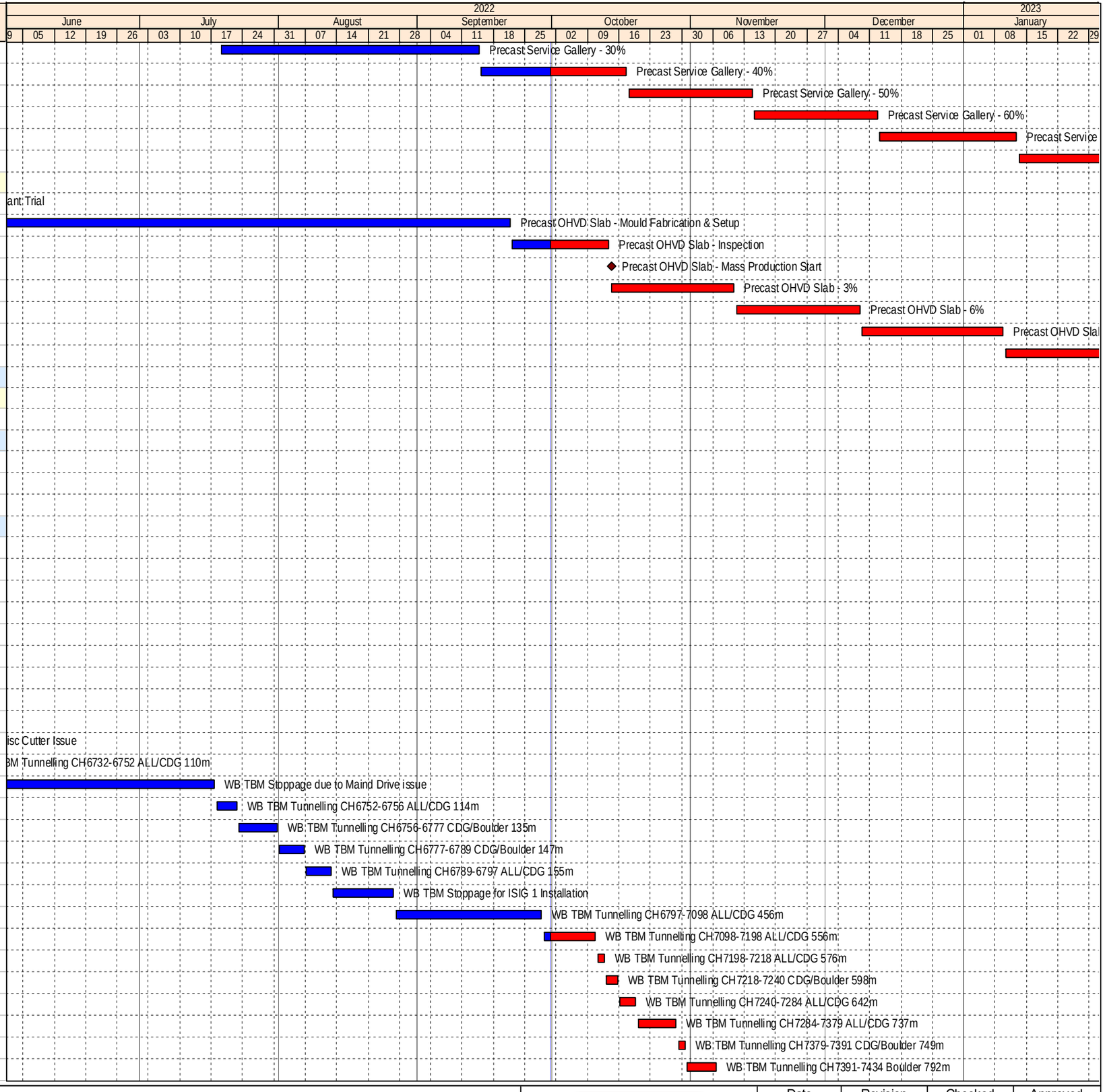
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
Precast Service Gallery - 30%	24	19-Jul-22 A	14-Sep-22 A
Precast Service Gallery - 40%	24	15-Sep-22 A	17-Oct-22
Precast Service Gallery - 50%	24	18-Oct-22	14-Nov-22
Precast Service Gallery - 60%	24	15-Nov-22	12-Dec-22
Precast Service Gallery - 70%	24	13-Dec-22	12-Jan-23
Precast Service Gallery - 80%	24	13-Jan-23	13-Feb-23
OHVD Slab	281	01-Feb-22 A	09-Feb-23
Concrete Mix - Plant Trial	72	01-Feb-22 A	12-May-22 A
Precast OHVD Slab - Mould Fabrication & Setup	72	01-Feb-22 A	21-Sep-22 A
Precast OHVD Slab - Inspection	12	22-Sep-22 A	13-Oct-22
Precast OHVD Slab - Mass Production Start	0	14-Oct-22	
Precast OHVD Slab - 3%	24	14-Oct-22	10-Nov-22
Precast OHVD Slab - 6%	24	11-Nov-22	08-Dec-22
Precast OHVD Slab - 10%	24	09-Dec-22	09-Jan-23
Precast OHVD Slab - 20%	24	10-Jan-23	09-Feb-23
Site Establishment	24	27-Sep-21 A	12-Jan-22 A
Mortar Plant	24	27-Sep-21 A	12-Jan-22 A
Mortar Plant - Commissioning	24	27-Sep-21 A	12-Jan-22 A
TBM Assembly	47	29-Nov-21 A	13-Jan-22 A
Air / Water / Hydraulic Electrical Connections	22	29-Nov-21 A	01-Jan-22 A
Testing & Commissioning	26	09-Dec-21 A	12-Jan-22 A
WB TBM Break-in	0	13-Jan-22 A	
TBM Tunnelling	373	13-Jan-22 A	06-Feb-23
WB TBM Tunnelling CH6642-6659 17m	15	13-Jan-22 A	19-Jan-22 A
WB TBM Tunnelling Stoppage due to Active Mortar injection	15	20-Jan-22 A	27-Jan-22 A
WB TBM Tunnelling CH6659-6660 18m	15	28-Jan-22 A	28-Jan-22 A
WB TBM Tunnelling Stoppage due to Additional Mass Fill	15	29-Jan-22 A	12-Feb-22 A
WB TBM Tunnelling Stoppage due to Covid-19 outbreak	15	13-Feb-22 A	28-Feb-22 A
WB TBM Tunnelling CH6660-6665 B/I Plug 23m	3	01-Mar-22 A	01-Mar-22 A
WB TBM Tunnelling CH6665-6710 ALL/CDG 68m	16	02-Mar-22 A	10-Mar-22 A
WB TBM Tunnelling CH6710-6725 ALL/CDG 83m	7	11-Mar-22 A	13-Mar-22 A
WB TBM Tunnelling CH6725-6732 ALL/CDG 90m	7	14-Mar-22 A	04-Apr-22 A
WB Stoppage due to Disc Cutter Issue	7	05-Apr-22 A	06-May-22 A
WB TBM Tunnelling CH6732-6752 ALL/CDG 110m	7	07-May-22 A	23-May-22 A
WB TBM Stoppage due to Maind Drive issue	7	24-May-22 A	17-Jul-22 A
WB TBM Tunnelling CH6752-6756 ALL/CDG 114m	1	18-Jul-22 A	22-Jul-22 A
WB TBM Tunnelling CH6756-6777 CDG/Boulder 135m	4	23-Jul-22 A	31-Jul-22 A
WB TBM Tunnelling CH6777-6789 CDG/Boulder 147m	3	01-Aug-22 A	06-Aug-22 A
WB TBM Tunnelling CH6789-6797 ALL/CDG 155m	38	07-Aug-22 A	12-Aug-22 A
WB TBM Stoppage for ISIG 1 Installation	9	13-Aug-22 A	26-Aug-22 A
WB TBM Tunnelling CH6797-7098 ALL/CDG 456m	37	27-Aug-22 A	28-Sep-22 A
WB TBM Tunnelling CH7098-7198 ALL/CDG 556m	11	29-Sep-22 A	10-Oct-22
WB TBM Tunnelling CH7198-7218 ALL/CDG 576m	2	11-Oct-22	12-Oct-22
WB TBM Tunnelling CH7218-7240 CDG/Boulder 598m	3	13-Oct-22	15-Oct-22
WB TBM Tunnelling CH7240-7284 ALL/CDG 642m	4	16-Oct-22	19-Oct-22
WB TBM Tunnelling CH7284-7379 ALL/CDG 737m	9	20-Oct-22	28-Oct-22
WB TBM Tunnelling CH7379-7391 CDG/Boulder 749m	2	29-Oct-22	30-Oct-22
WB TBM Tunnelling CH7391-7434 Boulder 792m	7	31-Oct-22	06-Nov-22



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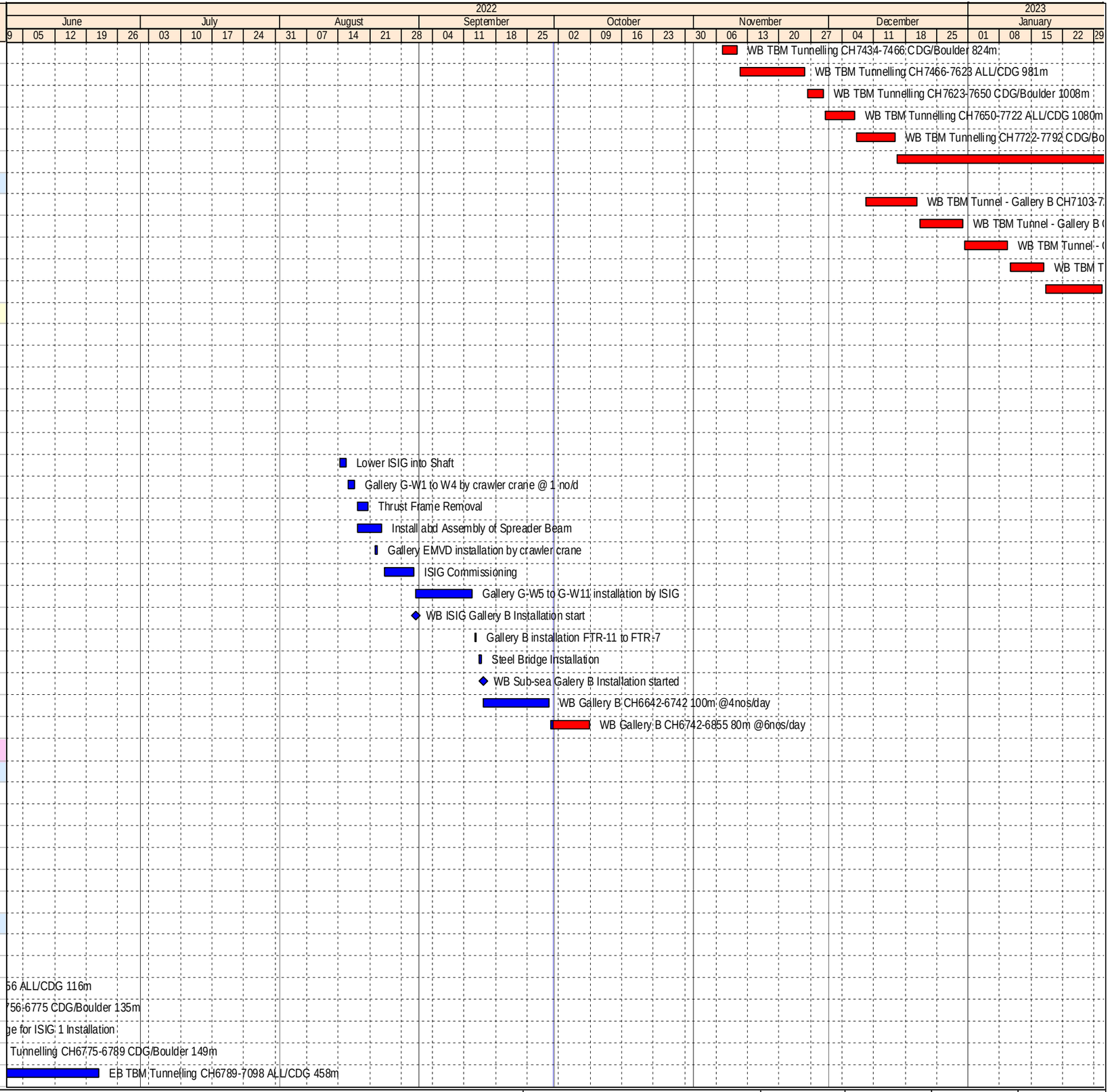
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
WB TBM Tunnelling CH7434-7466 CDG/Boulder 824m	4	07-Nov-22	10-Nov-22
WB TBM Tunnelling CH7466-7623 ALL/CDG 981m	15	11-Nov-22	25-Nov-22
WB TBM Tunnelling CH7623-7650 CDG/Boulder 1008m	4	26-Nov-22	29-Nov-22
WB TBM Tunnelling CH7650-7722 ALL/CDG 1080m	7	30-Nov-22	06-Dec-22
WB TBM Tunnelling CH7722-7792 CDG/Boulder 1150m	9	07-Dec-22	15-Dec-22
WB TBM Tunnelling CH7792-8445 ALL/CDG 1803m	53	16-Dec-22	06-Feb-23
Gallery B Installation	321	27-Dec-21 A	30-Jan-23
WB TBM Tunnel - Gallery B CH7103-7203 100m CP12	10	09-Dec-22	20-Dec-22
WB TBM Tunnel - Gallery B CH7203-7303 100m CP13	7	21-Dec-22	30-Dec-22
WB TBM Tunnel - Gallery B CH7303-7403 100m CP14	7	31-Dec-22	09-Jan-23
WB TBM Tunnel - Gallery B CH7403-7503 100m CP15	7	10-Jan-23	17-Jan-23
WB TBM Tunnel - Gallery B CH7503-7603 100m CP16	8	18-Jan-23	30-Jan-23
Forecast	248	27-Dec-21 A	08-Oct-22
Spreader Beam, Hook, Hook Block etc..(from Italy by sea)	56	27-Dec-21 A	15-Mar-22 A
Wheels (from Italy by air)	10	30-Dec-21 A	07-Jan-22 A
Ramp delivery (from China by road)	6	06-Jan-22 A	11-Jan-22 A
Loader (from China by road)	13	21-Jan-22 A	26-Jan-22 A
Ramp pre-assembly at surface	12	27-Jan-22 A	16-Feb-22 A
Loader pre-assembly at surface	6	17-Feb-22 A	25-Feb-22 A
Lower ISIG into Shaft	3	14-Aug-22 A	15-Aug-22 A
Gallery G-W1 to W4 by crawler crane @ 1 no/d	2	16-Aug-22 A	17-Aug-22 A
Thrust Frame Removal	6	18-Aug-22 A	20-Aug-22 A
Install abd Assembly of Spreader Beam	6	18-Aug-22 A	23-Aug-22 A
Gallery EMVD installation by crawler crane	1	22-Aug-22 A	22-Aug-22 A
ISIG Commissioning	6	24-Aug-22 A	30-Aug-22 A
Gallery G-W5 to G-W11 installation by ISIG	3	31-Aug-22 A	12-Sep-22 A
WB ISIG Gallery B Installation start	0	31-Aug-22 A	
Gallery B installation FTR-11 to FTR-7	3	13-Sep-22 A	13-Sep-22 A
Steel Bridge Installation	1	14-Sep-22 A	14-Sep-22 A
WB Sub-sea Galery B Installation started	0	15-Sep-22 A	
WB Gallery B CH6642-6742 100m @4nos/day	11	15-Sep-22 A	29-Sep-22 A
WB Gallery B CH6742-6855 80m @6nos/day	6	30-Sep-22 A	08-Oct-22
SUB-SEA TBM TUNNEL - EASTBOUND	342	14-Dec-21 A	03-Feb-23
TBM Assembly	140	14-Dec-21 A	10-Mar-22 A
Lifting & Welding of Tailskin to Shield	62	14-Dec-21 A	06-Jan-22 A
Air / Water / Hydraulic Electrical Connections	22	20-Dec-21 A	06-Jan-22 A
Testing & Commissioning	26	26-Dec-21 A	10-Mar-22 A
Thrust Frame Installation	22	30-Dec-21 A	06-Jan-22 A
Power On	3	07-Jan-22 A	07-Jan-22 A
S1282 EB TBM Break-in	0		10-Mar-22 A
TBM Tunnelling	290	11-Mar-22 A	02-Feb-23
EB TBM Tunnelling CH6640-6665 B/I Plug 25m	16	11-Mar-22 A	25-Mar-22 A
EB TBM Tunnelling CH6665-6710 ALL/CDG 70m	15	26-Mar-22 A	02-Apr-22 A
EB TBM Tunnelling CH6710-6756 ALL/CDG 116m	7	03-Apr-22 A	27-Apr-22 A
EB TBM Tunnelling CH6756-6775 CDG/Boulder 135m	4	28-Apr-22 A	04-May-22 A
WB TBM Stoppage for ISIG 1 Installation	9	06-May-22 A	12-May-22 A
EB TBM Tunnelling CH6775-6789 CDG/Boulder 149m	3	13-May-22 A	21-May-22 A
EB TBM Tunnelling CH6789-7098 ALL/CDG 458m	38	22-May-22 A	21-Jun-22 A



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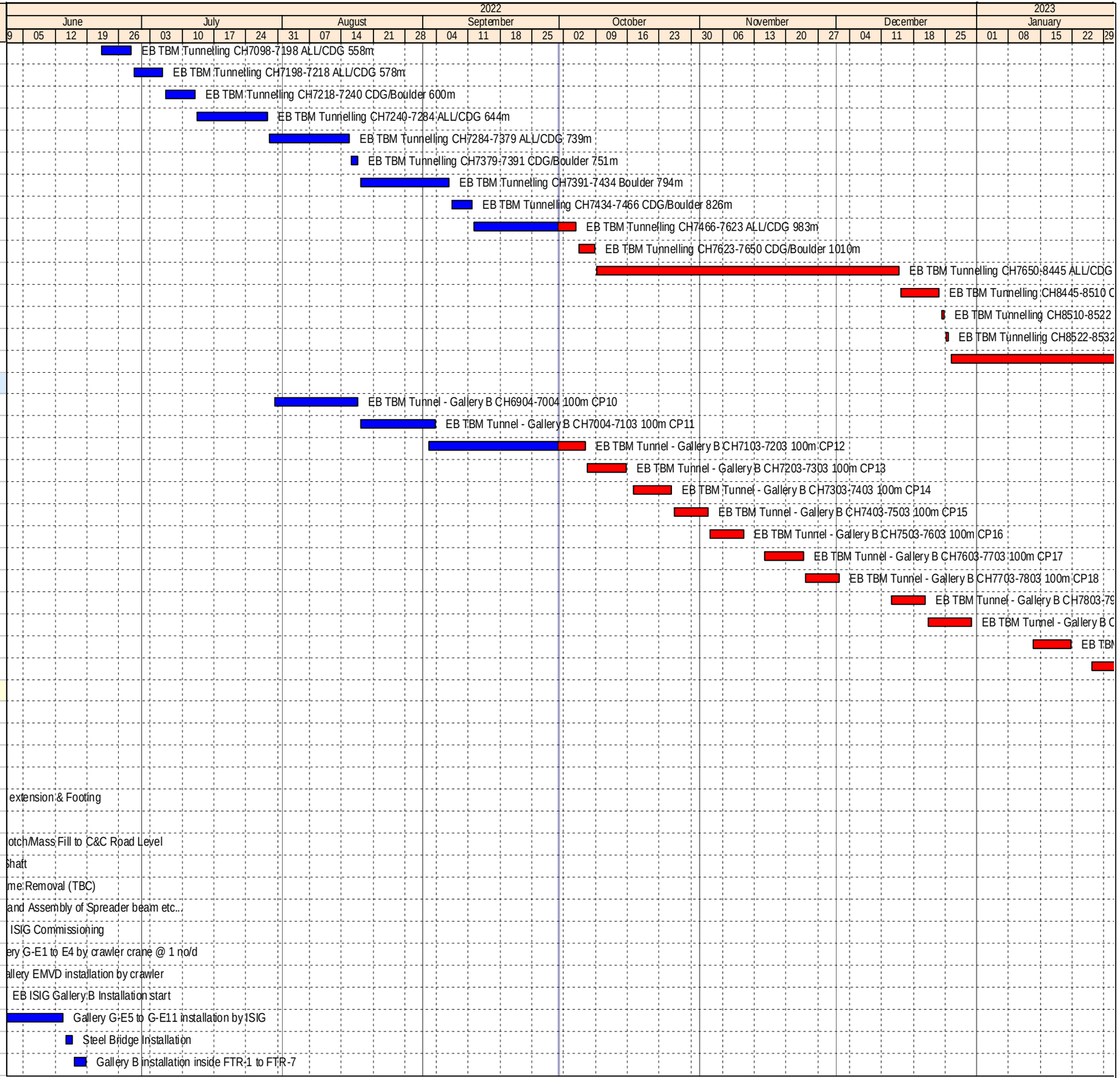
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
EB TBM Tunnelling CH7098-7198 ALL/CDG 558m	11	22-Jun-22 A	28-Jun-22 A
EB TBM Tunnelling CH7198-7218 ALL/CDG 578m	2	29-Jun-22 A	05-Jul-22 A
EB TBM Tunnelling CH7218-7240 CDG/Boulder 600m	3	06-Jul-22 A	12-Jul-22 A
EB TBM Tunnelling CH7240-7284 ALL/CDG 644m	4	13-Jul-22 A	28-Jul-22 A
EB TBM Tunnelling CH7284-7379 ALL/CDG 739m	9	29-Jul-22 A	15-Aug-22 A
EB TBM Tunnelling CH7379-7391 CDG/Boulder 751m	2	16-Aug-22 A	17-Aug-22 A
EB TBM Tunnelling CH7391-7434 Boulder 794m	7	18-Aug-22 A	06-Sep-22 A
EB TBM Tunnelling CH7434-7466 CDG/Boulder 826m	4	07-Sep-22 A	11-Sep-22 A
EB TBM Tunnelling CH7466-7623 ALL/CDG 983m	15	12-Sep-22 A	04-Oct-22
EB TBM Tunnelling CH7623-7650 CDG/Boulder 1010m	4	05-Oct-22	08-Oct-22
EB TBM Tunnelling CH7650-8445 ALL/CDG 1805m	67	09-Oct-22	14-Dec-22
EB TBM Tunnelling CH8445-8510 CDG/Boulder 1870m	9	15-Dec-22	23-Dec-22
EB TBM Tunnelling CH8510-8522 ALL/CDG 1882m	1	24-Dec-22	24-Dec-22
EB TBM Tunnelling CH8522-8532 CDG/Boulder 1892m	1	25-Dec-22	25-Dec-22
EB TBM Tunnelling CH8532-8730 Boulder/Granite 2090m	39	26-Dec-22	02-Feb-23
Gallery B Installation	325	28-Jan-22 A	03-Feb-23
EB TBM Tunnel - Gallery B CH6904-7004 100m CP10	7	30-Jul-22 A	17-Aug-22 A
EB TBM Tunnel - Gallery B CH7004-7103 100m CP11	9	18-Aug-22 A	03-Sep-22 A
EB TBM Tunnel - Gallery B CH7103-7203 100m CP12	9	02-Sep-22 A	06-Oct-22
EB TBM Tunnel - Gallery B CH7203-7303 100m CP13	8	07-Oct-22	15-Oct-22
EB TBM Tunnel - Gallery B CH7303-7403 100m CP14	8	17-Oct-22	25-Oct-22
EB TBM Tunnel - Gallery B CH7403-7503 100m CP15	7	26-Oct-22	02-Nov-22
EB TBM Tunnel - Gallery B CH7503-7603 100m CP16	7	03-Nov-22	10-Nov-22
EB TBM Tunnel - Gallery B CH7603-7703 100m CP17	8	15-Nov-22	23-Nov-22
EB TBM Tunnel - Gallery B CH7703-7803 100m CP18	7	24-Nov-22	01-Dec-22
EB TBM Tunnel - Gallery B CH7803-7903 100m CP19	7	13-Dec-22	20-Dec-22
EB TBM Tunnel - Gallery B CH7903-8001 100m CP20	7	21-Dec-22	30-Dec-22
EB TBM Tunnel - Gallery B CH8001-8099 100m CP21	8	13-Jan-23	21-Jan-23
EB TBM Tunnel - Gallery B CH8099-8196 100m CP22	8	26-Jan-23	03-Feb-23
Forecast	224	28-Jan-22 A	20-Jul-22 A
Spreader Beam, Hook, Hook Block etc..(from Italy by sea)	56	28-Jan-22 A	05-Mar-22 A
Front Ramp (from China by road)	9	11-Feb-22 A	19-Feb-22 A
Mild and Rear Ramp + Loader (from China by road)	9	14-Feb-22 A	22-Feb-22 A
Ramp pre-assembly at surface	24	11-Apr-22 A	25-Apr-22 A
Shifting way curve shape extension & Footing	6	25-Apr-22 A	04-May-22 A
Loader pre-asembly	10	26-Apr-22 A	04-May-22 A
Construction of Notch/Mass Fill to C&C Road Level	9	05-May-22 A	12-May-22 A
Lower ISIG into Shaft	3	05-May-22 A	12-May-22 A
Thrust Frame Removal (TBC)	6	13-May-22 A	19-May-22 A
Install and Assembly of Spreader beam etc...	6	13-May-22 A	23-May-22 A
ISIG Commissioning	6	13-May-22 A	30-May-22 A
Gallery G-E1 to E4 by crawler crane @ 1 no/d	2	23-May-22 A	25-May-22 A
Gallery EMVD installation by crawler	1	26-May-22 A	27-May-22 A
EB ISIG Gallery B Installation start	0	31-May-22 A	
Gallery G-E5 to G-E11 installation by ISIG	3	31-May-22 A	13-Jun-22 A
Steel Bridge Installation	1	14-Jun-22 A	15-Jun-22 A
Gallery B installation inside FTR-1 to FTR-7	3	16-Jun-22 A	18-Jun-22 A



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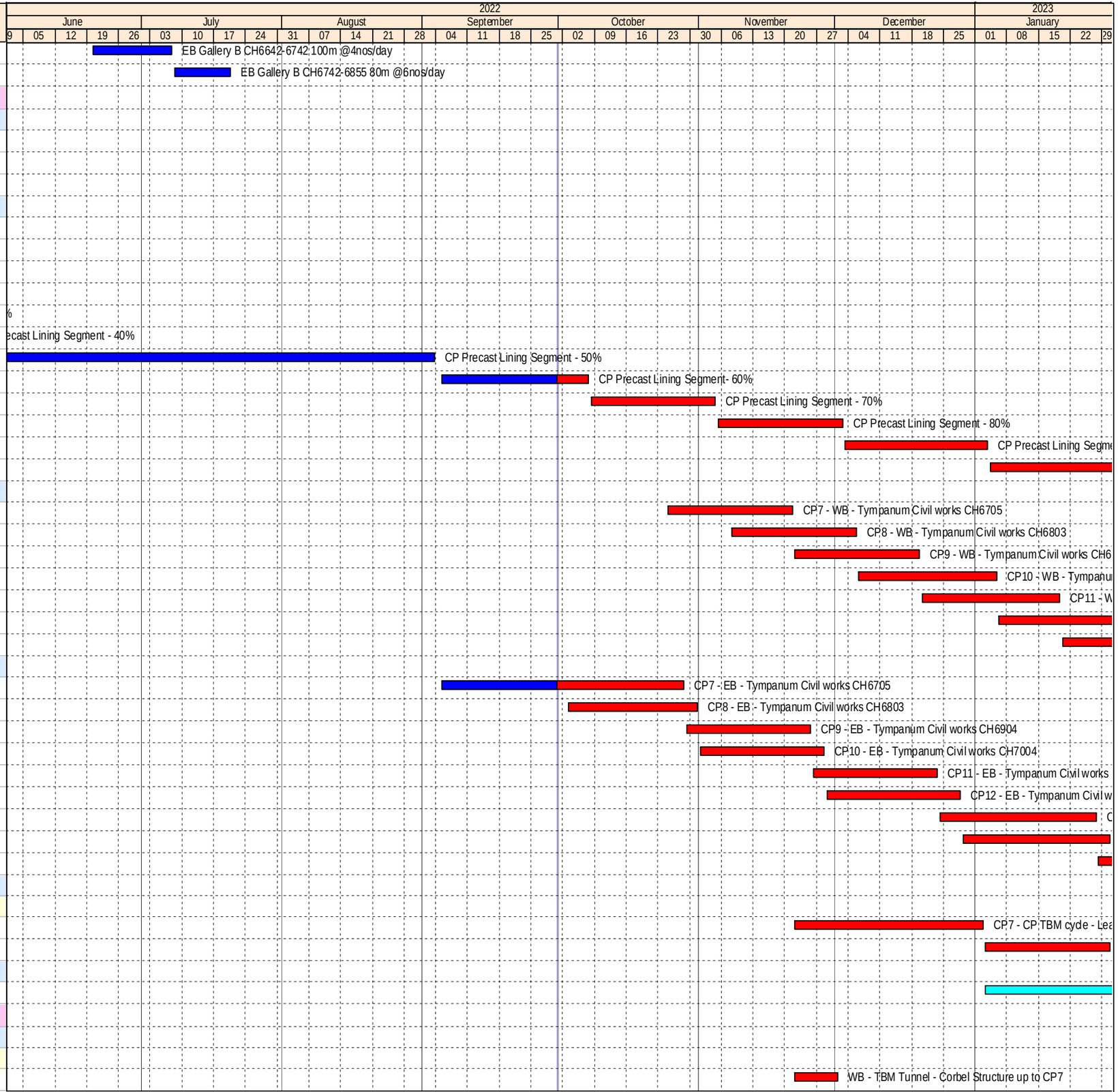
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
EB Gallery B CH6642-6742 100m @4nos/day	11	20-Jun-22 A	07-Jul-22 A
EB Gallery B CH6742-6855 80m @6nos/day	6	08-Jul-22 A	20-Jul-22 A
SUB-SEA TUNNEL CROSS PASSAGE (CP7-CP27a/b)	350	10-May-21 A	02-Mar-23
CP TBM Design / Fabrication / FAT / Delivery	144	10-May-21 A	19-Mar-22 A
Fabrication / Refurbishment	144	10-May-21 A	10-Feb-22 A
FAT	24	11-Feb-22 A	28-Feb-22 A
Delivery of TBM components to the Site	24	01-Mar-22 A	19-Mar-22 A
CP Precast Lining Fabrication	279	17-Dec-21 A	03-Feb-23
CP Precast Lining Segment - 3%	18	17-Dec-21 A	15-Jan-22 A
CP Precast Lining Segment - 6%	18	17-Jan-22 A	29-Jan-22 A
CP Precast Lining Segment - 10%	24	31-Jan-22 A	19-Feb-22 A
CP Precast Lining Segment - 20%	24	21-Feb-22 A	30-Mar-22 A
CP Precast Lining Segment - 30%	5	31-Mar-22 A	26-Apr-22 A
CP Precast Lining Segment - 40%	24	27-Apr-22 A	23-May-22 A
CP Precast Lining Segment - 50%	24	24-May-22 A	03-Sep-22 A
CP Precast Lining Segment- 60%	24	05-Sep-22 A	07-Oct-22
CP Precast Lining Segment - 70%	24	08-Oct-22	04-Nov-22
CP Precast Lining Segment - 80%	24	05-Nov-22	02-Dec-22
CP Precast Lining Segment - 90%	24	03-Dec-22	03-Jan-23
CP Precast Lining Segment - 100%	24	04-Jan-23	03-Feb-23
WB CP Tympanum Structure	96	25-Oct-22	20-Feb-23
CP7 - WB - Tympanum Civil works CH6705	24	25-Oct-22	21-Nov-22
CP8 - WB - Tympanum Civil works CH6803	24	08-Nov-22	05-Dec-22
CP9 - WB - Tympanum Civil works CH6904	24	22-Nov-22	19-Dec-22
CP10 - WB - Tympanum Civil works CH7004	24	06-Dec-22	05-Jan-23
CP11 - WB - Tympanum Civil works CH7103	24	20-Dec-22	19-Jan-23
CP12 - WB - Tympanum Civil works CH7203	24	06-Jan-23	06-Feb-23
CP13 - WB - Tympanum Civil works CH7303	24	20-Jan-23	20-Feb-23
EB CP Tympanum Structure	118	05-Sep-22 A	24-Feb-23
CP7 - EB - Tympanum Civil works CH6705	24	05-Sep-22 A	28-Oct-22
CP8 - EB - Tympanum Civil works CH6803	24	03-Oct-22	31-Oct-22
CP9 - EB - Tympanum Civil works CH6904	24	29-Oct-22	25-Nov-22
CP10 - EB - Tympanum Civil works CH7004	24	01-Nov-22	28-Nov-22
CP11 - EB - Tympanum Civil works CH7103	24	26-Nov-22	23-Dec-22
CP12 - EB - Tympanum Civil works CH7203	24	29-Nov-22	28-Dec-22
CP13 - EB - Tympanum Civil works CH7303	24	24-Dec-22	27-Jan-23
CP14 - EB - Tympanum Civil works CH7403	24	29-Dec-22	30-Jan-23
CP15 - EB - Tympanum Civil works Ch7503	24	28-Jan-23	24-Feb-23
CP TBM Pipe Jacking	70	22-Nov-22	30-Jan-23
CP7 to CP8	70	22-Nov-22	30-Jan-23
CP7 - CP TBM cycle - Learning Curve	42	22-Nov-22	02-Jan-23
CP8 - CP TBM cycle - Learning Curve	28	03-Jan-23	30-Jan-23
CP Internal & Collar Structure	48	03-Jan-23	02-Mar-23
CP7 - Internal & Collar Structure	48	03-Jan-23	02-Mar-23
SUB-SEA TUNNEL INTERNAL & FINISHING	62	22-Nov-22	08-Feb-23
Corbel	62	22-Nov-22	08-Feb-23
Westbound	62	22-Nov-22	08-Feb-23
WB - TBM Tunnel - Corbel Structure up to CP7	9	22-Nov-22	01-Dec-22



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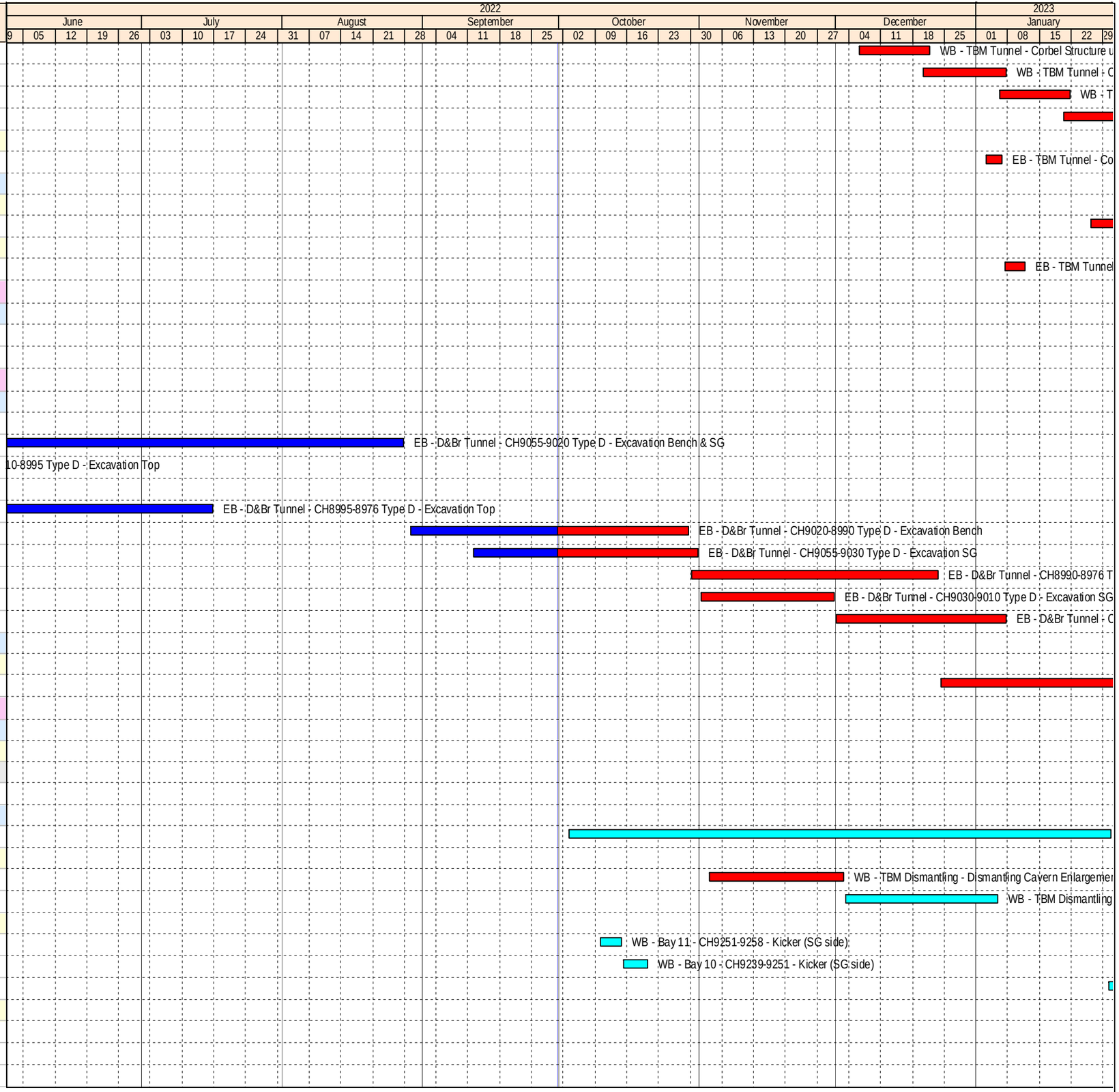
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
WB - TBM Tunnel - Corbel Structure up to CP8	14	06-Dec-22	21-Dec-22
WB - TBM Tunnel - Corbel Structure up to CP9	14	20-Dec-22	07-Jan-23
WB - TBM Tunnel - Corbel Structure up to CP10	14	06-Jan-23	21-Jan-23
WB - TBM Tunnel - Corbel Structure up to CP11	14	20-Jan-23	08-Feb-23
Eastbound	4	03-Jan-23	06-Jan-23
EB - TBM Tunnel - Corbel Structure up to CP7	4	03-Jan-23	06-Jan-23
Fire Board - Tunnel Crown	20	07-Jan-23	02-Feb-23
Westbound	7	26-Jan-23	02-Feb-23
WB - TBM Tunnel - Fire board - Tunnel Crown up to CP10	7	26-Jan-23	02-Feb-23
Eastbound	4	07-Jan-23	11-Jan-23
EB - TBM Tunnel - Fire board - Tunnel Crown up to CP7	4	07-Jan-23	11-Jan-23
CHA KWO LING ROAD WORKS	151	19-Apr-21 A	30-Mar-22 A
Wai Yip Street / Cha Kwo Ling Road Junction	151	19-Apr-21 A	30-Mar-22 A
Reinstatement	30	19-Apr-21 A	30-Mar-22 A
Section 8E Completion	0		30-Mar-22 A
DRILL & BREAK TUNNEL [D&BR]	321	06-Dec-21 A	03-Feb-23
Tunnel Excavation	371	06-Dec-21 A	07-Jan-23
EB - D&Br Tunnel - CH9025-9010 Type D - Excavation Top	40	06-Dec-21 A	22-Jan-22 A
EB - D&Br Tunnel - CH9055-9020 Type D - Excavation Bench & SG	72	23-Dec-21 A	27-Aug-22 A
EB - D&Br Tunnel - CH9010-8995 Type D - Excavation Top	39	24-Jan-22 A	03-May-22 A
Probe hole at CH8995	1	04-May-22 A	04-May-22 A
EB - D&Br Tunnel - CH8995-8976 Type D - Excavation Top	50	05-May-22 A	16-Jul-22 A
EB - D&Br Tunnel - CH9020-8990 Type D - Excavation Bench	60	29-Aug-22 A	29-Oct-22
EB - D&Br Tunnel - CH9055-9030 Type D - Excavation SG	55	12-Sep-22 A	31-Oct-22
EB - D&Br Tunnel - CH8990-8976 Type D - Excavation Bench	55	30-Oct-22	23-Dec-22
EB - D&Br Tunnel - CH9030-9010 Type D - Excavation SG	30	01-Nov-22	30-Nov-22
EB - D&Br Tunnel - CH9010-8990 Type D - Excavation SG	38	01-Dec-22	07-Jan-23
Cross Passage	30	24-Dec-22	03-Feb-23
CP30	30	24-Dec-22	03-Feb-23
CP30 - Excavation - Drill & break	30	24-Dec-22	03-Feb-23
DRILL & BLAST TUNNEL [D&BL]	350	14-Dec-21 A	13-Feb-23
Tunnel Excavation	28	14-Dec-21 A	29-Jan-22 A
Eastbound	28	14-Dec-21 A	29-Jan-22 A
Full Face Drill & Blast	28	14-Dec-21 A	29-Jan-22 A
EB - D&Bl Tunnel - Branch Tunnel S01	28	14-Dec-21 A	29-Jan-22 A
Tunnel Structure WB Type A	157	30-Dec-21 A	03-Feb-23
SUS - EB OHVD	96	03-Oct-22	30-Jan-23
TBM Dismantling Preparation	52	03-Nov-22	05-Jan-23
WB - TBM Dismantling - Dismantling Cavern Enlargement	26	03-Nov-22*	02-Dec-22
WB - TBM Dismantling - Dismantling Gantry Installation	26	03-Dec-22	05-Jan-23
SG Preparation	95	10-Oct-22	03-Feb-23
WB - Bay 11 - CH9251-9258 - Kicker (SG side)	5	10-Oct-22	14-Oct-22
WB - Bay 10 - CH9239-9251 - Kicker (SG side)	5	15-Oct-22	20-Oct-22
WB - Bay 9 - CH9227-9239 - Kicker (SG side)	5	30-Jan-23*	03-Feb-23
SG Installation	62	30-Dec-21 A	08-Oct-22
WB - Bay 7 - CH9203-9215 - SG Installation	3	30-Dec-21 A	03-Jan-22 A
WB - Bay 8 - CH9215-9227 - SG Installation	3	04-Jan-22 A	06-Jan-22 A
WB - Bay 9 - CH9227-9239 - SG Installation	3	07-Jan-22 A	22-Jan-22 A



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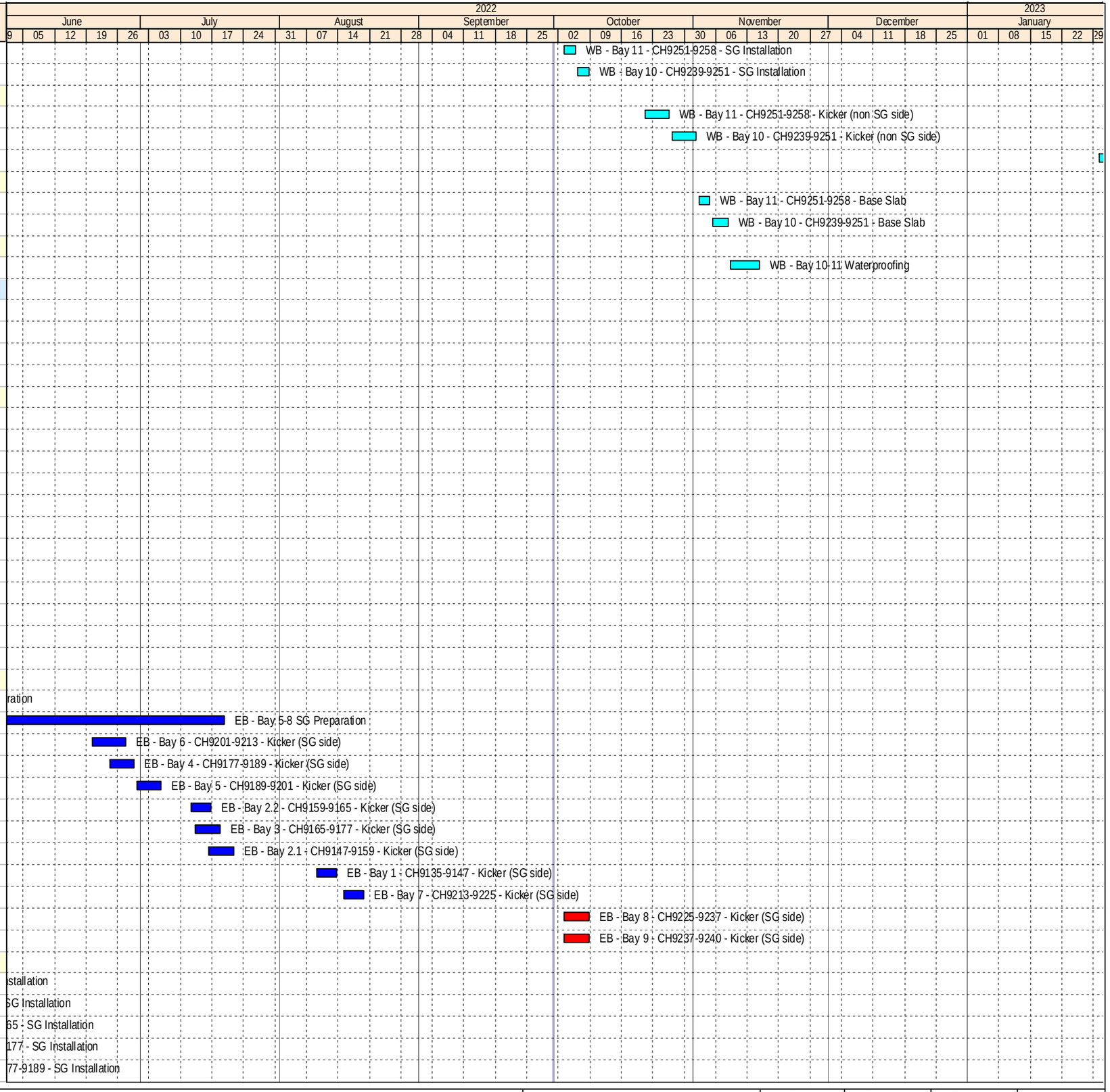
09-Oct-20	01V3	SPa/LLo	WYu
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
WB - Bay 11 - CH9251-9258 - SG Installation	2	03-Oct-22	05-Oct-22
WB - Bay 10 - CH9239-9251 - SG Installation	3	06-Oct-22	08-Oct-22
Kicker	85	21-Oct-22	03-Feb-23
WB - Bay 11 - CH9251-9258 - Kicker (non SG side)	5	21-Oct-22	26-Oct-22
WB - Bay 10 - CH9239-9251 - Kicker (non SG side)	5	27-Oct-22	01-Nov-22
WB - Bay 9 - CH9227-9239 - Kicker (non SG side)	5	30-Jan-23	03-Feb-23
Base Slab	6	02-Nov-22	08-Nov-22
WB - Bay 11 - CH9251-9258 - Base Slab	3	02-Nov-22	04-Nov-22
WB - Bay 10 - CH9239-9251 - Base Slab	3	05-Nov-22	08-Nov-22
Waterproofing Rebar	6	09-Nov-22	15-Nov-22
WB - Bay 10-11 Waterproofing	6	09-Nov-22	15-Nov-22
Tunnel Structure EB Type A	302	05-Jan-22 A	01-Feb-23
East Bound New Blast Door Installation	12	05-Jan-22 A	28-Feb-22 A
East Bound New Blast Door CNP Application	16	01-Feb-22 A	30-Mar-22 A
Removal of old Blast Door	22	08-Mar-22 A	13-Apr-22 A
EB - Overbreak Concreting	26	09-Mar-22 A	09-Apr-22 A
Earth Mat Installation	38	22-Jan-22 A	11-Mar-22 A
Earth Mat 8 Drilling	3	22-Jan-22 A	25-Jan-22 A
Earth Mat 7 Drilling	3	26-Jan-22 A	28-Jan-22 A
Earth Mat 6 Drilling	3	28-Jan-22 A	31-Jan-22 A
Earth Mat 5 Drilling	3	04-Feb-22 A	07-Feb-22 A
Earth Mat 4 Drilling	3	07-Feb-22 A	09-Feb-22 A
Earth Mat 3 Drilling	3	10-Feb-22 A	12-Feb-22 A
Earth Mat 2 Drilling	3	12-Feb-22 A	15-Feb-22 A
Earth Mat 1 Drilling	3	16-Feb-22 A	18-Feb-22 A
Earth Mat 8-5 Installation	8	18-Feb-22 A	28-Feb-22 A
Earth Mat 4-1 Installation	8	28-Feb-22 A	09-Mar-22 A
Earth Mat 8-5 Testing	1	09-Mar-22 A	10-Mar-22 A
Earth Mat 4-1 Testing	1	10-Mar-22 A	11-Mar-22 A
SG Preparation	147	09-Apr-22 A	08-Oct-22
EB - Bay 1-4 SG Preparation	19	09-Apr-22 A	06-May-22 A
EB - Bay 5-8 SG Preparation	19	06-May-22 A	19-Jul-22 A
EB - Bay 6 - CH9201-9213 - Kicker (SG side)	5	20-Jun-22 A	27-Jun-22 A
EB - Bay 4 - CH9177-9189 - Kicker (SG side)	5	24-Jun-22 A	29-Jun-22 A
EB - Bay 5 - CH9189-9201 - Kicker (SG side)	5	30-Jun-22 A	05-Jul-22 A
EB - Bay 2.2 - CH9159-9165 - Kicker (SG side)	5	12-Jul-22 A	16-Jul-22 A
EB - Bay 3 - CH9165-9177 - Kicker (SG side)	5	13-Jul-22 A	18-Jul-22 A
EB - Bay 2.1 - CH9147-9159 - Kicker (SG side)	5	16-Jul-22 A	21-Jul-22 A
EB - Bay 1 - CH9135-9147 - Kicker (SG side)	5	09-Aug-22 A	13-Aug-22 A
EB - Bay 7 - CH9213-9225 - Kicker (SG side)	5	15-Aug-22 A	19-Aug-22 A
EB - Bay 8 - CH9225-9237 - Kicker (SG side)	5	03-Oct-22	08-Oct-22
EB - Bay 9 - CH9237-9240 - Kicker (SG side)	5	03-Oct-22	08-Oct-22
SG Installation	144	21-Apr-22 A	13-Oct-22
EB - Bay 1 - CH9135-9147 - SG Installation	3	21-Apr-22 A	25-Apr-22 A
EB - Bay 2.1 - CH9147-9159 - SG Installation	3	25-Apr-22 A	28-Apr-22 A
EB - Bay 2.2 - CH9159-9165 - SG Installation	3	28-Apr-22 A	03-May-22 A
EB - Bay 3 - CH9165-9177 - SG Installation	3	03-May-22 A	06-May-22 A
EB - Bay 4 - CH9177-9189 - SG Installation	3	06-May-22 A	11-May-22 A



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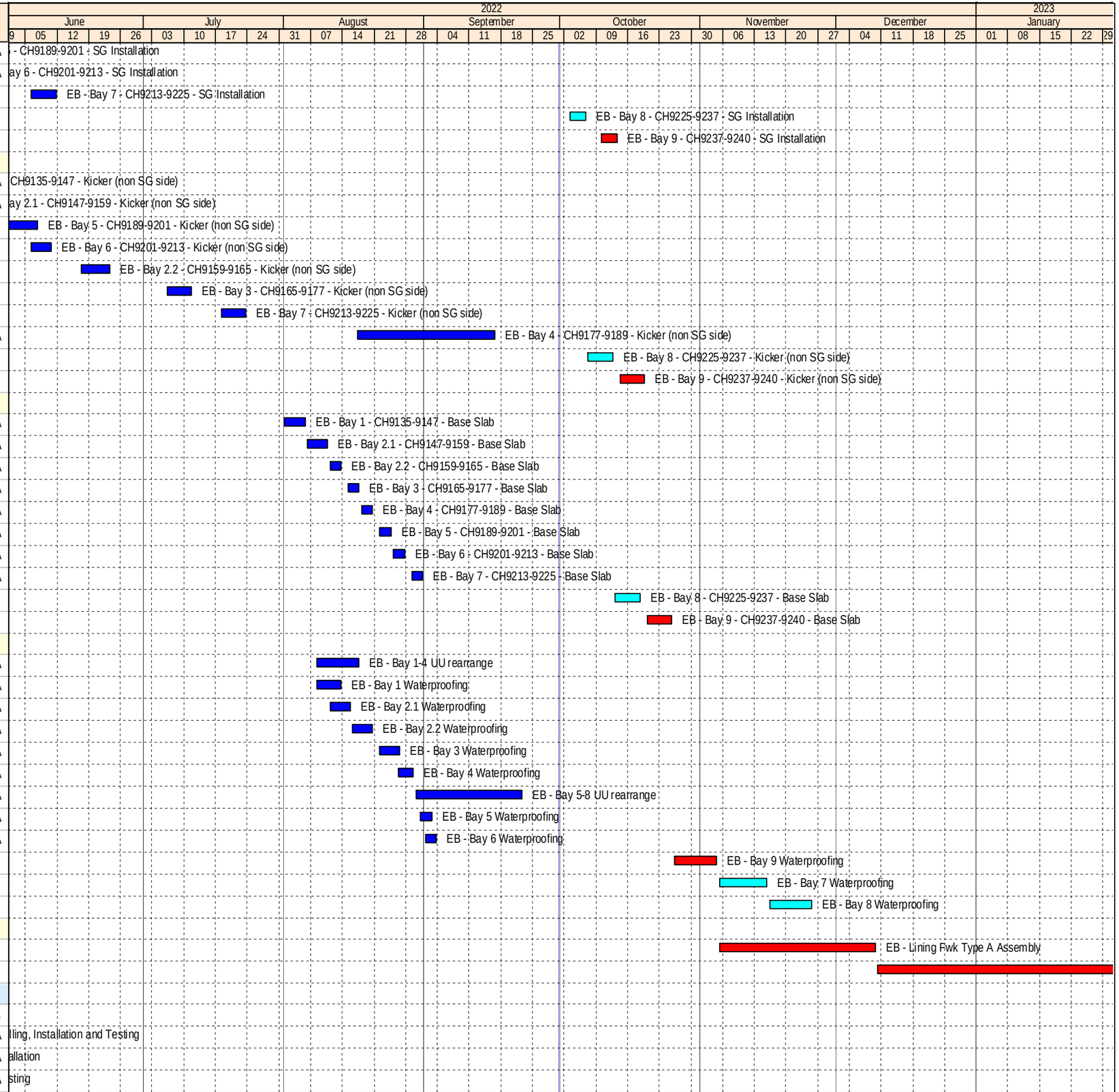
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
EB - Bay 5 - CH9189-9201 - SG Installation	3	16-May-22 A	19-May-22 A
EB - Bay 6 - CH9201-9213 - SG Installation	3	19-May-22 A	23-May-22 A
EB - Bay 7 - CH9213-9225 - SG Installation	3	06-Jun-22 A	11-Jun-22 A
EB - Bay 8 - CH9225-9237 - SG Installation	3	03-Oct-22	06-Oct-22
EB - Bay 9 - CH9237-9240 - SG Installation	4	10-Oct-22	13-Oct-22
Kicker	134	11-May-22 A	19-Oct-22
EB - Bay 1 - CH9135-9147 - Kicker (non SG side)	5	11-May-22 A	17-May-22 A
EB - Bay 2.1 - CH9147-9159 - Kicker (non SG side)	5	17-May-22 A	23-May-22 A
EB - Bay 5 - CH9189-9201 - Kicker (non SG side)	5	01-Jun-22 A	07-Jun-22 A
EB - Bay 6 - CH9201-9213 - Kicker (non SG side)	5	06-Jun-22 A	10-Jun-22 A
EB - Bay 2.2 - CH9159-9165 - Kicker (non SG side)	5	17-Jun-22 A	23-Jun-22 A
EB - Bay 3 - CH9165-9177 - Kicker (non SG side)	5	06-Jul-22 A	11-Jul-22 A
EB - Bay 7 - CH9213-9225 - Kicker (non SG side)	5	18-Jul-22 A	23-Jul-22 A
EB - Bay 4 - CH9177-9189 - Kicker (non SG side)	5	17-Aug-22 A	16-Sep-22 A
EB - Bay 8 - CH9225-9237 - Kicker (non SG side)	5	07-Oct-22	12-Oct-22
EB - Bay 9 - CH9237-9240 - Kicker (non SG side)	5	14-Oct-22	19-Oct-22
Base Slab	40	01-Aug-22 A	25-Oct-22
EB - Bay 1 - CH9135-9147 - Base Slab	5	01-Aug-22 A	05-Aug-22 A
EB - Bay 2.1 - CH9147-9159 - Base Slab	5	06-Aug-22 A	10-Aug-22 A
EB - Bay 2.2 - CH9159-9165 - Base Slab	5	11-Aug-22 A	13-Aug-22 A
EB - Bay 3 - CH9165-9177 - Base Slab	5	15-Aug-22 A	17-Aug-22 A
EB - Bay 4 - CH9177-9189 - Base Slab	5	18-Aug-22 A	20-Aug-22 A
EB - Bay 5 - CH9189-9201 - Base Slab	5	22-Aug-22 A	24-Aug-22 A
EB - Bay 6 - CH9201-9213 - Base Slab	5	25-Aug-22 A	27-Aug-22 A
EB - Bay 7 - CH9213-9225 - Base Slab	5	29-Aug-22 A	31-Aug-22 A
EB - Bay 8 - CH9225-9237 - Base Slab	5	13-Oct-22	18-Oct-22
EB - Bay 9 - CH9237-9240 - Base Slab	5	20-Oct-22	25-Oct-22
Waterproofing Rebar	86	08-Aug-22 A	25-Nov-22
EB - Bay 1-4 UU rearrange	12	08-Aug-22 A	17-Aug-22 A
EB - Bay 1 Waterproofing	9	08-Aug-22 A	13-Aug-22 A
EB - Bay 2.1 Waterproofing	9	11-Aug-22 A	15-Aug-22 A
EB - Bay 2.2 Waterproofing	9	16-Aug-22 A	20-Aug-22 A
EB - Bay 3 Waterproofing	9	22-Aug-22 A	26-Aug-22 A
EB - Bay 4 Waterproofing	9	26-Aug-22 A	29-Aug-22 A
EB - Bay 5-8 UU rearrange	12	30-Aug-22 A	22-Sep-22 A
EB - Bay 5 Waterproofing	9	31-Aug-22 A	02-Sep-22 A
EB - Bay 6 Waterproofing	9	01-Sep-22 A	03-Sep-22 A
EB - Bay 9 Waterproofing	9	26-Oct-22	04-Nov-22
EB - Bay 7 Waterproofing	9	05-Nov-22	15-Nov-22
EB - Bay 8 Waterproofing	9	16-Nov-22	25-Nov-22
Lining	70	05-Nov-22	01-Feb-23
EB - Lining Fwk Type A Assembly	30	05-Nov-22	09-Dec-22
EB - D&Bl Tunnel - CH9225-9135 Type A&B - Lining Structure	40	10-Dec-22	01-Feb-23
Tunnel Structure EB Type C	245	19-Apr-22 A	13-Feb-23
EB - Earth Mat 9-11 Drilling	8	19-Apr-22 A	27-Apr-22 A
EB - Earth Mat 9-11 Drilling, Installation and Testing	11	22-Apr-22 A	06-May-22 A
EB - Earth Mat 9-11 Installation	6	27-Apr-22 A	05-May-22 A
EB - Earth Mat 9-11 Testing	1	05-May-22 A	06-May-22 A



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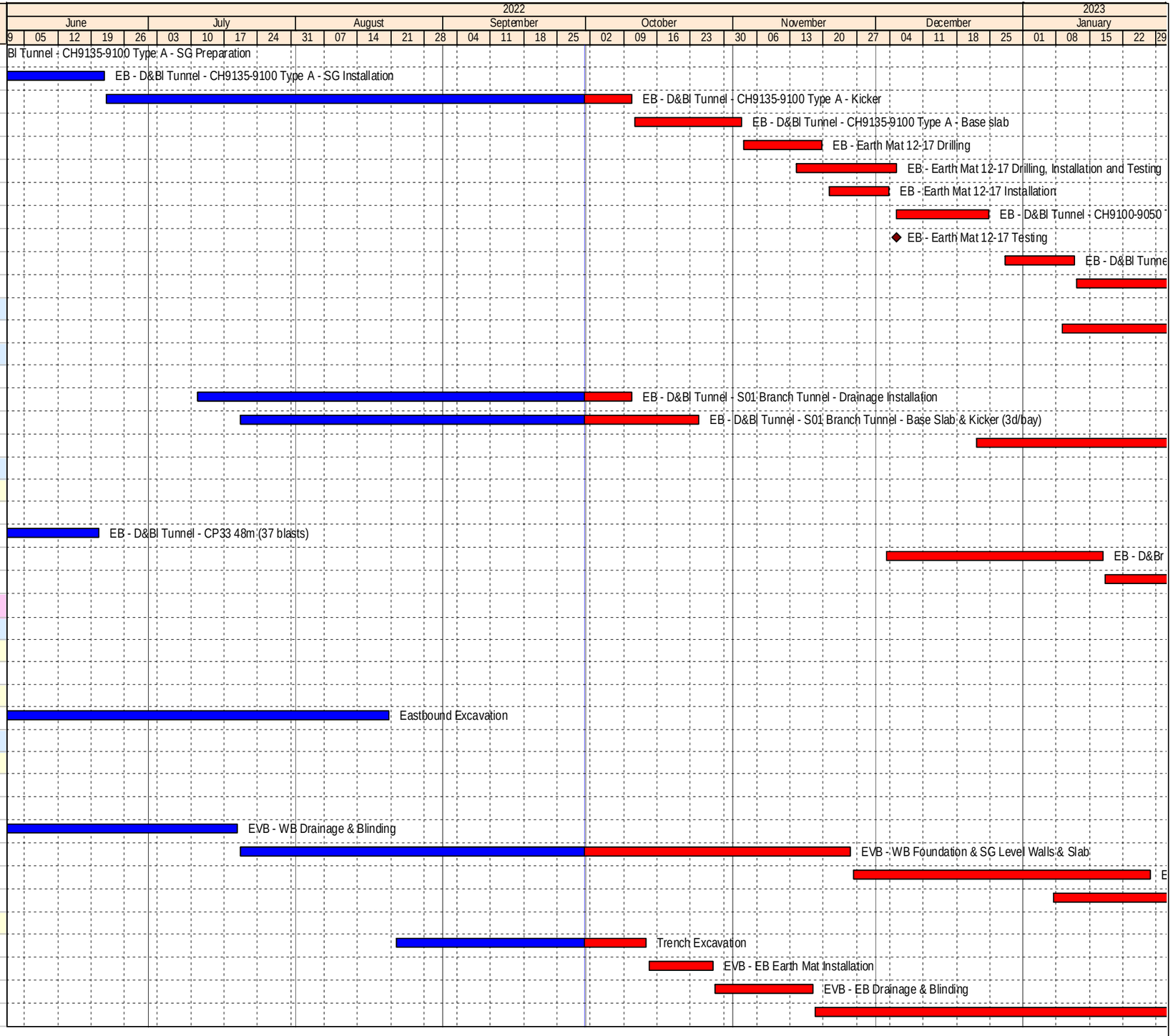
02-Jul-21	02V0	SPa/LLo	WYu

Activity Name	Dur	Start	Finish
EB - D&Bl Tunnel - CH9135-9100 Type A - SG Preparation	12	06-May-22 A	21-May-22 A
EB - D&Bl Tunnel - CH9135-9100 Type A - SG Installation	8	23-May-22 A	21-Jun-22 A
EB - D&Bl Tunnel - CH9135-9100 Type A - Kicker	15	22-Jun-22 A	10-Oct-22
EB - D&Bl Tunnel - CH9135-9100 Type A - Base slab	20	11-Oct-22	02-Nov-22
EB - Earth Mat 12-17 Drilling	15	03-Nov-22	19-Nov-22
EB - Earth Mat 12-17 Drilling, Installation and Testing	18	14-Nov-22	05-Dec-22
EB - Earth Mat 12-17 Installation	12	21-Nov-22	03-Dec-22
EB - D&Bl Tunnel - CH9100-9050 Type A - SG Preparation	18	05-Dec-22	24-Dec-22
EB - Earth Mat 12-17 Testing	0	05-Dec-22	05-Dec-22
EB - D&Bl Tunnel - CH9100-9050 Type A - SG Installation	12	28-Dec-22	11-Jan-23
EB - D&Bl Tunnel - CH9100-9050 Type A - Kicker	25	12-Jan-23	13-Feb-23
Tunnel Structure EB Type A (D&Br)	17	09-Jan-23	31-Jan-23
EB - D&Bl Tunnel - CH8988-9050 Type A - SG Preparation	17	09-Jan-23	31-Jan-23
Tunnel Structure S01 Branch Tunnel	285	15-Feb-22 A	01-Feb-23
EB - D&Bl Tunnel - S01 Branch Tunnel - Exc. for Drainage	12	15-Feb-22 A	28-Feb-22 A
EB - D&Bl Tunnel - S01 Branch Tunnel - Drainage Installation	40	11-Jul-22 A	10-Oct-22
EB - D&Bl Tunnel - S01 Branch Tunnel - Base Slab & Kicker (3d/bay)	21	20-Jul-22 A	24-Oct-22
EB - Lining Fwk S01 Branch Tunnel Assembly	30	22-Dec-22	01-Feb-23
Cross Passage	293	15-Feb-22 A	10-Feb-23
CP33	293	15-Feb-22 A	10-Feb-23
EB - D&Bl Tunnel - CP33 48m (5 blasts)	5	15-Feb-22 A	19-Feb-22 A
EB - D&Bl Tunnel - CP33 48m (37 blasts)	47	11-Apr-22 A	20-Jun-22 A
EB - D&Br Tunnel - CP33 (5m plug)	36	03-Dec-22	17-Jan-23
CP33 - Exc. for Drainage	18	18-Jan-23	10-Feb-23
EAST VENTILATION BUILDING [EVB]	415	13-Mar-21 A	21-Feb-23
Excavation	297	13-Mar-21 A	20-Aug-22 A
Westbound	66	13-Mar-21 A	15-Feb-22 A
Westbound Excavation	66	13-Mar-21 A	15-Feb-22 A
Eastbound	143	05-Mar-22 A	20-Aug-22 A
Eastbound Excavation	143	05-Mar-22 A	20-Aug-22 A
Foundation / Portal Structure	261	16-Feb-22 A	21-Feb-23
Westbound	261	16-Feb-22 A	21-Feb-23
Trench Excavation	24	16-Feb-22 A	26-Mar-22 A
EVB - WB Earth Mat Installation	12	28-Mar-22 A	20-Apr-22 A
EVB - WB Drainage & Blinding	18	21-Apr-22 A	19-Jul-22 A
EVB - WB Foundation & SG Level Walls & Slab	91	20-Jul-22 A	25-Nov-22
EVB - WB Tunnel & Plenum Level Wall & Column	48	26-Nov-22	27-Jan-23
EVB - WB Tunnel & Plenum Level Beam & Slab	36	07-Jan-23	21-Feb-23
Eastbound	90	22-Aug-22 A	02-Feb-23
Trench Excavation	18	22-Aug-22 A	13-Oct-22
EVB - EB Earth Mat Installation	12	14-Oct-22	27-Oct-22
EVB - EB Drainage & Blinding	18	28-Oct-22	17-Nov-22
EVB - EB Foundation & SG Level Walls & Slab	60	18-Nov-22	02-Feb-23



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