Monthly EM&A Report (April 2023)

0185/21/ED/0537 01

Sai O Trunk Sewer Sewage Pumping Station

Ref.: SHKSOSPSEM00_0_0082L.23

15 May 2023

By Fax (2827 0485)

Sun Hung Kai Properties Ltd.
42/F., Sun Hung Kai Centre
30 Harbour Road, Wan Chai, Hong Kong

Attention: Mr. Sunny Cheung

Dear Sir,

Re: Sai O Trunk Sewer Sewage Pumping Station
Environmental Permit No. EP-597/2021
Monthly EM&A Report (April 2023)

Reference is made to the Environmental Team's submission of the Monthly EM&A Report for April 2023 (ET's ref.:0185/21/ED/0537 01) certified by the ET Leader and provided to us via e-mail on 10 May 2023.

We are pleased to inform you that we have no further comments on the captioned submission. We write to verify the captioned submission in accordance with Condition 3.4 of EP-597/2021 and Section 12.4.1.1 of EM&A Manual for the captioned project.

Thank you very much for your attention and please feel free to contact the undersigned should you require further information.

Yours sincerely,
For and on behalf of
Ramboll Hong Kong Ltd.

Y H Hui
Independent Environmental Checker

c.c.	AECOM	Ms. Janice Tam / Mr. CK Man	(By Fax: 3894 5801)
	Fugro	Mr. Calvin Leung	(By Fax: 2450 6138)
	SGJV	Mr. Eddie Tse	(By Fax: 3894 5801)

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Document Control

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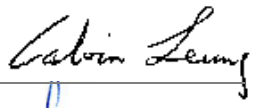
Client Information

Client	Light Time Investments Limited
Client Address	42/F, Sun Hung Kei Centre, 30 Harbour Road, Wan Chai, Hong Kong
Client Contact	Mr. Sunny Cheung

Environmental Team

Initials	Name	Role	Signature
MP	Calvin M.P. Leung	Environmental Team Leader	
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EXECUTIVE SUMMARY

i. This Monthly Environmental Monitoring and Audit (EM&A) Report is prepared for Sai O Trunk Sewer Sewage Pumping Station. Light Time Investments Limited has appointed Fugro Technical Services Limited (FTS) to undertake the Environmental Team services for the project and implement the EM&A works.

ii. This is the 15th Monthly EM&A Report for the Project which summaries findings of the EM&A programme during the reporting period from 1 April 2023 to 30 April 2023.

Breaches of Environmental Quality Performance Limits (Action & Limit levels)

iii. No Action and Limit Level exceedance was recorded for air quality monitoring and construction noise monitoring in the reporting month.

iv. No corrective actions were required according to the Event-Action Plans.

Complaint Log

v. No complaints were received in the reporting period.

Notifications of any Summons and Successful Prosecutions

vi. No notifications of summons and prosecutions were received in the reporting period.

Reporting Change

vii. There were no reporting changes during the reporting month

Future Key Issues

viii. The main works will be anticipated in the next month are as follow:

<u>Pump Room – Structure - Wall to CJ 500mm below S1</u>

- Internal falsework and working platform
- Rebar
- Internal formwork
- Concreting
- Remove formwork and trim CJ
- Waterproofing to vertical concrete face
- Backfilling

<u>Pump Room – Structure - Ground Slab</u>

- Remove noise cover and S1 including concrete packing
- Internal false work and working platform
- Vertical blinding against pipe pile
- Waterproofing on vertical blinding
- External working platform and formwork
- Wall rebar
- Internal wall and soffit formwork
- Ground slab rebar

Rising Main and Gravity Sewer

- backfilling and remove 3 layers of support
- Install sewer & rising main and concrete manhole

Transformer Room and Switch Room

- Cable trench
- Dwarf wall on roof and waterproofing

ABWF Works

- Interior finish – transformer room & switch room

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1. INTRODUCTION

1.1 Background

1.1.1 The proposed Sai O Trunk Sewer Sewage Pumping Station (Sai O Trunk Sewer SPS) is a part of Public Works Programme Item 4125DS - Tolo Harbour Sewerage of Unsewered Areas, Stage II, is a core component of the proposed trunk sewerage system in Ma On Shan along Sai Sha Road. It is required to receive all sewage flows along Sai Sha Road from Kei Ling Ha Lo Wai to Cheung Muk Tau and the adjacent residential development, health care institution and education institutions, and then convey the sewage to Sha Tin Sewage Treatment Works.

1.1.2 Based on the latest design, the installed capacity per day of the proposed Sai O Trunk Sewer SPS is about 20,600m^3 for coping with the sewerage needs of both existing and future developments. Location of the proposed Sai O Trunk Sewer SPS is shown in **Figure 1.1**.

1.1.3 The proposed Sai O Trunk Sewer SPS include the following main components:

- Loading/unloading bay
- Inlet chamber
- Coarse screen channel
- Distribution chamber
- Wet wells
- Valve chamber
- Emergency storage tank
- Deodorizing unit
- Switch room
- Transformer room

1.1.4 The Project is a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499) for which Environmental Impact Assessment (EIA) report and Environmental Monitoring and Audit (EM&A) Manual was approved by EPD (Register No.: AEIAR-230/2021) on 4 June 2021. The Environmental Permit (EP) (EP No. EP-597/2021) was issued by EPD on 28 September 2021.

1.1.5 Fugro Technical Services Limited (FTS) has been appointed as the Environmental Team (ET) by Light Time Investments Limited to undertake the Environmental Team services for the Project and implement the EM&A works under Sai O Trunk Sewer Sewage Pumping Station (hereinafter referred as “the Project”).

1.1.6 This is the 15th Monthly EM&A report to document the findings of site inspection activities and EM&A programme for this project from 1 April 2023 to 30 April 2023 (reporting period) and is submitted to fulfil Condition 3.4 of the EP and Section 12.4 of the EM&A Manual. According to Condition 4 of the EP, electronic reporting is provided on the internet website to facilitate public inspection of the report.

1.2 Project Organization

1.2.1 The Project Organization structure is shown in **Appendix A**. The key personnel contact names and numbers are summarized in **Table 1.1**.

Table 1.1 – Contact Information of Key Personnel

Party	Position	Name	Telephone
Project Proponent (PP) (Light Time Investments Ltd.)	Senior Project Manager	Mr. Sunny Cheung	3894 5934
Engineer's Representative (ER) (AECOM Asia Co. Ltd.)	Senior Resident Engineer	Mr. C.K. Man	3894 5919
Independent Environmental Checker (IEC) (Ramboll Hong Kong Ltd.)	Independent Environmental Checker	Mr. Y.H. Hui	3465 2888
Contractor (Sanfield-Gammon Construction JV Company Ltd.)	Environmental Officer	Ms. Carrie Kwan	3894 5816
Environmental Team (ET) (Fugro Technical Services Ltd.)	Environmental Team Leader (ETL)	Mr. Calvin Leung	3565 4441

1.3 Construction Programme and Activities

1.3.1 The construction programme of this project is shown in **Appendix B**.

1.4 Works undertaken during the month

1.4.1 **Major construction activities were undertaken in the reporting month were:**

Pump Room – Structure - Base slab and Wall to CJ 500mm below S1

- Internal falsework and working platform
- Vertical blinding against pipe pile
- Waterproofing on vertical blinding
- External working platform and formwork
- Rebar
- Internal formwork
- Concreting
- Remove formwork and trim CJ

Pump Room – Structure – Ground Slab

- Remove noise cover and S1 including concrete packing

Rising Main and Gravity Sewer

- Earthwork and ELS
- Install sewer & rising main and concrete manholes

Transformer Room and Switch Room

- Wall and roof slab

1.5 Status of Environmental Licences, Notification and Permits

1.5.1 A summary of the relevant permits, licenses and/or notifications on environmental protection for this project is presented in **Table 1.2**.

Table 1.2 – Environmental Licenses, Notification and Permits Summary

Permit/ Notification/ License	Reference No	Valid From	Valid Till
Environmental Permit	EP-597/2021	28-Sep-2021	NA
Notification of Construction Works under APCO	432718	18-Apr-2018	31-May-2023
Billing Account under Construction Waste Disposal Charging Scheme	7031695	28-Aug-2018	NA
Effluent Discharge License under WPCO	WT00040139-2021	11-Mar-2022	31-Mar-2027
Chemical Waste Producer Registration	8334-741-S4115-01	14-Aug-2018	31-Aug-2023
Construction Noise Permit	GW-RN0255-23	12-Mar-2023	07-Jun-2023

Notes:

NA = Not Applicable

2. AIR QUALITY

2.1 Monitoring Requirement

2.1.1 In accordance with the EM&A Manual, 1-hour Total Suspended Particulates (TSP) levels should be measured at the designated air quality monitoring station to ensure that any deteriorating air quality could be readily detected and timely action shall be undertaken to rectify such situation. Impact 1-hour TSP monitoring was conducted for at least three times every 6 days when the highest dust impact occurs.

2.2 Monitoring Equipment

2.2.1 1-hour TSP air quality monitoring was performed using High Volume Sampler (HVS) deployed at the designated monitoring station. The HVS shall meet all the requirements of the EM&A Manual.

2.2.2 Wind data monitoring equipment is provided at the conspicuous locations for logging wind speed and wind direction near to the air quality monitoring location. The equipment installation location is agreed with the ER and the IEC.

2.2.3 The model of the air quality monitoring equipment used is summarized in **Table 2.1**.

Table 2.1 – Air Quality Monitoring Equipment

Item	Brand	Model	Equipment	Serial No.
1	Tisch	TE-5170 (TSP)	High Volume Sampler	HVS-05
		TE-300-310X	-Mass Flow Controller	3088
		TE-5005X	-Blower Motor Assembly	2083
		TE-5007X	-Mechanical Timer	5159
		TE-5009X	-Continuous Flow Recorder	5483
2	Global Water	GL500-7-2	Wind Station	WS-03
3	Tisch	TE-5025A	Calibration Kit	2154

2.3 Monitoring Parameters and Frequency

2.3.1 The parameters and frequencies of impact noise monitoring is summarized in **Table 2.2**.

Table 2.2 – Monitoring Parameters and Frequencies of Air Quality Monitoring

Parameter	Frequency
1-hour TSP	At least three times every 6 days when the highest dust impact occurs

2.4 Monitoring Methodology

HVS Installation

2.4.1 The following guidelines were adopted during the installation of HVS:

i. A horizontal platform with appropriate support to secure the samplers against gusty wind shall be provided;

ii. Two samplers shall be placed less than 2 meters apart;

iii. 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;

iv. A minimum of 2 metres of separation from walls, parapets and penthouses is required for rooftop samplers;

v. A minimum of 2 metres of separation from any supporting structure, measured horizontally is required;

vi. No furnace or incinerator flue is nearby;

vii. Airflow around the sampler is unrestricted;

viii. The sampler is more than 20 metres from the dripline;

ix. Any wire fence and gate, to protect the sampler, shall not cause any obstruction during monitoring;

x. Permission must be obtained to set up the samplers and to obtain access to the monitoring stations; and

xi. A secured supply of electricity is needed to operate the samplers.

Operating / Analytical Procedures

2.4.2 Prior to the commencement of the dust sampling, the flow rate of the HVS shall be properly set. The flow rate shall be indicated on the flow rate chart. The power supply should be checked to ensure the proper functioning of the sampler. The sampler is recommended to be operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.

2.4.1 The filter holding frame should be removed by loosening the four nuts and placing carefully a weighted and conditioned filter at the centre with the stamped number upwards on a supporting screen.

2.4.2 The filter should be aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. The filter holding frame should be tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.

2.4.3 A programmed timer should be used to control the duration of operation. Information should be recorded on the record sheet, which included the starting time, the weather condition and the filter number.

2.4.4 After sampling process is finished, the filter should be removed and sent to the laboratory for weighting. The elapsed time should also be recorded.

2.4.5 All filter papers should be equilibrated in a conditioning environment for 24 hours before weighting. 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%.

2.5 Maintenance and Calibration

2.5.1 The high volume motors and their accessories should be properly maintained, including routine motor brushes replacement and electrical wiring checking, to ensure that the equipment and a continuous power supply were in good working condition.

2.5.2 Initial calibration of dust monitoring equipment shall be conducted upon installation and thereafter at bimonthly intervals. The transfer standard shall be traceable to the internationally recognized primary standard and be calibrated annually. The calibration certificate for the HVS is provided in **Appendix C**.

2.6 Monitoring Locations

2.6.1 In accordance with the EM&A Manual, air quality monitoring should be carried out at a designated monitoring location.

2.6.2 As limitation of stable electricity supply & safety concern could not be obtained from the designated dust monitoring location, an alternative monitoring location (CA_M1(a)) was proposed to measure 1-hour TSP levels in accordance with EP Condition 3.1 & Section 2.2.1.20 of the EM&A manual. The alternative monitoring location (CA_M1(a)) was approved by EPD on 15 December 2021.

2.6.3 The air quality monitoring location summarised in **Table 2.3** and shown in **Figure 2.1**.

Table 2.3 – Air Quality Monitoring Locations

Monitoring Location ID	Location
CA_M1(a)	Construction Site Boundary near Hong Kong Baptist Theological Seminary (HKBTS) Staff & Students Quarters

2.7 Monitoring Results

2.7.1 The schedule of air quality monitoring in reporting month is provided in **Appendix D**.

2.7.2 The monitoring data of 1-hr TSP are summarized in **Table 2.4**. The Detailed air quality monitoring results & graphs are presented in **Appendix E** & **Appendix F** respectively.

Table 2.4 – Summary of Air Quality Monitoring Results

Monitoring Station	Average ($\mu g/m^3$)	Range ($\mu g/ m^3$)	Action Level ($\mu g/ m^3$)	Limit Level ($\mu g/ m^3$)
1-hour TSP				
CA_M1(a)	99.9	56.9 – 126.5	339	500

2.7.3 No Action / Limit Level exceedance was recorded for 1-hr TSP at CA_M1(a).

2.7.4 No effect that arose from the other special phenomena and work progress of the concerned site was noted during the current monitoring month.

2.7.5 The Action and Limit Levels for impact air quality monitoring have been set and are presented in **Appendix G**.

2.7.6 The Event and Action Plan for Air Quality is given in **Appendix H**.

2.7.7 The weather conditions during the monitoring are provided in **Appendix I**.

2.7.8 The wind data obtained from the on-site wind station during the reporting period is provided in **Appendix J**.

3. NOISE

3.1 Monitoring Requirement

3.1.1 In accordance with the EM&A Manual, Leq (30min) monitoring is conducted at least once a week when there are Project-related construction activities being undertaken within a radius of 300 m from the monitoring stations. The monitoring is conducted during the construction phase between 0700 and 1900 on normal weekdays at the designated monitoring locations.

3.2 Monitoring Equipment

3.2.1 As referred to the requirements of the Technical Memorandum (TM) issued under the NCO, the sound level meters in compliance with the International Electro technical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications should be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement, the accuracy of the sound level meter should be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. The measurements may be accepted as valid only if the difference between calibration levels obtained before and after the noise measurement is less than 1.0 dB (94 dB ± 0.1 dB).

3.2.2 The model of the noise monitoring equipment used is summarized in **Table 3.1**.

Table 3.1 – Construction Noise Monitoring Equipment

Item	Brand	Model	Equipment	Serial No.
1	Casella	CEL-63X Series	Integrating Sound Level Meter	1488293
2	Casella	CEL-120/1	Calibrator	3321858
3	Benetech	GM816	Anemometer	WS-10

3.3 Monitoring Parameters and Frequency

3.3.1 The parameters and frequencies of impact noise monitoring is summarized in **Table 3.2**.

Table 3.2 – Monitoring Parameters and Frequencies of Noise Monitoring

Parameter	Frequency
LAeq (30 min) (L10 and L90 will be recorded for reference)	At each station at 0700-1900 hours on normal weekdays at a frequency of once a week when construction activities are underway

3.4 Monitoring Methodology

3.4.1 Noise measurement should be conducted as the following procedures:

- The monitoring station will set at a point 1m from the exterior of the sensitive receivers building façade and set at a position 1.2m above the ground. (In case façade measurement is not feasible on-site, a free field correction of +3dB(A) will be applied.)
- The battery condition was checked to ensure good functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time will set as follows:
    - frequency weighting: A
    - time weighting: Fast
    - measurement time: 30 minutes
- Prior to and after noise measurement, the meter shall be calibrated using the calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement will considered invalid and repeat of noise measurement is required after re-calibration or repair of the equipment.
- Noise measurement should be paused during periods of high intrusive noise if possible and observation shall be recorded when intrusive noise is not avoided.
- Noise measurements shall not be made in fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s. Calibration certificate of the anemometer is provided in **Appendix C**.

3.5 Maintenance and Calibration

3.5.1 Maintenance and calibration procedures should also be carried out, including:

- The microphone head of the sound level meter and calibrator should be cleaned with a soft cloth at quarterly intervals.
- The sound level meter and calibrator should be calibrated annually by a HOKLAS laboratory.
- Relevant calibration certificates are provided in **Appendix C**.

3.6 Monitoring Locations

3.6.1 In accordance with the EM&A Manual, noise monitoring should be carried out at 2 designated monitoring locations.

3.6.2 The noise monitoring locations are summarised in **Table 3.3** and shown in **Figure 3.1**.

Table 3.3 – Construction Noise Monitoring Location

Monitoring Location ID	Location	Measurements
CN_M1	In front of the HKBTS Staff & Students Quarters	Free Field
CN_M2	In front of the HKBTS Administration and Education Block	Façade

Note: Correction of +3 dB(A) shall be made to the free field measurements.

3.7 Monitoring Results

3.7.1 The schedule of noise monitoring in reporting month is provided in **Appendix D**.

3.7.2 The noise monitoring data are summarized in **Table 3.4**. The Detailed noise monitoring results & graphs are presented in **Appendix E** & **Appendix F** respectively.

Table 3.4 – Summary of Construction Noise Monitoring Results

Frequency and Period	Location	Corrected L_{Aeq}		Action Level	Limit Level
		Range (dB(A))	Average (dB(A))		
0700-1900 hours in normal weekdays LAeq (30min)	CN_M1	52.8 – 63.7	62.6	When one documented complaint is received	70dB(A) during normal teaching period and examination periods 65 dB(A) during
	CN_M2	48.4 – 59.3	57.1		

Remark:
1. CN_M1: Free-field measurement (+3 dB(A) correction has been applied).

3.7.3 No Action / Limit Level exceedance of location CN_M1 & CN_M2 was recorded for construction noise in the reporting month.

3.7.4 Construction Noise and Road traffic noise along Ning Ming Road was observed at CN_M1 & CN_M2 during the monitoring month. No effect that arose from the other special phenomena was noted during the current monitoring month.

3.7.5 The Action and Limit Levels for Construction Noise have been set and are presented in **Appendix G**.

3.7.6 The Event and Action Plan for Construction Noise is given in **Appendix H**.

3.7.7 No raining and wind with speed over 5 m/s was observed during noise monitoring according to the onsite observation. The weather conditions during the monitoring month are provided in **Appendix I**.

3.8 Comparison of Noise Monitoring data with EIA Predictions

3.8.1 The noise monitoring data was compared with the EIA predictions as summarized in **Table 3.5**.

Table 3.5 – Comparison of Noise monitoring data with EIA predictions

Monitoring Station	EIA ID	Maximum Predicted Mitigated Construction Noise Level L_{eq} (30min) dB(A)	Maximum Construction Noise Level in April 2023 L_{eq} (30min) dB(A)
CN_M1	N1b	72	63.7
CN_M2	N2	66	59.3

Notes:
Predicted Construction Noise Levels extracted from Table 4.8 of EIA Report, AEIAR-230/2021

3.8.2 The construction noise monitoring results at CN_M1 and CN_M2 were below the Maximum Predicted mitigated Construction Noise Level in the approved Environmental Impact Assessment (EIA) Report (Register No.: AEIAR-230/2021).

4. SITE INSPECTION AND AUDIT

4.1 Site Inspection

4.1.1 Site audits were carried out by ET on weekly basis to monitor the implementation of proper environmental management practices and mitigation measures in the Project site.

4.1.2 In the reporting month, 4 site inspections were carried out on 3, 11, 17 and 24 April 2023.

4.1.3 No outstanding issues were reported during the reporting month. The Site Environmental Audit are summarized in **Appendix K**.

4.2 Advice on the Solid and Liquid Waste Management Status

4.2.1 The Contractor registered as a chemical waste producer for the Contract. Sufficient numbers of receptacles were available for general refuse collection and sorting.

4.2.2 The monthly summary of waste flow table is detailed in **Appendix L**.

4.2.3 If off-site disposal is required, the excavated marine mud from the land-based works shall be disposed of at the designated disposal sites within Hong Kong as allocated by the Marine Fill Committee or other locations as agreed by the Director. The Contractor shall ensure no spilling and overflowing of materials during loading / unloading / transportation is allowed.

4.2.4 The Contractor was reminded that chemical waste should be properly treated and stored temporarily in designated chemical waste storage area on site in accordance with the Code of Practice on the Packing, Labelling and Storage of Chemical Waste.

5. NON-COMPLIANCE, COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

5.1 Non-compliance (Exceedances of Action & Limit levels)

5.1.1 No Action / Limit Level exceedance was recorded for 1-hr TSP level at CA_M1(a) in the reporting month.

5.1.2 No Action / Limit Level exceedance was recorded for construction noise at CN_M1 & CN_M2 in the reporting month.

5.1.3 No corrective actions were required according to the Event-Action Plans.

5.2 Complaints, Notification of Summons and Prosecution

5.2.1 No environmental complaint, notification of summons and successful prosecution were received in the reporting month.

5.2.2 Cumulative complaint log, summaries of complaints, notification of summons and successful prosecutions are presented in **Appendix M**.

5.2.3 No corrective actions were required.

6. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURE

6.1 Implementation Status

The Contractor had implemented environmental mitigation measures and requirements as stated in the EIA Report, the EP and EM&A Manual. **Appendix N** summarized the Implementation Status of Environment Mitigation Measures.

7. FUTURE KEY ISSUES

7.1 Construction Programme for the Next Month

Pump Room – Structure - Wall to CJ 500mm below S1

- Internal falsework and working platform
- Rebar
- Internal formwork
- Concreting
- Remove formwork and trim CJ
- Waterproofing to vertical concrete face
- Backfilling

Pump Room – Structure - Ground Slab

- Remove noise cover and S1 including concrete packing
- Internal false work and working platform
- Vertical blinding against pipe pile
- Waterproofing on vertical blinding
- External working platform and formwork
- Wall rebar
- Internal wall and soffit formwork
- Ground slab rebar

Rising Main and Gravity Sewer

- backfilling and remove 3 layers of support
- Install sewer & rising main and concrete manhole

Transformer Room and Switch Room

- Cable trench
- Dwarf wall on roof and waterproofing

ABWF Works

- Interior finish – transformer room & switch room

7.2 Key Issues for the Coming Month

7.2.1 Potential environmental impacts arising from the above construction activities are mainly associated with construction dust, construction noise, waste management, and landscape and visual impact issues.

7.3 Monitoring Schedules for the Next Month

7.3.1 The tentative schedule for environmental monitoring in the coming month is provided in **Appendix D**.

8. CONCLUSION AND RECOMMENDATION

8.1 Conclusions

8.1.1 1-hour TSP impact monitoring was carried out in the reporting month. No Action / Limit Level exceedance at CA_M1(a) was recorded during the period.

8.1.2 Construction noise monitoring was carried out in the reporting month. No Action / Limit Level exceedance at CN_M1 & CN_M2 was recorded during the period.

8.1.3 Four environmental site inspections were carried out in the reporting month. Recommendations on mitigation measures for Permit/ Licenses were given to the Contractor for remediating the deficiencies identified during the site inspections.

8.1.4 Two landscape and visual site audits were carried out in the reporting month. Recommendations on mitigation measures for Permit/ Licenses were given to the Contractor for remediating the deficiencies identified during the site inspections.

8.1.5 Referring to the Contractor's information, no environmental complaint, notification of summons and successful prosecution was received in the reporting month.

8.2 Comment and Recommendations

8.2.1 The recommended environmental mitigation measures, as proposed in the EIA report and EM&A Manual shall be effectively implemented to minimize the potential environmental impacts from the Project. The EM&A programme would effectively monitor the environmental impacts generated from the construction activities and ensure the proper implementation of mitigation measures.

8.2.2 **According to the environmental site inspections performed in the reporting month, the following recommendations were provided:**

Air Quality Impact

- The NRMM Label of the crawler crane should be replaced.

Construction Noise Impact

- No specific observation was identified in the reporting month.

Water Quality Impact

- No specific observation was identified in the reporting month.

Chemical Waste and Construction Waste Management

- No specific observation was identified in the reporting month.

Landscape and Visual Impact

- No specific observation was identified in the reporting month.

Permit/ Licenses

- No specific observation was identified in the reporting month.

Figure 1.1

Location of the proposed Sai O Trunk SPS

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

843900 E

844200 E

844500 E

N

LEGEND:

SITE BOUNDARY

TOLO CHANNEL
(CHEK MUN)

832800 N

832500 N

832200 N

NIN MING ROAD

SAI SHA ROAD

NAI CHUNG

SAI O

SYMPHONY BAY
Villa Concerto

SYMPHONY BAY
Village Piazza

Cheung Mok Tau
Pavilion Centre
for the Elderly

Hong Kong Baptist
Theological Seminary

Nai Chung Barbecue Site

Pkt File by: ZHUMZ 2020/8/20
PATH: p:\projects\60547289\drawing\report\eia\EIA_721.dgn

AECOM

PROJECT
項目

TOLO HARBOUR SEWERAGE OF UNSEWERED AREAS STAGE 2 - INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT
業主

渠務署
Drainage Services Department

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對

STATUS
階段

SCALE 比例
A1 1 : 1500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60547289

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱

LOCATION OF THE PROPOSED SAI O TRUNK SEWER SEWAGE PUMPING STATION

SHEET NUMBER
圖紙編號

60547289/EM&A/FIGURE 1.1

Figure 2.1

Air Quality Monitoring Location

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

843900 E

844300 E

844700 E

N

LEGEND:

SITE BOUNDARY

500m ASSESSMENT AREA

REPRESENTATIVE AIR SENSITIVE RECEIVER

CA_M1(a) PROPOSED AIR QUALITY MONITORING POINT DURING CONSTRUCTION PHASE

TOLO CHANNEL (CHEK MUN)

門

TOLO CHANNEL (CHEK MUN)

832700 N

832300 N

A6

A3b

A3a

CA_M1(a)

A1

A2

A7

A4

A5

NAI CHUNG

NIN MING ROAD

SAI SHA ROAD

SYMPHONY BAY Villa Concerto

SYMPHONY BAY Villa Rhapsody

CHEUNG MUK TAU

KWUN HANG

Nai Chung Barbecue Site

Plot File by: ZHUMZ 2020/12/21

PATH: P:\PKO\PROJECTS\60547289\DRAWING\Report\EIA\EIA_731.dgn

AECOM

PROJECT
項目

TOLO HARBOUR SEWERAGE OF UNSEWERED AREAS STAGE 2 - INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT
業主

渠務署
Drainage Services Department

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核

STATUS
階段

SCALE
比例

A1 1 : 2000

DIMENSION UNIT
單位

METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60547289

CONTRACT NO.
合約編號

SHEET TITLE
圖紙名稱

LOCATIONS OF PROPOSED DUST MOINTORING POINT

SHEET NUMBER
圖紙編號

60547289/EM&A/FIGURE 2.1

Figure 3.1

Noise Monitoring Locations

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

843900 E

844200 E

844500 E

N

832800 N

832500 N

832200 N

TOLO CHANNEL
(CHEK MUN)

LEGEND:

SITE BOUNDARY

300m ASSESSMENT AREA

REPRESENTATIVE NOISE SENSITIVE RECEIVER

CN_M1 PROPOSED NOISE MONITORING POINT DURING CONSTRUCTION PHASE

N3b

N3a

CN_M1

CN_M2

N1a

N1b

N2

N4

N5

NAI CHUNG

NIN MING ROAD

SAI SHA ROAD

SAI O

Cheung Mok Tau Heights Centre for the Elderly

SYMPHONY BAY Villa Concerto

Hong Kong Baptist Theological Seminary

Nai Chung Barbecue Site

AECOM

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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對

STATUS
階段

SCALE
比例

A1 1 : 1500

DIMENSION UNIT
尺寸單位

METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60547289

CONTRACT NO.
合約編號

SHEET TITLE
圖紙名稱

LOCATIONS OF PROPOSED NOISE MOINTORING POINT

SHEET NUMBER
圖紙編號

60547289/EM&A/FIGURE 3.1

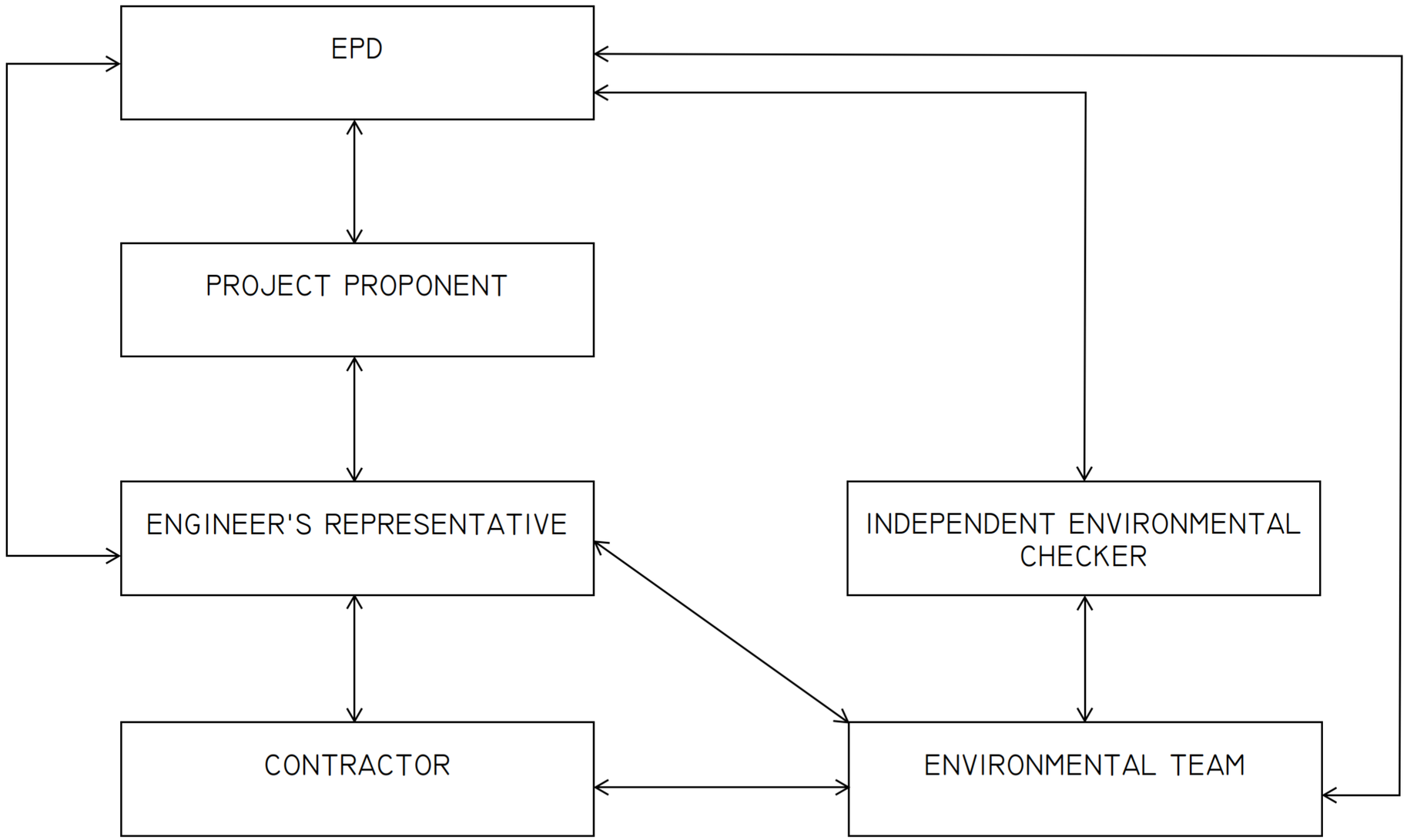
Plot File by: ZHUMZ 2020/10/29
PATH: P:\Projects\60547289\DRAWING\Report\EIA\EIA_741.dgn

Appendix A

Project Organization Chart

LEGEND:

LINE OF COMMUNICATION



AECOM

PROJECT
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STATUS
階段

SCALE
比例

A1 1 : AS SHOUWN

DIMENSION UNIT
尺寸單位

METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60547289

CONTRACT NO.
合約編號

SHEET TITLE
圖紙名稱

PROJECT ORGANISATION

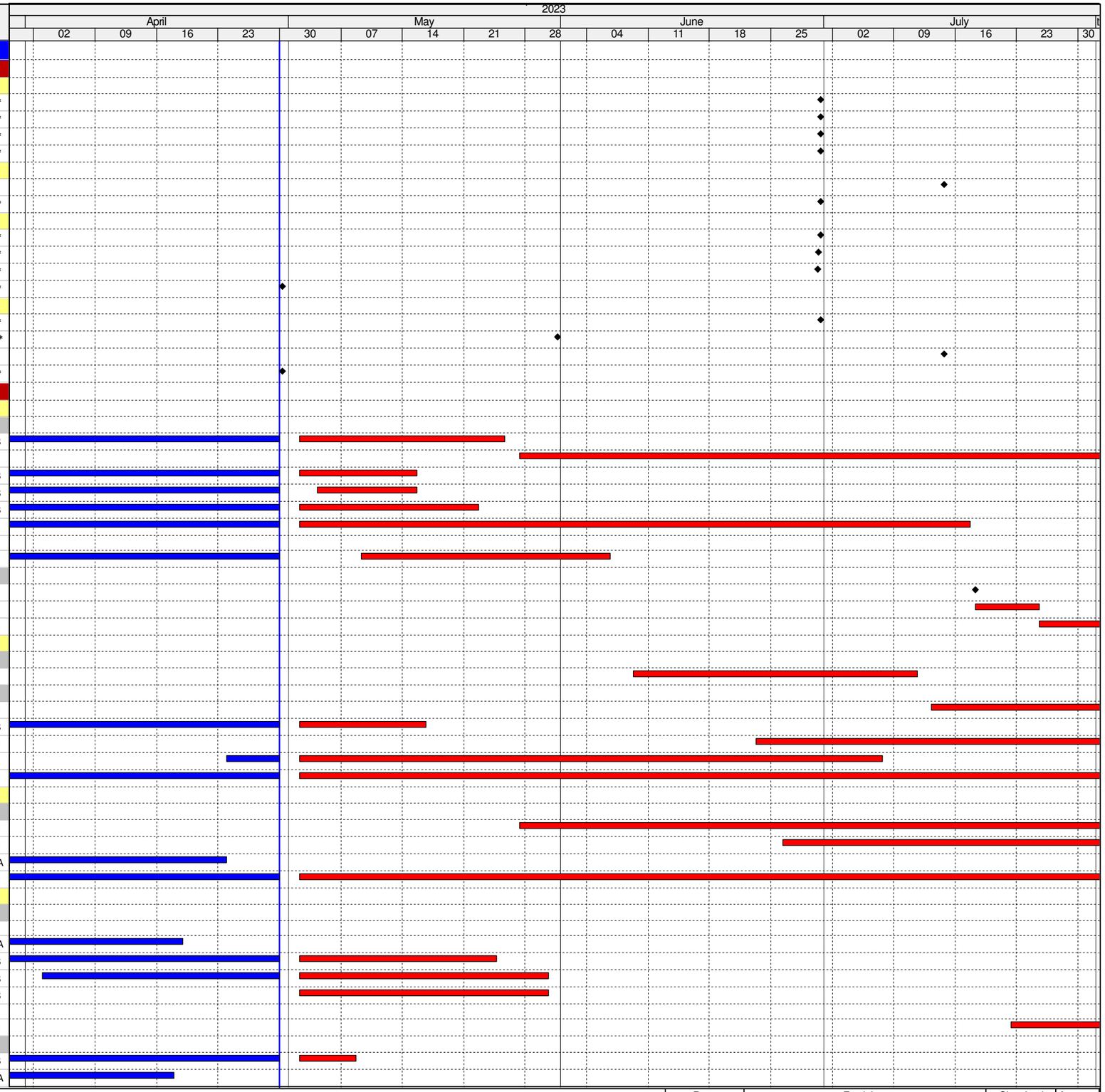
SHEET NUMBER
圖紙編號

60547289/EM&A/FIGURE 1.2

Appendix B

Construction Programme

ID	Activity	Days	Start	Finish
Master Programme Rev.1 Updated to 30-Apr 23				
Contractual Dates				
Completion Date (Contractual - Dates Adjusted Using Target Date for OP)				
KD1050	Section 1 - Completion of Sai Sha Road and Associated Works	0		30-Jun-23*
KD1060	Section 2 - Completion of Tseng Tau Road and Associated Works	0		30-Jun-23*
KD1070	Section 3 - Completion of TBM Works and Associated Works outside Green Area	0		30-Jun-23*
KD1080	Section 4 - Completion of Sai O Sewage Pumping Station	0		30-Jun-23*
Completion Date (Programmed)				
KD1020	Section 2 - Completion of Tseng Tau Road and Associated Works	0		14-Jul-23*
KD1030	Section 3 - Completion of TBM Works and Associated Works outside Green Area	0		30-Jun-23*
Keydates (Target)				
KDT08	KD8 - Completion of Watermain outside Green Area	0		30-Jun-23*
KDT09	KD9 - Completion of Rising Main outside Green Area	0		30-Jun-23*
KDT13A	KD13A - Completion of all UU connections for Site C OP and Tseng Tau Road	0		30-Jun-23*
KDT15	KD15 - Completion of all TBM Works (excluding Rising Mains and Gas Main Installation ar	0		30-Apr-23*
Keydates (Programmed)				
KD08	KD8 - Completion of Watermain outside Green Area	0		30-Jun-23*
KD09	KD9 - Completion of Rising Main outside Green Area	0		31-May-23*
KD13A	KD13A - Completion of all UU connections for Site C OP and Tseng Tau Road	0		14-Jul-23*
KD15	KD15 - Completion of all TBM Works (excluding Rising Mains and Gas Main Installation ar	0		30-Apr-23*
Sai Sha Road & Associated Works (Section 1 of the Works)				
Public Transport Interchange and Public Car Park at Sai O				
Public Car Park and Public Mini Bus Terminus				
PCP2170	Construct Public Toilet Remainig Structure & Refuse Collection Point	90	30-Nov-22 A	25-May-23
PCP2180	E&M, ABWF and Misc. for New Toilet and Refuse Collection Point	130	27-May-23	31-Oct-23
PCP2210	Drainage (carrier), 2WF	146	16-Aug-21 A	15-May-23
PCP2220	DN250 Sewerage, 110m	128	13-Sep-21 A	15-May-23
PCP2230	Site formation work	140	18-Oct-21 A	22-May-23
PCP2250	Roadworks	169	23-Oct-21 A	17-Jul-23
Utilities Works				
PCP2240	CMHK-190m,HKBN-195m,HKT-200m,VTL-190m,WTT-20m	159	01-Nov-21 A	06-Jun-23
Remaining Works at New PTI				
PCP2255	TMLG approval for relocation of temporary car park at new PTI to permanent car park	0	18-Jul-23	
PCP2260	Relocation of temporary car park at new PTI to permanent car park	7	18-Jul-23	25-Jul-23
PCP2270	Construct permanent kerb line, bus shelter, meters, and road surface for Bus Terminus	96	25-Jul-23	16-Nov-23
Nai Chung Footbridge FB1				
Eastbound				
NCFB1080	Temporary TTM to new W/B and Remove the Portal Frames at E/B	26	09-Jun-23	11-Jul-23
ABWF, E&M Installation				
NCFB3010	E&M Works at Eastbound	53	13-Jul-23	12-Sep-23
NCFB3020	Lift Installation at Eastbound	62	14-Feb-23 A	16-May-23
NCFB3030	E&M Works at Westbound	69	23-Jun-23	12-Sep-23
NCFB3040	Lift Installation at Westbound	61	24-Apr-23 A	07-Jul-23
NCFB3110	ABWF Works	180	15-Nov-22 A	20-Sep-23
Kwun Hang Footbridge FB2				
ABWF, E&M Installation				
KHFB3010	E&M Works at Eastbound	85	27-May-23	05-Sep-23
KHFB3030	E&M Works at Westbound	61	26-Jun-23	05-Sep-23
KHFB3040	Lift Installation at Westbound	60	11-Jan-23 A	24-Apr-23 A
KHFB4010	ABWF Works	180	25-Oct-22 A	15-Sep-23
Ma Kwu Lam Footbridge FB3				
Eastbound				
Stage 2 (after Diversion of Tseng Tau Road Stage 1) Tai Tung Village				
MKLFB2120	Pile caps	48	26-Oct-22 A	19-Apr-23 A
MKLFB2140	Stair and lift	78	09-Feb-23 A	24-May-23
MKLFB2170	Prestressing, Grouting and ABWF on external faces	52	03-Apr-23 A	30-May-23
MKLFB2180	Remaining Structures	24	02-May-23	30-May-23
Stage 3 Reinstatement Works				
MKLFB2210	Remove the Portal Frame at TTR W/B incl. concrete blocks at median supports	12	22-Jul-23	04-Aug-23
Westbound (Site A)				
MKLFB3080	Stair and lift	78	28-Dec-22 A	08-May-23
MKLFB3110	Prestressing, Grouting and ABWF on external faces	52	18-Mar-23 A	18-Apr-23 A



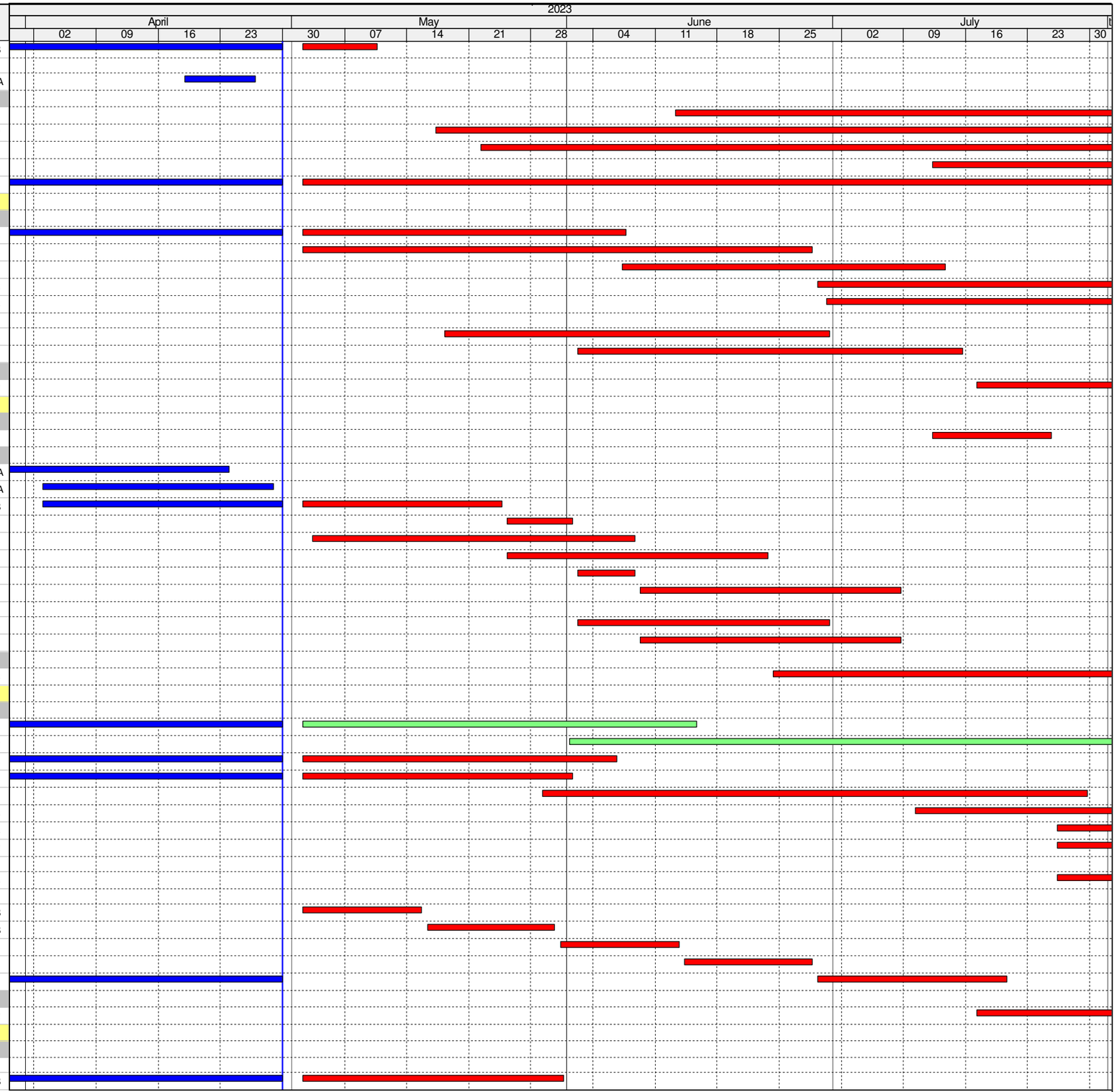
SAI SHA ROAD WIDENING

THREE MONTHLY ROLLING PROGRAMME AS OF 30/04/2023

SSR - RMCP 81W

Date	Revision	Checked	Appr...
04-May-23			

ID	Activity	Days	Start	Finish
MKLFB3120	Remaining Structures	24	30-Mar-23 A	10-May-23
Reinstatement Works				
MKLFB3210	Remove the Portal Frame at SSR W/B incl. concrete blocks at median supports	18	19-Apr-23 A	27-Apr-23 A
ABWF, E&M Installation				
MKLFB4010	E&M Works at Eastbound	98	13-Jun-23	09-Oct-23
MKLFB4020	Lift - MKL2, MKL3 (2 nrs)	114	17-May-23	29-Sep-23
MKLFB4041	Lift - MKL1 (2 nrs)	113	22-May-23	05-Oct-23
MKLFB4042	Lift - MKL4 (2 nrs)	73	12-Jul-23	06-Oct-23
MKLFB5010	ABWF Works	228	11-Mar-23 A	17-Oct-23
Area 1 - Sai Sha Road (R100: Ch100-280)				
West Bound				
SSR1540	Noise barrier footing (NB19, NB20, NB21), 180m 2WF	198	25-Jul-22 A	07-Jun-23
SSR1550	Drainage (carrier), 176m	48	02-May-23	28-Jun-23
SSR1570	Site formation work	30	07-Jun-23	13-Jul-23
SSR1590	Noise barrier steelwork, 169m, 5m/Day	36	29-Jun-23	10-Aug-23
SSR1600	Roadworks	36	30-Jun-23	11-Aug-23
Utilities Works				
SSR1580	CLP (2 x 180m), 50m/wk	36	18-May-23	30-Jun-23
SSR1585	CMHK-180m,HGC-180m,HKBN-180m,HKT-180m,SMT-180m	36	02-Jun-23	15-Jul-23
Soft Landscaping Works				
SSR1810	Soft Lanscaping Works	42	17-Jul-23	02-Sep-23
Area 2 - Sai Sha Road (R100: Ch280-450)				
East Bound (Portions 5 & 26)				
SSR2108	Reinstate cofferdam after towngas connection (HP750)	12	12-Jul-23	25-Jul-23
West Bound				
SSR2570	Drainage (carrier) stage 1	32	07-Feb-23 A	24-Apr-23 A
SSR2573	Construct footpath and divert footpath	15	03-Apr-23 A	29-Apr-23 A
SSR2575	Drainage (carrier), stage 2	60	03-Apr-23 A	24-May-23
SSR2590	Site formation work stage 1	6	25-May-23	01-Jun-23
SSR2600	Site formation work stage 2	31	03-May-23	08-Jun-23
SSR2620	Noise barrier steelwork, 196m	24	25-May-23	23-Jun-23
SSR2625	Roadworks stage 1 & implement TTM for relocate Sai O Access	6	02-Jun-23	08-Jun-23
SSR2630	Roadworks stage 2 & implement TTM for removal eastbound portal	24	09-Jun-23	08-Jul-23
Utilities Works				
SSR2610	CLP (2 x 170m), 50m/wk	24	02-Jun-23	30-Jun-23
SSR2640	CATV-25m,CMHK-170m,HGC-170m,HKBN-80m,HKT-170m,SMT-170m	24	09-Jun-23	08-Jul-23
Soft Landscaping Works				
SSR2810	Soft Lanscaping Works	48	24-Jun-23	19-Aug-23
Area 3 - Sai Sha Road (R100: Ch450-800)				
West Bound				
SSR2562	Noise barrier footing NB24, 86m	105	25-Oct-22 A	15-Jun-23
SSR2568	Drainage (twin DN1100) stage 2	90	01-Jun-23	15-Sep-23
SSR3535	RW17: Bay 34a, 34b and 34c footing	48	27-Mar-23 A	06-Jun-23
SSR3545	RW17: Bay 34 - 41 - pile cap and Bay 41A-41C - footings	48	17-Dec-22 A	01-Jun-23
SSR3560	Drainage (carrier), stage 2 - 146m	52	29-May-23	29-Jul-23
SSR3575	Site formation work - stage 2	26	10-Jul-23	08-Aug-23
SSR3590	Noise barrier steelwork, 360m	24	26-Jul-23	22-Aug-23
SSR3600	Roadworks	39	26-Jul-23	08-Sep-23
Utilities Works				
SSR3580	CLP (350m), 50m/wk	18	26-Jul-23	15-Aug-23
Slope No.8				
SSR3750	Soil Nails (12 no.s)	12	02-May-23	15-May-23
SSR3760	Excavation to below +16mPD	12	16-May-23	30-May-23
SSR3770	Soil Nails (12 no.s)	12	31-May-23	13-Jun-23
SSR3780	Excavation to F.L. (approx +14mPD)	12	14-Jun-23	28-Jun-23
SSR3790	Construct U Channels & Hydroseeding	70	06-Mar-23 A	20-Jul-23
Soft Landscaping Works				
SSR3810	Soft Lanscaping Works	56	17-Jul-23	19-Sep-23
Areas 4 - Sai Sha Road (R100: Ch800-960)				
East Bound				
Utilities Works				
SSR4190	CATV-160m,CMHK-160m,HGC-160m,HKBN-160m,HKT-160m,SMT-45m,TGT-160m,VTL-19	56	13-Feb-23 A	31-May-23



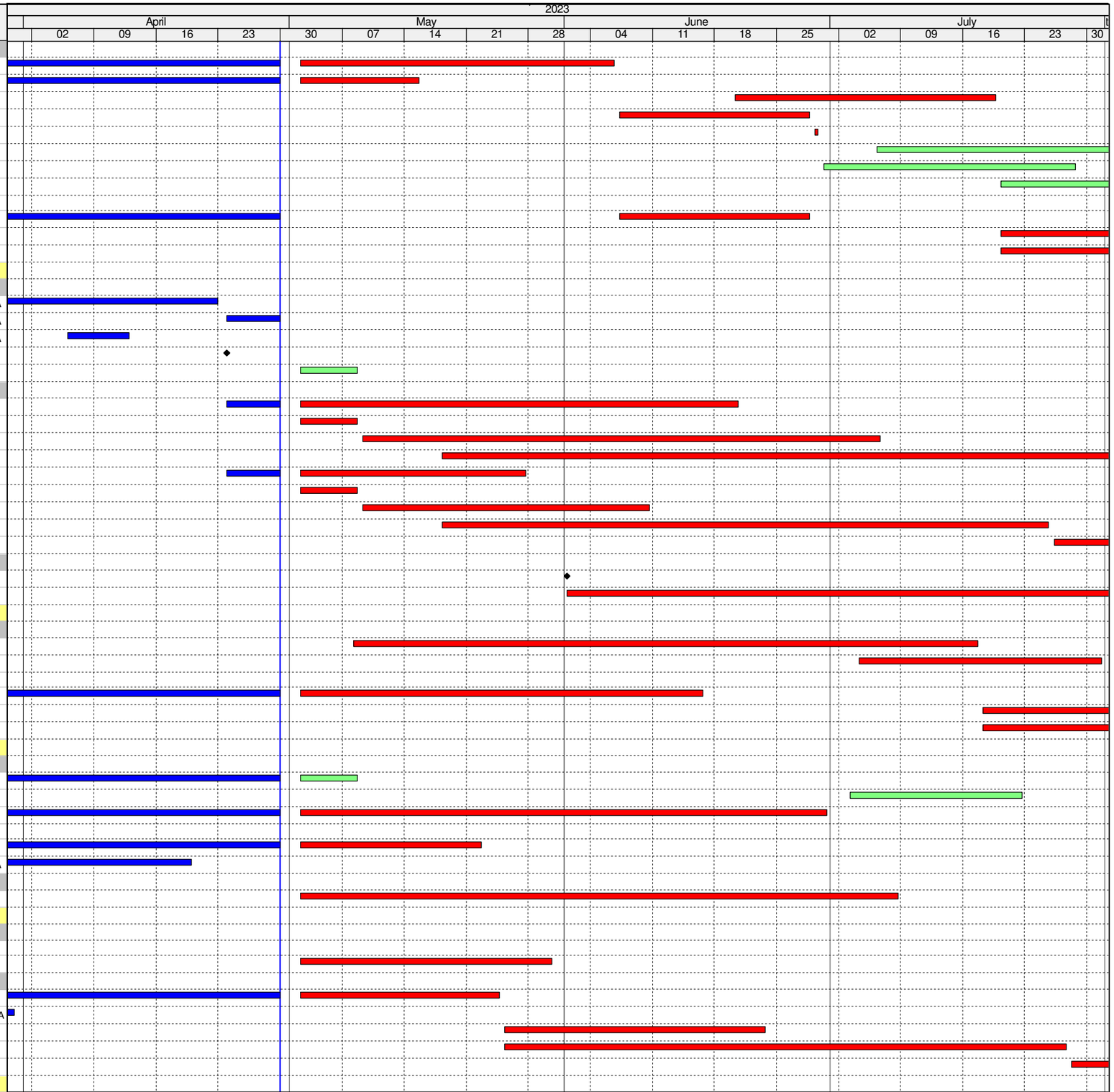
SAI SHA ROAD WIDENING

THREE MONTHLY ROLLING PROGRAMME AS OF 30/04/2023

SSR - RMCP 81W

Date	Revision	Checked	Appr...
04-May-23			

ID	Activity	Days	Start	Finish
	West Bound			
SSR4568	Noise barrier NB33 - pile caps	53	06-Mar-23 A	06-Jun-23
SSR4569	Drainage (carrier) stage 1	24	28-Feb-23 A	15-May-23
SSR4570	Drainage (carrier) stage 2	24	20-Jun-23	19-Jul-23
SSR4575	Utility and footpath	18	07-Jun-23	28-Jun-23
SSR4577	TTM to divert footpath	1	29-Jun-23	29-Jun-23
SSR4578	Site formation work	24	06-Jul-23	02-Aug-23
SSR4590	Noise barrier steelwork, 153m	24	30-Jun-23	28-Jul-23
SSR4595	Roadworks for TTM to remove of KH FB eastbound portal	24	20-Jul-23	16-Aug-23
	Utilities Works			
SSR4700	Waterworks (DN400/DN600, 190m incl W/B)	78	07-Jan-22 A	28-Jun-23
SSR4710	CLP (310m), 50m/wk	24	20-Jul-23	16-Aug-23
SSR4720	CATV-30m,CMHK-310m,HGC-310m,HKBN-30m,HKT-310m,SMT-310m)	24	20-Jul-23	16-Aug-23
	Che Ha Road			
	CHe Ha Village Access Road - Advanced Works			
CHR0020	Tree Felling and Site Clearance	24	16-Mar-23 A	23-Apr-23 A
CHR0030	Trial Pit / UU Detection	18	24-Apr-23 A	30-Apr-23 A
CHR0040	Instrumentation	12	06-Apr-23 A	13-Apr-23 A
CHR0050	BD Consent	0	24-Apr-23 A	
CHR0060	BA10	6	02-May-23	08-May-23
	Section 1 - Che Ha Road Roundabout			
CHR0120	Workfront 1 - excavation for retaining wall (RW), 12 bays	48	24-Apr-23 A	20-Jun-23
CHR0130	Workfront 1 - plate load test	6	02-May-23	08-May-23
CHR0140	Workfront 1 - RW base slab, 12 bays	48	09-May-23	06-Jul-23
CHR0150	Workfront 1 - RW wall stem, 12 bays	96	18-May-23	09-Sep-23
CHR0152	Workfront 2 - excavation for retaining wall (RW), 7 bays	28	24-Apr-23 A	27-May-23
CHR0155	Workfront 2 - plate load test	6	02-May-23	08-May-23
CHR0160	Workfront 2 - RW base slab, 7 bays	28	09-May-23	10-Jun-23
CHR0170	Workfront 2 - RW wall stem, 7 bays	56	18-May-23	25-Jul-23
CHR0180	Sewerage and drainage works	72	26-Jul-23	18-Oct-23
	Section 3 - Village Junciton to End of Che Ha Road			
CHR0520	Settle village issue	0	01-Jun-23*	
CHR0530	Sewerage and drainage works	96	01-Jun-23	22-Sep-23
	Areas 5 - Sai Sha Road (R100: Ch960-1110)			
	West Bound			
SSR5550	Drainage (carrier), 150m	58	08-May-23	17-Jul-23
SSR5560	Site formation work	24	04-Jul-23	31-Jul-23
	Utilities Works			
SSR5700	Waterworks (DN400/DN600, 150m incl W/B)	75	11-Jan-23 A	16-Jun-23
SSR5710	CLP (310m), 50m/wk	24	18-Jul-23	14-Aug-23
SSR5720	CATV-30m,CMHK-310m,HGC-310m,HKBN-30m,HKT-310m,SMT-310m)	24	18-Jul-23	14-Aug-23
	Area 6 - Sai Sha Road (R100: Ch1100 - R200: Ch180)			
	West Bound (Stage 2)			
SSR6580	Site formation work	90	05-Sep-22 A	08-May-23
SSR6585	Tree Transplant to Roundabout	18	03-Jul-23	22-Jul-23
SSR6610	Roadworks (incl Permanent Roundabout & Fire Hydrants)	90	07-Oct-22 A	30-Jun-23
	Utilities Works			
SSR6590	CLP (210m), 50m/wk	28	26-Nov-22 A	22-May-23
SSR6600	CATV-35m,CMHK-210m,HGC-210m,HKBN-210m,HKT-210m,SMT-210m,VTL-140m)	52	02-Feb-23 A	20-Apr-23 A
	Soft Landscaping Works			
SSR6810	Soft Lanscaping Works	56	02-May-23	08-Jul-23
	Area 7 - Sai Sha Road (R200: Ch180 - R300: Ch140)			
	East Bound			
	Utilities Works			
SSR7100	CATV-140m,CMHK-140m,HGC-140m,HKBN-140m,HKT-140m,TGT-140m,VTL-140m,WTT-1	24	02-May-23	30-May-23
	West Bound			
SSR7547	RW8: Structure, 7 Bays	85	11-Feb-23 A	24-May-23
SSR7558	SPW4: Lagging Wall and Capping beam	66	30-Dec-22 A	31-Mar-23 A
SSR7570	Waterworks	24	25-May-23	23-Jun-23
SSR7610	Drainage (carrier), 190m	52	25-May-23	27-Jul-23
SSR7620	Site formation work	36	28-Jul-23	07-Sep-23
	Area 8 - Sai Sha Road (R300: Ch140-314)			



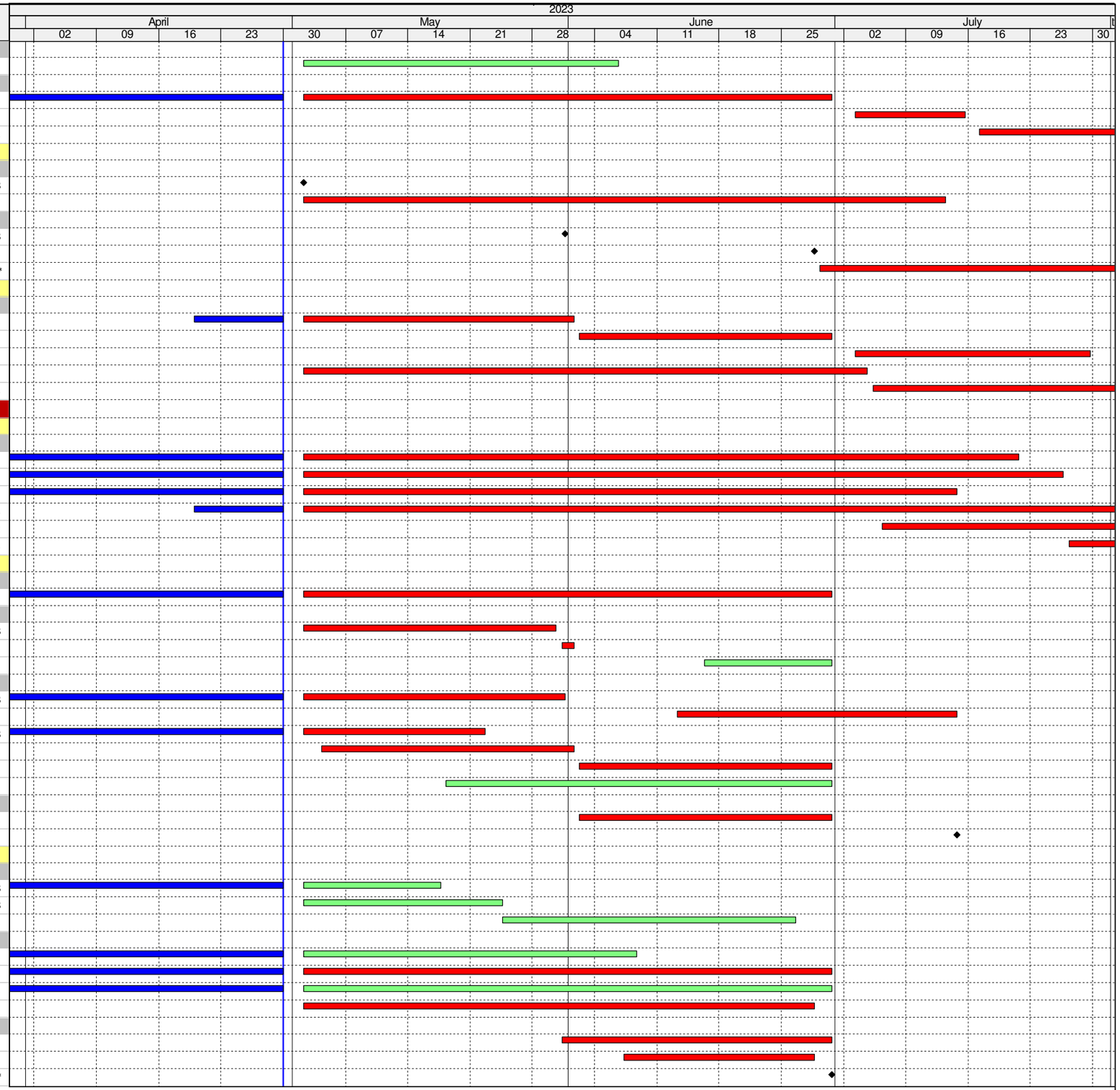
SAI SHA ROAD WIDENING

THREE MONTHLY ROLLING PROGRAMME AS OF 30/04/2023

SSR - RMCP 81W

Date	Revision	Checked	Appr...
04-May-23			

ID	Activity	Days	Start	Finish
East Bound				
SSR8060	Installation of Noise Barrier Panels at NB17/18	30	02-May-23*	06-Jun-23
West Bound				
SSR8525	Stage 1 - Drainage (carrier)	108	14-Feb-23 A	30-Jun-23
SSR8540	Stage 1 - Site formation work	12	03-Jul-23	15-Jul-23
SSR8560	Stage 1 - Roadworks	24	17-Jul-23	12-Aug-23
Utilities Connection				
Towngas				
UC1020	Completion of Towngas Works	0		02-May-23
UC1030	Towngas Connection Works (say, 2 months)	59	02-May-23	13-Jul-23*
Waterworks				
UC1060	Completion of Waterworks (Outside Green Area)	0		31-May-23
UC1070	Completion of Waterworks (Green Area) except Area 7 to Tin Liu Road	0		28-Jun-23
UC1080	Waterwork Connection	52	29-Jun-23	29-Aug-23*
Area 7.1 - Access Road to Tin Liu Village				
Stage 3 - Roadworks				
TLR3110	Zone 1: Drainage, 50m	24	20-Apr-23 A	01-Jun-23
TLR3125	Zone 1: gasmain and telecom duct	24	02-Jun-23	30-Jun-23
TLR3130	Zone 1: Roadworks (permanent 1st half and temporary)	24	03-Jul-23	29-Jul-23
TLR3210	Zone 2: Drainage, 50m	52	02-May-23	04-Jul-23
TLR3225	Zone 2: gasmain and telecom duct	24	05-Jul-23	01-Aug-23
Tseng Tau Road (Section 2 of the Works)				
Area 7.2 - Tseng Tau Road (R400: Ch100-250)				
West bound				
TTR1518	RW27-29 (4 bays)	110	07-Mar-23 A	21-Jul-23
TTR1524	RW 6 - RC works (15 bays)	170	10-Nov-22 A	26-Jul-23
TTR1527	Rising main from Site B (9 ways) (Nga Yiu Tau Road - RW6 Bay 10)	130	20-Oct-22 A	14-Jul-23
TTR1535	Rising main from Site B (9 ways) (RW6 Bay 9 - RW 27-29)	126	20-Apr-23 A	25-Aug-23
TTR1540	Drainage (carrier), 135m	68	06-Jul-23	22-Sep-23
TTR1550	Drainage and surface channel behind RW6 and RW27-29	96	27-Jul-23	18-Nov-23
Area 7.3 - Outstanding Works at Tseng Tau Road				
Stage 1 Eastbound Lane including Footpath / Cycle Track / Planter				
A2150	Footpath, cycle track and amenity	115	17-Oct-22 A	30-Jun-23
Stage 2 - Westbound Lane				
A1752	Install manhole covers & gully gratings	24	02-May-23	30-May-23
A1755	TTM for permanent traffic including road marking	2	31-May-23	01-Jun-23
A1757	Traffic signs and street furniture	12	16-Jun-23	30-Jun-23
Stage 3 - Footpath/Planter (Site B Side)				
A1770	Utility (Telecom & lighting)	34	21-Feb-23 A	31-May-23
A1775	Cable & lighting installation (by others)	26	13-Jun-23*	14-Jul-23
A1790	Construct U channel & E2 kerb along footpath, 320m, 100m/wk	36	24-Mar-23 A	22-May-23
A1810	Filling to permanent level (300m3), say 2 layers	24	04-May-23	01-Jun-23
A1815	Construct traffic islands and roundabout	24	02-Jun-23	30-Jun-23
A1818	Footpath paving blocks	36	18-May-23	30-Jun-23
Stage 4 - Soft Landscaping Works				
A1820	Soft landscaping works	24	02-Jun-23	30-Jun-23
A1870	Completion of Outstanding Works at Tseng Tau Road	0		14-Jul-23
Tseng Tau Pumping Station				
Green Roof				
TTSPS1073	Finishing works and metal works	0	25-Feb-23 A	17-May-23
TTSPS1074	Place planter soil for Green Roof includes Irrigation System	20	02-May-23	24-May-23
TTSPS1075	Planting works on green roof	26	24-May-23	26-Jun-23
External Works and ABWF/E&M Works				
TTSPS1120	E&M works	140	21-Nov-22 A	08-Jun-23
TTSPS1130	ABWF works (interior finish and building envelope)	100	25-Aug-22 A	30-Jun-23
TTSPS1132	Remaining Boundary Wall and Additional Manhole	90	30-Jan-23 A	30-Jun-23
TTSPS1135	External works (fencing, planter, EVA, signage, etc)	48	02-May-23	28-Jun-23
T&C and Statutory Inspection				
TTSPS1140	T&C	26	31-May-23	30-Jun-23
TTSPS1150	FSD Inspection, ASD Inspection, OP	18	07-Jun-23	28-Jun-23
TTSPS1160	Completion of Section 2	0		30-Jun-23*



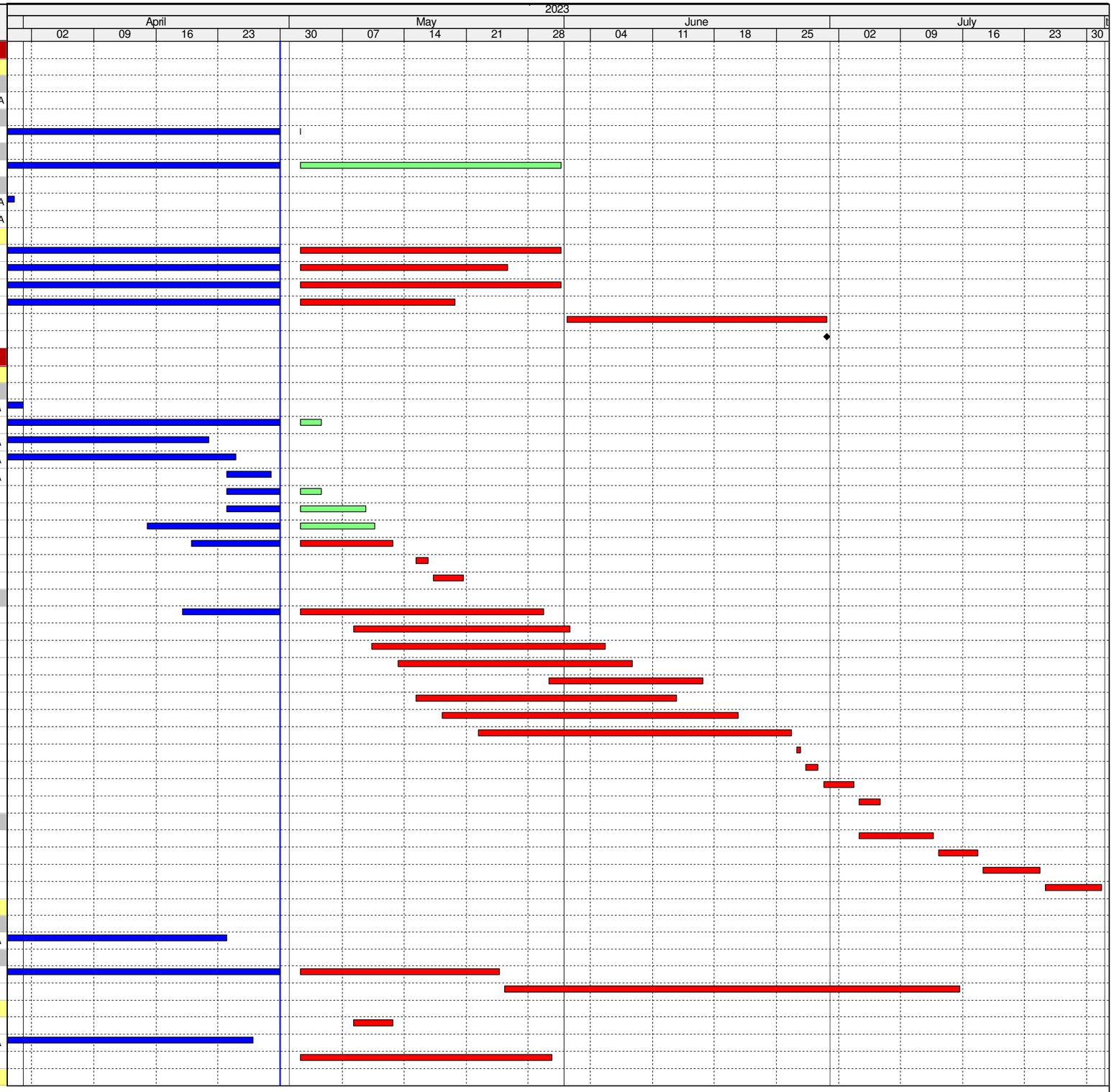
SAI SHA ROAD WIDENING

THREE MONTHLY ROLLING PROGRAMME AS OF 30/04/2023

SSR - RMCP 81W

Date	Revision	Checked	Appr...
04-May-23			

ID	Activity	Days	Start	Finish
Works Outside Green Area (Section 3 of the Works)				
(1) Pipe Jacking for DN1800 Rising Main				
Section 1 (684m) - Shaft 3 to Shaft 4				
RM1093	Lay twin DN630 pipes, pressure test and grouting to Shaft 4 (454m)	126	15-Mar-22 A	30-Mar-23 A
Section 3 (147m) - Shaft 5 to Shaft 4				
RM1320	Set Up in Shaft 5	24	23-Aug-21 A	02-May-23
Section 5 (420m) - Shaft 7 to Ma On Shan (Gravity Sewer by Trench Method)				
RM1290	Gravity sewer M4.01 to M4.15 (363m)	300	25-Oct-21 A	31-May-23
Final Pressure, Backfilling and Reinstatement				
RM1245	Backfilling and reinstatement at Shaft 4 and Shaft 7	53	27-Jun-22 A	31-Mar-23 A
RM1280	Final pressure test (Shaft 1 to 7)	52	18-Feb-23 A	30-Mar-23 A
Waterworks Outside Green Area with 4 WF (Refer to Detailed Prog)				
WW1110	Waterworks - Work Front 1 (700m)	480	02-Dec-19 A	31-May-23
WW1120	Waterworks - Work Front 2 (960m)	550	31-Jul-20 A	25-May-23
WW1135	Waterworks - Work Front 3, (1251m)	891	31-Mar-20 A	31-May-23
WW1140	Waterworks - Work Front 4 (1835m)	700	02-Jan-20 A	19-May-23
WW1145	Testing of Waterworks from Work Front 1 to Work Front 4	25	01-Jun-23*	30-Jun-23
WW9890	Completion of waterwork outside Green Area	0		30-Jun-23
Sai O Pumping Station (Section 4)				
Pump Room				
Structure - Wall to CJ 500mm below S1 (+2.20 mPD)				
SOPS2550	Wall - remove S2 and concrete packing	11	25-Mar-23 A	01-Apr-23 A
SOPS2560	Wall - internal falsework and working platform	23	23-Mar-23 A	04-May-23
SOPS2570	Wall - vertical blinding against pipe pile	27	18-Mar-23 A	22-Apr-23 A
SOPS2580	Wall - waterproofing on vertical blinding	21	28-Mar-23 A	25-Apr-23 A
SOPS2590	Wall - external working platform and formwork	4	24-Apr-23 A	29-Apr-23 A
SOPS2600	Wall - rebar	21	24-Apr-23 A	04-May-23
SOPS2610	Wall - internal formwork	22	24-Apr-23 A	09-May-23
SOPS2620	Wall - concreting (to +2.20 mPD)	19	15-Apr-23 A	10-May-23
SOPS2630	Wall - remove formwork and trim CJ	19	20-Apr-23 A	12-May-23
SOPS2640	Wall - waterproofing to vertical concrete face	2	15-May-23	16-May-23
SOPS2650	Backfilling to +2.20 mPD	4	17-May-23	20-May-23
Structure - Ground Slab				
SOPS2700	Remove noise cover and S1 including conrete packing	33	19-Apr-23 A	29-May-23
SOPS2710	Wall and ground slab - internal falsework and working platform	21	08-May-23	01-Jun-23
SOPS2720	Wall and ground slab - vertical blinding against pipe pile	22	10-May-23	05-Jun-23
SOPS2730	Wall and ground slab - waterproofing on vertical blinding	22	13-May-23	08-Jun-23
SOPS2740	Wall and ground slab - external working platform and formwork	16	30-May-23	16-Jun-23
SOPS2750	Wall and ground slab - wall rebar	25	15-May-23	13-Jun-23
SOPS2760	Wall and ground slab - internal wall and soffit formwork	28	18-May-23	20-Jun-23
SOPS2770	Wall and ground slab - ground slab rebar	29	22-May-23	26-Jun-23
SOPS2780	Wall and ground slab - concreting	1	27-Jun-23	27-Jun-23
SOPS2790	Wall and ground slab - remove formwork and trim CJ	2	28-Jun-23	29-Jun-23
SOPS2800	Wall and ground slab - waterproofing to vertical concrete face	2	30-Jun-23	03-Jul-23
SOPS2810	Backfill to ground slab	3	04-Jul-23	06-Jul-23
Structure - Wall and Column Above Ground				
SOPS2850	Falsework and external scaffold	8	04-Jul-23	12-Jul-23
SOPS2860	External formwork	4	13-Jul-23	17-Jul-23
SOPS2870	Rebar	6	18-Jul-23	24-Jul-23
SOPS2880	Internal formwork and column formwork	6	25-Jul-23	31-Jul-23
Rising Main and Gravity Sewer				
ELS				
SOPS3020	Earthwork and ELS (3 layers of supports)	72	26-Nov-22 A	24-Apr-23 A
Installation and Backfilling				
SOPS3030	Install sewer & risiing main and construct manholes	52	14-Mar-23 A	24-May-23
SOPS3040	Backfilling and remove 3 layers of supports	42	25-May-23	15-Jul-23
Transformer Room and Switch Room				
SOPS4015	Cable trench	5	08-May-23	12-May-23
SOPS4020	Wall and roof slab	50	14-Mar-23 A	27-Apr-23 A
SOPS4030	Dwarf wall on roof and waterproofing	24	02-May-23	30-May-23
ABWF Works				



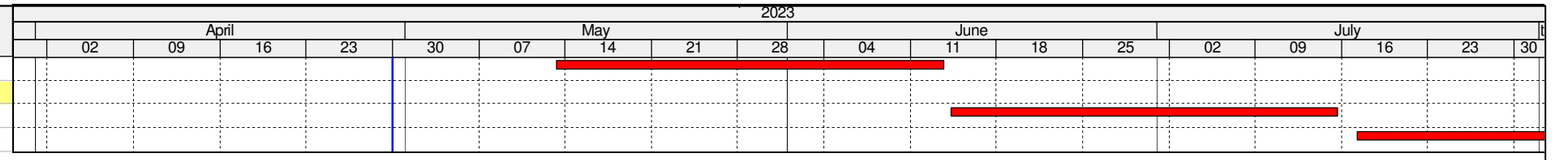
SAI SHA ROAD WIDENING

THREE MONTHLY ROLLING PROGRAMME AS OF 30/04/2023

SSR - RMCP 81W

Date	Revision	Checked	Appr...
04-May-23			

ID	Activity	Days	Start	Finish
SOPS5000	Interior finish - transformer room & switch room	26	13-May-23	13-Jun-23
E&M Works and OP				
SOPS6000	E&M works - transformer room	26	14-Jun-23	15-Jul-23
SOPS6010	CLP works - transformer room	101	17-Jul-23	14-Nov-23



SAI SHA ROAD WIDENING

THREE MONTHLY ROLLING PROGRAMME AS OF 30/04/2023

SSR - RMCP 81W

Date	Revision	Checked	Appr...
04-May-23			

Appendix C

Equipment Calibration Certificates

Air Quality Monitoring Equipment

FUGRO TECHNICAL SERVICES LIMITED

19/F, Fugro House – KCC2,
1 Kwai On Rd, Kwai Chung, NT,
Hong Kong

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Model:	Tisch TE-5170	Date of Calibration:	4-Apr-23
Equipment No.:	HVS-05	Next Calibration Date:	3-Jun-23
Location:		Technician:	Ho Woo

CONDITIONS

Sea Level Pressure (hPa):	1009.30	Corrected Pressure (mm Hg):	757
Temperature (°C):	23.7	Temperature (K):	297

CALIBRATION ORIFICE

Model:	Tisch TE-5025A	Qstd Slope:	2.11005
Serial No.:	2154	Qstd Intercept:	-0.01868
Calibration Date:	24-Apr-22	Expiry Date:	24-Apr-23

CALIBRATIONS

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m^3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION	
18	7.40	-6.60	14.000	1.783	56.00	56.01	Slope =	27.0814
13	6.10	-5.80	11.900	1.644	52.00	52.01	Intercept =	8.0017
10	4.80	-3.90	8.700	1.407	47.00	47.01	Corr. coeff.=	0.9969
7	2.40	-2.70	5.100	1.079	38.00	38.01		
5	1.50	-1.90	3.400	0.883	31.00	31.01		

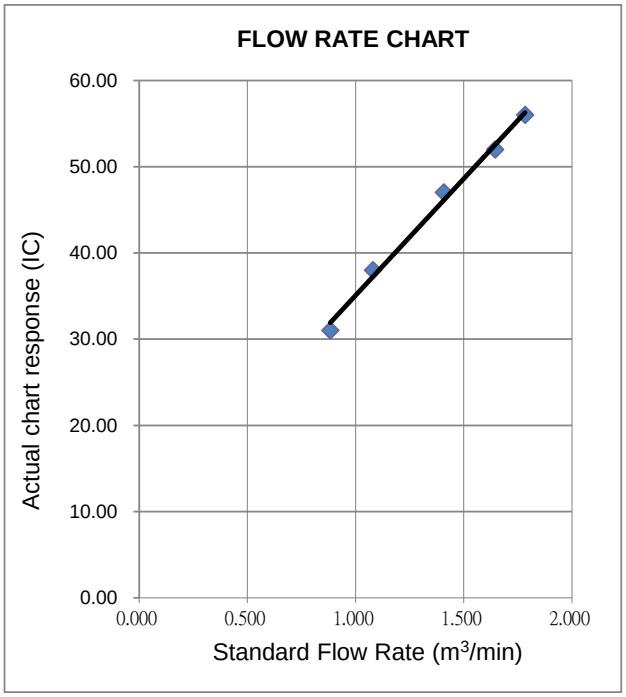
Calculations:

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart response
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg

For subsequent calculation of sampler flow:
1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

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



Calibrated by : Woo Date : 4 Apr 2023 Supervised by : Date : 4 Apr 2023

** End of Report **

TISCH Environmental

RECALIBRATION DUE DATE:
April 24, 2023

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	April 24, 2022	**Rootsmeter S/N:** 438320	**Ta:** 295	°K
Operator:	Jim Tisch		**Pa:** 751.1	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **2154**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4680	3.2	2.00
2	3	4	1	1.0350	6.4	4.00
3	5	6	1	0.9240	8.0	5.00
4	7	8	1	0.8800	8.8	5.50
5	9	10	1	0.7290	12.8	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)
0.9941	0.6772	1.4130	0.9957	0.6783	0.8863
0.9898	0.9563	1.9983	0.9915	0.9580	1.2534
0.9877	1.0689	2.2342	0.9893	1.0707	1.4014
0.9866	1.1212	2.3432	0.9883	1.1230	1.4698
0.9813	1.3461	2.8260	0.9830	1.3484	1.7726
QSTD	**m=**	**2.11005**	**QA**	**m=**	**1.32128**
	b=	**-0.01868**		**b=**	**-0.01172**
	r=	**0.99998**		**r=**	**0.99998**

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

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

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

FUGRO TECHNICAL SERVICES LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong.

CALIBRATION REPORT OF WIND METER

EP No.: EP-597/2021
Location: Sai O Trunk Sewer Sewage Pumping Station

Date of Calibration: 30-Nov-2022
Next Calibration Date: 29-May-2023
Technician: Ho Woo

Brand: Global Water
Model: GL500-7-2 **Equipment ID: WS-03**

Anemometer

Brand: Smart Sensor
Model: AR816 **Equipment ID: WS-03**

Procedures:

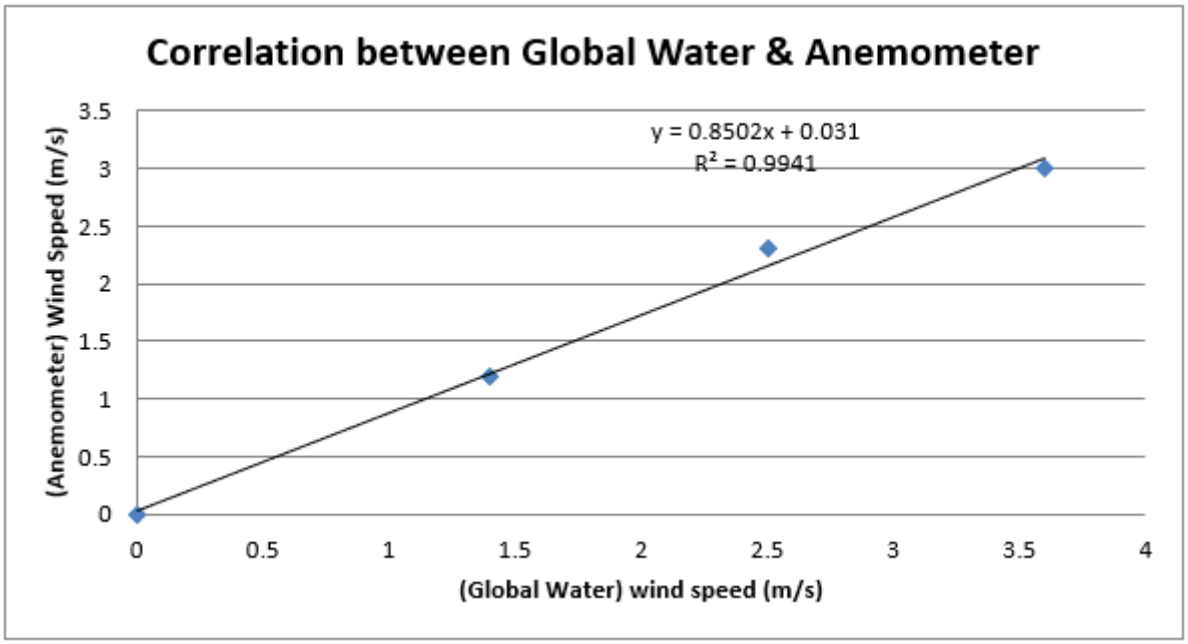
1. **Wind Still Test:** **The wind speed sensor was held by hand until stabilized.**
2. **Wind Speed Test:** **By direct comparison the reading between the wind speed sensor and the Anemometer.**
3. **Wind Direction Test:** **The wind meter was calibrated in-situ and compared with a marine compass from four directions.**

Wind Still Test:

Wind Speed (m/s)
0.00

Wind Speed Test:

Global Water (m/s)	Anemometer (m/s)
1.2	1.4
2.3	2.5
3.0	3.6



Remarks:
1. Actual Wind Speed Value (m/s) = 0.8502 x (Reading of Global Water Instrument) + 0.031
2. Correlation coefficient (R^2) = 0.9941
3. Acceptable Range: R^2 >=0.99

FUGRO TECHNICAL SERVICES LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong.

CALIBRATION REPORT OF WIND METER

Wind Direction Test:

	Marine Compass (o)
0	3
52	53
92	94
272	271

Report Date: **30/11/2022**

Cheung Wang Ching
Project Consultant

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report No. : 212769CA220614

CALIBRATION CERTIFICATE OF ANEMOMETER

Client Supplied Information

Client : Fugro Technical Services Limited

Project : Calibration Services

Details of Unit Under Test, UUT

Description : Anemometer

Manufacturer : Smart Sensor

Model No. : AR816

Serial No. : N/A

Equipment ID. : AM-001

Next Calibration Date : 28-Mar-2023

Laboratory Information

Details of Reference Equipment –

Description : Reference Anemometer

Equipment ID. : R-101-4

Date of Calibration : 29-Mar-2022 Ambient Temperature : 22 ºC

Calibration Location : Calibration Laboratory of FTS

Method Used : In-house Method R-C-279

Calibration Results :

Reference Reading (m/s)	UUT Reading (m/s)	Error (m/s)
2.1	2.0	-0.1
3.6	4.0	0.4
5.4	6.0	0.6
7.0	8.0	1.0
8.8	10.0	1.2

Remarks :

1. The equipment being used in this calibration is traceable to recognized National Standards.
2. The expanded uncertainty is 0.5 m/s with a coverage factor of 2 at a confidence level of 95%.
3. The reported readings in this calibration are an average from 10 trials.

Checked by : Date : 31-3-2022 Certified by : Date : 1-4-2022

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

** End of Report **

Noise Monitoring Equipment

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 212769CA221783

CALIBRATION CERTIFICATE OF SOUND LEVEL METER

Client Supplied Information

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Details of Unit Under Test, UUT

Description : Sound Level Meter

Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No. :	CEL-63X	CE-251	CEL-495
Serial No. :	1488293	02772	004020

Equipment ID : N/A

Next Calibration Date : 27-Jul-2023

Specification Limit : EN 61672-1: 2003 Class 1

Laboratory Information

Details of Reference Equipment -

Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)

Equipment ID. : R-108-1

Date Receipt of UUT : 27-Jul-2022

Date of Calibration : 28-Jul-2022

Calibration Location : Calibration Laboratory of FTS

Ambient Temperature : 20±2 °C

Method Used : By direct comparison

Relative Humidity : <80% R.H.

Calibration Results :

Parameters		Mean Value (dB)	Specification Limit(dB)
A-weigthing frequency response	4000Hz	0.6	2.6 to -0.6
	2000Hz	1.0	2.8 to -0.4
	1000Hz	0.0	1.1 to -1.1
	500Hz	-3.3	-1.8 to -4.6
	250Hz	-8.6	-7.2 to -10.0
	125Hz	-16.1	-14.6 to -17.6
	63Hz	-26.1	-24.7 to -27.7
Differential level linearity	94dB-104dB	0.0	± 0.6
	104dB-114dB	0.0	± 0.6

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast
3. The mean value is the average of four measurements.
4 The values given in this Calibration Certificate only relate to unit under test and the values measured at the time of the test. Any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during tranportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : _____ Date : 1-8-2022 Certified by : _____ Date : 2-8-2022

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

** End of Report **

T +852 2450 8233 | F +852 2450 6138 | E matlab@fugro.com | W fugro.com

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 212769CA221230

CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Client Supplied Information

Details of Unit Under Test, UUT

Description	:	Sound Calibrator
Manufacturer	:	Casella (Model CEL-120/1)
Serial No.	:	3321858
Equipment ID	:	N/A

Next Calibration Date : 08-Jun-2023

Specification Limit : EN 60942: 2003 Class 1

Laboratory Information

Details of Calibration Equipment

Description	:	Reference Sound level meter
Equipment ID.	:	R-119-2

Date of Calibration : 09-Jun-2022

Calibration Location : Calibration Laboratory of FTS

Ambient Temperature : 20 ± 2 °C

Method Used : By direct comparison

Relative Humidity : < 80 %RH

Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	0.1 dB	±0.4dB
114dB	0.1 dB	

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The unit under test complies with the specification limit.
4. The values given in this Calibration Certificate only relate to the unit-under-test and the values measured at the time of the test. Any uncertainties quoted will not include allowances for the environmental changes, variation and shock during transportation, or the capability of any other laboratory to repeat the measurement.

Checked by : Date : 24-6-2022 Certified by : Date : 25-6-2022

Leung Kwok Tai (Assistant Manager)

CA-R-297 (22/07/2009)

** End of Report **

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report No. : 212769CA221052(1)

CALIBRATION CERTIFICATE OF ANEMOMETER

Client Supplied Information

Client : Fugro Technical Services Limited

Project : Calibration Services

Details of Unit Under Test, UUT

Description : Anemometer

Manufacturer : BENETECH

Model No. : GM816

Serial No. : N/A

Equipment ID. : WS-10

Next Calibration Date : 30-May-2023

Laboratory Information

Details of Reference Equipment –

Description : Reference Anemometer

Equipment ID. : R-101-4

Date of Calibration : 31-May-2022 Ambient Temperature : 22 °C

Calibration Location : Calibration Laboratory of FTS

Method Used : In-house Method R-C-279

Calibration Results :

Reference Reading (m/s)	UUT Reading (m/s)	Error (m/s)
2.0	1.9	-0.1
4.0	3.7	-0.3
6.0	5.3	-0.8
8.0	7.0	-1.0
10.0	8.7	-1.3

Remarks :

1. The equipment being used in this calibration is traceable to recognized National Standards.
2. The expanded uncertainty is 0.5 m/s with a coverage factor of 2 at a confidence level of 95%.
3. The reported readings in this calibration are an average from 10 trials.

Checked by : Cmy Date : 31-5-2022 Certified by : K.T.Leung Date : 31.5.2022

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

** End of Report **

Appendix D

Environmental Monitoring Schedule

Project: **EP-597/2021 Sai O Trunk Sewer Sewage Pumping Station**

Impact Air Quality & Noise Monitoring Schedule (April 2023)

Sun	Mon	Tue	Wed	Thur	Fri	Sat
						1 April
2	3 • Site Inspection	4	5 • AQM • NM	6	7	8
9	10	11 • Site Inspection • AQM • NM	12	13	14	15
16	17 • Site Inspection • AQM • NM	18	19	20	21 • AQM	22
23/30	24 • Site Inspection	25	26	27 • AQM • NM	28	29

Remarks

1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition;
2. Air Quality Monitoring(AQM): 3 x 1-hours TSP Monitoring in every 6 days;
   Monitoring Locations: CA_M1(a) Construction Site Boundary near Hong Kong Baptist Theological Seminary (HKBTS) Staff & Students Quarters
3. Noise Monitoring(NM): one set of Leq (30 min) between 0700 and 1900 hours on normal weekdays once a week;
   Monitoring Locations: CN_M1 In front of the HKBTS Staff & Students Quarters
   Monitoring Locations: CN_M2 In front of the HKBTS Administration and Education Block
4. Site Inspection: Once a week

Project: **EP-597/2021 Sai O Trunk Sewer Sewage Pumping Station**

Impact Air Quality & Noise Monitoring Schedule (May 2023)

Sun	Mon	Tue	Wed	Thur	Fri	Sat
	1	2	3 • AQM • NM	4	5 • Site Inspection	6
7	8 • Site Inspection	9 • AQM • NM	10	11	12	13
14	15 • Site Inspection • AQM • NM	16	17	18	19 • AQM	20
21	22 • Site Inspection	23	24	25 • AQM • NM	26	27
28	29 • Site Inspection	30	31 • AQM • NM			

Remarks

1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition;
2. Air Quality Monitoring(AQM): 3 x 1-hours TSP Monitoring in every 6 days;
   Monitoring Locations: CA_M1(a) Construction Site Boundary near Hong Kong Baptist Theological Seminary (HKBTS) Staff & Students Quarters
3. Noise Monitoring(NM): one set of Leq (30 min) between 0700 and 1900 hours on normal weekdays once a week;
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   Monitoring Locations: CN_M2 In front of the HKBTS Administration and Education Block
4. Site Inspection: Once a week

Appendix E

Air Quality & Construction Noise

Monitoring Results

1-hr TSP Monitoring Results

Monitoring Location : CA_M1(a) Construction Site Boundary near Hong Kong Baptist Theological Seminary (HKBTS) Staff & Students Quarters

Start Date	Start Time	Weather Condition	Filter Identification No	Elapsed-Time Meter		Sampling Time (min)	Temperature (K)	Atmospheric Pressure (mmHg)	Filter Paper Weight			Flow Rate			Total Volume (m^3)	Concentration			
				Start	Stop				Initial Weight	Final Weight	Particulate Weight	Intial	Final	Average		Value	Average	Action Level	Limit Level
5-Apr-23	9:05	Cloudy	M11593	6223.54	6224.52	59	298.3	757.2	2.7126	2.7192	0.007	1.18	1.18	1.18	69.27	95.3	95.6	339	500
	10:11	Cloudy	M11690	6224.52	6225.50	59	298.3	757.2	2.6851	2.6906	0.006	1.33	1.33	1.33	77.94	70.6			
	11:16	Cloudy	M10732	6225.50	6226.48	59	298.3	757.2	2.7626	2.7715	0.009	1.25	1.25	1.25	73.60	120.9			
11-Apr-23	13:11	Fine	M10743	6226.48	6227.46	59	297.2	759.7	2.7455	2.7550	0.010	1.33	1.33	1.33	78.27	121.4	123.3	339	500
	14:18	Fine	M10744	6227.46	6228.44	59	297.2	759.7	2.7437	2.7522	0.009	1.18	1.18	1.18	69.58	122.2			
	15:20	Fine	M10745	6228.44	6229.42	59	297.2	759.7	2.7488	2.7576	0.009	1.18	1.18	1.18	69.58	126.5			
17-Apr-23	12:50	Fine	M11916	6229.42	6230.40	59	299.1	758.7	2.7906	2.7989	0.008	1.18	1.18	1.18	69.24	119.9	104.9	339	500
	13:53	Fine	M11917	6230.40	6231.38	59	299.1	758.7	2.7900	2.7971	0.007	1.18	1.18	1.18	69.24	102.5			
	14:53	Fine	M11918	6231.38	6232.36	59	299.1	758.7	2.8025	2.8093	0.007	1.25	1.25	1.25	73.57	92.4			
21-Apr-23	11:22	Fine	M11923	6232.36	6233.34	59	297.1	755.5	2.7657	2.7740	0.008	1.18	1.18	1.18	69.35	119.7	99.1	339	500
	12:26	Fine	M11924	6233.34	6234.32	59	297.1	755.5	2.8062	2.8123	0.006	1.33	1.33	1.33	78.02	78.2			
	13:29	Fine	M11925	6234.32	6235.30	59	297.1	755.5	2.7744	2.7813	0.007	1.18	1.18	1.18	69.35	99.5			
27-Apr-23	9:34	Sunny	M11928	6235.30	6236.28	59	295.7	761.5	2.8029	2.8075	0.005	1.37	1.37	1.37	80.81	56.9	76.4	339	500
	10:44	Sunny	M10447	6236.28	6237.26	59	295.7	761.5	2.7476	2.7546	0.007	1.26	1.26	1.26	74.26	94.3			
	13:02	Sunny	M10448	6237.26	6238.24	59	295.7	761.5	2.7577	2.7635	0.006	1.26	1.26	1.26	74.26	78.1			
															Min	56.9			
															Max	126.5			
															Average	99.9			

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report No. : 181172EN231080

Test Report on Analysis of Filters

Information Supplied by Client

Client	:	Fugro Technical Services Ltd.
Client's address	:	13/F, Fugro House – KCC2, No.1 Kwai On Road, Kwai Chung, N.T., H.K.
Project	:	Provision of ET Services for Sai O Trunk Sewer Sewage Pumping Station
Sample description	:	3 samples of TSP filter paper
Sample identification	:	-
Sampling date	:	-
Test required	:	Provision of conditioned & tared filter paper and subsequent reconditioning and reweighing of returned filter paper for TSP monitoring

Laboratory Information

Filter paper I.D.	:	M10732, M11593, M11690
Date of receipt of sample	:	06/04/2023
Date test completed	:	12/04/2023
Test method used	:	USEPA Method 40 CFR Part 50 Appendix B.

Results :

Filter paper I.D.	Initial wt. of filter, g	Final wt. of filter, g
M10732	2.7626	2.7715
M11593	2.7126	2.7192
M11690	2.6851	2.6906

Supervised by : C.H. Chiu

Certified by :

Approved Signatory: HO Kin Man, John
Assistant General Manager – Laboratories

Date : 14/4/2023

** End of Report **

Note : This report refers only to the sample(s) tested and the result(s) applied to the sample(s) as received.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report No. : 181172EN231080(1)

Test Report on Analysis of Filters

Information Supplied by Client

Client	:	Fugro Technical Services Ltd.
Client's address	:	13/F, Fugro House – KCC2, No.1 Kwai On Road, Kwai Chung, N.T., H.K.
Project	:	Provision of ET Services for Sai O Trunk Sewer Sewage Pumping Station
Sample description	:	3 samples of TSP filter paper
Sample identification	:	-
Sampling date	:	-
Test required	:	Provision of conditioned & tared filter paper and subsequent reconditioning and reweighing of returned filter paper for TSP monitoring

Laboratory Information

Filter paper I.D.	:	M10743, M10744, M10745
Date of receipt of sample	:	11/04/2023
Date test completed	:	12/04/2023
Test method used	:	USEPA Method 40 CFR Part 50 Appendix B.

Results :

Filter paper I.D.	Initial wt. of filter, g	Final wt. of filter, g
M10743	2.7455	2.7550
M10744	2.7437	2.7522
M10745	2.7488	2.7576

Supervised by : C.H. Chiu

Certified by :

Approved Signatory: HO Kin Man, John
Assistant General Manager – Laboratories

Date : 14/4/2023

** End of Report **

Note : This report refers only to the sample(s) tested and the result(s) applied to the sample(s) as received.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report No. : 181172EN231080(2)

Test Report on Analysis of Filters

Information Supplied by Client

Client	:	Fugro Technical Services Ltd.
Client's address	:	13/F, Fugro House – KCC2, No.1 Kwai On Road, Kwai Chung, N.T., H.K.
Project	:	Provision of ET Services for Sai O Trunk Sewer Sewage Pumping Station
Sample description	:	3 samples of TSP filter paper
Sample identification	:	-
Sampling date	:	-
Test required	:	Provision of conditioned & tared filter paper and subsequent reconditioning and reweighing of returned filter paper for TSP monitoring

Laboratory Information

Filter paper I.D.	:	M11916, M11917, M11918
Date of receipt of sample	:	17/04/2023
Date test completed	:	19/04/2023
Test method used	:	USEPA Method 40 CFR Part 50 Appendix B.

Results :

Filter paper I.D.	Initial wt. of filter, g	Final wt. of filter, g
M11916	2.7906	2.7989
M11917	2.7900	2.7971
M11918	2.8025	2.8093

Supervised by : C.H. Chiu

Certified by :
Approved Signatory: HO Kin Man, John
Assistant General Manager – Laboratories

Date : 21/4/2023

** End of Report **

Note : This report refers only to the sample(s) tested and the result(s) applied to the sample(s) as received.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report No. : 181172EN231080(3)

Test Report on Analysis of Filters

Information Supplied by Client

Client	:	Fugro Technical Services Ltd.
Client's address	:	13/F, Fugro House – KCC2, No.1 Kwai On Road, Kwai Chung, N.T., H.K.
Project	:	Provision of ET Services for Sai O Trunk Sewer Sewage Pumping Station
Sample description	:	3 samples of TSP filter paper
Sample identification	:	-
Sampling date	:	-
Test required	:	Provision of conditioned & tared filter paper and subsequent reconditioning and reweighing of returned filter paper for TSP monitoring

Laboratory Information

Filter paper I.D.	:	M11923, M11924, M11925
Date of receipt of sample	:	21/04/2023
Date test completed	:	22/04/2023
Test method used	:	USEPA Method 40 CFR Part 50 Appendix B.

Results :

Filter paper I.D.	Initial wt. of filter, g	Final wt. of filter, g
M11923	2.7657	2.7740
M11924	2.8062	2.8123
M11925	2.7744	2.7813

Supervised by : C.H. Chiu

Certified by :
Approved Signatory: WONG Kwok Fung, Raymond
Manager – Chemistry Department

Date : 27/04/2023

** End of Report **

Note : This report refers only to the sample(s) tested and the result(s) applied to the sample(s) as received.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report No. : 181172EN231080(4)

Test Report on Analysis of Filters

Information Supplied by Client

Client	:	Fugro Technical Services Ltd.
Client's address	:	13/F, Fugro House – KCC2, No.1 Kwai On Road, Kwai Chung, N.T., H.K.
Project	:	Provision of ET Services for Sai O Trunk Sewer Sewage Pumping Station
Sample description	:	3 samples of TSP filter paper
Sample identification	:	-
Sampling date	:	-
Test required	:	Provision of conditioned & tared filter paper and subsequent reconditioning and reweighing of returned filter paper for TSP monitoring

Laboratory Information

Filter paper I.D.	:	M10447, M10448, M11928
Date of receipt of sample	:	28/04/2023
Date test completed	:	29/04/2023
Test method used	:	USEPA Method 40 CFR Part 50 Appendix B.

Results :

Filter paper I.D.	Initial wt. of filter, g	Final wt. of filter, g
M10447	2.7476	2.7546
M10448	2.7577	2.7635
M11928	2.8029	2.8075

Supervised by : C.H. Chiu

Certified by : _____
Approved Signatory: WONG Kwok Fung, Raymond
Manager – Chemistry Department

Date : 02/05/2023

** End of Report **

Note : This report refers only to the sample(s) tested and the result(s) applied to the sample(s) as received.

Noise Monitoring Results

Monitoring Location : CN_M1 In front of the HKBTS Staff & Students Quarters

Date	Weather	Wind Speed (m/s)	Start Time	Noise Monitoring (30min)(dB(A))			
				Corrected Leq	Leq	L90	L10
5-Apr-23	Cloudy	0.2	9:13	62.6	59.6	51.5	61.5
11-Apr-23	Fine	0.2	9:37	52.8	49.8	46.5	53.0
17-Apr-23	Fine	0.7	13:14	55.4	52.4	49.5	56.5
27-Apr-23	Sunny	0.4	9:42	63.7	60.7	52.0	63.0
			Average :	60.7			
			Baseline Level:	64.3			
			Action Level :	When one valid documented complaint is received			
			Limit Level :	70dB(A) for schools and 65dB(A) during school examination periods			

Monitoring Location : CN_M2 In front of the HKBTS Administration and Education Block

Date	Weather	Wind Speed (m/s)	Start Time	Noise Monitoring (30min)(dB(A))		
				Leq	L90	L10
5-Apr-23	Cloudy	0.1	9:52	58.4	48.5	60.5
11-Apr-23	Fine	0.1	10:14	48.4	44.5	51.5
17-Apr-23	Fine	0.4	13:58	49.6	47.5	52.5
21-Apr-23	Sunny	0.3	10:21	59.3	49.0	61.5
			Average :	56.3		
			Baseline Level:	62.5		
			Action Level :	When one valid documented complaint is received		
			Limit Level :	70dB(A) for schools and 65dB(A) during school examination periods		

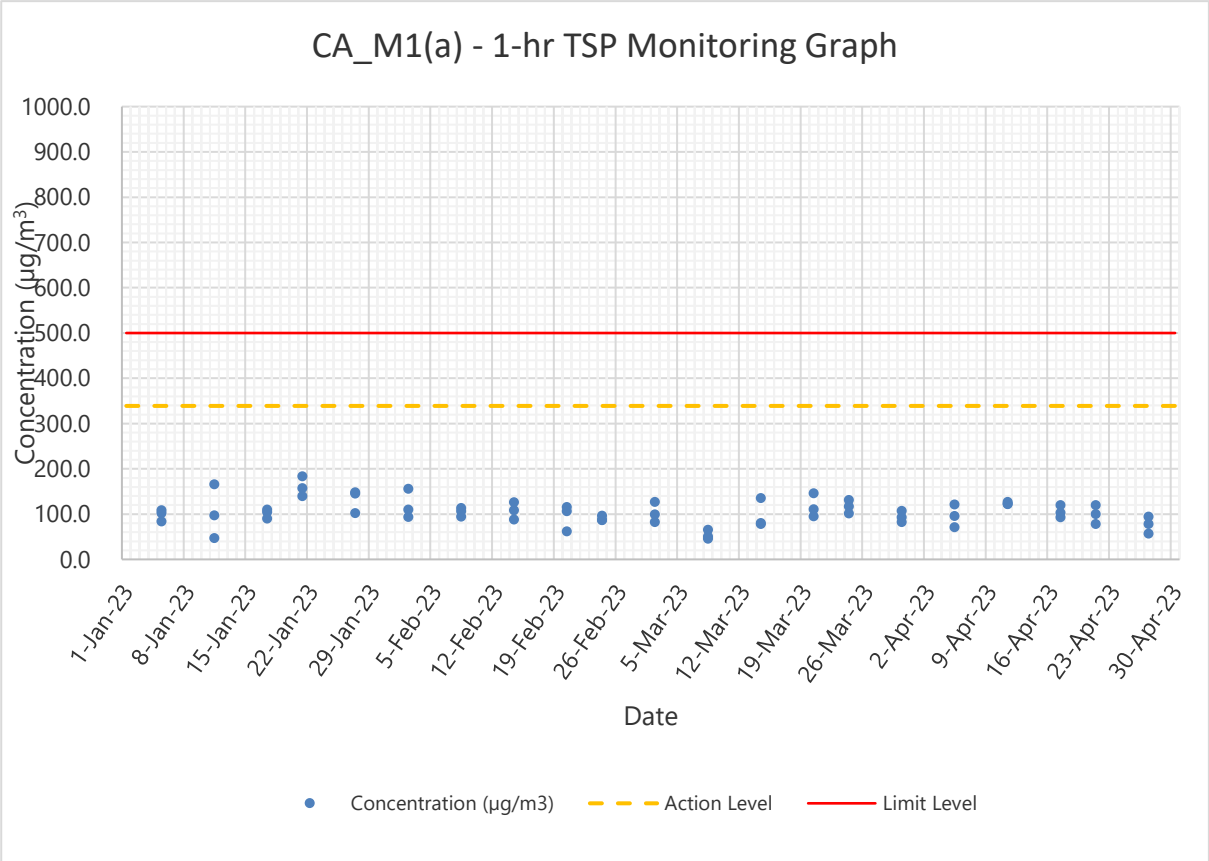
Remarks: 1. Noise results at CN_M1 were calculated by +3 dB (A) correction for free-field measurement.

Appendix F

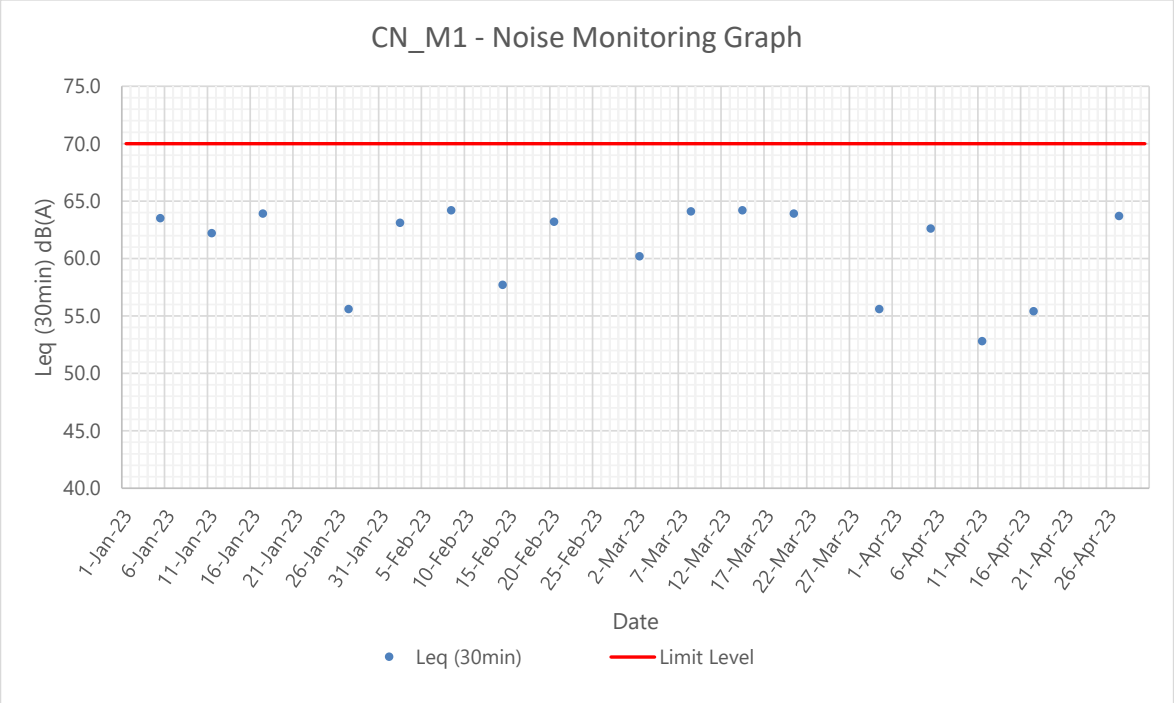
Air Quality & Construction Noise

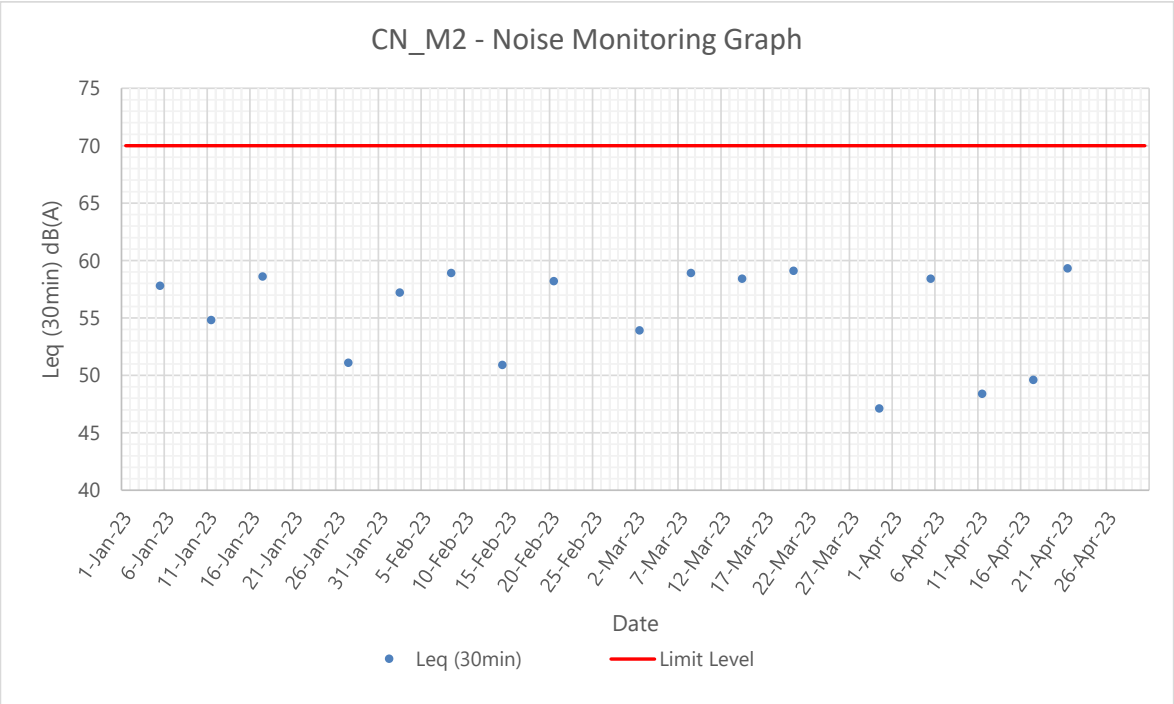
Monitoring Graphs

1-hr TSP Monitoring Graph



Noise Monitoring Graph





Appendix G

Action and Limit Level

Action and Limit Levels for Air Quality

Monitoring Parameter	Monitoring Station	Action Level	Limit Level
1-hour TSP	CA_M1(a)	339 µg/m^3	500 µg/m^3

Action and Limit Levels for Construction Noise

Monitoring Parameter	Monitoring Station	Action Level	Limit Level
0700-1900 hours in normal weekdays LA_{eq} (30min)	CN_M1	When one documented complaint is received	70dB(A) during normal teaching period & 65 dB(A) during examination periods
	CN_M2		

Remark:
CN_M1: Free-field measurement (+3 dB(A) correction has been applied).

Appendix H

Event and Action Plan

Event and Action Plan for Air Quality (Construction 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 Contractor, IEC and ER; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Identify source(s), investigate the causes of exceedance and propose remedial measures; 2. Implement remedial measures; and 3. Amend working methods agreed with the ER as appropriate.
Action level being exceeded by two or more consecutive sampling	1. Identify source; 2. Inform Contractor, IEC and ER; 3. Advise the Contractor and 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; 7. If exceedance continues, arrange meeting with Contractor, IEC and ER; and 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Identify source and investigate the causes of exceedance; 2. Submit proposals for remedial measures to the ER with a copy to ET and IEC within three working days of notification; 3. Implement the agreed proposals; and 4. Amend proposal as appropriate.
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; and 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; and 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. Identify source(s) and investigate the causes of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to ER with a copy to ET and IEC within three working days of notification; 4. Implement the agreed proposals; and 5. 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; 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; and 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by the ET; 2. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 3. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 4. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 3. Supervise the implementation of remedial measures; and 4. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Identify source(s) and investigate the causes of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to the ER with a copy to the IEC and ET within three working days of notification; 4. Implement the agreed proposals; 5. Revise and resubmit proposals if problem still not under control; and 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event and Action Plan for Noise (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; and 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analyzed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; and 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 analyzed noise problem; and 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to IEC; and 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; and 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; and 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 analyzed noise problem; 4. Ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. 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; and 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Appendix I

Weather and Meteorological

Conditions during Reporting Month

Weather Condition (April 2023)

Date	Mean Pressure (hPa)	Air Temperature			Mean Relative Humidity (%)	Total Rainfall (mm)
		Maximum (°C)	Mean (°C)	Minimum (°C)		
1 April 2023	1012.7	22.4	20.3	19.3	89	0.7
2 April 2023	1012.2	21.6	21.1	20.5	92	0.7
3 April 2023	1011.8	21.5	20.9	20.3	90	2.1
4 April 2023	1009.3	25.9	23.7	20.6	90	4.0
5 April 2023	1009.5	26.3	25.3	24.3	89	0.4
6 April 2023	1011	28.4	25.4	20.2	87	5.9
7 April 2023	1015.2	25.9	21.8	19.4	74	4.4
8 April 2023	1020.1	21.8	20.6	20.2	73	Trace
9 April 2023	1018.4	21.7	19.8	18.0	72	2.6
10 April 2023	1014.9	23.3	21.4	19.9	80	0.0
11 April 2023	1012.9	28.1	24.2	21.9	81	0.0
12 April 2023	1012.3	29.2	25.0	22.0	76	0.0
13 April 2023	1012.8	26.3	23.4	21.6	78	0.0
14 April 2023	1010.8	28.9	24.7	22.5	80	0.0
15 April 2023	1009.3	30.6	26.9	23.4	70	0.0
16 April 2023	1009.5	30.8	26.7	24.1	69	0.0
17 April 2023	1011.5	29.2	26.1	24.0	80	Trace
18 April 2023	1010.1	29.9	26.7	24.6	81	Trace
19 April 2023	1005.1	27.7	25.9	21.6	81	26.5
20 April 2023	1004.1	25.1	24.0	23.2	94	18.2
21 April 2023	1007.3	25.3	24.1	23.3	90	4.3
22 April 2023	1010.5	23.9	23.1	22.5	89	0.7
23 April 2023	1013.3	23.7	23.0	22.4	91	0.4
24 April 2023	1014.2	24.3	23.5	22.9	89	1.0
25 April 2023	1013.9	23.7	22.4	20.4	91	4.4
26 April 2023	1014.6	24.8	21.6	19.4	73	0.0
27 April 2023	1015.2	24.7	22.7	21.5	80	0.3
28 April 2023	1013.8	27.6	24.1	21.8	84	0.9
29 April 2023	1011.6	28.1	25.4	23.7	82	Trace
30 April 2023	1012.1	27.8	24.6	22.7	73	0.0

Remark:

1. Trace means rainfall less than 0.05 mm.

Source: Hong Kong Observatory

Appendix J

Wind Data

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
01 Apr 2023 00:00	2.8	SEE	02 Apr 2023 00:00	2.7	NE
01 Apr 2023 01:00	2.8	NEN	02 Apr 2023 01:00	2.7	SE
01 Apr 2023 02:00	2.7	N	02 Apr 2023 02:00	2.7	NEN
01 Apr 2023 03:00	3.5	SE	02 Apr 2023 03:00	2.7	SWS
01 Apr 2023 04:00	4.0	NEN	02 Apr 2023 04:00	2.7	SWS
01 Apr 2023 05:00	4.0	NEN	02 Apr 2023 05:00	2.8	S
01 Apr 2023 06:00	5.2	SE	02 Apr 2023 06:00	2.7	E
01 Apr 2023 07:00	4.2	SEE	02 Apr 2023 07:00	2.7	S
01 Apr 2023 08:00	4.9	NEE	02 Apr 2023 08:00	3.9	SE
01 Apr 2023 09:00	2.7	E	02 Apr 2023 09:00	3.0	N
01 Apr 2023 10:00	2.9	SE	02 Apr 2023 10:00	2.8	E
01 Apr 2023 11:00	3.0	N	02 Apr 2023 11:00	2.8	NE
01 Apr 2023 12:00	3.0	NEE	02 Apr 2023 12:00	2.8	NEN
01 Apr 2023 13:00	2.8	NEN	02 Apr 2023 13:00	2.7	NE
01 Apr 2023 14:00	2.7	NEN	02 Apr 2023 14:00	2.7	N
01 Apr 2023 15:00	2.7	NEN	02 Apr 2023 15:00	2.7	NEN
01 Apr 2023 16:00	2.8	N	02 Apr 2023 16:00	2.8	N
01 Apr 2023 20:00	2.8	NEN	02 Apr 2023 17:00	2.8	N
01 Apr 2023 18:00	2.8	NE	02 Apr 2023 18:00	2.8	N
01 Apr 2023 19:00	2.8	NEE	02 Apr 2023 19:00	2.8	N
01 Apr 2023 20:00	2.8	NE	02 Apr 2023 20:00	2.7	NEN
01 Apr 2023 21:00	2.8	NE	02 Apr 2023 21:00	2.7	NE
01 Apr 2023 22:00	2.8	N	02 Apr 2023 22:00	2.8	NEN
01 Apr 2023 23:00	2.7	NE	02 Apr 2023 23:00	2.7	N

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
3 Apr 2023 00:00	2.8	NEN	4 Apr 2023 00:00	2.8	SE
3 Apr 2023 01:00	2.8	NEN	4 Apr 2023 01:00	2.7	N
3 Apr 2023 02:00	2.7	N	4 Apr 2023 02:00	2.7	NEE
3 Apr 2023 03:00	2.7	E	4 Apr 2023 03:00	2.7	NE
3 Apr 2023 04:00	2.7	NEE	4 Apr 2023 04:00	2.7	NEE
3 Apr 2023 05:00	2.8	NEN	4 Apr 2023 05:00	2.8	NEE
3 Apr 2023 06:00	2.7	NEN	4 Apr 2023 06:00	2.7	NE
3 Apr 2023 07:00	2.7	N	4 Apr 2023 07:00	2.8	NEN
3 Apr 2023 08:00	2.7	NEN	4 Apr 2023 08:00	2.7	E
3 Apr 2023 09:00	2.7	NEN	4 Apr 2023 09:00	2.6	NEE
3 Apr 2023 10:00	2.7	NEN	4 Apr 2023 10:00	2.7	E
3 Apr 2023 11:00	2.7	N	4 Apr 2023 11:00	2.7	NEN
3 Apr 2023 12:00	2.7	NEE	4 Apr 2023 12:00	2.6	NE
3 Apr 2023 13:00	2.7	NEN	4 Apr 2023 13:00	2.8	SE
3 Apr 2023 14:00	2.7	NE	4 Apr 2023 14:00	2.7	NEN
3 Apr 2023 15:00	2.7	NEN	4 Apr 2023 15:00	2.7	NE
3 Apr 2023 16:00	2.7	NEE	4 Apr 2023 16:00	2.7	NE
3 Apr 2023 17:00	2.7	NEN	4 Apr 2023 17:00	2.7	NE
3 Apr 2023 18:00	2.7	NE	4 Apr 2023 18:00	2.7	E
3 Apr 2023 19:00	2.7	NEN	4 Apr 2023 19:00	2.8	NEE
3 Apr 2023 20:00	2.7	NEN	4 Apr 2023 20:00	2.8	E
3 Apr 2023 21:00	2.8	N	4 Apr 2023 21:00	2.8	SE
3 Apr 2023 22:00	2.8	N	4 Apr 2023 22:00	2.8	NEN
3 Apr 2023 23:00	2.8	S	4 Apr 2023 23:00	2.8	NEN

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
5 Apr 2023 00:00	2.8	NEE	6 Apr 2023 00:00	2.8	SES
5 Apr 2023 01:00	2.8	NEE	6 Apr 2023 01:00	2.8	NEN
5 Apr 2023 02:00	2.8	SEE	6 Apr 2023 02:00	2.8	E
5 Apr 2023 03:00	2.8	SES	6 Apr 2023 03:00	2.7	NEN
5 Apr 2023 04:00	2.8	SEE	6 Apr 2023 04:00	2.7	NE
5 Apr 2023 05:00	2.8	S	6 Apr 2023 05:00	2.8	NE
5 Apr 2023 06:00	2.8	E	6 Apr 2023 06:00	2.7	SEE
5 Apr 2023 07:00	2.7	SEE	6 Apr 2023 07:00	2.7	E
5 Apr 2023 08:00	2.7	NEE	6 Apr 2023 08:00	2.7	N
5 Apr 2023 09:00	2.7	SEE	6 Apr 2023 09:00	2.7	NEN
5 Apr 2023 10:00	2.7	NEE	6 Apr 2023 10:00	2.7	NEN
5 Apr 2023 11:00	2.6	NE	6 Apr 2023 11:00	2.7	NEN
5 Apr 2023 12:00	2.7	NE	6 Apr 2023 12:00	2.7	N
5 Apr 2023 13:00	2.7	NEN	6 Apr 2023 13:00	2.7	NEN
5 Apr 2023 14:00	2.7	NEN	6 Apr 2023 14:00	2.7	NEN
5 Apr 2023 15:00	2.7	NEN	6 Apr 2023 15:00	2.7	NEN
5 Apr 2023 16:00	2.7	NEN	6 Apr 2023 16:00	2.7	N
5 Apr 2023 17:00	2.7	NEN	6 Apr 2023 17:00	2.7	NEN
5 Apr 2023 18:00	2.7	SEE	6 Apr 2023 18:00	2.8	N
5 Apr 2023 19:00	2.8	NEN	6 Apr 2023 19:00	2.7	SE
5 Apr 2023 20:00	2.7	NEN	6 Apr 2023 20:00	2.8	NEN
5 Apr 2023 21:00	2.8	SEE	6 Apr 2023 21:00	2.8	NEE
5 Apr 2023 22:00	2.8	SWS	6 Apr 2023 22:00	2.8	SW
5 Apr 2023 23:00	2.8	E	6 Apr 2023 23:00	2.8	E

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
7 Apr 2023 00:00	2.8	SE	8 Apr 2023 00:00	2.7	NEN
7 Apr 2023 01:00	2.7	SES	8 Apr 2023 01:00	2.7	NE
7 Apr 2023 02:00	2.8	SEE	8 Apr 2023 02:00	2.8	NE
7 Apr 2023 03:00	2.8	SE	8 Apr 2023 03:00	2.7	S
7 Apr 2023 04:00	2.8	SW	8 Apr 2023 04:00	2.8	SWS
7 Apr 2023 05:00	2.8	SEE	8 Apr 2023 05:00	2.8	NE
7 Apr 2023 06:00	2.8	SWS	8 Apr 2023 06:00	2.7	NEE
7 Apr 2023 07:00	2.7	S	8 Apr 2023 07:00	2.6	NE
7 Apr 2023 08:00	2.7	SES	8 Apr 2023 08:00	2.7	NEE
7 Apr 2023 09:00	2.7	NE	8 Apr 2023 09:00	2.7	SE
7 Apr 2023 10:00	2.7	NEN	8 Apr 2023 10:00	2.7	E
7 Apr 2023 11:00	2.7	SE	8 Apr 2023 11:00	2.7	SEE
7 Apr 2023 12:00	2.7	SES	8 Apr 2023 12:00	2.7	NEN
7 Apr 2023 13:00	2.7	NEE	8 Apr 2023 13:00	2.7	N
7 Apr 2023 14:00	2.7	N	8 Apr 2023 14:00	2.7	N
7 Apr 2023 15:00	2.7	SEE	8 Apr 2023 15:00	2.7	NE
7 Apr 2023 16:00	2.7	NE	8 Apr 2023 16:00	2.7	E
7 Apr 2023 17:00	2.7	SEE	8 Apr 2023 17:00	2.7	SEE
7 Apr 2023 18:00	2.7	NE	8 Apr 2023 18:00	2.7	E
7 Apr 2023 19:00	2.7	NE	8 Apr 2023 19:00	2.7	E
7 Apr 2023 20:00	2.7	N	8 Apr 2023 20:00	2.8	NE
7 Apr 2023 21:00	2.7	NE	8 Apr 2023 21:00	2.8	SES
7 Apr 2023 22:00	2.7	N	8 Apr 2023 22:00	2.8	NEE
7 Apr 2023 23:00	2.7	E	8 Apr 2023 23:00	2.8	E

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
9 Apr 2023 00:00	2.8	SEE	10 Apr 2023 00:00	2.8	SEE
9 Apr 2023 01:00	2.8	E	10 Apr 2023 01:00	2.8	SWS
9 Apr 2023 02:00	2.8	NEN	10 Apr 2023 02:00	2.8	NEN
9 Apr 2023 03:00	2.8	NEE	10 Apr 2023 03:00	2.8	SE
9 Apr 2023 04:00	2.8	NEN	10 Apr 2023 04:00	2.8	SEE
9 Apr 2023 05:00	2.7	N	10 Apr 2023 05:00	2.8	NE
9 Apr 2023 06:00	2.8	SES	10 Apr 2023 06:00	2.7	SEE
9 Apr 2023 07:00	2.8	N	10 Apr 2023 07:00	2.7	SES
9 Apr 2023 08:00	2.8	N	10 Apr 2023 08:00	2.7	S
9 Apr 2023 09:00	2.7	NEE	10 Apr 2023 09:00	2.7	SES
9 Apr 2023 10:00	2.7	NEE	10 Apr 2023 10:00	2.7	E
9 Apr 2023 11:00	2.7	NEN	10 Apr 2023 11:00	2.7	NEN
9 Apr 2023 12:00	2.7	NEN	10 Apr 2023 12:00	2.7	NE
9 Apr 2023 13:00	2.7	N	10 Apr 2023 13:00	2.7	NEN
9 Apr 2023 14:00	2.7	N	10 Apr 2023 14:00	2.7	NEN
9 Apr 2023 15:00	2.7	SE	10 Apr 2023 15:00	2.7	NEE
9 Apr 2023 16:00	2.7	NEE	10 Apr 2023 16:00	2.7	N
9 Apr 2023 17:00	2.8	SEE	10 Apr 2023 17:00	2.7	SWW
9 Apr 2023 18:00	2.7	NEN	10 Apr 2023 18:00	2.7	SE
9 Apr 2023 19:00	2.7	S	10 Apr 2023 19:00	2.7	SEE
9 Apr 2023 20:00	2.8	NE	10 Apr 2023 20:00	2.7	NE
9 Apr 2023 21:00	2.8	NEE	10 Apr 2023 21:00	2.7	NE
9 Apr 2023 22:00	2.8	E	10 Apr 2023 22:00	2.7	NEN
9 Apr 2023 23:00	2.8	E	10 Apr 2023 23:00	2.7	NEE

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
11 Apr 2023 00:00	2.7	E	12 Apr 2023 00:00	2.7	SE
11 Apr 2023 01:00	2.7	N	12 Apr 2023 01:00	2.7	SES
11 Apr 2023 02:00	2.8	SWS	12 Apr 2023 02:00	2.7	SWS
11 Apr 2023 03:00	2.7	NE	12 Apr 2023 03:00	2.7	NE
11 Apr 2023 04:00	2.7	N	12 Apr 2023 04:00	2.7	SEE
11 Apr 2023 05:00	2.7	NEN	12 Apr 2023 05:00	2.7	NE
11 Apr 2023 06:00	2.7	NE	12 Apr 2023 06:00	2.7	NE
11 Apr 2023 07:00	2.7	SEE	12 Apr 2023 07:00	2.7	SES
11 Apr 2023 08:00	2.7	NEN	12 Apr 2023 08:00	2.7	SES
11 Apr 2023 09:00	2.7	NEN	12 Apr 2023 09:00	2.6	S
11 Apr 2023 10:00	2.7	N	12 Apr 2023 10:00	2.7	SEE
11 Apr 2023 11:00	2.7	S	12 Apr 2023 11:00	2.7	W
11 Apr 2023 12:00	2.6	NEN	12 Apr 2023 12:00	2.7	NEN
11 Apr 2023 13:00	2.7	N	12 Apr 2023 13:00	2.7	NEE
11 Apr 2023 14:00	2.6	NEN	12 Apr 2023 14:00	2.7	N
11 Apr 2023 15:00	2.7	NEE	12 Apr 2023 15:00	2.6	NEN
11 Apr 2023 16:00	2.7	NE	12 Apr 2023 16:00	2.7	NEN
11 Apr 2023 17:00	2.7	SE	12 Apr 2023 17:00	2.7	NEN
11 Apr 2023 18:00	2.7	SE	12 Apr 2023 18:00	2.7	NEN
11 Apr 2023 19:00	2.7	S	12 Apr 2023 19:00	2.7	NEN
11 Apr 2023 20:00	2.7	N	12 Apr 2023 20:00	2.7	NEN
11 Apr 2023 21:00	2.7	N	12 Apr 2023 21:00	2.8	N
11 Apr 2023 22:00	2.7	SWS	12 Apr 2023 22:00	2.7	SE
11 Apr 2023 23:00	2.7	SEE	12 Apr 2023 23:00	2.8	NEE

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
13 Apr 2023 00:00	2.8	NEN	14 Apr 2023 00:00	2.8	NEN
13 Apr 2023 01:00	2.8	NE	14 Apr 2023 01:00	2.8	SES
13 Apr 2023 02:00	2.8	NE	14 Apr 2023 02:00	2.8	SEE
13 Apr 2023 03:00	2.9	E	14 Apr 2023 03:00	2.7	SEE
13 Apr 2023 04:00	2.8	NEE	14 Apr 2023 04:00	2.8	NE
13 Apr 2023 05:00	2.8	NEE	14 Apr 2023 05:00	2.7	SE
13 Apr 2023 06:00	2.9	E	14 Apr 2023 06:00	2.7	SES
13 Apr 2023 07:00	2.8	SWW	14 Apr 2023 07:00	2.7	NEN
13 Apr 2023 08:00	2.8	SWS	14 Apr 2023 08:00	2.7	N
13 Apr 2023 09:00	2.7	NE	14 Apr 2023 09:00	2.7	NEE
13 Apr 2023 10:00	2.9	NEE	14 Apr 2023 10:00	2.7	SE
13 Apr 2023 11:00	2.8	NEN	14 Apr 2023 11:00	2.7	NE
13 Apr 2023 12:00	2.7	N	14 Apr 2023 12:00	2.8	SEE
13 Apr 2023 13:00	2.8	NEE	14 Apr 2023 13:00	2.6	SES
13 Apr 2023 14:00	2.7	NE	14 Apr 2023 14:00	2.6	NWW
13 Apr 2023 15:00	2.7	N	14 Apr 2023 15:00	2.7	NWW
13 Apr 2023 16:00	2.8	NEN	14 Apr 2023 16:00	2.7	SWS
13 Apr 2023 17:00	2.7	NEE	14 Apr 2023 17:00	2.7	NEN
13 Apr 2023 18:00	2.7	NEN	14 Apr 2023 18:00	2.7	N
13 Apr 2023 19:00	2.7	N	14 Apr 2023 19:00	2.7	SW
13 Apr 2023 20:00	2.7	NEE	14 Apr 2023 20:00	2.8	SEE
13 Apr 2023 21:00	2.8	NEN	14 Apr 2023 21:00	2.7	SEE
13 Apr 2023 22:00	2.8	NEN	14 Apr 2023 22:00	2.8	SEE
13 Apr 2023 23:00	2.8	SE	14 Apr 2023 23:00	2.8	NEE

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
15 Apr 2023 00:00	2.7	NEN	16 Apr 2023 00:00	3.4	NEN
15 Apr 2023 01:00	2.8	NEN	16 Apr 2023 01:00	3.2	NEE
15 Apr 2023 02:00	2.8	SE	16 Apr 2023 02:00	3.6	SES
15 Apr 2023 03:00	2.7	NEN	16 Apr 2023 03:00	3.9	E
15 Apr 2023 04:00	2.8	NE	16 Apr 2023 04:00	3.7	NE
15 Apr 2023 05:00	2.7	NEN	16 Apr 2023 05:00	2.9	SEE
15 Apr 2023 06:00	2.8	NEE	16 Apr 2023 06:00	2.8	N
15 Apr 2023 07:00	3.3	NEN	16 Apr 2023 07:00	2.7	N
15 Apr 2023 08:00	3.1	NEE	16 Apr 2023 08:00	2.8	N
15 Apr 2023 09:00	4.5	N	16 Apr 2023 09:00	2.8	NEN
15 Apr 2023 10:00	3.8	SES	16 Apr 2023 10:00	2.7	NEN
15 Apr 2023 11:00	3.1	NEN	16 Apr 2023 11:00	2.7	NEN
15 Apr 2023 12:00	3.6	SEE	16 Apr 2023 12:00	2.8	NEN
15 Apr 2023 13:00	2.7	NEN	16 Apr 2023 13:00	2.7	NEN
15 Apr 2023 14:00	2.8	SE	16 Apr 2023 14:00	2.7	SE
15 Apr 2023 15:00	2.8	SWS	16 Apr 2023 15:00	2.7	NEE
15 Apr 2023 16:00	3.1	SE	16 Apr 2023 16:00	2.7	NE
15 Apr 2023 17:00	2.8	SEE	16 Apr 2023 17:00	2.7	NEN
15 Apr 2023 18:00	2.9	NE	16 Apr 2023 18:00	2.8	S
15 Apr 2023 19:00	3.3	NE	16 Apr 2023 19:00	2.8	NEE
15 Apr 2023 20:00	3.2	NEN	16 Apr 2023 20:00	2.9	N
15 Apr 2023 21:00	3.4	SES	16 Apr 2023 21:00	2.8	N
15 Apr 2023 22:00	3.2	NEN	16 Apr 2023 22:00	2.9	NEN
15 Apr 2023 23:00	3.2	E	16 Apr 2023 23:00	2.9	SEE

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
17 Apr 2023 00:00	3.4	SWS	18 Apr 2023 00:00	3.1	E
17 Apr 2023 01:00	3.8	NE	18 Apr 2023 01:00	2.8	E
17 Apr 2023 02:00	3.2	NEN	18 Apr 2023 02:00	2.9	E
17 Apr 2023 03:00	2.9	E	18 Apr 2023 03:00	2.7	S
17 Apr 2023 04:00	3.4	NE	18 Apr 2023 04:00	3.2	SEE
17 Apr 2023 05:00	3.4	NE	18 Apr 2023 05:00	3.1	SES
17 Apr 2023 06:00	2.9	N	18 Apr 2023 06:00	4.1	NE
17 Apr 2023 07:00	2.8	SEE	18 Apr 2023 07:00	3.9	E
17 Apr 2023 08:00	3.0	N	18 Apr 2023 08:00	3.4	SE
17 Apr 2023 09:00	3.0	N	18 Apr 2023 09:00	2.8	N
17 Apr 2023 10:00	2.9	N	18 Apr 2023 10:00	3.1	NEN
17 Apr 2023 11:00	2.9	NEN	18 Apr 2023 11:00	3.0	NEE
17 Apr 2023 12:00	2.9	NEN	18 Apr 2023 12:00	2.8	SW
17 Apr 2023 13:00	2.8	NEN	18 Apr 2023 13:00	2.9	SE
17 Apr 2023 14:00	2.8	N	18 Apr 2023 14:00	2.9	NE
17 Apr 2023 15:00	2.8	N	18 Apr 2023 15:00	2.8	SEE
17 Apr 2023 16:00	2.8	NEN	18 Apr 2023 16:00	2.7	NE
17 Apr 2023 17:00	2.8	NEN	18 Apr 2023 17:00	2.8	SE
17 Apr 2023 18:00	2.8	NEN	18 Apr 2023 18:00	2.8	SE
17 Apr 2023 19:00	2.9	NEN	18 Apr 2023 19:00	2.7	NEN
17 Apr 2023 20:00	2.9	NE	18 Apr 2023 20:00	2.8	NEE
17 Apr 2023 21:00	2.8	E	18 Apr 2023 21:00	2.8	S
17 Apr 2023 22:00	2.8	NEN	18 Apr 2023 22:00	2.8	NEE
17 Apr 2023 23:00	2.8	NEN	18 Apr 2023 23:00	2.7	E

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
19 Apr 2023 00:00	2.7	NE	20 Apr 2023 00:00	2.8	SE
19 Apr 2023 01:00	2.9	N	20 Apr 2023 01:00	2.7	SE
19 Apr 2023 02:00	2.7	NE	20 Apr 2023 02:00	2.7	NEN
19 Apr 2023 03:00	4.0	NEN	20 Apr 2023 03:00	2.7	SEE
19 Apr 2023 04:00	4.1	SEE	20 Apr 2023 04:00	2.7	E
19 Apr 2023 05:00	3.9	NEN	20 Apr 2023 05:00	2.7	SE
19 Apr 2023 06:00	3.8	NEN	20 Apr 2023 06:00	2.7	NEE
19 Apr 2023 07:00	3.8	NEE	20 Apr 2023 07:00	2.7	E
19 Apr 2023 08:00	3.9	NE	20 Apr 2023 08:00	2.7	SES
19 Apr 2023 09:00	3.8	NEN	20 Apr 2023 09:00	2.7	NEN
19 Apr 2023 10:00	3.9	SES	20 Apr 2023 10:00	2.7	NEE
19 Apr 2023 11:00	3.1	NEN	20 Apr 2023 11:00	2.7	NEN
19 Apr 2023 12:00	3.0	NE	20 Apr 2023 12:00	2.7	E
19 Apr 2023 13:00	2.9	N	20 Apr 2023 13:00	2.7	NE
19 Apr 2023 14:00	4.1	E	20 Apr 2023 14:00	2.7	N
19 Apr 2023 15:00	3.1	E	20 Apr 2023 15:00	2.7	N
19 Apr 2023 16:00	3.5	SES	20 Apr 2023 16:00	2.7	NEN
19 Apr 2023 17:00	2.9	NEE	20 Apr 2023 17:00	2.7	NEN
19 Apr 2023 18:00	3.8	E	20 Apr 2023 18:00	2.7	NE
19 Apr 2023 19:00	2.6	NE	20 Apr 2023 19:00	2.7	N
19 Apr 2023 20:00	2.7	N	20 Apr 2023 20:00	2.7	NEN
19 Apr 2023 21:00	2.7	N	20 Apr 2023 21:00	2.7	N
19 Apr 2023 22:00	2.7	NEN	20 Apr 2023 22:00	2.7	NEN
19 Apr 2023 23:00	2.7	SE	20 Apr 2023 23:00	2.7	NEN

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
21 Apr 2023 00:00	2.7	NEN	22 Apr 2023 00:00	2.7	NEN
21 Apr 2023 01:00	2.7	NEN	22 Apr 2023 01:00	2.7	NEN
21 Apr 2023 02:00	2.8	NEN	22 Apr 2023 02:00	2.7	N
21 Apr 2023 03:00	2.7	N	22 Apr 2023 03:00	2.7	NEN
21 Apr 2023 04:00	2.7	N	22 Apr 2023 04:00	2.7	E
21 Apr 2023 05:00	2.7	N	22 Apr 2023 05:00	2.7	NE
21 Apr 2023 06:00	2.7	NEN	22 Apr 2023 06:00	2.7	SEE
21 Apr 2023 07:00	2.7	N	22 Apr 2023 07:00	2.7	NEE
21 Apr 2023 08:00	2.7	N	22 Apr 2023 08:00	2.7	SE
21 Apr 2023 09:00	2.7	NEN	22 Apr 2023 09:00	2.7	NEN
21 Apr 2023 10:00	2.7	NEN	22 Apr 2023 10:00	2.7	E
21 Apr 2023 11:00	2.7	NEE	22 Apr 2023 11:00	2.7	NEE
21 Apr 2023 12:00	2.6	SEE	22 Apr 2023 12:00	2.7	NEN
21 Apr 2023 13:00	2.7	E	22 Apr 2023 13:00	2.7	NEN
21 Apr 2023 14:00	2.7	NEE	22 Apr 2023 14:00	2.7	NE
21 Apr 2023 15:00	2.6	NEN	22 Apr 2023 15:00	2.7	NEN
21 Apr 2023 16:00	2.7	NEE	22 Apr 2023 16:00	2.7	E
21 Apr 2023 17:00	2.7	NEE	22 Apr 2023 17:00	2.7	SEE
21 Apr 2023 18:00	2.7	NE	22 Apr 2023 18:00	2.7	N
21 Apr 2023 19:00	2.7	NEE	22 Apr 2023 19:00	2.8	NEN
21 Apr 2023 20:00	2.7	SE	22 Apr 2023 20:00	2.7	N
21 Apr 2023 21:00	2.7	NEN	22 Apr 2023 21:00	2.7	NE
21 Apr 2023 22:00	2.7	E	22 Apr 2023 22:00	2.7	NE
21 Apr 2023 23:00	2.7	NE	22 Apr 2023 23:00	2.7	NEN

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
23 Apr 2023 00:00	2.7	NE	24 Apr 2023 00:00	2.8	NE
23 Apr 2023 01:00	2.7	N	24 Apr 2023 01:00	2.7	NEN
23 Apr 2023 02:00	2.7	NEN	24 Apr 2023 02:00	2.7	N
23 Apr 2023 03:00	2.8	N	24 Apr 2023 03:00	2.7	N
23 Apr 2023 04:00	2.7	N	24 Apr 2023 04:00	2.7	NEN
23 Apr 2023 05:00	2.8	NEN	24 Apr 2023 05:00	2.7	NEN
23 Apr 2023 06:00	2.7	N	24 Apr 2023 06:00	2.7	N
23 Apr 2023 07:00	2.7	NEN	24 Apr 2023 07:00	2.8	NEN
23 Apr 2023 08:00	2.7	E	24 Apr 2023 08:00	2.7	NEN
23 Apr 2023 09:00	2.7	SEE	24 Apr 2023 09:00	2.7	N
23 Apr 2023 10:00	2.7	SEE	24 Apr 2023 10:00	2.7	NEN
23 Apr 2023 11:00	2.7	NE	24 Apr 2023 11:00	2.7	NEE
23 Apr 2023 12:00	2.7	SES	24 Apr 2023 12:00	2.6	NE
23 Apr 2023 13:00	2.7	NEN	24 Apr 2023 13:00	2.6	N
23 Apr 2023 14:00	2.6	E	24 Apr 2023 14:00	2.7	N
23 Apr 2023 15:00	2.7	N	24 Apr 2023 15:00	2.7	NE
23 Apr 2023 16:00	2.7	N	24 Apr 2023 16:00	2.7	NE
23 Apr 2023 17:00	2.7	N	24 Apr 2023 17:00	2.7	NEN
23 Apr 2023 18:00	2.7	NEN	24 Apr 2023 18:00	2.7	N
23 Apr 2023 19:00	2.7	N	24 Apr 2023 19:00	2.7	NEN
23 Apr 2023 20:00	2.8	E	24 Apr 2023 20:00	2.7	E
23 Apr 2023 21:00	2.8	NEE	24 Apr 2023 21:00	2.7	NEE
23 Apr 2023 22:00	2.8	NE	24 Apr 2023 22:00	2.8	NE
23 Apr 2023 23:00	2.8	S	24 Apr 2023 23:00	2.9	NEN

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
25 Apr 2023 00:00	2.9	N	26 Apr 2023 00:00	2.7	NEN
25 Apr 2023 01:00	2.9	NEE	26 Apr 2023 01:00	2.9	SES
25 Apr 2023 02:00	2.8	NEE	26 Apr 2023 02:00	2.8	N
25 Apr 2023 03:00	2.7	NEN	26 Apr 2023 03:00	2.9	NEE
25 Apr 2023 04:00	2.7	N	26 Apr 2023 04:00	2.8	NEN
25 Apr 2023 05:00	2.8	SES	26 Apr 2023 05:00	2.9	N
25 Apr 2023 06:00	2.8	SE	26 Apr 2023 06:00	2.9	SWS
25 Apr 2023 07:00	2.7	NEN	26 Apr 2023 07:00	2.8	SWS
25 Apr 2023 08:00	2.7	N	26 Apr 2023 08:00	2.7	E
25 Apr 2023 09:00	2.7	NEE	26 Apr 2023 09:00	2.8	E
25 Apr 2023 10:00	2.7	SES	26 Apr 2023 10:00	2.7	NEN
25 Apr 2023 11:00	2.7	E	26 Apr 2023 11:00	2.8	NEN
25 Apr 2023 12:00	2.7	NEE	26 Apr 2023 12:00	2.8	NE
25 Apr 2023 13:00	2.7	NEE	26 Apr 2023 13:00	2.6	NEN
25 Apr 2023 14:00	2.7	E	26 Apr 2023 14:00	2.8	NEN
25 Apr 2023 15:00	2.7	NEN	26 Apr 2023 15:00	2.7	N
25 Apr 2023 16:00	2.7	SEE	26 Apr 2023 16:00	2.7	SEE
25 Apr 2023 17:00	2.7	NEE	26 Apr 2023 17:00	2.7	NE
25 Apr 2023 18:00	2.7	NEE	26 Apr 2023 18:00	2.7	NEE
25 Apr 2023 19:00	2.7	E	26 Apr 2023 19:00	2.7	NEN
25 Apr 2023 20:00	2.7	NEN	26 Apr 2023 20:00	2.8	NE
25 Apr 2023 21:00	2.7	SEE	26 Apr 2023 21:00	2.7	NEN
25 Apr 2023 22:00	2.7	E	26 Apr 2023 22:00	2.7	SEE
25 Apr 2023 23:00	2.7	SE	26 Apr 2023 23:00	2.7	NEN

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
27 Apr 2023 00:00	2.7	SEE	28 Apr 2023 00:00	2.7	NEE
27 Apr 2023 01:00	2.7	NEE	28 Apr 2023 01:00	2.8	NEE
27 Apr 2023 02:00	2.7	SWS	28 Apr 2023 02:00	2.8	NE
27 Apr 2023 03:00	2.7	NEN	28 Apr 2023 03:00	2.7	NEN
27 Apr 2023 04:00	2.8	NEE	28 Apr 2023 04:00	2.8	NEE
27 Apr 2023 05:00	2.8	E	28 Apr 2023 05:00	2.8	N
27 Apr 2023 06:00	2.8	S	28 Apr 2023 06:00	2.9	NEN
27 Apr 2023 07:00	2.8	NEN	28 Apr 2023 07:00	3.2	NEN
27 Apr 2023 08:00	2.8	SE	28 Apr 2023 08:00	3.1	E
27 Apr 2023 09:00	2.7	E	28 Apr 2023 09:00	3.2	NEN
27 Apr 2023 10:00	2.6	NE	28 Apr 2023 10:00	3.4	SES
27 Apr 2023 11:00	2.7	N	28 Apr 2023 11:00	2.9	NEE
27 Apr 2023 12:00	2.7	NEE	28 Apr 2023 12:00	3.6	NEE
27 Apr 2023 13:00	2.6	NEN	28 Apr 2023 13:00	2.8	E
27 Apr 2023 14:00	2.6	NEN	28 Apr 2023 14:00	2.8	SE
27 Apr 2023 15:00	2.6	NEN	28 Apr 2023 15:00	2.9	S
27 Apr 2023 16:00	2.7	NEE	28 Apr 2023 16:00	3.0	SE
27 Apr 2023 17:00	2.7	NE	28 Apr 2023 17:00	2.8	SEE
27 Apr 2023 18:00	2.7	NE	28 Apr 2023 18:00	2.8	E
27 Apr 2023 19:00	2.7	NEN	28 Apr 2023 19:00	2.8	SES
27 Apr 2023 20:00	2.7	NEE	28 Apr 2023 20:00	2.8	SEE
27 Apr 2023 21:00	2.7	SWS	28 Apr 2023 21:00	2.8	NEE
27 Apr 2023 22:00	2.8	NEE	28 Apr 2023 22:00	2.8	SEE
27 Apr 2023 23:00	2.8	E	28 Apr 2023 23:00	3.0	SES

Wind Data (April 2023)

Date & Time	Wind Speed (m/s)	Wind Direction	Date & Time	Wind Speed (m/s)	Wind Direction
29 Apr 2023 00:00	3.4	N	30 Apr 2023 00:00	3.1	N
29 Apr 2023 01:00	3.7	SEE	30 Apr 2023 01:00	2.8	NEN
29 Apr 2023 02:00	3.9	S	30 Apr 2023 02:00	3.4	NE
29 Apr 2023 03:00	3.6	SES	30 Apr 2023 03:00	2.7	E
29 Apr 2023 04:00	2.8	NEN	30 Apr 2023 04:00	2.7	SEE
29 Apr 2023 05:00	3.5	NEE	30 Apr 2023 05:00	3.2	S
29 Apr 2023 06:00	3.0	N	30 Apr 2023 06:00	3.4	SE
29 Apr 2023 07:00	2.8	E	30 Apr 2023 07:00	4.0	NEN
29 Apr 2023 08:00	3.0	N	30 Apr 2023 08:00	4.1	E
29 Apr 2023 09:00	3.0	N	30 Apr 2023 09:00	3.8	N
29 Apr 2023 10:00	2.9	N	30 Apr 2023 10:00	2.7	E
29 Apr 2023 11:00	2.9	NEN	30 Apr 2023 11:00	2.8	N
29 Apr 2023 12:00	2.9	NEN	30 Apr 2023 12:00	2.8	NEN
29 Apr 2023 13:00	2.8	NEN	30 Apr 2023 13:00	2.8	N
29 Apr 2023 14:00	2.8	N	30 Apr 2023 14:00	2.7	N
29 Apr 2023 15:00	2.8	NEN	30 Apr 2023 15:00	2.7	N
29 Apr 2023 16:00	2.8	NEN	30 Apr 2023 16:00	2.7	NEN
29 Apr 2023 17:00	2.8	NEN	30 Apr 2023 17:00	2.7	NEN
29 Apr 2023 18:00	2.8	NEN	30 Apr 2023 18:00	2.8	N
29 Apr 2023 19:00	2.9	NEN	30 Apr 2023 19:00	2.7	NEN
29 Apr 2023 20:00	2.8	N	30 Apr 2023 20:00	2.8	NEN
29 Apr 2023 21:00	2.9	E	30 Apr 2023 21:00	2.8	N
29 Apr 2023 22:00	2.8	NEN	30 Apr 2023 22:00	2.8	N
29 Apr 2023 23:00	2.8	NE	30 Apr 2023 23:00	2.7	N

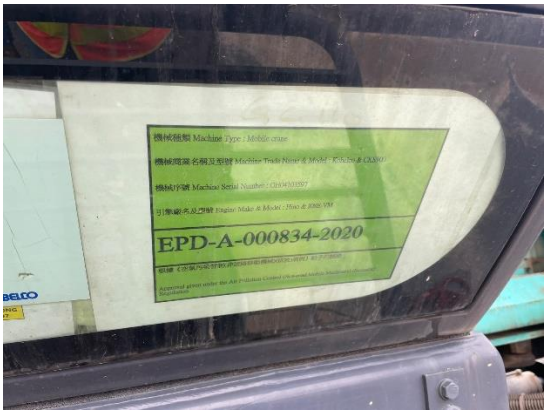
Appendix K

Summary of ET's Site Environmental Audit in the Reporting Month

Summary of ET's Site Environmental Audit in the Reporting Month

Parameters	Date	Observations and Recommendations	Follow-up
Air Quality	24th April 2023	The NRMM Label of the crawler crane should be replaced	24th April 2023
Noise	NA		
Water Quality	NA		
Chemical and Waste Management	NA		
Landscape and Visual Impact	NA		
Permit / Licenses	NA		
Others	NA		

Date of Inspection: 24 April 2023

Defect Photo	Rectified Photo
	
Observation 1: The NRMM label of the crawler crane should be replaced.	The NRMM label of the crawler crane had been replaced.

Appendix L

Waste Flow Table

Waste Flow Table (April 2023)

Monthly Ending	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated		Actual Quantities of Recyclables Generation			
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Chemical Waste	General Refuse	Felled Trees	Metals	Paper / Cardboard Packaging	Plastics
	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)
2023 Jan	0.238	0.000	0.000	0.000	0.238	0.000	0.000	3.070	0.000	0.000	0.000	0.000
2023 Feb	1.358	0.000	0.000	0.000	1.358	0.000	0.000	10.520	0.000	0.000	0.000	0.000
2023 Mar	1.565	0.000	0.000	0.000	1.565	0.000	0.000	16.230	0.000	0.000	0.000	0.000
2023 Apr	0.337	0.000	0.000	0.000	0.337	0.000	0.000	5.240	0.000	0.000	0.000	0.000
2023 May												
2023 Jun												
2023 Jul												
2023 Aug												
2023 Sep												
2023 Oct												
2023 Nov												
2023 Dec												
Total	3.498	0.000	0.000	0.000	3.498	0.000	0.000	35.060	0.000	0.000	0.000	0.000

Note:
1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.

Appendix M

Cumulative Statistics on Environmental Complaints, Notifications of Summons and Successful Prosecutions

Environmental Complaints Log

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Outcome	Date of Reply

Cumulative Statistics on Complaints

Environmental Aspects	Cumulative No. Brought Forward	No. of Complaints This Month	Cumulative Project-to-Date
Air	0	0	0
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	0

Cumulative Statistics on Notification of Summons and Successful Prosecutions

Environmental Aspects	Cumulative No. Brought Forward	No. of Notification of Summons and Prosecutions This Month	Cumulative Project-to-Date
Air	0	0	0
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	0

Appendix N

Implementation Status of Environmental Mitigation Measures (Construction Phase)

Implementation Status of Environmental Mitigation Measures (Construction Phase)

EIA Ref. (No.)	Environmental Protection Measures (Construction Phase) [1] A) Air Quality	Location & (Implementation Agent)	Implementation Status
3.7.1.1 (A1)	Sufficient dust suppression measures as stipulated under the *Air Pollution Control (Construction Dust) Regulation* (Cap. 311R), as well as good site practices and good housekeeping of the site should be properly implemented in order to minimise the construction dust generated. These measures include the followings::	All construction sites / construction phase / upon completion of all construction activities (Contractor)	
	a) Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather;		Implemented
	b) Use of frequent watering for particularly dusty construction areas and areas close to ASRs;		Implemented
	c) Use of frequent watering or water sprinklers for major haul roads, material stockpiling areas and other dusty activities within the construction site;		Implemented
	d) 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 should be applied to aggregate fines;		Implemented
	e) Provide hoarding of not less than 2.4 m high from ground level along the site boundary except for site entrance or exit;		Implemented
	f) Open temporary stockpiles should be avoided or covered. Prevent placing dusty material storage piles near ASRs;		N/A
	g) Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations;		Implemented
	h) Establishment and use of vehicle wheel and body washing facilities at the exit points of the site;		Implemented
	i) Imposition of speed controls for vehicles on unpaved site roads, 8 km/hr is the recommended limit;		Implemented
	j) Routing of vehicles and position of construction plant should be at the maximum possible distance from ASRs;		Implemented
	k) Avoid position of material stockpiling areas, major haul roads and dusty works within the construction site close to concerned ASRs; and		Implemented
	l) Avoid unnecessary exposed earth.		Implemented
3.7.1.2 (A2)	Guidelines stipulated in EPD's *Recommended Pollution Control Clauses for Construction Contracts* should be incorporated in the contract documents to abate dust impacts. The clauses include:	All construction sites / construction phase / upon completion of all construction activities (Contractor)	
	a) The contractor shall observe and comply with the *Air Pollution Control Ordinance* and its subsidiary regulations, particularly the *Air Pollution Control (Construction Dust) Regulation.*		Implemented
	b) The contractor shall undertake at all times to prevent dust nuisance as a result of the construction activities.		Implemented
	c) The contractor shall ensure that there will be adequate water supply / storage for dust suppression.		Implemented
	d) The contractor shall devise, arrange methods of working and carrying out the works in such a manner so as to minimise dust impacts on the surrounding environment, and shall provide experienced personnel with suitable training to ensure that these methods are implemented.		Implemented
	e) Before the commencement of any work, the contractor may require to submit the methods of working, plant, equipment and air pollution control system to be used on the site for the engineer inspection and approval.		Implemented
3.4.1.4 (A3)	Control on fuel combustion from the use of PMEs	All construction sites / construction phase / upon completion of all construction activities (Contractor)	
	a) Legal control on the types of fuel allowed for use and their sulphur contents in commercial and industrial processes should be observed.		Implemented
	b) Only approved or exempted non-road mobile machinery should be allowed to be used in construction sites.		Partially Implemented
	c) All construction plants are required to use ultra-low-sulphur diesel (ULSD) (defined as diesel fuel containing not more than 0.005% sulphur by weight).		Implemented

Note:

(1) Detailed EIA report and EM&A Manual reference refer to the Appendix B of approved EM&A Manual.

N/A: Not Available, N/O: Not Observed.

Implementation Status of Environmental Mitigation Measures (Construction Phase)

EIA Ref. (No.)	Environmental Protection Measures (Construction Phase) [1] B) Noise	Location & (Implementation Agent)	Implementation Status
4.8.1.2 (B1)	Good Site Practice The site practices listed below should be followed during construction works:	All construction sites / construction phase / upon completion of all construction activities (Contractor)	
	a) Only well-maintained PME to be operated on site and should be serviced regularly during construction;		Implemented
	b) Silencers or mufflers on construction equipment should be utilised (if appropriate) and should be properly maintained during the construction;		N/A
	c) Mobile plant, if any, should be sited as far away from NSRs as possible;		Implemented
	d) Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;		Implemented
	e) Plant known to emit noise strongly in one direction should, wherever possible, be orientated to direct noise away from the nearby NSRs; and		Implemented
	f) Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities		Implemented
4.8.1.3 – 4.8.1.4 & Table 7 (B2)	Use of Quiet PME	All construction sites / construction phase / upon completion of all construction activities (Contractor)	Implemented
	The Contractors may adopt alternative quiet PME as long as it can be demonstrated that they would not result in construction noise impacts worse than those predicted in this EIA Report. Use of quiet plant should be made reference to the Powered Mechanical Equipment (PME) listed in the Technical Memorandum or the Quality Powered Mechanical Equipment (QPME) / other commonly used PME listed in Environmental Protection Department (EPD) web pages as far as possible which includes the Sound Power Level (SWLs) for specific quiet PME.		
4.8.1.5 (B3)	Use of Movable Noise Barriers/Acoustic Mats	All construction sites / construction phase / upon completion of all construction activities (Contractor)	Implemented
	Movable noise barriers that can be placed close to the construction equipment and moved along with the PME are effective for screening noise from NSRs. A typical design which has been used locally is a wooden framed barrier with a cantilevered upper portion of superficial density no less than 10 kg/m² on a skid footing with internal sound absorptive lining. This measure is particularly effective for low level zone of NSRs. A longer cantilevered top cover would be required to achieve screening benefits at upper floors of NSRs. The Contractor shall be responsible for the design and actual position of the movable noise barriers with due consideration given to the position and size of the PME, and the requirement of intercepting the line-of-sight from the NSRs to the PME, as well as ensuring that the barriers should have no opening and gap. It is anticipated that properly designed noise barriers would achieve a 5 dB(A) reduction for mobile PME and a 10 dB(A) reduction for static PME. Acoustic mat with surface mass of not less than 7kg/m2 would be used for plant items such as piling, oscillator and a 10 dB(A) noise reduction is anticipated.		
4.8.1.7 (B4)	Scheduling of Noisy Activities to outside Examination Period of HKBTS	All construction sites / construction phase / upon completion of all construction activities (Contractor)	
	To minimise the construction noise impact on HKBTS, the use of piling (oscillator) in ELS and concurrent use of concrete lorry mixer with other PMEs in steel fixing and concreting of structure should be avoided during the examination period of HKBTS.		Implemented
	Contractor should keep close communication with the operator of HKBTS to obtain the updated schedule of examination at the time conducting of the relevant construction works.		Implemented

Note:
(1) Detailed EIA report and EM&A Manual reference refer to the Appendix B of approved EM&A Manual.
N/A: Not Available, N/O: Not Observed.

Implementation Status of Environmental Mitigation Measures (Construction Phase)

EIA Ref. (No.)	Environmental Protection Measures (Construction Phase) [1]	Location & (Implementation Agent)	Implementation Status
	C) Water Quality		
5.8.1.1 (C1)	Construction Site Runoff	All construction sites / construction phase / upon completion of all construction activities (Contractor)	
	Proper site management measures should be implemented to control site runoff and drainage, and thereby prevent high sediment loadings from entering nearby watercourses. The contractor should follow the practices, and be responsible for the design, construction, operation and maintenance of all the mitigation measures as specified in ProPECC PN 1/94 "*Construction Site Drainage*". The design of the mitigation measures should be submitted by the contractor to the engineer for approval.		
	These mitigation measures should include the following practices:		
	a) At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct storm water to silt removal facilities.		Implemented
	b) Sand / silt removal facilities such as sand / silt traps and sediment basins should be provided to remove sand / silt particles from runoff to meet the requirements of the TM standard under the WPCO. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt / sand traps should be 5 minutes under maximum flow conditions.		Implemented
	c) All drainage facilities and erosion and sediment control structures should always be regularly inspected and maintained to ensure proper and efficient operation and particularly during rainstorms. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.		Implemented
	d) Measures should be taken to minimise the ingress of site drainage into excavations. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities.		Implemented
	e) If surface excavation works cannot be avoided during the wet season (April to October), temporarily exposed slope / soil surfaces should be covered by a tarpaulin or other means, as far as practicable, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Interception channels should be provided (e.g. along the crest / edge of the excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm. Other measures that need to be implemented before, during and after rainstorms are summarised in ProPECC PN 1/94.		Implemented
	f) All vehicles and plant should be cleaned before leaving a construction site. An adequately designed and sited wheel washing facility should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.		Implemented
	g) Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms.		Implemented
5.8.1.2 – 5.8.1.3 (C2)	General Construction Activities	All construction sites / construction phase / upon completion of all construction activities (Contractor)	
	a) Debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby water bodies and public drainage system.		Implemented
	b) Stockpiles of cement and other construction materials should be kept covered when not being used.		Implemented
	c) Oils and fuels should only be used and stored in designated areas, which have pollution prevention facilities.		Implemented
	d) All fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. Rainwater in the bunds should be cleared after each rain event. Waste oils, fuels and solvents collected within the bund should be handled and treated as chemical waste.		Implemented
5.8.1.4 (C3)	Sewage Effluent	All construction sites / construction phase / upon completion of all construction activities (Contractor)	Implemented
	Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor would be responsible for appropriate disposal of waste matter and maintenance of these facilities.		

EIA Ref. (No.)	Environmental Protection Measures (Construction Phase) [1]	Location & (Implementation Agent)	Implementation Status
	C) Water Quality		
5.8.1.5 (C4)	Construction Works in Close Proximity of Inland Waters The practices outlined in ETWB TC (Works) No. 5/2005 "Protection of natural streams/rivers from adverse impacts arising from construction works" should be adopted where applicable to minimise the water quality impacts upon any natural streams or surface water systems.	All construction sites / construction phase / upon completion of all construction activities (Contractor)	N/A

Note:
(1) Detailed EIA report and EM&A Manual reference refer to the Appendix B of approved EM&A Manual.
N/A: Not Available, N/O: Not Observed.

Implementation Status of Environmental Mitigation Measures (Construction Phase)

EIA Ref. (No.)	Environmental Protection Measures (Construction Phase) [1] D) Waste Management	Location & (Implementation Agent)	Implementation Status
6.5.1.3 (D1)	Good Site Practices Recommendations for good site practices during the construction phase include:	All construction sites / construction phase / upon completion of all construction activities (Contractor)	
	a) Nomination of approved personnel, such as a site manager, to be responsible for implementation of good site practices, arrangements for waste collection and effective disposal to an appropriate facility;		Implemented
	b) Training of site personnel in site cleanliness, concepts of waste reduction, reuse and recycling, proper waste management and chemical waste handling procedures;		Implemented
	c) Provision of sufficient waste reception / disposal points, and regular collection of waste;		Implemented
	d) Adoption of appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;		Implemented
	e) Provision of regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;		Implemented
	f) Adoption of a recording system for the amount of wastes generated, recycled and disposed (including the disposal sites); and		Implemented
	g) Preparation of Waste Management Plan (WMP), as part of the Environmental Management Plan (EMP).		Implemented
6.5.1.4 (D2)	Waste Reduction Measures Recommendations to achieve waste reduction are discussed as follow:	All construction sites / construction phase / upon completion of all construction activities (Contractor)	
	a) Segregate and store different types of construction related waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;		Implemented
	b) Provide separate labelled bins to segregate recyclable waste such as aluminium cans from other general refuse generated by the work force, and to encourage collection by individual collectors;		Implemented
	c) Recycle any unused chemicals or those with remaining functional capacity;		Implemented
	d) Maximise the use of reusable steel formwork to reduce the amount of C&D materials;		Implemented
	e) Adopt proper storage and site practices to minimise the potential for damage to, or contamination of construction materials;		Implemented
	f) Plan the delivery and stock of construction materials carefully to minimise the amount of waste generated; and		Implemented
	g) Minimise over ordering and wastage through careful planning during purchasing of construction materials.		Implemented
6.5.1.6– 6.5.1.7 (D3)	Reducing and Reuse of C&D Materials	All construction sites / construction phase / upon completion of all construction activities (Contractor)	
	a) Careful design, planning together with good site management can reduce over-ordering and generation of C&D materials such as concrete, mortar and cement grouts. Formwork should be designed to minimise the use of standard wooden panels, so that high reuse levels can be achieved. Alternatives such as steel formwork or plastic facing should be considered to increase the potential for reuse.		Implemented
	b) To minimise off-site disposal of inert C&D material, the excavated inert materials with suitable characteristics / size should be reused on-site as fill material as far as practicable, such as for backfilling of the box culvert and drainage pipe works.		Implemented
	c) Prior to disposal of non-inert C&D materials, wood, steel and other metals should also be separated for reuse and / or recycle where practicable so as to minimise the quantity of waste to be disposed of to landfill.		Implemented
6.5.1.8 (D4)	Storage of C&D Materials Suitable areas should be designated within the works site boundaries for temporary stockpiling of C&D material. Within stockpile areas, the following measures should be taken to control potential environmental impacts or nuisance:	All construction sites / construction phase / upon completion of all construction activities (Contractor)	
	a) cover material during heavy rainfall;		Implemented
	b) locate stockpiles to minimise potential visual impacts; and		Implemented
	c) minimise land intake of stockpile areas as far as possible.		Implemented

EIA Ref. (No.)	Environmental Protection Measures (Construction Phase) [1] D) Waste Management	Location & (Implementation Agent)	Implementation Status
6.5.1.9 (D5)	Disposal of C&D Materials	All construction sites / construction phase / upon completion of all construction activities (Contractor)	
	a) In order to monitor the disposal of C&D materials at the designated public fill reception facility and landfill and to control fly-tipping, a trip-ticket system should be included.		Implemented
	b) When disposing inert C&D materials at a public filling reception facility, the material shall only consist of soil, rock, concrete, brick, cement plaster / mortar, inert building debris, aggregates and asphalt. The material shall be free from marine mud, household refuse, plastic, metals, industrial and chemical waste, animal and vegetable matter, and other material considered to be unsuitable by the Filling Supervisor.		Implemented
6.5.1.10 & 6.5.1.12 (D6)	Chemical Wastes	Construction and Operational Phase	
	a) If chemical waste is produced at the construction site / the SPS, the contractor would be required to register with the EPD as a Chemical Waste Producer.		Implemented
	b) Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately.		Implemented
	c) Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosives, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc.		Implemented
	d) The contractor shall use a licensed collector to transport and dispose of the chemical wastes at the CWTC or other licensed facility in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.		Implemented
6.5.1.11 & Table 6.2 (D7)	General Refuse	All construction sites / construction phase / upon completion of all construction activities (Contractor)	
	a) General refuse should be stored in enclosed bins or compaction units separate from C&D materials and chemical wastes.		Implemented
	b) A reputable waste collector should be employed by the contractor to remove general refuse / screenings from the site on a regular basis to minimise odour, pest and litter impacts.		Implemented
	c) Clearly labelled recycling bins should be provided on site to encourage segregation and recycling of aluminium and plastic wastes, and wastepaper to reduce general refuse production.		Implemented
	d) The contractor should carry out an education programme for workers in avoiding, reducing, reusing and recycling of materials generation. Posters and leaflets advising on the use of the bins should also be provided in the site as reminders. The recyclable waste materials should then be collected by reliable waste recycling agents on a regular basis.		Implemented
	e) The collected general refuse will be disposed of at NENT landfill.		Implemented

Note:
(1) Detailed EIA report and EM&A Manual reference refer to the Appendix B of approved EM&A Manual.
N/A: Not Available, N/O: Not Observed.

Implementation Status of Environmental Mitigation Measures (Construction Phase)

EIA Ref. (No.)	Environmental Protection Measures (Construction Phase) [1]	Location & (Implementation Agent)	Implementation Status
	E) Landscape and Visual		
Table 10.9 (E1)	CM1 – Preservation of Trees Trees to be retained in accordance with DEVB TCW No. 4/2020 - Tree Preservation.	All construction sites / construction phase / upon completion of all construction activities (Contractor)	N/A
Table 10.9 (E2)	CM2 – Compensatory Tree Planting Any trees to be felled under the Project shall be compensated in accordance with DEVB TCW No. 4/2020 - *Tree Preservation.*	All construction sites / construction phase / upon completion of all construction activities (Contractor)	N/A
Table 10.9 (E3)	CM3 – Control of Night-time Lighting Glare Any lighting provision of the construction works at night shall be carefully controlled to prevent light overspill to the nearby VSRs and into the sky.	All construction sites / construction phase / upon completion of all construction activities (Contractor)	Implemented
Table 10.9 (E4)	CM4 – Erection of Decorative Screen Hoarding Decorative Hoarding, which is compatible with the surrounding settings, shall be erected during construction to minimise the potential landscape and visual impacts due to the construction works and activities.	All construction sites / construction phase / upon completion of all construction activities (Contractor)	Implemented
Table 10.9 (E5)	CM5 – Management of Construction Activities and Facilities The facilities and activities at works sites and areas, which include site office, temporary storage areas, temporary works etc., shall be carefully managed and controlled on the height, deposition and arrangement to minimise any potential adverse landscape and visual impacts.	All construction sites / construction phase / upon completion of all construction activities (Contractor)	Implemented
Table 10.9 (E6)	CM6 – Reinstatement of Temporarily Disturbed Landscape Areas All hard and soft landscape areas disturbed temporarily during construction due to temporary excavations, temporary works sites and works areas shall be reinstated to equal or better quality, to the satisfaction of the relevant Government Departments.	All construction sites / construction phase / upon completion of all construction activities (Contractor)	N/A

Note:
(1) Detailed EIA report and EM&A Manual reference refer to the Appendix B of approved EM&A Manual.
N/A: Not Available, N/O: Not Observed

Appendix O

Summary of Outstanding Issues and Deficiencies in the Reporting Month

Summary of Outstanding Issues and Deficiencies in the Reporting Month

Environmental Aspects	Outstanding Issues	Deficiencies
Air Quality	N/A	Any items of deficiencies can be referred to **Appendix K**.
Noise	N/A	
Water Quality	N/A	
Chemical and Waste Management	N/A	
Landscape and Visual Impact	N/A	
Permit / Licenses	N/A	
Others	N/A	