

Drainage Services Department

Port Shelter Sewerage, Stage 3 – Sewerage Works at Po Toi O Monthly EM&A Report (August 2025)

Prepared by

SGS Hong Kong Limited

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Environmental Team Leader Independent Environmental Checker





Our Ref: PL-202509015

Drainage Services Department Special Duty Division 42/F, Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong.

Attention: Mr. Gary CHUNG

12 September 2025

Dear Gary,

Port Shelter Sewerage, Stage3 - Sewerage Works at Po Toi O Monthly EM&A Report for August 2025

Reference is made to your submission of the Monthly EM&A Report for August 2025 received by email on 05 September 2025 and the subsequent revision on 12 September 2025. We are pleased to inform you that we have no adverse comment on the captioned report.

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

Yours faithfully,

Toay Fauldery

F.C. Tsang

Independent Environmental Checker

cc. ETL – Johnathan HO



Drainage Services Department Port Shelter Sewerage, Stage 3 – Sewerage Works at Po Toi O Monthly EM&A Report (Period from 1 to 31 August 2025)

Prepared by

Drainage Services Department

SGS Hong Kong Limited

				Issue and	Revision Record
Revision	Description	Prepared by	Checked by	Approved by	Date
01	Submission	Various	Johnathan Ho	Roy Hung	Sep 2025
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1. EXECUTIVE SUMMARY

- 1.1 The proposed sewerage works in Po Toi O (hereafter as "the Project") is an environmental enhancement project that aims to improve environmental hygiene of the Po Toi O area. The Environmental Impact Assessment (EIA) Report for the Project (Register No: AEIAR-206/2017) was approved on 27 January 2017. The Environmental Permit (EP) (Permit No.: EP-516/2016) was issued on 27 January 2017 and is the current permit for the Project.
- 1.2 Société Générale de Surveillance (SGS) Hong Kong Limited has been appointed by Drainage Services Department (DSD) under service contract no. SD 4/2024 as the Environmental Team (ET) to undertake the EM&A programme during construction phase of the Project in accordance with the approved EM&A Manual for the Project.
- 1.3 This is the 54th monthly Environmental Monitoring & Audit (EM&A) Report prepared by SGS for the Project. This report summarized the monitoring results and audits findings of the EM&A programme under the EP and the EM&A Manual of the Project during the reporting period of 1 August 2025 to 31 August 2025.

Key Construction Works During the Reporting Period

- 1.4 The main works undertaken during the reporting period are as follows:
 - Major activities in the reporting month:
 - a) Construction of village sewer;
 - b) Coring of village sewer;
 - c) Superstructure works for Po Toi O Sewage Treatment Plant

Summary of Exceedances, Investigation and Follow-up

1.5 There was no action or limit level exceedance record of construction noise and air quality was recorded in the reporting month.

Complaint Handling, Prosecution and Public Engagement

- 1.6 No complaints, notification of summons and successful prosecution was received in the reporting period. No public engagement activity was conducted in the reporting month.
- 1.7 No notification of summons and successful prosecution was received in the reporting period. No public engagement activity was conducted in the reporting month.
- 1.8 No air quality, noise and water complaints was received in the reporting month.

Reporting Change of EM&A Programme

1.9 No reporting change of the EM&A programme in this reporting month.



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Future Key Issues

- 1.10 The main works will be anticipated in the next reporting period are as follows:
- -Major activities in the upcoming month:
 - Construction of village sewer;
 - Coring of village sewer;
 - Excavation works and construction of ELS for Po Toi O Sewage Treatment Plant



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2. INTRODUCTION

Project Information

2.1 Société Générale de Surveillance (SGS) Hong Kong Limited has been appointed by Drainage Services Department (DSD) as the Environmental Team (ET) to undertake the EM&A programme during construction phase of the Project in accordance to the approved EM&A Manual for the proposed sewerage works in Po Toi O (hereafter as "The Project"), an environmental enhancement project that aims to improve environmental hygiene of the Po Toi O area.

Project Background

- 2.2 Po Toi O is located in the southern part of Sai Kung District, next to Clear Water Bay. There is a small settlement called Po Toi O village around the bay. There is currently no public sewerage system for the village. Sewage and wastewater generated by local residents and local restaurants are treated by septic tanks/ soakaway system (STS).
- 2.3 Sewage works at Po Toi O comprise sewage collection, treatment and disposal facilities at Po Toi O under Port Shelter Sewerage, Stage 3 Sewerage Works at Po Toi O.
- 2.4 The Project in Po Toi O mainly comprises of the following items:
 - a. Provision of village sewerage to the unsewered areas of Po Toi O. The works involve construction of about 800m of gravity sewers and 400m of rising mains;
 - b. Construction of a local sewage treatment plant (STP) with Average Dry Weather Flow (ADWF) of about 139m3/day; and
 - c. Construction of a submarine outfall of about 385m in length.
- 2.5 The Project consists of the following works, which are classified as Designated Projects under Part I, Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO):
 - a. Item Q.1 A sewage treatment plant and portion of sewer alignments in a conservation area;
 - b. Item C.12 (a) (v) and (vii) A dredging operation which is less than 500m from the nearest boundary of an existing fish culture zone and coastal protection area; and
 - c. Item F.6 A submarine sewage outfall.
- 2.6 The Environmental Impact Assessment (EIA) Report "Port Shelter Sewerage, Stage 3 Sewerage Works at Po Toi O" (Register No: AEIAR-206/2017) was approved on 27 January 2017. An Environmental Permit (EP) (Permit No.: EP-516/2016) was issued on 27 January 2017 and is the current permit for the Project. The EM&A programme of the Project shall be implemented in accordance with the requirements and procedures set out in the EM&A Manual and the Environmental Permit (EP) of the Project (Permit No.: EP-516/2016).



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2.7 The air quality and noise baseline monitoring works were conducted from 23 December 2020 to 5 January 2021 and the water quality baseline monitoring work was conducted from 17 December 2020 to 12 January 2021. A Baseline Monitoring Report had been submitted to EPD on 10 March 2021.

Scope of Report

2.8 This is the 54th EM&A Report prepared by SGS for the Port Shelter Sewerage, Stage 3 – Sewerage Works at Po Toi O. This report summarized the monitoring results and audits findings of the EM&A programme under the EP of the Project and in accordance with the EM&A Manual during the reporting period of 1 August 2025 to 31 August 2025.

Project Organisation

2.9 The project organization structure is shown in **Appendix A**. The key personnel contact names and numbers are summarized in **Table 2-1**.

Table 2-1 Contact information of key personnel

Position	Party	Name	Telephone
Project Proponent	Drainage Services Department (DSD)	Mr. Gary Chung	2594 7227
Senior Resident Engineer (SRE)	Binnies Hong Kong Limited (Binnies)	Mr. Eugene Chan	6392 3809
Independent Environmental Checker (IEC)	Acuity Sustainability Consulting Limited (ASC)	Dr. F.C. Tsang	2698 8060
Environmental Team (ET)	Société Générale de Surveillance (SGS) Hong Kong Limited	Mr. Johnathan Ho	9236 5528
Environmental Officer	China Geo-engineering Corporation (CGC)	Mr. Alex Chow	5918 9179



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Construction Programme and Activities

2.10 The main works undertaken in the reporting period are as follows:

Major activities in the reporting month:

- 1. Construction of village sewer;
- 2. Coring of village sewer;
- 3. Superstructure works for Po Toi O Sewage Treatment Plant

The Construction Programme is shown in **Appendix B**. The general layout plan of the Project is shown in **Figure 2-1**.



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3. AIR QUALITY

Monitoring Requirements

3.1 In accordance with the EM&A Manual, impact air quality monitoring shall be carried out throughout the construction period at all approved air quality monitoring locations (AMSs). 24- hours total suspended particles (TSP) monitoring shall be conducted at least once every 6 days. Meanwhile, 1-hour TSP monitoring shall be conducted at least 3 times every 6 days when the highest dust impact takes place. The Action and Limit levels for 1-hour and 24-hours TSP level are provided in **Table 3-1** and **Table 3-2**.

Table 3-1 Action and Limit Levels for 1-hour-TSP

Parameter	Air Quality Monitoring Station (AMSs)	Action Level (μg/m³)	Limit Level (μg/m³)
	AMS1N	319	
	AMS2N1	279	
1-hr TSP (μg/m³)	AMS3N	303	500μg/m³
	AMS4N	278	

Table 3-2 Action and Limit Levels for 24-hour-TSP

Parameter	Air Quality Monitoring Station (AMSs)	Action Level (μg/m³)	Limit Level (μg/m³)
	AMS1N	153	
	AMS2N1	179	
24-hr TSP (μg/m³)	AMS3N	158	260μg/m³
	AMS4N	144	



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Monitoring Equipment

The 24-hour TSP air quality monitoring was performed using High Volume Air Samplers (HVS) at each of the designated monitoring stations. The HVS are calibrated by a HVS calibrator. Meanwhile 1-hour TSP air quality monitoring was performed using portable TSP monitors. The equipment used for air quality monitoring are given in **Table 3-3**.

Table 3-3 Equipment Used for Air Quality Monitoring

	1	
Air Quality Monitoring	Brand and Model of Equipment	Serial Number
24-hour TSP*	Graseby GMW High Volume Sampler	1180
	Gampier	1174
		9795
		2483
	Tisch TE-5025A High Volume Sampler Calibrator	4317
1-hour TSP	Sibata LD-3B Portable TSP	014746
	Monitors	155331
		597340
		597227

- 3.3 Meteorological information (such as the humidity, rainfall, air pressure and temperature etc.) were collected from Hong Kong Observatory (HKO)'s Weather Stations.
- 3.4 According to the approved EM&A Manual, wind data monitoring equipment shall be provided and setup for logging wind speed and wind direction near the dust monitoring locations. The equipment installation location shall be proposed by the ET and agreed with the IEC. For installation and operation of wind data monitoring equipment, the following points shall be observed:
 - a. The wind sensors should be installed 10 m above ground so that they are clear of obstructions or turbulence caused by buildings.
 - b. The wind data should be captured by a data logger. The data shall be downloaded for



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analysis at least once a month.

- c. The wind data monitoring equipment should be re-calibrated at least once every six months.
- d. Wind direction should be divided into 16 sectors of 22.5 degrees each.
- 3.5 It is noted that after liaison with the Po Toi O resident's representative on 22 December 2020, the resident's representative has rejected the access to the space and power supply for ET to install the wind data monitoring stations. Therefore, ET had proposed the alternative method for wind data collection according to section 3.4.7 of EM&A Manual.
- 3.6 The alternative method for wind data collection was adopt the wind data information collected from the HKO's Waglan Island weather station as the representative wind data. Although there are other closer weather stations, Waglan Island Station was selected as it is the nearest weather station that measures wind data information mentioned above.
- 3.7 The meteorological data from HKO's Weather Station is given in Appendix C.

Monitoring Parameters, Frequency and Duration

3.8 The parameters, duration and frequency for air quality impact monitoring is given in Table 3-4. Monitoring stations AMS1N, AMS2N1, AMS3N and AMS4N were set up in accordance to the requirements for placement of equipment, as set out in section 3.5.3 of the EM&A manual of the Project. Locations of the alternative AMSs are given in **Figure 3-1.**

Table 3-4 Monitoring Parameters for Air Quality Monitoring

Identification	Location	Type of	Parameters	Frequency
no. AMS1N*	Footpath above House No. 28 Po Toi O Chuen Road	monitoring		
AMS2N1*	Open space Approx. 15 m from Hung Shing Temple	TSP	1-hr TSP	1-hour TSP: At least 3 times for 1- hour with every 6 days
AMS3N*	Vacant land near Temporary Structure (House) Rocky Shore	ISP	24-hr TSP	24-hour TSP: Once every 6 days
AMS4N*	Resting shelter near Seacrest Villas			



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Notes:

Monitoring Methodology for 24-hour TSP Monitoring

- 3.9 The HVS was installed in the vicinity of the air quality monitoring stations. The following criteria were considered in the installation of the HVS:
 - a. A horizontal platform with appropriate support to secure the sampler against gusty wind was provided.
 - b. The distance between the HVS and any obstacles, such as buildings, was at least twice the height that the obstacle protrudes above the HVS.
 - c. A minimum of 2 meters separation from walls, parapets and penthouse for rooftop sampler.
 - d. A minimum of 2 meters separation from any supporting structure, measured horizontally.
 - No furnace or incinerator flues nearby.
 - f. Airflow around the sampler was unrestricted.
 - g. Permission was obtained to set up the samplers and access to the monitoring stations.
 - h. A secured supply of electricity was obtained to operate the samplers.
 - i. The sampler was located more than 20 meters from any dripline.
 - Any wire fence and gate, required to protect the sampler, did not obstruct the monitoring process.
 - k. Flow control accuracy was kept within $\pm 2.5\%$ deviation over 24-hour sampling period.
- 3.10 The following procedures to be followed for the preparation of filter papers of the HVS:
 - a. Glass fibre filters, G810 were labelled and sufficient filters that were clean and without pinholes were selected.
 - b. All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ± 3 °C; the relative humidity (RH) was < 50% and not variable by more than ± 5 %. A convenient working RH was 40%.
 - All filter papers were prepared and analysed by a HOKLAS accredited laboratory and has comprehensive quality assurance and quality control programmes.

^{*-} Due to a number of limitations identified at the air quality monitoring stations in the Approved EM&A Manual for the Project, the monitoring location AMS1 – AMS4 were replaced by alternative monitoring location AMS1N – AMS4N, which were approved by ER and IEC.



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- 3.11 The following procedures are followed throughout air quality monitoring works:
 - a. The power supply was checked to ensure the HVS works properly.
 - b. The filter holder and the area surrounding the filter were cleaned.
 - c. The filter holder was removed by loosening the four bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully.
 - d. The filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter.
 - e. The swing bolts were fastened to hold the filter holder down to the frame. The pressure applied was sufficient to avoid air leakage at the edges.
 - f. Then the shelter lid was closed and was secured with the aluminum strip.
 - g. The HVS was warmed-up for about 5 minutes to establish run-temperature conditions.
 - h. A new flow rate record sheet was set into the flow recorder.
 - i. On site temperature and atmospheric pressure readings were taken and the flow rate of the HVS was checked and adjusted at around 1.1 m3/min and complied with the range specified in the updated EM&A Manual (i.e., 0.6-1.7 m3/min).
 - j. The programmable digital timer was set for a sampling period of 24 hrs, and the starting time, weather condition and the filter number were recorded.
 - k. The initial elapsed time was recorded.
 - I. At the end of sampling, on site temperature and atmospheric pressure readings were taken and the final flow rate of the HVS was checked and recorded.
 - m. The final elapsed time was recorded.
 - n. The sampled filter was removed carefully and folded in half-length so that only surfaces with collected particulate matter were in contact.
 - o. It was then placed in a clean plastic envelope and sealed.
 - p. All monitoring information was recorded on a standard data sheet.
- 3.12 The following procedures are followed for the maintenance and calibration of HVS:
 - a. The HVS and its accessories were maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply.
 - b. 5-point calibration of the HVS was conducted using TE-5025A Calibration Kit prior to the commencement of monitoring. Bi-monthly 5-point calibration of the HVS will be carried out



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during impact monitoring. The details for HVS calibration against the TE-5025A Calibration Kit is given in **Appendix D**.

Monitoring Methodology for 24-hour TSP Monitoring by Direct Reading Dust Meters

- 3.13 Since power supply for HVS for 24-hour TSP monitoring at alternative monitoring locations (i.e., AMS1N to AMS4N) were rejected, the use of direct reading dust meters is adopted to measure both 1-hour and 24-hour average TSP levels for the reporting month.
- 3.14 In accordance to Condition 3.1 of the Project's EP and Section 3.3 of the Project's EM&A Manual, the proposal for alternative monitoring equipment (i.e., direct reading dust meter) for TSP monitoring was approved by IEC and ER.
- 3.15 The measuring procedures of the direct reading dust meters are given in Section 3.5.10.
- 3.16 24 consecutive 1-hour TSP concentration measurement results is adopted for the evaluation of 24-hour TSP concentration. Results are manually logged daily, during daily maintenance of the dust meter. Calculation of the value of 24-hour TSP concentration is given by the average of 24 calculated 1-hour TSP concentration, where the calculated 1-hr TSP concentration is given by the product of the direct reading and the K-factor based on the correlation results between the direct reading meter and HVS. Details for the correlation methodology and correlation record are given in Appendix E.
- 3.17 HVS for 24-hr TSP monitoring will be adopted once secured supply of electricity becomes available for any agreed TSP monitoring locations.

Monitoring Methodology for 1-Hour TSP Monitoring

- 3.18 The measuring procedures of the direct reading dust meters were in accordance with the Manufacturer's Instruction Manual as follows:
 - a. Turn the power on.
 - b. Close the air collecting opening cover.
 - c. Push the "TIME SETTING" switch to [BG].
 - d. Push "START/STOP" switch to perform background measurement for 6 seconds.
 - e. Turn the knob at SENSI ADJ position to insert the light scattering plate.
 - f. Leave the equipment for 1 minute upon "SPAN CHECK" is indicated in the display.
 - g. Push "START/STOP" switch to perform automatic sensitivity adjustment. This measurement takes 1 minute.
 - h. Pull out the knob and return it to MEASURE position.



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- i. Push the "TIME SETTING" switch the time set in the display to 3 hours.
- j. Lower down the air collection opening cover.
- k. Push "START/STOP" switch to start measurement.
- 3.19 The following procedures are followed for the maintenance and calibration of direct reading dust meters:
 - a. The 1-hour TSP meter was calibrated at 1-year intervals against with high volume sampler.
 - b. Calibration certificates of the Laser Dust Monitors are provided in **Appendix D**. 1-hour validation checking of the TSP meter against HVS is carried out yearly at the air quality monitoring locations.

Monitoring Results and Observations

- 3.20 The schedule for environmental monitoring in the reporting period is provided in **Appendix F**.
- 3.21 The air quality monitoring results for 1-hour and 24-hour air quality monitoring are summarized in **Table 3-6** and **Table 3-7**. Air quality monitoring data and graphical presentation of the data are provided in **Appendix G**.

Table 3-6 1-hour Air Quality Monitoring Results in the Reporting Period

Parameter	Monitoring Station	Average (μg/m³)	Range (μg/m³)
	AMS1N	26.7	19 – 32
	AMS2N1	31.8	16 – 47
1-hr TSP in μg/m³	AMS3N	24.0	16 – 31
	AMS4N	25.1	16 - 35

Table 3-7 24-hour Air Quality Monitoring Results in the Reporting Period

Parameter	Monitoring Station	Average (μg/m³)	Range (μg/m³)
	AMS1N	28.4	19 – 39
24-hr TSP in μg/m³	AMS2N1	32.4	18 - 44
	AMS3N	26.2	17 - 39



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AMS4N	23.4	18 - 29
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3.22 No Action or Limit Level exceedances of air quality were recorded in the reporting month. No air quality between 0700 – 1900 hours on normal weekdays (i.e., Mondays to Saturdays) were received in the reporting month.

Other Influencing Factors of the Monitoring Results

- 3.23 Major emission sources during air quality monitoring in the reporting period were mainly vehicle emission from Po Toi O Chuen Road and nearby residents' activities.
- 3.24 The event and action plan for air quality monitoring are given in **Appendix H**.



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4. NOISE

Monitoring Requirements

4.1 In accordance with the EM&A Manual, noise impact monitoring was conducted during daytime construction work on normal weekdays (0700-1900 hours between Monday to Saturday), 1 set of 30-min measurement shall be carried out at approved noise monitoring stations (NMSs) every week based on the measurement procedures under EPD's" Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites". The Action and Limit levels for construction noise monitoring is provided in **Table 4-1**.

Table 4-1 Action and Limit Levels for Construction Noise

NMSs ID	Noise Sensitive Receivers	Descriptions	Action Level	Limit Level
NMS1N	PTO_N1	Footpath Above House No. 28 Po Toi O Chuen Road		
NMS2N1	PTO_N2	Open Space Approx. 15 m from Hung Shing Temple	When one documented complaint	
NMS3N	PTO_N3	Vacant Land Near Temporary Structure (House) Rocky Shore	is received from any one of the noise sensitive receivers	75 dB(A)*
NMS4N	PTO_N4	Resting Shelter Near Seacrest Villas		

Monitoring Equipment

4.2 Noise monitoring was completed using sound level meters at each NMSs. The sound levels meters deployed comply with the International Electrotechnical Commission Publications (IEC) 651:1979 (Type 1) and 804:1985 (Type 1) specifications. Acoustic calibrator was deployed to calibrate the sound level meters at a given sound pressure level. The equipment used for noise impact monitoring is given in Table 4-2.

Table 4-2 Noise Monitoring Equipment

Equipment	Brand and Model	Serial No. /Equipment ID
Integrated Sound Level Meter	Rion NL-52	00264519



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Integrated Sound Level Meter	Rion NL-52	00264520
Acoustic Calibrator	Gastle GA607	038641
Anemometer	AZ Instrument – AZ 8908	1064869

Monitoring Locations

4.3 Due to the limitation posed by the approved monitoring stations set out by the EM&A manual, alternative monitoring stations NMS1N, NMS2N1, NMS3N and NMS4N were proposed in accordance to Section 4.5.3 of the EM&A Manual of the Project and approved from the ER and the IEC. The locations of the NMSs are given in **Figure 3-1**, and the details of the monitoring stations are illustrated in **Table 4-3**.

Table 4-3 Description of Proposed Noise Monitoring Locations

NMSs ID	Location	Type of measurement	Type of Monitoring	Duration
NMS1N*	Footpath above House No. 28 Po Toi O Chuen Road			30 mins
NMS2N1*	Open space approximately 15 m from Hung Shing Temple			30 mins
	Thriann riving Grining Temple	Free-Field	Noise	
NMS3N*	Vacant land near Temporary			30 mins
	Structure (House) Rocky Shore			
NMS4N*	Resting shelter near Seacrest			30 mins
	Villas			

Notes:

^{*}For Free-field measurement, a correction of +3dB(A) should be made to the measured results.

^{*} Due to the limitation posed by the approved monitoring stations set out by the EM&A manual, four alternative representative Noise Quality Monitoring Stations (NMSs) are proposed. The alternative monitoring Locations were approved by ER and IEC.



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Monitoring Parameters and Frequency

4.4 The monitoring parameters, frequency and duration of impact noise monitoring are summarized in **Table 4-4**.

Table 4-4 Parameters for Noise Impact Monitoring

Parameter and Duration	Frequency
30-mins measurement at each monitoring station between 0700 and 1900 on normal weekdays. Leq, L10 and L90 would be recorded	At least once per week

Monitoring Methodology

- 4.5 The measuring procedures of the sound level meter were in accordance with the Manufacturer's Instruction Manual as follows:
 - a. Free-field measurement was made for the noise monitoring stations.
 - b. The sound level meter was set on a tripod at a height of 1.2 m above the ground.
 - c. The battery condition was checked to ensure the correct functioning of the meter.
 - d. Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - i. frequency weighting: A
 - ii. Time weighting: Fast
 - iii. Time measurement: Leq(30-minutes) during non-restricted hours i.e., 07:00 1900 on normal weekdays; Leq(5-minutes) during restricted hours i.e., 19:00 23:00 and 23:00 07:00 of normal weekdays, whole day of Sundays and Public Holidays
 - e. Prior to and after each noise measurement, the meter was calibrated using the acoustic calibrator at a specified sound pressure level at a specified frequency. If the difference in the calibration level before and after measurement was more than 1 dB(A), the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.
 - f. During the monitoring period, the Leq, L10 and L90 were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
 - g. Noise measurement was paused during periods of high intrusive noise (e.g., dog barking, helicopter noise) if possible. Observations were recorded when intrusive noise was unavoidable.
 - h. Noise monitoring was cancelled in the presence of fog, rain, wind with a steady speed exceeding 5m/s, or wind with gusts exceeding 10m/s.



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- 4.6 The following procedures are followed for the maintenance and calibration of sound level meters:
 - a. The microphone head of the sound level meter was cleaned with soft cloth at regular
 - b. intervals.
 - c. The meter and calibrator were sent to the supplier or HOKLAS laboratory to check
 - d. and calibrate at yearly intervals.
 - e. Calibration certificates of the sound level meters, and acoustic calibrators are provided in **Appendix I.**

Monitoring Results and Observations

- 4.7 The schedule for environmental monitoring in the reporting period is provided in **Appendix F**.
- 4.8 The monitoring results for construction noise are summarized in **Table 4-5**. The noise monitoring data graphical presentation of the data is provided in **Appendix J**.

Table 4-5 Summary of Construction Noise Monitoring Results in the Reporting Period

NMSs ID	Construction Noise	Baseline Level, dB(A)	Limit Level, db(A)
	Level,		
	dB(A)*, Leq (30 min)		
NMS1N	61.7 dB(A)	62.7 dB(A)	75
NMS2N1	64.7 dB(A)	61.8 dB(A)	75
NMS3N	57.3 dB(A)	64.6 dB(A)	75
NMS4N	55.3 dB(A)	58.1 dB(A)	75

Note:

- 4.9 No Action or Limit Level exceedance of construction noise was recorded in the reporting month.
- 4.10 No noise complaints from between 0700 1900 hours on normal weekdays was received in the reporting month.
- 4.11 The event and action plan are provided in **Appendix H**.

Other Influencing Factors of the Monitoring Results

4.12 Major noise sources during noise monitoring in the reporting period were mainly road traffic noise.

^{*-} A correction of +3 dB(A) was made to the free field measurements. Leq (30min) was measured at 0700-1900 hours on normal weekdays.



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5. WATER QUALITY

Construction Phase

Monitoring Requirements

- 5.1 With the recommendations of the Project's EIA report, water quality impact monitoring shall be carried out carried out 3 days per week, at mid-flood and mid-ebb tides (within ± 1.75 hour of the predicted time required) at all the approved Water Quality Monitoring Stations (WQMSs) during whole cofferdam installation/extraction work and during dredging works. The interval between two sets of monitoring shall not be less than 36 hours.
- 5.2 Replicate in-situ measurements of Suspended Solids (SS) and in-situ water quality data (temperature, pH, turbidity, water depth, salinity, dissolved oxygen and percentage of saturation) shall be collected.
- 5.3 Other relevant data should also be recorded, including monitoring location/position, time, tidal stages, weather conditions and any special observation or works that may affect the monitoring results in the vicinity.
- 5.4 To ensure sufficient data for robust analysis, duplicate in-situ data shall be collected. In case the difference in the duplicate in-situ measurement results is larger than 25%, the third set of in-situ measurement shall be carried out for result confirmation purpose.
- 5.5 Water samples shall be extracted at 1m below surface, 1m above seabed and the mid-depth level at where the water depth is at least 6m. However, if the water depth is less than 3m, water samples shall only be collected at the mid-depth level. For stations with depth less than 6m, the mid-depth sample can be omitted.
- 5.6 Tidal information was collected from Hong Kong Observatory (HKO)'s Tai Miu Wan Tidal Station, the closest tidal station to the Project. It was utilized to determine the schedule for water quality monitoring during mid-ebb and mid-flood period.
- 5.7 In addition, duplicated water samples for suspended solid analysis shall be collected at all the above stations and delivered to the HOKLAS accredited laboratory for analysis. Results for suspended solids shall be received back from the laboratory within 24-hour of the receipt of the samples.
- 5.8 Water quality impact monitoring shall also be conducted at the same frequency as monitoring throughout the whole cofferdam installation/extraction work and during dredging work. In case of exceedance of Action/Limit Level recorded, the frequency of water quality monitoring shall be increased as per the Event and Action Plan.
- 5.9 The submarine outfall works at the cofferdam has been suspended due to an engineering design issue. With reference to Section 5.2.9 of the EM&A manual, the water quality monitoring under the



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environmental monitoring and audit programme was temporary suspended with effect from 10th February 2025 and shall recommence before the cofferdam works resume. The engineering team shall resolve the design issue and apply for a variation environmental permit (VEP) to cater for the new design. In the meantime, all marine construction works is ceased and no marine works in any forms shall be conducted before the variation environmental permit is issued and cofferdam works recommence.

Monitoring Equipment

5.10 The water quality monitoring (i.e. pH, salinity, temperature, turbidity and dissolved oxygen (DO)) was measured with Multi-Parameter Water Quality Meter at each of the designated monitoring stations. Water depth detector was used to measure the water depth of each monitoring locations. A global positioning device was used to locate the WMSs. Table 5-1 summarized the equipment used in water quality monitoring.

Table 5-1 Equipment Used for Water Quality Monitoring

Water Quality Monitoring Parameters	Brand and Model of Equipment
Multi-Parameter Water Quality Meter	Xylem-YSI ProDSS
Water Sampler	Kemmerer Bottle
Water Depth Detector	Xylem-YSI ProDSS
Global Positioning Device	Garmin eTrex H

Monitoring Parameters and Frequency

5.11 The monitoring parameters, monitoring periods and frequencies of the water quality monitoring are summarized in **Table 5-2**.

Table 5-2 Parameters of Water Quality Monitoring

Parameters	Duration	Frequency
Temperature (°C)	During Construction Phase:	3 Days Per Week
pH (pH Unit)	Throughout Installation	(The Interval Between Two
Turbidity (NTU)	And Extraction Of	Sets of Monitoring Shall Not
Water Depth (m)	Cofferdam; And	Be Less Than 36 Hours.)
Salinity (ppt)	During Dredging	
DO (mg/L and % Of		
Saturation)		
SS (mg/L)		



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Monitoring Locations

5.12 According to section 5.2.6 of the EM&A manual of the project, 6 water quality monitoring stations (WMSs) are proposed at the Po Toi O FCZs, major amphioxus habitats and rocky shores where coral thrives. With reference to the tidal characteristics of Po Toi O Bay, 3 control stations are proposed where fresh marine water is not affected by the cofferdam installation/ extraction works, and 2 impact stations are proposed near the cofferdam under different tidal periods. All water quality monitoring stations show as **Figure 5-1** and **Table 5-3**.

Table 5-3 Summary of Water Quality Impact Monitoring Stations

Station	Monitoring period	Description	Easting	Northing
*WMS1N	Mid-Ebb, Mid-Flood	Po Toi O Fish Culture Zone	848416	845209
*WMS2N	Mid-Ebb, Mid-Flood	Po Toi O Fish Culture Zone	848505	815375
WMS3	Mid-Ebb, Mid-Flood	Rocky Shore with Corals	848644	815391
WMS4	Mid-Ebb, Mid-Flood	Rocky Shore with Corals	848774	815602
WMS5	Mid-Ebb, Mid-Flood	Rocky Shore with Corals	848578	815591
WMS6	Mid-Ebb, Mid-Flood	Major Amphioxus Habitat	848639	815523
I1	Mid-Flood	Impact monitoring Station	848643	815692
I2	Mid-Ebb	Impact monitoring Station	848722	815910
C1	Mid-Flood	Control station	848904	816052
C2	Mid-Ebb	Control station	848529	815373
C3	Mid-Ebb	Control station	848243	815710
WMS1	Mid-Ebb, Mid-Flood	Po Toi O Fish Culture Zone	848387	815201
WMS2	Mid-Ebb, Mid-Flood	Po Toi O Fish Culture Zone	848479	815378

Notes:

Results and Observations

- 5.13 According to submission of construction works schedule and location plan under the EP of Project, the commencement of construction work with cofferdam installation / extraction work was 6 December 2023. Marine construction and water quality monitoring was commenced starting from 6 December 2023 and was suspended with effect from 10th February 2025 and shall recommence before the cofferdam works resume.
- 5.14 Marine construction has been suspended in the reporting month; hence no water quality monitoring was conducted.
- 5.15 Refer to approved EM&A Manual, construction phase site inspection for water quality mitigation

^{*}WMS1N, WMS2N are new proposed alterative monitoring location. As previous EIA proposed monitoring location WMS1, WMS2 are situated in fish barges within the Fish Culture Zone (FCZ), and accesses to WMS1 and WMS2 were subsequently denied by the tenants of the fish barges. The relocation of WMS1 and WMS2 were approved by IEC and the ER of the Project.



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measures and check the contractor's work practice on water pollution prevention during construction phase has been conducted during weekly site audit.

5.16 During the weekly site audit of this reporting month, no non-conformance water pollution was identified / observed in the commencement works area.

Operation Phase

5.17 The baseline marine water monitoring for operation phase has commenced and was conducted on 8th and 22th August 2025 (wet season). The monitoring schedule is provided in **Appendix K**.



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6. WASTE MANAGEMENT

- 6.1 As advised by the Contractor, 6.53 m³ of inert C&D material was generated in the reporting month. For C&D wastes, 6.53 m³ of general refuse was disposed of at NENT landfill, 0 kg waste were collected by recycling contractors, and 0 kg of chemical wastes was collected by licensed Contractors in the reporting period.
- 6.2 The actual amounts of different types of waste generated by the activities of the Project in the reporting period are shown in **Table 6-1**, the detailed monthly summary of waste flow is detailed in **Appendix L**.

Table 6-1 Summary of Waste Flow Table

Waste Type	Quantity	Disposal/ Reuse Locations
Inert C&D Waste Disposed as	0 m ³	Tseung Kwan O Area 137 Fill
Public Fill		Bank (TKO137FB).
Non-inert C&D Wastes	11.76 tonnes	North East New Territories
		(NENT)
Recycle Materials	0 kg	Recycling Facilities
General Refuse	0 kg	North East New Territories
		(NENT)
Chemical Waste	0 kg	Licensed Contractors

6.3 During regular site auditing, the mitigation measures proposed in the Implementation Schedule of the Environmental Mitigation Measures (EMIS) in the approved EIA report of the Project has been effectively implemented in the commenced works area. No adverse waste impact was observed from the construction works in reporting month.



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7. ENVIRONMENTAL SITE INSPECTION AND AUDIT

Site Inspection

- 7.1 Site inspections were carried out by ET on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. Key observations were recorded in the site inspection checklist and passed to the Contractor together with the appropriate recommended mitigation measures where necessary.
- 7.2 In the reporting period, 5 site inspections were carried out on 7, 15, 21 & 28 August 2025. No noncompliance was recorded during the site inspection. Details of observations recorded during the site inspections are presented in **Table 7-1**.

Table 7-1 Observations and Recommendations in the Reporting Month

Date	Parameters	Observations and Recommendations	Action was taken by
			the contractor
7	Water Quality	Reminder	Follow up Reminder
August 2025		Item 1: The Contractor is reminded to to	Item 1: This item is still
		remove all unused pipes from the	pending to be closed.
		construction works area.	
		Item 2: The Contractor should provide	Item 2: Sand bags have
		sandbags to prevent muddy water	been provided to prevent
		discharge.	muddy water discharge.
15	Water Quality	Reminder	Follow up Reminder
August 2025		Reminder 1: The Contractor is reminded	Item 1: This item is still
		to to remove all unused pipes from the	pending to be closed .
		construction works area. (Repeated)	
		Reminder 2	Item 2: Sand bags have
		The Contractor should provide sandbags	been provided to prevent
		to prevent muddy water discharge.	muddy water discharge.
		(Repeated)	
21	Water Quality	Reminder	Follow up Reminder
August 2025		Reminder 1: The Contractor is reminded	Item 1: This item is still
		to to remove all unused pipes from the	pending to be closed.
		construction works area. (Repeated)	



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Date	Parameters	Observations and Recommendations	Action was taken by
			the contractor
		Reminder 2: The Contractor is	Item 2: This item is still
		reminded to remove waste from the	pending to be closed.
		construction site regularly.	
28	Water Quality	Observation	Follow up Observation
August 2025		Observation 1: The Contractor is	Item 1: This item is still
		reminded to to remove all unused pipes	pending to be closed.
		from the construction works area.	
		(Repeated)	
		Reminder	Follow up Reminder
		Reminder 1: The Contractor is	Item 2: This item is still
		reminded to remove waste from the	pending to be closed.
		construction site regularly. (Repeated)	
No adverse observa	tion was identified in	the reporting period. Noise Impact	
No adverse observa	tion was identified in	the reporting period. Ecology	
No adverse observa	tion was identified in	the reporting period. Fisheries	
No adverse observa	No adverse observation was identified in the reporting period. Built Heritage		
No adverse observa	dverse observation was identified in the reporting period. Landscape and Visu		ial Impact
No adverse observa	tion was identified in	the reporting period. Miscellaneous	

Status of Environmental Licenses, Notification and Permits

7.3 The environmental licenses and permits for the Project and valid in the reporting period are summarized in **Table 7-2**. A construction noise permit was applied for the Po Toi O Sewage Treatment Plant and the details are shown in Table 7-2 below.

Table 7-2 Status of Environmental License, Notification and Permit

License/ Notification/ Permit	Reference No.	Valid Period	
		From	То
Environmental Permit	EP-516/2016	27 January 2017	End of Project
Construction Dust Notification	458613	3 August 2020	N/A
Under APCO			
Wastewater Discharge License	WT00038707-	3 November 2021	31 August 2026
	2021		
Chemical Waste Producer	5213-820-	23 September 2020	N/A
Registration	C3510-		



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	18		
Billing Account for Disposal of	7038102	17 August 2020	N/A
Construction Waste			
Construction Noise Permit	GW-RE0886-25	6 August 2025	30 January 2026

Implementation Status on Environmental Protection Requirements

7.4 The Implementation Schedule of the Environmental Mitigation Measures (EMIS) of the reporting period is summarized in **Appendix M**. The implementation of the key mitigation measures during the reporting period is presented in **Appendix N**.

Summary of Complaints, Notification of Summons, Successful Prosecutions and Public Engagement Activities

- 7.5 No complaints, notification of summons and successful prosecution was received in the reporting period. No public engagement activity was conducted in the reporting month.
- 7.6 Statistics on complaints, notifications of summons, successful prosecutions and public engagement activities are summarized in **Appendix O**.



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8. FUTURE KEY ISSUES

CONSTRUCTION PROGRAMME FOR THE UPCOMING REPORTING MONTH

- 8.1 Major activities in the upcoming month:
 - a. Construction of village sewer;
 - b. Coring of village sewer;
 - c. Excavation works and construction of ELS for Po Toi O Sewage Treatment Plant

Reinstatement Works Key Issues for the Upcoming Reporting Month

- 8.2 Potential environmental impacts due to the construction activities, including air quality, noise, water quality, waste, landscape and visual, will be monitored or reviewed. The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirement. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.
- 8.3 The anticipated impact of major work activities within the site and the recommended mitigation measures are shown in **Appendix N**.

Monitoring Schedule for the Coming Month

8.4 The tentative schedule for environmental monitoring in September 2025 is provided in **Appendix F**.



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9. CONCLUSION

General

9.1 This Report Summarized the Monitoring Results and Audits Findings of the EM&A Programme Under the EP of The Project and In Accordance with the EM&A Manual During the Reporting Period of 1 August 2025 to 31 August 2025.

Environmental Impact Monitoring

9.2 No Action or Limit Level exceedance of construction air quality, noise was recorded in the reporting month. No air quality complaints and noise complaints were received in the reporting month.

Environmental Site Inspections

9.3 The environmental site inspections were carried out in the reporting month. Recommendations on remedial actions were given to the contractors for the deficiencies identified during the site inspection. The contractor had been follow-up the recommendations on the remedial action accordingly.

Complaint Log

9.4 No complaints, notification of summons and successful prosecution was received in the reporting period. No public engagement activity was conducted in the reporting month.

Reporting Changes

9.5 No report changes in this reporting period.

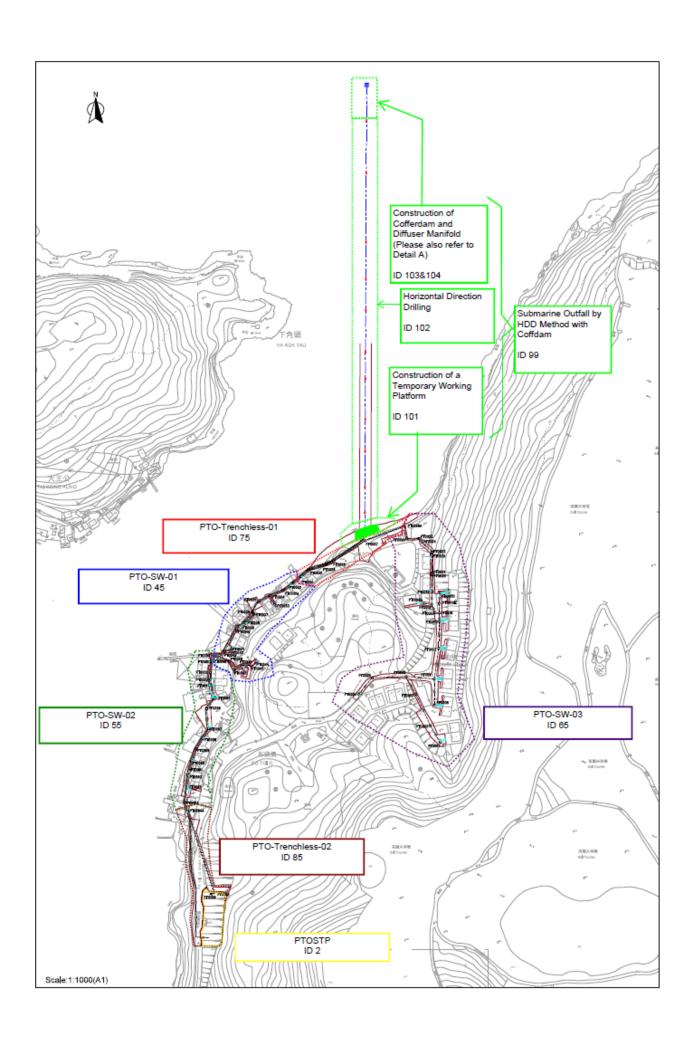
Notifications of Summons and Successful Prosecutions

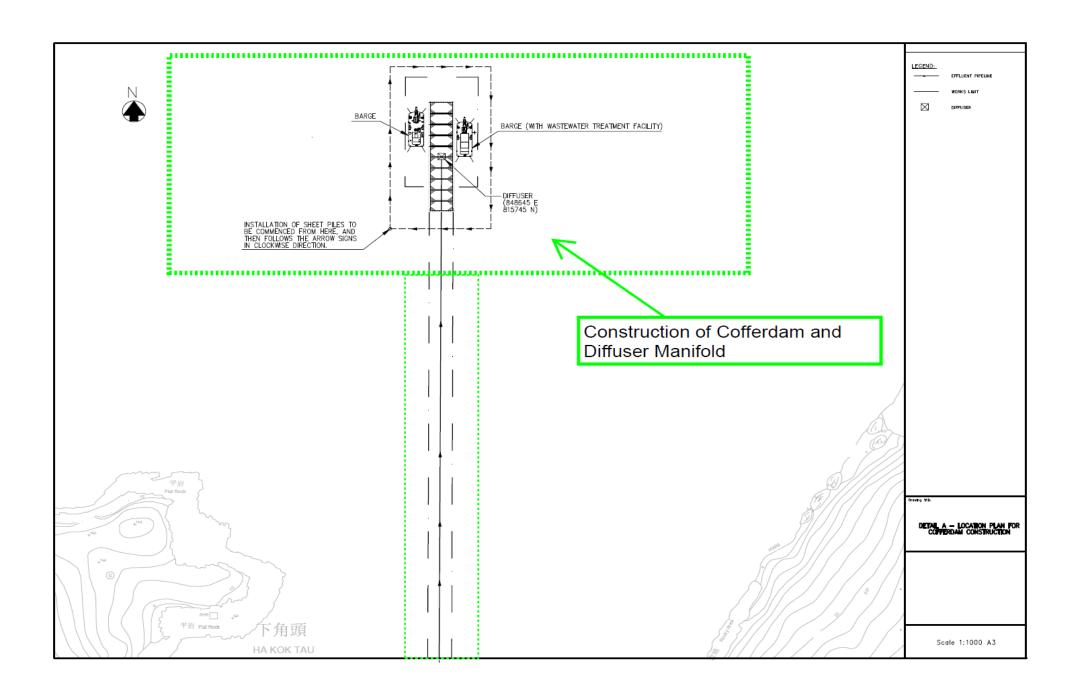
9.6 There was no notification of summons and successful prosecution was received in the reporting period.

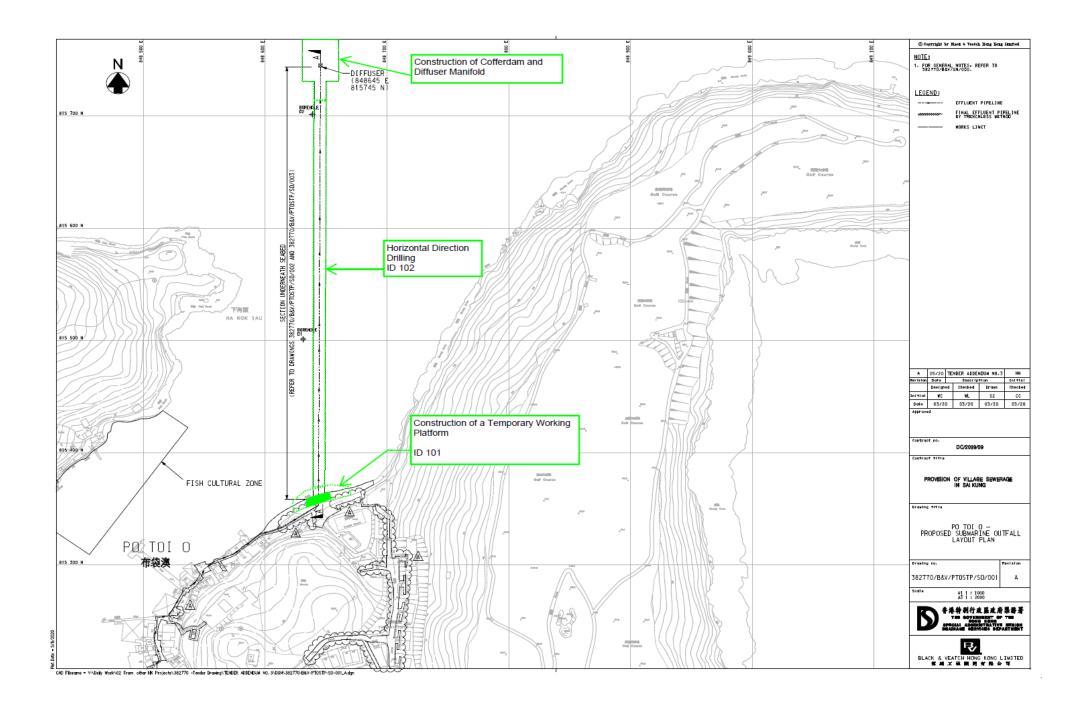


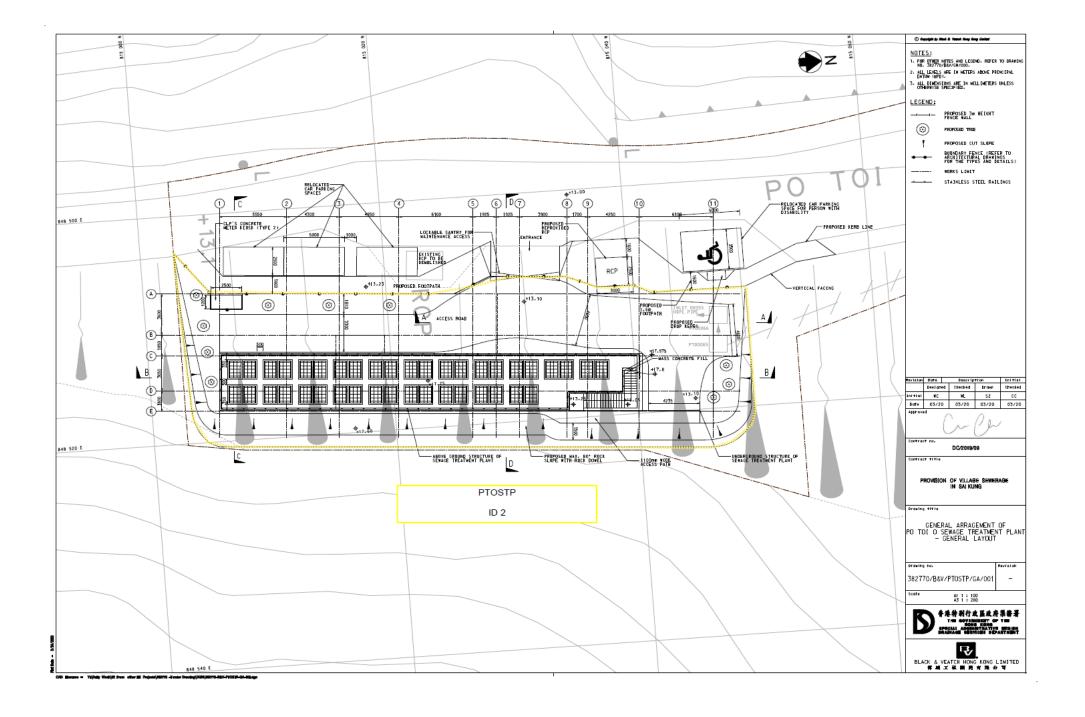
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FIGURE 2-1 – LAYOUT PLAN OF THE CAPTIONED PROJECT





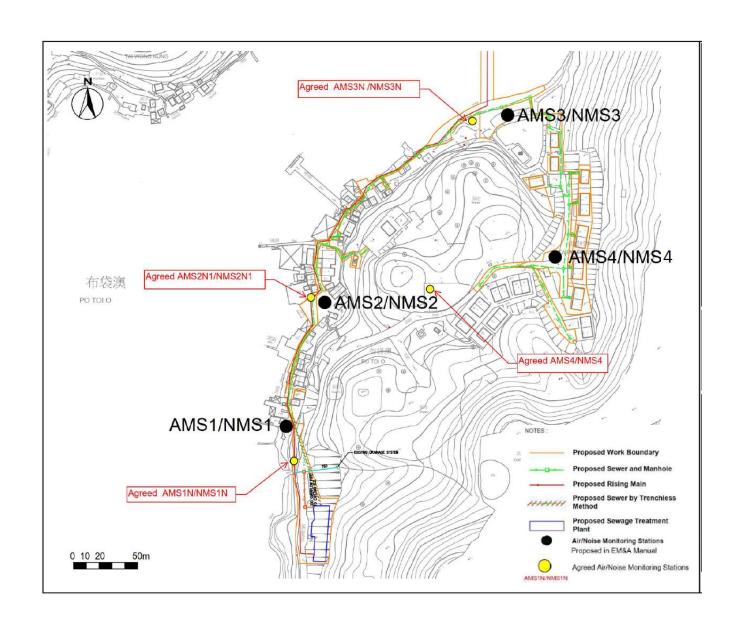






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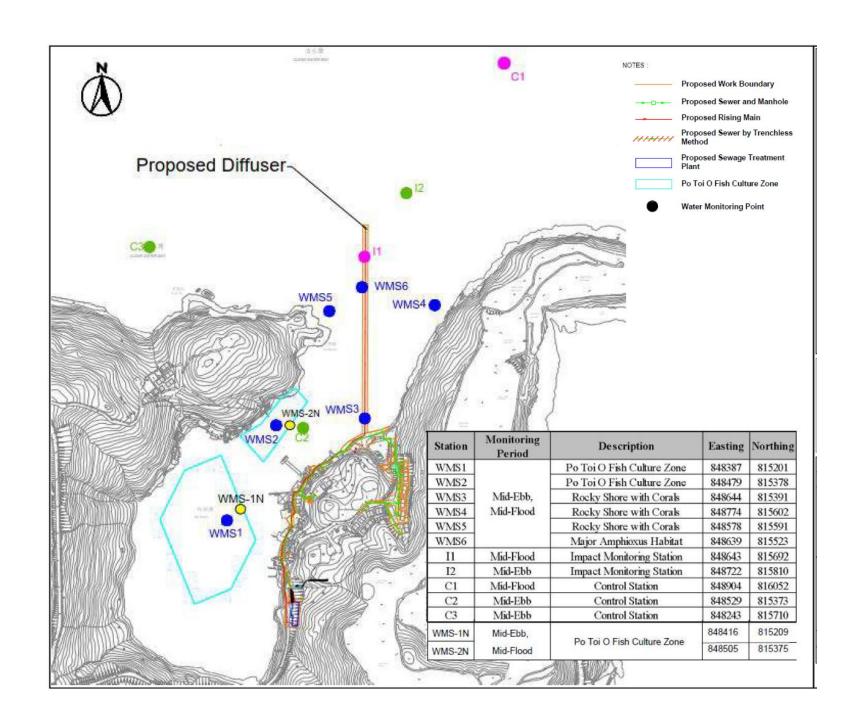
FIGURE 3-1 PROPOSED AIR QUALITY AND NOISE MONITORING STATIONS LOCATIONS





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FIGURE 5-1 LOCATIONS OF WATER QUALITY IMPACT MONITORING STATIONS





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APPENDIX A - PROJECT ORGANIZATION CHART

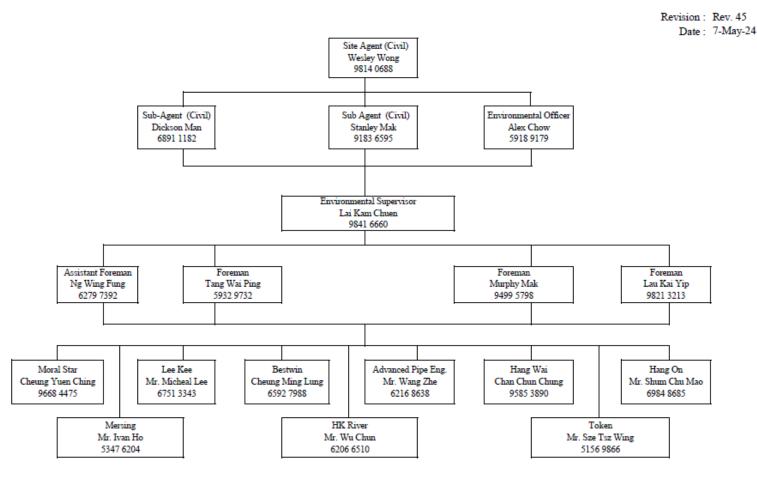


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Appendix 1

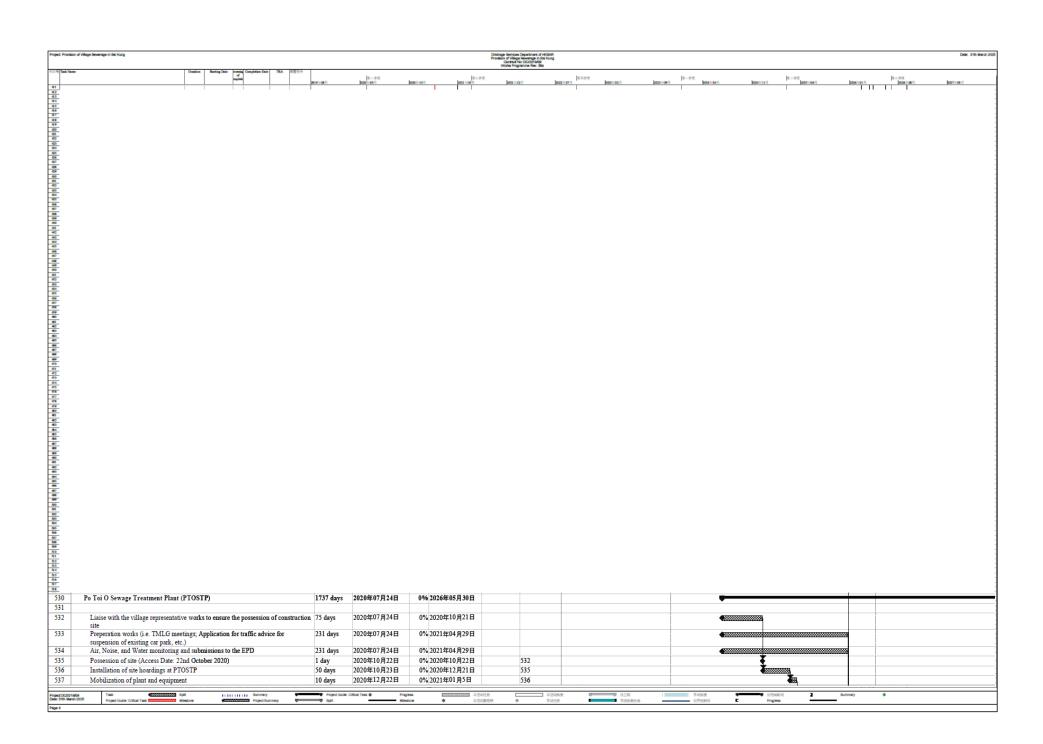
Environmental Organization Chart





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APPENDIX B - CONSTRUCTION PROGRAMME



Project Provision of Village Severage in Set Kung Date: 31th March 2005 Prosent of Village Severage in Set Kung Winder Provision of Village Severage in Set Kung Winder Properties Winder Programme Set Winder Program												
SEE THE NA	Duration Starting Date recenting Compt	plotion Date 17	KA 前世俗书	le-ac		15:00	2709		le e	o k-so	k-og	
538	Site clearance	95 days	2021年01月6日	0% 2021年04月29日	537	BLOW.	建五余 度	*	16-6	E-89	R-100	
539	Initial survey, UU detection and permit-to-dig	95 days	2021年01月6日	0% 2021年04月29日	537			*				
540		L										
541 542	Preparation for geotechnical submissions (topographic survey)	7 days	2021年04月30日	0% 2021年05月8日	538,539,533,53			•				
543	Liaison work with Po Toi O Villagers due to Feng Shui	30 days	2021年05月10日	0%2021年06月15日	541			<u>*</u>				
544		90 days	2021年05月16日	0% 2021年09月30日	543			•	 Z.			
545	Pending EPD's Endot sement of Deaned Landscape Plan	90 uays	2021-100/11011	0/8/2021-1-09/13013	343				****			
546	Slope cutting (Total 2850 m3 solid materials to be removed, i.e. about 4275 m3 loosen materials. 25m3 loosen materials to be removed per day, i.e. 4-5 trips of	450 days	2021年11月25日	0%2023年06月5日								
	loosen materials. 25m3 loosen materials to be removed per day, i.e. 4-5 trips of	1								·		
547	dumping per day). Geologist inspection and rock joint mapping. Installation of rock dowl (include drilling, rebar installation and grouting, etc.)	180 days	2023年01月6日	0%2023年08月16日	546FS-120 day				_			
548		21 days	2024年10月7日	0%2023年08月16日	340F 5-120 day						*	
549		14 days	2024年10月7日	0%2024年10月31日	548							
550	Unforseen graveyard on PTO slope	1 day	2024年11月18日	0%2024年11月18日	549							
551		125 days	2024年11月19日	0% 2025年04月24日	550							
552		l day	2025年04月25日	0% 2025年04月25日	551							
553	Material ordering, method statement material testing and submission and ICE	105 days	2025年04月26日	0% 2025年08月30日	552							
554		21 days	2025年09月1日	0% 2025年09月24日	553							
555		30 days	2025年09月25日	0% 2025年11月1日	554							
556 557	Erection of pole	14 days	2025年11月3日	0% 2025年11月18日	555							
557		14 days 70 days	2025年11月19日 2025年12月5日	0% 2025年12月4日 0% 2026年03日3日	556 557							
559		150 days	2023年12月5日 2023年08月17日	0% 2026年03月3日 0% 2024年02月17日	546,547						₩	
560	Excavation from +13.25 Mpd to -1.20 Mpd (Total 2150 m3 solid materials to be	202 days	2024年02月17日	0%2025年02月17日	559							
500	removed, i.e. about 3225m3 loosen materials. 25m3 loosen materials to be removed	202 days	-02/7171	3.0200-TV2/112D	235							
	per day, i.e. 4-5 trips of dumping per day)											
561			2025/2025/20	AN 2007 H AC 877								
562 563	Construction of EQ Tank and Wet Well I (-2.57 to -0.35mPD)	96 days 30 days	2025年02月13日 2025年02月13日	0% 2025年06月12日 0% 2025年03月19日								
564		4 days	2025年02月13日 2025年02月13日	0% 2025年03月19日 0% 2025年02月17日	560		-					
565	Erection of formwork Rebar fixing	4 days 6 days	2025年02月13日 2025年02月18日	0%2025年02月17日 0%2025年02月24日	564							
566	Preparation works for concreting	5 days	2025年02月15日	0%2025年03月1日	565							
567	Close up formwork	4 days	2025年03月3日	0%2025年03月6日	566							
568	Concreting	1 day	2025年03月7日	0% 2025年03月7日	567							
569	Exact formwork	3 days	2025年03月8日	0% 2025年03月11日	568							
570	Curing	7 days	2025年03月12日	0% 2025年03月19日	569							
571	II (-0.35 to +2.23mPD)	25 days	2025年03月8日	0% 2025年04月7日								
572	Erection of formwork	4 days	2025年03月8日	0% 2025年03月12日	568							
573		3 days	2025年03月13日	0% 2025年03月15日	572							
574 575		4 days 3 days	2025年03月17日 2025年03月21日	0% 2025年03月20日 0% 2025年03月24日	573 574		-					
576		3 days 1 day	2025年03月21日 2025年03月25日	0%2025年03月24日 0%2025年03月25日	574							
577		3 days	2025年03月25日	0%2025年03月25日	576							
578	Curing	7 days	2025年03月29日	0%2025年04月7日	577							
579	III (+2.23 to +5.65mPD)	34 days	2025年02月18日	0% 2025年03月28日								
580	Erection of formwork III (+2.23 to +5.98mPD)	5 days	2025年02月18日	0% 2025年02月22日	564							
581	Rebar fixing	6 days	2025年02月24日	0% 2025年03月1日	580							
582		6 days	2025年03月3日	0% 2025年03月8日	581							
583		6 days	2025年03月10日	0% 2025年03月15日	582							
584 585	Concreting Remove formwork	1 day 3 days	2025年03月17日 2025年03月18日	0% 2025年03月17日 0% 2025年03月20日	583 584				_			
586	Curing	7 days	2025年03月18日	0% 2025年03月20日	585							
587		23 days	2025年03月3日	0% 2025年03月28日	363							
588		4 days	2025年03月3日	0% 2025年03月6日	581							
589	Rebar fixing	3 days	2025年03月7日	0% 2025年03月10日	588							
590	Preparation works for concreting	3 days	2025年03月11日	0% 2025年03月13日	589							
591		2 days	2025年03月14日	0% 2025年03月15日	590							
592	Concreting	l day	2025年03月17日	0% 2025年03月17日	591							
593 594	Exact formwork	3 days	2025年03月18日	0% 2025年03月20日 0% 2025年03月28日	592 593							
594	Curing Water Test	7 days 14 days	2025年03月21日 2025年05日10日	0% 2025年03月28日 0% 2025年05月26日	593 606							
		14 days	2025年05月10日	0%2025年05月20日	595				-			
596 598	Construction of Basement	113 days	2025年03月27日	0%2025年07月3日	(35)		ï	'n			i	
599	V Basement Slab (+5.65 to +7.23mPD)	40 days	2025年03月18日	0% 2025年05月9日								
600	Exection of formwork	7 days	2025年03月18日	0%2025年03月25日	592							
601	Raber fixing	7 days	2025年03月26日	0% 2025年04月2日	600							
602	Preparation works for concreting	7 days	2025年04月3日	0% 2025年04月11日	601							
603	Close up forumverk	6 days	2025年04月12日	0% 2025年04月22日	602							
604	Concreting	1 day	2025年04月23日	0%2025年04月23日	603							
605	Exact formwork	5 days	2025年04月24日	0% 2025年04月29日	604							
606	Curing	7 days	2025年04月30日	0% 2025年05月9日	605							
607		31 days	2025年04月24日	0% 2025年06月2日								
608	Exection of formwork	5 days	2025年04月24日	0%2025年04月29日	604							
609		5 days	2025年04月30日	0% 2025年05月7日 0% 2025年05月12日	608							
610	Preparation works for concreting	4 days										
611 612		4 days	2025年05月13日 2025年05月17日	0% 2025年05月16日 0% 2025年05月17日	610 611		-					
613	Concreting Exact formwork	1 day	2025年05月17日 2025年05月19日	0%2025年05月17日 0%2025年05月23日	612							
613		5 days	2025年05月19日 2025年05月24日	0%2025年05月23日 0%2025年06月2日	612							
		7 days	2025年05月24日 2025年02月13日	0%2025年06月2日 0%2025年03月19日	613 560							
615		30 days			360		<u> </u>				<u> </u>	
Project DC0001 Date: 31th Mar	Spin Task Community Spin 111111111111111111111111111111111111			roject Guide: Officel Task 💠	Progress CC	#30H#	13399	₹ (KIR		FRANK COMMITTEE SAME	nacy &	
Page 4	ch 2025 Project Guide Critical Task Commonwell Milestone	Project Summary	• •	pit	Miestore •	132ES1 0	节心压药	下255至836		(CRIDINI E Progress		
regard												

protein of things leadings in the found young leadings to										Dete: 31th March					
20 6 Tank No.	Dustion Stating Date consist Company	deline Date 17	KA REGS		E-0-9	book to 1		国際を受 	poca in copilij	populiros ()	E-RE SCHLINE	boosti 11 Fl	第二条校 (0005/106/)	E=+0-00 accelerate	boor in on it
616	VII Basement Wall & Ground floor slab (+9.18 to +12.18mPD)	38 days	2025年05月19日	096 2	025年07月3日	page 100 y	past to the	prose traini	postinary	page 100 1	porton	posterin	patrioti	page (1917) page (1907)	portury
617	Erection of formwork	5 days	2025年05月19日	0% 2	1025年05月23日	612									
618	Rebar fixing	5 days	2025年05月24日	0% 2	1025年05月29日	617									
619	Preparation works for concreting	4 days	2025年05月30日	0% 2	1025年06月4日	618									
620	Delivery plant, material to installation of deodorisation tank	l day	2025年06月5日	0% 2	1025年06月5日	619									
621 622	Close up formwork Concreting	10 days 1 day	2025年06月6日 2025年06月18日	0% 2	1025年06月17日 1025年06月18日	620 621									
623	Concreting Exact formwork	1 day 3 days	2025年06月18日	0% 2	1025年06月18日	622									
624	Curing	12 days	2025年06月19日	0% 2	1025年07月3日	622									
625	Cumg	12 days	202340071311	0782	023401751	022									
626	Construction of R.C. walls at 1st Floor	21 days	2025年06月19日	096 2	025年07月14日										
627	VIII (+12.18 to +16.36mPD)	21 days	2025年06月19日	096 2	025年07月14日										
628	Erection of formwork	4 days	2025年06月19日		1025年06月23日	622									
629	Rebar fixing	4 days	2025年06月24日	0% 2	1025年06月27日	628									
630	Preparation works for concreting	3 days	2025年06月28日	0% 2	025年07月2日	629									
631		3 days	2025年07月3日	0% 2	1025年07月5日	630									
632	Concreting	1 day	2025年07月7日		1025年07月7日	631									
633 634	Exact formwork	5 days 6 days	2025年07月8日 2025年07月8日		1025年07月12日 1025年07月14日	632 632									
635	Curing Construction of rooftop (above + 16.36 mPD)	39 days	2025年07月8日	0% 2	2025年07月14日	032									
636	Construction of roottop (above + 10.30 mrD) Erection of formwork		2025年07月8日	090 2	1025年07月12日	632									
637	Rebar fixing	5 days 5 days	2025年07月14日	0% 2	025年07月12日	636					+				
638	Preparation works for concreting	5 days	2025年07月19日	0%2	1025年07月24日	637					1				
639	Close up formwork	5 days	2025年07月25日	0% 2	025年07月30日	638									
640	Concreting	1 day	2025年07月31日	0% 2	025年07月31日	639									
641	Exact formwork	4 days	2025年08月1日	0% 2	1025年08月5日	640									
642	Curing	12 days	2025年07月31日		1025年08月13日	639									
643	Temp work removal	7 days	2025年08月14日	0% 2	1025年08月21日	642									
644 645	Water Test Water test 1	59 days 15 days	2025年06月16日 2025年06月16日	096 2	1025年08月23日 1025年07月3日										
646	Water test 1 Water test 2		2025年00月10日		1025年07月3日 1025年07月21日	645									
647		15 days	2025年07月4日		1025年07月21日	646									
648	Water test 3 Dewatering &Falsework removal	15 days 14 days	2025年07月22日		1025年08月23日	647									
649	External Finishes	90 days	2025年08月22日	0% 2	025年12月8日	643									
650	Internal Finishes (incl. installation of Door & Window etc)	60 days	2025年08月22日	096 2	025年11月3日	643									
651	Waterproof for tank	14 days	2025年08月22日		025年09月6日	927									
652	Waterproof for roof	30 days	2025年08月22日	0% 2	1025年09月25日										
653	Screeding for basement	7 days	2025年09月15日	0% 2	1025年09月22日	657									
654	Screeding for ground floor	7 days	2025年09月23日	0% 2	1025年09月30日	653									
655	Screeding for roof	7 days	2025年09月26日	0% 2	1025年10月4日	652									
656	Louver, door and roller shutter installation	60 days	2025年08月22日		1025年11月3日										
657 658	FRP cover installation other associated works	20 days 312 days	2025年08月22日 2025年03月26日	0% 2	025年09月13日 026年04月17日										
			2025年08月1日	096 2	026年04月17日	640									
659 660	Drainage works Construction of rising main by open trench method	60 days 60 days	2025年03月1日	0% 2	1025年10月11日	576									
661	Temp. Relocation of RCP	15 days	2025年07月14日	0% 2	1025年07月30日	310									
662	Boundary Wall	60 days	2025年10月13日	0% 2	1025年12月22日	659									
663	Slope of U channel	60 days	2025年06月19日	0% 2	025年08月28日	622									
664	Roadworks & U-Channel	90 days	2025年12月23日	0%	2026年04月17日	662	i i							İ	
665	Permanent Relocation of RCP	30 days	2026年02月26日	0%	2026年04月1日	664SS+50 days									
666	E&M works for site access date	54 days	2025年06月23日		2025年08月25日										
667	Rasement	1 day	2025年06月23日		2025年06月23日	623									
668	Ground Floor	1 day	2025年07月29日		2025年07月29日										
669	Water Tank	1 day	2025年08月25日		2025年08月25日	648					1				
670	Utilities	368 days	2025年01月25日	00%	2026年04月27日	V70									
671	Telecommunication	198 days	2025年06月6日		2026年01月30日										
672	Electricity Supply (CLP)	287 days	2025年00月0日		2026年01月30日										
673	Water Supply	178 days	2025年06月9日		2026年01月14日										
	Water Supply Fire Service		2025年11月27日		2026年01月9日										
674		120 days	2025年11月27日 2025年02月14日		2026年04月27日										
675	Material Delivery to Site	135 days													
676	Installation (300 days)	226 days	2025年06月23日		2026年03月24日	600									
677	Installation & Test & commissioning	190 days	2025年06月23日		2026年02月6日	623					-				
678	System commissioning / MBR process start up	36 days	2026年02月7日		2026年03月24日	677									
679	Plant commissioning (60 days)	52 days	2026年03月25日	0%	2026年05月30日	678									
680															
681															
682															
683															
684	Construction of PTO Village Sewerage	1692 days	2020年07月24日	0%	2026年04月1日			-			+				
685	Liaise with the village representatives	90 days	2020年07月24日		2020年11月9日			-	00000						
686	Initial survey and photo-taking	90 days	2020年08月26日		2020年12月11日	685SS+28 days									
687	UU Detection and application for permit-to-dig	90 days	2020年09月21日		2021年01月9日	686SS+22 days		LM000						1	
688	o o Description and application for beaming and	Julya	2020-1-1-7-1-1-1	0/6/	1	00033-22 tillys									
689	Trial pit excavation (Access Date of PTO-B1-01: 22nd Oct 2020)	90 days	2020年10月22日	09/	2021年02月8日	687\$\$+25 days									
690	The process and values of the control of the contro	- v unja	2020410942213	0.76		varaaraa days			,						
		100.1	2020/011 0120	0.0	2021 (#06 E24 E	coopp. 0.					_				
691	Producing Layout plans showing the loction of terminal manholes, timber box and	180 days	2020年11月17日	0%	2021年06月24日	689SS+21					800				
	alignment of sewers and other associated preparation works			+		days									
602											1			1	
692	Linion work with DTO Villagers due to Pero Chair	9.4 da	2020/E12 E22 C	0.97	0031/E04 P 5 D	60100±20.2				-					
692 693	Liaison work with PTO Villagers due to Feng Shui	84 days	2020年12月22日		2021年04月5日 Br. Officel Tests &	691SS+30 days	#20055 #20 <u>4</u> 888 ◆	#2556 P	OIR T-25/204		事动构象 似开始射用	♥ Gifb6	원리 3	Sumary &	

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(-6) Task Name	Dustion Stating Date country Comp of specific	letine Date 1	TA 新世任书	E = 0.5 cool: cs/)		Works Programme Ho pass in on i) pass in sz i)	EXA9	16-0-9		
695	PTO-SW-03 (Open Trench, 25 nos., Length: 360m)	424 days	2021年08月13日	0% 2023年01月14日	\$000 is 10 ii)		pezz ii ar i j pezs ii az i j	page (1 op ()		
696	Installation of fencing (PTO 001 - PTO 017)	2 days	2021年08月13日	0% 2021年08月14日	693			1 1		<u> </u>
697	Temporary diversion of existing sewerage	15 days	2021年08月16日	0%2021年09月1日	4 696					
698		120 days	2021年09月2日	0% 2022年01月26日	697					
699	Tapping sewer + timber box	45 days	2022年01月27日	0% 2022年03月23日	698				4	
700	Installation of fencing (PTO 018 - PTO 026A)	2 days	2022年03月24日	0%2022年03月25日	699				<u> </u>	
701		15 days	2022年03月26日	0% 2022年04月13日	3 700				&	
702		120 days	2022年04月14日	0% 2022年09月7日	701					
703		45 days	2022年09月8日	0%2022年11月2日	702				-	
704 705	Air testing Reinstatement Works	30 days 30 days	2022年11月3日 2022年12月8日	0% 2022年12月7日 0% 2023年01月14日	703 704					
706	Reinstatement works	50 days	2022年12月8日	0%2023年01月14日	/04					•
707	PTO-SW-02 (Trenchless, 18nos. Manhole(148m), and a Section of Rising Main)	179 days	2023年08月31日	0% 2024年04月10日						-
708	Installation of fencing (PTO 050 - PTO 057)	2 days	2023年08月31日	0%2023年09月1日	730					•
709	Temporary diversion of existing sewerage	8 days	2023年09月2日	0% 2023年09月11日	4 708					t
710	Construction of sewer pipe, manhole and rising main by open trench	60 days	2023年09月12日	0% 2023年11月23日	709					
711	(Downstream to Upstream, including chambers for rising main)	0.4	2022 11 24	04/ 0003 10 2	710					
11	Tapping sewer + timber box	8 days 2 days	2023年11月24日 2023年12月4日	0% 2023年12月2日 0% 2023年12月5日	710 711					
			2023年12月4日 2023年12月6日	0% 2023年12月5日 0% 2023年12月13日						
13 14	Temporary diversion of existing sewerage (PTO 058 - PTO 064)	7 days 60 days	2023年12月0日 2023年12月14日	0% 2023年12月13日 0% 2024年02月28日	3 712 713					
	Construction of sewer pipe, manhole and rising main by open trench (Downstream to Upstream, including chambers for rising main)									
15	Tapping sewer + timber box	7 days	2024年02月29日	0% 2024年03月7日	714					
16		13 days	2024年03月8日	0% 2024年03月22日	715					
17		12 days	2024年03月23日	0% 2024年04月10日	716					
18										
19	PTO 077 01 07 11 10 10 11 070 1 1 1 070 1		2022/2027/2017	04/ 0000 tran = 20 =						
20	PTO-SW-01 (Trenchless, 19 nos. manholes (170m), and rising main(CH2+53.81 - CH4+36.66)	184 days	2023年01月16日	0% 2023年08月30日						<u> </u>
21	Installation of fencing (PTO 032 - PTO 040)	2 days	2023年01月16日	0%2023年01月17日	705					+ *
22	Temporary diversion of existing sewerage	8 days	2023年01月18日	0%2023年01月30日	4 721					Ł
723	Construction of sewer pipe, manhole and rising main by open trench	60 days	2023年01月31日	0% 2023年04月14日	722					*
	(Downstream to Upstream, including chambers for rising main)		2023年04月15日	0%2023年04月26日						
724	Tapping sewer + timber box	10 days		0% 2023年04月26日 0% 2023年04月28日	723					9
25 26	Installation of fencing (PTO 041 - PTO 049) - Trenchless Temporary diversion of existing sewerage	2 days 7 days	2023年04月27日 2023年04月29日	0% 2023年04月28日 0% 2023年05月8日	724 3 725					L
27	Construction of sewer nine, manhole and riving main by onen tranch	60 days	2023年04月29日	0%2023年05月8日	726					1
	(Downstream to Upstream, including chambers for rising main)									***************************************
728	Tapping sewer + timber box	9 days	2023年07月21日	0% 2023年07月31日	727					&
729	Air testing	14 days	2023年08月1日	0%2023年08月16日	728					E
730	Reinstatement Works	12 days	2023年08月17日	0% 2023年08月30日	729					- E
731										
732	PTO-Trechless-01 (Open Trench, (Length: 75m) and related Rising Main) Installation of fencing (PTO 026A - PTO 028)	237 days 2 days	2024年04月11日 2024年04月11日	0% 2025年01月23日 0% 2024年04月12日	717					
734	Temporary diversion of existing sewerage	5 days	2024年04月11日	0% 2024年04月12日	2 733					
735	Excavation of jacking pit and receiving pit	30 days	2024年04月13日	0%2024年04月18日	2 /33					
736	Construction of sewer pipe by trenchless method	71 days	2024年05月27日	0% 2024年08月19日	735					
737	Excavation for tunnel	30 days	2024年05月27日	0% 2024年07月2日						
738	Pipe laying	7 days	2024年07月3日	0% 2024年07月10日	737					
139	Grouting	4 days	2024年07月11日	0% 2024年07月15日	738					
40	Construction of manhole	30 days	2024年07月16日	0% 2024年08月19日	739					
41	Installation of fencing (PTO 026A - PTO 028)	2 days	2024年08月20日	0% 2024年08月21日	740					
742	Temporary diversion of existing sewerage	5 days	2024年08月22日	0% 2024年08月27日	2 741					
43		30 days	2024年08月28日	0% 2024年10月3日	742					
44	Construction of sewer pipe and rising main (Downstream to Upstream) by trenchless method	73 days	2024年10月4日	0% 2024年12月31日	743					
45	Excavation for tunnel	30 days	2024年10月4日	0%2024年11月8日						
46	Pipe laying	8 days	2024年11月9日	0% 2024年11月18日	745					
47	Grouting	5 days	2024年11月19日	0%2024年11月23日	746					
48	Construction of manhole and chambers for rising main	30 days	2024年11月25日	0% 2024年12月31日	747					
49	Air testing	7 days	2025年01月2日	0%2025年01月9日	748					
50	Reinstatement Works	12 days	2025年01月10日 2025年07月4日	0% 2025年01月23日 0% 2026年04月1日	749					
52 53	PTO-Trechless-02 (Trenchless, (Length: 100m) and related Rising Main) Construction of sewer & effuent pipe by trenchless method (PTO063 - 065)	224 days 224 days	2025年07月4日 2025年07月4日	0% 2026年04月1日 0% 2026年04月1日						
	85 m.									
54	Excavation of receiving pit	30 days	2025年08月22日	0% 2025年09月25日	643					
55	TBM set up	30 days	2025年07月4日	0% 2025年08月7日	624					
56 57	Trenchless Excavation Pipe laying	50 days 12 days	2025年09月26日 2025年11月27日	0% 2025年11月26日 0% 2025年12月10日	754 756					
58	Pipe laying Air testing	12 days 1 day	2025年11月27日 2025年12月11日	0% 2025年12月10日 0% 2025年12月11日	750					
59	Grouting	12 days	2025年12月12日	0% 2025年12月27日	758					
60	Construction of manhole (Chambers)	60 days	2025年12月29日	0% 2026年03月12日	759					
51	CCTV	5 days	2026年03月13日	0% 2026年03月18日	760					
62	Reinstatement Works	12 days	2026年03月19日	0% 2026年04月1日	761					
53 54	Testing of PTO Village Sewerage	73 days	2025年12月17日	0% 2026年03月18日						
65	CCTV surveying, T&C (Stage 3)	73 days	2025年12月17日	0% 2026年03月18日	761FF					
66	territoria, and (onge s)	. J unys			70122					
66 67										
68 5	Submarine Outfall by HDD Method with Cofferdam	1047 days	2022年10月29日	0% 2026年05月14日						V
59	Civil Works	560 days	2022年10月29日	0% 2024年09月17日						-
10	Construction of Offshore Cofferdam Installation of sheetpiles and lateral supports	45 days 45 days	2024年07月2日 2024年07月2日	0% 2024年08月22日 0% 2024年08月22日	783FF					
72	Working Platform	560 days	2024年07月2日	0% 2024年08月22日	/63FF					
73	Construction of Onshore Working Platform + Mud Pit + Deadman Anchor	168 days	2022年10月29日	0% 2023年05月25日						
74 75	Complete Diversion of CLP Cable	59 days	2023年06月1日	0% 2023年08月10日	773					***************************************
75	Dismantling of Onshore Working Platform	75 days	2024年06月21日	0% 2024年09月17日	779					
		Sunnery		Project Guide: Officel Task &						

ESSET-AV	ion of Village Severage in Sei Kung					Çra Çra	inage Services Department of HKSAR					Cela: 31
			-				inage Services Department of H909AR vision of Village Sewanage in Six Kung Context No: D001011989 Visoha Programme Rev. 58a					
	Dustion Saring Dain	of mplots	INA STEAM	E=01	pope is no			(c) populi (c) (i	possince () possince ()	K=#/R some(conf) some(conf)	Paginger bookings	Exiling bookings () bookings ()
776	Mobilzation And Demobilization	254 days	2023年08月11日 2023年08月11日	0% 2024年06月20日 0% 2023年09月5日	774) page 1001)	post in terry possession ry	post real-	postery	post in pa	position)	
777 778 779	Mobililization of HDD Plant and Machineries to Hong Kong Site Mobilization of HDD plant and Machinery to Site	22 days 11 days	2023年09月6日	0%2023年09月18日	777							
779	Demobilization of HDD Plant And Machinery from Site	14 days	2024年06月4日	0% 2024年06月20日	790							_
780 781 782	HDD WORKS Plant And Machinery Setting Un	192 days 50 days	2023年10月9日	0% 2024年06月3日 0% 2023年12月6日								
782	Plant And Machinery Setting Up Installation of Paratrack Cable	7 days	2023年11日29日	0% 2023年12月6日	781FF							•
783 784	Pilot Hole Drilling Installation Exit Casing - as required	32 days 14 days	2024年01月24日 2024年03月5日	0% 2024年03月4日 0% 2024年03月20日	782 783							
785	Plug Tunnel At Exit Site	7 days	2024年03月21日	0% 2024年03月28日	784							
786 787	Hole Cleaning - Pass 1 Hole Cleaning - Pass 2	7 days 7 days	2024年04月2日 2024年04月11日	0% 2024年04月10日 0% 2024年04月18日	785 786							
. 788	Pipe Pulling @ 48m/day	9 days	2024年04月19日	0% 2024年04月29日	787							
789 790	Pipe Testing Dismantle	14 days 14 days	2024年04月30日 2024年05月18日	0% 2024年05月17日 0% 2024年06月3日	788 789							
791	Construction of Diffuser Manifold	335 days	2025年03月25日	0% 2026年05月14日	789							
792 793	VEP application Installation of silt curtain	140 days 25 days	2025年03月25日 2025年09月13日	0% 2025年09月12日 0% 2025年10月14日	792							
793	Dreadging of marine deposit	60 days	2025年10月15日	0% 2025年12月24日	793							
795	Installation of diffuser manifold	45 days	2025年12月27日	0% 2026年02月21日	794							
797	Reinstatement of the seabed Installation of Marker Buoy	40 days 25 days	2026年02月23日 2026年04月15日	0% 2026年04月14日 0% 2026年05月14日	795 796							
798												
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APPENDIX C - METEORLOGICAL DATA



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August 2025 Meterological data

			ŀ	long Kong O	bservate	ory			King's Park	Waglan Is	land^
Day	Mean Pressure (hPa)	Absolute Daily Max (deg. C)	Mean (deg. C)	Absolute Daily Min (deg. C)	Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Total Bright Sunshine (hours)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
01	1000,3	33,2	30,1	28,6	25,9	79	85	3,0	***	***	***
02	1002.9	30,1	28,1	26,3	26,3	90	95	109.0	***	***	***
03	1003.1	30.2	29.2	25,5	26,5	86	89	47.5	***	***	***
04	1003,6	30,0	28,8	26,1	26,6	88	93	72,2	***	***	***
05	1005,4	29.2	27.1	24,0	25,6	92	97	368,9	***	***	***
06	1007.7	30.1	27.5	25,5	25.1	87	90	6.8	***	***	***
07	1009,3	32,9	29,3	26,8	25,4	80	81	0,0	***	***	***
80	1008,7	32,9	29,8	27.6	25,6	79	45	0,0	***	***	***
09	1007.8	33.8	30.1	28.0	25.7	78	44	0.0	***	***	***
10	1006.9	34.4	30.5	28.6	25.9	77	68	0.0	***	***	***
11	1006,3	32,5	29,7	28,1	25,3	77	78	0,3	***	***	***
12	1006,9	32.6	29,8	27.7	25,3	77	82	8,5	***	***	***
13	1005.6	33.0	30.1	28.3	25.5	77	84	0.0	***	***	***
14	1005,5	29,5	26,3	24.4	24,8	91	95	117.4	***	***	***
15	1008,9	30.2	27.5	25,5	24.8	86	79	4.3	***	***	***
16	1008.5	32.8	29.3	27.4	24.5	76	74	0.0	***	***	***
17	1009,0	30,2	27,3	25,6	24,4	84	92	41,5	***	***	***
18	1010.4	28,4	26,6	25,4	25,2	92	91	80.1	***	***	***
19	1010.9	27.9	27.1	25.4	26.0	94	94	68.9	***	***	***
20	1010,7	32,2	29,0	27,1	25,5	82	86	0,2	***	***	***
21	1011.4	33,3	29,6	27.9	25,5	79	82	0.0	***	***	***
22	1009.9	32.7	29.7	27.3	23,6	71	82	0.0	***	***	***
23	1008,5	33,6	30,0	27,6	24,5	73	82	0,2	***	***	***
24	1009,6	31.7	29,6	28,5	25,5	79	88	0,0	***	***	***
25	1010.2	31.3	29.4	28,3	24.7	76	88	0.1	***	***	***
26	1009.7	34.2	30.3	28.0	24.6	72	65	0.0	***	***	***
27	1008,3	32.7	29,8	27.7	24.6	74	65	0,0	***	***	***
28	1008,1	30.6	28,9	26,0	24.3	77	85	2.7	***	***	***
29	1009.3	33.0	30.2	28.9	24.6	72	80	0.5	***	***	***
30	1010,3	31,9	29.4	27,6	25,0	77	85	7.1	***	***	***
31	1009.4	33.0	29,8	28,1	24.9	75	77	0.0	***	***	***
Mean/Total	1007.8	31.7	29.0	27.0	25.2	81	81	939.2	***	***	***
Climatological Normal ²	1005,2	31.3	28.7	26.7	25.1	81	70	453,2	182.1	230	18,8



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APPENDIX D - AIR QUALITY MONITORING EQUIPMENT CALIBRATION CERTIFICATES



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東業德勤測試顧問有限公司 **ETS-TESTCONSULT LTD.**

Date

TEST REPORT

Internal Calibration Report

of **Dust Monitor**

Manufacturer : SIBATA (LD-3B)

Date of Calibration

10 July 2025

Serial No.

: 014746 (ET/EA/001/06)

Calibration Due Date :

09 September 2025

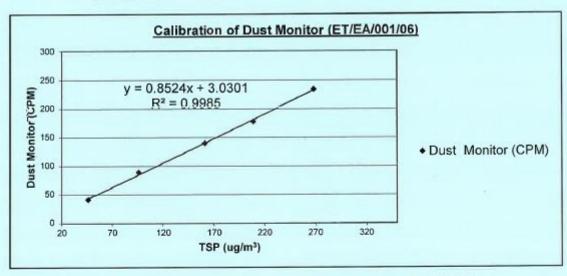
Method

: Parallel measurement (Five-point calibration) by placing the Dust Monitor

and High Volume Air Samper together under the same environmental condition

Results

Dust Monitor (CPM)	40	89	140	178	233
TSP (ug/m ³)	46	96	161	209	268
High Volume Air Sampler Serial No.:1180	Calibration Due Date: 02 August 2025				



Acceptance Criteria:

Correlation coefficient (r) of the calibration curve greater than 0.990 after

five-point calibration.

The Dust Trak Monitor complies * / does not comply * with the internal calibration procedures and is deemed acceptable */ unacceptable * for use.

Calibrated by:

CHENG, Hei Man (Technician)

Checked by

Guy, Kong Ping (Laboratory Manager)



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Works at Po Toi O	

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東業德勤測試顧問有限公司 ETS-TESTCONSULT LTD.

Date

TEST REPORT

Internal Calibration Report

of **Dust Monitor**

Manufacturer : SIBATA (LD-3B)

Date of Calibration

: 10 July 2025

Serial No.

: 155331 (ET/EA/001/09)

Calibration Due Date

: 09 September 2025

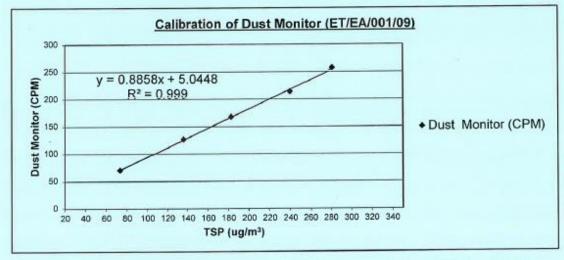
Method

: Parallel measurement (Five-point calibration) by placing the Dust Monitor

and High Volume Air Samper together under the same environmental condition

Results

Dust Monitor (CPM)	69	127	168	214	256
TSP (ug/m³)	73	136	183	240	281
High Volume Air Sampler Serial No.; 9795	Calibration Due Date: 01 August 2025				25



Acceptance Criteria:

Correlation coefficient (r) of the calibration curve greater than 0.990 after a five-point calibration

The Dust Trak Monitor complies * / does not comply * with the internal calibration procedures and is deemed acceptable */ unacceptable * for use.

Calibrated by:

CHENG, Hei Man

(Technician)

Guy Kong Ping Ki (Laboratory Manager)



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東業德勤測試顧問有限公司 **ETS-TESTCONSULT LTD.**

TEST REPORT

Internal Calibration Report

of **Dust Monitor**

Manufacturer : SIBATA (LD-3B)

Date of Calibration :

10 July 2025

Serial No.

597340 (ET/EA/001/14)

Calibration Due Date:

09 September 2025

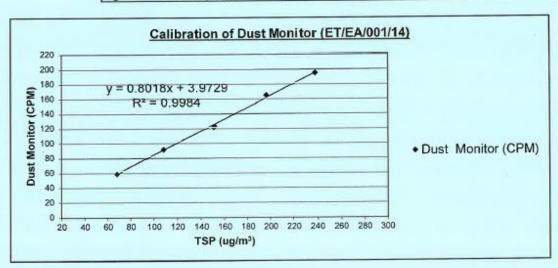
Method

Parallel measurement (Five-point calibration) by placing the Dust Monitor

and High Volume Air Samper together under the same environmental condition

Results

Dust Monitor (CPM)	59	91	122	164	194
TSP (ug/m ³)	68	108	151	196	238
High Volume Air Sampler Serial No.: 1174	4 Calibration Due Date: 02 August 2025				



Acceptance Criteria:

Correlation coefficient (r) of the calibration curve greater than 0.990 after a five-point

calibration

The Dust Trak Monitor complies * / does not comply * with the internal calibration procedures and is deemed acceptable */ unacceptable * for use.

Calibrated by

CHENG, Hei Man (Technician)

Checked by

Guy Kong Ping K (Laboratory Manager)



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Date Sep 25



東業德勤測試顧問有限公司 **ETS-TESTCONSULT LTD**

TEST REPORT

Internal Calibration Report

of **Dust Monitor**

Manufacturer : SIBATA (LD-3B)

Date of Calibration :

10 July 2025

Serial No.

: 597227 (ET/EA/001/15)

Calibration Due Date:

09 September 2025

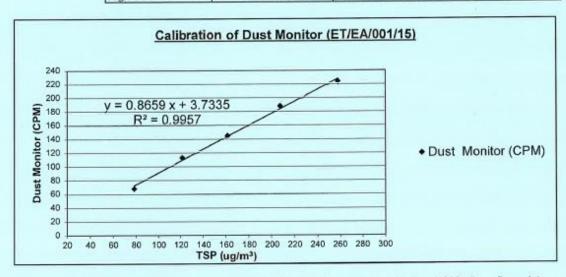
Method

: Parallel measurement (Five-point calibration) by placing the Dust Monitor

and High Volume Air Samper together under the same environmental condition

Results

Dust Monitor (CPM)	67	112	144	187	223
TSP (ug/m³)	78	121	161	207	258
High Volume Air Sampler Serial No.: 2483	Calibration Due Date: 02 August 2025				



Acceptance Criteria:

Correlation coefficient (r) of the calibration curve greater than 0.990 after a five-point calibration

The Dust Trak Monitor complies * / does not comply * with the internal calibration procedures and is deemed acceptable */ unacceptable * for use.

Calibrated by

CHENG, Hei Man (Technician)

Checked by

(Laboratory Manager)



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東業德勤測試顧問有限公司 **ETS-TESTCONSULT LTD.**

BIF Block B, Activitiong Industrial Centra 34-36 Au Pul Wen Street. Fo Tan, Hong Kong

TEST REPORT

Calibration Report

of

High Volume Air Sampler

Manufacturer : Graseby GMW Date of Calibration

: 03 June 2025

Serial No.

: 1180 (ET/EA/003/04)

Calibration Due Date : 02 August 2025

Method

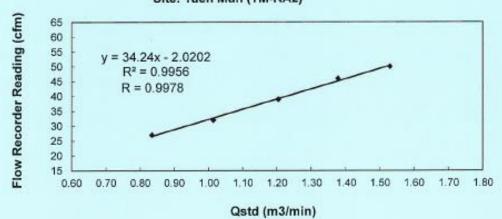
: Based on Operations Manual for the 5-point calibration using standard calibration kit

manufactured by Tisch TE-5025 A

Results

Flow recorder re	ading (cfm)	50	46	39	32	27
Qstd (Actual flow	v rate, m³/min)	1.53	1.38	1.20	1.01	0.84
Pressure:	752.46	mm Hg	Temp.:	302	К	

Sampler 1180 Calibration Curve Site: Tuen Mun (TM-RA2)



Acceptance Criteria: Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration

The high volume sampler complies* / does not comply* with the specified requirements and is deemed acceptable unacceptable * for use.

Calibrated by

To, Kwan Yir

Checked by

(Technician) (Environmental Team Leader)

LAU, Chi Leung



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東業德勤測試顧問有限公司 ETS-TESTCONSULT LTD.

8/F Block 8, Veristrong Industrial Centre, 34-36 Au Pui Wan Street, Fo Tee Hong Kong

Date

T: +852 2895 8318 F: +852 2895 3044 E: ett@ets-testconsult.com

TEST REPORT

Calibration Report of High Volume Air Sampler

Manufacturer

: Graseby GMW

Date of Calibration

: 02 August 2025

Serial No.

: 1180 (ET/EA/003/04)

Calibration Due Date

01 October 2025

Method

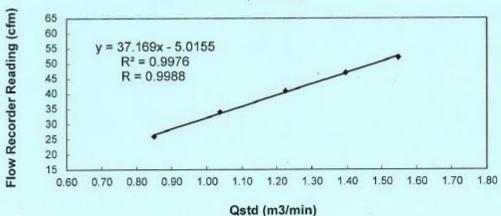
: Based on Operations Manual for the 5-point calibration using standard calibration kit

manufactured by Tisch TE-5025 A

Results

Flow recorder re-	ading (cfm)	52	47	41	34	26
Qstd (Actual flow	rate, m³/min)	1.55	1.40	1.23	1.04	0.85
Pressure:	752.24	mm Hg	Temp.:	301	K	

Sampler 1180 Calibration Curve Site: Tuen Mun (TM-RA2)



Acceptance Criteria: Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration

The high volume sampler complies* / does_not_comply* with the specified requirements and is deemed acceptable unacceptable * for use.

Calibrated by

MAK, Kei Wai (Assistant Supervisor) Checked by

LAU, Chi Leung

(Environmental Team Leader)



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&F Block B, wistrong Industrial Centre 34-36 Au Pui Wan Street, Fo Tan, Hong Kong

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TEST REPORT

Calibration Report of High Volume Air Sampler

Manufacturer

: Graseby GMW

Date of Calibration

: 03 June 2025

Serial No.

: 1174 (ET / EA / 003 / 08)

Calibration Due Date

: 02 August 2025

Method

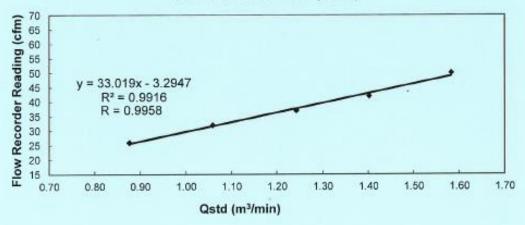
Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the Operations

Manual

Results

Flow recorder reading (cfm)		50	42	37	32	26
Ostd (Actual flow rate, m ³ /min)		1.58	1.40	1.24	1.06	0.88
Pressure:	752.46 mm H	lg .	Temp.:	302	К	

Sampler 1174 Calibration Curve Site: Tuen Mun CWSF (TM1a)



Acceptance Criteria: Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration.

The high volume sampler complies* / dees not comply* with the specified requirements and is deemed acceptable* / unacceptable* for use.

Calibrated by:

To, Kwan Yin (Technician) Checked by

LAU, Chi Leung

(Environmental Team Leader)



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TEST REPORT

Calibration Report of High Volume Air Sampler

Manufacturer

Graseby GMW

Date of Calibration

: 02 August 2025

Serial No.

1174 (ET / EA / 003 / 08)

Calibration Due Date

: 01 October 2025

Method

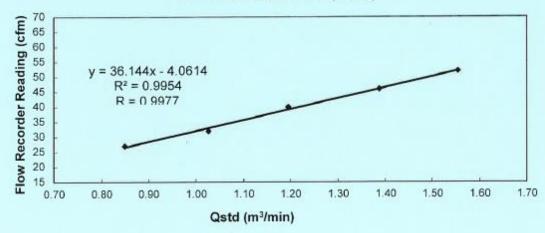
Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the Operations

Manual

Results

Flow recorder reading (cfm)	52	46	40	32	27
Qstd (Actual flow rate, m3/min)	1.55	1.39	1.20	1.03	0.85
Pressure: 752.24	mm Hg	Temp.:	301	K	

Sampler 1174 Calibration Curve Site: Tuen Mun CWSF (TM1a)



Acceptance Criteria: Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration,

The high volume sampler complies* / does not-comply* with the specified requirements and is deemed acceptable* / unacceptable* for use.

Calibrated by

(Assistant Supervisor)

Checked by

LAU, Chi Leung

(Environmental Team Leader)



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TEST REPORT

Calibration Report of High Volume Air Sampler

Manufacturer

: Graseby 105

Date of Calibration

: 02 June 2025

Serial No.

: 9795 (ET/EA/003/18)

Calibration Due Date

01 August 2025

Method

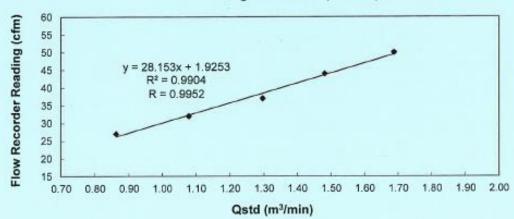
: Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the

Operations Manual

Results

Flow recorder reading (cfm) Qstd (Actual flow rate, m³/min)		50	44	37	32	27
		1.69	1,48	1.30	1.08	0.86
Pressure:	751.71 mm Hg		Temp.:	302	к	

Sampler 9795 Calibration Curve Site: Tseung Kwan O 137 (TKO-A1)



Acceptance Criteria: Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration

The high volume sampler complies* / does not comply* with the specified requirements and is deemed acceptable*/ unacceptable* for use.

Calibrated by

To, Kwan Yin (Technician) Checked by :

LAU, Chi Leung

(Environmental Team Leader)



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東業德勤測試顧問有限公司 ETS-TESTCONSULT LTD.

8/F Black B, Veristrong Industrial Centre, 34-36 Au Pui Wan Street, Fo Tan, Hong Kong

Date

T: +852 2695 8318 F: +862 2695 3944 E: eli@ets-testconsult.com

TEST REPORT

Calibration Report of

High Volume Air Sampler

Manufacturer

: Graseby 105

Date of Calibration

01 August 2025

Serial No.

9795 (ET/EA/003/18)

Calibration Due Date

30 September 2025

Method

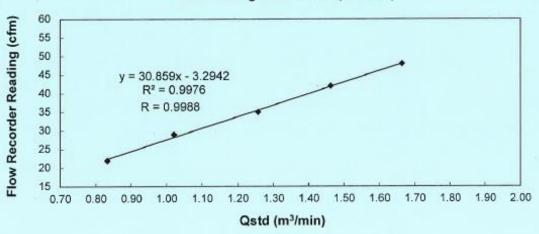
Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the

Operations Manual

Results

Flow recorder reading (cfm) Qstd (Actual flow rate, m³/min)		48	42	35 1.26	29 1.02	22	
		1.66	1.46			0.83	
Pressure :	750.29 mm H	9	Temp.:	303	K		

Sampler 9795 Calibration Curve Site: Tseung Kwan O 137 (TKO-A1)



Acceptance Criteria: Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration

The high volume sampler complies* / does not comply* with the specified requirements and is deemed acceptable*/ unacceptable* for use.

Calibrated by :

To, Kwan Yin (Technician) Checked by ;

LAU, Chi Leung

(Environmental Team Leader)



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東業德勤測試顧問有限公司 ETS-TESTCONSULT LTD.

RF Block B, Veristrong Industrial Centre, 34-36 Au Pul Wen Street, Fe Tan, Hong Kong

Calibration Report

of

High Volume Air Sampler

Manufacturer

: Graseby GMW

Date of Calibration

: 03 June 2025

Serial No.

: 2483 (ET / EA / 003 / 26)

Calibration Due Date : 02 August 2025

Method

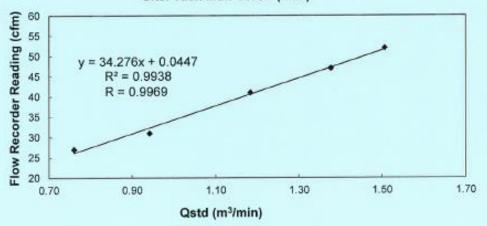
Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the Ope

Manual

Results

Flow recorder rea	eding (cfm)	52	47	41	31	27
Ostd (Actual flow	rate, m3/min)	1.51	1.38	1.18	0.94	0.76
Pressure:	752.46 mm Hg		Temp. :	302	K	

Sampler 2483 Calibration Curve Site: Tuen Mun CWSF (TM2)



Acceptance Criteria: Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point cali

The high volume sampler complies* / does not comply* with the specified requirements and is deemed accej unacceptable* for use.

Calibrated by:

To, Kwan Yin (Technician)

Checked by :

LAU, Chi Leung

(Environmental Team Leader)



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東業德勤測試顧問有限公司 **ETS-TESTCONSULT LTD.**

Date

TEST REPORT

Calibration Report of High Volume Air Sampler

Manufacturer

: Graseby GMW

Date of Calibration

: 02 August 2025

Serial No.

2483 (ET / EA / 003 / 26)

Calibration Due Date : 01 October 2025

Method

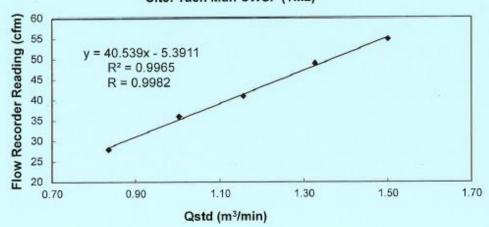
Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the Ope

Manual

Results

Flow recorder	reading (cfm)	55	49	41	36	28
Ostd (Actual flo	ow rate, m³/min)	1.50	1.33	1.16	1.00	0.84
Pressure:	752.24 mm Hg		Temp. :	301	K	

Sampler 2483 Calibration Curve Site: Tuen Mun CWSF (TM2)



Acceptance Criteria: Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point cali

The high volume sampler complies* / does not comply* with the specified requirements and is deemed accept unacceptable* for use.

Calibrated by

(Assistant Supervisor)

Checked by :

LAU, Chi Leung

(Environmental Team Leader)



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RECALIBRATION DUE DATE:

January 13, 2026

Sertificate of

Calibration Certification Information

Cal. Date: January 13, 2025

Rootsmeter S/N: 438320

Ta: 294 Pa: 754.4 °K

Operator: Jim Tisch

Calibrator S/N: 4317

mm Hg

Calibration Model #: TE-5025A

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4160	3.2	2.00
2	3	4	1	1.0140	6.4	4.00
3	5	6	1	0.8940	7.9	5.00
4	7	8	1	0.8560	8.8	5.50
- 5	9	10	1	0.7090	12.7	8.00

		Data Tabulat	ion		
Vstd (m3)	Qstd (x-axis)	√ΔH(Patd)(Tstd) (y-axis)	Va	Qa (x-axis)	√∆H(Ta/Pa) (y-axis)
1.0018	0.7075	1.4185	0.9958	0.7032	0.8829
0.9976	0.9838	2.0061	0.9915	0.9778	1.2486
0.9956	1.1136	2.2429	0.9895	1.1069	1.3959
0.9944	1.1617	2.3524	0.9883	1.1546	1.4641
0.9892	1.3952	2.8371	0.9832	1.3867	1.7657
	m=	2.05352		m=	1.28588
QSTD	b=	-0.03071	QA	b=	-0.01911
~	r=	0.99978	7.	r=	0.99978

Calculati	ons
Vstd= ∆Vol((Pa-∆P)/Pstd)(Tstd/Ta)	Va= ΔVol((Pa-ΔP)/Pa)
Qstd= Vstd/∆Time	Qa= Va/ΔTime
For subsequent flow r	ate 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: rootsmete	er manometer reading (mm Hg)
Ta: actual abs	olute temperature (°K)
Pa: actual bar	ometric 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

Tisch Environmental, Inc. 145 South Miami Avenue Village of Cleves, OH 45002 www.tisch-env.com

TOLL FREE: (877)263-7610

FAX: (513)467-9009



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APPENDIX E - METHODOLOGY FOR CORRELATION CALCULATION BETWEEN POTABLE LASER DUST METER AND HIGH-VOLUME SAMPLER



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Correlation between Portable laser dusty meter and High-volume Sampler Methodology

Correlation results between the direct reading meter and High-Volume Sampler

High - Volume Sampler Calibration

The specification, a sample of calibration certificate and certificate of comparison check with High volume sampler of the proposed air quality monitoring equipment listed in Table 2.1 are attached in appendix.

The High-Volume air sampler calibration procedure based on the requirement of manufacturer is shown below.

- a. Disconnect the sampler motor from the mass flow controller and connect the motor to a stable AC power source.
- b. Mount the calibrator orifice and top loading adapter plate to the sampler. A sampling filter is generally not used during this procedure. Tighten the top loading adapter hold down nuts securely to ensure that no air leaks are present.
- c. Allow the sampler motor to warm up to its normal operating temperature (approximately 10-15 minutes).
- d. Conduct a leak test by covering the hole(s) on top of the orifice and pressure tap on the orifice with your hands. Listen for a high-pitched squealing sound made by escaping air. If this sound is heard, a leak is present and the top loading adapter hold-down nuts need to be re-tightened. If the sound is lower, the leak is near one of the other gaskets in the system. Avoid running the sampler for longer than 30 seconds at a time with the orifice blocked to avoid overheating the motor. Do not perform this leak test procedure with a manometer connected to the side tap on the calibration orifice or the blower motor. Liquid from the manometer could be drawn into the system and cause motor damage
- e. Connect one side of a water manometer to the pressure tap on the side of the orifice with a rubber vacuum tube. Leave the opposite side of the manometer open to the atmosphere. Note: Both valves on the manometer have to be open for the liquid to flow freely. One side of the 'U' tube goes up the other goes down; add together for the "H2O reading.
- f. A manometer must be held vertically to ensure accurate readings. Tapping the backside of the continuous flow recorder will help to center the pen and provide accurate readings. When using a variable orifice, five flow rates are achieved in this step by adjusting the knob on the variable orifice to five different positions and taking five different reading.



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- g. Record the ambient air temperature, the ambient barometric pressure, the sampler serial number, the orifice s/n, the orifice slope and intercept with date last certified, today's date, site location and the operators initial on the attached blank calibration sheet.
- h. An example of a Lead (or TSP) Sampler Calibration Data Sheet has been attached with data filled in from a typical calibration. This includes the transfer standard orifice calibration relationship which was taken from the Orifice Calibration Worksheet that accompanies the calibrator orifice.

Disconnect the sampler motor from its power source and remove the orifice and top loading adapter plate. Re-connect the sampler motor to the electronic mass flow controller.

Since this calibration is for a TSP sampler, the slope and intercept for this orifice uses standard flows rather than actual flows and is taken from the Q standard section of the Orifice Calibration Worksheet. The Q actual flows are only used when calibrating a PM-10 sampler.

The five orifice manometer readings taken during the calibration have been recorded in the column on the data worksheet titled Orifice "H2O. The five continuous flow recorder readings taken during the calibration have been recorded under the column titled I chart.

The orifice manometer readings need to be converted to the standard air flows they represent using the following equation:

 $Qstd = 1/m[Sqrt((H_20)(Pa/760)(298/Ta))-b]$

where:

Qstd = actual flow rate as indicated by the calibrator orifice, m³/min

H₂O = orifice manometer reading during calibration, "H₂O

Ta = ambient temperature during calibration, K ($K = 273 + {}^{\circ}C$)

298 = standard temperature, a constant that never changes, K

Pa = ambient barometric pressure during calibration, mm Hg

760 = standard barometric pressure, a constant that never changes, mm Hg

m = Qstandard slope of orifice calibration relationship

b = *Qstandard intercept of orifice* calibration relationship.



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Once these standard flow rates have been determined for each of the five run points, they are recorded in the column titled Qstd and are represented in cubic meters per minute.

The continuous flow recorder readings taken during the calibration need to be corrected to the current meteorological conditions using the following equation:

$$IC = I[Sqrt((Pa/760)(298/Ta))]$$

where:

IC = continuous flow recorder readings corrected to current Ta and Pa

I = continuous flow recorder readings during calibration

Pa = ambient barometric pressure during calibration, mm Hg.

760 = standard barometric pressure, a constant that never changes, mm Hg

Ta = ambient temperature during calibration, K (K = 273 + °C)

298 = standard temperature, a constant that never changes, K

After each of the continuous flow recorder readings have been corrected, they are recorded in the column titled IC (corrected).

Using Qstd and IC (or FLOW (corrected)) as the x and y axis respectively, a slope, intercept, and correlation coefficient can be calculated using the least squares regression method. The correlation coefficient should never be less than 0.990 after a five-point calibration. A coefficient below .990 indicates a calibration that is not linear, and the calibration should be performed again. If this occurs, it is most likely the result of an air leak during the calibration or high wind speed during the calibration procedure.

The equations for determining the slope (m) and intercept (b) are as follows:

m=
$$\frac{\sum xy - n}{\sum xy - n}$$

$$\frac{(\sum x)^2}{\sum x^2 - n} ; b = y - mx$$

The equation for the coefficient of correlation (r) is as follows:



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$$\mathbf{r} = \sum xy - \frac{(\sum x)(\sum y)}{n}$$

$$\sqrt{\left[\sum x^2 - \frac{(\sum x)^2}{n}\right] \left[\sum y^2 - \frac{(\sum y)^2}{n}\right]}$$

where: n = number of observations $\Sigma = sum of$

The acceptable operating flow range of a TSP sampler is 1.1 to 1.7 m3/min (39 to 60 CFM). Looking at the worksheet column Qstd(see page 38), the flow rates that are within this range can be identified along with the chart reading (I) that represents them. For instance, if you wanted to set this sampler at 1.265 m3/min (44.67 CFM) (Make sure the mass flow controller is plugged in and a filter is in place) you would turn the Flow Adjustment screw until the continuous flow recorder read 37 on the chart. By making sure that the sampler is operating at a chart reading (or manometer reading) that is within the acceptable range, it can be assumed that valid TSP data is being collected.

A calibration that has a correlation coefficient of less than .990 is not considered linear and should be re-calibrated. Therefore, if r < 0.990, return all the points or only the point with the greatest deviation and the recalculate.

The 24-hour TSP levels to be measured by direct reading methods, utilising portable Laser Particle Photometer Monitors (Sibata Model LD-3B), in place of High-Volume Sampler (HVS) if HVS experience difficulties in operation during monitoring. It is demonstrated by the previous project experiences, that 24-hour TSP monitoring results collected by direct reading method are comparable to those produced by the high-volume sampling method, to indicate short event impacts. The projects utilising the collection of 24-hour TSP levels data by direct reading methods are shown below.-

Project Reference for utilising the collection of 24-hour TSP levels data by direct reading methods

Project Contract Number	Location	Status
NDO 03/2018	Road Widening and Retrofitting Noise Barriers on	On-going
	Tai Po Road (Sha Tin Section)	



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NDO 14/2018	Advance and First Stage Works of Kwu Tung North	On-going
	and Fanling North New Development Areas	

Calculation of the value of 24-hour TSP concentration is given by the average of 24 calculated 1-hour TSP concentration, where the calculated 1-hr TSP concentration is given by the product of the direct reading and the K-factor based on the correlation results between the direct reading meter and High-Volume Sampler.

The correlation results between the direct reading meter and High-Volume Sampler shall be review with bimonthly internal calibration. To maintain the correlation with two sets of data (monitoring data from HVS and monitoring data from Portable Laser Particle Photometer Monitors) bimonthly internal calculated are strongly linked together two sets of data.

To protect the dust meter from being damaged and to operate without disturbances or nuisance, temporary barriers shall be erected around the monitoring equipment during the monitoring period. Temporary barriers will be placed approx. 0.5m away from the dust meter.

Maintenance/ Calibration for the High-Volume Sampler (HVS) being correlation

The HVS shall be calibrated bimonthly in accordance to the specification in the manufacturer's manual. The calibration certificates shall be available to the IEC for checking upon request. The validity and accuracy of the HVS shall also be tested against the result by the TE-5025A Calibration Kit periodically, Details of Calibration Cert and Specification for HVS – Graseby GMW and HVS- Calibration Kit TE-5025A are given in Appendix 2-1 and Appendix 2-3.

Graseby GMW is chosen as the HVS for 24-hour TSP monitoring and Tisch TE – 5025A is chosen as the HVS Calibration-Kit for HVS calibration.



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APPENDIX F - AIR QUALITY AND NOISE IMPACT MONITORING SCHEDULE



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2025 August Air Quality and Noise Impact Monitoring Schedule

	Manadani		Wednesday		Eddan.	and modern
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27-Jul	28-Jul	29-Jul	30-Jul	1 hr TSP x 3 24 hr TSP Noise (30 mins)	1-Aug	2-Aug
2 4 100	4-Aug	5-Aug	5 400	7-Aug	8-Aug	9-Aug
3-Aug	4-Aug	SAUG	1 hr TSP x 3 24 hr TSP Noise (30 mins)	7-Aug	o-Aug	Shug
10-Aug	11-Aug	12-Aug	13-Aug	14-Aug	15-Aug	16-Aug
		1 hr TSP x 3 24 hr TSP Noise (30 mins)				
17-Aug	18-Aug	19-Aug	20-Aug	21-Aug	22-Aug	23-Aug
	1 hr TSP x 3 24 hr TSP Noise (30 mins)				1 hr TSP x 3 24 hr TSP	
24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug
				1 hr TSP x 3 24 hr TSP Noise (30 mins)		
31-Aug	1-Sep	2-Sep	3-Sep	4-Sep	5-Sep	6-Sep
			1 hr TSP x 3 24 hr TSP Noise (30 mins)			



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2025 September Air Quality and Noise Impact Monitoring Schedule

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31-Aug	01-Sep	02-Sep	03-Sep	04-Sep	05-Sep	06-Sep
3	3734		1 hr TSP x 3 24 hr TSP Noise (30 mins)	3.35	33.54	335,
07-Sep	08-Sep	1 hr TSP x 3 24 hr TSP Noise (30 mins)	10-Sep	11-Sep	12-Sep	13-Sep
14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep
	1 hr TSP x 3 24 hr TSP Noise (30 mins)				1 hr TSP x 3 24 hr TSP	
21-Sep	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep	27-Sep
				1 hr TSP x 3 24 hr TSP Noise (30 mins)		
28-Sep	29-Sep	30-Sep	01-Oct	02-Oct	03-Oct	04-Oct
		1 hr TSP x 3 24 hr TSP Noise (30 mins)				



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APPENDIX G - AIR QUALITY MONITORING RESULT



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2025 August 1-hour TSP Monitoring Data of Monitoring Location AMS1N

		1-hour TSP Monitoring				
Date	Weather		Start Time	Concentration (µg/m³)	Average Concentration (µg/m³)	
		1st hr	9:20	29.0		
6-Aug-25	Cloudy	2nd hr	10:20	32.0	30.3	
		3rd hr	13:05	30.0		
		1st hr	9:41	20.0		
12-Aug-25	Fine	2nd hr	10:41	21.0	19.7	
		3rd hr	13:08	18.0		
		1st hr	9:20	30.0		
18-Aug-25	Cloudy	2nd hr	10:20	32.0	30.3	
		3rd hr	13:05	29.0		
		1st hr	13:19	25.0		
22-Aug-25	Fine	2nd hr	14:19	24.0	22.7	
		3rd hr	15:19	19.0		
		1st hr	13:19	30.0		
28-Aug-25	Cloudy	2nd hr	14:19	32.0	30.3	
		3rd hr	15:19	29.0		
				Average:	26.7	
				Action Level :	319	
				Limit Level :	500	



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2025 August 1-hour TSP Monitoring Data of Monitoring Location AMS-2N1

		1-hour TSP Monitoring				
Date	Weather		Start Time	Concentration	Average Concentration	
			Start Time (µg/m³)		(µg/m³)	
		1st hr	9:25	29.0		
6-Aug-25	Cloudy	2nd hr	10:25	34.0	32.3	
		3rd hr	13:10	34.0		
		1st hr	9:48	18.0		
12-Aug-25	Fine	2nd hr	10:48	19.0	17.7	
		3rd hr	13:05	16.0		
		1st hr	9:25	47.0		
18-Aug-25	Cloudy	2nd hr	10:25	43.0	45.0	
		3rd hr	13:10	45.0		
		1st hr	9:25	23.0		
22-Aug-25	Fine	2nd hr	10:25	18.0	19.0	
		3rd hr	13:10	16.0		
		1st hr	9:25	47.0		
28-Aug-25	Cloudy	2nd hr	10:25	43.0	45.0	
		3rd hr	13:10	45.0		
				Average:	31.8	
				Action Level :	279	
				Limit Level :	500	



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2025 August 1-hour TSP Monitoring Data

Monitoring Location: AMS-3N

			1-	hour TSP Monitoring	
Date	Weather		Start Time	Concentration (µg/m³)	Average Concentration (µg/m³)
		1st hr	9:15	31.0	
6-Aug-25	Cloudy	2nd hr	10:15	30.0	30.7
		3rd hr	13:15	31.0	
		1st hr	9:50	19.0	
12-Aug-25	Fine	2nd hr	10:50	20.0	18.3
		3rd hr	13:03	16.0	
		1st hr	9:15	27.0	
18-Aug-25	Cloudy	2nd hr	10:15	25.0	26.3
		3rd hr	13:15	27.0	
		1st hr	13:04	21.0	
22-Aug-25	Fine	2nd hr	14:04	17.0	18.3
		3rd hr	15:04	17.0	
		1st hr	9:00	27.0	
28-Aug-25	Cloudy	2nd hr	10:00	25.0	26.3
		3rd hr	14:15	27.0	
				Average :	24.0
				Action Level:	303
				Limit Level :	500



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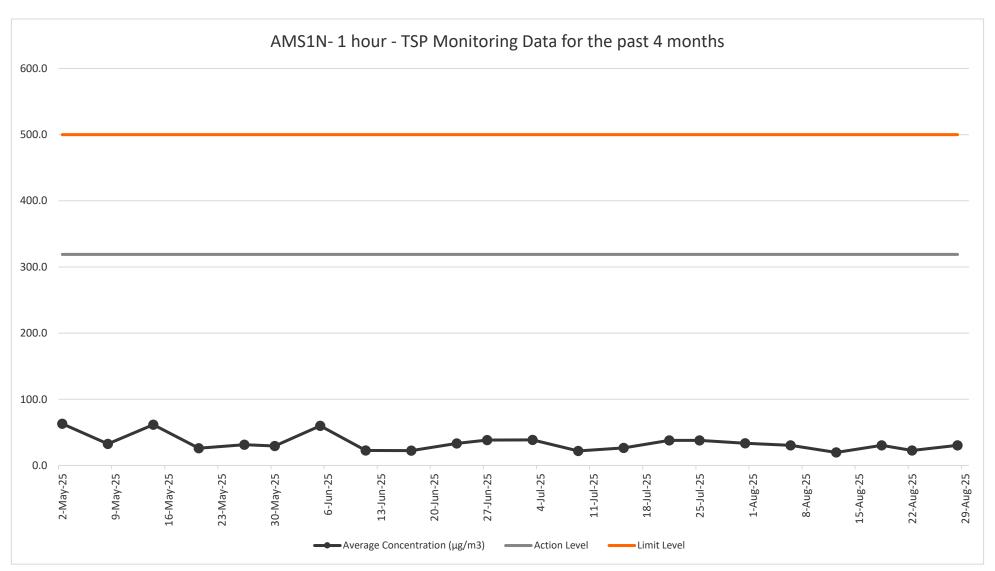
2025 August 1-hour TSP Monitoring Data

Monitoring Location: AMS-4N

		1-hour TSP Monitoring						
Date	Weather		Start Time	Concentration (µg/m³)	Average Concentration (µg/m³)			
		1st hr	9:30	33.0				
6-Aug-25	Cloudy	2nd hr	10:30	35.0	32.3			
		3rd hr	13:32	29.0				
		1st hr	9:44	22.0				
12-Aug-25	Fine	2nd hr	10:44	23.0	21.7			
		3rd hr	13:00	20.0				
		1st hr	9:30	23.0				
18-Aug-25	Cloudy	2nd hr	10:30	26.0	25.3			
		3rd hr	13:22	27.0				
		1st hr	13:00	22.0				
22-Aug-25	22-Aug-25 Fine		14:00	21.0	19.7			
		3rd hr	15:00	16.0				
		1st hr	9:10	25.0				
28-Aug-25	Cloudy	2nd hr	10:10	27.0	26.7			
			14:25	28.0				
				Average:	25.1			
				Action Level :	278			
				Limit Level :	500			

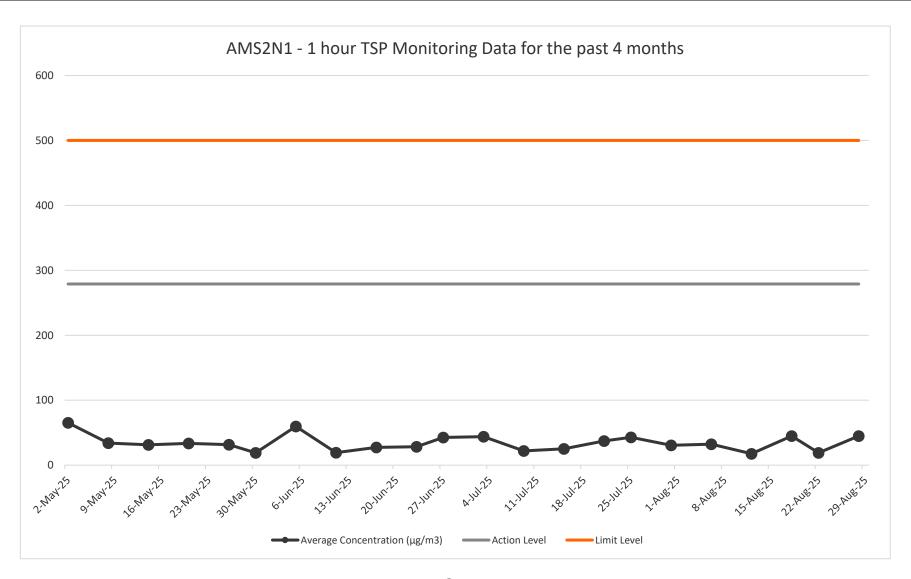


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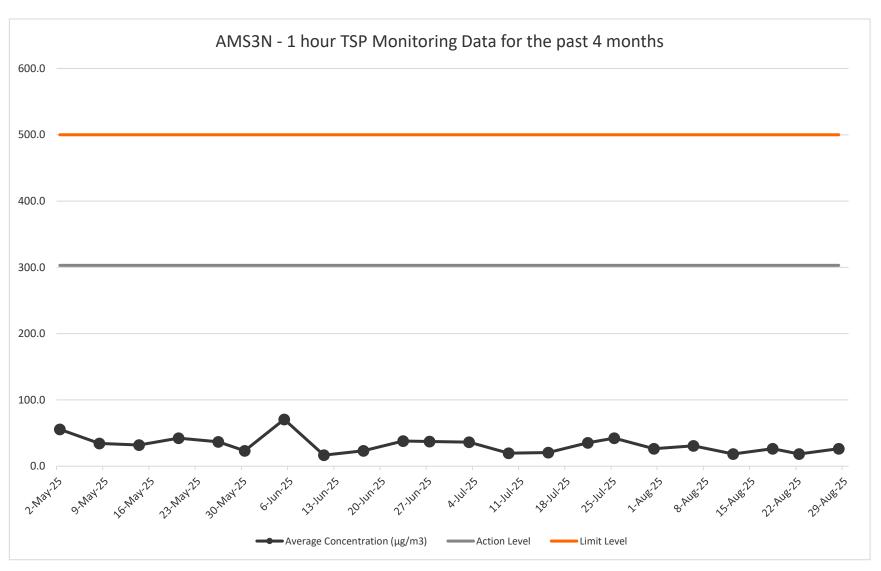


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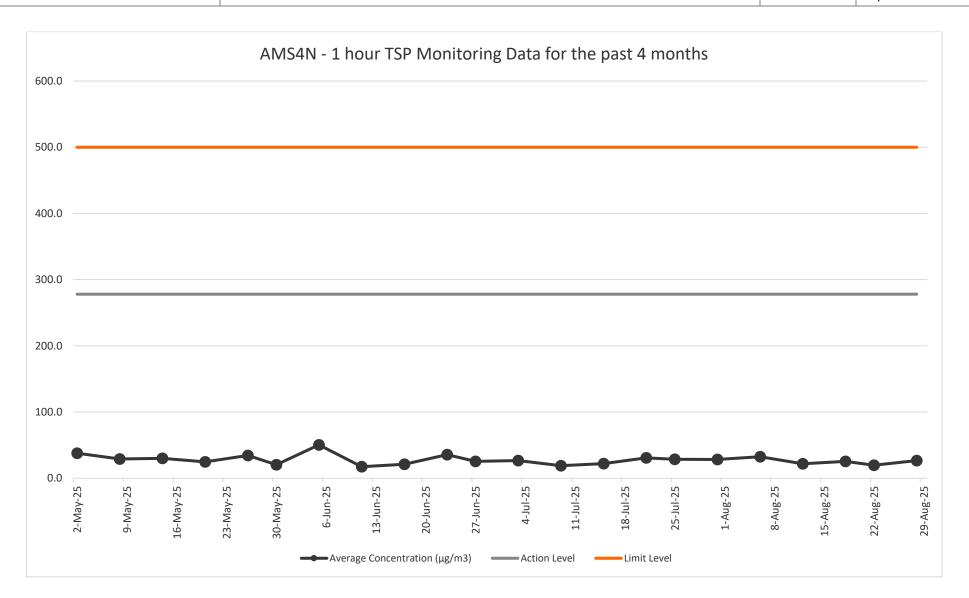


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2025 August 24-hour TSP Monitoring Data

Monitoring Location: AMS1N

Hour	6- Aug -25	12- Aug -25	18- Aug -25	22- Aug -25	28- Aug -25
1	40	26	25	19	21
2	49	22	39	25	34
3	34	19	39	27	24
4	51	22	31	25	24
5	50	22	29	25	39
6	34	20	31	20	41
7	43	19	27	19	35
8	30	19	32	19	42
9	35	20	32	21	21
10	46	23	34	23	27
11	50	23	30	26	38
12	32	21	39	27	31
13	38	22	42	25	34
14	36	19	27	24	39
15	46	18	42	22	36
16	46	19	40	26	31
17	31	19	26	24	21
18	31	21	35	29	36
19	33	25	43	36	37
20	32	30	27	44	42
21	50	23	31	33	36
22	40	26	40	27	23
23	38	25	41	21	24
24	45	24	19	22	18
Average:	40	22	33	25	31
24-hr TSP					
(μg/m³; with orrelation(x)	39	19	32	23	29
Action Level:	153				<u> </u>
Limit Level:	260	-			

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2025 August 24-hour TSP Monitoring Data

Monitoring Location: AMS2N1

Hour	6- Aug -25	12- Aug -25	18- Aug -25	22- Aug -25	28- Aug -25
1	37	17	38	17	36
2	44	18	48	21	28
3	41	17	32	25	41
4	50	20	42	18	47
5	48	19	30	24	34
6	30	18	49	20	53
7	34	18	37	19	48
8	49	17	40	18	45
9	35	18	44	17	37
10	34	20	29	19	30
11	40	21	49	19	49
12	34	20	30	22	45
13	28	19	45	21	52
14	44	18	28	23	34
15	37	18	53	22	49
16	35	16	29	20	47
17	31	17	51	23	50
18	31	20	39	22	38
19	34	22	48	28	34
20	30	20	32	42	40
21	28	25	34	27	40
22	47	27	35	23	49
23	31	21	38	24	43
24	38	21	45	22	49
Average:	37	19	39	22	42
24-hr TSP					
μg/m³; with orrelation(x)	38	18	41	21	44
ction Level:	179				
Limit Level:	260	1			



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2025 August 24-hour TSP Monitoring Data

Monitoring Location: AMS3N

Hour	6- Aug -25	12- Aug -25	18- Aug -25	22- Aug -25	28- Aug -25
1	23	14	25	15	34
2	31	16	38	21	32
3	44	15	21	23	22
4	25	18	28	18	34
5	39	18	15	23	16
6	41	16	14	21	27
7	44	18	31	18	31
8	22	17	15	19	15
9	35	19	26	20	35
10	45	19	28	20	21
11	44	20	32	22	13
12	43	17	24	21	21
13	42	17	14	20	22
14	32	16	26	20	15
15	45	16	18	18	36
16	22	16	37	19	27
17	22	15	32	19	28
18	22	17	34	22	35
19	46	18	34	30	28
20	34	19	30	40	13
21	43	20	19	25	36
22	46	22	21	18	37
23	25	22	29	18	16
24	34	20	22	18	26
Average:	35	18	26	21	26
24-hr TSP					
(µg/m³; with	39	17	27	21	27
correlation(x)					
Action Level:	158		I	I	<u>I</u>
Limit Level:	260	1			



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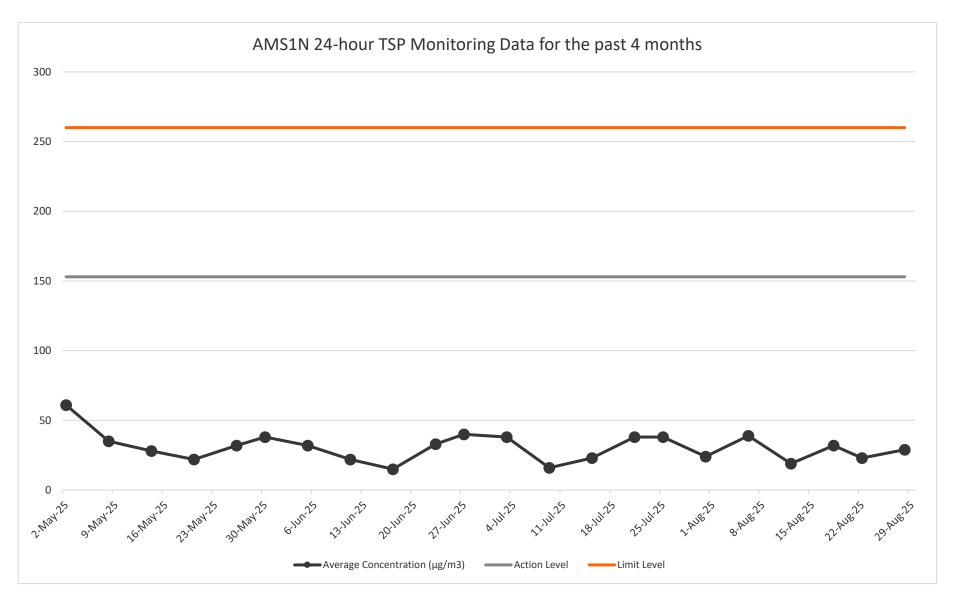
2025 August 24-hour TSP Monitoring Data

Monitoring Location: AMS4N

Hour	6- Aug -25	12- Aug -25	18- Aug -25	22- Aug -25	28- Aug -25
1	38	15	31	16	35
2	32	16	31	20	25
3	31	16	22	23	23
4	24	17	18	19	28
5	20	18	13	23	32
6	19	17	21	20	35
7	18	16	22	19	18
8	30	17	14	18	13
9	19	18	15	19	24
10	21	17	32	20	27
11	37	19	32	21	29
12	16	19	10	22	22
13	26	18	14	21	28
14	29	17	25	20	11
15	20	17	30	18	30
16	35	15	10	18	35
17	34	16	24	19	30
18	17	16	32	23	25
19	30	17	19	28	17
20	33	18	23	35	16
21	40	20	16	26	29
22	38	20	27	19	27
23	32	23	28	19	33
24	33	22	15	20	21
Average:	28	18	22	21	26
24-hr TSP					
(μg/m³; with	29	18	22	21	27
correlation(x)					
Action Level:	144		L	L	
Limit Level:	260				

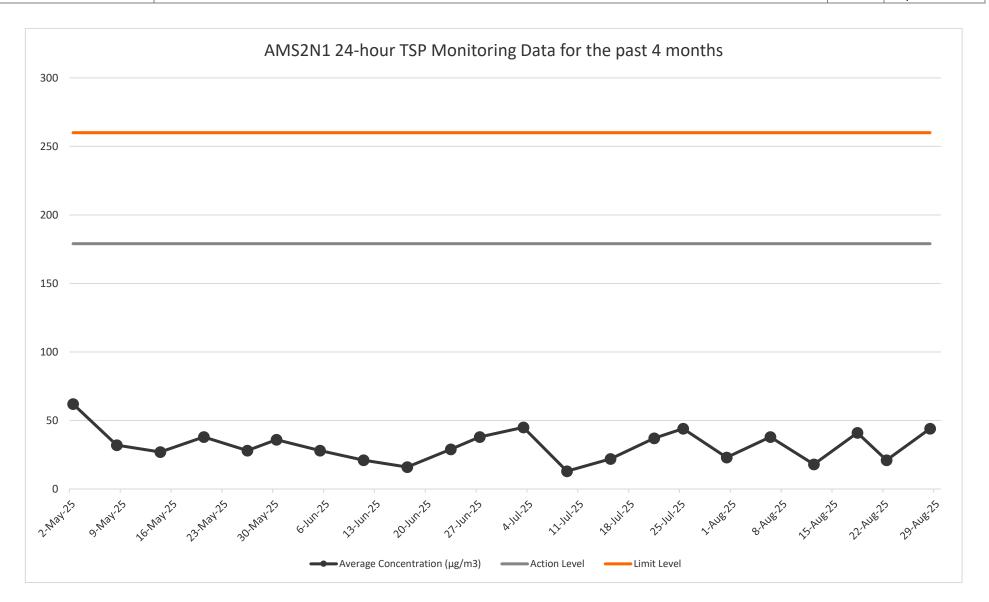


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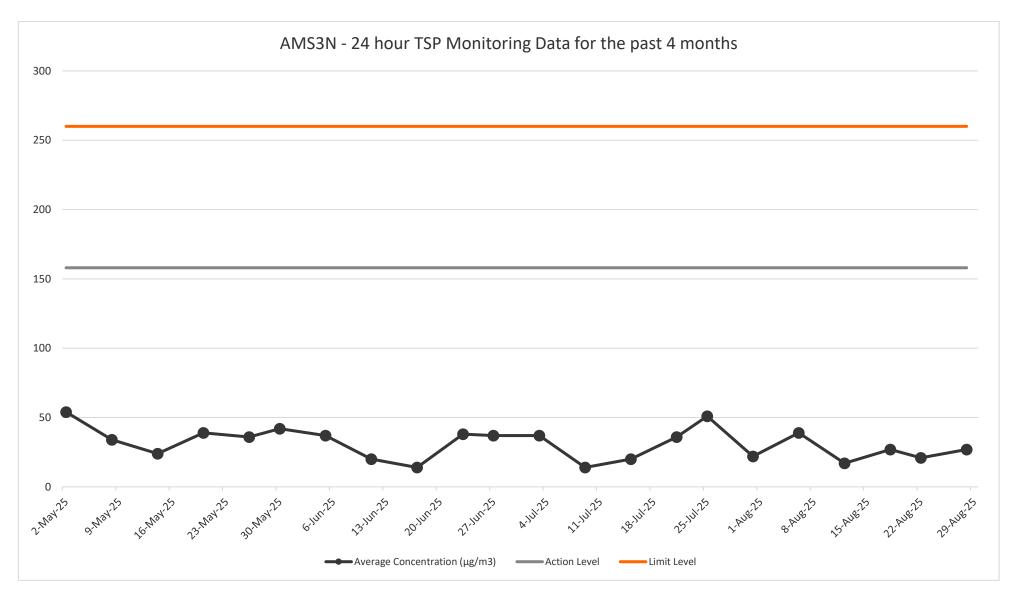


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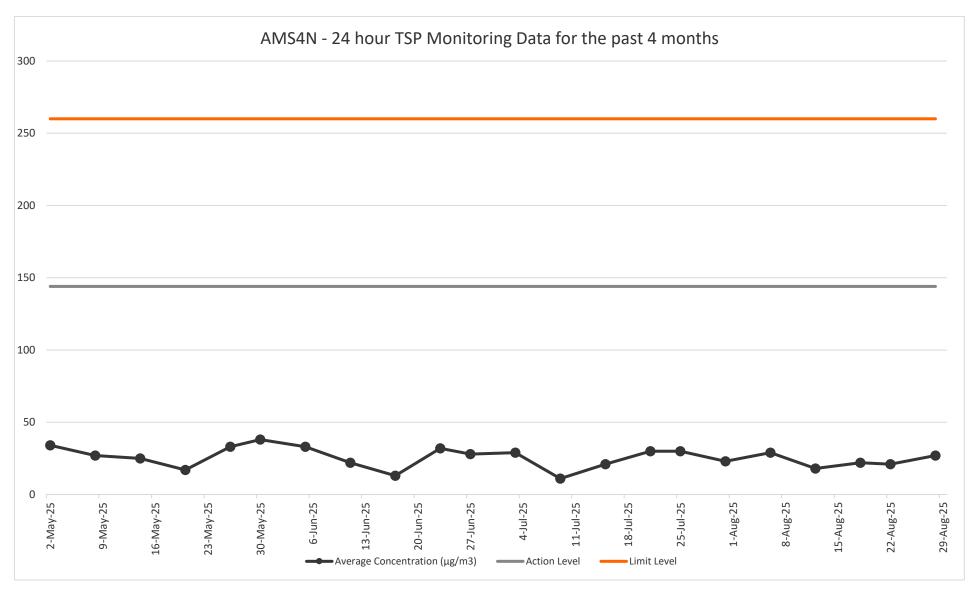


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APPENDIX H – EVENT AND ACTION PLAN



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AIR QUALITY MONITORING

EVENT	ACTION				
EVENI	ET	IEC	ER	CONTRACTOR	
ACTION LEVEL					
Exceedance for one sample	 Repeat measurement to confirm findings; If exceedance is confirmed, inform the Contractor, IEC and ER; Identify source(s), investigate the causes of exceedance and propose remedial measures; and Increase monitoring frequency. 	 Check monitoring data submitted by the ET; Check Contractor's working method; and Discuss with ET, ER and Contractor on possible remedial measures Review and advise the ET and ER on the effectiveness of the proposed remedial measures. 	Confirm receipt of notification of exceedance in writing.	Identify source(s), investigate the causes of exceedance and propose remedial measures; Implement remedial measures; and Amend working methods agreed with the ER as appropriate.	
Exceedance for two or more consecutive samples	 Repeat measurements to confirm findings; If exceedance is confirmed, inform Contractor, IEC and ER; Identify source(s), investigate the causes of exceedance and propose remedial measures; Increase monitoring frequency to daily; Advise the Contractor and ER on the effectiveness of the proposed remedial measures; Discuss with IEC and Contractor on remedial actions required; 	 Check monitoring data submitted by the ET; Check Contractor's working method; and Discuss with ET, ER and Contractor on possible remedial measures; Review and advise the ET and ER on the effectiveness of the proposed remedial measures; and Supervise Implementation of remedial measures. 	Confirm receipt of notification of exceedance in writing; In consultation with the ET and IEC agree with the Contractor on the remedial measures to be implemented; and Supervise implementation of remedial measures	1. Identify source(s) and investigate the causes of exceedance; 2. Submit proposals for remedial measures to the ER, ET and IEC within three working days of notification for agreement; 3. Implement the agreed proposals; and 4. Amend proposal as appropriate.	



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FVENT		A	CTION	
EVENT	FT 7. If exceedance continues, arrange meeting with Contractor, IEC and ER to discuss the remedial measures to be taken; and 8. If exceedance stops, cease additional monitoring.	IEC	ER	CONTRACTOR
LIMIT LEVEL	1			
Exceedance for one sample	Repeat measurement to confirm findings; If exceedance is confirmed, inform the Contractor, IEC, EPD and ER; Identify source(s), investigate the causes of exceedance and propose remedial; Increase monitoring frequency to daily; and Discuss with the ER, IEC and Contractor on the remedial measures and assess effectiveness.	 Check monitoring data submitted by the ET; Check Contractor's working method; Discuss with the ET, ER and Contractor on possible remedial measures; Review and advise the ET and ER on the effectiveness of the proposed remedial measures; and Supervise implementation of remedial measures. 	Confirm receipt of notification of exceedance in writing; Review and agree on the remedial measures proposed by the Contractor; and Ensure remedial measures properly implemented.	 Identify source(s) and investigate the causes of exceedance; Take immediate action to avoid further exceedance; Submit proposals for remedial measures to ER, ET and IEC within three working days of notification for agreement; Implement the agreed proposals; and Amend proposal if appropriate.
Exceedance for two or more consecutive samples	Repeat measurement to confirm findings; If exceedance is confirmed, inform IEC, ER, Contractor and EPD; Identify source(s), investigate the causes of	Check monitoring data submitted by the ET; Discuss amongst ER, ET, and Contractor on the potential remedial actions;	Confirm receipt of notification of exceedance in writing; In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented;	Identify source(s) and investigate the causes of exceedance; Take immediate action to avoid further exceedance; Submit proposals for remedial measures to the



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EVENT	ENT				
EVENT	ET exceedance and propose remedial measures; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;	IEC 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.	ER 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.	CONTRACTOR ER, IEC and ET within three working days of notification for agreement; 4. Implement the agreed proposals; 5. Revise and resubmit proposals if problem still not under control; and 6. Stop the relevant portion of	
	 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. 			works as determined by the ER until the exceedance is abated.	

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



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NOISE IMPACT MONITORING

Event		Act	tion	
	ET	IEC	ER	CONTRACTOR
Action Level	1. Notify IEC, ER and Contractor of	1. Review the analysed results	1. Confirm receipt of notification of	1. Submit noise mitigation proposals to
	exceedance;	submitted by the ET;	failure in writing;	ER with copy to ET and IEC;
	2. Identify source	2. Review the proposed remedial	2. Notify Contractor;	Implement noise mitigation proposals.
	3. Investigate the causes of	measures by the Contractor and advise	3. Require Contractor to propose	
	exceedance and propose remedial	the ER accordingly;	remedial measures for the analysed	
	measures;	3. Supervise the implementation of	noise problem;	
	4. Report the results of investigation to	remedial measures.	4. Ensure remedial measures are	
	the IEC, ER and Contractor;		properly implemented	
	5. Discuss with the IEC, ER and			
	Contractor and formulate remedial			
	measures;			
	6. Increase monitoring frequency to			
	check mitigation effectiveness			



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



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Water Quality Monitoring

Event		Action				
	ET	IEC	ER	CONTRACTOR		
Action Level being exceeded	1. Repeat in situ measurement on next day	1. Check monitoring data submitted by	1. Confirm receipt of notification of non-	1. Inform the ER and confirm notification of the		
by one sampling day	of exceedance to confirm findings;	ET and Contractor's working methods.	conpliance in writing;	non-compliance in writing;		
	2. Identify source(s) of impact;	2. Discuss with ET and Contractor on	2. Notify Contractor;	2. Rectify unacceptable practice;		
	3. Inform IEC, contractor and ER;	possible remedial actions.	3. Discuss with IEC on possible	3. Check all plant and equipment and consider		
	4. Check monitoring data, all plant,	3. Review the proposed mitigation	remedial actions;	changes of working methods;		
	equipment and Contractor's working	measures submitted by Contractor and	4. Make agreement on the mitigation	4. Submit proposal of mitigation measures to		
	methods.	advise the ER accordingly.	measures to be implemented.	ER within 3 working days of notification and		
	5. Discuss mitigation measures with IEC			discuss with ET, IEC and ER.		
	and Contractor.			5. Implement the agreed mitigation measures.		
Action Level being exceeded	1. Repeat measurement on next day of	Check monitoring data submitted by	1. Discuss with IEC on the proposed	Inform the ER and confirm notification of the		
by more than one consecutive	exceedance to confirm findings;	ET and Contractor's working method;	mitigation measures;	non-compliance in writing;		
sampling days	2. Identify source(s) of impact;	2. Discuss with ET and Contractor on	2. Make agreement on the mitigation	2. Rectify unacceptable practice;		
	3. Inform IEC, contractor and ER and EPD;	possible remedial actions.	measures to be implemented;	3. Check all plant and equipment and consider		
	4. Check monitoring data, all plant,	3. Review the proposed mitigation	3. Ensure mitigation measures are	changes of working methods;		
	equipment and Contractor's working	measures submitted by Contractor and	properly implemented by the	4. Submit proposal of mitigation measures to		
	methods.	advise the ER accordingly;	Contractor;	ER within 3 working days of notification and		
	5. Discuss mitigation measures with IEC	4. Supervise the implementation of	4. Assess the effectiveness of the	discuss with ET, IEC and ER.		
	and Contractor;	mitigation measures.	implemented mitigation measures.	5. Implement the agreed mitigation measures.		
	6. Ensure mitigation measures are					
	implemented;					
	7. Increase the monitoring frequency to					
	daily until no exceedance of Action level.					



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Event	Action				
	ET	IEC	ER	CONTRACTOR	
Limit Level being exceeded by	1. Repeat measurement on next day of	1. Check monitoring data submitted by	1. Confirm receipt of notification of non-	1. Inform the ER and confirm notification of the	
one sampling day	exceedance to confirm findings;	ET and Contractor's working method;	conpliance in writing;	non-compliance in writing;	
	2. Identify source(s) of impact;	2. Discuss with ET and Contractor on	2. Discuss with IEC, ET and Contractor	2. Rectify unacceptable practice;	
	3. Inform IEC, contractor and ER;	possible remedial actions.	on the proposed mitigation measures;	3. Check all plant and equipment and consider	
	4. Check monitoring data, all plant,	3. Review the proposed mitigation	3. Request Contractor to review the	changes of working methods;	
	equipment and Contractor's working	measures submitted by Contractor and	working methods.	4. Submit proposal of mitigation measures to	
	methods.	advise the ER accordingly.		ER within 3 working days of notification and	
	5. Discuss mitigation measures with IEC			discuss with ET, IEC and ER.	
	and Contractor.				



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Limit I	_evel b	being	exceeded	by
more	than	one	consecuti	ve
sampl	ing da	ys		

- Repeat measurement on next day of exceedance to confirm findings;
- 2. Identify source(s) of impact;
- 3. Inform IEC, contractor and ER and EPD;
- 4. Check monitoring data, all plant, equipment and Contractor's working methods.
- Discuss mitigation measures with IEC and Contractor;
- Ensure mitigation measures are implemented;
- 7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days.

- Check monitoring data submitted by ET and Contractor's working method;
- 2. Discuss with ET and Contractor on possible remedial actions.
- Review the Contractor's mitigation measures whenever necessary to assure their effectiveness and advise the ER accordingly;
- 4. Supervise the implementation of mitigation measures.

- Discuss with IEC, ET and Contractor on the proposed mitigation measures;
- 2. Request Contractor to critically review the working methods;
- 3. Make agreement on the mitigation measures to be implemented;
- 4. Ensure mitigation measures are properly implemented;
- Consider and instruct, if necessary, the Contractor to slow down or stop all or part of the construction activities until no exceedance of Limit Level.

- 1. Inform the ER and confirm notification of the non-compliance in writing;
- 2. Take immediate action to avoid further exceedance;
- Check all plant and equipment and consider changes of working methods;
- Submit proposal of mitigation measures to ER within 3 working days of notification and discuss with ET, IEC and ER.
- 5. Implement the agreed mitigation measures;
- 6. Resubmit proposals of mitigation measures if problem still not under control;
- 7. As directed by the Supervising Officer, to slow down or stop all or part of the construction activities until no exceedance of Limit Level



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APPENDIX I - NOISE MONITORING EQUIPMENT CALIBRATION CERTIFICATES



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東業德勤測試顧問有限公司 **ETS-TESTCONSULT LTD.**

&F Block B, Arristrong Industrial Centre 34-36 Au Pui Wan Street, Fo Tan, Hong Kong

Date

E eli@ets-testconsult.com W: www.ets-testconsult.com



Form Q/AS/G/02 Issue 1(1/4) [02/22]

Calibration Certificate

Certificate No.

: CSA53631

Page

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Information Provided by Customer

Customer : ETS - Testconsult Limited

Address

: 8/F., Block B, Veristrong Industrial Centre, 34 - 36 Au Pui Wan Street, Fotan, Shatin, Hong Kong

Information of Unit-under-test (UUT)

Description

: Sound Level Calibrator

Manufacturer

: Castle : GA607

Equipment I.D.

; ET/EN/002/07

; 038641 Serial No.

Laboratory Information

Lab. Ref. No. Date of Calibration Date of Issue

: Q/CAL/25/4051/I

: 22-May-2025 : 26-May-2025 Procedure

: CQS/002/A

Date of Receipt Calibration Location : 15-May-2025 : Calibration Laboratory

Calibration Condition

Ambient Temperature : (20 ± 3) °C

Stabilizing Time : 30 minutes Ambient Pressure : (1000 ± 50) hPa

Relative Humidity

: (50±20) %

Sampling

; As received

Reference equipment

- Multi-function sound calibrator, ET/2801/01
- Measuring Amplifier, ET/2702/01/01
- Signal generator, ET/2503/01
- Reference Oscilloscope, ET/2502/01

Calibration specification

To perform the calibration of sound level calibrator,

Calibration result

The results are detailed on the subsequent pages.

Remarks

- The calibration results apply to the particular unit-under-test only,
- The values given in this calibration certificate only to the values measureed at the time of test & any uncertainties quoted will not include allowance for the equipment long term drift, varifications with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement

Calibrated By:

Tommy TAM (Technician) Approved By:

CHAN Chi Wai

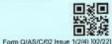
The results shown in this certificate are traceable to the international System of Units (SI) or recognised measurement standards. This report shall not be reproduced unless with prior written approval from this laboratory.



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東業德勤測試顧問有限公司 Werestrong Industrial Control, 34-96 Au Pull Wan Street, Fe Tan, Hong Kong **ETS-TESTCONSULT LTD.**



Calibration Certificate

Certificate No. : CSA53631

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Calibration Result:

1. Measured Sound Pressure Level:

Reference Frequency (Hz)	Reference Output Sound Pressure (dB)	UUT Nominal Output Sound Pressure (dB)		Expanded Uncertatiny (dB)	Coverage Factor
1000	93.9	94.0	93.9	0,13	2.0
1000	103.9	104.0	103.8	0.13	2.0

2. Actual Output Frequency:

UUT Nominal Frequency (Hz)	UUT Nominal Output Sound Pressure (dB)	Measured UUT Output (Hz)	Expanded Uncertatiny (Hz)	Coverage Factor
1000	94.0	1000.023	0.057	2.0
1000	104.0	1000.017	0.057	2,0

Remark:

- The uncertainty quoted is based on 95 % confidence level.
- Measured UUT output are mean of three measurements.

End of certificate



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Form Q/AS/C/01 beaux 1(1/7) [09/21]

Calibration Certificate

Certificate No. : CSA53630

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Information Provided by Customer

Customer

ETS - TESTCONSULT LIMITED

: 8/F., Block B, Veristrong Industrial Centre, 34 - 36 Au Pui Wan Street, Fotan, Shafin, Hong Kong

Information of Unit-under-test (UUT)

	Sound Level Meter	Microphone	Pre-Amplitier	Sound Calibrator
Manufacturer	RION	RION		Castle
Туре	NL-52	UC-59	NH-25	GA607
Equipment I.D. no.	ET/EN/003/18			ET/EN/002/07
Serial No.	00264520	09888	64646	038641
Adaptors used			*	20-
Resolution	0.1 dB			

Laboratory Information

Lab. Ref. No. : Q/CAL/25/4050/I Date of Calibration

Date of Issue

Procedure

: CQS/001/A

: 22-May-2025

Date of Receipt

: 15-May-2025

Calibration Location

: Calibration Laboratory

Calibration Condition

Ambient Temperature : (20 ± 3) °C

: 26-May-2025

Relative Humidity

; (50 ± 20) %

Stabilizing Time ; 30 minutes Ambient Pressure

Sampling

: As received

: (1000 ± 50) hPa

Reference equipment

- Multi-function sound calibrator, ET/2801/01
- Signal generator, ET/2503/01

Calibration specification

To perform the calibration of linearity and frequency response by multi-function sound calibrator,

Calibration result

- The results are detailed on the subsequent pages

Remarks

- The calibration results apply to the particular unit-under-test only.
- . The values given in this calibration cartificate only to the values measureed at the time of test & any uncertainties quoted will not include allowance for the equipment long term drift, varifications with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measureme

Calibrated By :

Tommy TAM (Technician) Approved By:

CHAN Chi Wai

The results shown in this certificate are traceable to the International System of Units (SI) or recognised measurement standards. This report shall not be reproduced unless with prior written approval from this laboratory.



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B/F Block B, Veristrong Industrial Centre 34-36 Au Pui Wan Street, Fo Tan, Hong Kong

Date

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Calibration Certificate

Certificate No. : CSA53630

Form Q/AS/C/01 los

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Calibration Result:

1 Reference Sound Pressure Level : (Unit in: dB)

Ra	nge / Mode		Reference Level	REF Frequency (kHz)	UUT Reading	Deviation	Expanded Uncertaliny	Coverage Factor
	Self-cal	Before	93.9		93.7	-0.2	0.13	2.0
	Range	30 to 130	103.9	1	103.7	-0.2	0.13	2.0
	Mode	Fast	113.9		113.7	-0,2	0.13	2.0
	Self-cal	After	93.9		94.0	0,1	0.13	2.0
A-Weighting	Range	30 to 130	103.9	1	104.0	0,1	0.13	2.0
S 349	Mode	Fast	113,9		114.0	0.1	0.13	2.0
1	Self-cal	After	93.9	1	94,0	0.1	0.13	2.0
	Range	30 to 130	103.9		104.0	0.1	0.13	2.0
	Mode	Slow	113.9		114.0	0.1	0.13	2.0
	Self-cal	After	93.9		94.0	0.1	0.13	2.0
	Range	30 to 130	103.9	1	104.0	0,1	0.13	2.0
O Minishins	Mode	Fast	113.9		114.0	0.1	0.13	2.0
C-Weighting	Self-cal	After	93,9		94.0	0.1	0.13	2.0
	Range	30 to 130	103.9	1	104.0	0.1	0.13	2.0
	Mode	Slow	113.9		114.0	0.1	0.13	2.0
Z-Weighting	Self-cal	After	93.9		94.0	0.1	0,13	2.0
	Range	30 to 130	103.9	1	104.0	0.1	0.13	2.0
	Mode	Fast	113.9		114.0	0.1	0.13	2.0
	Self-cal	After	93.9	1	94.0	0.1	0.13	2.0
	Range	30 to 130	103.9	1	104.0	0.1	0,13	2.0
	Mode	Slow	113.9		114,0	0.1	0.13	2.0

Remark:

- The uncertainty quoted is based on 95 % confidence level.
- UUT reading are mean of three measurements.
- Deviation = UUT Reading Reference Level
- Customer's sound calibrator was used to adjust the "Self cal" reading of UUT,

**



Monthly EM&A Report

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Date	Sep 25



東業德勤測試顧問有限公司

8/F Block B. Veristrong Industrial Centre, 34-36 Au Pul Wan Street, Fo Tan, Hong Kong



Calibration Certificate

Ferm QUAS/C/01 hour 1(37) (99/21)

Certificate No. 2 CSA53630 Page : 8 or 3

Calibration Result:

Acoustic Soroitivity and Frequency Response:

2 Frequency Response A-Weighting (Unit in: dB)

Renge	Mode	Applied Level	Frequency (Hz)	Reference Level	UUT Reading	Deviation	ISC 61672-1:2002 class 1 Specification
			31.5	54.4	54.4	0.0	-38.4 +/- Z.D
		1	63	87.6	67.8	0.2	-26.2 +/- 1.5
		1	125	72.7	77.9	0.2	-16.1+/-1.5
	Fast	1	250	85.2	85.4	0.2	4.0 46- 5.4
		1	500	90.6	90.8	0.2	-32 1/- 14
30 to 130		93.9	1000 (Ref.)	93.9	94.0	0,1	0+/-1,1
100000		GREAT THE	2000	95.0	95.1	0.1	+1.2 +F 1.6
			4000	94.9	95.0	0.1	#1.0 #F.1.8
			8000	92.5	92,4	-0.1	-1.1 (+2.1 : - 3.1)
			12500	88.1	\$5.0	-3.3	-4.3 (+3.0 ; -6.0)
			16000	86.6	80.3	-6.3	-6.6 (+3.5; -17.0)

3 Frequency Response C-Weighting : (Unit in: dB)

Range	Mode	Applied Level	Frequency (Hz)	Reference Lavel	UUT Reading	Deviation	IEC 61672-1:2002 class 1 Specification
			31.5	90.8	90.7	-0.1	-3.0 +/- 2.0
			60	93.0	93.2	0.2	-0,8 +/- 1.5
			125	83.6	93.9	0.3	-0.2 +/- 1.5
		0 1	250	93,9	940	0.2	0.0 +/- 1.4
		80,9	500	93,8	94,0	0.2	0,0 +/- 1,4
30 to 130	Fast		1000 (Ref.)	93.9	94,0	0.1	0+61,1
			2000	93,6	93.7	0.1	-0,2 +/- 1.6
	4000 93.		93.1	93,2	0.1	-0.8 +/- 1,6	
			8000	90,6	90,5	-0.1	-3.0 (+2.1; -3.1)
			12500	67.2	83.9	-3,3	-6,2 (+3,0 ; -6.0)
		1	16000	84.7	78.5	-6.2	-8,5 (+3,5; -17.0)

4 Frequency Response Z-Weighting : (Unit in: dB)

Range	Mode	Applied Level	Frequency (Hz)	Reference Level	UUT Reading	Deviation	IEC 61672-1:2002 class 1 Specification	
			31,5	93,4	93.8	0,0	0.0 +/- 2.0	
			63	92,8	94,0	0.2	0,0 % 1.5	
		1	125	93,8	94.0	0.2	0.0 +/- 1.5	
	Fast	83.9	250	93.9	94.0	0.2	0.0+/-1.4	
			600	93.6	94.0	0.2	0.0 +/- 1,4	
30 to 130			83.9	() w5() 000f:	93.9	94,0	0.1	0+/-1,1
77.000.000			2000	93.0	93,9	0.1	0.0+6-1.0	
		4000		93.9	94.0	0,1	0,0 45-1,8	
			8000	93.6	93,4	-0.2	0,0 (+2,1; -3.1)	
			12500	93,4	90,4	-8,0	0,0 (+3.0; -6,0)	
			16000	93.2	88.2	-5.0	0.0 (+3.5 : -17.0)	

Range (Hz)	(dB)	Range (Hz)	(dB)	
31,5	Q 17	2000	0.13	
63	0,15	4000	0.13	
125	0.15	8000	0.15	
250	0,13	12500	0,15	
500	0.18	16000	0,15	
1000	0.45			

- 1000 0.15

 Manufacturer specification: IEC 61672 class 1
- Signal level at 1000 Hz is not as indication of reference sound pressure level.
- The uncertainty quoted is based on 95 % confidence level with coverage factor k=2.0.
 UUT reading are mean of three measurements.
- Deviation = UUT Reading Reference Level

End of certificate



Monthly EM&A Report

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東業德勤測試顧問有限公司 ETS-TESTCONSULT LTD.

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Form Q/AS/C/01 Issue 1(1/7) [09/21]

Calibration Certificate

Certificate No.

: CSA54904

: 1 of

3

Information Provided by Customer

ETS - Testconsult Limited

Address

: 8/F., Block B, Veristrong Industrial Centre, 34 - 35 Au Pui Wan Street, Fotan, Shatin, Hong Kong

Page

Information of Unit-under-test (UUT)

	Sound Level Meter	Microphone	Pre-Amplifier	Sound Calibrator
Manufacturer	RION	RION	RION	N/A
Туре	NL-52	UC-59	NH-25	
Equipment I.D. no.	ET/EN/003/17	-		
Serial No.	00264519	03558	64644	-
Adaptors used	-			
Resolution	0.1 dB			

Laboratory Information

Lab. Ref. No. Date of Calibration

Date of Issue

: Q/CAL/25/5473/I

Procedure Date of Receipt : CQS/001/A 3-Jul-2025

: 15-Jul-2025 : 16-Jul-2025

Calibration Location

: Calibration Laboratory

Calibration Condition

Ambient Temperature : (20 ± 3) °C

30 minutes

Relative Humidity

: (50 ± 20) %

Stabilizing Time Ambient Pressure

: (1000 ± 50) hPa

Sampling

: As received

Reference equipment

- Multi-function sound calibrator, ET/2801/01
- Signal generator, ET/2503/01

Calibration specification

To perform the calibration of linearity and frequency response by multi-function sound calibrator.

Calibration result

- The results are detailed on the subsequent pages.

Remarks

- The calibration results apply to the particular unit-under-test only.
- The values given in this calibration certificate only to the values measureed at the time of test & any uncertainties quoted will
 not include allowance for the equipment long term drift, vanifications with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement

Calibrated By:

Tommy TAM (Technician) Approved By:

CHAN Chi Wai

The results shown in this certificate are traceable to the infernational System of Units (SI) or recognised measurement standards. This report shall not be reproduced unless with prior written approval from this laboratory.



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Calibration Certificate

Certificate No. : CSA54904

Page: 2 of 3

Calibration Result:

1 Reference Sound Pressure Level : (Unit in: dB)

Range / Mode		Reference Level	REF Frequency (kHz)	UUT Reading	Deviation	Expanded Uncertatiny	Coverage Factor	
	Self-cal	Before.	93.9	1	88,1	-5.8	0.13	2.0
	Range	30 to 130	103.9	1	98.1	-6.8	0.13	2.0
	Mode	Fast	113.9		108.1	-5.8	0,13	2.0
	Self-cal	After	93.9	1	91.1	-2.8	0.13	2.0
A-Weighting	Range	30 to 130	103.9		101.1	-2.8	0.13	2.0
	Mode	Fast	113.9		111.1	-2.8	0,13	2,0
	Self-cal	After	93.9		91.0	-2.9	0.13	80
	Range	30 to 130	103.9	1	101.1	-2.8	0.13	2.0
	Mode	Slow	113.9		111.1	-2.8	0.13	2.0
-	Self-cal	After	93.9	1	91.0	-2.9	0.13	2.0
	Range	30 to 130	103.9		101.0	-2.9	0.13	2.0
C-Weighting	Mode	Fast	113.9		111.0	-2,9	0.13	2.0
C-wedining	Self-cal	After	93.9	1	91.0	-2.9	0.13	2.0
	Range	30 to 130	103.9		101.0	-2.9	0.13	2.0
	Mode	Slow	113.9		111.0	-2.9	0.13	2.0
	Self-cal	After	93.9		91,0	-2.9	0.13	2.0
	Range	30 to 130	103.9	1 1	101.0	-2.9	0.13	2.0
Z-Weighting	Mode	Fast	113.9		111.0	-2.9	0.13	2.0
T-steriffront)	Self-cal	After	93.9		91.0	-2.9	0.13	2.0
	Range	30 to 130	103.9	1 1	101.0	-2.9	0.13	2.0
	Mode	Slow	113,9		111.0	-2,9	0,13	2.0

Remark:

- The uncertainty quoted is based on 95 % confidence level,
- UUT reading are mean of three measurements.
- Deviation = UUT Reading Reference Level
- Laboratory reference multi-function sound calibrator was used to adjust the "Self cal" reading of UUT,

...



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Calibration Certificate

Form QIASICIQ1 Issue 1(3/7) (09/21)

Certificate No. | CSA54904 Page [3 of 3

Calibration Result:

Accustic Sensitivity and Frequency Response:

2 Frequency Response A-Weighting (Unit in: dll)

Range	Mode	Applied Level	Frequency (Hz)	Reference Level	UUT Reading	Deviation
			31.5	54.4	30.5	-23.9
			63	67.6	45.7	-21.9
			125	77.7	811	-16.6
		1	250	85.2	73.9	-113
	Fast 93.9		500	90.6	84.3	-0.3
30 to 130			1000 (Ref.)	93.9	91.2	-2.8
200000			2000	95.0	93.6	-1.4
			4000	94.9	92.6	-2.3
		1	8000	92.5	87.4	-5.1
		1	12500	89.1	78.7	-10.4
			10000	86.6	71.5	-15.1

3. Frequency Response C-Weighting (Unit in: dB)

Range	Mode	Applied Level	Frequency (Hz)	Reference Level	UUT Reading	Deviation
		- 4	31.6	90,8	63.1	-21.7
		1	63	93,0	70.8	-22.2
		1	125	93.6	77.1	-16.5
			250	93.8	82.6	-11.2
		1	500	93,8	67.4	-6.4
30 to 130	Fast	93.9	1000 (Ref.)	93.9	91,1	-2.7
			2000	93,6	62,2	-1.4
		1	4000	93.1	90,8	-23
			8000	90,6	85.4	-5,2
			12500	87,2	70,9	-10,3
			16000	84,7	69,8	-14.9

4 Frequency Response Z-Weighting (Link in: dB)

Range	Mode	Applied Level	Frequency (Hz)	Reference Lovel	UUT Reading	Deviation
			31.5	93,9	66,0	-27,8
			63	93.8	71,7	-22.0
		1 1	125	93.6	77,3	-16,5
			250	95,8	82,0	-112
			500	99,8	87.5	-6,3
30 to 130	Fact	93,9	1000 (Ref.)	93.9	910	+2.8
			2000	90,8	92.4	-1,4
			4000	93,9	91.6	-23
			8000	69,6	06,5	-5,1
			12500	93,4	83,3	-10,1
			16000	93,2	784	-13,8

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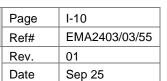
Range (Hz)	(dB)	Range (Hz)	(dB)
31,5	0,62	2000	0,13
63	0.21	4000	0,13
125	0.15	9000	0,15
250	0,95	12500	0,16
500	0,13	10000	0,17
1000	0.13		

Remerk:

- . Signal level at 1000 Hz is set as indication of reference accord prossure level,
- . The uncertainty quoted is based on 95 % confidence level with coverage factor k=2,0
- . UUT reading are mean of three measurements;
- . Deviation = UUT Reading Reference Level

End of certificate







Calibration record of Anemometer						
	Cambrati	on record or A	iemomete.			
Equipment Ref. N	o. : <u>ET/EN/</u>	001/05 Manuf	acturer :	AZ Instrument		
Model No.	: AZ 8	908 Serial	No. :	1064869		
Date of Check : 25-Oct-2024 Due Date : 24-Oct-2025						
Method						
2 A fan with vario 3 Adjust the spee 4 Ose uite referent 5 Record the indi 6 Apply the corre	us speed control had d and direction of the ce anemometer and cated value of both a cted value in the refer value in the UUT shou	ength about 1m was us set in on end of the pip fan to achieve the targuler unit union less to conserve the targular union enter ence anemometer and ald not over ±5% of the	et wind speeds eck up who speed in calculate the corrects			
Equipment Ref. N	o. ;ET/12	15/01 Calibr	ation Due Date :	2-Sep-2026		
Environmental Ambient Tempera Results	ture :26	.0 Relati	ve Humidity :	45%		
Applied Range	Reference An	emometer (m/s)	Unit Under	Test (m/s)		
(m/s)	Indicated Value	Corrected Value	Indicated Value	Corrected Value		
0	0.00	0.00	0.0	0.0		
2 - 3	2.59	2.65	2.4	+0.3		
4-6	5.68	5.54	5.9	-0.4		
9 - 11	9.4	9.8	10.1	-0.3		
14 - 16	14.9	15.4	15.2	+0.2		
18 - 20	18.6	18.8	19.3	-0.5		
Acceptance Cri	should < ±5% FS					
The Anemomete deemed accepta * Delete as appro	able * / unacceptat	s not comply * with to le * for use.	ne specified require	ements and is		
Checked by	· :_ Tal	15 A	pproved by :	6		



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Works at Po Toi O	Ref#	EMA2403/03/55	
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APPENDIX J - NOISE IMPACT MONITORING RESULT



ED 540/0040 Port Chalter Courses Starre? Courses Weeks at Da Tai O	Page	J-2
EP-516/2016 - Port Shelter Sewerage, Stage3 - Sewerage Works at Po Toi O	Ref#	EMA2403/03/55
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monthly Linear Report	Date	Sep 25

Monthly Environmental Monitoring & Audit Report for Port Shelter Phase 3, Po Toi O Sewerage Treatment Plant 2025 August Noise Monitoring Data

Monitoring Location: NMS1N

Doto	Noise Monitoring (30min)						
Date	Weather	Start Time	Leq dB(A)	L10 dB(A)	L90 dB(A)		
6- Aug -25	Cloudy	14:30	55.5	59.6	53.0		
12- Aug -25	Fine	10:55	60.2	63.3	54.9		
18- Aug -25	Cloudy	09:51	58.1	59.7	54.7		
28- Aug -25	Cloudy	10:22	65.8	68.1	61.2		
Average			61.7				
Action Level:	When one valid documented complaint is received						
Limit Level:			75.0 dB(A)				



ED 540/2040. Don't Chalten Courseans Champ? Courseans Works at Do Toi O	Page	J-3
EP-516/2016 - Port Shelter Sewerage, Stage3 - Sewerage Works at Po Toi O	Ref#	EMA2403/03/55
Monthly EM&A Report	Rev.	01
monuny amort ropert	Date	Sep 25

Monthly Environmental Monitoring & Audit Report for Port Shelter Phase 3, Po Toi O Sewerage Treatment Plant 2025 August Noise Monitoring Data

Monitoring Location: NMS2N1

Doto	Noise Monitoring (30min)						
Date	Weather	Start Time	Leq dB(A)	L10 dB(A)	L90 dB(A)		
6- Aug -25	Cloudy	13:30	54.8	59.0	52.5		
12- Aug -25	Fine	10:23	55.9	57.4	53.8		
18- Aug -25	Cloudy	10:26	70.3	71.4	67.9		
28- Aug -25	Cloudy	10:57	55.8	57.1	52.2		
Average	64.7						
Action Level:	When one valid documented complaint is received						
Limit Level:			75.0 dB(A)				



ED 540/0040 Down Challen Courses Starre? Courses Works at Da Tai O	Page	J-4
EP-516/2016 - Port Shelter Sewerage, Stage3 - Sewerage Works at Po Toi O	Ref#	EMA2403/03/55
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Monthly Environmental Monitoring & Audit Report for Port Shelter Phase 3, Po Toi O Sewerage Treatment Plant

2025 August Noise Monitoring Data

Monitoring Location: NMS3N

Doto	Noise Monitoring (30min)						
Date	Weather	Start Time	Leq dB(A)	L10 dB(A)	L90 dB(A)		
6- Aug -25	Cloudy	15:39	55.5	59.5	53.0		
12- Aug -25	Fine	09:50	54.1	57.4	46.5		
18- Aug -25	Cloudy	09:17	60.7	61.9	58.8		
28- Aug -25	Cloudy	09:03	55.4	57.6	52.2		
Average		57.3					
Action Level:		When one valid documented complaint is received					
Limit Level:			75.0 dB(A)				



ED 546/2046 Port Chalter Courses Store? Courses Works at Da Tai O	Page	J-5
EP-516/2016 - Port Shelter Sewerage, Stage3 - Sewerage Works at Po Toi O		EMA2403/03/55
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monthly _max.report	Date	Sep 25

Monthly Environmental Monitoring & Audit Report for Port Shelter Phase 3, Po Toi O Sewerage Treatment Plant

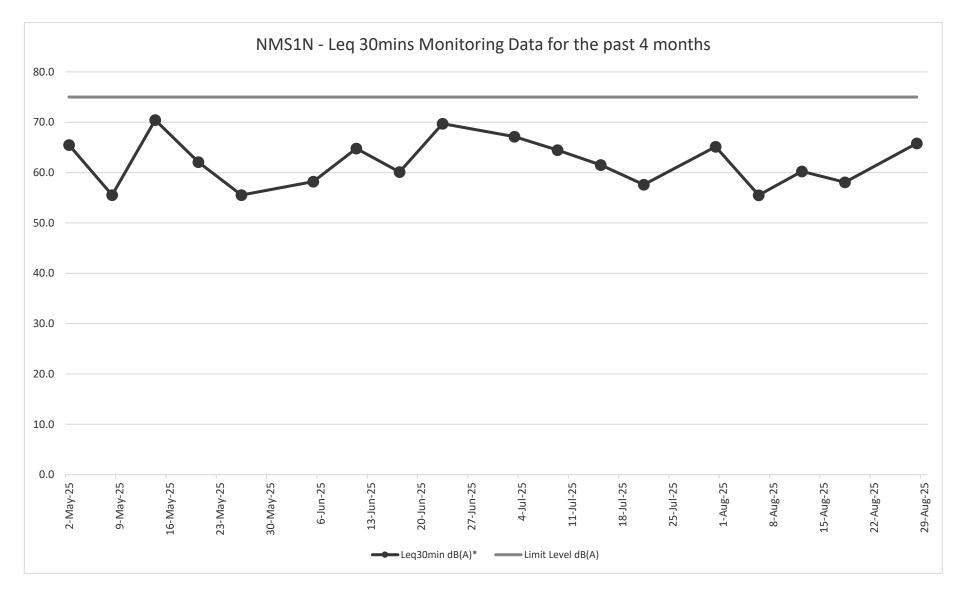
2025 August Noise Monitoring Data

Monitoring Location: NMS4N

Doto	Noise Monitoring (30min)						
Date	Weather	Start Time	Leq dB(A)	L10 dB(A)	L90 dB(A)		
6- Aug -25	Cloudy	15:06	55.1	59.9	52.3		
12- Aug -25	Fine	11:28	53.5	55.8	45.5		
18- Aug -25	Cloudy	11:00	55.1	56.8	53.6		
28- Aug -25	Cloudy	09:42	56.8	60.7	53.3		
Average	55.3						
Action Level:	When one valid documented complaint is received						
Limit Level:			75.0 dB(A)				



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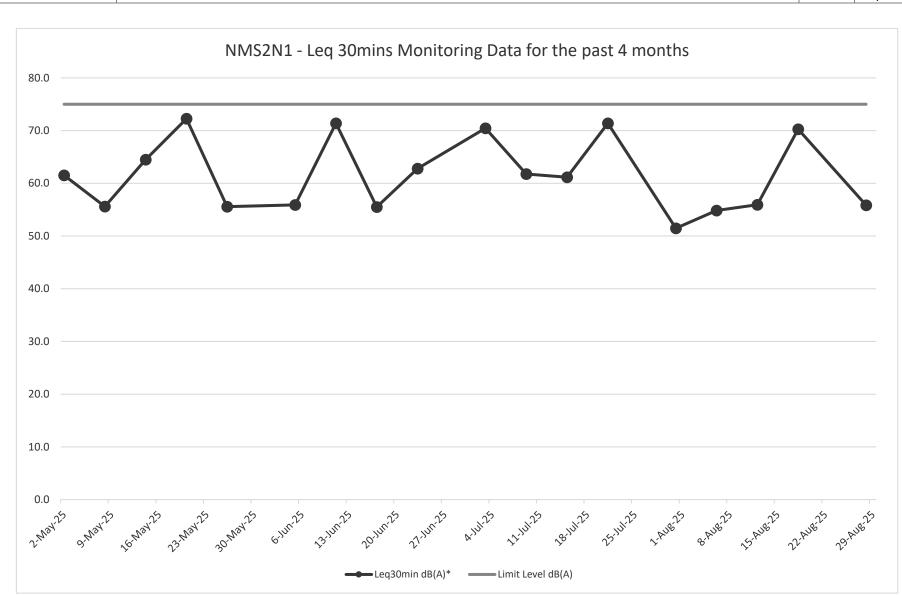




Monthly EM&A Report

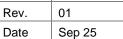
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Date





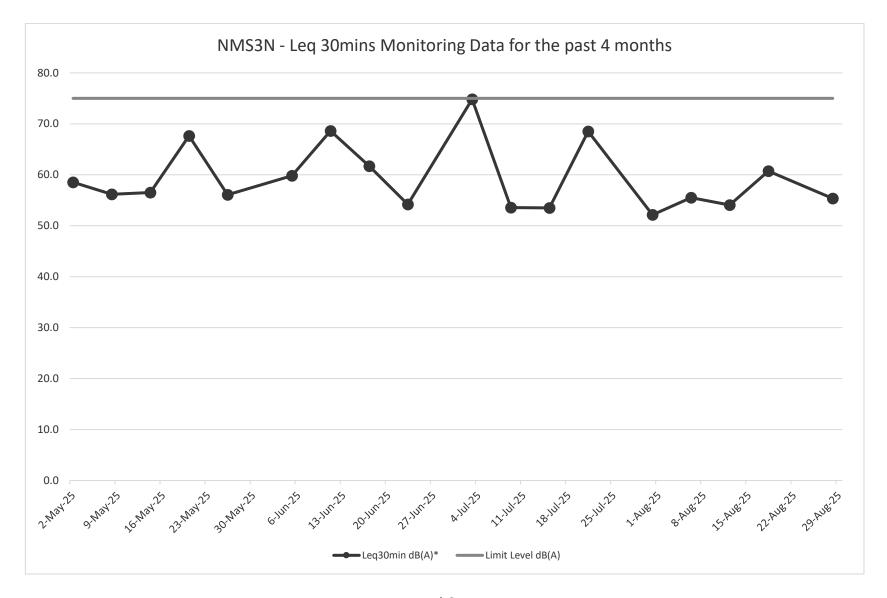
Monthly EM&A Report Ref#



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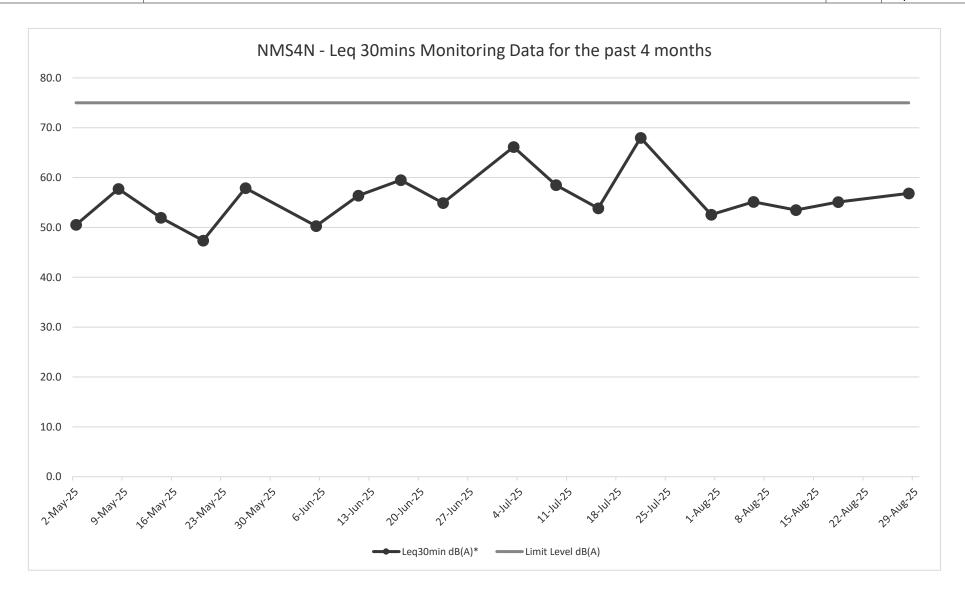
EMA2403/03/55

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APPENDIX K - WATER QUALITY MONITORING SCHEDULE



ED 540/0040 D. 4 Ol. IV. O Ov. O. O W. L. 4 D. T. 10		K-2
EP-516/2016 - Port Shelter Sewerage, Stage3 - Sewerage Works at Po Toi O	Ref#	EMA2403/03/55
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August 2025

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	Water Quality Monitoring Ebb: 10:15 - 13:45 Flood: 17:15 - 20:45	9
10	11	12	13	14	15	16
17	18	19	20	21	Water Quality Monitoring Ebb: 10:15 - 13:45 Flood: 16:15 - 19:45	23
24	25	26	27	28	29	30
31		Notes 1. Water sampling will be conducte 2. Predicted tides time were referer (Tai Miu Wan Station).	ed +/- 1.75 hour of the predicted tide nce from Hong Kong Observatory	s time.	https://www.verte	ss by Vertex42.com x42.com/calendars/ LLC. Free to print.



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Works at Po Toi O	Ref#	EMA2403/03/55
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APPENDIX L - MONTHLY SUMMARY OF WASTE FLOW



ED 540/9940	Page	L-2
EP-516/2016 - Port Shelter Sewerage, Stage3 - Sewerage Works at Po Toi O		EMA2403/03/55
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Monthly Summary Waste Flow Table for 2025 Year

		Actual Quant	tities of Inert	C&D Materi	als Generate	d Monthly	Actual	Quantities of (C&D Waste	s Generated	Monthly
Month	Total Quantity Generated	Quantity and Large the in other as Public imported Fill	Metals	Paper / Cardboard Packaging	Plastics (see note 3)	Chemical Waste	Other, e.g. general refuse				
	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	[in '000kg]	[in '000kg]	[in '000kg]	[in '000kg]	[in Tonne]
Jan	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jun	0.085	0.000	0.000	0.000	0.085	0.000	0.000	0.000	0.000	0.000	3.67
Sub- Total	0.088	0.000	0.000	0.000	0.088	0.000	0.000	0.000	0.000	0.000	3.67
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.34
Aug	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.76
Sep											
Oct											
Nov											
Dec											
Total	0.088	0.000	0.000	0.000	0.088	0.000	0.000	0.000	0.000	0.000	23.77

Note:

- 1) The performance targets are given in the Environmental Management Plan.
- (2) The waste flow table shall also include C&D materials to be imported for use at the Site.
- (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.



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APPENDIX M - IMPLEMENTATION SCHEDULE OF RECOMMENDED MITIGATION MEASURES



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Ref.	& A		Recommended Measure &	Agent	the measure	measure	stages	Legislation &
	Ref.		Main Concerns to address					Guidelines
Air Qua	ality imp	act				l	l	
Project	t Specifi	c Measures						
3.8	A1	Deodourizer should have at least 99.5% hydrogen sulfide removal	To minimize odour nuisance to	DSD	Sewage	Throughout	Operational phase	EIAO-TM
		efficiency.	sensitive receivers		Treatment Plant	operational phase		
3.8	A2	Odourous materials (sludge, screenings and grits, worn filter)	To minimize odour nuisance to	DSD	Sewage	Throughout	Operational phase	EIAO-TM
		should be stored and removed in sealed tankers and containers.	sensitive receivers		Treatment Plant	operational phase		
3.8	А3	Sludge should be transferred to sludge tanker by coupling	To minimize odour nuisance to	DSD	Sewage	Throughout	Operational phase	EIAO-TM
		method.	sensitive receivers		Treatment Plant	operational phase		
3.8	A4	During release of pressure from the tanker, the odourous gas	To minimize odour nuisance to	DSD	Sewage	Throughout	Operational phase	EIAO-TM
		should be discharged into the sludge storage room for extraction	sensitive receivers		Treatment Plant	operational phase		
		to deodourization unit.						
3.8	A5	Regular inspection should be conducted to check for leakage of	To minimize odour nuisance to	DSD	Sewage	Throughout	Operational phase	EIAO-TM
		odourous gas.	sensitive receivers		Treatment Plant	operational phase		
3.8	A6	Maintain the removal efficiency of screenings and grits by	To maintain the removal	DSD	Sewage	Throughout	Operational phase	EIAO-TM
		flushing the screens and grit sump regularly to prevent buildup of	efficiency of screenings and		Treatment Plant	operational phase		
		solids	grits					
3.8	A7	Maintain the efficiency of MBR membrane by removing	To maintain the efficiency of	DSD	Sewage	Throughout	Operational phase	EIAO-TM
		organic and inorganic debris regularly	MBR membrane		Treatment Plant	operational phase		
3.8	A8	Replace worn filter to maintain the odour removal efficiency at	To minimize odour nuisance to	DSD	Sewage	Throughout	Operational phase	EIAO-TM
		99.5%	sensitive receivers		Treatment Plant	operational phase		
3.8	A9	Clean all the tanks with water regularly	To minimize odour nuisance to	DSD	Sewage	Throughout	Operational phase	EIAO-TM
			sensitive receivers		Treatment Plant	operational phase		
Genera	al/Stand	ard Measures		1	1	•	•	
3.8	A10	Good housekeeping to minimize dust generation, e.g. by	To minimize dust generation	DSD's Contractor	Whole	Throughout	Construction	EIAO-TM,
		properly handling and storing dusty materials			construction	construction phase	Phase	APCO
					site	p		
3.8	A11	Adopt dust control measures, such as dust suppression using	To minimize dust generation	DSD's Contractor	Whole	Throughout	Construction	EIAO-TM,
		water spray on exposed soil (at least 4 times per day), in areas	due to erosion		construction	construction phase	phase	APCO
		with dusty construction activities and during material handling			site			



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Ref.	A Ref.		Recommended Measure &	Agent	the measure	measure	stages	Legislation &
			Main Concerns to address					Guidelines
3.8	A12	Store cement bags in shelter with 3 sides and the	To prevent leakage of cement	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		top covered by impervious materials if the stack		Contractor	construction	construction	phase	
		exceeds 20 bags			site	phase		
3.8	A13	Maintain a reasonable height when dropping	To minimize dust generation during movement of excavated	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		excavated materials to limit dust generation	materials	Contractor	construction	construction	phase	
					site	phase		
3.8	A14	Limit vehicle speed within construction site and in	To minimize dust generation due to traffic movement	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		Po Toi O to 10km/hr and confine vehicle		Contractor	construction	construction	phase	
		movement in haul road			site	phase		
3.8	A15	Minimize exposed earth after completion of work in	To minimize dust generation due to erosion	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		a certain area by hydroseeding, vegetating, soil		Contractor	construction	construction	phase	
		compacting or covering with bitumen			site	phase		
3.8	A16	Provide wheel washing at construction site exit to	To prevent dust from being brought offsite	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		clean the vehicle body and wheel		Contractor	construction	construction	phase	
					site	phase		
3.8	A17	Cover materials on trucks before leaving the	To prevent falling of debris during traffic movement and by wind	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		construction site to prevent debris from dropping		Contractor	construction	construction	phase	
		during traffic movement or being blown away by			site	phase		
		wind						
3.8	A18	Regular maintenance of plant equipment to	To minimize black smoke emission	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		prevent black smoke emission		Contractor	construction	construction	phase	
					site	phase		
3.8	A19	Throttle down or switch off unused machines or	To minimize unnecessary emission	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		machine in intermittent use		Contractor	construction	construction	phase	
					site	phase		
3.8	A20	Minimize excavation area as far as possible	To minimize dust emission and potential release of odour from	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
			exposed ground	Contractor	construction	construction	phase	
					site	phase		



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Ref.	A Ref.		Recommended Measure &	Agent	the measure	measure	stages	Legislation &
			Main Concerns to address					Guidelines
3.8	A21	Store odourous excavated materials in covered	To minimize odour nuisance to sensitive receivers	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		containers and remove off-site as soon as possible		Contractor	construction	construction	phase	
		within 24 hours			site	phase		
3.8	A22	Cover open stockpiles of construction materials	To prevent soil erosion under rainstorm	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		(e.g. aggregates, sand and fill materials) with		Contractor	construction	construction	phase	
		impermeable materials such as tarpaulin during			site	phase		
		rainstorms						
3.8	A23	Hoarding of not less than 2.4 m high shall be	To minimize dust emission	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		erected from ground level to surround the		Contractor	construction	construction	phase	
		construction site for sewage treatment plant along			site	phase		
		Po Toi O Chuen Road except for a construction						
		site entrance or exit						
3.8	A24	Carry out air quality monitoring throughout the	To monitor construction dust level	DSD's	At	Prior to and	Construction	EIAO-TM
		construction period		Contractor	representative	throughout	phase	
					ASRs	construction		
						phase		
3.8	A25	Carry out regular site inspection to audit the	To check the implementation status and effectiveness of	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		implementation of mitigation measures	mitigation measures	Contractor	construction	construction	phase	
					site	phase		



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Ref.	& A		Recommended Measure &	Agent	the measure	measure	stages	Legislation &
	Ref.		Main Concerns to address					Guidelines
Noise	Impact			•		•	•	
Projec	t Specif	ic Measures						
4.7	N1	Use hand-held plant equipment or manual equipment within village area	To minimize construction noise level	DSD's Contractor	Whole construction site	Throughout construction phase	Construction phase	NCO, EIAO-TM
4.7	N2	For HDD, enclose the stationary plant equipment on three sides with cover. Only the side facing the sea shall be opened for heat exhaustion.	To lower noise transmission	DSD's Contractor	HDD work site	Throughout construction phase	Construction Phase	NCO, EIAO-TM
4.7	N3	Generator should be placed at a fixed location at least 5-6m away from the NSRs and screened by noise barrier whenever excavation work has to be carried out at their front doors	To lower noise transmission	DSD's Contractor	Whole construction site	Throughout construction phase	Construction Phase	NCO, EIAO-TM
4.7	N4	Avoid carrying out noisy activities at the same time. The work front of village sewer installation near NSRs PTO_N1 and PTO_N3 shall not be conducted concurrently with installation of Po Toi O Chuen Road sewer and horizontal directional drilling respectively.	To minimize noise production	DSD's Contractor	Whole construction site	Throughout construction phase	Construction Phase	NCO, EIAO-TM
4.7	N5	Vibratory poker shall only be operated 4m away from NSR and with noise barrier properly erected. Surfacing work within 4m from NSR shall be carried out by manual method	To minimize noise production	DSD's Contractor	Whole construction site	Throughout construction phase	Construction phase	NCO, EIAO-TM
Gene	ric/Stand	dard Measures		•			•	
4.7	N6	Schedule noisy activities to minimise exposure of nearby NSRs to high levels of construction noise	To minimize construction noise level	DSD's Contractor	Whole construction site	Throughout construction phase	Construction Phase	NCO, EIAO-TM
4.7	N7	Use Quality Powered Mechanical Equipment (QPME) which produces lower noise level	To minimize construction noise level	DSD's Contractor	Whole construction site	Throughout construction phase	Construction Phase	NCO, EIAO-TM
4.7	N8	Erect 3m high mobile barriers with skid footing and a small cantilevered upper portion within a few metres of stationary plants and within about 5m of more mobile plant.	To lower noise transmission	DSD's Contractor	Whole construction site	Throughout construction phase	Construction phase	NCO, EIAO-TM



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Ref.	A Ref.		Recommended Measure &	Agent	the measure	measure	stages	Legislation &
			Main Concerns to address					Guidelines
4.7	N9	Hand-held breaker shall be fitted with mufflers. A movable enclosure made	To lower noise transmission	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		up of plywood is proposed to surround both worker and breaker during		Contractor	construction	construction	phase	
		breaking process. The internal wall of the enclosure should be laid with			site	phase		
		sound absorbent such as mineral wool.						
4.7	N10	Regular maintenance of plant equipment to prevent noise emission due to	To prevent noise emission due	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		impair	to impair	Contractor	construction	construction	phase	
					site	phase		
4.7	N11	Position mobile noisy equipment in location and direction away from NSR	To minimize noise transmission	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
			to NSR	Contractor	construction	construction	phase	
					site	phase		
4.7	N12	Use silencer or muffler on plant equipment and should be properly	To minimize noise transmission	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		maintained		Contractor	construction	construction	phase	
					site	phase		
4.7	N13	Throttle down or switch off unused machines or machine in Intermittent	To minimize noise production	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
		use between work		Contractor	construction	construction	phase	
					site	phase		
4.7	N14	Make good use of stockpiles or other structures for noise screening	To minimize noise transmission	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
				Contractor	construction	construction	phase	
					site	phase		
4.7	N15	Mobile plant should be sited as far away from NSRs as possible	To minimize noise transmission	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
				Contractor	construction	construction	phase	
					site	phase		
4.7	N16	Reduce the percentage on-time for some noisy PMEs	To mimize noise production	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
				Contractor	construction	construction	phase	
					site	phase		
4.7	N17	Carry out noise monitoring	To monitor construction noise	DSD's	At	Prior to and	Construction	EIAO-TM, APCO
			level	Contractor	representative	throughout	phase	
					NSRs	construction		
						phase		



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	Ref.		Main Concerns to address			measure		Guidelines
Water	Quality	Impact		l	1	.1		
Projec	t Specif	ic Measures						
5.8	W1	Divert the water from outfall of W3 (stream near Fairway Vista) during open cut	To prevent the excavated	DSD's	Whole	Throughout	Construction	ProPECC PN 1/94,
		excavation for laying of gravity sewer nearby	materials from falling into the	Contractor	construction site	construction	phase	EIAOTM
			water and being carried into the		5.10	phase		
			sea					
5.8	W2	Place sandbag along the upstream section of the stream near Fairway Vista and	To prevent the excavated	DSD's	Whole	Throughout	Construction	ProPECC PN 1/94,
		along rocky shore during open cut excavation for laying of gravity sewers/rising	materials from falling into the	Contractor	construction	construction	Phase	EIAOTM
		mains nearby.	water and being carried into the		site	phase		
			sea					
5.8	W3	Intercept the water from u-channel at the foot of the slope where the STP will be	To prevent water from entering	DSD's	Whole	Throughout	Construction	EIAO-TM
		built	the construction site	Contractor	construction site	construction	Phase	
						phase		
5.8	W4	Install cofferdam around the proposed excavation area for entry pit of HDD work	To prevent debris from entering	DSD's	HDD work site	Throughout	Construction	EIAO-TM
		to prevent falling of debris into the sea	the waterbodies	Contractor		construction	Phase	
						phase		
5.8	W5	Install sheet piles in marine waters by vibratory action.	To minimize dispersion of	DSD's	Whole	Throughout	Construction	EIAO-TM
			marine sediment	Contractor	construction site	construction	phase	
						phase		
5.8	W6	Marine works (dredging, construction and installation works at diffuser location,	To minimize dispersion of	DSD's	Whole	Throughout	Construction	EIAO-TM
		backfilling) shall be carried out inside the watertight cofferdam. The cofferdam	marine sediment	Contractor	construction site	construction	Phase	
		can only be removed after completion of work				phase		
5.8	W7	Dredging should be carried out by grab dredgers anchored outside the cofferdam.	To minimize dispersion of	DSD's	Whole	Throughout	Construction	EIAO-TM
		The marine sediment should be placed in sealed compartment of the marine	marine sediment	Contractor	construction site	construction	Phase	
		barge.				phase		
5.8	W8	Water removed from the cofferdam should be desilted before discharge back into		DSD's	Whole	Throughout	Construction	EIAO-TM
		the sea.	To prevent discharge of silty	Contractor	construction site	construction	phase	
			water into the sea			phase		



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Ref.	Ref.		Recommended Measure &	Agent	the measure	measure	stages	Guidelines
			Main Concerns to address					
5.8	W9	Carry out water quality monitoring at water sensitive receivers before and during	To identify any water quality	DSD's	Water	Before and	Construction	EIAO-TM
		cofferdam installation works, throughout dredging works, and during cofferdam	impact due to construction	Contractor	Monitoirng	throughout	phase	
		extraction works	works		Stations	installation and		
						extraction works		
						of cofferdam		
5.8	W10	The following summarizes the precautionary measures for	To prevent emergency	DSD	Sewage	Operational phase	Operational	EIAO-TM
		minimizing chance of emergency discharge:	discharge		Treatment Plant		phase	
		Provision of dual power by CLP;						
		Equipped with Supervisory control and data acquisition system (SCADA), which						
		signals to the operation and maintenance personnel for emergency attendance in						
		case of plant failure;						
		Provision of standby pump and screen at the PTOSTW.						
		Provision of emergency generator within 4 hours by DSD's future term contractor.						
		Provision of emergency storage with capacity of 4-hr sewage retention time.						
		Arrangement of tankers for removing incoming sewage to other sewage treatment						
		plants for treatment.						
5.8	W11	Carry out water quality monitoring at water sensitive receivers during normal	To identify any water quality	DSD	At	6 months before	Operational	WPCO, EIAO-TM
		operation	impact due to the normal		representative	and in 1st year of	phase	
			operation of the Sewage		WSRs	operation		
			Treatment Plant (STP)					
Generi	c/Standard M	leasures						
5.8	W12	Set up sedimentation tank for settling suspended solids in wastewater before	To reduce the amount of	DSD's	Whole	Throughout	Construction	ProPECC PN 1/94,
		discharge into storm drains. Sand/silt removal facilities such as sand traps, silt traps	suspended solid in wastewater	Contractor	construction	construction	phase	EIAO-TM
		and sedimentation basin should be provided with adequate capacity.			site	phase		
5.8	W13	Follow ProPECC PN 1/94 "Construction Site Drainage" as far as practicable	To minimize surface runoff and	DSD's	Whole	Throughout	Construction	ProPECC PN 1/94,
			chance of erosion	Contractor	construction	construction	phase	EIAO-TM
					site	phase		
5.8	W14	Construct catchpits and perimeter channels prior to commencement of site formation	To stop runoff from flowing	DSD's	Whole	Throughout	Construction	ProPECC PN 1/94,
		works and earthworks.	across the construction site	Contractor	construction	construction	phase	EIAO-TM
					site	phase		
5.8	W15	Maintain silt removal facilities, channels, manholes before and after rainstorm.	To prevent failure that may lead	DSD's	Whole	Throughout	Construction	ProPECC PN 1/94,
			to flooding	Contractor	construction	construction	phase	EIAO-TM
					site	phase		



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5.8	W16 W17	Remove silt and grit from silt trap at regular interval. Well design works program to minimize the work areas to minimize the soil exposure and site runoff. Arrange soil excavation works outside rainy seasons (202 to September) as far as	Main Concerns to address To prevent blockage the may lead to flooding To minimize surface runoff and chance of erosion	DSD's Contractor	Whole construction site Whole	Throughout construction phase	Construction phase	Guidelines ProPECC PN 1/94, EIAO-TM
5.8	W17	Well design works program to minimize the work areas to minimize the soil exposure and site runoff.	lead to flooding To minimize surface runoff and	Contractor DSD's	construction site	construction		
		and site runoff.	To minimize surface runoff and	DSD's	site		phase	EIAO-TM
		and site runoff.				phase		
		and site runoff.			Whole			
5.8	W18		chance of erosion	0		Throughout	Construction	ProPECC PN 1/94,
5.8	W18	Arrango coil execution works outside rainy seasons (202 to September) as far as		Contractor	construction	construction	phase	EIAO-TM
5.8	W18	Arrango soil executation works outside rainy spacens (202 to Sontember) as far as			site	phase		
		Arrange soil excavation works outside rainy seasons (202 to September) as iai as	To minimize surface runoff and	DSD's	Whole	Throughout	Construction	ProPECC PN 1/94,
		possible. If this cannot be achieved, the following measures should be implemented:	chance of erosion	Contractor	construction	construction	phase	EIAO-TM
		- Cover temporary exposed slope surfaces with impermeable materials, e.g. tarpaulin			site	phase		
		- Protect temporary access roads by crushed stone or gravel						
		- Provide intercepting channels along crest/edge of excavation						
		- Carry out adequate surface protection measures well before the arrival of a rainstorm						
5.8	W19	Minimize exposed earth after completion of work in a certain area by hydroseeding,	To prevent soil erosion under	DSD's	Whole	Throughout	Construction	ProPECC PN 1/94,
		vegetating, soil compacting or covering with bitumen	Rainstorm	Contractor	construction	construction	phase	EIAO-TM
					site	phase		
5.8	W20	Prevent rainwater from entering trenches. Excavation of trenches should be dug and	To prevent soil erosion under	DSD's	Whole	Throughout	Construction	ProPECC PN 1/94,
		backfilled in short sections during rainy seasons. Remove silt in rainwater collected	Rainstorm	Contractor	construction	construction	phase	EIAO-TM
		from the trenches or foundation excavations prior to discharge to storm drains.			site	phase		
5.8	W21	Cover open stockpiles of construction materials (e.g. aggregates, sand and fill	To prevent soil erosion under	DSD's	Whole	Throughout	Construction	ProPECC PN 1/94,
		materials) with impermeable materials such as tarpaulin during rainstorms.	rainstorm	Contractor	construction	construction	phase	EIAO-TM
					site	phase		
5.8	W22	Cover and temporary seal manholes to prevent silt, construction materials or debris	To prevent overloading of foul	DSD's	Whole	Throughout	Construction	ProPECC PN 1/94,
		and surface runoff from entering foul sewers.	sewers	Contractor	construction	construction	phase	EIAO-TM
					site	phase		
5.8	W23	Remove waste from the construction site regularly.	To prevent waste accumulation	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
				Contractor	construction	construction	phase	
					site	phase		
5.8	W24	Apply discharge license for effluent discharge. Treat the discharge to comply with the	To ensure compliance with	DSD's	Whole	Throughout	Construction	WPCO, TM-DSS,
		requirement in TM-DSS.	effluent discharge requirement	Contractor	construction	construction	phase	EIAOTM
							· ·	-



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			Main Concerns to address					Guidelines
5.8	W25	Reuse treated effluent onsite, e.g. dust suppression, wheel washing and general cleaning.	To minimize wastewater	DSD's	Whole	Throughout	Construction	Waste Disposal
			generation	Contractor	construction	construction	phase	Ordinance, EIAO-
					site	phase		TM
5.8	W26	Monitor effluent water quality	To ensure compliance with	DSD's	Whole	Throughout	Construction	WPCO, EIAO-TM
			effluent discharge requirement	Contractor	construction	construction	phase	
					site	phase		
5.8	W27	Register as chemical waste producer if chemical waste will be generated.	To control chemical waste	DSD's	Whole	Throughout	Construction	Waste Disposal
				Contractor	construction	construction	phase	(Chemical
					site	phase		Waste) (General)
								Regulation, EIAO-
								TM
5.8	W28	Perform maintenance of vehicles and equipment that have oil leakage and spillage potential on	To prevent oil leakage or	DSD's	Whole	Throughout	Construction	Waste Disposal
		hard standings within a bunded area with sumps and oil interceptors.	spillage	Contractor	construction	construction	phase	(Chemical
					site	phase		Waste) (General)
								Regulation, EIAO-
								TM
5.8	W29	Dispose chemical waste in accordance to Waste Disposal Ordinance. Follow the Code of Practice	To avoid accident in waste	DSD's	Whole	Throughout	Construction	Waste Disposal
		on the Packaging, Labelling and Storage of Chemical Wastes, examples as follows:	storage and handling	Contractor	construction	construction	phase	Ordinance, EIAO-
		- Store chemical wastes with suitable containers to avoid leakage or spillage during storage,			site	phase		TM
		handling and transport						
		- Label chemical waste containers according to the CoP to notify and warn the waste handlers						
		- Store chemical wastes at designated safe location with adequate space						
5.8	W30	Provide sufficient chemical toilets with regular maintenance by registered waste collector where	To proper collection of tasks	DSD's	Whole	Throughout	Construction	Waste Disposal
		necessary	force waste	Contractor	construction	construction	phase	Ordinance, EIAO-
					site	phase		TM
5.8	W31	Provide a drip tray/container underneath the bentonite recycling system	To prevent any leaked bentonite	DSD's	Whole	Throughout	Construction	EIAO-TM
			from entering the watercourse	Contractor	construction	construction	phase	
			or sea		site	phase		
5.8	W32	Carry out regular site inspection to audit the implementation of mitigation measures	To check the implementation	DSD's	Whole	Throughout	Construction	EIAO-TM, APCO
			status and effectiveness of	Contractor	construction	construction	phase	
			mitigation measures		site	phase		
5.8	W33	Carry out effluent quality monitoring at location specified in the discharge licence	To ensure compliance with effluent discharge requirement	DSD	Effluent outlet	Operational phase	Operational phase	WPCO, EIAO-TM



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Ref.	Α		Recommended Measure &	Agent	the measure	measure	stages	Legislation &
	Ref.		Main Concerns to address					Guidelines
Terrestri	al Ecology	y		I .	<u> </u>	I.		
Project S	Specific M	leasures						
6.12	E1	Erect bright color fencing along the boundary of the undisturbed region of the shrubland and	To protect the shrub from being	DSD's	Whole	Throughout	Construction	EIAO-TM
		woodland, and around <i>Diospyros vaccinioides</i> , a plant species of conservation importance,	Damaged	Contractor	construction site	construction	phase	
		near the work boundary to remind workers not to trespass or occupy the area, and to be				phase	·	
		careful during operation of equipment.						
6.12	E2	Reinstate the disturbed rocky shore with the rocks temporarily removed	To restore the rocky shore	DSD's	HDD work site	After completion	Construction	EIAO-TM
			habitat	Contractor		of works near the	Phase	
						rocky shore		
6.12	E3	Place sandbag around the section of W3 next to Fairway Vista and along the shore during	To prevent the excavated	DSD's	Whole	When	Construction	EIAO-TM
		open cut excavation for laying of gravity sewer nearby.	materials from falling into the	Contractor	Contractor construction site		Phase	
			water and being carried into the		S.KO	is carried out in		
			sea			the vicinity of W3		
6.12	E4	Temporarily divert the water from outfall of W3 away from excavation area.	To prevent the excavated materials from	DSD's	Whole	When	Construction	EIAO-TM
			falling into the water and being carried into	Contractor	construction site	construction work	Phase	
			the sea			is carried out in		
						the vicinity of W3		
6.12	E5	Inspect the condition of the Diospyros vaccinioides near the work boundary as part of weekly	To inspect the condition of the Diospyros	DSD's	Whole	Throughout	Construction	EIAO-TM
		site audit	vaccinioides	Contractor	construction site	construction	phase	
					S.I.G	phase	,	
Generic	Standard	Measures						
6.12	E6	Erection of hoarding, fencing or provision of clear demarcation of work zones	To remind workers not to	DSD's	Whole	Throughout	Construction	EIAO-TM
			damage area outside the work boundary	Contractor	construction site	construction	Phase	
						phase		
6.12	E7	Designate areas for placement of equipment, building materials and wastes away from the	To prevent damage on the	DSD's	Whole	Throughout	Construction	EIAO-TM
		natural environment	natural environment	Contractor	construction site	construction	Phase	
					S.KO	phase		
6.12	E8	Carry out tree preservation and compensatory tree planting will be carried out in accordance		DSD's	Whole	After completion	Construction	EIAO-TM
		with DEVB TCW No. 7/2015.	To reinstated woodland habitat	Contractor	construction site	of works near	phase	
					Sito	woodland		



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Ref.	Ref.		Recommended Measure &	Agent	the measure	measure	stages	Legislation &
			Main Concerns to address					Guidelines
Terres	trial Ecology			L			L	l
Project	t Specific Me	asures						
9.8	WM1	Sludge will be delivered by sealed sludge tanker for treatment at Sludge	To prevent odour nuisance	DSD	STP	Throughout	Operational	Waste Disposal
		Treatment Facilities				construction	phase	(Chemical
						phase		Waste)
								(General)
								Regulation,
								EIAO-TM
9.8	WM2	Debris from screening process and general refuse should be stored within	To prevent odour nuisance	DSD	STP	Throughout	Operational	Waste Disposal
		the STP in sealed container and be disposed of at landfill regularly.				construction	phase	(Chemical
						phase		Waste)
								(General)
								Regulation,
								EIAO-TM
9.8	WM3	Worn filters and MBR membrane shall be stored and labelled as in	To prevent odour nuisance	DSD	STP	Throughout	Operational	Waste Disposal
		construction phase. Chemical wastes shall be treated at chemical				construction	phase	Ordinance,
		treatment facility by licensed contractor				phase		EIAO-TM
Generi	c/Standard N	Measures		•			1	
9.8	WM4	Allocate an area for waste sorting and storage of C&D materials	To minimize waste generation	DSD's	Whole	Throughout	Construction	Waste Disposal
		into the following categories for reuse, recycle or disposal if		Contractor	construction site	construction	Phase	Ordinance,
		possible. Remove waste from the construction site for sorting				phase		EIAO-TM
		once generated if no suitable space can be identified.						
		- excavated materials suitable for reuse						
		- inert C&D materials (or public fill) for disposal offsite						
		- non-inert C&D materials (or C&D waste) for disposal at						
		landfills						
		- chemical waste						
		- bentonite slurry for reconditioning and reuse						
		- general refuse						
						1		



EM & A

Ref.

WM5

WM6

WM7

avoidance, reuse, recovery, recycling, storage, collection, treatment and

disposal according to the recommendations on the EIA and EM&A Manual.

It should be approved by the ER and regularly reviewed.

EIA

Ref.

9.8

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	Recommended Mitigation Measures *	Objectives of the Recommended Measure & Main Concerns to address	Implementation Agent	Location of the measure	Duration of the measure	Implementation stages	Relevant Legislation & Guidelines
Adopt good site p	practice as follows:	To proper handling of waste	DSD's	Whole	Throughout	Construction	Waste Disposa
- Provide training	to workers on site cleanliness, waste		Contractor	construction	construction	phase	Ordinance,
management (wa	iste reduction, reuse and recycle) and chemical			site	phase		EIAO-TM
handling procedu	ires						
- Provide sufficier	nt waste collection points and regular removal						
	aterials with tarpaulin or in enclosure during						
transportation	·						
- Maintain draina	ge systems, sumps and oil interceptors						
- Sort out chemic	al waste for proper handling and treatment						
onsite or offsite							
Adopt waste redu	uction measures as follows:	To minimize waste generation	DSD's	Whole	Throughout	Construction	Waste Disposa
- Allocate area/co	ontainers for sorting, recovering and storing		Contractor	construction	construction	phase	Ordinance,
waste for reuse, r	recycle or disposal (e.g. demolition debris and			site	phase		EIAO-TM
excavated materi	als, general refuse like aluminium cans.)						
Remove waste from	om the construction site for sorting once						
generated if no si	uitable space can be identified.						
- Allocate area fo	r proper storage of construction materials to						
prevent contamin	ation						
- Minimize wasta	ge through careful planning and avoiding overpurchase						
of construction m	aterials						
Prepare and impl	ement a site-specific Waste Management Plan (WMP) as	To provide guidance to waste	DSD's	Whole	Throughout	Construction	ETWB TCW
part of Environme	ental Management Plan (EMP) in accordance with ETWB	management	Contractor	construction	construction	phase	No.
TCW No. 19/20	05. Detail waste management method in the form of	-		site	phase		19/2005, EIAC
1			1				



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EIA	EM & A	Recommended Mitigation Measures *	Objectives of the	Implementation	Location of	Duration of the	Implementation	Relevant Legislation &
Ref.	Ref.		Recommended Measure &	Agent	the measure	measure	stages	Guidelines
			Main Concerns to address					
9.8	WM8	Store waste materials properly as follows:	To properly store waste	DSD's	Whole	Throughout	Construction	ProPECC PN 1/94, EIAOTM
		- Avoid contamination by proper handling and storing waste		Contractor	construction	construction	phase	
		- Prevent erosion by covering waste			site	phase		
		- Apply water spray on excavated materials						
		- Maintain and clean storage area regularly						
		- Sort and stockpile different materials at designated location to enhance reuse						
9.8	WM9	Apply for relevant waste disposal permits in accordance with the Waste Disposal	To properly dispose waste	DSD's	Whole	Throughout	Construction	Waste Disposal Ordinance
		Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste)		Contractor	construction	construction	phase	(Cap. 354), Waste
		Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28),			site	phase		Disposal (Charges for
		Dumping at Sea Ordinance (Cap. 466).						Disposal of Construction
								Waste) Regulation (Cap.
								345) and the Land
								(Miscellaneous
								Provisions) Ordinance
								(Cap. 28), Dumping at
								Sea Ordinance (Cap.
								466), EIAO-TM
9.8	WM10	Hire licensed waste disposal contractors for waste collection and removal. Dispose waste	To properly dispose waste	DSD's	Whole	Throughout	Construction	Waste Disposal
		at licensed waste disposal facilities		Contractor	construction	construction	phase	Ordinance, EIAO-TM
					site	phase		
9.8	WM11	Implement trip-ticket system for recording the amount of waste generated, recycled and	To monitor movement of waste	DSD's	Whole	Throughout	Construction	Waste Disposal (Chemical
		disposed, including chemical wastes		Contractor	construction	construction phase	phase	Waste) (General)
					site	,		Regulation, Waste
								Disposal Ordinance,
								EIAO-TM
9.8	WM12	Provide wheel washing at construction site exit to clean the vehicle body and wheel	To prevent dust from being	DSD's	Whole	Throughout	Construction	ProPECC PN 1/94, EIAOTM
			brought offsite	Contractor	construction	construction phase	phase	
					site	p.i.acc		
9.8	WM13	Reduce water content in wet spoil generated from piling work by mixing with dry	To minimize load to reception	DSD's	Whole	Throughout	Construction	Waste Disposal
		materials. Only dispose treated spoil with less than 25% dry density to Public Fill	facilities	Contractor	construction	construction phase	phase	Ordinance, EIAO-TM
		Reception Facilities			site	F		



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Ref.	Ref.		Recommended Measure &	Agent	the measure	measure	stages	Guidelines
			Main Concerns to address					
9.8	WM14	Dispose dry waste or waste with less than 70% water content by	To minimize load to reception	DSD's	Whole	Throughout	Construction	Waste Disposal
		weight to landfill	facilities	Contractor	construction	construction	phase	Ordinance, EIAO-TM
					site	phase		
9.8	WM15	Follow the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste	To avoid accident in waste	DSD's	Whole	Throughout	Construction	Waste Disposal
		as follows:	storage and handling	Contractor	construction	construction	phase	Ordinance, EIAO-TM
		- Store chemical wastes with suitable containers. Seal and maintain the container to			site	phase		
		avoid leakage or spillage during storage, handling and transport						
		- Label chemical waste containers in both English and Chinese with instructions in						
		accordance to Schedule 2 of the Waste Disposal (Chemical Waste) (General) Regulation						
		- The container capacity should be smaller than 450 litres unless agreed by the EPD						
9.8	WM16	Comply with the requirement of the chemical storage area:	To ensure proper storage of	DSD's	Whole	Throughout	Construction	Waste Disposal
		- Store only chemical waste and label clearly the chemical characters of the waste	chemical waste	Contractor	construction	construction	phase	Ordinance, EIAO-TM
		- Have at least 3 sides enclosed and protected from rainfall with cover			site	phase		
		- Provide sufficient ventilation						
		- Have impermeable floor and has bunds to contain 110% of the						
		capacity of the largest container or 20% of the total volume of						
		the stored waste in the area, whichever is larger						
		- Adequately spaced incompatible materials						
9.8	WM17	Transfer used lubricants, waste oils and other chemicals to oil recycling companies, if	To ensure proper disposal of	DSD's	Whole	Throughout	Construction	Waste Disposal (Chemical
		possible, and empty oil drums for reuse or refill. No direct or indirect discharge is	chemical waste	Contractor	construction	construction phase	phase	Waste) (General)
		permitted			site	pridoc		Regulation, EIAO-TM
9.8	WM18	Hire licensed chemical waste disposal contractors for waste collection and removal.	To ensure proper disposal of	DSD's	Whole	Throughout	Construction	Waste Disposal (Chemical
		Dispose chemical waste at the approved Chemical Waste Treatment Centre at Tsing Yi	chemical waste	Contractor	construction	construction phase	phase	Waste) (General)
		or other licensed facility			site	F.1.222		Regulation, EIAO-TM
9.8	WM19	Hire reputable waste collector to separately collect and dispose general refuse from other	To ensure proper disposal of	DSD's	Whole	Throughout	Construction	Waste Disposal (Chemical
		wastes. Cover the waste to prevent being blown away	general refuse	Contractor	construction	construction phase	phase	Waste) (General)
					site	pa00		Regulation, EIAO-TM



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Ref.		Recommended Measure	Agent	the measure	the	stages	Guidelines
		&			measure		
		Main Concerns to					
		address					
WM20	Provide recycling bins for sorting out recyclables for collection by recycling	To ensure proper recycling	DSD's	Whole	Throughout	Construction	Waste Disposal
	companies. Non-recyclables should be removed to designated landfills	and	Contractor	construction	construction	phase	Ordinance, EIAO-TM
	every day by licensed collectors to prevent environmental and health	disposal of general refuse		site	phase		
	nuisance.						
WM21	Organize training and reminders to site staff on waste minimization through	To ensure proper	DSD's	Whole	Throughout	Construction	EIAO-TM
	avoidance and reduction, reusing and recycling	management	Contractor	construction	construction	phase	
		of general refuse		site	phase		
WM22	Used bentonite shall be reconditioned onsite and reused as far as practical	To minimize wastage of	DSD's	Whole	Throughout	Construction	EIAO-TM
	to minimize wastage. If this is deemed not viable, the used bentonite shall	bentonite	Contractor	construction	construction	phase	
	be delivered offsite for reconditioning.			site	phase		
WM23	Characterize the sediment quality of the marine sediment to be dredged and	To verify the categories of	DSD's	To be	Before	Construction	ETWB TC(W) No.
	submit a Sediment Quality Report for EPD's approval. Dispose the dredged	sediment to be disposed in	Contractor	allocated	dredging works	phase	34/2002
	marine sediment in accordance with ETWB TC(W) No. 34/2002	accordance with ETWB		by CEDD			
		TC(W)					

No. 34/2002



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	A Ref.		Recommended Measure &	Agent	the measure	measure	stages	Legislation &
			Main Concerns to address					Guidelines
Project Spe	cific Measu	Itas						
Table	CM8	Protective materials to be provided to natural rocky coastline to prevent damage to	To protect landscape resources	DSD's contractor	Temporary	Construction	Construction	Particular
10-6		existing landform from plant and machinery during temporary drilling operations.			drilling site for	planning and	phase	Specification
		Reinstatement following removal of plant & equipment to original or improved condition			submarine	during	phaod	opeomedien.
		shall be undertaken.			outfall	construction		
		Shall be unuchaken.			Odilali	period		
Table	OM1	Sensitive design of sewage treatment plant in terms of scale, height and bulk (visual	To mitigate visual impacts	DSD's Design	STP	Design Phase	Design Phase	Detailed Design
10-7		weight) to integrate the building into the existing topography.		Architect/		, and the second		Drawings
				Engineer				and Specifications
Table	OM2	Use of appropriate building materials and colors for Sewage Treatment Plant to	To mitigate visual impacts	DSD's Design	STP	Design Phase	Design,	Detailed Design
10-7		complement surroundings	3	Architect/		3	Construction and	Drawings
		1		Engineer DSD's contractor		Construction	Operational	and Specifications
				2020001111110101		Phase & first year	Phases	
						in Operational	1 118363	
						Phase		
				Building		Operational phase	_	
				Operator/DSD		Operational priase		
Generic/Sta	andard Mea	sures						
Table	CM1	The construction area and contractor's temporary works areas should be minimized to	To avoid impact on adjacent	DSD's	STP, along	Construction	Construction	Detailed Design
10-6		avoid impacts on adjacent landscape. All slope excavation shall take place from within	landscape areas	Contractor	gravity sewers and rising	planning and	Phase	drawings
		the work boundary to minimize impacts on adjacent slopes.			mains	during		and particular
					construction route and at	construction period		specifications
					temporary			
					drilling site for			
					submarine outfall			
Table	CM2	Reduction of construction period to practical minimum	To minimize duration of impact	DSD's contractor	N/A	Construction	Construction	N/A
10-6						planning and	phase	
						during		
						construction		
						period		



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	A Ref.		Recommended Measure &	Agent	the measure	measure	stages	Guidelines
			Main Concerns to address					
Table	CM3	Construction traffic (land and sea) including construction plant, construction vessels and	To minimize visual impacts to	DSD's	STP, along	Construction	Construction	As per the Particular
10-6		barges to be kept to a practical minimum.	local residents and surrounding	Contractor	gravity sewers	planning and	phase	Specification
			VSRs		and rising	during		
					mains	construction		
					construction	period		
					route at			
					temporary			
					drilling and			
					dredging sites			
					for submarine			
					outfall			
Table	CM4	Erection of decorative mesh screens or construction hoardings and/or temporary noise	To screen construction works	DSD's	STP, along	Construction	Construction	As per the Particular
10-6		barriers around works areas in visually unobtrusive colors.	from local residents and	Contractor	gravity sewers	planning and	phase	Specification
			surrounding VSRs		and rising	during		
					mains	construction		
					construction	period		
					route and at			
					temporary			
					drilling site for			
					submarine			
					outfall			
Table	CM5	Avoidance of excessive height and bulk of site buildings and structures.	To reduce visual impact	DSD's	STP, and at	Construction	Construction	As per the Particular
10-6				Contractor	temporary	planning and	phase	Specification
					drilling site for	during		
					submarine	construction		
					outfall	period		
Table	CM6	Control of night-time lighting by hooding all lights and through minimization of night	To maximize screening of the	DSD's	STP and at	Construction	Construction	As per the Particular
10-6		working periods.	works	Contractor	temporary	planning and during	phase	Specification
					drilling and	construction		
					dredging site	period		
					for submarine			
					outfall			



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Ref.	A Ref.		Recommended Measure	Agent	the measure	the	stages	Guidelines
			&			measure		
			Main Concerns to					
			address					
Table	CM7	All existing trees shall be carefully protected during construction. A Detailed	To maximize protection of	DSD's	STP and all	Construction	Construction	As per Tree Protection
10-6		Tree Protection Specification shall be provided in the Contract Specification.	existing trees	Contractor	other	planning and	phase	Particular Specification,
		Under this specification, the Contractor shall be required to submit, for			construction	during		DEVB TC (W)
		approval, a detailed working method statement for the protection of trees			areas	construction		No.10/2013 and
		prior to undertaking any works adjacent to all retained trees, including trees				period		Guidelines for Tree Risk
		in contractor's works areas. Tree risk assessment shall be undertaken to all						Assessment and
		existing trees within the project site as per "Guidelines for Tree Risk						Management
		Assessment and Management Arrangement"						Arrangement
Table	OM3	Lighting units to be directional and minimize unnecessary light spill and	To mitigate visual impacts	DSD's Design	STP	Design Phase	Design,	Detailed Design
10-7		glare.		Architect/ Engineer			Construction and	Drawings
				DSD's contractor		Construction	Operational	and Specifications
						Phase & first	Phases	
						year		
						in Operational		
						Phase		
				Building		Operational		
				Operator/DSD		phase		
Table	OM4	Greening measures to reinstate the landscape which are appropriate to the	To mitigate visual impacts	DSD's Design	STP	Design Phase	Design,	Detailed Design
10-7		context, including tree and shrub planting and vertical greening, shall be		Landscape Architect			Construction and	Drawings
		implemented.		DSD's contractor		Construction	Operational	and Specifications
						Phase & first	Phases	
						year		
						in Operational		
						Phase		
				Building		Operational		
				Operator/DSD		phase		



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Ref.	A Ref.		Recommended Measure	Agent	the measure	the	stages	Guidelines
			&			measure		
			Main Concerns to					
			address					
Table	OM5	Compensatory tree planting for all felled trees shall be provided to the	To mitigate landscape and	DSD's	STP and at	Design Phase	Design,	As per approved Tree
10-7		satisfaction of relevant Government departments. Required numbers and	visual impacts of tree loss	Landscape Architect	temporary		Construction and	Removal Application,
		locations of compensatory trees shall be determined and agreed separately		7 11 01 111 0 0 1	drilling site for		Operational	Detailed Design
		with Government during the Tree Felling Application process under the		Contractor's	submarine	Construction	Phases	Drawings, Tree
		relevant technical circulars. Tree risk assessment shall be undertaken to all		Landscape Architect	outfall	Phase & first		Protection
		existing trees within the project site as per "Guidelines for Tree Risk		71101111001		year		Particular Specification
		Assessment and Management Arrangement"				in Operational		and Guidelines for Tree
						Phase		Risk Assessment and
				Building		Operational		Management
				Operator/DSD		phase		Arrangement
1								



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			Main Concerns to address	1.90	I		2900	Guidelines
Built H	eritage						1	
Project	Specific Me	asures						
11.6	BH1	Undertake condition survey by professional qualified building surveyor or	To record the condition of the	DSD's	GB01, BH02,	Before	Construction	EIAO-TM and
		engineer to record the existing condition of the built heritage resources.	built heritage resources before	Contractor	LF04	commencement	Phase	Guidelines
			the commencement of			of		for CHIA
			construction works			construction		
						works		
11.6	BH2	Carry out vibration and settlement monitoring to built heritage resources. A	To minimize the potential	DSD's Contractor	GB01, BH02,	During	Construction	EIAO-TM and
		maximum vibration level 7.5mm/s shall be adopted for the Grade 3 Hung	impact by mechanical vibration		LF04	construction	phase	Guidelines
		Shing Temple and settlement check points in the Alert/Alarm/Action limit	and settlement of built heritage			works		for CHIA
		levels at 6mm/8mm/10mm shall be adopted.	resources					
11.6	BH3	Provision of protective covering or protective screen to built heritage	To prevent direct impact from	DSD's Contractor	GB01, BH02,	During	Construction	EIAO-TM and
		resources which are close to the works area	the machine and damages by		LF01, LF04	construction	phase	Guidelines
			construction tools or waste			works		for CHIA
11.6	BH4	Maintain public access to the cultural landscape features as far as possible	To avoid the proposed works	DSD's Contractor	LF01, LF04,	During	Construction	EIAO-TM and
			affecting the worshippers		LF05	construction	phase	Guidelines
						works		for CHIA
11.6	BH5	Provision of buffer zone of at least 1m from the proposed works as far as	To avoid the proposed works	DSD's Contractor	BH02, LF01,	During	Construction	EIAO-TM and
		possible	affecting the worshippers		LF04	construction	phase	Guidelines
						works		for CHIA

^{*} All recommendations and requirements resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed pro



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APPENDIX N - RECOMMENDED MITIGATION MEASURES AND PROACTIVE ENVIRONMENTAL PROTECTION PROFORMA



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Construction Works Area: PTO-SW-03, PTO-Trenchless -01& STP

Anticipated Impacts: Dust, Noise, Water Quality, Terrestrial Ecology, Marine Ecology, Fisheries, Waste Management, Landscape and Visual and Build Heritage Impact

Item	EIA Ref.	EM&A	Environmental	Corresponding	EM&A Manual	Action By	Measurement
		Ref.	Aspect	Mitigation Measures	Recommended Mitigation/		Procedures/Methods
					Actions		
Air	3.8	A10 -	a) Major air quality impact in construction phase	a) All construction plants / machineries will be	(a) Hoarding of not less than 2.4 m high shall be erected from	Contractor	a) 1-hour and 24-hour TSP levels will be
Quality		A25	would arise from excavation of slope at the	checked / serviced on a regular basis during the courses	ground level to surround the work area along Po Toi O Chuen		measured in accordance to the standard
Impact			proposed sewage treatment plant.	of construction to minimize the emission of noise	Road except for a site entrance or exit.		high-volume sampling method as set out in
				generation and eliminate dark smoke emission.			the Title 40 of the Code of Federal
			b) Excavation, Gas welding, slope cutting, Rock		(b) Good housekeeping to minimize dust generation, e.g. by		Regulations, Chapter 1 (Part 50), Appendix
			dowel, fencing, flexible barrier installation Loading	b) All dump trucks will be equipped with mechanical covers	properly handling and storing dusty materials.		A.
			& Unloading Dusty Materials storage, Dusty	to prevent the dust emission during transportation when			
			Waste Sorting, Temporary Site Traffic Control	necessary.	(c) Adopt dust control measures, such as dust suppression		b) Due to objection from the residents of Po
					using water spray on exposed soil at least 4 times a day, in		Toi O village of the use of high-volume
				c) Dust control measures, such as water spraying, will be	areas with dusty construction activities and during material		sampler (HVS) in conducting 24-hours TSP
				provided during demolition works when necessary.	handling.		measurement, 24-hour TSP measures for
							impact monitoring is to be measured by
				d) Maintaining of wet surface on access road and keep	d) Minimize exposed earth after completion of work in a		portable dust meters during construction
				slow speed in the site.	certain area by hydroseeding, vegetating, soil compacting or		phase of the project. This is to be approved
					covering with bitumen.		and verified by ER and IEC.
				e) Conditions in the Environmental Permit			
				and Discharge License should be followed.	(e) Provide wheel washing at site exit to prevent carrying		c) Other than using high volume sampler, 1-
					dust outside of the site.		hour TSP levels can be measured
				f) Predict required quantity of concrete			alternatively by direct reading from portable
				accurately and collect the unused fresh	(f) Cover materials on trucks before leaving the site.		dust meters upon approval from ER. The
				concrete at designated locations in the site for			meters should be capable of producing
				subsequent disposal.	(g) Limit vehicle speed of construction trucks within the		comparable results as that by the high-
					construction site and in Po Toi O, maximum at 10km/hr, and		volume sampling method, to indicate short
				g) Provide sufficient mitigation measures as	confine vehicle movement in haul road.		event impacts.
				recommended in approved EIA Manual requirement.			
					(h) As there is limited space in Po Toi O, stockpiling should		d) -The ET shall agree with the IEC on the
					be avoided. However, if found necessary, the materials		monitoring position and the corrections
					should be covered by impervious materials such as tarpaulin.		adopted.
							e) -The agreed position shall be chosen in
							subsequent baseline and impact
							monitoring.



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	Ref.	Ref.	Aspect	Mitigation Measures	Recommended Mitigation/		Procedures/Methods
					Actions		
Noise	4.7	N1 -	a) The Project comprises three main	a) Conditions in the Environmental Permit and		Contractor	a) Noise measurement shall normally
Impact		N175	works including the construction of	Discharge License should be followed.			be at a point 1 m from the exterior of
Control			sewage treatment plant (STP),				the sensitive receiver building façade
			underground sewers and rising main, and	b) Provide sufficient mitigation measures as			and be at a position 1.2 m above the
			the submarine outfall.	recommended in approved EIA Manual			ground. If the normal monitoring
				requirement.			position cannot be accessed, an
			b) The major noise impact will arise from				alternative position may be chosen,
			the use of powered mechanical				and a correction to the
			equipment.				measurements shall be made. For
							reference, a correction of +3 dB(A)
			c) Excavation, Gas welding, slope cutting,				shall be made to the free field
			Rock dowel, fencing, flexible barrier				measurements.
			installation Loading & Unloading Dusty				
			Materials storage, Temporary Site Traffic				b) The ET shall agree with the IEC on
			Control.				the monitoring position and the
							corrections adopted.
							c) The agreed position shall be
							chosen in subsequent baseline and
,							impact monitoring.



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					Actions		
Water	5.8	W1-	a) Major Water quality impact will be	a) Wastewater to be treated by wastewater	a) Well manage construction materials, chemicals,	Contractor	a) Weekly site audit to monitor the
Quality		W33	originated from minor displacement of	treatment facilities before discharge.	sewage for proper storage and usage and to prevent		implementation of the proposed water
impact			suspended solids during installation,		accumulation onsite.		quality mitigation measures and
			testing pipe and extraction of cofferdam	b) Conditions in the Environmental Permit and	(b) Immediately clean up contaminated soil upon		check the Contractor's work practice
			around the proposed diffuser.	Discharge License should be followed.	chemical and oil leakage.		on water pollution prevention during
					(c) Label chemical waste containers according to the		construction phase.
					Code of Practice to notify and warn the waste		
					handlers. Store fuels, chemicals and chemical waste		b) Should water pollution is observed
					at designated area with locks and bunds.		(e.g. discharge of silty water into
					(d) Register as chemical waste producer.		storm drains), the ET should record
					(e) Set up sedimentation tank for settling suspended		the environmental deficiency for
					solids in wastewater before discharge into storm		investigation.
					drains. Sand/silt removal facilities such as sand		
					traps, silt traps and sedimentation basin should be		c) The Contractor should be notified
					provided with adequate capacity.		and responsible for carrying out
					(f) Provide sufficient number of chemical toilets if		rectification work immediately.
					necessary and employ licensed contractor for		
					regular clean-up and maintenance.		d) The ET shall re-inspect the Project
					(g) Provide wheel washing at site exit to prevent dust		Site and review the effectiveness of
					and silty water from leaving the construction site.		the remedial measure performed until
					(h) Cover slope and loose materials with tarpaulin		satisfaction.
					before rainstorm and inspect the area afterwards.		
					(i) Cover manhole to prevent silt, construction		e) The Contractor shall implement
					materials or debris and surface runoff from entering		preventive measure to avoid causing
					the foul sewer.		the same problem.
					(j) Install fully enclosed cofferdam around the		
					proposed diffuser and deploy a dredger barge		
					outside the cofferdam for dredging and filling works.		



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					Actions		
Terrestrial	6.12	E1-E8	a) The proposed Project will cause minor	a) Conditions in the Environmental Permit and	a) Construction noise and water quality mitigation	Contractor	(a) Bright colour fencing shall be
Ecology			habitat loss of shrubland, temporary	Discharge License should be followed.	measures proposed in the previous sections will be		erected along the boundary of the
			habitat loss of woodland, developed area		applicable to terrestrial ecology.		undisturbed region of the shrubland
			and rocky shore, and removal of one	b) Provide sufficient mitigation measures as			and woodland, and around Diospyros
			individual climber species of conservation	recommended in approved EIA Manual			vaccinioides, a plant species of
			importance that is common within the	requirement.			conservation importance, near the
			Study Area and Hong Kong. Indirect				work boundary to remind workers not
			water quality impact may arise from				to trespass or occupy the area, and
			surface runoff or accidental spillage of				to be careful during operation of
			chemicals in construction Phase.				equipment.
			b) Use of powered plant equipment may				(b)Inspect the condition of <i>Diospyros</i>
			bring noise disturbance on wildlife				vaccinioides as part of weekly site
							audit.
							(c) Reinstate the disturbed rocky
							shore with the rocks temporarily
							removed.
							(d) Carry out compensatory tree
							planting in accordance with DEVB
							TCW No. 7/2015 to reinstate the
							affected woodland.



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					Actions		
Marine	7	7	a) The proposed Project will cause minor	a) Conditions in the Environmental Permit and	a) The variation in water quality at coral and	Contractor	(a) No specific monitoring and audit
Ecology			habitat loss of muddy seabed.	Discharge License should be followed	amphioxus habitats during cofferdam installation		programme is required. With proper
					and extraction works will be overseen by water		implementation of water quality
			b) Indirect water quality impact may arise		quality monitoring mentioned.		mitigation measures, residual impact
			from installation and extraction of sheet				is expected to be acceptable.
			pile of cofferdam in construction phase.				
			c) Dredging and backfilling for installation				
			of diffuser will be conducted inside fully				
			enclosed cofferdam. No marine sediment				
			loss to water column is expected.				



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	1				Actions		
Fisheries	8	8	a) No direct encroachment on Fish Culture	a) Conditions in the Environmental Permit and	Water quality at FCZ will be monitored during	Contractor	(a) No specific monitoring and audit
	1		Zone and Artificial Reefs in the Study Area	Discharge License should be followed	cofferdam installation and extraction works and		programme are required. With proper
	l		is expected.		dredging works in the construction phase as		implementation of water quality
	l				proposed.		mitigation measures, residual impact
	l		b) About 1,920 m2 of fishing ground and				is expected to be acceptable.
	l		500 m2 of benthic spawning ground will be				
	l		affected. Except the 5 m2 benthic				
	1		spawning ground will be lost permanently,				
	1		other impacted area will only be affected in				
	1		construction phase temporarily (reversible				
	1		impact). Indirect impact on fisheries				
	l		resources by the water quality				
	1		deterioration will be insignificant with				
	l		proper implementation of water quality				
	1		mitigation measures.				
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					Actions		
Waste	9.8	WM4-	a) Construction of the sewage	a) All C&D materials generated will be	(a) Reuse C&D materials onsite and dispose excess	Contractor	The Contractor should apply for relevant
Management		WM23	treatment plant, laying of gravity	transported and stored at temporary	uncontaminated ones to public fill.		licenses/permits for waste disposal under
			sewers and rising mains and	storage area. Cover will be provided			different regulations and ordinances as
			submarine outfall are expected to	during transportation of dusty materials.	(b) Provide sufficient waste collection points for general		follows:
			generate mainly inert construction	Suitable materials will be sorted for	refuse and regularly maintained to avoid accumulation.		(a) Chemical Waste Permits/licenses
			and demolition (C&D) materials	reuse on-site. Only non-inert C&D	Dispose the waste at waste transfer or disposal facilities.		under the Waste Disposal Ordinance
			(or public fill) from excavation,	material will be disposed offsite to NENT			(Cap 354);
			and unused building materials.	Landfill.	(c) Minimize wastage through careful planning and avoiding		
			Other wastes include noninert		over purchase of construction materials.		(b) Public Dumping License under the
			C&D materials (or C&D waste),	b) Conditions in the Environmental			Land Miscellaneous Provisions)
			plant materials, scaffolding,	Permit and Discharge License should be	(d) Provide training to workers on site cleanliness, waste		Ordinance (Cap 28);
			formwork and packaging,	followed	management (waste reduction, reuse and recycle) and		
			chemical waste from plant		chemical handling procedures.		(c) Marine Dumping Permit under
			maintenance, bentonite slurry	c) Fueling of equipment will be			Dumping at Sea Ordinance (Cap 466); and
			from drilling works and general	conducted carefully onsite by mobile	(e) Hire licensed waste disposal contractors for waste		
			refuse from workers.	tanker to avoid storage of fuel and oil	collection and removal. Dispose waste at licensed waste		(d) Effluent Discharge License under the
				spillage.	disposal facilities.		Water Pollution Control Ordinance (Cap
			b) Dredging at the proposed				358).
			diffuser location will generate	d) Provision of drip trays for equipment	(f) Recondition and reuse bentonite as far as practical.		
			marine sediment.	likely cause spillage of chemical / fuel			b) Reference should be made to EPD's
				and provide routine maintenance.	(g) Conduct marine sediment test and dump dredged marine		booklets on licenses/permits. The
					sediment according to ETWB TCW No. 34/2002		Contractor shall also document recycling
					Management of Dredged/Excavated Sediment and Dumping		receipts/ disposal record to keep track of
					at Sea Ordinance.		waste movement. The ET shall check with
							the Contractor that these licenses/permits
					(h) Chemical waste shall be handled, stored and disposed		have been obtained. He should also
					properly, according to the relevant guidelines.		review the above documentations
							regularly to ensure compliance with
							legislations and specifications.



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					Actions		
Landscape	Table	CM1-	a) Minor landscape and visual	a) Conditions in the Environmental	a) The contractor shall employ a professionally qualified	Contractor	a) Tree risk assessment shall be
and Visual	10-6	CM8	impact is expected due to	Permit and Discharge License should	Registered Landscape Architect (RLA) on the Environmental		undertaken by the contractor during
impact	& 10-	&	dredging work in open sea,	be followed.	Team to supervise and monitor the implementation of		construction to all existing trees within the
	7	OM1-	construction of the STP and		construction phase landscape and visual mitigation		project site as per "Guidelines for Tree
		OM5	pipelines on land and the loss of	b) Implement the recommended	measures. This is necessary to ensure that all the		Risk Assessment and Management
			existing trees and vegetation at	mitigation proposed in EM&A manual.	recommended landscape and visual mitigation measures		Arrangement".
			the sewage treatment plant site in		under Chapter 10 of the EIA are effectively implemented		
			the construction phase.		including minimization of the works footprint, ensuring that		b) Site inspections by appointed RLA shall
					those existing trees earmarked for retention on site or		be undertaken at monthly intervals to
					transplanting are protected and planting works are correctly		closely monitor all these aspects of work.
					implemented.		Inspection findings shall be logged in a site
							monitoring report with any discrepancies
							or concerns regarding the implementation
							and effectiveness of mitigation measures
							highlighted.



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					Actions		
Build	11.6	BH1 -	a) As the proposed work is close	a) Conditions in the Environmental	a) Provision of protective covering or protective screen is	Contractor	a) A maximum vibration level of 7.5mm/s
Heritage		BH5	to some of the identified built	Permit and Discharge License should	recommended to identified built heritage to prevent damages		shall be adopted for the Grade 3 Hung
			heritage resources, condition	be followed.	by construction tools or waste.		Shing Temple and settlement check points
			survey, vibration and settlement				in the Alert/Alarm/Action limit levels at
			monitoring is recommended to	b) Implement the recommended	b) Maintenance of public access is suggested for identified		6mm/8mm/10mm shall be adopted.
			identified built heritage to prevent	mitigation proposed in EM&A manual.	built heritage. Besides, buffer zone of at least 1m from the		
			indirect damage by mechanical		works boundary should be provided for identified built		
			vibration and settlement.		heritage as far as possible.		
					c) Condition survey, vibration and settlement monitoring to		
					identified built heritage.		



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APPENDIX O - CUMULATIVE STATISTICS ON COMPLAINTS, NOTIFICATIONS OF SUMMONS



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Environmental Complaints Logss

Complaint	Date of	Received	Received	Nature of	Relevant to the	Investigation/	Status
Log No.	Complaint	From	Ву	Environmental	Construction Work	Mitigation	
				Complaint	of	Action	
					Project Site? (Y/N)		
001	28	EPD	ET	Waste	N	The investigation reports	Closed
	December			Management		was submitted on 7	
	2021					January	
						2022	
002	23	EPD	ET	Waste	N	The investigation reports	Closed
	September			Management		was submitted on 27	
	2024					September	
						2024	
003	26	EPD	ET	Wastewater	N	The investigation reports	Closed
	February			Management /		was submitted on 5	
	2025			Air & Noise		March	
						2025	

Remark:

^{*} No complaints, Notifications of Summons, or Successful Prosecutions were received in the reporting period.



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Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions and Public Engagement Activities

Reporting Period	Complaints	Notifications of Summons and	Public Engagement Activities	
		Prosecutions		
This Month	0	0	0	
Cumulative Project-to-Date	3	0	0	