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By courier

Environmental Protection Department
Environmental Assessment Division
Metro Assessment Group
Kowloon Section (2)
27th floor, Southorn Centre,
130 Hennessy Road, Wan Chai,
Hong Kong
(Attn: Ms. CHANG Chia Chi, Maureen)

Dear Ms Chang,

Contract No. ED/2018/01

Kai Tak development – stage 4 infrastructure at the former runway and south apron
Submission of the monthly EM&A report in January 2020

We are pleased to submit herewith monthly EM&A report in January 2020 for your perusal and retention.

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

Yours faithfully,

For and on behalf of
Ka Shing Management Consultant Limited

Lee wing hang

Mr. Lee wing hang


Encl. Monthly EM&A report

Environmental Monitoring and Audit Report
for
Contract No. ED/2018/01 –
Kai Tak Development – Stage 4 infrastructure at the
former runway and south apron

Contract No.: EDO 15/2018

January 2020

(Version 1.2)

Certified By:  _____

(Environmental Team Leader)

13 February 2020

AECOM Asia Company Limited
8/F, Grand Central Plaza, Tower 2
138 Shatin Rural Committee Road
Shatin, Hong Kong

By Post and Email

Attention: Mr. Clive Cheng

Dear Sir,

**Re: Contract No. ED/2018/01 – Kai Tak Development
Stage 4 Infrastructure at the Former Runway and South Apron**

Monthly EM&A Report for January 2020

Reference is made to the Environmental Team's submission of the Monthly EM&A Report for January 2020 (Version 1.2) certified by the ET Leader and provided to us via e-mail on 13 February 2020. Please be informed that we have no adverse comments on the captioned submission. We hereby verify the captioned submission in accordance with Condition 3.3 of EP-337/2009, Condition 3.2 of EP-445/2013 and Condition 3.2 of EP-445/2013/A.

The ET Leader is reminded that it is the ET's responsibility to ensure the reported information be true, valid and correct as per Condition 3.4 of EP-337/2009, Condition 3.3 of EP-445/2013 and Condition 3.3 of EP-445/2013/A.

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

Yours faithfully,

For and on behalf of

Ramboll Hong Kong Limited



Ray Yan

Independent Environmental Checker

c.c.	CEDD	Attn.: Mr. Ronald Siu	Fax: 2739 0076
	Ka Shing	Attn.: Mr. Chan Pang	By e-mail
	Penta-Ocean	Attn.: Mr. Daniel Ho	Fax: 2572 4080

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EXECUTIVE SUMMARY

1. This is the 1st Monthly Environmental Monitoring & Audit (EM&A) report which summaries the findings of the EM&A Programme during the reporting period from 20 to 31 January 2020.

Breaches of Action and Limit Levels

2. 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
3. 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
4. Construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
5. Summary of the non-compliance in the reporting month for the Project is tabulated in Table I.

Table I Non-compliance Record in the Reporting Month

Parameter	No. of Exceedance		Action Taken
	Action Level	Limit Level	
1-hr TSP	0	0	N/A
24-hr TSP	0	0	N/A
Construction noise	0	0	N/A

Complaint log

6. No complaint was received in the reporting month. Summary of complaints in the reporting month is tabulated in Table II.

Table II Summary of complaints in the Reporting Month

Date of Notification from EPD	Date of compliant	Description of complaint	Recommendations / Action take	Close-out date / Status
No complaint	NA	NA	NA	NA

Date of Notification from EPD	Date of compliant	Description of complaint	Recommendations / Action take	Close-out date / Status
was received in the reporting month.				

Notifications of summons and successful prosecutions

7. No notification of summons and successful prosecutions was received in the reporting month. Summary of summons and successful prosecutions in the reporting month is tabulated in Table III.

Table III Summary of summons and successful prosecutions in the Reporting Month

Date of receiving notification of summons or prosecutions	Date of event	Description of event	Action take	Close-out date / Status
No notification of summons and successful prosecutions were received in the reporting month.	NA	NA	NA	NA

Report changes

8. There was no reporting change in the reporting month.

Key construction works in the reporting month

9. Major construction activities undertaken during the reporting month included:
- Ground investigation works
 - Piling works for Bridge D3
 - Installation of sheetpile for North Approach Ramp
 - Excavation for North Depressed Road

Future key issues

10. The future key issues and potential impact in the coming month are given in Table IV.

Table IV Summary of future key issues and potential impact in the coming month

Future key issues in the coming month	Potential impact
Ground investigation work	Noise
Piling works for Bridge D3	Noise
Installation of sheetpile for North Approach Ramp	Noise
Excavation for North Depressed Road	Air Quality

1. INTRODUCTION

Project Background

- 1.1 The Kai Tak Development (KTD) is located in the south-eastern part of Kowloon Peninsula of the HKSAR, comprising the apron and runway areas of the former Kai Tak Airport and existing waterfront areas at To Kwa Wan, Ma Tau Kok, Kowloon Bay, Kwun Tong and Cha Kwo Ling.
- 1.2 Contract No. ED/2018/01 - Kai Tak Development – stage 4 infrastructure at the former runway and south apron (The Project), comprises mainly the design and construction of a dual two-lane Road D3 (Metro Park Section), a single 2-lane Road L12d, a salt water pumping station, a sewage pumping station, landscaped deck and promenade above and adjoining Road D3 (Metro Park Section) respectively, some remaining road works at Road L14, noise barrier at Road D3A, and other associated works at the former runway and south apron. The proposed works are shown in Figure 1 and Figure 2. During the course of the Contract No. ED/2018/01, there may be modification of noise barriers in association with the construction of footbridges connecting to the landscaped deck of Road D3A by developers of adjacent lands (Figure 3). The proposed works and site boundary are shown in Figure 4.
- 1.3 Civil Engineering and Development Department (CEDD) had completed an Environmental Impact Assessment (EIA) and is the Permit Holder.
- 1.4 The construction work under ED/2018/01 comprises the EM&A Manuals (EIA Register Nos. AEIAR-130/2009 for Kai Tak Development and EIA Register Nos. AEIAR-170/2013 for Roads D3A and D4A) and Environmental Permit (EP) Nos. EP-337/2009, EP-445/2013 and Variation to the EP (VEP) No. EP-445/2013/A.
- 1.5 Air quality and noise monitoring has been proposed in the EM&A Manual with EIA Register Nos. AEIAR-130/2009 for Kai Tak Development while no air quality and noise monitoring are proposed in EM&A Manual with EIA Register Nos. AEIAR-170/2013 for Roads D3A and D4A.

Project Organization

1.6 The project organization chart and with respect to the EM&A programme is shown in Appendix A. Information of key personnel contact names and telephone numbers are summarized in Table 1.1.

Table 1.1 Contact Information of Key Personnel

Party	Role	Contact Person	Position	Phone No.	Fax No.
Civil Engineering and Development Department (CEDD)	Project Proponent	Mr. Ronald Siu	Senior Engineer	3579 2452	2739 0076
		Mr. Edwin Chan	Engineer	3579 2458	2739 0076
AECOM Asia Co. Ltd. (AECOM)	Supervisor (act as Engineers' Representative (ER) listed in EM&A Manual)	Mr. Clive Cheng	CRE	3911 4201	3911 4288
Ramboll Hong Kong Limited (Ramboll)	Independent Environmental Checker (IEC)	Mr. Ray Yan	IEC	3465 2836	3465 2899
Ka Shing Management Consultant Limited (Ka Shing)	Environmental Team (ET)	Mr. Chan Pang	ET Leader	6082 2973	2120 7752
Penta-Ocean Construction Co., Ltd. (Penta-Ocean)	Contractor	Mr. Tony Tang	Environmental Officer	9433 2628	3465 8898

Works Area and Construction Programme

1.7 The construction works commenced on 20 January 2020. The construction programme of the Project is given in Appendix B.

Construction works undertaken during reporting month

1.8 Major construction works of the Project in the reporting month are summarized in Table 1.2:

Table 1.2 Major activities of the Project during reporting month

 A yellow drilling rig is positioned on a construction site, surrounded by orange and white safety barriers. The rig is used for ground investigation. A date stamp '24/01/2020 11:08' is visible in the bottom right corner of the image.	 A large yellow crane is lifting a long, cylindrical pile into the ground. A worker in a high-visibility vest stands in the foreground. The background shows other construction equipment and buildings.
 A red excavator is installing sheetpiles into the ground. The sheetpiles are arranged in a row, forming a wall. The excavator's arm is visible, and the background shows a city skyline.	 A red Hitachi excavator is working on a large excavation site. The excavator is digging into the earth, and a large pile of dirt is visible. The background shows a city skyline.

Submission Status under the Environmental Permits

1.9 The status of required submission under Environmental Permit (EP) conditions under EP-337/2009, EP-445/2013 and Variation to the EP (VEP) No. EP-445/2013/A are summarized in Table 1.3.

Table 1.3 Summary of Status of Required Submission of EPs

EP Condition EP-337/2009	EP Condition EP-445/2013	EP Condition EP-445/2013/A	Submission	Submission Date
Condition 1.11	Condition 1.12	Condition 1.12	Notification of Commencement Date of Construction of the Project	6 Jan 2020
Condition 2.3	Condition 2.3	Condition 2.3	Management Organization of Main Construction Companies	9 Sep 2019
Condition 2.4	Condition 2.4	Condition 2.4	Design Drawings	6 Jan 2020
Condition 2.11	Condition 2.5	Condition 2.5	Landscape Mitigation Plans	2 Jan 2020
Condition 3.2	NA	NA	Baseline Monitoring Report	2 Jan 2020

2. AIR QUALITY MONITORING

Monitoring Requirements

2.1 In accordance with EM&A Manuals (EIA Register Nos. AEIAR-130/2009), impact air quality monitoring shall be carried out during the construction phase of the Project. For regular impact monitoring, a sampling frequency of at least once in every six days will be strictly observed at all of the monitoring stations for 24-hour TSP. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six days will be undertaken when the highest dust impact occurs.

Monitoring Locations

2.2 Three designated monitoring stations were selected for air quality monitoring programme. Impact air quality monitoring was conducted at three air quality monitoring stations in the reporting month. Table 2.1 describes the air quality monitoring locations, which are also depicted in Figure 5.

Table 2.1 Locations of Air Quality Monitoring Stations

Air Quality Monitoring Locations for the Project	Location of Measurement
AM3 - Sky Tower	Podium floor near T7
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	Rooftop
AM7 – Hong Kong Children's Hospital	Rooftop

Monitoring Parameters, Frequency and Duration

2.3 The air quality monitoring locations and monitoring frequency are listed in Table 2.2.

Table 2.2 Air Quality Monitoring Parameters, Frequency and Duration

Air Monitoring Station	Location for Measurement	Parameter	Duration	Frequency
AM3 - Sky Tower	Podium floor near T7	- 24-hour average TSP - 1-hour average TSP	- 24 hours	- Once every 6 days
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	Rooftop		- 1 hour	- Three times every 6 days
AM7 - Hong Kong Children's Hospital	Rooftop			

2.4 The monitoring schedule for reporting month and next month is presented in Appendix C.

2.5 Photographic records of the impact monitoring setup are shown in Appendix D.

Monitoring Equipment

2.6 24-hour average TSP and 1-hour average TSP levels were measured for impact monitoring. 24-hour average TSP levels were measured by the High Volume Samplers (HVS) and 1-hour average TSP levels were measured by direct reading method to indicate short-term impacts. Wind data monitoring equipment was set up at conspicuous locations for logging wind speed and wind direction near to the dust monitoring locations. Table 2.3 summarizes the equipment to be used in the air quality monitoring.

Table 2.3 Air Quality Monitoring Equipment

Equipment	Model	Quantity
HVS Sampler	TE-5170 X c/w of TSP sampling inlet	3
Calibrator	TISCH TE-5025A	1
1-hour TSP Dust Meter	TSI Model AM510 SidePak Personal Aerosol Monitor	2
Wind Anemometer	Davis Vantage Pro2 Weather Station	1

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

2.8 Calibration certificates, catalogue of equipment are given in Appendix E.

Monitoring Methodology and QA/QC Procedure

24-hour TSP Monitoring

Operating/Analytical Procedures

2.9 Setup criteria of HVS are shown as follows:

- A horizontal platform with appropriate support to secure the samplers against gusty wind was provided.
- No two samplers were placed less than 2m apart.
- The distance between the sampler and an obstacle, such as buildings, was at least twice the height that the obstacle protrudes above the sampler.
- A minimum of 2m of separation from walls, parapets and penthouses was set for the rooftop samples.
- A minimum of 2m separation from any supporting structure, measured horizontally was set.
- No furnaces or incineration flues was nearby.
- Airflow around the sampler was unrestricted.
- The sampler was more than 20m from the dripline.
- Any wire fence and gate, to protect the samplers, was not caused any obstruction during monitoring.
- Permission were obtained to setup the samplers and to obtain access to the monitoring stations.
- A secured supply of electricity was provided to operate the samplers.

2.10 Prior to the commencement of the dust sampling, the flow rate of the HVS was properly set (between 1.1 m³/min. and 1.4 m³/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.

2.11 For TSP sampling, Glass Fiber Filter Media 8" x 10" have a collection efficiency of > 99 % for particles of 0.3 µm diameter were used.

2.12 The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.

- 2.13 The filter holding frame was removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.
- 2.14 The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure was sufficient to avoid air leakage at the edges.
- 2.15 The shelter lid was closed and secured with the aluminium strip.
- 2.16 The timer was programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- 2.17 After sampling, the filter was removed from the HVS and put into a clean and labeled seal plastic bag to avoid cross contamination. The elapsed time was also be recorded. The sampled filters were sent to the Castco Testing Centre Limited for weighting.
- 2.18 Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature was between 25°C and 30°C and not vary by more than $\pm 3^\circ\text{C}$; the relative humidity (RH) was less than 50% and not vary by more than $\pm 5\%$. A convenient working RH is 40%.

Maintenance/Calibration

2.19 The following maintenance/calibration are required for the HVS:

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

1-hour TSP Monitoring

Measurement Procedures

2.20 The measurement procedures of the 1-hour TSP were conducted in accordance with the

Manufacturer's Instruction Manual as follows:

- Set up the dust meter on a tripod at 1.2m level.
- Turned on the dust meter and check the battery, if too low, change new ones. Pointed the meter to the source area or the planned measurement area.
- The zero calibration of the instrument was conducted before and after each sampling.
- TSP levels were recorded for 1-hour with 5-minute data logging interval.
- Recorded down the general meteorological conditions, Test ID no., start/end time, initial/final reading at each sampling location for data processing.
- Recorded any activities that may generate dust during measurement period.

Maintenance/Calibration

2.21 The following maintenance/calibration are required for the direct dust meters:

- To validity the accuracy of dust meter, compare the results measured by dust meter and HVS by direct reading method every 12 months throughout all stages of the air quality monitoring.

Wind Data Monitoring

2.22 Wind Anemometer was installed at the roof-top of AM7 - Hong Kong Children's Hospital with 10m above ground and clear of constructions or turbulence caused by the buildings.

2.23 The wind data was captured by a data logger and the data was downloaded at least once per month for analysis.

2.24 The wind data monitoring equipment will be re-calibrated at least once every six months.

2.25 Wind direction is divided into 16 sectors of 22.5 degrees each.

2.26 Details of weather information during the monitoring period are shown in Appendix F.

Action and Limit Levels

2.27 The Action and Limit Levels of 24-hour average TSP and 1-hour average TSP are summarized

in Table 2.4 and Table 2.5 respectively.

Table 2.4 Action and Limit Levels of 24-hour average TSP for Construction Dust Monitoring

Parameter	Air Monitoring Station	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
24-hour average TSP	AM3	182	260
	AM4(A)	187	260
	AM7	181	260

Table 2.5 Action and Limit Levels of 1-hour average TSP for Construction Dust Monitoring

Parameter	Air Monitoring Station	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
1-hour average TSP	AM3	297	500
	AM4(A)	326	500
	AM7	315	500

Impact Air Quality Monitoring results

2.28 Impact monitoring results for 24-hour average TSP and 1-hour average TSP levels at the designed air quality monitoring stations are summarized in Table 2.6 and Table 2.7 respectively.

Table 2.6 Summary of 24-hour average TSP Monitoring Data during the reporting month

Air Monitoring Station	Average TSP Concentration, $\mu\text{g}/\text{m}^3$	Range, $\mu\text{g}/\text{m}^3$	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM3	85	35 - 125	182	260
AM4(A)	53	40 - 70	187	260
AM7	52	31 - 78	181	260

Table 2.7 Summary of 1-hour average TSP Monitoring Data during the reporting month

Air Monitoring Station	Average TSP Concentration, $\mu\text{g}/\text{m}^3$	Range, $\mu\text{g}/\text{m}^3$	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM3	80	68 - 92	297	500
AM4(A)	75	64 - 85	326	500
AM7	74	63 - 89	315	500

2.29 There was no Action and Limit Level exceedance of 24-hour average TSP and 1-hour average TSP levels recorded during the reporting month.

2.30 Graphical presentation and detailed monitoring results of 24-hour average TSP and 1-hour

average TSP levels are shown in Appendix G and Appendix H respectively.

2.31 The Event and Action Plan is provided in Appendix I.

2.32 Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.

3. NOISE MONITORING

Monitoring Requirements

- 3.1 In accordance with EM&A Manuals (EIA Register Nos. AEIAR-130/2009), impact noise monitoring shall be carried out during the construction phase of the Project.
- 3.2 Regular monitoring, $L_{Aeq, 30\text{-minute}}$, for each station will be on a weekly basis and conduct one set of measurements between 0700 – 1900 on normal weekdays.
- 3.3 If construction works are extended to include works during 1900 – 0700 as well as public holidays and Sundays, additional weekly impact monitoring will be carried out during the respective restricted hours periods.

Monitoring Locations

- 3.4 Two designated monitoring stations were selected for noise monitoring programme. Impact noise monitoring was conducted at two noise monitoring stations in the reporting month. Table 3.1 describes the noise monitoring locations, which are also depicted in Figure 6.

Table 3.1 Locations of Noise Monitoring Stations

Noise Monitoring Locations for the Project	Location of Measurement
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	Rooftop (Façade)
M12 - Hong Kong Children's Hospital	Rooftop (Façade)

Monitoring Parameters, Frequency and Duration

- 3.5 The noise monitoring locations and monitoring frequency are listed in Table 3.2.

Table 3.2 Noise Monitoring Parameters, Frequency and Duration

Noise Monitoring Station	Location for Measurement	Parameter	Frequency and Duration
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	Rooftop (Façade)	L_{Aeq} , L_{A10} and L_{A90}	30 - minutes measurement at each monitoring station between 0700 – 1900 hrs on normal weekdays (Monday to Saturday) at frequency of once per week.
M12 - Hong Kong Children's Hospital	Rooftop (Façade)		

3.6 The monitoring schedule for reporting month and next month is presented in Appendix C.

3.7 Photographic records of the monitoring setup are shown in Appendix D.

Monitoring Equipment

3.8 As referred to in the Technical Memorandum (TM) issued under the Noise Control Ordinance (NCO), sound level meters in compliance with the IEC 61672-1 (Type 1) standard [this standard replaced the International Electrotechnical Commission Publications 60651:1979 (Type 1) and 60804:1985 (Type 1)] were used for noise monitoring. Table 3.3 summarizes the equipment to be used in the noise monitoring.

Table 3.3 Noise Monitoring Equipment

Equipment	Model	Quantity
Sound Level Meter	RION NL52	2
Sound Level Calibrator	RION NC 74	1
Air Flowmeter	TSI TA440 Air Velocity	1

3.9 Calibration certificates, catalogue of equipment are given in Appendix J.

Monitoring Methodology and QA/QC Procedure

3.10 The noise level measurement was conducted at 1m from the exterior of the nearby noise sensitive receivers building façade and at 1.2m above the ground and facing to the source area or the planned measurement area.

3.11 No noise measurement was conducted in the presence of fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. Air flow was measured by air flow

meter.

3.12 Turned on the sound level meter and check the battery, if too low, change new ones.

3.13 Calibration was conducted immediately prior to and after each noise measurement, the accuracy of the sound level meters was checked by using sound calibrator generating 1,000 Hz with 94dB. Measurement data was found to be valid only if the calibration levels from before and after the noise measurement agreed to within 1.0 dB.

3.14 Noise level was recorded.

3.15 Recorded any activities that may generate noise during measurement period.

Maintenance and Calibration

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

3.17 The sound level meter and sound calibrator were calibrated annually.

3.18 Calibration for sound level meter was conducted immediately prior to and following each noise measurement by using sound calibrator generating a known sound pressure level at a known frequency (1,000 Hz with 94dB). Measurements may be accepted as valid only if the calibration levels from before and after the noise measurement agree to within 1.0 dB.

Action and Limit Levels

3.19 The Baseline Noise Levels and Action and Limit Levels for construction noise is presented in Table 3.4.

Table 3.4 Baseline Noise Level and Action and Limit Levels for Construction Noise Monitoring

Time Period	Noise Monitoring Station	Baseline Noise Levels, dB (A)	Action Level	Limit Level [^]
0700 – 1900 on normal weekdays	M11	68.3	When one documented complaint is received.	75 dB(A)
	M12	61.9		

Note: ^ If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit

(CNP) issued by the Noise Control Authority have to be followed.

Impact Noise Monitoring results

3.20 Impact noise monitoring results at the designed noise monitoring stations are summarized in Table 3.5 respectively.

Table 3.5 Summary of Noise Monitoring Data during the reporting month

Noise Monitoring Station	Measured $L_{Aeq, 30\text{-min}}$, Average, dB(A)	Measured $L_{Aeq, 30\text{-min}}$, Range, dB(A)	Action Level	Limit Level [^]
M11	66.6	64.5 – 68	When one documented complaint is received	75 dB(A)
M12	65.4	64.3 – 66.2		

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

3.21 There was no Action and Limit Level exceedance of $L_{Aeq, 30\text{-min}}$ recorded during the reporting month.

3.22 Graphical presentation and detailed monitoring results are shown in Appendix K.

3.23 The Event and Action Plan is provided in Appendix L.

3.24 Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.

4. COMPARISON OF EM&A RESULTS WITH EIA PREDICTIONS

4.1 The environmental impacts predictions were given in Agreement No. CE 35/2006(CE) Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction - Kai Tak Development Environmental Impact Assessment Report, EIA Register Nos. AEIAR-130/2009 for Kai Tak Development (The EIA Report). The EM&A data was compared with the EIA predictions as summarized in Table 4.1 to Table 4.3.

Table 4.1 Comparison of 24-hour average TSP Monitoring Data with EIA predictions

Air Monitoring Station	ASR No. in EIA report	Predicted Cumulative Maximum 24-hour average TSP concentration		Measured 24-hr average TSP in Reporting Month (January 2020) $\mu\text{g}/\text{m}^3$
		Scenario 1 (Mid 2009 to Mid 2013), $\mu\text{g}/\text{m}^3$	Scenario 2 (Mid 2013 to Late 2016), $\mu\text{g}/\text{m}^3$	
AM3 - Sky Tower	A40 [^]	106	138	35 - 125
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	A43 [^]	123	195	40 - 70
AM7 – Hong Kong Children's Hospital	PA60	NA	NA	31 - 78

Note:

[^] Prediction results are given in the Table 3.13 of the EIA report EIA Register Nos. AEIAR-130/2009 for Kai Tak Development.

Table 4.2 Comparison of 1-hour average TSP Monitoring Data with EIA predictions

Air Monitoring Station	ASR No. in EIA report	Predicted Cumulative Maximum 1-hour average TSP concentration		Measured 1-hr average TSP in Reporting Month (January 2020) $\mu\text{g}/\text{m}^3$
		Scenario 1 (Mid 2009 to Mid 2013), $\mu\text{g}/\text{m}^3$	Scenario 2 (Mid 2013 to Late 2016), $\mu\text{g}/\text{m}^3$	
AM3 - Sky Tower	A40	217 [^]	247 [^]	68 - 92
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	A43	283 [^]	409 [^]	64 - 85
AM7 – Hong Kong Children's Hospital	PA60	NA	NA	63 - 89

Note:

[^] Prediction results are given in the Table 3.13 of the EIA report EIA Register Nos. AEIAR-130/2009 for Kai Tak Development.

Table 4.3 Comparison of Noise Monitoring Data with EIA predictions

Noise Monitoring Station	NSR No. in EIA report	Predicted Mitigated Construction Noise Levels during Normal Daytime Working Hour L _{Aeq, 30min} , dB(A)	Measured Noise Level in Reporting Month (January 2020) L _{Aeq, 30min} , dB(A)
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop	N18	50 – 76*	64.5 – 68
M12 - Hong Kong Children's Hospital	PN83, PN84, PN84A	NA	64.3 – 66.2

Note:

* Prediction results are given in the Table 3.20 of the EIA report EIA Register Nos. AEIAR-130/2009 for Kai Tak Development.

- 4.2 24-hour TSP monitoring results at AM3 was recorded higher than the Scenario 1 (Mid 2009 to Mid 2013) prediction but lower than the Scenario 2 (Mid 2013 to Late 2016) in the EIA Report. Non-project related construction activities in the adjacent construction sites were observed during the reporting period and may affect the monitoring results.
- 4.3 24-hour TSP monitoring results at AM4(A) were recorded lower than the prediction in the EIA Report.
- 4.4 No prediction in the EIA Report for 24-hour TSP monitoring results at AM7.
- 4.5 1-hour TSP monitoring results at AM3, AM4(A) were recorded lower than the prediction in the EIA Report.
- 4.6 No prediction in the EIA Report for 1-hour TSP monitoring results at AM7.
- 4.7 Noise monitoring results at M11 was recorded lower than the prediction in the EIA Report.
- 4.8 No prediction in the EIA Report for noise monitoring results at M12.

5. LANDSCAPE AND VISUAL MONITORING

5.1 In accordance with EM&A Manuals (EIA Register Nos. AEIAR-130/2009 and AEIAR-170/2013), Landscape and Visual Monitoring shall be carried out during the construction phase of the Project. Regular impact monitoring will be conducted at least once per week.

Results and Observations

5.2 Site inspections were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site.

5.3 Site inspections were conducted on 22 January 2020 in the reporting month. No site inspection was conducted on week 26 January to 2 February 2020 due to site closure.

5.4 The summaries of site audits are attached in Table 5.1.

Table 5.1 Summary of observations of Landscape and Visual impact during the reporting month

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
22 Jan 2020	No	NA	NA

5.5 No non-compliance of the landscape and visual impact was recorded in the reporting month.

5.6 Should non-compliance of the landscape and visual impact occur, action in accordance with the action plan presented in Appendix M shall be performed.

6. ENVIRONMENTAL SITE INSPECTION AND AUDIT

Site Inspection

- 6.1 Site inspections were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site.
- 6.2 Site inspections were conducted on 22 January 2020 in the reporting month. No site inspection was conducted on week 26 January to 2 February 2020 due to site closure.
- 6.3 The summaries of site audits are attached in Table 6.1.

Table 6.1 Summary of site inspections observations during the reporting month

Inspection Date	Key Observations	Recommendations / Actions	Close-out Date / Status
22 Jan 2020	No	NA	NA

Status of Waste Management

- 6.4 The amount of wastes generated by the major site activities of the work contracts within the Project during the reporting month is shown in Appendix N.
- 6.5 The Contractor was registered as a chemical waste producer for the Project. The Contractor was reminded that chemical waste containers should be properly treated and stored temporarily in designated chemical waste storage area on site in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.

Status of Environmental Licenses, Notification and Permits

- 6.6 A summary of the relevant permits, licenses and/or notifications on environmental protection for the Project is shown in Table 6.2. Environmental licenses and notifications are reported in Appendix O.

Table 6.2 Summary of Environmental Licenses, Notifications and Permits

Environmental Licenses, Notifications and Permits	Ref. No.	Valid Form	Valid Till
Environmental Permit under EIAO	EP-337/2009	23 Apr 2009	N/A
	EP-445/2013	3 May 2013	N/A
	EP-445/2013/A	13 Aug 2014	N/A
Construction Dust Notification under APCO	445956	6 Jun 2019	N/A
Wastewater Discharge License under WPCO	WT00034610-2019	26 Sep 2019	30 Sep 2024
Construction Noise Permit	GW-RE0699-19	13 Sep 2019	12 Mar 2020
	GW-RE0786-19	5 Oct 2019	4 Apr 2020
	GW-RE0880-19	30 Oct 2019	27 Apr 2020
	GW-RE0039-20	24 Jan 2020	23 Mar 2020
Waste Disposal Billing Account	7034450	28 Jun 2019	N/A
Registration as a Chemical Waste Producer	5218-286-P3182-03	18 Jul 2019	N/A

Implementation Status of Environmental Mitigation Measures

6.7 The Contractor has implemented environmental mitigation measures and requires as stated in the EIA reports, the EP and the EM&A Manuals. The implementation status of the mitigation measures during the reporting month is summarized in Appendix P.

6.8 In response to the site audit findings, the Contractor carried out corrective actions with summary given in Appendix P.

Environmental Complaint and Non-compliance

6.9 No complaint was received in the reporting month. Summary of complaints in the reporting month is tabulated in Table 6.3.

Table 6.3 Summary of complaints in the Reporting Month

Date of Notification from EPD	Date of compliant	Description of complaint	Recommendations / Action take	Close-out date / Status
No complaint was received	NA	NA	NA	NA

Date of Notification from EPD	Date of compliant	Description of complaint	Recommendations / Action take	Close-out date / Status
in the reporting month.				

6.10 Complaint log is shown in Appendix Q.

Notifications of summons and successful prosecutions

6.11 No notification of summons and successful prosecutions was received in the reporting month. Summary of summons and successful prosecutions in the reporting month is tabulated in Table 6.4.

Table 6.4 Summary of summons and successful prosecutions in the Reporting Month

Date of receiving notification of summons or prosecutions	Date of event	Description of event	Action take	Close-out date / Status
No notification of summons and successful prosecutions were received in the reporting month.	NA	NA	NA	NA

6.12 The summaries of cumulative environmental complaint, warning, summon and notification of successful prosecution for the Project is presented in Appendix Q.

7. FUTURE KEY ISSUES

Construction Programme in the coming month

7.1 The major construction activities and potential impacts in the next reporting month as follow:

Table 7.1 Summary of future key issues and potential impact in the coming month

Future key issues in the coming month	Potential impact
Ground investigation work	Noise
Piling works for Bridge D3	Noise
Installation of sheetpile for North Approach Ramp	Noise
Excavation for North Depressed Road	Air Quality

7.2 The mitigation measures for environmental impact including Air Quality, Construction Noise, Water Quality, Chemical and Waste Management, Landscape and Visual shall be implemented:

- Sufficient watering of the works site with the active dust emitting activities,
- Limitation of the speed for vehicles on unpaved site roads,
- Properly cover the stockpiles,
- Good maintenance to the plant and equipment,
- Use of quieter plant and Quality Powered Mechanical Equipment (QPME),
- Appropriate desilting/ sedimentation devices provided on site for treatment before discharge,
- Onsite waste sorting and implementation of trip ticket system,
- Erection of decorative screen hoarding,
- Strictly following the Environmental Permits and Licenses, and
- Provide sufficient mitigation measures as recommended in Approved EIA Reports.

Environmental Site Inspection and Monitoring Schedule for next month

7.3 The tentative schedule for weekly site inspection and air quality and noise monitoring in the next month is provided in Appendix C.

8. CONCLUSIONS

- 8.1 Environmental monitoring works were performed in the reporting month and all monitoring results were checked and reviewed.
- 8.2 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 8.3 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 8.4 Construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 8.5 No complaint was received in the reporting month.
- 8.6 No notification of summons and successful prosecutions was received in the reporting month.

Figure

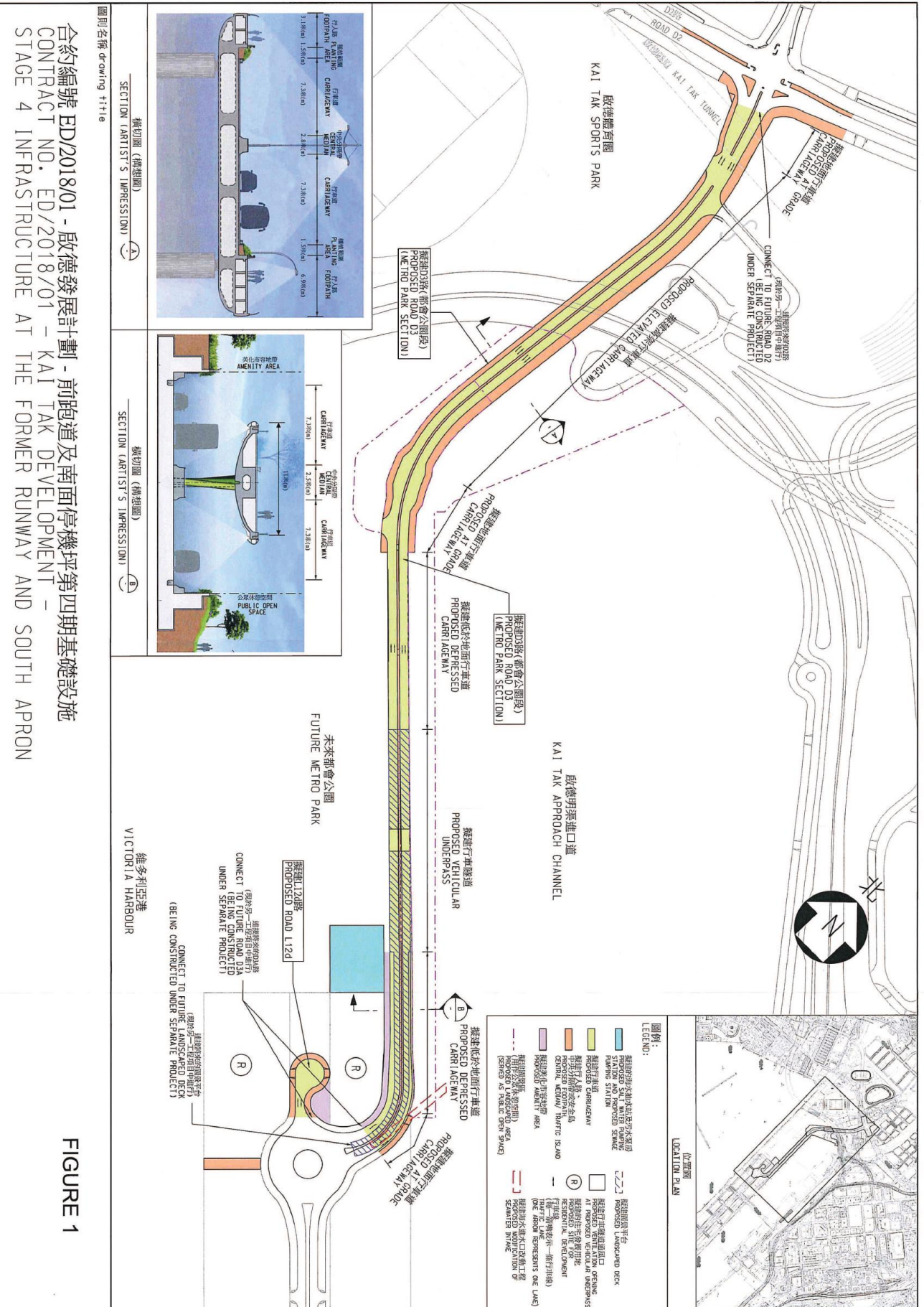
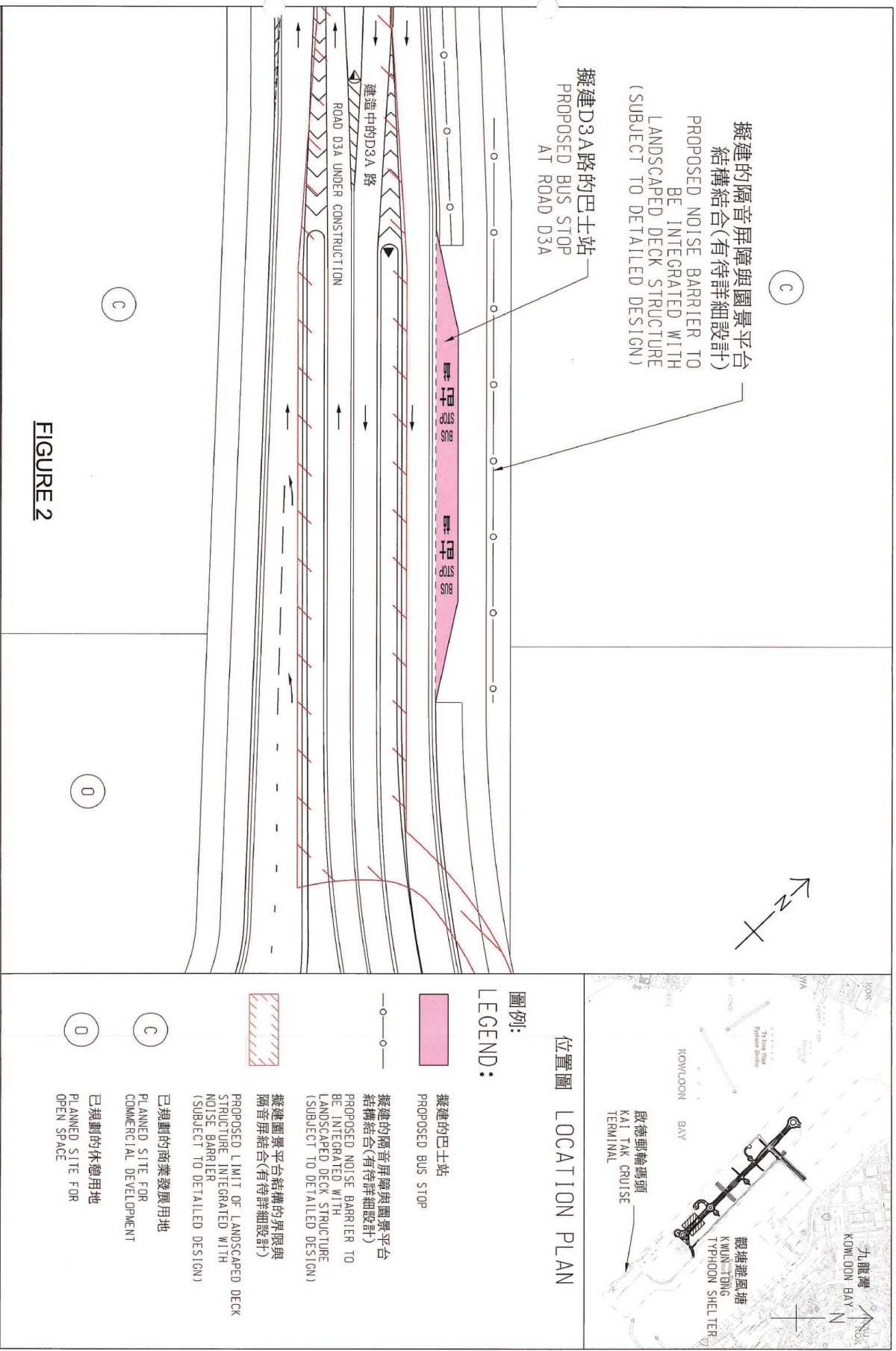


Figure 1 – Proposed works of Contract No. ED/2018/01



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 Civil Engineering and Development Department
 渠務處
 EAST DEVELOPMENT OFFICE

CEED

CONTRACT NO. ED/2018/01
 KAI TAK DEVELOPMENT - STAGE 4
 INFRASTRUCTURE AT THE FORMER
 RUNWAY AND SOUTH APRON

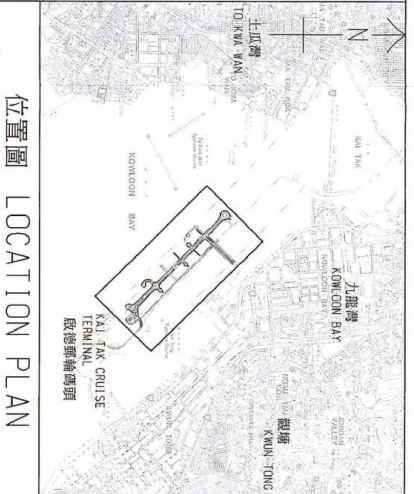
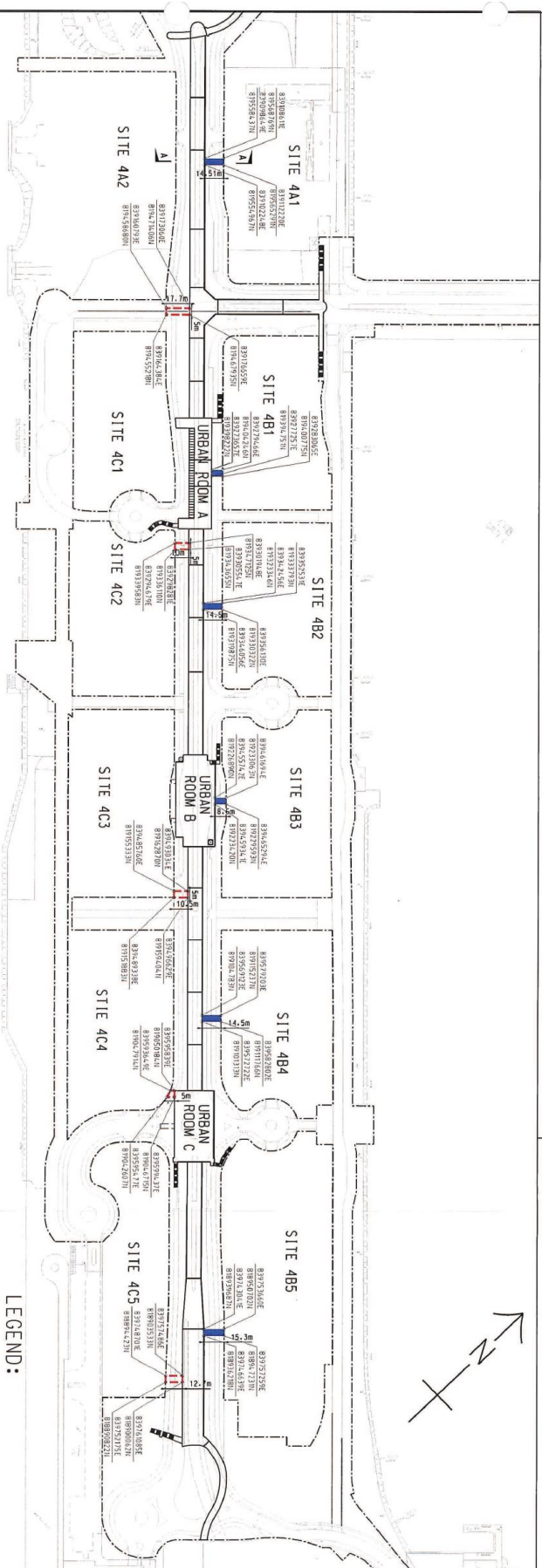
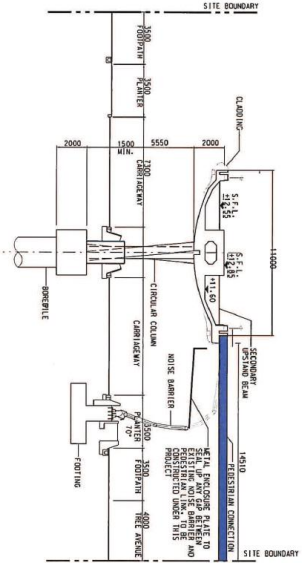
合約編號: ED/2018/01
 啟德發展計劃一前跑道及
 南面停機坪第四期基礎設施

PROPOSED BUS STOP AND ASSOCIATED NOISE BARRIER AT ROAD D3A
 擬建於D3A路的巴士站及相關隔音屏障

Plan: T:\Drawing (Internal Use)\KTD-300-KTD-389\KTD-372 (Bus Stop Gazette).dgn

Pmt Date: 13/2/2019

Figure 2 – Proposed Bus Stop And Associated Noise Barrier At Road D3A



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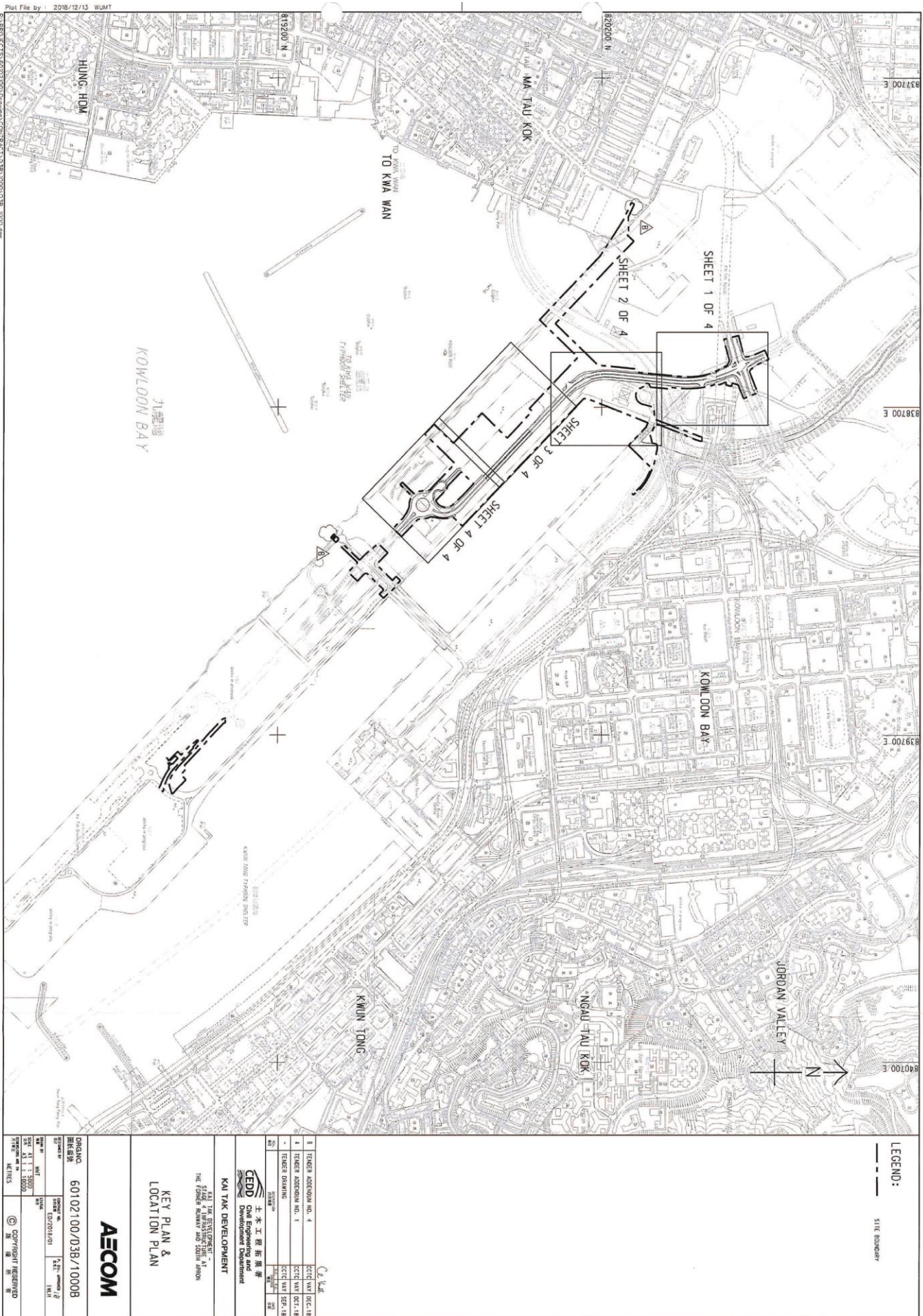
FUTURE PEDESTRIAN CONNECTION BETWEEN LANDSCAPED DECK AND PRIVATE DEVELOPMENTS

SCALE	1 : 3000 (A3)	DATE	3 MAR 2018
DRAWN BY	JY	CHECKED BY	AL
APPROVED BY	CC		

FIGURE 3

Print Date : 7/2/2019

Figure 3 – Future Pedestrian Connection Between Landscaped Deck And Private Developments



Plot File by : 2018/12/13 WUMT
 P:\PROJECTS\16102100\Drawings\CONTRACT\381\1000\0381_1000.dwg

LEGEND:

— SITE BOUNDARY

8	TENDER ADDENDUM NO. 4	01/11/2018	01/11/2018
4	TENDER ADDENDUM NO. 1	01/11/2018	01/11/2018
1	TENDER DRAWING	01/11/2018	01/11/2018
NO.			

CEED
 Civil Engineering and
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KAI TAK DEVELOPMENT
 KAI TAK DEVELOPMENT
 THE FORMER REARVIEW AND SOUTH WING

**KEY PLAN &
 LOCATION PLAN**

AECOM

DRGNO.	60102100/0381/1000B
圖號	60102100/0381/1000B
DATE	11/11/2018
日期	11/11/2018
SCALE	AS SHOWN
比例	AS SHOWN
STATUS	FOR INFORMATION
狀態	FOR INFORMATION
REVISIONS	
修改	
NO.	
號	

Figure 4 – Site Layout Plan

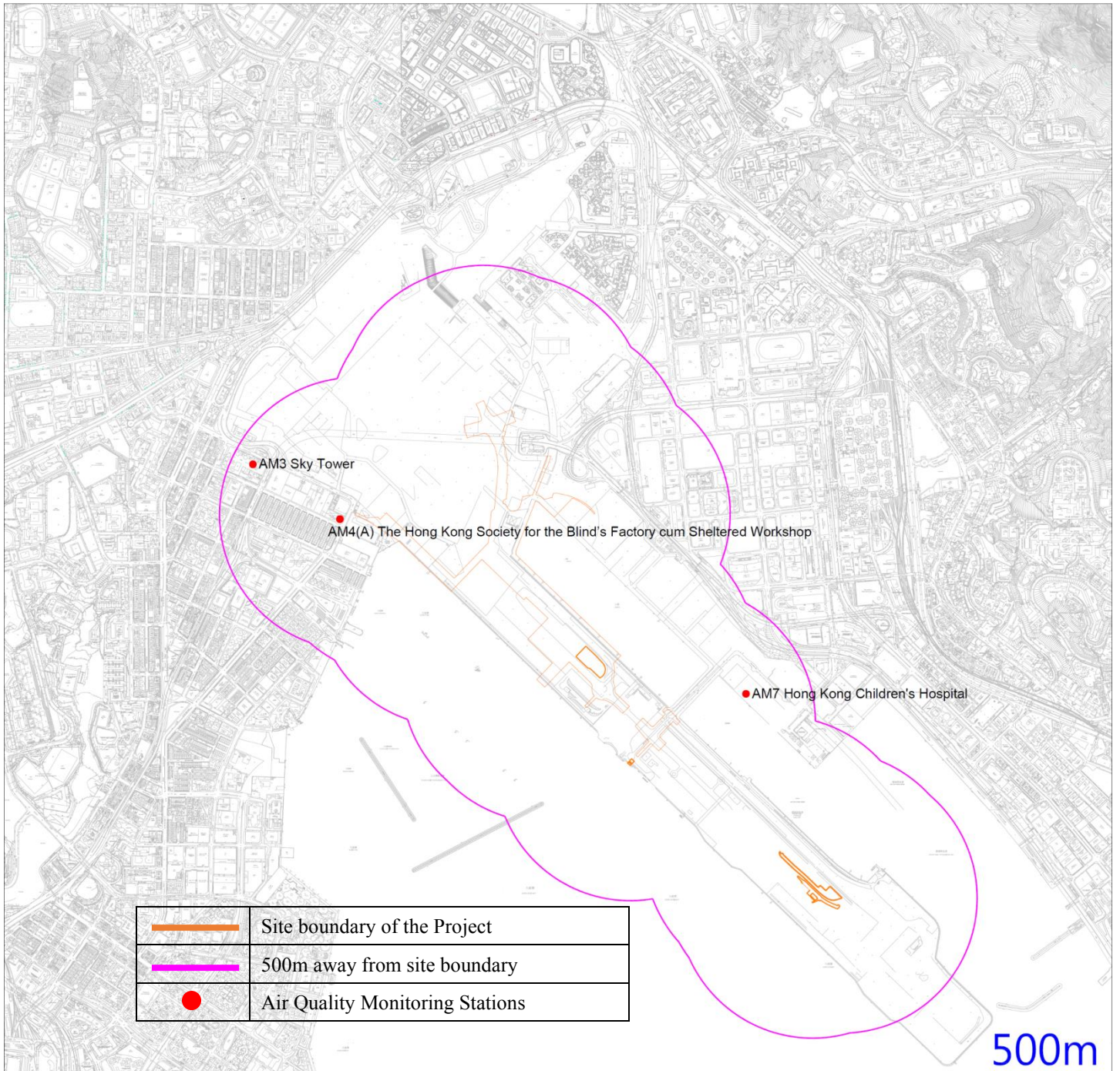


Figure 5 – Air Quality Monitoring Stations

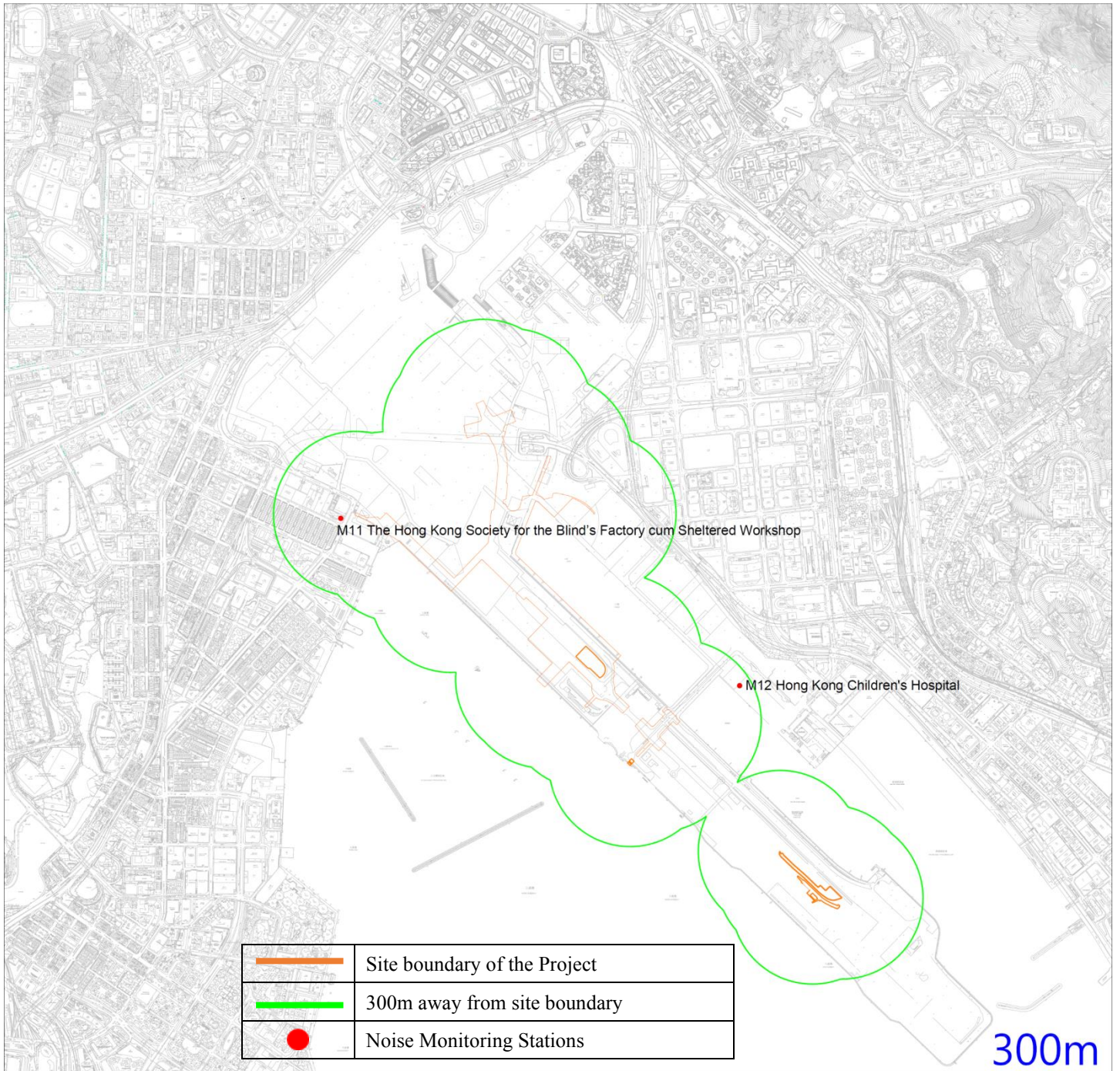
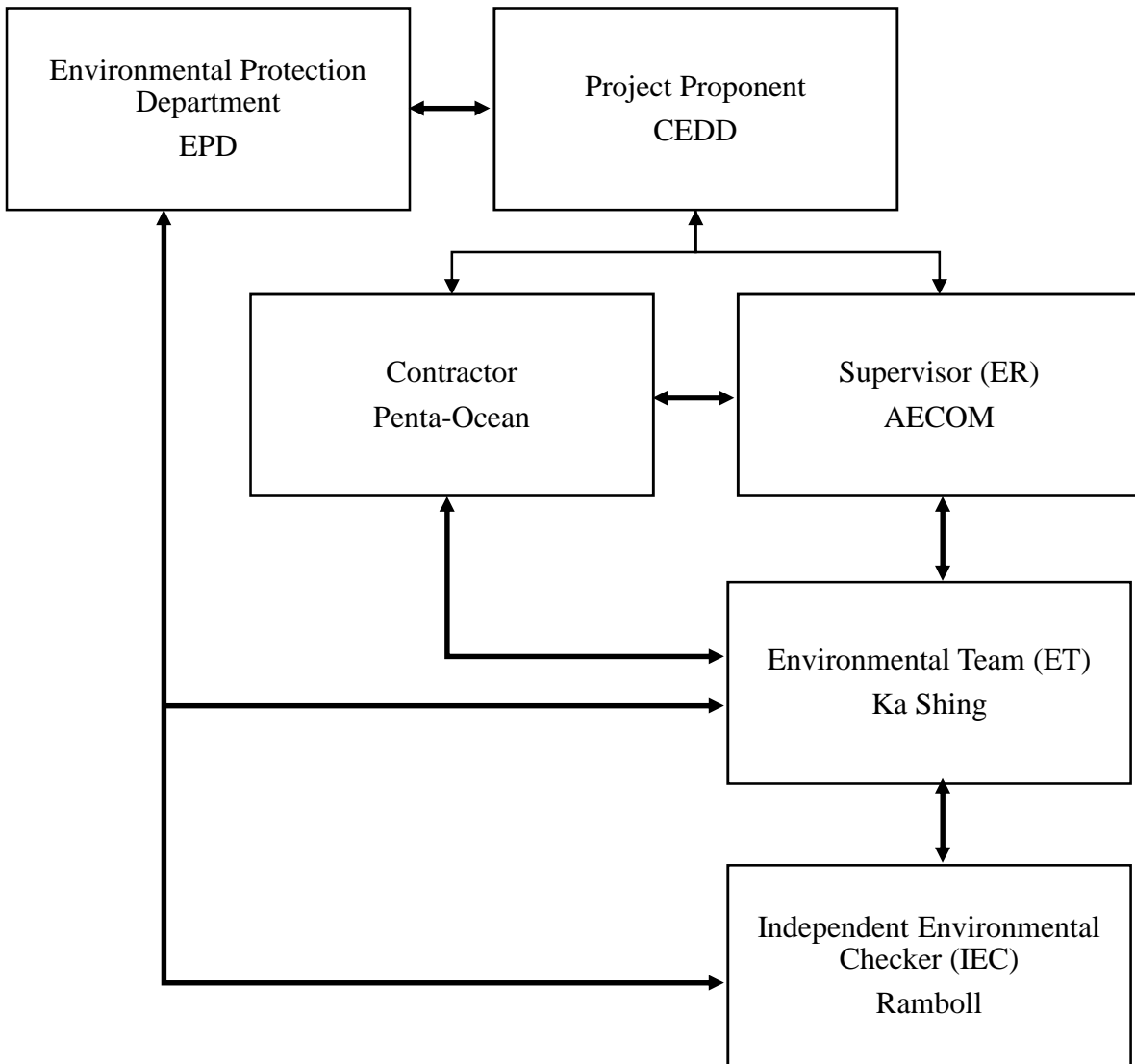



Figure 6 – Noise Monitoring Stations

Appendix A – Organization Chart of EM&A Team



 Link of communication

Appendix B – Construction Programme

ID	Task Name	Duration	Remaining Duration	Actual Start	Actual Finish	Plan Start	Plan Finish	Late Start	Late Finish	Physical Complete %	Free Slack	Time Risk Allowances (TFA)	Total Slack
1	Project Dates	1841 days	1841 days	May 16, 2019	NA	May 16, 2019	May 29, 2024	May 16, 2019	May 29, 2024	0%	0 days	0 days	0 days
2	Contract Date	0 days	0 days	May 16, 2019	May 16, 2019	May 16, 2019	May 16, 2019	May 16, 2019	May 16, 2019	0%	0 days	0 days	0 days
3	Date of Commencement & Completion (CDP1: Item 3)	1827 days	1827 days	May 30, 2019	NA	May 30, 2019	May 29, 2024	May 30, 2019	May 29, 2024	0%	0 days	0 days	0 days
4	Starting Date (CDPart1: Item 3)	0 days	0 days	May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019	100%	0 days	0 days	0 days
5	Completion Date	0 days	0 days	NA	NA	May 30, 2023	May 30, 2023	May 30, 2023	May 30, 2023	0%	0 days	0 days	0 days
6	Establishment Work	365 days	365 days	NA	NA	May 31, 2023	May 29, 2024	May 31, 2023	May 29, 2024	0%	0 days	0 days	0 days
7	Schedule of Access Dates (CDP1: Item 3(TA No.1))	1221 days	1221 days	May 30, 2019	NA	May 30, 2019	October 2, 2022	May 30, 2019	October 2, 2022	0%	0 days	0 days	0 days
8	Access Date - Part 1, 6A,6B,9A,9B	0 days	0 days	May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019	100%	0 days	0 days	0 days
9	Access Date - Part 2A,2C	0 days	0 days	NA	NA	June 2, 2020	June 2, 2020	June 2, 2020	June 2, 2020	0%	0 days	0 days	0 days
10	Access Date - Part 2B	0 days	0 days	NA	NA	January 31, 2021	January 31, 2021	January 31, 2021	January 31, 2021	0%	0 days	0 days	0 days
11	Access Date - Part 2E	0 days	0 days	NA	NA	October 2, 2022	October 2, 2022	October 2, 2022	October 2, 2022	0%	0 days	0 days	0 days
12	Access Date - Part 3A	0 days	0 days	NA	NA	March 6, 2022	March 6, 2022	March 6, 2022	March 6, 2022	0%	0 days	0 days	0 days
13	Access Date - Part 3B,4	0 days	0 days	NA	NA	March 5, 2021	March 5, 2021	March 5, 2021	March 5, 2021	0%	0 days	0 days	0 days
14	Access Date - Part 3C,3D,3E,3G,3I	0 days	0 days	NA	NA	December 2, 2019	December 2, 2019	December 2, 2019	December 2, 2019	0%	0 days	0 days	0 days
15	Access Date - Part 3F	0 days	0 days	NA	NA	June 3, 2022	June 3, 2022	June 3, 2022	June 3, 2022	0%	0 days	0 days	0 days
16	Access Date - Part 3H,7A,7B,8,9 (TA No. 1)	0 days	0 days	NA	NA	August 31, 2021	August 31, 2021	August 31, 2021	August 31, 2021	0%	0 days	0 days	0 days
17	Access Date - Part 10	0 days	0 days	NA	NA	June 2, 2021	June 2, 2021	June 2, 2021	June 2, 2021	0%	0 days	0 days	0 days
18	Access Date - Area WAI	0 days	0 days	May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019	May 30, 2019	100%	0 days	0 days	0 days
19	Schedule of Time for Ordering (CDP1: Item C1,B5)	695 days	695 days	July 5, 2019	NA	July 5, 2019	July 5, 2019	May 30, 2021	May 30, 2021	0%	0 days	0 days	0 days
20	Time for Ordering "Section Subject to Excision" - Section 4	0 days	0 days	NA	NA	June 2, 2020	June 2, 2020	June 2, 2020	June 2, 2020	0%	0 days	0 days	0 days
21	Time for Ordering "Section Subject to Excision" - Section 8	0 days	0 days	NA	NA	June 2, 2020	June 2, 2020	June 2, 2020	June 2, 2020	0%	0 days	0 days	0 days
22	Time for Ordering "Section Subject to Excision" - Section 9	0 days	0 days	July 5, 2019	July 5, 2019	July 5, 2019	July 5, 2019	July 5, 2019	July 5, 2019	100%	0 days	0 days	0 days
23	Time for Ordering "Section Subject to Excision" - Section 10	0 days	0 days	NA	NA	May 30, 2021	May 30, 2021	May 30, 2021	May 30, 2021	0%	0 days	0 days	0 days
24	Schedule of Key Dates (CDP1: Item 3(TA No.1))	665 days	665 days	NA	NA	August 7, 2020	June 3, 2022	August 7, 2020	June 3, 2022	0%	0 days	0 days	0 days
25	KD1	0 days	0 days	NA	NA	August 7, 2020	August 7, 2020	August 7, 2020	August 7, 2020	0%	0 days	0 days	0 days
26	KD2	0 days	0 days	NA	NA	April 18, 2021	April 18, 2021	April 18, 2021	April 18, 2021	0%	0 days	0 days	0 days
27	KD3	0 days	0 days	NA	NA	June 1, 2021	June 1, 2021	June 1, 2021	June 1, 2021	0%	0 days	0 days	0 days
28	KD4	0 days	0 days	NA	NA	January 31, 2022	January 31, 2022	January 31, 2022	January 31, 2022	0%	0 days	0 days	0 days
29	KD5	0 days	0 days	NA	NA	September 17, 2021	September 17, 2021	September 17, 2021	September 17, 2021	0%	0 days	0 days	0 days
30	KD6	0 days	0 days	NA	NA	December 29, 2021	December 29, 2021	December 29, 2021	December 29, 2021	0%	0 days	0 days	0 days
31	KD7	0 days	0 days	NA	NA	June 3, 2022	June 3, 2022	June 3, 2022	June 3, 2022	0%	0 days	0 days	0 days
32	Schedule of Section Completion (CDP1: C1, X5)	1092 days	1092 days	NA	NA	June 2, 2021	May 29, 2024	June 2, 2021	May 29, 2024	0%	0 days	0 days	0 days
33	Section Completion Date Section 1	0 days	0 days	NA	NA	June 2, 2021	June 2, 2021	June 2, 2021	June 2, 2021	0%	0 days	0 days	0 days
34	Section Completion Date Section 2	0 days	0 days	NA	NA	November 2, 2021	November 2, 2021	November 2, 2021	November 2, 2021	0%	0 days	0 days	0 days
35	Section Completion Date Section 3	0 days	0 days	NA	NA	May 30, 2023	May 30, 2023	May 30, 2023	May 30, 2023	0%	0 days	0 days	0 days
36	Section Completion Date Section 4	0 days	0 days	NA	NA	July 5, 2021	July 5, 2021	July 5, 2021	July 5, 2021	0%	0 days	0 days	0 days
37	Section Completion Date Section 5	0 days	0 days	NA	NA	May 30, 2023	May 30, 2023	May 30, 2023	May 30, 2023	0%	0 days	0 days	0 days
38	Section Completion Date Section 6	0 days	0 days	NA	NA	May 29, 2024	May 29, 2024	May 29, 2024	May 29, 2024	0%	0 days	0 days	0 days
39	Section Completion Date Section 7	0 days	0 days	NA	NA	December 2, 2021	December 2, 2021	December 2, 2021	December 2, 2021	0%	0 days	0 days	0 days
40	Section Completion Date Section 8	0 days	0 days	NA	NA	July 5, 2021	July 5, 2021	July 5, 2021	July 5, 2021	0%	0 days	0 days	0 days
41	Section Completion Date Section 9	0 days	0 days	NA	NA	May 30, 2023	May 30, 2023	May 30, 2023	May 30, 2023	0%	0 days	0 days	0 days
42	Section Completion Date Section 10	0 days	0 days	NA	NA	May 30, 2023	May 30, 2023	May 30, 2023	May 30, 2023	0%	0 days	0 days	0 days
43	Pre-meeting of ACBABS	153 days	153 days	NA	NA	November 29, 2019	April 30, 2020	May 29, 2024	May 29, 2024	0%	1491 d...	1491 d...	1491 d...
44	Design Working Group Meeting	0 days	0 days	NA	NA	November 29, 2019	November 29, 2019	May 29, 2024	May 29, 2024	0%	1644 d...	1644 d...	1644 d...
45	Task Force on Kai Tak Harbourfront Development Meeting	0 days	0 days	NA	NA	January 31, 2020	January 31, 2020	May 29, 2024	May 29, 2024	0%	1581 d...	1581 d...	1581 d...
46	District Council Consultation	0 days	0 days	NA	NA	April 30, 2020	April 30, 2020	May 29, 2024	May 29, 2024	0%	1491 d...	1491 d...	1491 d...
47	Project Submission	853 days	679,02 days	May 16, 2019	NA	May 16, 2019	September 14, 20...	May 16, 2019	May 16, 2019	0%	988 days	0 days	988 days
48	Submit Third Parties Insurance	71 days	0 days	May 18, 2019	August 27, 2019	May 18, 2019	August 27, 2019	August 27, 2019	August 27, 2019	100%	0 days	0 days	0 days
49	Submit Professional Indemnity Insurance	29,39 days	14 days	June 11, 2019	NA	June 11, 2019	October 22, 2019	June 11, 2019	May 29, 2024	52%	2 days	0 days	1681,1...
50	Review, Comment and Acceptance of Insurances by Project Manager	139,1 days	50 days	June 13, 2019	NA	June 13, 2019	November 11, 2019	June 13, 2019	May 29, 2024	64%	1661	0 days	1661
51	Works Programme	160 days	60,42 days	May 16, 2019	NA	May 16, 2019	October 22, 2019	May 16, 2019	June 1, 2020	0%	223 days	0 days	223 days
52	Submit First Programme	20 days	0 days	May 16, 2019	June 4, 2019	May 16, 2019	June 4, 2019	May 16, 2019	June 4, 2019	100%	0 days	0 days	0 days
53	Review and Comment by Project Manager	9 days	0 days	June 5, 2019	June 13, 2019	June 5, 2019	June 13, 2019	June 5, 2019	June 13, 2019	100%	0 days	0 days	0 days
54	Revise and Resubmission of Works Programme	30 days	9,21 days	June 14, 2019	NA	June 14, 2019	October 2, 2019	June 14, 2019	May 11, 2020	69%	0 days	0 days	222,79...
55	Final Review and Acceptance of the First Programme by Project Manager	21 days	21 days	NA	NA	October 2, 2019	October 23, 2019	June 1, 2020	June 1, 2020	0%	218,79	0 days	222,79
56	Submit Health and Safety Management Plan (ACC CI, D6(2))	6 days	0 days	May 30, 2019	June 4, 2019	May 30, 2019	June 4, 2019	June 4, 2019	June 4, 2019	100%	0 days	0 days	0 days
57	Submit Detailed Programme for Safety Risk (ER Part 7, CI, 7.3.4)	12 days	12 days	NA	NA	October 29, 2019	November 9, 2019	May 18, 2024	May 29, 2024	0%	1663	0 days	1663
58	Submit Environmental Management Plan (ACC CI, D20(2))	6 days	0 days	May 30, 2019	June 4, 2019	May 30, 2019	June 4, 2019	May 30, 2019	June 4, 2019	100%	0 days	0 days	0 days
59	Submit QA/QC Manual	14 days	14 days	NA	NA	October 25, 2019	November 7, 2019	May 16, 2024	May 29, 2024	0%	1665 d...	0 days	1665 d...
60	Submit BIM Models Deliverables	103 days	41,33 days	August 19, 2019	NA	August 19, 2019	November 30, 2019	August 19, 2019	May 29, 2024	0%	1643 d...	0 days	1643 d...
61	Existing Site Model (Topography)	5 days	0 days	August 19, 2019	August 23, 2019	August 19, 2019	August 23, 2019	August 19, 2019	August 23, 2019	100%	0 days	0 days	0 days

Title: Revised Programme-ED/2018/01 with Progress Update as of 22-Sep-19

Legend:

- Critical Path:** Red line
- Task Progress:** Blue bar
- Manual Task:** Green bar
- Start-only:** Blue bar
- Finish-only:** Blue bar
- Baseline:** Dotted line
- Baseline Split:** Dotted line
- Baseline Milestone:** Diamond
- Summary:** Grey bar
- Manual Summary:** Grey bar
- Project Summary:** Grey bar
- External Milestone:** Diamond
- External Task:** Green bar
- Inactive Milestone:** Grey diamond
- Inactive Summary:** Grey bar
- Deadline:** Green arrow

Page 1

ID	Task Name	Duration	Remaining Duration	Actual Start	Actual Finish	Plan Start	Plan Finish	Late Start	Late Finish	Physical Complete	Free Slack	Time Risk Allowances (TRA)	Total
120	VCAB (Draft)	45 days	0 days	September 4, 2019	October 18, 2019	September 4, 2019	October 18, 2019	September 4, 2019	October 18, 2019	100%	0 days	2 days	0 days
121	Address Committee's comments	15 days	15 days	NA	NA	October 19, 2019	November 3, 2019	October 19, 2019	November 3, 2019	0%	0 days	2 days	3 days
122	VCAB (Final)	15 days	15 days	NA	NA	November 3, 2019	November 17, 2019	November 3, 2019	November 17, 2019	0%	0 days	2 days	3 days
123	Durability Assessment Report (Draft)	60 days	0 days	May 30, 2019	July 28, 2019	May 30, 2019	July 28, 2019	May 30, 2019	July 28, 2019	0%	0 days	3 days	0 days
124	Address Comments	30 days	0 days	July 29, 2019	August 27, 2019	July 29, 2019	August 27, 2019	July 29, 2019	August 27, 2019	0%	0 days	2 days	0 days
125	Durability Assessment Report (Final)	30 days	4 days	August 28, 2019	NA	August 28, 2019	September 7, 2019	September 26, 2019	November 20, 2019	0%	52 days	2 days	55 days
126	Landscaping Mitigation Plan	20 days	20 days	NA	NA	November 18, 2019	December 7, 2019	November 21, 2019	December 10, 2019	0%	15 days	3 days	3 days
127	Site Investigation	209 days	116.69 days	June 1, 2019	NA	June 1, 2019	December 26, 2019	June 1, 2019	January 10, 2020	0%	15 days	15 days	15 days
128	Ground Investigation Proposal (Draft)	56 days	0 days	June 1, 2019	July 26, 2019	June 1, 2019	July 26, 2019	June 1, 2019	July 26, 2019	100%	0 days	1 days	0 days
129	Submit & endorse by Gov. Depts and PM	6 days	0 days	July 27, 2019	August 1, 2019	July 27, 2019	August 1, 2019	July 27, 2019	August 1, 2019	100%	0 days	1 days	0 days
130	Ground Investigation Proposal (Final)	25 days	25 days	NA	NA	August 12, 2019	October 17, 2019	August 2, 2019	November 29, 2019	0%	0 days	1 days	43 days
131	Submit and endorse by Gov. Depts and PM	14 days	14 days	NA	NA	October 18, 2019	October 31, 2019	November 30, 2019	December 13, 2019	0%	28 days	1 days	43 days
132	Supervise the SI Carry Out on Site	90 days	46 days	NA	NA	August 10, 2019	November 7, 2019	November 10, 2019	December 22, 2019	49%	0 days	4 days	15 days
133	Submit SI Report(Draft) for Comment	21 days	21 days	NA	NA	November 8, 2019	November 28, 2019	November 23, 2019	December 13, 2019	0%	1 days	1 days	15 days
134	Submit and endorse SI Report(Final) by Project Manager	28 days	28 days	NA	NA	November 29, 2019	December 26, 2019	December 14, 2019	January 10, 2020	0%	15 days	1 days	15 days
135	Lifts (L11 to L14), Staircase and Associated Works	278 days	269.21 days	September 12, 20..	NA	September 12, 20..	June 15, 2020	September 12, 2019	June 19, 2020	0%	0 days	4 days	4 days
136	Prepare AIP and ICE certification (Draft)	60 days	49 days	September 12, 2019	NA	September 12, 2019	November 10, 2019	September 12, 2019	November 14, 2019	18%	0 days	3 days	4 days
137	Submit & endorse by PM and Statutory Authorities/Gov.	60 days	60 days	NA	NA	November 11, 2019	January 9, 2020	December 5, 2019	February 2, 2020	0%	0 days	0.5 days	24 days
138	Prepare AIP and ICE certification (Final)	10 days	10 days	NA	NA	January 10, 2020	January 19, 2020	February 3, 2020	February 12, 2020	0%	20 days	0 days	24 days
139	Prepare DDA and ICE certification (Draft)	90 days	90 days	NA	NA	November 11, 2019	February 8, 2020	November 15, 2019	February 12, 2020	0%	0 days	4 days	4 days
140	Submit & endorse by PM and Statutory Authorities/Gov.	60 days	60 days	NA	NA	February 9, 2020	April 8, 2020	February 13, 2020	April 12, 2020	0%	0 days	3 days	4 days
141	Prepare DDA for and ICE certification (Final)	15 days	15 days	NA	NA	April 9, 2020	April 23, 2020	April 13, 2020	April 27, 2020	0%	0 days	1 days	4 days
142	Submit & endorse by PM and Statutory Authorities/Gov.	53 days	53 days	NA	NA	April 24, 2020	June 15, 2020	April 28, 2020	June 19, 2020	0%	0 days	3 days	4 days
143	Noise barrier fronting to A85 at Rd D3A & Bus Lay By	222 days	222 days	NA	NA	November 11, 2019	June 19, 2020	November 18, 2019	June 26, 2020	0%	0 days	7 days	7 days
144	Prepare AIP and ICE certification (Draft)	50 days	50 days	NA	NA	November 11, 2019	December 30, 2019	November 18, 2019	January 6, 2020	0%	0 days	2 days	7 days
145	Submit & endorse by PM and Statutory Authorities/Gov.	60 days	60 days	NA	NA	December 31, 2019	February 28, 2020	January 11, 2020	March 10, 2020	0%	0 days	0.5 days	11 days
146	Prepare AIP and ICE certification (Final)	14 days	14 days	NA	NA	February 29, 2020	March 13, 2020	March 11, 2020	March 24, 2020	0%	4 days	0 days	11 days
147	Prepare DDA and ICE certification (Draft)	78 days	78 days	NA	NA	December 31, 2019	March 17, 2020	January 7, 2020	March 24, 2020	0%	0 days	4 days	7 days
148	Submit & endorse by PM and Statutory Authorities/Gov.	40 days	40 days	NA	NA	March 18, 2020	April 26, 2020	March 25, 2020	May 3, 2020	0%	0 days	2 days	7 days
149	Prepare DDA for and ICE certification (Final)	14 days	14 days	NA	NA	April 27, 2020	May 10, 2020	May 4, 2020	May 17, 2020	0%	0 days	1 days	7 days
150	Submit & endorse by PM and Statutory Authorities/Gov.	40 days	40 days	NA	NA	May 11, 2020	June 19, 2020	May 18, 2020	June 26, 2020	0%	0 days	1 days	7 days
151	Decking for Underpass (Rd L14)	390 days	390 days	NA	NA	May 11, 2020	June 4, 2021	May 23, 2020	June 16, 2021	0%	0 days	12 days	12 days
152	Prepare AIP and ICE certification (Draft)	60 days	60 days	NA	NA	May 11, 2020	July 9, 2020	May 23, 2020	July 21, 2020	0%	0 days	3 days	12 days
153	Submit & endorse by PM and Statutory Authorities/Gov.	60 days	60 days	NA	NA	July 10, 2020	September 7, 2020	August 23, 2020	October 21, 2020	0%	0 days	0.5 days	44 days
154	Prepare AIP and ICE certification (Final)	14 days	14 days	NA	NA	September 8, 2020	September 21, 2020	October 22, 2020	November 4, 2020	0%	0 days	0 days	44 days
155	Prepare DDA and ICE certification (Draft)	90 days	90 days	NA	NA	September 22, 2020	December 20, 2020	November 5, 2020	February 2, 2021	0%	0 days	1 day	44 days
156	Submit & endorse by PM and Statutory Authorities/Gov.	60 days	60 days	NA	NA	December 21, 2020	February 18, 2021	February 3, 2021	April 3, 2021	0%	0 days	0.5 days	44 days
157	Prepare DDA for and ICE certification (Final)	14 days	14 days	NA	NA	February 19, 2021	March 4, 2021	April 4, 2021	April 17, 2021	0%	0 days	0 days	44 days
158	Submit & endorse by PM and Statutory Authorities/Gov.	60 days	60 days	NA	NA	March 5, 2021	May 3, 2021	April 18, 2021	June 16, 2021	0%	32 days	0 days	44 days
159	AIP for E&M Works and Architectural Finishes of Underpass and ICE certification (Draft)	60 days	60 days	NA	NA	July 10, 2020	September 7, 2020	July 22, 2020	September 19, 2020	0%	0 days	3 days	12 days
160	Submit & endorse by PM and Statutory Authorities/Gov.	60 days	60 days	NA	NA	September 8, 2020	November 6, 2020	September 20, 2020	November 18, 2020	0%	0 days	3 days	12 days
161	Prepare AIP for E&M Works and Architectural Finishes of Underpass and ICE certification (Final)	10 days	10 days	NA	NA	November 7, 2020	November 16, 2020	November 19, 2020	November 28, 2020	0%	0 days	0 days	12 days
162	Prepare DDA for E&M Works and Architectural Finishes of Underpass certification (Draft)	90 days	90 days	NA	NA	November 17, 2020	February 14, 2021	November 29, 2020	February 26, 2021	0%	0 days	3 days	12 days
163	Submit & endorse by PM and Statutory Authorities/Gov.	60 days	60 days	NA	NA	February 15, 2021	April 15, 2021	February 27, 2021	April 27, 2021	0%	0 days	3 days	12 days
164	Prepare DDA for E&M Works and Architectural Finishes of Underpass and ICE certification (Final)	10 days	10 days	NA	NA	April 16, 2021	April 25, 2021	April 28, 2021	May 7, 2021	0%	0 days	0 days	12 days
165	Submit & endorse by PM and Statutory Authorities/Gov.	40 days	40 days	NA	NA	April 26, 2021	June 4, 2021	May 8, 2021	June 16, 2021	0%	12 days	2 days	12 days
166	Road D3 Bridge & Approach Ramps	226 days	98.71 days	May 30, 2019	NA	May 30, 2019	January 10, 2020	May 30, 2019	January 10, 2020	0%	0 days	0 days	0 days
167	D3 Bridge	226 days	106.5 days	May 30, 2019	NA	May 30, 2019	January 10, 2020	May 30, 2019	January 10, 2020	0%	0 days	0 days	0 days
168	Prepare AIP and ICE certification (Draft)	66 days	0 days	August 3, 2019	August 3, 2019	May 30, 2019	August 3, 2019	May 30, 2019	August 3, 2019	100%	0 days	3 days	0 days
169	Submit & endorse by PM and Statutory Authorities/Gov. Dept	15 days	0 days	August 5, 2019	August 19, 2019	August 5, 2019	August 19, 2019	August 5, 2019	August 19, 2019	100%	0 days	1 days	0 days
170	Prepare AIP and ICE certification (Final)	21 days	21 days	August 20, 2019	NA	August 20, 2019	October 13, 2019	August 20, 2019	October 16, 2019	0%	3 days	0 days	3 days
171	Prepare DDA and ICE certification (Draft)	90 days	24 days	July 19, 2019	NA	July 19, 2019	October 16, 2019	July 19, 2019	October 16, 2019	73%	0 days	5 days	0 days

Title: Revised Programme-ED/2018/01 with Progress Update as of 22-Sep-19
Legend:
 Critical Progress: ■ Task Progress: ■ Manual Task: ■ Start-only: ■ Finish-only: ■
 Duration-only: ■ Baseline Milestone: ■ Milestone: ■ Summary Progress: ■
 External Milestone: ■ Inactive Milestone: ■ Inactive Summary: ■ Inactive Task: ■ Deadline: ■
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ID	Task Name	Duration	Remaining Duration	Actual Start	Actual Finish	Plan Start	Plan Finish	Late Start	Late Finish	Physical Complete %	Free Slack	Time Risk Allowances (TRA)	Total Slack	2019	2020	2021	2022	2023	2024
268	DDA for Water Works - Remaining water works (Draft)	90 days	90 days	NA	NA	October 3, 2020	December 31, 2020	January 12, 2021	April 11, 2021	0%	0 days	1 day	101 days	H1	H2	H1	H2	H1	H2
269	DDA for Water Works - Remaining water works (Final)	52 days	52 days	NA	NA	January 1, 2021	February 21, 2021	April 12, 2021	June 2, 2021	0%	84 days	1 day	101 days						
270	Water Works Prepare AIP for Bridge D3 and ICE certification (Draft)	442 days 60 days	442 days 60 days	NA	NA	October 17, 2019 October 17, 2019	December 31, 2020 December 15, 2019	May 1, 2020 May 1, 2020	July 16, 2021 June 29, 2020	0% 0%	197 days 0 days	1 day 1 day	197 days 197 days						
271	Submit & endorse by PM and Statutory Authorities/Gov. Dept	28 days	28 days	NA	NA	December 16, 2019	January 12, 2020	October 28, 2020	November 24, 2020	0%	0 days	0.5 days	317 days						
272	Prepare AIP for Bridge D3 and ICE certification (Final)	14 days	14 days	NA	NA	January 13, 2020	January 26, 2020	November 25, 2020	December 8, 2020	0%	0 days	0 days	317 days						
273	Prepare DDA for Bridge D3 and ICE certification (Draft)	90 days	90 days	NA	NA	January 27, 2020	April 25, 2020	December 9, 2020	March 8, 2021	0%	0 days	1 day	317 days						
274	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	April 26, 2020	June 24, 2020	March 9, 2021	May 7, 2021	0%	0 days	0.5 days	317 days						
275	Prepare DDA for Bridge D3 and ICE certification (Final)	10 days	10 days	NA	NA	June 25, 2020	July 4, 2020	May 8, 2021	May 17, 2021	0%	0 days	0 days	317 days						
276	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	July 5, 2020	September 2, 2020	May 18, 2021	July 16, 2021	0%	268 days	0 days	317 days						
277	Prepare AIP for Underpass, Depressed Road and ICE certification (Draft)	60 days	60 days	NA	NA	December 16, 2019	February 13, 2020	June 30, 2020	August 28, 2020	0%	0 days	1 day	197 days						
278	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	February 14, 2020	April 13, 2020	September 30, 2020	November 28, 2020	0%	0 days	0.5 days	229 days						
279	Prepare AIP for Underpass, Depressed Road and ICE certification (Final)	10 days	10 days	NA	NA	April 14, 2020	April 23, 2020	November 29, 2020	December 8, 2020	0%	0 days	0	229 days						
280	Prepare DDA for Underpass, Depressed Road and ICE certification (Draft)	90 days	90 days	NA	NA	April 24, 2020	July 22, 2020	December 9, 2020	March 8, 2021	0%	0 days	1 day	229 days						
281	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	July 23, 2020	September 20, 2020	March 9, 2021	May 7, 2021	0%	0 days	0.5 days	229 days						
282	Prepare DDA for Underpass, Depressed Road and ICE certification (Final)	10 days	10 days	NA	NA	September 21, 2020	September 30, 2020	May 8, 2021	May 17, 2021	0%	0 days	0 days	229 days						
283	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	October 1, 2020	November 29, 2020	May 18, 2021	July 16, 2021	0%	180 days	0 days	229 days						
284	AIP for Water Works - Road L12d (Draft)	60 days	60 days	NA	NA	February 14, 2020	April 13, 2020	August 29, 2020	October 27, 2020	0%	0 days	1 day	197 days						
285	DDA for Water Works - Road L12d (Final)	38 days	38 days	NA	NA	April 14, 2020	May 21, 2020	April 18, 2021	May 25, 2021	0%	52 days	0.5 days	369 days						
286	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	90 days	NA	NA	April 14, 2020	July 12, 2020	February 25, 2021	May 25, 2021	0%	0 days	1 day	317 days						
287	DDA for Water Works - Road L12d (Draft)	52 days	52 days	NA	NA	July 13, 2020	September 2, 2020	May 26, 2021	July 16, 2021	0%	268 days	1 day	317 days						
288	AIP for Water Works - Waterfront Promenade and at grade Open Space (Draft)	60 days	60 days	NA	NA	April 14, 2020	June 12, 2020	October 28, 2020	December 26, 2020	0%	0 days	1 day	197 days						
289	DDA for Water Works - Remaining water works (Final)	38 days	38 days	NA	NA	August 12, 2020	September 18, 2020	April 18, 2021	May 25, 2021	0%	52 days	0.5 days	309 days						
290	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	90 days	NA	NA	June 13, 2020	September 10, 2020	February 25, 2021	May 25, 2021	0%	0 days	1 day	257 days						
291	DDA for Water Works - Waterfront Promenade and at grade Open Space (Draft)	52 days	52 days	NA	NA	September 11, 2020	November 1, 2020	May 26, 2021	July 16, 2021	0%	208 days	1 day	257 days						
292	AIP for Water Works - Remaining water works (Draft)	60 days	60 days	NA	NA	June 13, 2020	August 11, 2020	December 27, 2020	February 24, 2021	0%	0 days	1 day	197 days						
293	DDA for Water Works - Remaining water works (Final)	38 days	38 days	NA	NA	August 12, 2020	September 18, 2020	April 18, 2021	May 25, 2021	0%	52 days	0.5 days	249 days						
294	Submit & endorse by PM and Statutory Authorities/Gov. Dept	90 days	90 days	NA	NA	August 12, 2020	November 9, 2020	February 25, 2021	May 25, 2021	0%	0 days	1 day	197 days						
295	DDA for Water Works - Remaining water works (Draft)	52 days	52 days	NA	NA	November 10, 2020	December 31, 2020	May 26, 2021	July 16, 2021	0%	148 days	1 day	197 days						
296	Submit & endorse by PM and Statutory Authorities/Gov. Dept	61 days	0 days	May 30, 2019	July 29, 2019	May 30, 2019	July 29, 2019	May 30, 2019	July 29, 2019	100%	0 days	1 day	0 days						
297	Pumping Stations, Box Culverts and Intake Structures Prepare AIP for Structures and ICE certification (Draft)	505 days 61 days	409, 17 days 0 days	May 30, 2019 May 30, 2019	NA July 29, 2019	May 30, 2019 May 30, 2019	October 15, 2020 October 11, 2019	May 30, 2019 May 30, 2019	February 10, 2022 September 29, 2021	0% 0%	340 days 0 days	1 day 0 days	483 days 0 days						
298	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	July 30, 2019	September 27, 2019	July 30, 2019	September 15, 2021	92%	0 days	0.5 days	719 days						
299	Prepare AIP for Structures and ICE certification (Final)	14 days	14 days	NA	NA	September 28, 2019	October 11, 2019	September 16, 2021	September 29, 2021	0%	18 days	0 days	719 days						
300	Prepare DDA for Structures and ICE certification (Draft)	92 days	37 days	July 30, 2019	NA	July 30, 2019	October 29, 2019	July 30, 2019	May 30, 2020	0%	0 days	1 day	214 days						
301	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	October 30, 2019	December 28, 2019	September 30, 2021	November 28, 2021	0%	0 days	0.5 days	701 days						
302	Prepare DDA for Structures and ICE certification (Final)	14 days	14 days	NA	NA	December 29, 2019	January 11, 2020	November 29, 2021	December 12, 2021	0%	0 days	0 days	701 days						
303	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	January 12, 2020	March 11, 2020	December 13, 2021	February 10, 2022	0%	558 days	0 days	701 days						
304	Prepare AIP for E&M and ICE certification (Draft)	60 days	5 days	July 30, 2019	NA	July 30, 2019	September 27, 2019	July 30, 2019	May 30, 2020	0%	0 days	1 day	246 days						
305	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	September 28, 2019	November 26, 2019	April 27, 2021	June 25, 2021	0%	0 days	0.5 days	577 days						
306	Prepare AIP for E&M and ICE certification (Final)	90 days	90 days	NA	NA	November 27, 2019	December 6, 2019	June 26, 2021	July 5, 2021	0%	0 days	0 days	577 days						
307	Prepare DDA for E&M and ICE certification (Draft)	60 days	60 days	NA	NA	December 7, 2019	March 5, 2020	July 6, 2021	October 3, 2021	0%	0 days	1 day	577 days						
308	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	March 6, 2020	May 4, 2020	October 4, 2021	December 2, 2021	0%	0 days	0.5 days	577 days						
309	Prepare DDA for E&M and ICE certification (Final)	10 days	10 days	NA	NA	May 5, 2020	May 14, 2020	December 3, 2021	December 12, 2021	0%	0 days	0 days	577 days						

Title: Revised Programme- ED/2018/01 with Progress Update as of 22-Sep-19

Task Progress: Critical Progress (Red), Task Progress (Blue)

Task Split: Critical Split (Red), Split (Blue)

Manual Task: Manual Task (Green), Start-only (Blue), Finish-only (Blue)

Duration-only: Duration-only (Green)

Baseline Milestone: Milestone (Diamond), Summary Progress (Bar)

External Milestone: External Milestone (Diamond), Inactive Milestone (Grey)

External Task: External Task (Green), Inactive Task (Grey)

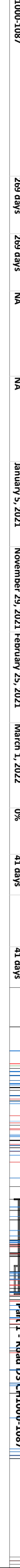
Summary: Summary (Bar), Manual Summary (Bar), Project Summary (Bar)

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ID	Task Name	Duration	Remaining Duration	Actual Start	Actual Finish	Plan Start	Plan Finish	Late Start	Late Finish	Physical Complete %	Free Slack (TRA)	Time Risk Allowances	Total Slack
311	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	May 15, 2020	July 13, 2020	December 13, 2021	February 10, 2022	0%	434 days 0 days	577 days	0 days
312	AIP for Box Culvert and Intake Structures (Draft)	60 days	60 days	NA	NA	October 30, 2019	December 28, 2019	May 31, 2020	July 29, 2020	0%	0 days	1 day	214 days
313	AIP for Box Culvert and Intake Structures (Final)	38 days	38 days	NA	NA	December 29, 2019	February 4, 2020	November 13, 2021	December 20, 2021	0%	52 days	0.5 days	685 days
314	DDA for Box Culvert and Intake Structures (Draft)	90 days	90 days	NA	NA	December 29, 2019	March 27, 2020	July 30, 2020	October 27, 2020	0%	0 days	1 day	214 days
315	DDA for Box Culvert and Intake Structures (Final)	52 days	52 days	NA	NA	March 28, 2020	May 18, 2020	December 21, 2021	February 10, 2022	0%	490 days 1 day	633 days	0 days
316	AIP for Remaining Works (Draft)	60 days	60 days	NA	NA	March 28, 2020	May 26, 2020	October 28, 2020	December 26, 2020	0%	0 days	1 day	214 days
317	AIP for Remaining Works (Final)	38 days	38 days	NA	NA	May 27, 2020	July 3, 2020	November 13, 2021	December 20, 2021	0%	52 days	0.5 days	535 days
318	DDA for Remaining Works (Draft)	90 days	90 days	NA	NA	May 27, 2020	August 24, 2020	September 22, 2021	December 20, 2021	0%	0 days	1 day	483 days
319	DDA for Remaining Works (Final)	52 days	52 days	NA	NA	August 25, 2020	October 15, 2020	December 21, 2021	February 10, 2022	0%	340 days 1 day	483 days	0 days
320	Elevated Landscape Deck Staircase & Associated Work	302 days	173-99 days	May 30, 2019	NA	May 30, 2019	March 26, 2020	May 30, 2019	May 5, 2020	0%	40 days	40 days	40 days
321	Prepare AIP and ICE certification (Draft)	96 days	0 days	May 30, 2019	September 2, 2019	May 30, 2019	September 2, 2019	May 30, 2019	September 2, 2019	100%	0 days	3 days	0 days
322	Submit & endorse by PM and Statutory Authorities/Gov. Dept	18 days	0 days	September 3, 2019	September 20, 2019	September 3, 2019	September 20, 2019	September 3, 2019	September 20, 2019	100%	0 days	1 day	0 days
323	Prepare AIP and ICE certification (Final)	14 days	0 days	August 29, 2019	September 11, 2019	August 29, 2019	September 11, 2019	August 29, 2019	September 11, 2019	100%	0 days	0 days	0 days
324	Prepare DDA and ICE certification (Draft)	52 days	46-9 days	September 14, 2019	NA	September 14, 2019	November 13, 2019	September 14, 2019	December 9, 2019	10%	0 days	1 day	26 days
325	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	November 14, 2019	January 12, 2020	December 24, 2019	February 21, 2020	0%	0 days	0.5 days	40 days
326	Prepare DDA for and ICE certification (Final)	14 days	14 days	NA	NA	January 13, 2020	January 26, 2020	February 22, 2020	March 6, 2020	0%	0 days	0 days	40 days
327	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	January 27, 2020	March 26, 2020	March 7, 2020	May 5, 2020	0%	0 days	0 days	40 days
328	Waterfront Promenade and At-grade Open Space	671 days	671 days	NA	NA	November 14, 2019	September 14, 20...	December 10, 2019	October 10, 2021	0%	0 days	26 days	26 days
329	Prepare AIP for Observation Deck with Lift and Staircase and ICE certification (Draft)	61 days	61 days	NA	NA	November 14, 2019	January 13, 2020	December 10, 2019	February 8, 2020	0%	0 days	1 day	26 days
330	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	January 14, 2020	March 13, 2020	March 17, 2021	May 15, 2021	0%	0 days	0.5 days	428 days
331	Prepare AIP for Observation Deck with Lift and Staircase and ICE certification (Final)	14 days	14 days	NA	NA	March 14, 2020	March 27, 2020	May 16, 2021	May 29, 2021	0%	18 days	0 days	428 days
332	Prepare DDA for Observation Deck with Lift and Staircase and ICE certification (Draft)	92 days	92 days	NA	NA	January 14, 2020	April 14, 2020	February 9, 2020	May 10, 2020	0%	0 days	1 day	26 days
333	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	April 15, 2020	June 13, 2020	May 30, 2021	July 28, 2021	0%	0 days	0.5 days	410 days
334	Prepare DDA for Observation Deck with Lift and Staircase and ICE certification (Final)	14 days	14 days	NA	NA	June 14, 2020	June 27, 2020	July 29, 2021	August 11, 2021	0%	0 days	0 days	410 days
335	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	June 28, 2020	August 26, 2020	August 12, 2021	October 10, 2021	0%	384 days 0 days	410 days	0 days
336	Prepare AIP for Remaining Works at Waterfront Promenade and ICE certification (Draft)	60 days	60 days	NA	NA	January 14, 2020	March 13, 2020	September 24, 2020	November 22, 2020	0%	0 days	1 day	254 days
337	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	March 14, 2020	May 12, 2020	December 25, 2020	February 22, 2021	0%	0 days	0.5 days	286 days
338	Prepare AIP for Remaining Works at Waterfront Promenade and ICE certification (Final)	10 days	10 days	NA	NA	May 13, 2020	May 22, 2020	February 23, 2021	March 4, 2021	0%	0 days	0 days	286 days
339	Prepare DDA for Remaining Works at Waterfront Promenade and ICE certification (Draft)	90 days	90 days	NA	NA	May 23, 2020	August 20, 2020	March 5, 2021	June 2, 2021	0%	0 days	1 day	286 days
340	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	August 21, 2020	October 19, 2020	June 3, 2021	August 1, 2021	0%	0 days	0.5 days	286 days
341	Prepare DDA for Remaining Works at Waterfront Promenade and ICE certification (Final)	10 days	10 days	NA	NA	October 20, 2020	October 29, 2020	August 2, 2021	August 11, 2021	0%	0 days	0 days	286 days
342	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	October 30, 2020	December 28, 2020	August 12, 2021	October 10, 2021	0%	250 days 0 days	286 days	0 days
343	AIP for Cladding Design of Landscape Deck, Lifts and associated Works (Draft)	60 days	60 days	NA	NA	October 28, 2020	December 26, 2020	November 23, 2020	January 21, 2021	0%	0 days	1 day	26 days
344	AIP for Cladding Design of Landscape Deck, Lifts and associated Works (Final)	38 days	38 days	NA	NA	December 27, 2020	February 2, 2021	July 13, 2021	August 19, 2021	0%	52 days	0.5 days	198 days
345	DDA for Cladding Design of Landscape Deck, Lifts and associated Works (Final)	90 days	90 days	NA	NA	December 27, 2020	March 26, 2021	May 22, 2021	August 19, 2021	0%	0 days	1 day	146 days
346	DDA for Cladding Design of Landscape Deck, Lifts and associated Works (Draft)	52 days	52 days	NA	NA	March 27, 2021	May 17, 2021	August 20, 2021	October 10, 2021	0%	120 days 1 day	146 days	0 days
347	AIP for Water Works - Waterfront Promenade and at grade Open Space (Final)	60 days	60 days	NA	NA	December 27, 2020	February 24, 2021	January 22, 2021	March 22, 2021	0%	0 days	1 day	26 days
348	AIP for Water Works - Waterfront Promenade and at grade Open Space (Final)	38 days	38 days	NA	NA	February 25, 2021	April 3, 2021	July 13, 2021	August 19, 2021	0%	52 days	0.5 days	138 days
349	DDA for Water Works - Waterfront Promenade and at grade Open Space (Draft)	90 days	90 days	NA	NA	February 25, 2021	May 25, 2021	May 22, 2021	August 19, 2021	0%	0 days	1 day	86 days
350	DDA for Water Works - Waterfront Promenade and at grade Open Space (Final)	52 days	52 days	NA	NA	May 26, 2021	July 16, 2021	August 20, 2021	October 10, 2021	0%	60 days	1 day	86 days
351	AIP for Balustrade and Railing of Promenade, Open Space and Associated Works (Draft)	60 days	60 days	NA	NA	February 25, 2021	April 25, 2021	March 23, 2021	May 21, 2021	0%	0 days	1 day	26 days
352	AIP for Balustrade and Railing of Promenade, Open Space and Associated Works (Final)	38 days	38 days	NA	NA	April 26, 2021	June 2, 2021	July 13, 2021	August 19, 2021	0%	52 days	0.5 days	78 days

Title: Revised Programme-ED/2018/01 with Progress Update as of 22-Sep-19
Task Progress: Critical Progress (Red), Task Progress (Blue)
Task: Critical Split (Red), Split (Blue)
Manual Task: Manual Task (Green), Start-only (Yellow), Finish-only (Purple)
Duration-only: Duration-only (Light Blue)
Baseline: Baseline (Grey), Baseline Split (Light Grey)
Milestone: Milestone (Diamond), Summary Progress (Bar)
Summary: Summary (Bar), Manual Summary (Bar), Project Summary (Bar)
External Tasks: External Task (Green), Inactive Task (Grey)
Inactive Milestone: Inactive Milestone (Grey), Inactive Summary (Grey), Deadline (Green)

ID	Task Name	Duration	Remaining Duration	Actual Start	Actual Finish	Plan Start	Plan Finish	Late Start	Late Finish	Physical Complete	Free Slack	Time Risk Allowances	Total Slack
353	DDA for Balustrade and Railing of Promenade, Open Space and Associated Works (Draft)	90 days	90 days	NA	NA	April 26, 2021	July 24, 2021	May 22, 2021	August 19, 2021	0%	0 days	1 day	26 days
354	DDA for Balustrade and Railing of Promenade, Open Space and Associated Works (Final)	52 days	52 days	NA	NA	July 25, 2021	September 14, 2021	August 20, 2021	October 10, 2021	0%	0 days	1 day	26 days
355	Landscaping works	457 days	457 days	NA	NA	March 29, 2020	June 28, 2021	April 24, 2020	November 15, 2022	0%	26 days	26 days	26 days
356	Prepare AP for Roadside Landscaping Softworks and ICE certification (Draft)	61 days	61 days	NA	NA	March 29, 2020	May 28, 2020	April 24, 2020	June 23, 2020	0%	0 days	1 day	26 days
357	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	May 29, 2020	July 27, 2020	April 22, 2022	June 20, 2022	0%	0 days	0.5 days	693 days
358	Prepare AP for roadside landscaping softworks and ICE certification (Final)	14 days	14 days	NA	NA	July 28, 2020	August 10, 2020	June 21, 2022	July 4, 2022	0%	18 days	0 days	693 days
359	Prepare DDA for Roadside Landscaping Softworks and ICE certification (Draft)	92 days	92 days	NA	NA	May 29, 2020	August 28, 2020	June 24, 2020	September 23, 2020	0%	0 days	1 day	26 days
360	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	August 29, 2020	October 27, 2020	July 5, 2022	September 2, 2022	0%	0 days	0.5 days	675 days
361	Prepare DDA for Roadside Landscaping softworks and ICE certification (Final)	14 days	14 days	NA	NA	October 28, 2020	November 10, 2020	September 3, 2022	September 16, 2022	0%	0 days	0 days	675 days
362	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	November 11, 2020	January 9, 2021	September 17, 2022	November 15, 2022	0%	587 days	0 days	675 days
363	Prepare AP for irrigation system for all landscaping works and ICE certification (Draft)	60 days	60 days	NA	NA	August 29, 2020	October 27, 2020	September 24, 2020	November 22, 2020	0%	0 days	1 day	26 days
364	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	October 28, 2020	December 26, 2020	March 17, 2022	May 15, 2022	0%	0 days	0.5 days	505 days
365	Prepare AP for irrigation system for all landscaping works and ICE certification (Final)	10 days	10 days	NA	NA	December 27, 2020	January 5, 2021	May 16, 2022	May 25, 2022	0%	0 days	0 days	505 days
366	Prepare DDA for irrigation system for all landscaping works and ICE certification (Draft)	90 days	90 days	NA	NA	January 6, 2021	April 5, 2021	May 26, 2022	August 23, 2022	0%	0 days	1 day	505 days
367	Submit & endorse by PM and Statutory Authorities/Gov. Dept	60 days	60 days	NA	NA	April 6, 2021	June 4, 2021	August 24, 2022	October 22, 2022	0%	0 days	0.5 days	505 days
368	Prepare DDA for irrigation system for all landscaping works and ICE certification (Final)	10 days	10 days	NA	NA	June 5, 2021	June 14, 2021	October 23, 2022	November 1, 2022	0%	0 days	0 days	505 days
369	Submit & endorse by PM and Statutory Authorities/Gov. Dept	14 days	14 days	NA	NA	June 15, 2021	June 28, 2021	November 2, 2022	November 15, 2022	0%	417 days	0 days	505 days
370	Work Staged/Phase - Planned Completion	1394 days	1394 days	NA	NA	August 4, 2020	May 29, 2024	August 7, 2020	May 29, 2024	0%	0 days	0 days	0 days
371	Section 1	0 days	0 days	NA	NA	March 1, 2022	March 1, 2022	March 1, 2022	March 1, 2022	0%	0 days	0 days	0 days
372	Section 2	0 days	0 days	NA	NA	May 26, 2021	May 26, 2021	June 2, 2021	June 2, 2021	0%	6 days	0 days	6 days
373	Section 3	0 days	0 days	NA	NA	October 28, 2021	October 28, 2021	November 2, 2021	November 2, 2021	0%	4 days	0 days	4 days
374	Section 4	0 days	0 days	NA	NA	May 17, 2023	May 17, 2023	July 5, 2021	July 5, 2021	0%	10 days	0 days	10 days
375	Section 5	0 days	0 days	NA	NA	June 28, 2021	June 28, 2021	July 5, 2021	July 5, 2021	0%	5 days	0 days	5 days
376	Section 6	0 days	0 days	NA	NA	May 30, 2023	May 30, 2023	May 30, 2023	May 30, 2023	0%	0 days	0 days	0 days
377	Section 7	0 days	0 days	NA	NA	May 29, 2024	May 29, 2024	May 29, 2024	May 29, 2024	0%	0 days	0 days	0 days
378	Section 8	0 days	0 days	NA	NA	November 24, 2021	November 24, 2021	December 2, 2021	December 2, 2021	0%	7 days	0 days	7 days
379	Section 9	0 days	0 days	NA	NA	June 25, 2021	June 25, 2021	July 5, 2021	July 5, 2021	0%	7 days	0 days	7 days
380	Section 10	0 days	0 days	NA	NA	May 18, 2023	May 18, 2023	May 30, 2023	May 30, 2023	0%	9 days	0 days	9 days
381	KD1	0 days	0 days	NA	NA	August 4, 2020	August 4, 2020	August 7, 2020	August 7, 2020	0%	3 days	0 days	3 days
382	KD2	0 days	0 days	NA	NA	March 29, 2021	March 29, 2021	April 18, 2021	April 18, 2021	0%	14 days	0 days	14 days
383	KD3	0 days	0 days	NA	NA	May 21, 2021	May 21, 2021	June 1, 2021	June 1, 2021	0%	9 days	0 days	9 days
384	KD4	0 days	0 days	NA	NA	January 31, 2022	January 31, 2022	January 31, 2022	January 31, 2022	0%	0 days	0 days	0 days
385	KD5	0 days	0 days	NA	NA	September 17, 2021	September 17, 2021	September 17, 2021	September 17, 2021	0%	0 days	0 days	0 days
386	KD6	0 days	0 days	NA	NA	December 14, 2021	December 14, 2021	December 29, 2021	December 29, 2021	0%	11 days	0 days	11 days
387	KD7	0 days	0 days	NA	NA	May 27, 2022	May 27, 2022	June 3, 2022	June 3, 2022	0%	5 days	0 days	5 days
388	Construction Works	1499 days	1499 days	NA	NA	May 16, 2019	May 29, 2024	May 16, 2019	May 29, 2024	0%	0 days	0 days	0 days
389	Office Accommodation	32 days	32 days	NA	NA	August 8, 2019	October 31, 2019	August 8, 2019	January 10, 2020	40%	58 days	1 day	58 days
390	Procurement of Materials and Equipments	509 days	509 days	NA	NA	November 4, 2019	July 23, 2021	November 26, 2019	July 27, 2022	0%	19 days	19 days	19 days
398	Excavation Permit	297 days	297 days	NA	NA	October 18, 2019	October 16, 2020	November 22, 2020	November 21, 2021	0%	326 days	326 days	326 days
400	Haul Road Diversion 3m wide within Kai Tak Sport Part	152 days	152 days	NA	NA	November 1, 2019	March 31, 2020	December 30, 2023	May 29, 2024	0%	1520 d...	1520 d...	1520 d...
401	Section 1	831 days	825.54 days	May 16, 2019	NA	May 16, 2019	March 1, 2022	May 16, 2019	May 29, 2024	0%	668 days	668 days	668 days
402	Agree Interface Coordination Plan with CKR & KTSP	14 days	0 days	August 27, 2019	September 11, 2019	August 27, 2019	September 11, 2019	August 27, 2019	September 11, 2019	100%	0 days	0 days	0 days
403	Ground Investigation	60 days	52 days	September 12, 2019	NA	September 12, 2019	November 23, 2019	September 12, 2019	January 10, 2020	0%	38 days	38 days	38 days
404	GI Work	60 days	52 days	September 12, 2019	NA	September 12, 2019	November 23, 2019	September 12, 2019	January 10, 2020	13%	38 days	0.5 days	38 days
405	Part 1 - Junction Modification Rd L6 & D2	80 days	80 days	NA	NA	November 22, 2021	March 1, 2022	November 22, 2021	March 1, 2022	0%	0 days	0 days	0 days
406	Break up existing pavement and traffic island	12 days	12 days	NA	NA	November 22, 2021	December 4, 2021	November 22, 2021	December 4, 2021	0%	0 days	0 days	0 days
407	Utility ducting laying (by others)	25 days	25 days	NA	NA	December 6, 2021	January 6, 2022	December 6, 2021	January 6, 2022	0%	0 days	1 days	0 days
408	Trim formation and lay sub base	7 days	7 days	NA	NA	December 13, 2021	December 20, 2021	December 13, 2021	December 20, 2021	0%	0 days	0 days	0 days
409	Lay kerb	12 days	12 days	NA	NA	December 21, 2021	January 6, 2022	December 21, 2021	January 6, 2022	0%	0 days	0 days	0 days
410	Construct pedestrian street/ footpath	7 days	7 days	NA	NA	January 7, 2022	January 14, 2022	January 7, 2022	January 14, 2022	0%	0 days	0 days	0 days
411	Install central median	12 days	12 days	NA	NA	January 15, 2022	January 28, 2022	January 15, 2022	January 28, 2022	0%	0 days	0 days	0 days
412	Concrete infill between profile barrier	4 days	4 days	NA	NA	January 29, 2022	February 5, 2022	January 29, 2022	February 5, 2022	0%	0 days	0 days	0 days
413	Road pavement	5 days	5 days	NA	NA	February 7, 2022	February 11, 2022	February 7, 2022	February 11, 2022	0%	0 days	0 days	0 days
414	Install street furniture	15 days	15 days	NA	NA	February 12, 2022	March 1, 2022	February 12, 2022	March 1, 2022	0%	0 days	1 days	0 days
415	Part 1 - Road D3 CH1000-1087	269 days	269 days	NA	NA	January 5, 2021	November 29, 2021	February 25, 2021	March 1, 2022	0%	41 days	41 days	41 days



Title: Revised Programme-ED/2018/01 with Progress Update as of 22-Sep-19

Critical Path: [Red line]

Task Progress: [Green line]

Manual Task: [Blue line]

Start-only: [Light blue line]

Baseline: [Grey line]

Baseline Split: [Dotted line]

Duration-only: [Light blue line]

Baseline Milestone: [Diamond icon]

Summary: [Blue line]

Manual Summary: [Light blue line]

Project Summary: [Light blue line]

External Tasks: [Light blue line]

External Milestone: [Diamond icon]

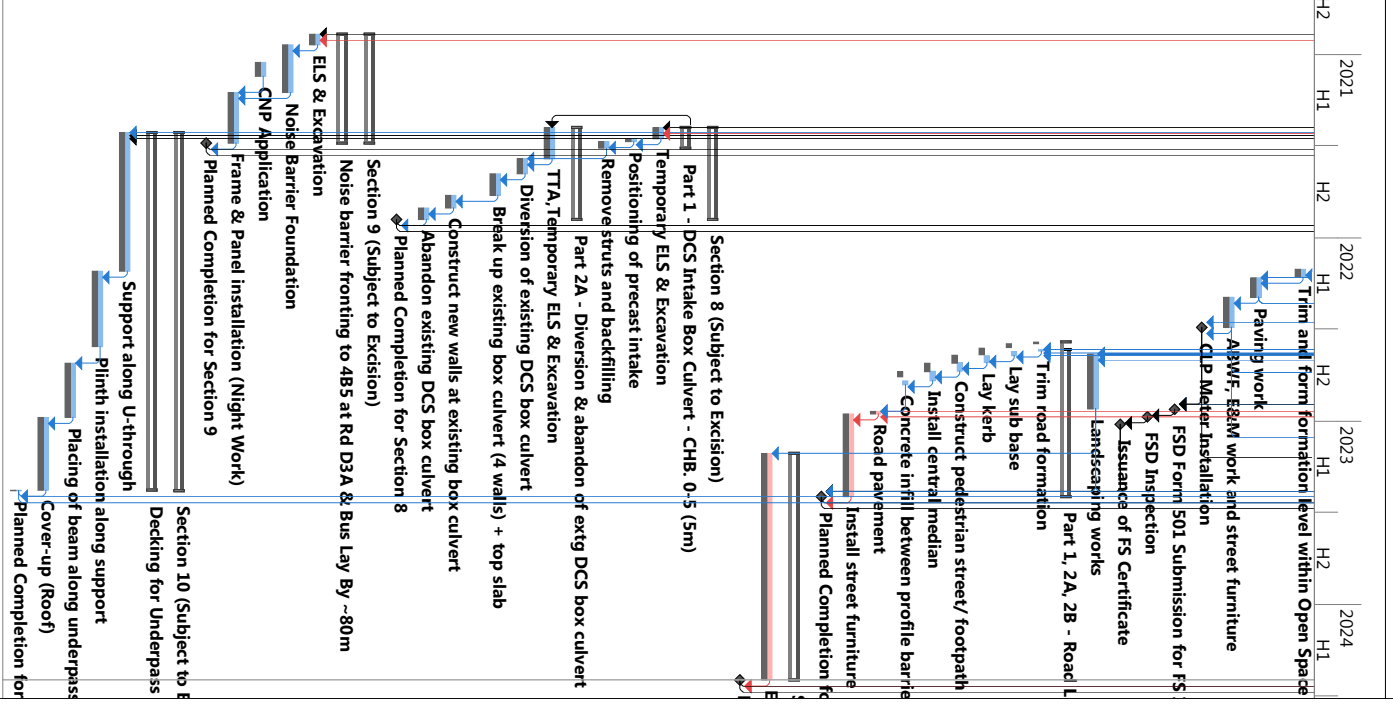
Inactive Milestone: [Grey line]

Inactive Summary: [Light blue line]

Deadline: [Green arrow]

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ID	Task Name	Duration	Remaining Duration	Actual Start	Actual Finish	Plan Start	Plan Finish	Late Start	Late Finish	Physical Complete %	Free Slack	Time Risk (TRA)	Total Slack	2019	2020	2021	2022	2023	2024	
968	Trim and form formation level within Open Space & Promenade area	14 days	14 days	NA	NA	March 4, 2022	March 19, 2022	June 1, 2022	June 17, 2022	0%	0 days	0 days	72 days							
969	Paving work	30 days	30 days	NA	NA	March 21, 2022	April 28, 2022	June 18, 2022	July 23, 2022	0%	0 days	0.5 days	72 days							
970	ABWF, E&M work and street furniture	50 days	50 days	NA	NA	April 29, 2022	June 27, 2022	July 28, 2022	September 24, 2022	0%	0 days	1 day	75 days							
971	CLP Meter Installation	0 days	0 days	NA	NA	June 27, 2022	June 27, 2022	May 1, 2023	May 1, 2023	0%	163 days	307 days								
972	FSD Form 501 Submission for FS Inspection	0 days	0 days	NA	NA	December 8, 2022	December 8, 2022	May 1, 2023	May 1, 2023	0%	0 days	144 days								
973	FSD Inspection	0 days	0 days	NA	NA	December 22, 2022	December 22, 2022	May 16, 2023	May 16, 2023	0%	0 days	144 days								
974	Issuance of FS Certificate	0 days	0 days	NA	NA	January 6, 2023	January 6, 2023	May 30, 2023	May 30, 2023	0%	144 days	144 days								
975	Landscaping works	90 days	90 days	NA	NA	August 20, 2022	December 6, 2022	November 16, 2022	March 4, 2023	0%	72 days	1 day	72 days							
976	Part 1, 2A, 2B - Road L12	238 days	238 days	NA	NA	August 11, 2022	May 30, 2023	October 6, 2022	May 30, 2023	0%	0 days	0 days	0 days							
977	Trim road formation	3 days	3 days	NA	NA	August 11, 2022	August 13, 2022	October 6, 2022	October 8, 2022	0%	0 days	1 day	45 days							
978	Lay sub base	7 days	7 days	NA	NA	August 15, 2022	August 22, 2022	October 10, 2022	October 17, 2022	0%	0 days	1 day	45 days							
979	Lay kerb	12 days	12 days	NA	NA	August 23, 2022	September 5, 2022	October 18, 2022	October 31, 2022	0%	0 days	1 day	45 days							
980	Construct pedestrian street/ footpath	14 days	14 days	NA	NA	September 6, 2022	September 22, 2022	November 1, 2022	November 16, 2022	0%	0 days	1 day	45 days							
981	Install central median	14 days	14 days	NA	NA	September 23, 2022	October 11, 2022	November 17, 2022	December 2, 2022	0%	0 days	1 day	45 days							
982	Concrete infill between profile barrier	7 days	7 days	NA	NA	October 12, 2022	October 19, 2022	December 3, 2022	December 10, 2022	0%	45 days	0 days	45 days							
983	Road pavement	5 days	5 days	NA	NA	December 12, 2022	December 16, 2022	December 12, 2022	December 16, 2022	0%	0 days	0 days	0 days							
984	Install street furniture	131 days	131 days	NA	NA	December 17, 2022	May 30, 2023	December 17, 2022	May 30, 2023	0%	0 days	6 days	0 days							
985	Planned completion for Section 6	0 days	0 days	NA	NA	May 30, 2023	May 30, 2023	May 30, 2023	May 30, 2023	0%	0 days	0 days	0 days							
986	Section 7	365 days	365 days	NA	NA	March 6, 2023	May 29, 2024	March 6, 2023	May 29, 2024	0%	0 days	10 days	0 days							
987	Establishment work for landscape softwork	365 days	365 days	NA	NA	March 6, 2023	May 29, 2024	March 6, 2023	May 29, 2024	0%	0 days	0 days	0 days							
988	Planned completion for Section 7	0 days	0 days	NA	NA	May 29, 2024	May 29, 2024	May 29, 2024	May 29, 2024	0%	0 days	0 days	0 days							
989	Section 8 (Subject to Excision)	152 days	152 days	NA	NA	May 26, 2021	November 24, 2021	June 3, 2021	December 2, 2021	0%	7 days	7 days	7 days							
990	Part 1 - DCS Intake Box Culvert - CHB, 0-5 (5m)	33 days	33 days	NA	NA	May 26, 2021	July 5, 2021	June 25, 2021	August 3, 2021	0%	0 days	2 days	25 days							
991	Temporary ELS & Excavation	18 days	18 days	NA	NA	May 26, 2021	June 16, 2021	July 16, 2021	July 16, 2021	0%	0 days	1 days	25 days							
992	Positioning of precast intake	5 days	5 days	NA	NA	June 17, 2021	June 22, 2021	July 17, 2021	July 22, 2021	0%	18 days	2 days	25 days							
993	Remove struts and backfilling	10 days	10 days	NA	NA	June 23, 2021	July 3, 2021	August 3, 2021	August 3, 2021	0%	0 days	3 days	7 days							
994	Part 2A - Diversion & abandon of extg DCS box culvert	51 days	51 days	NA	NA	May 26, 2021	July 26, 2021	June 3, 2021	August 3, 2021	0%	0 days	2 days	7 days							
995	TTA, Temporary ELS & Excavation	26 days	26 days	NA	NA	July 27, 2021	August 25, 2021	August 4, 2021	September 2, 2021	0%	0 days	2 days	7 days							
996	Diversion of existing DCS box culvert	35 days	35 days	NA	NA	August 26, 2021	October 7, 2021	September 3, 2021	October 16, 2021	0%	0 days	2 days	7 days							
997	Break up existing box culvert (4 walls) + top slab	20 days	20 days	NA	NA	October 8, 2021	November 1, 2021	October 18, 2021	November 9, 2021	0%	0 days	1 days	7 days							
998	Construct new walls at existing box culvert	20 days	20 days	NA	NA	November 2, 2021	November 24, 2021	November 10, 2021	December 2, 2021	0%	0 days	1 days	7 days							
999	Abandon existing DCS box culvert	0 days	0 days	NA	NA	November 24, 2021	November 24, 2021	December 2, 2021	December 2, 2021	0%	0 days	0 days	7 days							
1000	Planned completion for Section 8	0 days	0 days	NA	NA	November 24, 2021	November 24, 2021	December 2, 2021	December 2, 2021	0%	0 days	0 days	7 days							
1001	Section 9 (Subject to Excision)	174 days	174 days	NA	NA	November 21, 2020	June 25, 2021	November 30, 2020	July 5, 2021	0%	7 days	7 days	7 days							
1002	Noise barrier fronting to 485 at Rd D3A & Bus Lay By ~80m	18 days	18 days	NA	NA	November 21, 2020	December 11, 2020	November 30, 2020	December 19, 2020	0%	0 days	1 days	7 days							
1003	ELS & Excavation	75 days	75 days	NA	NA	December 12, 2020	March 16, 2021	December 21, 2020	March 24, 2021	0%	0 days	4 days	7 days							
1004	Noise Barrier Foundation	28 days	28 days	NA	NA	January 16, 2021	February 12, 2021	February 25, 2021	March 24, 2021	0%	32 days	4 days	40 days							
1005	CNP Application	81 days	81 days	NA	NA	March 17, 2021	June 25, 2021	July 5, 2021	July 5, 2021	0%	0 days	4 days	7 days							
1006	Frame & Panel Installation (Night Work)	0 days	0 days	NA	NA	June 25, 2021	June 25, 2021	July 5, 2021	July 5, 2021	0%	0 days	0.5 days	10 days							
1007	Planned completion for Section 9	0 days	0 days	NA	NA	June 25, 2021	June 25, 2021	July 5, 2021	July 5, 2021	0%	0 days	0 days	10 days							
1008	Section 10 (Subject to Excision)	582 days	582 days	NA	NA	June 5, 2021	May 18, 2023	June 17, 2021	May 29, 2023	0%	9 days	9 days	9 days							
1009	Decking for Underpass (Rd L14)	581 days	581 days	NA	NA	June 5, 2021	May 17, 2023	June 17, 2021	May 29, 2023	0%	9 days	9 days	9 days							
1010	Support along U-through	225 days	225 days	NA	NA	June 5, 2021	March 7, 2022	June 17, 2021	March 17, 2022	0%	0 days	10 days	9 days							
1011	Plinth installation along support	123 days	123 days	NA	NA	March 8, 2022	August 4, 2022	March 18, 2022	August 15, 2022	0%	0 days	6 days	9 days							
1012	Placing of beam along underpass	90 days	90 days	NA	NA	September 7, 2022	December 23, 2022	September 19, 2022	January 4, 2023	0%	0 days	4 days	9 days							
1013	Cover-up (Roof)	115 days	115 days	NA	NA	December 24, 2022	May 17, 2023	January 5, 2023	May 29, 2023	0%	0 days	5 days	9 days							
1014	Planned completion for Section 10	1 day	1 day	NA	NA	May 18, 2023	May 18, 2023	May 30, 2023	May 30, 2023	0%	0 days	0.5 days	12 days							



Title: Revised Programme-ED/2018/01 with Progress Update as of 22-Sep-19

Critical Path: Critical Split, Task Progress

Task Legend: Task, Split, Manual Task, Start-only, Finish-only

Duration Legend: Duration-only, Baseline, Baseline Split

Milestone Legend: Milestone, Summary Progress

Summary Legend: Summary, Manual Summary, Project Summary

External Legend: External Task, External Milestone, Inactive Task

Inactive Legend: Inactive Milestone, Inactive Summary, Deadline

Appendix C – Environmental monitoring schedules

Contract No. EDO 15/2018 Environmental Monitoring at Kai Tak Development Stage 4 Infrastructure at the former runway and south apron
Environmental Monitoring and Weekly Site Inspection Schedule for January 2020

January 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2 Weekly Site Inspection	3	4
5	6	7	8	9 Weekly Site Inspection + SSMC meeting	10	11
12	13	14	15 Weekly Site Inspection	16	17	18
19	20 Project Commence Date	21 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12	22 Weekly Site Inspection	23	24 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7	25
26	27	28	29	30 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12	31	

NOTE:

1) Site inspection schedule may be changed due to unforeseen circumstance (e.g. adverse weather).

Air Quality Monitoring Station

AM3 - Sky Tower
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop
AM7 - Hong Kong Children's Hospital

Noise Quality Monitoring Station

M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop
M12 - Hong Kong Children's Hospital

Contract No. EDO 15/2018 Environmental Monitoring at Kai Tak Development Stage 4 Infrastructure at the former runway and south apron

Propose Environmental Monitoring and Weekly Site Inspection Schedule for February 2020

February 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
		24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12		Weekly Site Inspection + SSMC meeting		
9	10	11	12	13	14	15
	24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12			Weekly Site Inspection		24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7
16	17	18	19	20	21	22
				Weekly Site Inspection	24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12	
23	24	25	26	27	28	29
				Weekly Site Inspection 24-hr TSP: AM3, AM4(A), AM7 1-hr X3 TSP: AM3, AM4(A), AM7 30-min Noise: M11, M12		

NOTE:

1) Site inspection schedule and Impact monitoring schedule may be changed due to unforeseen circumstance (e.g. adverse weather).

Air Quality Monitoring Station

AM3 - Sky Tower
AM4(A) - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop
AM7 - Hong Kong Children's Hospital

Noise Quality Monitoring Station

M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop
M12 - Hong Kong Children's Hospital

Appendix D – Photographic records

Impact Air Quality Monitoring



Measurement setup at AM3



Measurement setup at AM4(A)



Measurement setup at AM7

Impact Noise Monitoring



Measurement setup at M11



Measurement setup at M12



Weather Station at the rooftop of Hong Kong Children's Hospital

**Appendix E – Calibration certificates, catalogue of air quality
monitoring equipment**



Total Suspended Particulate, Mass Flow Controlled

TSP MFC



MFC TSP

Ambient Air Sampler

The TE-5170 is a high volume ambient Total Suspended Particulate (TSP) air sampler featuring a mass flow controller (MFC) for accurate and consistent particulate sampling. The mass flow controller adjust the motor speed as the filter media collects particulate to maintain a constant flow rate throughout the entire sample duration. The system utilizes a stainless steel filter holder for use with standard 8" x 10" filter paper. The anodized aluminum shelter and robust electrical components allow the system to operate a continuous 24 hour sample.

- Meets EPA CFR, Appendix B to Part 50
- Total Suspended Particulate(TSP)
- Mass Flow Controlled
- 7-Day Mechanical Timer
- Elapsed Time Indicator
- Aluminum Outdoor Shelter
- Brush Style Motor
- Dickson Chart Recorder, 24 Hour
- Stainless Steel Filter Holder
- 36-60 CFM
- Made in USA

ABOUT US: Tisch Environmental Inc. Tisch Environmental is the benchmark for high volume air sampling, particulate, metals, volatiles, and specialty monitoring equipment. Since the company's inception in 1953 as General Metal Works, our product line has expanded from the first high volume air sampler to include high-tech and custom samplers. Our clients are professionals from every sector of the regulatory and industrial markets.

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www.tischenvironmental.com

TISCH ENVIRONMENTAL

www.tisch-env.com

Tisch Environmental
148 S. Miami Ave
Clear FL 32807
sales@tisch-env.com



TSP MFC

MFC TSP Ambient Air Sampler

- General System Specifications**
- Particulate Size:**Total Suspended Particulate (TSP)
 - EPA Designator:** CFR 40 Part 50 Appendix B
 - Flow Controller:** Mass Flow Controller
 - Motor Style:**Brush Style Motor Assembly
 - Pressure Recorder:**Dickson Chart Recorder, 24 hour
 - Timer:** 7 Day Mechanical
 - Elapsed Time Indicator:**Mechanical, Hours and Tenths
 - Flow Range:**39-60CFM, 1.09M³M-1.68M³M
 - Housing:**Anodized Aluminum
 - Filter Holder:**Stainless Steel, 8" x 10"
 - 4" Recorder Charts:** Box of 100
 - Filter Holder:** 8" x 10" Stainless Steel with hold down frame
- Applications**
- US EPA Reference Method Sampling, CFR Appendix J Part 50 Regulatory Compliance
 - Institutional Studies
 - Construction Sites
 - Bridge and Water Tower Painting Sites
 - Fence Line Monitoring
 - Industrial Monitoring
 - Landfill Monitoring
 - Public Health Applications

- Available Models**
- TE-5170 TSP MFC, 110 Volt 60 Hertz, 8 Amps
 - TE-5170X TSP MFC, 220 Volt 50 Hertz 4 Amps
 - TE-5170XZ TSP MFC, 220 Volts 60 Hertz, 4 Amps
- Calibration Equipment**
- TE-5028 -Variable Flow Calibration Kit
 - TE-HVC-V Xcalibrator H/Volt Calibrator

- Optional Equipment**
- TE-3000 Filter Holder Cartridge
 - TE-6653 8" x 10" Glass Fiber Filter Media
 - TE-33384 Motor Brush Set (110volt)
 - TE-33378 Motor Brush Set (220volt)
 - TE-116311 Replacement Motor (110volt)
 - TE-116312 Replacement Motor (220volt)
 - TE-106 Recorder Charts
 - TE-160 Recorder Pen Points
 - TE-5018 Gasket 8" x 10"

- Physical Specifications**
- Weight:** 75lbs, Shelter
 - Shipping Dimensions:** 46"W x 23"L x 20" H, Shelter
 - 19"W x 19"L x 20" H, Lid
 - Assembled Dimensions:** 28"W x 28"L x 61"H

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Calibration Certificate of HVS

CASTCO

佳力高試驗中心有限公司
CASTCO TESTING CENTRE LTD.

Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

Calibration curve ref. No. : ATSPC-01-2020011601 Date of calibration : 16/01/2020

Location : The Hong Kong Society for the Blind's Sampler : TE-5170X
Factory cum Sheltered Workshop

Calibration Data

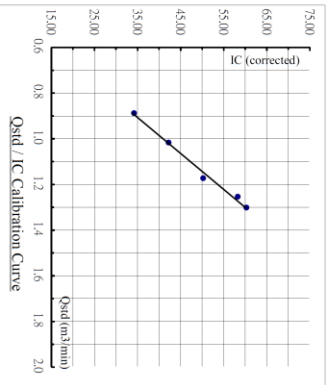
Ambient barometric pressure, Pa = 762.1 (mmHg) Ambient temperature, Ta = 296.65 (deg K)
Qsd Slope, m = 2.03067 Qsd Intercept, b = -0.007660

Calibration Curve

Plate No.	H ₂ O (in)	Qsd (m ³ /min)	I (chart)	IC (corrected)
18	6.90	1.302	60.0	60.22
13	6.40	1.254	58.0	58.21
10	5.60	1.173	50.0	50.18
7	4.20	1.017	42.0	42.15
5	3.20	0.888	34.0	34.12

Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	$Qsd = 1/m \{ (1) \{ \text{Sqrt} \left(\frac{Pa}{760} \left(\frac{298}{Ta} \right) \right) - b \} \}$	63.487	-22.5613	0.9953



Calibration curve requirements : (A), $r > 0.990$; (B), At least 3 Qsd numbers are in the TSP range (1.1 - 1.7 m³/min).

Remark : $Qsd (m^3/min) = 1/m [\text{Sqrt} (H_2O (Pa / 760) (298 / Ta)) - b]$

IC (corrected) = $1 [\text{Sqrt} ((Pa / 760) (298 / Ta))]$

FLOW (corrected) = $\text{Sqrt} (FLOW (mano) (Pa / 760) (298 / Ta))$

Calibrated by: [Signature]

Name : (Chan Kwok Ho)

Checked by: [Signature]

Name : (Wong Yin Tong)

Form No. INSPIVSCAL d416.01.2020

Calibration Certificate of HVS

CASTCO

佳力高試驗中心有限公司
CASTCO TESTING CENTRE LTD.

Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

Calibration curve ref. No. : ATSPC-01-2020011602 Date of calibration : 16/01/2020

Location : Sky Tower Sampler : TE-5170X

Calibration Data

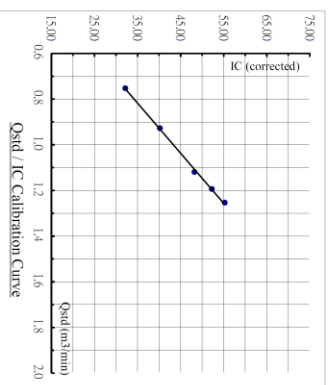
Ambient barometric pressure, Pa = 762.1 (mmHg) Ambient temperature, Ta = 296.65 (deg K)
Qsd Slope, m = 2.03067 Qsd Intercept, b = -0.007660

Calibration Curve

Plate No.	H ₂ O (in)	Qsd (m ³ /min)	I (chart)	IC (corrected)
18	6.40	1.254	55.0	55.20
13	5.80	1.194	52.0	52.19
10	5.10	1.120	48.0	48.17
7	3.50	0.928	40.0	40.15
5	2.50	0.753	32.0	32.12

Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	$Qsd = 1/m \{ (1) \{ \text{Sqrt} \left(\frac{Pa}{760} \left(\frac{298}{Ta} \right) \right) - b \} \}$	45.529	-22.307	0.9993



Calibration curve requirements : (A), $r > 0.990$; (B), At least 3 Qsd numbers are in the TSP range (1.1 - 1.7 m³/min).

Remark : $Qsd (m^3/min) = 1/m [\text{Sqrt} (H_2O (Pa / 760) (298 / Ta)) - b]$

IC (corrected) = $1 [\text{Sqrt} ((Pa / 760) (298 / Ta))]$

FLOW (corrected) = $\text{Sqrt} (FLOW (mano) (Pa / 760) (298 / Ta))$

Calibrated by: [Signature]

Name : (Chan Kwok Ho)

Checked by: [Signature]

Name : (Wong Yin Tong)

Form No. INSPIVSCAL d416.01.2020

Calibration Certificate of HVS

CASTCO 佳力高試驗中心有限公司
CASTCO TESTING CENTRE LTD.

Air Sampler Calibration Curve Plotting & Calculation

(Dickson recorder)

Calibration curve ref No.: ATSRC-01-2020011603 Date of calibration: 16/01/2020

Location: Hong Kong Children's Hospital Sampler: TE-5170X

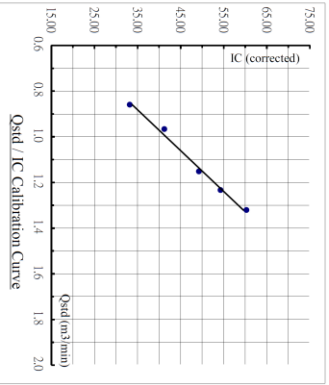
Calibration Data

Ambient barometric pressure, Pa = 762.1 (mmHg) Ambient temperature, Ta = 296.65 (deg K)
Qstd Slope, m = 2.03067 Qstd Intercept, b = -0.007660

Plate No.	H ₂ O (in)	Qstd (m ³ /min)	I (chart)	IC (corrected)
18	7.10	1.321	60.0	60.22
13	6.20	1.234	54.0	54.20
10	5.40	1.152	49.0	49.18
7	3.80	0.967	41.0	41.15
5	3.00	0.860	33.0	33.12

Subsequent calculation of sampler flow

Method	Calibration equation	Slope, m	Intercept, b	Corr. coeff., r
Dickson recorder	Qstd = 1/m [(1 + (Sqrt ((Pa/760) (298/Ta))) - b)]	55.960	-14.3626	0.9957



Calibration curve requirements: (A), r > 0.990; (B), At least 3 Qstd numbers are in the TSP range (1.1 - 1.7 m³ / min).

Remark: Qstd (m³ / min) = 1/m [Sqrt ((Pa / 760) (298 / Ta)) - b]

IC (corrected) = 1 [Sqrt ((Pa / 760) (298 / Ta))]

FLOW (corrected) = Sqrt (FLOW (mmo) (Pa / 760) (298 / Ta))

Calibrated by: [Signature]

Name: Chan Kwok Ho

Checked by: [Signature]

Name: Wong Yin Tong

Form No. INS/SP/SCA/4d/16/01/200

Calibration Certificate for Calibrator



Certificate of Calibration

RECALIBRATION
DUE DATE:
July 25, 2020

Cal. Date: July 25, 2019 Roommeter S/N: 438320 Ta: 297 *K
Operator: Jim Tisch Pa: 755.7 mm Hg
Calibrator Model #: TE-5025A Calibrator S/N: 0006

Run	Vol. Init (m ³)	Vol. Final (m ³)	ΔVol. (m ³)	ΔTime (min)	AP (mm Hg)	AH (in H ₂ O)
1	1	2	1	1.4200	3.2	2.00
2	3	4	1	1.0640	6.3	4.00
3	5	6	1	0.9960	7.9	5.00
4	7	8	1	0.8480	8.8	5.50
5	9	10	1	0.7040	12.7	8.00

Data Tabulation

Vstd (m ³)	Qstd (k-axis)	$\sqrt{\frac{\Delta H (Pa)}{Pstd} \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va (k-axis)	Qa (k-axis)	$\sqrt{\frac{\Delta H (Pa)}{Pa}}$ (y-axis)
0.9934	0.6996	1.4725	0.9958	0.7012	0.8666
0.9893	0.6854	1.9976	0.9917	0.9877	1.2539
0.9872	1.3018	2.2334	0.9895	1.1044	1.4019
0.9860	1.1627	2.3424	0.9884	1.1655	1.4703
0.9809	1.3933	2.8251	0.9832	1.3966	1.7732
QSTD	m = 2.03067	b = -0.00766	QA	m = 1.27157	b = -0.00481
	r = 0.99992			r = 0.99992	

Vstd = ΔVol / (Pa ΔP) / Pstd [(Tstd / Ta)]	Va = ΔVol / (Pa ΔP) / Pa
Qstd = Vstd / ΔTime	Qa = Va / ΔTime
For subsequent flow rate calculations:	
Qstd = 1/m [(ΔH (Pa / Pstd) (Tstd / Ta)) - b]	Qa = 1/m [(ΔH (Pa / Pa)) - b]

Standard Conditions	
Tstd	298.15 °K
Pstd	760 mm Hg
Key	
ΔH	calibrator manometer reading (in H ₂ O)
ΔP	rotometer manometer reading (mm Hg)
Ta	actual absolute temperature (°K)
Pa	actual barometric pressure (mm Hg)
b	intercept
m	slope

isch Environmental, Inc.
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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, 9.2.1.7, page 30

Catalogue of Dust Meter (TSP) Sidepack AM510)

The SidePak AM510 monitor's easy-to-read display shows your data as both real-time aerosol mass-concentration and 8-hour time-weighted average (TWA). With its convenient data logging and long battery life, the AM510 is also ideal for extended sampling. The easy-to-use TrackPro Data Analysis Software lets you create effective graphs and reports.

- User Friendly**
- + Small, lightweight and quiet to maximize worker acceptance
 - + Rugged design with secure belt clip
 - + Easy-to-understand user interface with only four keys
 - + Lockable keypad prevents tampering while sampling
 - + User-adjustable sample flow rate
 - + Define, label and store multiple calibration constants
 - + Easy-to-read LCD display
 - + Convenient, threaded tripod socket accommodates area sampling

- Advanced Features**
- + Smart Battery Management System provides precise run time information, maximizes battery capacity and speeds charging
 - + Integrated pump allows use of size-selective aerosol inlet conditions
 - + Built-in impactors let you choose "none," 10, 25 or 10-micron cut off
 - + 10-mm Dorr-Oliver cyclone for respirable sampling
 - + Display shows real-time concentrations (mg/m³) and 'on-the-fly' TWA as you data log
 - + Display statistics: max, min and average readings, elapsed time and 8-hour TWA

- Quick and Easy Reports**
- + Convenient preprogramming for occupational exposure sampling
 - + Data log for long periods and store multiple tests
 - + Analyze data, print graphs and create reports with TrackPro Data Analysis Software
 - + USB port lets you conveniently connect to your computer

- Power to Spare**
- + Long-lasting NiMH rechargeable battery packs eliminate "memory" issues
 - + Choice of rechargeable NiMH smart battery packs or AA-cell pack



Model AM510 Sidepack Personal Aerosol Monitor

Sensitivity

90° light scattering sensor type
670, 200 and 0.001 to 20 mg/m³ (calibrated to respirable fraction of ISO 12103-1, A1 test dust)

Concentration Range

0.1 to 10 micrometer (µm) 0.001 mg/m³ using 10-second time-constant

Temperature Coefficient

Approximately +0.0005 mg/m³ per °C (for variations from temperature at which instrument was last zeroed)

Flow Rate

User-adjustable, 0.7 to 1.8 liters/min (L/min)

Temperature Range

Operating Range: -4 to 140°F (-20 to 60°C)
Storage Range: 0 to 95% RH, non-condensing

Operational Humidity

0 to 95% RH, non-condensing

Time Constant (LCD display)

User-adjustable, 1 to 60 seconds

Data Logging

Data Points: Approx. 31,000
Logging Interval: User-adjustable, 1 second to 1 hour

User-Select Calibration Factors

Factory Setting: 1.0 (non-adjustable)
Factory-defined Settings: 3, with user-defined labels
Range: 0.1 to 100, user-adjustable

Physical

External Dimensions: 4.2 x 3.7 x 2.8 in. (106 x 92 x 70 mm) with 801723, 801724, 801729 or 801743 battery
5.1 x 3.7 x 2.6 in. (130 x 92 x 70 mm) with 801708, 801722, 801728, 801735, or 801736 battery

Weight

16 oz. (0.46 kg) with 801723, 801724, 801729 or 801743 battery
19 oz. (0.54 kg) with 801708, 01722, 801728, 801735, or 801736 battery

Display

Tripod Socket
1/4-20 female thread

Power Supply/Charger (P/N 2613310)

Input Voltage Range: 24 VDC to 60 VDC
Output Voltage: 9 VDC @ 1.0 A

Maintenance

Factory Clean/Calibrate: Recommended annually
User Zero Calibration: Before each use
User Flow Calibration: As needed

Communications Interface

Type: USB 1.1
Connector, Instrument: USB Mini-B (socket)

Minimum Computer Requirements for TrackPro™ Data Analysis Software

Communications Port: Universal Serial Bus (USB)
Operating System: V.11 or higher
Microsoft Windows® XP or 7 (32-bit or 64-bit) operating systems

Battery Performance


Battery Options	Charge Time (hrs)*	Intrinsic Safety Rating	Run Time (hrs @ 1.7 L/min)
1600 mAh NiMH Pack, 4.8 V (P/N 801723)	3.0	No	7.1
1650 mAh NiMH Pack, 4.8 V (P/N 801724, 801729 or 801743)	3.5	CSA**	7.5
2700 mAh NiMH Pack, 4.8 V (P/N 801728)	5.5	No	12.0
2700 mAh NiMH Pack, 4.8 V (P/N 801735)	5.5	No	12.0
5-cell AA-size Alkaline Pack*** (P/N 801708 or 801736 with six user-supplied AA cells)	N/A	No	22.5

*For fully depleted battery
**Not all ratings and dust gauges must be installed
***Using Energizer AA-size, E91 alkaline batteries

Battery Level Indicator

The Smart Battery Management System™ technology utilizes a built-in "gauge" in the SidePak™ battery packs. The gauge monitors battery capacity and calculates run time information by dividing capacity of the battery (mAh) by the instantaneous current consumed by the instrument (mA). This calculation is correct for current operating conditions and can change due to current (mA) consumption or changes in battery capacity.

Calibration Certificate of Dust Meter (TSI Sidepack AM510)

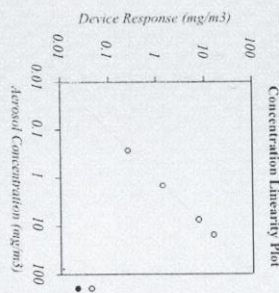


CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 900 California Road, Shoreline, WA 98136 USA
Tel: 1-800-997-9211 Fax: 1-651-490-3824 <http://www.tsi.com>

Environmental Conditions Temperature: 76.4 (24.7) °F (°C) Relative Humidity: 22 %RH Barometric Pressure: 29.38 (994.9) inHg (hPa)	Model AM510	Serial Number 11404005
---	-----------------------	----------------------------------

As Found In Tolerance
 As Found Out of Tolerance



System ID: DT1001-02

CONCENTRATION		LIMIT	
#	STANDARD	MEASURED	ALLOWABLE RANGE
1	1.474	1.333	1.371-1.621
2	0.274	0.248	0.252-0.315

STANDARD		MEASURED		ALLOWABLE RANGE	
#	STANDARD	MEASURED	STANDARD	MEASURED	ALLOWABLE RANGE
1	7.288	7.210	7.288	7.210	5.099-9.469
2	15.065	14.901	15.065	14.901	11.538-18.578

TSI Incorporated does hereby certify that all materials, components, and workmanship used in the manufacture of this equipment are in strict accordance with the design specifications required under this contract were successfully conducted according to required specifications. There is no NIST standard for optical mass measurements. Calibration of this instrument performed by TSI has been done using error of and has been numerically adjusted to respirable mass per standard ISO 12104-1, A1 test dust (15.7µm dust). Our calibration ratio is greater than 4:1.

Measurement Variable	System ID	Last Cal.	Cal. Due
Temp/Humidity	E005657	02-28-18	02-28-19
DC Voltage	E003314	05-02-18	05-31-19
Photometer	E005812	12-29-18	06-30-19
Pressure	E005311	10-29-18	10-31-19

February 8, 2019
 Date of Calibration

Tested by: Chan Kwok Ho

Name: (Chan Kwok Ho)

Checked by: Wong Yin Tong

Name: (Wong Yin Tong)

Form No. ENV CAL-SAMPLER-CCT-0412/22/080

Personal Aerosol Monitor Performance check with High Volume Sampler

Performance Check ref. No.: ASO190801-1 Report Issue Date: 05/08/2017
 Date of performance check: 1-3 August 2019

Objective:

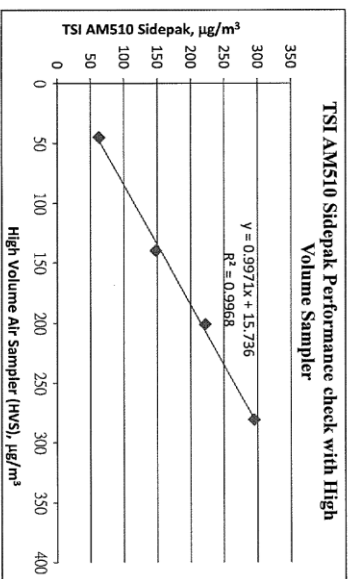
A dust meter, TSI AM510 Sidepack, and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

Equipment Used:

Equipment	Manufacturer and Model	Serial Number
Personal Aerosol Monitor	TSI AM510 Sidepack	11404005
Total Suspended Particulate High Volume Air Sampler (HVS)	GS2310	10346


Results:

Equipment	Measurement Result, µg/m³
TSI AM510 Sidepack	63
High Volume Air Sampler (HVS)	45
	148
	222
	201
	281



Tested by: Chan Kwok Ho Checked by: Wong Yin Tong
 Name: (Chan Kwok Ho) Name: (Wong Yin Tong)

Calibration Certificate of Dust Meter (TSI Sidepack AM510)



CERTIFICATE OF CALIBRATION AND TESTING
 TSI Incorporated, 500 Gardner Road, Shippensburg, MD 21764, USA
 Tel: 1-800-974-2811, Fax: 1-651-499-2811, Email: 1-651-499-3824, <http://www.tsi.com>

Environmental Conditions		Model		AM510	
Temperature	77.2 (25.1)	°F (°C)			
Relative Humidity	21	%RH	Serial Number		
Barometric Pressure	29.08 (984.8)	inHg (hPa)	11108001		

As Left In Tolerance
 As Found Out of Tolerance

System ID: DT100-02

CONCENTRATION		ALLOWABLE RANGE		MEASURED		ALLOWABLE RANGE	
#	STANDARD	MEASURED	#	STANDARD	MEASURED	#	STANDARD
1	1.375	1.439	3	7.861	7.829	4	14.552
2	4.250	4.259	5	13.17-17.55	14.552	5	5.503-10.319
3			6	42.57-63.55	63.552	6	1.1109-16.022

TSI Incorporated does hereby certify that all materials, components, and workmanship used in the manufacture of this equipment are in strict accordance with the applicable specifications agreed upon by TSI and the customer and with all applicable standards. There is no NIST standard for optical mass measurements. Calibration of this instrument performed by TSI has been done using every oil and has been nominally adjusted to respirable mass per standard ISO 12103-1, A1 test dust (Arizona dust). Our calibration ratio is greater than 4:1.

Measurement Variable: Temp/Humidity, DC Voltage, Photometer Pressure System ID: E005657, E003314, E009512, E009311 Last Cal. Date: 02-28-18, 05-02-18, 12-19-18, 10-29-18 Cal. Due: 02-28-19, 05-31-19, 06-30-19, 10-31-19	Measurement Variable: Temp/Humidity, DC Voltage, Photometer System ID: E005656, E003315, M001324, E004025 Last Cal. Date: 03-01-18, 05-17-18, 10-01-18, 06-06-18 Cal. Due: 03-31-19, 05-31-19, 10-3-19, 06-30-19
---	---

February 6, 2019
 Date
 JEFFREY LEWIS
 Calibrated

Personal Aerosol Monitor Performance check with High Volume Sampler

Performance Check ref No.: AS0190801-2 Report Issue Date: 03/08/2017
 Date of performance check: 1-3 August 2019

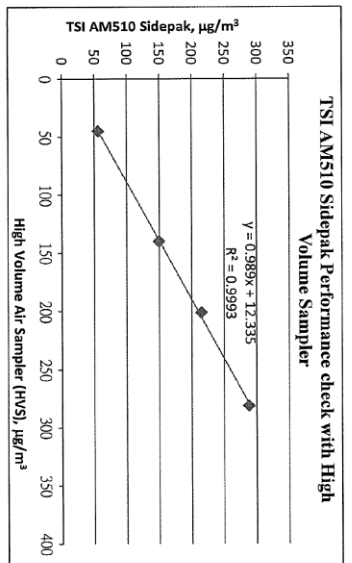
Objective:
 A dust meter, TSI AM510 Sidepack, and a Total Suspended Particulate High Volume Air Sampler (HVS) were placed together to measure the Total Suspended Particulate (TSP) concentrations simultaneously to check the performance.

Equipment Used:

Equipment	Manufacturer and Model	Serial Number
Personal Aerosol Monitor	TSI AM510 Sidepack	11108001
Total Suspended Particulate High Volume Air Sampler (HVS)	GS2310	10346

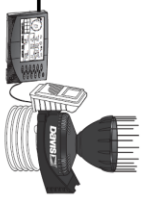
Results:

Equipment	Measurement Results, µg/m³
TSI AM510 Sidepack	56 150 215 288
High Volume Air Sampler (HVS)	45 140 201 281



Tested by: Chan Kwok Ho Checked by: Wong Yin Tong
 Name: () Name: ()
 From No. ENV.CAL.SAMPLE.CC1.0412/12/200

**Cabled Vantage Pro2™
& Vantage Pro2 Plus™ Stations**



Vantage Pro2™
6152C
6162C

The Vantage Pro2™ (# 6152C) and Vantage Pro2™ Plus (# 6162C) cabled weather stations include two components: the Integrated Sensor Suite (ISS) and the console. The ISS contains the sensor interface module (SIM), rain collector, an anemometer, and a passive radiation shield. The Vantage Pro2 console provides the user interface, data display, and calculations. The Vantage Pro2 Plus weather station includes two additional sensors that are optional on the Vantage Pro2 and purchased separately: the UV Sensor and the Solar Radiation Sensor. The console and ISS are powered by an AC-power adapter connected to the console. Batteries can be installed in the console to provide a backup power supply. Use WeatherLink™ to let your weather station interface with a computer, log data, and upload weather information to the Internet. The 6152C and 6162C models rely on passive shielding to reduce solar-radiation induced temperature errors in the outside temperature sensor readings.

Integrated Sensor Suite (ISS)

Operating Temperature	-40° to +150°F (-40° to +65°C)
Non-operating Temperature	-40° to +158°F (-40° to +70°C)
Current Draw	5 mA (average) at 4 to 6 VDC for ISS only; 10 mA average for both console and ISS
Connectors, Sensor	Modular RJ-11
Cable Type	4-conductor, 26 AWG
Cable Length, Anemometer	40' (12 m) (included); 240' (73 m) (maximum recommended)

Note: Maximum displayable wind decreases as the length of cable increases. At 140' (42 m) of cable, the maximum wind speed displayed is 135 mph (60 m/s), at 240' (73 m), the maximum wind speed displayed is 120 mph (54 m/s).

Wind Speed Sensor	Solid state magnetic sensor
Wind Direction Sensor	Wind vane with potentiometer
Rain Collector Type	Tipping bucket, 0.01" per tip (0.2 mm with metric rain adapter), 33.2 in ² (214 cm ²) collection area
Temperature Sensor Type	PN Junction Silicon Diode
Relative Humidity Sensor Type	Film capacitor element
Housing Material	UV-resistant ABS, polypropylene
Sensor Inputs	RC low-pass filter on each signal line
RF Filtering	

ISS Dimensions(not including anemometer or bird spikes):

Vantage Pro2 with Standard Rad Shield	14.0" x 9.4" x 14.5" (356 mm x 239 mm x 368 mm)
Vantage Pro2 with Fan-Aspirated Rad Shield	20.8" x 9.4" x 16.0" (528 mm x 239 mm x 406 mm)
Vantage Pro2 Plus with Standard Rad Shield	14.3" x 9.7" x 14.5" (363 mm x 246 mm x 368 mm)
Vantage Pro2 Plus with Fan-Aspirated Rad Shield	21.1" x 9.7" x 16.0" (536 mm x 246 mm x 406 mm)

DAVIS INSTRUMENTS **Davis Instruments** 1465 Dublin Ave., Hayward, CA 94545-2778 USA
(510) 372-9229 • FAX (510) 670-6599 • sales@davisinstruments.com • www.davisinstruments.com
D56152C, 6162C Rev W 12/7/18

7
Vantage Pro2™

Ultra Violet (UV) Radiation Index (requires UV sensor)

Resolution and Units	0.1 Index
Range	0 to 16 Index
Accuracy	±5% of full scale (Reference: Yankee UVB-1 at UV index 10 (Extremely High))
Cosine Response	±4% FS (0° to 90° zenith angle)
Update Interval	50 seconds to 1 minute (5 minutes when dark)
Current Graph Data	Instant Reading and Hourly Average; Daily, Monthly High
Historical Graph Data	Hourly Average, Daily, Monthly Highs
Alarm	High Threshold from Instant Calculation

Wind

Wind Chill (Calculated)	1°F or 1°C (user-selectable); °C is converted from °F and rounded to the nearest 1°C
Resolution and Units	
Range	-110° to +135°F (-79° to +57°C)
Accuracy	±2°F (±1°C) (typical)
Update Interval	10 to 12 seconds
Source	United States National Weather Service (NWS)/NOAA
Equation Used	Osczeski (1995) (adopted by US NWS in 2001)
Variables Used	Instant Outside Temperature and 10-min. Avg. Wind Speed
Current Display Data	Instant Calculation
Current Graph Data	Instant Calculation, Hourly, Daily and Monthly Low
Historical Graph Data	Hourly, Daily and Monthly Lows
Alarm	Low Threshold from Instant Calculation

Wind Direction	
Range	1 - 360°
Display Resolution	16 points (22.5°) on compass rose, 1° in numeric display
Accuracy	±3°
Update Interval	2.5 to 3 seconds
Current Graph Data	Instant Reading (user adjustable); 10-min. Dominant; Hourly, Daily, Monthly Dominant
Historical Graph Data	Past 6 10-min. Dominants on compass rose only; Hourly, Daily, Monthly Dominants

Wind Speed	
Resolution and Units	1 mph, 1 km/h, 0.4 m/s, or 1 knot (user-selectable) (Measured in mph; other units are converted from mph and rounded to nearest 1 km/h; 0.1 m/s, or 1 knot).
Range	0 to 200 mph, 0 to 173 knots, 0 to 89 m/s, 0 to 322 km/h
Update Interval	Instant Reading; 2.5 to 3 seconds, 10-minute Average; 1 minute
Accuracy	±2 mph (2 Kts, 3.2 km/h, 0.9 m/s) or ±5%, whichever is greater
Maximum Cable Length	540' (165 m) (Note that maximum wind speed reading decreases as length of cable from anemometer to ISS increases.)
Current Display Data	Instant Reading; 10-minute and Hourly Average; Hourly High; Daily, Monthly and Yearly High with Direction of High
Current Graph Data	10-min. and Hourly Averages; Hourly Highs; Daily, Monthly and Yearly Highs with Direction of Highs
Historical Graph Data	High Thresholds from Instant Reading and 10-minute Average
Alarms	

Calibration Certificate of Weather Station



Calibration Certificate

Certificate No.: CC0101908

1. Description

Calibration Item:	a) Wind Speed b) Wind Direction
Equipment description:	Weather Station
Manufacturer:	Davis Vantage Pro 2
Type / Model No.:	6152CUK
Serial No.:	BC180807017
Assigned equipment no.:	N/A
Adjustment:	N/A
Remark:	Received with good condition

2. Customer Information

Customer:	Castco Testing Centre Limited
Address:	33, On Kai Street, Fanning, N.T.
Date of receipt:	19 August 2019

3. Date of performance of the calibration

Date of calibration:	21 August 2019
----------------------	----------------

Approved Signatory:
WML Ling

Company Chop:
Certificate issue date: 26 August 2019



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- The certificate is issued subject to the latest Term and Condition, available assessable at our web site

Address: Room 2103, Technology Plaza, 29-35 She Tsui Road, Tsuen Wan, NT, Hong Kong
Tel: (852)25980106 Fax: (852)30116154 Email: info@callab.com.hk Website: callab.com.hk

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CR-BE65-02
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CC0101908



4. Result of Calibration

a) Wind Speed

Reference reading : m/s	Measured reading : m/s	Error of indication : %
0.0	0.0	N/A
2.0	2.1	5.0
5.0	5.3	4.0
10.0	9.9	-1.0
15.0	15.1	0.7
20.0	20.1	0.5

Estimated expanded uncertainty: 0.5 m/s Technical Requirement: +/-5% or 1 m/s

a) Wind direction

Reference reading	Measured reading	Error of indication
0°	0°	0°
45°	45°	0°
90°	90°	0°
135°	135°	0°
180°	180°	0°
225°	225°	0°
270°	270°	0°
315°	315°	0°

Estimated expanded uncertainty: 5° Technical Requirement: N/A

Note: The arrow head was adjusted to the magnetic north before performing calibration.

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CC0101908

Calibration Certificate of Weather Station



CALIBRATION

5. Reference method for calibration

Wind Speed	SOP-251
Wind Direction	SOP-252

6. Environment condition of calibration

Temperature, °C	24.6 °C
Relative Humidity: %RH	42 %RH

7. Reference equipment used in the calibration

Item	Model	Serial No.	Expiry date	Traceable to
Reference Anemometer	TSI 9515	T95151233004	7 Jan 2020	SMQ

Notes: The estimated expanded uncertainties have been calculated in "Evaluation and expression of uncertainty in measurement" and give an internal estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

Note2: The standard (s) and instrument used in the calibration are traceable to national or international recognized standard and are calibrated on a schedule to maintain the accuracy and good condition.

Note3: The result reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long term stability of the instrument.

Note4: The result shows in this calibration certificate relate only to the item calibrated, and the result only applies to the calibration item as received.

Calibrated by: *Agnes Yung* Date: 22 August 2019

Checked by: *M. Li* Date: 22 August 2019

*** End of Certificate ***

CT-END-02

1. The certificate shall not reproduced except in full without the written approval of CALLAB LTD
2. The certificate is issued subject to the latest Term and Condition, available assessable at our web site

Address: Room 2105, Technology Plaza, 29-35 Sha Tsui Road, Tseun Wan, NT, Hong Kong
Tel: (852)25880106 Fax: (852)30118154 Email: info@callab.com.hk Website: callab.com.hk

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Appendix F – Weather information

General Information

Date	Absolute Daily Min Temperature (°C)	Absolute Daily Max Temperature (°C)	Total Rainfall (mm)
20/01/2020	15.7	20.6	0.0
21/01/2020	17.3	21.1	0.0
22/01/2020	18.0	23.6	Trace
23/01/2020	20.5	25.7	0.0
24/01/2020	20.1	23.1	Trace
25/01/2020	18.8	22.2	2.1
26/01/2020	13.7	19.2	12.3
27/01/2020	11.5	16.0	0.2
28/01/2020	10.8	16.1	0.1
29/01/2020	11.0	17.1	0.0
30/01/2020	11.6	18.5	0.0
31/01/2020	11.8	18.9	0.0

NOTE1: The above weather information was obtained from manned weather station of Hong Kong Observatory.

NOTE2: Trace means rainfall less than 0.05 mm

<https://www.hko.gov.hk/en/cis/dailyExtract.htm?y=2020&m=01>

Mean Wind Speed and Wind Direction recorded by the weather station setup at the rooftop of Hong Kong Children's Hospital

Date / Time	Wind Speed (m/s)	Wind Direction
20/01/2020 0:00	1.29	168.5
20/01/2020 1:00	0.36	180.5
20/01/2020 2:00	0.3	197
20/01/2020 3:00	0.56	220.5
20/01/2020 4:00	0.1	260.5
20/01/2020 5:00	0.6	195.8
20/01/2020 6:00	0.37	155
20/01/2020 7:00	0.38	277
20/01/2020 8:00	0.54	198
20/01/2020 9:00	1.46	180.5
20/01/2020 10:00	1.48	175
20/01/2020 11:00	1.38	236.3
20/01/2020 12:00	1.38	237.8
20/01/2020 13:00	1.86	256
20/01/2020 14:00	1.64	241
20/01/2020 15:00	1.16	214.8
20/01/2020 16:00	1.2	252.3
20/01/2020 17:00	0.49	228
20/01/2020 18:00	0.26	221.3
20/01/2020 19:00	0.19	214.6
20/01/2020 20:00	0.13	207.9
20/01/2020 21:00	0.09	201.2
20/01/2020 22:00	0.06	194.5
20/01/2020 23:00	0.05	187.8
21/01/2020 0:00	0.33	181.1
21/01/2020 1:00	0.74	174.4
21/01/2020 2:00	0.57	176.3
21/01/2020 3:00	1.37	217.5
21/01/2020 4:00	1.94	232.5
21/01/2020 5:00	2.27	228.8
21/01/2020 6:00	1.43	247.5
21/01/2020 7:00	1.76	221.3
21/01/2020 8:00	1.32	187.5
21/01/2020 9:00	1.33	258.8
21/01/2020 10:00	1.42	176.3
21/01/2020 11:00	1.57	176.3
21/01/2020 12:00	1.87	247.5
21/01/2020 13:00	1.34	225.3
21/01/2020 14:00	1.49	202.5

Date / Time	Wind Speed (m/s)	Wind Direction
21/01/2020 15:00	0.94	191.3
21/01/2020 16:00	0.68	176.3
21/01/2020 17:00	0.68	146.3
21/01/2020 18:00	0.52	146.3
21/01/2020 19:00	0.87	198.8
21/01/2020 20:00	0.88	251.3
21/01/2020 21:00	0.69	255
21/01/2020 22:00	1.74	232.5
21/01/2020 23:00	2.27	217.5
22/01/2020 0:00	1.36	228.8
22/01/2020 1:00	0.75	236.3
22/01/2020 2:00	0.91	232.5
22/01/2020 3:00	1.33	247.5
22/01/2020 4:00	1.38	243.8
22/01/2020 5:00	1.85	232.5
22/01/2020 6:00	2.93	198.8
22/01/2020 7:00	3.18	183.8
22/01/2020 8:00	2.45	187.5
22/01/2020 9:00	2.08	180
22/01/2020 10:00	1.94	195
22/01/2020 11:00	1.89	195
22/01/2020 12:00	1.55	297.3
22/01/2020 13:00	1.16	228.8
22/01/2020 14:00	1.25	221.3
22/01/2020 15:00	0.97	288.8
22/01/2020 16:00	0.92	187.5
22/01/2020 17:00	0.94	195
22/01/2020 18:00	0.62	303.8
22/01/2020 19:00	0.86	180
22/01/2020 20:00	1.12	258.8
22/01/2020 21:00	1.09	213.8
22/01/2020 22:00	1.49	251.3
22/01/2020 23:00	2.11	232.5
23/01/2020 0:00	2.37	225
23/01/2020 1:00	2.19	255
23/01/2020 2:00	1.81	251.3
23/01/2020 3:00	1.68	228.8
23/01/2020 4:00	1.43	258.8
23/01/2020 5:00	1.72	247.5
23/01/2020 6:00	2.44	195.8
23/01/2020 7:00	2.09	247.5
23/01/2020 8:00	2.37	225

Date / Time	Wind Speed (m/s)	Wind Direction
23/01/2020 9:00	2.49	187.5
23/01/2020 10:00	2.06	213.8
23/01/2020 11:00	1.63	168.8
23/01/2020 12:00	2.71	195
23/01/2020 13:00	1.52	232.5
23/01/2020 14:00	1.42	243.8
23/01/2020 15:00	1.77	195
23/01/2020 16:00	2.28	206.3
23/01/2020 17:00	0.48	292.5
23/01/2020 18:00	1.39	266.3
23/01/2020 19:00	1.58	240
23/01/2020 20:00	1.73	198.8
23/01/2020 21:00	1.53	260
23/01/2020 22:00	1.79	225
23/01/2020 23:00	1.46	161.3
24/01/2020 0:00	1.73	228.8
24/01/2020 1:00	1.42	285
24/01/2020 2:00	1.61	225
24/01/2020 3:00	1.32	236.3
24/01/2020 4:00	1.79	251.3
24/01/2020 5:00	2.21	187.5
24/01/2020 6:00	2.29	217.5
24/01/2020 7:00	1.82	236.3
24/01/2020 8:00	1.84	206.3
24/01/2020 9:00	1.54	198.8
24/01/2020 10:00	1.62	195
24/01/2020 11:00	2.05	210
24/01/2020 12:00	2.64	195
24/01/2020 13:00	2.34	213.8
24/01/2020 14:00	2.37	217.5
24/01/2020 15:00	2.17	198.8
24/01/2020 16:00	2.27	206.3
24/01/2020 17:00	2.21	221.3
24/01/2020 18:00	1.8	202.5
24/01/2020 19:00	2.41	213.8
24/01/2020 20:00	2.23	225
24/01/2020 21:00	2.41	228.8
24/01/2020 22:00	2.02	247.5
24/01/2020 23:00	1.93	183.8
25/01/2020 0:00	1.24	210
25/01/2020 1:00	0.73	225
25/01/2020 2:00	0.63	202.5

Date / Time	Wind Speed (m/s)	Wind Direction
25/01/2020 3:00	0.75	315.5
25/01/2020 4:00	1.53	304.3
25/01/2020 5:00	0.82	304.3
25/01/2020 6:00	0.67	308
25/01/2020 7:00	0.55	270.5
25/01/2020 8:00	0.45	263
25/01/2020 9:00	0.96	270.5
25/01/2020 10:00	0.94	274.3
25/01/2020 11:00	1.13	278
25/01/2020 12:00	1.63	263
25/01/2020 13:00	1.26	248
25/01/2020 14:00	1.95	233
25/01/2020 15:00	1.9	206.8
25/01/2020 16:00	1.4	244.3
25/01/2020 17:00	1.7	220
25/01/2020 18:00	1.41	213.3
25/01/2020 19:00	0.94	206.6
25/01/2020 20:00	0.66	199.9
25/01/2020 21:00	0.66	193.2
25/01/2020 22:00	0.76	186.5
25/01/2020 23:00	0.66	179.8
26/01/2020 0:00	0.19	173.1
26/01/2020 1:00	0.78	166.4
26/01/2020 2:00	0.76	159.7
26/01/2020 3:00	0.37	247.5
26/01/2020 4:00	0.79	206.3
26/01/2020 5:00	0.96	210
26/01/2020 6:00	0.41	195
26/01/2020 7:00	0.1	138.8
26/01/2020 8:00	0.88	161.3
26/01/2020 9:00	0.97	183.8
26/01/2020 10:00	1.12	168.8
26/01/2020 11:00	0.69	191.3
26/01/2020 12:00	0.87	168.8
26/01/2020 13:00	0.89	202.5
26/01/2020 14:00	1.24	161.3
26/01/2020 15:00	1.09	176.3
26/01/2020 16:00	0.79	191.3
26/01/2020 17:00	0.55	277.5
26/01/2020 18:00	0.64	183.8
26/01/2020 19:00	0.39	225
26/01/2020 20:00	0.81	258.8

Date / Time	Wind Speed (m/s)	Wind Direction
26/01/2020 21:00	0.32	228.8
26/01/2020 22:00	0.46	217.5
26/01/2020 23:00	0.35	135
27/01/2020 0:00	0.24	138.8
27/01/2020 1:00	0.06	157.5
27/01/2020 2:00	0.59	165
27/01/2020 3:00	0.63	146.3
27/01/2020 4:00	0.22	123.8
27/01/2020 5:00	0.24	243.8
27/01/2020 6:00	0.23	157.5
27/01/2020 7:00	1.23	292.5
27/01/2020 8:00	1.49	300
27/01/2020 9:00	1.67	300
27/01/2020 10:00	2.1	307.5
27/01/2020 11:00	1.98	315
27/01/2020 12:00	1.69	288
27/01/2020 13:00	2.03	313.3
27/01/2020 14:00	1.98	285
27/01/2020 15:00	2.36	290.5
27/01/2020 16:00	1.98	300.5
27/01/2020 17:00	1.8	288.4
27/01/2020 18:00	1.49	270
27/01/2020 19:00	1.34	307.5
27/01/2020 20:00	1.21	311.3
27/01/2020 21:00	1.06	292.5
27/01/2020 22:00	1.17	311.3
27/01/2020 23:00	1.52	303.8
28/01/2020 0:00	1.47	298.8
28/01/2020 1:00	1.37	315
28/01/2020 2:00	1.11	331.3
28/01/2020 3:00	1.1	322.5
28/01/2020 4:00	0.84	313.3
28/01/2020 5:00	0.74	297.5
28/01/2020 6:00	2.14	276.5
28/01/2020 7:00	2.19	296.3
28/01/2020 8:00	1.76	288.8
28/01/2020 9:00	3.14	281.3
28/01/2020 10:00	3.12	277.5
28/01/2020 11:00	2.74	295
28/01/2020 12:00	2.52	286.8
28/01/2020 13:00	2.58	296.3
28/01/2020 14:00	3.17	298.8

Date / Time	Wind Speed (m/s)	Wind Direction
28/01/2020 15:00	2.83	113
28/01/2020 16:00	2.46	113
28/01/2020 17:00	2.54	113
28/01/2020 18:00	2.26	169.3
28/01/2020 19:00	2.58	195.5
28/01/2020 20:00	1.72	168.5
28/01/2020 21:00	1.34	229.3
28/01/2020 22:00	0.75	303.3
28/01/2020 23:00	1.17	289.3
29/01/2020 0:00	0.79	281.8
29/01/2020 1:00	1.39	296.8
29/01/2020 2:00	0.93	300.5
29/01/2020 3:00	1.23	296.8
29/01/2020 4:00	1.69	285.5
29/01/2020 5:00	1.46	311.8
29/01/2020 6:00	2.68	195.5
29/01/2020 7:00	2.34	199.3
29/01/2020 8:00	2.23	188
29/01/2020 9:00	2.81	263
29/01/2020 10:00	3.51	289.3
29/01/2020 11:00	3.07	311.8
29/01/2020 12:00	3.38	304.3
29/01/2020 13:00	3.62	308
29/01/2020 14:00	2.15	311.8
29/01/2020 15:00	2	285
29/01/2020 16:00	1.91	292.5
29/01/2020 17:00	2.02	303.8
29/01/2020 18:00	1.63	303.8
29/01/2020 19:00	0.93	273.8
29/01/2020 20:00	0.78	281.3
29/01/2020 21:00	1.57	281.3
29/01/2020 22:00	2.68	292.5
29/01/2020 23:00	2.71	288.8
30/01/2020 0:00	2.21	292.5
30/01/2020 1:00	2.63	281.3
30/01/2020 2:00	2.28	292.5
30/01/2020 3:00	2.12	288.8
30/01/2020 4:00	2.24	285
30/01/2020 5:00	2.86	288.8
30/01/2020 6:00	0.83	285
30/01/2020 7:00	1.98	296.3
30/01/2020 8:00	2.2	288.8

Date / Time	Wind Speed (m/s)	Wind Direction
30/01/2020 9:00	2.71	121.9
30/01/2020 10:00	2.62	121.9
30/01/2020 11:00	2.82	121.9
30/01/2020 12:00	2.7	178.2
30/01/2020 13:00	2.95	204.4
30/01/2020 14:00	2.53	174.4
30/01/2020 15:00	2.11	238.2
30/01/2020 16:00	2.21	313.2
30/01/2020 17:00	1.58	298.2
30/01/2020 18:00	0.56	290.7
30/01/2020 19:00	0.73	305.7
30/01/2020 20:00	0.41	309.4
30/01/2020 21:00	0.58	305.7
30/01/2020 22:00	0.84	294.4
30/01/2020 23:00	0.71	320.7
31/01/2020 0:00	0.47	204.4
31/01/2020 1:00	0.4	208.2
31/01/2020 2:00	0.58	196.9
31/01/2020 3:00	0.76	271.9
31/01/2020 4:00	0.3	298.2
31/01/2020 5:00	0.07	320.7
31/01/2020 6:00	0.16	313.2
31/01/2020 7:00	0.09	316.9
31/01/2020 8:00	0.75	320.7
31/01/2020 9:00	1.15	213.8
31/01/2020 10:00	1.39	180
31/01/2020 11:00	0.93	251.3
31/01/2020 12:00	1.78	315
31/01/2020 13:00	1.87	337
31/01/2020 14:00	0.53	318.8
31/01/2020 15:00	0.24	206.3
31/01/2020 16:00	0.66	180.3
31/01/2020 17:00	1.13	313.8
31/01/2020 18:00	0.24	262.5
31/01/2020 19:00	0.26	286.3
31/01/2020 20:00	1	157.5
31/01/2020 21:00	1.38	165.3
31/01/2020 22:00	1.17	187
31/01/2020 23:00	0.81	165

Appendix G – 24-hr TSP monitoring results and graphical presentation

Location: AM3 – Sky Tower

Start Date	Weather	Air Temp. (°C)	Atmospheric Pressure (hPa)	Filter weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (min)	Flow Rate (cfm)		Av. Flow (m ³ /min)	Total vol. (m ³)	Conc. (µg/m ³)
				Initial	Final		Initial	Final		Initial	Final			
21/1/2020	Sunny	21.1	1015	18.6657	18.9138	0.2481	36000	38400	1440	50	50	1.38	1992	125
24/1/2020	Cloudy	23.1	1012	18.7516	18.9352	0.1836	38400	40800	1440	48	48	1.32	1905	96
30/1/2020	Sunny	19.7	1017	14.4799	14.5491	0.0692	40800	43200	1440	50	50	1.39	1999	35
Maximum Minimum Average Action Level Limit Level														125 35 85 182 260

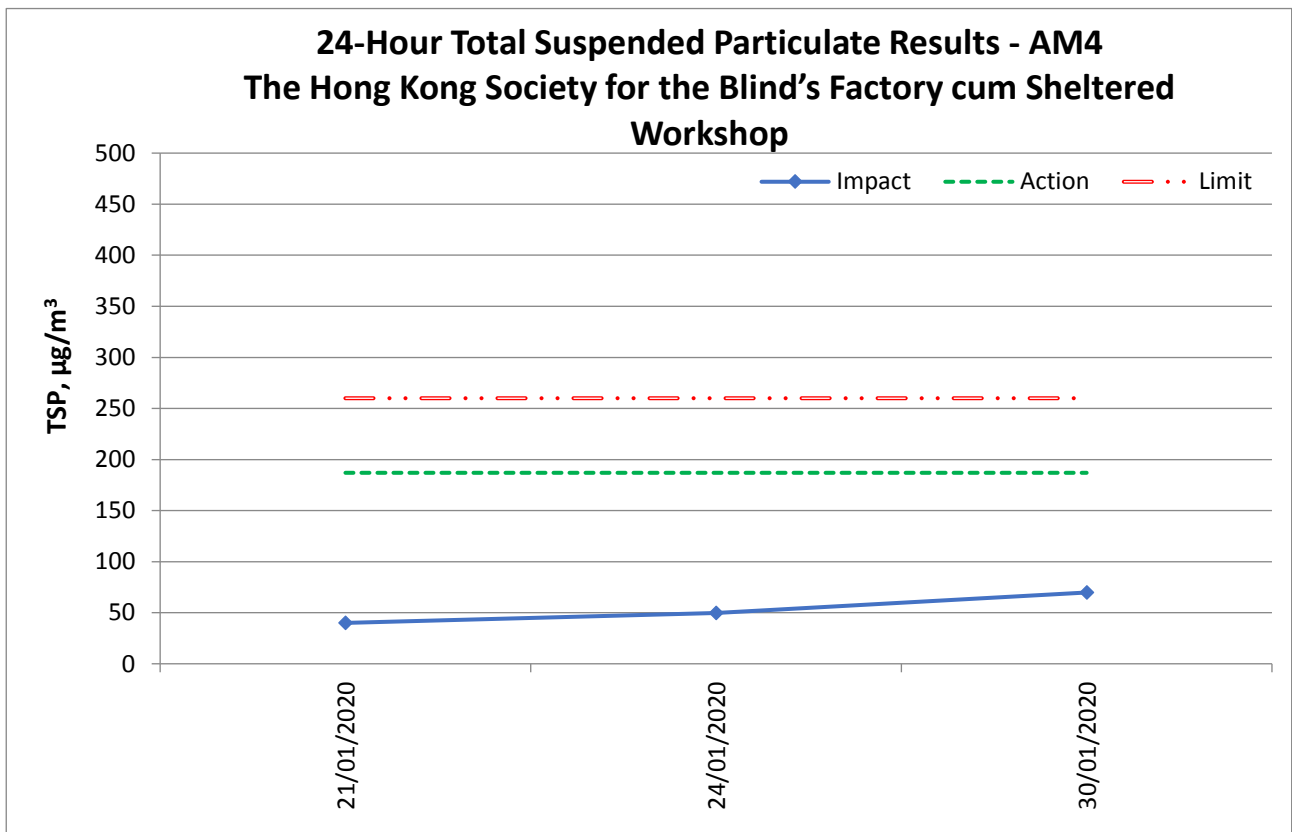
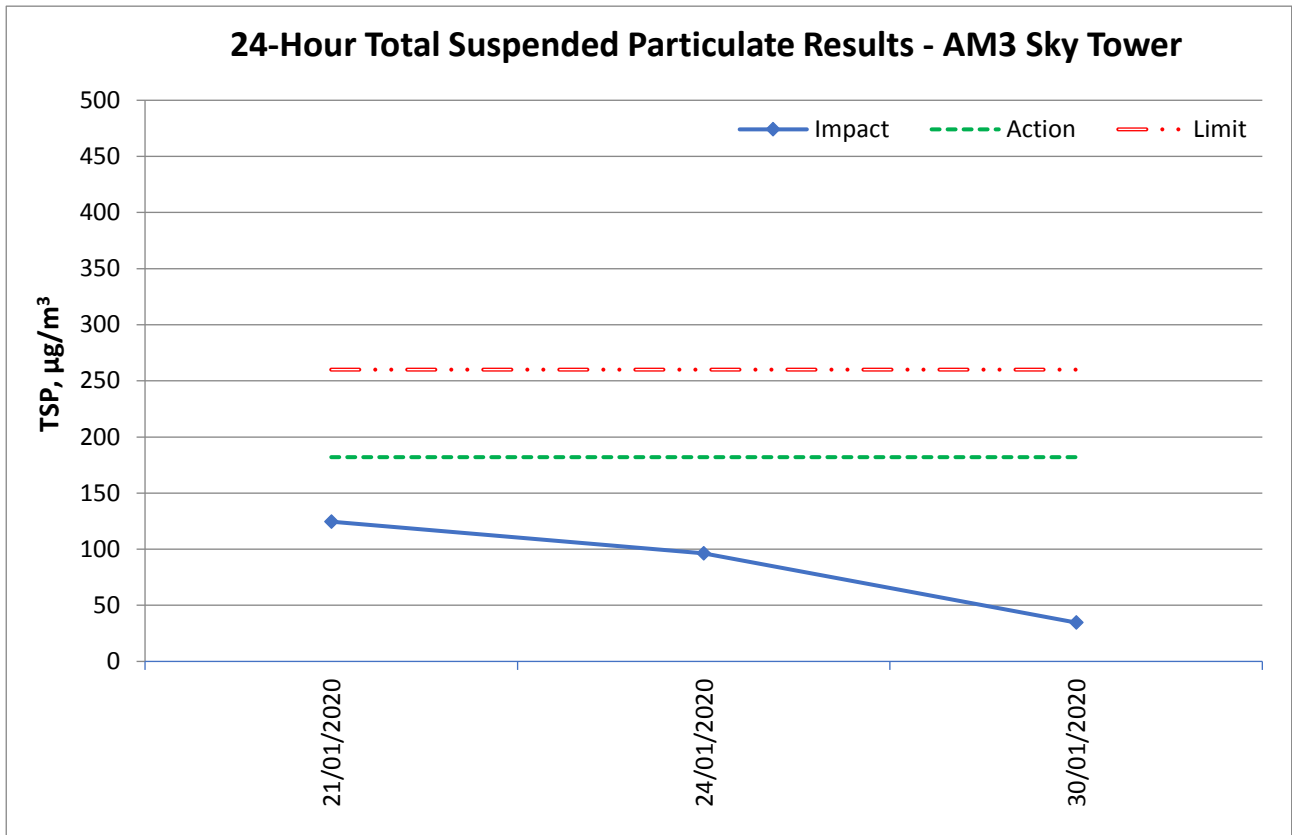
Location: AM4(A) – The Hong Kong Society for the Blind's Factory cum Sheltered Workshop

Start Date	Weather	Air Temp. (°C)	Atmospheric Pressure (hPa)	Filter weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (min)	Flow Rate (cfm)		Av. Flow (m ³ /min)	Total vol. (m ³)	Conc. (µg/m ³)
				Initial	Final		Initial	Final		Initial	Final			
21/1/2020	Sunny	21.1	1016	15.0955	15.1690	0.0735	36000	38400	1440	46	46	1.28	1837	40
24/1/2020	Cloudy	23.1	1015	14.3563	14.4512	0.0949	38400	40800	1440	48	48	1.32	1908	50
30/1/2020	Sunny	19.7	1010	18.7539	18.8875	0.1336	40800	43200	1440	48	48	1.33	1914	70
Maximum Minimum Average Action Level Limit Level														70 40 53 187 260

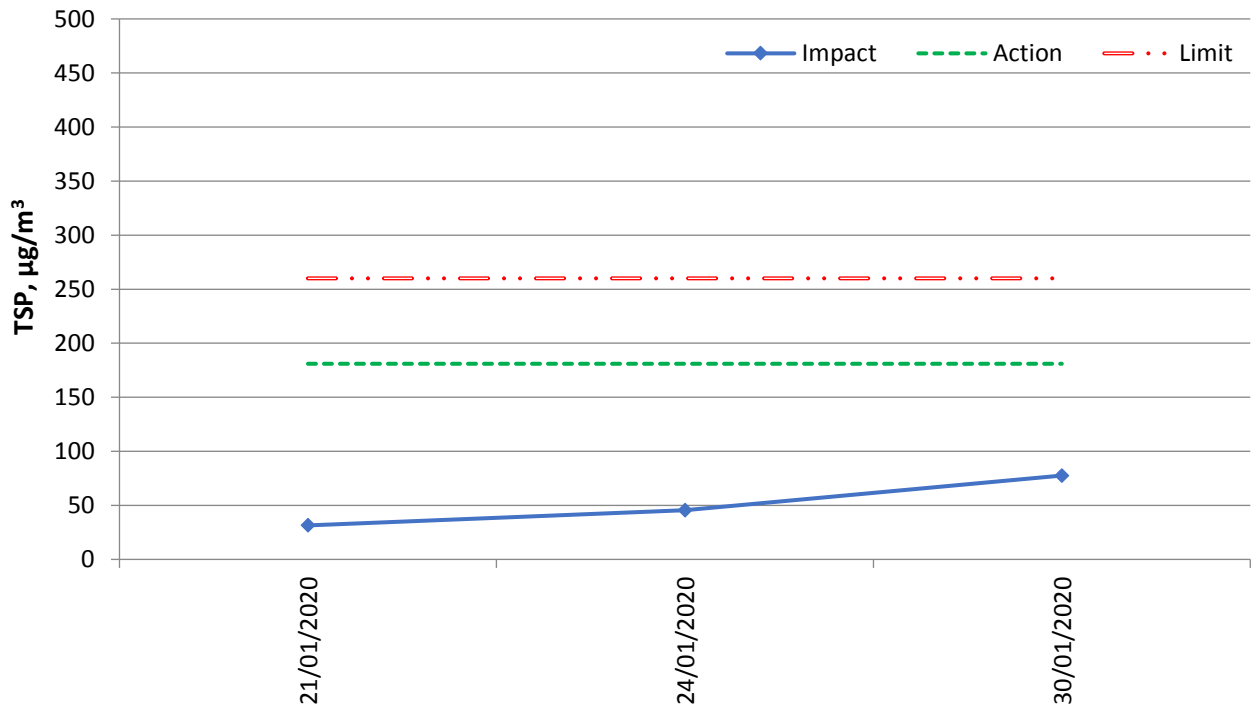
Location: AM7 – Hong Kong Children’s Hospital

Start Date	Weather	Air Temp. (°C)	Atmospheric Pressure (hPa)	Filter weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (min)	Flow Rate (cfm)		Av. Flow (m ³ /min)	Total vol. (m ³)	Conc. (µg/m ³)									
				Initial	Final		Initial	Final		Initial	Final												
21/1/2020	Sunny	21.1	1018	14.9623	15.0226	0.0603	36000	38400	1440	48	48	1.33	1917	31									
24/1/2020	Cloudy	23.1	1013	15.4809	15.5641	0.0832	38400	40800	1440	46	46	1.27	1828	46									
30/1/2020	Sunny	19.7	1019	15.5419	15.6971	0.1552	40800	43200	1440	50	50	1.39	2001	78									
<table border="1"> <tr> <td>Maximum</td> <td>78</td> </tr> <tr> <td>Minimum</td> <td>31</td> </tr> <tr> <td>Average</td> <td>52</td> </tr> <tr> <td>Action Level</td> <td>181</td> </tr> <tr> <td>Limit Level</td> <td>260</td> </tr> </table>														Maximum	78	Minimum	31	Average	52	Action Level	181	Limit Level	260
Maximum	78																						
Minimum	31																						
Average	52																						
Action Level	181																						
Limit Level	260																						

24-hour average TSP



24-Hour Total Suspended Particulate Results - AM7 Hong Kong Children's Hospital



Appendix H – 1-hr TSP monitoring results and graphical presentation

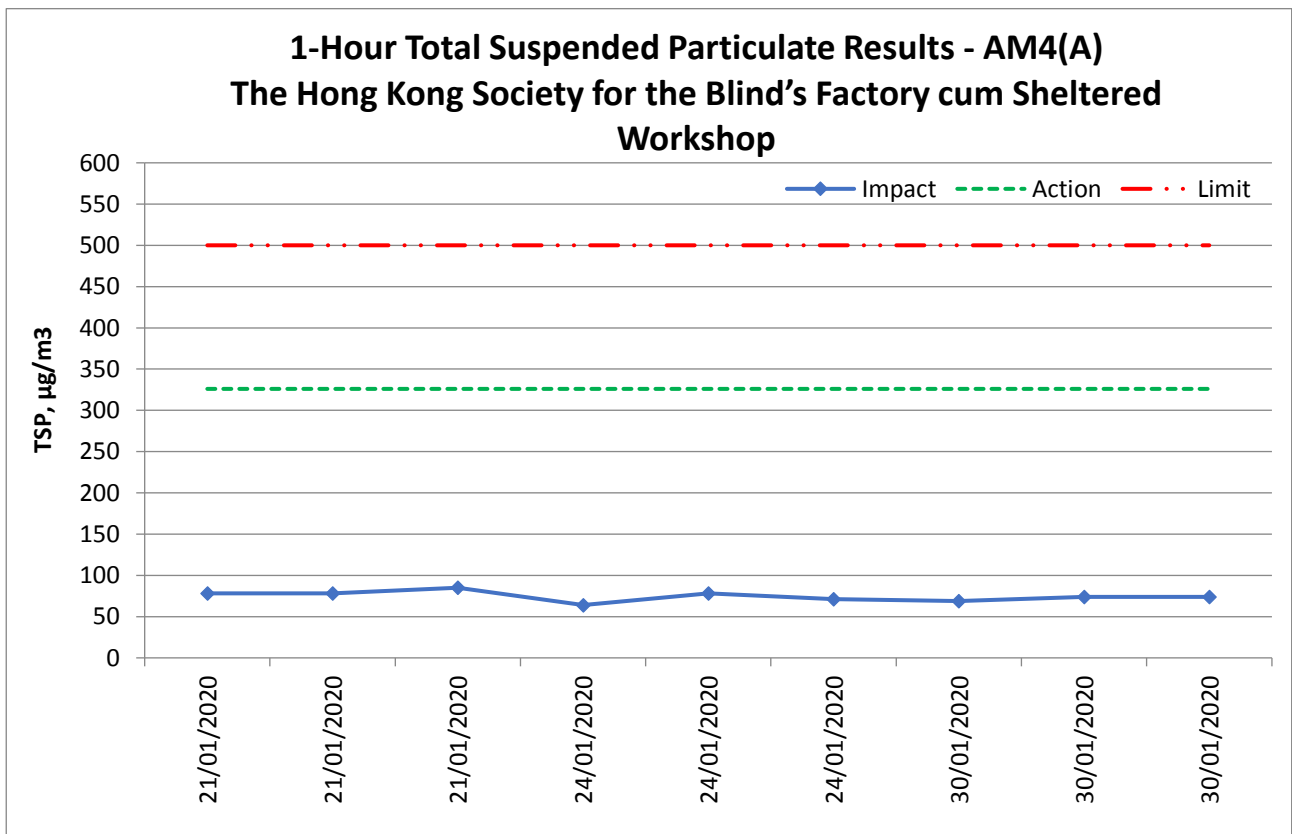
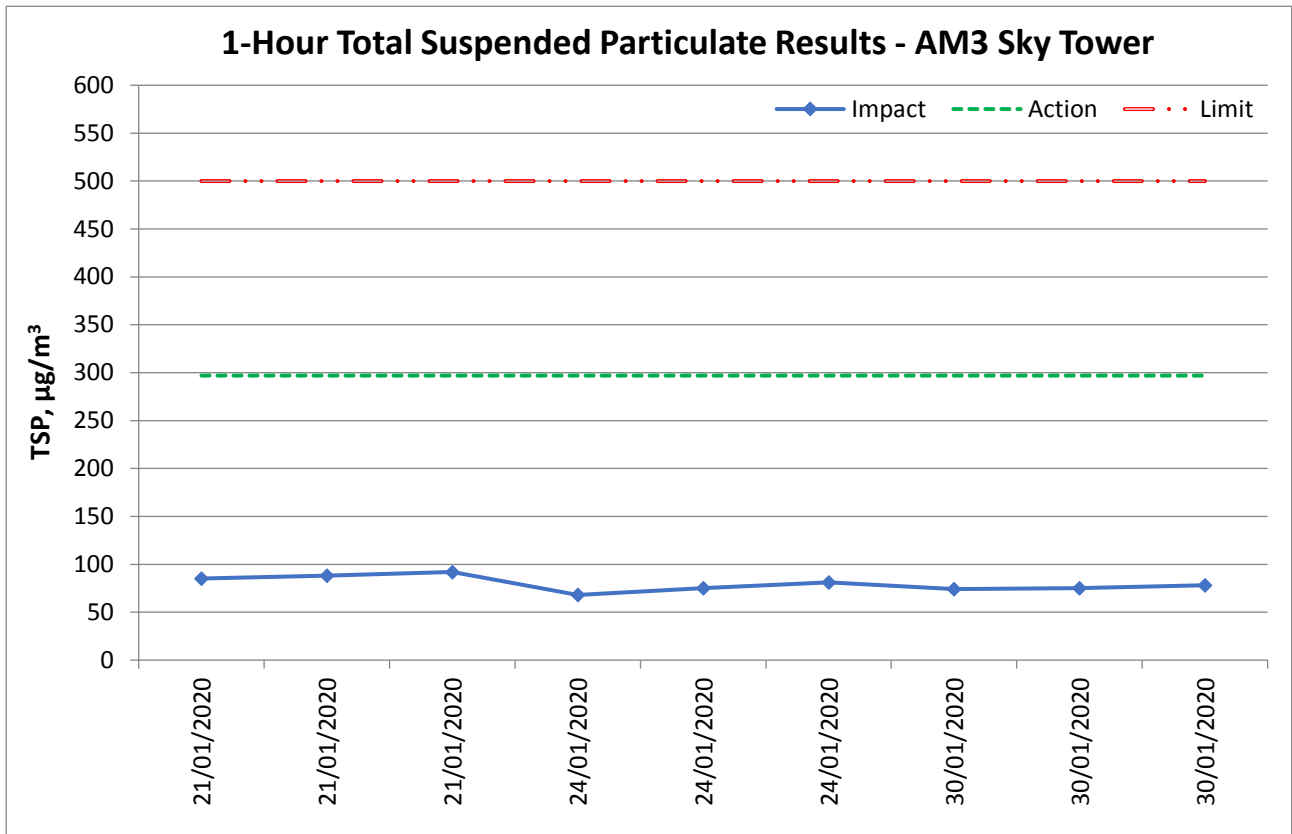
Location:
**AM3 -
 Sky Tower**

Date	Measurement Period			1-hr TSP concentration, µg/m ³	Weather
21/01/2020	13:00	-	14:00	85	Sunny
	14:00	-	15:00	88	
	15:00	-	16:00	92	
24/01/2020	9:00	-	10:00	68	Cloudy
	10:00	-	11:00	75	
	11:00	-	12:00	81	
30/01/2020	13:00	-	14:00	74	Sunny
	14:00	-	15:00	75	
	15:00	-	16:00	78	
Maximum				92	
Minimum				68	
Average				80	
Action Level				297	
Limit Level				500	
21/01/2020	9:00	-	10:00	78	Sunny
	10:00	-	11:00	78	
	11:00	-	12:00	85	
24/01/2020	13:00	-	14:00	64	Cloudy
	14:00	-	15:00	78	
	15:00	-	16:00	71	
30/01/2020	9:00	-	10:00	69	Sunny
	10:00	-	11:00	74	
	11:00	-	12:00	74	
Maximum				85	
Minimum				64	
Average				75	
Action Level				326	
Limit Level				500	
21/01/2020	9:00	-	10:00	89	Sunny
	10:00	-	11:00	76	
	11:00	-	12:00	81	
24/01/2020	13:00	-	14:00	69	Cloudy
	14:00	-	15:00	74	
	15:00	-	16:00	77	
30/01/2020	9:00	-	10:00	63	Sunny
	10:00	-	11:00	67	
	11:00	-	12:00	69	
Maximum				89	
Minimum				63	
Average				74	
Action Level				315	
Limit Level				500	

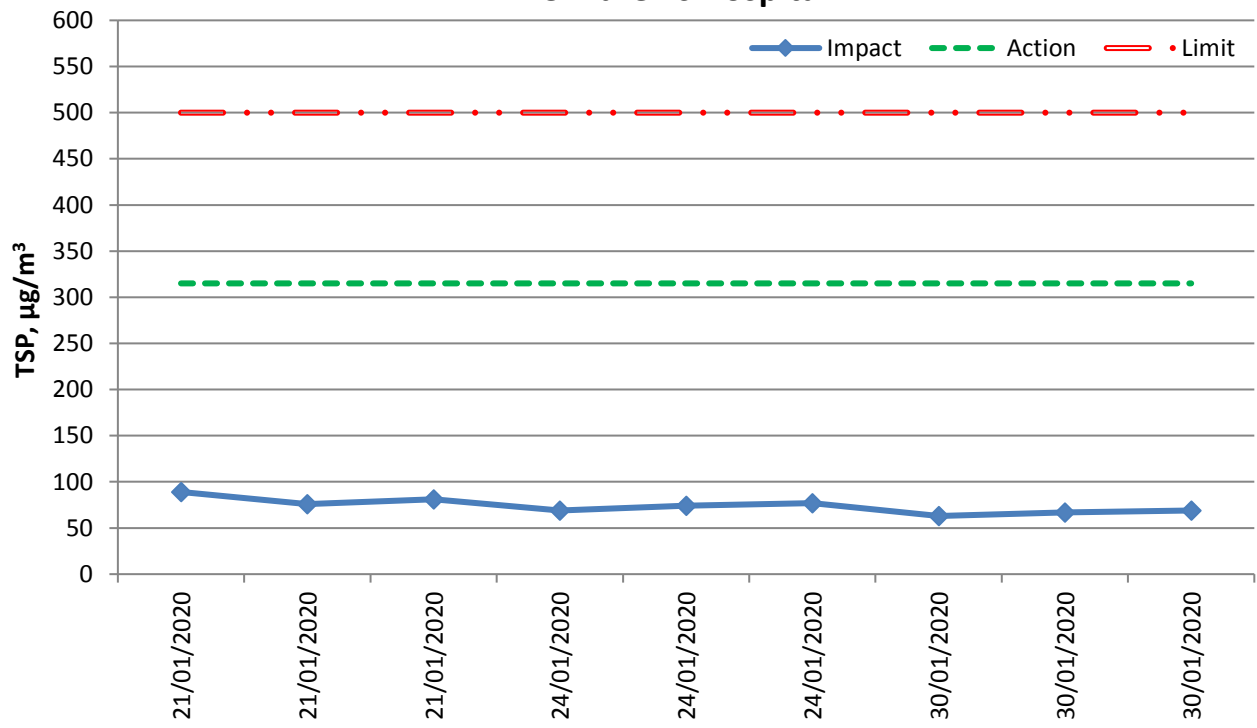
Location:
**AM4(A) -
 The Hong Kong
 Society for the
 Blind's Factory
 cum Sheltered
 Workshop**

Location:
**AM7 -
 Hong Kong
 Children's
 Hospital**

1-hour average TSP



1-Hour Total Suspended Particulate Results - AM7 Hong Kong Children's Hospital



Appendix I – Event and Action Plan for air quality

Event	Action			
	ET	IEC	Supervisor /ER	Contractor
Action Level being exceeded by one sampling	<ol style="list-style-type: none"> 1. Identify source and investigate the causes of exceedance; 2. Inform Contractor, IEC and Supervisor /ER; 3. Repeat measurement to confirm finding. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method. 	<ol style="list-style-type: none"> 1. Notify Contractor. 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
Action Level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> 1. Identify source and investigate the causes of exceedance; 2. Inform Contractor, IEC and Supervisor /ER; 3. Increase monitoring frequency to daily; 4. Discuss with IEC and Contractor on remedial actions required; 5. Assess the effectiveness of Contractor's remedial actions; 6. If exceedance continues, arrange meeting with IEC and Supervisor /ER; 7. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the Supervisor /ER on the effectiveness of the proposed remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise implementation of remedial measures; 5. Conduct meeting with ET and IEC if exceedance continues. 	<ol style="list-style-type: none"> 1. Discuss with ET and IEC on proper remedial actions; 2. Submit proposals for remedial actions to Supervisor /ER and IEC within three working day of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
Limit Level being exceeded by one sampling	<ol style="list-style-type: none"> 1. Identify source and investigate the causes of exceedance; 2. Inform Contractor, IEC, Supervisor /ER, and EPD; 3. Repeat measurement to confirm finding; 4. Assess effectiveness of 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss possible remedial measures with ET and Contractor; 4. Advise the Supervisor /ER 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Discuss with ET and IEC on proper remedial actions; 3. Submit proposal for remedial actions to Supervisor /ER and IEC

Event	Action			
	ET	IEC	Supervisor / ER	Contractor
Limit Level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> 1. Notify IEC, Supervisor /ER, Contractor and EPD; 2. Repeat measurement to confirm findings; 3. Carry out analysis of Contractor's working procedures to identify source and investigate the causes of exceedance; 4. Increase monitoring frequency to daily; 5. Arrange meeting with IEC, Supervisor /ER and Contractor to discuss the remedial action to be taken; 6. Assess effectiveness of Contractor's remedial actions and keep EPD, IEC and Supervisor /ER informed of the results; 7. If exceedance stop, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with Supervisor /ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the Supervisor /ER accordingly. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Discuss with ET and IEC on proper remedial actions; 3. Submit proposal for remedial actions to Supervisor /ER and IEC within three working days of notification; 4. Implement the agreed proposals; 5. Submit further remedial actions if problem still not under control; 6. Stop the relevant portion of works as instructed by the Supervisor /ER until the exceedance is abated.

Appendix J – Calibration certificates, catalogue of noise monitoring equipment

Catalogue of Sound Level Meter

Specifications

		NL-52	NL-42
Applicable standards		IEC 61672-1: 2002 Class 1 ANSI S1.4-1983 Type 1 ANSI S1.4A-1985 Type 1 ANSI S1.43-1997 Type 1 JIS C 1509-1: 2005 Class 1	IEC 61672-1: 2002 Class 2 ANSI S1.4-1983 Type 2 ANSI S1.4A-1985 Type 2 ANSI S1.43-1997 Type 2 JIS C 1509-1: 2005 Class 2
Measurement functions		Simultaneous measurement of the following items, with selected time weighting and frequency weighting WEEE Directives, Chinese RoHS (export model for China only)	
Processing (main ch)		Instantaneous sound pressure level: L_p Equivalent continuous sound pressure level: L_{eq} Sound exposure level: L_E Maximum sound pressure level: L_{max} Minimum sound pressure level: L_{min} Percentile sound levels: L_N (0.1 to 99.9 %, 0.1-increment steps, max. 5 values)	
Processing (sub ch)		Instantaneous sound pressure level: L_p	
Additional processing		In addition to main processing items, one of the following can be selected for simultaneous processing: C-weighted equivalent continuous sound level: L_{Ceq} C-weighted peak sound level: L_{Cpeak} Z-weighted peak sound level: L_{Zpeak} 1-time-weighted equivalent continuous sound level: L_{A1eq}^{*2} Maximum 1-time-weighted equivalent continuous sound level: L_{A1max}^{*2} The power average of the maximum level of each 5 second interval: L_{A1av}^{*2} The frequency weighting for the additional processing synchronizes with the frequency weighting of the sub-channel, so when the sub-channel has A-weighting, L_{A1av} can be selected. When C-weighting (Z-weighting) is selected, the additional processing L_{Ceq} and L_{Cpeak} (L_{Zpeak}) are selectable.	
Measuring time		10 s, 1, 5, 10, 15, 30 m, 1, 8, 24 h, and manual (maximum 24 h)	
Microphone	Type	UC-59	UC-52
	Sensitivity level	-27 dB	-33 dB
Measurement range		A-weighting: 25 dB to 138 dB C-weighting: 33 dB to 138 dB Z-weighting: 38 dB to 138 dB C-weighting peak sound level: 55 dB to 141 dB Z-weighting peak sound level: 60 dB to 141 dB	
Inherent noise	A-weighting	17 dB or less	19 dB or less
	C-weighting	25 dB or less	27 dB or less
	Z-weighting	30 dB or less	32 dB or less
Frequency range		20 Hz to 20 kHz	20 Hz to 8 kHz
Frequency weighting		A, C, and Z	
Time weighting		F (Fast) and S (Slow)	
Level range		Single range (Linearity range: 113 dB) Bar graph display range max: Max. 110 dB (20 to 130 dB) Switching of bar graph display: Set the upper/ lower limit in 10 dB increments.	
RMS detection circuit		Digital processing method	
Sampling cycle		20.8 μ s (L_p , L_{eq} , L_E , L_{max} , L_{min} , L_{peak} : sampling frequency: 48 kHz) 100 ms (L_N)	
Calibration		Measurement Law: electrical calibration performed according to IEC and JIS standards, using internally generated signals; acoustic calibration performed with the NC-74.	
Correction functions		Windscreen correction: Compliant with IEC 61672-1 and JIS C 1509-1 standards when the windscreen is installed. Diffuse sound field correction: Correction of frequency characteristics in order to comply with standards (ANSI S1.4) in diffuse sound field.	
Delay time		The meter can be set to start measuring a specified time (OFF, 1, 3, 5 or 10 s) after the start button has been pressed or when a user-set trigger is exceeded.	
Back erase function		When the PAUSE key is pressed to pause measurement, the preceding (user selectable) 0, 1, 3 or 5 s data are excluded from processing.	
Display		Backlit semitransparent color TFT LCD display WQVGA (400 x 240 dots) * LCD with touch panel (Capacitive Touch Panel) Numerical display update frequency: 1 s Bar graph update frequency: 100 ms	
Store	Manual	Data for measurement results are stored manually in single address increments. Internal memory: max. 1000 sets SD Card: depends on the capacity of the SD Card*1	
	Auto+2	Instantaneous values (L_p mode) and processed values (L_{eq} mode) are stored continuously and automatically at preset intervals. L_p sampling cycle: 100 ms, 200 ms, 1 s, L_{eq} 1 s L_{eq} sampling cycle: 10 s, 1, 5, 10, 15, 30 ms, 1, 8, 24 h Measurement Time: Max. 1000 h (depends on the capacity of the SD Card)*1	

* Windows is a trademark of Microsoft Corporation.
* Specifications subject to change without notice.

Distributed by:

Data recall	Allows viewing of stored data
Setup memory	Up to five setup configurations can be saved in internal memory, for later recall Start up via file settings previously stored on SD card possible
Waveform recording*3	
File format	Uncompressed waveform WAVE file
Sampling frequency	Select 48 kHz, 24 kHz or 12 kHz
Data length	Select 24 bit or 16 bit
Outputs	
DC output	Output DC signals using a frequency weighting characteristic selected by processing
Output voltage	2.5 V, 25 mV / dB at bar graph display full scale
AC output	Output AC signals using a frequency weighting characteristic selected by processing or by A, C, Z-weighting.
Output voltage	1 V (rms values) at bar graph display full scale
Comparator output*2	Turns on when the open-collector output exceeds the set value (max. applied voltage 24 V, max. current 60 mA, allowable dissipation 300 mW)
USB	
Allows USB to be connected to a computer and recognized as a removable disk	
Allows USB to be controlled via communication commands	
RS-232C communication	Allows for RS-232C communication via use of a dedicated cable
Data continuous output*2	
Type of data	Instantaneous value: L_p Processed value: L_{eq} , L_{max} , L_{min} , L_{peak}
Output interval	100 ms
Print out	Printing of measurement results on dedicated printer DPU-414
Power requirements	Four IEC R6 (size AA) batteries (alkaline or rechargeable batteries) or external power supply
Battery life (23 °C)	Alkaline battery LR6 (AA): 26 h NI-MH secondary battery: 25 h At the maximum * Depends on the setting
AC adapter	NC-98C (NC-34 for previous models cannot be used)
External power voltage	5 to 7 V (rated voltage: 6 V)
Current consumption	Approximately 90 mA (normal operation, rated voltage)
Ambient conditions	Temperature: -10 to +50 °C Humidity: 10 to 90 % RH (non-condensing)
Dustproof / water-resistant performance*4	IP code: IP54 (except for microphone) See precautions regarding waterproofing
Dimensions, weight	Approx. 250 (H) x 76 (W) x 33 mm(D), approx. 400 g (with batteries)
Supplied accessories	Storage case x 1, Windscreen WS-10 x 1, Windscreen fall prevention rubber x 1, Hand strap x 1, LR6 (AA) alkaline batteries x 4, SD card 512 MB x 1 (NX-42EX preinstalled model only)

Options

Product name	Product number
Extended function program (Inst on 512 MB SD card)	NX-42EX
Waveform recording program*2 (Inst on 2 GB SD card)	NX-42WR
Octave, 1/3 octave real-time analysis program*2 (Inst on 512 MB SD card)	NX-42RT
FFT analysis program*2 (Inst on 512 MB SD card)	NX-42FT
Data management software for environmental measurement	AS-60
Data management software for environmental measurement (includes the octave and 1/3 octave data management software)	AS-60RT
Data management software for environmental measurement (includes the vibration level data management software)	AS-60VM
Waveform analysis software	CAT-WAVE
SD Card 512 MB	SD-512M
SD Card 2 GB	SD-2G
AC adapter (100 V to 240 V)	NC-98C
Battery pack	BP-21
Microphone extension cables	EC-04 (from 2 m)
BNC-Pin output code	CC-24
Comparator output cable	CC-42C
Printer	DPU-414
Printer cable	CC-42P
RS 232C serial I/O cable	CC-42R
USB cable	—
Sound calibrator	NC-74
All-weather windscreen	WS-15
Windscreen mounting adapter	WS-15006
Rain-protection windscreen	WS-16
Sound level meter tripod	ST-80
All-weather windscreen tripod	ST-81

*1 Use Rion fully guaranteed products. *2 NX-42EX required (sold separately). *3 NX-42WR required (sold separately).
*4 Protection against harmful dust and water splashing from any direction.

Precautions regarding waterproofing

Before use, verify that the rubber bottom cover and the battery compartment lid are firmly closed.
To maintain the water and dust proof rating, internal packing replacement is required every two years (at cost).



RION CO., LTD.
http://www.rion.co.jp/english/

3-20-41, Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan
Tel: +81-42-359-7888 Fax: +81-42-359-7442

This product is environment-friendly. It does not include toxic chemicals on our policy.
This product is certified to an International Protection rating of IP54 (dust protected and resistant to splashing water).
This leaflet is printed with environmentally friendly vegetable-based ink on recycled paper.

1011-4 212 P.D



中国计量科学研究院
CHINA CEPREI LABORATORY



中国合格评定委员会
CALIBRATION
CNAS L0462

校准证书 CALIBRATION CERTIFICATE

证书编号: ZHB190001116-0003
Certificate No.

委托单位: Client	Castco Testing Centre Limited
仪器名称: Description	Sound Level Meter
型号规格: Model/Type	NL-52
制造商: Manufacturer	RIION
机身号: Serial No.	00021213
管理号: Asset No.	AAST-SLM-04
接收日期: Rec. Date	2019年07月03日
签发日期: App. Date	2020年07月10日
结论: Conclusion	所校准项目合格(Passed at Calibration Items)

校准: Calibrated by
物西杨

签发: Issued by
刘鹏

批准: Approved by
郑木乃


印章: Stamp

校准日期: Cal. Date
2019年07月10日

建议再校日期: Next Cal. Date
2020年07月10日

肇庆计量检测中心
广州天河区东圃庄路110号
广州总部地址: 广州天河区东圃庄路110号
香港分部地址: 香港上水剑竹厂场/F/2
客服电话: 852-26680871 传真: 852-26686197
投资电话: 852-26680936 Q20-872326789
邮件: call@ceprei.com.hk
网址: www.ceprei-cal.com

CEPREI Calibration and Testing Centre
H.Q. Addr.: No.110 Dongpuzhuang Road, Tsim Sha Tsui, Guangzhou
CEPREI H.K. Addr.: G/F2 Cheung Ching Building, Sham N.T. Hong Kong
Tel: 852-26680871 Fax: 852-26686197
Customer phone: 852-26680936 Q20-872326789
Email: call@ceprei.com.hk
Website: www.ceprei-cal.com



中国合格评定委员会
CALIBRATION
CNAS L0462

说明 DIRECTIONS

1. 本校准质量管理体系符合ISO/IEC 17025的要求, 获得中国合格评定国家认委员会 (CNAS) 认可。证书编号: CNAS L0462。
This laboratory quality management system meets the ISO/IEC 17025 and is accredited by the China National Accreditation Service for Conformity Assessment, No. CNAS L0462.

2. 本次校准的技术依据及CNAS认可范围(Reference documents and CNAS accredited scopes):
• JGJ 188-2002 声级计检定规程; 声压级计在A计权网络(A-weighting)下的校准; 校准的测量不确定度(U₉₅)。 (Please see the attachment of certificate No. L0462 for CNAS accredited details, formal which is not accredited.)

3. 本次校准所使用的主要测量标准(The main measurement standards used during the calibration):

名称 (Description)	证书号/有效期至/溯源单位 (Certificate No./Due Date/Traceability)	校准日期 (Calibration Date)	校准不确定度 (Measurement Uncertainty)
Sound Calibrator	ZHB19000002-01042020-06-23 华夏	11月	1.0%
音级计声压	ZHB19000002-01092020-01-05 华夏	1月	±5%

4. 校准地点(The calibration place):
广州市天河区东圃庄路110号401楼杨鸣声学室

5. 环境条件(Environmental conditions):
温度(Temperature): 21°C 相对湿度(Relative Humidity): 63%


6. 依据 JJF 1059.1-2012 测量不确定度评定与表示, 进行测量结果不确定度评定。评定结果以包含因子为1的扩展不确定度U₉₅或相对扩展不确定度E₉₅表示。
The evaluation was made according to JJF 1059.1-2012 Expression and Expression of Uncertainty in Measurement. The evaluation results were expressed by the extended uncertainty U or relative expanded uncertainty E₉₅ with a coverage factor k.

7. 证书中“P”、“合格”代表“测量结果在允许范围内”, “F”、“不合格”代表“测量结果不在允许范围内”, “N/A”、“不适用”、“本证书报告的判定规则和结论仅供参考, 使用人员应综合实际测量的要求合理使用, 如考虑测量结果测量不确定度的影响等。”
“P” and “Pass” in this certificate stand for “Low Limit/Side measured value ≤High Limit”, “F” and “Fail” stand for “The measured value >Low Limit or the measured value >High Limit”, “N/A” stands for “Not Applicable”. The judgment rules and conclusions of this certificate are for reference only. Users should use them reasonably according to the actual measurement requirements, such as considering the impact of measurement uncertainty, etc.

8. 建议再校日期是本实验室依据本证书报告的技术依据和仪器设备常规使用条件给出的建议, 仅供参考。委托方可根据实际使用情况自行决定仪器的再校准日期。
The date of recalibration is based on the reference documents and the normal operating conditions of the calibrated instrument. It is only for reference. The client may decide the date of recalibration of the instrument according to actual use.

注: 1. 本证书未经本机构书面授权, 不得部分复制。 (The certificate shall not be partly reproduced without written approval of the laboratory.)
2. 本次校准结果仅与被校物有关。 (The results are only related to the items calibrated.)

Calibration Certificate of Sound Level Meter


赛宝计量检测中心
 CEPREI (CMA, CALIBRATION) TESTING CENTER 证书编号(Certificate No.): 2HB19001116-0003

1. Appearance and Function Check

There is no damage and defect that affect the calibration result accuracy of the certificate.

2. Single Operation (at 1000Hz, 1/1A-Weighting)

Reference Value (dB)	Indicated Value (dB)	Error (dB)	Manufacturer Specification (dB)	U (dB)	P/F
114.0	114.3	0.3	±1.0	0.4	P
104.0	104.3	0.3	±1.0	0.4	P
94.0	94.3	0.3	±1.0	0.4	P
84.0	84.3	0.3	±1.0	0.4	P
74.0	74.3	0.3	±1.0	0.4	P
64.0	64.4	0.4	±1.0	0.4	P
54.0	54.5	0.5	±1.0	0.4	P

3. Sound Pressure Level Measurement (at 1000Hz, 1/1A-Weighting)

Reference Value (dB)	Indicated Value (dB)	Error (dB)	Manufacturer Specification (dB)	U (dB)	P/F
114.0	114.3	0.3	±1.0	0.4	P
104.0	104.3	0.3	±1.0	0.4	P
94.0	94.3	0.3	±1.0	0.4	P
84.0	84.3	0.3	±1.0	0.4	P
74.0	74.3	0.3	±1.0	0.4	P
64.0	64.4	0.4	±1.0	0.4	P
54.0	54.5	0.5	±1.0	0.4	P

4. A-Weighting Freq. Response Characteristic


Frequency (Hz)	Reference Value (dB)	Indicated Value (dB)	Error (dB)	Manufacturer Specification (dB)	U (dB)	P/F
31.5	-39.4	-39.3	0.1	+3.5	0.5	P
63	-26.2	-26.0	0.2	+2.5	0.5	P
125	-16.1	-16.0	0.1	+2.0	0.5	P
250	-8.6	-8.6	0.0	+1.9	0.4	P
500	-3.2	-3.2	0.0	+1.9	0.4	P
1k	0.0	0.0	0.0	(Ref)	/	/
2k	1.2	1.0	-0.2	+2.6	0.6	P
4k	1.0	0.3	-0.7	+3.6	0.6	P
8k	-1.1	-1.9	-0.8	+5.6	0.6	P
16k	-6.6	-11.4	-4.8	+6.0	1.0	P

因 NIST 自 No data hereafter

数据页(Data sheet) ID: Q126581

Page 5 of 5

Calibration Certificate of Sound Level Meter



耀創工程有限公司
 Sun Creation Engineering Limited
 Calibration & Testing Laboratory

CA1 (Cr) 2019
 MCT-5LA-12

Certificate of Calibration

校正證書

ITEM TESTED / 送檢項目 (Job No. / 序引編號) : IC19-1346
Description / 儀器名稱 : Sound Level Meter
Manufacturer / 製造商 : Rion
Model No. / 型號 : NL-52
Serial No. / 編號 : 01287681
Supplied By / 委託者 : Casco Testing Centre Limited
 Air & Acoustics Laboratory, /F/, Techno Centre,
 33 On Kai Street, Foshing, N.T.

Date of Receipt / 收件日期 : 3 July 2019
Certificate No. / 證書編號 : C193567


TEST CONDITIONS / 測試條件
 Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (50 ± 25)%
 Line Voltage / 電壓 : ---


TEST SPECIFICATIONS / 測試規範
 Calibration check

DATE OF TEST / 測試日期 : 7 July 2019

TEST RESULTS / 測試結果
 The results apply to the particular unit-under-test only.
 The results do not exceed manufacturer's specification.
 The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
 - The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
 - The Brunel & Kjaer Calibration Laboratory, Denmark
 - Rohde & Schwarz Laboratory, Germany
 - Fluke Evert Service Center, USA

Tested By / 測試 :  H.T. Wong
 Technical Officer

Certified By / 校證 :  K.C. Leo
 Engineer

Date of Issue / 簽發日期 : 9 July 2019

The test equipment used for calibration are traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.
 本證書所載之儀器均經溯源至國家標準。此證書須完整重印，不得刪改或轉載。

Sun Creation Engineering Limited - Calibration & Testing Laboratory
 606-671, Hang On Lane, Tuen Mun, New Territories, Hong Kong
 新界屯門恒安道606-671號耀創工程有限公司
 Tel: (852) 2627 2606 Fax: (852) 2744 8986 E-mail: casco@suncreation.com Website: www.suncreation.com



耀創工程有限公司
 Sun Creation Engineering Limited
 Calibration & Testing Laboratory

Certificate of Calibration

校正證書

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
2. Self-calibration was performed before the test.
3. The results presented are the mean of 7 measurements at each calibration point.
4. Test equipment :
 Equipment ID : 40 MHz Arbitrary Waveform Generator
 CI280
 Multifunction Acoustic Calibrator
 Test procedure : MA101N
 Results :
 6.1 Sound Pressure Level
 6.1.1 Reference Sound Pressure Level

Range (dB)	Function	UUT Setting	Applied Value	UUT Reading	HEC 61672 Class 1 Spec.
30 - 130	L _A	Frequency Weighting: A	Time Weighting: Fast	Level (dB) (Hz)	Reading (dB) (Ref)
				94.00	94.1
				104.00	104.1
				114.00	114.1

6.2 Time Weighting

Range (dB)	Function	UUT Setting	Applied Value	UUT Reading	HEC 61672 Class 1 Spec.
30 - 130	L _A	Frequency Weighting: A	Time Weighting: Fast	Level (dB) (Hz)	Reading (dB) (Ref)
				94.00	94.1
				104.00	104.1
				114.00	114.1

The test equipment used for calibration are traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.
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 新界屯門恒安道606-671號耀創工程有限公司
 Tel: (852) 2627 2606 Fax: (852) 2744 8986 E-mail: casco@suncreation.com Website: www.suncreation.com

Calibration Certificate of Sound Level Meter


耀創工程有限公司
 Sun Creation Engineering Limited
 Calibration & Testing Laboratory

Certificate of Calibration 校正證書

Certificate No. : C193567
證書編號

6.3 Frequency Weighting

6.3.1 A-Weighting

Range (dB)	Function	UUT Setting		Level (dB)	Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
		Frequency Weighting	Time Weighting		Freq.	Reading (dB)		
30 - 130	L _A	A	Fast	94.00	63 Hz	77.8	-16.1 ± 1.5	
					125 Hz	85.4	-8.6 ± 1.4	
					250 Hz	90.8	-3.2 ± 1.4	
					500 Hz	94.1	Ref.	
					1 kHz	95.3	+1.2 ± 1.6	
					4 kHz	95.1	+1.0 ± 1.6	
					8 kHz	93.0	-1.1 (+2.1, -3.1)	
					125 kHz	89.6	-4.3 (+3.0, -6.0)	

6.3.2 C-Weighting

Range (dB)	Function	UUT Setting		Level (dB)	Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)					
		Frequency Weighting	Time Weighting		Freq.	Reading (dB)							
30 - 130	L _C	C	Fast	94.00	63 Hz	93.9	-0.2 ± 1.5						
					125 Hz	93.9	0.0 ± 1.4						
					250 Hz	94.0	0.0 ± 1.4						
					500 Hz	94.1	0.0 ± 1.4						
					1 kHz	94.1	Ref.						
					2 kHz	93.9	-0.2 ± 1.6						
					4 kHz	93.3	-0.8 ± 1.6						
					8 kHz	91.1	-3.0 (+2.1, -3.1)						
										12.5 kHz	87.7	-6.2 (+3.0, -6.0)	

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Sun Creation Engineering Limited - Calibration & Testing Laboratory
 Sun Creation Engineering Limited - 耀創工程有限公司
 耀創工程有限公司 - 校正及測試實驗室
 香港新界沙田博愛道一號四樓
 Tel: (852) 2977 2006 Fax: (852) 2744 8986 E-mail: cal@suncreation.com Website: www.suncreation.com


耀創工程有限公司
 Sun Creation Engineering Limited
 Calibration & Testing Laboratory

Certificate of Calibration 校正證書

Certificate No. : C193567
證書編號

Remarks : - UUT Microphone Model No. : UC-59 & SN : 14595

- Mf's Spec. : IEC 61672 Class 1
- Uncertainties of Applied Value : 94 dB : 63 Hz - 125 Hz : ± 0.35 dB
 250 Hz - 500 Hz : ± 0.20 dB
 1 kHz : ± 0.35 dB
 2 kHz - 4 kHz : ± 0.35 dB
 8 kHz : ± 0.45 dB
 12.5 kHz : ± 0.70 dB
 104 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)
 114 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)
- The uncertainties are for a confidence probability of not less than 95 %.

Note :
Only the original copy or the laboratory's certified true copy is valid.

The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

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Sun Creation Engineering Limited - Calibration & Testing Laboratory
 Sun Creation Engineering Limited - 耀創工程有限公司
 耀創工程有限公司 - 校正及測試實驗室
 香港新界沙田博愛道一號四樓
 Tel: (852) 2977 2006 Fax: (852) 2744 8986 E-mail: cal@suncreation.com Website: www.suncreation.com

For microphone calibrator NC-74

How to use

Carefully insert the microphone all the way into the coupler of the NC-74. Then simply turn the power on to apply a constant sound pressure level to the diaphragm of the microphone.



The performance of the NC-74 is suitable for calibration of high-precision sound level meters. The unit is compact, lightweight, and easy to use. Two IEC LHe (size AA) alkaline batteries will power the unit for more than 30 hours of continuous use at room temperature.

Atmospheric pressure compensation principle

The NC-74 incorporates a sensor that detects atmospheric pressure. Based on the information provided by the sensor, the CPU controls the signal amplitude. This allows the unit to always provide the correct output for achieving constant sound pressure level, regardless of fluctuations in atmospheric pressure.



Using the 1/2-inch adapter

To allow calibration of sound level meter microphones with 1-inch diameter, the 1/2-inch microphone adapter can be removed. 1/2-inch microphones are indicated with the adapter in place.



Specifications

Applicable standards	IEC 60422:2002 Class 1 IEC 61131:2004 Class 1	IEC 61694-1 Type L,SP IEC 61694-2
Standard microphones	1-inch microphones IEC 61094-1 IEC 61094-2 IEC 61094-3	
1/2-inch microphones	IEC 61094-1 Type L,SP IEC 61094-2 IEC 61094-3	
Microphone connector	IEC 60268-1 Type L,SP IEC 60268-2 IEC 60268-3 IEC 60268-4 IEC 60268-5 IEC 60268-6 IEC 60268-7 IEC 60268-8 IEC 60268-9 IEC 60268-10 IEC 60268-11 IEC 60268-12 IEC 60268-13 IEC 60268-14 IEC 60268-15 IEC 60268-16 IEC 60268-17 IEC 60268-18 IEC 60268-19 IEC 60268-20 IEC 60268-21 IEC 60268-22 IEC 60268-23 IEC 60268-24 IEC 60268-25 IEC 60268-26 IEC 60268-27 IEC 60268-28 IEC 60268-29 IEC 60268-30 IEC 60268-31 IEC 60268-32 IEC 60268-33 IEC 60268-34 IEC 60268-35 IEC 60268-36 IEC 60268-37 IEC 60268-38 IEC 60268-39 IEC 60268-40 IEC 60268-41 IEC 60268-42 IEC 60268-43 IEC 60268-44 IEC 60268-45 IEC 60268-46 IEC 60268-47 IEC 60268-48 IEC 60268-49 IEC 60268-50 IEC 60268-51 IEC 60268-52 IEC 60268-53 IEC 60268-54 IEC 60268-55 IEC 60268-56 IEC 60268-57 IEC 60268-58 IEC 60268-59 IEC 60268-60 IEC 60268-61 IEC 60268-62 IEC 60268-63 IEC 60268-64 IEC 60268-65 IEC 60268-66 IEC 60268-67 IEC 60268-68 IEC 60268-69 IEC 60268-70 IEC 60268-71 IEC 60268-72 IEC 60268-73 IEC 60268-74 IEC 60268-75 IEC 60268-76 IEC 60268-77 IEC 60268-78 IEC 60268-79 IEC 60268-80 IEC 60268-81 IEC 60268-82 IEC 60268-83 IEC 60268-84 IEC 60268-85 IEC 60268-86 IEC 60268-87 IEC 60268-88 IEC 60268-89 IEC 60268-90 IEC 60268-91 IEC 60268-92 IEC 60268-93 IEC 60268-94 IEC 60268-95 IEC 60268-96 IEC 60268-97 IEC 60268-98 IEC 60268-99 IEC 60268-100	
Nominal sound pressure level	1 Pa	
Frequency response	1 Hz	
Operating distance	1.1, 0.5, 0.1 m	
Dimensions (mm)	Approx. 40 (H) × 60 (W) × 74 (D) mm	
Weight (mm)	Approx. 200 g (including battery)	
Signal connection	IEC 60268-1 Type L,SP IEC 60268-2 IEC 60268-3 IEC 60268-4 IEC 60268-5 IEC 60268-6 IEC 60268-7 IEC 60268-8 IEC 60268-9 IEC 60268-10 IEC 60268-11 IEC 60268-12 IEC 60268-13 IEC 60268-14 IEC 60268-15 IEC 60268-16 IEC 60268-17 IEC 60268-18 IEC 60268-19 IEC 60268-20 IEC 60268-21 IEC 60268-22 IEC 60268-23 IEC 60268-24 IEC 60268-25 IEC 60268-26 IEC 60268-27 IEC 60268-28 IEC 60268-29 IEC 60268-30 IEC 60268-31 IEC 60268-32 IEC 60268-33 IEC 60268-34 IEC 60268-35 IEC 60268-36 IEC 60268-37 IEC 60268-38 IEC 60268-39 IEC 60268-40 IEC 60268-41 IEC 60268-42 IEC 60268-43 IEC 60268-44 IEC 60268-45 IEC 60268-46 IEC 60268-47 IEC 60268-48 IEC 60268-49 IEC 60268-50 IEC 60268-51 IEC 60268-52 IEC 60268-53 IEC 60268-54 IEC 60268-55 IEC 60268-56 IEC 60268-57 IEC 60268-58 IEC 60268-59 IEC 60268-60 IEC 60268-61 IEC 60268-62 IEC 60268-63 IEC 60268-64 IEC 60268-65 IEC 60268-66 IEC 60268-67 IEC 60268-68 IEC 60268-69 IEC 60268-70 IEC 60268-71 IEC 60268-72 IEC 60268-73 IEC 60268-74 IEC 60268-75 IEC 60268-76 IEC 60268-77 IEC 60268-78 IEC 60268-79 IEC 60268-80 IEC 60268-81 IEC 60268-82 IEC 60268-83 IEC 60268-84 IEC 60268-85 IEC 60268-86 IEC 60268-87 IEC 60268-88 IEC 60268-89 IEC 60268-90 IEC 60268-91 IEC 60268-92 IEC 60268-93 IEC 60268-94 IEC 60268-95 IEC 60268-96 IEC 60268-97 IEC 60268-98 IEC 60268-99 IEC 60268-100	

*Specification subject to change without notice

RION CO., LTD.
 3-20-41, Higashinonmachi, Kōkubunji, Tokyo 185-8533, Japan
 Tel: +81-42-359-7888 Fax: +81-42-359-7442
 http://www.rion.co.jp/english/



Discovered by:



Printed in Japan 0310-1 0307 P.MF

中国赛宝实验室
工业和信息化部电子第五研究所
CHINA CEPREI LABORATORY

中国合格评定委员会
CALIBRATION
CNAS L0482

校准证书

CALIBRATION CERTIFICATE

证书编号: 2HB19001116-0001
 Certificate No.

委托单位: Casico Testing Centre Limited
 Client

仪器名称: SOUND LEVEL CALIBRATOR
 Description

型号规格: NC-74
 Model/Type

制造商: RION
 Manufacturer

机身号: 34178129
 Serial No.

管理号: AAST-SLC-05
 Asset No.

接收日期: 2019年07月03日
 Rec. Date

签发日期: 2019年07月12日
 App. Date

结论: 所校准项目合格(Passed at Calibration Items)

校准: 杨西梅
 Approved by

签发: 杨西梅
 Issued by

接收: 刘鹏
 Inspected by

印章: [Stamp]
 Stamp

地址: 深圳市宝安区西乡街道铁岗社区铁岗路110号
 香港总部地址: 香港上环德辅道中172号
 客服电话: 852-26680871 传真: 852-26686197
 天津办事处: 852-26680936 020-87238789
 邮件: cal@ceprei.com.hk
 网站: www.ceprei-cal.com

Page 1 of 5

Catalogue of Air Flow Meter (TSI TA440)

SPECIFICATIONS

THERMAL ANEMOMETERS MODELS TA410, TA430 AND TA440

Velocity

Range (TA410) 0 to 20 m/s (0 to 4000 ft/min)
 Range (TA430, TA440) 0 to 30 m/s (0 to 6000 ft/min)
 Accuracy (TA410)¹ ±5% of reading or ±0.025 m/s (±5 ft/min), whichever is greater
 Accuracy (TA430, TA440)² ±3% of reading or ±0.015 m/s (±3 ft/min), whichever is greater
 Resolution 0.01 m/s (1 ft/min)

Duct Size (TA430, TA440)

Dimensions 1 to 635 cm in increments of 10 cm
 Probe diameter 10 to 125 cm in increments of 0.1 in

Volumetric Flow Rate (TA430, TA440)

Range Actual range is a function of velocity and duct size

Temperature

Range (TA410, TA430) -18 to 59°C (0 to 200°F)
 Range (TA440) -10 to 60°C (14 to 140°F)
 Accuracy ±0.3°C (±0.5°F)
 Resolution 0.1°C (0.1°F)

Relative Humidity (TA440 only)

Range 5 to 95% RH
 Accuracy ±3% RH
 Resolution 0.1% RH

Wet Bulb Temperature (TA440 only)

Range 5 to 50°C (40 to 140°F)
 Resolution 0.1°C (0.1°F)

Dew Point (TA440 only)

Range -15 to 49°C (5 to 120°F)
 Resolution 0.1°C (0.1°F)

Instrument Temperature Range

Operating (Electronics) 3 to 45°C (40 to 113°F)
 Operating (TA430) -18 to 59°C (0 to 200°F)
 Operating (Probe) -10 to 60°C (14 to 140°F)
 Model TA440
 Operating (Probe) -20 to 60°C (-4 to 140°F)
 Storage

Data Storage Capabilities (TA430, TA440)

Range 12,700 + samples and 100 test IDs

Logging Interval (TA430, TA440)

1 second to 1 hour

Specifications subject to change without notice.

TSI and TSI logo are registered trademarks and Airflow is a trademark of TSI Incorporated.

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Time Constant (TA430, TA440)

User selectable

External Meter Dimensions

8.4 cm x 17.8 cm x 4.4 cm (3.3 in x 7.0 in x 1.8 in)

Meter Weight with Batteries

0.27 kg (0.6 lbs.)

Meter Probe Dimensions

Probe Length 101.5 cm (40 in)
 Probe Diameter of Tip 7.0 mm (0.28 in)
 Probe Diameter of Base 13.0 mm (0.51 in)

Articulating Probe Dimensions

Articulating Section Length 19.7 cm (7.8 in)
 Diameter of Articulating Knuckle 9.5 mm (0.38 in)

Power Requirements

Four AA-size batteries or AC adapter

	TA410	TA430	TA440
Velocity range (0 to 20/30 m/s)	+	+	+
Temperature range (-18 to 59/60°C)	+	+	+
Relative Humidity range (5 to 95% RH)	+	+	+
Wet Bulb Temperature range (5 to 50°C)	+	+	+
Dew Point range (-15 to 49°C)	+	+	+
Humidity, wet bulb, dew point	+	+	+
Probe	Straight	Straight or A-arched	Straight or A-arched
Variable time constant	+	+	+
Manual data logging	+	+	+
Auto save data logging	+	+	+
Statistics	+	+	+
Review data	+	+	+
Logistic software	+	+	+
Free Certificate of Calibration	+	+	+

¹ Temperature compensated over an air temperature range of 5 to 59°C (40 to 139°F).
² Temperature compensated over an air temperature range of 5 to 59°C (40 to 139°F).
 For the model TA410, and all models through 6000 ft/min (0.15 m/s) through 30 m/s for models TA430 and TA440. Read at 25°C (77°F). Add uncertainty of ±0.03°C (±0.05°F) for change in instrument temperature.
³ Accuracy with probe at 25°C (77°F). Add uncertainty of 0.2% RH/0.1% RH/1% for change in probe temperature. Excludes 1% by sensor.

Calibration Certificate of Air Flow Meter



CERTIFICATE OF CALIBRATION AND TESTING
 TSI Instruments Ltd, Spring Point, 25500 Spring Point Drive, Dayton, OH 45424
 Tel: (614) 440-1000 (UK) 01484 459000 Fax: (614) 440-1000 Email: www.airflowinstruments.co.uk

ENVIRONMENT CONDITION	22.1	°C	MODEL	TA440
TEMPERATURE	43.89	%RH	SERIAL NUMBER	TA4401232005
RELATIVE HUMIDITY	1007.8	hPa		
BAROMETRIC PRESSURE				
<input checked="" type="checkbox"/> AS LEFT			<input checked="" type="checkbox"/> IN TOLERANCE	
<input type="checkbox"/> AS FOUND			<input type="checkbox"/> OUT OF TOLERANCE	

- CALIBRATION VERIFICATION RESULTS -

TEMPERATURE VERIFICATION		SYSTEM T-200		MEASURED		ALLOWABLE RANGE	
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	0.0	0.1	-0.3-0.3	2	60.0	60.0	59.7-60.3
VELOCITY VERIFICATION		SYSTEM V-352		MEASURED		ALLOWABLE RANGE	
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	0.00	0.00	-0.02-0.02	7	3.4	3.4	3.2-3.4
2	0.18	0.18	0.16-0.19	8	5.11	5.11	4.96-5.27
3	0.33	0.33	0.32-0.35	9	7.51	7.51	7.28-7.73
4	0.51	0.50	0.49-0.52	10	12.78	12.85	12.39-13.16
5	0.82	0.81	0.80-0.85	11	22.97	23.08	22.29-23.66
6	1.71	1.69	1.66-1.76	12	29.47	29.43	28.99-30.36
HUMIDITY VERIFICATION		SYSTEM H-200		MEASURED		ALLOWABLE RANGE	
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	29.7	29.2	27.5-31.9	4	70.0	69.2	67.8-72.2
2	39.7	39.2	37.5-41.9	5	90.0	88.7	87.8-92.2
3	50.0	49.2	47.5-53.2				

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specifications that apply to its Foundry calibration. This certificate is valid for the duration of the instrument's warranty period. The accuracy of this instrument is traceable to NIST standards (NIST 413) for the model TA410, and all models through 6000 ft/min (0.15 m/s) through 30 m/s for models TA430 and TA440. Read at 25°C (77°F). Add uncertainty of ±0.03°C (±0.05°F) for change in instrument temperature.
 For the model TA410, and all models through 6000 ft/min (0.15 m/s) through 30 m/s for models TA430 and TA440. Read at 25°C (77°F). Add uncertainty of 0.2% RH/0.1% RH/1% for change in probe temperature. Excludes 1% by sensor.

Measurement Variable	System ID	Measurement Variable	System ID
Temperature	E006026	Temperature	E006026
Pressure	E006022	Pressure	E006022
Humidity	E006018	Humidity	E006018
Temperature	E006007	DC Volts	E006125

P. McRAN
 13 MAR 2019
 0961 01 CERT_DEFAULT

Appendix K – Noise monitoring results and graphical presentation

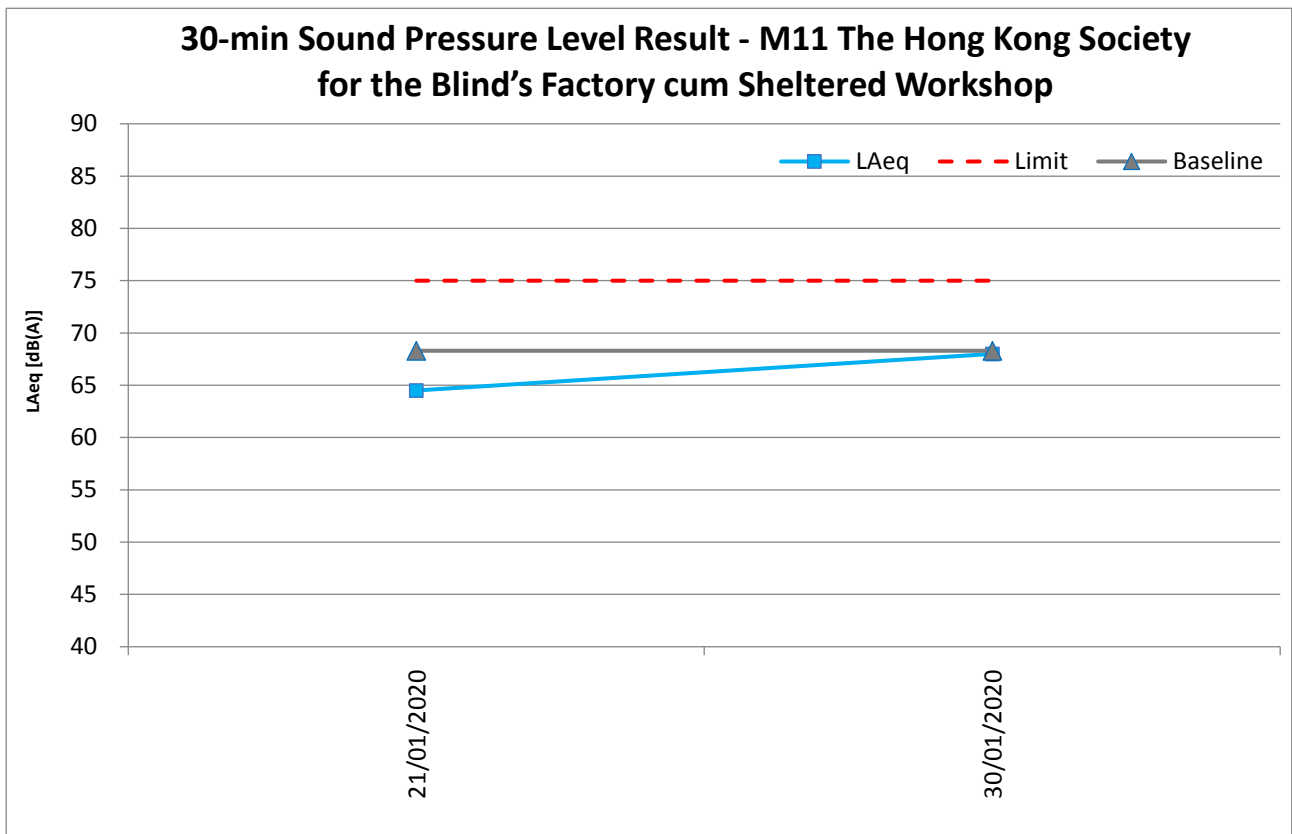
M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop

Date	Temp (°C)	Weather	Measured Noise Level at M11, dB(A)						Limit	
			Time		Baseline	L _{Aeq}	L _{A10}	L _{A90}		
21/01/2020	21.1	Sunny	10:15	-	10:45	68.3	64.5	68	63.2	75
30/01/2020	19.7	Sunny	11:00	-	11:30	68.3	68.0	70.9	65.2	75
							Maximum			68.0
							Minimum			64.5
							Average			66.6

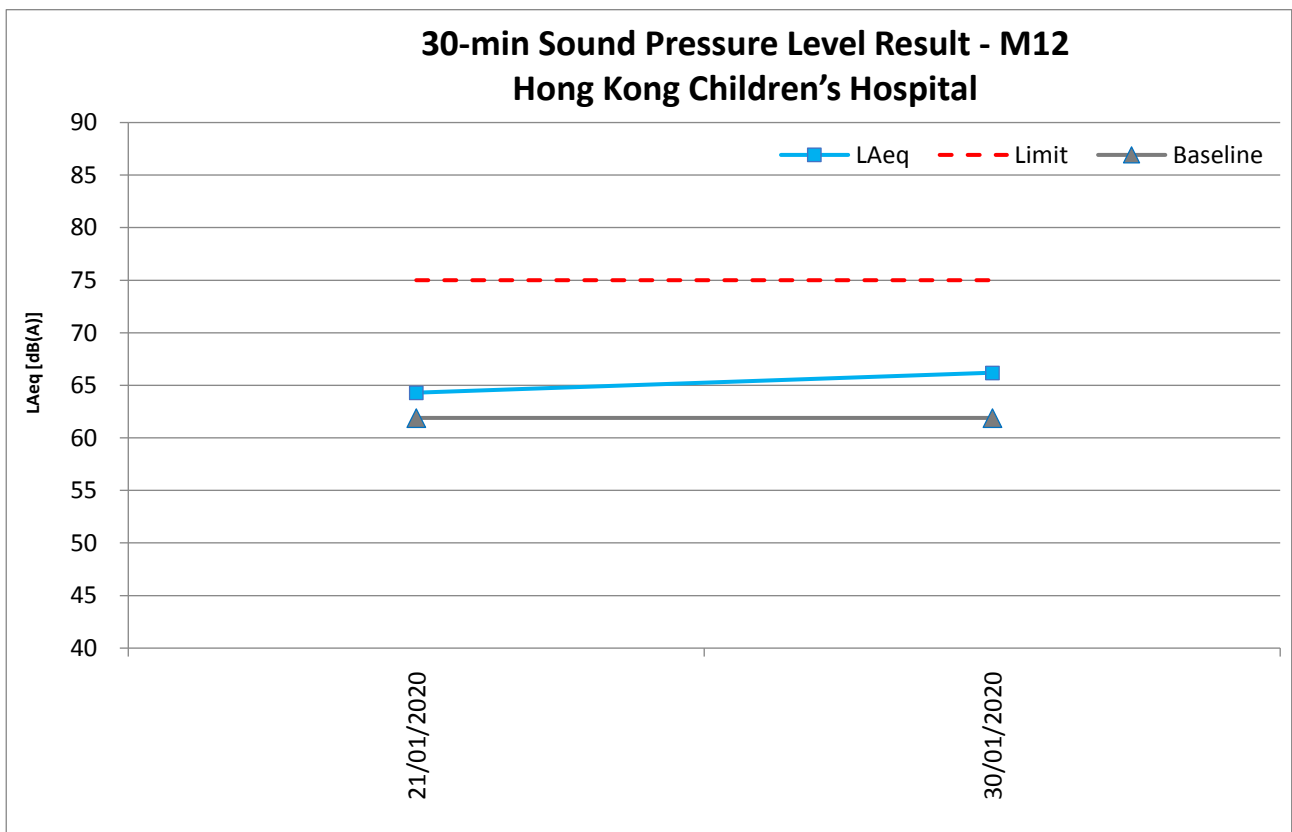
M12 - Hong Kong Children's Hospital

Date	Temp (°C)	Weather	Measured Noise Level at M12, dB(A)						Limit	
			Time		Baseline	L _{Aeq}	L _{A10}	L _{A90}		
21/01/2020	21.1	Sunny	11:20	-	11:50	61.9	64.3	68.4	61.7	75
30/01/2020	19.7	Sunny	10:45	-	11:15	61.9	66.2	68.4	62.9	75
							Maximum			66.2
							Minimum			64.3
							Average			65.4

L_{Aeq}, 30-min graphical results of M11 - The Hong Kong Society for the Blind's Factory cum Sheltered Workshop



L_{Aeq}, 30-min graphical results of M12 - Hong Kong Children's Hospital



Appendix L – Event and Action Plan for noise

Event	Action			
	ET	IEC	Supervisor / ER	Contractor
Action Level being exceeded	<ol style="list-style-type: none"> 1. Notify Supervisor / ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, Supervisor / ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness. <p>(The above actions should be taken within 2 working days after the exceedance is identified.)</p>	<ol style="list-style-type: none"> 1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures submitted by the Contractor and advise the ER accordingly; 3. Advise the Supervisor / ER on the proposed remedial measures. <p>(The above actions should be taken within 2 working days after the exceedance is identified.)</p>	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise implementation of remedial measures. <p>(The above actions should be taken within 2 working days after the exceedance is identified.)</p>	<ol style="list-style-type: none"> 1. Submit noise mitigation proposal to IEC and Supervisor / ER; 2. Implement noise mitigation proposals. <p>(The above actions should be taken within 2 working days after the exceedance is identified.)</p>
Limit Level being exceeded	<ol style="list-style-type: none"> 1. Inform IEC, Supervisor /ER, Contractor and EPD; 2. Repeat measurement to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedure; 6. Discuss remedial measures required with the IEC, Contractor and Supervisor /ER; 7. Assess effectiveness of 	<ol style="list-style-type: none"> 1. Discuss the potential remedial actions with Supervisor /ER, ET and Contractor; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the Supervisor /ER accordingly. <p>(The above actions should be taken within 2 working days after the exceedance is identified.)</p>	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and Supervisor /ER within 3 working days of notification; 3. Implement the agreed proposal; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the Supervisor /ER until the exceedance is abated. <p>(The above actions should be</p>

Event	Action			
	ET	IEC	Contractor	
	<p>Contractor's remedial actions and keep IEC, EPD, and Supervisor /ER informed of the results;</p> <p>8. If exceedance stops, cease additional monitoring.</p> <p>(The above actions should be taken within 2 working days after the exceedance is identified.)</p>		<p>Supervisor / ER</p> <p>exceedance until the exceedance is abated.</p> <p>(The above actions should be taken within 2 working days after the exceedance is identified.)</p>	<p>Contractor</p> <p>taken within 2 working days after the exceedance is identified.)</p>

Appendix M – Event and Action Plan for Landscape and Visual Impact

Event	Action			
	ET	IEC	Supervisor / ER	Contractor
Design Check	<ol style="list-style-type: none"> 1. Check final design conforms to the requirements of EP and prepare report. 	<ol style="list-style-type: none"> 1. Check report. 2. Recommend remedial design if necessary. 	<ol style="list-style-type: none"> 1. Undertake remedial design if necessary. 	
Non-conformity on one occasion	<ol style="list-style-type: none"> 1. Identify Source. 2. Inform IEC and Supervisor/ER. 3. Discuss remedial actions with IEC, Supervisor/ER and Contractor. 4. Monitor remedial actions until rectification has been completed. 	<ol style="list-style-type: none"> 1. Check report. 2. Check Contractor's working method. 3. Discuss with ET and Contractor on possible remedial measures. 4. Advise Supervisor /ER on effectiveness of proposed remedial measures. 5. Check implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Notify Contractor. 2. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Amend working methods. 2. Rectify damage and undertake any necessary replacement.
Repeated conformity	<ol style="list-style-type: none"> 1. Identify Source. 2. Inform IEC and Supervisor/ER. 3. Increase monitoring frequency. 4. Discuss remedial actions with IEC, Supervisor/ER and Contractor. 5. Monitor remedial actions until rectification has been completed. 6. If non-conformity ceases, additional monitoring. 	<ol style="list-style-type: none"> 1. Check monitoring report. 2. Check Contractor's working method. 3. Discuss with ET and Contractor on possible remedial measures. 4. Advise Supervisor /ER on effectiveness of proposed remedial measures. 5. Supervise implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Notify Contractor. 2. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Amend working methods. 2. Rectify damage and undertake any necessary replacement.

Appendix N – Waste Flow Table

Appendix F - Monthly Summary Waste Flow Table

Name of Department : CEDD

Monthly Summary Waste Flow Table for January 2020

Contract No.: ED/2018/01

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated (in '000m ³)	Hard Rock and Large Broken Concrete (in '000m ³)	Reused in the Contract (in '000m ³)	Reused in other Projects (in '000m ³)	Disposed as Public Fill (in '000m ³)	Imported Fill (in '000m ³)	Metals (in '000 kg)	Paper / cardboard packaging (in '000kg)	Plastics (see Note 3) (in '000kg)	Chemical Waste (in '000kg)	Others, e.g. general refuse (in '000m ³)	
Jan	1,068	--	--	--	1,068	--	--	--	--	--	0,007	
Feb	--	--	--	--	--	--	--	--	--	--	--	
Mar	--	--	--	--	--	--	--	--	--	--	--	
Apr	--	--	--	--	--	--	--	--	--	--	--	
May	--	--	--	--	--	--	--	--	--	--	--	
Jun	--	--	--	--	--	--	--	--	--	--	--	
Sub-total	--	--	--	--	--	--	--	--	--	--	--	
July	--	--	--	--	--	--	--	--	--	--	--	
Aug	--	--	--	--	--	--	--	--	--	--	--	
Sep	--	--	--	--	--	--	--	--	--	--	--	
Oct	--	--	--	--	--	--	--	--	--	--	--	
Nov	--	--	--	--	--	--	--	--	--	--	--	
Dec	--	--	--	--	--	--	--	--	--	--	--	
Total	1,068	--	--	--	1,068	--	--	--	--	--	0,007	

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*

Total Quantity Generated (in '000m ³)	Hard Rock and Large Broken Concrete (in '000m ³)	Reused in the Contract (in '000m ³)	Reused in other Projects (in '000m ³)	Disposed as Public Fill (in '000m ³)	Imported Fill (in '000m ³)	Metals (in '000 kg)	Paper / cardboard packaging (in '000kg)	Plastics (see Note 3) (in '000kg)	Chemical Waste (in '000kg)	Others, e.g. general refuse (in '000m ³)
--	--	--	--	--	--	--	--	--	--	--

- Notes:
- (1) The performance targets are given in **ER Appendix 8I Clause 14** and the EM&A Manual
 - (2) The waste flow table shall also include C&D materials to be imported for use at the Site
 - (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
 - (4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m³ (**ER Part 8 Clause 8.7.5(d)(ii)** refers)

Appendix O – Environmental Licenses and Notification

445956

Our Ref: 445956
Your Ref: 2755 5518
Tel. No.: 2756 8588
Fax No.:
E-Mail:

Home page: <http://www.epd.gov.hk/>

Environmental Protection Department
Environmental Compliance Division
Regional Office (East)
5th Floor, Nan Fung Commercial Centre,
19 Lam Lok Street, Kowloon Bay,
Kowloon, Hong Kong.



環境保護署
環保法規管理科
區域辦事處(東)
香港九龍九龍彌敦道
十九號南豐商業中心五樓

0049

06/06/2019

Penta-Ocean Construction Co. Ltd
Flat 601, K. Wah Centre, 191 Java Road,
North Point, Hong Kong

Dear Sirs,

Site /Premises:
Kai Tak Development - Stage 4 Infrastructure
at the former runway and south apron

This is to acknowledge receipt of the following submission(s) on 06/06/2019

Notification Pursuant to Section 3(1) of The Air Pollution Control (Construction Dust) Regulation
Ref. Number: 445956

Meanwhile, if you have any further questions, please contact the undersigned.

Yours faithfully,

(Customer Service Counter (RE))
for Director of Environmental Protection



(內文中文譯本)

執事先生：

工地/處所 (見英文版本)

我們已於 2019 年 6 月 6 日收到你提交的文件，詳列如下：

- 進行指明工序所需的牌照申請
- 申請批准裝置或改裝火爐、烘爐及煙筒
- 申請露天焚物許可證——
- 石棉調查報告、石棉清減計劃，石棉管理計劃，及/或開始進行石棉清減工程通知書
- 空氣污染管制(建造工程塵埃)規例的建造工程通知書
- 一般工程/訂明建造工程的建築噪音許可證申請
- 撞擊式打樁工程的建築噪音許可證申請
- 申請空氣壓縮機的噪音標籤
- 申請手提撞擊式破碎機的噪音標籤
- 水污染管制條例的排污牌照申請
- 申請化學廢物產生者的登記
- 化學廢物處置牌照申請
- 化學廢物收集牌照申請
- 根據條例第 17 條的規定呈報指定(甲類)化學廢物通知書
- 申請批准使用容量超過 450 公升的化學廢物容器
- 廢物進出口許可證申請
- 申請批准使用油污分散劑及類似物質
- 廢物入海許可證申請

如有疑問，請與代行人查詢

年 月 日

環境保護署署長
(代印)

本署總機
Our Ref: EP682/286/0141/
來函編號
Your Ref:
電話: 2117 7539
Tel. No.: 2117 7539
圖文傳真
Fax No.: 2756 8588
電子郵件
E-Mail:
網址
Homepage: <http://www.epd.gov.hk/>

Environmental Protection Department
Environmental Compliance Division
Regional Office (East)
5th Floor, Nan Fung Commercial Centre,
19 Lam Lok Street, Kowloon Bay,
Kowloon, Hong Kong.



0501
環境保護署
環境法規管理科
區域辦事處(東)
香港九龍九龍灣藍灣
十九號南豐商業中心五樓

BY REGISTERED POST

26 SEP 2019

Penta-Ocean Construction Co., Ltd.
Room 601, K. Wah Centre,
191 Java Road,
North Point, Hong Kong



Dear Sir/Madam,

Water Pollution Control Ordinance (Cap. 358)
Victoria Harbour (Phase Two) Water Control Zone
Issue of Licence

I refer to your application for a licence made under Section 19/23/23A* of the Water Pollution Control Ordinance ("the Ordinance"), Chapter 358, for the discharge/deposit from your premises as stated in your application. The licence pursuant to Section 20/23A* of the Ordinance is enclosed. Your attention is drawn to the details, terms and conditions subject to which the licence is granted. You should note, in particular, the stipulated sampling, treatment and disposal requirements and should also read the notes at the back of the licence.

Please note that granting of this licence to you does not imply that the discharge from your premises is in compliance with the required limits as stipulated in the licence. It is your responsibility to ensure that the terms and conditions of the licence are complied with.

You are reminded that it is an offence to contravene any of the provisions specified in the licence. The offender is liable to a fine of \$200,000 and to imprisonment for 6 months.

If you are aggrieved by any of the terms and conditions of the licence, you may appeal to the Appeal Board by lodging a notice of appeal under Section 29 of the Ordinance in the prescribed manner and form within 21 days after receipt of this licence.

Should you have any enquiry, please feel free to contact LEE Yau-hang, Benson at 2117 7527.

Yours faithfully,

(CHAN Wai-lun, William)
Environmental Protection Officer
for Director of Environmental Protection

Encl.: Discharge Licence

* Delete as appropriate



掛號郵件

先生/女士:

《水污染管制條例》(第358章)
維多利亞港(第二期)水質管制區
發出排污牌照事宜

你根據香港法例第 358 章《水污染管制條例》(「本條例」)第 19/23/23A*條就你的申請所述處所排放的污水/沉積物向本署遞交的牌照申請書已經收悉。現寄上根據本條例第 20/23A*條簽發的牌照。請留意發出牌照的細節、條款及條件，尤其注意有關取樣、處理及排放等事宜的規定，另請細閱牌照背頁的附註。

獲簽發本牌照並不表示從你的處所排出的污水或污染物質已達到牌照所規定的排放限度。你必須採取必要措施，以確保符合牌照中的條款及條件。

請注意，任何人違反牌照的任何條文，均屬違法，可處罰款二十萬元及監禁六個月。

如你對牌照所載的條款及條件感到不滿，可於收到本牌照後 21 天內，按本條例第 29 條的規定，使用訂明的方式及表格，向上訴委員會遞交上訴通知書，提出上訴。

如有查詢，請致電 2117 7527 與本署 李有恒 聯絡。

環境保護署署長
環境保護主任
(陳偉麟代行)

附件：排污牌照

* 將不適用者刪去



0502

License No.: WT000034610-2019
牌照編號: WT00034610-2019
This License is Valid to: 30 September 2024
本牌照有效期至: 二〇二四年九月三十日

ENVIRONMENTAL PROTECTION DEPARTMENT
環境保護署
WATER POLLUTION CONTROL ORDINANCE (CAP. 358)
水污染管制條例 (第 358 章)
LICENCE PURSUANT TO SECTION 15(2)(23A)*
按第 15 / 20 / 23A* 條簽發的牌照

The Director of Environmental Protection ("the Authority") grants this licence under the Water Pollution Control Ordinance ("the Ordinance") on the terms and conditions stated below.

環境保護署署長(「監督」)按下列的條款及條件,根據水污染管制條例(「本條例」)批給此牌照。

26 September 2019

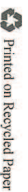
Date
日期
(CHAN Wai-lun, William)
For the Authority
監督 (陳偉麟) (代行)

PART A 甲部 : GENERAL TERMS 一般條款

Name of Licensee ("the Licensee") 持牌人名稱(「持牌人」)	Penta-Ocean Construction Co., Ltd.
Discharge Premises ("the premises") 排放處所(「處所」)	Construction Site of Kai Tak Development – Stage 4 Infrastructure at the Former Runway and South Apron, Kowloon City, Kowloon (CEDD Contract No. ED/2018/01) (See Annex I) 九龍九龍城啟德發展前期跑道和南停機坪的第4階段基礎設施之建築地盤(土木工程拓展署合約編號 ED/2018/01) (參見附件 I)
Water Control Zone 水質管制區	Victoria Harbour (Phase Two) Water Control Zone 維多利亞港(第二期)水質管制區
Discharge Category 排放種類	Discharge of industrial trade effluent 工業污水排放
Nature of Discharge and Wastewater Treatment Facilities 排放性質及廢水處理設施	Effluent, Surface Run-off, and all other wastewater discharges from the premises 上址排放的污水、地面徑流水及其他的廢水 Screen, pH Adjustment, Sedimentation Tank and Chemical Precipitation 隔濾設施, 酸鹼值調節, 沉澱池及化學沉澱
Discharge Point(s) 排放點	Discharge into communal storm water drain 排入公用雨水渠
Sampling Point(s) 取樣點	Discharge outlet(s) of Wastewater Treatment Facility marked S.P. on Annex II attached 參見附件 II 中標指 S.P. 的廢水處理設施的出水口

*Delete as appropriate
將不適用者刪去
Reference No. 參考號碼 EPD228K01H11

- 1 -



EPD156

PART B 乙部 : SPECIFIC CONDITIONS 特別條件

B1. Limitations on Discharge 排放限制

The quantity and composition of any discharge from the premises shall not exceed the limits stated in the table below^(see a). All figures are upper limits unless otherwise indicated. All units are expressed as concentration in milligramme per litre unless otherwise stated.
任何源自處所之排放的量和成份不得超過下表所列的限度^(註 a)。除另予表明外,所有數字均為上限。除另予說明外,所有單位均以毫克/升的濃度表示。

Determinand 測量物	Limit 限度
Flow Rate (m ³ / day) 流量(立方米/日)	60
pH (pH units) 酸鹼值 (pH 單位)	6-9 ^b
Suspended Solids 懸浮固體	30
Chemical Oxygen Demand 化學需氧量	80

Range 上下限

B2. Self-monitoring and Reporting 自行監測及報告

The Licensee shall perform self-monitoring as and when required by the Authority.
持牌人須在監督要求時進行監測。

The Licensee shall sample the discharge at the Sampling Point(s) and, at his own expense carry out analysis in accordance with the sample type and measurement frequency specified for each determinand named below:-
持牌人須在取樣點為排放抽取樣本,並依照下列指定的測量物、取樣形式及頻率,自資予以分析。

Determinand 測量物	Unit 單位	Sample Type 取樣形式	Frequency 頻率
Suspended Solids 懸浮固體	mg/L 毫克/升	Grab 隨意取集	Quarterly 每三個月一次

Results of these monitoring shall be summarized in a report on a monthly/Bi-monthly/Quarterly/Yearly* basis and shall be submitted to the Authority.
所有監測結果須以摘要形式,每一個月/兩個月/三個月/年*作出報告,並須呈交監督審閱。

*Delete as appropriate
將不適用者刪去

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EPD156

PART C 丙部：STANDARD CONDITIONS 標準條件

C1. The Discharge 排放

C1.1 The discharge shall not contain polychlorinated biphenyls (PCB), polycyclic aromatic hydrocarbon (PAH), fumigant, pesticide or toxicant, chlorinated hydrocarbons, flammable or toxic solvents, calcium carbide, any substance likely to damage the sewer or to interfere with any of the treatment processes, or to be harmful to the health and safety of any personnel engaged in the operation or maintenance of a sewerage system; waste liable to form scum or deposits in any part of the drainage or sewerage system, or the waters of Hong Kong; waste liable to form discoloration in any parts of the waters of Hong Kong; sludge, floatable substances or solids larger than 10 mm; and sludge or solid refuse of any kind.

排放不得含有多氯聯苯、聚芳烴、薰蒸劑、殺蟲劑或毒劑、氯化氫、可燃的或有毒的溶劑、碳化合物；會損毀污水渠結構或干擾任何處理程序的物質，或有損操作及維修排污系統人員健康及安全的任何物質；足以在排水或排污系統，或香港水域任何範圍內形成浮渣或沉積物的廢物；足以在香港水域任何範圍內形成變色的廢物；污泥、漂浮物實或體積超過 10 毫米的固體；及任何種類的污泥或固體垃圾。

C1.2 No discharge shall bypass the wastewater treatment facilities, the Sampling Point(s) or the Discharge Point(s) unless it is unavoidable to prevent loss of life, personal injury or severe property damage or no feasible alternative exists.

除非避免人命傷亡或嚴重財物損失或無其他可行代替辦法，排放不得繞流不經其廢水處理設施，取樣點或排放點。

C1.3 Dilution of the discharge to achieve compliance with the limits contained in this licence is prohibited. 不得將排放稀釋，以求達到本牌照內所訂的限額。

C2. Flow Measurement 量度流量

The Licensee shall determine the flow rate of the discharge by installing, operating and maintaining a continuous flow measuring device with an accuracy certified by its manufacturer to be within plus or minus 3 percent of the actual flow, and calibrating the flow measuring device regularly according to manufacturer's recommendations. If no such device is installed, the Licensee shall determine the flow rate through using calculation methods agreed by the Authority, by making reference to the amount of water used in the premises being served by mains supply and other sources, less process consumption and any other losses.

持牌人必須設置、操作及保養一個連續性流量計作為測定排放的流量率之方法，其準確程度須經製造商證實為不超過或低於真正流量的 3%，並應根據製造商建議的方法，定期校準流量計。如沒有設置量度設備，持牌人須依照監督同意的計算方法，根據總所由自來水及其他水源供應的總用水量減去工序耗水量及其他耗水量來測定流量率。

C3. Treatment 處理

C3.1 The Licensee shall provide necessary wastewater treatment facilities, and shall engage personnel with adequate qualification and experience to properly operate and maintain all wastewater treatment facilities at all times. Standby equipment shall be provided to guard against failure of major treatment equipment.

持牌人須提供必需的廢水處理設施，並須僱用有足夠資格及經驗的人士，時常妥善操作及保養所有廢水處理設施。主要處理設施須配有後備裝置，以應付故障發生。

C3.2 In the event of loss of efficiency of operation, or failure of all or part of the wastewater treatment facility, the Licensee shall take all reasonable steps to the extent necessary to maintain compliance with this licence. Such steps shall remain until operation of the wastewater treatment facility is restored or an alternative method of treatment is provided.

倘若部份或整個廢水處理設施操作失靈或發生故障，持牌人須採取所有必要的合理措施，以求達到符合本牌照的規定。此等措施須維持至廢水處理設施恢復如常操作或有其他代替的處理方法可供採用為止。

C3.3 If the wastewater treatment facilities are not properly operated and maintained to the satisfaction of the Authority, the Licensee shall take immediate and effective remedial actions as required by the Authority.

倘若廢水處理設施的操作及保養未能令監督滿意，持牌人須按監督之規定，採取即時及有效的補救行動。

C4. Disposal 棄置

Sludges, screenings, solids, oil and grease, filter backwash, or other pollutants removed in the course of treatment shall be disposed of in a proper manner.^(Note 1 & 2)

處理過程中所產生的污泥、隔渣物、固體、油脂、過濾器回洗或其他污染物，必須妥善地棄置。^(附註 1 & 2)

C5. Monitoring 監測

C5.1 The Licensee shall provide and maintain suitable and accessible facility such as an inspection chamber, manhole or sampling valve at each Sampling Point to enable duly authorized officer(s) of the Authority to take samples of the discharge at any time from the premises.

持牌人須在每一個取樣點提供及保養適當及可容易到達的設施，例如檢查槽，沙井或取樣閘，以確保受監督授權的人員隨時可在處所內抽取排放樣本。

C5.2 For self-monitoring, "grab samples" shall be taken during the period when the determinand to be analyzed for is likely to be present in its maximum concentration. "Composite samples" shall include samples taken over daily duration of the discharge.

在自行監測中，「隨意取樣樣本」須在測量物的濃度很可能是最高的那段時間內抽取。「綜合樣本」須包含在每日排放期間不同時候所抽取的樣本。

C5.3 For self-monitoring, all samples shall be analyzed in accordance with the most updated analytical methods used by the Government Chemist.^(Note 3)

在自行監測中，所有樣本均須按照政府化驗師所採用的最新分析方法予以分析。^(附註 3)

C6. Records and Reporting 紀錄及報告

C6.1 The Licensee shall keep the following records in the premises for inspection by duly authorized officer(s) of the Authority:

持牌人須在處所內保存下列紀錄，以備獲監督授權的人員隨時查閱：

(i) records of flow rate, nature and composition of the discharge; 排放流量率、性質及成份的紀錄；

(ii) updated records of all monitoring information, including all laboratory analytical results relating to samples taken, all original chart recordings for continuous flow and pH monitoring; and 所有最新監測資料的紀錄，包括所有關於已取樣本的檢驗分析結果、所有連續性流量及酸鹼值監測紀錄圖表的正本；及

(iii) records of all desludging and degreasing operation, and records of corresponding disposal operation. 所有清除污泥和清理隔油池廢物工序的紀錄，及其棄置工序的紀錄。

Copies of all such records shall be submitted to the Authority upon request.

在監督要求時，須向監督呈交所有該等紀錄的副本。

C6.2 The Licensee shall notify and explain to the Authority: Director of Environmental Protection, Regional Office (E), Kowloon City Section by fax (fax no.: 2756 8588) or electronic mail (email address: hotline_e@epd.gov.hk) within 24 hours upon the occurrence of an accidental discharge or any emergency bypass or an overflow of untreated effluent or an operation upset which places the discharge in a temporary state of non-compliance with this licence. The Licensee shall within 7 days following the incident, submit to the Authority a detailed report in writing on the cause and duration of the non-compliance and steps taken or to be taken to reduce, eliminate, or prevent recurrence of such non-compliance. Reporting in accordance with this Condition does not relieve the Licensee of any obligations imposed by this licence.

倘若發生未經處理的污水意外排放、緊急繞流或溢滿的事件或操作失靈，引至排放出現短暫不符合牌照規定的情況，持牌人須在事發後 24 小時內以傳真（傳真號碼：2756 8588）或電郵（電郵地址：hotline_e@epd.gov.hk）通知監督：環境保護署署長，區域辦事處（九龍城區），並予以解釋。持牌人須在事故發生後 7 天內，以書面報告，詳述事件的起因、違反牌照條件的時間及為減少、消除或防止類似事件再次發生所採取或將會採取的措施，送交監督審閱。然而，按照本條件的規定提交報告並不表示持牌人可獲免除承擔本牌照內所載的任何責任。

C7. Operation Manual 操作手冊

The Licensee shall prepare an operation manual which shall include, as a minimum, operating procedures, inspection programme and repair and maintenance programme for the wastewater treatment facilities. The operation manual shall be kept at the aforesaid wastewater treatment facilities and a copy of the manual shall be submitted to the Authority upon request.

持牌人須擬備廢水處理設施的操作手冊。手冊內容須包括操作程序、檢查、維修及保養工作計劃表。該手冊須保存在上述廢水處理設施內。持牌人須在監督要求時，呈交手冊副本乙份。

C8. Notification of Change 更改通知

The Licensee shall notify the Authority: Director of Environmental Protection, Regional Office (E), Kowloon City Section by fax (fax no.: 2756 8588) or electronic mail (email address: hotline_e@epd.gov.hk)

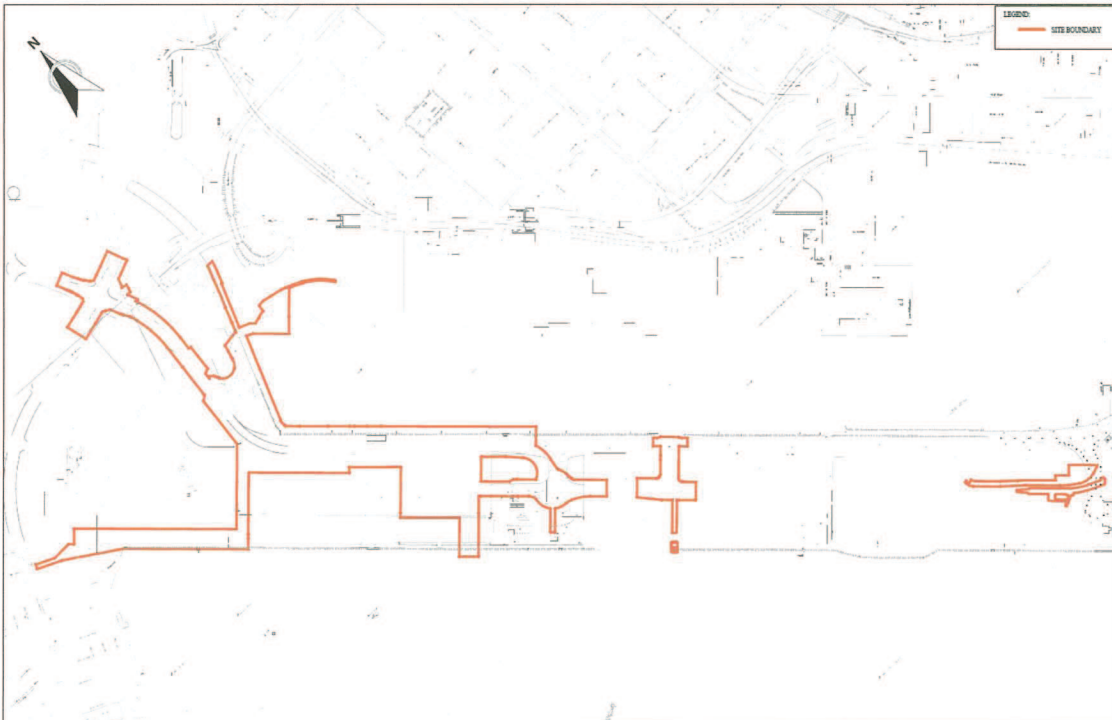
in writing within 14 days of any changes or proposed changes in the wastewater treatment methods/facilities, the processes of manufacture or the nature of the raw materials used or of any other circumstances which may alter the nature and composition of the discharge or may result in the permanent cessation of the discharge.

倘若持牌人更改或擬更改其廢水處理設施、生產程序、或所用原料的性質、或有其他足以改變其排放的性質及成份或可導致永久性終止排放的事情，必須在 14 日內以傳真（傳真號碼：2756 8388）或電郵（電郵地址：hotline_epd@gov.hk）書面通知監督：環境保護署署長，區域辦事處（東）九龍城區。

Notes 附註

- (a) For the purposes of determining compliance with the limits stated in Specific Condition B1, samples shall be taken by the duly authorized officer(s) of the Authority at the Sampling Point(s) or any other points from which the samples so taken are regarded by the duly authorized officer(s) as being representative of the quality of the discharge. When any single sample analyzed for a determinant is proved not complying with corresponding limit set out in the table, the discharge is deemed to have failed to comply with Specific Condition B1.
- (b) An example of proper disposal method for sludge is sending dewatered sludge to landfill for disposal.
- (c) Proper disposal of grease trap waste includes but is not limited to employing registered grease trap waste collector to conduct the disposal work. All registered collectors should have a Certificate of Registration issued by the Environmental Protection Department. The most updated list of the registered collectors can be obtained from the Environmental Protection Department. 妥善的隔油池廢物處理方法包括但不限於聘用已登記的隔油池廢物收集商進行有關的棄置工作。所有已登記的隔油池廢物收集商，均備有由環境保護署發出的登記證明書。已登記的隔油池廢物收集商最新名單，可向環境保護署索取。
- (d) The licensee may make reference to Annex 1 of the <Technical Memorandum on Effluent Standards> for analytical methods used by the Government Chemist.
- (e) The Licensee shall keep this licence in the premises and make it available at all times for inspection by duly authorized officer(s) of the Authority.
- (f) (i) The Licensee shall allow duly authorized officer(s) of the Authority to enter the premises for the purposes of inspection, sampling, records examination or any other duties authorized by Section 37 and Section 38 of the Ordinance. 持牌人須准許獲授權人員進入處所內進行檢查、抽取樣本、審查紀錄或執行其他根據本條例第 37 及第 38 條所授權的職務。
- (ii) Where the premises has security measures in force which would require proper identification and clearance before entry, the Licensee shall make necessary arrangements such that upon presentation of evidence of identity and of authorization, duly authorized officer(s) will be permitted to enter, without delay, for the purposes of performing duties. 倘若由於處所的安全措施而需先行鑑定來人的身份，持牌人必須作出必要的安排，以便獲授權人員在出示身份證明及授權文件後，即可內進執行其職務而不致受延誤。
- (g) (i) For a licence granted under Section 15 of the Ordinance, the Licensee may, not less than 2 months before expiry of the licence, apply under Section 19 of the Ordinance for a new licence. The Authority may grant the licence or otherwise. 持有根據本條例第 15 條所批給牌照的人士，可於牌照屆滿前不少於 2 個月內，根據本條例第 19 條的規定，申請一個新牌照。監督可批給或拒絕批給牌照。
- (ii) For a licence granted under Section 20 or 23A of the Ordinance, the Licensee may, not more than 4 months and not less than 2 months before expiry of the licence, apply under Section 23 or 23A respectively of the Ordinance for renewal of licence. The Authority may renew the licence or otherwise. 持有根據本條例第 20 條或第 23A 條所批給牌照的人士，可於牌照屆滿前不多於 4 個月及不少於 2 個月內，根據本條例第 23 或 23A 條的規定，申請牌照續期。監督可將牌照續期或拒絕牌照續期。
- (h) Under Section 24 of the Ordinance, the Authority may by notice in writing, impose new or amended terms and conditions on this licence or cancel this licence. Under Section 25, 26 and 27 of the Ordinance, a licensee whose licence has been so varied or cancelled may be entitled to compensation. 根據本條例第 24 條的規定，監督可以書面通知，向本牌照持牌人訂立新條款及條件，或取消本牌照。根據本條例第 25、26 及 27 條的規定，被更改或取消牌照的持牌人可能會獲得補償。
- (i) Under Section 28 of the Ordinance, the Licensee may apply to the Authority for a variation of this licence. 根據本條例第 28 條的規定，持牌人可向監督申請更改本牌照。
- (j) Under Section 49 of the Ordinance, this licence shall not be construed as a dispensation from the requirements of any other Ordinance except where that other Ordinance so provides. 根據本條例第 49 條的規定，本牌照並不構成釋義為豁免符合任何其他條例的規定，除非該其他條例如此訂定。
- (k) The licensee should ensure good practice is carried out in dealing with discharges from the construction site. The licensee should make reference to the EPD's Practice Note for Professional Persons, No. PN 1/94, "Construction Site Drainage". 持牌人須確保妥善處理地盤之去水排放。持牌人可參考環境保護署印發之「專業人員之建築地盤排水」(Construction Site Drainage)。

Annex I
附件 I



Title: Construction Site Boundary 標題: 建築地盤範圍		Annex to licence No.: WT00034610-2019 牌照編號 WT00034610-2019 的附件	
Construction Site of Kai Tak Development – Stage 4 Infrastructure at the Former Runway and South Apron, Kowloon City, Kowloon (CEDD Contract No. ED/2018/01) 九龍九龍城政德發展-前跑道和南停機坪的第4階段基礎設施之建築地盤 (土木工程拓展署合約編號ED/2018/01)		Date: 日期:	September 2019
Scale: 比例:		NTS 不按比例	ENVIRONMENTAL PROTECTION DEPARTMENT, HONG KONG REGIONAL OFFICE (EAST) 香港環境保護署 區域辦事處(東)





Wastewater Treatment Facility
廢水處理設施

Sampling Point (S.P.) at sampling valve of the discharge outlet of Wastewater Treatment Facility

取樣點 (S.P.) 位於廢水處理設施出水口的取樣閥



Title: Wastewater Treatment Facility and Sampling Point (S.P.)

標題: 廢水處理設施 及取樣點 (S.P.)

Construction Site of Kai Tak Development – Stage 4 Infrastructure at the Former Runway and South Apron, Kowloon City, Kowloon (CEDD Contract No. ED/2018/01)

九龍九龍城啟德發展-前跑道和南停機坪的第4階段基礎設施之建築地盤 (土木工程拓展署合約編號ED/2018/01)

Annex to licence No.: WT00034610-2019

牌照編號 WT00034610-2019 的附件

Date: September 2019
日期: 2019年9月

Scale: NTS
比例: 不按比例

ENVIRONMENTAL PROTECTION DEPARTMENT,
HONG KONG
REGIONAL OFFICE (EAST)

香港環境保護署
區域辦事處(東)



本署檔案
OUR REF: (4) in EP631/K19/RE448177-19
來函檔案
YOUR REF:
電話: 2150 8081
圖文傳真
TEL NO: 2150 8081
FAX NO: 2402 8275
網址
HOME PAGE: <http://www.epd.gov.hk/>

Registered Post

30 August 2019



Environmental Protection Department
環境保護署 0354
Environmental Compliance Division
環境法規管理科
Regional Office (East)
區域辦事處(東)
8/F., Cheung Sha Wan Government Offices,
303 Cheung Sha Wan Road,
Kowloon
九龍長沙灣道303號
長沙灣政府合署8樓



To: PENTA – OCEAN CONSTRUCTION CO., LTD.
Flat 601, K. Wah Centre,
191 Java Road,
North Point, Hong Kong

Dear Sir,

Notice of Issue of Construction Noise Permit pursuant
to section 8(6) of the Noise Control Ordinance (Cap. 400)

I write to inform you that, under section 8(6) of the Noise Control Ordinance, the Authority has decided to issue a construction noise permit in respect of your application, which was received by the Authority on 16 August 2019 for the use of powered mechanical equipment for carrying out construction work at Kai Tak Development – Stage 4 infrastructure at the former runway and south apron, Kai Tak, Kowloon (CEDD Contract No. ED/2018/01).

The construction noise permit No. GW-RE0699-19 is enclosed.

You are advised to read the conditions of the permit carefully and to ensure compliance with these conditions. Any breaching of the conditions may lead to cancellation of the permit, subsequent prosecution action and the Authority's refusal to issue further permit for the above construction site.

Yours faithfully,

(TANG Wai-man, Lisa)
for Authority

Note:

Electronic submission of application for construction noise permit is available at Environmental Protection Department's website. File attachments with total size not exceeding 20 MB in acceptable format are allowed for electronic submission. Electronic application form can be downloaded from our website (<https://epic.epd.gov.hk/eForm/ChangeLanguage.do?language=eng&url=/pages/data/download/downloadMain.jsp>) and an overview of application submission (<https://epic.epd.gov.hk/eForm/introduce.html>) is provided for more information.

(4) in EP631/K19/RE448177-19

2150 8081
2402 8275

致： 香港 北角
渣華道 191 號

嘉華國際中心 601 室
PENTA – OCEAN CONSTRUCTION CO., LTD.

掛號函件

執事先生：

根據《噪音管制條例(第 400 章)》第 8(6)條
發出的通知書——簽發「建築噪音許可證」。

本監督於二零一九年八月十六日，收到你擬於下述地址：九龍啟德啟德發展計劃
-前跑道及南面停機坪第四期基礎設施(土木工程拓展署合約編號 EID/2018/01)，使用機
動設備進行建築工程而提出的「建築噪音許可證」申請，現根據《噪音管制條例》第
8(6)條的規定通知你，上述的申請已被批准。

隨函附上「第 GW-RE0699-19 號建築噪音許可證」。

請細閱許可證各項條件，確保遵守，如有違反，本監督可撤銷許可證，提出檢控
及拒絕再就上述地盤簽發任何「建築噪音許可證」。

(劉慧敏 監 督
代行)

二零一九年八月三十日

注意：

環境保護署提供網上申請「建築噪音許可證」服務。網上申請容許上傳檔案總容量不大於 20 MB 的有
關文件。可於本署網頁下載電子表格

(<https://epic.epd.gov.hk/eForm/ChangeLanguage.do?language=en&url=/pages/data/download/downloadMain.jsp>)及參閱電子表格提交服務概覽(<https://epic.epd.gov.hk/eForm/introduce.html>)，了解更多資料。

FORM 3
NOISE CONTROL ORDINANCE
(Chapter 400)
SECTION 8(9)

[reg.5(a)]

CONSTRUCTION NOISE PERMIT FOR THE USE OF POWERED
MECHANICAL EQUIPMENT FOR THE PURPOSE OF CARRYING OUT
CONSTRUCTION WORK OTHER THAN PERCUSSIVE PILING AND/OR
THE CARRYING OUT OF PRESCRIBED CONSTRUCTION WORK

CONSTRUCTION NOISE PERMIT NO. GW-RE0699-19
To: PENTA – OCEAN CONSTRUCTION CO., LTD.

This construction noise permit is issued in accordance with section 8 of the Noise Control Ordinance. Permission is granted for the use of
powered mechanical equipment for the purpose of carrying out construction work other than percussive piling and/or the carrying out of
prescribed construction work, subject to the conditions set out below. The carrying out of construction work otherwise than in accordance
with the conditions may result in the permit being cancelled and in a prosecution for an offence.

CONDITIONS

1. Construction site where the powered mechanical equipment and/or prescribed construction work may be employed:
Full address: Kai Tak Development – Stage 4 Infrastructure at the former runway and south apron, Kai Tak, Kowloon
(GEDD Contract No. ED/2018/01). Lot No.:
The site boundary, that is, the boundary of the area within which the powered mechanical equipment may be used and the prescribed
construction work may be carried out is delineated on the attached plan which forms part of this construction noise permit.

2. *PART/WHOLE of the site falls * WITHIN/OUTSIDE a designated area.

3. Powered Mechanical Equipment

a. Items of powered mechanical equipment which may be used inside the site boundary:

Identification code of item of powered mechanical equipment (if applicable)	Description of item of powered mechanical equipment	No. of units
	Refer to attached sheet.	

b. Validity of the construction noise permit for the use of the powered mechanical equipment:

Date and time of commencement:	13 September 2019	at	1900 hours
Days and hours:	0000-2400 hours on general holiday (including Sunday), 0000-0700 hours and 1900-2400 hours on any day not being a general holiday [but note condition 3. d.1. below for the operating hours within which the use of the above listed powered mechanical equipment is allowed].		
This part of the permit expires on:	12 March 2020	at	2300 hours

c. One photograph, endorsed by the Authority, of each item of powered mechanical equipment described in this construction noise permit is required to be kept on the construction site and made available for inspection by the Authority.

d. Other conditions imposed on the use of the powered mechanical equipment:

1. The powered mechanical equipment listed in condition 3. a. shall only be operated during the hours shown below:

General holiday (including Sunday)	0700 – 2300 hours
Any day not being a general holiday	1900 – 2300 hours

2. Only one group of the powered mechanical equipment listed in condition 3. a. shall be allowed to operate at any time.

4. Prescribed Construction Work

a. Type of prescribed construction work which may be carried out inside the site boundary :

Identification code of type of prescribed construction work	Description of type of prescribed construction work
Not applicable	

b. Validity of the construction noise permit for the carrying out of the prescribed construction work:

Date and time of commencement: Not applicable at Not applicable
 Days and hours: Not applicable

This part of the permit expires on: Not applicable at Not applicable

c. Site layout plan(s) endorsed by the Authority may be attached with the permit to indicate the locations permitted for the carrying out of prescribed construction work described in this permit. The layout plan(s) required to be kept on the construction site and made available for inspection by the Authority:

d. Other conditions imposed on the carrying out of the prescribed construction work:

5. This construction noise permit or a copy thereof must be displayed on the construction site at all vehicular entrances for public information.

Dated this 30th day of August 20 19

Signed: _____

(TANG Wa-man, Lisa)
for Authority

* Delete as necessary

表格 3
 噪音管制條例
 (第 400 章)
 第 8 (9) 條

建築噪音許可證
 為進行建築工程 (撞擊式打樁除外)
 而使用機動設備及 / 或進行訂明建築工程

建築噪音許可證編號: GW-RE06599-19
 致: PENTA - OCEAN CONSTRUCTION CO, LTD.

本建築噪音許可證是按照《噪音管制條例》第 8 條的規定而發出的。現准予使用機動設備以進行撞擊式打樁工程以外的建築工程及 / 或進行訂明建築工程, 但須受以下條件規限。若不按照該等條件進行建築工程, 許可證可遭撤銷, 而且會受到檢控。

1. 可使用機動設備及 / 或進行訂明建築工程的建築地段: 廢 存

詳細地址: 九龍啟德啟德發展計劃-前跑道及南面停機坪第四期基礎設施 (土木工程拓展署合約編號 ED/2018/01)。 地段編號: ---

地段範圍 (即可使用機動設備及進行訂明建築工程的地方範圍) 已描劃於夾附的圖則上, 而該圖則是本建築噪音許可證的一部分。

2. 該地段部分 / 全部 * 位於指定範圍之內 / 外*。

3. 機動設備

a. 在地盤範圍內可使用的各項機動設備:

各項機動設備的識別代碼 (如適用的話)	各項機動設備的說明	數目
	參見附頁。	

b. 可使用機動設備的建築噪音許可證有效期:

生效日期及時間: 二零一九年九月十三日 下午七時

日期及時間: 公眾假日 (包括星期日) 的凌晨零時至晚上十二時, 公眾假日以外的任何一日凌晨零時至上午七時及下午七時至晚上十二時 【但須注意條件 3. d. 1. 有關可以使用上列機動設備的時間】。

此部分許可證屆滿日期及時間: 二零二零年三月十二日 晚上十一時

c. 建築地段須備有本建築噪音許可證所述每件機動設備的照片各一幅, 供監督隨時查看; 該等照片須經監督認可。

d. 規限使用機動設備的其他條件:

1. 祇可於以下時間內使用列在條件 3. a 內的機動設備:

公眾假日 (包括星期日)	上午七時至晚上十一時
公眾假日以外的任何一日	下午七時至晚上十一時

2. 在任何時間內, 祇可使用列在條件 3. a. 內的其中一組機動設備。

4. 訂明建築工程

a. 在地盤範圍內可進行的訂明建築工程：

訂明建築工程的識別代碼	訂明建築工程的類別的說明
不適用	

b. 可進行訂明建築工程的建築噪音許可證有效期期：

生效日期及時間： 不適用

日期及時間： 不適用。

此部分許可證屆滿日期及時間：

不適用

日期

時間

c. 本許可證可夾附經監督認可的地盤圖則，以顯示本許可證准予進行訂明建築工程的地點。該地盤圖則須存放於建築地盤供監督隨時查看。

d. 規限進行訂明建築工程的其他條件：

5. 本建築噪音許可證或其副本必須展示於建築地盤的所有車輛入口處，給予公眾人士參閱。

日期：20 19 年 08 月 30 日

* 刪去不適用者

簽署：

 監督
 (鄧慧敏 代行)

Sheet Attached to Construction Noise Permit

No. GW-RE0699-19

3.a. Items of powered mechanical equipment which may be used inside the site boundary :

Identification code of item of powered mechanical equipment (if applicable)	Description of item of powered mechanical equipment	No. of units
Group A		
CNP 101	Generator, standard	One
---	Lorry with grab, 5.5 tonne<gross vehicle weight≤38 tonne	One
---	Lorry with crane, 5.5 tonne<gross vehicle weight≤38 tonne	One
---	Wastewater treatment plant	One
CNP 281	Water pump (electric)	One
CNP 283	Water pump, submersible (electric)	One
Group B		
CNP 101	Generator, standard	One
---	Dump truck, 5.5 tonne<gross vehicle weight≤38 tonne	One
---	Wastewater treatment plant	One
CNP 281	Water pump (electric)	One
CNP 283	Water pump, submersible (electric)	One
CNP 081	Excavator, tracked	One

Signed : 
 (TANG Wai-man, Lisa)
 for Authority

建築噪音許可證
編號 GW-RE0699-19 的附頁

3.a. 在地盤範圍內可使用的各項機動設備：

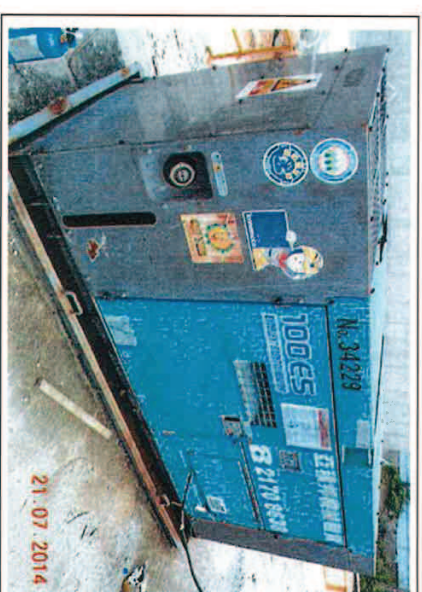
各項機動設備的識別代碼 (如適用的話)	各項機動設備的說明	數目
A組		
CNP 101	發電機，標準型	壹
---	抓斗貨車，5.5噸<總重量≤38噸	壹
---	吊臂貨車，5.5噸<總重量≤38噸	壹
---	污水處理器	壹
CNP 281	水泵(電動)	壹
CNP 283	潛水泵(電動)	壹
B組		
CNP 101	發電機，標準型	壹
---	卸土車，5.5噸<總重量≤38噸	壹
---	污水處理器	壹
CNP 281	水泵(電動)	壹
CNP 283	潛水泵(電動)	壹
CNP 081	挖土機，履帶式	壹

簽署：

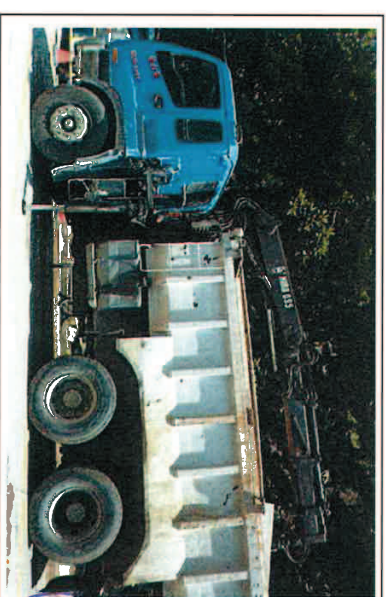


監督
(鄧慧敏 代行)

Photograph(s) attached to Construction Noise Permit No. GW-RE0699-19
建築噪音許可證編號：GW-RE0699-19 的照片



CNP 101 Generator, standard
發電機，標準型



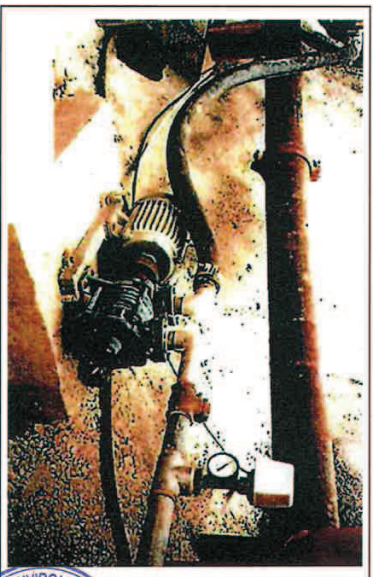
Lorry with grab, 5.5 tonne<gross vehicle weight≤38 tonne
抓斗貨車，5.5噸<總重量≤38噸



Photograph(s) attached to Construction Noise Permit No. GW-RE0699-19
建築噪音許可證編號：GW-RE0699-19 的照片



Wastewater treatment plant
污水處理器



CNP 281 Water pump (electric)
水泵 (電動)



Photograph(s) attached to Construction Noise Permit No. GW-RE0699-19
建築噪音許可證編號：GW-RE0699-19 的照片



CNP 283 Water pump, submersible (electric)
潛水泵 (電動)



Lorry with crane, 5.5 tonne < gross vehicle weight \leq 38 tonne
吊臂貨車，5.5噸 < 總重量 \leq 38 噸

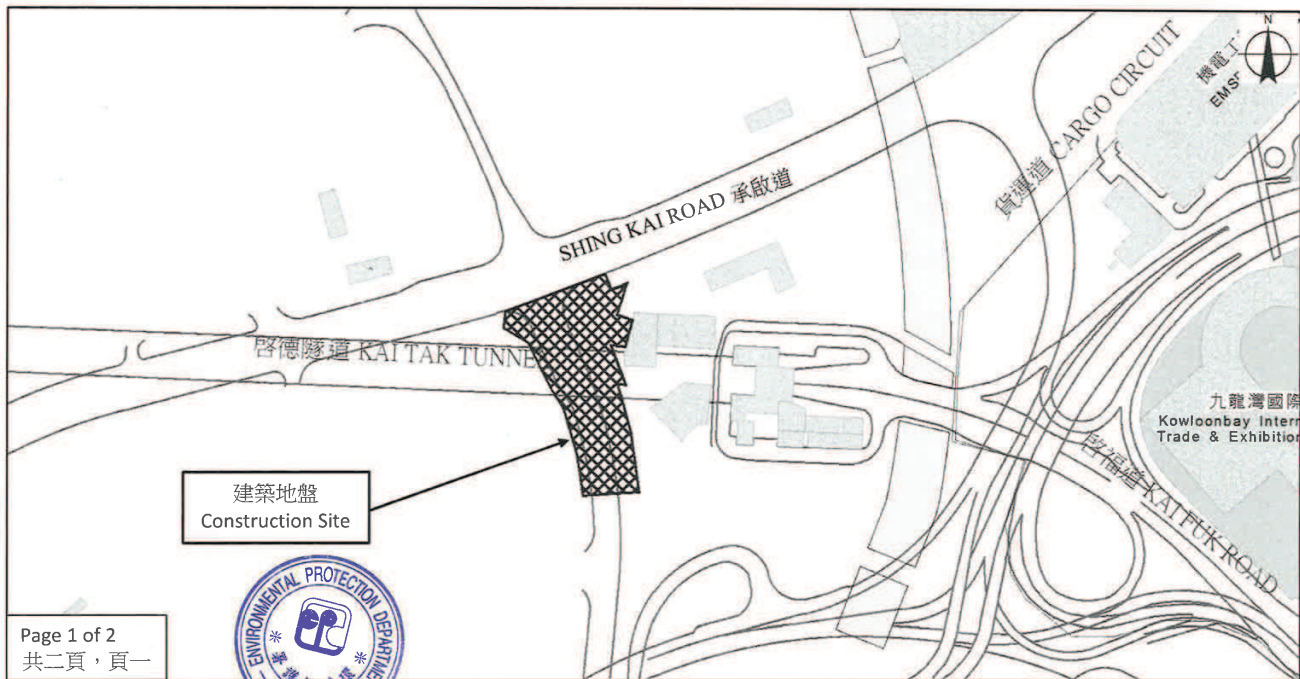




Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne
 卸土車，5.5噸 < 總重量 ≤ 38噸

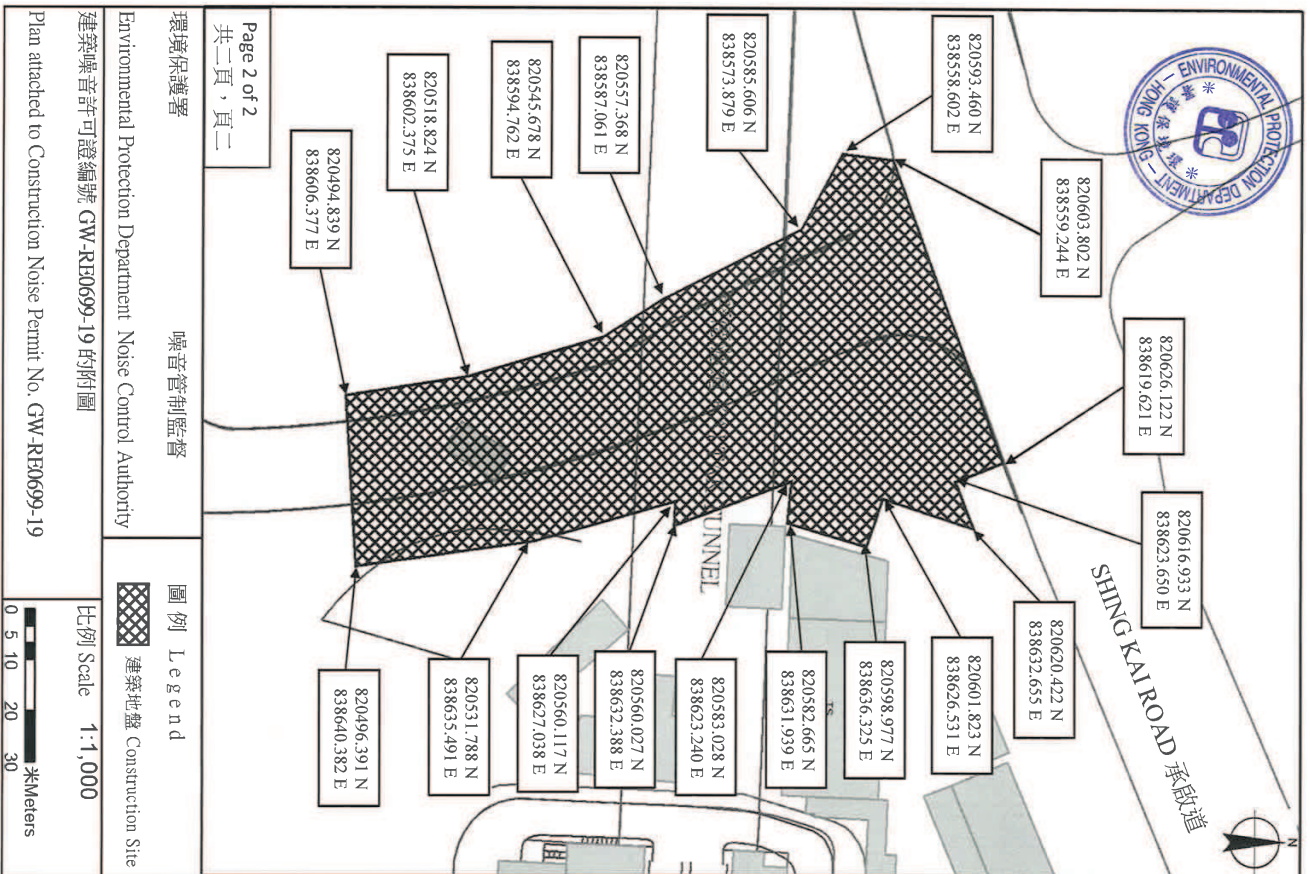


CNP 081 Excavator, tracked
 挖土機，履帶式



建築地盤
 Construction Site





Page 2 of 2
共二頁，頁二

環境保護署

噪音管制監督

圖例 Legend

Environmental Protection Department Noise Control Authority

建築地盤 Construction Site

建築噪音許可證編號 GW-RE0699-19 的附圖

比例 Scale 1:1,000

Plan attached to Construction Noise Permit No. GW-RE0699-19

0 5 10 20 30 米 Meters

本署檔案
OUR REF: (4) in EP631/K/19/RE449113-19
來函檔案
YOUR REF:
電話
TEL NO: 2150 8081
圖文傳真
FAX NO: 2402 8275
網址
HOMEPAGE: <http://www.epd.gov.hk/>

Environmental Protection Department
Environmental Compliance Division
Regional Office (East)
8/F, Cheung Sha Wan Government Offices,
303 Cheung Sha Wan Road,
Kowloon

環境保護署
環境法規管理科
區域辦事處(東)
九龍长沙灣道303號
长沙灣政府官署8樓

0513

RECEIVED
5 OCT 2019
PENTA-OCEAN
KTD 09021

Registered Post

03 October 2019

To: PENTA – OCEAN CONSTRUCTION CO., LTD.
Flat 601, K. Wah Centre,
191 Java Road,
North Point, Hong Kong

Dear Sir,

Notice of Issue of Construction Noise Permit pursuant to section 8(6) of the Noise Control Ordinance (Cap. 400)

I write to inform you that, under section 8(6) of the Noise Control Ordinance, the Authority has decided to issue a construction noise permit in respect of your application, which was received by the Authority on 16 September 2019 for the use of powered mechanical equipment for carrying out construction work at Kai Tak Development – Stage 4 infrastructure at the former runway and south apron (Works Area WAI), Kai Tak, Kowloon (CEDD Contract No. ED/2018/01).

The construction noise permit No. GW-RE0786-19 is enclosed.

You are advised to read the conditions of the permit carefully and to ensure compliance with these conditions. Any breaching of the conditions may lead to cancellation of the permit, subsequent prosecution action and the Authority's refusal to issue further permit for the above construction site.

Yours faithfully,

(TANG Wai-man, Lisa)
for Authority

Note:
Electronic submission of application for construction noise permit is available at Environmental Protection Department's website. File attachments with total size not exceeding 20 MB in acceptable format are allowed for electronic submission. Electronic application form can be downloaded from our website (<https://epic.epd.gov.hk/eForm/ChangeLanguage.do?language=en&url=/pages/data/download/downloadVain.jsp>) and an overview of application submission (<https://epic.epd.gov.hk/eForm/introduce.html>) is provided for more information.

(4) in EP631/K19/RE449113-19

2150 8081
2402 8275

致： 香港 北角
渣華道 191 號

嘉華國際中心 601 室

PENTA – OCEAN CONSTRUCTION CO., LTD.

掛號函件

執事先生：

根據《噪音管制條例(第 400 章)》第 8(6)條
發出的通知書——簽發「建築噪音許可證」

本監督於二零一九年九月十六日，收到你擬於下述地址：九龍啟德啟德發展計劃
-前跑道及南面停機坪第四期基礎設施(工作地區 WAI) (土木工程拓展署合約編號
ED/2018/01)，使用機動設備進行建築工程而提出的「建築噪音許可證」申請，現根據
《噪音管制條例》第 8(6)條的規定通知你，上述的申請已被批准。

隨函附上「第 GW-RE0786-19 號建築噪音許可證」。

請細閱許可證各項條件，確保遵守，如有違反，本監督可撤銷許可證，提出檢控
及拒絕再就上述地盤簽發任何「建築噪音許可證」。

(劉慧敏)

監督

代行)

二零一九年十月三日

注意：

環境保護署提供網上申請「建築噪音許可證」服務。網上申請容許上傳檔案總容量不大於 20 MB 的有
關文件。可於本署網頁下載電子表格

<https://epic.epd.gov.hk/eForm/ChangeLanguage.do?language=eng&url=/pages/data/download/downloadMain.jsp>及參閱電子表格提交服務概覽(<https://epic.epd.gov.hk/eForm/introduce.html>)，了解更多資料。

FORM 3
NOISE CONTROL ORDINANCE
(Chapter 400)
SECTION 8(9)

[reg-5(a)]

CONSTRUCTION NOISE PERMIT FOR THE USE OF POWERED
MECHANICAL EQUIPMENT FOR THE PURPOSE OF CARRYING OUT
CONSTRUCTION WORK OTHER THAN PERCUSSIVE PILING AND/OR
THE CARRYING OUT OF PRESCRIBED CONSTRUCTION WORK

CONSTRUCTION NOISE PERMIT NO. GW-RE0786-19
To: PENTA – OCEAN CONSTRUCTION CO., LTD.

This construction noise permit is issued in accordance with section 8 of the Noise Control Ordinance. Permission is granted for the use of powered mechanical equipment for the purpose of carrying out construction work other than percussive piling and/or the carrying out of prescribed construction work, subject to the conditions set out below. The carrying out of construction work otherwise than in accordance with the conditions may result in the permit being cancelled and in a prosecution for an offence.

CONDITIONS

1. Construction site where the powered mechanical equipment and/or prescribed construction work may be employed:
Full address: Kai Tak Development – Stage 4 infrastructure at the former runway and south apron (Works Area WAI), Kai Tak, Kowloon (CEDD Contract No. ED/2018/01). Lot No.: ---
2. * PARERWHOLE of the site falls * WHHHH/N/OUTSIDE a designated area.
3. Powered Mechanical Equipment

a. Items of powered mechanical equipment which may be used inside the site boundary:

Identification code of item of powered mechanical equipment (if applicable)	Description of item of powered mechanical equipment	No. of units
---	Generator, with Quality Powered Mechanical Equipment Label showing a Sound Power Level ≤ 93 dB(A)	Two

b. Validity of the construction noise permit for the use of the powered mechanical equipment:

Date and time of commencement: 05 October 2019 at 1900 hours
Days and hours: 0000-2400 hours on general holiday (including Sunday), 0000-0700 hours and 1900-2400 hours on any day not being a general holiday.

This part of the permit expires on: 04 April 2020 at 2400 hours

- c. One photograph, endorsed by the Authority, of each item of powered mechanical equipment described in this construction noise permit is required to be kept on the construction site and made available for inspection by the Authority.
- d. Other conditions imposed on the use of the powered mechanical equipment:

4. Prescribed Construction Work

a. Type of prescribed construction work which may be carried out inside the site boundary :

Identification code of type of prescribed construction work	Description of type of prescribed construction work
Not applicable	

b. Validity of the construction noise permit for the carrying out of the prescribed construction work:

Date and time of commencement: Not applicable at Not applicable
 Days and hours: Not applicable

This part of the permit expires on: Not applicable at Not applicable

c. Site layout plan(s) endorsed by the Authority may be attached with the permit to indicate the locations permitted for the carrying out of prescribed construction work described in this permit. The layout plan(s) is(are) required to be kept on the construction site and made available for inspection by the Authority.

d. Other conditions imposed on the carrying out of the prescribed construction work:

5. This construction noise permit or a copy thereof must be displayed on the construction site at all vehicular entrances for public information.

Dated this 03rd day of October 20 19

Signed: _____
 (TANG Wai-man, Lisa)
 for Authority

* Delete as necessary

[第 5(a) 條]

表格 3
 噪音管制條例
 (第 400 章)
 第 8(9) 條

建築噪音許可證
 為進行建築工程（撞擊式打樁除外）
 而使用機動設備及／或進行訂明建築工程

建築噪音許可證編號： GM-RE0786-19

致： PENTA - OCEAN CONSTRUCTION CO., LTD.

本建築噪音許可證是按照《噪音管制條例》第 8 條的規定而發出的。現准予使用機動設備以進行撞擊式打樁工程以外的建築工程及／或進行訂明建築工程，但須受以下條件規限。若不按照該等條件進行建築工程，許可證可遭撤銷，而且會受到檢控。

條件

1. 可使用機動設備及／或進行訂明建築工程的建築地盤：

詳細地址：九龍啟德啟德發展計劃-前跑道及南面停機坪第四期基礎設施(工作地區 WA1) (土木工程拓展署合約編號 ED/2018/01)。 地段編號： _____

地盤範圍(即可使用機動設備及進行訂明建築工程的地方範圍)已描劃於夾附的圖則上，而該圖則是本建築噪音許可證的一部分。

2. 該地盤部分／全部*位於指定範圍之內／外*。

3. 機動設備

a. 在地盤範圍內可使用的各項機動設備：

各項機動設備的識別代碼 (如適用的話)	各項機動設備的說明	數目
---	發電機，備有優質機動設備標籤顯示聲功率等級≤93分貝(A)	貳

b. 可使用機動設備的建築噪音許可證有效期：

生效日期及時間： 二零一九年十月五日 下午七時
 日期及時間：公眾假日(包括星期日)的凌晨零時至晚上十二時，公眾假日以外的任何一日凌晨零時至上午七時及下午七時至晚上十二時。

此部分許可證屆滿日期及時間： 二零二零年四月四日 晚上十二時

c. 建築地盤須備有本建築噪音許可證所述每件機動設備的照片各一幀，供監督隨時查看；該等照片須經監督認可。

d. 規限使用機動設備的其他條件：

4. 訂明建築工程

a. 在地盤範圍內可進行的訂明建築工程：

訂明建築工程的識別代碼	訂明建築工程的類別的說明
	不適用

b. 可進行訂明建築工程的建築噪音許可證有效期期：

生效日期及時間：不適用

日期及時間：不適用。

此部分許可證屆滿日期及時間：不適用

日期 時間

c. 本許可證可夾附經監督認可的地盤圖則，以顯示本許可證准予進行訂明建築工程的地點。該地盤圖則須存放於建築地盤供監督隨時查看。

d. 規限進行訂明建築工程的其他條件：

5. 本建築噪音許可證或其副本必須展示於建築地盤的所有車輛入口處，給予公眾人士參閱。

日期：20 19 年 10 月 03 日

簽署：

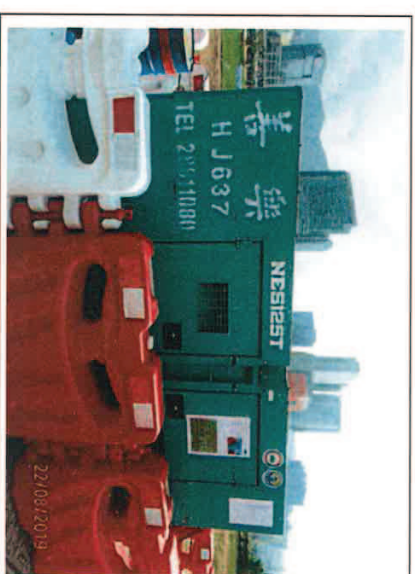


監督
(鄧慧敏 代行)

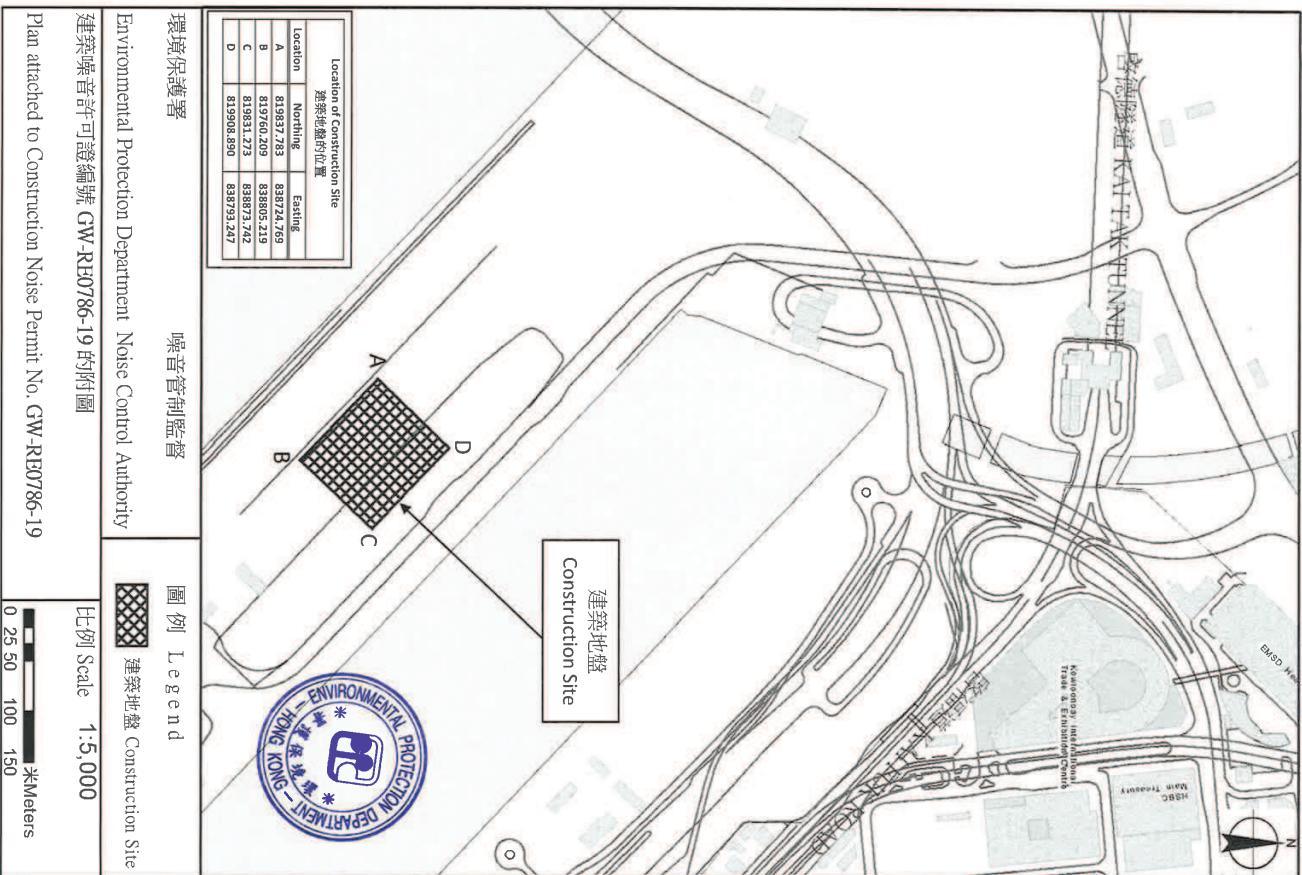
* 刪去不適用者

Photograph(s) attached to Construction Noise Permit No. GW-RE0786-19

建築噪音許可證編號：GW-RE0786-19 的照片



Generator, with Quality Powered Mechanical Equipment Label showing a Sound Power Level ≤ 93 dB(A)
發電機，備有優質機動設備標籤顯示聲功率等級 ≤ 93 分貝(A)



Plan attached to Construction Noise Permit No. GW-RE0786-19

建築噪音許可證編號 GW-RE0786-19 的附圖

Environmental Protection Department Noise Control Authority

環境保護署 噪音管制監督

圖例 Legend



建築地盤 Construction Site

比例 Scale 1:5,000

0 25 50 100 150 米Meters

本署檔案
OUR REF: (4) in EP631/K(19)/RE449941-19
來函檔案
YOUR REF:
電話
TEL NO: 2150 8081
圖文傳真
FAX NO: 2402 8275
網址
HOMEPAGE: <http://www.epd.gov.hk/>

Environmental Protection Department
Environmental Compliance Division
Regional Office (East)
8/F., Cheung Sha Wan Government Offices,
303 Cheung Sha Wan Road,
Kowloon

環境保護署
環境法規管理科
區域辦事處(東)
九龍長沙灣道303號
長沙灣政府合署8樓
000687

Registered Post

30 October 2019

To: PENTA – OCFAN CONSTRUCTION CO., LTD.
Flat 601, K. Wah Centre,
191 Java Road,
North Point, Hong Kong



Dear Sir,

Notice of Issue of Construction Noise Permit pursuant to section 8(6) of the Noise Control Ordinance (Cap. 400)

I write to inform you that, under section 8(6) of the Noise Control Ordinance, the Authority has decided to issue a construction noise permit in respect of your application, which was received by the Authority on 14 October 2019 for the use of powered mechanical equipment for carrying out construction work at Kai Tak Development – Stage 4 infrastructure at the former runway and south apron (Works Area Part 1), Kai Tak, Kowloon (CEDD Contract No. ED/2018/01).

The construction noise permit No. GW-RE0880-19 is enclosed.

You are advised to read the conditions of the permit carefully and to ensure compliance with these conditions. Any breaching of the conditions may lead to cancellation of the permit, subsequent prosecution action and the Authority's refusal to issue further permit for the above construction site.

Yours faithfully,

(TANG Wai-man, Lisa)
for Authority

Note:

Electronic submission of application for construction noise permit is available at Environmental Protection Department's website. File attachments with total size not exceeding 20 MB in acceptable format are allowed for electronic submission. Electronic application form can be downloaded from our website (<https://epic.epd.gov.hk/eForm/ChangeLanguage.do?language=eng&url=/pages/data/download/downloadMain.jsp>) and an overview of application submission (<https://epic.epd.gov.hk/eForm/introduce.html>) is provided for more information.

香港 北角
渣華道 191 號
嘉華國際中心 601 室
PENTA-OCEAN CONSTRUCTION CO., LTD.

掛號函件

執事先生：

根據《噪音管制條例(第 400 章)》第 8(6)條
發出的通知書 — 簽發「建築噪音許可證」

本監督於二零一九年十月十四日，收到你擬於下述地址：九龍啟德啟德發展計劃
—前跑道及南面停機坪第四期基礎設施(工作地區第一部分) (土木工程拓展署合約編號
ED/2018/01)，使用機動設備進行建築工程而提出的「建築噪音許可證」申請，現根據
《噪音管制條例》第 8(6)條的規定通知你，上述的申請已被批准。

隨函附上「第 GW-RE0880-19 號建築噪音許可證」。

請細閱許可證各項條件，確保遵守，如有違反，本監督可撤銷許可證，提出檢控
及拒絕再就上述地點簽發任何「建築噪音許可證」。

二零一九年十月三十日

(鄧慧敏

監督

代行)

注意：
環境保護署提供網上申請「建築噪音許可證」服務。網上申請容許上傳檔案總容量不大於 20 MB 的有
關文件。可於本署網頁下載電子表格

(<https://epic.epd.gov.hk/eForm/ChangeLanguage.do?language=eng&url=pages/data/download/downloadMain.jsp>)
及參閱電子表格提交服務概覽(<https://epic.epd.gov.hk/eForm/introduce.html>)，了解更多資料。

FORM 3
NOISE CONTROL ORDINANCE
(Chapter 400)
SECTION 8(9)

[reg.5(a)]

CONSTRUCTION NOISE PERMIT FOR THE USE OF POWERED
MECHANICAL EQUIPMENT FOR THE PURPOSE OF CARRYING OUT
CONSTRUCTION WORK OTHER THAN PERCUSSIVE PILING AND/OR
THE CARRYING OUT OF PRESCRIBED CONSTRUCTION WORK

CONSTRUCTION NOISE PERMIT NO. GW-RE0880-19

To: PENTA-OCEAN CONSTRUCTION CO., LTD.

This construction noise permit is issued in accordance with section 8 of the Noise Control Ordinance. Permission is granted for the use of
powered mechanical equipment for the purpose of carrying out construction work other than percussive piling and/or the carrying out of
prescribed construction work, subject to the conditions set out below. The carrying out of construction work otherwise than in accordance with
the conditions may result in the permit being cancelled and in a prosecution for an offence.

CONDITIONS

1. Construction site where the powered mechanical equipment and/or prescribed construction work may be employed:
Full address: Kai Tak Development - Stage 4 Infrastructure at the former runway and south apron (Works Area Part 1), Kai Tak,
Kowloon (CHDD Contract No. ED/2018/01), Lot No: _____

The site boundary, that is, the boundary of the area within which the powered mechanical equipment may be used and the prescribed
construction work may be carried out is delineated on the attached plan which forms part of this construction noise permit.

2. * PARE/WHOLE of the site falls * WITHIN/OUTSIDE a designated area.

3. Powered Mechanical Equipment

a. Items of powered mechanical equipment which may be used inside the site boundary:

Identification code of item of powered mechanical equipment (if applicable)	Description of item of powered mechanical equipment	No. of units
	Refer to attached sheet.	

b. Validity of the construction noise permit for the use of the powered mechanical equipment:

Date and time of commencement: 30 October 2019 at 1900 hours

Days and hours: 0000-2400 hours on general holiday (including Sunday), 0000-0700 hours and 1900-2400 hours on any day not
being a general holiday [but note Condition 3.d.1. below for the operating hours within which the use of the above listed
powered mechanical equipment is allowed].

This part of the permit expires on: 27 April 2020 at 2400 hours

c. One photograph, endorsed by the Authority, of each item of powered mechanical equipment described in this construction noise
permit is required to be kept on the construction site and made available for inspection by the Authority.

d. Other conditions imposed on the use of the powered mechanical equipment:

Refer to attached sheet.

4. Prescribed Construction Work

a. Type of prescribed construction work which may be carried out inside the site boundary:

Identification code of type of prescribed construction work	Description of type of prescribed construction work
Not applicable	

b. Validity of the construction noise permit for the carrying out of the prescribed construction work:

Date and time of commencement: Not applicable at Not applicable
 Days and hours: Not applicable

This part of the permit expires on: Not applicable at Not applicable

c. Site layout plan(s), endorsed by the Authority, may be attached with the permit to indicate the locations permitted for the carrying out of prescribed construction work described in this permit. The layout plan(s) required to be kept on the construction site and made available for inspection by the Authority:

d. Other conditions imposed on the carrying out of the prescribed construction work:

5. This construction noise permit or a copy thereof must be displayed on the construction site at all vehicular entrances for public information.

Dated this 30th day of October 20 19

Signed: _____
 (TANG Wai-man, Lisa)
 for Authority

* Delete as necessary

表格 3
 噪音管制條例
 (第 400 章)
 第 8 (9) 條

建築噪音許可證
 為進行建築工程 (撞擊式打樁除外)
 而使用機動設備及/或進行訂明建築工程

建築噪音許可證編號: GW-RE0880-19

致: PENTA - OCEAN CONSTRUCTION CO., LTD.

本建築噪音許可證是按照《噪音管制條例》第 8 條的規定而發出的。現准予使用機動設備以進行撞擊式打樁工程以外的建築工程及/或進行訂明建築工程, 但須受以下條件規限。若不按照該等條件進行建築工程, 許可證可遭撤銷, 而且會受到檢控。

條件

1. 可使用機動設備及/或進行訂明建築工程的建築地盤: _____
 詳細地址: 九龍啟德發展計劃前跑道及南面停機坪第四期基礎設施(工作地區第一部份)(土木工程拓展署合約編號ED/2018/01)。 地段編號: _____
2. 該地盤部分/全部*位於指定範圍之內/外*。
 地盤範圍(即可使用機動設備及進行訂明建築工程的地方範圍)已描劃於夾附的圖則上, 而該圖則是本建築噪音許可證的一部分。
3. 機動設備
 a. 在地盤範圍內可使用的各項機動設備:

各項機動設備的識別代碼 (如適用的話)	各項機動設備的說明	數目
	參見附頁。	

- b. 可使用機動設備的建築噪音許可證有效期: _____
 生效日期及時間: 二零一九年十月三十日 下午七時
 日期及時間: 公眾假日(包括星期日)的凌晨零時至晚上十二時; 公眾假日以外的任何一日凌晨零時至上午七時及下午七時至晚上十二時【但須注意條件3.d.1.有關可以使用上列機動設備的時間】。
 此部分許可證屆滿日期及時間: 二零二零年四月二十七日 晚上十二時

 日期 時間
- c. 建築地盤須備有本建築噪音許可證所述每件機動設備的照片各一幀, 供監督隨時查看; 該等照片須經監督認可。
- d. 規限使用機動設備的其他條件: _____
 參見附頁。

4. 訂明建築工程

a. 在地盤範圍內可進行的訂明建築工程：

訂明建築工程的識別代碼	訂明建築工程的類別的說明
不適用	

b. 可進行訂明建築工程的建築噪音許可證有效期期：

生效日期及時間：不適用

日期及時間：不適用。

此部分許可證屆滿日期及時間：

日期 不適用 時間

c. 本許可證可夾附監察機認可的地盤圖則，以顯示本許可證准予進行訂明建築工程的地點。該地盤圖則須存放於建築地盤供監督隨時查看。

d. 規限進行訂明建築工程的其他條件：

5. 本建築噪音許可證或其副本必須展示於建築地盤的所有車輛入口處，給予公眾人士參閱。

日期：2019 年 10 月 30 日

簽署：



監督

(鄧慧敏 代行)

* 刪去不適用者

Sheet Attached to Construction Noise Permit

No. GW-RE08880-19

3.a. Items of powered mechanical equipment which may be used inside the site boundary :

Identification code of item of powered mechanical equipment (if applicable)	Description of item of powered mechanical equipment	No. of units
Group A		
---	Generator, with Quality Powered Mechanical Equipment Label showing a Sound Power Level ≤ 93 dB(A)	One
CNP 048	Piling, vibrating hammer	One
---	Crane, mobile (diesel)	One
---	Welding machine (electric)	One
---	Air blower (electric)	One
---	Power pack (diesel)	One
CNP 283	Water pump, submersible (electric)	Eight
---	Wastewater treatment plant	One
Group B		
---	Generator, with Quality Powered Mechanical Equipment Label showing a Sound Power Level ≤ 93 dB(A)	One
CNP 081	Excavator, tracked	One
CNP 283	Water pump, submersible (electric)	Eight
---	Wastewater treatment plant	One
---	Dump truck with grab, 5.5 tonne \leq gross vehicle weight ≤ 38 tonne	One
---	Welding machine (electric)	One
CNP 048	Crane, mobile (diesel)	One
Group C		
---	Generator, with Quality Powered Mechanical Equipment Label showing a Sound Power Level ≤ 93 dB(A)	Three
CNP 283	Water pump, submersible (electric)	Twelve
---	Wastewater treatment plant	Two

Signed:

(TANG Wai-man, Lisa)
for Authority

建築噪音許可證
編號 GW-RE0880-19 的附頁

3.a. 在地盤範圍內可使用的各項機動設備：

各項機動設備的識別代碼 (如適用的話)	各項機動設備的說明	數目
A組 --- CNP 048 --- --- CNP 283 ---	發電機，備有優質機動設備標籤顯示聲功率等級 ≤93 分貝(A) 打樁機，震動鏈 起重機，流動 (油渣) 焊接機 (電動) 吹風機 (電動) 油渣動力供應器 潛水泵 (電動) 污水處理器	壹 壹 壹 壹 壹 壹 捌 壹
B組 --- CNP 081 CNP 283 --- --- CNP 048	發電機，備有優質機動設備標籤顯示聲功率等級 ≤93 分貝(A) 挖土機，履帶式 潛水泵 (電動) 污水處理器 抓斗卸土車，5.5 噸<總重量 ≤38 噸 焊接機 (電動) 起重機，流動 (油渣)	壹 壹 捌 壹 壹 壹 壹
C組 --- CNP 283 ---	發電機，備有優質機動設備標籤顯示聲功率等級 ≤93 分貝(A) 潛水泵 (電動) 污水處理器	壹 拾 貳

簽署：



監督

(鄧慧敏 代行)

Sheet Attached to Construction Noise Permit

No. GW-RE0880-19

3.d. Other conditions imposed on the use of the powered mechanical equipment:

- The powered mechanical equipment listed in condition 3.a shall only be operated during the hours shown below:

Group A and Group B	General holiday including Sunday	0700 – 1900 hours
	Any day not being a general holiday	1900 – 2300 hours
Group C	General holiday including Sunday	0000 – 2400 hours
	Any day not being a general holiday	0000 – 0700 hours AND 1900 – 2400 hours

- Only one group of the powered mechanical equipment listed in condition 3.a shall be allowed to operate at any time.

Signed :

(TANG Wai-man, Lisa)
for Authority

建築噪音許可證
編號 GW-RE0880-19 的附頁

3. d. 規限使用機動設備的其他條件：

1. 祇可於以下時間內使用列在條件 3. a 內的機動設備：

A組及B組	公眾假日包括星期日	上午七時 至 下午七時
	公眾假日以外的任何一日	下午七時 至 晚上十一時
C組	公眾假日包括星期日	凌晨零時至晚上十二時
	公眾假日以外的任何一日	凌晨零時至 上午七時 及 下午七時至晚上十二時

2. 在任何時間內，祇可使用列在條件 3. a. 內其中一組機動設備。

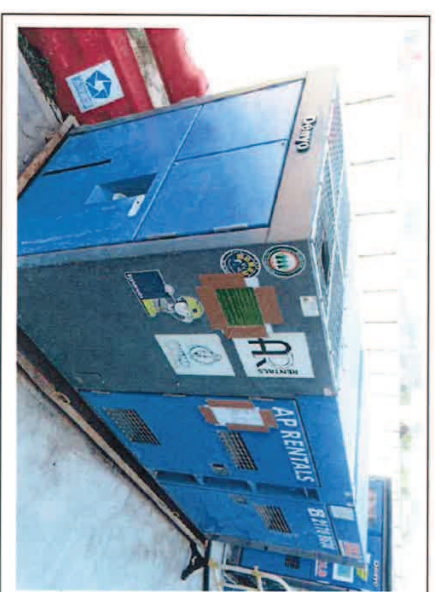
簽署：



監督

(鄧慧敏 代行)

Photograph(s) attached to Construction Noise Permit No. GW-RE0880-19
建築噪音許可證編號：GW-RE0880-19 的照片



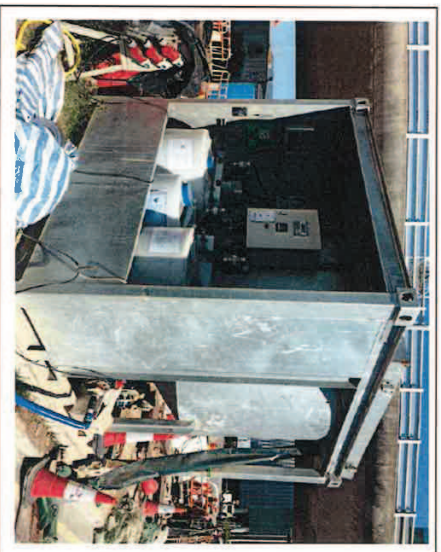
Generator, with Quality Powered Mechanical Equipment Label showing a Sound Power Level ≤ 93 dB(A)
發電機，備有優質機動設備標籤顯示聲功率級 ≤ 93 分貝(A)



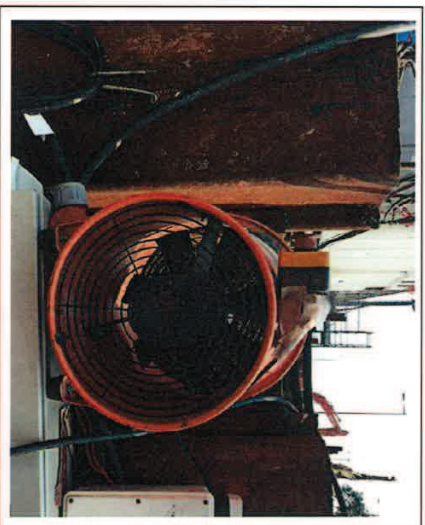
CNP 283 Water pump, submersible (electric)
潛水泵 (電動)



Photograph(s) attached to Construction Noise Permit No. GW-RE0880-19
建築噪音許可證編號：GW-RE0880-19 的照片



Wastewater treatment plant
污水處理器



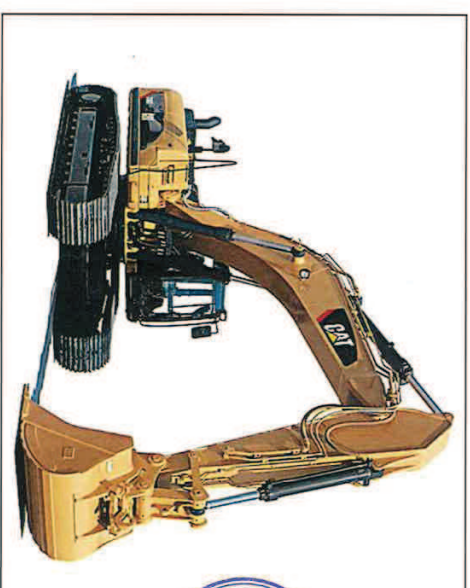
Air blower (electric)
吹風機 (電動)



Photograph(s) attached to Construction Noise Permit No. GW-RE0880-19
建築噪音許可證編號：GW-RE0880-19 的照片



Dump truck with grab, 5.5 tonne < gross vehicle weight \leq 38 tonne
抓斗卸土車，5.5 噸 < 總重量 \leq 38 噸



CNP 081 Excavator, tracked
挖土機，履帶式



Photograph(s) attached to Construction Noise Permit No. GW-RE0880-19
建築噪音許可證編號：GW-RE0880-19 的照片



Power pack (diesel)
油渣動力供應器

Photograph(s) attached to Construction Noise Permit No. GW-RE0880-19
建築噪音許可證編號：GW-RE0880-19 的照片



CNP 048 Crane, mobile (diesel) (1)
起重機，流動(油渣) (1)



Piling, vibrating hammer
打樁機，震動錘

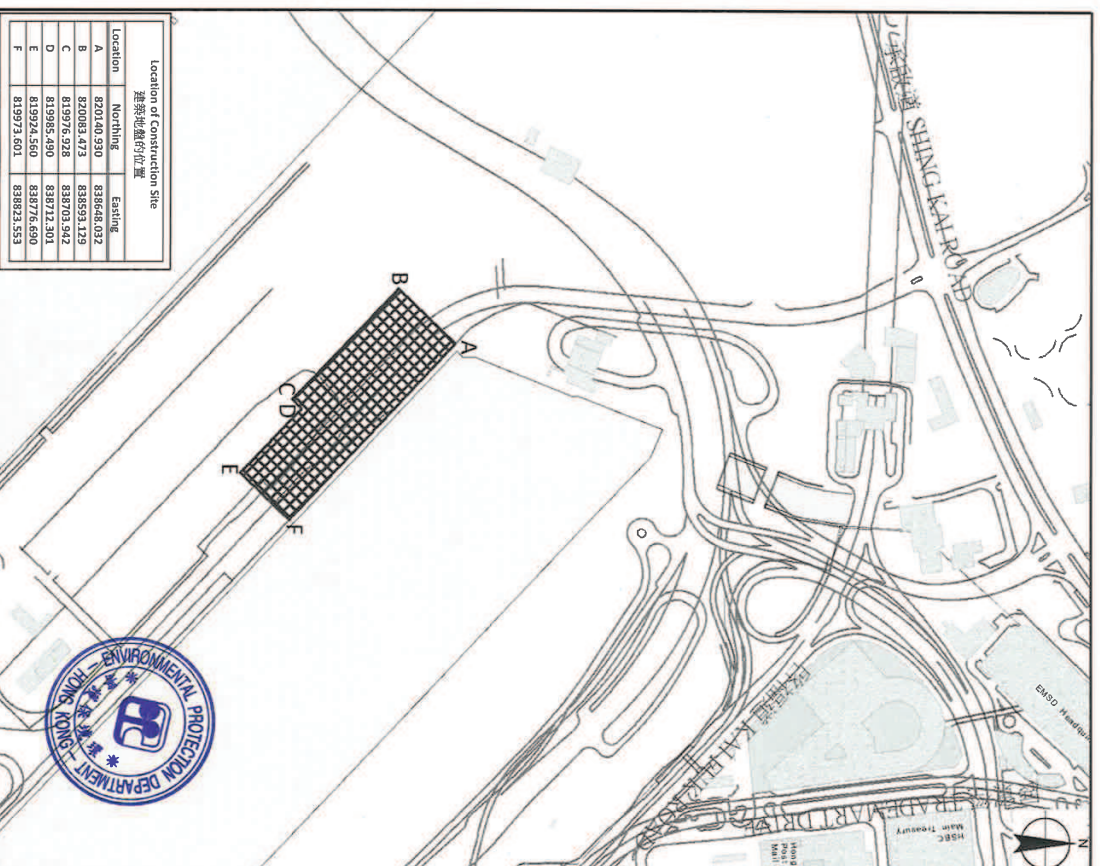


CNP 048 Crane, mobile (diesel) (2)
起重機，流動(油渣) (2)

Photograph(s) attached to Construction Noise Permit No. GW-RE0880-19
 建築噪音許可證編號：GW-RE0880-19 的照片



Welding machine (electric)
 焊接機 (電動)



環境保護署

噪音管制監督

Environmental Protection Department Noise Control Authority

建築噪音許可證編號 GW-RE0880-19 的附圖

圖例 Legend

建築地點 Construction Site

比例 Scale 1:5,000



Plan attached to Construction Noise Permit No. GW-RE0880-19

本署個案
OUR REF.: (4) in EP631/K19/RE452581-20
來函編號
YOUR REF.:
電話
TEL NO.: 2150 8081
圖文傳真
FAX NO.: 2402 8275
網址
HOMEPAGE: <http://www.epd.gov.hk/>

Environmental Protection Department
Environmental Compliance Division
Regional Office (East)
8/F., Cheung Sha Wan Government Offices,
303 Cheung Sha Wan Road,
Kowloon

環境保護署
環保法規管理科
區域辦事處(東)
九龍長沙灣道303號
長沙灣政府合署8樓



Registered Post

22 January 2020

To: PENTA – OCEAN CONSTRUCTION CO., LTD.
Flat 601, K. Wah Centre,
191 Java Road,
North Point, Hong Kong



Dear Sir,

Notice of Issue of Construction Noise Permit pursuant to section 8(6) of the Noise Control Ordinance (Cap. 400)

I write to inform you that, under section 8(6) of the Noise Control Ordinance, the Authority has decided to issue a construction noise permit in respect of your application, which was received by the Authority on 8 January 2020 for the use of powered mechanical equipment for carrying out construction work at Kai Tak Development – Stage 4 infrastructure at the former runway and south apron (Works Area Part D), Kai Tak, Kowloon (CEDD Contract No. ED/2018/01).

The construction noise permit No. GW-RE0039-20 is enclosed.

You are advised to read the conditions of the permit carefully and to ensure compliance with these conditions. Any breaching of the conditions may lead to cancellation of the permit, **subsequent prosecution action** and the Authority's refusal to issue further permit for the above construction site.

Yours faithfully,



(TANG Wai-man, Lisa)
for Authority

Note:

Electronic submission of application for construction noise permit is available at Environmental Protection Department's website. File attachments with total size not exceeding 20 MB in acceptable format are allowed for electronic submission. Electronic application form can be downloaded from our website (<https://epic.epd.gov.hk/eForm/ChangeLanguage.do?language=eng&url=/pages/download/downloadMain.jsp>) and an overview of application submission (<https://epic.epd.gov.hk/eForm/introduce.html>) is provided for more information.

(4) in EP631/K19/RE452581-20

2150 8081
2402 8275

掛號函件

致： 香港 北角
渣華道191號

嘉華國際中心601室
PENTA – OCEAN CONSTRUCTION CO., LTD.

執事先生：

根據《噪音管制條例(第400章)》第8(6)條發出的通知書——簽發「建築噪音許可證」。

本監督於二零二零年一月八日，收到你據於下述地址：九龍啟德發展計劃—前跑道及南面停機坪第四期基礎設施(工作地區第一部分)(土木工程拓展署合約編號ED/2018/01)，使用機動設備進行建築工程而提出的「建築噪音許可證」申請，現根據《噪音管制條例》第8(6)條的規定通知你，上述的申請已被批准。

隨函附上「第GW-RE0039-20號建築噪音許可證」。

請細閱許可證各項條件，確保遵守，如有違反，本監督可撤銷許可證，提出檢控及拒絕再就上述地盤簽發任何「建築噪音許可證」。

監督

(鄧慧敏)



代行)

二零二零年一月二十二日

注意：

環境保護署提供網上申請「建築噪音許可證」服務。網上申請容許上傳檔案總容量不大於20 MB的有關文件。可於本署網頁下載電子表格 (<https://epic.epd.gov.hk/eForm/ChangeLanguage.do?language=eng&url=/pages/download/downloadMain.jsp>) 及參閱電子表格提交服務概覽(<https://epic.epd.gov.hk/eForm/introduce.html>)，了解更多資料。

CONSTRUCTION NOISE PERMIT FOR THE USE OF POWERED MECHANICAL EQUIPMENT FOR THE PURPOSE OF CARRYING OUT CONSTRUCTION WORK OTHER THAN PERCUSSIVE PILING AND/OR THE CARRYING OUT OF PRESCRIBED CONSTRUCTION WORK

CONSTRUCTION NOISE PERMIT NO. GW-RE0039-20
 To: PENTA-OCEAN CONSTRUCTION CO., LTD.

This construction noise permit is issued in accordance with section 8 of the Noise Control Ordinance. Permission is granted for the use of powered mechanical equipment for the purpose of carrying out construction work other than percussive piling and/or the carrying out of prescribed construction work, subject to the conditions set out below. The carrying out of construction work otherwise than in accordance with the conditions may result in the permit being cancelled and in a prosecution for an offence.

CONDITIONS

1. Construction site where the powered mechanical equipment and/or prescribed construction work may be employed:

Full address: Kai Tak Development - Stage 4 Infrastructure at the former runway and south apron (Works Area Part 1), Kai Tak, Kowloon (SEPD Contract No. ED/2018/01). Lot No:
 The site boundary, that is, the boundary of the area within which the powered mechanical equipment may be used and the prescribed construction work may be carried out is delineated on the attached plan which forms part of this construction noise permit.

2. ***PARA/WHOLE** of the site falls *** WITHIN/OUTSIDE** a designated area.

3. Powered Mechanical Equipment

a. Items of powered mechanical equipment which may be used inside the site boundary:

Identification code of item of powered mechanical equipment (if applicable)	Description of item of powered mechanical equipment	No. of units
	Refer to attached sheet.	

b. Validity of the construction noise permit for the use of the powered mechanical equipment:

Date and time of commencement: 24 January 2020 at at 1900 hours.
 Days and hours: 0000-2400 hours on general holidays (including Sundays), 0000-0700 hours and 1900-2400 hours on any day not being a general holiday. But note condition 3.d.1. below for the operating hours within which the use of the above listed powered mechanical equipment is allowed.

This part of the permit expires on: 23 March 2020 at at 2300 hours.
 c. One photograph, endorsed by the Authority, of each item of powered mechanical equipment described in this construction noise permit is required to be kept on the construction site and made available for inspection by the Authority.
 d. Other conditions imposed on the use of the powered mechanical equipment:

1. The powered mechanical equipment listed in condition 3.a. shall only be operated during the hours shown below:

General holiday (including Sunday)	0900 - 2300 hours
Any day not being a general holiday	1900 - 2300 hours

2. Only one group of the powered mechanical equipment listed in condition 3.a shall be allowed to operate at any time.....

4. Prescribed Construction Work

a. Type of prescribed construction work which may be carried out inside the site boundary:

Identification code of type of prescribed construction work	Description of type of prescribed construction work
	Not applicable

b. Validity of the construction noise permit for the carrying out of the prescribed construction work:

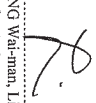
Date and time of commencement: at at hours.
 Date and hours: Not applicable.

This part of the permit expires on: at at hours.

c. Site layout plan(s) endorsed by the Authority, may be attached with the permit to indicate the locations permitted for the carrying out of prescribed construction work described in this permit. The layout plan(s) required to be kept on the construction site and made available for inspection by the Authority.

d. Other conditions imposed on the carrying out of the prescribed construction work:

5. This construction noise permit or a copy thereof must be displayed on the construction site at all vehicular entrances for public information.
 Dated this 22nd day of January, 2020

Signed:  (TANG Wan-man, Lisa)
 for Authority

* Delete as necessary

表格 3
噪音管制條例
(第400章)
第8(9)條

建築噪音許可證
為進行建築工程（撞擊式打樁除外）
而使用機動設備及／或進行訂明建築工程

GW:RE0039-20

建築噪音許可證編號：
致：PENTA-OCEAN CONSTRUCTION CO., LTD.

本建築噪音許可證是按照《噪音管制條例》第8條的規定而發出的。現准予使用機動設備以進行撞擊式打樁工程以外的建築工程及／或進行訂明建築工程，但須受以下條件規限。若不按照該等條件進行建築工程，許可證可遭撤銷，而且會受到檢控。

條件

1. 可使用機動設備及／或進行訂明建築工程的建築地盤：
詳細地址：九龍啟德啟德發展計劃：跑道及南面綠地發展第四期基礎設施（工作地區第二部分）
(土木工程拓展合約編號ED/2018/011)； 地段編號：
地盤範圍（即可使用機動設備及進行訂明建築工程的地方範圍）已描劃於夾附的圖則上，而該圖則則是本建築噪音許可證的一部分。
2. 該地盤部分／全部*位於指定範圍之內／外*。

3. 機動設備

- a. 在地盤範圍內可使用的各項機動設備：

各項機動設備的識別代碼 (如適用的話)	各項機動設備的說明	數目
	參見附頁。	

- b. 可使用機動設備的建築噪音許可證有效期：

生效日期及時間：二零二零年一月二十四日下午七時

日期及時間：公眾假日(包括星期日)的凌晨零時至晚上十二時，公眾假日以外的任何一日凌晨零時至上午七時及下午七時至晚上十二時【但須注意條件3.d.1.有關可以使用上列機動設備的時間】。

此部分許可證屆滿日期及時間：二零二零年三月二十三日晚上十一時

日期 時間

- c. 建築地盤須備有本建築噪音許可證所述每件機動設備的照片各一張，供監督隨時查看；該等照片須經監督認可。

- d. 規限使用機動設備的其他條件：

1. 祇可於以下時間內使用列在條件3.a.內的機動設備：

公眾假日包括星期日	上午九時至晚上十一時
公眾假日以外的任何一日	下午七時至晚上十一時

2. 在任何時間內，祇可使用列在條件3.a.內其中一組機動設備。

4. 訂明建築工程
 - a. 在地盤範圍內可進行的訂明建築工程：

訂明建築工程的識別代碼	訂明建築工程的說明
	不適用

- b. 可進行訂明建築工程的建築噪音許可證有效期：

生效日期及時間：不適用

日期及時間：不適用。

此部分許可證屆滿日期及時間：不適用

日期 時間

- c. 本許可證可夾附經監督認可的地盤圖則，以顯示本許可證准予進行訂明建築工程的點。該地盤圖則須存放於建築地盤供監督隨時查看。

- d. 規限進行訂明建築工程的其他條件：

5. 本建築噪音許可證或其副本必須展示於建築地盤的所有車輛入口處，給予公眾人士參閱。

日期：2020年1月22日

簽署：




監督
(鄧慧敏 代行)

* 刪去不適用者

Sheet Attached to Construction Noise Permit
No. GW-RE0039-20

3.a. Items of powered mechanical equipment which may be used inside the site boundary :

<i>Identification code of item of powered mechanical equipment (if applicable)</i>	<i>Description of item of powered mechanical equipment</i>	<i>No. of units</i>
Group A --- CNP 166 ---	Generator, with Quality Powered Mechanical Equipment Label showing a Sound Power Level ≤ 94 dB(A) Piling, large diameter bored, reverse circulation drill Air compressor, with Noise Emission Label showing a Sound Power Level of ≤ 104 dB(A) Power pack (diesel) Wastewater treatment plant Water pump, submersible (electric)	One Two Two One One Four
Group B --- CNP 164 CNP 048	Generator, with Quality Powered Mechanical Equipment Label showing a Sound Power Level ≤ 94 dB(A) Piling, large diameter bored, grab and chisel Crane, mobile (diesel)	One One One
Group C --- CNP 048	Generator, with Quality Powered Mechanical Equipment Label showing a Sound Power Level ≤ 94 dB(A) Welding machine (electric) Crane, mobile (diesel)	One Five One
Group D --- CNP 048 --- CNP 283	Generator, with Quality Powered Mechanical Equipment Label showing a Sound Power Level ≤ 94 dB(A) Air compressor, with Noise Emission Label showing a Sound Power Level of ≤ 104 dB(A) Crane, mobile (diesel) Wastewater treatment plant Water pump, submersible (electric)	One One One One Four
Group E --- CNP 048 CNP 165 CNP 044 CNP 283 ---	Generator, with Quality Powered Mechanical Equipment Label showing a Sound Power Level ≤ 94 dB(A) Crane, mobile (diesel) Piling, large diameter bored, oscillator Concrete lorry mixer Water pump, submersible (electric) Wastewater treatment plant	One One One One One One

Signed : 
(TANG Wai-man, Lisa)
for Authority

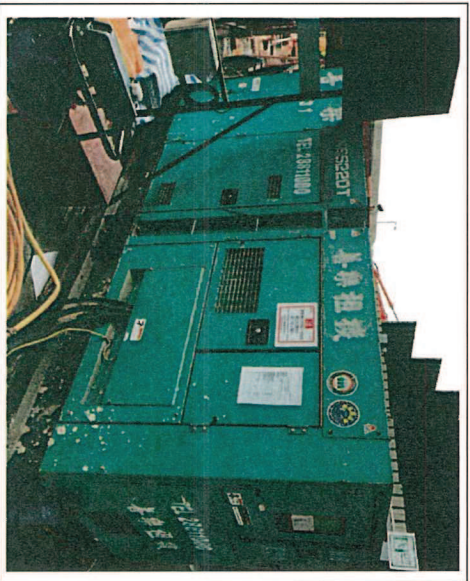
建築噪音許可證
編號 GW-RE0039-20 的附頁

3.a. 在地盤範圍內可使用的各項機動設備 :

<i>各項機動設備的識別代碼 (如適用的話)</i>	<i>各項機動設備的說明</i>	<i>數目</i>
A 組 --- CNP 166 --- --- --- CNP 283	發電機，備有優質機動設備標籤顯示聲功率級 ≤ 94 分貝 (A) 大直徑鑽孔樁，循環式鑽機 空氣壓縮機，備有噪音標籤顯示聲功率級 ≤ 104 分貝(A) 油渣動力供應器 污水處理器 潛水泵 (電動)	壹 貳 壹 壹 壹 肆
B 組 --- CNP 164 CNP 048	發電機，備有優質機動設備標籤顯示聲功率級 ≤ 94 分貝 (A) 大直徑鑽孔樁，抓斗及鑿 起重機，流動 (油渣)	壹 壹 壹
C 組 --- CNP 048	發電機，備有優質機動設備標籤顯示聲功率級 ≤ 94 分貝 (A) 焊接機 (電動) 起重機，流動 (油渣)	壹 伍 壹
D 組 --- CNP 048 --- CNP 283	發電機，備有優質機動設備標籤顯示聲功率級 ≤ 94 分貝 (A) 空氣壓縮機，備有噪音標籤顯示聲功率級 ≤ 104 分貝(A) 起重機，流動 (油渣) 污水處理器 潛水泵 (電動)	壹 壹 壹 壹 肆
E 組 --- CNP 048 CNP 165 CNP 044 --- CNP 283	發電機，備有優質機動設備標籤顯示聲功率級 ≤ 94 分貝 (A) 起重機，流動 (油渣) 大直徑鑽孔樁，擺動機 混凝土攪拌車 污水處理器 潛水泵 (電動)	壹 壹 壹 壹 壹 壹

簽署 : 
監督
(鄧慧敏 代行)

Photograph(s) attached to Construction Noise Permit No. GW-RE0039-20
建築噪音許可證編號：GW-RE0039-20 的照片



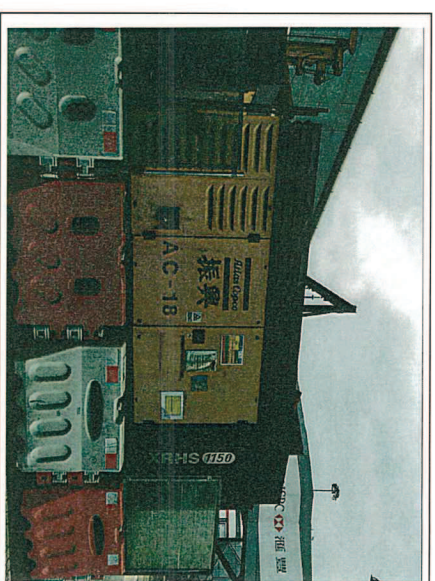
Generator, with Quality Powered Mechanical Equipment Label showing a Sound Power Level $\leq 94\text{dB(A)}$
發電機，備有優質機動設備標籤顯示聲功率級 ≤ 94 分貝(A)



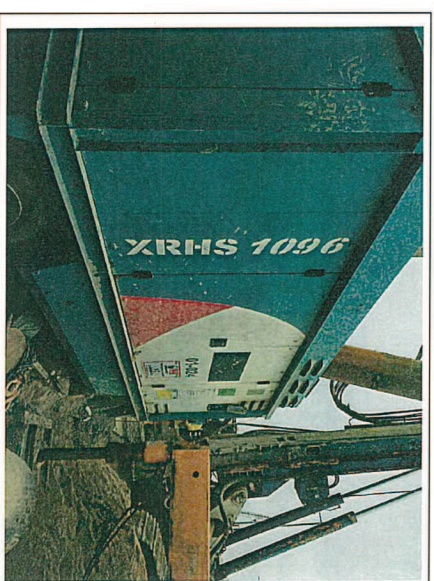
CNP 283 Water pump, submersible (electric)
潛水泵 (電動)



Photograph(s) attached to Construction Noise Permit No. GW-RE0039-20
建築噪音許可證編號：GW-RE0039-20 的照片



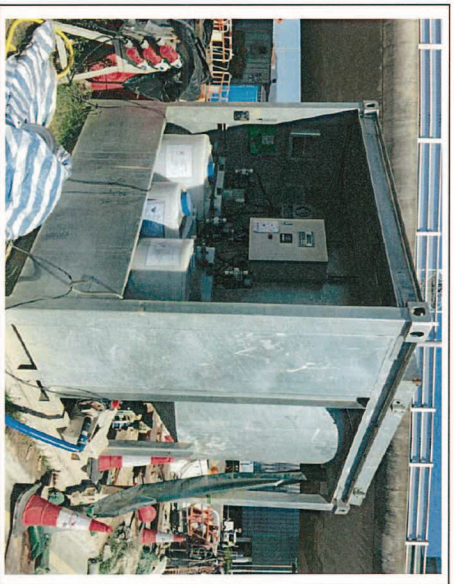
Air compressor, with Noise Emission Label showing a Sound Power Level of $\leq 104\text{dB(A)}$ (1)
空氣壓縮機，備有噪音標籤顯示聲功率級 ≤ 104 分貝(A) (一)



Air compressor, with Noise Emission Label showing a Sound Power Level of $\leq 104\text{dB(A)}$ (2)
空氣壓縮機，備有噪音標籤顯示聲功率級 ≤ 104 分貝(A) (二)



Photograph(s) attached to Construction Noise Permit No. GW-RE0039-20
建築噪音許可證編號：GW-RE0039-20 的照片



Wastewater treatment plant
污水處理器



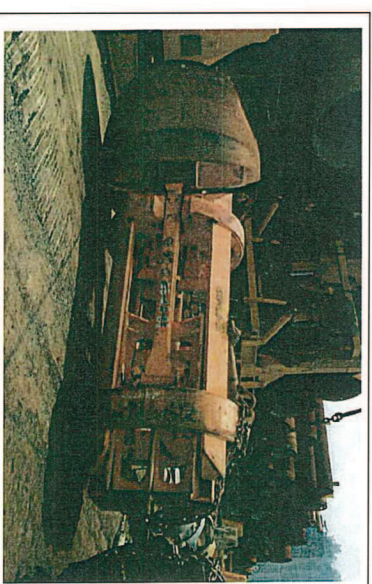
Power pack (diesel)
油渣動力供應器



Photograph(s) attached to Construction Noise Permit No. GW-RE0039-20
建築噪音許可證編號：GW-RE0039-20 的照片



CNP 165 Piling, large diameter bored, oscillator
大直徑鑽孔樁，擺動機



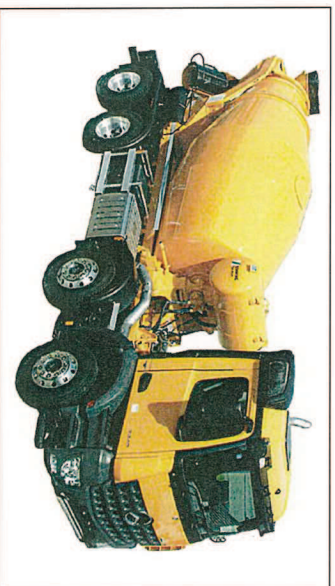
CNP 164 Piling, large diameter bored, grab and chisel
大直徑鑽孔樁，抓斗及鑿



Photograph(s) attached to Construction Noise Permit No. GW-RE0039-20
建築噪音許可證編號：GW-RE0039-20 的照片



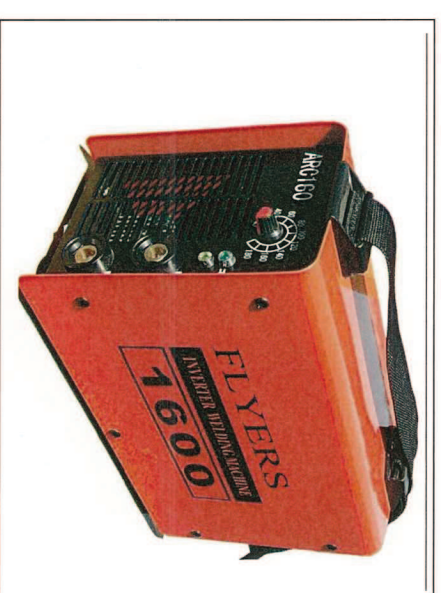
CNP 048 Crane, mobile (diesel)
起重機，流動(油渣)



CNP 044 Concrete lorry mixer
混凝土攪拌車



Photograph(s) attached to Construction Noise Permit No. GW-RE0039-20
建築噪音許可證編號：GW-RE0039-20 的照片



Welding machine (electric)
焊接機(電動)



CNP 166 Piling, large diameter bored, reverse circulation drill
大直徑鑽孔樁，循環式鑽機





環境保護署
環境基建科
香港西環
堅尼地城
域多利道88號

Environmental Protection Department
Environmental Infrastructure Division

88 Victoria Road,
Kennedy Town,
Hong Kong.

本署編號
OUR REF.: RE04380
來函編號
YOUR REF.:
電話
TEL. NO.: 2872 1769
圖文傳真
FAX NO.: 2591 0361
網址
HOMEPAGE: <http://www.epd.gov.hk>

Friday, 28 June, 2019

RECEIVED
03 JUL 2019

PENTA-OCEAN

PENTA-OCEAN CONSTRUCTION CO., LTD.
FLAT/ROOM 601, K. WAH CENTRE,
191 JANA ROAD, NORTH POINT,
HONG KONG
Attn.: CHOI CHONG KEI

Dear Sir/Madam,

Waste Disposal (Charges for Disposal of Construction Waste) Regulation
Approval of Application for Billing Account
(Construction work contract with value of \$1 million or above)
Application No.: RE04380

I am pleased to inform you that your application for billing account for disposal of construction waste under the following construction work contract has been approved under Section 6 and 9 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation:

Contract No.: ED/2018/01

Contract Name: KAI TAK DEVELOPMENT - STAGE 4 INFRASTRUCTURE AT THE FORMER RUNWAY AND SOUTH APRON

Construction Waste Generated Site: KAI TAK THE FORMER RUNWAY AND SOUTH APRON

The account number is Z034450. Please quote this account number for enquiries in relation to the billing account.

You are bound by the "Basic Conditions" and "Conditions of Use" accompanied with this account for disposal of construction waste at the prescribed facilities. You shall ensure that (a) the billing account established solely for the contract as stated above is used for paying any prescribed charge payable in respect of construction waste generated from construction work undertaken under the above contract; and (b) that billing account is not used for paying any prescribed charge payable in respect of any other construction waste not generated from construction work undertaken under the contract as stated above.

Regarding your application for issuance of chits, a demand note for the deposit required will be sent to you accordingly. Request for additional chits can be made using "Form 4". Please note that one chit is required for each load of construction waste to be disposed of at prescribed facility.

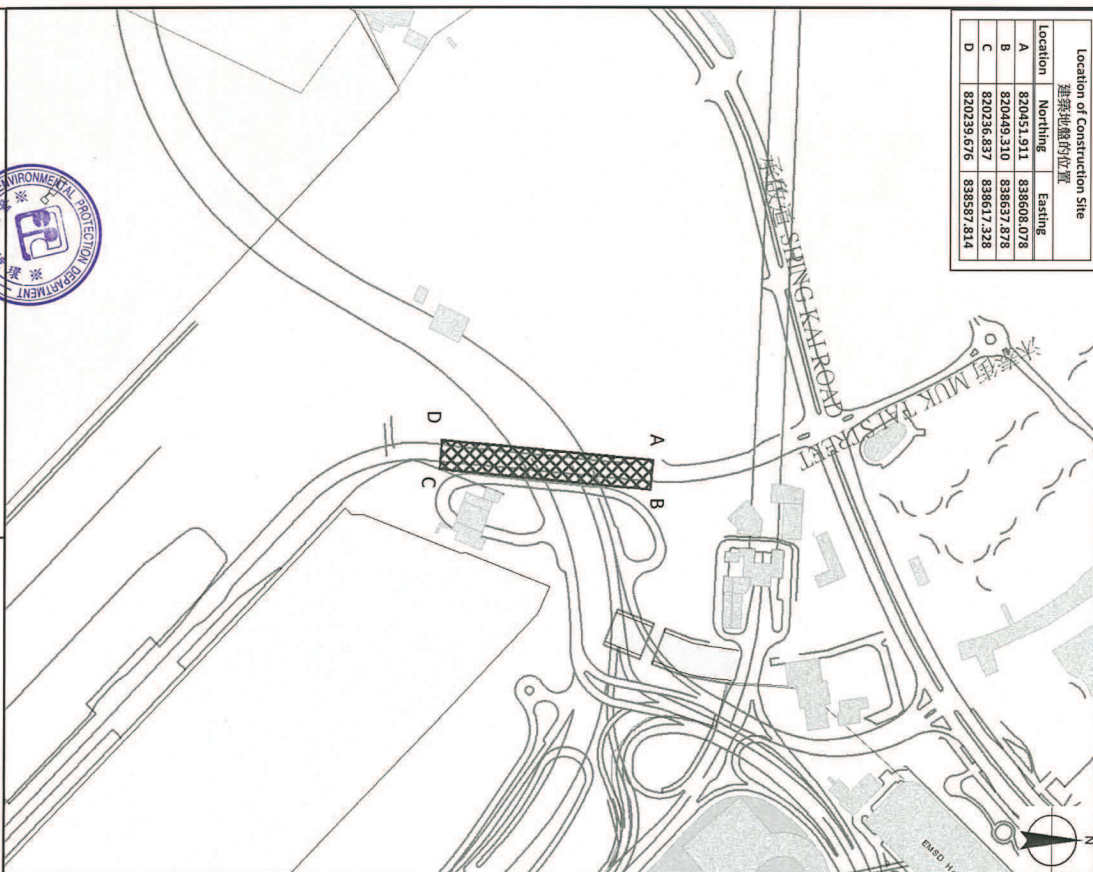
Should you have any queries, please contact us at 2872 1769.

Yours faithfully,

(K O Yeung)

Principal Environmental Protection Officer
for Director of Environmental Protection

Location of Construction Site			
建築地盤的位置			
Location	Northing	Eastng	
A	820451.911	838608.078	
B	820449.310	838637.878	
C	820236.857	838617.328	
D	820239.076	838587.814	



噪音管制監督

Environmental Protection Department Noise Control Authority

圖例 Legend

建築地盤 Construction Site

建築噪音許可證編號 GW-RE0039-20 的附圖

比例 Scale 1:5,000

0 25 50 100 150 米Meters

Plan attached to Construction Noise Permit No. GW-RE0039-20



ISO 14001:2015
Certificate No: E103



再生紙
RECYCLED PAPER

本署編號 447046
Our Ref: 447046
來函編號
Your Ref: 2117 7539
電話 2117 7539
Tel. No.: 2756 8388
圖文傳真
Fax No.:
電子郵件
E-Mail:
網址
Homepage: <http://www.epdd.gov.hk/>

Environmental Protection Department
Environmental Compliance Division
Regional Office (East)
5th Floor, Nan Fung Commercial Centre,
19 Lam Lok Street, Kowloon Bay,
Kowloon, Hong Kong.



環境保護署
環保法規管理科
區域辦事處(東)
香港九龍九龍灣臨樂街
十九號南豐商業中心五樓

31 JUL 2019

By Registered Post

PENTA-OCEAN CONSTRUCTION CO., LTD.
FLAT 601, K. WAH CENTRE,
191 JAVA ROAD,
NORTH POINT, HONG KONG



Dear Sir/Madam,

**Waste Disposal Ordinance (Cap. 354)
Waste Disposal (Chemical Waste) (General) Regulation
Registration as a Chemical Waste Producer
Completion of Registration**

I am pleased to inform you that your registration with this department as a chemical waste producer has been completed.

The assigned Waste Producer Number (WPN) and the particulars of your establishment are printed in the enclosed form (EPD 130). If you consider there are any discrepancies about the particulars, please notify me immediately, quoting the assigned WPN.

The "EPD 130" is an important document, please archive appropriately. This registration is not transferable and will be valid only in respect of the applicant and the premises registered. In future when there is change in the registration particulars, you should inform this department as soon as possible so that our record can be amended accordingly. Under section 7 of the above regulation, failure to notify this department of relevant changes is an offence and liable to a maximum fine of HK\$10,000.

For enquiries, please contact us at Tel 2117 7546.

Yours faithfully,

(CHAN Wai-lun, William)
Environmental Protection Officer
for Director of Environmental Protection

Encl.



掛號函件

先生/女士:

香港法例第三五四章廢物處置條例
廢物處置(化學廢物)(一般)規例
化學廢物產生者
完成登記程序

本署已完成辦理 貴機構申請登記為「化學廢物產生者」。現隨信附上EPD 130表格,載有 貴機構的各項資料及你的「化學廢物產生者」編號。請即核對表格內的各项資料,如有錯漏,請即聯絡本署職員以便更正。通計時請註明你的化學廢物產生者編號。

EPD 130 表格是一份重要文件,請妥善存檔。同時,是項登記,不得轉讓,並只適用於已登記的申請人/機構及有關地址。日後如果已申報的資料有變更,你應馬上通知本署,以便修正紀錄。按照上述規例第七條規定,任何人倘未有將變更資料及時呈報,乃屬違例行為,一經定罪,可被判罰款最高港幣一萬元正。

若有任何疑問,請致電 2117 7546 與本署職員聯絡。

環境保護署署長
(環境保護主任 陳偉麟 代行)

附件

Environmental Protection Department
環境保護署
Waste Disposal Ordinance (Chapter 354)
 香港法例第354章廢物處置條例
Waste Disposal (Chemical Waste) (General) Regulation
 廢物處置(化學廢物)(一般)規例
Registration of Waste Producer
 廢物產生者登記證

To: **Chemical Waste Producer** 致
 化學廢物產生者

Full Name (English) PENTA-OCEAN CONSTRUCTION CO., LTD.
全名 (英文)

(Chinese) _____
(中文)

ID. Card No. (if any) _____
身份證號碼 (如有者)

Business Reg. Cert. No. (if any) 07818486-000-05-18-7
商業登記證號碼 (如有者)

Address for Correspondence _____
通訊地址: FLAT 601, K. WAH CENTRE, 191 JAVA ROAD, NORTH POINT, HONG KONG

Tel. No. 94332628
電話:

Fax No. 25724080
圖文傳真:

With reference to your application dated 09 / 07 / 2019 for registration as a Waste Producer under the Waste Disposal (Chemical Waste) (General) Regulation, the Waste Producer Number, W P N | 5 | 2 | 1 | 8 | - | 2 | 8 | 6 | - | P | 3 | 1 | 8 | 2 | - | 0 | 3 | is assigned to you in respect of the location or premises listed below: _____

關於 2019 年 07 月 09 日根據廢物處置(化學廢物)(一般)規例而來信，申請登記為廢物產生者，茲特配予廢物產生者編號第 | 5 | 2 | 1 | 8 | - | 2 | 8 | 6 | - | P | 3 | 1 | 8 | 2 | - | 0 | 3 | 號，予下列地點或處所： _____

Location _____
地點或處所

Name of Establishment PENTA-OCEAN CONSTRUCTION CO., LTD.
機構名稱

Business Reg. Cert. No. (if any) 07818486-000-05-18-7
商業登記證號碼 (如有者)

Nature of Business CONSTRUCTION
業務性質

Major chemical waste types _____
主要化學廢物種類: SPENT LUBRICATING OIL, SPENT MINERAL OIL, SURPLUS PAINT, SPENT BATTERY CELL CONTAINING HEAVY METALS, SPENT MIXING RESIDUE CONTAINING ACID AND ASBESTOS WASTE

Address CONSTRUCTION SITE OF KAI TAK DEVELOPMENT - STAGE 4 INFRASTRUCTURE AT
地址: THE FORMER RUNWAY AND SOUTH APRON, KOWLOON CITY, KOWLOON (CEDD)
 CONTRACT NO. ED/2018/01)



Chan Wai-lun
 (CHAN Wai-lun, William)
 for Director of Environmental Protection
 環境保護署署長 (陳偉麟 代行)
 Date 18 / 07 / 2019
 日期

WARNING: Any registered waste producer who fails to inform the Director of Environmental Protection of any change in his registration particulars commits an offence and is liable on conviction to a fine of \$10,000.

警告: 任何已登記的廢物產生者，若其登記資料有任何改變而不知會環境保護署署長，即屬違法，被定罪者最高罰款港幣10,000元。

**Appendix P – Environmental Mitigation Implementation Schedule
(EMIS)**

Implementation Schedule for Air Quality Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
S3.2		8 times daily watering of the work site with active dust emitting activities.	^
S3.2	S4.8	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimize cumulative dust impacts.	
		- Stockpiling site(s) should be lined with impermeable sheeting and bunded. Stockpiles should be fully covered by impermeable sheeting to reduce dust emission.	^
		- Misting for the dusty material should be carried out before being loaded into the vehicle.	^
		- Any vehicle with an open load carrying area should have properly fitted side and tail boards.	^
		- Material having the potential to create dust should not be loaded from a level higher than the side and tail boards and should be dampened and covered by a clean tarpaulin.	^
		- The tarpaulin should be properly secured and should extend at least 300 mm over the edges of the sides and tailboards. The material should also be dampened if necessary, before transportation.	^
		- The vehicles should be restricted to maximum speed of 10 km per hour and confined haulage and delivery vehicle to designated roadways insider the site. On- site unpaved roads should be compacted and kept free of lose materials.	^
		- Vehicle washing facilities should be provided at every vehicle exit point.	^
		- The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.	^
		- Every main haul road should be scaled with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet.	^
		- Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the three sides.	NA
		- Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.	^

Implementation Schedule for Noise Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
S3.3		Use of quiet PME, movable barriers barrier for Asphalt Paver, Breaker, Excavator and Hand-held breaker and full enclosure for Air Compressor, Bar Bender, Concrete Pump, Generator and Water Pump.	^
S3.3		Good Site Practice:	
S3.3		- Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program.	^
		- Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program.	^
		- Mobile plant, if any, should be sited as far away from NSRs as possible.	^
		- Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum.	^
		- Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.	^
		- Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.	^
		- Scheduling of Construction Works during School Examination Period	^

Implementation Schedule for Water Quality Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
S3.4		<u>Construction Runoff</u> Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include:	
S3.4		- use of sediment traps.	^
S3.4		- adequate maintenance of drainage systems to prevent flooding	^

Implementation Schedule for Water Quality Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
		and overflow.	
	S5.8	- Surface run-off from construction sites should be discharged into storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sedimentation basins.	^
	S5.8	- Channels or earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels should be provided on site boundaries where necessary to intercept storm run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.	^
	S5.8	- Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to prevent local flooding. Any practical options for the diversion and re-alignment of drainage should comply with both engineering and environmental requirements in order to provide adequate hydraulic capacity of all drains. Minimum distance of 100 m should be maintained between the discharge points of construction site run-off and the existing saltwater intakes.	^
	S5.8	- Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.	^
	S5.8	- Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	^
	S5.8	- Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric during rainstorms.	^
	S5.8	- Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must	NA

Implementation Schedule for Water Quality Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
		always be prevented in order not to unduly overload the foul sewerage system.	
	S5.8	- Good site practices should be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis.	^
S3.4		Construction site should be provided with adequately designed perimeter channel and pre-treatment facilities and proper maintenance. The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94.	^
S3.4	S5.8	Ideally, construction works should be programmed to minimise surface excavation works during the rainy season (April to September). All exposed earth areas should be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means. If excavation in soil cannot be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporary exposed slope surfaces should be covered e.g. by tarpaulin, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest / edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should always be in place in such a way that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm.	^
S3.4		Sediment tanks of sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m ³ capacity, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity is	^

Implementation Schedule for Water Quality Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
		flexible and able to handle multiple inputs from a variety of sources and particularly suited to applications where the influent is pumped.	
S3.4		Open stockpiles of construction materials (for examples, aggregates, sand and fill material) of more than 50 m ³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.	^
S3.4		Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers.	NA
S3.4		Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events.	^
S3.4		Oil interceptors should be provided in the drainage system and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	NA
S3.4	S5.8	<u>Wheel Washing Water</u> All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.	^
S3.4		<u>Drainage</u> It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There should be no direct discharge of effluent from the site into the sea.	^

Implementation Schedule for Water Quality Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
S3.4		All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment control measures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage should be reinstated to its original condition when the construction work has finished or the temporary diversion is no longer required.	^
S3.4		All fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour WCZ.	^
S3.4	S5.8	<p><u>Sewage Effluent</u></p> <p>Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage may need to be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets should be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor should also be responsible for waste disposal and maintenance practices.</p> <p>Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the surrounding environment. Regular environmental audit of the construction site will provide an effective control of any malpractices and can encourage continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the project would not cause water pollution problem after undertaking all required measures.</p>	^
S3.4		<p><u>Stormwater Discharges</u></p> <p>Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes</p>	^
S3.4		<p><u>Debris and Litter</u></p> <p>In order to maintain water quality in acceptable conditions with regard to aesthetic quality, contractors should be required, under</p>	^

Implementation Schedule for Water Quality Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
		conditions of contract, to ensure that site management is optimised and that disposal of any solid materials, litter or wastes to marine waters does not occur.	
	S5.8	<u>Boring and Drilling Water</u> Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.	^
	S5.8	<u>Acid Cleaning, Etching and Pickling Wastewater</u> Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10 before discharging into foul sewers.	NA
	S5.8	<u>Effluent Discharge</u> There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. Minimum distance of 100 m should be maintained between the discharge points of construction site effluent and the existing seawater intakes and the planned WSR mentioned in S5.3.1 as appropriate. The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO licence which is under the ambit of regional office (RO) of EPD.	^
	S5.8	<u>Accidental Spillage</u> Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation, should be observed and complied with for control of chemical wastes.	^

Implementation Schedule for Water Quality Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
		Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	
	S5.8	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: - Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport.	^
	S5.8	- Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents.	^
	S5.8	- Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.	^

Implementation Schedule for Waste Management Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
S3.5		<u>Good Site Practices</u> It is not anticipated that adverse waste management related impacts would arise, provided that good site practices are adhered to. Recommendations for good site practices during construction activities include:	
S3.5		- Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.	^
	S6.7	- Prepare a Waste Management Plan, which becomes a part of the Environmental Management Plan, in accordance with the requirements stipulated in ETWB TC(W) No. 19/2005, approved by the Engineer/Supervising Officer of the Project based on current practices on construction sites.	^

Implementation Schedule for Waste Management Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
S3.5	S6.7	- Training of site personnel in proper waste management and chemical waste handling procedures.	^
S3.5	S6.7	- Provision of sufficient waste disposal points and regular collection for disposal.	^
S3.5	S6.7	- Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers.	^
S3.5		- A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites).	^
	S6.7	- Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.	^
	S6.7	- Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle.	^
S3.5		<u>Waste Reduction Measures</u> Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:	^
S3.5	S6.7	- Sort C&D waste from demolition of the remaining structures to recover recyclable portions such as metals.	^
S3.5	S6.7	- Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.	^
S3.5	S6.7	- Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force.	^
S3.5		- Any unused chemicals or those with remaining functional capacity should be recycled.	^
S3.5	S6.7	- Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	^
S3.5		<u>Construction and Demolition Materials</u> Mitigation measures and good site practices should be incorporated in the contract document to control potential environmental impact from handling and transportation of C&D material. The mitigation measures include:	

Implementation Schedule for Waste Management Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
S3.5		- Where it is unavoidable to have transient stockpiles of C&D material within the Project work site pending collection for disposal, the transient stockpiles shall be located away from waterfront or storm drains as far as possible.	^
S3.5		- Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric.	^
S3.5		- Skip hoist for material transport should be totally enclosed by impervious sheeting.	^
S3.5		- Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site.	^
S3.5		- The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.	^
S3.5		- The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle.	^
S3.5		- All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.	^
S3.5		- The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading.	^
S3.5		- When delivering inert C&D material to public fill reception facilities, the material should consist entirely of inert construction waste and of size less than 250mm or other sizes as agreed with the Secretary of the Public Fill Committee. In order to monitor the disposal of the surplus C&D material at the designed public fill reception facility and to control fly tipping, a trip-ticket system as stipulated in the ETWB TCW No. 31/2004 “Trip Ticket System for Disposal of Construction and Demolition Materials” should be included as one of the contractual requirements and implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work. An Independent Environmental Checker should be responsible for auditing the results of the system.	^

Implementation Schedule for Waste Management Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
	S6.7	- Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste.	^
S3.5		<u>Chemical Waste</u> After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals should be collected by a licensed collector for disposal at the CWTF or other licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation	^
	S6.7	Separation of chemical wastes for special handling and appropriate treatment.	^
S3.5		<u>General Refuse</u> General refuse should be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Effective collection and storage methods (including enclosed and covered area) of site wastes would be required to prevent waste materials from being blown around by wind, wastewater discharge by flushing or leaching into the marine environment, or creating odour nuisance or pest and vermin problem.	^

Implementation Schedule for Landscape and Visual Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
S3.8.12		All existing trees should be carefully protected during construction	^
S3.8.12		Trees unavoidably affected by the works should be transplanted where practical. Detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBC 2/2004 and 3/2006. Final locations of transplanted trees should be agreed prior to commencement of the work.	^
S3.8.12		Control of night-time lighting.	^
S3.8.12		Erection of decorative screen hoarding.	^
	S7.9	<u>Construction Site Control</u> - CM1 - Minimized construction area and contractor's temporary works areas.	^
		- CM2- Control of night-time lighting and glare by hooding all	^

Implementation Schedule for Landscape and Visual Measures			
EIA for KTD Development Ref.	EIA for KTD – Roads D3A & D4A Ref.	Environmental Protection Measures / Mitigation Measures	Status
		lights.	
		- CM3 - Erection of decorative mesh screens or construction hoardings around works areas in visually unobtrusive colours.	^
		- CM4 - Reduction of construction period to practical minimum.	^
		- CM5 - Limitation of / Ensuring no run-off into surrounding landscape and adjacent seawater areas.	^
		- CM6 - Temporary or advance landscape should be provided along the temporary access roads to the Cruise Terminal until such time as road D3 is open.	^

Remarks:			
^	Compliance of mitigation measure.	X	Non-compliance of mitigation measure.
N/A	Not Applicable at this stage.	●	Non-compliance but rectified by the contractor.
N/A (1)	Not observed.		
*	Recommendation was made during site audit but improved/rectified by the contractor.	#	Recommendation was made during audit and to be improved/ rectified by the contractor.

Mitigation Measures undertaken by the Contractor for site inspections



Date:	22 Jan 2020
Mitigation Measures:	Watering of the work site with active dust emitting activities.

Date:	22 Jan 2020
Mitigation Measures:	Quiet PME was used.



Date:	22 Jan 2020
Mitigation Measures:	Stockpile had been covered properly.

**Appendix Q – Summaries of Environmental Complaint, Warning,
Summon and Notification of Successful Prosecution**

Reporting Month: January 2020

Contract No.	Record of Complaint (Yes/No)	Record of Warning (Yes/No)	Notification of Summons and Successful Prosecutions (Yes/No)
ED/2018/01	No	No	No

Cumulative Statistics on Complaints, Notification of Summons and Successful Prosecutions upto reporting month

Contract No.	Record of Complaint	Record of Warning	Notification of Summons and Successful Prosecutions
ED/2018/01	0	0	0

Complaint Log for ED/2018/01				
EPD Complaint Ref. No.	Date of Complaint	Description of Complaint	Investigation / Recommendations / Actions	Close-Out Date / Status
		No compliant was received in Jan 2020.		