



大成環境科技拓展有限公司

ENVIRONMENTAL PIONEERS & SOLUTIONS LIMITED

豐盛創建環保科技集團附屬公司 Subsidiary of FSE Environmental Technologies Group
豐盛創建成員 Member of FSE Holdings

Proposed Road Improvement Works in West Kowloon Reclamation Development – Phase 1

Environmental Monitoring & Audit Report

06/02/2016 – 29/02/2016

The Contents of this report have been certified by:

Ms. Goldie Fung
(Environmental Team Leader)

Environmental Pioneers & Solutions Limited

Flat A, 8/F, Chaiwan Industrial Centre,
20 Lee Chung Street, Chai Wan, Hong Kong
Tel: 2556 9172 Fax: 2856 2010

TABLE OF CONTENT

Executive Summary	3
1 Introduction	5
1.1 The Project.....	5
1.2 Summary of EM&A Requirements	6
1.3 Construction Programme and Activities	6
1.4 Project Organization	7
1.5 Status of Environmental Licences, Notification and Permits.....	7
2 Air Quality Monitoring.....	8
2.1 Monitoring Locations.....	8
2.2 Monitoring Frequency	9
2.3 Monitoring Equipment	10
2.4 Monitoring Methodology and Parameters.....	10
2.5 Maintenance and Calibration	12
2.6 Quality Assurance / Quality Control Results and Detection Limits	12
2.7 Action and Limit Level for 1-hr TSP and 24-hr TSP	12
2.8 Monitoring Results and Observations.....	15
2.9 Monitoring Schedule for Next Reporting Month	15
3 Noise Monitoring	16
3.1 Monitoring Locations.....	16
3.2 Monitoring Frequency	16
3.3 Monitoring Equipment	16
3.4 Monitoring Methodology and Parameters.....	17
3.5 Maintenance and Calibration	18
3.6 Quality Assurance / Quality Control Results and Detection Limits	18
3.7 Action and Limit Level for Construction Noise	18
3.8 Monitoring Results and Observations.....	20
3.9 Monitoring Schedule for Next Reporting Month	21
4 Solid and Liquid Waste Management Status.....	22
5 Landscape and Visual Impact	23
6 Environmental Site Inspection	24
6.1 Site Audit.....	24
6.2 Implementation Status of Environmental Mitigation Measures	24
7 Environmental Non-Conformance	26
7.1 Summary of Environmental Exceedances	26
7.2 Summary of Environmental Non-Compliance	26
7.3 Summary of Environmental Complaint.....	26
7.4 Summary of Notification of Summons and Successful Prosecution	26

8	Future Key Issues	27
9	Comment, Recommendations and Conclusions	28
9.1	Comment	28
9.2	Recommendations	28
9.3	Conclusions	28

LIST OF APPENDICES

Appendix A: Construction Programme and Project Layout Plan
Appendix B: Project Organization Chart
Appendix C: Environmental Licences, Notification and Permits
Appendix D: Monitoring Locations
Appendix E: Calibration Certification
Appendix F: TSP Monitoring Data
Appendix G1: Noise Monitoring Data
Appendix G2: School Schedule
Appendix H: Waste Management Record
Appendix I: Environmental Mitigation Implementation Schedule
Appendix J: Cumulative Log for Environmental Exceedance, Complaints, Notification of Summons and Successful Prosecutions

Executive Summary

This is the first monthly Environmental Monitoring and Audit (EM&A) Report for Proposed Road Improvement Works in West Kowloon Reclamation Development – Phase 1. The project commenced on 6th February 2016. This report documents the finding of EM&A Works conducted from 6th February 2016 to 29th February 2016.

Environmental Monitoring and Audit Progress

Air Quality Monitoring

3 times 1-hr Total Suspended Particulates (TSP) monitoring and 24-hr TSP monitoring were carried out on 11th, 16th, 22nd and 27th of February 2016.

Noise Monitoring

1 time 30-min LEQ noise monitoring was carried out on 11th, 16th, 22nd and 27th of February 2016.

Waste Management

According to Contractor's waste flow data, 521.76 tonnes of inert C&D materials and 38.34 tonnes of general refuse were generated and disposed of.

Landscape and Visual Impact

Bi-weekly inspections were conducted on 6th and 20th February 2016. Most of the necessary mitigation measures have been implemented. Details of the audit findings and implementation status are presented in Section 6.

Environmental Site Inspection

Joint weekly inspections were conducted by representatives of the Contract Administrator, Engineer, Contractor and ET on 12th, 17th, 23rd and 29th February 2016. The representative of the IEC joined the site inspection on 17th February 2016. Details of the audit findings and implementation status are presented in Section 6.

Environmental Exceedance / Non-conformance / Compliant / Summons and Successful Prosecution

No exceedance of action level and limit level was recorded for TSP and Noise. No Non-compliance event, environmental complaint, notification of summons and

successful prosecution against the Project were received in this reporting month.

Variation in Construction Method

No variation in construction method from the proposed construction programme was made and affected the EM&A.

Future Key Issues

The major construction works to be undertaken in the next reporting month include:

- Portion I – Trial Trench Works
- Portion I – UU Diversion Works
- Portion HA – Socketed H-Pile Works
- Portion HA – Trial Trench Works
- Portion HA – Pre-Drill Works
- Portion HA – Man-hole Construction Works
- Portion HA – Tree Felling
- Portion J – Socketed H-Pile Works
- Portion J – ELS Works
- Portion J – Modification of Manhole
- Portion J – Tree Felling Works
- Portion Q – Demolition of Central Divider
- Portion Q – Construction of CCTV Highmast Footing
- Portion Q – Trial Pit Excavation

1 Introduction

1.1 The Project

This is a road improvement project in West Kowloon Reclamation Development (WKRD) for completing the developments and the commissioning of the new transport facilities.

Apart from the additional traffic impacts arising from the major development and transport facilities in WKRD, several major junctions in the area are currently operating with insufficient capacity causing serious congestion to some existing major road corridors such as Jordan Road (JRD), Ferry Street (FST) and Canton Road (CRD).

To enhance the road network of the area, Transport Department commissioned the “West Kowloon Reclamation Development Traffic Study” which identified and recommended Core and Additional Schemes together with the improvement works at the junction of CRD/FST/JRD. Implementation of these schemes would enable most of the key road junctions in the study area to operate with spare capacity, and the traffic queue length would also be reduced avoiding blockage to the upstream junctions

The Environmental Team (ET), Environmental Pioneers & Solutions Limited (EPSL), was appointed by Vibro Construction Co. Ltd. to undertake the Environmental Monitoring and Audit (EM&A) programme during construction phase of the Proposed Road Improvement Works in West Kowloon Reclamation Development – Phase 1. The project proponent is Highways Department. This is a Designated Project under the Environmental Impact Assessment Ordinance (Cap.499). The No. of Environment Permit is EP-455/2015.

The construction works and EM&A programme of this project was commenced on 6th February 2016. The construction programme and project layout plan are shown in **Appendix A**.

1.2 Summary of EM&A Requirements

The EM&A requirements are described in the following sections, including:

- Weekly site inspection;
- Air quality impact monitoring;
 - 3 times 1-hr TSP monitoring and 24-hr TSP monitoring for each location in every six days
- Noise impact monitoring;
 - Leq (30minutes) monitoring for each location on a weekly basis
- Water quality monitoring;
- Waste management;
- Landscape and visual impact monitoring;
 - ET to report on Contractor's compliance on a bi-weekly basis
- Environmental mitigation measures, as recommended in EM&A Manual;
- Action and limited level
- Event and action plan
- Environmental requirements in environmental permit;
- Environmental requirements in contract documents.

1.3 Construction Programme and Activities

A summary of the major construction activities undertaken in this reporting period is shown as follows.

- Portion I – Trial Trench Works
- Portion I – UU Diversion Works
- Portion HA – Socketed H-Pile Works
- Portion HA – Trial Trench Works
- Portion HA – Pre-Drill Works
- Portion HA – Man-hole Construction Works
- Portion HA – Tree Felling
- Portion J – Socketed H-Pile Works
- Portion J – ELS Works
- Portion J – Modification of Manhole
- Portion J – Tree Felling Works
- Portion Q – Demolition of Central Divider
- Portion Q – Construction of CCTV Highmast Footing
- Portion Q – Trial Pit Excavation

1.4 Project Organization

The project organization chart and contact details are shown in **Appendix B**.

1.5 Status of Environmental Licences, Notification and Permits

A summary of the relevant permits, licences, and notifications on environmental protection for this Project is presented in Table 1.5.1. The details are shown in **Appendix C**.

Table 1.5.1 Summary of the Status of Environmental Licences, Notification and Permits

Permit / License No.	Valid Period		Status	Remark
	From	To		
Notification pursuant to Air Pollution Control (Construction Dust) Regulation				
Ref. No. 386894	23/03/2015	N/A	Valid	/
Effluent Discharge License				
WT00021818-2015	18/06/2015	30/06/2020	Valid	Portion I
WT00021822-2015	18/06/2015	30/06/2020	Valid	Portion HA
WT00021825-2015	18/06/2015	30/06/2020	Valid	Portion J
WT00021826-2015	18/06/2015	30/06/2020	Valid	Portion Q
WT00021903-2015	26/06/2015	30/06/2020	Valid	Works area 1
Waste Disposal (Charges for Disposal of Construction Waste) Regulation				
Billing Account No.7022012	31/03/2015	N/A	Valid	/
Registration of Chemical Waste Producer				
WPN5213-229-V2215-01	01/06/2015	N/A	Valid	/
Construction Noise Permit				
GW-RE1183-15	04/12/2015	03/06/2016	Valid	Portion HA

2 Air Quality Monitoring

2.1 Monitoring Locations

According to the EM&A Manual Section 3.5, four impact monitoring locations have been established for air quality monitoring, which are summarized in Table 2.1.1.

Table 2.1.1 Air Quality Monitoring Locations

Identification No.	Monitoring Location	Description	Parameter
AM1	Marine Department New Yau Ma Tei Public Cargo Working Area Administrative Building	Ground Floor Face to Hoi Po Road	1hr-TSP 24-hr TSP
AM2	Garden Building	Ground Floor Face to Canton Road	1hr-TSP 24-hr TSP
AM3	The Cullinan I	Ground Floor Face to Nga Cheung Road	1hr-TSP 24-hr TSP
AM4	Lai Chack Middle School	Ground Floor Face to Canton Road	1hr-TSP 24-hr TSP

Due to the rejection from the representatives/ property management of the premises, high volume samplers are not feasible to be installed at AM2, AM3 and AM4 for the 24-hr TSP monitoring. Alternative locations AM2-A, AM3-A and AM4-A are proposed accordingly. Coordination with the representatives of premises for the installation of high volume samplers at AM2-A and AM4-A is in progress, which are summarized in Table 2.1.2. The details of monitoring location plan are shown in **Appendix D**.

Table 2.1.2 Air Quality Monitoring Locations

ID No.	Monitoring Location	Description	Coordinates	Parameter
AM1	Marine Department New Yau Ma Tei Public Cargo Working Area Administrative Building	Ground Floor Face to Hoi Po Road	22°18'44.8"N 114°09'37.4"E	1hr-TSP
AM2	Garden Building	Ground Floor Face to Canton Road	22°18'12.7"N 114°10'05.7"E	1hr-TSP

AM3	The Cullinan I	Ground Floor Face to Nga Cheung Road	22°18'22.0"N 114°09'39.3"E	1hr-TSP
AM4	Lai Chack Middle School	Ground Floor Face to Canton Road	22°18'05.4"N 114°10'05.3"E	1hr-TSP
AM1	Marine Department New Yau Ma Tei Public Cargo Working Area Administrative Building	Rooftop Face to Hoi Po Road	22°18'44.8"N 114°09'37.4"E	24-hr TSP
AM2-A	King George V Memorial Park	N/A*	22°18'14.9"N 114°10'048"E	24-hr TSP*
AM3-A	International Commerce Centre (Works Area 4)	Ground Floor Near to International Commerce Centre Roundabout on Nga Cheung Road and	22°18'10.5"N 114°09'34.5"E	24-hr TSP
AM4-A	Kowloon Park	N/A*	22°18'09.1"N 114°10'11.8"E	24-hr TSP*

*Remark: Coordination for the installation of high volume samplers is in progress.

2.2 Monitoring Frequency

For 1-hr TSP monitoring, the sampling frequency is at least three times in every six days when the highest dust impact occurs.

For 24-hr TSP monitoring, the sampling frequency is once in every six days when the highest dust impact occurs.

Monitoring was carried out on 11th, 16th, 22nd and 27th of February 2016.

2.3 Monitoring Equipment

1-hr TSP monitoring was carried out by the portable dust meters. A comparison test for the portable dust meters with the HVS was carried out to ensure the accuracy for direct reading of the portable dust meter. 24-hr TSP monitoring was carried out by the high volume samplers. The monitoring equipment is listed in Table 2.3.1 and Calibration Certificates of the equipment are shown in **Appendix E**.

Table 2.3.1 Air Quality Monitoring Equipment

Equipment	Manufacturer & Model No.	Serial No.	Latest Calibration Date	Next Calibration Date
Portable Dust Meter	TSI AM510	11510002	02/10/2015	01/10/2016
		11510003	02/10/2015	01/10/2016
		11510004	02/10/2015	01/10/2016
		11510005	02/10/2015	01/10/2016
High Volume Sampler	Tisch TE-5170	0001	25/01/2016	24/03/2016
		0002	25/01/2016	24/03/2016
Calibration Kit	Tisch TE-5028A	9833620	30/01/2015	29/01/2016

2.4 Monitoring Methodology and Parameters

1-hr TSP and 24-hr TSP air quality monitoring has been carried out during the reporting period.

Measurements of 1-hr TSP monitoring were taken by a Dust Trak aerosol monitor or its equivalent that is a portable and battery-operated laser photometer capable of performing real time 1-hr TSP measurements.

Field monitoring procedures are as follows:

- The monitoring station was set at a point 1m from the exterior of the sensitive receivers building façade and set at a position 1.2m above the ground.
- The battery condition was checked to ensure good functioning of the dust monitor.

- Zero Cal was conducted to the dust monitor to each test for ensuring more accurate data.
- Logging setup and Instrument setup such as log interval, test length, number of test and impactor adaptor will set as follows:
 - log interval : 1min
 - test length : 60mins
 - number of test : 3
 - Impactor adaptor: 10 μ (PM₁₀)
- Start the monitoring lasting 3 hours for each monitoring location
- At the end of the monitoring period, the Average, Maximum and Minimum of each TSP test shall be recorded. In addition on a standard record sheet.

Measurements of 24-hr TSP monitoring were taken by High Volume Samplers (HVSs).

HVSs fitted with appropriate sampling inlets were employed for air quality monitoring. Each sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complies with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).

Installation of HVSs:

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

Data of wind speed and wind direction was extracted from King's Park Meteorological Station of Hong Kong Observatory. The collection of wind data meets the prescribed criteria in S.3.4.3 of the EM&A Manual.

Other relevant data such as monitoring location, time, weather conditions and any other special phenomena at the construction site were recorded during the measurement period.

2.5 Maintenance and Calibration

Dust Trak aerosol monitors were calibrated by the manufacturer or a HOKLAS Laboratory for every year and on-site Zero Cal before every monitoring. HVSs were calibrated after installation and re-calibrated on bi-monthly basis.

2.6 Quality Assurance / Quality Control Results and Detection Limits

The portable dust meter was calibrated annually by the manufacturer or a HOKLAS laboratory. HVSs were first been calibrated after installation and repeated on bi-monthly basis. Calibration Kit for HVSs was calibrated annually by the manufacturer or a HOKLAS laboratory. The detection limits of the HVSs meet with the prescribed standard. Calibration details and current Calibration Certificates are shown in **Appendix E**.

2.7 Action and Limit Level for 1-hr TSP and 24-hr TSP

The Action and Limit levels for air quality impact monitoring results at all monitoring locations are summarized in Table 2.7.1, which would be applied for compliance assessment of air quality for this project. If the air quality monitoring results at any monitoring stations exceeded the criteria, the actions in accordance with the Event and Action Plan in Table 2.7.2 shall be taken.

Table 2.7.1 Established TSP Actions and Limit Level

Monitoring Locations	Monitoring Parameter	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
AM1	1-hr TSP	288	500
AM2		299	500
AM3		299	500

AM4	24-hr TSP	303	500
AM1		157	260
AM3-A		177	260

Table 2.7.2 Event and action Plan for Air Quality

Event	ET	IEC	WKCD	Contractor
Action Level				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and WKCD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and WKCD; 3. Advise the WKCD on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and WKCD; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Monitor the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial to WKCD within three working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.

Event	ET	IEC	WKCD	Contractor
Limit Level				
1. Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform WKCD, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and WKCD informed of the results. 	<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 WKCD on the effectiveness of the proposed remedial measures; 5. Monitor the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 1. Notify IEC, WKCD, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and WKCD to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and WKCD informed of the results; 8. 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 amongst WKCD, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the WKCD accordingly; 5. Monitor the implementation of remedial measures. 	<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. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the WKCD until the exceedance is abated.

2.8 Monitoring Results and Observations

1-hr TSP monitoring was conducted at four monitoring locations. The monitoring results are summarized in Table 2.8.1. 24-hr TSP monitoring was conducted at two monitoring locations. The monitoring results are summarized in Table 2.8.2. Detailed impact monitoring data of 1-hr TSP, 24-hr TSP and meteorological data are shown in **Appendix F**.

Table 2.8.1 Summary of average 1-hr TSP monitoring data

Monitoring Locations	Average 1-hr TSP ($\mu\text{g}/\text{m}^3$)	Range 1-hr TSP ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
AM1	100	52 – 158	288	500
AM2	142	107 – 207	299	500
AM3	108	50 – 154	299	500
AM4	100	69 – 161	303	500

Table 2.8.2 Summary of average 24-hr TSP monitoring data

Monitoring Locations	Average 24-hr TSP ($\mu\text{g}/\text{m}^3$)	Range 24-hr TSP ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
AM1	60	43 – 82	157	260
AM3-A	74	36 – 105	177	260

In accordance with the established action and limited levels for impact monitoring, there was no exceedance recorded in the reporting period.

During the monitoring period, vehicle emissions were identified as one of the main dust sources for AM1, AM2, AM3, AM4 and AM3-A. Construction activities from other construction sites near Canton Road were the influencing factors for AM2 and AM4. Construction activities from other construction sites near Nga Cheung Road were the influencing factors for AM3-A.

2.9 Monitoring Schedule for Next Reporting Month

The monitoring schedule for next reporting month is scheduled on 4th, 10th, 16th, 22nd, 24th and 30th of March 2016.

3 Noise Monitoring

3.1 Monitoring Locations

According to the EM&A Manual Section 4.5, five impact monitoring locations have been established for noise impact monitoring during the construction phase of the project, which are summarized in Table 3.1.1. The details of monitoring location plan are shown in **Appendix D**.

Table 3.1.1 Noise Monitoring Locations

Identification No.	Noise Monitoring Location	Description	Measurement Type
NM1	Sorrento - Tower 1	Ground Floor Face to Nga Cheung Road	Façade
NM2	Yau Ma Ti Catholic Primary School (Hoi Wang Road)	Ground Floor Face to Hoi Ting Road	Façade
NM3	The Cullinan I	Ground Floor Face to Nga Cheung Road	Façade
NM4	Lai Chack Middle School	Ground Floor Face to Canton Road	Façade
NM5	Yue Tak Building	Ground Floor Face to Jordan Road	Façade

3.2 Monitoring Frequency

The regular monitoring for each location was performed on a weekly basis.

Monitoring was carried out on 11th, 16th, 22nd and 27th of February 2016.

3.3 Monitoring Equipment

Noise monitoring was conducted by using BSWA 806 which complied with the International Electrotechnical Commission Publications 61672:2002 (Type 1), 60651:1979 (Type 1) and 60804:1985 (Type 1) Specifications as referred to the Technical Memorandum to the Noise Control Ordinance. The equipment was calibrated and verified by certified laboratory to ensure they can perform to the same level of accuracy as stated in the manufacturer's specification. Before and after the baseline measurement, the reading of sound level meter was checked with the acoustic calibrator

and the measurements were accepted as valid if the calibration levels before and after the noise measurement agreed to within 1.0 dB. The measurement equipment is listed in Table 3.3.1 and Calibration Certificates of the equipment are shown in **Appendix E**.

Table 3.3.1 Equipment List for Noise Monitoring

Equipment	Manufacturer & Model No.	Precision Grade	Serial No.	Latest Calibration Date	Next Calibration Date
Sound level meter	SVANTEK 971	IEC61672 Type 1	34350	28/12/2015	27/12/2016
Acoustical calibrator	SVANTEK SV30A	IEC 942 Type 1	29085	28/12/2015	27/12/2016

3.4 Monitoring Methodology and Parameters

The construction noise level was measured in terms of the A-weighted equivalent continuous sound pressure level, L_{Aeq} . L_{Aeq} (30minutes) was used as the monitoring parameter for the impact monitoring in the time period between 0700 to 1900 hours on normal weekdays.

In case of non-compliance with the construction noise criteria, more frequent monitoring, as specified in the Action plan in Table 3.6.2, shall be carried out. This additional monitoring shall be carried out until the recorded noise levels are rectified or proved to be irrelevant to the construction activities.

Field monitoring procedures are as follows:

- The monitoring station was set at a point 1m from the exterior of the sensitive receivers building façade and set at a position 1.2m above the ground.
- The battery condition was checked to ensure good functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time will set as follows:
 - frequency weighting : A
 - time weighting : Fast
- Prior to and after noise measurement, the meter shall be calibrated using the calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement will be considered invalid and repeat of noise measurement is required after re-calibration or repair of the equipment.

- The wind speed at the monitoring station shall be checked with the portable wind meter.
- Noise monitoring should be cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s. Noise measurement should be paused during periods of high intrusive noise if possible and observation shall be recorded when intrusive noise is not avoided.
- At the end of the monitoring period, the Leq, L₁₀ and L₉₀ shall be recorded. In addition, site conditions and noise sources should be recorded on a standard record sheet.

3.5 Maintenance and Calibration

Monitoring equipment was calibrated by the HOKAS Laboratory for every year and on-site calibrated before and after every monitoring.

3.6 Quality Assurance / Quality Control Results and Detection Limits

The sound level meter and calibrator were calibrated annually by the HOKLAS laboratory. The detection limits of the sound level meter meet with the prescribed standard. Calibration details and current Calibration Certificates are shown in **Appendix E**.

3.7 Action and Limit Level for Construction Noise

The Action and Limit levels for construction noise are defined in Table 3.7.1. Should exceedance of the criteria occur, action in accordance with the Action Plan in Table 3.7.2 shall be carried out.

Table 3.7.1 Action and Limit Levels for Construction Noise at all Sensitive Receivers

Monitoring Locations	Building Type	Time Period	Action Level	Limit Level
NM1	Residential	Daytime 0700 – 1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A)
NM2	Education			70 dB(A) / 65dB(A)*
NM3	Residential			75 dB(A)
NM4	Education			70 dB(A) / 65dB(A)*

NM5	Residential			75 dB(A)
-----	-------------	--	--	----------

*Remark: 70dB(A) and 65dB(A) for schools during normal teaching periods and school examination periods, respectively.

Table 3.7.2 Event / Action Plan for Construction Noise

Event	ET	IEC	WKCD	Action Contractor
Action Level	<ol style="list-style-type: none"> 1. Notify WKCD, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, WKCD and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the WKCD accordingly; 3. Advise the WKCD on the effectiveness of the proposed remedial measures. 	<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 the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC and WKCD; 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 1. Inform IEC, WKCD, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and WKCD on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and WKCD informed of the results; 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst WKCD, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the WKCD accordingly. 	<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 the 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. Submit proposals for remedial actions to IEC and WKCD within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the WKCD until the exceedance is abated.

3.8 Monitoring Results and Observations

Noise impact monitoring was conducted at five monitoring locations. The monitoring results are summarized in Table 3.8.1. Detailed impact monitoring data of noise are shown in **Appendix G1**.

Table 3.8.1 Summary of average noise monitoring data

Monitoring Locations	Monitoring Date	Baseline Level (dB(A))	L _{Aeq} (dB(A))	Corrected Noise Level (dB(A))* ¹	Action Level (dB(A))	Limit Level (dB(A))
NM1	11/02/2016	75.1	76.7	71.6	When one documented complaint is received	75 dB(A)
	16/02/2016		77.4	73.5		
	22/02/2016		76.5	70.9		
	27/02/2016		75.9	68.2		
NM2	11/02/2016	66.5	68.2	63.3	When one documented complaint is received	70 dB(A) * ²
	16/02/2016		69.5	66.5		70 dB(A) * ²
	22/02/2016		68.9	65.2		70 dB(A) * ²
	27/02/2016		67.3	59.6		70 dB(A) * ²
NM3	11/02/2016	74.5	76.9	73.2	When one documented complaint is received	75 dB(A)
	16/02/2016		75.1	66.2		
	22/02/2016		76.9	73.2		
	27/02/2016		76.8	72.9		
NM4	11/02/2016	73.3	73.7	63.1	When one documented complaint is received	70 dB(A) * ²
	16/02/2016		74.3	67.4		70 dB(A) * ²
	22/02/2016		73.9	65.0		70 dB(A) * ²
	27/02/2016		74.1	66.4		70 dB(A) * ²
NM5	11/02/2016	71.8	69.6	<Baseline level	When one documented complaint is received	75 dB(A)
	16/02/2016		69.7	<Baseline level		
	22/02/2016		70.6	<Baseline level		
	27/02/2016		70.4	<Baseline level		

Remark:

*¹ Calculations refer to Section 3.5 of the Baseline environmental monitoring report.

*² 70dB(A) for schools during normal teaching periods. School schedule is shown in **Appendix G2**.

In accordance with the established action and limited levels for impact monitoring, there was no exceedance recorded in the reporting period.

During the monitoring period, traffic noise was identified as the main noise source for NM1, NM2, NM3, NM4 and NM5. Construction activities from other construction sites near Nga Cheung Road were the influencing factors for NM1 and NM3. Construction activities from other construction sites near Hoi Ting Road were the influencing factors for NM2. Construction activities from other construction sites near Canton Road were the influencing factors for NM4 and NM5.

3.9 Monitoring Schedule for Next Reporting Month

The monitoring schedule for next reporting month is scheduled on 4th, 10th, 16th, 22nd, 24th and 30th of March 2016.

4 Solid and Liquid Waste Management Status

With reference to relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting month are summarised in Table 4.1. During this reporting month, inert C&D materials and general refuse were generated and disposed. No mixed waste was generated. No chemical waste was generated and collected by licensed collector. No paper, plastic and metal was recycled. Detail of waste management data is presented in **Appendix H**.

Table 4.1 Quantities of Waste Disposed from the Project

Reporting Month	Quantity						
	C&D Materials (inert) ^(a)	C&D Materials (non-inert) ^(b)					
		General Refuse	Mixed Waste	Chemical Waste	Recycled materials		
					Paper/ cardboard	Plastics	Metals
	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)
Feb 2016	521.76	38.34	0	0	0	0	0
Notes:							
(a) Inert C&D materials include bricks, concrete, building debris, rubble and excavated soil.							
(b) Non-inert C&D materials include steel, paper/cardboard packaging waste, plastics and other wastes such as general refuse and vegetative wastes. Steel metal generated from the Project are grouped into non-inert C&D materials as the materials were not disposed of with other inert C&D materials.							

Waste materials were generated during this reporting period, such as excavated waste, demolition waste and general refuse. Contractor handled, stored and disposed in accordance with good waste management practice and EPD's regulation and requirements.

5 Landscape and Visual Impact

In accordance with the EM&A Manual, the landscape and visual mitigation measures shall be implemented to minimize the landscape and visual impacts during the construction works. The proposed monitoring program for landscape and visual impact is detailed in Table 5.1.

Table 5.1 Proposed Monitoring Program

Stage	Monitoring Task	Frequency	Report	Approval
Construction stage	Mitigation measures implementation	Bi-weekly	Landscape and Visual Impact Assessment Checklist	Registered Landscape Architect & ET Leader

Bi-weekly site inspections were conducted by representatives of the Engineer, Contractor and ET on 6th and 20th February 2016. The observations, reminders and recommendations made during the site inspections are summarized in Section 6, Table 6.1.

The implementation status of the proposed mitigation measures for landscape and visual impacts is given in **Appendix I**. Should non-conformity on one occur, action in accordance with the Action Plan in Table 5.2 shall be carried out.

Table 5.2 Event / Action Plan for Landsscape and Visual Impact

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

6 Environmental Site Inspection

6.1 Site Audit

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

Joint weekly inspections were conducted by representatives of the Contract Administrator, Engineer, Contractor and ET on 12th, 17th, 23rd and 29th February 2016. The representative of the IEC joined the site inspection on 17th February 2016. Observations were recorded and summarized in table 6.1.

No inspection was conducted by EPD during the reporting period.

During site inspection in the reporting month, no non-compliance was identified.

6.2 Implementation Status of Environmental Mitigation Measures

According to the EM&A Manual of the Project, the mitigation measures detailed in the documents shall be implemented during the construction phase. Updated status summary of the Environmental Mitigation Implementation Schedule is provided in **Appendix I**.

The observations, reminders and recommendations made during the audit sessions are summarized in table 6.1.

Table 6.1 Summary results of site inspections findings.

Date	Findings	Identification	Advice from ET	Action taken	Closing date
12 Feb 16	General waste was stored on site.	Reminder	Contractor was reminded to conduct frequent waste collection and keep the site areas clean and tidy.	Waste collection and site clearance were conducted.	13Feb 16
17 Feb 16	Exposed surface was not properly covered. (Scheme I)	Observation	Contractor was advised to cover the exposed area with tarpaulin sheet or conduct frequent water spray for dust suppression.	Exposed surface was properly covered.	23 Feb 16
17 Feb 16	Retain trees were not properly protect from damage. (Scheme HA)	Observation	Contractor was advised to set up protective fencing for encircling and protecting the retain trees	Retain trees were properly protect from damage.	23 Feb 16
17 Feb 16	Portion of construction materials were stored near the trees.	Reminder	Contractor was reminded to properly store the construction materials and stockpiles in appropriate areas	Construction materials were properly stored.	23 Feb 16
23 Feb 16	Pre drilling works were planned to start. (Scheme I)	Reminder	Contractor was reminded to set up intercepting channels along the edge of pre drilling areas for preventing surface runoff.	Intercepting channels were properly set up along the edge of pre drilling areas.	23 Feb 16
Landscape and Visual Impact					
6 Feb 16	No TPZ was provided for the retained trees in Scheme HA.	Observation	Contractor was reminded to provide Tree Protection Zone (TPZ) for the retained trees in Scheme HA.	Working zone was limited.	20 Feb 16
20 Feb 16	No TPZ was provided for the retained trees in Scheme HA.	Observation	Contractor was reminded to provide Tree Protection Zone (TPZ) for the retained trees in Scheme HA.	The follow-up status will be reported in the next reporting period.	N/A

7 Environmental Non-Conformance

7.1 Summary of Environmental Exceedances

No exceedances of Action and Limit levels were recorded in the reporting month.

7.2 Summary of Environmental Non-Compliance

No environmental non-compliance was recorded in the reporting month.

7.3 Summary of Environmental Complaint

No environmental project-related complaint was received in the reporting month.

7.4 Summary of Notification of Summons and Successful Prosecution

There was no successful environmental prosecution or notification of summons received since the Project commencement.

The cumulative log for environmental exceedance, non-compliance, complaint and summon and successful prosecution since the commencement of the Project is presented in **Appendix J**.

8 Future Key Issues

The major construction activities in the coming month will include:

- Portion I – Trial Trench Works
- Portion I – UU Diversion Works
- Portion HA – Socketed H-Pile Works
- Portion HA – Trial Trench Works
- Portion HA – Pre-Drill Works
- Portion HA – Man-hole Construction Works
- Portion HA – Tree Felling
- Portion J – Socketed H-Pile Works
- Portion J – ELS Works
- Portion J – Modification of Manhole
- Portion J – Tree Felling Works
- Portion Q – Demolition of Central Divider
- Portion Q – Construction of CCTV Highmast Footing
- Portion Q – Trial Pit Excavation

Potential environmental impacts arising from the above construction activities are mainly associated with dust, construction noise, water quality and waste management. The Contractor has been reminded to properly implement dust, construction noise and water quality control measures as well as proper waste management in order to minimize the potential environmental impacts due to the construction works of the Project.

9 Comment, Recommendations and Conclusions

9.1 Comment

The recommended mitigation measures accordance with the EM&A Manual had been effectively implemented to minimize the environmental impacts due to the construction. The contractor had implemented the mitigation measures to control the dust and noise impacts. The measured TSP and noise level complied with the established action and levels. No dust and noise impacts obviously affected to the environment and sensitive receivers. The environmental performance during the reporting period was considered satisfactory.

9.2 Recommendations

According to the environmental audit performed in the reporting month, the following recommendation was made:

- To conduct frequent waste collection and keep the site areas clean and tidy;
- To cover the exposed area with tarpaulin sheet or conduct frequent water spray for dust suppression;
- To set up protective fencing for encircling and protecting the retained trees;
- To properly store the construction materials and stockpiles in appropriate areas;
- To set up intercepting channels along the edge of pre drilling areas for preventing surface runoff;
- To provide Tree Protection Zone (TPZ) for the retained trees.

9.3 Conclusions

This is the monthly Environmental Monitoring and Audit (EM&A) Report presenting the EM&A works undertaken during 6th February 2016 to 29th February 2016 in accordance with the EM&A Manual.

No exceedance of action level and limit level was recorded for TSP and Noise. No Non-compliance event, environmental complaint, notification of summons and successful prosecution against the Project were received in this reporting month.

4 nos. of environmental site inspections and 2 nos. of landscape and visual inspection were carried out in this reporting month. Recommendations on remedial actions were

given to the Contractor for the deficiencies identified during the site audit.

ET has reminded the contractor to provided environmental pollution control measures, waste management measures and good site practice

The ET will keep tracking of the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all the necessary mitigation measures.

Appendix A: Construction Programme and Project Layout Plan

ID	Task Name	Duration	Start	Finish	2015				2016				2017			
					Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
1	Road Improvement Works in West Kowloon Reclamation Development	956 d	Mon 23/3/15	Thu 2/11/17												
2	West Kowloon Highway South Bound near Western Harbour Tunnel at Portion I	956 d	Mon 23/3/15	Thu 2/11/17												
3	Site Clearance, tree felling	320 d	Mon 23/3/15	Fri 5/2/16												
4	Underground investigation, utilities diversion and piling construction	250 d	Sat 6/2/16	Wed 12/10/16												
5	Pile cap, Pier and Bridge Deck construction	180 d	Thu 13/10/16	Mon 10/4/17												
6	E&M installation and roadworks	76 d	Tue 11/4/17	Sun 25/6/17												
7	Street furniture installation	130 d	Mon 26/6/17	Thu 2/11/17												
8																
9																
10	Canton road at Portion Q	956 d	Mon 23/3/15	Thu 2/11/17												
11	Site Clearance, tree felling	320 d	Mon 23/3/15	Fri 5/2/16												
12	Road works at Canton road footpath and utilities diversion	100 d	Sat 6/2/16	Sun 15/5/16												
13	Construction of sign gantry	50 d	Mon 16/5/16	Mon 4/7/16												
14	Road works at Ferry Street and Jordan road	236 d	Tue 5/7/16	Sat 25/2/17												
15	Road works at Wui Cheung road	250 d	Sun 26/2/17	Thu 2/11/17												
16																
17																
18	Lin Cheung Road North Bound at Portion HA	912 d	Mon 23/3/15	Tue 19/9/17												
19	Site Clearance, tree felling	320 d	Mon 23/3/15	Fri 5/2/16												
20	Underground investigation, utilities diversion and piling construction	250 d	Sat 6/2/16	Wed 12/10/16												
21	Pile cap, Pier and Bridge Deck construction	180 d	Thu 13/10/16	Mon 10/4/17												
22	E&M installation and roadworks	42 d	Tue 11/4/17	Mon 22/5/17												
23	Street furniture installation	120 d	Tue 23/5/17	Tue 19/9/17												
24																
25																
26	Lin Cheung Road South Bound at Portion J	730 d	Mon 23/3/15	Tue 21/3/17												
27	Site Clearance, tree felling	320 d	Mon 23/3/15	Fri 5/2/16												
28	Construction of retaining walls and utilities diversion	140 d	Sat 6/2/16	Fri 24/6/16												
29	Site formation and roadworks	140 d	Sat 25/6/16	Fri 11/11/16												
30	Street furniture installation	130 d	Sat 12/11/16	Tue 21/3/17												

Task



Critical Task



Progress

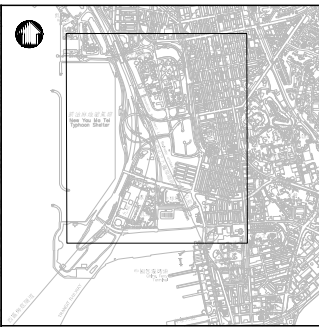
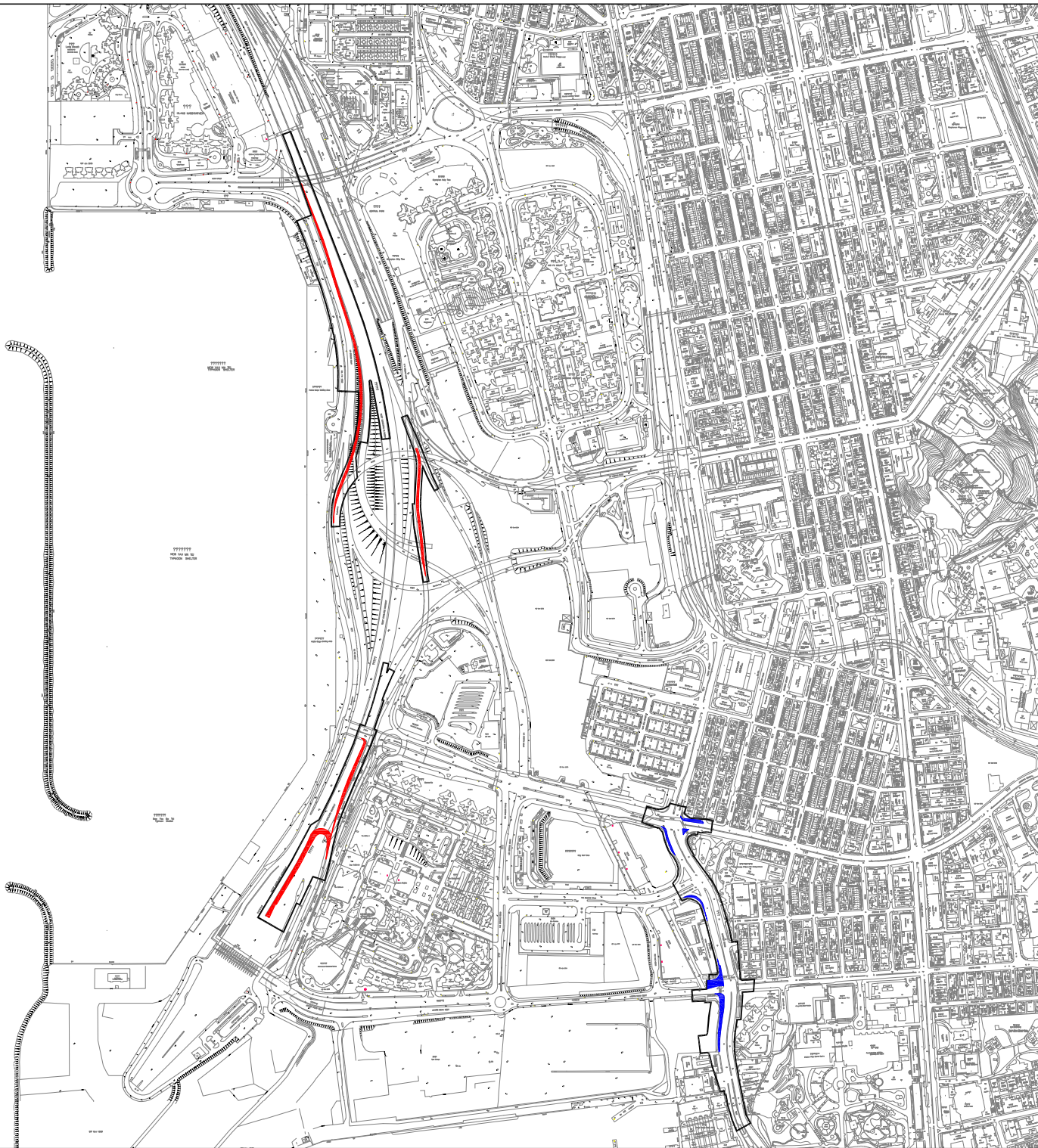


Milestone



Summary






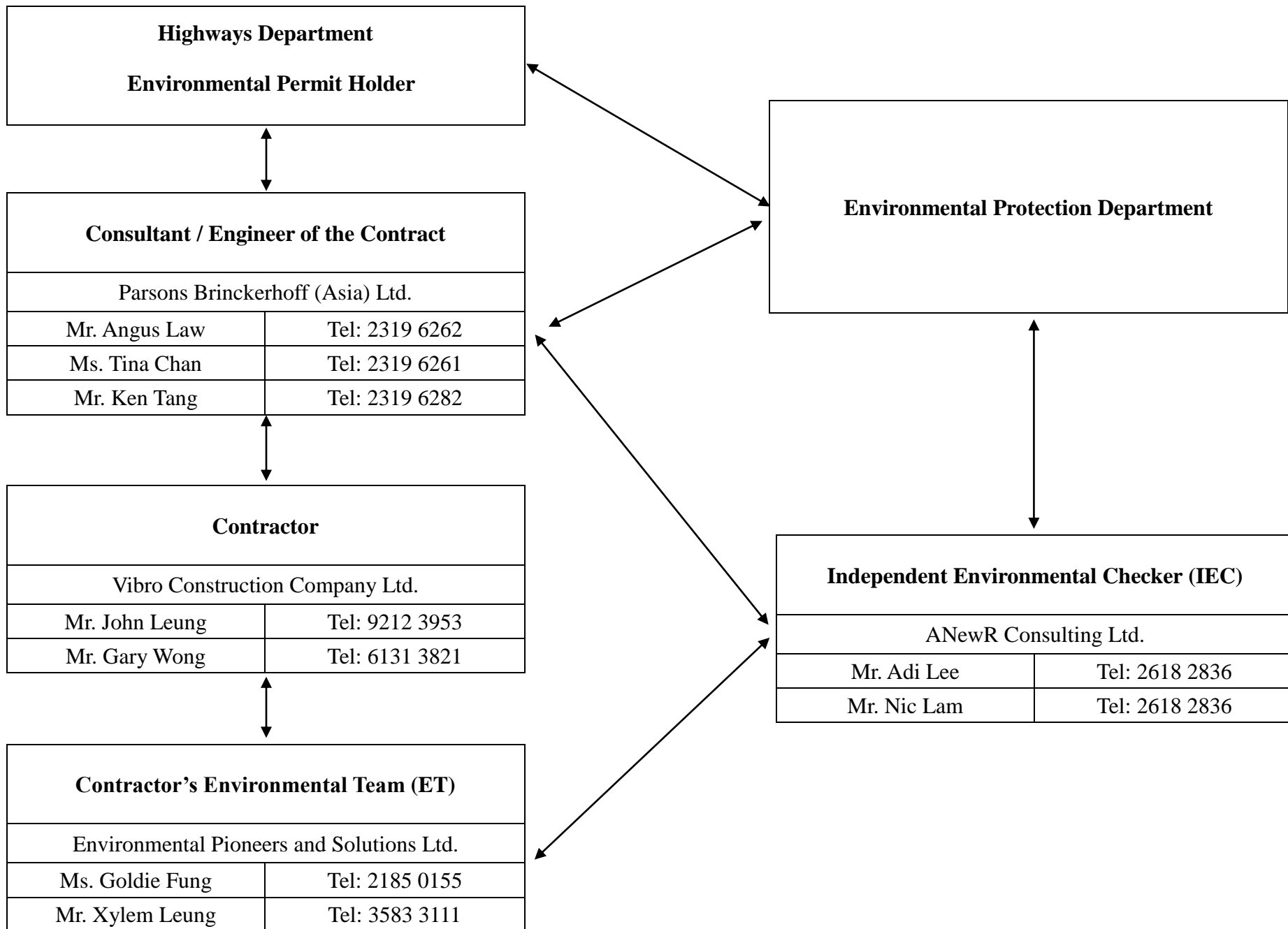
LOCATION PLAN

LEGEND:

WORKS BOUNDARY

Rev	Description	By	Date
Consultant			
PARSONS BRINCKERHOFF			
漢綠 CINETECH 			
Project title			
AGREEMENT NO. CE 44/2011 (HY) PROPOSED ROAD IMPROVEMENT WORKS IN WEST KOWLOON RECLAMATION DEVELOPMENT – PHASE 1 INVESTIGATION, DESIGN AND CONSTRUCTION			
Drawing title			
SITE LOCATION PLAN			
Drawing no.		Rev.	
CE44/T/ST/EM01		—	
Drawn	Date	Checked	Approved
BC	JUL12	KS	LC
Scale	Status		
A1 NTS	Preliminary		

Appendix B: Project Organization Chart



↔ Line of communication

Appendix C: Environmental Licences, Notification and Permits

RECEIVED 24 MAR 2015

本署檔號
OUR REF: 386894
來函檔號
YOUR REF:

電話: 2417 6116
TEL NO:

圖文傳真: 2411 3073
FAX NO.:

網址:

HOME PAGE: <http://www.epd.gov.hk/>

Environmental Protection Department
Environmental Compliance Division
Regional Office (West)
8/F., Tsuen Wan Government Offices
38 Sai Lau Kok Road
Tsuen Wan
New Territories



環境保護署
環保法規管理科
區域辦事處 (西)
新界荃灣西樓角路 38 號
荃灣政府合署 8 樓



2015B003242

23/03/2015

VIBRO CONSTRUCTION CO LTD
11/F., CHEVALIER COMMERCIAL CENTRE,
8 WANG HOI ROAD, KOWLOON BAY,
KOWLOON

Dear Sirs,

Site /Premises:

(VC201501)
West Kowloon Highway, Nga Cheung Road, Lin Cheung Road,
Austin Road, Jordan Road and Hoi Fan Road, Typhoon Shelter,
Kowloon

This is to acknowledge receipt of the following submission(s) on 23/03/2015

Notification Pursuant to Section 3(1) of The **Air Pollution Control**
(Construction Dust) Regulation

Ref. Number: **386894**

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

Yours faithfully,

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

執事先生:

工地/處所:(見英文版本)

我們已於 二零一五年三月廿三日 收到你提交的文件，詳列如下:

根據空氣污染管制(建造工程塵埃)規例第
3(1)條的規定呈報通知
檔案編號: 386894

如有疑問，請與代行人查詢。

環境保護署署長
(代行)

二零一五年三月廿三日



Licence No.: **WT00021818-2015**
 牌照編號 :

This Licence is Valid to : **30 Jun 2020**
 本牌照有效期至 : **2020 年 6 月 30 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 15/20/23A*
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。

18 June 2015

Date
日期

(K. H. LAM)
 For the Authority
 監督 (林嘉濠 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」)	Vibro Construction Company Limited 惠保建築有限公司
Discharge Premises ("the premises") 排放處所(「處所」)	Construction Site at West Kowloon Highway and Nga Cheung Road, Kowloon (Refer to the attached Annex) 九龍西九龍公路及雅翔道之地盤(參閱附件)
Water Control Zone 水質管制區	Victoria Harbour (Phase Two) Water Control Zone 維多利亞港水質管制區 (第二期)
Discharge Category 排放種類	Effluent arising from construction activities 由建築工程產生的排放
Nature of Discharge and Wastewater Treatment Facilities 排放性質及廢水處理設施	Effluent arising from construction site 由建築工程所產生的廢水: Stream A – Zone A Stream B – Zone B Chemical Precipitation & Sedimentation Tank 化學沉澱及沉澱池
Discharge Point(s) 排放點	Discharge into communal storm water drain 排放入公用雨水渠
Sampling Point(s) 取樣點	Sampling points at discharge outlets of the treatment facilities 取樣點位於廢水處理設施之出水口

*Delete as appropriate
將不適用者刪去

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^(Note 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^(附註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	
	Stream A	Stream B
Flow Rate (m ³ /day) 流量 (立方米/日)	20	20
pH (pH units) 酸鹼值(pH 單位)	#6-9	#6-9
Suspended Solids 懸浮固體	30	30
Chemical Oxygen Demand 化學需氧量	80	80

Range 限度

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自行監測。

- ☐ The Licensee shall sample the discharge at the Sampling Point(s) and, at his own expense carry out analyses 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
-----------------	---------	------------------	--------------

Results of these monitoring shall be summarized in a report on a ~~Monthly/Bi-monthly/Quarterly*~~ 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*作出報告，並須呈交監督審閱。

*Delete as appropriate
將不適用者刪去

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), polyaromatic 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 discolouration 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、氯化烴、可燃的或有毒的溶劑、碳化鈣；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、漂浮物質或體積超越 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度。

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逾或低於真正流量的 3%，並應根據製造商建議的方法，定期校準流量計。如沒有設置該設備，持牌人須依照監督同意的計算方法，根據處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 b & c).

處理過程中所產生的污泥、隔濾物、固體、油脂、過濾器回洗或其他污染物，必須妥善地棄置^(附註 b 及 c)。

C5. Monitoring 監測

- C5.1 The Licensee shall provide and maintain suitable 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的設施，例如檢查槽，沙井或取樣閥，以確保獲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，「隨意取集樣本」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 d).

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 d)。

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記錄圖表的正本；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 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.

倘若有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 小時內立即知會監督並予以解釋。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。手冊內容須最低限度包括操作程序、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。

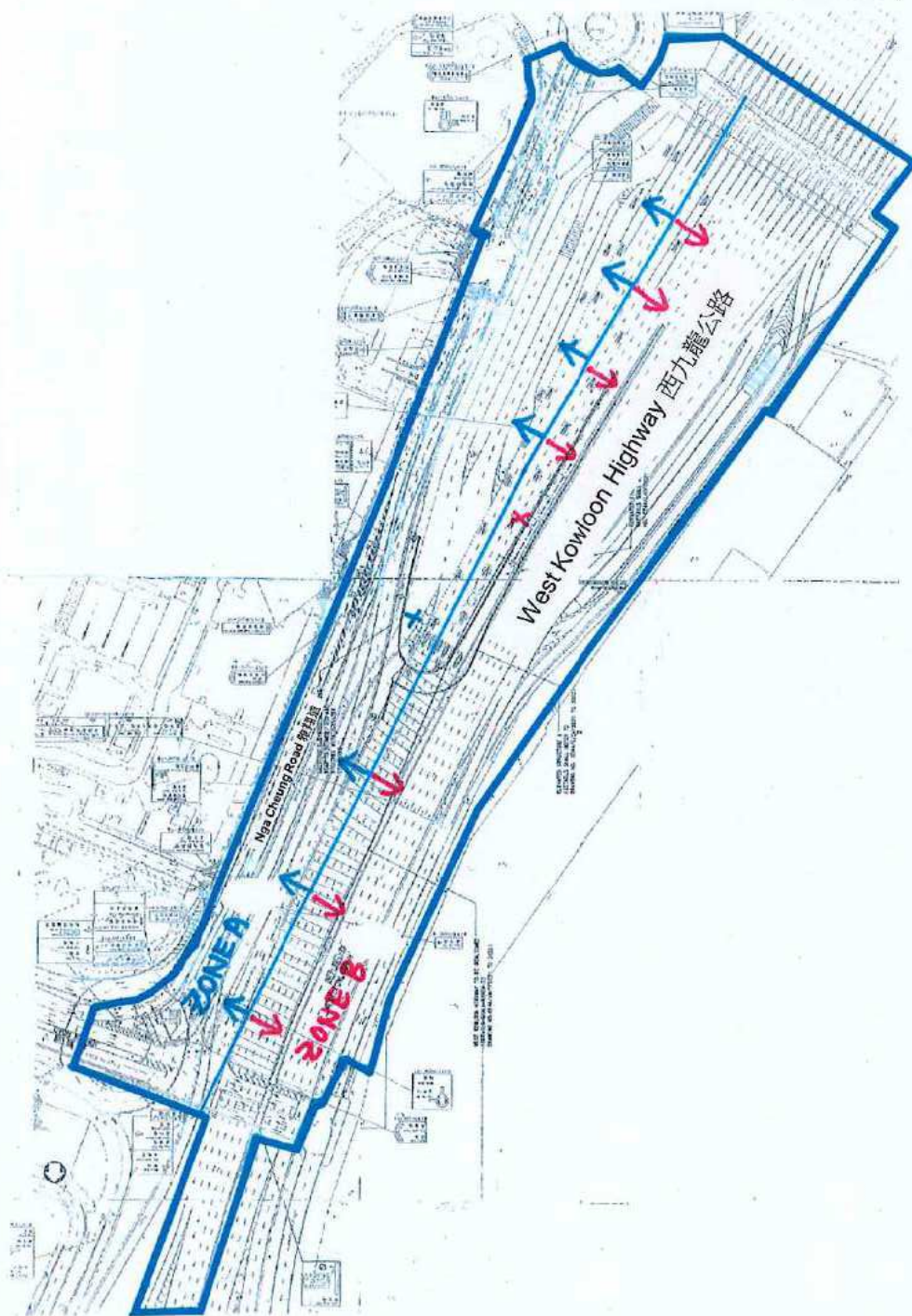
C8. Notification of Change 更改通知

The Licensee shall notify the Authority in writing within 14 days of any changes or proposed changes in 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 日內以書面通知監督。

- (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 Authority as being representative of the quality of the discharge. When any single sample analyzed for a determinand 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.
為確定排放是否符合特別條件第 B1 項內所列的限度，獲監督授權的人員須在取樣點或在監督認為可以抽取到具代表性的樣本的任何其他位置抽取樣本。只要在任何一個經分析的樣本中，證實任何一個測量物不符合表中所列的相應限度時，排放即被視為不符合特別條件第 B1 項。
- (b) An example of proper disposal method for sludge is sending dewatered sludge to landfill for disposal.
妥善棄置污泥方法中的一個例子是將脫水後的污泥運往堆填區棄置。
- (c) Proper disposal of grease trap waste includes but is not limited to employing any reputable firm or collector who will use the right equipment and dispose of the collected grease trap waste at West Kowloon Transfer Station. The updated list of grease trap waste collectors who are using the disposal service at West Kowloon Transfer Station is maintained in the EPD website and Green Restaurant website.
妥善的隔油池廢物棄置方法包括卻不限於聘用任何信譽良好的公司／收集商使用適當的設備在西九龍廢物轉運站棄置所收集的隔油池廢物。環保署網站及環保食肆網均載有目前使用西九龍廢物轉運站棄置隔油池廢物的收集商最新名單。
- (d) The Licensee may make reference to Annex 1 of the <Technical Memorandum on Effluent Standards> for analytical methods used by the Government Chemist.
持牌人可參照「流出物標準技術備忘錄」附件 1 有關政府化驗師所採用的分析方法。
- (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.
持牌人須在處所內保存此牌照，以備獲監督授權的人員隨時查閱。
- (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.
持牌人須准許獲監督授權的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.
倘若由於處所的保安理由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，申請一面新牌照。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 23 A 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，根據本條例的第 23 或 23 A 條的規定，申請牌照續期。監督可將牌照續期或拒絕將牌照續期。
- (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，向本牌照施加新訂或經修訂的條款及條件，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，本牌照並不得解釋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。

Annex



— - Construction Site Boundary
地盤分界線

Title: Construction Site Boundary 地盤分界線

Construction Site at West Kowloon Highway and Nga Cheung Road, Kowloon
九龍西九龍公路及雅翔道之地盤

Annex to Licence No.: WT00021818-2015

Date: 18 June 2015

Scale: Not To Scale

Page: Sheet 1 of 1

ENVIRONMENTAL PROTECTION DEPARTMENT,
HONG KONG



REGIONAL OFFICE (EAST)



Licence No.: **WT00021822-2015**
 牌照編號 :

This Licence is Valid to : **30 Jun 2020**
 本牌照有效期至 : **2020 年 6 月 30 日**

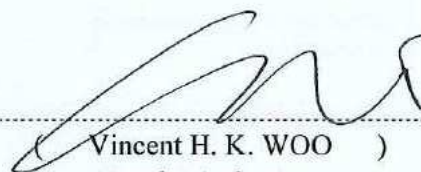
ENVIRONMENTAL PROTECTION DEPARTMENT
環境保護署
WATER POLLUTION CONTROL ORDINANCE (CAP. 358)
水污染管制條例(第 358 章)
LICENCE PURSUANT TO SECTION 15/20/23A*
按第 15/20/23A* 條簽發的牌照

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。

18 June 2015

Date
日期


 Vincent H. K. WOO)
 For the Authority

監督 (胡漢強 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」)	Vibro Construction Company Limited 惠保建築有限公司
Discharge Premises ("the premises") 排放處所(「處所」)	Construction Site at Lin Cheung Road and Hoi Po Road, Kowloon (Contract No. HY/2013/17) (Refer to the attached Annex) 九龍連翔道及海寶路之地盤(合約編號 HY/2013/17) (參閱附件)
Water Control Zone 水質管制區	Victoria Harbour (Phase Two) Water Control Zone 維多利亞港水質管制區 (第二期)
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 and all other wastewater arising from the above premises: 源自上址的污水及其他廢水: Stream A – Zone A Stream B – Zone B Stream C – Zone C Chemical Precipitation & Sedimentation Tank 化學沉澱及沉澱池
Discharge Point(s) 排放點	Discharge into communal storm water drain 排放入公用雨水渠
Sampling Point(s) 取樣點	Sampling points at discharge outlets of the treatment facilities 取樣點位於廢水處理設施之出水口

*Delete as appropriate
將不適用者刪去

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^(Note 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^(附註 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		
	Stream A	Stream B	Stream C
Flow Rate (m ³ /day) 流量 (立方米/日)	15	15	10
pH (pH units) 酸鹼值(pH 單位)	#6-9	#6-9	#6-9
Suspended Solids 懸浮固體	30	30	50
Chemical Oxygen Demand 化學需氧量	80	80	100

Range 限度

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自行監測。

- ☐ The Licensee shall sample the discharge at the Sampling Point(s) and, at his own expense carry out analyses 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
-----------------	---------	------------------	--------------

Results of these monitoring shall be summarized in a report on a ~~Monthly/Bi-monthly/Quarterly*~~ 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*作出報告，並須呈交監督審閱。

*Delete as appropriate
將不適用者刪去

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), polyaromatic 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 discolouration 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、氯化烴、可燃的或有毒的溶劑、碳化鈣；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；足以及在排水或排污系統，或香港水域任何範圍內形成浮渣或沉積物的廢物；足以及在香港水域任何範圍內形成變色的廢物；污泥、漂浮物質或體積超越 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度。

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逾或低於真正流量的 3%，並應根據製造商建議的方法，定期校準流量計。如沒有設置該設備，持牌人須依照監督同意的計算方法，根據處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 b & c).

處理過程中所產生的污泥、隔濾物、固體、油脂、過濾器回洗或其他污染物，必須妥善地棄置^(附註 b 及 c)。

C5. Monitoring 監測

- C5.1 The Licensee shall provide and maintain suitable 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的設施，例如檢查槽，沙井或取樣閥，以確保獲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，「隨意取集樣本」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 d).
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 d)。

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記錄圖表的正本；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 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.
倘若有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 小時內立即知會監督並予以解釋。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。手冊內容須最低限度包括操作程序、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。

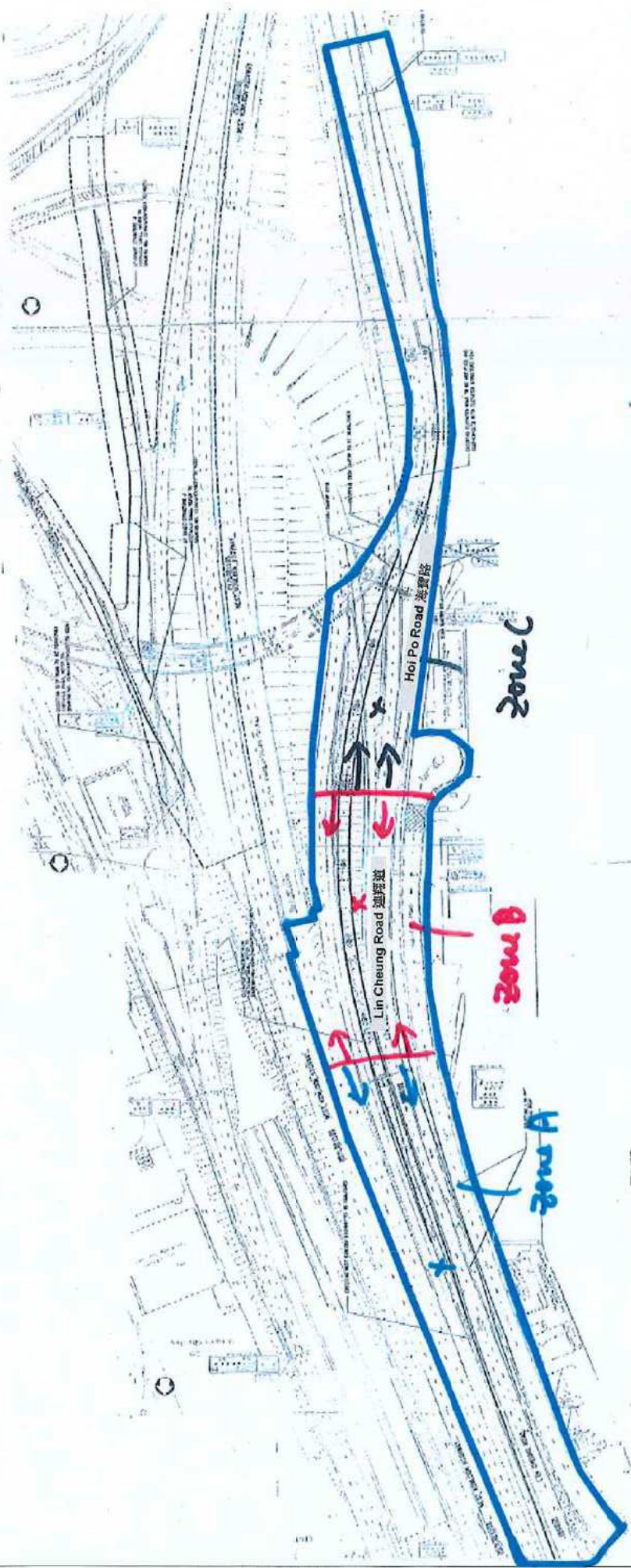
C8. Notification of Change 更改通知

The Licensee shall notify the Authority in writing within 14 days of any changes or proposed changes in 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 日內以書面通知監督。

- (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 Authority as being representative of the quality of the discharge. When any single sample analyzed for a determinand 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.
為確定排放是否符合特別條件第 B1 項內所列的限度，獲監督授權的人員須在取樣點或在監督認為可以抽取到具代表性的樣本的任何其他位置抽取樣本。只要在任何一個經分析的樣本中，證實任何一個測量物不符合表中所列的相應限度時，排放即被視為不符合特別條件第 B1 項。
- (b) An example of proper disposal method for sludge is sending dewatered sludge to landfill for disposal.
妥善棄置污泥方法中的一個例子是將脫水後的污泥運往堆填區棄置。
- (c) Proper disposal of grease trap waste includes but is not limited to employing any reputable firm or collector who will use the right equipment and dispose of the collected grease trap waste at West Kowloon Transfer Station. The updated list of grease trap waste collectors who are using the disposal service at West Kowloon Transfer Station is maintained in the EPD website and Green Restaurant website.
妥善的隔油池廢物棄置方法包括卻不限於聘用任何信譽良好的公司／收集商使用適當的設備在西九龍廢物轉運站棄置所收集的隔油池廢物。環保署網站及環保食肆網均載有目前使用西九龍廢物轉運站棄置隔油池廢物的收集商最新名單。
- (d) The Licensee may make reference to Annex 1 of the <Technical Memorandum on Effluent Standards> for analytical methods used by the Government Chemist.
持牌人可參照「流出物標準技術備忘錄」附件 1 有關政府化驗師所採用的分析方法。
- (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.
持牌人須在處所內保存此牌照，以備獲監督授權的人員隨時查閱。
- (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.
持牌人須准許獲監督授權的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.
倘若由於處所的保安理由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，申請一面新牌照。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 23 A 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，根據本條例的第 23 或 23 A 條的規定，申請牌照續期。監督可將牌照續期或拒絕將牌照續期。
- (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，向本牌照施加新訂或經修訂的條款及條件，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，本牌照並不得解釋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。

Annex



— - Construction Site Boundary
地盤分界線

Title: Construction Site Boundary 地盤分界線

Construction Site at Lin Cheung Road and Hoi Po Road, Kowloon (Contract No. HY/2013/17)

九龍連輝道及海寶路之地盤 (合約編號 HY/2013/17)

Annex to Licence No.: WT00021822-2015

Date: 18 June 2015

Scale: Not To Scale

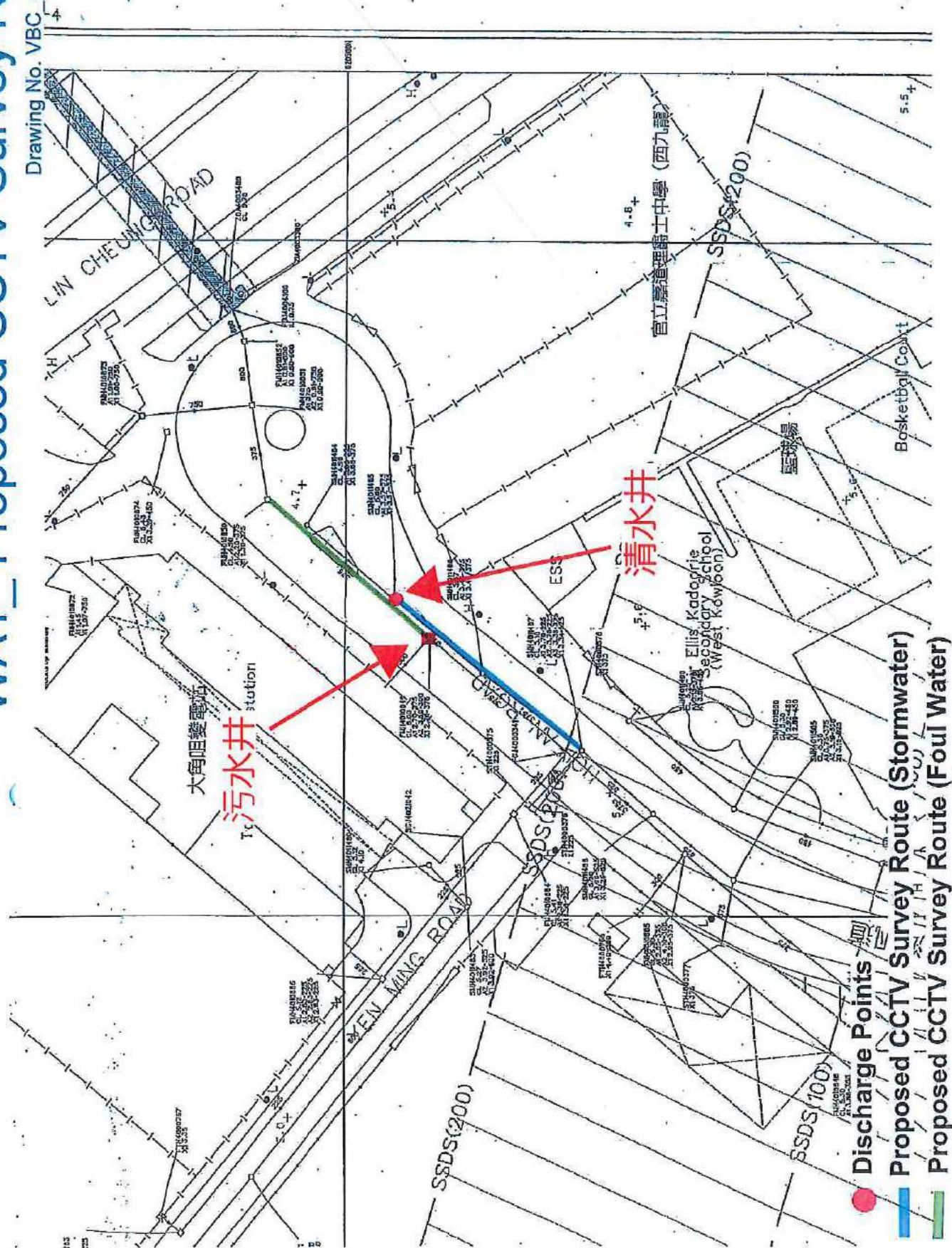
Page: Sheet 1 of 1

ENVIRONMENTAL PROTECTION DEPARTMENT,
HONG KONG



REGIONAL OFFICE (EAST)

Drawing No. VBC CCTV WA1





Licence No.: **WT00021825-2015**
 牌照編號 :

This Licence is Valid to : **30 Jun 2020**
 本牌照有效期至 : **2020 年 6 月 30 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 15/20/23A*
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。

18 June 2015

Date
日期

(K. H. LAM)

For the Authority

監督 (林嘉濠 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」)	Vibro Construction Company Limited 惠保建築有限公司
Discharge Premises ("the premises") 排放處所(「處所」)	Construction Site at West Kowloon Highway and Lin Cheung Road, Kowloon (Refer to the attached Annex) 九龍西九龍公路及連翔道之地盤(參閱附件)
Water Control Zone 水質管制區	Victoria Harbour (Phase Two) Water Control Zone 維多利亞港水質管制區(第二期)
Discharge Category 排放種類	Effluent arising from construction activities 由建築工程產生的排放
Nature of Discharge and Wastewater Treatment Facilities 排放性質及廢水處理設施	Effluent arising from construction site 由建築工程所產生的廢水: Stream A – Zone A Stream B – Zone B Chemical Precipitation & Sedimentation Tank 化學沉澱及沉澱池
Discharge Point(s) 排放點	Discharge into communal storm water drain 排放入公用雨水渠
Sampling Point(s) 取樣點	Sampling points at discharge outlets of the treatment facilities 取樣點位於廢水處理設施之出水口

*Delete as appropriate
將不適用者刪去

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^(Note 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^(附註 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	
	Stream A	Stream B
Flow Rate (m ³ /day) 流量 (立方米/日)	20	20
pH (pH units) 酸鹼值(pH 單位)	#6-9	#6-9
Suspended Solids 懸浮固體	30	30
Chemical Oxygen Demand 化學需氧量	80	80

Range 限度

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自行監測。

- ☐ The Licensee shall sample the discharge at the Sampling Point(s) and, at his own expense carry out analyses 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

Results of these monitoring shall be summarized in a report on a ~~Monthly~~/Bi-monthly/Quarterly* 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*作出報告，並須呈交監督審閱。

*Delete as appropriate
將不適用者刪去

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), polyaromatic 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 discolouration 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、氯化烴、可燃的或有毒的溶劑、碳化鈣；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、漂浮物質或體積超越 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度。

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逾或低於真正流量的 3%，並應根據製造商建議的方法，定期校準流量計。如沒有設置該設備，持牌人須依照監督同意的計算方法，根據處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 b & c).

處理過程中所產生的污泥、隔濾物、固體、油脂、過濾器回洗或其他污染物，必須妥善地棄置^(附註 b 及 c)。

C5. Monitoring 監測

- C5.1 The Licensee shall provide and maintain suitable 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的設施，例如檢查槽，沙井或取樣閥，以確保獲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，「隨意取集樣本」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 d).
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d)。

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記錄圖表的正本；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 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.
倘若有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 小時內立即知會監督並予以解釋。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.

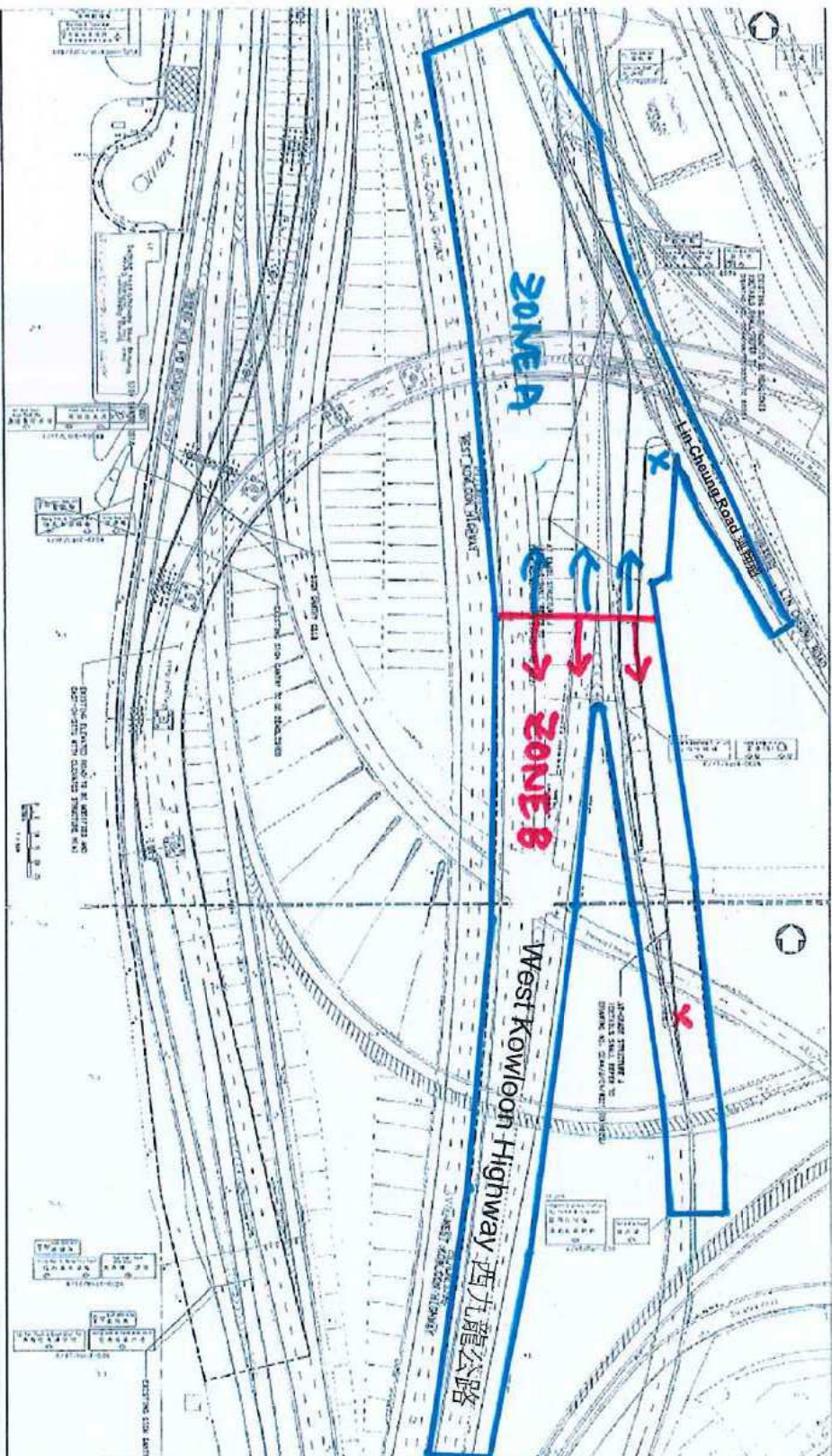
持牌人須擬備廢水處理設施的操作手冊。手冊內容須最低限度包括操作程序、檢查、維修及保養工作計劃表。該手冊須保存在上述廢水處理設施內。持牌人須在監督要求時，呈交手冊副本乙份。

C8. Notification of Change 更改通知

The Licensee shall notify the Authority in writing within 14 days of any changes or proposed changes in 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 日內以書面通知監督。

- (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 Authority as being representative of the quality of the discharge. When any single sample analyzed for a determinand 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.
為確定排放是否符合特別條件第 B1 項內所列的限度，獲監督授權的人員須在取樣點或在監督認為可以抽取到具代表性的樣本的任何其他位置抽取樣本。只要在任何一個經分析的樣本中，證實任何一個測量物不符合表中所列的相應限度時，排放即被視為不符合特別條件第 B1 項。
- (b) An example of proper disposal method for sludge is sending dewatered sludge to landfill for disposal.
妥善棄置污泥方法中的一個例子是將脫水後的污泥運往堆填區棄置。
- (c) Proper disposal of grease trap waste includes but is not limited to employing any reputable firm or collector who will use the right equipment and dispose of the collected grease trap waste at West Kowloon Transfer Station. The updated list of grease trap waste collectors who are using the disposal service at West Kowloon Transfer Station is maintained in the EPD website and Green Restaurant website.
妥善的隔油池廢物棄置方法包括卻不限於聘用任何信譽良好的公司／收集商使用適當的設備在西九龍廢物轉運站棄置所收集的隔油池廢物。環保署網站及環保食肆網均載有目前使用西九龍廢物轉運站棄置隔油池廢物的收集商最新名單。
- (d) The Licensee may make reference to Annex 1 of the <Technical Memorandum on Effluent Standards> for analytical methods used by the Government Chemist.
持牌人可參照「流出物標準技術備忘錄」附件 1 有關政府化驗師所採用的分析方法。
- (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.
持牌人須在處所內保存此牌照，以備獲監督授權的人員隨時查閱。
- (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.
持牌人須准許獲監督授權的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.
倘若由於處所的保安理由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，申請一面新牌照。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 23 A 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，根據本條例的第 23 或 23 A 條的規定，申請牌照續期。監督可將牌照續期或拒絕將牌照續期。
- (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，向本牌照施加新訂或經修訂的條款及條件，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，本牌照並不得解釋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。



— Construction Site Boundary
地盤分界線

Title: Construction Site Boundary地盤分界線

Construction Site at West Kowloon Highway and Lin
Cheung Road, Kowloon
九龍西九龍公路及連翔道之地盤

Annex to Licence No.: WT00021825-2015

WT00021825-2015

Date: 18 June 2015

ENVIRONMENTAL PROTECTION DEPARTMENT,
HONG KONG

Scale: Not To Scale

REGIONAL OFFICE (EAST)

Page: Sheet 1 of 1





Licence No.: **WT00021826-2015**
 牌照編號 :

This Licence is Valid to : **30 Jun 2020**
 本牌照有效期至 : **2020 年 6 月 30 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 15/20/23A*

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。

18 June 2015

Date

日期

(K. H. LAM)

For the Authority

監督 (林嘉濠 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」)	Vibro Construction Company Limited 惠保建築有限公司
Discharge Premises ("the premises") 排放處所(「處所」)	Construction Site at Canton Road and the three junctions of Canton Road with Austin Road & Austin Road West with Wui Cheung Road, and with Jordan Road & Ferry Street, Kowloon (Refer to the attached Annex) 九龍廣東道及廣東道分別與柯士甸道及柯士甸道西的交界、與匯翔道的交界、以及與佐敦道及渡船街的交界之地盤(參閱附件)
Water Control Zone 水質管制區	Victoria Harbour (Phase Two) Water Control Zone 維多利亞港水質管制區(第二期)
Discharge Category 排放種類	Effluent arising from construction activities 由建築工程產生的排放
Nature of Discharge and Wastewater Treatment Facilities 排放性質及廢水處理設施	Effluent arising from construction site 由建築工程所產生的廢水: Stream A - Zone A Stream B - Zone B Stream C - Zone C Sedimentation Tank 沉澱池
Discharge Point(s) 排放點	Discharge into communal storm water drain 排放入公用雨水渠
Sampling Point(s) 取樣點	Sampling points at discharge outlets of sedimentation tanks 取樣點位於沉澱池之出水口

*Delete as appropriate
將不適用者刪去

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^(Note 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^(附註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		
	Stream A	Stream B	Stream C
Flow Rate (m ³ /day) 流量 (立方米/日)	5	5	5
pH (pH units) 酸鹼值(pH 單位)	#6-9	#6-9	#6-9
Suspended Solids 懸浮固體	50	50	50
Chemical Oxygen Demand 化學需氧量	100	100	100

Range 限度

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自行監測。

- ☐ The Licensee shall sample the discharge at the Sampling Point(s) and, at his own expense carry out analyses 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
-----------------	---------	------------------	--------------

Results of these monitoring shall be summarized in a report on a Monthly/Bi-monthly/Quarterly* 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*作出報告，並須呈交監督審閱。

*Delete as appropriate
將不適用者刪去

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), polyaromatic 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 discolouration 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、氯化烴、可燃的或有毒的溶劑、碳化鈣；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、漂浮物質或體積超越 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度。

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。如沒有設置該設備，持牌人須依照監督同意的計算方法，根據處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 b & c).

處理過程中所產生的污泥、隔濾物、固體、油脂、過濾器回洗或其他污染物，必須妥善地棄置^(附註 b 及 c)。

C5. Monitoring 監測

- C5.1 The Licensee shall provide and maintain suitable 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的設施，例如檢查槽，沙井或取樣閥，以確保獲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，「隨意取集樣本」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 d).

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d)。

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記錄圖表的正本；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 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.

倘若有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 小時內立即知會監督並予以解釋。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。手冊內容須最低限度包括操作程序、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。

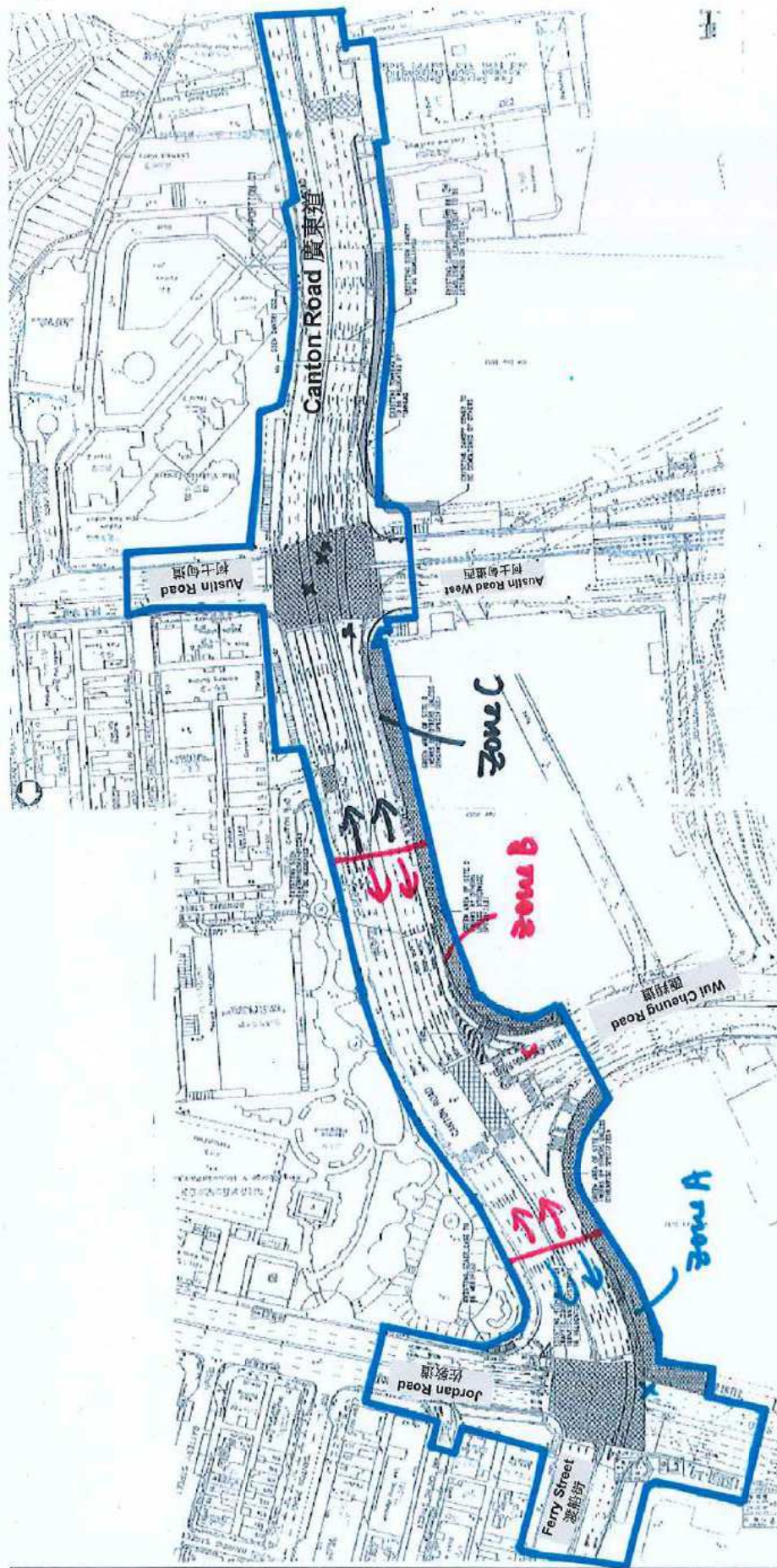
C8. Notification of Change 更改通知

The Licensee shall notify the Authority in writing within 14 days of any changes or proposed changes in 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 日內以書面通知監督。

- (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 Authority as being representative of the quality of the discharge. When any single sample analyzed for a determinand 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.
為確定排放是否符合特別條件第 B1 項內所列的限度，獲監督授權的人員須在取樣點或在監督認為可以抽取到具代表性的樣本的任何其他位置抽取樣本。只要在任何一個經分析的樣本中，證實任何一個測量物不符合表中所列的相應限度時，排放即被視為不符合特別條件第 B1 項。
- (b) An example of proper disposal method for sludge is sending dewatered sludge to landfill for disposal.
妥善棄置污泥方法中的一個例子是將脫水後的污泥運往堆填區棄置。
- (c) Proper disposal of grease trap waste includes but is not limited to employing any reputable firm or collector who will use the right equipment and dispose of the collected grease trap waste at West Kowloon Transfer Station. The updated list of grease trap waste collectors who are using the disposal service at West Kowloon Transfer Station is maintained in the EPD website and Green Restaurant website.
妥善的隔油池廢物棄置方法包括卻不限於聘用任何信譽良好的公司／收集商使用適當的設備在西九龍廢物轉運站棄置所收集的隔油池廢物。環保署網站及環保食肆網均載有目前使用西九龍廢物轉運站棄置隔油池廢物的收集商最新名單。
- (d) The Licensee may make reference to Annex 1 of the <Technical Memorandum on Effluent Standards> for analytical methods used by the Government Chemist.
持牌人可參照「流出物標準技術備忘錄」附件 1 有關政府化驗師所採用的分析方法。
- (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.
持牌人須在處所內保存此牌照，以備獲監督授權的人員隨時查閱。
- (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.
持牌人須准許獲監督授權的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.
倘若由於處所的保安理由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，申請一面新牌照。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 23 A 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，根據本條例的第 23 或 23 A 條的規定，申請牌照續期。監督可將牌照續期或拒絕將牌照續期。
- (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，向本牌照施加新訂或經修訂的條款及條件，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，本牌照並不得解釋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。

Annex



— - Construction Site Boundary

地盤分界線

Title: Construction Site Boundary 地盤分界線

Construction Site at Canton Road and the three junctions of Canton Road with Austin Road & Austin Road West with Wui Cheung Road, and with Jordan Road & Ferry Street, Kowloon (Refer to the attached Annex)

九龍廣東道及廣東道分別與柯士甸道及柯士甸道西的交界、與匯翔道的交界、以及與佐敦道及渡船街的交界之地盤

Annex to Licence No.: WT00021826-2015

ENVIRONMENTAL PROTECTION DEPARTMENT,
HONG KONG



REGIONAL OFFICE (EAST)

Date: 18 June 2015

Scale: Not To Scale

Page: Sheet 1 of 1



Licence No.: **WT00021903-2015**
牌照編號 :

This Licence is Valid to : **30 Jun 2020**
本牌照有效期至 : **2020 年 6 月 30 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 15/20/23A*

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 June 2015

Date
日期

(Vincent H. K. WOO)

For the Authority

監督 (胡漢強 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」)	Vibro Construction Company Limited 惠保建築有限公司
Discharge Premises ("the premises") 排放處所(「處所」)	Construction Site near Hoi Fan Road, Kowloon (Contract No. HY/2013/17) (Refer to the attached Annex) 九龍近海帆道之地盤(合約編號 HY/2013/17) (參閱附件)
Water Control Zone 水質管制區	Victoria Harbour (Phase Two) Water Control Zone 維多利亞港水質管制區 (第二期)
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 and all other wastewater arising from the above premises 源自上址的污水及其他廢水 Sedimentation Tank 沉澱池
Discharge Point(s) 排放點	Discharge into communal storm water drain 排放入公用雨水渠
Sampling Point(s) 取樣點	Sampling point at discharge outlet of the treatment facilities 取樣點位於廢水處理設施之出水口

*Delete as appropriate
將不適用者刪去

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^(Note 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^(附註 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)	10
pH (pH units) 酸鹼值(pH 單位)	#6-9
Suspended Solids 懸浮固體	50
Chemical Oxygen Demand 化學需氧量	100

Range 限度

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自行監測。

☐ The Licensee shall sample the discharge at the Sampling Point(s) and, at his own expense carry out analyses 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
-----------------	---------	------------------	--------------

Results of these monitoring shall be summarized in a report on a ~~Monthly/Bi-monthly/Quarterly~~* 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~~*作出報告，並須呈交監督審閱。

*Delete as appropriate
將不適用者刪去

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), polyaromatic 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 discolouration 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、氯化烴、可燃的或有毒的溶劑、碳化鈣；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、漂浮物質或體積超越 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度。

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。如沒有設置該設備，持牌人須依照監督同意的計算方法，根據處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 b & c).

處理過程中所產生的污泥、隔濾物、固體、油脂、過濾器回洗或其他污染物，必須妥善地棄置^(附註 b 及 c)。

C5. Monitoring 監測

- C5.1 The Licensee shall provide and maintain suitable 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的設施，例如檢查槽，沙井或取樣閥，以確保獲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，「隨意取集樣本」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 d).

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d)。

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記錄圖表的正本；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 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.

倘若有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 小時內立即知會監督並予以解釋。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。手冊內容須最低限度包括操作程序、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

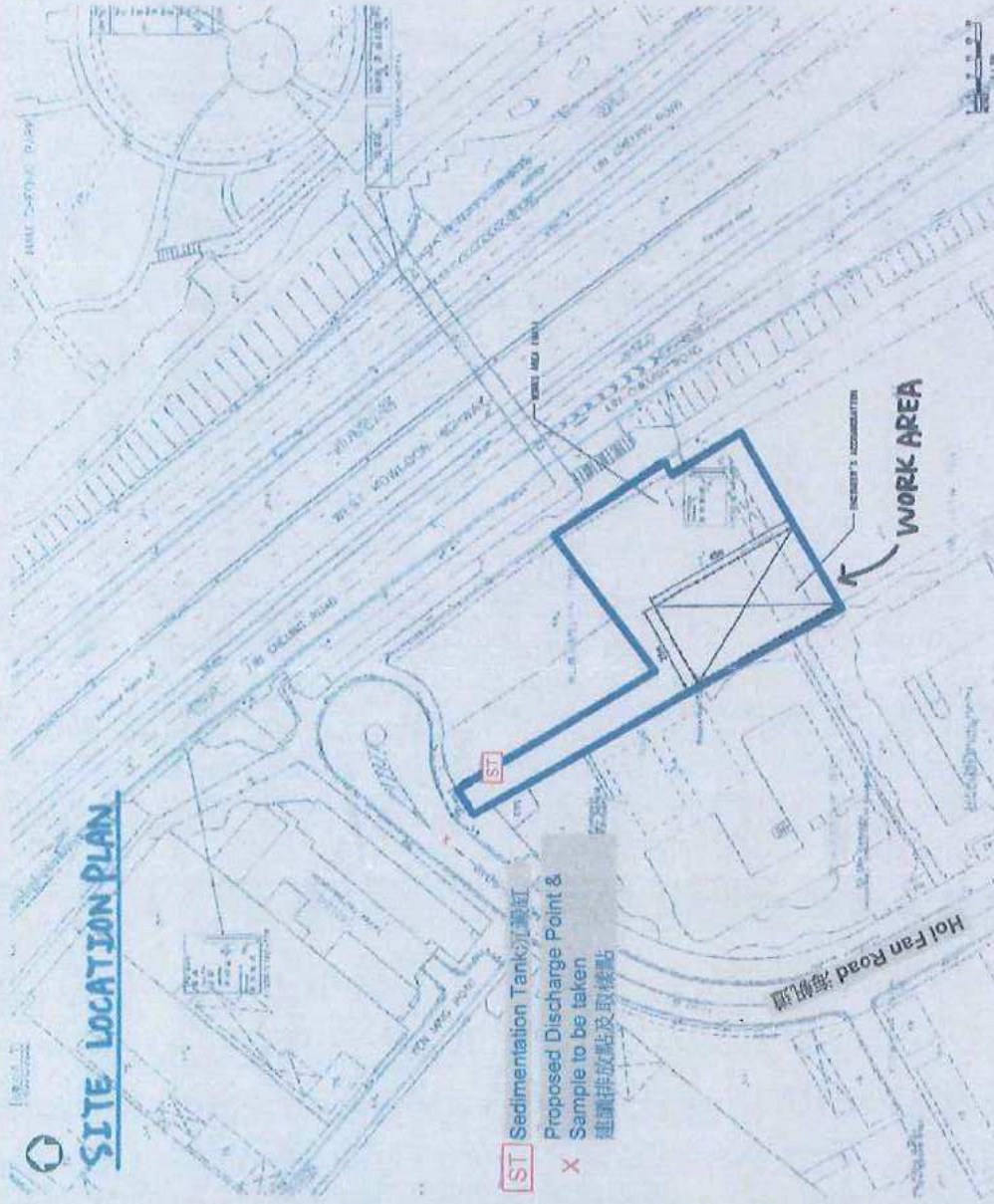
The Licensee shall notify the Authority in writing within 14 days of any changes or proposed changes in the processes of manufacture or the nature of the raw materials used or of any other circumstances which may alter the nature and composition of the discharge or may result in the permanent cessation 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 日內以書面通知監督。

- (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 Authority as being representative of the quality of the discharge. When any single sample analyzed for a determinand 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.
為確定排放是否符合特別條件第 B1 項內所列的限度，獲監督授權的人員須在取樣點或在監督認為可以抽取到具代表性的樣本的任何其他位置抽取樣本。只要在任何一個經分析的樣本中，證實任何一個測量物不符合表中所列的相應限度時，排放即被視為不符合特別條件第 B1 項。
- (b) An example of proper disposal method for sludge is sending dewatered sludge to landfill for disposal.
妥善棄置污泥方法中的一個例子是將脫水後的污泥運往堆填區棄置。
- (c) Proper disposal of grease trap waste includes but is not limited to employing any reputable firm or collector who will use the right equipment and dispose of the collected grease trap waste at West Kowloon Transfer Station. The updated list of grease trap waste collectors who are using the disposal service at West Kowloon Transfer Station is maintained in the EPD website and Green Restaurant website.
妥善的隔油池廢物棄置方法包括卻不限於聘用任何信譽良好的公司／收集商使用適當的設備在西九龍廢物轉運站棄置所收集的隔油池廢物。環保署網站及環保食肆網均載有目前使用西九龍廢物轉運站棄置隔油池廢物的收集商最新名單。
- (d) The Licensee may make reference to Annex 1 of the <Technical Memorandum on Effluent Standards> for analytical methods used by the Government Chemist.
持牌人可參照「流出物標準技術備忘錄」附件 1 有關政府化驗師所採用的分析方法。
- (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.
持牌人須在處所內保存此牌照，以備獲監督授權的人員隨時查閱。
- (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.
持牌人須准許獲監督授權的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.
倘若由於處所的保安理由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，申請一面新牌照。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 23 A 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，根據本條例的第 23 或 23 A 條的規定，申請牌照續期。監督可將牌照續期或拒絕將牌照續期。
- (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，向本牌照施加新訂或經修訂的條款及條件，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，本牌照並不得解釋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。

Annex

SITE LOCATION PLAN



— - Construction Site Boundary
 地盤分界線

Title: Construction Site Boundary 地盤分界線

Construction Site near Hoi Fan Road, Kowloon
 (Contract No. HY/2013/17)

九龍近海帆道之地盤 (合約編號 HY/2013/17)

Annex to Licence No.: WT00021903-2015

ENVIRONMENTAL PROTECTION DEPARTMENT,
 HONG KONG



REGIONAL OFFICE (EAST)

Date: 26 June 2015

Scale: Not To Scale

Page: Sheet 1 of 1

RECEIVED - 2 APR 2015

本署機號
OUR REF.:
來函檔號 RW01070
YOUR REF.:
電話
TEL. NO.:
圖文傳真 2872 1769
FAX NO.:
網址 2591 0361
HOMEPAGE: <http://www.epd.gov.hk>

Environmental Protection Department
Environmental Infrastructure Division

88 Victoria Road,
Kennedy Town,
Hong Kong.



環境保護署
環境基建科

香港西環
堅尼地城
域多利道 88 號

Tuesday, 31 March, 2015

VIBRO CONSTRUCTION COMPANY LIMITED
11/F, CHEVALIER COMMERCIAL CENTRE,
8 WANG HOI ROAD, KOWLOON BAY,
KOWLOON
Attn.: LEUNG KAM FAI



2015B003517

Dear Sir/Madam,

(VC2015017)

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.: RW01070

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.: - HY/2013/17

**Contract Name: - ROAD IMPROVEMENT WORKS IN WEST KOWLOON RECLAMATION
DEVELOPMENT**

**Construction Waste Generated Site: WEST KOWLOON HIGHWAY, NGA CHEUNG ROAD, LIN
CHEUNG ROAD, AUSTIN ROAD, JORDAN ROAD AND HOI FAN ROAD**

The account number is 7022012. 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,


(C F Wong)

Principal Environmental Protection Officer
for Director of Environmental Protection



本署檔案 : (8) in EPRE/2215/229/01/376212
OUR REF : S0063/VC201501-G01/JL/LC
來函檔案 :
YOUR REF :
電話 :
TEL. NO : 2150 8016
圖文傳真 :
FAX NO : 2402 8275
網址 :
HOMEPAGE : <http://www.epd.gov.hk/>

RECEIVED - 3 JUN 2015
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

By Registered Post

| June 2015

Vibro Construction Company Limited
11/F, Chevalier Commercial Centre,
8 Wang Hoi Road, Kowloon Bay,
Kowloon
(Attn: John LEUNG (Site Agent))

Dear Sir/Madam,

Waste Disposal Ordinance (Cap. 354) (VC201501)
Waste Disposal (Chemical Waste) (General) Regulation
Registration as a Chemical Waste Producer
Completion of Registration

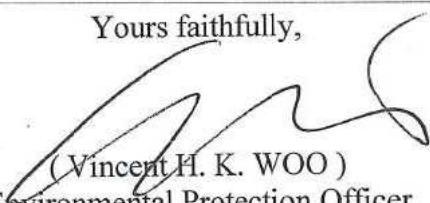
I am pleased to inform you that your registration with this department as a chemical waste producer has been completed.

Your assigned Waste Producer Number (WPN) and the particulars of your establishment are printed in the enclosed form (EPD 130). You should check these entries in the form and notify this department immediately if there is any error. Please quote your assigned WPN in all correspondence.

Please note that this registration is not transferable and will be valid only in respect of the applicant and the premises registered. In case of any 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.

Should you have any queries, please contact Mr. FUNG Hoi-chuen at 2150 8030.

Yours faithfully,


(Vincent H. K. WOO)
Environmental Protection Officer
Regional Office (East)
Environmental Compliance Division
for Director of Environmental Protection

Encl.

4 Original encl. to site

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: 致 化學廢物產生者	Chemical Waste Producer	Full Name (English) 全 名 (英 文)	<u>Vibro Construction Company Limited</u>	
		(Chinese) (中 文)	<u>惠保建築有限公司</u>	
		I.D. Card No. (if any) 身份證號碼:(如有者)	<u>---</u>	
		Business Reg. Cert. No. (if any) 商業登記證號碼:(如有者)	<u>06853665-000</u>	
		Address for Correspondence 通訊地址: <u>11/F, Chevalier Commercial Centre, 8 Wang Hoi Road, Kowloon Bay, Kowloon</u> <u>九龍九龍灣宏開道8號其士商業中心11樓</u>		
	Tel. No. 電話:	<u>21375500</u>	Fax No. 圖文傳真:	<u>21375599</u>

With reference to your application dated 21 / 04 / 2015 for registration as a Waste Producer under the Waste Disposal (Chemical Waste) (General) Regulation, the Waste Producer Number, WPN 5|2|1|3-2|2|9-V|2|2|1|5-0|1 is assigned to you in respect of the location or premises listed below:—

前於 2015年 04月 21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|3-2|2|9-V|2|2|1|5-0|1 號,予下開地點或處所:—

Location or Premises where the waste is produced 產生廢物的地點或處所	Name of Establishment 機 構 名 稱 :	<u>Vibro Construction Company Limited</u> <u>惠保建築有限公司</u>
	Business Reg. Cert. No. (if any) 商業登記證號碼:(如有者)	<u>06853665-000</u>
	Nature of Business 業 務 性 質 :	<u>Civil Contractor</u>
	Major chemical waste types 主 要 化 學 廢 物 種 類 :	<u>Spent lubricating oil, spent organic solvent and spent batteries</u>
	Address 地 址 :	<u>Construction Site of Road Improvement Works in West Kowloon Reclamation Development</u> <u>(Contract No. HY/2013/17)</u>



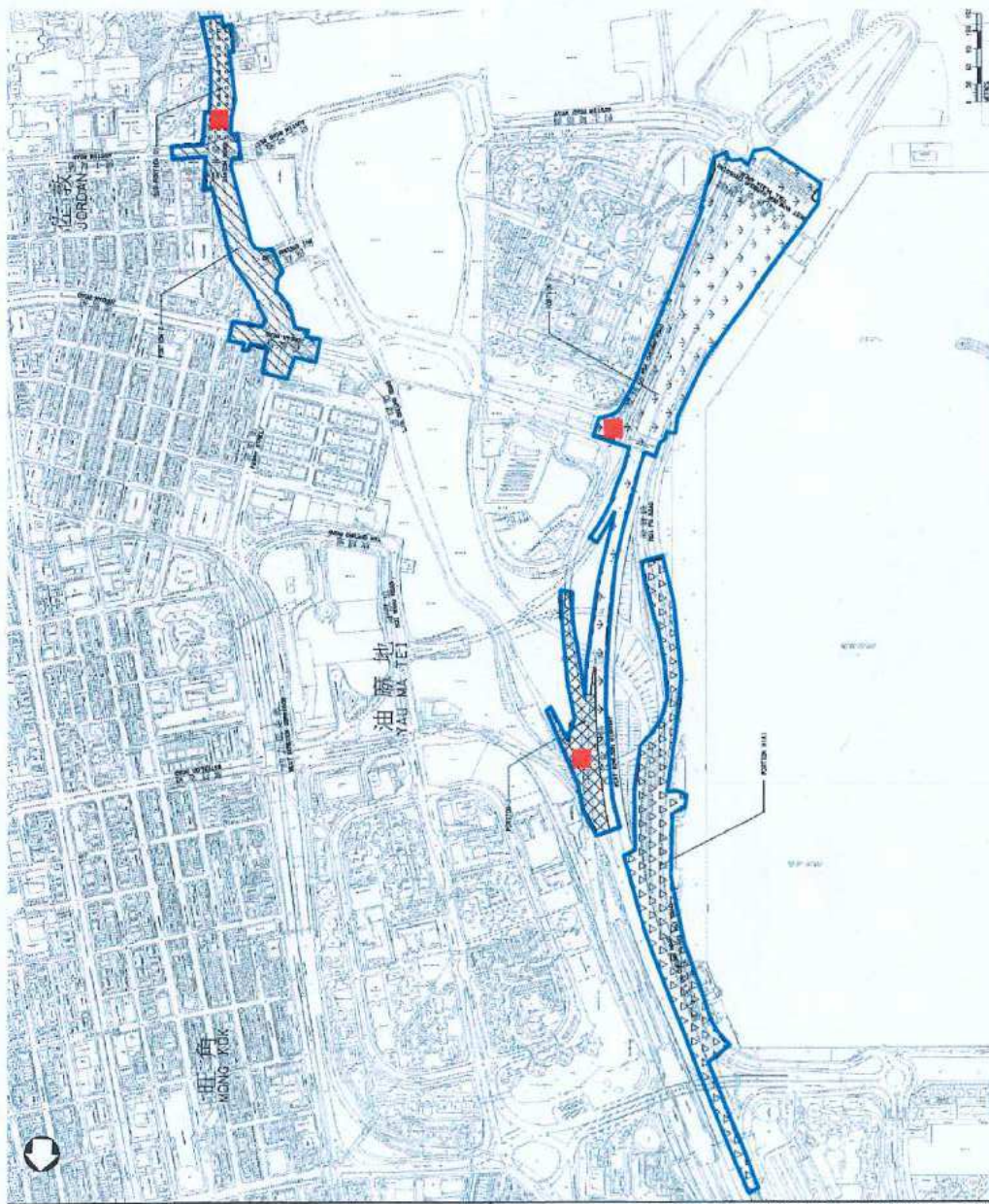

(Vincent H. K. WOO)
for Director of Environmental Protection
環境保護署署長 (胡漢強 代行)

Date
日期 1 / Jun / 2015

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。

Annex



- - Construction Site Boundary
- - Chemical Waste Container

Title: Construction Site Boundary

**Construction Site of Road Improvement Works in
West Kowloon Reclamation Development
(Contract No. HY/2013/17)**

Annex to WPN: 5213-229-V2215-01

**ENVIRONMENTAL PROTECTION DEPARTMENT,
HONG KONG**



REGIONAL OFFICE (EAST)

Date: June 2015

Scale: Not To Scale

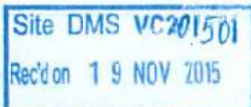
Page: Sheet 1 of 1

本署檔案
GUR REF: (4) in EP631/K03/RE395146-15
來函檔案
YOUR REF: S0862/VC201501-G01/JL/KCL
電話
TEL NO: 2150 8017
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

18 November 2015

To: VIBRO CONSTRUCTION COMPANY LIMITED
Floor 11, Chevalier Commercial Centre,
8, Wang Hoi Road,
Kowloon Bay, Kowloon

Dear Sirs,

**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 05 November 2015, for the use of powered mechanical equipment for carrying out construction work at **Road sections of Hoi Po Road; Hoi Fai Road; West Kowloon Corridor (Northbound); and Lin Cheung Road (Northbound) outside Olympian City Two, Kowloon (HyD Contract No.: HY/2013/17).**

The construction noise permit No. **GW-RE1183-15** 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/or the Authority's refusal to issue further permit for the above construction site.

Yours faithfully,

(WONG Chun Yin Johnny)
for Authority

(4) in EP631/K03/RE395146-15

S0862/VC201501-G01/JL/KCL

2150 8017

2402 8275

掛號函件

致： 九龍 九龍灣
宏開道 8 號
其士商業中心 11 樓
惠保建築有限公司

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」

本監督在二零一五年十一月五日接獲你擬於九龍奧海城二期對出的海寶路；海輝路；西九龍走廊(北行線)及連翔道(北行線)的路段(路政署合約: HY/2013/17)，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-RE1183-15 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/或拒絕再就上述地盤簽發任何「建築噪音許可證」。

監 督

(黃鎮賢



代行)

二零一五年十一月十八日

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-RE1183-15

To : VIBRO CONSTRUCTION COMPANY LIMITED

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: Road sections of Hoi Po Road; Hoi Fai Road; West Kowloon Corridor (Northbound); and Lin Cheung Road (Northbound)
outside Olympian City Two, Kowloon (HyD Contract No.: HY/2013/17). 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 :

<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	---	Generator, with Quality Powered Mechanical Equipment Noise Emission Label showing the Sound Power Level of $\leq 97\text{dB(A)}$	One
	---	Generator, with Quality Powered Mechanical Equipment Noise Emission Label showing the Sound Power Level of $\leq 96\text{dB(A)}$	One
	---	Welding machine (electric)	Two
Group B	---	Generator, with Quality Powered Mechanical Equipment Noise Emission Label showing the Sound Power Level of $\leq 97\text{dB(A)}$	One
	---	Generator, with Quality Powered Mechanical Equipment Noise Emission Label showing the Sound Power Level of $\leq 96\text{dB(A)}$	One
	CNP 048	Crane, mobile (diesel)	One
	CNP 283	Water pump, submersible (electric)	Two
	---	Grout mixer	One
	---	Grout pump	One

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

Date and time of commencement : 04 December 2015 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 : 03 June 2016 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:

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
	Nil.

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

Date and time of commencement : 04 December 2015 at 1900 hours

Date 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.

This part of the permit expires on : 03 June 2016 at 2300 hours

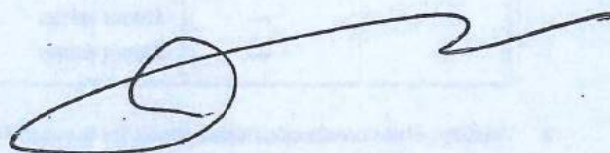
- c. ~~Site layout plan(s), endorsed by the Authority, may be attached with the permit to indicate the locations permitted for the carrying out of prescribed construction work described in this permit. The layout plan(s) is(are) required to be kept on the construction site and made available for inspection 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 both ends of road section on a standing sign board of adequate size for public information.

Dated this 18th day of November 2015

Signed :



(WONG Chun Yin Johnny)
for Authority

* Delete as necessary

表格 3
噪音管制條例
(第400章)
第8(9)條

[第5(a)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-RE1183-15

致： 惠保建築有限公司

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：九龍奧海城二期對出的海寶路；海輝路；西九龍走廊(北行線)及連翔道(北行線)的路段(路政署合約：HY/2013/17)。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
<u>A 組</u>	---	發電機，備有優質機動設備噪音標籤顯示聲功率級≤97分貝(A)	壹
	---	發電機，備有優質機動設備噪音標籤顯示聲功率級≤96分貝(A)	壹
	---	焊接機(電動)	貳
<u>B 組</u>	---	發電機，備有優質機動設備噪音標籤顯示聲功率級≤97分貝(A)	壹
	---	發電機，備有優質機動設備噪音標籤顯示聲功率級≤96分貝(A)	壹
	CNP 048	起重機，流動(油渣)	壹
	CNP 283	潛水泵(電動)	貳
	---	灌漿攪拌機	壹
	---	灌漿泵	壹

- 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：二零一五年十二月四日下午七時

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：二零一六年六月三日晚上十一時

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
	無

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：二零一五年十二月四日 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。

此部分許可證屆滿日期及時間：二零一六年六月三日 晚上十一時

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：

4. 本建築噪音許可證或其副本必須展示於建築地盤的道路前後兩端所豎立的適當告示牌上，給予公眾人士參閱。

日期：2015 年 11 月 18 日

簽署：



監督
(黃鎮賢代行)

* 刪去不適用者

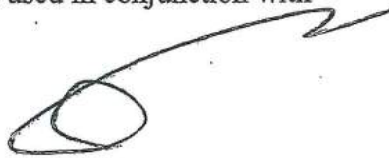
**Sheet attached to Construction Noise Permit
No. GW-RE1183-15**

3.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 holidays (including Sundays)	0700 - 1900 hours
Any day not being a general holiday	1900 - 2300 hours

2. The powered mechanical equipment listed in condition 3.a. shall not be used in conjunction with the carrying out of any prescribed construction work.


 Signed : _____
 (WONG Chun Yin Johnny)
 for Authority

建築噪音許可證
編號 GW-RE1183-15 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：

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

2. 使用列在條件3.a.內的機動設備，不可涉及進行任何訂明建築工程。

簽署：_____



監督
(黃鎮賢 代行)

Photograph(s) attached to Construction Noise Permit No. GW-RE1183-15

建築噪音許可證編號 GW-RE1183-15 的照片



Grout pump

灌漿泵



Grout mixer

灌漿攪拌機

Photograph(s) attached to Construction Noise Permit No. GW-RE1183-15

建築噪音許可證編號 GW-RE1183-15 的照片



Welding machine (electric)

焊接機 (電動)



CNP 048

Crane, mobile (diesel)

起重機，流動 (油渣)

Photograph(s) attached to Construction Noise Permit No. GW-RE1183-15

建築噪音許可證編號 GW-RE1183-15 的照片



Generator, with Quality Powered Mechanical Equipment Noise Emission Label showing the Sound Power Level of $\leq 97\text{dB(A)}$

發電機，備有優質機動設備噪音標籤顯示聲功率級 ≤ 97 分貝(A)



Generator, with Quality Powered Mechanical Equipment Noise Emission Label showing the Sound Power Level of $\leq 96\text{dB(A)}$

發電機，備有優質機動設備噪音標籤顯示聲功率級 ≤ 96 分貝(A)

Photograph(s) attached to Construction Noise Permit No. GW-RE1183-15

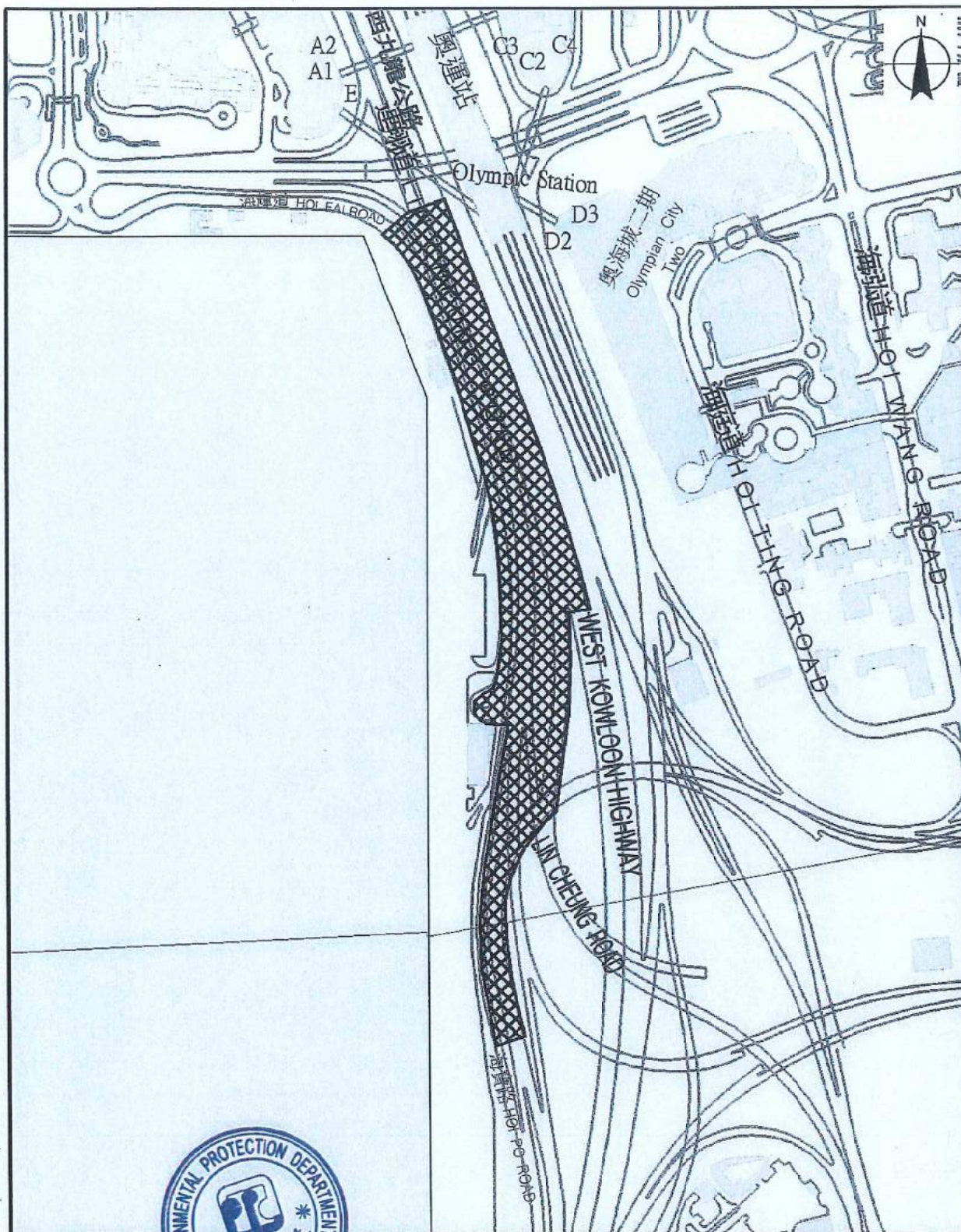
建築噪音許可證編號 GW-RE1183-15 的照片



CNP 283

Water pump, submersible (electric)

潛水泵 (電動)



環境保護署

噪音管制監督

Environmental Protection Department Noise Control Authority

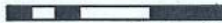
建築噪音許可證編號 GW-RE1183-15 的附圖

Plan attached to Construction Noise Permit No. GW-RE1183-15

圖例 Legend

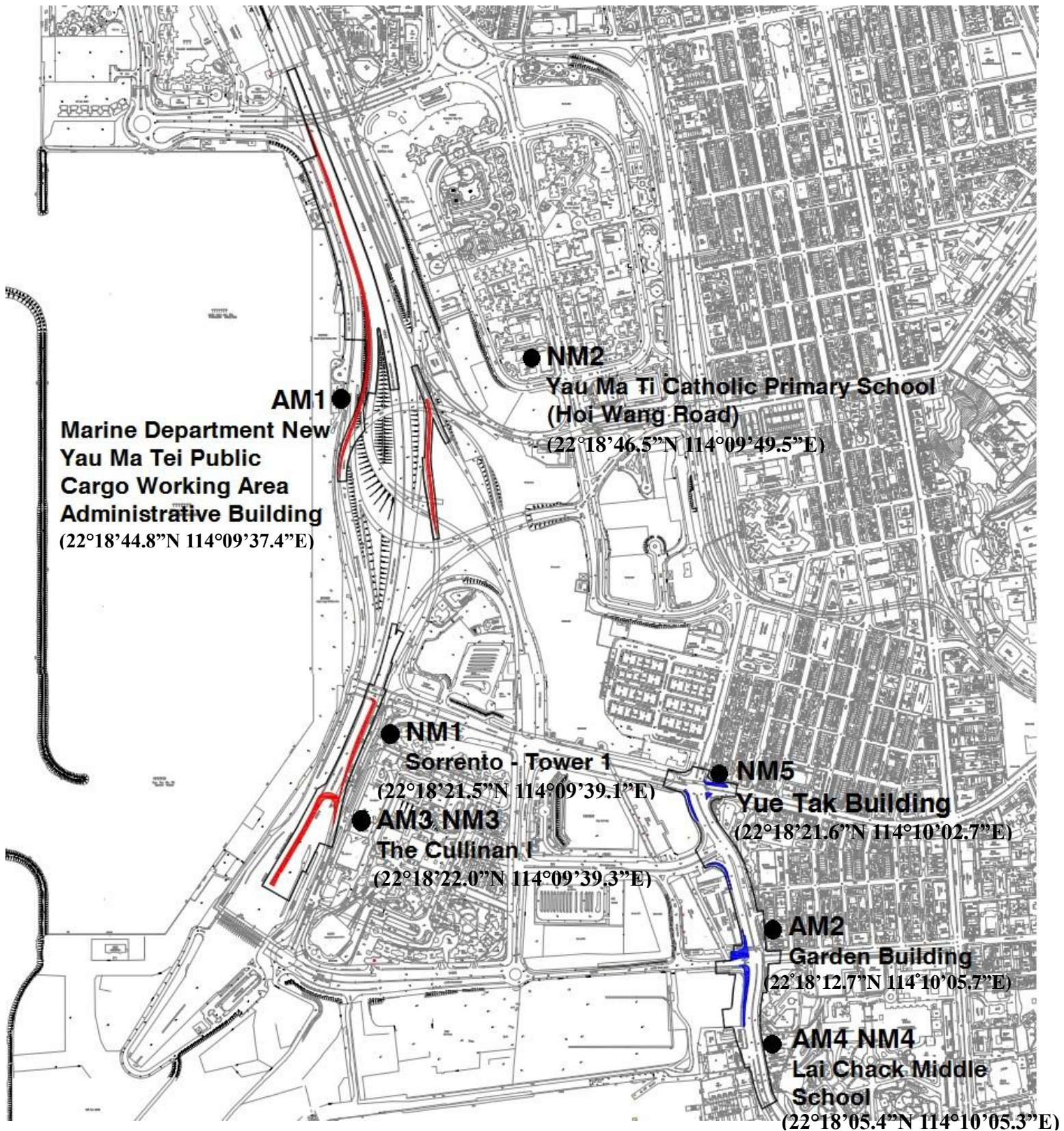
 建築地盤 Construction Site





比例 Scale 1:5,000






 米 Meters
0 25 50 100 150

Appendix D: Monitoring Locations

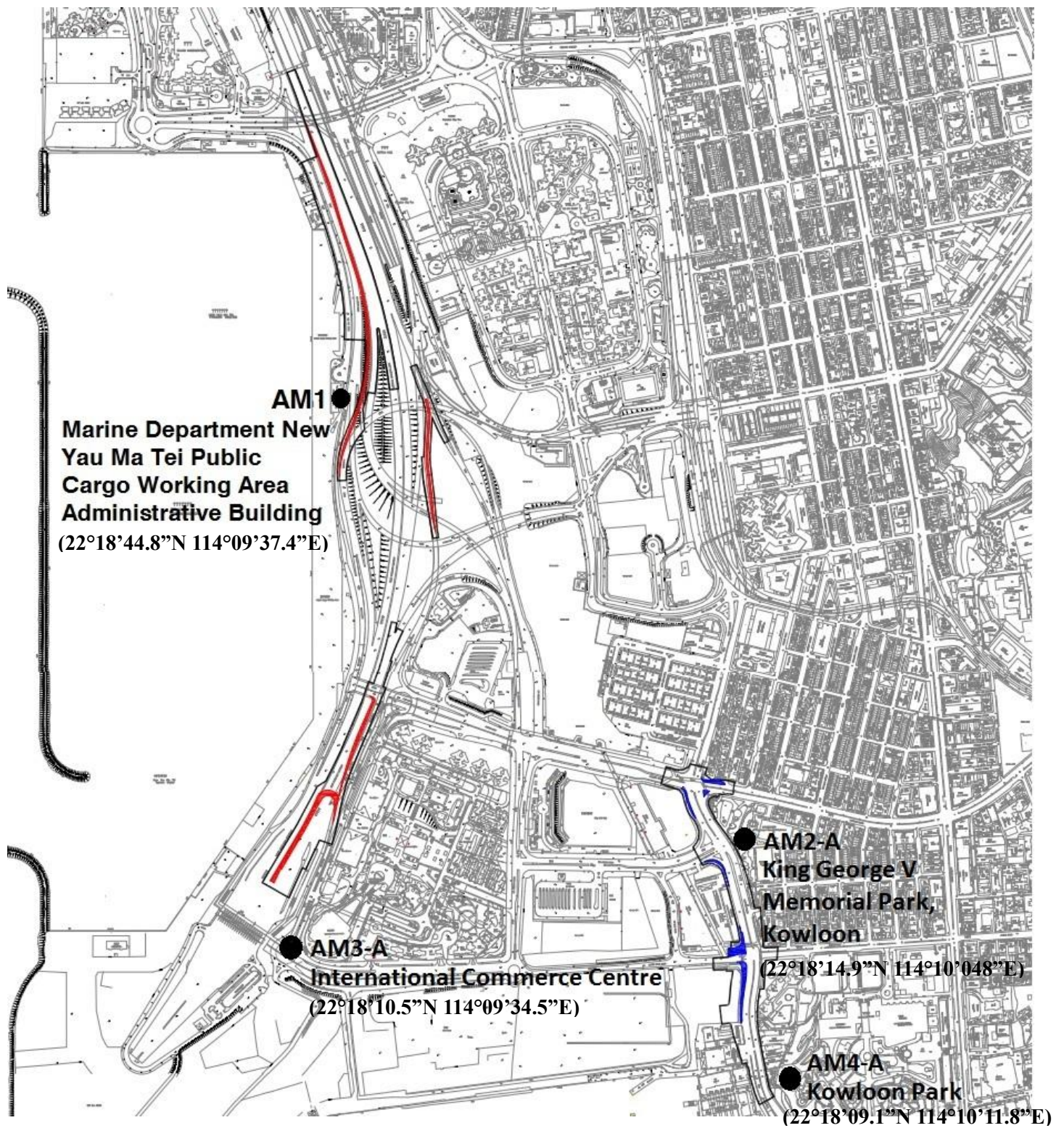
Locations for 1-hr TSP and Noise monitoring



Monitoring Location	Photo Record
<p>AM1</p> <p>Marine Department New Yau Ma Tei Public Cargo Working Area Administrative Building</p>	
<p>AM2</p> <p>Garden Building</p>	
<p>AM3</p> <p>The Cullinan I</p>	
<p>AM4</p> <p>Lai Chack Middle School</p>	

Monitoring Location	Photo Record
<p>NM1</p> <p>Sorrento - Tower 1</p>	
<p>NM2</p> <p>Yau Ma Ti Catholic Primary School (Hoi Wang Road)</p>	
<p>NM3</p> <p>The Cullinan I</p>	
<p>NM4</p> <p>Lai Chack Middle School</p>	
<p>NM5</p> <p>Yue Tak Building</p>	

Locations for 24-hr TSP monitoring



Monitoring Location	Photo Record
<p>AM1</p> <p>Marine Department New Yau Ma Tei Public Cargo Working Area Administrative Building</p>	
<p>AM3-A</p> <p>International Commerce Centre (Contractor Work Area 4)</p>	

Appendix E: Calibration Certification



CERTIFICATE OF CALIBRATION AND TESTING

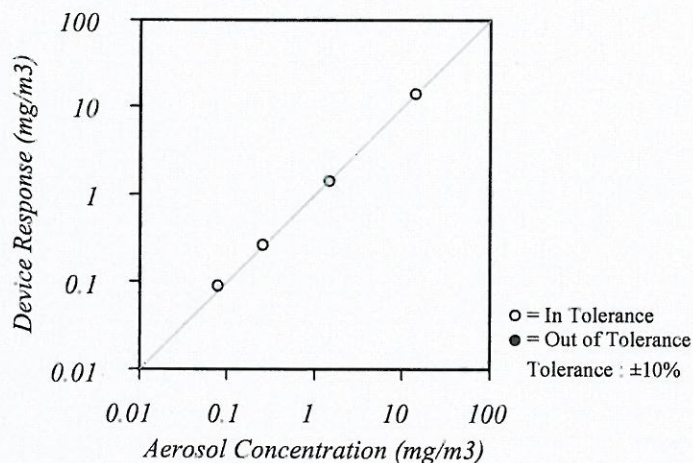
TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 <http://www.tsi.com>

Environment Condition			Model	AM510
Temperature	74.2 (23.4)	°F (°C)	Serial Number	11510002
Relative Humidity	29	%RH		
Barometric Pressure	29.45 (997.3)	inHg (hPa)		

☒ As Left
☐ As Found

☒ In Tolerance
☐ Out of Tolerance

Concentration Linearity Plot



System ID: DTII01-01

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 published specifications. All performance and acceptance tests 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 emery oil and has been nominally adjusted to respirable mass of standard ISO 12103-1, A1 test dust (Arizona dust). Our calibration ratio is greater than 1.2:1

Measurement Variable	System ID	Last Cal	Cal Due
Photometer	E003433	09-09-15	03-09-16
DC Voltage(Keithley)	E002859	06-18-15	06-18-16
Temp/Humidity	E005409	04-16-15	04-16-16
Pressure	E003440	08-04-15	08-04-16

Measurement Variable	System ID	Last Cal	Cal Due
Flowmeter	E002371	03-02-15	03-02-16
Microbalance	M001324	01-05-15	01-05-17
Temp/Humidity	E005410	04-17-15	04-17-16

Linda Hillheimer

Calibrated

☒ Final Function Check

October 2, 2015

Date



大成環境科技拓展有限公司

ENVIRONMENTAL PIONEERS & SOLUTIONS LIMITED

豐盛創建環保科技集團附屬公司 Subsidiary of FSE Environmental Technologies Group

豐盛創建成員 Member of FSE Holdings

REPORT OF EQUIPMENT CALIBRATION

INSTRUMENT DESCRIPTION

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

Instrument:	TSP meter
Brand Name:	TSI
Model No.:	AM510
Serial No.:	11510002
Date of Issue:	27/10/2015
Date of Calibration:	12/10/2015
Date of Next Calibration:	11/10/2016

ISSUING ORGANISATION

Environmental Pioneers & Solutions Limited

Flat A 19/F. Chaiwan Industrial Centre
20 Lee Chung Street
Chai Wan, Hong Kong

Phone: 852 - 2556 9172

Fax: 852 - 2856 2010

Mr. Ip Wing Hong, John
Manager



大成環境科技拓展有限公司

ENVIRONMENTAL PIONEERS & SOLUTIONS LIMITED

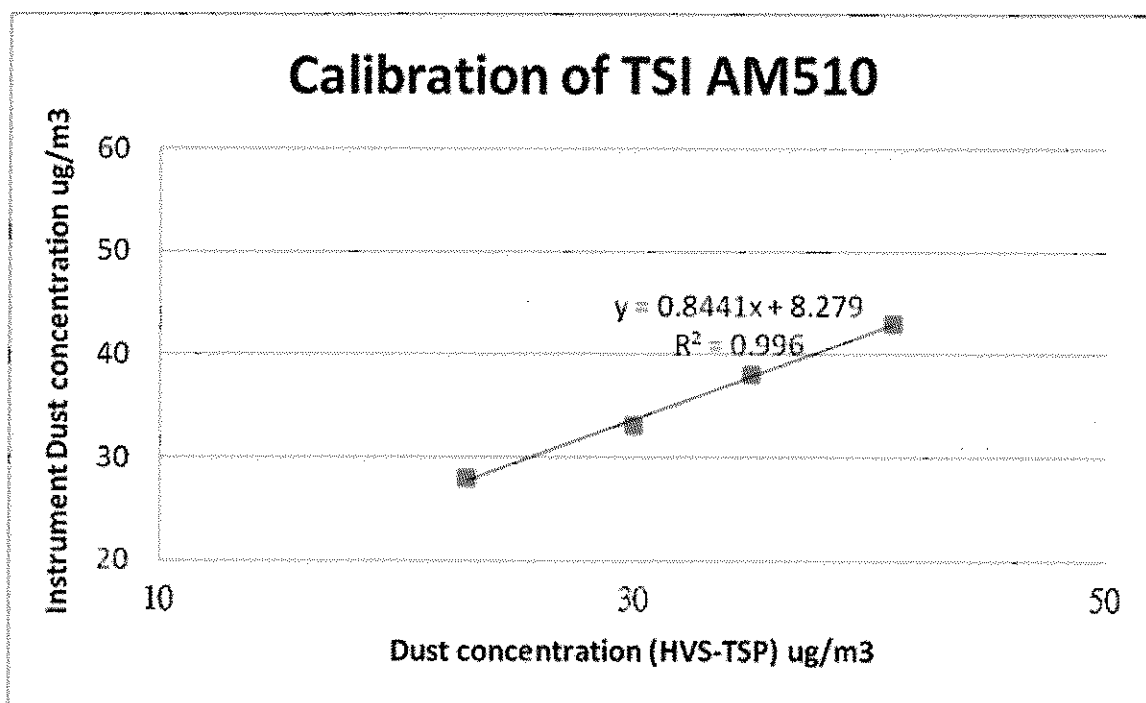
豐盛創建環保科技集團附屬公司 Subsidiary of FSE Environmental Technologies Group

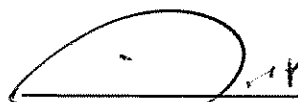
豐盛創建成員 Member of FSE Holdings

Brand Name: TSI
Model No.: AM510
Serial No.: 11510002
HVS No.: TE-5028A
HVS Calibration Kit No.: TISCH 2137
Date of Calibration: 12/10/2015
Date of next Calibration: 11/10/2016

Calibration Record

HVS - TSP	23	30	35	41
TSI AM510	28	33	38	43




Mr. Ip Wing Hong, John
Manager



CERTIFICATE OF CALIBRATION AND TESTING

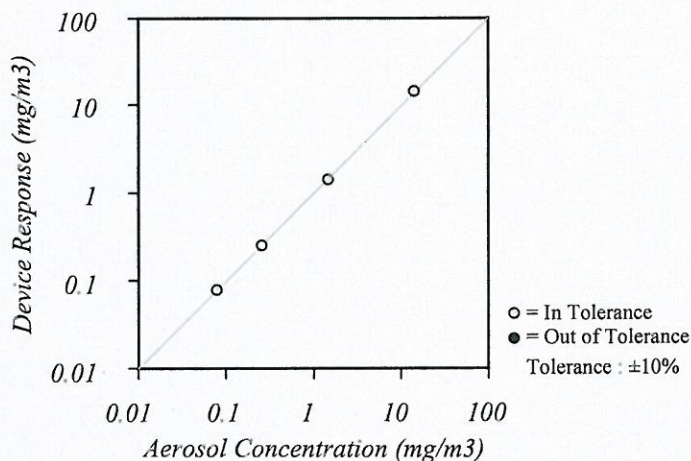
TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 <http://www.tsi.com>

Environment Condition			Model	AM510
Temperature	74.2 (23.4)	°F (°C)	Serial Number	11510003
Relative Humidity	29	%RH		
Barometric Pressure	29.45 (997.3)	mHg (hPa)		

☒ As Left
☐ As Found

☒ In Tolerance
☐ Out of Tolerance

Concentration Linearity Plot



System ID: DTII01-01

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 published specifications. All performance and acceptance tests 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 emery oil and has been nominally adjusted to respirable mass of standard ISO 12103-1, A1 test dust (Arizona dust). Our calibration ratio is greater than 1.2:1

Measurement Variable	System ID	Last Cal	Cal. Due
Photometer	E003433	09-09-15	03-09-16
DC Voltage(Keithley)	E002859	06-18-15	06-18-16
Temp/Humidity	E005409	04-16-15	04-16-16
Pressure	E003440	08-04-15	08-04-16

Measurement Variable	System ID	Last Cal.	Cal. Due
Flowmeter	E002371	03-02-15	03-02-16
Microbalance	M001324	01-05-15	01-05-17
Temp/Humidity	E005410	04-17-15	04-17-16

Linda Hill-Kramer

Calibrated

☒ Final Function Check

October 2, 2015

Date



大成環境科技拓展有限公司

ENVIRONMENTAL PIONEERS & SOLUTIONS LIMITED

豐盛創建環保科技集團附屬公司 Subsidiary of FSE Environmental Technologies Group

豐盛創建成員 Member of FSE Holdings

REPORT OF EQUIPMENT CALIBRATION

INSTRUMENT DESCRIPTION

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

Instrument:	TSP meter
Brand Name:	TSI
Model No.:	AM510
Serial No.:	11510003
Date of Issue:	27/10/2015
Date of Calibration:	12/10/2015
Date of Next Calibration:	11/10/2016

ISSUING ORGANISATION

Environmental Pioneers & Solutions Limited

Flat A 19/F. Chaiwan Industrial Centre
20 Lee Chung Street
Chai Wan, Hong Kong

Phone: 852 - 2556 9172
Fax: 852 - 2856 2010

Mr. Ip Wing Hong, John
Manager



大成環境科技拓展有限公司

ENVIRONMENTAL PIONEERS & SOLUTIONS LIMITED

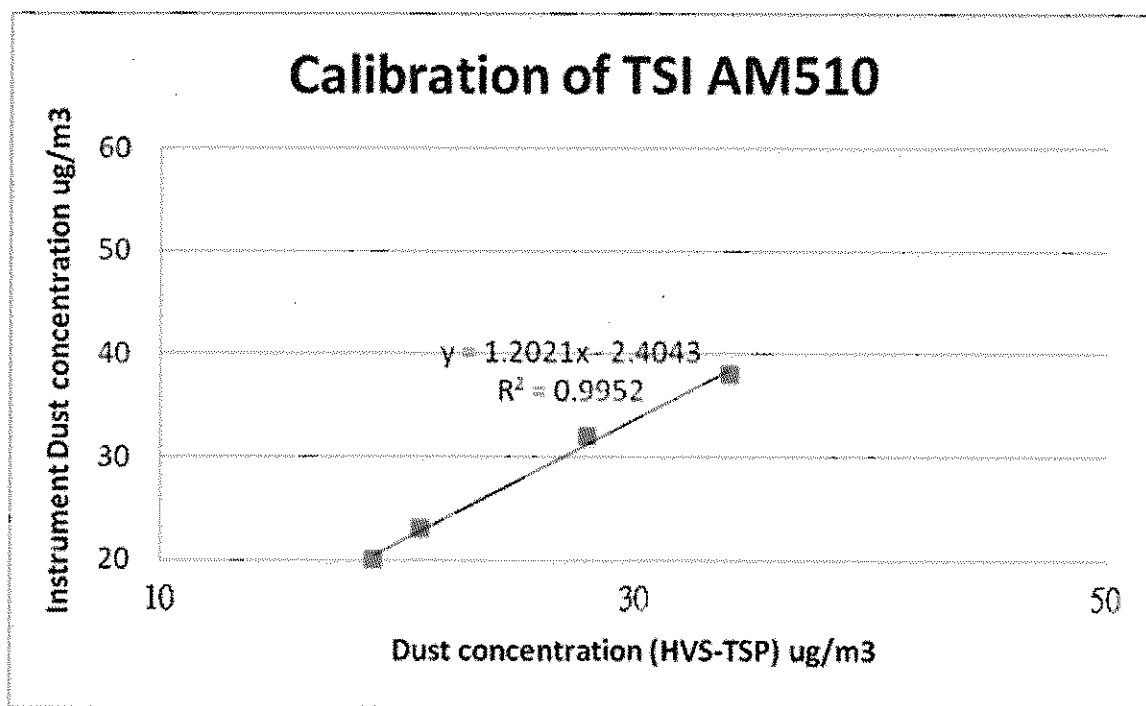
豐盛創建環保科技集團附屬公司 Subsidiary of FSE Environmental Technologies Group

豐盛創建成員 Member of FSE Holdings

Brand Name: TSI
Model No.: AM510
Serial No.: 11510003
HVS No.: TE-5028A
HVS Calibration Kit No.: TISCH 2137
Date of Calibration: 12/10/2015
Date of next Calibration: 11/10/2016

Calibration Record

HVS - TSP	19	21	28	34
TSI AM510	20	23	32	38



Mr. Ip Wing Hong, John
Manager



CERTIFICATE OF CALIBRATION AND TESTING

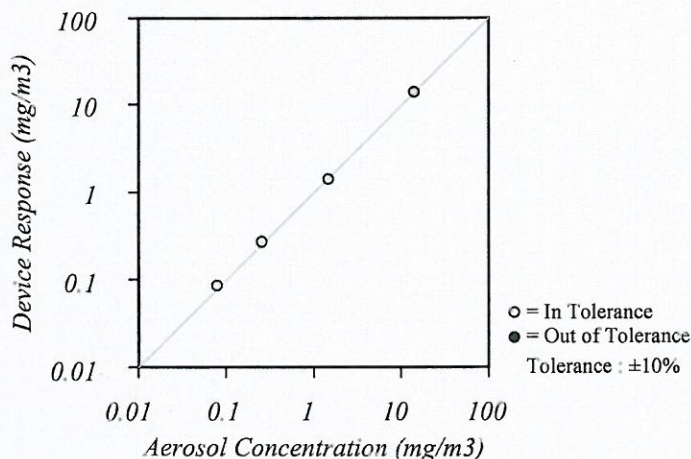
TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 <http://www.tsi.com>

Environment Condition			Model	AM510
Temperature	74.2 (23.4)	°F (°C)	Serial Number	11510004
Relative Humidity	29	%RH		
Barometric Pressure	29.45 (997.3)	inHg (hPa)		

☒ As Left
☐ As Found

☒ In Tolerance
☐ Out of Tolerance

Concentration Linearity Plot



System ID: DTII01-01

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 published specifications. All performance and acceptance tests 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 emery oil and has been nominally adjusted to respirable mass of standard ISO 12103-1, A1 test dust (Arizona dust). Our calibration ratio is greater than 1.2:1

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
Photometer	E003433	09-09-15	03-09-16	Flowmeter	E002371	03-02-15	03-02-16
DC Voltage(Keithley)	E002859	06-18-15	06-18-16	Microbalance	M001324	01-05-15	01-05-17
Temp/Humidity	E005409	04-16-15	04-16-16	Temp/Humidity	E005410	04-17-15	04-17-16
Pressure	E003440	08-04-15	08-04-16				

Linda Hillshamer

Calibrated

☒ Final Function
Check

October 2, 2015

Date



大成環境科技拓展有限公司

ENVIRONMENTAL PIONEERS & SOLUTIONS LIMITED

豐盛創建環保科技集團附屬公司 Subsidiary of FSE Environmental Technologies Group

豐盛創建成員 Member of FSE Holdings

REPORT OF EQUIPMENT CALIBRATION

INSTRUMENT DESCRIPTION

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

Instrument:	TSP meter
Brand Name:	TSI
Model No.:	AM510
Serial No.:	11510004
Date of Issue:	27/10/2015
Date of Calibration:	13/10/2015
Date of Next Calibration:	12/10/2016

ISSUING ORGANISATION

Environmental Pioneers & Solutions Limited

Flat A 19/F. Chaiwan Industrial Centre
20 Lee Chung Street
Chai Wan, Hong Kong

Phone: 852 - 2556 9172

Fax: 852 - 2856 2010

Mr. Ip Wing Hong, John
Manager



大成環境科技拓展有限公司

ENVIRONMENTAL PIONEERS & SOLUTIONS LIMITED

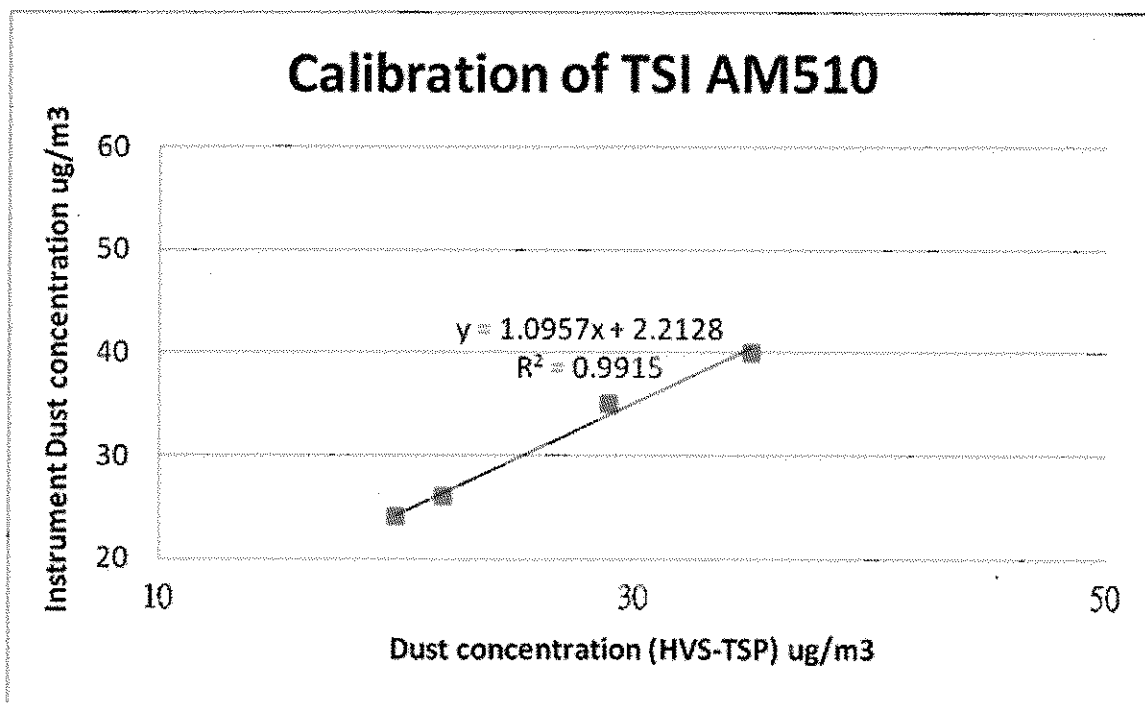
豐盛創建環保科技集團附屬公司 Subsidiary of FSE Environmental Technologies Group

豐盛創建成員 Member of FSE Holdings

Brand Name: TSI
Model No.: AM510
Serial No.: 11510004
HVS No.: TE-5028A
HVS Calibration Kit No.: TISCH 2137
Date of Calibration: 13/10/2015
Date of next Calibration: 12/10/2016

Calibration Record

HVS - TSP	20	22	29	35
TSI AM510	24	26	35	40



Mr. Ip Wing Hong, John
Manager



CERTIFICATE OF CALIBRATION AND TESTING

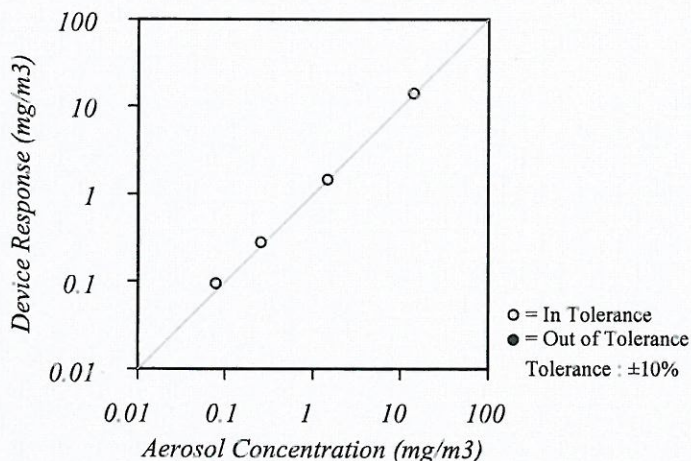
TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 <http://www.tsi.com>

Environment Condition			Model	AM510
Temperature	74.2 (23.4)	°F (°C)	Serial Number	11510005
Relative Humidity	29	%RH		
Barometric Pressure	29.45 (997.3)	inHg (hPa)		

☒ As Left
☐ As Found

☒ In Tolerance
☐ Out of Tolerance

Concentration Linearity Plot



System ID: DTII01-01

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 published specifications. All performance and acceptance tests 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 emery oil and has been nominally adjusted to respirable mass of standard ISO 12103-1, A1 test dust (Arizona dust). Our calibration ratio is greater than 1.2:1

Measurement Variable	System ID	Last Cal.	Cal. Due
Photometer	E003433	09-09-15	03-09-16
DC Voltage(Keithley)	E002859	06-18-15	06-18-16
Temp/Humidity	E005409	04-16-15	04-16-16
Pressure	E003440	08-04-15	08-04-16

Measurement Variable	System ID	Last Cal.	Cal. Due
Flowmeter	E002371	03-02-15	03-02-16
Microbalance	M001324	01-05-15	01-05-17
Temp/Humidity	E005410	04-17-15	04-17-16

Kida H. Hume
Calibrated

☒ Final Function
Check

October 2, 2015

Date



大成環境科技拓展有限公司

ENVIRONMENTAL PIONEERS & SOLUTIONS LIMITED

豐盛創建環保科技集團附屬公司 Subsidiary of FSE Environmental Technologies Group

豐盛創建成員 Member of FSE Holdings

REPORT OF EQUIPMENT CALIBRATION

INSTRUMENT DESCRIPTION

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

Instrument: TSP meter
Brand Name: TSI
Model No.: AM510
Serial No.: 11510005
Date of Issue: 27/10/2015
Date of Calibration: 13/10/2015
Date of Next Calibration: 12/10/2016

ISSUING ORGANISATION

Environmental Pioneers & Solutions Limited

Flat A 19/F. Chaiwan Industrial Centre
20 Lee Chung Street
Chai Wan, Hong Kong

Phone: 852 - 2556 9172
Fax: 852 - 2856 2010

Mr. Ip Wing Hong, John
Manager



大成環境科技拓展有限公司

ENVIRONMENTAL PIONEERS & SOLUTIONS LIMITED

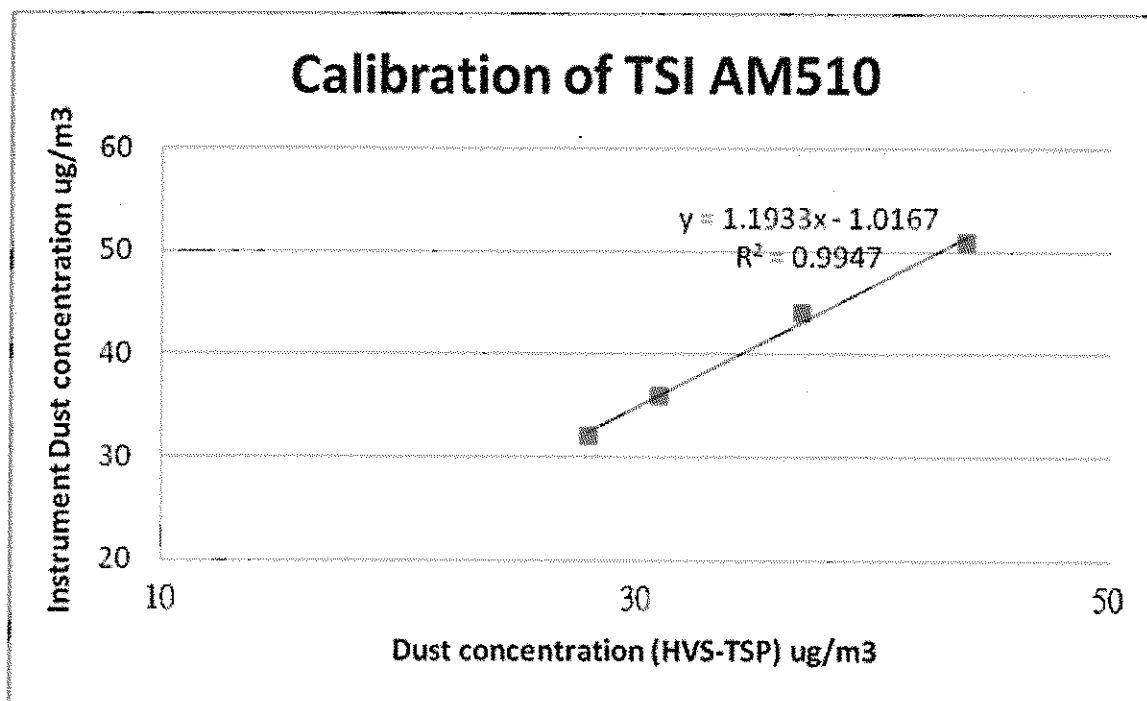
豐盛創建環保科技集團附屬公司 Subsidiary of FSE Environmental Technologies Group

豐盛創建成員 Member of FSE Holdings

Brand Name: TSI
Model No.: AM510
Serial No.: 11510005
HVS No.: TE-5028A
HVS Calibration Kit No.: TISCH 2137
Date of Calibration: 13/10/2015
Date of next Calibration: 12/10/2016

Calibration Record

HVS - TSP	28	31	37	44
TSI AM510	32	36	44	51



Mr. Ip Wing Hong, John
Manager



TISCH ENVIRONMENTAL, INC.
 145 SOUTH MIAMI AVE
 VILLAGE OF CLEVELAND, OH
 44102
 513.467.9000
 877.263.7610 TOLL FREE
 513.467.9009 FAX

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5028A

Date - Jan 30, 2015 Rootmeter S/N 9833620 Ta (K) - 293
 Operator Tisch Orifice I.D. - 2137 Pa (mm) - 762

PLATE OR VDC #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER	ORFICE
					DIFF Hg (mm)	DIFF H2O (in.)
1	NA	NA	1.00	1.3460	4.1	1.50
2	NA	NA	1.00	1.0420	6.9	2.50
3	NA	NA	1.00	0.9580	8.1	3.00
4	NA	NA	1.00	0.8820	9.6	3.50
5	NA	NA	1.00	0.6710	16.3	6.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
1.0142	0.7535	1.2368		0.9946	0.7389	0.7595
1.0104	0.9697	1.5967		0.9909	0.9509	0.9805
1.0088	1.0530	1.7491		0.9893	1.0327	1.0740
1.0068	1.1415	1.8892		0.9873	1.1194	1.1601
0.9978	1.4871	2.4735		0.9785	1.4583	1.5189
Qstd slope (m) = 1.68658				Qa slope (m) = 1.05611		
intercept (b) = -0.03417				intercept (b) = -0.02098		
coefficient (r) = 0.99991				coefficient (r) = 0.99991		

y axis = $\text{SQRT}[\text{H}_2\text{O}(\text{Pa}/760)(298/\text{Ta})]$

y axis = $\text{SQRT}[\text{H}_2\text{O}(\text{Ta}/\text{Pa})]$

CALCULATIONS

$$\begin{aligned} \text{Vstd} &= \text{Diff. Vol}[(\text{Pa}-\text{Diff. Hg})/760](298/\text{Ta}) \\ \text{Qstd} &= \text{Vstd}/\text{Time} \end{aligned}$$

$$\begin{aligned} \text{Va} &= \text{Diff Vol}[(\text{Pa}-\text{Diff Hg})/\text{Pa}] \\ \text{Qa} &= \text{Va}/\text{Time} \end{aligned}$$

For subsequent flow rate calculations:

$$\begin{aligned} \text{Qstd} &= 1/\text{m}\{[\text{SQRT}(\text{H}_2\text{O}(\text{Pa}/760)(298/\text{Ta}))]-b\} \\ \text{Qa} &= 1/\text{m}\{[\text{SQRT}(\text{H}_2\text{O}(\text{Ta}/\text{Pa}))]-b\} \end{aligned}$$

Tisch Environmental, Inc.
TSP Sampler Calibration
(Dickson recorder)

SITE

Location: **YMT Public Cargo Working Area** Date: **25-Jan-16**
 Sampler: **TE-5170 MFC** Tech: **Andy Tsang**

CONDITIONS

Barometric Pressure (in Hg):	17.00	Corrected Pressure (mm Hg):	432
Temperature (deg F):	63	Temperature (deg K):	290
Average Press. (in Hg):	17.00	Corrected Average (mm Hg):	432
Average Temp. (deg F):	63	Average Temp. (deg K):	290

CALIBRATION ORIFICE

Make: Tisch	Qstd Slope: 2.01000
Model: TE-5028A	Qstd Intercept: -0.02003
Serial#: 9833620	Date Certified: 30-Jan-15

CALIBRATIONS

Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION
1	1.80	0.520	25.0	19.10	Slope = 111.6711
2	2.40	0.599	34.0	25.98	Intercept = -40.2455
3	4.00	0.770	58.0	44.32	Corr. coeff.= 0.9987
4	5.60	0.910	80.0	61.13	
5	6.80	1.001	95.0	72.59	# of Observations: 5

Calculations

$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta)) - b]$
 $IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$

Qstd = standard flow rate
 IC = corrected chart response
 I = actual chart response
 m = calibrator Qstd slope
 b = calibrator Qstd intercept
 Ta = actual temperature during calibration (deg K)
 Pa = actual pressure during calibration (mm Hg)
 Tstd = 298 deg K
 Pstd = 760 mm Hg
 For subsequent calculation of sampler flow:
 $1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)] - b)$

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

**Tisch Environmental, Inc.
TSP Sampler Calibration
(Dickson recorder)**

SITE

Location: **Nga Cheung Road** Date: **25-Jan-16**
 Sampler: **TE-5170 MFC** Tech: **Andy Tsang**

CONDITIONS

Barometric Pressure (in Hg):	17.00	Corrected Pressure (mm Hg):	432
Temperature (deg F):	63	Temperature (deg K):	290
Average Press. (in Hg):	17.00	Corrected Average (mm Hg):	432
Average Temp. (deg F):	63	Average Temp. (deg K):	290

CALIBRATION ORIFICE

Make:	Tisch	Qstd Slope:	2.01000
Model:	TE-5028A	Qstd Intercept:	-0.02003
Serial#:	9833620	Date Certified:	30-Jan-15

CALIBRATIONS

Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION
1	3.50	0.721	37.0	28.26	Slope = 46.2065
2	5.00	0.860	45.0	34.37	Intercept = -5.3474
3	6.20	0.956	50.0	38.19	Corr. coeff.= 0.9984
4	7.40	1.044	56.0	42.77	
5	8.70	1.131	62.0	47.36	# of Observations: 5

Calculations

$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta)) - b]$
 $IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$

Qstd = standard flow rate
 IC = corrected chart response
 I = actual chart response
 m = calibrator Qstd slope
 b = calibrator Qstd intercept
 Ta = actual temperature during calibration (deg K)
 Pa = actual pressure during calibration (mm Hg)
 Tstd = 298 deg K
 Pstd = 760 mm Hg
 For subsequent calculation of sampler flow:
 $1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)] - b)$

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



CERTIFICATE OF CALIBRATION

Certificate No.: 15CA1228 01-01

Page 1 of 2

Item tested

Description:	Sound Level Meter (Type 1)	, Microphone
Manufacturer:	SVANTEK, Poland	, ACO, Japan
Type/Model No.:	971	, 7052E
Serial/Equipment No.:	34350 / EPS OE0032	, 54635
Adaptors used:	-	, -

Item submitted by

Customer Name: Environmental Pioneers & Solutions Ltd.
Address of Customer: Flat A, 8/F., Chai Wan Industrial Centre., 20 Lee Chung Street, Chaiwan, Hong Kong
Request No.: -
Date of receipt: 28-Dec-2015

Date of test: 28-Dec-2015

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	19-Jun-2016	CIGISMEC
Signal generator	DS 360	33873	16-Apr-2016	CEPREI
Signal generator	DS 360	61227	16-Apr-2016	CEPREI

Ambient conditions

Temperature: 21 ± 1 °C
Relative humidity: 55 ± 10 %
Air pressure: 1005 ± 5 hPa

Test specifications

- 1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- 2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of $\pm 20\%$.
- 3, The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsiveness of the Sound Level Meter.


Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory:


Huang Jian Min/Feng Jun Qi

Date: 04-Jan-2016

Company Chop:



Comments: The results 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.



CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 15CA1228 01-01

Page 2 of 2

1, Electrical Tests

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given in below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

Test:	Subtest:	Status:	Expanded Uncertainty (dB)	Coverage Factor
Self-generated noise	A	Pass	0.3	
	C	Pass	0.6	
	Lin	Pass	1.0	
Linearity range for Leq	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
Linearity range for SPL	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
	A	Pass	0.3	
	C	Pass	0.3	
Frequency weightings	Lin	Pass	0.3	
	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
Peak response	Single 100 μ s rectangular pulse	Pass	0.3	
R.M.S. accuracy	Crest factor of 3	Pass	0.3	
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.3	
	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor 1/10 ³ at 4kHz	Pass	0.3	
	1 ms burst duty factor 1/10 ⁴ at 4kHz	Pass	0.3	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	Single burst 10 ms at 4 kHz	Pass	0.4	
Overload indication	SPL	Pass	0.3	
	Leq	Pass	0.4	

2, Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test:	Subtest	Status	Expanded Uncertainty (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
	Weighting A at 8000 Hz	Pass	0.5	

3, Response to associated sound calibrator

N/A

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

- End -

Calibrated by:

Date: 23-Dec-2015

Checked by:

Date: 04-Jan-2016

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.



Test Data for Sound Level Meter

Page 1 of 5

Sound level meter type: 971 Serial No. 34350 / EPS OE0032 Date 28-Dec-2015
Microphone type: 7052E Serial No. 54635

Report: 15CA1228 01-01

SELF GENERATED NOISE TEST

The noise test is performed in the most sensitive range of the SLM with the microphone replaced by an equivalent impedance.

Noise level in A weighting	11.9	dB
Noise level in C weighting	11.9	dB
Noise level in Lin (Z)	16.9	dB

LINEARITY TEST

The linearity is tested relative to the reference sound pressure level using a continuous sinusoidal signal of frequency 4 kHz. The measurement is made on the reference range for indications at 5 dB intervals starting from the 94 dB reference sound pressure level. And until within 5 dB of the upper and lower limits of the reference range, the measurements shall be made at 1 dB intervals. (SLM set to LEQ/SPL)

Reference/Expected level	Actual level		Tolerance	Deviation	
	non-integrated	integrated		non-integrated	integrated
dB	dB	dB	+/- dB	dB	dB
94.0	94.0	94.0	0.7	0.0	0.0
99.0	99.0	99.0	0.7	0.0	0.0
104.0	104.0	104.0	0.7	0.0	0.0
109.0	109.0	109.0	0.7	0.0	0.0
114.0	114.0	114.0	0.7	0.0	0.0
115.0	115.0	115.0	0.7	0.0	0.0
116.0	116.0	116.0	0.7	0.0	0.0
117.0	117.0	117.0	0.7	0.0	0.0
118.0	118.0	118.0	0.7	0.0	0.0
119.0	119.0	119.0	0.7	0.0	0.0
120.0	120.0	120.0	0.7	0.0	0.0
89.0	89.0	89.0	0.7	0.0	0.0
84.0	84.0	84.0	0.7	0.0	0.0
79.0	79.0	79.0	0.7	0.0	0.0
74.0	74.0	74.0	0.7	0.0	0.0
69.0	69.0	69.0	0.7	0.0	0.0
64.0	64.0	64.0	0.7	0.0	0.0
59.0	59.0	59.0	0.7	0.0	0.0
54.0	54.0	54.0	0.7	0.0	0.0
49.0	49.0	49.0	0.7	0.0	0.0
44.0	43.9	43.9	0.7	-0.1	-0.1
39.0	38.9	38.9	0.7	-0.1	-0.1
34.0	33.7	33.7	0.7	-0.3	-0.3
33.0	32.7	32.7	0.7	-0.3	-0.3



Test Data for Sound Level Meter

Page 2 of 5

Sound level meter type: 971 Serial No. 34350 / EPS OE0032 Date 28-Dec-2015
Microphone type: 7052E Serial No. 54635
Report: 15CA1228 01-01

32.0	31.6	31.6	0.7	-0.4	-0.4
31.0	30.5	30.5	0.7	-0.5	-0.5
30.0	29.6	29.6	0.7	-0.4	-0.4
29.0	28.5	28.5	0.7	-0.5	-0.5
28.0	27.3	27.3	0.7	-0.7	-0.7

Measurements for an indication of the reference SPL on all other ranges which include it

Other ranges	Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
40-140	94.0	94.0	0.7	0.0
25-120	94.0	94.0	0.7	0.0

Measurements on all level ranges for indications 2 dB below the upper limit and 2 dB above the lower limit

Ranges	Reference/Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
40-140	42.0	42.0	0.7	0.0
	138.0	138.0	0.7	0.0
25-120	28.0	27.3	0.7	-0.7
	118.0	118.0	0.7	0.0

FREQUENCY WEIGHTING TEST

The frequency response of the weighting networks are tested at octave intervals over the frequency ranges 31.5 Hz to 12500 Hz. The signal level at 1000 Hz is set to give an indication of the reference SPL.

Frequency weighting A:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	54.6	54.7	1.5	1.5	0.1
63.1	94.0	67.8	67.9	1.5	1.5	0.1
125.9	94.0	77.9	77.9	1.0	1.0	0.0
251.2	94.0	85.4	85.4	1.0	1.0	0.0
501.2	94.0	90.8	90.8	1.0	1.0	0.0
1995.0	94.0	95.2	95.2	1.0	1.0	0.0
3981.0	94.0	95.0	95.1	1.0	1.0	0.1
7943.0	94.0	92.9	93.0	1.5	3.0	0.1
12590.0	94.0	89.7	89.6	3.0	6.0	-0.1

Frequency weighting C:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	91.0	91.1	1.5	1.5	0.1
63.1	94.0	93.2	93.1	1.5	1.5	-0.1



Test Data for Sound Level Meter

Page 3 of 5

Sound level meter type: 971 Serial No. 34350 / EPS OE0032 Date 28-Dec-2015
Microphone type: 7052E Serial No. 54635

Report: 15CA1228 01-01

125.9	94.0	93.8	93.8	1.0	1.0	0.0
251.2	94.0	94.0	94.0	1.0	1.0	0.0
501.2	94.0	94.0	94.0	1.0	1.0	0.0
1995.0	94.0	93.8	93.8	1.0	1.0	0.0
3981.0	94.0	93.2	93.2	1.0	1.0	0.0
7943.0	94.0	91.0	91.1	1.5	3.0	0.1
12590.0	94.0	87.8	87.7	3.0	6.0	-0.1

Frequency weighting Z:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	94.0	94.0	1.5	1.5	0.0
63.1	94.0	94.0	94.0	1.5	1.5	0.0
125.9	94.0	94.0	94.0	1.0	1.0	0.0
251.2	94.0	94.0	94.0	1.0	1.0	0.0
501.2	94.0	94.0	94.0	1.0	1.0	0.0
1995.0	94.0	94.0	94.0	1.0	1.0	0.0
3981.0	94.0	94.0	94.0	1.0	1.0	0.0
7943.0	94.0	94.0	94.0	1.5	3.0	0.0
12590.0	94.0	94.0	93.9	3.0	6.0	-0.1

TIME WEIGHTING FAST TEST

Time weighting F is tested on the reference range with a single sinusoidal burst of duration 200 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous. (Weight A, Maximum hold)

Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
dB	dB	dB	+	-	dB
81.0	80.0	80.0	1.0	1.0	0.0

TIME WEIGHTING SLOW TEST

Time weighting S is tested on the reference range with a single sinusoidal burst of duration 500 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous. (Weight A, Maximum hold)

Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
dB	dB	dB	+	-	dB
81.0	76.9	76.9	1.0	1.0	0.0

PEAK RESPONSE TEST

The onset time of the peak detector is tested on the reference range by comparing the response to a 100 us rectangular test pulse with the response to a 10 ms reference pulse of the same amplitude. The amplitude of the 10 ms reference pulse is such as to produce an indication 1 dB below the upper limit of the primary indicator range.

Positive polarities: (Weighting Z, set the generator signal to single, Lzpeak)



Test Data for Sound Level Meter

Page 4 of 5

Sound level meter type: 971 Serial No. 34350 / EPS OE0032 Date 28-Dec-2015
Microphone type: 7052E Serial No. 54635

Report: 15CA1228 01-01

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
84.0	84.0	84.0	2.0	0.0

Negative polarities:

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
84.0	84.0	84.0	2.0	0.0

RMS ACCURACY TEST

The RMS detector accuracy is tested on the reference range for a crest factor of 3.

Test frequency: 2000 Hz
Amplitude: 2 dB below the upper limit of the primary indicator range.
Burst repetition frequency: 40 Hz
Tone burst signal: 11 cycles of a sine wave of frequency 2000 Hz. (Set to INT)

	Ref. Level	Expected level	Tone burst signal	Tolerance	Deviation
Time weighting	dB	dB	indication(dB)	+/- dB	dB
Slow	83.0+6.6	83.0	83.0	0.5	0.0

TIME WEIGHTING IMPULSE TEST

Time weighting I is tested on the reference range (Set the SLM to LAImax)

Test frequency: 2000 Hz
Amplitude: The upper limit of the primary indicator range.

Single sinusoidal burst of duration 5 ms:

Ref. Level	Single burst indication		Tolerance	Deviation
dB	Expected (dB)	Actual (dB)	+/- dB	dB
85.0	76.2	76.1	2.0	-0.1

Repeated at 100 Hz

Ref. Level	Repeated burst indication		Tolerance	Deviation
dB	Expected (dB)	Actual (dB)	+/- dB	dB
85.0	82.3	82.2	1.0	-0.1

TIME AVERAGING TEST

This test compares the SLM reading for continuous sine signals with readings obtained from a sine tone burst sequence having the same RMS level. The test level is 30 dB below the upper limit of the linearity range and repeated for Type 1 SLM with 40 dB below the upper limit of the linearity.

Frequency of tone burst: 4000 Hz

Duration of tone burst: 1 ms

Repetition Time	Level of tone burst	Expected Leq	Actual Leq	Tolerance	Deviation	Remarks
msec	dB	dB	dB	+/- dB	dB	
1000	90.0	90.0	89.9	1.0	-0.1	60s integ.
10000	80.0	80.0	79.9	1.0	-0.1	6min. integ.

PULSE RANGE AND SOUND EXPOSURE LEVEL TEST



Test Data for Sound Level Meter

Page 5 of 5

Sound level meter type: 971 Serial No. 34350 / EPS OE0032 Date 28-Dec-2015
Microphone type: 7052E Serial No. 54635

Report: 15CA1228 01-01

The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range

Test frequency: 4000 Hz

Integration time: 10 sec

The integrating sound level meter set to Leq:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10	88.0	58.0	57.9	1.7	-0.1

The integrating sound level meter set to SEL:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10.0	88.0	68.0	68.0	1.7	0.0

OVERLOAD INDICATION TEST

For SLM capable of operating in a non-integrating mode.

Test frequency: 2000 Hz
Amplitude: 2 dB below the upper limit of the primary indicator range.
Burst repetition frequency: 40 Hz
Tone burst signal: 11 cycles of a sine wave of frequency 2000 Hz.

Level	Level reduced by	Further reduced	Difference	Tolerance	Deviation
at overload (dB)	1 dB	3 dB	dB	dB	dB
117.9	116.9	113.9	3.0	1.0	0.0

For integrating SLM, with the instrument indicating Leq.

For integrating SLM, with the instrument indicating Leq and set to the reference range. The test signal as follow
The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range
Test frequency: 4000 Hz
Integration time: 10 sec
Single burst duration: 1 msec

Rms level	Level reduced by	Expected level	Actual level	Tolerance	Deviation
at overload (dB)	1 dB	dB	dB	dB	dB
124.5	123.5	83.5	83.4	2.2	-0.1

ACOUSTIC TEST

The acoustic test of the complete SLM is tested at the frequency 125 Hz and 8000 Hz using a B&K type 4226 Multifunction Acoustic Calibrator. The test is performed in A weighting.

Frequency	Expected level	Actual level	Tolerance (dB)		Deviation
Hz	dB	Measured (dB)	+	-	dB
1000	94.0	94.0	0.0	0.0	0.0
125	77.9	78.0	1.0	1.0	0.1
8000	92.9	92.6	1.5	3.0	-0.3

-----END-----



CERTIFICATE OF CALIBRATION

Certificate No.: 15CA1228 01-02

Page: 1 of 2

Item tested

Description: Acoustical Calibrator (Type 1)
Manufacturer: SVANTEK
Type/Model No.: SV30A
Serial/Equipment No.: 29085
Adaptors used: -

Item submitted by

Customer: Environmental Pioneers & Solutions Ltd.
Address of Customer: Flat A, 8/F., Chai Wan Industrial Centre., 20 Lee Chung Street, Chaiwan, Hong Kong
Request No.: -
Date of receipt: 28-Dec-2015

Date of test: 28-Dec-2015

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2341427	15-Apr-2016	SCL
Preamplifier	B&K 2673	2239857	22-Apr-2016	CEPREI
Measuring amplifier	B&K 2610	2346941	22-Apr-2016	CEPREI
Signal generator	DS 360	61227	16-Apr-2016	CEPREI
Digital multi-meter	34401A	US36087050	17-Apr-2016	CEPREI
Audio analyzer	8903B	GB41300350	17-Apr-2016	CEPREI
Universal counter	53132A	MY40003662	16-Apr-2016	CEPREI

Ambient conditions

Temperature: 21 ± 1 °C
Relative humidity: 55 ± 5 %
Air pressure: 1005 ± 5 hPa

Test specifications

- 1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- 3, The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

Details of the performed measurements are presented on page 2 of this certificate.

Approved Signatory:

Huang Jian Min/Feng Jun Qi

Date: 04-Jan-2016

Company Chop:



Comments: The results 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.



CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 15CA1228 01-02

Page: 2 of 2

1, Measured Sound Pressure Level

The output Sound Pressure Level in the calibrator head was measured at the setting and frequency shown using a calibrated laboratory standard microphone and insert voltage technique. The results are given in below with the estimated uncertainties.

Frequency Shown Hz	Output Sound Pressure Level Setting dB	Measured Output Sound Pressure Level dB	(Output level in dB re 20 μ Pa) Estimated Expanded Uncertainty dB
1000	94.00	93.67	0.10

2, Sound Pressure Level Stability - Short Term Fluctuations

The Short Term Fluctuations was determined by measuring the maximum and minimum of the fast weighted DC output of the B&K 2610 measuring amplifier over a 20 second time interval as required in the standard. The Short Term Fluctuation was found to be:

At 1000 Hz STF = 0.001 dB

Estimated expanded uncertainty 0.005 dB

3, Actual Output Frequency

The determination of actual output frequency was made using a B&K 4180 microphone together with a B&K 2673 preamplifier connected to a B&K 2610 measuring amplifier. The AC output of the B&K 2610 was taken to an universal counter which was used to determine the frequency averaged over 20 second of operation as required by the standard. The actual output frequency at 1 KHz was:

At 1000 Hz Actual Frequency = 1000.0 Hz

Estimated expanded uncertainty 0.1 Hz Coverage factor k = 2.2

4, Total Noise and Distortion

For the Total Noise and Distortion measurement, the unfiltered AC output of the B&K 2610 measuring amplifier was connected to an Agilent Type 8903 B distortion analyser. The TND result at 1 KHz was:

At 1000 Hz TND = 0.4 %

Estimated expanded uncertainty 0.7 %

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

- End -

Calibrated by:

Date:

Fung Chi Yip
28-Dec-2015

Checked by:

Date:

Lam Tze Wai
04-Jan-2016

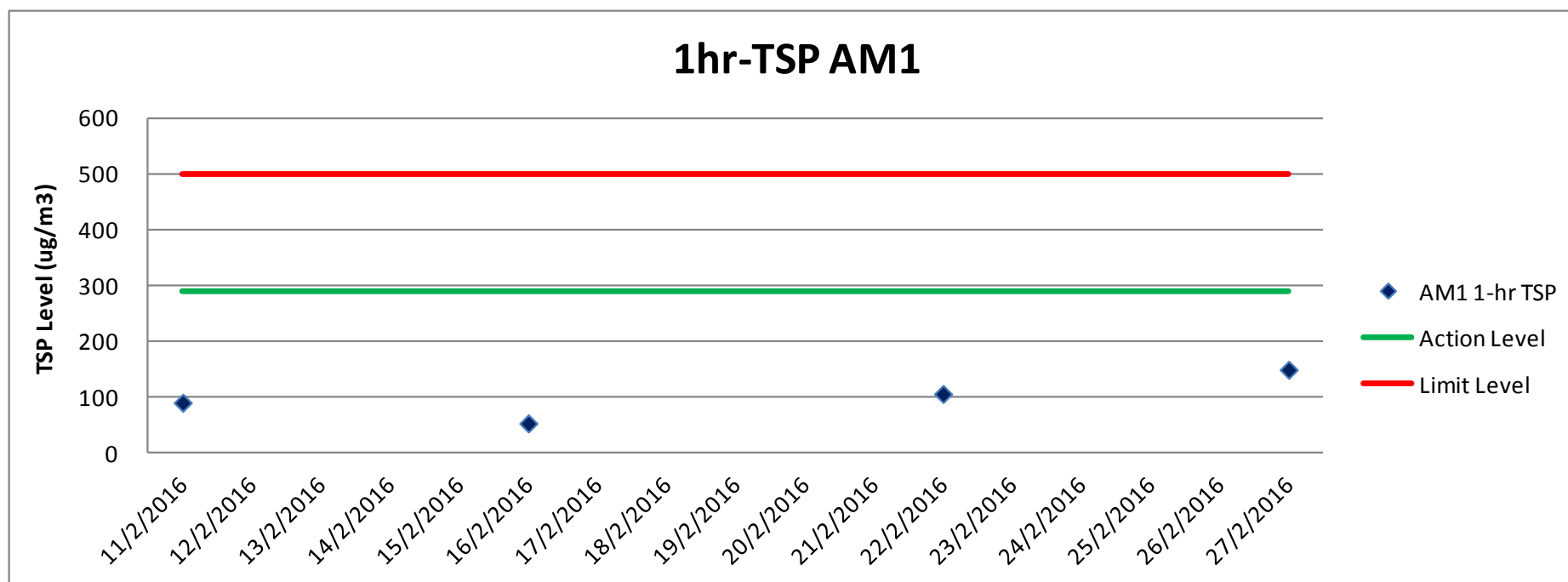
The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

Appendix F: TSP Monitoring Data

1-hr TSP Monitoring Result for AM1

Date	Weather	Temperature (°C) *	Wind Direction *	Wind Speed (m/s) *	Sampling Time			Reading ($\mu\text{g}/\text{m}^3$)			
					1	2	3	1	2	3	Average
11/2/2016	Overcast	20	NW	1.8	14:57	15:58	16:59	83	92	96	90
16/2/2016	Overcast	13	NW	2.5	14:50	15:51	16:52	55	53	52	53
22/2/2016	Overcast	17	E	3.7	10:22	11:23	12:24	113	102	103	106
27/2/2016	Sunny	16	NW	3.1	15:15	16:16	17:17	158	148	142	149

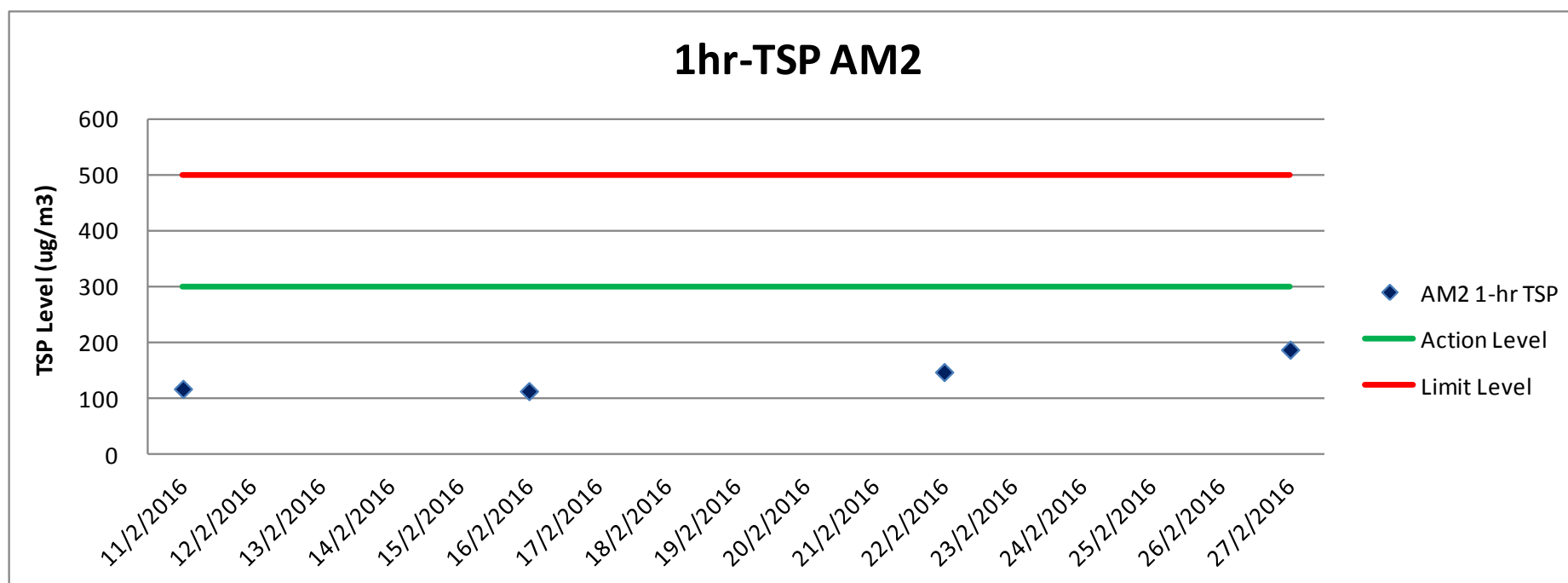
*Remark: Data of temperature, wind direction and wind speed was extracted from King's Park Meteorological Station of HKO



1-hr TSP Monitoring Result for AM2

Date	Weather	Temperature (°C) *	Wind Direction *	Wind Speed (m/s) *	Sampling Time			Reading ($\mu\text{g}/\text{m}^3$)			
					1	2	3	1	2	3	Average
11/2/2016	Overcast	20	NW	1.8	13:29	14:30	15:31	113	118	122	118
16/2/2016	Overcast	13	NW	2.5	13:28	14:29	15:30	107	113	121	114
22/2/2016	Overcast	17	E	3.7	13:26	14:27	15:28	141	145	157	148
27/2/2016	Sunny	16	NW	3.1	13:34	14:35	15:36	162	194	207	188

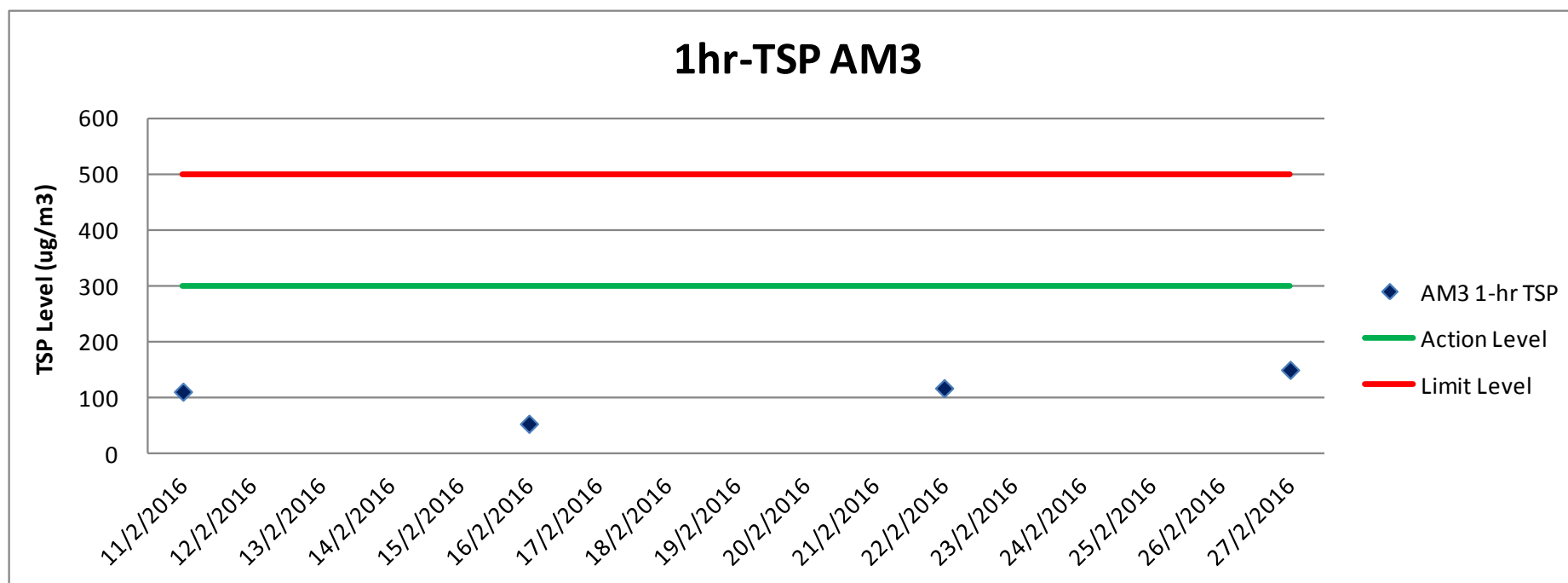
*Remark: Data of temperature, wind direction and wind speed was extracted from King's Park Meteorological Station of HKO



1-hr TSP Monitoring Result for AM3

Date	Weather	Temperature (°C) *	Wind Direction *	Wind Speed (m/s) *	Sampling Time			Reading ($\mu\text{g}/\text{m}^3$)			
					1	2	3	1	2	3	Average
11/2/2016	Overcast	20	NW	1.8	15:33	16:34	17:35	107	111	116	111
16/2/2016	Overcast	13	NW	2.5	15:22	16:23	17:24	56	56	50	54
22/2/2016	Overcast	17	E	3.7	10:50	11:51	12:52	113	123	117	118
27/2/2016	Sunny	16	NW	3.1	15:51	16:52	17:53	154	146	151	150

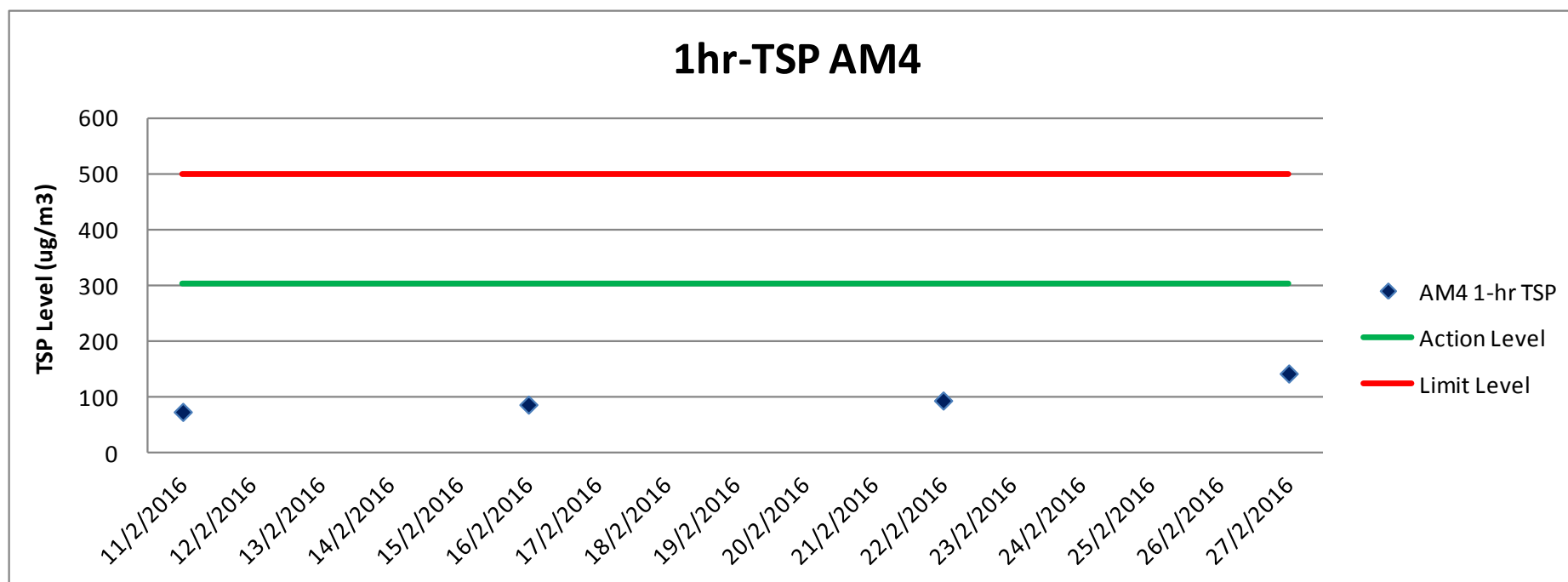
*Remark: Data of temperature, wind direction and wind speed was extracted from King's Park Meteorological Station of HKO



1-hr TSP Monitoring Result for AM4

Date	Weather	Temperature (°C) *	Wind Direction *	Wind Speed (m/s) *	Sampling Time			Reading ($\mu\text{g}/\text{m}^3$)			
					1	2	3	1	2	3	Average
11/2/2016	Overcast	20	NW	1.8	13:28	14:29	15:30	69	75	78	74
16/2/2016	Overcast	13	NW	2.5	13:26	14:27	15:28	76	91	94	87
22/2/2016	Overcast	17	E	3.7	13:22	14:23	15:24	88	95	100	94
27/2/2016	Sunny	16	NW	3.1	13:30	14:31	15:32	116	151	161	143

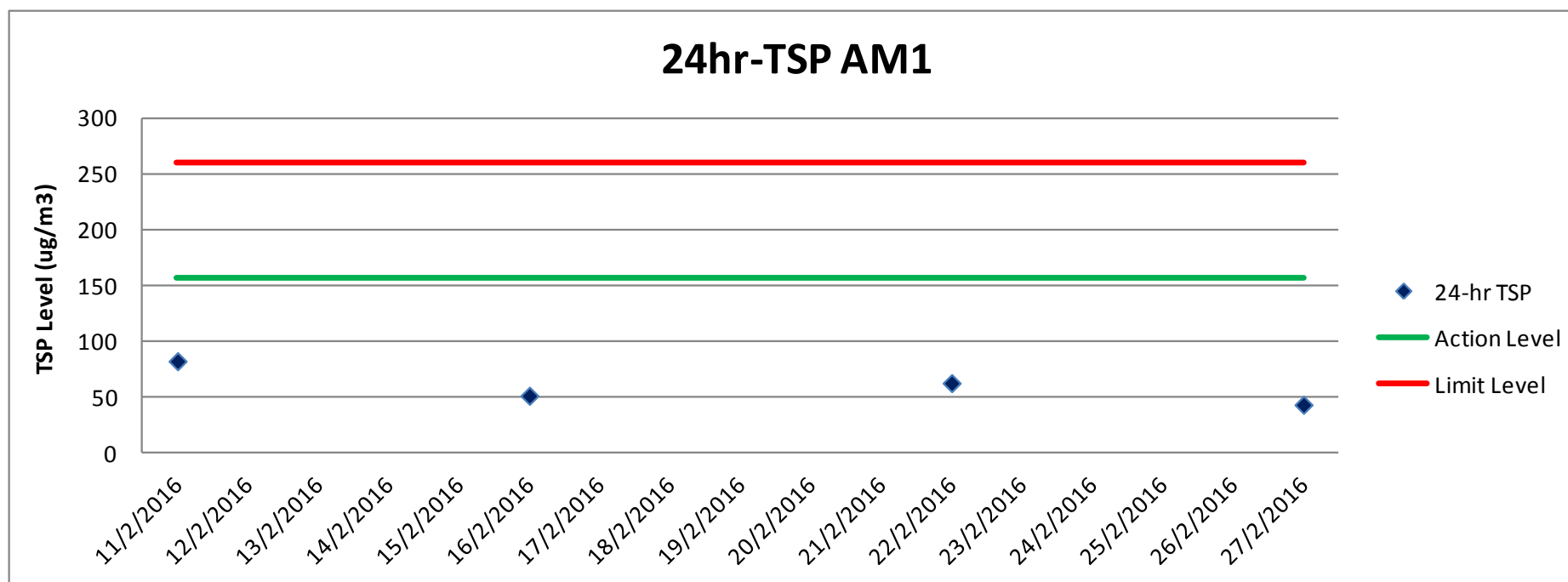
*Remark: Data of temperature, wind direction and wind speed was extracted from King's Park Meteorological Station of HKO



24-hr TSP Monitoring Result for AM1

Sampling ID & Paper No.	Temperature (°C) *	Wind Diection *	Wind Speed (m/s) *	Sampling Date	Wt. of paper (g)			Flow Rate (CFM)			Total Volume (m³)	TSP Concentration (µg/m3)
					Initial Wt.	Final Wt.	Wt. of dust	Initial	Final	Avg Flow Rate		
AM10211 200499	19	NW	1.8	11/02/16	2.8173	3.0054	0.1881	56	56	56.0	2283.47	82.3746
AM10216 200552	13	NW	2.5	16/02/16	2.9075	3.0249	0.1174	56	56	56.0	2283.47	51.4130
AM10222 200554	17	E	3.7	22/02/16	2.8956	3.0389	0.1433	56	56	56.0	2283.47	62.7554
AM10227 200569	16	NW	3.1	27/02/16	2.8310	2.9300	0.0990	56	56	56.0	2283.47	43.3551

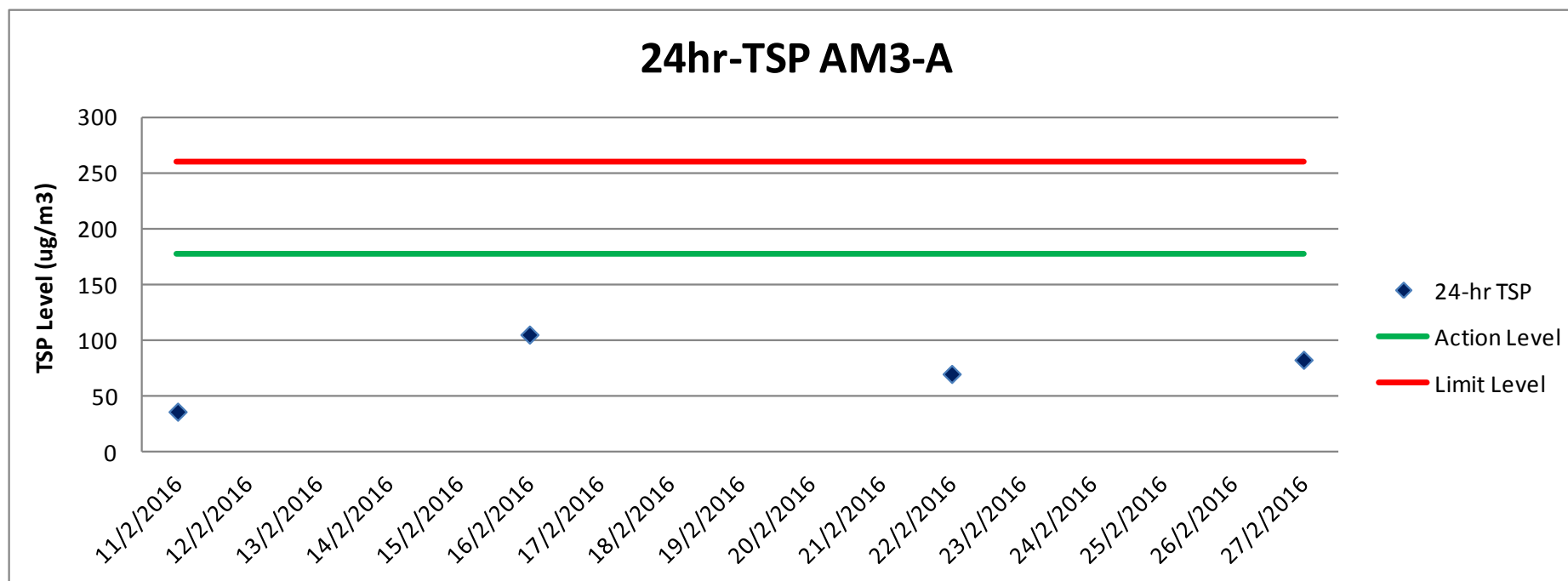
*Remark: Data of temperature, wind direction and wind speed was extracted from King's Park Meteorological Station of HKO



24-hr TSP Monitoring Result for AM3-A

Sampling ID & Paper No.	Temperature (°C) *	Wind Diection *	Wind Speed (m/s) *	Sampling Date	Wt. of paper (g)			Flow Rate (CFM)			Total Volume (m³)	TSP Concentration (µg/m3)
					Initial Wt.	Final Wt.	Wt. of dust	Initial	Final	Avg Flow Rate		
AM3-A0211 200510	16 - 25	NW	0-3.6	11/02/16	2.8180	2.8921	0.0741	50	50	50.0	2038.81	36.3447
AM3-A0216 200568	11 - 15	NW	0-5	16/02/16	2.8382	3.0530	0.2148	50	50	50.0	2038.81	105.3554
AM3-A0222 200556	15 - 19	E	0.8-6.6	22/02/16	2.9264	3.0694	0.1430	50	50	50.0	2038.81	70.1389
AM3-A0227 200555	13 - 18	NW	0-6.1	27/02/16	2.9299	3.0987	0.1688	50	50	50.0	2038.81	82.7933

*Remark: Data of temperature, wind direction and wind speed was extracted from King's Park Meteorological Station of HKO





CERTIFICATE OF ANALYSIS

Client	: ENVIRONMENTAL PIONEERS & SOLUTION LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 2
Contact	: ANDY TSANG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1608016
Address	: FLAT A, 8/F, CHAI WAN INDUSTRIAL CENTRE, 20 LEE CHUNG STREET, CHAI WAN HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: kytsang@fsenv.com.hk	E-mail	: Richard.Fung@alsglobal.com		
Telephone	: +852 2185 0159	Telephone	: +852 2610 1044		
Facsimile	: +852 2258 0568	Facsimile	: +852 2610 2021		
Project	: PROPOSED ROAD IMPROVEMENT WORKS IN WEST KOWLOON RECLAMATION DEVELOPMENT - PHASE 1	Quote number	: ---	Date Samples Received	: 27-FEB-2016
Order number	: ----			Issue Date	: 02-MAR-2016
C-O-C number	: ----			No. of samples received	: 5
Site	: ----			No. of samples analysed	: 5

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 01-MAR-2016

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1608016

- Sample(s) were received in an ambient condition.
- Sample(s) analysed and reported on an as received basis.

This report may not be reproduced except with prior written approval from the testing laboratory.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories

Position

Authorised results for

Fung Lim Chee, Richard

General Manager

Inorganics



Analytical Results

Sub-Matrix: FILTER (TSP/RSP)

Client sample ID

Client sampling date / time

				AM10205 200500	AM10211 200499	AM10216 200552	AM10222 200554	AM10227 200569
				[05-FEB-2016]	[11-FEB-2016]	[16-FEB-2016]	[22-FEB-2016]	[27-FEB-2016]
Compound	CAS Number	LOR	Unit	HK1608016-001	HK1608016-002	HK1608016-003	HK1608016-004	HK1608016-005
EA/ED: Physical and Aggregate Properties								
HK-TSP: Total Suspended Particulates	----	0.0010	g	0.1046	0.1881	0.1174	0.1433	0.0990
HK-TSP: Initial Weight	----	0.0010	g	2.8250	2.8173	2.9075	2.8956	2.8310
HK-TSP: Final Weight	----	0.0010	g	2.9296	3.0054	3.0249	3.0389	2.9300

Remark:

The project commenced on 6th Februar 2016. The analytical result of AM10205 can be ignored.



CERTIFICATE OF ANALYSIS

Client	: ENVIRONMENTAL PIONEERS & SOLUTION LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 2
Contact	: ANDY TSANG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1608017
Address	: FLAT A, 8/F, CHAI WAN INDUSTRIAL CENTRE, 20 LEE CHUNG STREET, CHAI WAN HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: kytsang@fsenv.com.hk	E-mail	: Richard.Fung@alsglobal.com		
Telephone	: +852 2185 0159	Telephone	: +852 2610 1044		
Facsimile	: +852 2258 0568	Facsimile	: +852 2610 2021		
Project	: PROPOSED ROAD IMPROVEMENT WORKS IN WEST KOWLOON RECLAMATION DEVELOPMENT - PHASE 1	Quote number	: ---	Date Samples Received	: 27-FEB-2016
Order number	: ----			Issue Date	: 02-MAR-2016
C-O-C number	: ----			No. of samples received	: 5
Site	: ----			No. of samples analysed	: 5

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 01-MAR-2016

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1608017

Sample(s) were received in an ambient condition.

Sample(s) analysed and reported on an as received basis.

This report may not be reproduced except with prior written approval from the testing laboratory.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories

Position

Authorised results for

Fung Lim Chee, Richard

General Manager

Inorganics



Analytical Results

Sub-Matrix: FILTER (TSP/RSP)

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	AM3-A0205 200495 [05-FEB-2016] HK1608017-001	AM3-A0211 200510 [11-FEB-2016] HK1608017-002	AM3-A0216 200568 [16-FEB-2016] HK1608017-003	AM3-A0222 200556 [22-FEB-2016] HK1608017-004	AM3-A0227 200555 [27-FEB-2016] HK1608017-005
EA/ED: Physical and Aggregate Properties								
HK-TSP: Total Suspended Particulates	----	0.0010	g	0.2321	0.0741	0.2148	0.1430	0.1688
HK-TSP: Initial Weight	----	0.0010	g	2.8311	2.8180	2.8382	2.9264	2.9299
HK-TSP: Final Weight	----	0.0010	g	3.0632	2.8921	3.0530	3.0694	3.0987

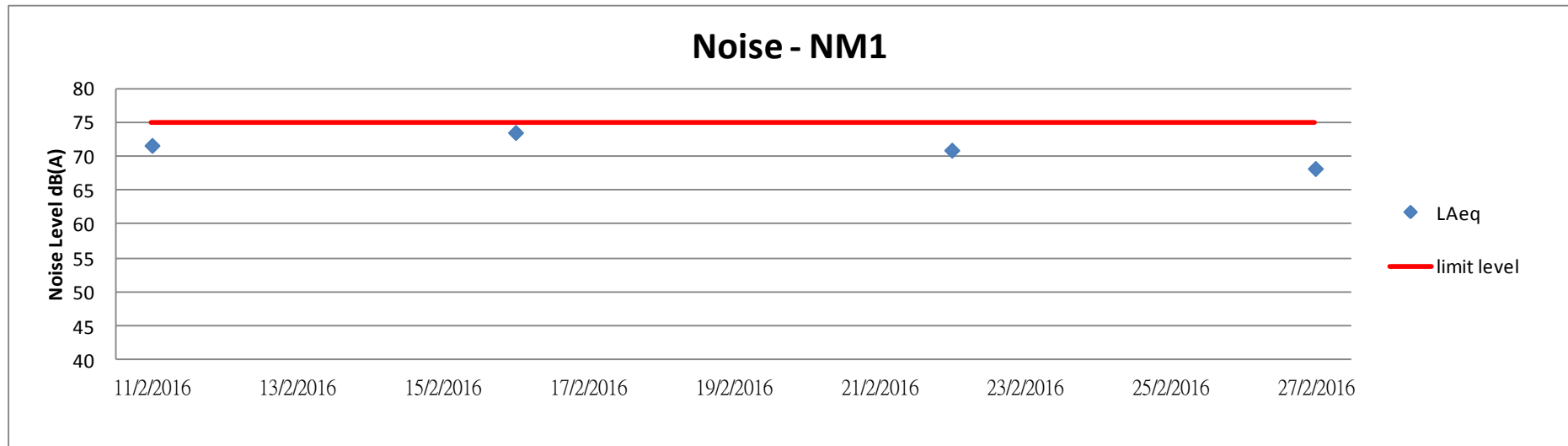
Remark:

The project commenced on 6th Februar 2016. The analytical result of AM3-A0205 can be ignored.

Appendix G1: Noise Monitoring Data

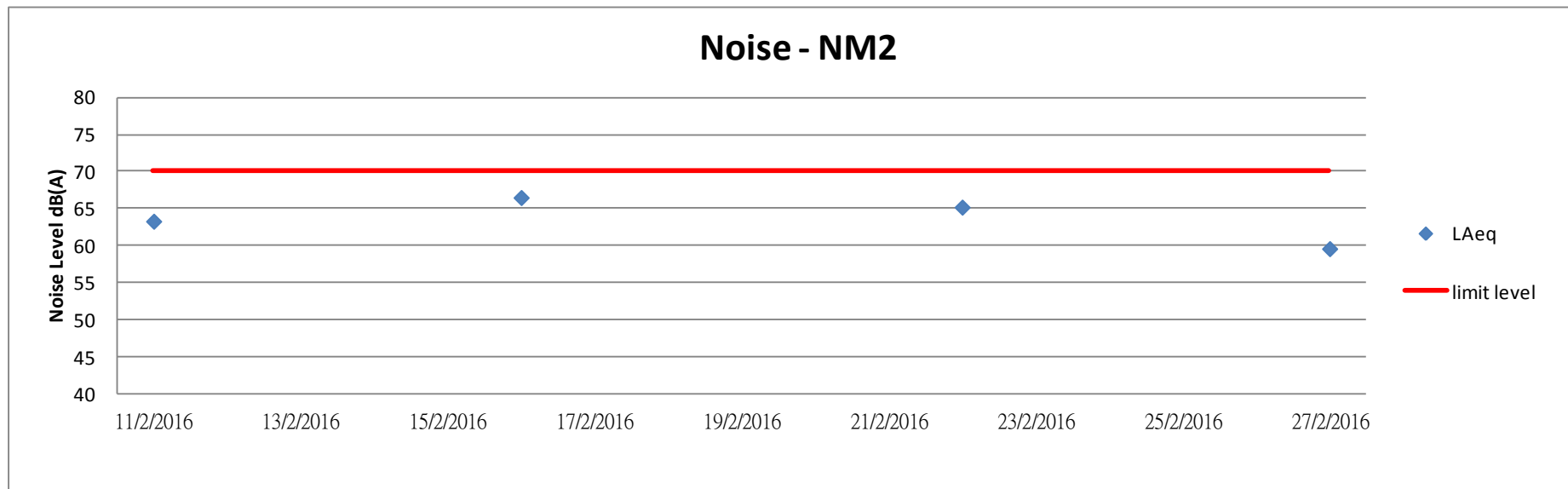
Noise Monitoring Result for NM1

Location	NM1			
Date	11/2/2016	16/2/2016	22/2/2016	27/2/2016
Weather Condition	Overcast	Overcast	Sunny	Overcast
Start Time	16:12	16:10	13:43	16:32
Measurement Period	30min	30min	30min	30min
Baseline Level	75.1			
L _{Aeq}	76.7	77.4	76.5	75.9
L ₁₀	79.3	80.1	79.0	77.8
L ₉₀	72.1	72.8	72.5	70.3
Baseline Corrected Level	71.6	73.5	70.9	68.2



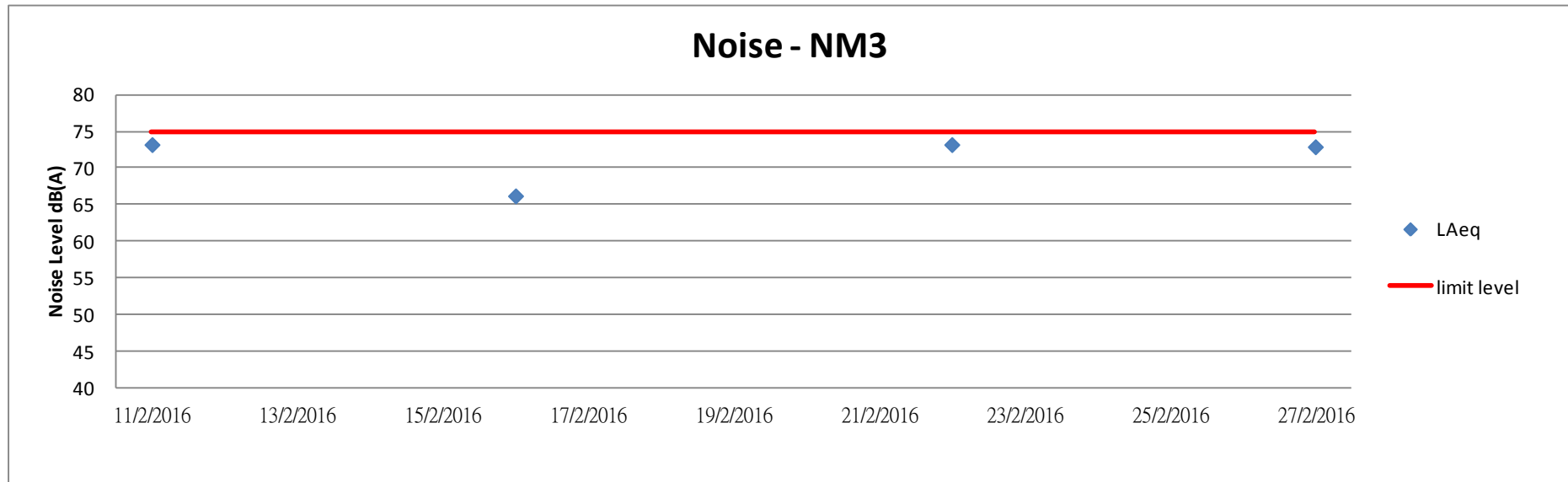
Noise Monitoring Result for NM2

Location	NM2			
Date	11/2/2016	16/2/2016	22/2/2016	27/2/2016
Weather Condition	Overcast	Overcast	Sunny	Overcast
Start Time	9:00	9:00	9:00	9:00
Measurement Period	30min	30min	30min	30min
Baseline Level	66.5			
L _{Aeq}	68.2	69.5	68.9	67.3
L ₁₀	71.3	71.1	70.4	70.1
L ₉₀	65.5	66.3	64.2	62.5
Baseline Corrected Level	63.3	66.5	65.2	59.6



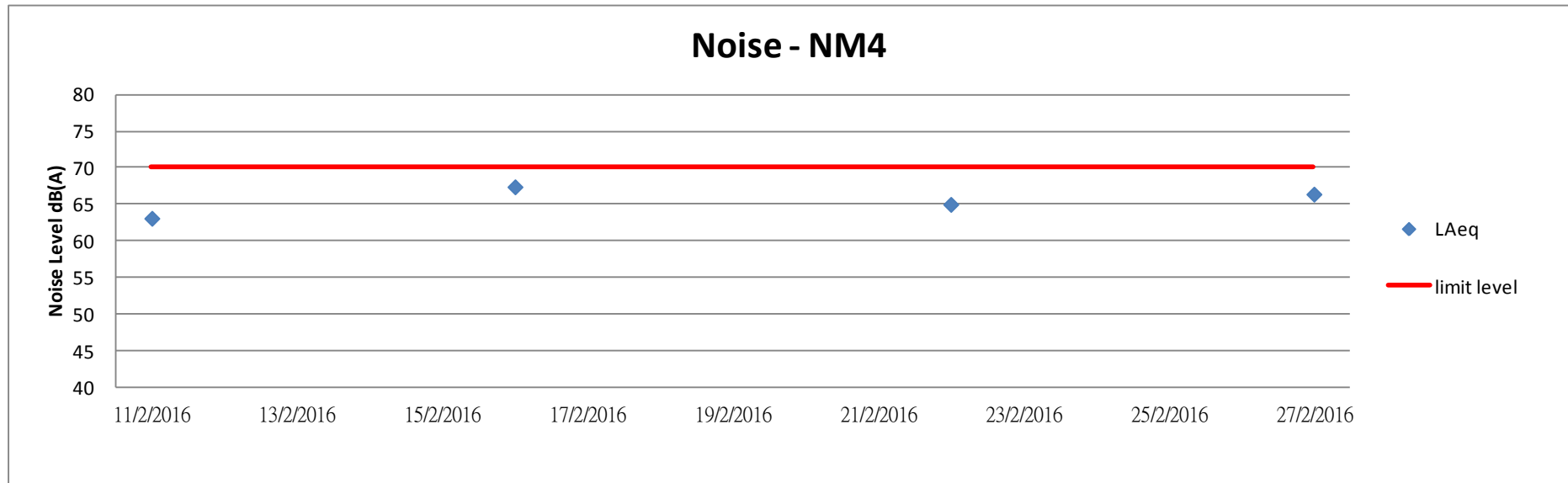
Noise Monitoring Result for NM3

Location	NM3			
Date	11/2/2016	16/2/2016	22/2/2016	27/2/2016
Weather Condition	Overcast	Overcast	Sunny	Overcast
Start Time	15:36	15:33	10:51	15:58
Measurement Period	30min	30min	30min	30min
Baseline Level	74.5			
L _{Aeq}	76.9	75.1	76.9	76.8
L ₁₀	80.0	78.4	79.8	79.6
L ₉₀	71.1	69.5	71.8	72.8
Baseline Corrected Level	73.2	66.2	73.2	72.9



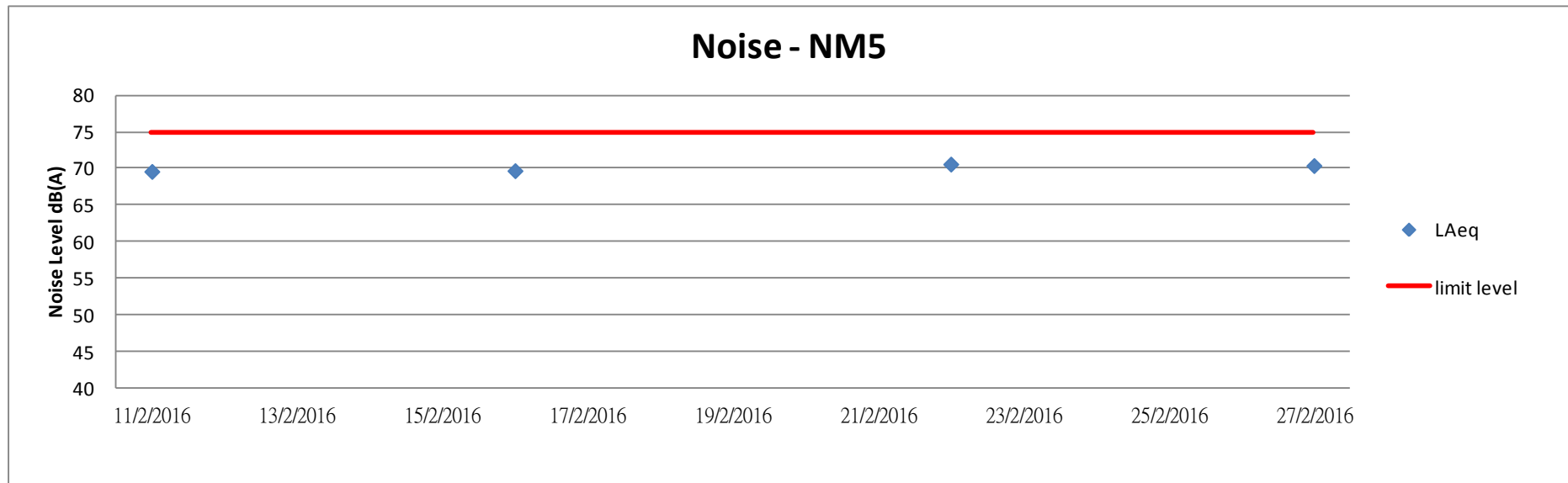
Noise Monitoring Result for NM4

Location	NM4			
Date	11/2/2016	16/2/2016	22/2/2016	27/2/2016
Weather Condition	Overcast	Overcast	Sunny	Overcast
Start Time	13:36	13:37	13:24	13:35
Measurement Period	30min	30min	30min	30min
Baseline Level	73.3			
L _{Aeq}	73.7	74.3	73.9	74.1
L ₁₀	75.9	76.7	76.9	75.5
L ₉₀	64.3	69.0	67.2	66.4
Baseline Corrected Level	63.1	67.4	65.0	66.4



Noise Monitoring Result for NM5

Location	NM5			
Date	11/2/2016	16/2/2016	22/2/2016	27/2/2016
Weather Condition	Overcast	Overcast	Sunny	Overcast
Start Time	15:24	15:28	15:29	15:25
Measurement Period	30min	30min	30min	30min
Baseline Level	71.8			
L _{Aeq}	69.6	69.7	70.6	70.4
L ₁₀	73.5	73.5	73.8	73.8
L ₉₀	62.5	63.4	63.6	63.9
Baseline Corrected Level	<Baseline level	<Baseline level	<Baseline level	<Baseline level



Appendix G2: School Schedule

油蔴地天主教小學(海泓道)
二零一五至二零一六年度校曆表(九月至二月)

月份	周次	日	一	二	三	四	五	六	行事曆
九月	一			1 S	2 S	3	4 S	5	1/9 開學 3/9 額外公眾假期
	二	6	7 S	8 S	9 A	10 B	11 C	12	11/9 求恩禮
	三	13	14 D	15 E	16 F	17 A	18 B	19	
	四	20	21 C	22 D	23 E	24 F	25 A	26	
	五	27	28	29 B	30 C				27/9 教育日 28/9 中秋節翌日
十月					1	2 D	③		1/10 國慶 3/10 我和班主任有個約會/J6 升中面試講座
	六	4	5 E	6 F	7 A	8 B	9 C	10	
	七	11	12 D	13 E	14 F	15 A	16 B	17	
	八	18	19 S	20 C	21	22 D	23 E	24	19/10 水運會 21/10 重陽節 23/10 J6 升中座談會(1)
	九	25	26 F	27 A	28 B	29 C	30 D	31	30/10 九西水運會 第九周英文串字(J1 - J6)
十一月	十	1	2 E	3 F	4 S	5 S	6 S	7	5/11 - 10/11 J1 評估、J2 - 6 第一段考(J6 呈分試)
	十一	8	9 S	10 S	11 S	12 S	13 A	14	11/11 綠色旅行(J1 - 3) 12/11 綠色旅行(J4 - 6)
	十二	15	16 B	17 C	18 D	19 E	20 F	21	
	十三	22	23 A	24 B	25 C	26 D	27 E	28	
	十四	29	30 F						30/11 - 11/12 全方位學習周
十二月				1 A	2 B	3 C	4 D	5	3/12 九西陸運會
	十五	6	7 E	8 F	9 A	10 B	11 C	12	
	十六	13	14 D	15 E	16 F	17 A	18 S	①⑨	18/12 聖誕祈禱禮 19/12 家長日
		20	21	22	23	24	25	26	21/12/15 - 3/1/16 聖誕及新年假期 21/12 教師發展日(1)
		27	28	29	30	31			
一月						1	2		1/1 元旦
	十七	3	4 B	5 C	6 D	7 E	8 F	9	
	十八	10	11 A	12 B	13 C	14 D	15 E	16	
	十九	17	18 F	19 A	20 B	21 C	22 D	②③	18/1 下學期開始 23/1 家教會周年大會暨頒獎禮
	二十	24	25 E	26 F	27 A	28 S	29 B	30	28/1 陸運會
二月		31							
	廿一		1 C	2 D	3 S	4	5	6	3/2 送舊迎新大掃除 4/2 - 17/2 農曆新年假期
		7	8	9	10	11	12	13	8/2 - 10/2 初一至初三
	廿二	14	15	16	17	18 E	19 F	②⑩	20/2 新春團拜
	廿三	21	22 A	23 B	24 C	25 D	26 E	27	25/2 畢業照及班照 第廿三周英文串字(J1 - J6)
	廿四	28	29 F						

油蔴地天主教小學(海泓道)
二零一五至二零一六年度校曆表(三月至八月)

月份	周次	日	一	二	三	四	五	六	行事曆
三月	廿四			1 A	2 S	3 S	4 S	5	3/3 - 8/3 J1 - 6 第二段考(J6 呈分試)
	廿五	6	7 S	8 S	9 B	10 C	11 D	12	9/3 - 18/3 全方位學習周
	廿六	13	14 E	15 F	16 A	17 B	18 C	19	16/3 - 18/3 J5 教育營
	廿七	20	21 D	22 E	23 F	24	25	26	22/3 復活節祈禱聚會 24/3 - 4/4 復活節假期
		27	28	29	30	31			27/3 復活主日
四月							1	2	
	廿八	3	4	5 A	6 B	7 C	8 D	9	4/4 清明節
	廿九	10	11 E	12 F	13 A	14 B	15 C	①⑥	16/4 J6 升中座談會(2)
	三十	17	18 D	19 E	20 F	21 A	22 B	②③	23/4 成長見證日
	卅一	24	25 C	26 D	27 E	28 F	29 A	30	
五月	卅二	1	2	3 B	4 C	5 D	6 E	7	2/5 勞動節翌日 3/5 - 4/5 J3 TSA 說話及視訊評估 6/5 J5 升中座談會
	卅三	8	9 F	10 A	11 B	12 S	13 S	14	12/5 學藝薈萃耀油天綵排 13/5 學藝薈萃耀油天 14/5 佛誕
	卅四	15	16 C	17	18 D	19 E	20 F	21	17/5 天主教學校教師日
	卅五	22	23 A	24 B	25 C	26 D	27 E	28	第卅五周英文串字(J1 - J6)
	卅六	29	30 F	31 A					
六月					1 S	2 S	3 S	4	2/6 - 7/6 J1 - 6 期終考(J5 呈分試、J6 畢業試)
	卅七	5	6 S	7 S	8 B	9	10 C	11	9/6 端午節
	卅八	12	13 D	14 E	15 F	16 A	17 B	18	15/6 - 16/6 J3 TSA 紙筆評估
	卅九	19	20 C	21 D	22 E	23 F	24 A	25	25/6 聖保祿堂主保瞻禮
	四十	26	27	28 B	29 S	30 S			27/6 主保瞻禮假期 29/6 畢業禮綵排 30/6 畢業禮
七月							1	2	1/7 特別行政區成立日
	四一	3	4 S	5 S	6 S	7 S	8 S	9	5/7 升中派位 7/7 - 8/7 升中派位註冊 8/7 感恩禮
	四二	10	11 S	12 S	13 S	14	15	16	11/7 頒獎禮 12/7 J6 中一入學前測驗 14/7 教師發展日(2)
		17	18	19	20	21	22	23	14/7 - 31/8 暑假(2016年9月1日開課)
		24	25	26	27	28	29	30	
八月		31							
			1	2	3	4	5	6	備註:
		7	8	9	10	11	12	13	考試前夕(4/11, 2/3, 1/6) 半天上課
		14	15	16	17	18	19	20	12/5 - 13/5 學藝薈萃耀油天(半天上課)
		21	22	23	24	25	26	27	
		28	29	30	31				

麗澤中學

2015-2016 年 度 校 曆 表

2016 年 2 月

	周次	日	一	二	三	四	五	六
			1	2	3	4	5	6
	24	7	8	9	10	11	12	13
B	25	14	15	16	7	18	19	20
A	26	21	22	23	24	25	26	27
B	27	28	29					

全校活動及考試： 16/2 科學日 22/2 - 26/2 中文周	學校假期： 1/2 - 12/2 農曆新年假期
---	----------------------------

備註： 學校活動

 學校考試

 公眾假期

 學校假期

 學校自訂假期

Appendix H: Waste Management Record

Monthly Summary Waste Flow Table for 2016 (year)

Month	<u>Actual Quantities of Inert C&D Materials Generated Monthly</u>					<u>Actual Quantities of Non-inert C&D Wastes Generated Monthly</u>					
	Total Quantity Generated	Hard Rocks & Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Mixed Waste Disposal at Sorting Facility	Metals	Paper / cardboard packaging	Plastics	Chemical Waste	Others (general refuse)
	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)
Jan	--	--	--	--	--	--	--	--	--	--	--
Feb	521.76	0	0	0	521.76	0	0	0	0	0	38.34
Mar	--	--	--	--	--	--	--	--	--	--	--
Apr	--	--	--	--	--	--	--	--	--	--	--
May	--	--	--	--	--	--	--	--	--	--	--
June	--	--	--	--	--	--	--	--	--	--	--
Sub-total	521.76	0	0	0	521.76	0	0	0	0	0	38.34
July	--	--	--	--	--	--	--	--	--	--	--
Aug	--	--	--	--	--	--	--	--	--	--	--
Sept	--	--	--	--	--	--	--	--	--	--	--
Oct	--	--	--	--	--	--	--	--	--	--	--
Nov	--	--	--	--	--	--	--	--	--	--	--
Dec	--	--	--	--	--	--	--	--	--	--	--
Total	521.76	0	0	0	521.76	0	0	0	0	0	38.34
Grand Total	521.76	0	0	0	521.76	0	0	0	0	0	38.34

Appendix I: Environmental Mitigation Implementation Schedule

Implementation Schedule for Environmental Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to Implement the measure	Location of the measure	When to implement the measure	What requirements or standard for the measure to achieve	Implementation Status
Air Quality Impact (Construction Phase)								
4.8	A1	housekeeping to minimize dust generation, e.g. by properly handling and storing dusty materials	To minimize dust generation	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO	✓
4.8	A2	Adopt dust control measures, such as dust suppression using water spray on exposed soil (at least 8 times per day), in areas with dusty construction activities and during material handling	To minimize dust generation due to erosion	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO	*
4.8	A3	Store cement bags in shelter with 3 sides and the top covered by impervious materials if the stack exceeds 20 bags	To prevent leakage of cement	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO	N/A
4.8	A4	Maintain a reasonable height when dropping excavated materials to limit dust generation	To minimize dust generation during movement of excavated materials	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO	✓
4.8	A5	Limit vehicle speed within site to 10km/hr and confine vehicle movement in haul road	To minimize dust generation due to traffic movement	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO	✓

4.8	A6	Minimize exposed earth after completion of work in a certain area by hydroseeding, vegetating, soil compacting or covering with bitumen	To minimize dust generation due to erosion	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO	✓
4.8	A7	Provide wheel washing at site exit to clean the vehicle body and wheel	To prevent dust from being brought offsite	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO	✓
4.8	A8	Hard pave the area at site exit with concrete, bitumen or hardcores	To prevent dust from being brought offsite	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO	✓
4.8	A9	Cover materials on trucks before leaving the site to prevent debris from dropping during traffic movement or being blown away by wind	To prevent falling of debris during traffic movement and by wind	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO	✓
4.8	A11	Regular maintenance of plant equipment to prevent black smoke emission	To minimize black smoke emission	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO	✓
4.8	A12	Throttle down or switch off unused machines or machine in intermittent use	To minimize unnecessary emission	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO	✓
4.8	A13	Carry out regular site inspection to audit the implementation of mitigation measures	To check the implementation status and effectiveness of mitigation measures	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM, APCO	✓

4.8	A14	Carry out air quality monitoring throughout the construction period	To monitor construction dust level	HyD's Contractor	At representative ASRs	Prior to and throughout construction phase	EIAO-TM	✓
Noise Impact (Construction Phase)								
3.8	N1	Adopt good site practice, such as regular maintenance of plant equipment, throttle down unused machines	To minimize construction noise level	HyD's Contractor	Whole construction site	Throughout construction phase	NCO,EIAO-TM	✓
3.8	N2	Use Quality Powered Mechanical Equipment (QPME) which produces lower noise level (e.g. Excavator/Loader (EPD-01431), Asphalt Paver (EPD-01226), Road Roller (EPD-00244) and Mobile Crane (EPD-01477))	To minimize construction noise level	HyD's Contractor	Whole construction site	Throughout construction phase	NCO,EIAO-TM	N/A
3.8	N3	Erect movable noise barrier at significant noise source(e.g. Concrete Pump, Concrete Lorry Mixer, Excavator/Loader, Road Sweeper, Asphalt Paver, Road Roller, Lorry, Breaker and Poker)	To lower noise transmission	HyD's Contractor	Whole construction site	Throughout construction phase	NCO,EIAO-TM	N/A
3.8	N5	Regular maintenance of plant equipment to prevent noise emission due to impair	To prevent noise emission due to impair	HyD's Contractor	Whole construction site	Throughout construction phase	NCO,EIAO-TM	✓
3.8	N6	Position mobile noisy equipment in location and direction away from NSR	To minimize noise transmission to NSR	HyD's Contractor	Whole construction site	Throughout construction phase	NCO,EIAO-TM	N/A

3.8	N7	Use silencer or muffler on plant equipment and should be properly maintained	To minimize noise transmission	HyD's Contractor	Whole construction site	Throughout construction phase	NCO,EIAO-TM	✓
3.8	N8	Throttle down or switch off unused machines or machine in intermittent use between work	To minimize noise production	HyD's Contractor	Whole construction site	Throughout construction phase	NCO,EIAO-TM	✓
3.8	N9	Make good use of stockpiles or other structures for noise screening	To minimize noise transmission	HyD's Contractor	Whole construction site	Throughout construction phase	NCO,EIAO-TM	N/A
3.8	N10	Avoid carrying out noisy activities at the same time	To minimize noise production	HyD's Contractor	Whole construction site	Throughout construction phase	NCO,EIAO-TM	✓
3.8	N11	Reduce the percentage on-time for some noisy PMEs	To minimize noise production	HyD's Contractor	Whole construction site	Throughout construction phase	NCO,EIAO-TM	✓
3.8	N12	Carry out noise monitoring	To monitor construction noise level	HyD's Contractor	At representative NSRs	Prior to and throughout construction phase	EIAO-TM	✓
Water Impact (Construction Phase)								
5.8	W1	Recirculate settled water for ground boring and drilling during site investigation or rock/soil anchoring.	To minimize wastewater generation	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓
5.8	W2	Set up sedimentation tank for settling suspended solids in wastewater before discharge into storm drains. Sand/silt	To reduce the amount of suspended solid in wastewater	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓

		removal facilities such as sand traps, silt traps and sedimentation basin should be provided with adequate capacity.						
5.8	W3	Pave the construction road between the wheel washing bay and the public road with backfall	To prevent soil and site runoff from leaving the site	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓
5.8	W4	Follow ProPECC PN 1/94 "Construction Site Drainage" as far as practicable	To minimize surface runoff and chance of erosion	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓
5.8	W5	Provide perimeter channels at site boundaries.	To stop offsite storm runoff from entering the site	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓
5.8	W6	Construct catchpits and perimeter channels prior to commencement of site formation works and earthworks.	To stop runoff from flowing across the site	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓
5.8	W7	Maintain silt removal facilities, channels, manholes before and after rainstorm.	To prevent failure that may lead to flooding	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	N/A
5.8	W8	Remove sediment from silt and grit at regular interval.	To prevent blockage the may lead to flooding	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓
5.8	W9	Consider environmental requirements when diverting or realigning drainage.	To ensure adequate hydraulic capacity of all drains	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓

5.8	W10	Maintain a minimum distance of 100m between discharge point of construction site runoff and the existing saltwater intakes. No effluent will be discharged into typhoon shelter. (for loations of seawater intakes, please refer to Figure 5.1 in EIA Report)	To prevent mixing	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓
5.8	W11	Arrange soil excavation works outside rainy seasons (April to September) as far as possible. If this cannot beachieved, the following measures should be implemented:	To minimize surface runoff and chance of erosion	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	
		-Cover temporary exposed slope surfaces with impermeable materials, e.g. tarpaulin						✓
		- Protect temporary access roads by crushed stone or gravel						N/A
		- Proved intercepting channels along crest/edge of excavation						N/A
		- Carry out adequate surface protection measures well before the arrival of a rainstorm						N/A
5.8	W12	Compact soil after earthwork. Provide permanent work or surface protection with appropriate drainage channels immediately after forming the final surfaces.	To prevent soil erosion under rainstorm	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓
5.8	W13	Prevent rainwater from entering trenches. Excavation of trenches should be dug and backfilled in short sections during rainy	To prevent soil erosion under rainstorm	HyD's Contractor	Whole Construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	N/A

		seasons. Remove silt in rainwater collected from the trenches or foundation excavations prior to discharge to storm drains.						
5.8	W14	Cover open stockpiles of construction materials (e.g. aggregates, sand and fill materials) with impermeable materials such as tarpaulin during rainstorms.	To prevent soil erosion under rainstorm	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓
5.8	W15	Cover and temporary seal manholes (including newly constructed ones) to prevent silt, construction materials or debris and surface runoff from entering foul sewers.	To prevent overloading of foul sewers	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓
5.8	W16	Remove waste from the site regularly.	To prevent waste accumulation	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓
5.8	W17	Apply discharge license for effluent discharge. Treat the discharge to comply with the requirement in TM-DSS.	To ensure compliance with effluent discharge requirement	HyD's Contractor	Whole construction site	Throughout construction phase	WPCO,TM-DSS, EIAO-TM	✓
5.8	W18	Reuse treated effluent onsite, e.g. dust suppression, wheel washing and general cleaning.	To minimize wastewater generation	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO-TM	✓
5.8	W19	Monitor effluent water quality.	To ensure compliance with effluent discharge requirement	HyD's Contractor	Whole construction site	Throughout construction phase	WPCO, EIAO-TM	✓
5.8	W20	Register as chemical waste producer if chemical waste will be generated.	To control chemical waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal (Chemical Waste) (General)	✓

							Regulation, EIAO-TM	
5.8	W21	Perform maintenance of vehicles and equipment that have oil leakage and spillage potential on hard standings within a bunded area with sumps and oil interceptors.	To prevent oil leakage or spillage	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal (Chemical Waste) (General) Regulation, EIAO-TM	✓
5.8	W22	<p>Dispose chemical waste in accordance to Waste Disposal Ordinance. Follow the <i>Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes</i> ,examples as follows:</p> <ul style="list-style-type: none"> - Store chemical wastes with suitable containers to avoid leakage or spillage during storage, handling and transport - Label chemical waste containers according to the CoP to notify and warn the waste handlers - Store chemical wastes at designated safe location with adequate space 	To avoid accident in waste storage and handling	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO-TM	N/A

5.8	W23	Provide sufficient chemical toilets with regular maintenance by licensed chemical waste collector	To proper collection of taskforce waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO-TM	✓
Water Impact (Operational Phase)								
5.8	W24	Direct surface runoff for silt removal through silt trap before flowing to public storm water drainage system	To remove silt in surface runoff	HyD	Whole construction site	Throughout construction phase	WPCO, EIAO-TM	✓
5.8	W25	Regularly maintain the silt traps	To prevent blockage	HyD	Whole construction site	Throughout construction phase	WPCO, EIAO-TM	✓
Waste Management (Construction Phase)								
6.5	WM1	Allocate an area for waste sorting and storage of C&D materials into the following categories for reuse, recycle or disposal: - excavated material suitable for reuse - inert C&D material for disposal offsite - non-inert C&D materials for disposal at landfills - chemical waste - general refuse	To minimize waste generation	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO-TM	✓
6.5	WM2	Adopt good site practice as follows: - Provide training to workers on site cleanliness, waste management (waste	To proper handling of waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO-TM	✓

		reduction, reuse and recycle) and chemical handling procedures - Provide sufficient waste collection points and regular removal - Cover waste materials with tarpaulin or in enclosure during transportation - Maintain drainage systems, sumps and oil interceptors - Sort out chemical waste for proper handling and treatment						
6.5	WM3	Adopt waste reduction measures as follows: - Allocate area/containers for sorting, recovering and storing waste for reuse, recycle or disposal (e.g. demolition debris and excavated materials, general refuse like aluminium cans) - Allocate area for proper storage of construction materials to prevent contamination - Minimize wastage through careful planning and avoiding over-purchase of construction materials	To minimize waste generation	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO-TM	✓
6.5	WM4	Prepare and implement a site specific Waste Management Plan (WMP) as part of Environmental Management Plan (EMP) in accordance with ETWB TCW No. 19/25. Detail waste management method in the form of avoidance, reuse, recovery,	To provide guidance to waste management	HyD's Contractor	Whole construction site	Throughout construction phase	ETWB TCW No. 19/2005, EIAO-TM	✓

		recycling, storage, collection, treatment and disposal according to the recommendations on the EIA and EM&A Manual. It should be approved by the ER and						
6.5	WM5	Store waste materials properly as follows: - Avoid contamination by proper handling and storing waste - Prevent erosion by covering waste or applying water spray - Maintain and clean storage area regularly - Sort and stockpile different materials at designated location to enhance reuse	To properly store waste	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓
6.5	WM6	Apply for relevant waste disposal permits in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28).	To properly dispose waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28), EIAO-TM	✓

6.5	WM7	Hire licensed waste disposal contractors for waste collection and removal. Dispose waste at licensed waste disposal facilities	To properly dispose waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO-TM	✓
6.5	WM8	Implement trip-ticket system for recording the amount of waste generated, recycled and disposed, including chemical wastes	To monitor movement of waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal (Chemical Waste) (General) Regulation, Waste Disposal Ordinance, EIAO-TM	✓
6.5	WM9	Provide wheel washing bay at site exit to clean the vehicle body and wheel	To prevent dust from being brought offsite	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, EIAO-TM	✓
6.5	WM10	Reduce water content in wet spoil generated from piling work by mixing with dry materials. Only dispose treated spoil with less than 25% dry density to Public Fill Reception Facilities	To minimize load to reception facilities	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO-TM	✓
6.5	WM11	Dispose dry waste or waste with less than 70% water content by weight to landfill	To minimize load to reception facilities	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO-TM	✓
6.5	WM12	Follow the <i>Code of Practice on the Packaging, Labelling and Storage of Chemical Waste</i> as follows: - Store chemical wastes with suitable	To avoid accident in waste storage and handling	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO-TM	✓

		<p>containers. Seal and maintain the container to avoid leakage or spillage during storage, handling and transport</p> <ul style="list-style-type: none"> - Label chemical waste containers in both English and Chinese with instructions in accordance to Schedule 2 of the Waste Disposal (Chemical Waste) (General) Regulation - The container capacity should be smaller than 450 litres unless agreed by the EPD 						
6.5	WM13	<p>Comply with the requirement of the chemical storage area:</p> <ul style="list-style-type: none"> - Store only chemical waste and label clearly the chemical characters of the waste - Have at least 3 sides enclosed and protected from rainfall with cover - Provide sufficient ventilation - Have impermeable floor and has bunds to contain 110% of the capacity of the largest container or 20% of the total volume of the stored waste in the area, whichever is larger - Adequately spaced incompatible materials 	To ensure proper storage of chemical waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO-TM	✓
6.5	WM14	<p>Transfer used lubricants, waste oils and other chemicals to oil recycling companies, if possible, and empty oil drums for reuse or refill. No direct or indirect discharge is permitted</p>	To ensure proper disposal of chemical waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal (Chemical Waste) (General) Regulation, EIAO-TM	N/A

6.5	WM15	Hire licensed chemical waste disposal contractors for waste collection and removal. Dispose chemical waste at the approved CWTC at Tsing Yi or other licensed facility	To ensure proper disposal of chemical waste	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal (Chemical Waste) (General) Regulation, EIAO-TM	N/A
6.5	WM16	Hire reputable waste collector to separately collect and dispose general refuse from other wastes. Cover the waste to prevent being blown away	To ensure proper disposal of general refuse	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal (Chemical Waste) (General) Regulation, EIAO-TM	✓
6.5	WM17	Provide recycling bins for sorting out recyclables for collection by recycling companies. Non-recyclables should be removed to designated landfills every day by licensed collectors to prevent environmental and health nuisance.	To ensure proper recycling and disposal of general refuse	HyD's Contractor	Whole construction site	Throughout construction phase	Waste Disposal Ordinance, EIAO-TM	✓
6.5	WM18	Organize training and reminders to site staff on waste minimization through avoidance and reduction, reusing and recycling	To ensure proper management of general refuse	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM	✓
6.5	WM19	Carry out testing to verify sediment quantity and quality	To verify the categories of sediment to be disposed in accordance with ETWB TC(W) No. 34/2002	HyD's GI Contractor	Drillholes CB1 to 5 as shown in Sediment Sampling and Testing Plan	Throughout construction phase	ETWB TC(W) No. 34/2002	N/A

Landscape and Visual								
7.9.3	CM1	Shorten the construction period	To minimize duration of landscape and visual impact	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM	N/A
7.9.3	CM2	Limit work within site area without encroaching into the landscape resources offsite.	To minimize landscape and visual impact	HyD's Contractor	Whole construction site	Throughout construction phase	EIAO-TM	✓
7.9.3	CM3	Protect retained trees from damage during construction work according to the recommended in the detailed tree assessment report and the approval of Tree Removal Application under ETWB TCW No. 3/2006 Tree Preservation	To maintain and minimize damage to existing greenery	HyD's Contractor	Whole construction site	Throughout construction phase	ETWB TCW 3/2006, EIAOTM	#
7.9.3	CM4	Transplant unavoidably affected trees wherever possible in accordance with ETWB TCW No. 3/2006 Tree Preservation. Maintain transplanted trees to ensure healthy development during the establishment period	To minimize tree loss and ensure survival of transplanted trees	HyD's Contractor	Whole construction site	Throughout construction phase	ETWB TCW 3/2006, EIAOTM	N/A
7.9.2.6	OM1	Carry out compensatory planting in areas proposed in the Tree Survey and Landscape and Greening Study Report in accordance to ETWB TCW 3/2006, which will be subjected to refinement in detailed design stage. Compensatory planting of a ratio no less than 1:1 in terms of quality and quantity will be provided for any potential tree	To compensate for loss greenery	HyD's Contractor	Whole construction site/Offsite	Construction phase	ETWB TCW 3/2006, EIAOTM	N/A

		felling within the site. Offsite planting may be required due to land constraint. 410 nos. of compensatory trees have been proposed						
7.9.2.6	OM2	Provide vertical greening at piers of elevated roads and shrub planting near amenity planting strips to soften the hard landscape (e.g. climber and shrub for hiding central divider and enclosures). Early comments from the ACABAS and relevant departments, implementation and maintenance agents shall be sought at the earlier stage.	To soften hard landscape	HyD's Contractor	Whole construction site	Construction phase	ETWB TCW 36/2004	N/A
7.9.2.6	OM3	Match the design and materials of road structure with the surrounding environment and with the schematic theme paving of the future West Kowloon Reclamation Development and the Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS)	To match with existing landscape character	HyD's Contractor	Whole construction site	Construction phase	ETWB TCW 36/2004	N/A

Remarks:

- ✓ Compliance of mitigation measure
- X Non-compliance of mitigation measure
- Non-compliance but rectified by the contractor
- * Recommendation was made during site audit but improved/rectified by the contractor
- # Waiting for improving/rectifying by the contractor
- N/A Not Applicable

Appendix J: Cumulative Log for Environmental Exceedance, Complaints,
Notification of Summons and Successful Prosecutions

Cumulative Log for Environmental Exceedance, Complaints, Notification of Summons and Successful Prosecution

Reporting Month	Number of Exceedance	Number of Environmental Complaints	Number of Notification of Summons	Number of Successful Prosecutions
February 2016	0	0	0	0
Grand Total	0	0	0	0