

**Proposed Road Improvement Works in
West Kowloon Reclamation Development – Phase 1
Quarterly Environmental Monitoring & Audit Report
01/11/2018 – 31/01/2019**



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Executive Summary

This is the quarterly Environmental Monitoring and Audit (EM&A) Report for Proposed Road Improvement Works in West Kowloon Reclamation Development – Phase 1. The project was commenced on 6 February 2016. This report documents the finding of EM&A Works conducted from 1 November 2018 to 31 January 2019.

Environmental Monitoring and Audit Progress

Air Quality Monitoring

Noise Monitoring

Waste Management

Landscape and Visual Impact

Environmental Site Inspection

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

No exceedance of action level and limit level was recorded for TSP. One exceedance was recorded at NM2 and sixteen exceedances were recorded at NM4 for noise. No non-compliance environmental complaint, notification of summons and successful prosecution against the Project were received in this reporting period.

Variation in Construction Method

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

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-455/2013.

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

1.2 Construction Programme and Activities

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

November 2018

- Portion I – Pile Cap, Pier and Bridge Deck Construction Works
- Portion I – E&M Installation and Road Works
- Portion HA – Pile Cap, Pier and Bridge Deck Construction Works
- Portion HA – E&M Installation and Road Works

December 2018

- Portion I – Pile Cap, Pier and Bridge Deck Construction Works
- Portion I – E&M Installation and Road Works
- Portion HA – Pile Cap, Pier and Bridge Deck Construction Works
- Portion HA – Road Pavement, Street Furniture Installation

January 2019

- Portion I – Pile Cap, Pier and Bridge Deck Construction Works
- Portion I – E&M Installation and Road Works
- Portion I – Road Pavement, Street Furniture Installation
- Portion HA – Pile Cap, Pier and Bridge Deck Construction Works
- Portion HA – Road Pavement, Street Furniture Installation

1.3 Project Organization

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

2 EM&A Requirements for Monitoring Parameters

Air Quality Monitoring

According to the EM&A Manual Section 3.2 & 3.4, the construction air quality impact shall be evaluated by conducting 1-hr and 24-hr Total Suspended Particulates measurements. 1-hr TSP sampling shall be conducted at a frequency of at least 3 times in every 6 days. 24-hr TSP sampling shall be conducted at a frequency of at least once in every 6 days. The wind speed and wind direction shall be recorded in accordance with the EM&A Manual Section 3.4.3.

Noise Monitoring

According to the EM&A Manual Section 4.2 & 4.4, construction noise level shall be measured in terms of the A-weight equivalent continuous sound pressure level (Leq). Leq 30min shall be used as the monitoring parameter for the time period between 0700 and 1900 hours on normal weekdays. One set of 30-min measurement shall be carried out at each monitoring location every week.

Waste Management

According to the EM&A Manual Section 6.2, relevant licences/ permits shall be applied for waste disposal and handling. Waste disposal record/ recycling receipts shall be kept for tracking of waste movement.

Landscape and Visual

According to the EM&A Manual Section 7.2, inspection and audit for the implementation of mitigation measures shall be conducted once every two weeks by the Registered Landscape Architect. The adequacy of tree preservation, status of tree planting and removal shall also be monitored.

3 Air Quality Monitoring

3.1 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 3.1.1. The details of monitoring location plan are shown in **Appendix C**.

Table 3.1.1 Air Quality Monitoring Locations

ID 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	1-hr TSP
AM2	Garden Building	Ground Floor Face to Canton Road	1-hr TSP
AM3	The Cullinan I	Ground Floor Face to Nga Cheung Road	1-hr TSP
AM4	Lai Chack Middle School	Ground Floor Face to Canton Road	1-hr TSP
AM1	Marine Department New Yau Ma Tei Public Cargo Working Area Administrative Building	Rooftop Face to Hoi Po Road	24-hr TSP
AM2	Garden Building	Ground Floor Face to Canton Road	24-hr TSP
AM3-B	The Cullinan II (W Hong Kong)	Ground Floor Near to International Commerce Centre Roundabout on Nga Cheung Road and	24-hr TSP
AM4-A	Tsim Sha Tsui Fire Station	Ground Floor Face to Canton Road	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 AM3 and AM4 for the 24-hr TSP monitoring. Alternative locations AM3-B and AM4-A are proposed accordingly.

Alternative monitoring location AM4-A is adjacent to the construction site of Xiqu Centre. Power supply for AM4-A was temporarily provided by the Main Contractor of Xiqu Centre, Hip Hing Engineering Co. Ltd.. Due to the outside surface works and drainage works of Xiqu Centre, the power distribution box under Hip Hing Engineering Co. Ltd. was relocated. The power supply to AM4-A has been cut off from early August 2017. 24hr-TSP monitoring at AM4-A was ceased from August 2017. The Contractor and ET are keeping in search of another alternative location to install the HVS and the power supply for AM4-A. On the other hand, major road works (excavation and utilities diversion) are approximately to be completed in Portion Q (close to AM4-A). The Contractor will review the construction works with ET and ER to deliberate on the possibility of suspending 24-hr TSP monitoring at AM4/AM4-A.

3.2 Monitoring Results

1-hr TSP monitoring was conducted at four monitoring locations. The monitoring results are summarized in Table 3.2.1. 24-hr TSP monitoring was conducted at three monitoring locations. The monitoring results are summarized in Table 3.2.2. Detailed impact monitoring data of 1-hr TSP, 24-hr TSP and meteorological data are shown in **Appendix D**.

Table 3.2.1 Summary of average 1-hr TSP monitoring data

Month	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 ($\mu\text{g}/\text{m}^3$)
Nov 18	AM1	52	22 – 71	288	500
	AM2	120	87 – 175	299	500
	AM3	43	15 – 89	299	500
	AM4	58	16 – 104	303	500
Dec 18	AM1	51	20 – 66	288	500
	AM2	73	44 – 105	299	500
	AM3	52	32 – 79	299	500
	AM4	63	43 – 85	303	500
Jan 19	AM1	54	29 – 85	288	500
	AM2	54	29 – 73	299	500
	AM3	70	46 – 92	299	500
	AM4	71	51 – 95	303	500

Table 3.2.2 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 ($\mu\text{g}/\text{m}^3$)
Nov 18	AM1	89	77 – 111	157	260
	AM2	49	43 – 60	183	260
	AM3-B	69	40 – 106	177	260
	AM4-A	-	-	176	260
Dec 18	AM1	74	27 – 108	157	260
	AM2	43	23 – 63	183	260
	AM3-B	73	45 – 108	177	260
	AM4-A	-	-	176	260
Jan 19	AM1	74	38 – 140	157	260
	AM2	53	25 – 90	183	260
	AM3-B	66	53 – 83	177	260
	AM4-A	-	-	176	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 dust sources for AM1, AM2, AM3, AM4, AM3-B. TSP level of AM2, AM4 may be affected by construction activities from other construction sites near Canton Road.

3.3 Baseline Review

The comparisons of baseline result, measured result and action and limit levels of 1-hr TSP monitoring and 24-hr TSP monitoring are shown in Table 3.3.1 and Table 3.3.2 for reviewing the baseline data.

Table 3.3.1 Comparisons of Baseline, Impact and Action & Limit Levels of 1-hr TSP

Location	Baseline Level ($\mu\text{g}/\text{m}^3$)	Established Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)	Average Impact Monitoring Level (reporting Quarter) ($\mu\text{g}/\text{m}^3$)
AM1	58	288	500	52
AM2	76	299	500	82
AM3	76	299	500	55
AM4	82	303	500	64

Table 3.3.2 Comparisons of Baseline, Impact and Action & Limit Levels of 24-hr TSP

Location	Baseline Level ($\mu\text{g}/\text{m}^3$)	Established Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)	Average Impact Monitoring Level (reporting Quarter) ($\mu\text{g}/\text{m}^3$)
AM1	42	157	260	79
AM2	81	183	260	48
AM3-B	72	177	260	69
AM4-A	70	176	260	-

The impact monitoring levels of 1-hr TSP and 24-hr TSP obtained from November 2018 to January 2019 were much lower than the action levels established by baseline monitoring data for AM1, AM2, AM3/AM3-B and AM4/AM4-A. The impact monitoring results presented that no dust impacts obviously caused by the construction site and affected by the background environmental conditions. The baseline results are still applicable and valid. Need not to repeat the measurement of baseline monitoring, unless the exceedance of action level of TSP is recorded.

4 Noise Monitoring

4.1 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 4.1.1. The details of monitoring location plan are shown in **Appendix C**.

Table 4.1.1 Noise Monitoring Locations

Identification No.	Noise Monitoring Location	Description	Measurement Type
NM1	Sorrento - Tower 1	Podium Level 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

4.2 Monitoring Results

Noise impact monitoring was conducted at five monitoring locations. The monitoring results are summarized in Table 4.2.1. Detailed impact monitoring data of noise are shown in **Appendix E**.

Table 4.2.1 Summary of average noise monitoring data

Monitoring Locations	Monitoring Date	Baseline Level (dB(A))	L _{Aeq} * ¹ (dB(A))	Action Level (dB(A))	Limit Level (dB(A))	Exceedance
NM1	1/11/2018	75.1	63.5	When one documented complaint is received	75 dB(A)	No
	7/11/2018		63.8			No
	13/11/2018		65.7			No
	19/11/2018		64.5			No
	24/11/2018		65.3			No
	30/11/2018		66.8			No
	6/12/2018		64.2			No
	12/12/2018		63.7			No
	18/12/2018		65.2			No
	22/12/2018		64.8			No
	28/12/2018		64.6			No
	3/1/2019		62.5			No
	9/1/2019		67.9			No
	15/1/2019		66.1			No
	21/1/2019		63.7			No
	26/1/2019		65.0			No
NM2	1/11/2018	66.5	68.5	When one documented complaint is received	70 dB(A) * ²	No
	7/11/2018		67.9		70 dB(A) * ²	No
	13/11/2018		66.3		65 dB(A) * ³	Yes
	19/11/2018		69.6		70 dB(A) * ²	No
	24/11/2018		66.8		70 dB(A) * ²	No
	30/11/2018		68.0		70 dB(A) * ²	No
	6/12/2018		68.9		70 dB(A) * ²	No
	12/12/2018		69.8		70 dB(A) * ²	No
	18/12/2018		67.5		70 dB(A) * ²	No
	22/12/2018		68.8		70 dB(A) * ²	No
	28/12/2018		69.9		70 dB(A) * ²	No
	3/1/2019		65.1		70 dB(A) * ²	No
	9/1/2019		66.7		70 dB(A) * ²	No
	15/1/2019		66.5		70 dB(A) * ²	No
	21/1/2019		66.1		70 dB(A) * ²	No
	26/1/2019		65.9		70 dB(A) * ²	No
NM3	1/11/2018	74.5	73.0	When one	75 dB(A)	No

	7/11/2018		73.9	documented complaint is received		No
	13/11/2018		73.5			No
	19/11/2018		74.8			No
	24/11/2018		74.1			No
	30/11/2018		73.8			No
	6/12/2018		73.2			No
	12/12/2018		74.8			No
	18/12/2018		73.5			No
	22/12/2018		74.4			No
	28/12/2018		74.9			No
	3/1/2019		73.7			No
	9/1/2019		74.5			No
	15/1/2019		73.9			No
	21/1/2019		72.2			No
	26/1/2019		70.9			No
NM4	1/11/2018	73.3	71.0	When one documented complaint is received	70 dB(A) * ²	Yes
	7/11/2018		72.0		70 dB(A) * ²	Yes
	13/11/2018		72.2		70 dB(A) * ²	Yes
	19/11/2018		73.0		70 dB(A) * ²	Yes
	24/11/2018		74.3		70 dB(A) * ²	Yes
	30/11/2018		72.8		70 dB(A) * ²	Yes
	6/12/2018		72.9		70 dB(A) * ²	Yes
	12/12/2018		73.4		65 dB(A) * ³	Yes
	18/12/2018		74.0		65 dB(A) * ³	Yes
	22/12/2018		72.0		70 dB(A) * ²	Yes
	28/12/2018		73.4		70 dB(A) * ²	Yes
	3/1/2019		73.9		70 dB(A) * ²	Yes
	9/1/2019		74.4		70 dB(A) * ²	Yes
	15/1/2019		74.2		70 dB(A) * ²	Yes
	21/1/2019		74.0		65 dB(A) * ³	Yes
	26/1/2019		74.9		65 dB(A) * ³	Yes
NM5	1/11/2018	71.8	69.3	When one documented complaint is received	75 dB(A)	No
	7/11/2018		68.7			No
	13/11/2018		70.0			No
	19/11/2018		67.3			No
	24/11/2018		71.1			No
	30/11/2018		70.8			No

	6/12/2018		69.8			No
	12/12/2018		70.6			No
	18/12/2018		70.2			No
	22/12/2018		71.5			No
	28/12/2018		72.0			No
	3/1/2019		71.6			No
	9/1/2019		71.2			No
	15/1/2019		72.8			No
	21/1/2019		71.8			No
	26/1/2019		72.2			No

Remark:

*¹ Measured result would be rounded down before comparison with the limit level

*² 70dB(A) for schools during normal teaching periods

*³ 65dB(A) for schools examination periods

In accordance with the established action and limited levels for impact monitoring, one exceedance was recorded at NM2 and sixteen exceedances were recorded at NM4.

The noise source for causing exceedances at NM2 was from other construction site, Design and Construction of West Kowloon Government Offices (DCWKGO), which located at No.11 Hoi Ting Road. The construction site of DCWKGO is located between Portion J and the NM2 and close to the NM2. The NM2 was directly affected by the noise generated from the construction site of DCWKGO. The exceedances were not caused by the construction works of this project. And all the recorded noise levels during the reporting period were close to the baseline noise level. The noise source for causing exceedances at NM4 was from the traffic of Canton Road. The NM4 was directly affected by the noise generated from the traffic. The recorded monitoring results at the NM4 were near the baseline noise level. The exceedances were not caused by the construction works of this project.

During the monitoring period, traffic noise was identified as one of the noise source for NM1, NM2, NM3, NM4 and NM5. Noise levels of NM1 and NM3 may be influenced by the construction activities from other construction sites near Nga Cheung Road. Noise level of NM2 may be influenced by construction activities from other construction sites near Hoi Ting Road. Noise levels of NM4 and NM5 may be influenced by the construction activities from other construction sites near Canton Road.

5 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 quarter are summarised in Table 5.1. During this reporting quarter, 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.

Table 5.1 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)
Nov 2018	1389.54	36.60	0	0	0	0	0
Dec 2018	1396.37	25.37	0	0	0	0	0
Jan 2019	1359.4	29.60	0	0	0	0	0
Total	4145.31	91.57	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.

6 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.

Bi-weekly site inspections were conducted by representatives of the Engineer, Contractor and ET on 14 and 28 November 2018, 12 and 27 December 2018, 10 and 24 January 2019. The observations, reminders and recommendations made during the site inspections are summarized in Section 8.2.

The implementation status of the proposed mitigation measures for landscape and visual impacts is given in **Appendix F**.

7 Environmental Site Inspection

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 7, 14, 21 and 28 November 2018, 5, 12, 19 and 27 December 2018, 2, 9, 16, 23 and 30 January 2019. Observations were recorded and summarized in Section 8.2.

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

Updated status summary of the Environmental Mitigation Implementation Schedule is provided in **Appendix F**.

8 Environmental Non-Conformance

8.1 Summary of Environmental Exceedances

No exceedance of action level and limit level was recorded for TSP. One exceedance was recorded at NM2 and sixteen exceedances were recorded at NM4 for noise.

8.2 Summary of Environmental Non-Compliance

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

8.3 Summary of Environmental Complaint

No environment project-related complaint was received in the reporting period.

8.4 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 G**.

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. 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 quarter, the following recommendation was made:

Air Quality

- To frequently implement water spray.
- To properly maintain or replace the generator for preventing air pollution.
- To frequently implement water spraying for the exposed surface.
- To properly cover or removed the dusty materials for dust suppression.
- To properly collect the sawdust for preventing dust emission.

Water / Wastewater

- To frequently clean up the wastewater collection tank.
- To properly treat the wastewater before discharge.
- To regularly clean up the site drainage system.
- To properly cover the gully for preventing construction waste entering the gully.
- To frequently clean up the drainage channel.
- To clean up the drainage channel and properly protect the channel for preventing mud and sands entering the drainage system.
- To improve the treatment efficacy for preventing muddy water discharge.

Waste Management / Materials Storage / Others

- To remove the C&D waste and set up a tree protection zone.
- To provide drip tray to the chemical container for preventing chemical leakage.
- To remove the construction waste for keeping the site clean and tidy.

Visual and Landscape Impact

- To relocate the construction materials which were piled within the TPZ.
- To provide TPZ with robust fence at the dripline of all retained trees in order to avoid damage to the trees and their root zones. No works were allowed to undertake within the TPZ.
- To provide robust TPZ for the trees and to avoid damaging the root zone under the dripline.
- To avoid crown and root damage of the tree.
- To prepare incident report for the damaged trees and to conduct remedial pruning for the damaged trees. Tree at risk should be removed. Fallen trees should be erected into upright position.

9.3 Conclusions

This is the quarterly Environmental Monitoring and Audit (EM&A) Report presenting the EM&A works undertaken during 1 November 2018 to 31 January 2019 in accordance with the EM&A Manual.

No exceedance of action level and limit level was recorded for TSP. One exceedance was recorded at NM2 and sixteen exceedances were recorded at NM4 for noise.

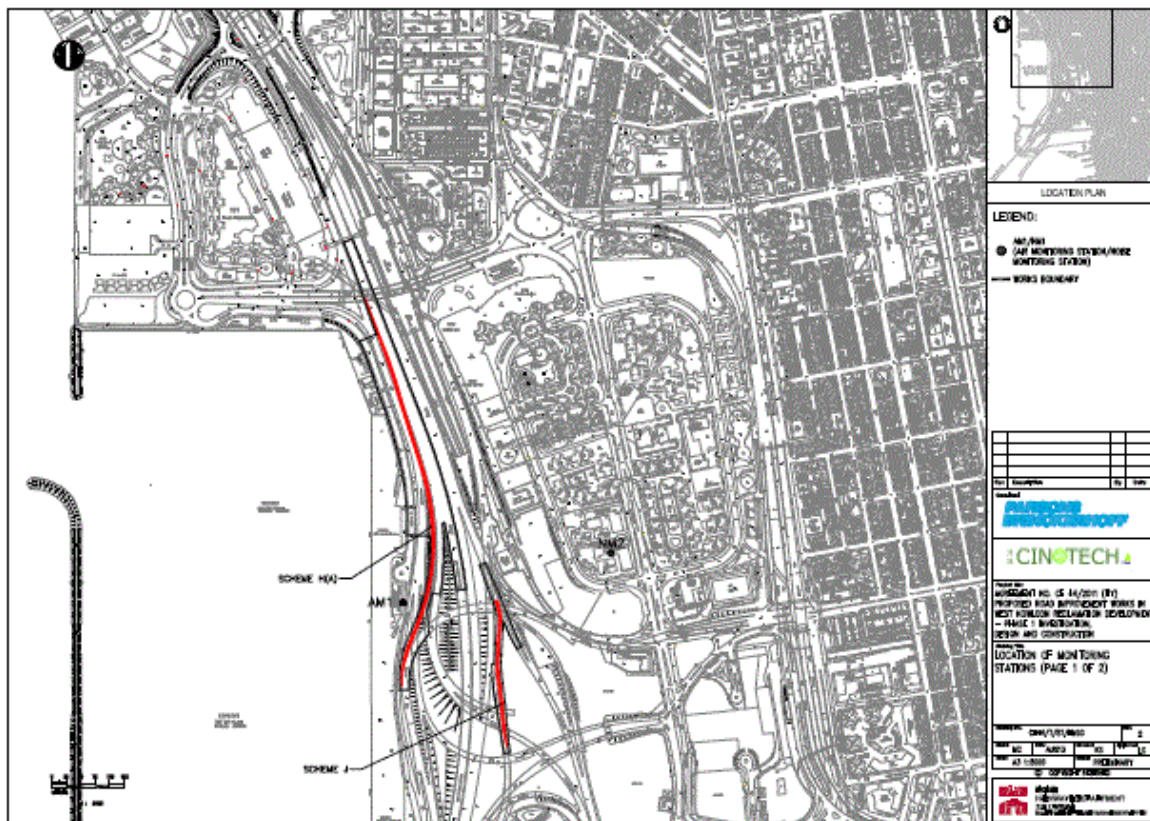
No Non-compliance event, environmental complaint, notification of summons and successful prosecution against the Project were received in this reporting quarter.

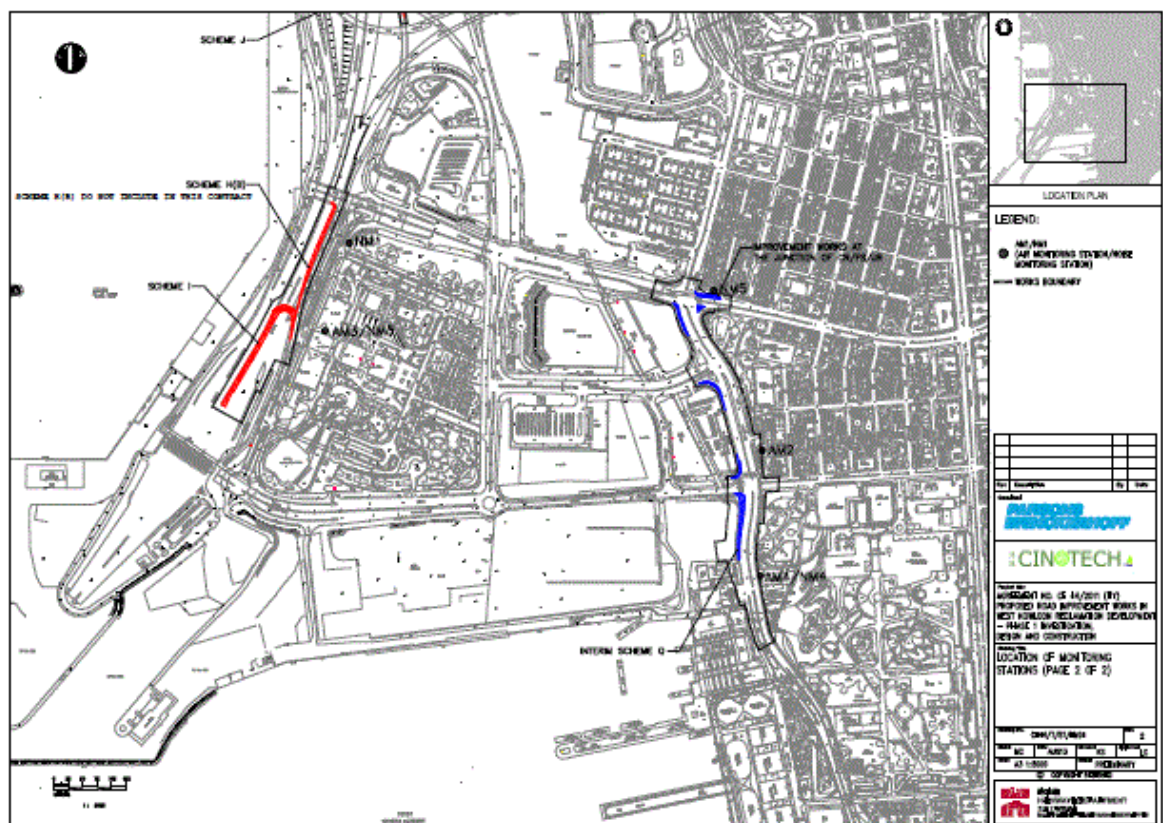
13 nos. of environmental site inspections and 6 nos. of landscape and visual inspections were carried out in this reporting quarter. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site audit.

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

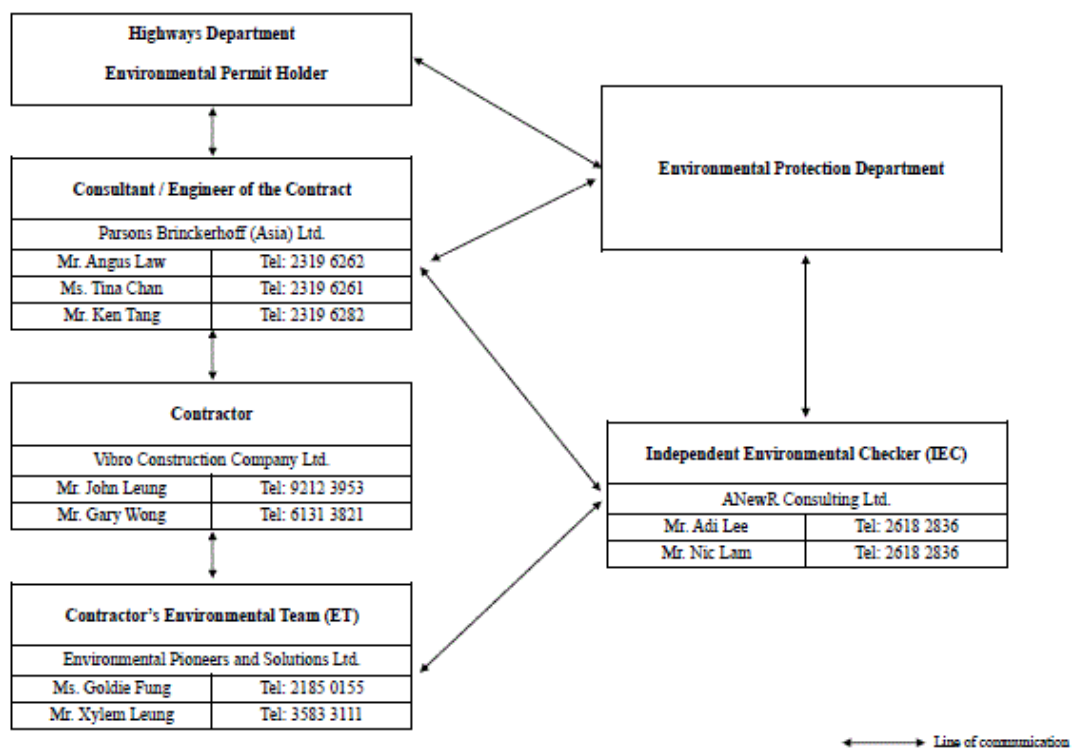
The ET will keep tracking of the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all the necessary mitigation measures.

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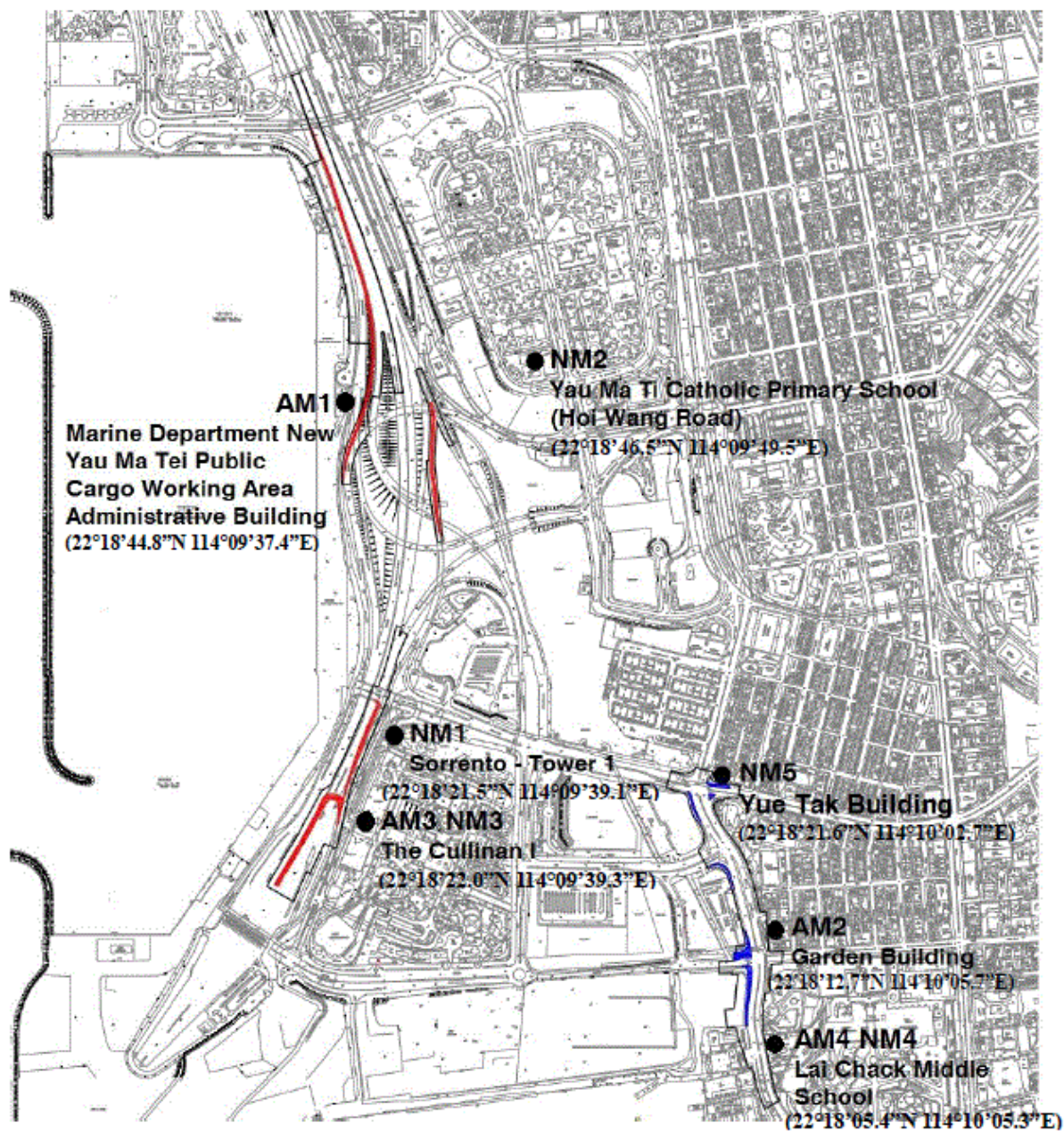






Appendix B: Project Organization Chart

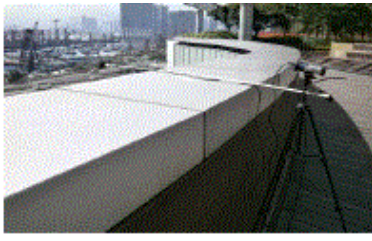






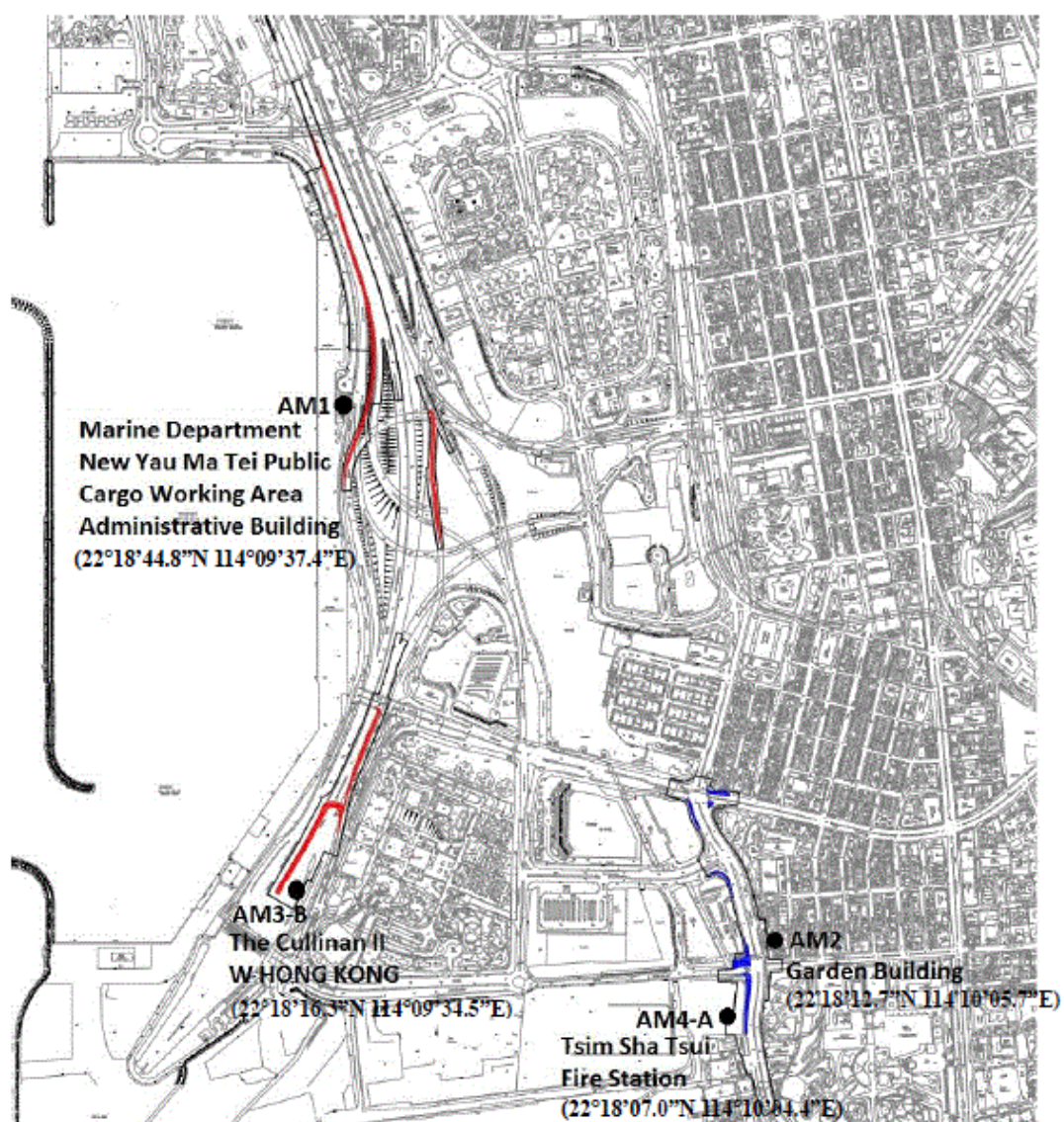
Appendix C: Monitoring Locations

Locations for 1-hr TSP and Noise monitoring



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

Sorrento - lower 1	
NM2 Yau Ma Ti Catholic Primary School (Hoi Wang Road)	
NM3 The Cullinan I	
NM4 Lai Chack Middle School	
NM5 Yue Tak Building	



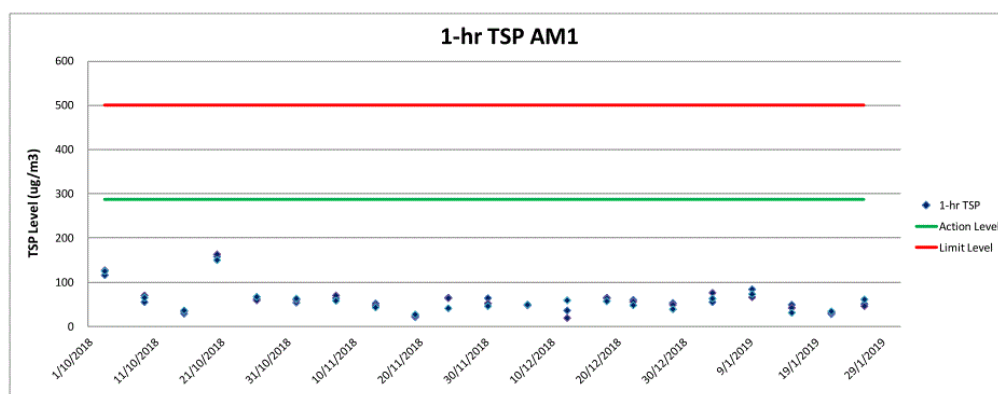
Monitoring Location	Photo Record
<p>AM1 Marine Department New Yau Ma Tei Public Cargo Working Area Administrative Building</p>	
<p>AM2 Garden Building</p>	
<p>AM3-B The Cullinan II (W Hong Kong)</p>	
<p>AM4-A Tsim Sha Tsui Fire Station</p>	

Appendix D: TSP Monitoring Data

1-hr TSP Monitoring Result for AM1

Date	Weather	Temperature (°C) *	Wind Direction *	Wind Speed (m/s) *	Sampling Time			Reading (µg/m ³)			
					1	2	3	1	2	3	Average
1/11/2018	Sunny	21.9 - 27.0	N	<5m/s	13:00	14:01	15:02	55	61	64	60
7/11/2018	Sunny	23.0 - 28.0	E	<5m/s	13:07	14:08	15:09	65	71	59	65
13/11/2018	Sunny	22.6 - 26.9	E	<5m/s	13:10	14:11	15:12	53	48	44	48
19/11/2018	Sunny	21.3 - 27.1	E	<5m/s	9:15	10:16	11:17	22	24	28	25
24/11/2018	Overcast	19.8 - 23.2	E	<5m/s	14:05	15:06	16:07	66	65	42	58
30/11/2018	Sunny	19.3 - 23.4	E	<5m/s	13:00	14:01	15:02	65	53	47	55
6/12/2018	Cloudy	21.1 - 25.2	SE	<5m/s	13:30	14:31	15:32	50	49	50	50
12/12/2018	Cloudy	13.5 - 15.9	N	<5m/s	13:30	14:31	15:32	37	20	60	39
18/12/2018	Sunny	14.9 - 20.9	E	<5m/s	13:30	14:31	15:32	66	65	58	63
22/12/2018	Cloudy	19.0 - 26.0	E	<5m/s	10:17	11:18	12:19	61	57	49	56
28/12/2018	Cloudy	15.4 - 20.4	NE	<5m/s	10:47	11:48	12:49	54	50	40	48
3/1/2019	Cloudy	21.1 - 25.2	SE	<5m/s	15:00	16:01	17:02	56	77	64	66
9/1/2019	Cloudy	13.5 - 15.9	N	<5m/s	13:20	14:21	15:22	85	67	74	75
15/1/2019	Sunny	16.9 - 18.8	N	<5m/s	9:50	10:51	11:52	50	43	32	42
21/1/2019	Sunny	17.5 - 20.3	E	<5m/s	9:45	10:46	11:47	29	32	35	32
26/1/2019	Cloudy	15.7 - 21.4	E	<5m/s	11:12	12:13	13:14	52	47	62	54

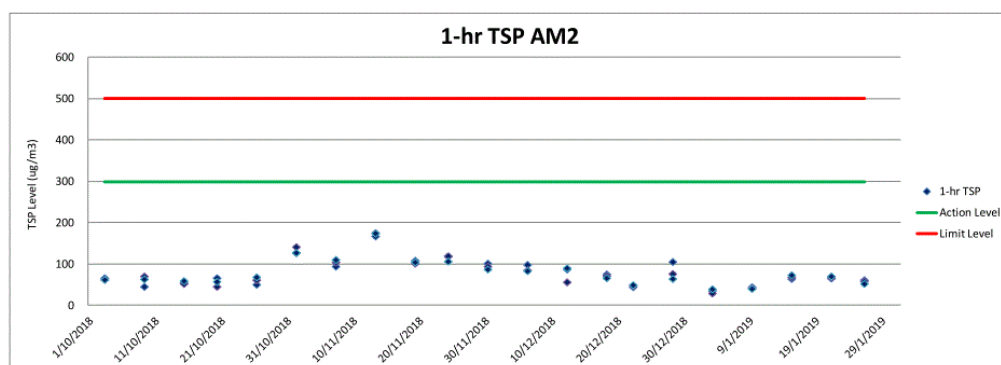
*Remark: Data of temperature, wind direction and wind speed was extracted from King's Park Meteorological Station of HKO



1-hr TSP Monitoring Result for AM2

Date	Weather	Temperature (°C) *	Wind Direction *	Wind Speed (m/s) *	Sampling Time			Reading (µg/m³)			
					1	2	3	1	2	3	Average
1/11/2018	Sunny	21.9 - 27.0	N	<5m/s	10:42	11:43	12:44	127	141	127	132
7/11/2018	Sunny	23.0 - 28.0	E	<5m/s	10:43	11:44	12:45	94	104	110	103
13/11/2018	Sunny	22.6 - 26.9	E	<5m/s	10:10	11:11	12:12	167	175	174	172
19/11/2018	Sunny	21.3 - 27.1	E	<5m/s	10:19	11:20	12:21	108	101	104	104
24/11/2018	Overcast	19.8 - 23.2	E	<5m/s	9:59	11:00	12:01	118	119	106	114
30/11/2018	Sunny	19.3 - 23.4	E	<5m/s	10:06	11:07	12:08	101	94	87	94
6/12/2018	Cloudy	21.1 - 25.2	SE	<5m/s	10:35	11:36	12:37	98	85	83	89
12/12/2018	Cloudy	13.5 - 15.9	N	<5m/s	9:45	10:46	11:47	87	56	90	78
18/12/2018	Sunny	14.9 - 20.9	E	<5m/s	9:21	10:22	11:23	75	71	66	71
22/12/2018	Cloudy	19.0 - 26.0	E	<5m/s	11:34	12:35	13:36	44	47	49	47
28/12/2018	Cloudy	15.4 - 20.4	NE	<5m/s	9:15	10:16	11:17	105	76	64	82
3/1/2019	Cloudy	21.1 - 25.2	SE	<5m/s	13:00	14:01	15:02	35	29	39	34
9/1/2019	Cloudy	13.5 - 15.9	N	<5m/s	13:00	14:01	15:02	44	41	40	42
15/1/2019	Sunny	16.9 - 18.8	N	<5m/s	9:55	10:56	11:57	64	68	73	68
21/1/2019	Sunny	17.5 - 20.3	E	<5m/s	9:50	10:51	11:52	65	67	70	67
26/1/2019	Cloudy	15.7 - 21.4	E	<5m/s	13:00	14:01	15:02	61	58	52	57

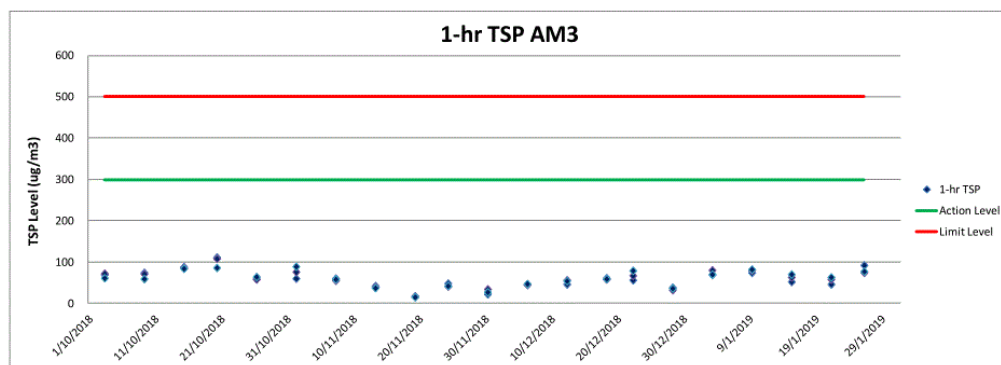
*Remark: Data of temperature, wind direction and wind speed was extracted from King's Park Meteorological Station of HKO



1-hr TSP Monitoring Result for AM3

Date	Weather	Temperature (°C) *	Wind Direction *	Wind Speed (m/s) *	Sampling Time			Reading (µg/m ³)			
					1	2	3	1	2	3	Average
1/11/2018	Sunny	21.9 - 27.0	N	<5m/s	13:05	14:06	15:07	60	76	89	75
7/11/2018	Sunny	23.0 - 28.0	E	<5m/s	13:12	14:13	15:14	60	55	58	58
13/11/2018	Sunny	22.6 - 26.9	E	<5m/s	13:05	14:06	15:07	42	39	37	39
19/11/2018	Sunny	21.3 - 27.1	E	<5m/s	9:49	10:50	11:51	17	16	15	16
24/11/2018	Overcast	19.8 - 23.2	E	<5m/s	13:38	14:39	15:40	48	41	42	44
30/11/2018	Sunny	19.3 - 23.4	E	<5m/s	13:20	14:21	15:22	22	34	27	28
6/12/2018	Cloudy	21.1 - 25.2	SE	<5m/s	13:00	14:01	15:02	45	45	47	46
12/12/2018	Cloudy	13.5 - 15.9	N	<5m/s	13:00	14:01	15:02	46	56	54	52
18/12/2018	Sunny	14.9 - 20.9	E	<5m/s	13:00	14:01	15:02	61	58	59	59
22/12/2018	Cloudy	19.0 - 26.0	E	<5m/s	10:30	11:31	12:32	56	67	79	67
28/12/2018	Cloudy	15.4 - 20.4	NE	<5m/s	11:17	12:18	13:19	38	32	36	35
3/1/2019	Cloudy	21.1 - 25.2	SE	<5m/s	15:30	16:31	17:32	69	80	70	73
9/1/2019	Cloudy	13.5 - 15.9	N	<5m/s	14:10	15:11	16:12	74	80	82	79
15/1/2019	Sunny	16.9 - 18.8	N	<5m/s	10:05	11:06	12:07	52	63	70	62
21/1/2019	Sunny	17.5 - 20.3	E	<5m/s	9:58	10:59	12:00	46	58	63	56
26/1/2019	Cloudy	15.7 - 21.4	E	<5m/s	11:45	12:46	13:47	92	74	77	81

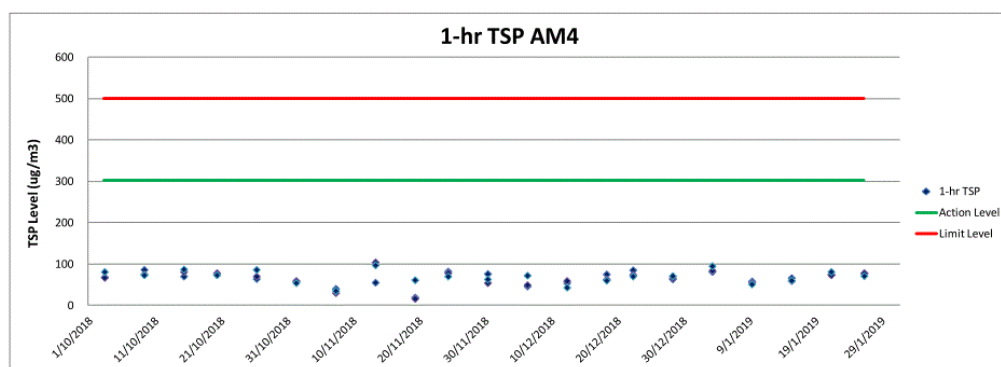
*Remark: Data of temperature, wind direction and wind speed was extracted from King's Park Meteorological Station of HKO



1-hr TSP Monitoring Result for AM4

Date	Weather	Temperature (°C) *	Wind Direction *	Wind Speed (m/s) *	Sampling Time			Reading (µg/m ³)			
					1	2	3	1	2	3	Average
1/11/2018	Sunny	21.9 - 27.0	N	<5m/s	9:55	10:56	11:57	58	59	54	57
7/11/2018	Sunny	23.0 - 28.0	E	<5m/s	9:59	11:00	12:01	40	30	35	35
13/11/2018	Sunny	22.6 - 26.9	E	<5m/s	10:01	11:02	12:03	55	104	97	85
19/11/2018	Sunny	21.3 - 27.1	E	<5m/s	10:05	11:06	12:07	19	16	61	32
24/11/2018	Overcast	19.8 - 23.2	E	<5m/s	10:35	11:36	12:37	82	78	70	77
30/11/2018	Sunny	19.3 - 23.4	E	<5m/s	10:20	11:21	12:22	76	54	63	64
6/12/2018	Cloudy	21.1 - 25.2	SE	<5m/s	10:42	11:43	12:44	46	49	72	56
12/12/2018	Cloudy	13.5 - 15.9	N	<5m/s	9:35	10:36	11:37	54	59	43	52
18/12/2018	Sunny	14.9 - 20.9	E	<5m/s	9:16	10:17	11:18	75	63	60	66
22/12/2018	Cloudy	19.0 - 26.0	E	<5m/s	11:28	12:29	13:30	85	74	70	76
28/12/2018	Cloudy	15.4 - 20.4	NE	<5m/s	9:04	10:05	11:06	63	66	71	67
3/1/2019	Cloudy	21.1 - 25.2	SE	<5m/s	10:00	11:01	12:02	81	84	95	87
9/1/2019	Cloudy	13.5 - 15.9	N	<5m/s	10:00	11:01	12:02	58	54	51	54
15/1/2019	Sunny	16.9 - 18.8	N	<5m/s	10:20	11:21	12:22	66	59	60	62
21/1/2019	Sunny	17.5 - 20.3	E	<5m/s	10:05	11:06	12:07	75	73	81	76
26/1/2019	Cloudy	15.7 - 21.4	E	<5m/s	10:00	11:01	12:02	77	78	71	75

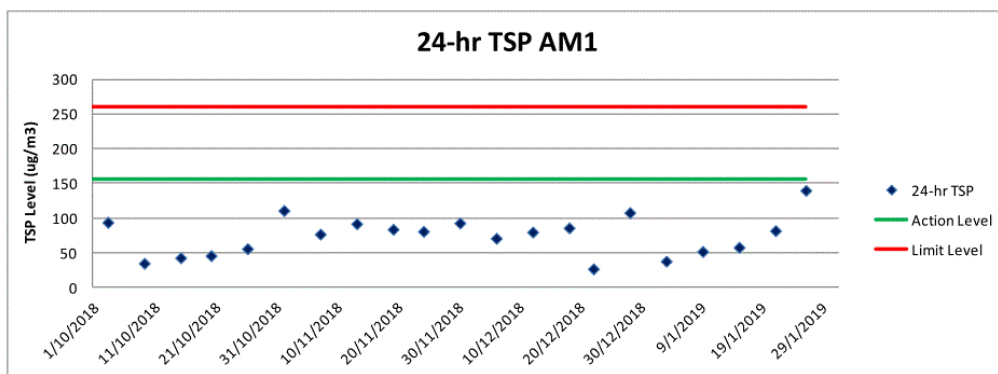
*Remark: Data of temperature, wind direction and wind speed was extracted from King's Park Meteorological Station of HKO



24-hr TSP Monitoring Result for AM1

Sampling ID & Paper No.	Temperature (°C) *	Wind Direction *	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			
AM11101 205456	21.9 - 27.0	N	<5m/s	1/11/2018	2.6728	2.8918	0.2190	50.0	1978.39	111
AM11107 206468	23.0 - 28.0	E	<5m/s	7/11/2018	2.6945	2.8474	0.1529	50.0	1978.39	77
AM11113 205494	22.6 - 26.9	E	<5m/s	13/11/2018	2.6527	2.8345	0.1818	50.0	1978.39	92
AM11119 205397	21.3 - 27.1	E	<5m/s	19/11/2018	2.6665	2.8318	0.1653	50.0	1978.39	84
AM11124 295451	19.8 - 23.2	E	<5m/s	24/11/2018	2.6632	2.8230	0.1598	50.0	1978.39	81
AM11130 205452	19.3 - 23.4	E	<5m/s	30/11/2018	2.6933	2.8767	0.1834	50.0	1978.39	93
AM11206 205481	21.1 - 25.2	SE	<5m/s	6/12/2018	2.6683	2.8121	0.1438	50.0	2011.64	71
AM11212 206560	13.5 - 15.9	N	<5m/s	12/12/2018	2.6886	2.8489	0.1603	50.0	2011.64	80
AM11218 206552	14.9 - 20.9	E	<5m/s	18/12/2018	2.6711	2.8442	0.1731	50.0	2011.64	86
AM11222 205489	19.0 - 26.0	E	<5m/s	22/12/2018	2.6622	2.7172	0.0550	50.0	2011.64	27
AM11228 206556	15.4 - 20.4	NE	<5m/s	28/12/2018	2.6812	2.8983	0.2171	50.0	2011.64	108
AM10103 206557	14.2 - 17.3	N	<5m/s	3/1/2019	2.6830	2.7585	0.0755	50.0	2011.64	38
AM10109 206559	16.5 - 19.0	NE	<5m/s	9/1/2019	2.6844	2.7895	0.1051	50.0	2011.64	52
AM10115 206547	16.4 - 21.8	E	<5m/s	15/1/2019	2.6873	2.8031	0.1158	50.0	2011.64	58
AM10121 206532	14.9 - 20.0	NE	<5m/s	21/1/2019	2.6827	2.8486	0.1659	50.0	2011.64	82
AM10126 206528	15.6 - 21.7	NE	<5m/s	26/1/2019	2.6865	2.9688	0.2823	50.0	2011.64	140

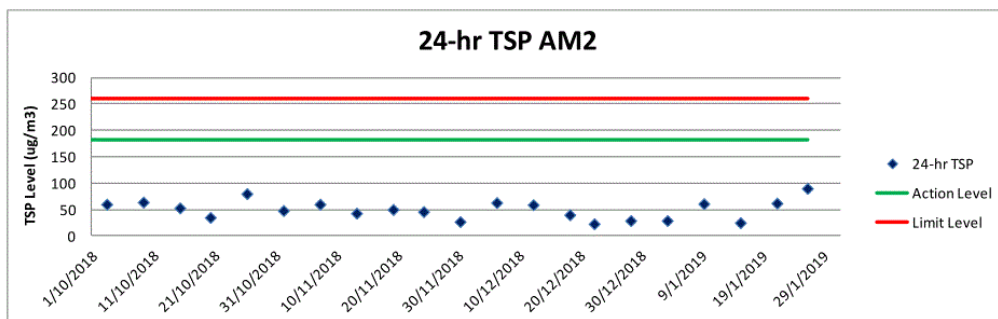
*Remark: Data of temperature, wind direction and wind speed was extracted from King's Park Meteorological Station of HKO



24-hr TSP Monitoring Result for AM2

Sampling ID & Paper No.	Temperature (°C) *	Wind Direction *	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			
AM21101 205495	21.9 - 27.0	N	<5m/s	1/11/2018	2.6467	2.7423	0.0956	50.0	2011.93	48
AM21107 205493	23.0 - 28.0	E	<5m/s	7/11/2018	2.6555	2.7755	0.1200	50.0	2011.93	60
AM21113 205492	22.6 - 26.9	E	<5m/s	13/11/2018	2.6563	2.7430	0.0867	50.0	2011.93	43
AM21119 205475	21.3 - 27.1	E	<5m/s	19/11/2018	2.6710	2.7717	0.1007	50.0	2011.93	50
AM21124 205476	19.8 - 23.2	E	<5m/s	24/11/2018	2.6831	2.7753	0.0922	50.0	2011.93	46
AM21130 206465	19.3 - 23.4	E	<5m/s	30/11/2018	2.6864	2.7414	0.0550	50.0	2011.93	27
AM21101 205495	21.1 - 25.2	SE	<5m/s	6/12/2018	2.6746	2.7973	0.1227	50.0	1952.96	63
AM21107 205493	13.5 - 15.9	N	<5m/s	12/12/2018	2.6980	2.8137	0.1157	50.0	1952.96	59
AM21113 205492	14.9 - 20.9	E	<5m/s	18/12/2018	2.6703	2.7487	0.0784	50.0	1952.96	40
AM21119 205475	19.0 - 26.0	E	<5m/s	22/12/2018	2.6814	2.7271	0.0457	50.0	1952.96	23
AM21124 205476	15.4 - 20.4	NE	<5m/s	28/12/2018	2.6900	2.7457	0.0557	50.0	1952.96	29
AM20103 206548	21.1 - 25.2	SE	<5m/s	3/1/2019	2.6698	2.7267	0.0569	50.0	1952.96	29
AM20109 206551	13.5 - 15.9	N	<5m/s	9/1/2019	2.6740	2.7925	0.1185	50.0	1952.96	61
AM20115 205491	14.9 - 20.9	E	<5m/s	15/1/2019	2.6595	2.7090	0.0495	50.0	1952.96	25
AM20121 206530	19.0 - 26.0	E	<5m/s	21/1/2019	2.6919	2.8124	0.1205	50.0	1952.96	62
AM20126 205488	15.4 - 20.4	NE	<5m/s	26/1/2019	2.6582	2.8338	0.1756	50.0	1952.96	90

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

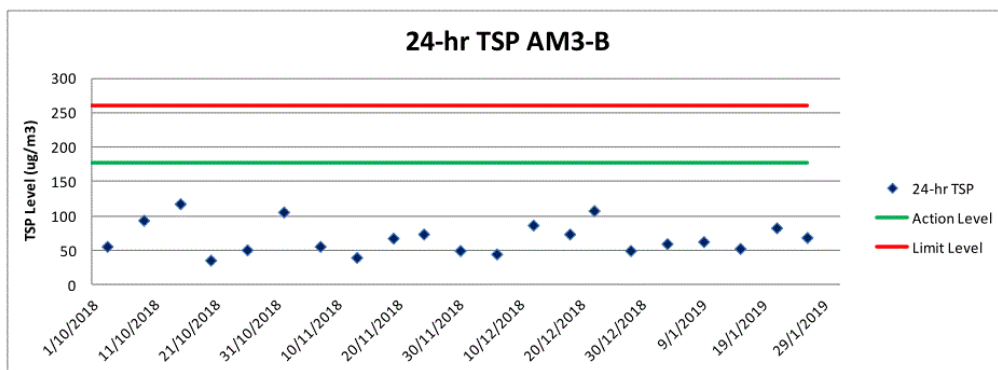


24-hr TSP Monitoring Result for AM3-B

Sampling ID & Paper No.	Temperature (°C) *	Wind Direction *	Wind Speed (m/s) *	Sampling Date	Wt. of paper (g)			Flow Rate (CFM)	Total Volume (m³)	TSP Concentration (µg/m³)*²
					Initial Wt.	Final Wt.	Wt. of dust			
AM3-B1101 205487	21.9 - 27.0	N	<5m/s	1/11/2018	2.6563	2.9024	0.2461	60.0	2322.54	106
AM3-B1107 205480	23.0 - 28.0	E	<5m/s	7/11/2018	2.6832	2.8144	0.1312	60.0	2322.54	56
AM3-B1113 205474	22.6 - 26.9	E	<5m/s	13/11/2018	2.6715	2.7641	0.0926	60.0	2322.54	40
AM3-B1119 205455	21.3 - 27.1	E	<5m/s	19/11/2018	2.6789	2.8378	0.1589	60.0	2322.54	68
AM3-B1124 205453	19.8 - 23.2	E	<5m/s	24/11/2018	2.6826	2.8543	0.1717	60.0	2322.54	74
AM3-B1130 206550	19.3 - 23.4	E	<5m/s	30/11/2018	2.6814	2.7968	0.1154	60.0	2322.54	50
AM3-B1206 205478	21.1 - 25.2	SE	<5m/s	6/12/2018	2.6952	2.7843	0.0891	50.0	1967.14	45
AM3-B1212 206549	13.5 - 15.9	N	<5m/s	12/12/2018	2.6905	2.8607	0.1702	50.0	1967.14	87
AM3-B1218 206564	14.9 - 20.9	E	<5m/s	18/12/2018	2.6789	2.8238	0.1449	50.0	1967.14	74
AM3-B1222 206563	19.0 - 26.0	E	<5m/s	22/12/2018	2.6673	2.8790	0.2117	50.0	1967.14	108
AM3-B1228 205490	15.4 - 20.4	NE	<5m/s	28/12/2018	2.6525	2.7502	0.0977	50.0	1967.14	50
AM3-B0103 206545	21.1 - 25.2	SE	<5m/s	3/1/2019	2.6754	2.7930	0.1176	50.0	1967.14	60
AM3-B0109 206562	13.5 - 15.9	N	<5m/s	9/1/2019	2.6792	2.8036	0.1244	50.0	1967.14	63
AM3-B0115 206533	14.9 - 20.9	E	<5m/s	15/1/2019	2.6790	2.7823	0.1033	50.0	1967.14	53
AM3-B0121 206527	19.0 - 26.0	E	<5m/s	21/1/2019	2.6803	2.8439	0.1636	50.0	1967.14	83
AM3-B0126 206531	15.4 - 20.4	NE	<5m/s	26/1/2019	2.6905	2.8269	0.1364	50.0	1967.14	69

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

*² Sampled filter paper was accidentally damaged, no result was recorded.

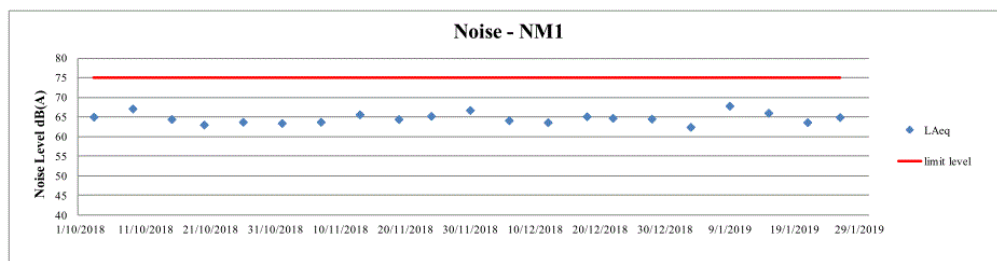


Appendix E: Noise Monitoring Data

Location	NM1					
Date	1/11/2018	7/11/2018	13/11/2018	19/11/2018	24/11/2018	30/11/2018
Weather Condition	Sunny	Sunny	Sunny	Sunny	Overcast	Sunny
Start Time	13:00	11:00	12:00	11:00	14:00	14:20
Measurement Period	30min	30min	30min	30min	30min	30min
Baseline Level	75.1					
L _{Aeq}	63.5	63.8	65.7	64.5	65.3	66.8
L ₁₀	65.5	65.8	68.2	65.9	67.7	69.2
L ₉₀	60.9	61.3	62.5	62.1	61.6	61.7

Location	NM1				
Date	6/12/2018	12/12/2018	18/12/2018	22/12/2018	28/12/2018
Weather Condition	Cloudy	Cloudy	Sunny	Cloudy	Cloudy
Start Time	11:00	11:00	11:00	11:00	11:00
Measurement Period	30min	30min	30min	30min	30min
Baseline Level	75.1				
L _{Aeq}	64.2	63.7	65.2	64.8	64.6
L ₁₀	65.2	64.9	66.1	66.4	65.9
L ₉₀	60.6	62.0	62.6	60.8	62.1

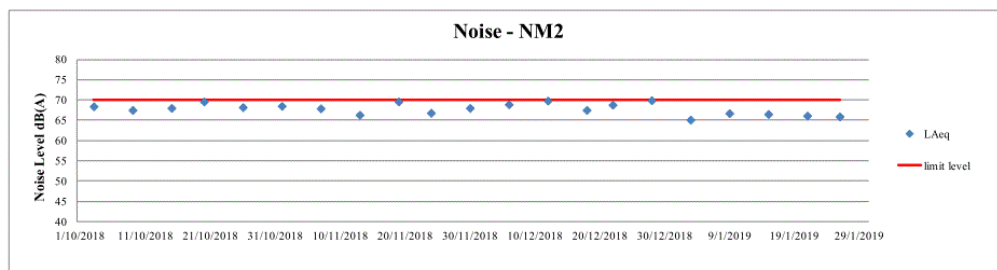
Location	NM1				
Date	3/1/2019	9/1/2019	15/1/2019	21/1/2019	26/1/2019
Weather Condition	Cloudy	Cloudy	Sunny	Sunny	Cloudy
Start Time	15:09	15:20	11:00	11:00	11:00
Measurement Period	30min	30min	30min	30min	30min
Baseline Level	75.1				
L _{Aeq}	62.5	67.9	66.1	63.7	65.0
L ₁₀	64.1	69.9	69.2	66.2	68.2
L ₉₀	60.1	60.0	59.6	60.2	59.7



Location	NM2						NM2 (Re-measurement)
Date	1/11/2018	7/11/2018	13/11/2018	19/11/2018	24/11/2018	30/11/2018	13/11/2018
Weather Condition	Sunny	Sunny	Sunny	Sunny	Overcast	Sunny	Sunny
Start Time	9:00	9:00	9:00	9:00	9:00	9:00	9:30
Measurement Period	30min	30min	30min	30min	30min	30min	30min
Baseline Level	66.5						66.5
L _{Aeq}	68.5	67.9	66.3	69.6	66.8	68.0	66.9
L ₁₀	70.0	72.0	70.2	72.6	70.2	69.9	70.5
L ₉₀	63.4	62.9	61.4	64.0	61.1	63.0	61.7

Location	NM2				
Date	6/12/2018	12/12/2018	18/12/2018	22/12/2018	28/12/2018
Weather Condition	Cloudy	Cloudy	Sunny	Cloudy	Cloudy
Start Time	9:00	9:00	9:00	9:00	9:00
Measurement Period	30min	30min	30min	30min	30min
Baseline Level	66.5				
L _{Aeq}	68.9	69.8	67.5	68.8	69.9
L ₁₀	69.9	72.8	69.6	70.4	72.8
L ₉₀	64.8	64.7	64.2	63.9	65.1

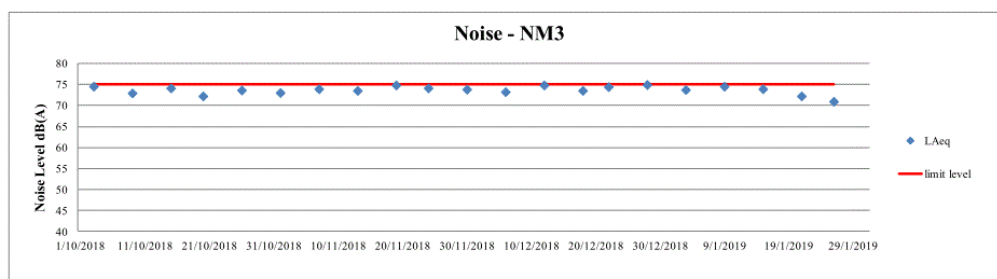
Location	NM2				
Date	3/1/2019	9/1/2019	15/1/2019	21/1/2019	26/1/2019
Weather Condition	Cloudy	Cloudy	Sunny	Sunny	Cloudy
Start Time	9:00	9:00	9:00	9:00	9:00
Measurement Period	30min	30min	30min	30min	30min
Baseline Level	66.5				
L _{Aeq}	65.1	66.7	66.5	66.1	65.9
L ₁₀	67.1	69.5	69.4	68.8	68.0
L ₉₀	58.8	60.1	59.9	56.0	57.9



Location	NM3					
Date	1/11/2018	7/11/2018	13/11/2018	19/11/2018	24/11/2018	30/11/2018
Weather Condition	Sunny	Sunny	Sunny	Sunny	Overcast	Sunny
Start Time	13:45	10:00	11:00	10:05	13:00	13:30
Measurement Period	30min	30min	30min	30min	30min	30min
Baseline Level	74.5					
L _{Aeq}	73.0	73.9	73.5	74.8	74.1	73.8
L ₁₀	75.8	76.5	76.2	77.7	76.2	76.7
L ₉₀	68.8	69.2	69.0	69.1	69.4	69.5

Location	NM3				
Date	6/12/2018	12/12/2018	18/12/2018	22/12/2018	28/12/2018
Weather Condition	Cloudy	Cloudy	Sunny	Cloudy	Cloudy
Start Time	10:00	10:00	10:00	10:00	10:00
Measurement Period	30min	30min	30min	30min	30min
Baseline Level	74.5				
L _{Aeq}	73.2	74.8	73.5	74.4	74.9
L ₁₀	75.5	77.8	76.5	76.9	77.2
L ₉₀	69.8	70.1	70.8	70.3	69.4

Location	NM3				
Date	3/1/2019	9/1/2019	15/1/2019	21/1/2019	26/1/2019
Weather Condition	Cloudy	Cloudy	Sunny	Sunny	Cloudy
Start Time	15:47	14:42	10:00	10:00	10:00
Measurement Period	30min	30min	30min	30min	30min
Baseline Level	74.5				
L _{Aeq}	73.7	74.5	73.9	72.2	70.9
L ₁₀	76.8	77.2	77.0	75.9	73.5
L ₉₀	68.1	69.0	69.3	68.1	67.0

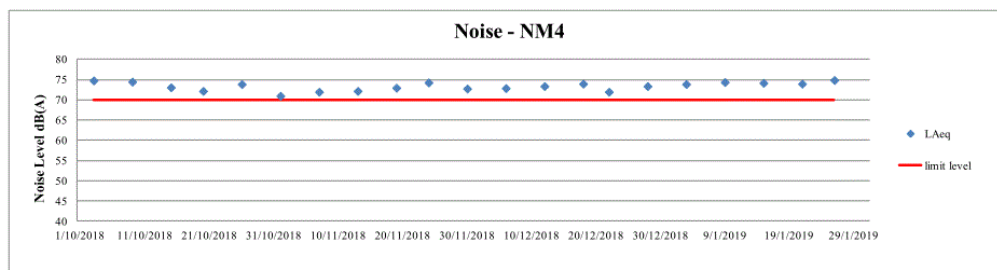


Location	NM4						NM4 (Re-measurement) *					
Date	1/11/2018	7/11/2018	13/11/2018	19/11/2018	24/11/2018	30/11/2018	1/11/2018	7/11/2018	13/11/2018	19/11/2018	24/11/2018	30/11/2018
Weather Condition	Sunny	Sunny	Sunny	Sunny	Overcast	Sunny	Sunny	Sunny	Sunny	Sunny	Overcast	Sunny
Start Time	13:00	13:00	13:00	13:00	10:10	11:00	13:30	13:30	13:30	13:30	10:40	11:30
Measurement Period	30min	30min	30min	30min	30min	30min	30min	30min	30min	30min	30min	30min
Baseline Level	73.3						73.3					
L _{Aeq}	71.0	72.0	72.2	73.0	74.3	72.8	72.1	72.8	72.7	74.4	75.0	72.1
L ₁₀	73.9	75.1	75.4	75.9	77.4	75.4	74.4	75.4	75.1	76.0	77.4	74.7
L ₉₀	64.5	63.4	65.6	65.9	68.3	67.1	64.8	64.4	65.3	66.2	68.2	65.6

Location	NM4					NM4 (Re-measurement) *				
Date	6/12/2018	12/12/2018	18/12/2018	22/12/2018	28/12/2018	6/12/2018	12/12/2018	18/12/2018	22/12/2018	28/12/2018
Weather Condition	Cloudy	Cloudy	Sunny	Cloudy	Cloudy	Cloudy	Cloudy	Sunny	Cloudy	Cloudy
Start Time	13:00	13:00	13:00	13:00	13:00	13:30	13:30	13:30	13:30	13:30
Measurement Period	30min	30min	30min	30min	30min	30min	30min	30min	30min	30min
Baseline Level	73.3					73.3				
L _{Aeq}	72.9	73.4	74.0	72.0	73.4	73.0	73.9	73.6	74.3	74.5
L ₁₀	74.5	75.3	76.9	74.9	75.4	74.4	75.6	75.5	76.0	76.5
L ₉₀	64.5	66.5	67.4	65.8	66.1	65.8	67.1	66.5	66.1	65.8

Location	NM4					NM4 (Re-measurement) *				
Date	3/1/2019	9/1/2019	15/1/2019	21/1/2019	26/1/2019	3/1/2019	9/1/2019	15/1/2019	21/1/2019	26/1/2019
Weather Condition	Cloudy	Cloudy	Sunny	Sunny	Cloudy	Cloudy	Cloudy	Sunny	Sunny	Cloudy
Start Time	13:00	13:00	13:00	13:00	13:00	13:30	13:30	13:30	13:30	13:30
Measurement Period	30min	30min	30min	30min	30min	30min	30min	30min	30min	30min
Baseline Level	73.3					73.3				
L _{Aeq}	73.9	74.4	74.2	74.0	74.9	74.5	74.2	73.9	74.0	73.5
L ₁₀	77.0	75.6	77.1	75.3	77.5	77.6	75.5	76.8	75.6	76.6
L ₉₀	65.8	66.8	66.6	67.2	67.8	67.1	68.4	66.0	67.9	68.5

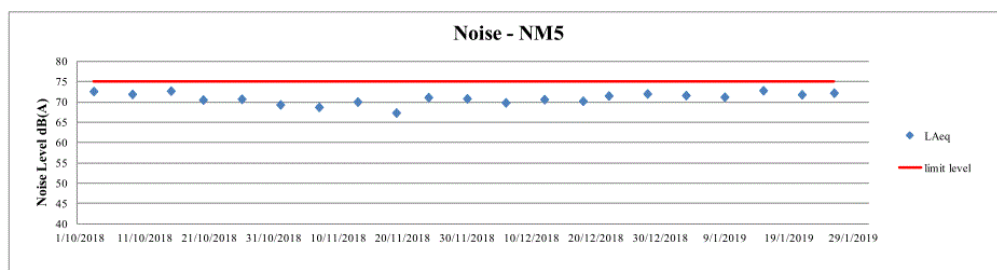
* Repeat noise measurement when exceedance is recorded. The result is used to confirm the findings and it would not be showed on the graph plot



Location	NM5					
Date	1/11/2018	7/11/2018	13/11/2018	19/11/2018	24/11/2018	30/11/2018
Weather Condition	Sunny	Sunny	Sunny	Sunny	Overcast	Sunny
Start Time	15:00	15:00	15:00	15:00	15:00	13:01
Measurement Period	30min	30min	30min	30min	30min	30min
Baseline Level	71.8					
L _{Aeq}	69.3	68.7	70.0	67.3	71.1	70.8
L ₁₀	71.1	72.5	73.1	69.3	74.1	73.8
L ₉₀	63.2	62.8	64.1	64.0	65.0	65.5

Location	NM5				
Date	6/12/2018	12/12/2018	18/12/2018	22/12/2018	28/12/2018
Weather Condition	Cloudy	Cloudy	Sunny	Cloudy	Cloudy
Start Time	15:00	15:00	15:00	15:00	15:00
Measurement Period	30min	30min	30min	30min	30min
Baseline Level	71.8				
L _{Aeq}	69.8	70.6	70.2	71.5	72.0
L ₁₀	72.6	73.4	73.2	74.4	74.9
L ₉₀	65.6	64.9	65.0	65.5	65.3

Location	NM5				
Date	3/1/2019	9/1/2019	15/1/2019	21/1/2019	26/1/2019
Weather Condition	Cloudy	Cloudy	Sunny	Sunny	Cloudy
Start Time	15:00	15:00	15:00	15:00	15:00
Measurement Period	30min	30min	30min	30min	30min
Baseline Level	71.8				
L _{Aeq}	71.6	71.2	72.8	71.8	72.2
L ₁₀	74.5	73.9	75.9	75.0	74.3
L ₉₀	65.8	65.5	66.3	65.9	66.8



Appendix F: 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	✓
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 hardcore	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	A10	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	A11	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	A12	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	A13	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	✓
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	✓
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, ELAO-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, ELAO-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, ELAO-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, ELAO-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, ELAO-TM	*
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, ELAO-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, ELAO-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, ELAO-TM	✓
5.8	W11	Arrange soil excavation works outside rainy seasons (April to September) as far as possible. If this cannot be achieved, the following measures should be implemented: -Cover temporary exposed slope surfaces with impermeable materials, e.g. tarpaulin - Protect temporary access roads by crushed stone or gravel - Proved intercepting channels along crest/edge of excavation - Carry out adequate surface protection measures well before the arrival of a rainstorm	To minimize surface runoff and chance of erosion	HyD's Contractor	Whole construction site	Throughout construction phase	ProPECC PN 1/94, ELAO-TM	✓ 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, ELAO-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, ELAO-TM	✓

		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	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: - 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	*

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	✓

		containers. Seal and maintain the container to avoid leakage or spillage during storage, handling and transport - Label chemical waste containers in both English and Chinese with instructions in accordance to Schedule 2 of the Waste Disposal (Chemical Waste) (General) Regulation - The container capacity should be smaller than 450 litres unless agreed by the EPD						
6.5	WM13	Comply with the requirement of the chemical storage area: - 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	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	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	✓

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

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

Reporting Month	Number of Exceedance	Number of Non-Compliance	Number of Environmental Complaints	Number of Notification of Summons	Number of Successful Prosecutions
February 2016	0	0	0	0	0
March 2016	0	0	0	0	0
April 2016	0	0	2	0	0
May 2016	7	0	0	0	0
June 2016	11	0	0	0	0
July 2016	6	0	0	0	0
August 2016	6	0	0	0	0
September 2016	5	0	0	0	0
October 2016	6	1	0	0	0
November 2016	5	0	0	0	0
December 2016	5	0	0	0	0
January 2017	5	0	0	0	0
February 2017	5	0	0	0	0
March 2017	6	0	0	0	0
April 2017	6	0	1	0	0
May 2017	5	0	0	0	0
June 2017	6	0	0	0	0
July 2017	5	0	0	0	0
August 2017	5	0	0	0	0
September 2017	6	0	0	0	0

October 2017	5	0	0	0	0
November 2017	6	0	0	0	0
December 2017	5	0	0	0	0
January 2018	5	0	0	0	0
February 2018	5	0	0	0	0
March 2018	6	0	0	0	0
April 2018	5	0	0	0	0
May 2018	7	0	1	0	0
June 2018	5	0	0	0	0
July 2018	5	0	0	0	0
August 2018	7	0	0	0	0
September 2018	5	0	0	0	0
October 2018	5	0	0	0	0
November 2018	7	0	0	0	0
December 2018	5	0	0	0	0
January 2019	5	0	0	0	0
Grand Total	188	1	4	0	0