



**Proposed Road Improvement Works in
West Kowloon Reclamation Development – Phase 1
Quarterly Environmental Monitoring & Audit Report
01/05/2017 – 31/07/2017**

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Summons and Successful Prosecutions

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 May 2017 to 31 July 2017.

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. 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.

May 2017

- Portion I – Underground Investigation Works
- Portion I – Utilities Diversion Works
- Portion HA – Underground Investigation Works
- Portion HA – Utilities Diversion Works
- Portion HA – Piling Works
- Portion J – Utilities Diversion Works
- Portion J – Construction of Retaining Walls
- Portion Q – Road Works (excavation and utilities diversion)

June 2017

- Portion I – Underground Investigation Works
- Portion I – Utilities Diversion Works
- Portion HA – Underground Investigation Works
- Portion HA – Utilities Diversion Works
- Portion HA – Piling Works
- Portion J – Utilities Diversion Works
- Portion J – Construction of Retaining Walls
- Portion Q – Road Works (excavation and utilities diversion)

July 2017

- Portion I – Underground Investigation Works
- Portion I – Utilities Diversion Works
- Portion I – Piling Works
- Portion HA – Underground Investigation Works
- Portion HA – Utilities Diversion Works
- Portion HA – Piling Works
- Portion HA – Construction of Pile Cap
- Portion J – Site Formation and Road Works
- Portion Q – Road Works (excavation and utilities diversion)
- Portion Q – Construction of Sign Gantry

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 |

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 ($\mu\text{g}/\text{m}^3$) |
|--------|----------------------|-----------------------------------------------|---------------------------------------------|-------------------------------------------|------------------------------------------|
| May 17 | AM1 | 81 | 17 – 173 | 288 | 500 |
| | AM2 | 76 | 58 – 91 | 299 | 500 |
| | AM3 | 75 | 25 – 167 | 299 | 500 |
| | AM4 | 79 | 61 – 97 | 303 | 500 |
| Jun 17 | AM1 | 63 | 32 – 90 | 288 | 500 |
| | AM2 | 60 | 50 – 77 | 299 | 500 |
| | AM3 | 52 | 34 – 98 | 299 | 500 |
| | AM4 | 68 | 50 – 84 | 303 | 500 |
| Jul 17 | AM1 | 38 | 11 – 124 | 288 | 500 |
| | AM2 | 77 | 61 – 91 | 299 | 500 |
| | AM3 | 66 | 32 – 88 | 299 | 500 |
| | AM4 | 67 | 49 – 103 | 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 ($\mu\text{g}/\text{m}^3$) |
|--------|---------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------|
| May 17 | AM1 | 47 | 32 – 59 | 157 | 260 |
| | AM2 | 39 | 29 – 49 | 183 | 260 |
| | AM3-B | 58 | 36 – 73 | 177 | 260 |
| | AM4-A | 42 | 30 – 48 | 176 | 260 |
| Jun 17 | AM1 | 39 | 25 – 63 | 157 | 260 |
| | AM2 | 36 | 20 – 72 | 183 | 260 |
| | AM3-B | 43 | 27 – 78 | 177 | 260 |
| | AM4-A | 60 | 28 – 79 | 176 | 260 |
| Jul 17 | AM1 | 26 | 18 – 32 | 157 | 260 |
| | AM2 | 23 | 17 – 33 | 183 | 260 |
| | AM3-B | 27 | 23 – 30 | 177 | 260 |
| | AM4-A | 34 | 22 – 66 | 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 and AM4-A. TSP level of AM2, AM4 and AM4-A 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 | 60 |
| AM2 | 76 | 299 | 500 | 71 |
| AM3 | 76 | 299 | 500 | 64 |
| AM4 | 82 | 303 | 500 | 71 |

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 | 37 |
| AM2 | 81 | 183 | 260 | 33 |
| AM3-B | 72 | 177 | 260 | 43 |
| AM4-A | 70 | 176 | 260 | 45 |

The impact monitoring levels of 1-hr TSP and 24-hr TSP obtained from May 2017 to July 2017 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 | 4/5/2017 | 75.1 | 64.3 | When one documented complaint is received | 75 dB(A) | No |
| | 10/5/2017 | | 62.6 | | | No |
| | 16/5/2017 | | 63.3 | | | No |
| | 22/5/2017 | | 63.1 | | | No |
| | 27/5/2017 | | 61.7 | | | No |
| | 2/6/2017 | | 61.7 | | | No |
| | 8/6/2017 | | 63.3 | | | No |
| | 14/6/2017 | | 64.5 | | | No |
| | 20/6/2017 | | 65.3 | | | No |
| | 26/6/2017 | | 62.8 | | | No |
| | 30/6/2017 | | 65.4 | | | No |
| | 6/7/2017 | | 63.6 | | | No |
| | 12/7/2017 | | 62.5 | | | No |
| | 18/7/2017 | | 65.1 | | | No |
| | 24/7/2017 | | 63.7 | | | No |
| | 29/7/2017 | | 64.4 | | | No |
| NM2 | 4/5/2017 | 66.5 | 66.9 | When one documented complaint is received | 70 dB(A) * ² | No |
| | 10/5/2017 | | 67.1 | | 70 dB(A) * ² | No |
| | 16/5/2017 | | 64.8 | | 70 dB(A) * ² | No |
| | 22/5/2017 | | 65.1 | | 70 dB(A) * ² | No |
| | 27/5/2017 | | 65.8 | | 70 dB(A) * ² | No |
| | 2/6/2017 | | 65.0 | | 65 dB(A) * ³ | No |
| | 8/6/2017 | | 64.9 | | 70 dB(A) * ² | No |
| | 14/6/2017 | | 65.2 | | 70 dB(A) * ² | No |
| | 20/6/2017 | | 66.9 | | 70 dB(A) * ² | No |
| | 26/6/2017 | | 64.9 | | 70 dB(A) * ² | No |
| | 30/6/2017 | | 66.1 | | 70 dB(A) * ² | No |
| | 6/7/2017 | | 68.1 | | 70 dB(A) * ² | No |
| | 12/7/2017 | | 67.5 | | 70 dB(A) * ² | No |
| | 18/7/2017 | | 67.8 | | 70 dB(A) * ² | No |
| | 24/7/2017 | | 67.2 | | 70 dB(A) * ² | No |
| | 29/7/2017 | | 67.9 | | 70 dB(A) * ² | No |

| | | | | | | |
|-----|-----------|------|------|-------------------------------------------|-------------------------|-----|
| NM3 | 4/5/2017 | 74.5 | 74.3 | When one documented complaint is received | 75 dB(A) | No |
| | 10/5/2017 | | 72.7 | | | No |
| | 16/5/2017 | | 72.4 | | | No |
| | 22/5/2017 | | 73.4 | | | No |
| | 27/5/2017 | | 73.7 | | | No |
| | 2/6/2017 | | 73.8 | | | No |
| | 8/6/2017 | | 72.4 | | | No |
| | 14/6/2017 | | 74.1 | | | No |
| | 20/6/2017 | | 74.3 | | | No |
| | 26/6/2017 | | 74.7 | | | No |
| | 30/6/2017 | | 73.1 | | | No |
| | 6/7/2017 | | 74.3 | | | No |
| | 12/7/2017 | | 74.3 | | | No |
| | 18/7/2017 | | 73.6 | | | No |
| | 24/7/2017 | | 74.0 | | | No |
| | 29/7/2017 | | 74.3 | | | No |
| NM4 | 4/5/2017 | 73.3 | 74.5 | When one documented complaint is received | 70 dB(A) * ² | Yes |
| | 10/5/2017 | | 73.8 | | 70 dB(A) * ² | Yes |
| | 16/5/2017 | | 74.1 | | 70 dB(A) * ² | Yes |
| | 22/5/2017 | | 74.8 | | 70 dB(A) * ² | Yes |
| | 27/5/2017 | | 73.6 | | 70 dB(A) * ² | Yes |
| | 2/6/2017 | | 75.0 | | 70 dB(A) * ² | Yes |
| | 8/6/2017 | | 74.9 | | 65 dB(A) * ³ | Yes |
| | 14/6/2017 | | 74.5 | | 65 dB(A) * ³ | Yes |
| | 20/6/2017 | | 74.7 | | 70 dB(A) * ² | Yes |
| | 26/6/2017 | | 73.8 | | 70 dB(A) * ² | Yes |
| | 30/6/2017 | | 73.5 | | 70 dB(A) * ² | Yes |
| | 6/7/2017 | | 74.5 | | 70 dB(A) * ² | Yes |
| | 12/7/2017 | | 73.1 | | 70 dB(A) * ² | Yes |
| | 18/7/2017 | | 74.8 | | 70 dB(A) * ² | Yes |
| | 24/7/2017 | | 74.2 | | 70 dB(A) * ² | Yes |
| | 29/7/2017 | | 73.6 | | 70 dB(A) * ² | Yes |
| NM5 | 4/5/2017 | 71.8 | 63.6 | When one documented complaint is received | 75 dB(A) | No |
| | 10/5/2017 | | 62.4 | | | No |
| | 16/5/2017 | | 62.5 | | | No |
| | 22/5/2017 | | 67.3 | | | No |
| | 27/5/2017 | | 65.9 | | | No |

| | | | | | | |
|--|-----------|--|------|--|--|----|
| | 2/6/2017 | | 65.8 | | | No |
| | 8/6/2017 | | 67.8 | | | No |
| | 14/6/2017 | | 63.5 | | | No |
| | 20/6/2017 | | 66.7 | | | No |
| | 26/6/2017 | | 68.5 | | | No |
| | 30/6/2017 | | 67.1 | | | No |
| | 6/7/2017 | | 66.0 | | | No |
| | 12/7/2017 | | 65.6 | | | No |
| | 18/7/2017 | | 64.2 | | | No |
| | 24/7/2017 | | 67.1 | | | No |
| | 29/7/2017 | | 66.9 | | | 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, sixteen exceedances were recorded at NM4.

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 this project construction works.

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 month are summarised in Table 5.1. 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.

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) |
| May 2017 | 1083.4 | 10.04 | 0 | 0 | 0 | 0 | 0 |
| June 2017 | 840.63 | 12.53 | 0 | 0 | 0 | 0 | 0 |
| July 2017 | 1115.46 | 19.58 | 0 | 0 | 0 | 0 | 0 |
| Total | 3039.49 | 42.15 | 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 5 and 19 May 2017, 2, 16 and 30 June 2017, 14 and 28 July 2017. 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 2, 8, 15, 24 May 2017, 1, 7, 13, 21 and 26 June 2017, 3, 11, 19, 27 and 31 July 2017. Observations were recorded and summarized in Section 8.2.

During site inspection in the reporting month, 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. 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 month, the following recommendation was made:

Air Quality

- To frequently implement water spray to exposed surface for dust suppression.
- To provide wheel washing facilities at all the site entrances.
- To backfill the excavated areas as soon as possible for shortening the storage period of dusty materials/ fill materials.
- To cover the debris and maintain proper storage.
- To cover the exposed debris and dusty materials.
- To remove or properly cover the debris.
- To properly cover the construction debris and use the sand materials to backfill as soon as possible.

Water / Wastewater

- To frequently collect the stagnant water/ wastewater for mosquito control and prevention
- To frequently collect the silt, fallen leaves for preventing blockage and maintain the drainage system
- To enhance the efficacy by using the sandbags for protecting the manholes
- To properly maintain the site drainage system for collecting/ directing wastewater and preventing surface runoff
- To regularly maintain the wastewater treatment plant for ensuring the treatment outcome.
- To place sandbags around the site boundary for preventing surface runoff.

- To completely place sandbags for isolating the muddy areas/ works areas.
- To properly maintain the temporary drainage system during the wet season for preventing surface runoff causing by heavy rain.
- To place sand bags around the manholes for preventing surface runoff.
- To completely block the openings of all drainage pipes.
- To clean up the U-channel.
- To clean up the water accumulated in the drip tray after rain.
- To review the wastewater treatment capacity and efficiency for wastewater water treatment tank to ensure the treatment outcome reaching the discharge requirements during heavy rainfall.
- To remove the algae and increase the frequency of cleaning activities to the sedimentation tank.
- To increase the capacity of the sedimentation tank for enhancing the treatment effect.
- To properly operate the pumps to collect the wastewater and set up channels to direct the wastewater.
- To control the flow rate of collecting wastewater for preventing overflow.
- To set up a sandbag barrier to isolate the works area for preventing muddy runoff and surface runoff.
- To repair the slope and maintain proper protection and coverage.

Visual and Landscape

- To remove the ties.
- To conduct crown pruning for the existing tree which next to T24.
- To remove the excess soil around B37 and B39.
- To relocate the construction materials which were piled within the TPZ.
- To properly cover and protect the exposed slope.

Chemicals / Chemical waste and C&D waste

- To provide drip tray for chemicals and oil buckets storage
- To sort the waste and provide suitable containers for storage.
- To store the chemicals/ chemical waste in designated and proper areas
- To properly collect the waste and provide rubbish bins for waste storage.
- To regularly arrange the collector to collect the recyclable materials.
- To sort the chemical waste and maintain appropriate storage
- To properly collect and store the recyclable materials.
- To properly collect and store the general refuse
- To sort and store/dispose the construction debris and construction waste.

- To sort the construction materials and maintain proper storage.
- To properly cover the dusty materials especially closed to the drainage area.
- To collect the oil and clean up the ground.
- To sorted and store the construction materials in designated area.

Equipment, Document, Housekeeping & Others

- To display the EP at the site entrance.
- To properly check all the newly introduced equipment for preventing dark smoke and oil leakage.

9.3 Conclusions

This is the quarterly Environmental Monitoring and Audit (EM&A) Report presenting the EM&A works undertaken during 1 May 2017 to 31 July 2017 in accordance with the EM&A Manual.

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




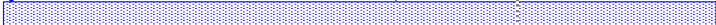
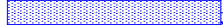



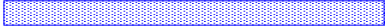
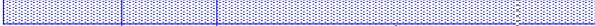















No Non-compliance event, environmental complaint, notification of summons and successful prosecution against the Project were received in this reporting period.

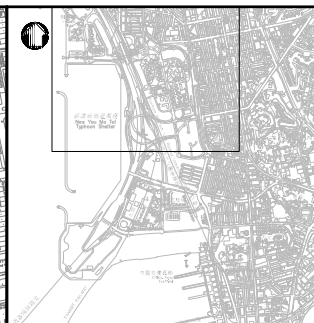
14 nos. of environmental site inspections and 7 nos. of landscape and visual inspections were carried out in this reporting month. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site audit.

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 | | | | 2018 | | | | |
|----|-------------------------------------------------------------------------------|---------------|--------------------|---------------------|-------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| | | | | | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | 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 | 1312 d | Mon 23/3/15 | Wed 24/10/18 |  | | | | | | | | | | | | | | | | 1312 d |
| 2 | West Kowloon Highway South Bound near Western Harbour Tunnel at Portio | 1306 d | Mon 23/3/15 | Thu 18/10/18 |  | | | | | | | | | | | | | | | | 1306 d |
| 3 | Site Clearance, tree felling | 320 d | Mon 23/3/15 | Fri 5/2/16 |  | | | | | | | | | | | | | | | | |
| 4 | Underground investigation, utilities diversion and piling construction | 600 d | Sat 6/2/16 | Wed 27/9/17 |  | | | | | | | | | | | | | | | | |
| 5 | Pile cap, Pier and Bridge Deck construction | 180 d | Thu 28/9/17 | Mon 26/3/18 |  | | | | | | | | | | | | | | | | |
| 6 | E&M installation and roadworks | 76 d | Tue 27/3/18 | Sun 10/6/18 |  | | | | | | | | | | | | | | | | |
| 7 | Street furniture installation | 130 d | Mon 11/6/18 | Thu 18/10/18 |  | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | |
| 9 | Canton road at Portion Q | 1200 d | Mon 23/3/15 | Wed 4/7/18 |  | | | | | | | | | | | | | | | | 1200 d |
| 10 | Site Clearance, tree felling | 320 d | Mon 23/3/15 | Fri 5/2/16 |  | | | | | | | | | | | | | | | | |
| 11 | Road works at Canton road footpath and utilities diversion | 500 d | Sat 6/2/16 | Mon 19/6/17 |  | | | | | | | | | | | | | | | | |
| 12 | Construction of sign gantry | 150 d | Tue 20/6/17 | Thu 16/11/17 |  | | | | | | | | | | | | | | | | |
| 13 | Road works at Ferry Street and Jordan road | 500 d | Mon 16/5/16 | Wed 27/9/17 |  | | | | | | | | | | | | | | | | |
| 14 | Road works at Wui Cheung road | 450 d | Thu 4/8/16 | Fri 27/10/17 |  | | | | | | | | | | | | | | | | |
| 15 | Road Works at Austin Road junction | 350 d | Thu 20/7/17 | Wed 4/7/18 |  | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | | |
| 17 | Lin Cheung Road North Bound at Portion HA | 1312 d | Mon 23/3/15 | Wed 24/10/18 |  | | | | | | | | | | | | | | | | 1312 d |
| 18 | Site Clearance, tree felling | 320 d | Mon 23/3/15 | Fri 5/2/16 |  | | | | | | | | | | | | | | | | |
| 19 | Underground investigation, utilities diversion and piling construction | 650 d | Sat 6/2/16 | Thu 16/11/17 |  | | | | | | | | | | | | | | | | |
| 20 | Pile cap, Pier and Bridge Deck construction | 180 d | Fri 17/11/17 | Tue 15/5/18 |  | | | | | | | | | | | | | | | | |
| 21 | E&M installation and roadworks | 42 d | Wed 16/5/18 | Tue 26/6/18 |  | | | | | | | | | | | | | | | | |
| 22 | Street furniture installation | 120 d | Wed 27/6/18 | Wed 24/10/18 |  | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | |
| 25 | Lin Cheung Road South Bound at Portion J | 1090 d | Mon 23/3/15 | Fri 16/3/18 |  | | | | | | | | | | | | | | | | 1090 d |
| 26 | Site Clearance, tree felling | 320 d | Mon 23/3/15 | Fri 5/2/16 |  | | | | | | | | | | | | | | | | |
| 27 | Construction of retaining walls and utilities diversion | 500 d | Sat 6/2/16 | Mon 19/6/17 |  | | | | | | | | | | | | | | | | |
| 28 | Site formation and roadworks | 140 d | Tue 20/6/17 | Mon 6/11/17 |  | | | | | | | | | | | | | | | | |
| 29 | Street furniture installation | 130 d | Tue 7/11/17 | Fri 16/3/18 |  | | | | | | | | | | | | | | | | |



LOCATION PLAN

LEGEND:

- AM1/NM1
(AIR MONITORING STATION/NOISE MONITORING STATION)
- WORKS BOUNDARY

| Rev | Description | By | Date |
|-----|-------------|----|------|
| | | | |
| | | | |

Consultant
**PARSONS
BRINCKERHOFF**

漢
綠 **CINOTECH**

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
**LOCATION OF MONITORING
STATIONS (PAGE 1 OF 2)**

| | | | | | |
|-------------|----------------|------|-------|---------|-------------|
| Drawing no. | CE44/T/ST/EM03 | | | Rev. | 2 |
| Drawn | MC | Date | AUG13 | Checked | KS |
| Scale | A3 1:5000 | | | Status | PRELIMINARY |

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LOCATION PLAN

LEGEND:

- AM1/NM1
(AIR MONITORING STATION/NOISE MONITORING STATION)
- WORKS BOUNDARY

| Rev | Description | By | Date |
|-----|-------------|----|------|
| | | | |
| | | | |
| | | | |

Consultant
PARSONS BRINCKERHOFF

漢綠 CINOTECH

Project title
AGREEMENT NO. CE 44/2011 (HY)
PROPOSED ROAD IMPROVEMENT WORKS IN WEST KOWLOON RECLAMATION DEVELOPMENT – PHASE 1 INVESTIGATION, DESIGN AND CONSTRUCTION

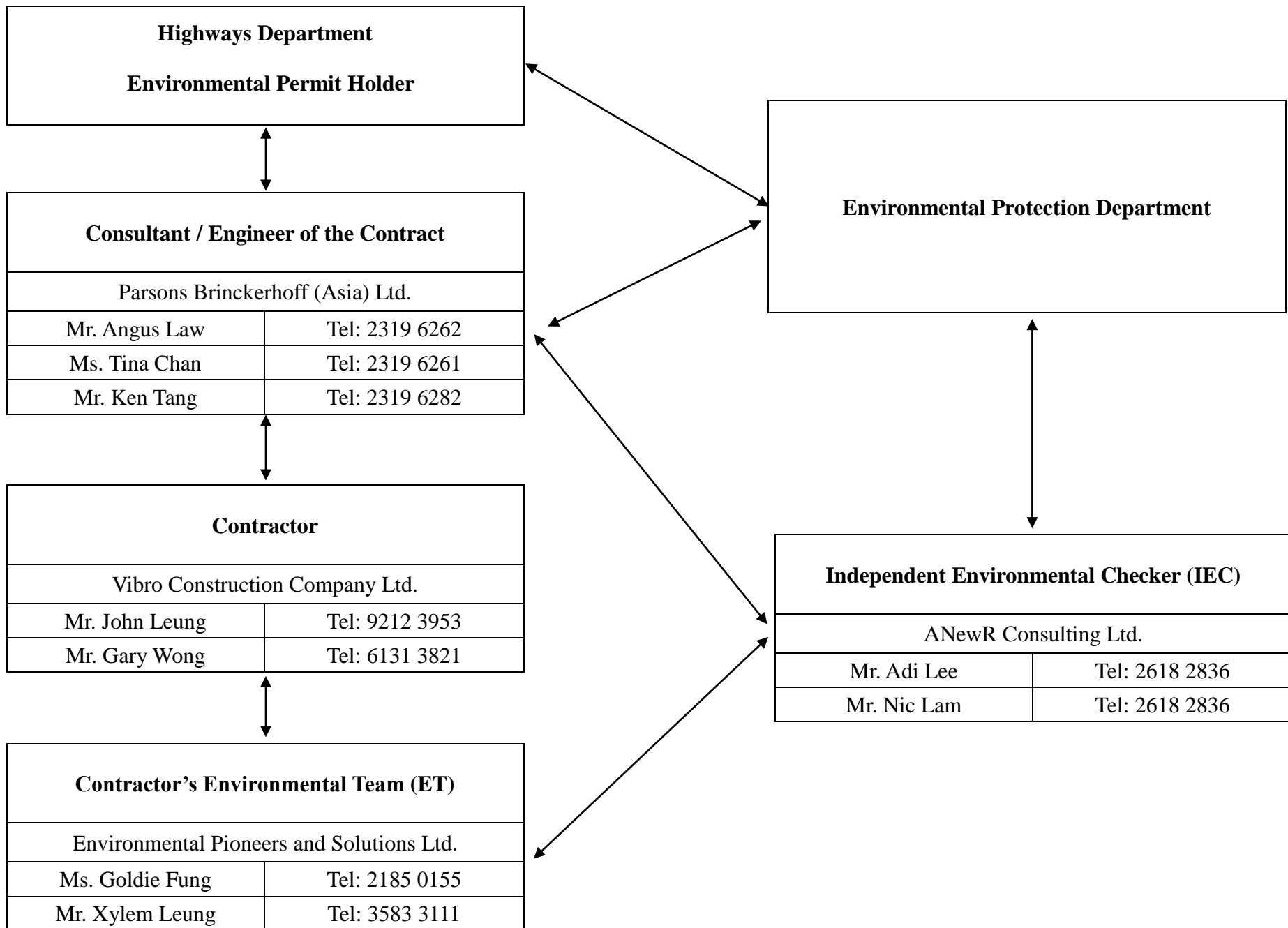
Drawing title
LOCATION OF MONITORING STATIONS (PAGE 2 OF 2)

| | | | |
|-------------|----------------|----------|-------------|
| Drawing no. | CE44/T/ST/EM04 | Rev. | 2 |
| Drawn | MC | Date | AUG13 |
| Checked | KS | Approved | LC |
| Scale | A3 1:5000 | Status | PRELIMINARY |

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路政署
HIGHWAYS DEPARTMENT
主要工程管理部
MAJOR WORKS PROJECT MANAGEMENT OFFICE

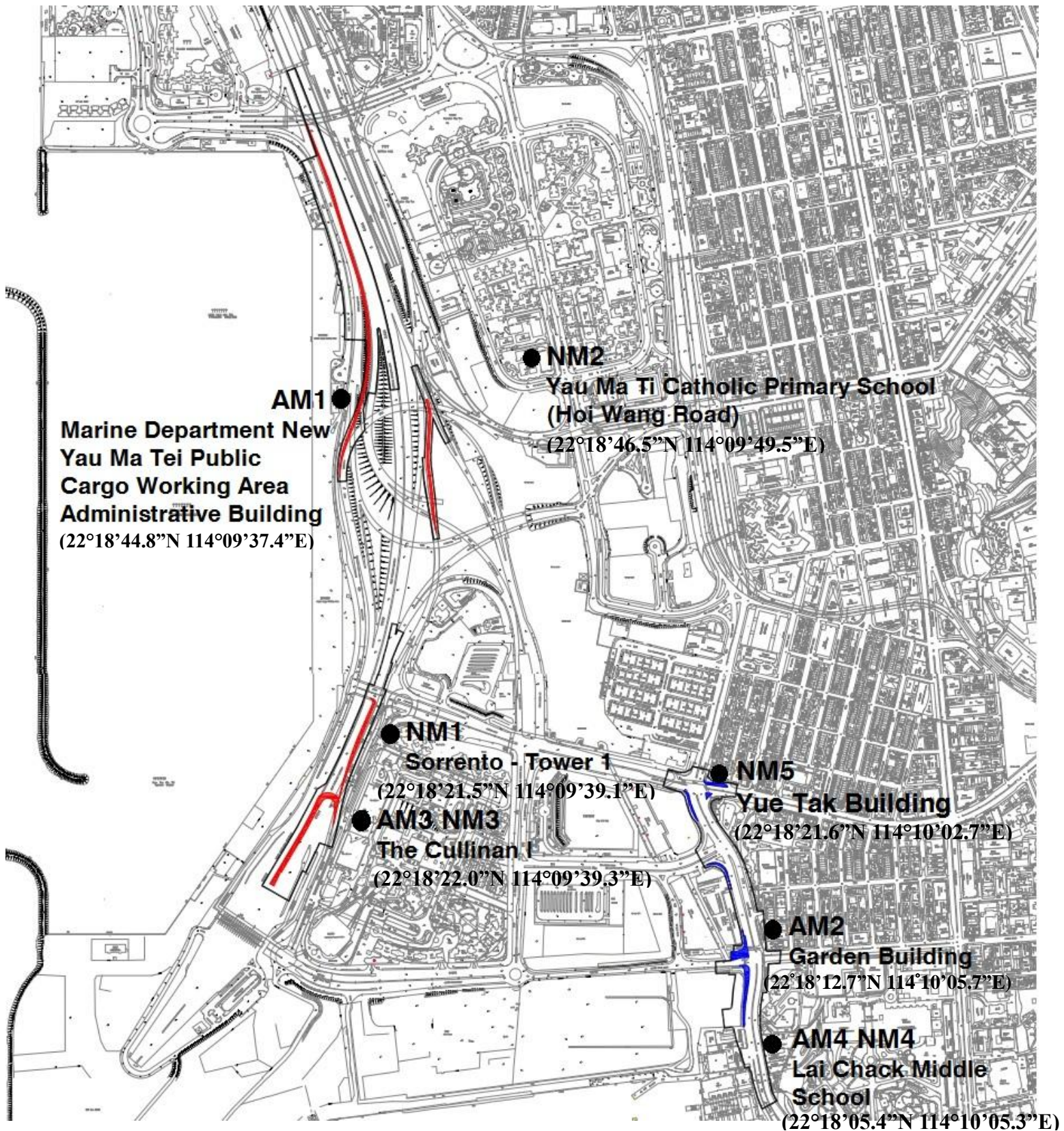
Appendix B: Project Organization Chart












↔ Line of communication

Appendix C: Monitoring Locations

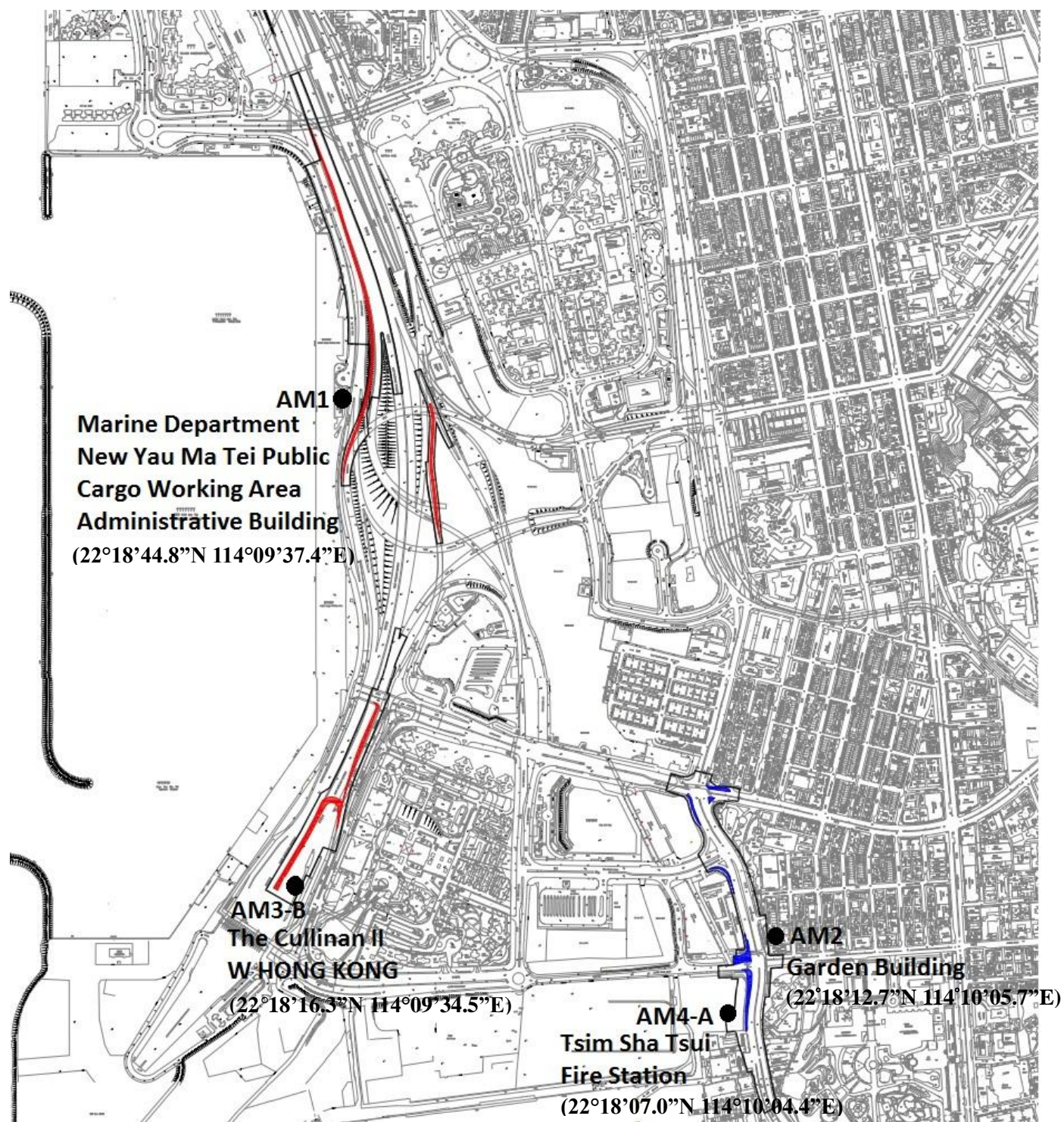
Locations for 1-hr TSP and Noise monitoring



| 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>A photograph showing a grey electrical control cabinet with a white door, situated on a paved rooftop area. A white door is visible in the background. The date stamp in the bottom right corner reads 2016/11/07.</p> |
| <p>AM2</p> <p>Garden Building</p> |  <p>A photograph showing a grey electrical control cabinet with a white door, situated on a paved area. A building entrance with a staircase is visible in the background. The date stamp in the bottom right corner reads 2016/05/18.</p> |
| <p>AM3-B</p> <p>The Cullinan II (W Hong Kong)</p> |  <p>A photograph showing a blue electrical control cabinet with a white door, situated on a paved area. A building and some greenery are visible in the background. The date stamp in the bottom right corner reads 2016/09/28.</p> |
| <p>AM4-A</p> <p>Tsim Sha Tsui Fire Station</p> |  <p>A photograph showing a grey electrical control cabinet with a white door, situated on a paved area. A building and some greenery are visible in the background. The date stamp in the bottom right corner reads 2016/09/28.</p> |

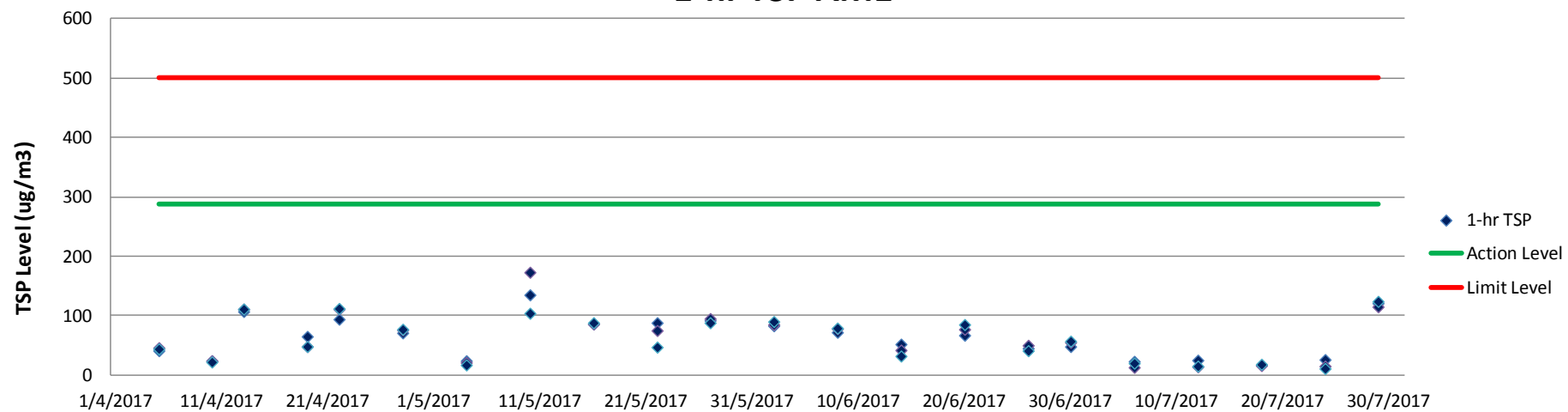
Appendix D: TSP Monitoring Data

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 |
| 4/5/2017 | Overcast | 23.4 - 27.4 | NW | <5m/s | 10:10 | 11:11 | 12:12 | 24 | 21 | 17 | 21 |
| 10/5/2017 | Overcast | 25.0 - 29.9 | SE | <5m/s | 14:25 | 15:26 | 16:27 | 135 | 173 | 104 | 137 |
| 16/5/2017 | Sunny | 23.2 - 26.2 | NE | <5m/s | 14:12 | 15:13 | 16:14 | 86 | 86 | 88 | 87 |
| 22/5/2017 | Overcast | 23.6 - 25.0 | SE | <5m/s | 16:01 | 17:02 | 18:03 | 88 | 75 | 47 | 70 |
| 27/5/2017 | Sunny | 23.4 - 29.0 | SE | <5m/s | 10:24 | 11:25 | 12:26 | 92 | 95 | 88 | 92 |
| 2/6/2017 | Cloudy | 28.3 - 30.4 | W | <5m/s | 9:24 | 10:25 | 11:26 | 83 | 85 | 90 | 86 |
| 8/6/2017 | Sunny | 27.8 - 32.1 | SE | <5m/s | 14:25 | 15:26 | 16:27 | 72 | 78 | 79 | 76 |
| 14/6/2017 | Cloudy | 25.2 - 29.4 | SW | <5m/s | 9:47 | 10:48 | 11:49 | 52 | 42 | 32 | 42 |
| 20/6/2017 | Cloudy | 25.2 - 27.4 | NW | <5m/s | 8:26 | 9:27 | 10:28 | 67 | 77 | 85 | 76 |
| 26/6/2017 | Cloudy | 26.2 - 28.3 | NW | <5m/s | 8:45 | 9:46 | 10:47 | 45 | 50 | 41 | 45 |
| 30/6/2017 | Cloudy | 25.9 - 28.5 | NW | <5m/s | 8:50 | 9:51 | 10:52 | 48 | 55 | 57 | 53 |
| 6/7/2017 | Cloudy | 28.3 - 30.4 | W | <5m/s | 10:04 | 11:05 | 12:06 | 23 | 13 | 20 | 19 |
| 12/7/2017 | Sunny | 27.3- 32.3 | SE | <5m/s | 9:19 | 10:20 | 11:21 | 25 | 14 | 15 | 18 |
| 18/7/2017 | Cloudy | 24.7 - 28.3 | SE | <5m/s | 14:08 | 15:09 | 16:10 | 17 | 16 | 18 | 17 |
| 24/7/2017 | Cloudy | 25.5 - 30.9 | SE | <5m/s | 10:10 | 11:11 | 12:12 | 26 | 15 | 11 | 17 |
| 29/7/2017 | Sunny | 27.8 - 33.8 | SE | <5m/s | 10:46 | 11:47 | 12:48 | 121 | 115 | 124 | 120 |

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

1-hr TSP AM1

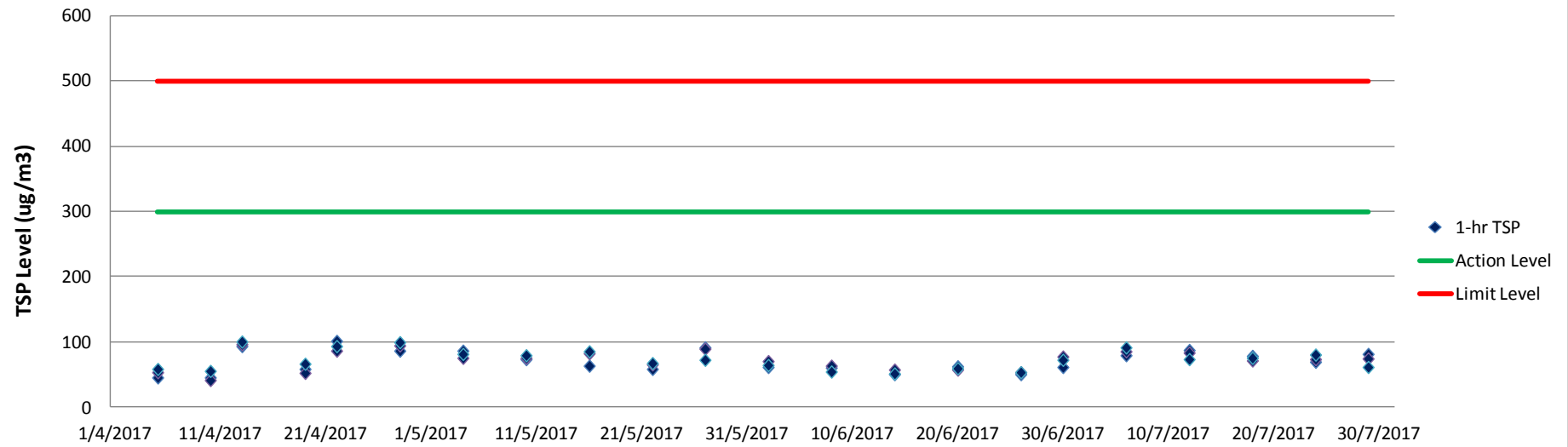


1-hr TSP Monitoring Result for AM2

| Date | Weather | Temperature (°C) * | Wind Direction * | Wind Speed (m/s) * | Sampling Time | | | Reading (µg/m ³) | | | |
|-----------|----------|-----------------------|---------------------|-----------------------|---------------|-------|-------|------------------------------|----|----|---------|
| | | | | | 1 | 2 | 3 | 1 | 2 | 3 | Average |
| 4/5/2017 | Overcast | 23.4 - 27.4 | NW | <5m/s | 10:30 | 11:31 | 12:32 | 86 | 75 | 81 | 81 |
| 10/5/2017 | Overcast | 25.0 - 29.9 | SE | <5m/s | 10:35 | 11:36 | 12:37 | 73 | 75 | 79 | 76 |
| 16/5/2017 | Sunny | 23.2 - 26.2 | NE | <5m/s | 10:38 | 11:39 | 12:40 | 63 | 82 | 85 | 77 |
| 22/5/2017 | Overcast | 23.6 - 25.0 | SE | <5m/s | 10:24 | 11:25 | 12:26 | 58 | 65 | 67 | 63 |
| 27/5/2017 | Sunny | 23.4 - 29.0 | SE | <5m/s | 10:40 | 11:41 | 12:42 | 91 | 89 | 72 | 84 |
| 2/6/2017 | Cloudy | 28.3 - 30.4 | W | <5m/s | 9:30 | 10:31 | 11:32 | 61 | 70 | 64 | 65 |
| 8/6/2017 | Sunny | 27.8 - 32.1 | SE | <5m/s | 9:30 | 10:31 | 11:32 | 60 | 63 | 54 | 59 |
| 14/6/2017 | Cloudy | 25.2 - 29.4 | SW | <5m/s | 9:30 | 10:31 | 11:32 | 50 | 57 | 51 | 53 |
| 20/6/2017 | Cloudy | 25.2 - 27.4 | NW | <5m/s | 9:30 | 10:31 | 11:32 | 62 | 57 | 59 | 59 |
| 26/6/2017 | Cloudy | 26.2 - 28.3 | NW | <5m/s | 9:30 | 10:31 | 11:32 | 50 | 53 | 53 | 52 |
| 30/6/2017 | Cloudy | 25.9 - 28.5 | NW | <5m/s | 9:30 | 10:31 | 11:32 | 61 | 77 | 72 | 70 |
| 6/7/2017 | Cloudy | 28.3 - 30.4 | W | <5m/s | 9:30 | 10:31 | 11:32 | 79 | 85 | 91 | 85 |
| 12/7/2017 | Sunny | 27.3- 32.3 | SE | <5m/s | 9:30 | 10:31 | 11:32 | 87 | 83 | 73 | 81 |
| 18/7/2017 | Cloudy | 24.7 - 28.3 | SE | <5m/s | 9:30 | 10:31 | 11:32 | 78 | 71 | 75 | 75 |
| 24/7/2017 | Cloudy | 25.5 - 30.9 | SE | <5m/s | 9:30 | 10:31 | 11:32 | 69 | 73 | 80 | 74 |
| 29/7/2017 | Sunny | 27.8 - 33.8 | SE | <5m/s | 9:30 | 10:31 | 11:32 | 81 | 74 | 61 | 72 |

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

1-hr TSP AM2

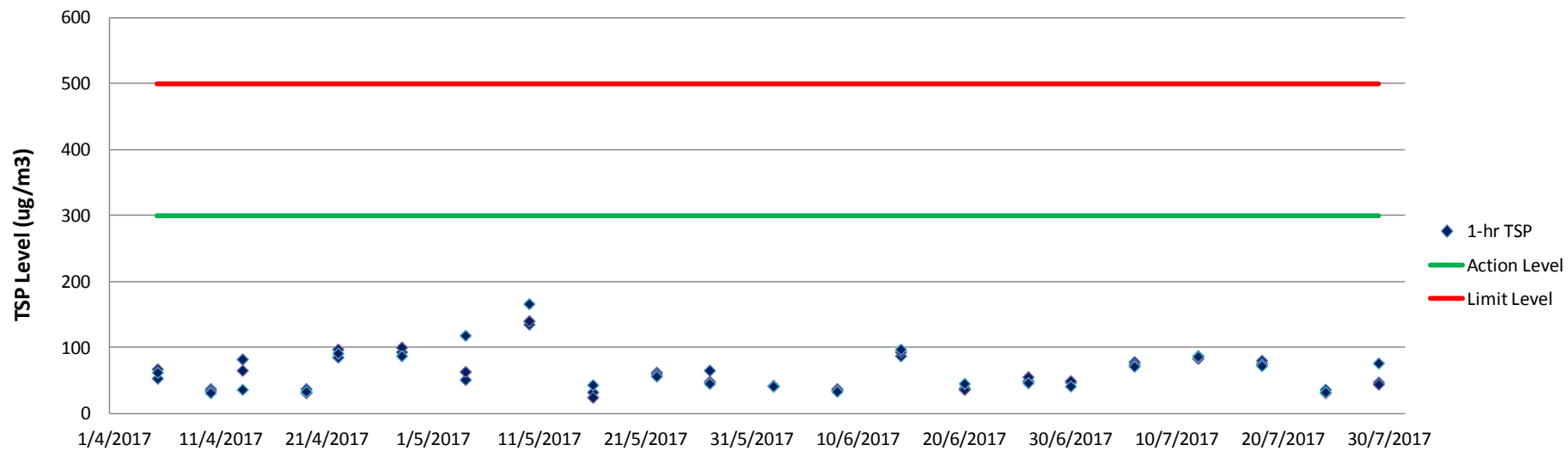


1-hr TSP Monitoring Result for AM3

| Date | Weather | Temperature (°C) * | Wind Direction * | Wind Speed (m/s) * | Sampling Time | | | Reading (µg/m ³) | | | |
|-----------|----------|-----------------------|---------------------|-----------------------|---------------|-------|-------|------------------------------|-----|-----|---------|
| | | | | | 1 | 2 | 3 | 1 | 2 | 3 | Average |
| 4/5/2017 | Overcast | 23.4 - 27.4 | NW | <5m/s | 10:27 | 11:28 | 12:29 | 52 | 64 | 119 | 78 |
| 10/5/2017 | Overcast | 25.0 - 29.9 | SE | <5m/s | 15:14 | 16:15 | 17:16 | 136 | 141 | 167 | 148 |
| 16/5/2017 | Sunny | 23.2 - 26.2 | NE | <5m/s | 14:43 | 15:44 | 16:45 | 33 | 25 | 44 | 34 |
| 22/5/2017 | Overcast | 23.6 - 25.0 | SE | <5m/s | 16:21 | 17:22 | 18:23 | 63 | 60 | 57 | 60 |
| 27/5/2017 | Sunny | 23.4 - 29.0 | SE | <5m/s | 11:03 | 12:04 | 13:05 | 66 | 49 | 46 | 54 |
| 2/6/2017 | Cloudy | 28.3 - 30.4 | W | <5m/s | 10:11 | 11:12 | 12:13 | 43 | 42 | 42 | 42 |
| 8/6/2017 | Sunny | 27.8 - 32.1 | SE | <5m/s | 15:05 | 16:06 | 17:07 | 38 | 37 | 34 | 36 |
| 14/6/2017 | Cloudy | 25.2 - 29.4 | SW | <5m/s | 9:17 | 10:18 | 11:19 | 88 | 94 | 98 | 93 |
| 20/6/2017 | Cloudy | 25.2 - 27.4 | NW | <5m/s | 9:03 | 10:04 | 11:05 | 39 | 37 | 46 | 41 |
| 26/6/2017 | Cloudy | 26.2 - 28.3 | NW | <5m/s | 13:00 | 14:01 | 15:02 | 50 | 56 | 47 | 51 |
| 30/6/2017 | Cloudy | 25.9 - 28.5 | NW | <5m/s | 13:00 | 14:01 | 15:02 | 48 | 50 | 42 | 47 |
| 6/7/2017 | Cloudy | 28.3 - 30.4 | W | <5m/s | 11:14 | 12:15 | 13:16 | 79 | 75 | 72 | 75 |
| 12/7/2017 | Sunny | 27.3- 32.3 | SE | <5m/s | 10:13 | 11:14 | 12:15 | 88 | 84 | 87 | 86 |
| 18/7/2017 | Cloudy | 24.7 - 28.3 | SE | <5m/s | 14:51 | 15:52 | 16:53 | 81 | 76 | 73 | 77 |
| 24/7/2017 | Cloudy | 25.5 - 30.9 | SE | <5m/s | 11:14 | 12:15 | 13:16 | 37 | 32 | 33 | 34 |
| 29/7/2017 | Sunny | 27.8 - 33.8 | SE | <5m/s | 10:00 | 11:01 | 12:02 | 48 | 45 | 77 | 57 |

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

1-hr TSP AM3

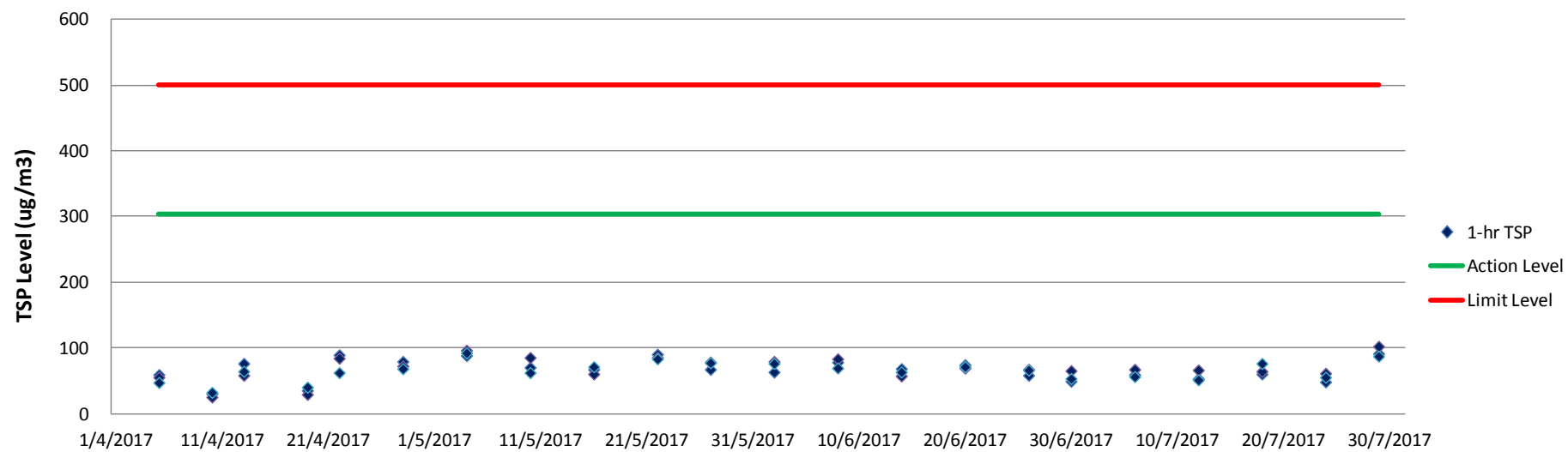


1-hr TSP Monitoring Result for AM4

| Date | Weather | Temperature (°C) * | Wind Direction * | Wind Speed (m/s) * | Sampling Time | | | Reading (µg/m ³) | | | |
|-----------|----------|-----------------------|---------------------|-----------------------|---------------|-------|-------|------------------------------|-----|----|---------|
| | | | | | 1 | 2 | 3 | 1 | 2 | 3 | Average |
| 4/5/2017 | Overcast | 23.4 - 27.4 | NW | <5m/s | 10:35 | 11:36 | 12:37 | 89 | 97 | 93 | 93 |
| 10/5/2017 | Overcast | 25.0 - 29.9 | SE | <5m/s | 10:42 | 11:43 | 12:44 | 71 | 86 | 63 | 73 |
| 16/5/2017 | Sunny | 23.2 - 26.2 | NE | <5m/s | 10:33 | 11:34 | 12:35 | 68 | 61 | 72 | 67 |
| 22/5/2017 | Overcast | 23.6 - 25.0 | SE | <5m/s | 10:16 | 11:17 | 12:18 | 91 | 86 | 84 | 87 |
| 27/5/2017 | Sunny | 23.4 - 29.0 | SE | <5m/s | 10:37 | 11:38 | 12:39 | 68 | 79 | 78 | 75 |
| 2/6/2017 | Cloudy | 28.3 - 30.4 | W | <5m/s | 13:00 | 14:01 | 15:02 | 64 | 80 | 77 | 74 |
| 8/6/2017 | Sunny | 27.8 - 32.1 | SE | <5m/s | 13:00 | 14:01 | 15:02 | 79 | 84 | 70 | 78 |
| 14/6/2017 | Cloudy | 25.2 - 29.4 | SW | <5m/s | 13:00 | 14:01 | 15:02 | 69 | 58 | 64 | 64 |
| 20/6/2017 | Cloudy | 25.2 - 27.4 | NW | <5m/s | 13:00 | 14:01 | 15:02 | 75 | 70 | 72 | 72 |
| 26/6/2017 | Cloudy | 26.2 - 28.3 | NW | <5m/s | 13:00 | 14:01 | 15:02 | 59 | 68 | 67 | 65 |
| 30/6/2017 | Cloudy | 25.9 - 28.5 | NW | <5m/s | 13:00 | 14:01 | 15:02 | 50 | 66 | 54 | 57 |
| 6/7/2017 | Cloudy | 28.3 - 30.4 | W | <5m/s | 13:00 | 14:01 | 15:02 | 60 | 68 | 57 | 62 |
| 12/7/2017 | Sunny | 27.3- 32.3 | SE | <5m/s | 13:00 | 14:01 | 15:02 | 54 | 67 | 52 | 58 |
| 18/7/2017 | Cloudy | 24.7 - 28.3 | SE | <5m/s | 13:00 | 14:01 | 15:02 | 61 | 65 | 77 | 68 |
| 24/7/2017 | Cloudy | 25.5 - 30.9 | SE | <5m/s | 13:00 | 14:01 | 15:02 | 49 | 62 | 56 | 56 |
| 29/7/2017 | Sunny | 27.8 - 33.8 | SE | <5m/s | 13:00 | 14:01 | 15:02 | 92 | 103 | 88 | 94 |

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

1-hr TSP AM4

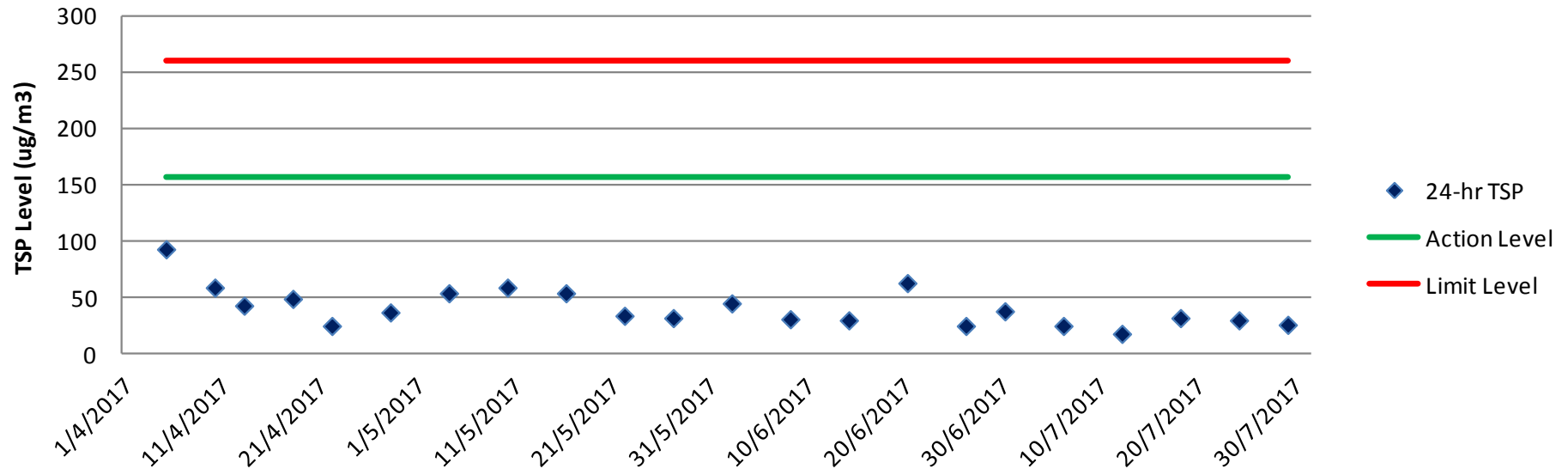


24-hr TSP Monitoring Result for AM1

| 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 | | | |
| AM10504 202628 | 23.4 - 27.4 | NW | <5m/s | 4/5/2017 | 2.8006 | 2.9316 | 0.1310 | 56.0 | 2420.41 | 54 |
| AM10510 202633 | 25.0 - 29.9 | SE | <5m/s | 10/5/2017 | 2.7841 | 2.9269 | 0.1428 | 56.0 | 2420.41 | 59 |
| AM10516 202632 | 23.2 - 26.2 | NE | <5m/s | 16/5/2017 | 2.7836 | 2.9138 | 0.1302 | 56.0 | 2420.41 | 54 |
| AM10522 202629 | 23.6 - 25.0 | SE | <5m/s | 22/5/2017 | 2.7970 | 2.8804 | 0.0834 | 56.0 | 2420.41 | 34 |
| AM10527 202637 | 23.4 - 29.0 | SE | <5m/s | 27/5/2017 | 2.7790 | 2.8570 | 0.0780 | 56.0 | 2420.41 | 32 |
| AM10602 202636 | 28.3 - 30.4 | W | <5m/s | 2/6/2017 | 2.7696 | 2.8708 | 0.1012 | 54.0 | 2238.72 | 45 |
| AM10608 202646 | 27.8 - 32.1 | SE | <5m/s | 8/6/2017 | 2.7940 | 2.8626 | 0.0686 | 54.0 | 2238.72 | 31 |
| AM10614 203293 | 25.2 - 29.4 | SW | <5m/s | 14/6/2017 | 2.8210 | 2.8884 | 0.0674 | 54.0 | 2238.72 | 30 |
| AM10620 202639 | 25.2 - 27.4 | NW | <5m/s | 20/6/2017 | 2.7797 | 2.9213 | 0.1416 | 54.0 | 2238.72 | 63 |
| AM10626 203295 | 26.2 - 28.3 | NW | <5m/s | 26/6/2017 | 2.8161 | 2.8726 | 0.0565 | 54.0 | 2238.72 | 25 |
| AM10630 203294 | 25.9 - 28.5 | NW | <5m/s | 30/6/2017 | 2.8257 | 2.9105 | 0.0848 | 54.0 | 2238.72 | 38 |
| AM10706 203309 | 28.3 - 30.4 | W | <5m/s | 6/7/2017 | 2.8512 | 2.9069 | 0.0557 | 54.0 | 2238.72 | 25 |
| AM10712 203308 | 27.3- 32.3 | SE | <5m/s | 12/7/2017 | 2.8596 | 2.8988 | 0.0392 | 54.0 | 2238.72 | 18 |
| AM10718 203307 | 24.7 - 28.3 | SE | <5m/s | 18/7/2017 | 2.8746 | 2.9462 | 0.0716 | 54.0 | 2238.72 | 32 |
| AM10724 203314 | 25.5 - 30.9 | SE | <5m/s | 24/7/2017 | 2.8533 | 2.9197 | 0.0664 | 54.0 | 2238.72 | 30 |
| AM10729 203313 | 27.8 - 33.8 | SE | <5m/s | 29/7/2017 | 2.8614 | 2.9193 | 0.0579 | 54.0 | 2238.72 | 26 |

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

24-hr TSP AM1

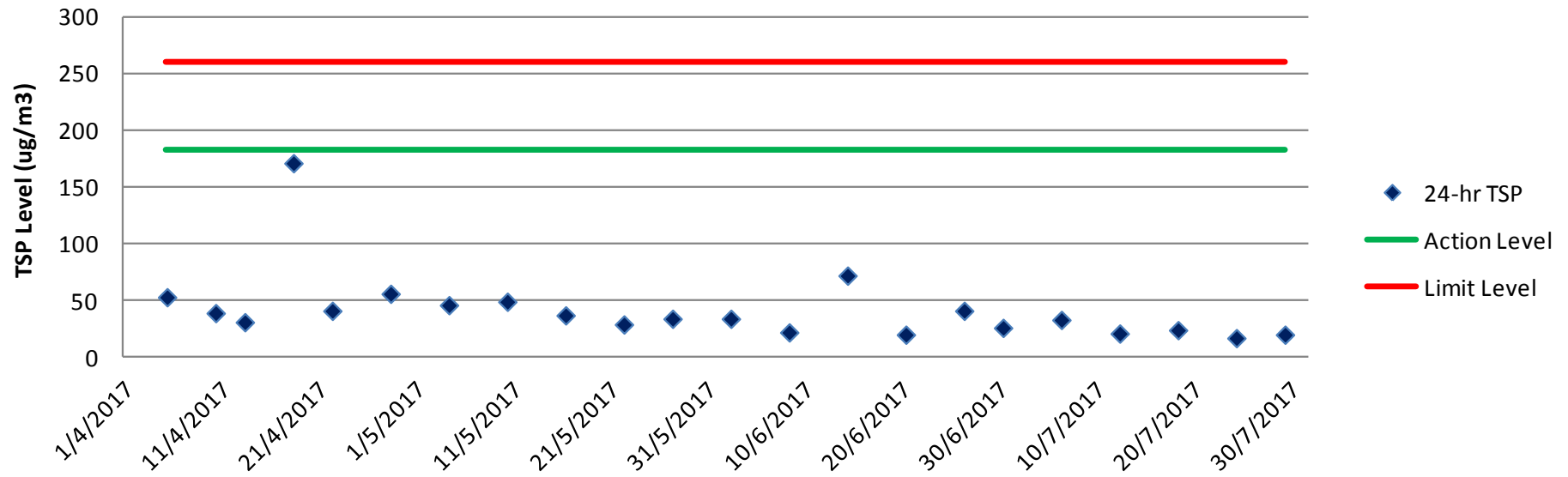


24-hr TSP Monitoring Result for AM2

| 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 | | | |
| AM20504 202612 | 23.4 - 27.4 | NW | <5m/s | 4/5/2017 | 2.8057 | 2.9369 | 0.1312 | 58.0 | 2822.51 | 46 |
| AM20510 202615 | 25.0 - 29.9 | SE | <5m/s | 10/5/2017 | 2.7844 | 2.9214 | 0.1370 | 58.0 | 2822.51 | 49 |
| AM20516 202614 | 23.2 - 26.2 | NE | <5m/s | 16/5/2017 | 2.7923 | 2.8979 | 0.1056 | 58.0 | 2822.51 | 37 |
| AM20522 202617 | 23.6 - 25.0 | SE | <5m/s | 22/5/2017 | 2.7944 | 2.8767 | 0.0823 | 58.0 | 2822.51 | 29 |
| AM20527 202616 | 23.4 - 29.0 | SE | <5m/s | 27/5/2017 | 2.7954 | 2.8901 | 0.0947 | 58.0 | 2822.51 | 34 |
| AM20602 202019 | 28.3 - 30.4 | W | <5m/s | 2/6/2017 | 2.8834 | 2.9626 | 0.0792 | 50.0 | 2352.00 | 34 |
| AM20608 202020 | 27.8 - 32.1 | SE | <5m/s | 8/6/2017 | 2.8869 | 2.9383 | 0.0514 | 50.0 | 2352.00 | 22 |
| AM20614 202650 | 25.2 - 29.4 | SW | <5m/s | 14/6/2017 | 2.8162 | 2.9861 | 0.1699 | 50.0 | 2352.00 | 72 |
| AM20620 203305 | 25.2 - 27.4 | NW | <5m/s | 20/6/2017 | 2.8587 | 2.9053 | 0.0466 | 50.0 | 2352.00 | 20 |
| AM20626 203298 | 26.2 - 28.3 | NW | <5m/s | 26/6/2017 | 2.8369 | 2.9331 | 0.0962 | 50.0 | 2352.00 | 41 |
| AM20630 203315 | 25.9 - 28.5 | NW | <5m/s | 30/6/2017 | 2.8362 | 2.8970 | 0.0608 | 50.0 | 2352.00 | 26 |
| AM20706 203306 | 28.3 - 30.4 | W | <5m/s | 6/7/2017 | 2.8548 | 2.9322 | 0.0774 | 50.0 | 2352.00 | 33 |
| AM20712 203318 | 27.3- 32.3 | SE | <5m/s | 12/7/2017 | 2.8350 | 2.8841 | 0.0491 | 50.0 | 2352.00 | 21 |
| AM20718 203319 | 24.7 - 28.3 | SE | <5m/s | 18/7/2017 | 2.8284 | 2.8846 | 0.0562 | 50.0 | 2352.00 | 24 |
| AM20724 203334 | 25.5 - 30.9 | SE | <5m/s | 24/7/2017 | 2.8384 | 2.8782 | 0.0398 | 50.0 | 2352.00 | 17 |
| AM20729 203321 | 27.8 - 33.8 | SE | <5m/s | 29/7/2017 | 2.8378 | 2.8853 | 0.0475 | 50.0 | 2352.00 | 20 |

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

24-hr TSP AM2

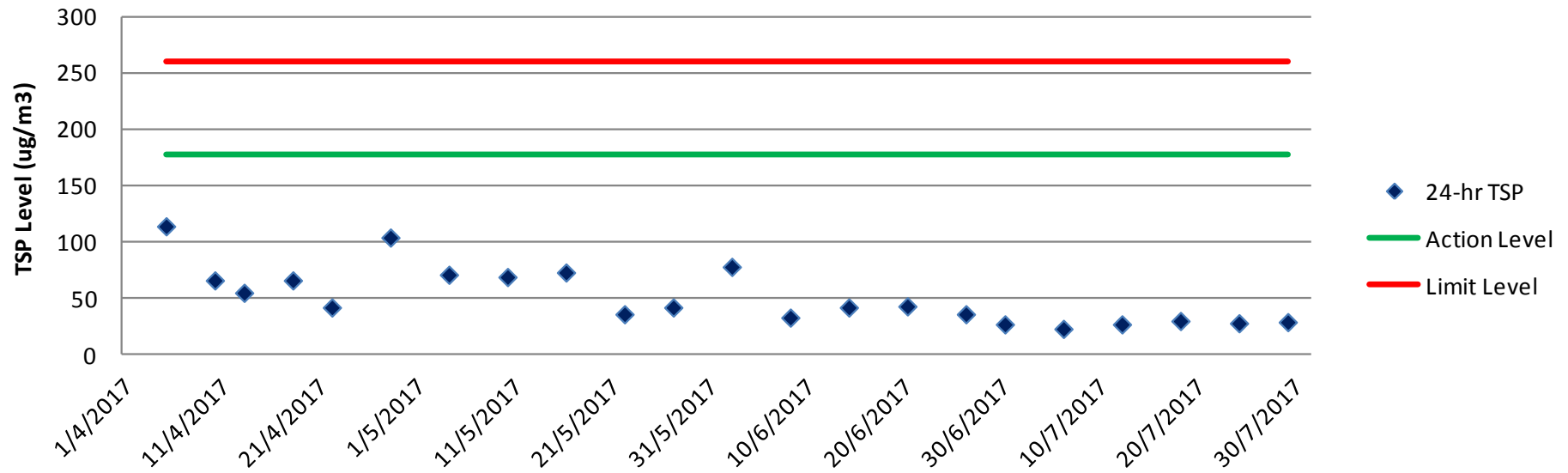


24-hr TSP Monitoring Result for AM3-B

| 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) |
|----------------------------|-----------------------|------------------------|--------------------------|---------------|------------------|-----------|-------------|-----------------|-------------------------|---------------------------------|
| | | | | | Initial Wt. | Final Wt. | Wt. of dust | | | |
| AM3-B0504 202631 | 23.4 - 27.4 | NW | <5m/s | 4/5/2017 | 2.7883 | 2.9523 | 0.1640 | 56.0 | 2315.47 | 71 |
| AM3-B0510 202630 | 25.0 - 29.9 | SE | <5m/s | 10/5/2017 | 2.8013 | 2.9606 | 0.1593 | 56.0 | 2315.47 | 69 |
| AM3-B0516 202635 | 23.2 - 26.2 | NE | <5m/s | 16/5/2017 | 2.7895 | 2.9578 | 0.1683 | 56.0 | 2315.47 | 73 |
| AM3-B0522 202634 | 23.6 - 25.0 | SE | <5m/s | 22/5/2017 | 2.7899 | 2.8743 | 0.0844 | 56.0 | 2315.47 | 36 |
| AM3-B0527 202645 | 23.4 - 29.0 | SE | <5m/s | 27/5/2017 | 2.7956 | 2.8923 | 0.0967 | 56.0 | 2315.47 | 42 |
| AM3-B0602 202014 | 28.3 - 30.4 | W | <5m/s | 2/6/2017 | 2.8703 | 3.0512 | 0.1809 | 56.0 | 2315.47 | 78 |
| AM3-B0608 202644 | 27.8 - 32.1 | SE | <5m/s | 8/6/2017 | 2.7980 | 2.8745 | 0.0765 | 56.0 | 2315.47 | 33 |
| AM3-B0614 202647 | 25.2 - 29.4 | SW | <5m/s | 14/6/2017 | 2.8058 | 2.9025 | 0.0967 | 56.0 | 2315.47 | 42 |
| AM3-B0620 203300 | 25.2 - 27.4 | NW | <5m/s | 20/6/2017 | 2.8444 | 2.9437 | 0.0993 | 56.0 | 2315.47 | 43 |
| AM3-B0626 203299 | 26.2 - 28.3 | NW | <5m/s | 26/6/2017 | 2.8356 | 2.9196 | 0.0840 | 56.0 | 2315.47 | 36 |
| AM3-B0630 203297 | 25.9 - 28.5 | NW | <5m/s | 30/6/2017 | 2.8092 | 2.8728 | 0.0636 | 56.0 | 2315.47 | 27 |
| AM3-B0706 203312 | 28.3 - 30.4 | W | <5m/s | 6/7/2017 | 2.8690 | 2.9216 | 0.0526 | 56.0 | 2315.47 | 23 |
| AM3-B0712 203311 | 27.3- 32.3 | SE | <5m/s | 12/7/2017 | 2.8428 | 2.9045 | 0.0617 | 56.0 | 2315.47 | 27 |
| AM3-B0718 203310 | 24.7 - 28.3 | SE | <5m/s | 18/7/2017 | 2.8419 | 2.9124 | 0.0705 | 56.0 | 2315.47 | 30 |
| AM3-B0724 203317 | 25.5 - 30.9 | SE | <5m/s | 24/7/2017 | 2.8311 | 2.8968 | 0.0657 | 56.0 | 2315.47 | 28 |
| AM3-B0729 203316 | 27.8 - 33.8 | SE | <5m/s | 29/7/2017 | 2.8360 | 2.9020 | 0.0660 | 56.0 | 2315.47 | 29 |

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

24-hr TSP AM3-B

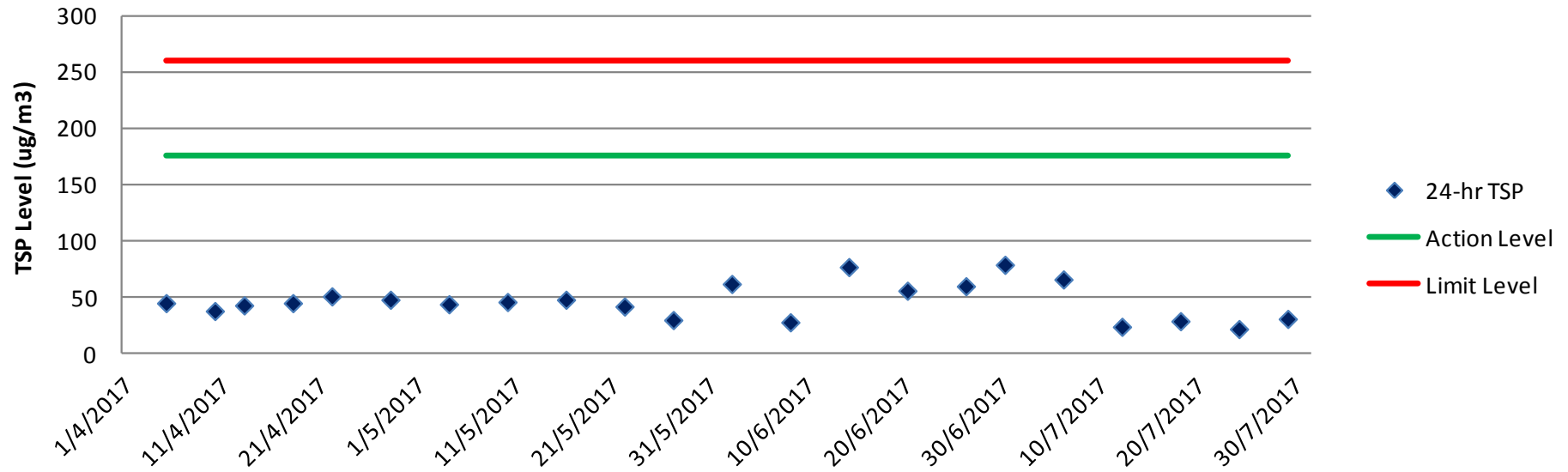


24-hr TSP Monitoring Result for AM4-A

| 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 | | | |
| AM4-A0504 202608 | 23.4 - 27.4 | NW | <5m/s | 4/5/2017 | 2.8057 | 2.9247 | 0.1190 | 60.0 | 2718.61 | 44 |
| AM4-A0510 202609 | 25.0 - 29.9 | SE | <5m/s | 10/5/2017 | 2.8075 | 2.9327 | 0.1252 | 60.0 | 2718.61 | 46 |
| AM4-A0516 202590 | 23.2 - 26.2 | NE | <5m/s | 16/5/2017 | 2.7956 | 2.9250 | 0.1294 | 60.0 | 2718.61 | 48 |
| AM4-A0522 202642 | 23.6 - 25.0 | SE | <5m/s | 22/5/2017 | 2.7970 | 2.9114 | 0.1144 | 60.0 | 2718.61 | 42 |
| AM4-A0527 202018 | 23.4 - 29.0 | SE | <5m/s | 27/5/2017 | 2.8720 | 2.9535 | 0.0815 | 60.0 | 2718.61 | 30 |
| AM4-A0602 202638 | 28.3 - 30.4 | W | <5m/s | 2/6/2017 | 2.7808 | 2.9139 | 0.1331 | 60.0 | 2162.08 | 62 |
| AM4-A0608 202640 | 27.8 - 32.1 | SE | <5m/s | 8/6/2017 | 2.7862 | 2.8474 | 0.0612 | 60.0 | 2162.08 | 28 |
| AM4-A0614 202641 | 25.2 - 29.4 | SW | <5m/s | 14/6/2017 | 2.7998 | 2.9654 | 0.1656 | 60.0 | 2162.08 | 77 |
| AM4-A0620 202643 | 25.2 - 27.4 | NW | <5m/s | 20/6/2017 | 2.7951 | 2.9164 | 0.1213 | 60.0 | 2162.08 | 56 |
| AM4-A0626 203303 | 26.2 - 28.3 | NW | <5m/s | 26/6/2017 | 2.8615 | 2.9920 | 0.1305 | 60.0 | 2162.08 | 60 |
| AM4-A0630 203304 | 25.9 - 28.5 | NW | <5m/s | 30/6/2017 | 2.8513 | 3.0212 | 0.1699 | 60.0 | 2162.08 | 79 |
| AM4-A0706 203301 | 28.3 - 30.4 | W | <5m/s | 6/7/2017 | 2.8614 | 3.0041 | 0.1427 | 60.0 | 2162.08 | 66 |
| AM4-A0712 202648 | 27.3 - 32.3 | SE | <5m/s | 12/7/2017 | 2.8017 | 2.8529 | 0.0512 | 60.0 | 2162.08 | 24 |
| AM4-A0718 203323 | 24.7 - 28.3 | SE | <5m/s | 18/7/2017 | 2.8270 | 2.8904 | 0.0634 | 60.0 | 2162.08 | 29 |
| AM4-A0724 203335 | 25.5 - 30.9 | SE | <5m/s | 24/7/2017 | 2.8505 | 2.8971 | 0.0466 | 60.0 | 2162.08 | 22 |
| AM4-A0729 203322 | 27.8 - 33.8 | SE | <5m/s | 29/7/2017 | 2.8184 | 2.8862 | 0.0678 | 60.0 | 2162.08 | 31 |

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

24-hr TSP AM4-A



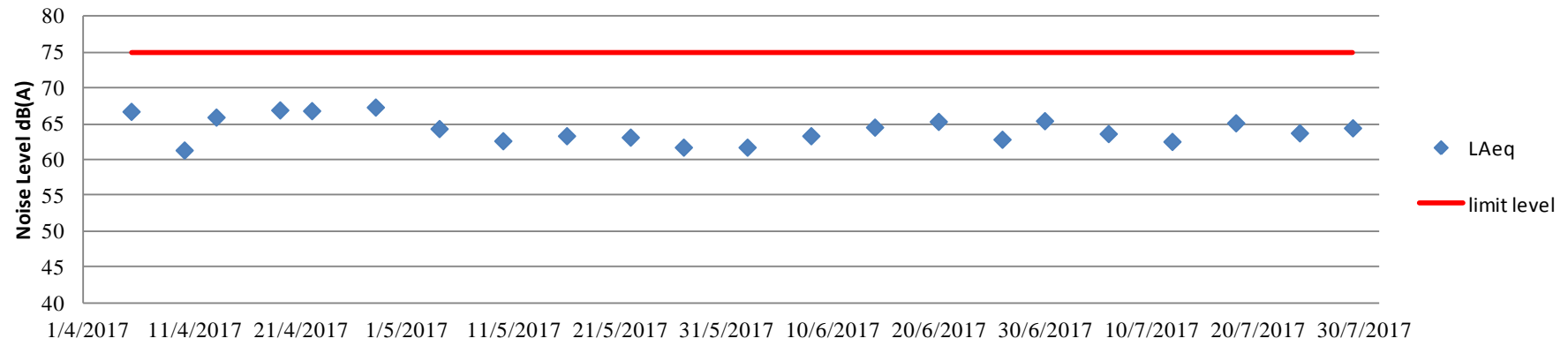
Appendix E: Noise Monitoring Data

| Location | NM1 | | | | |
|--------------------|----------|-----------|-----------|-----------|-----------|
| Date | 4/5/2017 | 10/5/2017 | 16/5/2017 | 22/5/2017 | 27/5/2017 |
| Weather Condition | Overcast | Overcast | Sunny | Overcast | Sunny |
| Start Time | 11:30 | 16:00 | 15:56 | 17:09 | 11:28 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 75.1 | | | | |
| L _{Aeq} | 64.3 | 62.6 | 63.3 | 63.1 | 61.7 |
| L ₁₀ | 64.8 | 63.9 | 64.8 | 64.3 | 62.8 |
| L ₉₀ | 59.1 | 60.5 | 61.2 | 61.1 | 60.0 |

| Location | NM1 | | | | | |
|--------------------|----------|----------|-----------|-----------|-----------|-----------|
| Date | 2/6/2017 | 8/6/2017 | 14/6/2017 | 20/6/2017 | 26/6/2017 | 30/6/2017 |
| Weather Condition | Cloudy | Sunny | Cloudy | Cloudy | Cloudy | Cloudy |
| Start Time | 10:52 | 16:00 | 10:35 | 9:22 | 9:30 | 10:00 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 75.1 | | | | | |
| L _{Aeq} | 61.7 | 63.3 | 64.5 | 65.3 | 62.8 | 65.4 |
| L ₁₀ | 62.9 | 64.8 | 65.8 | 66.6 | 64.5 | 67.3 |
| L ₉₀ | 60.0 | 61.1 | 62.7 | 64.0 | 60.9 | 62.5 |

| Location | NM1 | | | | |
|--------------------|----------|-----------|-----------|-----------|-----------|
| Date | 6/7/2017 | 12/7/2017 | 18/7/2017 | 24/7/2017 | 29/7/2017 |
| Weather Condition | Cloudy | Sunny | Sunny | Cloudy | Sunny |
| Start Time | 10:39 | 10:54 | 15:29 | 10:57 | 14:43 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 75.1 | | | | |
| L _{Aeq} | 63.6 | 62.5 | 65.1 | 63.7 | 64.4 |
| L ₁₀ | 64.7 | 64.0 | 65.7 | 65.3 | 66.3 |
| L ₉₀ | 62.2 | 60.2 | 63.1 | 61.1 | 61.7 |

Noise - NM1

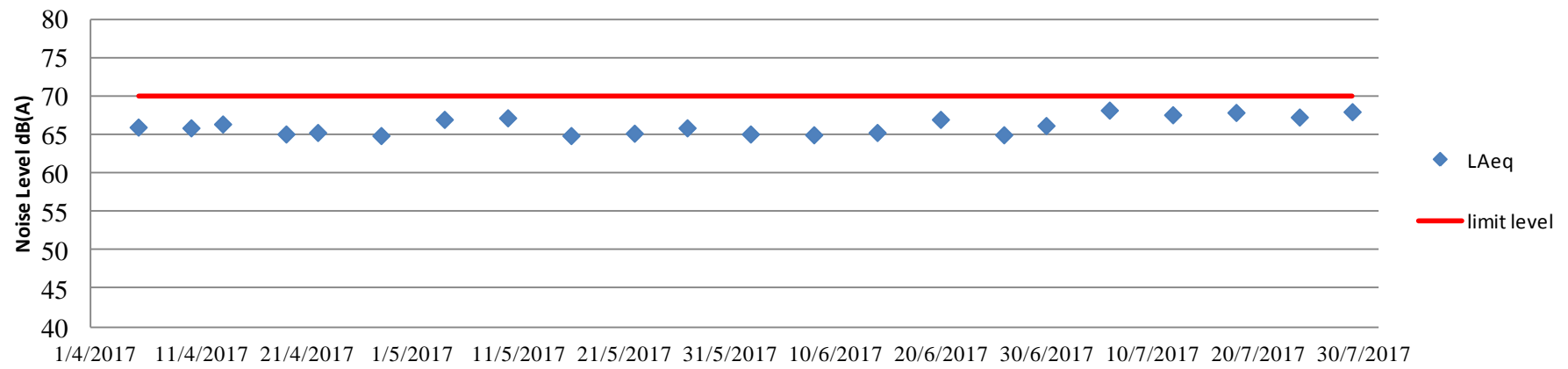


| Location | NM2 | | | | |
|--------------------|----------|-----------|-----------|-----------|-----------|
| Date | 4/5/2017 | 10/5/2017 | 16/5/2017 | 22/5/2017 | 27/5/2017 |
| Weather Condition | Overcast | Overcast | Sunny | Overcast | Sunny |
| Start Time | 9:45 | 9:45 | 9:45 | 9:45 | 9:45 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 66.5 | | | | |
| L _{Aeq} | 66.9 | 67.1 | 64.8 | 65.1 | 65.8 |
| L ₁₀ | 68.2 | 70.1 | 67.8 | 67.9 | 68.0 |
| L ₉₀ | 61.5 | 62.3 | 60.9 | 61.0 | 62.1 |

| Location | NM2 | | | | | |
|--------------------|----------|----------|-----------|-----------|-----------|-----------|
| Date | 2/6/2017 | 8/6/2017 | 14/6/2017 | 20/6/2017 | 26/6/2017 | 30/6/2017 |
| Weather Condition | Cloudy | Sunny | Cloudy | Cloudy | Cloudy | Cloudy |
| Start Time | 9:45 | 9:45 | 9:45 | 9:45 | 9:45 | 9:45 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 66.5 | | | | | |
| L _{Aeq} | 65.0 | 64.9 | 65.2 | 66.9 | 64.9 | 66.1 |
| L ₁₀ | 67.1 | 66.4 | 69.1 | 69.5 | 67.3 | 68.5 |
| L ₉₀ | 58.7 | 60.3 | 59.9 | 60.4 | 60.4 | 61.7 |

| Location | NM2 | | | | |
|--------------------|----------|-----------|-----------|-----------|-----------|
| Date | 6/7/2017 | 12/7/2017 | 18/7/2017 | 24/7/2017 | 29/7/2017 |
| Weather Condition | Cloudy | Sunny | Sunny | Cloudy | Sunny |
| Start Time | 9:45 | 9:45 | 9:45 | 9:45 | 9:45 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 66.5 | | | | |
| L _{Aeq} | 68.1 | 67.5 | 67.8 | 67.2 | 67.9 |
| L ₁₀ | 71.0 | 69.4 | 70.1 | 69.0 | 69.4 |
| L ₉₀ | 61.1 | 61.5 | 62.2 | 61.3 | 61.2 |

Noise - NM2

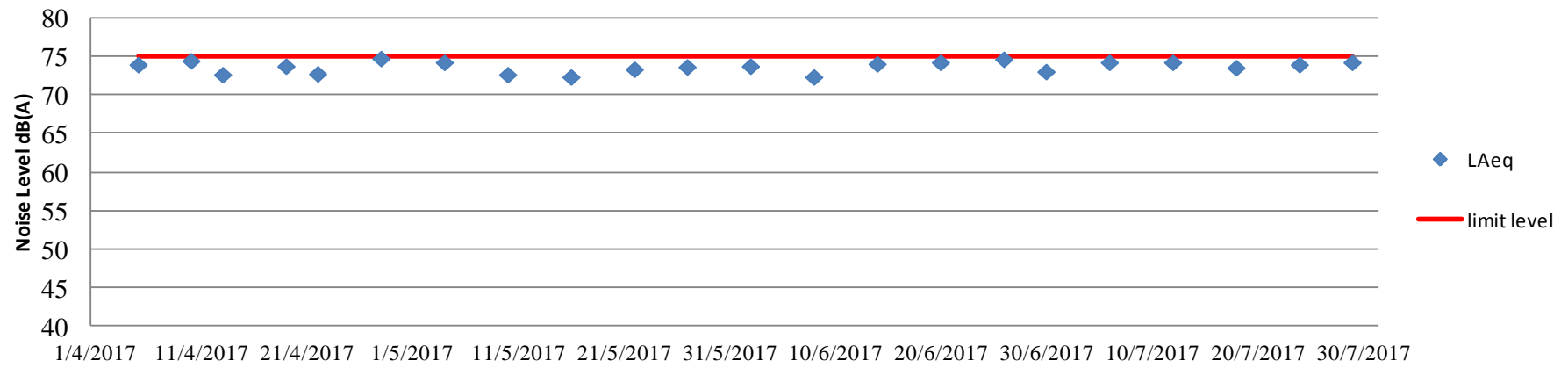


| Location | NM3 | | | | |
|--------------------|----------|-----------|-----------|-----------|-----------|
| Date | 4/5/2017 | 10/5/2017 | 16/5/2017 | 22/5/2017 | 27/5/2017 |
| Weather Condition | Overcast | Overcast | Sunny | Overcast | Sunny |
| Start Time | 10:45 | 15:24 | 15:18 | 16:33 | 10:48 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 74.5 | | | | |
| L _{Aeq} | 74.3 | 72.7 | 72.4 | 73.4 | 73.7 |
| L ₁₀ | 77.0 | 75.4 | 75.6 | 76.4 | 76.5 |
| L ₉₀ | 70.2 | 68.1 | 68.0 | 69.1 | 69.7 |

| Location | NM3 | | | | | |
|--------------------|----------|----------|-----------|-----------|-----------|-----------|
| Date | 2/6/2017 | 8/6/2017 | 14/6/2017 | 20/6/2017 | 26/6/2017 | 30/6/2017 |
| Weather Condition | Cloudy | Sunny | Cloudy | Cloudy | Cloudy | Cloudy |
| Start Time | 10:13 | 15:14 | 9:48 | 10:02 | 10:15 | 10:45 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 74.5 | | | | | |
| L _{Aeq} | 73.8 | 72.4 | 74.1 | 74.3 | 74.7 | 73.1 |
| L ₁₀ | 76.7 | 75.6 | 77.3 | 77.2 | 77.3 | 75.8 |
| L ₉₀ | 69.1 | 67.8 | 68.8 | 69.5 | 68.4 | 69.3 |

| Location | NM3 | | | | |
|--------------------|----------|-----------|-----------|-----------|-----------|
| Date | 6/7/2017 | 12/7/2017 | 18/7/2017 | 24/7/2017 | 29/7/2017 |
| Weather Condition | Cloudy | Sunny | Sunny | Cloudy | Sunny |
| Start Time | 11:23 | 10:17 | 14:52 | 10:15 | 14:03 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 74.5 | | | | |
| L _{Aeq} | 74.3 | 74.3 | 73.6 | 74.0 | 74.3 |
| L ₁₀ | 77.3 | 76.8 | 76.7 | 76.7 | 75.5 |
| L ₉₀ | 69.6 | 70.1 | 69.1 | 69.5 | 70.6 |

Noise - NM3



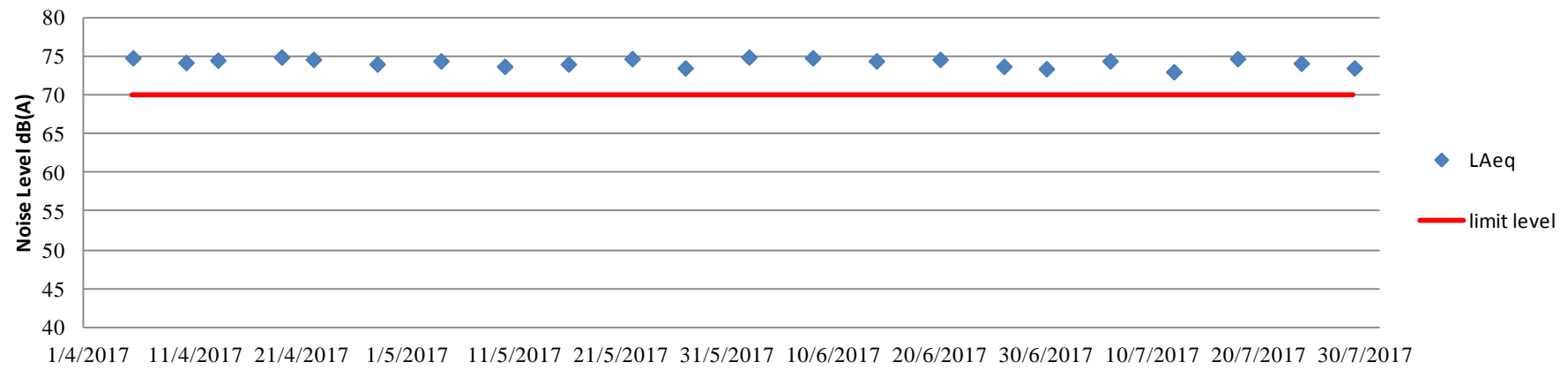
| Location | NM4 | | | | | NM4 (Re-measurement) * | | | | |
|--------------------|----------|-----------|-----------|-----------|-----------|------------------------|-----------|-----------|-----------|-----------|
| Date | 4/5/2017 | 10/5/2017 | 16/5/2017 | 22/5/2017 | 27/5/2017 | 4/5/2017 | 10/5/2017 | 16/5/2017 | 22/5/2017 | 27/5/2017 |
| Weather Condition | Overcast | Overcast | Sunny | Overcast | Sunny | Overcast | Overcast | Sunny | Overcast | Sunny |
| Start Time | 13:00 | 13:00 | 13:00 | 13:00 | 13:00 | 13:31 | 13:31 | 13:31 | 13:31 | 13:31 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 73.3 | | | | | 73.3 | | | | |
| L _{Aeq} | 74.5 | 73.8 | 74.1 | 74.8 | 73.6 | 73.8 | 74.5 | 73.6 | 74.0 | 74.1 |
| L ₁₀ | 77.8 | 77.6 | 77.5 | 77.0 | 76.9 | 76.4 | 77.0 | 76.9 | 77.1 | 76.4 |
| L ₉₀ | 69.5 | 70.3 | 70.1 | 69.9 | 69.5 | 69.9 | 70.0 | 70.2 | 69.8 | 69.3 |

| Location | NM4 | | | | | | NM4 (Re-measurement) * | | | | | |
|--------------------|----------|----------|-----------|-----------|-----------|-----------|------------------------|----------|-----------|-----------|-----------|-----------|
| Date | 2/6/2017 | 8/6/2017 | 14/6/2017 | 20/6/2017 | 26/6/2017 | 30/6/2017 | 2/6/2017 | 8/6/2017 | 14/6/2017 | 20/6/2017 | 26/6/2017 | 30/6/2017 |
| Weather Condition | Cloudy | Sunny | Cloudy | Cloudy | Cloudy | Cloudy | Cloudy | Sunny | Cloudy | Cloudy | Cloudy | Cloudy |
| Start Time | 13:00 | 13:00 | 13:00 | 13:00 | 13:00 | 13:00 | 13:31 | 13:31 | 13:31 | 13:31 | 13:31 | 13:31 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min | 30min | 30min | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 73.3 | | | | | | 73.3 | | | | | |
| L _{Aeq} | 75.0 | 74.9 | 74.5 | 74.7 | 73.8 | 73.5 | 75.9 | 74.4 | 74.8 | 74.2 | 74.1 | 75.1 |
| L ₁₀ | 77.5 | 77.9 | 77.8 | 77.0 | 77.1 | 76.4 | 78.6 | 77.5 | 78.1 | 77.6 | 76.5 | 77.4 |
| L ₉₀ | 68.5 | 68.2 | 69.3 | 68.1 | 67.2 | 68.3 | 69.7 | 69.1 | 68.7 | 68.4 | 68.0 | 68.3 |

| Location | NM4 | | | | | NM4 (Re-measurement) * | | | | |
|--------------------|----------|-----------|-----------|-----------|-----------|------------------------|-----------|-----------|-----------|-----------|
| Date | 6/7/2017 | 12/7/2017 | 18/7/2017 | 24/7/2017 | 29/7/2017 | 6/7/2017 | 12/7/2017 | 18/7/2017 | 24/7/2017 | 29/7/2017 |
| Weather Condition | Cloudy | Sunny | Sunny | Cloudy | Sunny | Cloudy | Sunny | Sunny | Cloudy | Sunny |
| Start Time | 13:00 | 13:00 | 13:00 | 13:00 | 13:00 | 13:31 | 13:31 | 13:31 | 13:31 | 13:31 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 73.3 | | | | | 73.3 | | | | |
| L _{Aeq} | 74.5 | 73.1 | 74.8 | 74.2 | 73.6 | 75.0 | 73.3 | 73.9 | 75.1 | 72.8 |
| L ₁₀ | 77.5 | 76.0 | 77.6 | 77.0 | 76.8 | 77.8 | 75.3 | 76.9 | 78.0 | 75.8 |
| L ₉₀ | 69.0 | 67.0 | 69.2 | 68.7 | 68.4 | 68.7 | 67.5 | 68.7 | 69.1 | 67.7 |

* 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

Noise - NM4

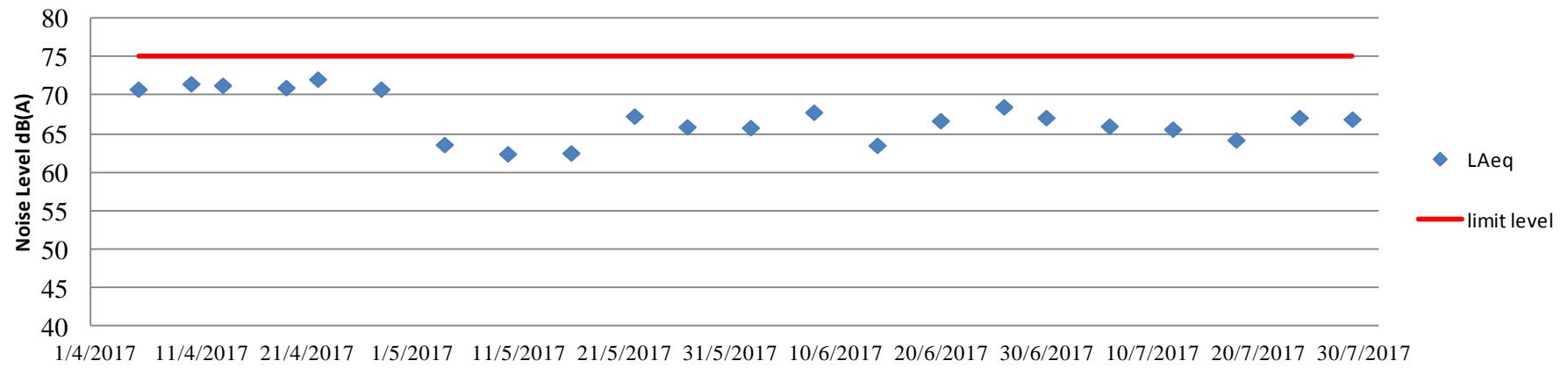


| Location | NM5 | | | | |
|--------------------|----------|-----------|-----------|-----------|-----------|
| Date | 4/5/2017 | 10/5/2017 | 16/5/2017 | 22/5/2017 | 27/5/2017 |
| Weather Condition | Overcast | Overcast | Sunny | Overcast | Sunny |
| Start Time | 10:45 | 10:45 | 10:45 | 10:45 | 10:45 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 71.8 | | | | |
| L _{Aeq} | 63.6 | 62.4 | 62.5 | 67.3 | 65.9 |
| L ₁₀ | 68.7 | 67.2 | 67.5 | 70.5 | 68.9 |
| L ₉₀ | 56.8 | 53.9 | 55.3 | 56.5 | 57.2 |

| Location | NM5 | | | | | |
|--------------------|----------|----------|-----------|-----------|-----------|-----------|
| Date | 2/6/2017 | 8/6/2017 | 14/6/2017 | 20/6/2017 | 26/6/2017 | 30/6/2017 |
| Weather Condition | Cloudy | Sunny | Cloudy | Cloudy | Cloudy | Cloudy |
| Start Time | 14:45 | 14:45 | 14:45 | 14:45 | 14:45 | 14:45 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 71.8 | | | | | |
| L _{Aeq} | 65.8 | 67.8 | 63.5 | 66.7 | 68.5 | 67.1 |
| L ₁₀ | 69.0 | 70.3 | 67.5 | 69.4 | 70.3 | 69.3 |
| L ₉₀ | 58.6 | 59.2 | 57.3 | 58.6 | 59.6 | 60.2 |

| Location | NM5 | | | | |
|--------------------|----------|-----------|-----------|-----------|-----------|
| Date | 6/7/2017 | 12/7/2017 | 18/7/2017 | 24/7/2017 | 29/7/2017 |
| Weather Condition | Cloudy | Sunny | Sunny | Cloudy | Sunny |
| Start Time | 14:45 | 14:45 | 14:45 | 14:45 | 14:45 |
| Measurement Period | 30min | 30min | 30min | 30min | 30min |
| Baseline Level | 71.8 | | | | |
| L _{Aeq} | 66.0 | 65.6 | 64.2 | 67.1 | 66.9 |
| L ₁₀ | 69.2 | 68.9 | 67.1 | 70.5 | 70.2 |
| L ₉₀ | 59.1 | 59.0 | 58.3 | 58.9 | 59.3 |

Noise - NM5



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 | 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 | ✓ |
| 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 PME's | 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 | * |
| 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 | * |

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|-----|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|------------------|-------------------------|-------------------------------|--------------------------|-----|
| 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 | | | | | | ✓ |
| | | - Carry out adequate surface protection measures well before the arrival of a rainstorm | | | | | | ✓ |
| 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 | * |

| | | | | | | | | |
|-----|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------|-------------------------|-------------------------------|-------------------------------------------|---|
| | | 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) | ✓ |

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|-----|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------|-------------------------|-------------------------------|---------------------------------------------------------------|---|
| | | | | | | | 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 | * |

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|---------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------|-------------------------|-------------------------------|-----------------------------------|---|
| 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 | * |

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|-----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|-------------------------|-------------------------------|---------------------------------------------------------------|-----|
| | | <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 | ✓ |

| 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 |
| Grand Total | 89 | 1 | 3 | 0 | 0 |