

MTR Corporation Limited

Kwun Tong Line Extension (KTE)

Monthly EM&A Report (August 2016)

Verified by:  \_\_\_\_\_

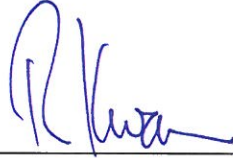
Position: Independent Environmental Checker

Date: 14 Sept 2016

MTR Corporation Limited

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Certified by:  \_\_\_\_\_

Position: Environmental Team Leader

Date: 14 SEP 2016

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## ***EXECUTIVE SUMMARY***

The Kwun Tong Line Extension (KTE) Project was awarded to the respective contractors in late May 2011. The EM&A programme for the Kwun Tong Line Extension (KTE) Project commenced on 20 June 2011, the commencement date of construction of the Project. This is the 62<sup>nd</sup> monthly Environmental Monitoring and Audit (EM&A) Report for Kwun Tong Line Extension (KTE) Project. The Report presents the results of EM&A works and the impact monitoring for the construction works undertaken during the period of 1 August 2016 to 31 August 2016. The major construction activities in the reporting period included building service and E&M works, track related installation works and reinstatement works.

No exceedance was recorded for TSP and noise monitoring in this reporting month.

No complaint in related with environmental issues was received in this reporting month.

As all KTE related construction works at Wylie Road Ancillary Building (Work Site C) has been ended in June 2016, a termination proposal for CD1a and CN3a at Methodist School was submitted on 18 July 2016 for EPD approval. The termination proposal was approved by EPD on 1 August 2016.

In this reporting month, noise commissioning test for all major fixed noise sources has been carried out. In accordance with EM&A clause 5.2.8, the Leq (30mins) has been used as the monitoring parameter to ensure the noise compliance with the noise standard stipulated in the EIAO-TM and NCO. The measurements were carried out at the first layer of representative NSRs for the area of WAB, HOM and WHA. The measurement results showed the compliance of EIAO-TM and NCO criteria. Details of the measurement results could be found in Appendix H.

Regular joint site inspections, led by the ER with the presence of representatives from the Contractors and Environmental Team, were conducted on a weekly basis to monitor Contractors' performance on environmental management and implementation of environmental pollution control and mitigation measures for the Project. No non-conformance was identified in the reporting period. Environmental concerned items raised during site inspections have been followed up by the respective contractors in a responsible manner.

Future key issues envisaged in the coming month include noise and dust emission, and site water control issues at work sites. ET will continue the implementation of EM&A programme in accordance to the EM&A manual. Details of future key issues produced by construction activities are given in Section 12 of the report.

An Environmental Permit (EP-399/2010/D), which is being used for the KTE Project, was granted by EPD dated 16 February 2016.

# 1 INTRODUCTION

## 1.1 Project Background

MTR Corporation Limited (MTRCL) proposes to build a new railway line, the Kwun Tong Line Extension (KTE), otherwise referred to as ‘the Project’, which is an extension of the existing Kwun Tong Line from Yau Ma Tei Station to Whampoa area. The route length of the fully underground KTE is approximately 2.6 km with two new stations namely Ho Man Tin Station (HOM) and Whampoa Station (WHA), and a new ancillary ventilation building at Wylie Road.

## 1.2 Project Programme

The Kwun Tong Line Extension (KTE) Project was awarded to the respective Contractors Nishimatsu Construction Co. Ltd (NCC) and Chun Wo-Hip Hing Joint Venture (CHJV) for construction in late May 2011. The commencement of construction was on 20 June 2011. The construction of the KTE is expected to complete in 2016.

NCC, as the Contractor of Contract 1001, is responsible for the construction of alignment link from the existing Yau Ma Tei Station to Wuhu Street at Whampoa and the new Ho Man Tin Station as well as the ancillary ventilation building at Wylie Road. CHJV, as the Contractor of Contract 1002, is responsible for the construction of the underground Whampoa Station and a platform & overrun tunnel.

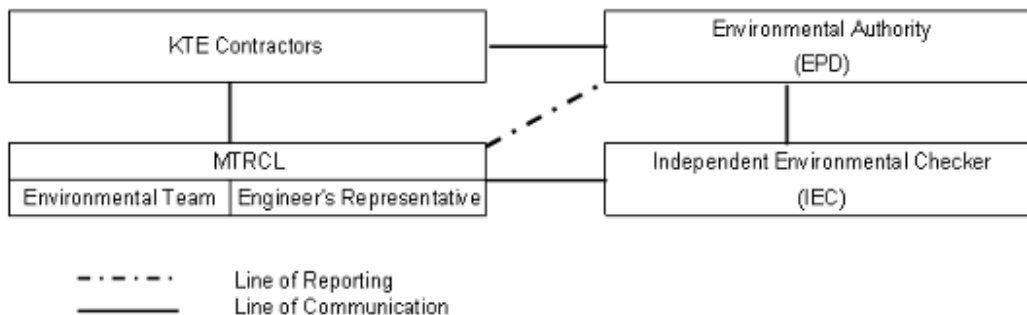
## 1.3 Coverage of the EM&A Report

The EM&A programme for the Kwun Tong Line Extension (KTE) Project commenced on 20 June 2011. This is the 62<sup>nd</sup> Monthly Environmental Monitoring and Audit (EM&A) Report for the Project. The Report presents the results of EM&A works and the impact monitoring for the construction works undertaken by respective Contractors during the period of 1 August 2016 to 31 August 2016.

# 2 PROJECT INFORMATION

## 2.1 Project Management Organization and Contact Details

The KTE Project organization chart is presented in Figure 1. Contacts of key environmental personnel of the Project are shown in Tables 1a and 1b respectively.



**Figure 1. Project Organization**

**Table 1a Contact List of Key Personnel for Project Management**

<b>Organization</b>	<b>Name</b>	<b>Telephone</b>
<b>Engineer's Representative</b>		
Project Manager	James Chow	2163 6283
Construction Manager	Kenny Kong	3441 3101
Construction Manager	Nelson Yeung	3940 3398
<b>Independent Environmental Checker</b>		
Consultant – Arup	Jacky Chan	3447 6292
<b>Environmental Team</b>		
Environmental Team Leader	Richard Kwan	2688 1179
<b>Contact 1001 Contractor</b>		
Project Manager	Satoshi Endo	6907 8277
Environmental Officer	Ken Wong	6323 6527
<b>Contact 1002 Contractor</b>		
Project Manager	Eric Wu	2743 3711
Environmental Officer	Li Chi Wah	3509 4107

**Table 1b Contact List of Environmental Authority**

<b>Organization</b>	<b>Name</b>	<b>Telephone</b>
<b>Environmental Protection Department</b>		
Sr Env Protection Offr(Metro Assessment) 2	Queenie Ng	2835 1129
Sr Env Protection Offr(Regional E) 6	PS Ng	2150 8002
Sr Env Protection Offr(Regional E) 5	Alfred Ng	2117 7538
Sr Env Protection Offr(Regional E) 4	Aaron Lui	2117 7502

## 2.2 Project Works Sites and Areas and Environmental Monitoring Locations

The KTE Project works sites and areas are summarized in Table 2 below and shown in [Appendix A](#) Figures 1 to 8. The locations of environmental monitoring stations are indicated in [Appendix A](#) Figures 2 to 8. Table 3 shows the details of the active monitoring stations as reported in Sections 3.1 and 3.2.

**Table 2 Summary of KTE Project Works Sites and Areas**

<i>Contract 1001 Works Sites and Areas</i>	
Works Site A#5	Gascoigne Road Rest Garden
Works Site B	Underground Tunnel between Yau Ma Tei Station and Wylie Road Ancillary Building
Works Site C #6	Wylie Road Ancillary Building
Works Site D	Underground Tunnel between Wylie Road Ancillary Building and Ho Man Tin Station
Works Site E	Ho Man Tin Station
Works Site F	Fat Kwong Street Playground
Works Site G	Underground Tunnel between Ho Man Tin Station and Whampoa Station
Works Area J#3	Finger Pier Barging Point
Works Area K#4	Tseung Kwan O Area 137 Magazine Site

<i>Contract 1002 Works Sites and Areas</i>	
Works Site H	Whampoa Station West Concourse
Works Site I	Whampoa Station East Concourse
Works Area L	Hung Lok Road Site Office

**Table 3 Summary of Impact Air Quality and Noise Monitoring Stations**

<b>ID</b>	<b>Monitoring Station</b>
<b>Air</b>	
CD1a#2 #6	Methodist School
CD2a #1	PolyU Homantin Student Halls of Residence
CD3a	No. 238 Chatham Road North
CD4a	Ka Fu Building, Whampoa Estate
CD5	Fung Kei Millennium Primary School
CD6a#3	Site boundary of Finger Pier adjacent to Harbourfront Horizon
<b>Noise</b>	
CN1#5	Alhambra Building
CN2#5	Methodist College
CN3a#2 #6	Methodist School
CN4a #1	PolyU Homantin Student Halls of Residence
CN5*	Caritas Bianchi College of Careers
CN6	Lok Do Building



<b>ID</b>	<b>Monitoring Station</b>
CN7	Block Y, Ki Fu Building, Whampoa Estate
CN8	Block I, Lok Wah Building, Whampoa Estate
CN9	Block 13, Bauhinia Mansions, Whampoa Garden Site 11
CN10	Block 1, Oak Mansions, Whampoa Garden Site 5
CN11	Fung Kei Millennium Primary School
CN12	GCEPSA Whampoa Primary School

Notes:

\*: Alternative monitoring locations were proposed in the Alternative Proposal which was submitted on 14 Apr 2011 and agreed by the Environmental Protection Department on 29 Apr 2011. The noise monitoring location at Caritas Bianchi College of Careers, which has been relocated to Tiu Keng Leng with the original premise unoccupied and inaccessible, is suspended until the premises are occupied by similar educational use. No noise monitoring will be conducted for CN5.

#1: Access to the original monitoring stations CD2 and CN4 (Yee Fu Building) has been denied by the management office since December 2012 and MTRCL proposed PolyU Homantin Student Halls of Residence as alternative monitoring stations with no objection from EPD on 28 February 2013.

#2: Access to the original monitoring stations CD1 and CN3 (Queen Elizabeth Hospital – Specialist Clinic) has been denied for demolition since end of July 2013 and MTRC proposed Methodist School at Wylie Road as alternative monitoring stations with no objection from EPD on 4 September 2013.

#3: As all KTE related construction works at Finger Pier was completed by end of December 2013 and the site have been handed over to other project under MTR, the CD6a has been terminated starting from January 2014. EPD has no objection on the termination proposal on 29 January 2014.

#4: All KTE related construction works at TKO Magazine site was completed at the end of December 2014 and the site had been handed over to other project under MTR.

#5: As all KTE related construction works at Gascoigne Road Rest Garden was ended by end January 2016 and the site will be handed over to LCSD. Termination proposal for noise monitoring at CN1 and CN2 was submitted to EPD on 1 February 2016 for approval. The termination proposal was approved by EPD on 29 March 2016.

#6: As all KTE related construction works at Wylie Road Ancillary Building (Work Site C) was completed in June 2016, termination proposal for dust monitoring (CD1a) and noise monitoring (CN3a) at Methodist School was submitted to EPD on 18 July 2016. The termination proposal was approved by EPD on 1 August 2016.

### **2.3 Summary of EM&A Requirements**

The EM&A programme mainly requires environmental monitoring for air quality, noise, landscape and visual, water quality and waste management as specified in the EM&A Manual.

A summary of impact EM&A requirements as applicable to this EM&A Report is presented in Table 4 below.

**Table 4 Summary of Impact EM&A Requirements**

Parameters	Descriptions	Locations	Monitoring Frequencies	Duration
Air Quality	24-hr TSP	Shown in Table 3	Once per 6 days	Construction stage
Noise	$L_{eq(30min)}$	Shown in Table 3	Once a week	Construction stage
Landscape and visual	On-Site Audit	Active Works Sites	Bi-weekly	Construction stage
Waste	On-Site Audit	Active Works Sites	Weekly	Construction stage
Wastewater	On-Site Audit	Active Works Sites	Weekly and in accordance to the discharge licences	Construction stage
General Site Conditions	Environmental Site Inspection	Active Works Sites	Weekly	Construction stage

Environmental Quality Performance Limits for air quality and noise are shown in [Appendix B](#). The Event Action Plan for air quality and noise are shown in [Appendix C](#).

#### **2.4 Implementation of Environmental Mitigation Measures**

The KTE Civil Works Contractors are required to implement the mitigation measures as specified in the EP, EIA Report and EM&A Manual. During the regular environmental site inspections, the Contractors' implementation of mitigation measures were inspected and reviewed. A schedule of the implementation of mitigation measures identified in the KTE EIA is given in [Appendix D](#).

#### **2.5 Construction Activities in the Reporting Month**

Major construction activities carried out by the respective KTE Civil Works Contractors during the reporting period include:

##### **Contract 1001 - Works Sites and Areas**

###### Works Site A (Gascoigne Road Rest Garden)

- All works related to KTE project completed

###### Works Site B (Underground Tunnel between Yau Ma Tei Station and Wylie Road Ancillary Building)

- All works related to KTE project completed

###### Works Site C (Wylie Road Ancillary Building)

- All works related to KTE project completed

###### Works Site D (Underground Tunnel between Wylie Road Ancillary Building and Ho Man Tin Station)

- All works related to KTE project completed

Works Site E (Ho Man Tin Station)

- Architectural builders works and finishes
- Landscaping works

Works Site F (Fat Kwong Street Playground)

- Reinstatement works

Works Site G (Underground Tunnel between Ho Man Tin Station and Whampoa Station)

- All works related to KTE project completed

Works Area J (Hung Hom Barging Point)

- All works related to KTE project completed

Works Area K (Tseung Kwan O Area 137 Magazine Site)

- All works related to KTE project completed

**Contract 1002 - Works Sites and Areas**

Works Site H (Whampoa Station West Concourse)

- Track related defects rectification works
- Architectural builders works and finishes
- Building services and E&M works
- Underground utilities construction works
- Backfill and road reinstatement

Works Site I (Whampoa Station East Concourse)

- Track related defects rectification works
- Architectural builders works and finishes
- Building services and E&M works
- Underground utilities construction works
- Backfill and road reinstatement

Works Area L (Hung Lok Road Site Office)

- No construction activities was carried out

**2.6 Construction Activities for the Coming Month**

According to the construction programme for the Civil Works Contracts, the scheduled major construction activities in the next reporting month are as follows:

**Contract 1001 - Works Sites and Areas**

Works Site A (Gascoigne Road Rest Garden)

- All works related to KTE project completed

Works Site B (Underground Tunnel between Yau Ma Tei Station and Wylie Road Ancillary Building)

- All works related to KTE project completed

Works Site C (Wylie Road Ancillary Building)

- All works related to KTE project completed

Works Site D (Underground Tunnel between Wylie Road Ancillary Building and Ho Man Tin Station)

- Track related installation works

Works Site E (Ho Man Tin Station)

- Architectural builders works and finishesLandscaping works

Works Site F (Fat Kwong Street Playground)

- Reinstatement works

Works Site G (Underground Tunnel between Ho Man Tin Station and Whampoa Station)

- All works related to KTE project completed

Works Area J (Hung Hom Barging Point)

- All works related to KTE project completed

Works Area K (Tseung Kwan O Area 137 Magazine Site)

- All works related to KTE project completed

**Contract 1002 - Works Sites and Area**

Works Site H (Whampoa Station West Concourse)

- All works related to Whampoa Station completed
- Backfill and road reinstatement

Works Site I (Whampoa Station East Concourse)

- All works related to Whampoa Station and Overrun Tunnel completed
- Backfill and road reinstatement

Works Area L (Hung Lok Road Site Office)

- No construction activities will be carried out

### 3 IMPACT MONITORING

#### 3.1 Air Quality

##### 24-Hour TSP Levels Monitoring

The sampling procedure follows that described in the App. B of Pt 50 in 40CFR Ch.1 (U.S. Environmental Protection Agency). TSP is sampled by drawing air through a conditioned, pre-weighed filter paper inside the high volume sampler at a controlled rate. After 24-hour sampling the filter paper with retained particles is collected and returned to the laboratory for drying in a desiccator followed by weighing. TSP levels are calculated from the ratio of the mass of particulate retained on the filter paper to the total volume of air sampled.

The samplers should be properly maintained. Prior to dust monitoring commencing, appropriate checks should be made to ensure that all equipment and necessary power supply are in good working condition.

##### Calibration Requirements

The flow rate of the high volume sampler with mass flow controller will be calibrated using an orifice calibrator. Initial calibration (five points) will be conducted upon installation and prior to commissioning. Calibration will be carried out every six months. Calibration certificates are attached in [Appendix E](#).

To examine the construction dust levels, 24-hour TSP monitoring was undertaken according to the EM&A Manual. The dust monitoring locations are shown in the Section 2.2 above.

Monitoring results are presented in the following table and [Appendix F](#) for graphical plot. The 24-hour TSP monitoring results in the range from 39.0 to 114.6 µg/m<sup>3</sup> recorded in the monitoring period shows that the dust levels generated by the active construction activities were within the Action Levels.

**Table 5 Summary of 24-Hour TSP Levels Monitoring Results**

<b>CD2a PolyU Homantin Student Halls of Residence</b>					
Date	TSP (µg/m <sup>3</sup> )	Action Level (µg/m <sup>3</sup> )	Limit Level (µg/m <sup>3</sup> )	Compliance (Yes /No)	Weather Condition
02/08/2016	114.6	183.0	260.0	Yes	Rainy
08/08/2016	84.1	183.0	260.0	Yes	Cloudy
13/08/2016	59.6	183.0	260.0	Yes	Rainy
19/08/2016	96.0	183.0	260.0	Yes	Rainy
25/08/2016	78.4	183.0	260.0	Yes	Sunny
31/08/2016	112.9	183.0	260.0	Yes	Rainy
<b>CD3a No.238 Chatham Road North</b>					

Date	TSP ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )	Compliance (Yes /No)	Weather Condition
05/08/2016	45.0	192.0	260.0	Yes	Cloudy
11/08/2016	39.0	192.0	260.0	Yes	Rainy
17/08/2016	106.2	192.0	260.0	Yes	Rainy
23/08/2016	61.5	192.0	260.0	Yes	Sunny
29/08/2016	56.9	192.0	260.0	Yes	Sunny
<b>CD4a Ka Fu Building, Whampoa Estate</b>					
Date	TSP ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )	Compliance (Yes /No)	Weather Condition
05/08/2016	51.5	187.0	260.0	Yes	Cloudy
11/08/2016	79.8	187.0	260.0	Yes	Rainy
17/08/2016	104.7	187.0	260.0	Yes	Rainy
23/08/2016	100.9	187.0	260.0	Yes	Sunny
29/08/2016	46.6	187.0	260.0	Yes	Sunny
<b>CD5 Fung Kei Millennium Primary School</b>					
Date	TSP ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )	Compliance (Yes /No)	Weather Condition
05/08/2016	93.5	168.0	260.0	Yes	Cloudy
11/08/2016	83.2	168.0	260.0	Yes	Rainy
17/08/2016	46.7	168.0	260.0	Yes	Rainy
23/08/2016	61.0	168.0	260.0	Yes	Sunny
29/08/2016	55.4	168.0	260.0	Yes	Sunny

### 3.2 Noise

B&K 2250 sound level meters which complied with the International Electrotechnical Commission Publication 651:1979 (Type 1) and 804:1985 (Type 1), specification as referred to in the Technical Memoranda to the NCO were used for the construction noise impact monitoring. The B&K sound level meter and B&K 4231 calibrator are verified by the certified laboratory or manufacturer in biennial basis and annual basis respectively to ensure they perform to the same level of accuracy as stated in the manufacturer's specifications. In this reporting period, sound level meters with serial number 2551244 and 2704791 were used while calibrator with serial number 2725557 was used for checking the sound level meters. All relevant calibration certificates are attached in [Appendix E](#) for reference.

Immediately prior to and following each set of measurements at any NSR, the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. If the calibration levels before and after the measurement differs by more than 1.0dB the measurement shall be repeated to obtain a reliable result. Periods of prolonged or repeated overloading of the sound level meter detector were avoided by setting the meter with adequate headroom prior to commencing measurements. Measurements were recorded to the nearest whole dB, with values of 0.5 or more being rounded up.

Impact noise monitoring of  $L_{Aeq(30min)}$  was undertaken to measure construction noise levels in accordance with the EM&A Manual. The noise monitoring locations are shown in Section 2.2 above.

The monitoring results corrected to the baselines in the range from 49 to 73 dB(A) are presented in the following table and [Appendix F](#) for graphical plot.

**Table 6 Summary of Construction Noise Monitoring Results**

<b>CN4a - PolyU Homantin Student Halls of Residence</b>								
Date	Time	Measured Leq(dBA)	Baseline Leq (dBA)	Corrected Leq(dBA)#	Limit Level (dBA)	Exceedance of Limit Level	Residual Level (dBA)##	Exceedance of Residual Level
01/08/2016	14:30	69	-	-	75	No	77	No
08/08/2016	15:00	69	-	-	75	No	77	No
15/08/2016	13:30	71	-	-	75	No	77	No
22/08/2016	13:30	70	-	-	75	No	77	No
29/08/2016	15:30	70	-	-	75	No	77	No
<b>CN6- Lok Do Building</b>								
Date	Time	Measured Leq(dBA)	Baseline Leq (dBA)	Corrected Leq(dBA)#	Limit Level (dBA)	Exceedance of Limit Level	Residual Level (dBA)##	Exceedance of Residual Level
01/08/2016	16:00	70	71	***	75	No	-	-
08/08/2016	16:00	69	71	***	75	No	-	-
15/08/2016	14:30	71	71	64	75	No	-	-
22/08/2016	14:30	70	71	***	75	No	-	-
29/08/2016	16:30	69	71	***	75	No	-	-
<b>CN7- Block Y, Ki Fu Building, Whampoa Estate</b>								
Date	Time	Measured Leq(dBA)	Baseline Leq (dBA)	Corrected Leq(dBA)#	Limit Level (dBA)	Exceedance of Limit Level	Residual Level (dBA)##	Exceedance of Residual Level
03/08/2016	9:30	71	71	***	75	No	83	No
10/08/2016	14:00	70	71	***	75	No	83	No
17/08/2016	10:30	73	71	68	75	No	83	No
24/08/2016	10:00	72	71	62	75	No	83	No
31/08/2016	9:00	72	72	64	75	No	83	No
<b>CN8- Block I, Lok Wah Building, Whampoa Garden</b>								
Date	Time	Measured Leq(dBA)	Baseline Leq (dBA)	Corrected Leq(dBA)#	Limit Level (dBA)	Exceedance of Limit Level	Residual Level (dBA)##	Exceedance of Residual Level
03/08/2016	10:30	73	69	71	75	No	81	No
10/08/2016	13:00	74	70	72	75	No	81	No
17/08/2016	9:30	71	70	66	75	No	81	No
24/08/2016	9:00	73	70	70	75	No	81	No
31/08/2016	10:00	72	70	69	75	No	81	No
<b>CN9- Block 13, Bauhinia Mansions, Whampoa Garden Site 11</b>								
Date	Time	Measured Leq(dBA)	Baseline Leq (dBA)	Corrected Leq(dBA)#	Limit Level (dBA)	Exceedance of Limit Level	Residual Level (dBA)##	Exceedance of Residual Level
04/07/2016	15:30	71	70	66	75	No	79	No
11/07/2016	11:00	74	69	72	75	No	79	No
18/07/2016	10:00	73	69	71	75	No	79	No
25/07/2016	16:00	72	70	69	75	No	79	No
<b>CN10- Block 1, Oak Mansions, Whampoa Garden Site 5</b>								
Date	Time	Measured Leq(dBA)	Baseline Leq (dBA)	Corrected Leq(dBA)#	Limit Level (dBA)	Exceedance of Limit Level	Residual Level (dBA)##	Exceedance of Residual Level
03/08/2016	15:00	73	67	72	75	No	82	No
10/08/2016	9:00	72	66	71	75	No	82	No
17/08/2016	14:00	74	69	73	75	No	82	No
24/08/2016	15:30	74	67	73	75	No	82	No
31/08/2016	15:30	73	67	71	75	No	82	No
<b>CN11- Fung Kei Millennium Primary School</b>								



Date	Time	Measured Leq(dBA)	Baseline Leq (dBA)	Corrected Leq(dBA)#	Limit Level (dBA)	Exceedance of Limit Level	Residual Level (dBA)##	Exceedance of Residual Level
03/08/2016	14:00	68	64	66	70	No	78	No
10/08/2016	11:00	69	64	68	70	No	78	No
17/08/2016	13:00	68	65	65	70	No	78	No
24/08/2016	14:00	69	64	67	70	No	78	No
31/08/2016	13:30	68	64	66	70	No	78	No
<b>CN12- GCEPSA Whampoa Primary School</b>								
Date	Time	Measured Leq(dBA)	Baseline Leq (dBA)	Corrected Leq(dBA)#	Limit Level (dBA)	Exceedance of Limit Level	Residual Level (dBA)##	Exceedance of Residual Level
03/08/2016	13:00	67	66	62	70	No	76	No
10/08/2016	11:30	66	65	60	70	No	76	No
17/08/2016	11:30	67	65	61	70	No	76	No
24/08/2016	13:00	66	66	49	70	No	76	No
31/08/2016	14:30	66	64	62	70	No	76	No

Notes:

It is noted that all noise monitoring were not undergone in the raining period. The weather condition is fine and with wind speed < 2m/s.

Decimal point of measured and baseline monitoring data is used to calculate the corrected noise level.

# The Measured Leq is corrected against the corresponding Baseline Level.

\*\*\* Refers to the Measured Leq is lower than the Baseline Level.

## Residual Level refers to the maximum predicted construction noise levels in the EIA report when residual impact is anticipated.

In this reporting month, noise commissioning test for all major fixed noise sources has been carried out. In accordance with EM&A clause 5.2.8, the Leq (30mins) has been used as the monitoring parameter to ensure the noise compliance with the noise standard stipulated in the EIAO-TM and NCO. The measurements were carried out at the first layer of representative NSRs for the area of WAB, HOM and WHA. The measurement results showed the compliance of EIAO-TM and NCO criteria. Details of the measurement results could be found in Appendix H.

### 3.3 Action taken in Event of Exceedance

No exceedance was recorded for both TSP and noise in this reporting period.

## **4 LANDSCAPE AND VISUAL**

### **4.1 Monitoring Requirements**

Monitoring of the implementation of the landscape and visual mitigation measures during construction phase was conducted in accordance with the requirements as stipulated in the EM&A Manual.

The landscape and visual monitoring and audit will be conducted once every two weeks throughout the construction stage.

### **4.2 Audit Results**

Monitoring and audit was undertaken in accordance with the EM&A Manual.

#### Tree Felling at Contract 1001 Works Sites / Areas

No tree related to KTE project was felled during the reporting month.

#### Tree Felling at Contract 1002 Works Sites / Areas

No tree related to KTE project was felled during the reporting month.

#### Tree Transplantation in this reporting period for Contract 1001

Due to imminent danger of collapsing, two of the preserved trees, numbered T1623 and T1192, were removed after sweeping of Typhoon on 2 August 2016. Incident report would be prepared by the contractor to notify relevant department for the removal.

#### Tree Transplantation in this reporting period for Contract 1002

No tree related to KTE project was transplanted during the reporting month.

#### Bi-weekly inspection

The Registered Landscape Architect of Environmental Team or his representatives conducted inspections and audits and the tree protection works being planned and implemented by the respective contractors of Contract 1001 and 1002 were in progress. No non-conformance was identified in the reporting period.

### **4.3 Action Taken in Event of Non-Conformance**

No non-conformance was recorded in this reporting period.

## **5 WASTE MANAGEMENT**

Mitigation measures on waste management have been implemented in accordance with the requirements of the EM&A Manual. Suitable C&D materials were reused on-site or at other projects such as Andersen Road Quarry while the remaining C&D materials and

non-inert wastes were disposed at the public filling reception facilities and the landfills respectively. The quantities disposed in the reporting period are summarized in the following table:

**Table 7 Statistics of Wastes Disposal from KTE**

Amount of Construction Wastes Disposed				
Reporting Period	Inert C&D Materials to Public Fill (m <sup>3</sup> )	Inert C&D Materials Reused (m <sup>3</sup> )	Non-inert Waste to Landfill (m <sup>3</sup> )	Chemical Waste to designated treatment facility (trips)
<b>Contract 1001</b>				
Jun -Dec 2011	28690	24768	714	0
Jan-Dec 2012	40393	415640	1614	2
Jan – Dec 2013	75176	317190	2544	7
Jan – Dec 2014	43825	142474	7692	5
Jan – Dec 2015	38687	4172	14088	0
January 2016	1185	0	1014	1
February 2016	2232	0	900	0
March 2016	1435	0	948	1
April 2016	1905	0	618	0
May 2016	1903	0	696	0
June 2016	1109	0	924	0
July 2016	1464	0	828	0
August 2016	608	0	426	1
Subtotal	238612	904244	33006	17
<b>Contract 1002</b>				
June – Dec 2011	3037	0	9	0
Jan – Dec 2012	14484	68	252	5
Jan – Dec 2013	45017	60	127	0
Jan – Dec 2014	204647	6826	211	1
Jan – Dec 2015	48684	376	11719	2
January 2016	362	0	1260	0
February 2016	22	0	570	0
March 2016	15	5	127	0
April 2016	15	0	816	0
May 2016	12	2	682	0
June 2016	23	1	517	0
July 2016	218	80	257	1
August 2016	6	144	107	1
Subtotal	316542	7562	16654	10
Overall Total	555154	911806	49660	27

## **6 WATER QUALITY**

Monitoring of the implementation of the water quality mitigation measures during construction phase was conducted in accordance with the requirements as stipulated in the EM&A Manual.

Weekly site inspection will be conducted throughout the construction stage covering the entire project site areas to ensure the recommended mitigation measures are properly implemented.

In the reporting period, the water quality mitigation measures were implemented in accordance with the requirements as stipulated in the EM&A Manual and found in an acceptable manner.

Water sample test were conducted for Works Sites E and F in August 2016. Analytical results have been reported in accordance to WPCO licenses.

## **7 RECORD OF ENVIRONMENTAL COMPLAINTS**

No complaint in relation with environmental issue was received in this reporting month.

A summary of complaint received since commencement of the project is shown below:

**Table 8 Summary of Complaint Received**

Reporting Period	Invalid Complaint			Valid Complaint		
	Frequency	Nature	Status	Frequency	Nature	Status
June 2011	0	N/A	N/A	0	N/A	N/A
July 2011	0	N/A	N/A	0	N/A	N/A
August 2011	0	N/A	N/A	0	N/A	N/A
September 2011	1	Noise	Closed	0	N/A	N/A
October 2011	0	N/A	N/A	0	N/A	N/A
November 2011	0	N/A	N/A	1	Dust	Closed
December 2011	1	Water	Closed	0	N/A	N/A
January 2012	0	N/A	N/A	0	N/A	N/A
February 2012	1	Noise	Closed	1	Noise	Closed
March 2012	2	Noise & Dust	Closed	2	Noise	Closed
April 2012	1	N/A	N/A	1	Noise	Closed
May 2012	1	Water	Closed	0	N/A	N/A
June 2012	3	Noise & Dust	Closed	3	Noise	Closed
July 2012	0	N/A	N/A	0	N/A	N/A
August 2012	2	Noise & Odor	Closed	0	N/A	N/A
September 2012	1	Air	Closed	0	N/A	N/A
October 2012	2	Noise	Closed	0	N/A	N/A
November 2012	2	Noise & Odor	Closed	1	Noise	Closed
December 2012	0	N/A	N/A	0	N/A	N/A
January 2013	0	N/A	N/A	1	Visual	Closed
February 2013	0	N/A	N/A	0	N/A	N/A
March 2013	1	Noise	Closed	0	N/A	N/A
April 2013	0	N/A	N/A	0	N/A	N/A
May 2013	0	N/A	N/A	0	N/A	N/A
June 2013	0	N/A	N/A	0	N/A	N/A
July 2013	0	N/A	N/A	0	N/A	N/A
August 2013	0	N/A	N/A	0	N/A	N/A
September 2013	0	N/A	N/A	0	N/A	N/A
October 2013	0	N/A	N/A	0	N/A	N/A
November 2013	0	N/A	N/A	0	N/A	N/A
December 2013	0	N/A	N/A	0	N/A	N/A
January 2014	0	N/A	N/A	0	N/A	N/A
February 2014	0	N/A	N/A	0	N/A	N/A
March 2014	1	Noise	Closed	0	N/A	N/A
April 2014	1	Noise	Closed	0	N/A	N/A
May 2014	1	Noise	Closed	1	Fume	Closed
June 2014	0	N/A	N/A	1	Fume	Closed
July 2014	0	N/A	N/A	1	Fume	Closed
August 2014	0	N/A	N/A	0	N/A	N/A
September 2014	1	Dust	Closed	0	N/A	N/A
October 2014	0	N/A	N/A	0	N/A	N/A
November 2014	1	Air	Closed	0	N/A	N/A
December 2014	1	Odor, Noise, and Water	Closed	0	N/A	N/A
Sub-cumulative	24	N/A	N/A	13	N/A	N/A

January 2015	1	Air	Closed	0	N/A	N/A
February 2015	0	N/A	N/A	1	Visual	Closed
March 2015	0	N/A	N/A	0	N/A	N/A
April 2015	2	Air	Closed	0	N/A	N/A
May 2015	3	Noise	Closed	0	N/A	N/A
June 2015	1	Noise	Closed	0	N/A	N/A
July 2015	0	N/A	N/A	0	N/A	N/A
August 2015	1	Odor	Closed	0	N/A	N/A
September 2015	0	N/A	N/A	0	N/A	N/A
October 2015	0	N/A	N/A	0	N/A	N/A
November 2015	0	N/A	N/A	0	N/A	N/A
December 2015	0	N/A	N/A	0	N/A	N/A
January 2016	0	N/A	N/A	0	N/A	N/A
February 2016	0	N/A	N/A	0	N/A	N/A
March 2016	0	N/A	N/A	0	N/A	N/A
April 2016	0	N/A	N/A	0	N/A	N/A
May 2016	0	N/A	N/A	0	N/A	N/A
June 2016	0	N/A	N/A	0	N/A	N/A
July 2016	0	N/A	N/A	0	N/A	N/A
August 2016	0	N/A	N/A	0	N/A	N/A
Cumulative	32	N/A	N/A	14	N/A	N/A

## 8 **RECORD OF NON-COMPLIANCES**

There was no non-compliance identified in the reporting period.

## 9 **NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS**

No summon or prosecution related to environmental issue was recorded in the reporting period. A summary of environmental prosecution since commencement of construction is shown below:

**Table 9 Summary of Summons and Successful Prosecution**

<b>Reporting Period</b>	<b>Frequency</b>	<b>Cumulative</b>	<b>Nature</b>	<b>Status</b>
June – December 2011	0	0	N/A	N/A
January – June 2012	0	0	N/A	N/A
July – December 2012	0	0	N/A	N/A
January - June 2013	0	0	N/A	N/A
July – December 2013	0	0	N/A	N/A
January – June 2014	0	0	N/A	N/A
July – December 2014	0	0	N/A	N/A
January – June 2015	0	0	N/A	N/A
July – December 2015	0	0	N/A	N/A
January – June 2017	0	0	N/A	N/A
July 2016	0	0	N/A	N/A
August 2016	0	0	N/A	N/A
Cumulative	0	0	N/A	N/A

## 10 STATUS OF STATUTORY SUBMISSIONS

### 10.1 Submissions required under Environmental Permit

A summary of the status of submissions required under the KTE Environmental Permit as of 31 August 2016 is shown below:

**Table 10 Summary of Submissions in accordance with EP Conditions**

EP-399/201 0/C Part C Clause No.	Description		Status
1.12	1	Notification of commencement of construction	Submitted on 17 May 2011
2.1	2	Establishment of ET with ET Leader	Submitted on 1 Apr 2011
2.1	3	Establishment of Registered Landscape Architect	Submitted on 14 Apr 2011
2.2	4	Employment of IEC	Submitted on 1 Apr 2011 and 7 Jul 2011
2.3	5	Notification of the management organization of main construction companies and/or any form of JV	Submitted on 19 May 2011
2.4	6	Layout drawings with explanatory statement, showing Project boundary, alignment and associated work areas and works sites locations	Submitted on 10 Jun 2011 and 13 Jul 2011
2.5	7	Notification of setting up hotline to service complaints, comments, suggestions or requests for information	Submitted on 12 May 2011
3.7	8	Report any contamination hotspot(s) identified from the reconnaissance site visit to the kerosene store at Chung Hau Street	Submitted on 25 Jul 2011
5.3	9	Submission of Baseline Monitoring Report	Submitted on 4 May 2011 and 8 Jul 2011
6.2	10	Notification of Internet address to place EM&A data	Submitted on 1 Aug 2011
5.4	11	Monitoring Report for July 2011	Submitted on 12 Aug 2011
5.4	12	Monitoring Report for August 2011	Submitted on 15 Sep 2011
5.4	13	Monitoring Report for September 2011	Submitted on 17 Oct 2011
4.1	14	Review Plan for Operational Groundborne Noise	Submitted on 28 Oct 2011
5.4	15	Monitoring Report for October 2011	Submitted on 14 Nov 2011
5.4	16	Monitoring Report for November 2011	Submitted on 14 Dec 2011
5.4	17	Monitoring Report for December 2011	Submitted on 16 Jan 2012
5.4	18	Monitoring Report for January 2012	Submitted on 14 Feb 2012
4.1	19	Review Plan for Operational Groundborne Noise	Submitted on 29 Feb 2012
5.4	20	Monitoring Report for February 2012	Submitted on 14 Mar 2012
5.4	21	Monitoring Report for March 2012	Submitted on 17 Apr 2012
4.1	22	Review Plan for Operational Groundborne Noise	Submitted on 27 Apr 2012
5.4	23	Monitoring Report for April 2012	Submitted on 15 May 2012
3.7	24	Further Inspection to the Kerosene Store	Submitted on 8 Jun 2012
5.4	25	Monitoring Report for May 2012	Submitted on 14 Jun 2012
2.4	26	Update of Layout drawings with explanatory statement, showing Project boundary, alignment and associated work areas and works sites locations	Submitted on 13 Jul 2012

5.4	27	Monitoring Report for Jun 2012	Submitted on 16 Jul 2012
5.4	28	Monitoring Report for Jul 2012	Submitted on 14 Aug 2012
4.9	29	Landscape and Visual Plan Part 1: Tseung Kwan O Area 137 Magazine Site	Submitted on 27 Aug 2012
5.4	30	Monitoring Report for Aug 2012	Submitted on 14 Sep 2012
5.4	31	Monitoring Report for Sep 2012	Submitted on 16 Oct 2012
4.9	32	Landscape and Visual Plan Part 1: Tseung Kwan O Area 137 Magazine Site Rev. A	Submitted on 24 Oct 2012
5.4	33	Monitoring Report for Oct 2012	Submitted on 14 Nov 2012
5.4	34	Monitoring Report for Nov 2012	Submitted on 14 Dec 2012
5.4	35	Monitoring Report for Dec 2012	Submitted on 14 Jan 2013
5.4	36	Monitoring Report for Jan 2013	Submitted on 19 Feb 2013
5.1	37	Proposal of Alternative Monitoring Locations from MTRCL	Submitted on 26 Feb 2013
5.4	38	Monitoring Report for Feb 2013	Submitted on 14 Mar 2013
5.4	39	Monitoring Report for Mar 2013	Submitted on 16 Apr 2013
5.4	40	Monitoring Report for April 2013	Submitted on 15 May 2013
5.4	41	Monitoring Report for May 2013	Submitted on 17 Jun 2013
2.1	42	Replacement of Registered Landscape Architect	Submitted on 3 Jul 2013
5.4	43	Monitoring Report for June 2013	Submitted on 15 Jul 2013
5.4	44	Monitoring Report for July 2013	Submitted on 14 Aug 2013
5.1	45	Proposal of Alternative Monitoring Locations from MTRCL	Submitted on 16 Aug 2013
5.4	46	Monitoring Report for August 2013	Submitted on 13 Sep 2013
5.4	47	Monitoring Report for September 2013	Submitted on 16 Oct 2013
5.4	48	Monitoring Report for October 2013	Submitted on 14 Nov 2013
5.4	49	Monitoring Report for November 2013	Submitted on 13 Dec 2013
5.4	50	Monitoring Report for December 2013	Submitted on 15 Jan 2014
5.1	51	Proposal for Termination of TSP Monitoring at CD6a Harbourfront Horizon	Submitted on 15 Jan 2014
5.4	52	Monitoring Report for January 2014	Submitted on 17 Feb 2014
5.4	53	Monitoring Report for February 2014	Submitted on 14 Mar 2014
4.1	54	Operational Groundborne Noise Review Plan	Submitted on 20 Mar 2014
4.2	55	Operational Groundborne Noise Review Report – Phase 1	Submitted on 20 Mar 2014
5.4	56	Monitoring Report for March 2014	Submitted on 14 Apr 2014
5.4	57	Monitoring Report for April 2014	Submitted on 19 May 2014
5.4	58	Monitoring Report for May 2014	Submitted on 16 Jun 2014
5.4	59	Monitoring Report for June 2014	Submitted on 15 Jul 2014



5.4	60	Monitoring Report for July 2014	Submitted on 14 Aug 2014
2.1	61	Replacement of Registered Landscape Architect	Submitted on 28 Aug 2014
5.4	62	Monitoring Report for August 2014	Submitted on 16 Sep 2014
5.4	63	Monitoring Report for September 2014	Submitted on 16 Oct 2014
4.2	64	Operational Groundborne Noise Review Report – Phase 1 and Phase 2	Submitted on 6 Nov 2014
5.4	65	Monitoring Report for October 2014	Submitted on 14 Nov 2014
5.4	66	Monitoring Report for November 2014	Submitted on 12 Dec 2014
4.2	67	Operational Groundborne Noise Review Report – Phase 1 and Phase 2 – Resubmission	Submitted on 7 Jan 2015
5.4	68	Monitoring Report for December 2014	Submitted on 15 Jan 2015
5.4	69	Monitoring Report for January 2015	Submitted on 13 Feb 2015
5.4	70	Monitoring Report for February 2015	Submitted on 13 Mar 2015
5.4	71	Monitoring Report for March 2015	Submitted on 17 Apr 2015
5.4	72	Monitoring Report for April 2015	Submitted on 15 May 2015
5.4	73	Monitoring Report for May 2015	Submitted on 12 Jun 2015
5.4	74	Monitoring Report for Jun 2015	Submitted on 15 Jul 2015
4.9	75	Landscape and Visual Plan Part 2: Gascoigne Road Rest Garden	Submitted on 7 Aug 2015
5.4	76	Monitoring Report for Jul 2015	Submitted on 14 Aug 2015
5.4	77	Monitoring Report for Aug 2015	Submitted on 14 Sep 2015
4.9	78	Landscape and Visual Plan Part 3: Wylie Road Ancillary Building	Submitted on 24 Sep 2015
5.4	79	Monitoring Report for Sep 2015	Submitted on 15 Oct 2015
5.4	80	Monitoring Report for Oct 2015	Submitted on 13 Nov 2015
4.3	81	As-built Drawings for Noise Mitigation Measures	Submitted on 20 Nov 2015
5.4	82	Monitoring Report for Nov 2015	Submitted on 14 Dec 2015
4.9	83	Landscape and Visual Plan Part 3: Wylie Road Ancillary Building (Revision A)	Submitted on 16 Dec 2016
5.4	84	Monitoring Report for Dec 2015	Submitted on 15 Jan 2016
5.1	85	Proposal for Termination of Monitoring Station CN1 Alhambra Building and CN2 Methodist College	Submitted on 1 Feb 2016
5.4	86	Monitoring Report for Jan 2016	Submitted on 17 Feb 2016
5.4	87	Monitoring Report for Feb 2016	Submitted on 11 Mar 2016
5.1	88	Proposal of Alternative Operational Ground-Borne Noise Monitoring Location from MTRCL	Submitted on 14 Mar 2016
5.4	89	Monitoring Report for Mar 2016	Submitted on 15 Apr 2016
4.9	90	Landscape and Visual Plan Part 4: Ho Man Tin Station (HOM)	Submitted on 6 May 2016
5.4	91	Monitoring Report for Apr 2016	Submitted on 16 May 2016
4.8	92	KTE Tunnel Water-tight Liner Audit Report	Submitted on 7 Jun 2016
5.4	93	Monitoring Report for May 2016	Submitted on 15 Jun 2016
5.4	94	Monitoring Report for June 2016	Submitted on 15 Jul 2016
5.1	95	Proposal for Termination of Monitoring Station CD1a and CN3a at Methodist School	Submitted on 18 Jul 2016
4.4	96	Operational Ground-borne Noise Performance Test Report	Submitted on 25 Jul 2016
4.9	97	Landscape and Visual Plan Part 2: Gascoigne Road Rest Garden (Revision A)	Submitted on 29 Jul 2016
4.9	98	Landscape and Visual Plan Part 5: Whampoa Station (WHA)	Submitted on 4 Aug 2016
5.4	99	Monitoring Report for Jul 2016	Submitted on 12 Aug 2016
4.9	100	Landscape and Visual Plan Part 2: Gascoigne Road Rest Garden (Revision B)	Submitted on 22 Aug 2016

4.6	101	Proposal for updating Maximum Sound Power Level for Fixed Plant Noise Sources	Submitted on 26 Aug 2016
4.4	102	Operational Ground-borne Noise Performance Test Report (Revision A)	Submitted on 30 Aug 2016
4.6	103	Noise Audit Report to Confirm the compliance of Design of Fixed Plant Noise Sources	Submitted on 31 Aug 2016

## 10.2 Statutory Permits and Licenses

A summary of the status of all relevant environmental permits and licenses as of 31 August 2016 is shown below:

**Table 11 Summary of Environmental Permits and Licenses**

Description	License/ Permit Reference	Issue Date	Expired Date
<b>Environmental Permit</b>			
Environmental Permit for Kwun Tong Line Extension Project (EP-399/2010)	(EP-399/2010) (superseded by EP-399/2010/A)	27 Sep 2010	NA
Variation of Environmental Permit for Kwun Tong Line Extension Project	(EP-399/2010/A) (superseded by EP-399/2010/B)	1 Dec 2010	NA
Variation of Environmental Permit for Kwun Tong Line Extension Project	(EP-399/2010/B) (superseded by EP-399/2010/C)	7 Jun 2012	NA
Variation of Environmental Permit for Kwun Tong Line Extension Project	(EP-399/2010/C) (superseded by EP-399/2010/D)	26 Jan 2015	NA
Variation of Environmental Permit for Kwun Tong Line Extension Project	(EP-399/2010/D)	16 Feb 2016	NA
<b>Contract 1001</b>			
Wastewater Discharge License	WT00024901-2016 (Works Site F)	20 Jul 2016	31 July 2021
	WT00024894-2016 (Works Site E)	20 Jul 2016	31 Jul 2021
Registration as a Chemical Waste Producer	5213-226-N2206-23 (Works Site C)	1 Aug 2011	NA
	5213-237-N2454-04 (Works Site E)	11 Aug 2011	NA
	5213-243-N2454-03 (Works Site F)	11 Aug 2011	NA
Disposal of Construction Waste	Billing Account no. 7012910 activated	26 May 2011	NA
Construction Noise Permit	GW-RE0346-16 (HOM)	08 Apr 2016	01 May 2016 to 30 Sep 2016
	GW-RE0587-16 (FKS)	08 Jun 2016	27 Jun 2016 to 10 Oct 2016
	GW-RE0603-16 (West Cavern to end 1001)	27 Jun 2016	27 Jun 2016 to 26 Aug 2016
<b>Contract 1002</b>			

Wastewater Discharge License	WT00009415-2011 (Site office)	11 Jul 2011	30 Sep 2016
	WT00010827-2011	8 Dec 2011	31 Oct 2016
Registration as a Chemical Waste Producer	Waste Producer No. 5213-245-C3672-01	16 Jun 2011	NA
Disposal of Construction Waste	Billing Account No. 7012934 activated	31 May 2011	NA
Construction Noise Permit	GW-RE0689-16	8 Jul 2016	9 Jul 2016 to 8 Aug 2016
	GE-RE0788-16	9 Aug 2016	9 Aug 2016 to 8 Sep 2016

## ***11 SITE INSPECTIONS***

### ***11.1 Observations***

Regular site inspections led by the Engineer's Representative and anticipated by ET and respective Contractors were undertaken in accordance with the EM&A Manual in the reporting period. The contractors' performance on environmental matters were assessed and found in an acceptable manner. The inspection findings and the associated recommendations on improvement to the environmental protection and pollution control works were raised to the contractors for reference and/ or action.

Observations against the implementation of the mitigation measures recommended in the EP/EIA are summarized as follows:

**Table 12 Summary of Environmental Findings from Site Inspections**

<b>Item</b>	<b>Description</b>	<b>Follow-up Status</b>
	<b>Contract 1001</b>	
1	Dust suppression measures (i.e. watering) shall be enhanced for unpaved work area and for earth moving operations.	Completed
	<b>Contract 1002</b>	
1	Earthy stockpile shall be well covered to prevent dust generation and surface runoff	Ongoing

The respective contractors are following the concerned items raised during the inspections for rectification in a responsible manner.

### ***11.2 Other Notable Events***

#### IEC Site Inspections

The IEC conducted site inspection on 25 August 2016 for Contract 1001 and Contract 1002. Observations listed in section 11.1 were noted during the site inspections and the respective Contractors had followed up the issues as identified in the site inspections in a responsible manner.

#### EPD Inspection

No EPD inspection was recorded during reporting month.

## **12 FUTURE KEY ISSUES**

### **12.1 Key Issues for the Coming Month**

Future key issues envisaged in the coming month include noise, dust and wastewater from site works, handling and disposal of C&D wastes as well as tree protection at site. The ET will continue the implementation of the EM&A programme in accordance to the EM&A Manual.

### **12.2 Effectiveness and Efficiency of Mitigation Measures**

Based on the environmental monitoring results of the reporting period, the effectiveness and efficiency of most of the mitigation measures implemented were found to be satisfactory.

### **13 CONCLUSIONS**

The Report presents the results of EM&A works and the impact monitoring for the construction works undertaken during the period of August 2016.

The major construction activities in the reporting period included building service and E&M works, track related installation works and reinstatement works.

No exceedance was recorded for TSP and construction noise monitoring in this reporting month.

No complaint in related with environmental issue was received in this reporting month.

As all KTE related construction works at Wylie Road Ancillary Building (Work Site C) has been ended in June 2016, a termination proposal for CD1a and CN3a at Methodist School was submitted on 18 July 2016 for EPD approval. The termination proposal was approved by EPD on 1 August 2016.

In this reporting month, noise commissioning test for all major fixed noise sources has been carried out. In accordance with EM&A clause 5.2.8, the Leq (30mins) has been used as the monitoring parameter to ensure the noise compliance with the noise standard stipulated in the EIAO-TM and NCO. The measurements were carried out at the first layer of representative NSRs for the area of WAB, HOM and WHA. The measurement results showed the compliance of EIAO-TM and NCO criteria.

Regular site inspections led by the Engineer's Representative and anticipated by the representatives from ET and the respective Contractors' Team were conducted on a weekly basis to monitor the implementation of environmental pollution control and mitigation measures for the Project.

No non-conformance was identified in the reporting period.

It is concluded from the environmental monitoring and audit works for the Kwun Tong Line Extension Project were undertaken in a responsible manner. The environmental protection and pollution control measures provided by respective contractors of Contract 1001 and 1002 were generally acceptable apart from some minor irregularities which were rectified timely by the respective civil works contractor.

