

**Highways Department**

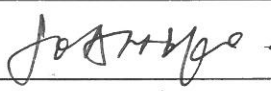

Agreement No. CE 20/2009 (EP)

**Environmental Team for the Widening of  
Tolo Highway / Fanling Highway between  
Island House Interchange and Fanling**

**(Stage 1)  
Between Island House Interchange and  
Tai Hang - Investigation**

**Annual EM&A Review Report  
for November 2012 - October 2013**

[01/2014]

	Name	Signature
Prepared & Checked:	Joanne Ko	
Reviewed & Approved:	Y T Tang	

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**Disclaimer**

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27 January 2013  
By Post

**Attn: Mr. James Penny**

Dear Sir,

**Widening of Tolo Highway between  
Island House Interchange and Tai Hang  
Environmental Permit No.: EP-324/2008/A  
Submission of Annual EM&A Review Report for November 2012 to October 2013 (Stage 1)**

We refer to the Annual EM&A Review Report for November 2012 to October 2013 (Stage 1) for the captioned Project submitted by ET via email on 9, 24 January 2014. We confirm we have no comment.

Yours faithfully  
for MOTT MACDONALD HONG KONG LIMITED

A handwritten signature in black ink, appearing to read "Terence Kong".

Terence Kong  
Independent Environmental Checker

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## EXECUTIVE SUMMARY

The proposed widening of Tolo Highway and Fanling Highway between Island House Interchange and Fanling (the Project) is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO) and was governed by a valid Environmental Permit (EP-324/2008 and EP-324/2008/A)(EP) during the reporting period mentioned below. The Project aims to widen Tolo Highway and Fanling Highway to dual 4-lane carriageway in order to alleviate the current traffic congestion problems and to cope with the increasing transport demands to and from the urban areas and also cross boundary traffic.

The construction works for this Project will be delivered in 2 stages i.e. Stage 1 (between Island House Interchange and Tai Hang) and Stage 2 (between Tai Hang and Wo Hop Shek Interchange). The construction works of Stage 1 commenced on 23 November 2009 and will tentatively be completed in January 2014; while construction programme of Stage 2 is currently under review. This report focuses on Stage 1 of the Project only.

The construction phase of Stage 1 under the EP and the EM&A programme for Stage 1 of the Project commenced on 23 November 2009. The impact environmental monitoring and audit includes air quality and noise monitoring.

This report documents the findings of EM&A works conducted in the period between 1 November 2012 and 31 October 2013.

As informed by the Contract 1 Contractor (China State Construction Engineering (Hong Kong) Ltd.), construction activities in the reporting period included:

- At-grade Road Construction;
- Bridge Deck Construction;
- Noise Barrier Footing Construction and Panel Installation;
- Pile Cap Construction;
- Retaining Wall Construction;
- Soil Nails Works and Installation of Soil Nails;
- Widening and Demolition of Central Dividers
- Asphalt Laying;
- Installation of Drainage Pipes
- Modification of Edge coping;
- Demolition of Temperate bridge TB1 & TB2;
- Pre-bored socket H-pile; and
- Temporary Shoring, Sheetpiling and Excavation

The construction works carried out by the Contract 2 Contractor (Gammon Construction Ltd.) in the reporting period included:

- Condition survey of existing structures;
- Initial and record survey;
- Survey Setting out works for slopes and structures;
- Setting up temporary traffic arrangement;
- Excavation of trial trenches to locate existing utilities;
- Construction of haul road;
- Extension of box culvert and subway;
- Structural works of bridges;
- Construction of Pilecap / Spread footing of Noise Barrier / Semi Noise Enclosure;
- Slope works, including installation of soil nails;
- NTHA mitigation works;
- Construction of retaining wall and associated mini-piles;
- Noise barrier construction;
- Modification / Demolition of existing bridge structures;
- Entrusted watermains works;
- Sewer Installation;

- Road and drainage works; and
- Landscaping works

#### **Breaches of Action and Limit Levels for Air Quality**

No exceedance of Action and Limit Level was recorded for 1-hour TSP monitoring in the reporting period.

No exceedance of Action and Limit Level was recorded for 24-hour TSP monitoring in the reporting period.

#### **Breaches of Action and Limit Levels for Noise**

No Limit Level exceedance of construction noise monitoring was recorded in the reporting period.

There were five (5) noise-related complaints followed up by the Environmental Team in the reporting period. Hence, five (5) Action Level exceedances of construction noise was recorded in the reporting period. Investigations were carried out. The findings and the proposed mitigation measures were submitted to all relevant parties. The Summary of investigation is described in Section 7.1.

#### **Complaint, Notification of Summons and Successful Prosecution**

Thirteen (13) environmental complaints were followed up by the Environmental Team in the reporting period. Investigations were carried out. The findings and the proposed mitigation measures were submitted to all relevant parties. The summary of investigation is described in Section 7.1.

No notification of summons and successful prosecution was received in the reporting period.

## 1 INTRODUCTION

### Background

- 1.1. Tolo Highway and Fanling Highway are expressways in the North East New Territories connecting Sha Tin, Tai Po and Fanling. These highways form a vital part of the strategic Route 9, which links Hong Kong Island to Shenzhen. At present, this section of Route 9 is dual 3-lane carriageway. However, at several major interchanges along this section of Route 9, the highway is only dual-2 lane. Severe congestion is a frequent occurrence during peak periods, particularly in the Kowloon bound direction.
- 1.2. The objective of the Project “Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling” is to widen Tolo Highway and Fanling Highway to dual 4-lane carriageway in order to alleviate the current traffic congestion problems and to cope with the increasing transport demands to and from the urban areas and also cross boundary traffic.
- 1.3. The Project is a designated project and was governed by a valid Environmental Permit (EP-324/2008 and EP-324/2008/A)(EP) during the reporting period mentioned below.
- 1.4. The scope of the Project comprises mainly:
  - (i) Widening of a 5.7 km section of Tolo Highway and 3.0 km section of Fanling Highway between Island House Interchange and Wo Hop Shek Interchange from the existing dual 3-lane to dual 4-lane, including construction of new vehicular bridges;
  - (ii) Widening of interchange sections at Island House Interchange, Tai Po North Interchange, and Lam Kam Road Interchange from dual 2-lane to dual 3-lane, except Sha Tin bound carriageway at Tai Po North Interchange, which is widened from 3-lane to 4-lane, including realignment of various slip roads;
  - (iii) Modification and reconstruction of highways, vehicular bridges, underpasses and footbridges.
- 1.5. The construction works for this Project will be delivered in 2 stages i.e. Stage 1 (between Island House Interchange and Tai Hang) and Stage 2 (between Tai Hang and Wo Hop Shek Interchange). The construction works of Stage 1 commenced on 23 November 2009 and will tentatively be completed in December 2013; while construction programme of Stage 2 is currently under review. This report focuses on Stage 1 of the Project only.
- 1.6. The construction works for Stage 1 of the Project will be implemented under 2 works contracts (Contract 1 and Contract 2). Contract 1 covers the section of Tolo Highway between Island House Interchange and Ma Wo, Contract 2 covers the section of Tolo Highway between Ma Wo and Tai Hang.
- 1.7. Hyder-Arup-Black and Veatch Joint Venture (HABVJV) are appointed by Highways Department as the consultants for the design and construction assignment for the Tolo project under Agreement No. CE 58/2000 Supplementary Agreement No. 3 (SA3) (i.e. the Engineer for the Contracts).
- 1.8. China State Construction Engineering (Hong Kong) Ltd. (CSCE) was commissioned as the Contractor of Contract 1 of Stage 1 of the Project, while Gammon Construction Limited (GCL) was commissioned as the Contractor of Contract 2 of Stage 1 of the Project.
- 1.9. AECOM Asia Co. Ltd. was employed by Highways Department as the Environmental Team to undertake the EM&A works for Stage 1 of the Project and Mott MacDonald Hong Kong Ltd. acts as the Independent Environmental Checker (IEC) for the Contracts.
- 1.10. The construction phase of Stage 1 under the EP commenced on 23 November 2009.
- 1.11. According to the updated EM&A Manual of Stage 1 of the Project, there is a need of an EM&A programme including air quality and noise monitoring. The EM&A programme for Stage 1 of the Project commenced on 23 November 2009.

### Scope of Report

- 1.12. This is the fourth Annual Environmental Monitoring and Audit (EM&A) Review Report under the Agreement No. CE 20/2009 (EP) - Widening of Tolo Highway between Island House Interchange and Tai Hang – Investigation. This report presents a summary of the environmental monitoring and audit works, list of activities and mitigation measures proposed by the ET for Stage 1 of the Project from 1 November 2012 to 31 October 2013.

### Project Organization

- 1.13. The project organization structure is shown in Appendix A. The key personnel contact names and numbers are summarized in Table 1.1.

**Table 1.1 Contact Information of Key Personnel**

Party	Position	Name	Telephone	Fax
<b>ER</b> of Stage 1, Contract 1 (Hyder-Arup-Black & Veatch Joint Venture)	Chief Resident Engineer /TOL01	James Tsang	9038 8797	26674000
<b>ER</b> of Stage 1, Contract 2 (Hyder-Arup-Black & Veatch Joint Venture)	Chief Resident Engineer /TOL02	Paul Appleton	9097 5833	2653 2348
<b>IEC</b> of Stage 1 (Mott MacDonald Hong Kong Ltd.)	Independent Environmental Checker	Terence Kong	2828 5919	2827 1823
<b>Contractor</b> of Stage 1, Contract 1 (China State Construction Engineering (Hong Kong) Ltd.)	Site Agent	Eddie Tang	9863 7686	2667 5666
	Environmental Officer	Michael Tsang	9277 4956	2667 5666
<b>Contractor</b> of Stage 1, Contract 2 (Gammon Construction Ltd.)	Site Agent	John Chan	3126 1202	2559 3410
	Environmental Officer	Thomson Chang	9213 6569	2559 3410
		Crispin Ao	9223 8773	2559 3410
Ao Ho Fo	9220 5848	2559 3410		
<b>ET</b> of Stage 1 (AECOM Asia Company Limited)	ET Leader	Y T Tang	3922 9393	3922 9797

### Summary of Construction Works

- 1.14. The construction phase of Stage 1 under the EP commenced on 23 November 2009. Details of the construction works carried out by the Contract 1 Contractor (CSCE) in this reporting period are listed below:
- At-grade Road Construction;
  - Bridge Deck Construction;
  - Noise Barrier Footing Construction and Panel Installation;
  - Pile Cap Construction;
  - Retaining Wall Construction;
  - Soil Nails Works and Installation of Soil Nails;
  - Widening and Demolition of Central Dividers
  - Asphalt Laying;
  - Installation of Drainage Pipes
  - Modification of Edge coping;
  - Demolition of Temperate bridge TB1 & TB2;
  - Pre-bored socket H-pile; and
  - Temporary Shoring, Sheetpiling and Excavation
- 1.15. The construction works carried out by the Contract 2 Contractor (GCL) in the reporting period were:
- Condition survey of existing structures;
  - Initial and record survey;
  - Survey Setting out works for slopes and structures;
  - Setting up temporary traffic arrangement;
  - Excavation of trial trenches to locate existing utilities;
  - Construction of haul road;
  - Extension of box culvert and subway;
  - Structural works of bridges;
  - Construction of Pilecap / Spread footing of Noise Barrier / Semi Noise Enclosure;
  - Slope works, including installation of soil nails;
  - NTHA mitigation works;
  - Construction of retaining wall and associated mini-piles;
  - Noise barrier construction;
  - Modification / Demolition of existing bridge structures;
  - Entrusted watermains works;
  - Sewer Installation;
  - Road and drainage works; and
  - Landscaping works
- 1.16. The general layout plan of the Project site showing the contract areas is shown in Figure 1.1.
- 1.17. The environmental mitigation measures implementation schedule (EMIS) are presented in Appendix B.

## 2 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

### Monitoring Parameters

- 2.1. The updated EM&A Manual designated 4 air quality monitoring stations and 7 noise monitoring stations to monitor environmental impacts on air quality and noise due to Stage 1 of the Project.
- 2.2. For air quality, monitoring locations AM2 (Shan Tong New Village) and AM3 (Riverain Bayside) were set up at the proposed locations in accordance with updated EM&A Manual. However, for monitoring locations: Dynasty View and Tai Po Garden, proposed in the updated EM&A Manual, as approval could not be obtained from the owner's corporation of the premises, impact air quality monitoring was conducted at alternative monitoring locations: AM1 (Ha Wun Yiu) and AM4 (Tai Kwong Secondary School). The monitoring station at 13 Ha Wun Yiu (AM1) was relocated to Fan Sin Temple, 3 Sheung Wun Yiu (AM1A) in February 2010. Also, the monitoring station at Tai Kwong Secondary School (AM4) was relocated to 168 Shek Kwu Lung Village (AM4A) in September 2011.



- 2.3. For noise, monitoring stations NM3 (Wong Shiu Chi Middle School), NM6 (PLK Tin Ka Ping Primary School) and NM7 (Riverain Bayside) were set up at the proposed locations in accordance with updated EM&A Manual. However, for monitoring locations: Tai Po Garden, Dynasty View, Hong Kong Teachers' Association Lee Heng Kwei Secondary School and Grand Palisades, proposed in the updated EM&A Manual, as approval of access could not be obtained from the owner's corporation of the premises or the principal of the education institutes, impact noise monitoring was conducted at alternative monitoring locations: NM1 (Tai Kwong Secondary School), NM2 (Ha Wun Yiu), NM4 (Uptown Plaza) and NM5 (The Paragon). The monitoring station at Tai Kwong Secondary School (NM1) was relocated to 168 Shek Kwu Lung Village (NM1A) in September 2011.
- 2.4. As Tai Kwong Secondary School was closed down with effect from 1 September 2011, air quality (AM4) and noise (NM1) monitoring stations were relocated to 168 Shek Kwu Lung Village, naming AM4A and NM1A respectively, starting from 1 September 2011. The same air quality Action and Limit of AM4 were adopted for AM4A. For the measured construction noise level, the same noise Action Level of NM1 was adopted for NM1A, whereas Limit Level for residential noise sensitive receiver was adopted for NM1A.
- 2.5. The monitoring locations used during the reporting period are depicted in Figure 2.1.
- 2.6. The updated EM&A Manual also required environmental site inspections for air quality, noise, water quality, chemical, waste management, ecology and landscape and visual impact.

#### **Environmental Quality Performance Limits (Action/Limit Levels)**

- 2.7. The environmental quality performance limits (i.e. Action/Limit Levels) of air quality monitoring were derived from the baseline air quality monitoring results at the respective monitoring stations (AM1, AM2, AM3 and AM4), while the environmental quality performance limits of noise monitoring were defined in the EM&A Manual.
- 2.8. The environmental quality performance limits of air quality and noise monitoring are given in Appendix C.

#### **Environmental Mitigation Measures**

- 2.9. Relevant environmental mitigation measures were stipulated in the Particular Specification and EP (EP-324/2008/A) for the Contractor to adopt. A list of environmental mitigation measures and their implementation statuses are given in Appendix B.

### 3 AIR QUALITY MONITORING

- 3.1. Air quality monitoring, including 1-hour and 24-hour TSP, was conducted at least 3 times every 6 days and at least once every 6 days respectively at the 4 monitoring stations, in accordance with the updated EM&A Manual.
- 3.2. Figure 2.1 shows the locations of monitoring stations used during the reporting period. Table 3.1 describes the details of the monitoring stations.

**Table 3.1 Locations of Impact Air Quality Monitoring Stations**

Monitoring Station	Location	Description
AM1A	3 Sheung Wun Yiu	Ground floor at the boundary outside Fan Sin Temple
AM2	12 Shan Tong New Village	Ground floor outside the premise
AM3	Riverain Bayside	Roof of the switch room
AM4A	168 Shek Kwu Lung Village	Roof of the switch room

- 3.3. The weather was mostly sunny, with several fine, cloudy and rainy days within the reporting period. The major dust source in the reporting period included construction activities from Stage 1 of the Project, as well as nearby traffic emissions.
- 3.4. The number of monitoring events and exceedances recorded in each month of the reporting period are presented in Table 3.2 and Table 3.3 respectively.

**Table 3.2 Summary of Number of Monitoring Events for 1-hr & 24-hr TSP Concentration**

Monitoring Parameter	Location	No. of monitoring events
		Nov 12 – Oct 13
1-hr TSP	AM1A	192
	AM2	192
	AM3	192
	AM4A	192
24-hr TSP	AM1A	64
	AM2	64
	AM3	64
	AM4A	64

**Table 3.3 Summary of Number of Exceedances for 1-hr & 24-hr TSP Monitoring**

Monitoring Parameter	Location	Level of Exceedance	Level of Exceedance
			Nov 12 – Oct 13
1-hr TSP	AM1A	Action	0
		Limit	0
	AM2	Action	0
		Limit	0
	AM3	Action	0
		Limit	0
	AM4A	Action	0
		Limit	0
		<b>Total</b>	<b>0</b>
24-hr TSP	AM1A	Action	0
		Limit	0
	AM2	Action	0
		Limit	0

	AM3	Action	0
		Limit	0
	AM4A*	Action	0
		Limit	0
		<b>Total</b>	<b>0</b>

- 3.5. All 1-hour TSP results were below the Action and Limit Level at all monitoring locations in the reporting period.
- 3.6. All 24-hour TSP results were below the Action and Limit Level at all monitoring locations in the reporting period.
- 3.7. The graphical plots of the impact air quality monitoring results are provided in Appendix D.

#### 4 CONSTRUCTION NOISE MONITORING

- 4.1. Construction noise monitoring was conducted at 7 monitoring stations for at least once per week during 07:00 – 19:00 in the reporting period.
- 4.2. Figure 2.1 shows the locations of the monitoring stations used during the reporting period. Table 4.1 describes the details of the monitoring stations.

**Table 4.1 Locations of Impact Noise Monitoring Stations**

Monitoring Station	Location	Description
NM1A	168 Shek Kwu Lung Village	1m from the exterior wall of the village house
NM2	38 Ha Wun Yiu	1.2m from the ground floor free-field of the village house
NM3	Wong Shiu Chi Middle School	1m from the exterior of the roof top façade of the New Wing
NM4	Uptown Plaza	1m from the exterior of the roof top façade of Block 4
NM5	The Paragon	1m from the exterior of the roof top façade of the club house
NM6	PLK Tin Ka Ping Primary School	1.2m ground floor free-field near the entrance
NM7	Riverain Bayside	1m from the exterior of the roof façade of the switch room

- 4.3. Major noise sources during the noise monitoring included construction activities of Stage 1 of the Project and nearby traffic noise. In addition, for NM3 and NM6, general school activities are also a potential noise source during the noise monitoring.
- 4.4. The number of construction noise monitoring events and exceedances are summarized in Table 4.2 and Table 4.3 respectively.

**Table 4.2 Summary of Number of Monitoring Events for Construction Noise**

Monitoring Parameter	Location	No. of monitoring events
		Nov 12 – Oct 13
Construction Noise	NM1A	52
	NM2	52
	NM3	52
	NM4	52
	NM5	52
	NM6	52
	NM7	52

**Table 4.3 Summary of Number of Monitoring Exceedances for Construction Noise**

Monitoring Parameter	Location	Level of Exceedance	Level of Exceedance
			Nov 12 – Oct 13
Construction Noise	NM1A	Limit	0
	NM2		0
	NM3		0
	NM4		0
	NM5		0
	NM6		0
	NM7		0
	<b>Total</b>	<b>0</b>	

- 4.5. All measured construction noise levels were below the Limit level and the graphical plots of the trends of the monitoring results are provided in Appendix E. Five (5) Action Level exceedances of construction noise were recorded in the reporting period.
- 4.6. There were five (5) noise-related complaints followed up by the Environmental Team in the reporting period. Investigations were carried out. The findings and the proposed mitigation measures were submitted to all relevant parties. Summaries of investigations are described in Section 7.1 of this report.

## 5 ENVIRONMENTAL SITE INSPECTION AND AUDIT

5.1. Site Inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for Stage 1 of the Project. In the reporting period, 50 and 52 site inspections were carried out for Contract 1 and Contract 2 of the Project respectively.

5.2. Particular observations during the site inspections for Contract 1 are described below:

### ***Air Quality***

- 5.2.1. Soil stockpiles were accumulated near the receiving pit. The Contractor was reminded to cover the soil stockpile by tarpaulin sheet properly.
- 5.2.2. Broken concretes were accumulated at New Banyan Bridge. The Contractor was reminded to spray the broken concretes with water or cover the broken concretes by impervious sheet properly to prevent any fugitive dust generation.
- 5.2.3. Broken concretes were accumulated at TB1 without proper dust mitigation measure. The Contractor was reminded to dampen the broken concretes or cover the broken concretes by impervious sheet properly to prevent any fugitive dust generation.
- 5.2.4. Site haul road at Area TB1 was observed in dry condition. Although, no vehicle was traveling on the site haul road during the site inspection, the Contractor was reminded to dampen the site haul road and maintain the road surface wet to prevent any fugitive dust generation.
- 5.2.5. Broken concretes were accumulated at Area NB17. The Contractor was reminded to maintain the surface of broken concretes in wet or cover the broken concretes by tarpaulin sheets.
- 5.2.6. Insufficient mitigation measure was observed for an exposed slope at area TB1 West Abutment. The Contractor was reminded to cover the exposed slope by tarpaulin sheets properly.
- 5.2.7. Mud trails were observed at Gate 33. The Contractor was reminded to implement preventive measures to avoid the spread of mud trails on the public road.
- 5.2.8. Stockpiles of dusty materials were exposed without being covered at Area NB 22. The Contractor was reminded to cover the materials with tarpaulin.
- 5.2.9. Cement bags at Area Gate 3 were exposed. The Contractor was reminded to cover the cement bags properly.
- 5.2.10. The Contractor was reminded to cover the exposed stockpiles of sands and stones with tarpaulin.
- 5.2.11. Sand and soil stockpiles at Gate 3 were not covered. The Contractor was reminded to cover the stockpiles with tarpaulin.

### ***Noise***

5.2.12. No adverse observation was identified in the reporting period.

### ***Water Quality***

- 5.2.13. Broken Sandbags were observed at Area NB19. The Contractor was reminded to replace the broken sandbags.
- 5.2.14. Stagnant waters were accumulated inside the tray and I-joint at Gate 3. The Contractor was reminded to remove the stagnant water regularly.
- 5.2.15. Stagnant water was accumulated at Area NB19. The Contractor was reminded to remove the stagnant water regularly.
- 5.2.16. Silt was accumulated at the site boundary of Gate 26 and public road. The Contractor was reminded to remove the silt as soon as possible to avoid any silty water discharging to nearby gully. The Contractor was also reminded to maintain the sandbag bunding properly to prevent surface runoff from construction work flowing outside the work area and discharging to public drain. The Contractor was recommended to review and maintain the effectiveness of sandbag bunding regularly.

- 5.2.17. Mud trails were observed at Gate 3. Although, the mud trails were removed by worker immediately, the Contractor should ensure that wheel washing facilities were operating at all vehicular site entrances/exits to wash off the deposited silt on vehicles' wheels and bodies and combine with cleaning of public roads wherever necessary and practical.
- 5.2.18. Turbid water was accumulated around the chemical storage at area Wall 20A. The Contractor was reminded to remove the turbid water.
- 5.2.19. Standing water was observed at Gate 3. The Contractor was reminded to remove the standing water to prevent mosquito breeding.
- 5.2.20. Oil stains were observed on the ground at Area NB 19. The Contractor was reminded to remove the oil stains.
- 5.2.21. Stagnant water was observed within the construction area at NB10. The Contractor was reminded to remove the stagnant water regularly.
- 5.2.22. Stagnant water was observed within the construction area at Gate 26. The Contractor was reminded to remove the stagnant water so as to prevent mosquito breeding.
- 5.2.23. The Contractor was reminded to remove the stagnant water within the construction area at NB 19.
- 5.2.24. The Contractor was reminded to remove the stagnant water within the construction site at Bridge 11.

#### ***Chemical and Waste Management***

- 5.2.25. C&D wastes were accumulated at Gate 30. The Contractor was reminded to remove the C&D waste regularly.
- 5.2.26. C&D wastes were accumulated at Area NB6. The Contractor was reminded to remove the C&D waste more frequently and maintain the site cleanliness and tidiness.
- 5.2.27. No drip tray provided for chemical container was observed at Area NB19. The Contractor was reminded to provide drip trays for all oil drums / chemical containers on site to prevent any oil / chemical leakage. The Contractor was also reminded to label all chemical containers properly.
- 5.2.28. Breaking tip of breaker was found placed on bare ground at Area TB2. The Contractor was reminded to place the breaking tip onto the tarpaulin sheet to avoid oil leakage from the breaking tip to the ground.
- 5.2.29. Oil stains were observed on bare ground at Banyan Bridge. The Contractor was reminded to remove the oil stains as soon as possible and handle it as chemical waste.
- 5.2.30. The Contractor was reminded to clear the refuse or cover the refuse before removal at Gate 28.
- 5.2.31. The Contractor was reminded to clear the construction waste accumulated at Gate 26 regularly.
- 5.2.32. The Contractor was reminded to clear the construction waste accumulated at Gate 3.
- 5.2.33. The Contractor was reminded to clear the construction waste regularly at Gate 47.
- 5.2.34. The Contractor was reminded to remove the general refuse at NB 17.
- 5.2.35. Oil drum was put on bare ground at Gate 3. The Contractor was reminded to provide a drip tray to prevent oil leakage.
- 5.2.36. The Contractor was reminded to remove the oil stains found at Bridge 11A.
- 5.2.37. The Contractor was reminded to remove the stockpile of construction materials away from the retained trees at NB 22.
- 5.2.38. The Contractor was reminded to remove the general refuse at Bridge 11.
- 5.2.39. The Contractor was reminded to remove the construction waste within the construction area at Bridge 10.
- 5.2.40. Oil cans were observed at Gate 41. The Contractor was reminded to provide a drip tray to hold the oil cans or remove the oil cans.

***Landscape and Visual Impact***

5.2.41. No adverse observation was identified in the reporting period.

***Miscellaneous***

5.2.42. No adverse observation was identified in the reporting period.



5.3. Particular observations during the site inspections for Contract 2 are described below:

***Air Quality***

- 5.3.1. The Contractor was reminded to cover the broken concretes and stockpiles at Hong Lok Yuen road by tarpaulin sheets after works to prevent any fugitive dust generation.
- 5.3.2. Mud trails were observed near the site entrance/exit at Gate 11 and Gate 15 and wheel washing facility at Gate 15 was also observed malfunction. The Contractor was reminded to repair the wheel washing facility as soon as possible and provide proper wheel washing facility during the repairing period. The Contractor should ensure that wheel washing facilities were operating at all vehicular site entrances/exits to wash off the deposited silt on vehicles' wheels and bodies and combine with cleaning of public roads wherever necessary and practical. The Contractor was recommended to provide a maintenance schedule for all wheel washing facilities on site.
- 5.3.3. Stockpile of sand was accumulated at Area NB42 without proper dust mitigation measure. The Contractor was reminded to dampen the stockpile or cover the stockpile by impervious sheet properly to prevent any fugitive dust generation.
- 5.3.4. Mud trails were observed at the site entrance/exit of Area NLK South Ramp. The Contractor should ensure that wheel washing facilities were operating at all vehicular site entrances/exits to wash off the deposited silt on vehicles' wheels and bodies before leaving the construction site and combine with cleaning of public roads wherever necessary and practical. Mud trails should be removed as soon as possible. Proper drainage channels/bunds/wheel washing bay should be provided to collect the run-off from wheel washing facilities.
- 5.3.5. No dust mitigation measure was provided for broken concrete in Area NLKP10. The Contractor was reminded to provide proper mitigation measures such as provision of water-spraying or covering the broken concrete to provide any fugitive dust generation.
- 5.3.6. Soil stockpiles were accumulated without cover at Area Bridge 15A North Ramp. The Contractor was reminded to cover the soil stockpiles.
- 5.3.7. Dusty construction materials were exposed at Area A. The Contractor was reminded to cover the construction materials to avoid emission of fugitive dust.
- 5.3.8. The Contractor was reminded to cover the open stockpiles of construction materials with tarpaulin.
- 5.3.9. Opened cement bag was placed on bare ground without being covered at Area NLK P4. The Contractor was reminded to cover the bag or remove it if applicable.
- 5.3.10. The Contractor was reminded to cover the soil stockpiles with tarpaulin at Truck Sewer.
- 5.3.11. Soil stockpiles were exposed at 12AP1. The Contractor was reminded to cover the soil stockpiles with tarpaulin as one of the dust controls.
- 5.3.12. The Contractor was reminded to cover the soil stockpiles at Bridge 12A with tarpaulin.
- 5.3.13. Exposed cement bags were observed at Wall 59. The Contractor was reminded to cover the cement bags or remove them.
- 5.3.14. The Contractor was reminded to cover the soil stockpile at Wall 59.
- 5.3.15. The Contractor was reminded to cover the exposed soil stockpile at Lam Kam Bridge P2.
- 5.3.16. The Contractor was reminded to cover the cement bags with impervious sheet at Link Bridge 1.
- 5.3.17. Mud trails were observed at Gate 65. The Contractor was reminded to clear the mud trails and prevent vehicles from bringing the mud trails to the public roads.

***Noise***

- 5.3.18. No adverse observation was identified in the reporting period.

### ***Water Quality***

- 5.3.19. Silt from construction site was observed accumulated on haul road at Area NB42. The Contractor was reminded to provide proper mitigation measures (e.g. bunds/sandbags at site work areas) to prevent any silt or silty water running off from the construction site to the haul road and nearby public drains. Silt on the haul road should be removed as soon as possible. The Contractor was also reminded to maintain the haul road in clean condition.
- 5.3.20. The Contractor was reminded to remove the standing water within the construction site at W58B.
- 5.3.21. Sands and debris were observed along the U-channel at Bridge 13. The Contractor was reminded to remove the sands and debris so as to maintain the drainage properly.
- 5.3.22. The Contractor was reminded to remove the standing water held within the drip tray at Link Bridge 1.
- 5.3.23. Silts were accumulated in wheel washing bays at Gate 11 and Gate 15 and u-channel connecting to sedimentation tank at Gate 15. The Contractor was reminded to remove the silt from wheel washing bays and u-channel more frequently.
- 5.3.24. Broken concretes and stockpile of sands were placed at Area NLKSA without mitigation measure. The Contractor was reminded to cover the broken concretes and stockpile of sands by tarpaulin sheets properly to prevent any silty water surface runoff to nearby public road due to rainfall.
- 5.3.25. Muddy water was observed accumulated inside the u-channel at Area W46 and likely flowing outside to the public drain. The Contractor was reminded to properly maintain and review the drainage systems provided within works area and ensure that the muddy water was properly desilted prior to discharging to public drains. Any untreated water should be avoided from flowing to public drains.
- 5.3.26. Oil drums were observed placed on the ground at Area 13A5A. The Contractor was reminded to provide drip trays for all oil drums on site to prevent any oil leakage.
- 5.3.27. Mud trails were observed at site entrance G2 and exit of Area LB1SA. Although, the mud trails were removed by worker immediately, the Contractor should ensure that wheel washing facilities were operating at all vehicular site entrances/exits to wash off the deposited silt on vehicles' wheels and bodies and combine with cleaning of public roads wherever necessary and practical.
- 5.3.28. The U-channel at Gate 23 was blocked by some debris. The Contractor was reminded to remove the debris and maintain the U-channel properly.
- 5.3.29. Stagnant water was observed within the car wheels at Bridge 15A. The Contractor was reminded to remove the stagnant water to prevent mosquito breeding.
- 5.3.30. Stagnant water was observed at 12AP3. The Contractor was reminded to remove the stagnant water regularly to prevent mosquito breeding.
- 5.3.31. The Contractor was reminded to provide measures to prevent debris, soil or sand from entering the drainage at NLK North Rump.
- 5.3.32. The Contractor was reminded to remove the stagnant water within the drip tray to prevent overflowing at Wall 59.
- 5.3.33. Stagnant water was observed within the construction site at Bridge 12A. The Contractor was reminded to remove the stagnant water to prevent mosquito breeding.

### ***Chemical and Waste Management***

- 5.3.34. Breaking tip of breaker was found placed on bare ground at Area NLKSA. The Contractor was reminded to place the breaking tip onto the tarpaulin sheet to avoid oil leakage from the breaking tip to the ground.
- 5.3.35. C&D wastes and general refuses were accumulated at Tai Wo West services road and Area NLKNA. The Contractor was reminded to remove the C&D wastes regularly and maintain the site tidiness and cleanliness.
- 5.3.36. C&D wastes were accumulated at Area RWB12B. The Contractor was reminded to remove the C&D waste regularly and maintain the site cleanliness and tidiness.
- 5.3.37. Chemical containers were placed on ground without providing drip trays at Trunk Sewer Manhole (STS 10\_160-170). The Contractor was reminded to provide drip trays for all chemical containers or oil drums to prevent any chemical / oil leakage.
- 5.3.38. Debris and oily water were accumulated inside the drip tray of oil drums at Area NLK P3. The Contractor was reminded to remove the debris and oily water and handle it as chemical wastes. The Contractor was also reminded to provide a larger size of drip tray with sufficient capacity for the oil drums.
- 5.3.39. Breaking tip of breaker was found placed on bare ground at Area NLK South Ramp. The Contractor was reminded to place the breaking tip onto the tarpaulin sheet to avoid oil leakage from the breaking tip to the ground.
- 5.3.40. C&D wastes were observed accumulated in several site areas. The Contractor was reminded to dispose the C&D wastes regularly and maintain the site cleanliness and tidiness. The Contractor was also reminded to sort the construction waste properly and recycle the sorted construction wastes as regular practice.
- 5.3.41. No label was provided for recycling bin of aluminium's can at Area NLKSA. The Contractor was reminded to label the recycling bin properly.
- 5.3.42. C&D wastes were not well sorted at Area Bridge 15A North Ramp. The Contractor was reminded to properly sort the C&D wastes.
- 5.3.43. General wastes were disposed near the river. The Contractor was reminded to clear the wastes.
- 5.3.44. Oil was spilled from the construction machine at area Bridge 12A. The Contractor was reminded to remove the oil stains.
- 5.3.45. Recycling bins at area Bridge 15A were not labeled. The Contractor was reminded to label the recycling bins properly.
- 5.3.46. Some oil leaked out from the excavator at Area Trunk Sewer. The Contractor was reminded to remove the oil stains on the ground.
- 5.3.47. Construction wastes were placed near the retained trees at Area LB 2. The Contractor was reminded to remove the wastes and avoid disposing of the wastes near the retained trees.
- 5.3.48. General refuse was dumped on bare ground at Area C. The Contractor was reminded to clear the general refuse regularly.
- 5.3.49. General refuse was found dumped into the recycling bins. The Contractor was reminded to remove the general refuse and dump only the recycling materials into the recycling bins.
- 5.3.50. The Contractor was reminded to sort and segregate the construction waste before removal at Area A.
- 5.3.51. Several cans of oil were placed on bare ground at Bridge 13A. The Contractor was reminded to provide a drip tray to prevent oil leakage or remove the oil cans if applicable.
- 5.3.52. The Contractor was reminded to remove the oil stains on the ground at NB 42.
- 5.3.53. Several oil cans were placed on bare ground at W53. The Contractor was reminded to provide a drip tray or remove the unused oil cans.

- 5.3.54. The Contractor was reminded to clear the general refuse at W53 regularly.
- 5.3.55. Oil drum was placed on the ground at NLK South Ramp. The Contractor was reminded to remove the oil drum or provide drip tray to prevent oil leakage.
- 5.3.56. The Contractor was reminded to remove the improperly dumped materials from the recycling bins and dump only the recycling materials into the recycling bins accordingly at NLK P10.
- 5.3.57. Stockpile of construction wastes were accumulated at Bridge 12A NA. The Contractor was reminded to remove the construction waste regularly.
- 5.3.58. General refuse was dumped into the recycling bins at Bridge 12A. The Contractor was reminded to remove the general refuse and dump only the recycling materials into the appropriate recycling bins.
- 5.3.59. The Contractor was reminded to provide drip tray for holding the oil drum at Wall 74.
- 5.3.60. The Contractor was reminded to remove the general refuse within the construction site at W58B.
- 5.3.61. Oil drum was placed on bare ground at W58B. The Contractor was reminded to remove the oil drum or provide a drip tray for holding the oil drum.
- 5.3.62. The Contractor was reminded to remove the general refuse at NB 30.
- 5.3.63. The Contractor was reminded to remove the oil drum or provide a drip tray for holding the oil drum at NB 30.
- 5.3.64. The Contractor was reminded to provide drip tray for holding the oil cans at Link Bridge 1.
- 5.3.65. The contractor was reminded to remove the general refuse at W74.
- 5.3.66. The contractor was reminded to provide a larger drip try to hold oil drums at Lam Kam Bridge.
- 5.3.67. The contractor was reminded to provide a drip try to oil cans to prevent oil leakage at Lam Kam Bridge.

#### ***Landscape and Visual Impact***

- 5.3.68. No adverse observation was identified in the reporting period.

#### ***Miscellaneous***

- 5.3.69. No adverse observation was identified in the reporting period.

## **6 SUMMARY AND REVIEW OF NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY**

- 6.1. No exceedance of Action and Limit Level was recorded for 1-hour TSP monitoring in the reporting period.
- 6.2. No exceedance of Action and Limit Level was recorded for 24-hour TSP monitoring in the reporting period
- 6.3. No Limit Level exceedance of construction noise monitoring was recorded in the reporting period.
- 6.4. There were five (5) noise-related complaints followed up by the Environmental Team in the reporting period. Hence, five (5) Action Level exceedances of construction noise were recorded in the reporting period. Investigations were carried out. The findings and the proposed mitigation measures were submitted to all relevant parties. The summary of investigation is described in Section 7.1.

#### **Summary of Actions Taken in the event of Non-Compliance**

- 6.5. In the event of non-compliance, actions were taken in accordance with the Event-Action Plan in the updated EM&A Manual. Investigation was carried out within three working days of identification of non-compliance, checking the implementation status of the mitigation measures, etc. Assessments showed that the monitoring exceedance was not due to the Project works and therefore no further action was required to be taken.

## 7 ENVIRONMENTAL COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

- 7.1. There were thirteen (13) complaints followed up by the Environmental Team, including four (4) air-related complaints, eight (8) noise complaints and one (1) water-related complaint, in the reporting period as below:

### Environmental Enquiry No.: EC-21

This noise complaint was received on 6 November 2012. The EPD referred a complaint (from a resident of The Paragon) about the suspected construction noise generated from the suspected construction activities on Tolo Highway on 4 November 2012 at 3:00 a.m. As informed by the Contractor (China State Construction Engineering (HK) Ltd.) and confirmed by the Engineer of the Project, road marking and road pavement works for road diversion were carried out in a section of Tolo Highway near Wall 8 (near The Paragon at Tai Po) during the period from 3 November 2012 at 22:30 to 4 November 2012 at 05:00. No PMEs were operating during 22:30 to 23:00 on 3 November and during 05:00 and 07:00 on 4 November 2012, and no road miller / mini road miller was operating between 02:00 and 05:00 on 4 November 2012. A valid Construction Noise Permit (CNP No.: GW-RN0515-12) was obtained for the use of certain powered mechanical equipments (PMEs). The numbers and types of powered mechanical equipments operated on the date were complied with the CNP. Site diary and list of plants used during the road diversion works (provided by the Engineer of the Project) were also checked for verification. Road marking and road pavement works for road diversion near Wall 8 were completed on 4 November 2012 and no road diversion works at the same location (near Wall 8) is currently planned in the restricted hours (23:00 – 05:00 of next day) for the coming months. The noise complaint was considered as project-related.

The Contractor is advised to implement the noise mitigation measures as stated in “Recommended Mitigation Measures” as below:

- Strictly comply with the requirements of the approved CNP for works carried out in restricted hours;
- Propose to use of quality powered mechanical equipments (QPME) for carrying out similar works in the future;
- Review the feasibility of wrapping up the buzzers of construction machineries under safety circumstance to suppress the noise impact;
- Better scheduling of works to minimize noise nuisance;
- Instruct the site workers to keep the noise to minimum during road diversion works in restricted hours;
- Review the possibility for re-sequencing the execution of some remaining road works after completion of the permanent noise barriers to act as a noise screen for mitigation of noise nuisance from the road works; and
- Foster better public relations with the sensitive receivers nearby.

### Environmental Enquiry No.: EC-22

For the air complaint received on 8 November 2012, EPD referred a telephone complaint from the complainant (a resident of Ma Wo at Tai Po) about no improvement on the dust nuisance from the road widening construction works by Gammon Construction Ltd. Despite repeated request of frequent water spraying at the entrance of the construction site, such measures were only implemented during senior site staff inspections, while fugitive dust were generated for the rest of the time, causing serious nuisance to the complainant’s dwelling. The complainant thereby strongly requested the EPD to monitor the status of water spraying of the construction site.

As informed by the Contractor (Gammon Construction Ltd) and confirmed by the Engineer of the Project, trimming the ground surface for blinding laying at NB31 & W44 was being carried out on 6 November 2012 at the work areas nearby the residential flat of the complainant. Mitigation measures, including erection of tarpaulin dust screen along the work areas W45-47, automatic sprinkler system and manual spraying by workers for haul roads and exposed slopes (at work areas NB31, W44 – W47), covering non-working slopes by tarpaulin sheets within work areas, covering of dusty materials carrying in dump trucks within work areas W45-47 were taken by the Contractor. Besides, environmental supervisions (by the Contractor’s foremen) were conducted two times everyday to

review the adequacy and effectiveness of dust suppression measure at work areas. Checklists of the Contractor's environmental supervision were checked for verification.

With reference to the monitoring results recorded on days near to the day of complaint at the nearest EM&A monitoring station (AM1A- Sheung Wun Yiu), the 24-hour TSP level on 6 November 2012 were found to be 83.1ug/m<sup>3</sup>, which were below the action level of 176.6 ug/m<sup>3</sup>. Nevertheless, the complaint was considered as project-related. Therefore, the Contractor is reminded to enhance the dust mitigation measures as stated in "Recommended Mitigation Measures" as below:

- Confirm the implementation of dust mitigation measures (erection of tarpaulin dust screen along the work areas W45-47, watering for the haul roads and exposed slopes at work areas NB31, W44 – W47, covering non-working slopes by tarpaulin sheets within work areas, covering of dusty materials carrying in dump trucks within work areas W45-47) during all construction / dusty activities to prevent any fugitive dust generation;
- Increase the frequency of watering in the work areas (e.g. the entrance of the construction site, site haul roads and exposed slopes / areas in the work areas NB31, W44-47) to maintain the surface of site haul roads and exposed surfaces in wet condition;
- Extend the water spraying areas to the exposed areas (near work area W45) nearby the residential flat of the complainant; Automatic sprinklers were operated for watering of site haul roads / site areas;
- Cover the backfilling surface after work;
- Maintain soil surface wet before loading and unloading activities
- Increase the frequency of the environmental supervision (by the Contractor) to frequently review the adequacy and effectiveness of dust suppression measures to suit the construction progress;
- Inform the complainant before dusty activities to be carried out, such as rock breaking, excavation, grouting and backfilling etc; and
- Foster better public relations with the sensitive receivers.

#### Environmental Enquiry No.: EC-23

For the noise complaint received on 5 November 2012, EPD referred a complaint about construction noise generated from breaking activities at the construction site of Gammon Construction Ltd. nearby Lot no. 450 of Wai Tau Tsuen at Lam Tsuen of Tai Po. The complainant expressed that the noise from the breaking activities began between 8:00am and 9:00am on 30 October 2012 at the construction site of Gammon Construction Ltd. nearby Lot no. 450 of Wai Tau Tsuen at Lam Tsuen of Tai Po, caused nuisance to nearby residents. The complainant requested EPD to follow-up as soon as possible. The complainant expressed that the complainant would call the police for help, if the problem of construction noise could not be handled by the day after the complaint received. The reply had been communicated to the complainant. However, the complainant expressed that construction activities were still carried out by the Contractor after 7:00pm and noise was still generated from construction works. The complainant thereby requested the EPD to follow-up and reply again.

According to the information of the Contractor (Gammon Construction Ltd.) and confirmed by the Engineer, sheet-pile by vibration hammer, H-pile drilling, minor excavation and hand-dig were carried out by the Contractor during 8:00am to 9:00am on 30 October 2012 (Tuesday) and no construction work was carried out by the Contractor after 7:00pm on 30 October 2012 at the construction site nearby Wai Tau Tsuen at Lam Tsuen of Tai Po. In accordance with the Noise Control Ordinance, 7:00am – 7:00pm of any general days are the non-restricted hours of general construction work. Therefore, commencement of construction work at 8:00am on general days is in compliance with the NCO. From observation of the site inspection (by ET) on 15 November 2012, permanent noise barriers were observed erected in some portions of Wai Tau Tsuen at Lam Tsuen of Tai Po as noise suppression measure. However, the noise complaint was considered as project-related. Therefore, the Contractor is advised to implement the noise mitigation measures as stated in "Recommended Mitigation Measures" as below:

- Wrapping the breaker tip with proper noise insulation materials during rock breaking works. Dust screen was erected along at the work area W45-47;
- Wrapping the chain link of sheet-pile machine;

- Erecting movable noise barriers fitted with noise adsorption materials for any noisy activities (e.g. breaking activity); and
- Informing the nearby residents in advance (at least one day) of any noisy works to be carried out in the morning;

During site inspection on 13 December 2012 (by ET) & 27 December 2012 (by ET and IEC), no sheet-pile works and breaking activity was observed at the construction site of Gammon Construction Ltd. nearby Lot no. 450 of Wai Tau Tsuen at Lam Tsuen of Tai Po. Acoustic blanket was erected at the gap of NB41 (near the Lot no. 450 of Wai Tau Tsuen) as noise suppression measure until the permanent noise barriers at NB41 were implemented. Technical data of the acoustic blanket was also checked. As indicated by the Contractor, the Contractor rescheduled the sheet-pile works and started on / after 9:00am after the complaint received and no negative news was received during the period. The Contractor would study the feasibility of keeping the practice (starting the sheet-pile works on / after 9:00am) in the future. Beside, the weekly noise monitoring measurements by the Contractor were carried out near Lot no. 450 of Wai Tau Tsuen at Lam Tsuen of Tai Po during 13 November 2012 to 21 December 2012. The noise monitoring results were checked by ET and IEC during the site inspection on 27 December 2012 and no noise monitoring (Leq30min) result exceeding the Limit Level (75dB(A)) was recorded.

#### Environmental Enquiry No.: EC-24

For the noise complaint received on 29 November 2012, EPD referred a complaint from a resident of Shek Kwu Lung Village about the construction of Widening of Tolo Highway at the foot of the hill slope. According to the complainant, the construction works have been conducted by Gammon Construction Ltd. for a year and the works had been conducted until 20:00 at night in recent months. Due to the short distance of the complainant's premises from the construction site, the nuisance was very annoying. The complainant requested EPD to follow up.

According to the information of the Contractor (Gammon Construction Ltd.) and confirmed by the Engineer, no construction work was carried out at Area RWTW2, LB3 (East & West Abutment) & RWTW3 near Shek Kwu Lung Village after 6:00pm in recent months except concreting works (at Area RWTW2 / RWTW3) on 5 October 2012, 31 October 2012 & 23 November 2012 and minor activities (e.g. general cleaning and site tidiness), both of which were completed by 7:00pm. In accordance with the Noise Control Ordinance, 7:00am – 7:00pm of any general days are the non-restricted hours of general construction work. Therefore, carrying out of construction work during 7:00am to 7:00pm on general days is in compliance with the NCO. In accordance with the observation of the site inspection (by ET) on 6 December 2012, temporary acoustic sheet was erected at Area LB3 (West Abutment) as a noise mitigation measure. However, the noise complaint was considered as project-related. Therefore, the Contractor is advised to implement the mitigation measures as stated in "Recommended Mitigation Measures" as below:

- Cease all construction activities at site during restricted hours unless a valid Construction Noise Permit had been obtained for the site areas and
- Apply for a Construction Noise Permit if any construction work during restricted hours and strictly comply with all conditions stipulated in CNP issued by EPD.

Environmental Enquiry No.: EC-25

For the air complaint received on 14 December 2012, EPD referred a complaint, from a resident at Ma Wo, about dust emission in construction site of the Tolo Highway widening construction works at Ma Wo. The complainant contacted the Contractor (Gammon Construction Ltd.) on 14 December 2012 and the Contractor promised that water-spraying would be provided at the entrance of the construction site. Although the complainant waited for 5 hours, no water-spraying was provided by the Contractor. Fugitive dust was generated and caused serious nuisance to the complainant's dwelling. Subsequently, the complainant made a call on 17 December 2012 saying that an EPD personnel contacted him in the morning on 17 December 2012. However, still no water-spraying was provided by the Contractor in the construction site on 17 December 2012. Fugitive dust generated overwhelmed the entrance of complainant's dwelling. The complainant thereby requested the EPD to follow-up and reply the complainant as soon as possible. Then, the complainant made a call on 21 December 2012 strongly complained that there had been no water-spraying provided in the construction site as requested by EPD and caused continuous dust nuisance to the complainant.

Afterward, the complainant made a call on 7 January 2013 complained about dust emission from construction site of the Tolo Highway widening construction works at Ma Wo and cause nuisance, pollution problem have been observed over two years and the condition were most serious specially on Saturday and Sunday. The Complainant requested EPD and the Contractor to follow-up. In addition, the complainant made another call on 15 January 2013 complained that the odour from asphalt paving works in the construction site nearby the complainant's dwelling at Ma Wo and caused serious nuisance. The complainant requested reply and follow-up.

As informed by the Contractor (Gammon Construction Ltd) and confirmed by the Engineer of the Project, rebar fixing at NB31 on 14 December 2012 (Friday); formwork erection and concreting at NB31 on 17 December 2012 (Thursday); general fill & compaction at NB31 on 21 December 2012 (Friday); scarifying CJ, erecting formwork, rebar fixing, general fill & soil compaction at NB31 on 22 December 2012 (Saturday); general cleaning and concreting at NB31 on 29 December 2012 (Saturday); general fill, compaction, general cleaning and concreting at NB31 on 5 Jan 2013 (Saturday); laying of base course bitumen, trimming and compaction of sub-base material near work areas W38 to W48 (Chainage approximately 2500 – 2700) on 15 January 2013 (Tuesday) were carried out at the work areas near the residential flat of the complainant. There were no construction activities conducted on Sunday (including 23 December 2012, 30 December 2012 and 6 Jan 2013) and only general site clearance (e.g. sweeping & washing floor) was conducted on 30 December 2012 & 6 January 2013 and no Powered Mechanical Equipment (PME) was involved or operated for the cleaning works on Sunday. According to information provided by Contractor and confirmed by the Engineer of the Project, the temporary bitumen paving work at Northbound carriageway near W38-W45 was completed on 19 January 2013.

Mitigation measures, including erection of tarpaulin dust screen along the work areas W44-NB31, water spraying by workers and automatic sprinkler system for haul roads and exposed slopes, covering non-working slopes by tarpaulin sheets within work areas, covering of dusty materials carrying in dump trucks within work areas W45-47 were taken by the Contractor. Besides, environmental supervisions (by the Contractor's foremen) were conducted everyday to review the adequacy and effectiveness of dust suppression measure at work areas. Checklists of the Contractor's environmental supervision were checked for verification. Notice board was also erected at site boundary to write down daily dusty activities (e.g. rock breaking, excavation, grouting and backfilling etc) / activities with odour emission (e.g. laying of base course bitumen) carried out within work areas W38 – W48, NB31 for notification / information to Ma Wo's residents. With reference to the monitoring results recorded on days near to the day of complaint at the nearest EM&A monitoring station (AM1A- Sheung Wun Yiu), the 24-hour TSP level on 12, 18, 24, 29 December 2012, 2 and 8 January 2013 were found to be 58.3ug/m<sup>3</sup>, 27.3ug/m<sup>3</sup>, 70.5ug/m<sup>3</sup>, 20.2ug/m<sup>3</sup>, 60.2ug/m<sup>3</sup>, 116.6ug/m<sup>3</sup> respectively, which were below the action level of 176.6 ug/m<sup>3</sup>. Nevertheless, the complaint was considered as project-related. Therefore, the Contractor is reminded to enhance the dust mitigation measures as stated in "Recommended Mitigation Measures" as below:

- Confirm the implementation of dust mitigation measures (erection of tarpaulin dust screen along the work areas W44-NB31, spraying water by manual worker / sprinkler systems for the haul roads and exposed slopes at work areas W44-NB31, covering non-working slopes by tarpaulin sheets within work areas, covering of dusty materials carrying in dump trucks within work areas W45-47) during all construction / dusty activities to prevent any fugitive dust generation;



- Increase the frequency of watering in the work areas (specially in the entrance of the construction site, site haul roads and exposed slopes / areas in the work areas W44-NB31) to maintain the surface of site haul roads and exposed surfaces in wet condition;
- Cover the backfilling surface after work;
- Maintain soil surface wet before loading and unloading activities;
- Maintain the frequency of the environmental supervision (by the Contractor) to regular review the adequacy and effectiveness of dust suppression measures to suit the construction progress;
- Inform the complainant before dusty activities (e.g. rock breaking, excavation, grouting and backfilling etc) and activities with odour emission (e.g. laying of base course bitumen) to be carried out; and
- Foster better public relations with the sensitive receivers / the complainant nearby.

Follow-up site visit was conducted on 24 January 2013, backfilling activity was observed in work area W45. No laying work of base course bitumen at W38 – W45 was observed. Several mitigation measures were implemented at the work area W38-47:

- Dust screen was erected along at the work area W44-NB31;
- Impermeable sheet was erected in backfilling area at W47;
- Automatic sprinklers were operated for watering of site haul roads / site areas;
- Water spraying for site haul roads / site areas was provided by worker;
- Haul road at work area NB31 was paved and noise barriers were erected act as a dust screen;
- Site haul road / site areas were dampened;
- Maintain soil surface wet during the backfilling activities;
- Dusty materials carrying in dump trucks was covered within work areas W45-47;
- Non-working slopes was properly covered by tarpaulin sheets;
- Notice board was erected at site boundary to write down daily dusty activities / activities with odour emission carried out within work areas W38 – W48, NB31 for notification / information to Ma Wo's residents.

Besides, the Contractor's site logs of environmental supervision and records of communication between the Contractor and Ma Wo's residents were also checked. Dust suppression measures were provided at work areas W38-48 and the deficiencies were also rectified properly. No fugitive dust arising from the work area W38-48 was observed.

#### Environmental Enquiry No.: EC-26

For the noise complaint received on 24 December 2012, EPD referred a complaint about hammering noise generated from construction activities at the construction site for bridge construction at Lam Kam Road and Tai Wo Service Road West (near Wai Tau Tsuen) during the period from 00:00 to 06:00 in the recent two weeks caused nuisance to nearby residents. The complainant called the Police before. However, the police expressed that as Construction Noise Permit (CNP) had been issued by EPD for the construction works, the complaint could not be handled by the Police and requested the complainant contacted EPD for help. The complainant strongly dissatisfied that EPD issued the CNP for the construction works but no government staff was observed to be on site to monitor the noise. The complainant objected the issuance of the CNP and strongly requested to reply and follow-up as soon as possible. The complainant expressed if the construction works were still carried out at night time again, he would lodge the complaint to the Director and he would contact the Media immediately for reporting.

According to the information of the Contractor (Gammon Construction Ltd.) and confirmed by the Engineer, loading and unloading works, lifting & welding steel beams, placing of concrete blocks, Inserting timber and plywood between steel beams and inserting hand railing & tarpaulin were carried out at Lam Kam Road and Tai Wo Service Road West (near Wai Tau Tsuen) during the period between 01:00 – 05:00 on 11, 12, 13, 14, 15, 18, 19, 20, 21 & 22 December 2012 (ten nights). A valid Construction Noise Permit (CNP no.: GW-RN0549-12) was obtained for the use of Powered Mechanical Equipments (PMEs) and carrying out of Prescribed Construction work (PCW) for bridge construction at Lam Kam Road and Tai Wo Service Road West (near Wai Tau Tsuen) in restrict hours (01:00 – 05:00 in weekday). All PMEs and PCW were carried out between 01:00 – 05:00 in these ten nights. The numbers and types of PMEs operated on the dates were complied with the CNP. No PME was operated and no PCW were carried out (under CNPs - GW-RN0330-12, GW-

RN0433-12, GW-RN0523-12 and GW-RN0546-12) in the same period. PMEs and PCW were only operated / carried in the ten weekday nights and therefore the construction activities complied with the conditions of CNP (CNP no.: GW-RN0549-12). Mobile cranes were equipped with appropriate noise control measures as stated in the CNP. Site logs (by the Contractor), site surveillance reports (by the Engineer), list of plants used during the construction works (provided by the Contractor and confirmed by the Engineer) for these ten nights were also checked for verification. Photo records for noise control measure of mobile crane were also taken for reference. In accordance with the observation of site inspection (by ET) on 27 December 2012, 3 January 2013, 10 January 2013, permanent noise barrier and temporary noise barrier were implemented near the work areas (along the Wai Tau Tsuen) as a noise mitigation measure. However, the noise complaint was considered as project-related. The Contractor is advised to implement the mitigation measures as stated in "Recommended Mitigation Measures" as below;

- Strictly comply with the requirements of the approved CNP for works carried out in restricted hours;
- Better scheduling of works to minimize noise nuisance;
- Instruct the site workers to keep the noise in minimum during construction works in restricted hours; and
- Foster better public relations with the sensitive receivers nearby.

#### Environmental Enquiry No.: EC-27

For the noise complaint received on 24 December 2012, EPD referred a complaint about noise nuisance generated from construction activities, at the construction site for bridge construction between Lam Kam Road and Tai Wo Service Road West at mid-night on Monday to Friday and ongoing for two weeks, caused nuisance to Wai Tau Tsuen. The complainant called the Police before and found out the related Construction Noise Permit (CNP) in EPD's website. However, the complainant did not provide the reference number of the CNP. The Complaint requested the Highways Department to stop the construction works as soon as possible.

According to the information of the Contractor (Gammon Construction Ltd.) and confirmed by the Engineer, loading and unloading works, lifting & welding steel beams, placing of concrete blocks, Inserting timber and plywood between steel beams and inserting hand railing & tarpaulin were carried out at Lam Kam Road and Tai Wo Service Road West (near Wai Tau Tsuen) during the period between 01:00 – 05:00 on 11, 12, 13, 14, 15, 18, 19, 20, 21 & 22 December 2012 (ten nights). A valid Construction Noise Permit (CNP no.: GW-RN0549-12) was obtained for the use of Powered Mechanical Equipments (PMEs) and carrying out of Prescribed Construction work (PCW) for bridge construction at Lam Kam Road and Tai Wo Service Road West (near Wai Tau Tsuen) in restrict hours (01:00 – 05:00 in weekday). All PMEs and PCW were carried out between 01:00 – 05:00 in these ten nights. The numbers and types of PMEs operated on the dates were complied with the CNP. No PME was operated and no PCW were carried out (under CNPs - GW-RN0330-12, GW-RN0433-12, GW-RN0523-12 and GW-RN0546-12) in the same period. PMEs and PCW were only operated / carried in the ten weekday nights and therefore the construction activities complied with the conditions of CNP (CNP no.: GW-RN0549-12). Mobile cranes were equipped with appropriate noise control measures as stated in the CNP. Site logs (by the Contractor), site surveillance reports (by the Engineer), list of plants used during the construction works (provided by the Contractor and confirmed by the Engineer) for these ten nights were also checked for verification. Photo records for noise control measure of mobile crane were also taken for reference. In accordance with the observation of site inspection (by ET) on 27 December 2012, 3 January 2013, 10 January 2013, permanent noise barrier and temporary noise barrier were implemented near the work areas (along the Wai Tau Tsuen) as a noise mitigation measure. However, the noise complaint was considered as project-related. The Contractor is advised to implement the mitigation measures as stated in "Recommended Mitigation Measures" as below;

- Strictly comply with the requirements of the approved CNP for works carried out in restricted hours;
- Better scheduling of works to minimize noise nuisance;
- Instruct the site workers to keep the noise in minimum during construction works in restricted hours; and
- Foster better public relations with the sensitive receivers nearby.

#### Environmental Enquiry No.: EC-28

This noise complaint was received on 11 January 2013. EPD referred a noise complaint which was made by a resident of Ha Wun Yiu at Tai Po. According to the complainant, the complainant's dwelling located at Ha Wun Yiu Village was very close to Tolo Highway. The complainant expressed that the road surface of Tolo Highway was uneven. When heavy vehicles passed the road, explosion-like loud noises were generated, seriously affecting the complainant. Although the same complaint had been made to the Highways Department before, noise barriers were still not installed and no improvement was observed. The complaint requested follow-up.

According to the information provided by the Contractor (China State Construction Engineering (HK) Ltd.) and confirmed by the Engineer of the Project, no construction activities were conducted over the road surface of Tolo Highway Northbound at Western End of Bridge 10 and West Abutment (near the complainant's dwelling) on 11 January 2013. According to the updated construction programme (provided by the Contractor), noise barriers installation work (1st half from the east end and 2nd half to the west end) of Tolo Highway (near the complainant's dwelling) will tentatively commence on 16 July 2013 and 7 August 2013 respectively.

With reference to the noise monitoring results recorded on days near the day of the complaint at the nearest EM&A monitoring station (NM2 – 10 Ha Wun Yiu), the noise levels (Leq 30mins) recorded on 8 January 2013 and 14 January 2013 were found to be 67.3dB(A) and 67.6dB(A) respectively, which were below the limit level of 75dB(A). Based on the complaint information and our investigation, the noise mentioned in the complaint was considered to be due to traffic and was not related to construction activities. Therefore, the noise complaint was considered non-project-related.

#### Environmental Enquiry No.: EC-29

On 28 January 2013, Highways Department received a water complaint from a citizen regarding muddy water discharged from the construction site near Tai Wo Estate to Lam Tsuen River, which contaminated the river water on 26 January 2013. The complaint was received by the ET on 28 January 2013.

The contaminated river water would flow to Tolo Harbour causing water quality impact. According to the information provided by the Contractor (Gammon Construction Ltd.) and confirmed by the Engineer of the Project, construction works including excavation at TW5, LB2-EA & RWTW3A, rebar fixing at LB2WA & LB3EA end wall, welding capping plate at TW4 and strike formwork at RWTW2 & RWTW3 were carried out on 26 January 2013. Desilting tanks and wastewater treatment facility (at Gate 15) were provided in construction site near Tai Po Tai Wo Road Linkbridge. All effluents from construction site/construction activities were treated by the wastewater treatment plant before discharge. Moreover, concrete blinding at site entrance was provided to prevent any effluent discharging / running off from the construction site areas to public drains. A valid discharge license (WT00007162-2010) was obtained since 8 August 2010 by the Contractor to discharge any industrial effluent arising from the construction activities into specified area and discharge sampling were taken by the Contractor at sampling point (Gate 15) regularly (bi-monthly basis). Discharge sampling (at Gate 15 sampling point) was collected on 19 December 2012 (which the sampling day near to the day of complaint) and no exceedance was recorded for Suspended Solids (SS) Limit Level (30mg/L) as stated in the discharge License. The lab result of discharge sampling (at Gate 15 sampling point) on 19 December 2012 was checked by ET.

Judged from the flow direction of the effluent discharged from the construction site, it is unlikely that the effluent arising from the construction activities conducted by the Contractor would pass to the point under inquiry. Mitigation measures and wastewater treatments were provided by the Contractor to prevent any muddy water discharged from the construction sites to public drains. The SS result of discharge sampling (at Gate 15 sampling point and near to the day of complaint) was also below the limit level of discharge License.

Upon our investigation, the wastewater mentioned in the complaint was considered not related to the effluent discharged from the construction sites of this project. Therefore, the water complaint was considered as non project-related.

#### Environmental Enquiry No.: EC-30

EPD referred a noise complaint from a resident of Parc Versailles on 5 March 2013. The complainant expressed that it was very noisy when vehicles passed Tolo Highway towards Tai Po North in a direction to Yuen Long, causing impact on the residents. The complainant requested to construct noise barriers.

According to the information provided by the Contractor (Gammon Construction Limited) and confirmed by the Engineer of the Project, mitigation measures have been implemented to minimize the noise emission from the Project area. Permanent noise barrier 37 was constructed to minimize noise when vehicles pass the newly open slip road K. Moreover, the construction of Noise Barrier 36 and the noise barrier at bridge 15A will be completed at the end of May 2013 before Bridge 15A, which is located near the complained traffic location, is open to traffic. Construction of other Noise Barriers including RWTW3 and RWTW3A will also be completed at the end of May 2013 before Linkbridges 1, 2 and 3, which are also located near Parc Versailles, are open to traffic.

With reference to the noise monitoring results recorded near the days of complaint at the nearest EM&A monitoring station (NM1A – 168 Shek Kwu Lung Village), the noise levels (Leq 30mins) on 27 February 2013 and 5 March 2013 were found to be 63.2 dB(A) and 62.1dB(A) respectively, which were below the limit level of 75dB(A).

Based on the complaint details and our investigation, the noise mentioned in the complaint was considered due to traffic noise and was not related to the noise from construction activities. Therefore, the noise complaint was considered as non project-related.

#### Environmental Enquiry No.: EC-31

The complaint was received on 10 April 2013. EPD referred a noise complaint from a resident of Wang Fuk Court at Tai Po. The complainant expressed that the construction work during midnight at Tolo Highway disturbed resident's sleep on 10 April 2013. According to the information provided by the Contractor (China State Construction Engineering (HK) Ltd.) and confirmed by the Engineer of the Project, utility duct laying works had been carried out at Tolo Highway between 01:00 – 05:00 on 10 April 2013. A valid Construction Noise Permit (CNP no.: GW-RN0144-13) was obtained for the use of Powered Mechanical Equipments (PMEs) and carrying out of construction work at Tolo Highway during restricted hours (01:00 – 05:00 in weekday). The numbers and types of PMEs operated on the dates were complied with the CNP. Besides, list of plants used during the construction works (provided by the Contractor and confirmed by the Engineer) on 10 April 2013 were also checked for verification.

However, the noise complaint was considered project-related. Responding to the noise complaint, the Contractor surrendered the CNP to EPD on 10 April 2013. The current working method and noise mitigation measures for carrying out the works will be reviewed. In addition, the Contractor is advised to implement the mitigation measures as stated in "Recommended Mitigation Measures" as below..

- Strictly comply with the requirements of the approved CNP for works carried out in restricted hours;
- Better scheduling of works to minimize noise nuisance;
- Instruct the site workers to keep the noise in minimum during construction works in restricted hours; and
- Foster better public relations with the sensitive receivers nearby.

#### Environmental Enquiry No.: EC-32

EPD referred a complaint about dust emission in the construction site of Tolo Highway widening construction works at Shek Kwu Lung to the ET on 25 April 2013. The complainant expressed that there were about seven to eight trucks unloading rocks at Shek Kwu Lung on 25 April 2013. Generation of fugitive dust would be his concern if the mentioned activities were carried out without the use of hoarding and spraying with water.

As informed by the Contractor (Gammon Construction Ltd) and confirmed by the Engineer of the Project, rock filling at RWTW3 and formwork erection at RWTW3A on 25 April 2013 were being carried out at Shek Kwu Lung as shown in the layout plan below. Mitigation measures, including water spraying at the concrete pavement near site access, wetting the fill material surface during unloading works, cleaning the wheels of vehicles before leaving the site area as well as maintaining proper traffic order in public area near site access were taken by the Contractor.

With reference to the monitoring results recorded on days near to the day of complaint at the nearest EM&A monitoring station (AM4A- 168 Shek Kwu Lung Village), the 24-hour TSP level on 19 April 2013 and 25 April 2013 were found to be 20.6ug/m<sup>3</sup> and 23.8ug/m<sup>3</sup> respectively, which were below the action level of 198.5 ug/m<sup>3</sup>. Besides, the average 1-hour TSP level on 26 April 2013 at the nearest EM&A monitoring station (AM4A- 168 Shek Kwu Lung Village) was found to be 79.7ug/m<sup>3</sup>, which was also below the action level of 302.3ug/m<sup>3</sup>.

Nevertheless, the complaint was considered as project-related. Therefore, the Contractor is reminded to enhance the dust mitigation measures as stated in "Recommended Mitigation Measures" below:

- Confirm the implementation of dust mitigation measures (watering for the haul roads and at work areas RWTW3 and RWTW3A, covering of dusty materials carrying in dump trucks within the construction area, screening the rock filling area from the public access road and nearby residences by hoarding, tarpaulin sheets or netting) during all construction / dusty activities to prevent any fugitive dust generation;
- Increase the frequency of watering in the work areas (specially near site access and work areas RWTW3) to maintain the surface of site haul roads and exposed surfaces in wet condition;
- Cover the backfilling surface after work;
- Maintain soil surface wet before loading and unloading activities;
- Maintain the frequency of the environmental supervision (by the Contractor) to regular review the adequacy and effectiveness of dust suppression measures to suit the construction progress; and
- Foster better public relations with the sensitive receivers / the complainant nearby.

#### Environmental Enquiry No.: EC-33

The air complaint was received by EPD on 7 October 2013 and referred from EPD on 7 October 2013. The complaint is about dust emission in construction site of the Tolo Highway widening construction works at Ma Wo, causing nuisance to the complainant.

As informed by the Contractor (Gammon Construction Ltd) and confirmed by the Engineer of the Project, backfilling and compaction work of general fill material at W38 and delivery of fill material from W48 to W38 by dump truck on 7 October 2013 were being carried out at Ma Wo as shown in the layout plan below. Mitigation measures, including manual and sprinklers water spraying on haul road and exposed slope, covering non-working slope by tarpaulin sheet at a sight distance from complainant before the construction of permanent footpath, providing full-time manual water spray and setting a tarpaulin dust screen on the top of W45-47 along W44 & NB31, were taken by the Contractor. In case of any dump truck passing through W45-47, the mechanical covering would not open until they reach the unloading point.

With reference to the monitoring results recorded on days near to the day of complaint at the nearest EM&A monitoring station (AM1A- 3 Sheung Wun Yiu), the 24-hour TSP levels on 27 September 2013 and 2 October 2013 were found to be 39.2ug/m<sup>3</sup> and 36.2ug/m<sup>3</sup> respectively, which were below the action level of 198.5 ug/m<sup>3</sup>. Besides, the average 1-hour TSP levels on 27 September 2013 and 2 October 2013 at the nearest EM&A monitoring station (AM1A- 3 Sheung Wun Yiu) were found to be 81.8ug/m<sup>3</sup> and 76.3ug/m<sup>3</sup> respectively, which were also below the action level of 302.3ug/m<sup>3</sup>.

Nevertheless, the complaint was considered as project-related.

Therefore, the Contractor is reminded to enhance the dust mitigation measures as stated in surese the dustwas considered as below:

- Confirm the implementation of dust mitigation measures (watering for the haul roads and at work areas W38 and W48, covering of dusty materials carrying in dump trucks within the construction area and covering non-working slope by tarpaulin sheet) during all construction / dusty activities to prevent any fugitive dust generation;
- Increase the frequency of watering in the work areas (specially near site access and work areas W38 and W48) to maintain the surface of site haul roads and exposed surfaces in wet condition;
- Cover the backfilling surface after work;
- Maintain soil surface wet before loading and unloading activities;
- Maintain the frequency of the environmental supervision (by the Contractor) to regular review the adequacy and effectiveness of dust suppression measures to suit the construction progress; and
- Foster better public relations with the sensitive receivers / the complainant nearby.

7.2. No notification of summons and prosecutions was received in the reporting period.

7.3. Cumulative statistics on complaints, notifications of summons and successful prosecutions are summarized in Appendix F.

## **8 REVIEW OF THE VALIDITY OF THE EIA/ERR PREDICTION**

8.1. All the air quality monitoring results in the reporting period were below the Action and Limite Levels established in the baseline air quality monitoring carried out in October and November 2009. The result was in line with the Environmental Impact Assessment (EIA) and Environmental Review Report (ERR) prediction that dust generation would be controlled and would not exceed the acceptable criteria, with proper implementation of the recommended dust mitigation measures.

8.2. No construction noise monitoring exceedance was recorded in the reporting period. This is generally in line with the EIA and ERR prediction that with the implementation of noise mitigation measures, the construction noise from the Project works will meet the stipulated criterion at the residential NSRs and at a majority of the education institutions, except that elevated construction noise level at Wong Shiu Chi Middle School (NM3) was predicted by the EIA and ERR.

## **9 REVIEW OF ENVIRONMENTAL IMPLEMENTATION STATUS**

9.1. The impact air quality and noise monitoring programme ensured that any environmental impact to the receivers would be readily detected and timely actions could be taken to rectify any non-compliance. The environmental monitoring results indicated that the construction activities in general were in compliance with the relevant environmental requirements and were environmentally acceptable. The weekly site inspection ensured that all the environmental mitigation measures recommended in the EIA/ERR were effectively implemented. Despite the minor deficiencies found during site audits, the relevant contractor had taken appropriate actions to rectify deficiencies within reasonable timeframe. Therefore, the effectiveness and efficiency of the mitigation measures were considered high in most of the time.

9.2. For all the parameters under monitoring as mentioned in Section 8, the measured levels were in line with the EIA and ERR predictions generally. This indicates that the mitigation measures were effectively implemented.

## **10 REVIEW OF EM&A PROGRAMME**

10.1. The environmental monitoring methodology was considered well established as the monitoring results were found in line with the EIA predictions.

- 10.2. As effective follow up actions were promptly taken once exceedances were recorded, no further exceedance occurred for each case. The EM&A programme was considered successfully and adequately conducted during the course of the reporting period.

## **11 CONCLUSIONS**

- 11.1. The construction phase and EM&A programme of Stage 1 of the Project commenced on 23 November 2009.
- 11.2. Air quality and noise monitoring, and weekly site inspections were carried out in the reporting period, in accordance with the updated EM&A manual.
- 11.3. All 1-hour TSP and 24-hour TSP monitoring results complied with the Action / Limit Level in the reporting period.
- 11.4. There were five (5) noise-related complaints followed up by the Environmental Team in the reporting period. Hence, five (5) Action Level exceedances were recorded. No Limit Level exceedance for construction noise was recorded at all monitoring stations in the reporting period.
- 11.5. Thirteen (13) environmental complaints were followed up by Environmental Team in the reporting period.
- 11.6. No notification of summons and prosecution was received in the reporting period.
- 11.7. Mitigation measures had been implemented by the Contractors to minimize the environmental impacts due to construction activities. Site inspections carried out by ET and IEC showed that the Contractors rectified the problems observed promptly and no major environmental deficiency was induced. The EM&A programme was considered successfully and adequately conducted during the course of the reporting period.

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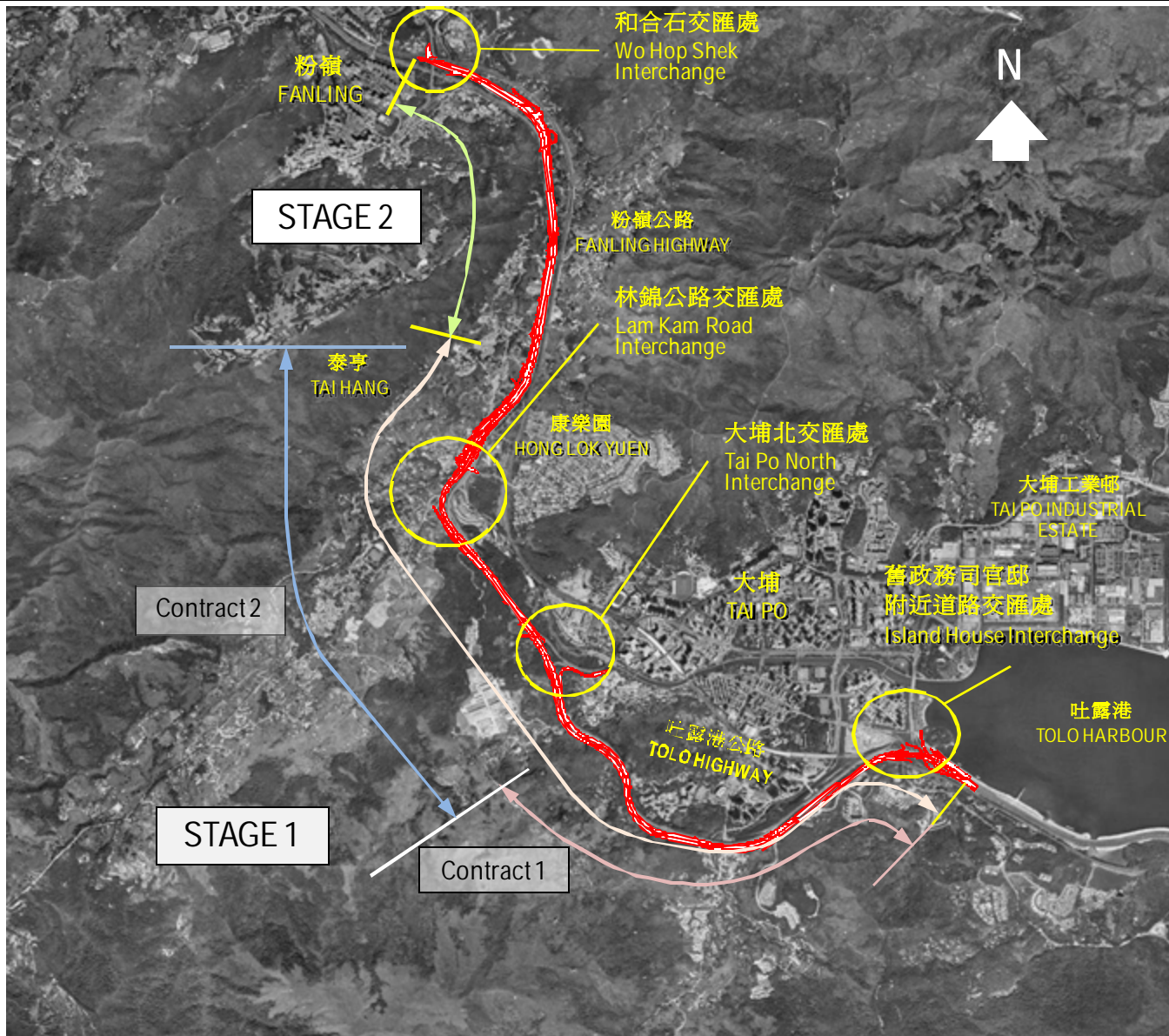
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## FIGURES

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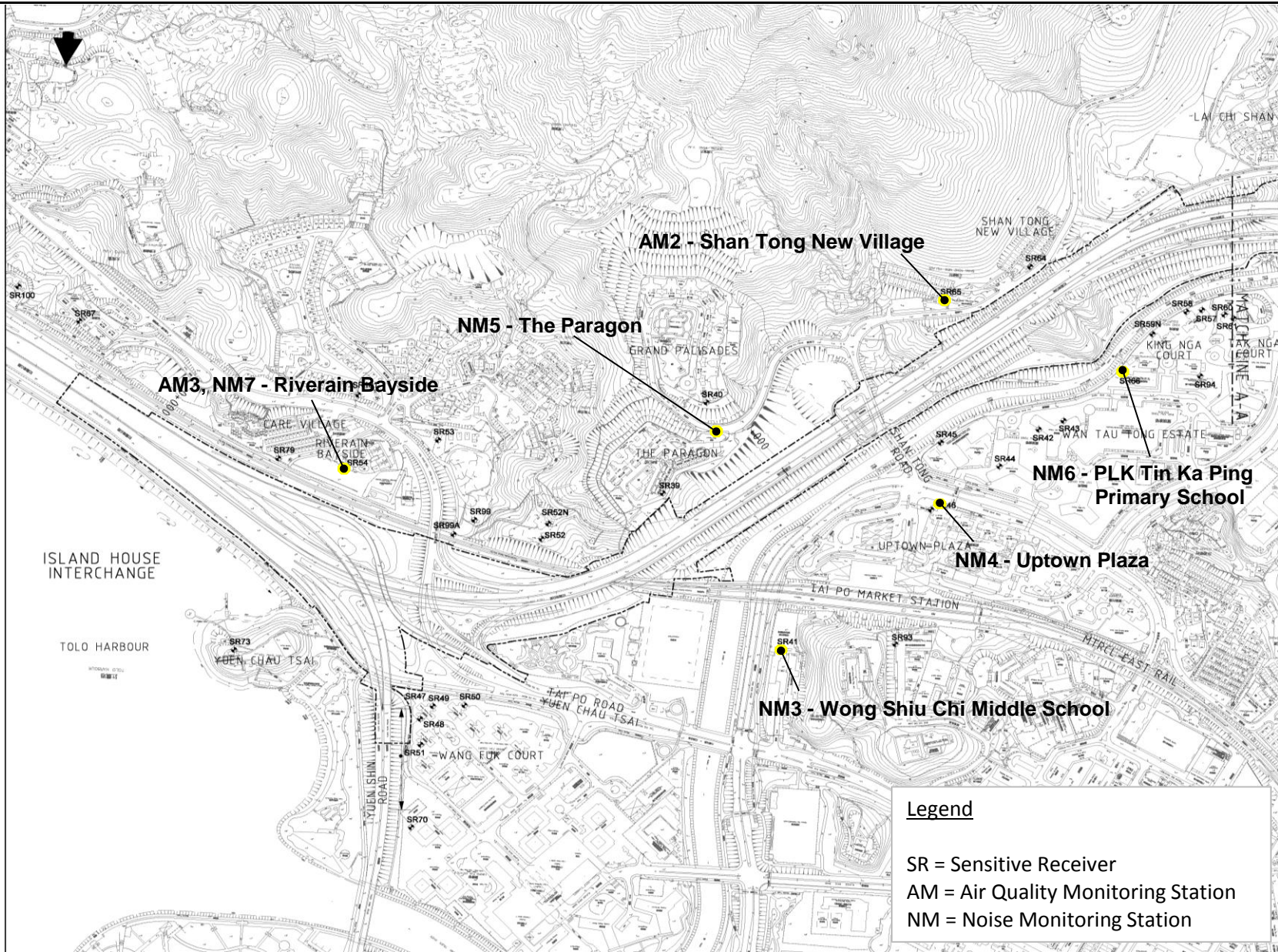




Environmental Team for the Widening of Tolo Highway between  
Island House Interchange and Tai Hang - Investigation

General Project Layout Plan

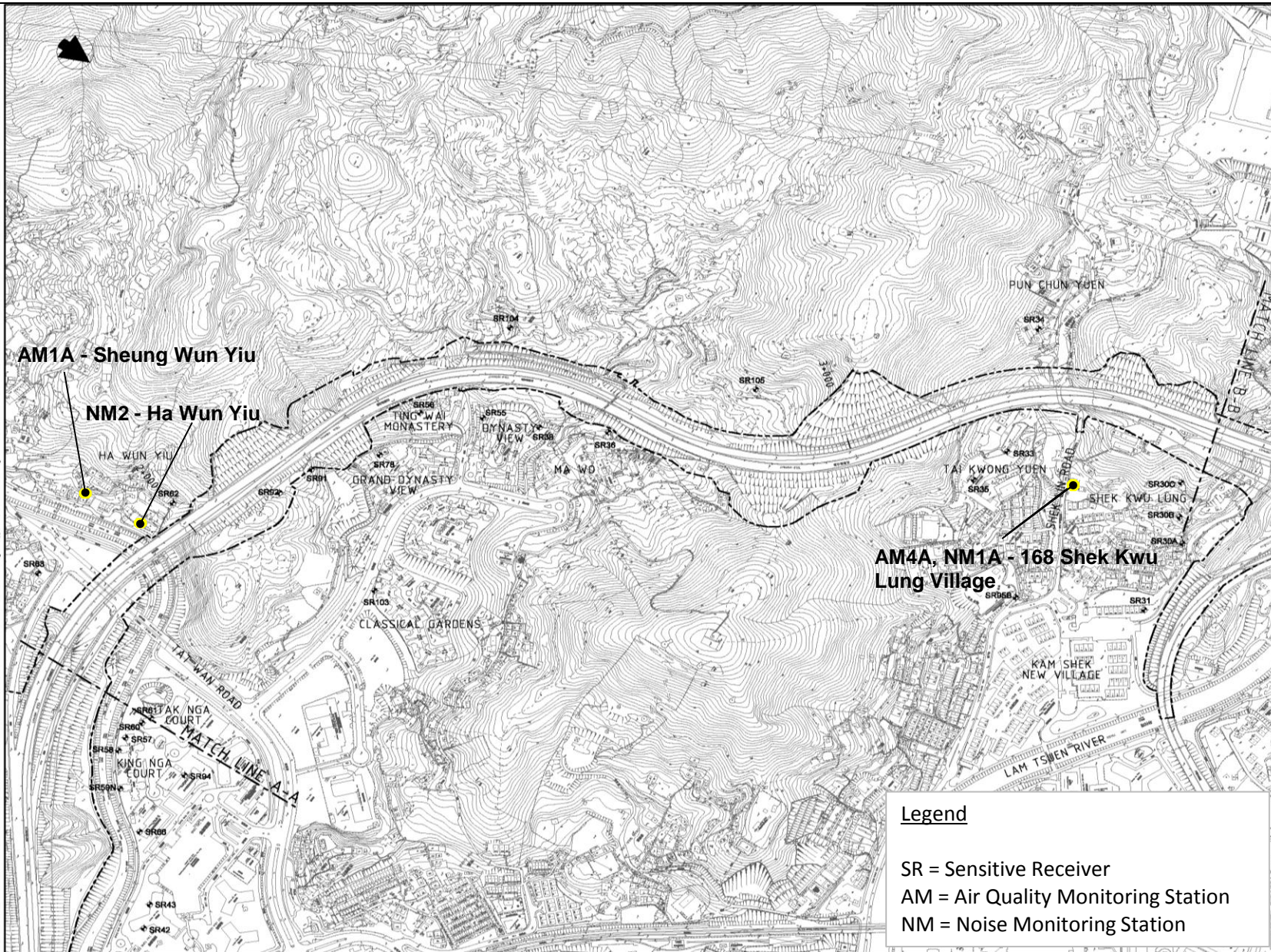
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CHECK	ENFL	DRAWN	RWHW
JOB NO.	60102979	FIGURE NO.	1.1
			Rev 0



**Legend**

SR = Sensitive Receiver  
 AM = Air Quality Monitoring Station  
 NM = Noise Monitoring Station

<b>AECOM</b>	<b>Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation</b>	SCALE	N.T.S.	DATE	Sep-11
	EM&A Monitoring Locations (Sheet 1 of 2)	CHECK	ENFL	DRAWN	LCHC
		JOB NO.	60102979	FIGURE NO.	2.1



**Environmental Team for the Widening of Tolo Highway between  
 Island House Interchange and Tai Hang - Investigation**

EM&A Monitoring Locations (Sheet 2 of 2)

SCALE	N.T.S.	DATE	Sep-11
CHECK	ENFL	DRAWN	LCHC
JOB NO.	60102979	FIGURE NO.	2.1
		Rev	0

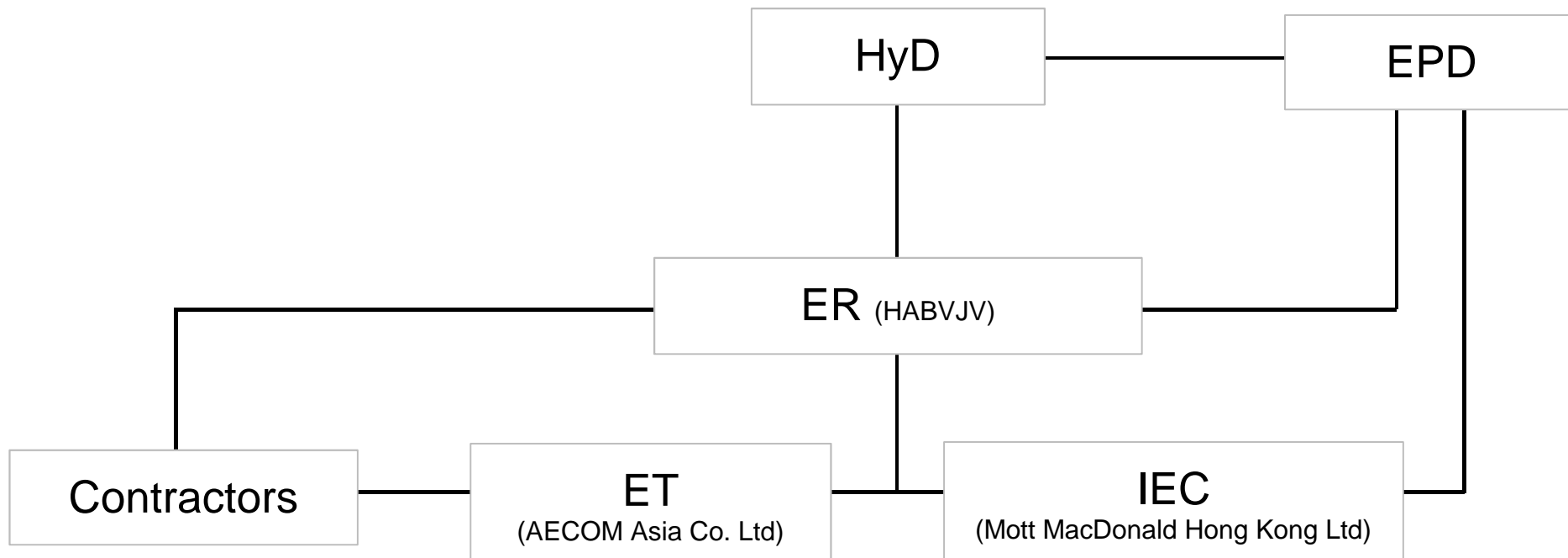
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**APPENDIX A  
PROJECT ORGANIZATION STRUCTURE**

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**Environmental Team for the Widening of Tolo Highway between  
Island House Interchange and Tai Hang - Investigation**

Project Organization Structure

SCALE	N.T.S.	DATE	2009
CHECK	ENFL	DRAWN	RWHW
JOB NO.	60102979	APPENDIX	Rev
		A	-

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**APPENDIX B  
IMPLEMENTATION SCHEDULE OF  
ENVIRONMENTAL MITIGATION MEASURES  
(EMIS)**

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**Appendix B – Implementation Schedule of Environmental Mitigation Measures (EMIS)**

Air Quality - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status												
			Nov 12	Dec 12	Jan 13	Feb 13	Mar 13	Apr 13	May 13	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	
Air Quality during Construction	• Restricting heights from which materials are dropped, as far as practicable to minimize the fugitive dust arising from unloading/loading.	During construction	V	V	V	V	V	V	V	V	V	V	V	V	
	• All stockpiles of excavated materials or spoil of more than 50m <sup>3</sup> shall be enclosed, covered or dampened during dry or windy conditions.		@	@	@	@	@	@	@	@	@	@	@	V	
	• Effective water sprays shall be used to control potential dust emission sources such as unpaved haul roads and active construction areas.		V	@	V	V	V	V	V	V	V	V	V	V	V
	• All spraying of materials and surfaces shall avoid excessive water usage.		V	V	V	V	V	V	V	V	V	V	V	V	V
	• Vehicles that have the potential to create dust while transporting materials shall be covered, with the cover properly secured and extended over the edges of the side and tail boards.		V	V	V	V	V	V	V	V	V	V	V	V	V
	• Materials shall be dampened, if necessary, before transportation.		V	V	V	V	V	V	V	V	V	V	V	V	V
	• Travelling speeds shall be controlled to reduce traffic induced dust dispersion and resuspension within the site from the operating haul trucks.		V	V	V	V	V	V	V	V	V	V	V	V	V
	• Vehicle washing facilities shall be provided to minimize the quantity of material deposited on public roads.		@	@	@	@	V	V	V	V	V	V	V	V	@

Noise - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status												
			Nov 12	Dec 12	Jan 13	Feb 13	Mar 13	Apr 13	May 13	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	
Noise during Construction	• Use of silenced plant or plant equipped with mufflers or dampers in substitute of ordinary plant.	During construction	V	V	V	V	V	V	V	V	V	V	V	V	
	• Reduce the number of equipment and their percentage on-time.		V	V	V	V	V	V	V	V	V	V	V	V	
	• 3.5 m and 5.5 m high temporary noise barrier at culvert construction work area (Figure 2a of the Environmental Permit).		V	V	V	V	V	V	V	V	V	V	V	V	
	• 3 m high temporary noise barrier along the northern edge of Bridge 12 at ground level (Figure 2b of the Environmental Permit).		V	V	V	V	V	V	V	V	V	V	V	V	
	• 2 m high temporary noise barrier along the northern edge of Bridge 12 at bridge level (Figure 2b of the Environmental Permit).		In progress	In progress	In progress	In progress	In progress	In progress	In progress	In progress	In progress	In progress	In progress	In progress	In progress
	• 2.5 m high temporary noise barrier along TaiWo Service Road West (Figure 2c of the Environmental Permit).		V	V	V	V	V	V	V	V	V	V	V	V	V
• 3.5m high temporary noise barrier along Tai Wo Services Road West near Tai Hang (Figure2c of the Environmental Permit).	In progress	In progress	In progress	In progress	In progress	In progress	In progress	In progress	In progress	In progress	In progress	In progress	In progress		

Water Quality - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status											
			Nov 12	Dec 12	Jan 13	Feb 13	Mar 13	Apr 13	May 13	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13
Water quality during Construction	Demolition and reconstruction of bridges	During construction	V	V	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>Prevent off-site migration through use of sheet piles.</li> <li>Minimize duration of works as far as practical.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>All sewer and drainage connections should be sealed to prevent debris, soil, sand, etc, from entering public sewers/drains.</li> </ul>		V	V	V	V	V	V	V	@	V	V	V	V
	<ul style="list-style-type: none"> <li>Site surface runoff should be settled to remove sand/silt before it is discharged into the existing storm drains.</li> </ul>		@	@	V	V	V	V	V	V	V	V	V	V
	River training works		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<ul style="list-style-type: none"> <li>Inspection and testing of water quality in the nullah on the Tai Po River.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	Road Widening Works and Earthworks		V	@	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>Wastewater generated from any concrete batching washdown of equipment or similar activities should be discharged into foul sewers, after the removal of settable solids, and pH adjustment as necessary. All sewage discharges from the study area should meet the TM standards and approval from EPD through the licensing process is required.</li> </ul>		@	@	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>Sand traps, oil interceptors and other pollution prevention installations should be provided, properly cleaned and maintained.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>Runoff from exposed working areas, unfinished slopes and from unlined temporary channels should be directed to stilling basins and/or silt traps before discharging to the drainage outfalls.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>Regular inspections of stilling basins and/or silt traps are required to ensure that sediment is not conveyed into the existing drainage system.</li> </ul>		@	V	V	@	@	V	@	@	@	@	@	V
	<ul style="list-style-type: none"> <li>Open stockpiles should be covered with a tarpaulin cover.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>During the wet season, any exposed top soils should be covered with a tarpaulin, shotcreted or hydroseeded.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>Sand and silt from wash-water from vehicle washing should be settled out before discharging into storm drains.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>Fuels should be stored in bunded areas such that spillage can be easily collected.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V

Waste - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status											
			Nov 12	Dec 12	Jan 13	Feb 13	Mar 13	Apr 13	May 13	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13
Waste Management during Construction	General Waste	During construction	V	V	V	V	V	V	@	@	@	@	@	@
	<ul style="list-style-type: none"> <li>Transport of wastes off site as soon as possible.</li> <li>Maintenance of accurate waste records</li> <li>Minimization of waste generation for disposal (via reduction/recycling/re-use).</li> <li>No on-site burning will be permitted.</li> <li>Use of re-useable metal hoardings/signboards.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	Vegetation from site clearance		V	V	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>Segregation of materials to facilitate disposal.</li> <li>Mulching to reduce bulk and where possible review opportunities for the possible beneficial use within landscaping areas.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	Demolition Wastes		V	V	V	V	V	@	@	@	V	V	V	V
	<ul style="list-style-type: none"> <li>Segregation of materials to facilitate disposal.</li> <li>Appropriate stockpile management.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	Excavated Materials		V	V	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>Segregation of materials to facilitate disposal / reuse.</li> <li>Appropriate stockpile management.</li> <li>Re-use of excavated material on or off site (where possible).</li> <li>Special handling and disposal procedures in the event that contaminated materials are excavated.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	Construction Wastes		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<ul style="list-style-type: none"> <li>Segregation of materials to facilitate recycling/reuse (within designated area in appropriate containers/stockpiles).</li> <li>Appropriate stockpile management.</li> <li>Planning to reduce over ordering and waste generation.</li> <li>Recycling and re-use of materials where possible (e.g. metal, wood from formwork)</li> <li>For material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal.</li> </ul>		V	V	V	@	V	@	@	@	V	V	V	V
	<ul style="list-style-type: none"> <li>Appropriate stockpile management.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>Recycling and re-use of materials where possible (e.g. metal, wood from formwork)</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>For material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
	Bentonite Slurries		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<ul style="list-style-type: none"> <li>Bentonite slurries should be reused as far as possible.</li> <li>Disposal in accordance with <i>Practice Note For Professional Persons ProPECC PN 1/94</i>.</li> </ul>		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Chemical Wastes		V	V	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>Storage within locked, covered and bunded area.</li> <li>The storage area shall not be located adjacent to sensitive receivers e.g. drains.</li> <li>Minimize waste production and recycle oils/solvents where possible.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V
			V	V	V	V	V	V	V	V	V	V	V	V



<ul style="list-style-type: none"> <li>• A spill response procedure shall be in place and absorption material available for minor spillages.</li> <li>• Use appropriate and labelled containers.</li> <li>• Educate site workers on site cleanliness/waste management procedures.</li> <li>• If chemical wastes are to be generated, the contractor must register with EPD as a Chemical Waste Producer.</li> <li>• The chemical wastes shall be collected by a licensed chemical waste collector.</li> </ul>		@	@	V	V	@	V	@	@	@	@	@	@
		V	V	V	V	V	@	V	V	V	V	V	V
		@	@	@	@	V	V	V	V	V	V	V	V
		V	V	V	V	V	V	V	V	V	V	V	V
	Municipal Wastes												
		@	V	V	@	V	V	V	V	V	V	V	V
		@	V	V	V	V	V	V	V	V	V	V	V
	<ul style="list-style-type: none"> <li>• Waste shall be stored within a temporary refuse collection facility, in appropriate containers prior to collection and disposal.</li> <li>• Regular, daily collections are required by an approved waste collector.</li> </ul>												

Ecology - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status														
			Nov 12	Dec 12	Jan 13	Feb 13	Mar 13	Apr 13	May 13	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13			
Ecology during Construction	Accurate Delineation of Works Area	During construction															
	<ul style="list-style-type: none"> <li>• Boundaries of proposed works areas shall be clearly identified and separated from external areas by a physical barrier to prevent encroachment of adjacent habitats.</li> <li>• Individual trees which fall within the works areas but which work plans show do not require removal are to be retained and fenced off to maximize protection.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V	V		
	Vegetation Clearance																
	<ul style="list-style-type: none"> <li>• No fires shall be lit within the works area for the purpose of burning cleared vegetation.</li> <li>• The Contractor shall give consideration to mulching the cleared vegetation for recycling within the works area / adjacent land.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V	V	V	
	Dust generation																
	<ul style="list-style-type: none"> <li>• Vehicle washing facilities to be provided at every discernible or designated vehicle exit point;</li> <li>• All temporary site access roads shall be sprayed with water to suppress dust as necessary;</li> <li>• All dusty materials should be sprayed with water immediately prior to any handling; and</li> <li>• All debris should be covered entirely by impervious sheeting or stored in a sheltered debris collection area.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V	V	V	
	Surface Run-off																
	<ul style="list-style-type: none"> <li>• Bund and cover stock piles to avoid run-off;</li> <li>• Channel any run-off through a system of oil, grease and sediment / silt traps and reuse water on site where ever practical;</li> <li>• All vehicle maintenance to be undertaken within a bunded area; and</li> <li>• Maximize vegetation retention on-site to maximize absorption (minimize transport).</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V	V	V	

Landscape and Visual Impact - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status														
			Nov 12	Dec 12	Jan 13	Feb 13	Mar 13	Apr 13	May 13	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13			
Landscape and Visual during Construction	Preservation of Existing Vegetation	During construction															
	<ul style="list-style-type: none"> <li>• Trees identified for retention within the project limit would be protected during the works</li> <li>• The tree transplanting and planting works shall be implemented by approved Landscape Contractors</li> </ul>		V	V	V	V	V	@	V	V	@	V	V	V			
	Temporary Works Areas																
	<ul style="list-style-type: none"> <li>• Where feasible the works areas would be screened using hoarding and existing vegetation would be retained where possible to reduce the landscape and visual impacts arising from the construction activity. The landscape of these works areas would be restored following the completion of the construction phase.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V	V		
	Hoarding																
	<ul style="list-style-type: none"> <li>• A hoarding would be erected where practicable in the most visually sensitive locations to screen the temporary construction works from the local VSR's.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V	V		
	Top Soils																
	<ul style="list-style-type: none"> <li>• The works will result in disturbance to extensive areas of topsoil. Topsoil worthy of retention should be stockpiled for use following completion of the civil engineering works. It should either be temporarily vegetated with hydroseeded grass or turned over on a regular basis.</li> </ul>		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
	Protection of Important Landscape Features																
	<ul style="list-style-type: none"> <li>• Important features such as temples, Island House and kilns within the study area, although remote from the proposed works retained and adequately protected.</li> </ul>		V	V	V	V	V	V	V	V	V	V	V	V	V		

Legend: V = implemented;  
 x = not implemented;  
 @ = partially implemented;  
 N/A = not applicable – No such work was undertaken or no such material was used on site.

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**APPENDIX C  
SUMMARY OF ACTION AND LIMIT LEVELS**

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## Appendix C - Summary of Action and Limit Levels

Table 1 – Action and Limit Levels for 1-hour TSP

Location	Action Level	Limit Level
AM1A	302.1 $\mu\text{g}/\text{m}^3$	500 $\mu\text{g}/\text{m}^3$
AM2	301.9 $\mu\text{g}/\text{m}^3$	500 $\mu\text{g}/\text{m}^3$
AM3	301.9 $\mu\text{g}/\text{m}^3$	500 $\mu\text{g}/\text{m}^3$
AM4/AM4A	302.3 $\mu\text{g}/\text{m}^3$ *	500 $\mu\text{g}/\text{m}^3$

\* Adopted from the Action level of AM4.

Table 2 – Action and Limit Levels for 24-hour TSP

Location	Action Level	Limit Level
AM1A	176.6 $\mu\text{g}/\text{m}^3$	260 $\mu\text{g}/\text{m}^3$
AM2	178.6 $\mu\text{g}/\text{m}^3$	260 $\mu\text{g}/\text{m}^3$
AM3	193.1 $\mu\text{g}/\text{m}^3$	260 $\mu\text{g}/\text{m}^3$
AM4/AM4A	198.5 $\mu\text{g}/\text{m}^3$ *	260 $\mu\text{g}/\text{m}^3$

\* Adopted from the Action level of AM4.

Table 3 – Action and Limit Levels for Construction Noise (0700-1900 hrs of normal weekdays)

Location	Action Level	Limit Level
NM1	When one documented complaint is received from any one of the sensitive receivers	65/70 dB(A)*
NM1A		75 dB(A)
NM2		75 dB(A)
NM3		65/70 dB(A)*
NM4		75 dB(A)
NM5		75 dB(A)
NM6		65/70 dB(A)*
NM7		75 dB(A)

\*Daytime noise Limit Level of 70 dB(A) applies to education institutions, while 65dB(A) applies during school examination period

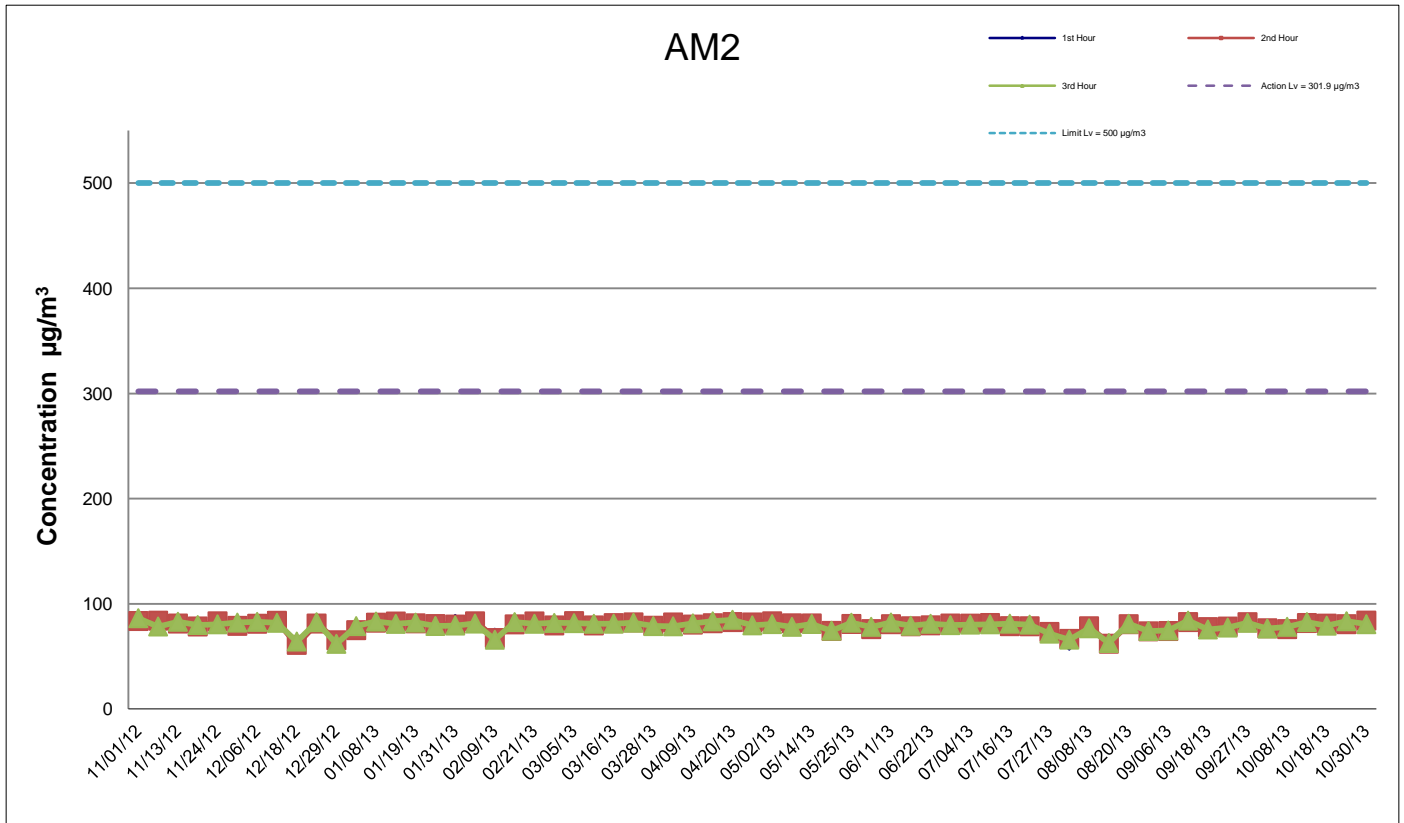
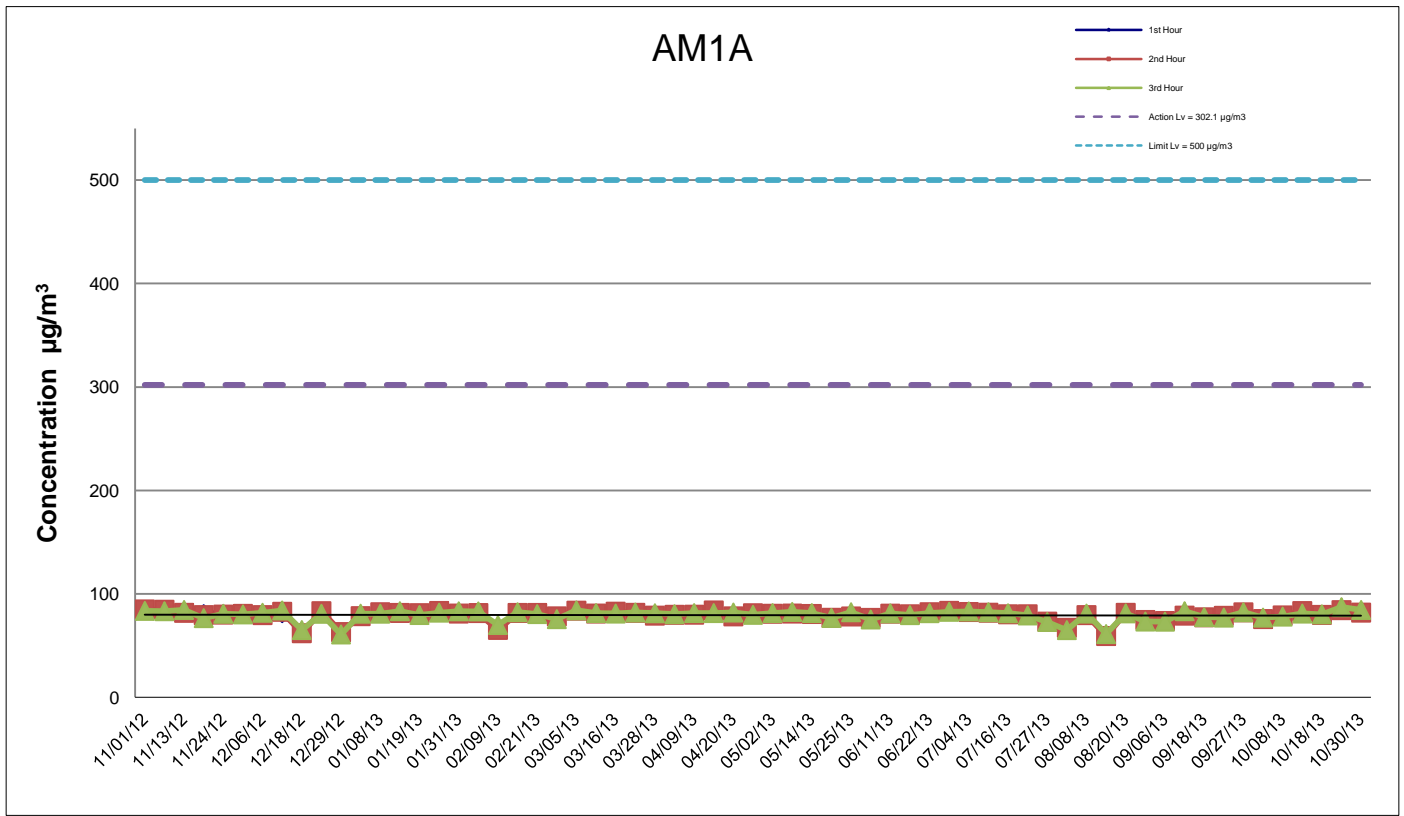
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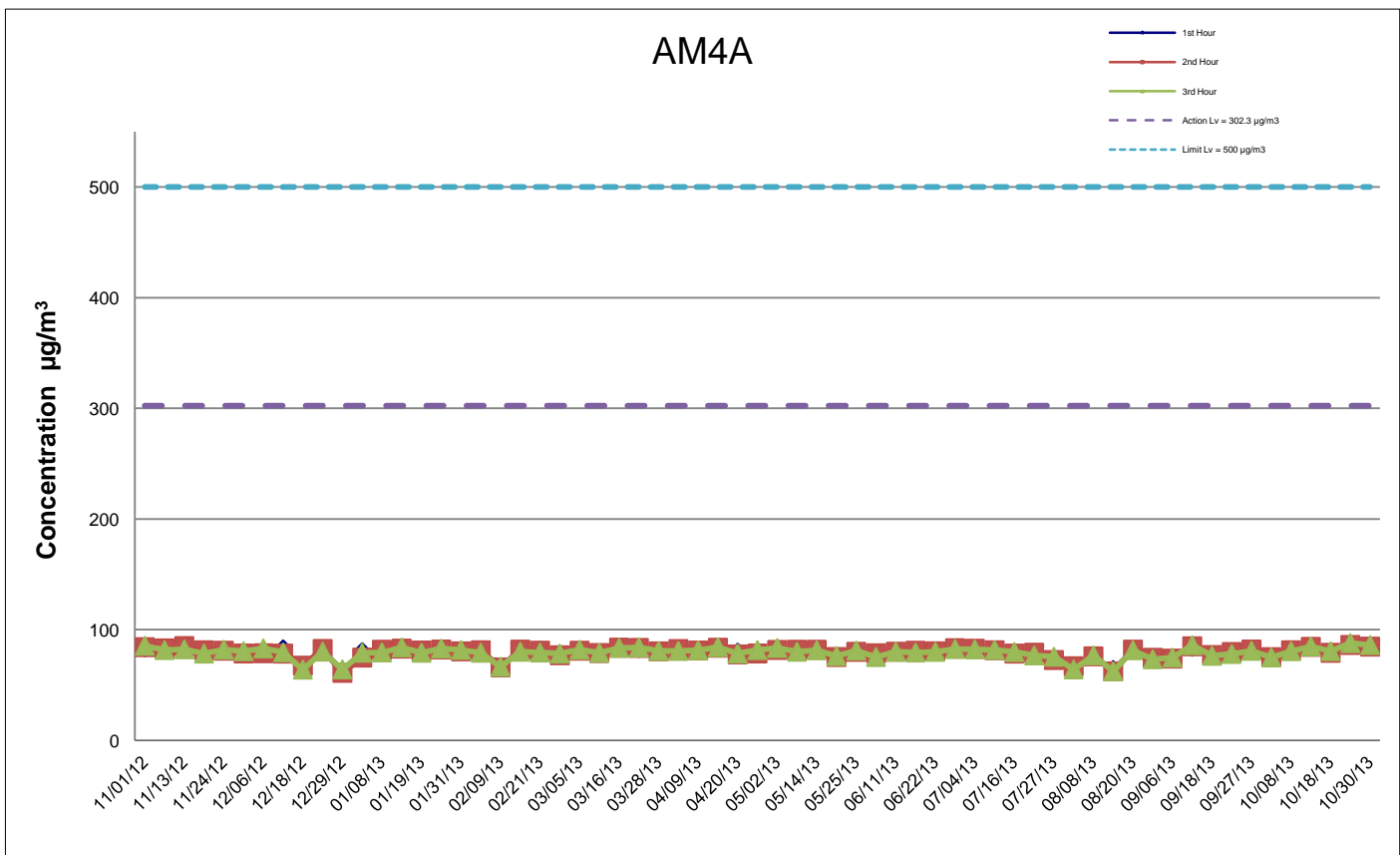
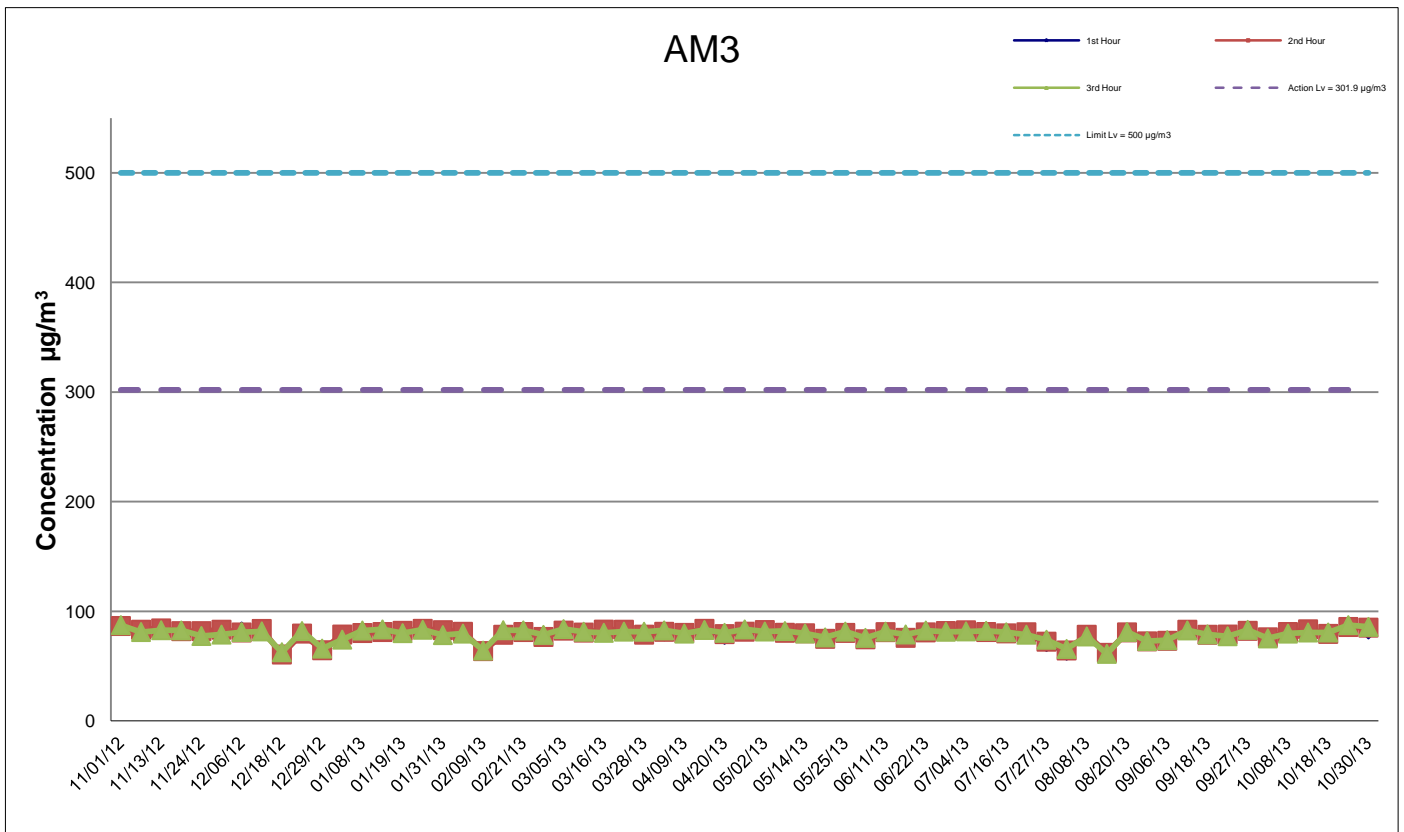
**APPENDIX D  
GRAPHICAL PRESENTATION OF IMPACT  
AIR QUALITY MONITORING RESULTS**

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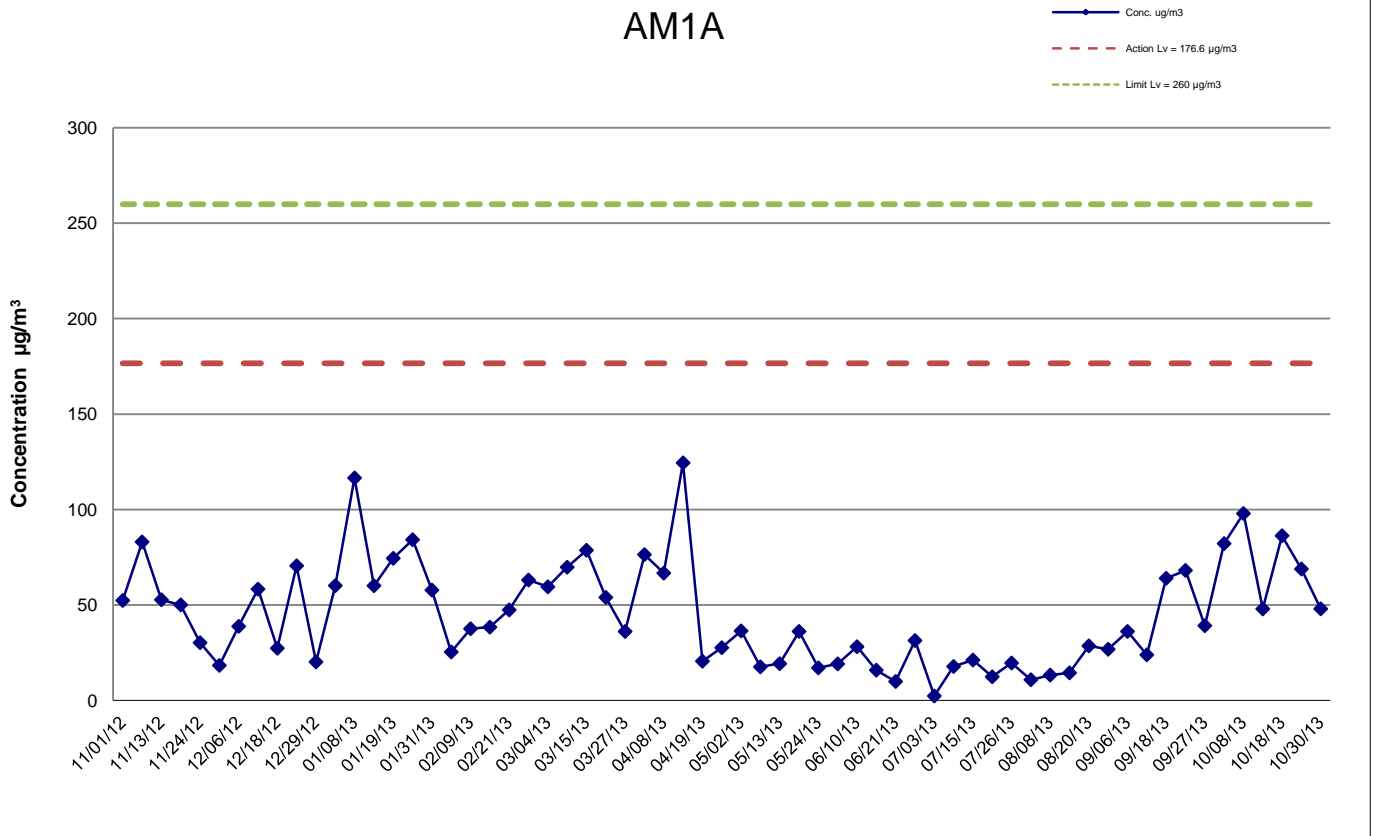
<b>AECOM</b>	<b>Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation</b>	SCALE	N.T.S.	DATE	Jan-14
	Graphical Presentation of Impact 1-hour TSP Monitoring Results	CHECK	ENFL	DRAWN	JCYK
		JOB NO.	60102979	APPENDIX No.	D



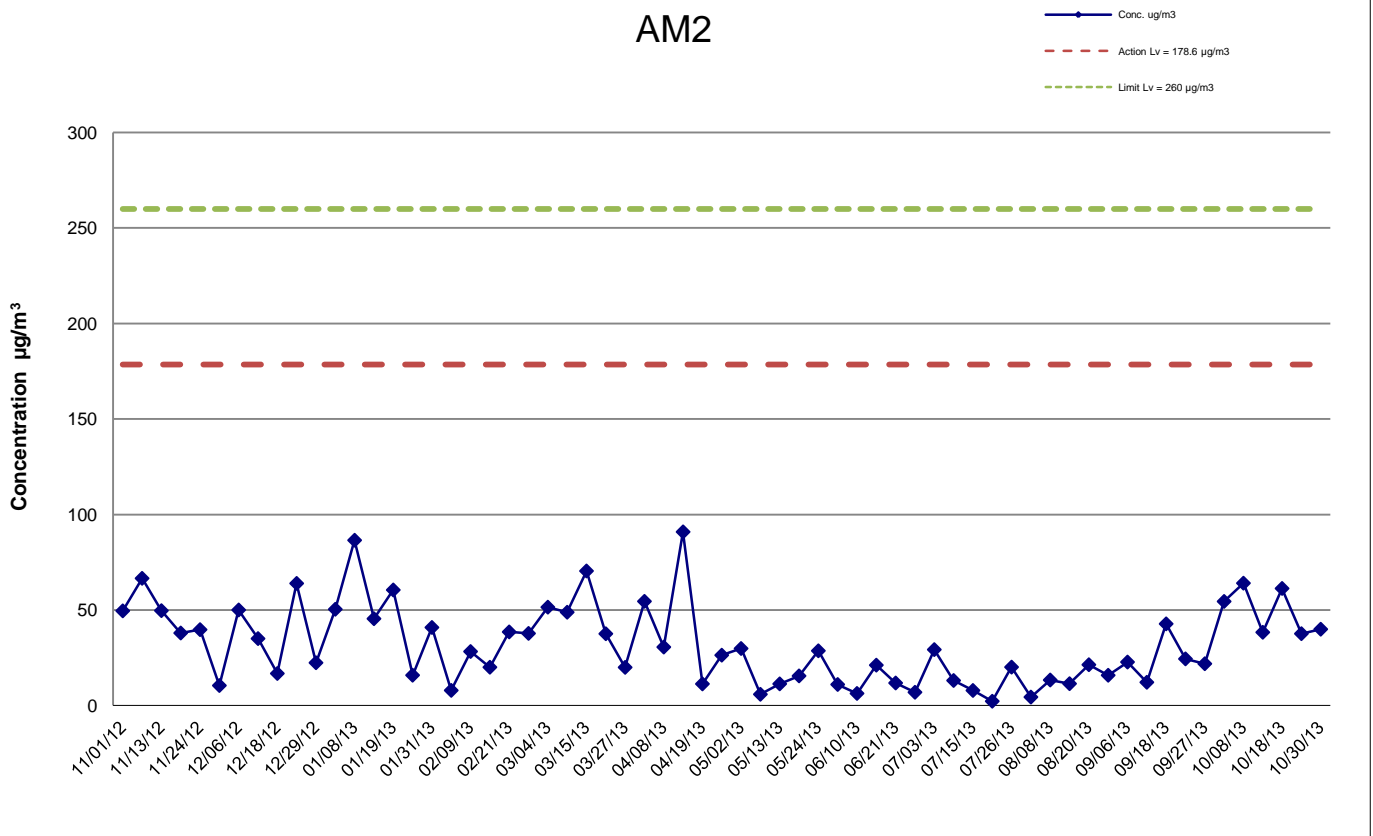
**Remark:** The monitoring station at Tai Kwong Secondary School (AM4) was relocated to 168 Shek Kwu Lung Village (AM4A) starting from 1 September 2011 due to the mentioned school was closed down.

<b>AECOM</b>	<b>Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation</b>	SCALE	N.T.S.	DATE	Jan-14
	Graphical Presentation of Impact 1-hour TSP Monitoring Results	CHECK	ENFL	DRAWN	JCYK
		JOB NO.	60102979	APPENDIX No.	
				D	-

### AM1A



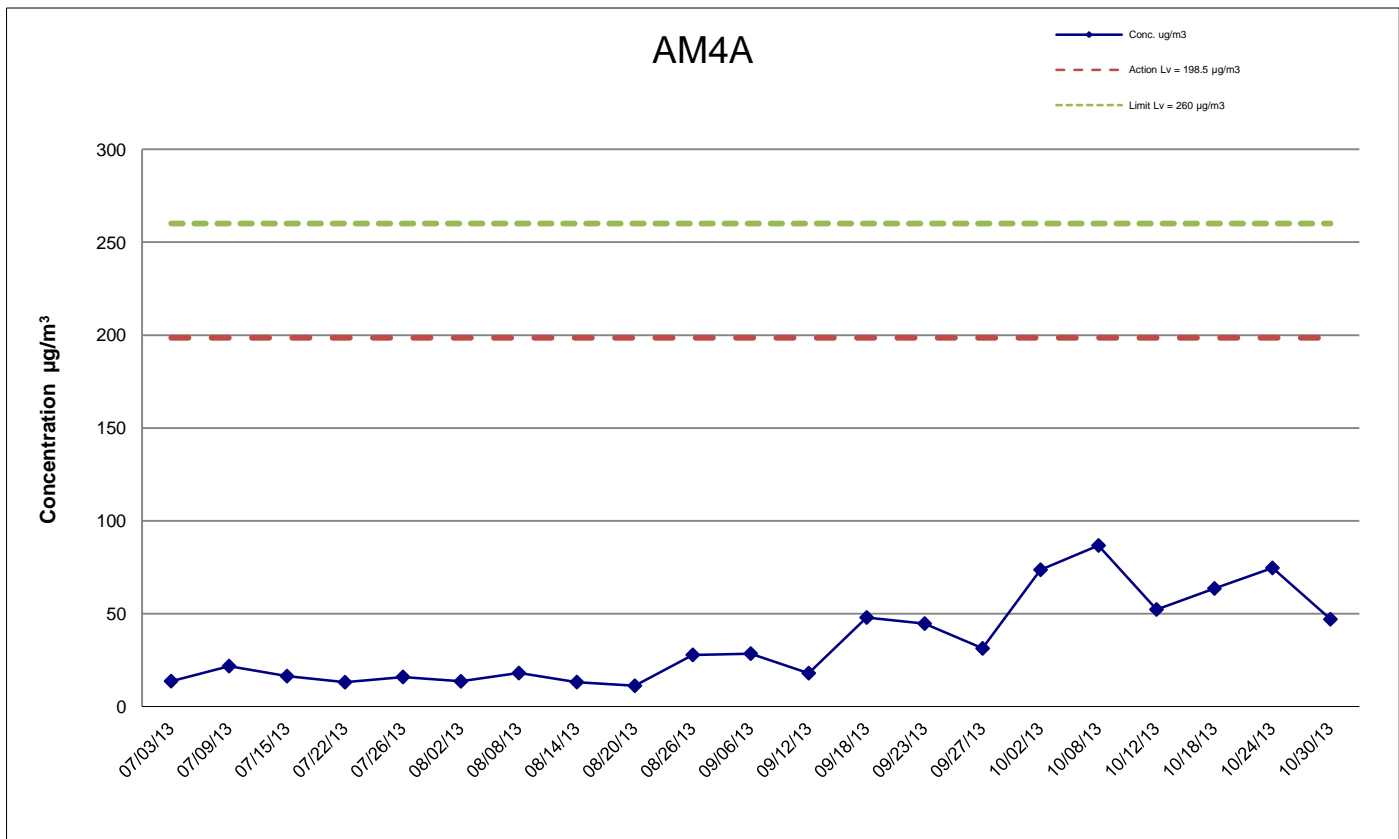
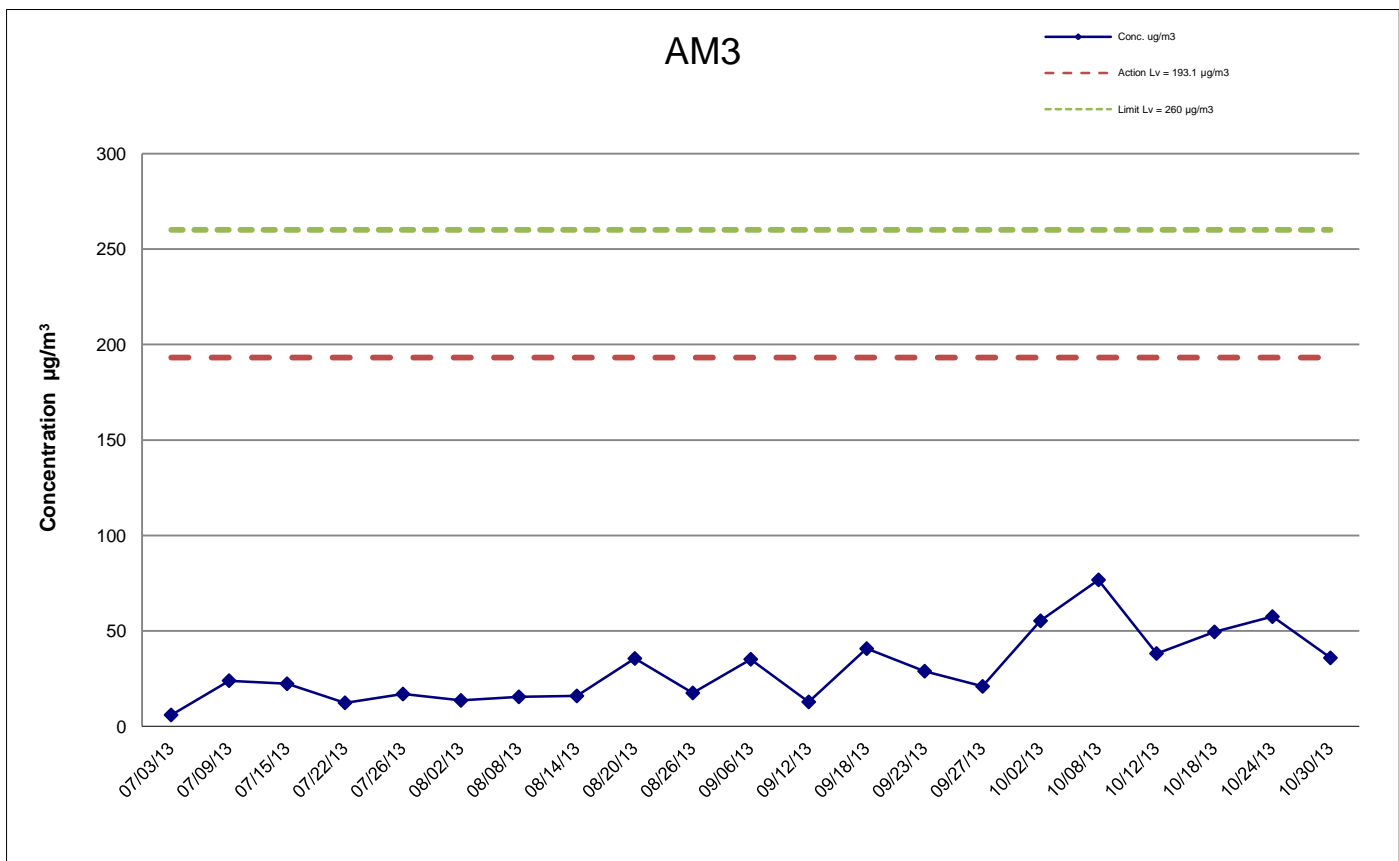
### AM2



**Environmental Team for the Widening of Tolo Highway  
between Island House Interchange and Tai Hang - Investigation**

Graphical Presentation of Impact 24-hour TSP Monitoring  
Results

SCALE	N.T.S.	DATE	Jan-14
CHECK	ENFL	DRAWN	JCYK
JOB NO.	60102979	APPENDIX No. D	Rev. -



**Remark:** The monitoring station at Tai Kwong Secondary School (AM4) was relocated to 168 Shek Kwu Lung Village (AM4A) starting from 1 September 2011 due to the mentioned school was closed down.

	<b>Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation</b>	SCALE	N.T.S.	DATE	Jan-14
	Graphical Presentation of Impact 24-hour TSP Monitoring Results	CHECK	ENFL	DRAWN	JCYK
		JOB NO.	60102979	APPENDIX No. D	



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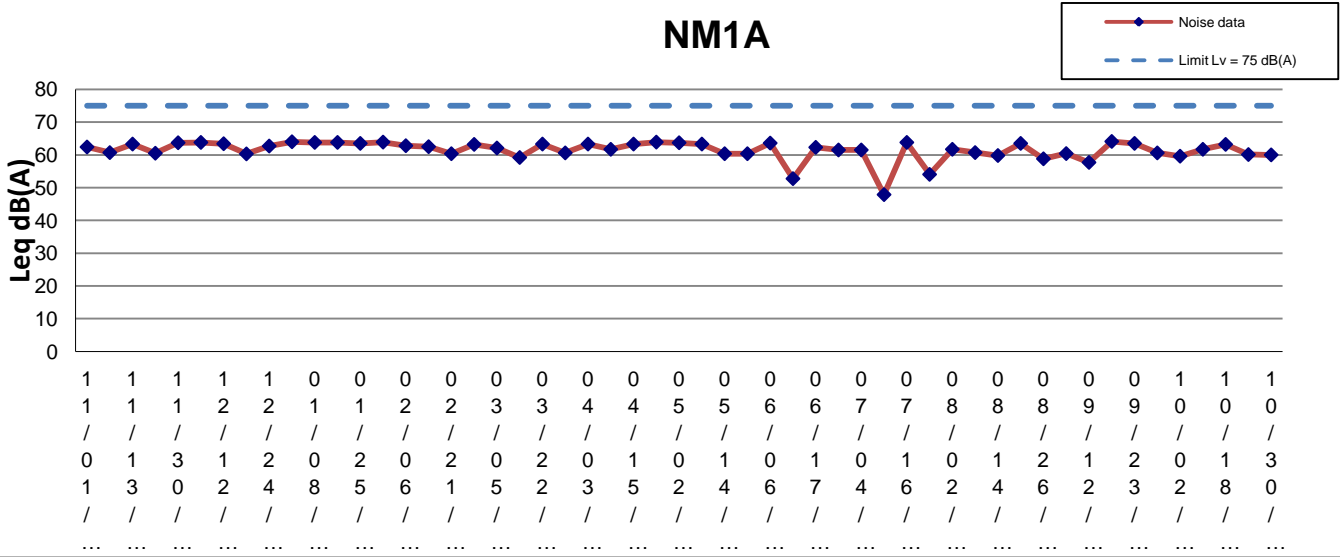
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**APPENDIX E  
GRAPHICAL PRESENTATION OF IMPACT  
DAYTIME CONSTRUCTION NOISE  
MONITORING RESULTS**

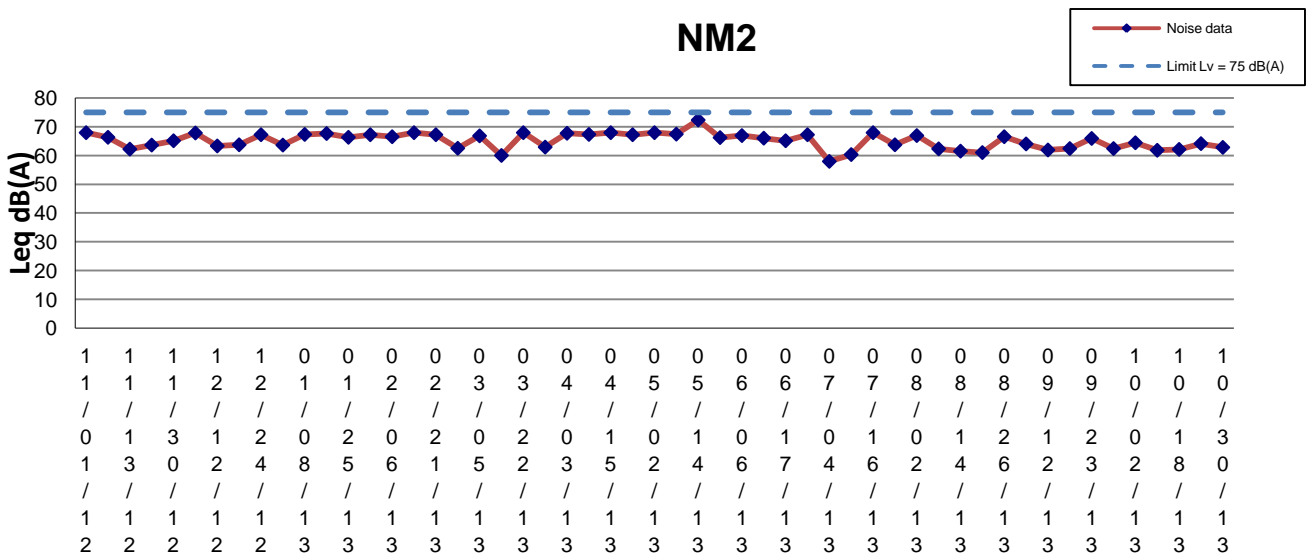
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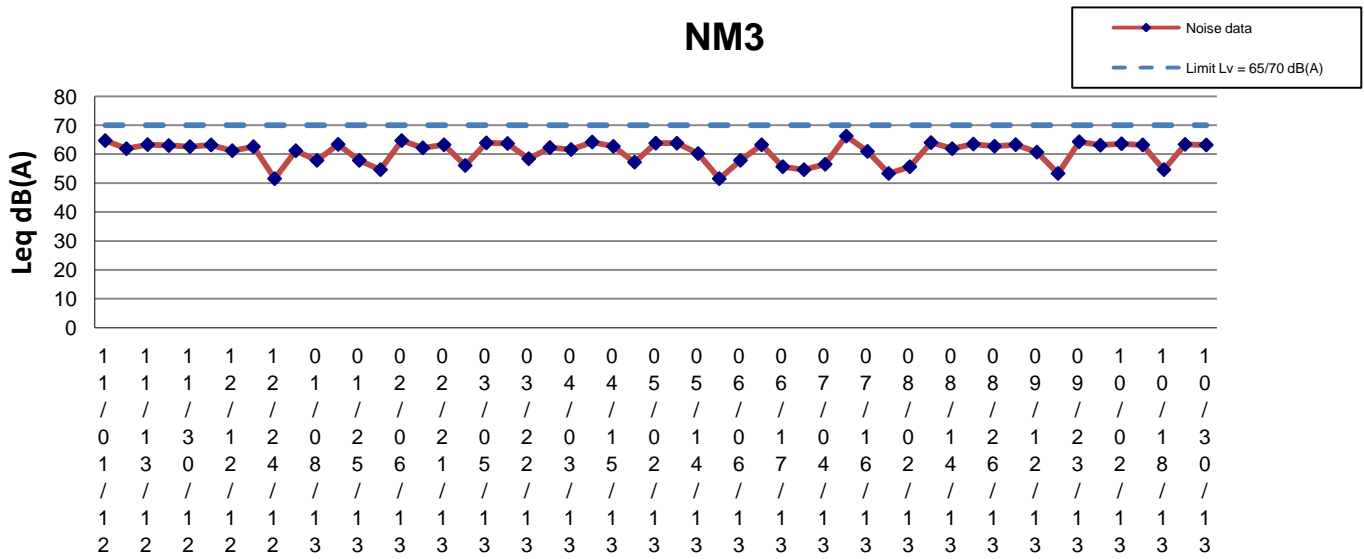
### NM1A



### NM2



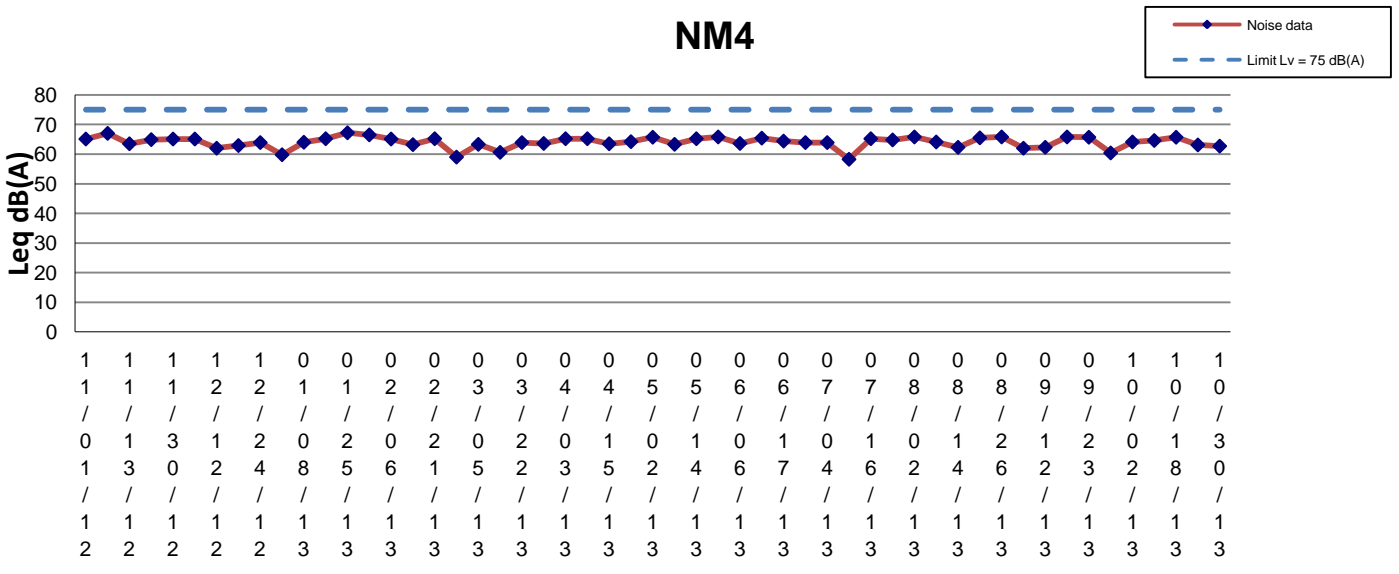
### NM3



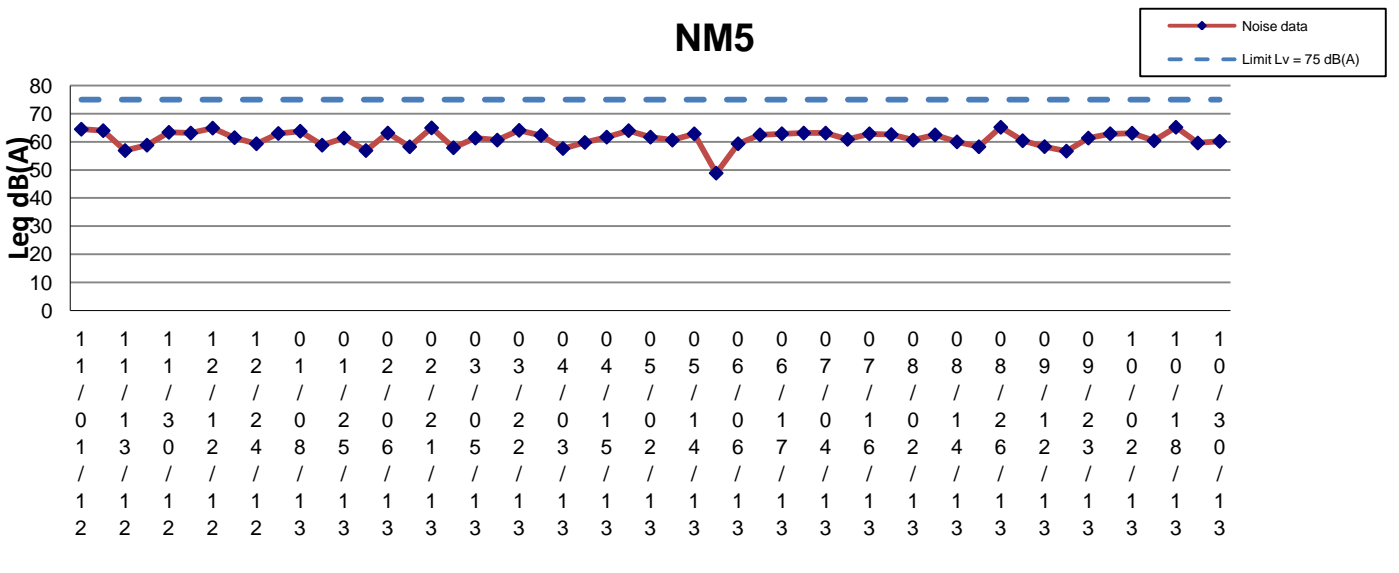
Remarks: (1) The monitoring station at Tai Kwong Secondary School (NM1) was relocated to 168 Shek Kwu Lung Village (NM1A) starting from 1 September 2011 due to the mentioned school was closed down;  
 (2) Measured noise level would be shown if Measured noise level (Leq) <= Baseline noise level

	<b>Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation</b>	SCALE	N.T.S.	DATE	Jan-14	
		CHECK	ENFL	DRAWN	JCYK	
	Graphical Presentation of Impact Daytime Construction Noise Monitoring Results	JOB NO.	60102979	APPENDIX No.	E	Rev.

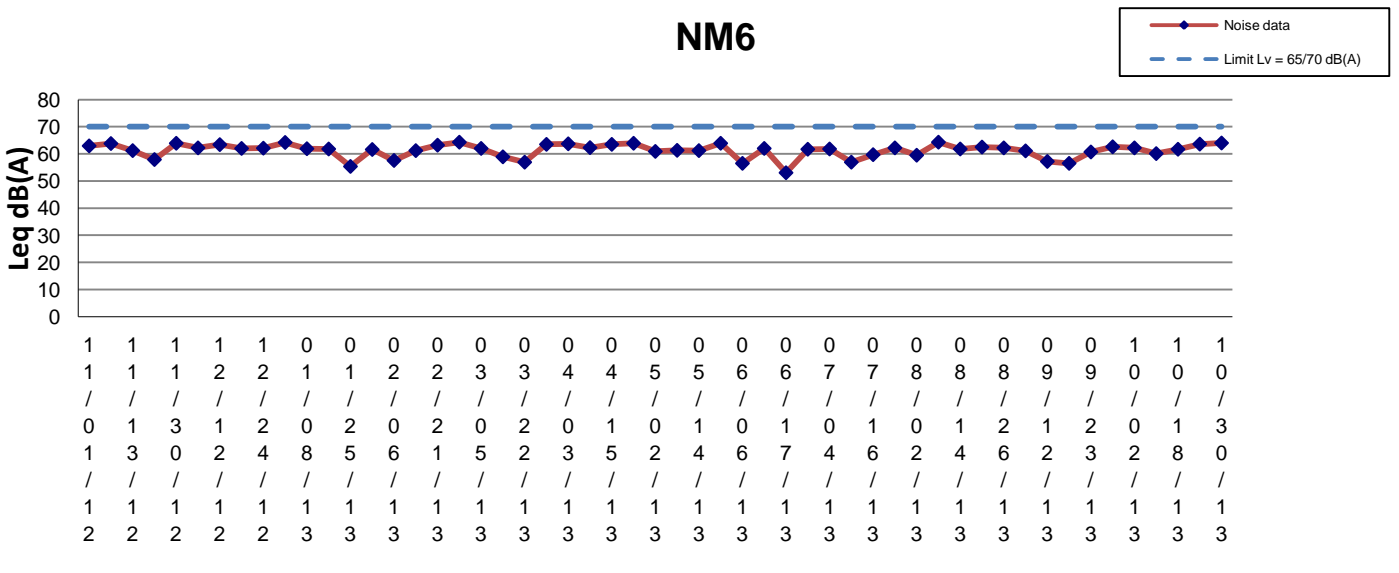
### NM4



### NM5



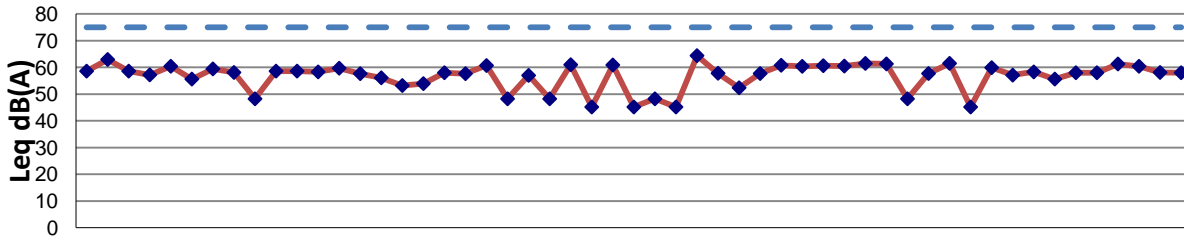
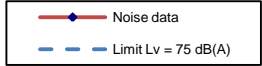
### NM6



Remark: Measured noise level would be shown if Measured noise level (Leq) <= Baseline noise level

	<b>Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation</b>	SCALE	N.T.S.	DATE	Jan-14
	Graphical Presentation of Impact Daytime Construction Noise Monitoring Results	CHECK	ENFL	DRAWN	JCYK
		JOB NO.	60102979	APPENDIX No.	E

# NM7



1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
1	1	1	2	2	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	8	9	9	0	0	0	0	0	0	0
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
0	1	3	1	2	0	2	0	2	0	2	0	1	0	1	0	1	0	1	0	1	2	1	2	0	1	3				
1	3	0	2	4	8	5	6	1	5	2	3	5	2	4	6	7	4	6	2	4	6	2	3	2	8	0				
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

**Remark:** Measured noise level would be shown if Measured noise level (Leq) <= Baseline noise level

	<b>Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation</b>	SCALE	N.T.S.	DATE	Jan-14
		CHECK	ENFL	DRAWN	JCYK
	Graphical Presentation of Impact Daytime Construction Noise Monitoring Results	JOB NO.	60102979	APPENDIX No.	Rev.

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**APPENDIX F  
CUMULATIVE STATISTICS ON  
COMPLAINTS, NOTIFICATIONS OF  
SUMMONS AND SUCCESSFUL  
PROSECUTIONS**

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## Appendix F

### Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

	Date Received	Subject	Status	Total no. followed up by ET from Nov 11 to Oct 12	Total no. followed up by ET since project commencement
<b>Environmental complaints</b>	6 November 2012	EPD referred a complaint (from a resident of The Paragon) about the suspected construction noise generated from the suspected construction activities at Tolo Highway on 4 November 2012 at 3:00 a.m.	Closed	13	33
	8 November 2012	EPD referred a telephone complaint from the a resident of Ma Wo at Tai Po about no reduction in the dust nuisance from the road widening construction works by Gammon Construction Ltd. Despite repeated request of frequent water spraying at the entrance of the construction site, such measures were only implemented during senior site staff inspections. Fugitive dust was generated for the rest of the time, causing serious nuisance to the complainant's dwelling. The complainant thereby strongly requested the EPD to monitor the status of water spraying of the construction site.	Closed		
	13 November 2012	EPD referred a complaint about construction noise generated from breaking activities at the construction site of Gammon	Closed		

		<p>Construction Ltd. near Lot no. 450 of Wai Tau Tsuen at Lam Tsuen of Tai Po. The complainant expressed that the noise from the breaking activities began between 8:00am and 9:00am on 30 October 2012 at the construction site of Gammon Construction Ltd. near Lot no. 450 of Wai Tau Tsuen at Lam Tsuen of Tai Po, causing nuisance to nearby residents. The complainant requested the EPD to follow up as soon as possible. The complainant expressed that the complainant would call the police for help if the problem of construction noise could not be handled by the day after the receipt of complaint. The reply had been communicated to the complainant. However, the complainant expressed that construction activities were still carried out by the Contractor after 7:00pm and noise was still generated from construction works. The complainant thereby requested the EPD to follow up and reply again.</p>			
	<p>29 November 2012</p>	<p>EPD referred a complaint from a resident of Shek Kwu Lung Village about the construction of Widening of Tolo Highway at the foot of the hill slope. According to the complainant, the construction works have been conducted by Gammon Construction Ltd. for a year and the works had been conducted until 20:00 at night in recent months. Due to the short distance of the complainant's premises from the</p>	<p>Closed</p>		

		<p>construction site, the nuisance was very annoying. The complainant requested EPD to follow up.</p>			
	<p>14, 17 &amp; 21 December 2012</p>	<p>EPD referred a complaint, from a resident at Ma Wo, about dust emission in construction site of the Tolo Highway widening construction works at Ma Wo. The complainant contacted the Contractor (Gammon Construction Ltd.) on 14 December 2012 and the Contractor promised that water-spraying would be provided at the entrance of the construction site. Although the complainant waited for 5 hours, no water-spraying was provided by the Contractor. Fugitive dust was generated and caused serious nuisance to the complainant's dwelling.</p> <p>Subsequently, the complainant made another call on 17 December 2012 saying that an EPD personnel contacted him in the morning on 17 December 2012. However, still no water-spraying was provided by the Contractor in the construction site on 17 December 2012. Fugitive dust generated overwhelmed the entrance of complainant's dwelling. The complainant thereby requested the EPD to follow up and reply the complainant as soon as possible.</p> <p>Afterwards, the complainant also made other call on 21</p>	<p>Closed</p>		



		<p>December 2012 strongly complaining that there are no water-spraying provided in the construction site as requested by EPD and caused continuous dust nuisance to the complainant.</p>			
	<p>24 December 2012</p>	<p>EPD referred a complaint about hammering noise generated from construction activities at the construction site for bridge construction at Lam Kam Road and Tai Wo Service Road West (near Wai Tau Tsuen) during the period from 00:00 to 06:00 in recent two weeks, causing nuisance to nearby residents. The complainant had called the Police before. However, the police expressed that as Construction Noise Permit (CNP) had been issued by the EPD for the construction works, the complaint could not be handled by the Police and requested the complainant to contact EPD. The complainant was strongly dissatisfied. It was because the EPD issued the CNP for the construction works but no government staff was observed to be on site to monitor the noise. The complainant objected the issuance of the CNP and strongly requested replies and follow-up as soon as possible.</p> <p>The complainant expressed if the construction works were still carried out at night time again, he would lodge the complaint to the Director and he would contact the Media immediately for</p>	<p>Closed</p>		

		reporting.			
	24 December 2012	EPD referred a complaint about noise nuisance generated from construction activities, at the construction site for bridge construction between Lam Kam Road and Tai Wo Service Road West at mid-night on Monday to Friday and ongoing for two weeks, caused nuisance to Wai Tau Tsuen. The complainant called the Police before and found out the related Construction Noise Permit (CNP) in EPD's website. However, the complainant did not provide the reference number of the CNP. The Complaint requested the Highways Department to stop the construction works as soon as possible.	Closed		
	11 January 2013	EPD referred a noise complaint from a resident of Ha Wun Yiu. According to complainant "C", the complainant's dwelling located at Ha Wun Yiu Village was very close to Tolo Highway. The complainant expressed that the road surface of Tolo Highway was uneven. When heavy vehicle passed through the road, strong sound and noise, like explosion, were produced. The noise seriously affected the complainant. Although the complainant had complained this issue to Highways Department before, noise barriers were still not installed and no improvement was observed. The complaint requested follow-up.	Closed		

	30 January 2013	On 28 January 2013, Highway received a water complaint from a citizen regarding muddy water discharged from construction site nearby Tai Wo Estate to Lam Tsuen River, which contaminated the river water on 26 January 2013. The contaminated river water would flow to Tolo Harbour causing water quality impact.	Closed		
	5 March 2013	EPD referred a noise complaint from a resident of Parc Versailles. The complainant expressed that it was very noisy when vehicles passed through Tolo Highway towards Tai Po North in a direction to Yuen Long, causing impact on the residents. The complainant requested to construct noise barrier.	Closed		
	10 April 2013	EPD referred a noise complaint from a resident of Wang Fuk Court at Tai Po. The complainant expressed that the construction work during midnight at Tolo Highway disturbed resident's sleep.	Closed		
	25 April 2013	EPD referred a complaint about dust emission in construction site of the Tolo Highway widening construction works at Shek Kwu Lung. The complainant expressed that there were about seven to eight trucks unloading the rocks at Shek Kwu Lung on 25 April 2013, fearing that it would generate fugitive dust if the mentioned activities were carried out without the use of	Closed		

		hoarding and water-spraying.			
	7 October 2013	EPD referred a complaint about dust emission in construction site of the Tolo Highway widening construction works at Ma Wo, causing nuisance to the complainant.	Closed		
<b>Notification of summons</b>	-	-	-	0	0
<b>Successful Prosecutions</b>	-	-	-	0	0