

Civil Engineering and Development Department

Contract No. ST/2013/01
Sha Tin New Town Stage II
Road T3 and Associated Roadworks –
Remaining Works, Phase III

Monthly EM&A Report
(Version 1.0)

August 2014

Certified By



(Environmental Team Leader)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties

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EXECUTIVE SUMMARY**Introduction**

1. This is the 3rd monthly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for CEDD Contract No. ST/2013/01 “Sha Tin New Town Stage II, Road T3 and Associated Roadworks – Remaining Works, Phase III” (hereinafter referred to as ‘the Project’). This report documents the findings of EM&A Works conducted in August 2014.
2. The major site activities undertaken in the reporting month included:
 - Concreting & curing
 - Formwork removal & soil backfill

Environmental Monitoring and Audit Works

3. Environmental monitoring and audit works for the Project were performed regularly and the results were checked and reviewed. Site audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.
4. Summary of the non-compliance of the reporting month is tabulated in **Table I**.

Table I Summary Table for Events Recorded in the Reporting Month

Parameter	No. of Exceedance		No. of Exceedance Due to this Project	Action Taken
	Action Level	Limit Level		
Noise	0	0	0	N/A

Construction Noise

5. All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

Environmental Licenses and Permits

6. Environmental related licenses/permits granted to the Project include the Environmental Permit (EP) for the Project and the Water Discharge Licence.

Key Information in the Reporting Month

7. Summary of key information in this reporting month is tabulated in **Table II**. The key information in the EIA Report is summarized in the Table III below. According to the EIA Report, air quality and noise would be the key environmental issues during the construction of the Project. Details of the implementation of mitigation measures are provided in the Appendix H.

Table II Summary Table for Key Information in the Reporting Month

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	0	---	N/A	N/A	---
Changes to the assumptions and key construction / operation activities recorded	0	---	N/A	N/A	---
Status of submissions under EP	1	Monthly EM&A Report for (July 2014)	Submitted to EPD on 20 th August 2014.	N/A	---
Notifications of any summons & prosecutions	0	---	N/A	N/A	---
<p>Future Key Issues</p> <p>Major site activities for the coming month will include:</p> <ul style="list-style-type: none"> • Formwork erection / Removal and reinforcement fixing • Concreting / soil backfill <p>The anticipated major environmental issues will be mainly on silty surface runoff, blocking of drainage system and ponding water during rainy season; and dust and noise nuisance due to roadwork activities.</p>					

Table III Key Information in the EIA Report and the Status of EMIS

	Issues	Assumptions and Assessment	Recommended Mitigation Measures	Status of Implementation of Mitigation Measures
Construction Phase	Air	With the implementation of dust suppression mitigation measures, the level of construction dust would comply with the relevant AQO.	Watering the work area at least twice a day. Environmental pollution control measures for minimizing construction dust impact as stipulated in the APCO.	During the audit sessions, it was observed that: • Watering the work site was provided.
	Noise	Noise level at most of NSRs would exceed the noise criteria without mitigation measures.	Good site practices, adoption of quiet construction plant, reduction of on-time operation of plant, movable noise barrier, avoid simultaneous noisy activities.	During the audit sessions, it was observed that: • Simultaneous noisy activities were avoided.
	Water	The potential impact rose from the construction of flyovers spanning to the upper Shing Mun River Channel.	Construction works spanning the upper Shing Mun River should be undertaken in the dry season All storm runoff should be routed through oil/grit separators and/or sediment basins/traps before being allowed to be discharged into the nearby receiving waters. All stockpiled areas should be covered. All sediment removable facilities should be maintained and the deposited sediments should be removed regularly.	The construction of flyovers spanning to the upper Shing Mun River Channel was completed under Sha Tin New Town – Stage II, Trunk Road T3 Project in 2009

1 INTRODUCTION

Background

- 1.1 ‘Road T3 and Associated Roadworks – Remaining Works, Phase III’ Project (hereinafter referred to as “the Project”) is the remaining works of the Project ‘Sha Tin New Town – Stage II, Trunk Road T3 (Tai Wai)’ which is a Schedule 2 Designated Project under the Environmental Impact Assessment Ordinance (Cap. 449). A study of environmental impact assessment (EIA) was undertaken for the ‘Sha Tin New Town – Stage II, Trunk Road T3 (Tai Wai)’ to consider the key issues of to provide information on nature and extent of environmental impacts arising from the construction and operation of Road T3, and identify possible mitigation measures associated with the works. An EIA Report was approved by the Environmental Protection Department (EPD) on March 1998.
- 1.2 The Project includes the construction of an outstanding 1-lane slip road in the original Road T3 Scheme under the Environmental Permit EP-135/2002/J (EP) issued for Schedule 2 Project ‘Sha Tin New Town, Stage II - Road T3 and associated roadworks’ on 6 February 2014. The construction period of the Contract is tentatively 16 months. The commencement date of major construction works of the Project was scheduled to 19th June 2014.
- 1.3 Cinotech Consultants Limited was commissioned by the CEDD to undertake the Environmental Monitoring and Audit (EM&A) works for the Project.
- 1.4 The site layout plan and the location of noise monitoring station are shown in **Figure 1**.
- 1.5 According to the Baseline Environmental Monitoring Plan submitted to EPD on 21 February 2014, there is one noise monitoring station under the Project for monitoring the impact construction noise. No comment was received from EPD.
- 1.6 This is the 3rd monthly EM&A report summarizing the EM&A works conducted for the Projects in August 2014.

Project Organizations

- 1.7 Different parties with different levels of involvement in the project organization include:
 - Project Proponent - Civil Engineering and Development Department (CEDD)
 - Engineer’s Representative (ER) – AECOM
 - Environmental Team (ET) – Cinotech Consultants Ltd.
 - Independent Environmental Checker (IEC) – ANEWR Consulting Limited
 - Contractor – Sheen Billion Development Ltd.
- 1.8 The key contacts of the Project are shown in **Table 1.1**, and the organization chart of ET is shown in **Figure 2**.

Table 1.1 Key Project Contacts

Party	Role	Name	Position	Phone No.	Fax No.
CEDD	Project Proponent	Mr. Bryan YUEN	Engineer	2301 1398	/
		Mr. T.M. KONG	Engineer	2762 5392	2714 5174
AECOM	Engineer's Representative	Mr. Daniel KO	Resident Engineer	2607 7805	2687 2322
Cinotech	Environmental Team Leader	Dr. Priscilla CHOY	Director	2151 2089	3107 1388
ANEWR	Independent Environmental Checker	Mr. James CHOI	Director	2869 6018	3007 8556
Sheen Billion Development Ltd.	Contractor	Mr. Walance LI	Project Manager	9609 1908	3427 9289
		Mr. Ryan CHAN	Site Engineer / Environmental Officer	9708 7539	

Construction Programme

1.9 The site activities undertaken in the reporting month were:

- Concreting & curing
- Formwork removal & soil backfill

Summary of EM&A Requirements

1.10 The EM&A programme requires construction phase noise monitoring as well as environmental site audits. The EM&A requirements are described in the following sections, including:

- All monitoring parameters;
- Action and Limit levels for all environmental parameters;
- Event / Action Plans;
- Environmental mitigation measures, as recommended in the project EIA study final report; and
- Environmental requirements in contract documents.

1.11 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 3 of this report.

1.12 This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the required monitoring parameters, namely noise as well as audit works for the Project in the reporting month.

2 NOISE MONITORING

Monitoring Requirements

- 2.1 One noise monitoring station, namely N6 was approved for impact monitoring. **Appendix A** shows the established Action and Limit Level for the environmental monitoring works.

Monitoring Locations

- 2.2 Noise monitoring was conducted at one designated monitoring station as presented in **Table 2.1**. **Figure 1** shows the location of the monitoring station.

Table 2.1 Location of Noise Monitoring Station

Monitoring Station	Description	Location of Measurement
N6	Scenery Court	Block 1 of Scenery Court

Monitoring Equipment

- 2.3 **Table 2.2** summarizes the noise monitoring equipment model being used.

Table 2.2 Noise Monitoring Equipment

Equipment	Model and Make	Quantity
Integrating Sound Level Meter	SVANTEK - SVAN 955 and SVAN 957	3
Calibrator	SVANTEK - SV30A	3

Monitoring Parameters, Frequency and Duration

- 2.4 **Table 2.3** summarizes the monitoring parameters, frequency and total duration of monitoring.

Table 2.3 Noise Monitoring Parameters, Frequency and Duration

Station	Parameter	Period	Frequency	Measurement
N6	L ₁₀ (30 min.) dB(A) L ₉₀ (30 min.) dB(A) L _{eq} (30 min.) dB(A)	0700-1900 hrs. on normal weekdays	Once a week	Façade

Monitoring Methodology and QA/QC Procedures

Field Monitoring

2.5 The monitoring procedures are as follows:

- The microphone head of the sound level meter was positioned 1m exterior of the noise sensitive facade and lowered sufficiently so that the building's external wall acts as a reflecting surface.
- The battery condition was checked to ensure good functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - frequency weighting : A
 - time weighting : Fast
 - measurement time : 30 minutes
- Prior to and after noise measurement, the meter was calibrated using the calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement was considered invalid and repeat of noise measurement was required after re-calibration or repair of the equipment.
- The wind speed at the monitoring station was checked with the portable wind meter. Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s.
- Noise measurement was paused during periods of high intrusive noise if possible and observation was recorded when intrusive noise was not avoided.
- At the end of the monitoring period, the L_{eq} , L_{10} and L_{90} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.

Maintenance and Calibration

2.6 Maintenance and Calibration procedures were as follows:

- The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- The sound level meter and calibrator were checked and calibrated at yearly intervals. Copies of calibration certificates are attached in **Appendix B**.

Results and Observations

2.7 In the reporting month, noise monitoring was conducted as scheduled at the designated location. The noise monitoring schedule is provided in **Appendix C**.

2.8 All the Construction Noise Levels (CNLs) reported in this report were adjusted with the corresponding baseline level (i.e. Measured L_{eq} – Baseline L_{eq} = Measured CNL), in order to facilitate the interpretation of the noise exceedance. The baseline noise level and the allowed CNL at the designated noise monitoring station are presented at Table

2.4.

Table 2.4 Baseline Noise Level and Allowed Construction Noise Level for Monitoring Station

Station	Baseline Noise Level, dB (A)	Allowed CNL, dB (A)
N6 – Scenery Court	66.7	75.0

2.9 The details of the monitoring results and graphical presentations are shown in **Appendix D**. The weather during the monitoring session was sunny and cloudy. In accordance with Condition 6.2 of the EP, all environmental monitoring data was made available to the public via internet access at the website: <http://www.st201301.com/test/>.

2.10 No Action/Limit Level exceedance for construction noise monitoring was recorded in the reporting month. The Action/Limit Level and the noise monitoring result are summarized at Table 2.5.

Table 2.5 Summary Table of Noise Monitoring Results during the Reporting Month

Parameter	Date	CNLs L _{eq} (30min) dB (A)	Action Level	Limit Level
N6	8 August 2014	66.7	When one documented complaint is received	75dB(A)
	12 August 2014	68.5		
	20 August 2014	68.2		
	26 August 2014	58.4		

2.11 According to our field observations, the major noise sources identified at the designated monitoring station are as follows:

Station	Major Noise Sources
N6 – Scenery Court	Road Traffic

3 ENVIRONMENTAL AUDIT

Site Audits

- 3.1 Site audits were carried out by ET on weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix F**.
- 3.2 Site audits were conducted on 7th, 14th, 22nd and 28th August 2014 by ET. A joint site audit with the representative with IEC, ER, the Contractor and the ET was carried out on 22nd August 2014. No site inspection was conducted by EPD during the reporting month. The details of observations during site audit can refer to **Table 3.3**.

Review of Environmental Monitoring Procedures

- 3.3 The monitoring works conducted by the monitoring team were inspected regularly. The following observations have been recorded for the monitoring works:

Noise Monitoring

- The monitoring team recorded all observations around the monitoring stations, which might affect the monitoring result.
- Major noise sources were identified and recorded. Other intrusive noise attributing to the result was trimmed off by pausing the monitoring temporarily.

Status of Environmental Licensing and Permitting

- 3.4 All permits/licenses obtained for the Project are summarized in **Table 3.1**.

Table 3.1 Summary of Environmental Licensing and Permit Status

Permit / License No.	Valid Period		Status
	From	To	
Environmental Permit (EP)			
EP-135/2002/J	6/2/2014	N/A	Valid
Billing Account for Construction Waste Disposal			
RS01172	19/2/2014	N/A	Valid
Registration of Chemical Waste Producer			
WPN5213-758-S3797-01	4/2/2014	N/A	Valid
Effluent Discharge License under Water Pollution Control Ordinance			
WT00019462-2014	8/7/2014	N/A	Valid

Status of Waste Management

- 3.5 There was 391 m³ of inert Construction and Demolition (C&D) materials generated in this reporting month. The table summarizing the quantities of waste generated in this reporting month is presented in **Appendix I**.

Implementation Status of Environmental Mitigation Measures

- 3.6 The key information in the EIA Report is summarized in **Table 3.2**. With referring to the EIA Report, air quality and noise would be the key issues during the construction of the Project. Details of the implementation of mitigation measures are provided in the **Appendix H**.

Table 3.2 Key Information in the EIA Report and the Status of EMIS

	Issues	Assumptions and Assessment	Recommended Mitigation Measures	Status of Implementation of Mitigation Measures
Construction Phase	Air	With the implementation of dust suppression mitigation measures, the level of construction dust would comply with the relevant AQO.	Watering the work area at least twice a day. Environmental pollution control measures for minimizing construction dust impact as stipulated in the APCO.	During the audit sessions, it was observed that: • Watering the work site was provided.
	Noise	Noise level at most of NSRs would exceed the noise criteria without mitigation measures.	Good site practices, adoption of quiet construction plant, reduction of on-time operation of plant, movable noise barrier, avoid simultaneous noisy activities.	During the audit sessions, it was observed that: • Simultaneous noisy activities were avoided.
	Water	The potential impact rose from the construction of flyovers spanning to the upper Shing Mun River Channel.	Construction works spanning the upper Shing Mun River should be undertaken in the dry season All storm runoff should be routed through oil/grit separators and/or sediment basins/traps before being allowed to be discharged into the nearby receiving waters. All stockpiled areas should be covered. All sediment removable facilities should be maintained and the deposited sediments should be removed regularly.	The construction of flyovers spanning to the upper Shing Mun River Channel was completed under Sha Tin New Town – Stage II, Trunk Road T3 Project in 2009

- 3.7 During site inspections in the reporting month, no non-conformance was identified. The observations and recommendations made during the audit sessions are summarized in **Table 3.3**.

Table 3.3 Observations and Recommendations of Site Audit

Parameters	Date	Observations	Remedial Actions
<i>Water Quality</i>	N/A	N/A	N/A
<i>Air Quality</i>	N/A	N/A	N/A
<i>Noise</i>	10 July 2014 17 July 2014 25 July 2014 31 July 2014 7 August 2014 14 August 2014 22 August 2014 28 August 2014	Noise barrier should be provided for the operation of pile driver to prevent noise generated from affecting the NSR. Movable noise barrier should be provided on site. While no suspected noisy activities were observed on site, Contractor was reminded to provide proper movable noise barrier on site for related PMEs as soon as possible.	Follow up action will be reported in next reporting period.
<i>Waste / Chemical Management</i>	31 July 2014 22 August 2014 28 August 2014 22 August 2014	Breaker should be covered with tarpaulin sheet to prevent oil spillage. Drip trays should be provided for the chemical containers Refuse should be sorted for recycling and proper receptacles should be provided for the collection of refuse.	The observation was observed to be improved/rectified by the Contractor during the audit session on 7 August 2014. Follow up action will be reported in next reporting period. The observation was observed to be improved/rectified by the Contractor during the audit session on 28 August 2014.
<i>Permit/ Licenses</i>	N/A	N/A	N/A

Summary of Exceedance

- 3.8 No exceedance of monitoring results was recorded in the reporting month. Summary of exceedance is provided in **Appendix E**.

Implementation Status of Event Action Plans

- 3.9 The Event Action Plan for construction noise is presented in **Appendix G**. No exceedance was recorded and thus no action was required to be implemented.

Summary of Complaint and Prosecution

- 3.10 No environmental related complaint, prosecution or notification of summons was received in the reporting month.
- 3.11 There was no environmental complaint, prosecution or notification of summon received since the Project commencement. The Complaint Log is attached in **Appendix J**.

4 FUTURE KEY ISSUES

4.1 Key issues to be considered in the coming month include:

- Effluent discharge generated from surface runoff;
- Dust generation from excavation works, concrete breaking works and stockpile of dusty materials;
- Noise generation from the operation of PMEs
- Accumulation of stagnant water in the site areas; and
- Accumulation of C&D waste on site.

Monitoring Schedule for the Next Month

4.2 The tentative environmental monitoring schedule for the next month is shown in **Appendix C**.

Construction Program for the Next Month

4.3 A tentative construction programme is provided in **Appendix K**. The major construction activities in the coming month will include:

- Formwork erection / Removal and reinforcement fixing
- Concreting / soil backfill

5 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 5.1 Environmental monitoring and audit works were conducted in the reporting month. Site inspections were conducted on a weekly basis. The results were reviewed and checked.
- 5.2 All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 5.3 There was no environmental complaint, prosecution or notification of summons received.

Recommendations

- 5.4 According to the environmental audit performed in the reporting month, the following recommendations were made:

Construction Noise

- Provide proper mitigation measure to minimize the noise of operating PMEs from affecting the nearby NSR(s)

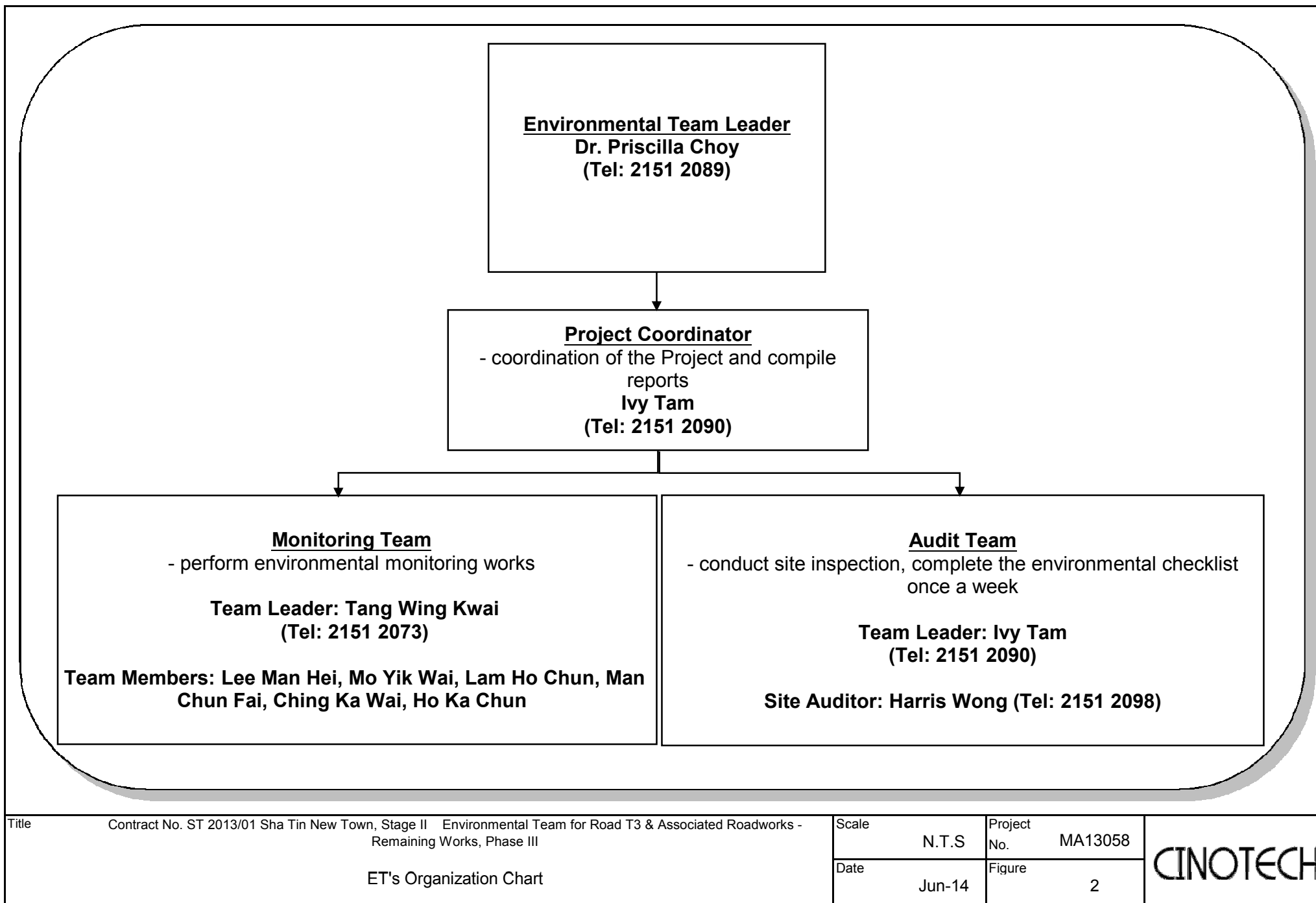
Waste / Chemical Management

- Provide receptacles to collect and sort general refuse on site for recycling before disposal
- Provide mitigation measure to prevent oil spillage from construction equipments
- Provide drip trays for chemical container

FIGURE(S)



Title	Contract No. ST/2013/01 - Sha Tin New Town Stage II - Road T3 and Associated Roadworks – Remaining Works, Phase III		Scale	N.T.S	Project No.	MA13058	CINOTECH
	Location of Noise Monitoring Station at Scenery Court		Date	Feb-14	Figure	1	



APPENDIX A
ACTION AND LIMIT LEVEL

APPENDIX A – Action and Limit Level**Construction Noise**

Time Period	Action Level	Limit Level
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A)
0700-2300 hrs on holidays; and 1900-2300 hrs on all other days		70* dB(A)
2300-0700 hrs of next day		55* dB(A)

Notes:

Notes: If works are to be carried during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.

(*) reduce to 70 dB(A) for schools and 65 dB(A) during school examination periods.

**APPENDIX B
COPIES OF CALIBRATION
CERTIFCATES**

TEST REPORT

APPLICANT: Cinotech Consultants Limited
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/N/130919/1
Date of Issue:	2013-09-21
Date Received:	2013-09-19
Date Tested:	2013-09-21
Date Completed:	2013-09-21
Next Due Date:	2014-09-20

ATTN: Mr. W.K. Tang

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 955
Serial No.	: 12553
Microphone No.	: 35222
Equipment No.	: N-08-02

Test conditions:

Room Temperatre	: 22 degree Celsius
Relative Humidity	: 57%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

APPLICANT: Cinotech Consultants Limited
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/N/140104
Date of Issue:	2014-01-05
Date Received:	2014-01-04
Date Tested:	2014-01-04
Date Completed:	2014-01-05
Next Due Date:	2015-01-04

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 955
Serial No.	: 14303
Microphone No.	: 35222
Equipment No.	: N-08-05

Test conditions:

Room Temperature	: 19 degree Celsius
Relative Humidity	: 52%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

Remark: 1) This report supersedes the one dated 2012/01/21 with certificate number C/N/120120/1.

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

APPLICANT: Cinotech Consultants Limited
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/N/130830/3
Date of Issue:	2013-08-31
Date Received:	2013-08-30
Date Tested:	2013-08-30
Date Completed:	2013-08-31
Next Due Date:	2014-08-30

ATTN: Mr. W.K. Tang

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Certificate of Calibration

Item for calibration:

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 957
Serial No.	: 21460
Microphone No.	: 43679
Equipment No.	: N-08-09

Test conditions:

Room Temperature	: 21 degree Celsius
Relative Humidity	: 69%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE

Laboratory Manager

TEST REPORT

APPLICANT: Cinotech Consultants Limited
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/N/130919/3
Date of Issue:	2013-09-21
Date Received:	2013-09-19
Date Tested:	2013-09-21
Date Completed:	2013-09-21
Next Due Date:	2014-09-20

ATTN: Mr. W.K. Tang

Page: 1 of 1

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 10929
Equipment No.	: N-09-01

Test conditions:

Room Temperature	: 22 degree Celsius
Relative Humidity	: 57%

Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

APPLICANT: Cinotech Consultants Limited
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/N/131004/1
Date of Issue:	2013-10-05
Date Received:	2013-10-04
Date Tested:	2013-10-04
Date Completed:	2013-10-05
Next Due Date:	2014-10-04

ATTN: Mr. W.K. Tang

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Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24803
Equipment No.	: N-09-03

Test conditions:

Room Temperature	: 21 degree Celsius
Relative Humidity	: 57%

Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE

Laboratory Manager

TEST REPORT

APPLICANT: Cinotech Consultants Limited
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/N/131004/3
Date of Issue:	2013-10-05
Date Received:	2013-10-04
Date Tested:	2013-10-04
Date Completed:	2013-10-05
Next Due Date:	2014-10-04

ATTN: Mr. W.K. Tang

Page: 1 of 1

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24780
Equipment No.	: N-09-05

Test conditions:

Room Temperatre	: 21 degree Celsius
Relative Humidity	: 57%

Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE

Laboratory Manager

**APPENDIX C
ENVIRONMENTAL MONITORING
SCHEDULES**

Contract No. ST/2013/01 Sha Tin New Town Stage II Road T3 and Associated Roadworks – Remaining Works, Phase III
Noise Monitoring Schedule in August 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-Aug	2-Aug
3-Aug	4-Aug	5-Aug	6-Aug	7-Aug	8-Aug	9-Aug
					Noise	
10-Aug	11-Aug	12-Aug	13-Aug	14-Aug	15-Aug	16-Aug
		Noise				
17-Aug	18-Aug	19-Aug	20-Aug	21-Aug	22-Aug	23-Aug
			Noise			
24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug
		Noise				

Noise Monitoring Stations

N6 - Scenery Court

Contract No. ST/2013/01 Sha Tin New Town Stage II Road T3 and Associated Roadworks – Remaining Works, Phase III
Tentative Noise Monitoring Schedule in September 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-Sep	2-Sep	3-Sep	4-Sep	5-Sep	6-Sep
		Noise				
7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep
				Noise		
14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep
		Noise				
21-Sep	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep	27-Sep
				Noise		
28-Sep	29-Sep	30-Sep				

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

Noise Monitoring Stations

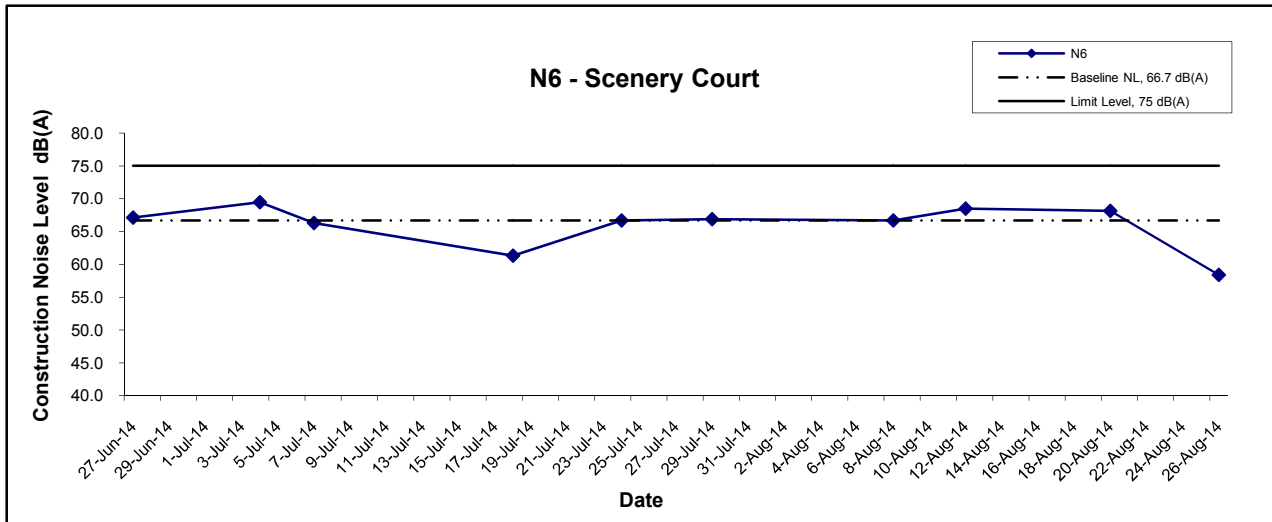
N6 - Scenery Court

APPENDIX D
NOISE MONITORING RESULTS AND
GRAPHICAL PRESENTATIONS

App D - Noise Monitoring Results

Location N6 - Scenery Court							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
8-Aug-14	09:30	Sunny	69.7	71.9	66.4	66.7	66.7
12-Aug-14	09:00	Cloudy	70.7	72.5	68.6		68.5
20-Aug-14	10:00	Cloudy	70.5	72.7	66.8		68.2
26-Aug-14	15:10	Sunny	67.3	70.5	61.4		58.4

Noise Levels



Title	Sha Tin New Town Stage II Road T3 and Associated Road Works- Remaning Works, Phase III	Scale	Project No.	CINOTECH
	Graphical Presentation of Construction Noise Monitoring Results	N.T.S Date Aug 14	MA13058 Appendix D	

APPENDIX E
SUMMARY OF EXCEEDANCE

APPENIDX E – SUMMARY OF EXCEEDANCE

Reporting Month: August 2014

a) Exceedance Report for Construction Noise (NIL)

APPENDIX F
SITE AUDIT SUMMARY



Sha Tin New Town Stage II

Road T3 and Associated Roadworks – Remaining Works, Phase III

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	140807
Date	7 August 2014 (Thursday)
Time	10:00-11:00

Ref. No.	Non-Compliance	Related Item No.
	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
	No environmental deficiency was identified during site inspection.	
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
140807-R01	• Movable noise barrier should be provided on site.	D7
	D. Waste/Chemical Management	
	No environmental deficiency was identified during site inspection.	
	E. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	F. Others	
	• Follow-up on previous site audit session (Ref. No. 140731), item 140731-R02 was improved/rectified by Contractor during the site inspection. Follow-up action is required for the item 140731-R01, which is renamed as 140807-R01.	

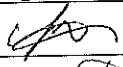
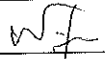
	Name	Signature	Date
Recorded by	Harris Wong		7 August 2014
Checked by	Dr. Priscilla Choy		7 August 2014

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	140814
Date	14 August 2014 (Thursday)
Time	10:00-11:00

Ref. No.	Non-Compliance	Related Item No.
	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
	No environmental deficiency was identified during site inspection.	
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
140814-R01	• Contractor was reminded that movable noise barrier should be provided on site.	D7
	D. Waste/Chemical Management	
	No environmental deficiency was identified during site inspection.	
	E. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	F. Others	
	• Follow-up on previous site audit session (Ref. No. 140807), follow-up action is required for the item 140807-R01, which is renamed as 140814-R01.	

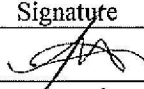

	Name	Signature	Date
Recorded by	Harris Wong		14 August 2014
Checked by	Dr. Priscilla Choy		14 August 2014

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	140822
Date	22 August 2014 (Friday)
Time	10:00-11:00

Ref. No.	Non-Compliance	Related Item No.
	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
	No environmental deficiency was identified during site inspection.	
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
140822-R03	• While no suspected noisy activities were observed on site, Contractor was reminded to provide proper noise barrier on site for related PME as soon as possible.	D7
	D. Waste/Chemical Management	
140822-R01	• Drip trays should be provided for the chemical containers.	E8
140822-R02	• Refuse should be sorted for recycling and proper receptacles should be provided for the collection of refuse.	E1ii
	E. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	F. Others	
	• Follow-up on previous site audit session (Ref. No. 140814), follow-up action is required for the item 140814-R01, which is renamed as 140822-R03.	

	Name	Signature	Date
Recorded by	Harris Wong		22 August 2014
Checked by	Dr. Priscilla Choy		22 August 2014

Sha Tin New Town Stage II

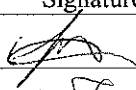

Road T3 and Associated Roadworks – Remaining Works, Phase III

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	140828
Date	28 August 2014 (Thursday)
Time	10:30-11:30

Ref. No.	Non-Compliance	Related Item No.
	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
	No environmental deficiency was identified during site inspection.	
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
140822-R02	• While no suspected noisy activities were observed on site, Contractor was reminded to provide proper movable noise barrier on site for related PME's as soon as possible.	D7
	D. Waste/Chemical Management	
140822-R01	• Drip trays should be provided for the chemical containers.	E8
	E. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	F. Others	
	• Follow-up on previous site audit session (Ref. No. 140822), follow-up actions are required for the items 140822-R01 and R03, which are renamed as 140828-R01 and R02 respectively.	

	Name	Signature	Date
Recorded by	Harris Wong		28 August 2014
Checked by	Dr. Priscilla Choy		28 August 2014

APPENDIX G
EVENT ACTION PLAN

Appendix G Event/Action Plan

Event/Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
	<ol style="list-style-type: none"> 1. Undertake measurement to establish validity of complaint 2. Identify the source(s) of the complaint 3. Inform ER & IEC in writing. Discuss remedial actions required with ER & IEC 4. Increase monitoring frequency to assess efficacy of remedial measures 5. If exceedance continues, meet with ER&IEC to review implementation of appropriate mitigation measures 6. If exceedance stops, cease additional monitoring 	<ol style="list-style-type: none"> 1. Review the analyzed results submitted by the ET 2. Review the proposed remedial measures by the Contractor and advise the ER & ET accordingly 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of complaint and notify Contractor if proven 2. Check monitoring data trends and Contractor's working methods. 3. Remind the Contractor of his Contractual obligations and discuss with ET, IEC and Contractor on proposed remedial actions. 4. Assess the efficacy of remedial actions and keep the Contractor informed 5. Inform complainant of actions taken 	<ol style="list-style-type: none"> 1. Submit proposals for remedial actions to ER within three working days of notification 2. Amend proposals if required by the Engineer 3. Implement the remedial actions immediately upon instruction 4. Liaise with the ER to optimise the effectiveness of the agreed mitigation 5. Amend proposal if appropriate
LIMIT LEVEL				
	<ol style="list-style-type: none"> 1. Repeat measurement to confirm findings 2. Identify the source(s) of impact 3. Inform ER&IEC and EPD in writing 4. Discuss remedial actions required with ER&IEC 5. Increase monitoring frequency to assess efficacy of remedial measures 6. If exceedance continues, meet with ER&IEC to identify appropriate mitigation measures 7. If exceedance stops, cease additional monitoring 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET 2. Review Contractor's remedial actions to assure their effectiveness and advise the ER & ET accordingly 3. Supervise the implementation of the remedial measures 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance and notify Contractor 2. Check monitoring data trends and Contractor's working methods 3. Discuss with ET, IC(E) and Contractor on proposed remedial actions to be implemented 4. Assess the efficacy of remedial actions and keep the Contractor informed 5. If exceedance continuous, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is aborted 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to ER within three working days of notification 3. Amend proposals if required by the ER 4. Implement remedial actions immediately upon instruction 5. Liaise with the ER to optimize the effectiveness of the agreed mitigation 6. Resubmit proposals if problem still not under control 7. Stop the relevant portion of works as determined by the ER until the exceedance is aborted.

**APPENDIX H
UPDATED ENVIRONMENTAL
MITIGATION IMPLEMENTATION
SCHEDULE**

Appendix H - Implementation Schedule of Environmental Mitigation Measures

EIA/ ERR Ref. Ref.	Recommended Mitigation Measures	Who to implement the measures?	Location of the measures	When to Implement the measures?
Construction Noise				
2.5.4 / 2.3	<ul style="list-style-type: none"> Where available, the Contractor shall use quiet items of PME or model of plants that are quieter than those specified in the EPD's Technical Memorandum (GW-TM) for undertaking construction works. Where practicable, the Contractor shall use movable noise barriers and avoid simultaneous noisy activities. 	Contractor	At active construction locations.	Construction stage
Air Quality				
3.5.3/ 3.4.5	Watering the works area at least twice a day	Contractor	Work site	Construction stage
3.5.4/ 3.4.5	Environmental pollution control measures for minimizing construction dust impact as stipulated in the Air Pollution Control Regulation.	Contractor	Work site	Construction stage
Waste Management				
5.2 – 5.6/4.5	Environmental pollution control measures for minimizing waste arising from the construction works.	Contractor	Within the works boundary	Construction stage
Water Quality				
4.5.1/5.5.1	Environmental pollution control measures for minimizing impacts on water quality.	Contractor	All construction sites	Construction stage
Landscape and Visual				
-/Table 6-1	Storage of materials and plant shall be limited to areas less visible to receivers.	Contractor	Project site	Construction stage
-/Table 6-1	Preservation wherever possible of existing trees and transplanting wherever practical of trees affected by the Works.	Contractor	Project site	Construction stage
-/Table 6-1	Stripping, storing and re-use of topsoil.	Contractor	Project site	Construction stage

Note: EIA Ref. refers to Trunk Road T3 (Tai Wai) - Updated Final Environmental Impact Assessment Report, March 1998

**APPENDIX I
WASTE GENERATION IN THE
REPORTING MONTH**

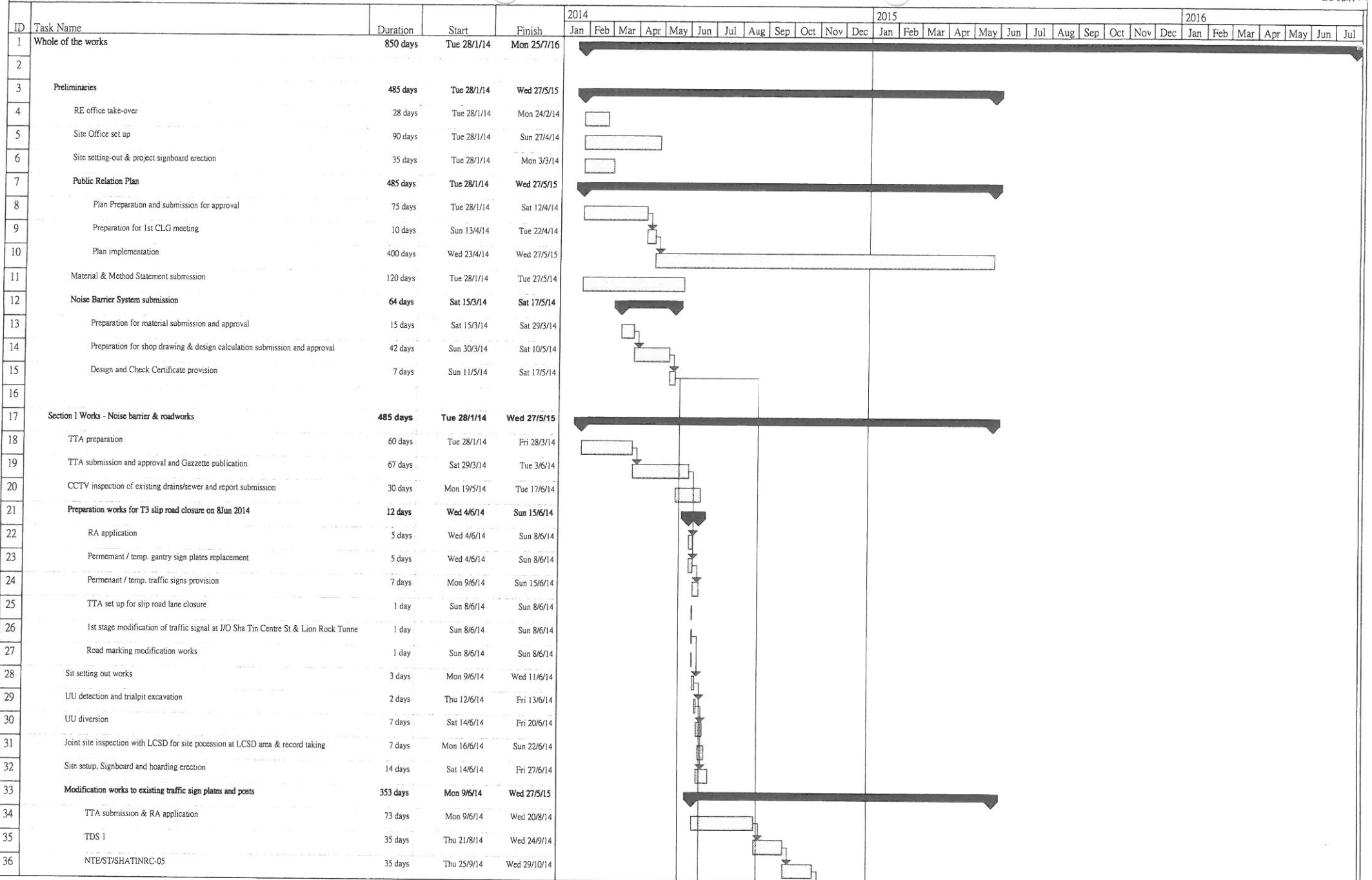
**APPENDIX J
COMPLAINT LOG**

APPENDIX J – COMPLAINT LOG**Reporting Month:** August 2014

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
N/A	N/A	N/A	N/A	N/A	N/A

Remarks: No environmental complaint was received in the reporting month.

APPENDIX K
CONSTRUCTION PROGRAMME



Page 2

ID	Task Name	Duration	Start	Finish	2014												2015												2016																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
73	Noise Barrier Panel, cladding and gutter fixing	21 days	Fri 17/4/15	Thu 7/5/15																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									</