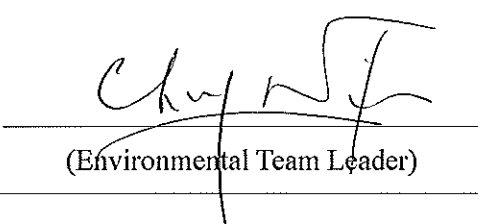


Civil Engineering and Development Department

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)
November 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

CINOTECH CONSULTANTS LTD
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong
Tel: (852) 2151 2083 Fax: (852) 3107 1388
Email: info@cinotech.com.hk

TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	1
Introduction	1
Environmental Monitoring and Audit Works	1
Environmental Licenses and Permits	1
Key Information in the Reporting Month.....	1
Future Key Issues	2
1 INTRODUCTION	4
Background	4
Construction Programme.....	5
Summary of EM&A Requirements	5
2 NOISE MONITORING	6
Monitoring Requirements.....	6
Monitoring Locations	6
Monitoring Equipment	6
Monitoring Parameters, Frequency and Duration	6
Monitoring Methodology and QA/QC Procedures	7
Results and Observations	7
3 ENVIRONMENTAL AUDIT.....	9
Site Audits	9
Review of Environmental Monitoring Procedures.....	9
Status of Environmental Licensing and Permitting.....	9
Status of Waste Management	9
Implementation Status of Environmental Mitigation Measures.....	10
Summary of Exceedance	12
Implementation Status of Event Action Plans.....	12
Summary of Complaint and Prosecution.....	12
4 FUTURE KEY ISSUES	13
Monitoring Schedule for the Next Month	13
Construction Program for the Next Month.....	13
5 CONCLUSIONS AND RECOMMENDATIONS	14
Conclusions	14
Recommendations	14

LIST OF TABLES

Table I	Summary Table for Events Recorded in the Reporting Month
Table II	Summary Table for Key Information in the Reporting Month
Table III	Key Information in the EIA Report and the Status of EMIS
Table 1.1	Key Project Contacts
Table 2.1	Location of Noise Monitoring Station
Table 2.2	Noise Monitoring Equipment
Table 2.3	Noise Monitoring Parameters, Frequency and Duration
Table 2.4	Baseline Noise Level and Allowed Construction Noise Level for Monitoring Station
Table 2.5	Summary Table of Noise Monitoring Results during the Reporting Month

Table 3.1	Summary of Environmental Licensing and Permit Status
Table 3.2	Observations and Recommendations of Site Audit

LIST OF FIGURE

Figure 1	Site Layout Plan with location of Noise Monitoring Station
Figure 2	ET's Organization Chart

LIST OF APPENDICES

Appendix A	Action and Limit Level
Appendix B	Copies of Calibration Certificates
Appendix C	Environmental Monitoring Schedules
Appendix D	Noise Monitoring Results and Graphical Presentations
Appendix E	Summary of Exceedance
Appendix F	Site Audit Summary
Appendix G	Event Action Plan
Appendix H	Updated Environmental Mitigation Implementation Schedule
Appendix I	Waste Generation in the Reporting Month
Appendix J	Complaint Log
Appendix K	Construction Programme

EXECUTIVE SUMMARY

Introduction

1. This is the 6th 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 November 2014.
2. The major site activities undertaken in the reporting month included:
 - Formwork erection/removal and reinforcement fixing
 - Sheet piling erection

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	1	Noise	The noisy construction works have been re-scheduled to be commenced after 10a.m. based on the requirement specified in the Particular Specification (PS) of the Contract.	Closed	The Contractor has not complied with the requirement as specified in the PS that the noisy construction works shall not be carried out during 8a.m. to 10a.m.
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 (October 2014)	Submitted to EPD on 20 th November 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"> • Concreting/Soil backfill • Formwork erection/removal and reinforcement fixing <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 6th monthly EM&A report summarizing the EM&A works conducted for the Projects in November 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:

- Formwork erection/removal and reinforcement fixing
- Sheet piling erection

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	2

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	6 November 2014	64.9	When one documented complaint is received	75dB(A)
	14 November 2014	69.1		
	18 November 2014	63.5		
	27 November 2014	61.3		

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 6th, 13th, 20th and 28th November 2014 by ET. A joint site audit with the representative with IEC, ER, the Contractor and the ET was carried out on 28th November 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	12/11/2014	Valid (Updated with two chemical waste types added – spent lubricating oil and contaminated soil with spent lubricating oil)
	13/11/2014	N/A	
Effluent Discharge License under Water Pollution Control Ordinance			
WT00019462-2014	8/7/2014	N/A	Valid
Construction Noise Permit			
GW-RN0712-14	17/11/2014	16/12/2014	Valid

Status of Waste Management

- 3.5 There was no 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>	28 November 2014	Hoarding should be surrounded with bunds to prevent muddy surface runoff from leaking offsite, and the sand accumulated on the cycling road offsite should be cleared.	Follow-up action will be reported during the next reporting period.
<i>Air Quality</i>	13 November 2014 20 November 2014	Clear the sand on the haul road or provide water spray on the haul road.	Follow-up action will be reported during the next reporting period.
	28 November 2014	Site vehicle should have its wheels washed before leaving the construction site, and the sand on the haul road should be cleared.	
<i>Noise</i>	15 October 2014	A properly-designed movable noise barrier should be provided for the breaker.	This observation was not observed during the audit session on 13 November 2014 since no noisy construction activities were in operation. Mitigation measure for noise impact reduction will be inspected again if there are noisy construction activities.
	23 October 2014	The noise barrier should be properly designed and placed properly to minimize the noise from PME (piling rig) from affecting nearby NSRs.	
	31 October 2014	Proper noise mitigation measures should be provided for the PMEs (breaker and piling rig).	
	6 November 2014	Mitigation measure should be provided for the piling rig to reduce the noise impact.	
<i>Waste / Chemical Management</i>	31 October 2014	Proper rubbish bins should be provided for the sorting of general refuse for recycling, and designated area for chemical waste should be set-up.	This observation was observed to be improved/rectified by Contractor during the audit session on 6 November 2014.
	6 November 2014	Oil leakage was observed at the excavator. Contractor was reminded to maintain the excavator and clear the leaked oil.	This observation was observed to be improved/rectified by Contractor during the audit session on 13 November 2014.
	13 November 2014	Drip tray should be provided for the	Follow-up action will be

Parameters	Date	Observations	Remedial Actions
	20 November 2014	chemical containers.	reported during the next reporting period.
	28 November 2014		
	28 November 2014	Construction waste should be cleared.	Follow-up action will be reported during the next reporting period.
<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 There was an environmental complaint received in the reporting month.
- 3.11 No prosecution or notification of summons was received in the reporting month. 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 an environmental complaint received in the reporting month. No prosecution or notification of summons received.

Recommendations

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

Water Quality

- Provide mitigation measures to prevent muddy surface runoff from leaking offsite under raining.

Air Quality

- Regularly clear the sand on haul road and water the haul road to prevent dust generation

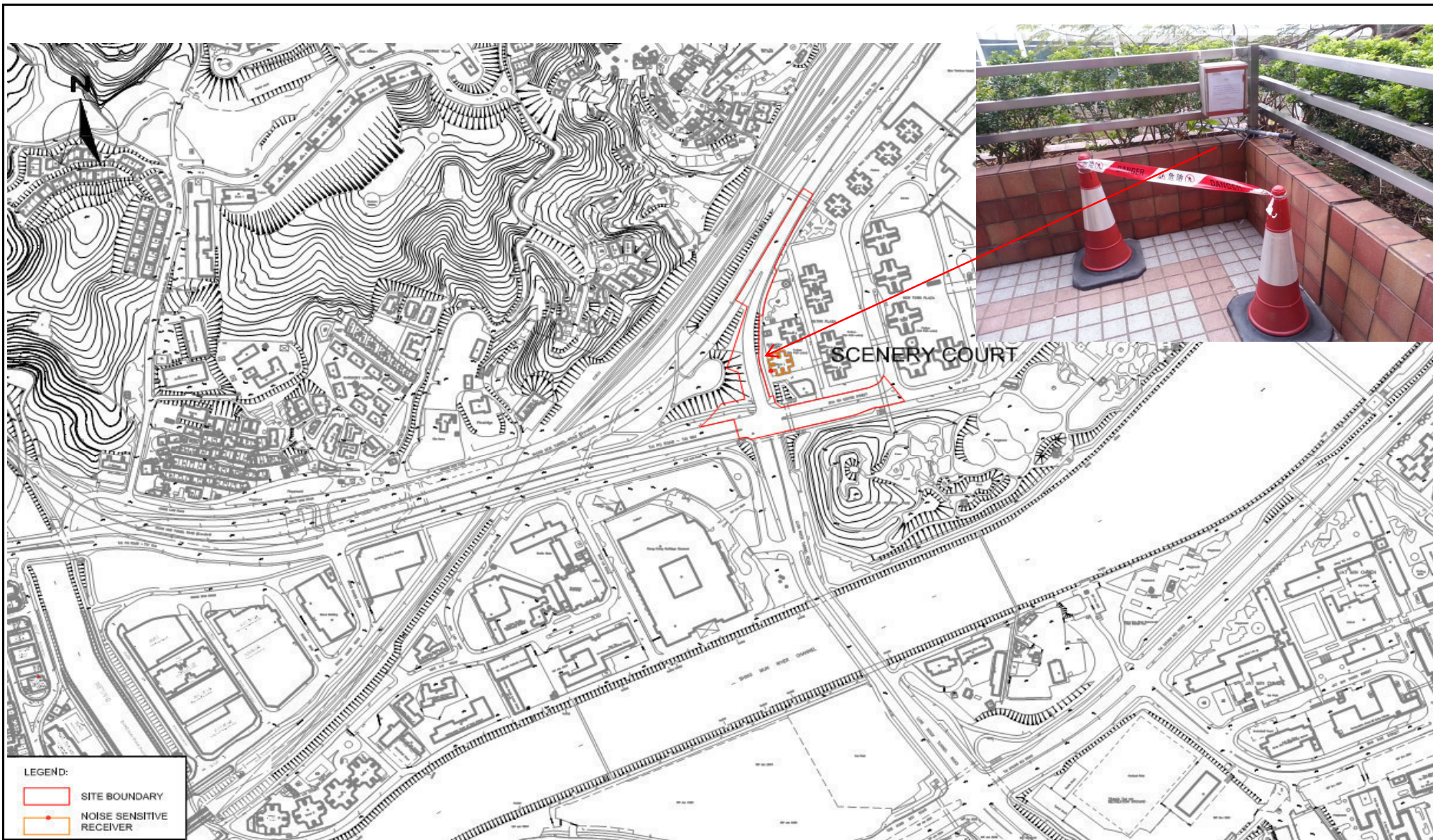
Construction Noise

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

Waste / Chemical Management

- Provide mitigation measure to prevent oil spillage/leakage 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/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/140822/1
Date of Issue:	2014-08-25
Date Received:	2014-08-22
Date Tested:	2014-08-22
Date Completed:	2014-08-25
Next Due Date:	2015-08-24

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 957
Serial No.	: 21460
Microphone No.	: 43679
Equipment No.	: N-08-09

Test conditions:

Room Temperature	: 22 degree Celsius
Relative Humidity	: 55%

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/131129/1
Date of Issue:	2013-11-30
Date Received:	2013-11-29
Date Tested:	2013-11-29
Date Completed:	2013-11-30
Next Due Date:	2014-11-29

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 957
Serial No.	: 23853
Microphone No.	: 48530
Equipment No.	: N-08-10

Test conditions:

Room Temperature	: 19 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/140919/4
Date of Issue:	2014-09-21
Date Received:	2014-09-19
Date Tested:	2014-09-21
Date Completed:	2014-09-21
Next Due Date:	2015-09-20

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 Temperatre	: 23 degree Celsius
Relative Humidity	: 55%

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/141003/1
Date of Issue:	2014-10-04
Date Received:	2014-10-03
Date Tested:	2014-10-03
Date Completed:	2014-10-04
Next Due Date:	2015-10-03

ATTN: Mr. W.K. Tang

Page: 1 of 1

Item for calibration:

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

Test conditions:

Room Temperature	: 22 degree Celsius
Relative Humidity	: 56%

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 November 2014

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

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 December 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-Dec	2-Dec	3-Dec	4-Dec	5-Dec	6-Dec
		Noise				
7-Dec	8-Dec	9-Dec	10-Dec	11-Dec	12-Dec	13-Dec
				Noise		
14-Dec	15-Dec	16-Dec	17-Dec	18-Dec	19-Dec	20-Dec
				Noise		
21-Dec	22-Dec	23-Dec	24-Dec	25-Dec	26-Dec	27-Dec
			Noise			
28-Dec	29-Dec	30-Dec	31-Dec			
			Noise			

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

Noise Monitoring Stations

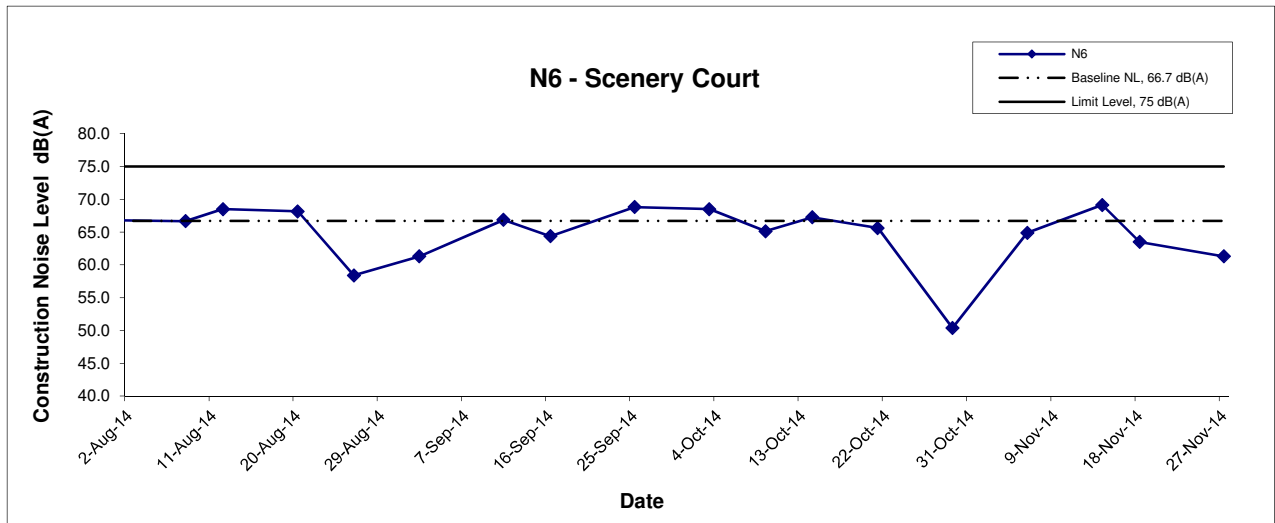
N6 - Scenery Court

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}
6-Nov-14	13:30	Cloudy	68.9	72.7	66.8	66.7	64.9
14-Nov-14	10:00	Cloudy	71.1	71.9	68.0		69.1
18-Nov-14	11:15	Sunny	68.4	71.2	64.5		63.5
27-Nov-14	16:45	Cloudy	67.8	65.4	63.1		61.3

Noise Levels



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

APPENDIX E
SUMMARY OF EXCEEDANCE

APPENIDX E – SUMMARY OF EXCEEDANCE

Reporting Month: November 2014

a) Exceedance Report for Construction Noise (NIL)

APPENDIX F
SITE AUDIT SUMMARY

Sha Tin New Town Stage II

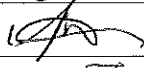

Road T3 and Associated Roadworks – Remaining Works, Phase III

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	141106
Date	6 November 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	
141106-R02	• Mitigation measure should be provided for the piling rig to reduce the noise impact.	D7
	D. Waste/Chemical Management	
141106-R01	• Oil leakage was observed at the excavator. Contractor was reminded to maintain the excavator and clear the leaked oil.	E7
	E. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	F. Others	
	• Follow-up on previous site audit session (Ref. No. 141031), item 141031-R01 was observed improved/rectified by Contractor during the site inspection. Follow-up action is required for the item 141031- R02, which was renamed as 141106-R02.	

	Name	Signature	Date
Recorded by	Harris Wong		6 November 2014
Checked by	Dr. Priscilla Choy		6 November 2014

Sha Tin New Town Stage II

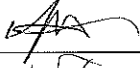
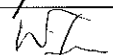
Road T3 and Associated Roadworks – Remaining Works, Phase III

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	141113
Date	13 November 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	
141113-R01	• Clear the sand on the haul road.	C5
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Waste/Chemical Management	
141113-R02	• Drip tray 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. 141106), item 141106-R01 was observed improved/rectified by Contractor during the site inspection. Item 141106- R02 was not observed during the site inspection as no noisy construction activities were in operation during the site inspection.	

	Name	Signature	Date
Recorded by	Harris Wong		13 November 2014
Checked by	Dr. Priscilla Choy		13 November 2014

Sha Tin New Town Stage II

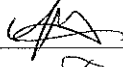

Road T3 and Associated Roadworks – Remaining Works, Phase III

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	141120
Date	20 November 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	
141120-R02	• Clear the sand on the haul road or provide water spray to the haul road.	C5
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Waste/Chemical Management	
141120-R01	• Drip tray 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. 141113), follow-up actions are required for the items 141113- R01 and R02 which were renamed as 141120-R02 and R01 respectively.	



	Name	Signature	Date
Recorded by	Harris Wong		20 November 2014
Checked by	Dr. Priscilla Choy		20 November 2014

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	141128
Date	28 November 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	
141128-R04	• Hoarding should be surrounded with bunds to prevent muddy surface runoff from leaking offsite, and the sand accumulated on the cycling road offsite should be cleared.	B2
	B. Air Quality	
141128-R03	• Site vehicle should have its wheels washed before leaving the construction site, and the sand on the haul road should be cleared.	C5, C8
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Waste/Chemical Management	
141128-R01	• Drip tray should be provided for the chemical containers.	E8
141128-R02	• Construction waste should be cleared.	E4ii
	E. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	F. Others	
	• Follow-up on previous site audit session (Ref. No. 141120), follow-up actions are required for the items 141120-R01 and R02 which were renamed as 141128-R01 and R03 respectively.	

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

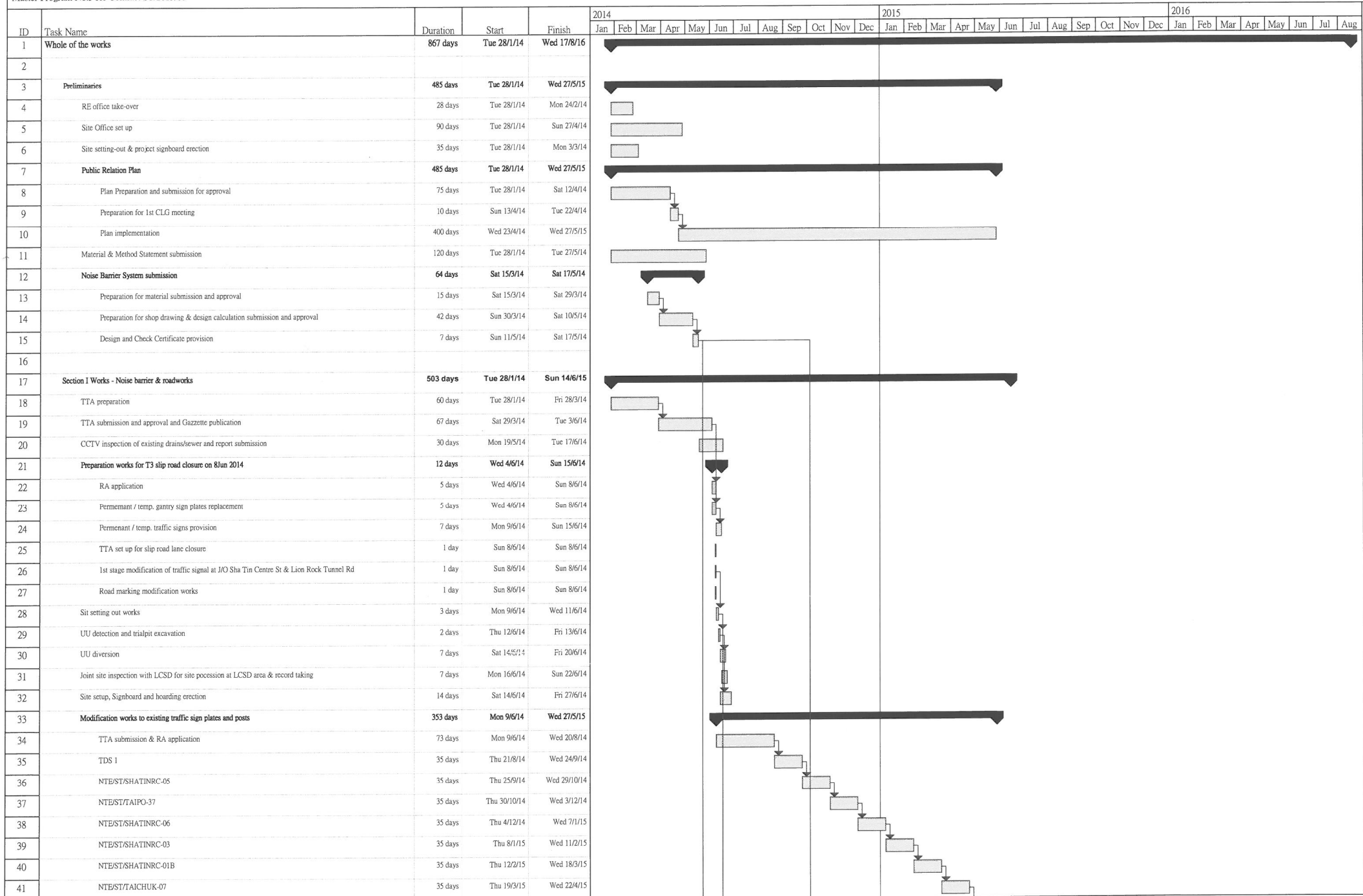
**APPENDIX I
WASTE GENERATION IN THE
REPORTING MONTH**

**APPENDIX J
COMPLAINT LOG**

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

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
Com-2014-11-01	Tai Po Slip Road	15 th November 2014	The complaint was received from a resident of Hilton Plaza by the Public Relation Officer (PRO) of Contractor (Sheen Billion Development Ltd) at 8:50 a.m. on 15 th November 2014 (Saturday). The complainant concerned about the noisy construction works conducted before 10 a.m.	<p>According to the information provided by the Contractor, the noisy construction work at the time of complaint was concrete breaking work using an excavator-mounted breaker.</p> <p>No violation of the Noise Control Ordinance as the noisy construction work was conducted within the non-restricted hour (07:00 to 19:00 on normal weekdays).</p> <p>However, according to item 2 of section 25.11B in PS of the Contract, demolition of existing artificial hard material should not be conducted during 8a.m. to 10a.m. Thus, the Contractor did not fulfil such requirement.</p> <p>After received the complaint, PRO coordinated the site personnel to stop the noisy works once the complaint was received. The noisy construction works have been re-scheduled to be commenced after 10 a.m. based on the requirement specified in the PS.</p>	Closed

APPENDIX K
CONSTRUCTION PROGRAMME



Page 2

Page 3