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 2.0) June 2015

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

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EXECUTIVE SUMMARY

Introduction

- This is the 13th monthly Environmental Monitoring and Audit (EM&A) Report 1. 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 June 2015.
- 2. The major site activities undertaken in the reporting month included:
 - Noise barrier & panel installation
 - Sheet piling removal
 - Excavate surplpus materials for planting works
 - Bituminous laying for road reinstatement
 - Gully and drainage installation

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	Action Taken
Farameter	Action Level	Limit Level	Due to this Project	Action Taken
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

Summary of key information in this reporting month is tabulated in **Table II**. The key 7. 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**.

Event	Even	t Details	Action Taken	Status	Remark
Event	Number	Nature	Action Taken	Status	
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 (May 2015)	Submitted to EPD on 22 nd June 2015.	N/A	
Notifications of any summons & prosecutions	0		N/A	N/A	

Future Key Issues

Major site activities for the coming month will include:

- Noise barrier & panel installation
- Bituminous laying for road reinstatement
- Gully, drainage installation
- Beam barrier installation

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.

Monthly EM&A Report – June 2015

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

	Table III Rey Information in the EIA Report and the Status of Eiths				
	Issues	Assumptions and Assessment	Recommended Mitigation Measures	Status of Implementation of Mitigation Measures	
	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.	
lse	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.	
Construction Phase	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 13th monthly EM&A report summarizing the EM&A works conducted for the Projects in June 2015.

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.
and b	Project	Mr. Bryan YUEN	Engineer	2301 1398	/
CEDD	CEDD Proponent		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		Mr. Walance LI	Project Manager	9609 1908	
Development Ltd.	Contractor	Mr. Ryan CHAN	Site Engineer / Environmental Officer	9708 7539	3427 9289

Construction Programme

- 1.9 The site activities undertaken in the reporting month were:
 - Noise barrier & panel installation
 - Sheet piling removal
 - Excavate surplpus materials for planting works
 - Bituminous laying for road reinstatement
 - Gully and drainage installation

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	2
Calibrator	SVANTEK - SV30A B&K 4231	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	$\begin{array}{c} L_{10}(30 \text{ min.}) \ dB(A) \\ L_{90}(30 \text{ min.}) \ dB(A) \\ L_{eq}(30 \text{ min.}) \ dB(A) \\ L_{eq}(5 \text{min}) \ dB(A)^* \end{array}$	0700-1900 hrs. on normal weekdays; 2300-0700 hrs on normal weekdays*	Once a week	Façade

^{*} One set of measurements of impact noise monitoring during the restricted hours (2300-0700 hrs) was conducted for the night time construction works from 14th to 18th May 2015.

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 : Atime 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 Leq Baseline Leq = 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	Allowed CNL,
	(A)	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	$\begin{array}{c} CNLs \\ L_{eq}(30min) / \\ L_{eq}(5min)^* \\ dB (A) \end{array}$	Action Level	Limit Level
	5 June 2015	64.9		
N6	11 June 2015	65.4	When one documented	75dB(A)
NO	19 June 2015	70.9	complaint is received	/Jub(A)
	23 June 2015	66.0		

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 2nd, 10th, 16th and 26th June 2015 by ET. A joint site audit with the representative with IEC, ER, the Contractor and the ET was carried out on 26th June 2015. 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	
Permit / License No.	From	To	Status	
Environmental Permit (EP)				
EP-135/2002/J	6/2/2014	N/A	Valid	
Billing Account for Construction	n Waste Dispo	sal		
RS01172	19/2/2014	N/A	Valid	
Registration of Chemical Waste	Producer			
	4/2/2014	12/11/2014	Valid (Updated with two chemical waste types added – spent lubricating oil and	
WPN5213-758-S3797-01	13/11/2014	N/A	contaminated soil with spent lubricating oil)	
Effluent Discharge License und	er Water Pollı	ition Control	Ordinance	
WT00019462-2014	8/7/2014	N/A	Valid	
Construction Noise Permit				
GW-RN0712-14	10/5/2015	30/6/2015	Valid	

Status of Waste Management

3.5 There are 53.99 m³ of 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
	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.
hase	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.
Construction Phase	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

Observations and Recommendations of Site Audit Table 3.3

Parameters	Date	Observations	Remedial Actions		
	27 February 2015 March 2015 April 2015 May 2015 June 2015	Further enhance the bundings at the bottom of water barriers to avoid the leakage of wastewater from the bottom of water barriers.	Follow up action will be reported during the next reporting period.		
Water Quality	28 May 2015	Clear the mud accumulated in the U-channel.	The mud was cleared.		
	10 June 2015	Wash the wheels of site vehicle before leaving the site.	No site vehicle was observed leaving the site.		
	16 June 2015	Cover properly the stockpile with tarpaulin sheet. (Bay 7)	The stockpile does not belong to the site. Contractor was reminded to cover the stockpile which belongs to them.		
	26 June 2015	Clear the mud accumulated in the drain to the sedimentation tank.	Follow up action will be reported during the next reporting period.		
	26 June 2015	Clear and sort the construction waste materials and general refuse.	Follow up action will be reported during the next reporting period.		
Air Quality	2 June 2015	Cover the stockpile with tarpaulin sheet. (Bay 7)	The stockpile was covered.		
Air Quainy	10 June 2015	Wash the wheels of site vehicle before leaving the site.	No site vehicle was observed leaving the site.		
Noise	N/A	N/A	N/A		
	28 May 2015 2 June 2015 10 June 2015	Clear the stagnant water inside the chemical waste storage and provide labels to the chemical waste.	The stagnant water was cleared, and labels were provided.		
Waste / Chemical Management	2 June 2015	Cover the breaker with tarpaulin sheet. (Bay 7)	The breaker was not observed on site.		
	26 June 2015	Provide drip tray to the chemical containers. (Bay7)	Follow up action will be reported during the next reporting period.		
	26 June 2015	Clear and sort the construction waste materials and general refuse.	Follow up action will be reported during the next reporting period.		
Permit/ Licenses	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 no 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.**

- 4.1 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:
 - Noise barrier & panel installation
 - Bituminous laying for road reinstatement
 - Gully, drainage installation
 - Beam barrier installation

5 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 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 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
- Discharge groundwater and surface runoff to the discharge point via sedimentation tank only, and maintain the sedimentation tank to ensure it functions properly

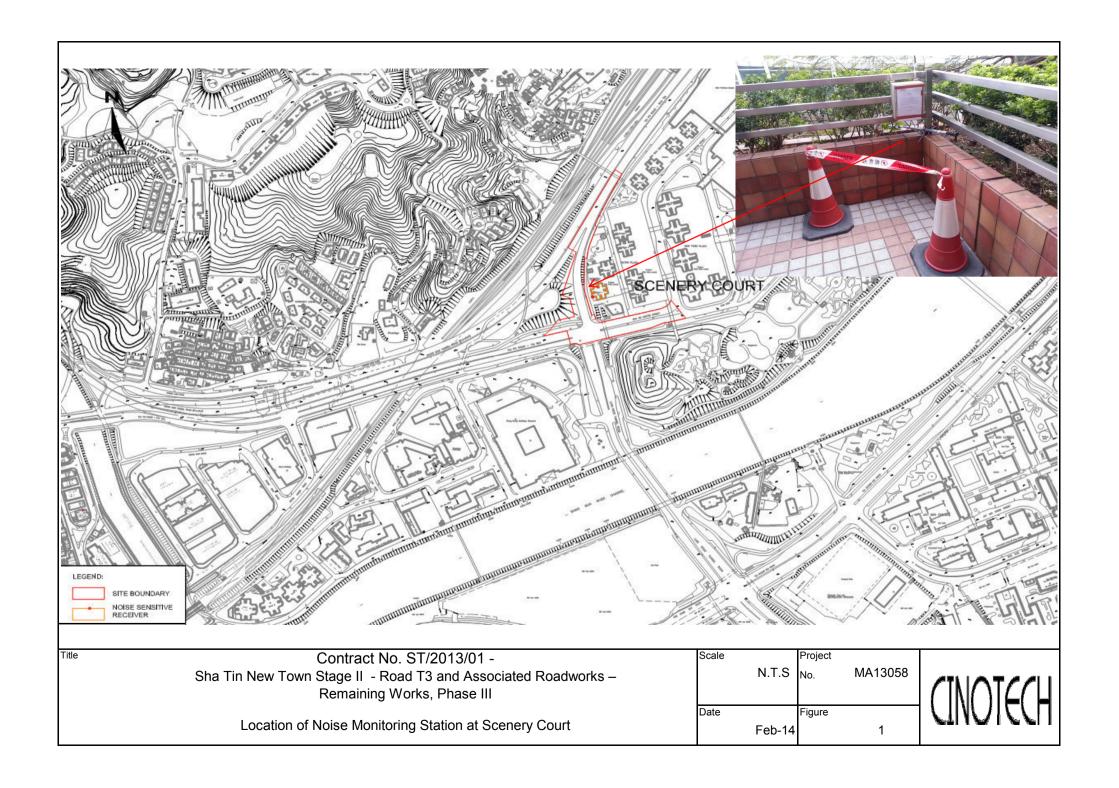
Air Quality

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

Waste / Chemical Management

Provide mitigation measure to prevent oil spillage/leakage from construction equipment

FIGURE(S)



Environmental Team Leader Dr. Priscilla Choy (Tel: 2151 2089)

Project Coordinator

coordination of the Project and compile reports
 lvy Tam

(Tel: 2151 2090)

Monitoring Team

- perform environmental monitoring works

Team Leader: Tang Wing Kwai (Tel: 2151 2073)

Team Members: Lee Man Hei, Mo Yik Wai, Lam Ho Chun, Man Chun Fai, Ching Ka Wai, Ho Ka Chun

Title

Audit Team

- conduct site inspection, complete the environmental checklist once a week

Team Leader: Ivy Tam (Tel: 2151 2090)

Site Auditor: Harris Wong (Tel: 2151 2098)

Contract No. ST 2013/01 Sha Tin New Town, Stage II Environmental Team for Road T3 & Associated Roadworks - Remaining Works, Phase III

ET's Organization Chart

Scale	N.T.S	Project No.	MA13058
Date	Jun-14	Figure	2

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APPENDIX A ACTION AND LIMIT LEVEL

Monthly EM&A Report

APPENDIX A - Action and Limit Level

Construction Noise

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



WELLAB LIMITED

Rms 816, 1516 & 1701, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong. Tel: 2898 7388 Fax: 2898 7076

Website: www.wellab.com.hk

TEST REPORT

APPLICANT:

Cinotech Consultants Limited

Room 1710, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: C/N/150103

Date of Issue: 2015-01-05

Date Received: 2015-01-03 Date Tested: 2015-01-03

Date Completed: 2015-01-05

Next Due Date: 20

2015-01-05 2016-01-04

ATTN:

Mr. W. K. Tang

Page:

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Certificate of Calibration

Item for calibration:

Description

: 'SVANTEK' Integrating Sound Level Meter

Manufacturer

: SVANTEK

Model No.

: SVAN 955

Serial No.

: 14303 : 35222

Microphone No. Equipment No.

: N-08-05

Test conditions:

Room Temperatre

: 20 degree Celsius

Relative Humidity

: 54%

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



WELLAB LIMITED

Rms 816, 1516 & 1701, Technology Park, 18 On Lai Street, Shatin, N.T, Hong Kong. Tel: 2898 7388 Fax: 2898 7076

Website: www.wellab.com.hk

TEST REPORT

APPLICANT: Cinote

Cinotech Consultants Limited

Room 1710, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: C/N/140822/3

Date of Issue: 2014-08-25

Date Received: 2014-08-22 Date Tested: 2014-08-22

Date Completed: 2014-08-25

Next Due Date:

2014-08-23

Page:

1 of 1

ATTN:

Mr. W.K. Tang

Certificate of Calibration

Item for calibration:

Description

: 'SVANTEK' Integrating Sound Level Meter

Manufacturer

: SVANTEK

Model No.

: SVAN 957

Serial No.

: 21459

Microphone No.

: 43676

Equipment No.

: N-08-08

Test conditions:

Room Temperatre

: 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:

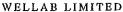
Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

Laboratory Manager





Rms 816, 1516 & 1701, Technology Park, 18 On Lai Street, Shatin, N.T, Hong Kong. Tel: 2898 7388 Fax: 2898 7076

Website: www.wellab.com.hk

TEST REPORT

APPLICANT: Cinotech Consultants Limited

Room 1710, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

	The second secon
Test Report No.:	C/N/141003/2
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:

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Item for calibration:

Description

: Acoustical Calibrator

Manufacturer

: SVANTEK

Model No.

: SV30A

Serial No.

: 24791

Equipment No.

: N-09-04

Test conditions:

Room Temperatre

: 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



WELLAB LIMITED

Rms 816, 1516 & 1701, Technology Park, 18 On Lai Street, Shatin, N.T, Hong Kong. Tel: 2898 7388 Fax: 2898 7076

Website: www.wellab.com.hk

TEST REPORT

APPLICANT: Cinotech Consultants Limited

Room 1710, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.:	C/N/140822/2
Date of Issue:	2014-08-25
Date Received:	2014-08-22
Date Tested:	2014-08-22
Date Completed:	2014-08-25

Page:

Next Due Date:

1 of 1

2015-08-24

ATTN:

Mr. W.K. Tang

Certificate of Calibration

Item for calibration:

Description

: Acoustical Calibrator

Manufacturer

: Brüel & Kjær

Model No.

: 4231

Serial No.

: 2412367

Equipment No.

: N-02-03

Test conditions:

Room Temperatre

: 20 degree Celsius

Relative Humidity

: 64%

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	$114.0 \pm 0.1 \mathrm{dB}$	

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

Laboratory Manager

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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 June 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-Jun	2-Jun	3-Jun	4-Jun	5-Jun	6-Jun
					Noise	
7-Jun	8-Jun	9-Jun	10-Jun	11-Jun	12-Jun	13-Jun
3,112		, , ,				
				Noise		
14 1	15 T	16 Ton	17 I	18-Jun	19-Jun	20 I
14-Jun	15-Jun	16-Jun	17-Jun	18-Jun	19-Jun	20-Jun
					Noise	
					1,0150	
21-Jun	22-Jun	23-Jun	24-Jun	25-Jun	26-Jun	27-Jun
		N7 '				
		Noise				
28-Jun	29-Jun	30-Jun				

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 July 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Jul	2-Jul	3-Jul	4-Jul
					Noise	
					110150	
5-Jul	6-Jul	7-Jul	8-Jul	9-Jul	10-Jul	11-Jul
			Noise			
10.1.1	10.1.1	14 7 1	15.7.1	16 7 1	17.1	10 X 1
12-Jul	13-Jul	14-Jul	15-Jul	16-Jul	17-Jul	18-Jul
	Noise					
19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul
17-341	20-Jul	21-341	22-341	25-341	24-341	23-Jui
				Noise		
26-Jul	27-Jul	28-Jul	29-Jul	30-Jul	31-Jul	
	- 1 1 1 1 1					
			Noise			
TCI 1 1 1 1 1 1	1	(1 (1 ()	ļ	ļ		

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

Noise Monitoring Stations

N6 - Scenery Court

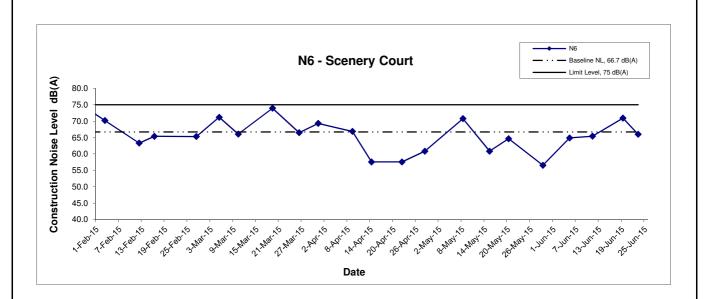
APPENDIX D NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

App D - Noise Monitoring Results

Location N6 - Scenery Court							
			Unit: dB (A) (30-min)				
Date	Time	Time Weather		Measured Noise Level			Construction Noise Level
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}
5-Jun-15	13:00	Sunny	68.9	70.2	67.0		64.9
11-Jun-15	15:30	Sunny	65.4	67.2	62.8	66.7	65.4 Measured ≤ Baseline
19-Jun-15	14:10	Sunny	72.3	74.2	70.5	00.7	70.9
23-Jun-15	14:00	Cloudy	66.0	67.9	63.5		66.0 Measured ≤ Baseline

MA14009/Noise Cinotech

Noise Levels



Title	Sha Tin New Town Stage II
	Road T3 and Associated Road Works- Remaning Works,
	Phase III
	Graphical Presentation of Construction Noise Monitoring
	Results

Scale		Project No.
	N.T.S	MA13058
Date	Jun 15	Appendix D



APPENDIX E SUMMARY OF EXCEEDANCE

APPENIDX E – SUMMARY OF EXCEEDANCE

Reporting Month: June 2015

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	150602
Date	2 June 2015 (Tuesday)
Time	10:00-11:00

		Related
Ref. No.	Non-Compliance	Item No.
	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No.
	A. Water Quality	
150602-R01	Further enhance the bundings at the bottom of water barriers.	B2, B16i
	B. Air Quality	
150602-R03	Cover the stockpile with tarpaulin sheet. (Bay 7)	C7
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Waste/Chemical Management	
150602-R02	Clear the stagnant water inside the chemical waste storage box and provide labels to the chemical waste.	E2i
150602-R04	Cover the breaker with tarpaulin sheet. (Bay 7)	E7
	E. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	F. Others	
	• Follow-up on previous site audit session (Ref. No. 150528), follow-up action is required for	
	the items 150528-R02 and R03 which were renamed as 150602-R01 and R02.	

	Name	Signature	Date
Recorded by	Harris Wong	4	2 June 2015
Checked by	Dr. Priscilla Choy	WI	2 June 2015

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	150610
Date	10 June 2015 (Wednesday)
Time	14:00-15:00

		Related
Ref. No.	Non-Compliance	Item No.
	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
150610-R01	Further enhance the bundings at the bottom of water barriers.	B2, B16i
150610-R03	Wash the wheels of site vehicle before leaving the site.	B14
	B. Air Quality	
150610-R03	Wash the wheels of site vehicle before leaving the site.	C8
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Waste/Chemical Management	
150610-R02	Clear the stagnant water inside the chemical waste storage box and provide labels to the chemical waste.	E2i
	E. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	F. Others	
	• Follow-up on previous site audit session (Ref. No. 150602), follow-up action is required for the items 150602-R01 and R02 which were renamed as 150610-R02 and R01.	

	Name	Signature	Date
Recorded by	Harris Wong	A	10 June 2015
Checked by	Dr. Priscilla Choy	WF	10 June 2015

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	150616
Date	16 June 2015 (Tuesday)
Time	14:00-15:00

D 4 N		Related
Ref. No.	Non-Compliance	Item No.
	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No.
	A. Water Quality	
150616-R01	Further enhance the bundings at the bottom of water barriers.	B2, B16i
150616-R02	Cover properly the stockpile with tarpaulin sheet. (Bay 7)	B11
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	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. 150610), follow-up action is required for the items 150610-R02 which was renamed as 150616-R01.	

	Name	Signature	Date
Recorded by	Harris Wong	AA	16 June 2015
Checked by	Dr. Priscilla Choy	WI	16 June 2015

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	150626
Date	26 June 2015 (Friday)
Time	10:00-11:30

		Related
Ref. No.	Non-Compliance	Item No.
	None identified	-
	·	Related
Ref. No.	Remarks/Observations	Item No.
	A. Water Quality	
150626-O01	Further enhance the bundings at the bottom of water barriers.	B2
150626-O02	Clear the mud accumulated in the drain to the sedimentation tank.	B8
150626-O04	Clear and sort the construction waste materials and general refuse.	B20
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
*** **********************************	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Waste/Chemical Management	
150626-O03	Provide drip tray to the chemical containers. (Bay 7)	E 8
150626-O04	Clear and sort the construction waste materials and general refuse.	E 1i
	E. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	F. Others	
	• Follow-up on previous site audit session (Ref. No. 150626), follow-up action is required for the items 150616-R01 which was renamed as 150626-O01.	

	Name	Signature	Date
Recorded by	Carrie Leung	(gie	29 June 2015
Checked by	Dr. Priscilla Choy	WA	29 June 2015

APPENDIX G EVENT ACTION PLAN

Appendix G Event/Action Plan

Event/Action Plan for Construction Noise

		AC	TION	
EVENT	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
	 Undertake measurement to establish validity of complaint Identify the source(s) of the complaint Inform ER & IEC in writing. Discuss remedial actions required with ER & IEC Increase monitoring frequency to assess efficacy of remedial measures If exceedance continues, meet with ER&IEC to review implementation of appropriate mitigation measures If exceedance stops, cease additional monitoring 	 Review the analyzed results submitted by the ET Review the proposed remedial measures by the Contractor and advise the ER & ET accordingly Supervise the implementation of remedial measures. 	 Confirm receipt of notification of complaint and notify Contractor if proven Check monitoring data trends and Contractor's working methods. Remind the Contractor of his Contractual obligations and discuss with ET, IEC and Contractor on proposed remedial actions. Assess the efficacy of remedial actions and keep the Contractor informed Inform complainant of actions 	 Submit proposals for remedial actions to ER within three working days of notification Amend proposals if required by the Engineer Implement the remedial actions immediately upon instruction Liaise with the ER to optimise the effectiveness of the agreed mitigation Amend proposal if appropriate
LIMIT LEVEL			taken	
LIMIT LEVEL	Repeat measurement to confirm findings Identify the source(s) of impact Inform ER&IEC and EPD in writing Discuss remedial actions required with ER&IEC Increase monitoring frequency to assess efficacy of remedial measures If exceedance continues, meet with ER&IEC to identify appropriate mitigation measures If exceedance stops, cease additional monitoring	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	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	 Take immediate action to avoid further exceedance Submit proposals for remedial actions to ER within three working days of notification Amend proposals if required by the ER Implement remedial actions immediately upon instruction Liaise with the ER to optimize the effectiveness of the agreed mitigation Resubmit proposals if problem still not under control 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?	
Construct	ion Noise				
2.5.4 /	 Where available, the Contractor shall use quiet items of PME or model of plants that are quieter than those specified in the EPD's 	Contractor	At active construction	Construction stage	
2.3	Technical Memorandum (GW-TM) for undertaking construction works.		locations.		
	 Where practicable, the Contractor shall use movable noise barriers and avoid simultaneous noisy activities. 				
Air Quality					
3.5.3/	Watering the works area at least twice a day	Contractor	Work site	Construction	
3.4.5	,			stage	
3.5.4/	Environmental pollution control measures for minimizing construction	Contractor	Work site	Construction	
3.4.5	dust impact as stipulated in the Air Pollution Control Regulation.			stage	
Waste Mai	nagement				
5.2 –	Environmental pollution control measures for minimizing waste arising	Contractor	Within the works	Construction stage	
5.6/4.5	from the construction works.		boundary		
Water Qua	ality				
4.5.1/5.5.1	Environmental pollution control measures for minimizing impacts on water quality.	Contractor	All construction sites	Construction stage	
Landscap	e 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

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 Summary Waste Flow Table for 2014 and 2015 (year)

			<u> </u>	<u> </u>				<u>unu 2018</u> (y			
		Actual Quantit	ties of Inert C&D	Materials Generate	ed Monthly			Actual Quantities of	C&D Wastes Ge	enerated Monthly	
Month	Total Quantity Generated	Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
June	0.228	0.000	0.000	0.000	0.228	0.000	0.000	0.000	0.000	0.000	0.000
July	0.542	0.005	0.000	0.000	0.537	0.000	0.000	0.000	0.000	0.000	0.000
Aug	0.391	0.000	0.000	0.000	0.391	0.000	0.000	0.000	0.000	0.000	0.000
Sept	0.060	0.000	0.000	0.000	0.060	0.000	0.000	0.000	0.000	0.000	0.000
Oct	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dec	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
G.Total (2014)	1.221	0.005	0.000	0.000	1.216	0.000	0.000	0.000	0.000	0.000	0.000
Jan	0.366	0.018	0.000	0.000	0.348	0.000	0.000	0.000	0.000	0.000	0.000
Feb	0.218	0.000	0.000	0.000	0.218	0.000	0.000	0.000	0.000	0.000	0.000
Mar	0.318	0.000	0.000	0.000	0.318	0.000	0.000	0.000	0.000	0.000	0.000
Apr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May	0.089	0.000	0.000	0.000	0.089	0.000	0.000	0.000	0.000	0.000	0.000
Jun	0.054	0.000	0.000	0.000	0.054	0.000	0.000	0.000	0.000	0.000	0.000
G.Total	2.266	0.023	0.000	0.000	2.243	0.000	0.000	0.000	0.000	0.000	0.000

APPENDIX J COMPLAINT LOG

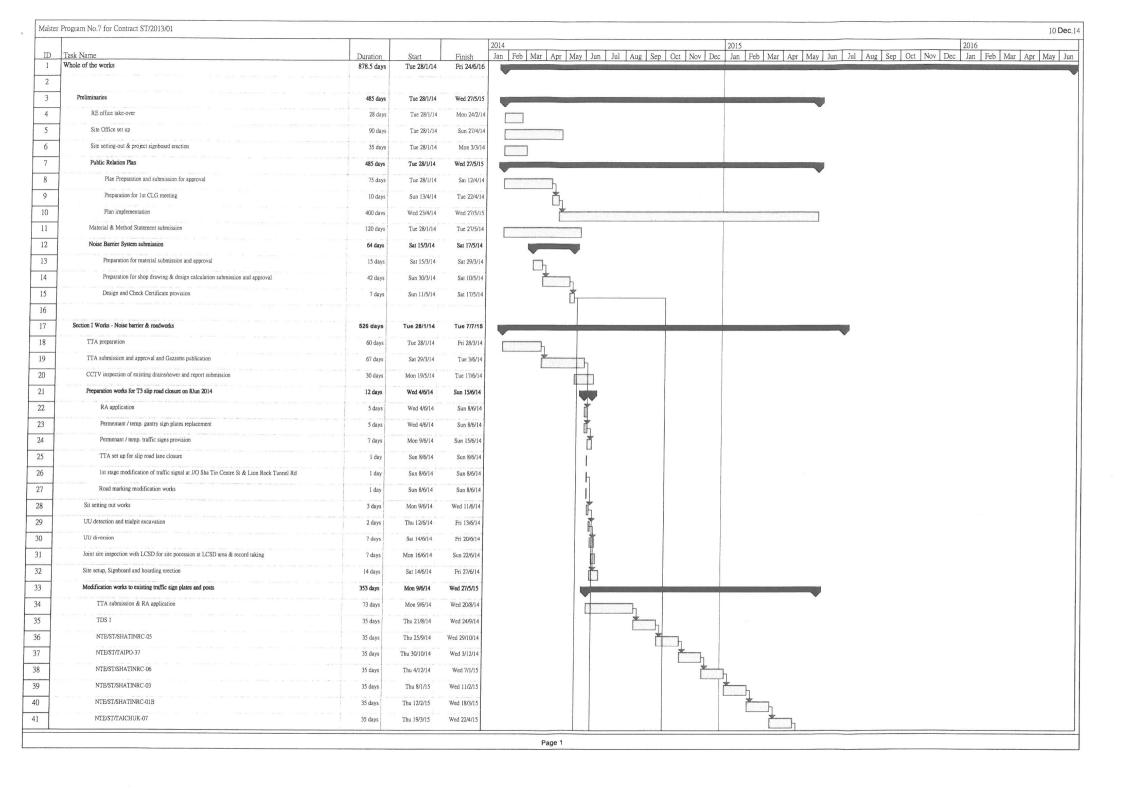
APPENDIX J – COMPLAINT LOG

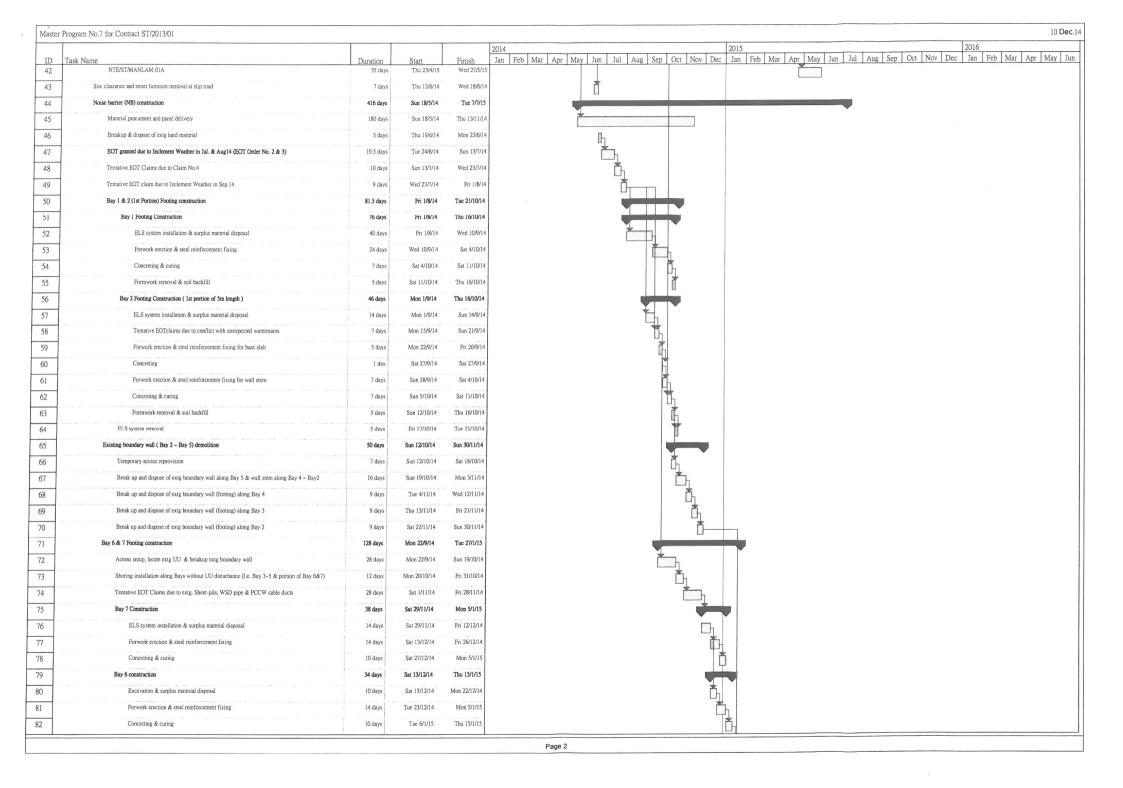
Reporting Month: June 2015

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.	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. No violation of the Noise Control Ordinance as the noisy construction work was conducted within the nonrestricted hour (07:00 to 19:00 on normal weekdays). 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. 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.	Closed
Com- 2014-12- 01	Tai Po Slip Road	29 th December 2014	The complaint was received by Environmental Protection Department (EPD) (EPD Complaint Ref: RN32146-14) in the morning of 29 th December 2014. The complainant complained about the effluent discharge to a gully in the worksite may cause pollution to the nearby environment.	According to the information provided by the Contractor, the effluent discharge was due to groundwater leakage from the trench excavation at deep depth of Bay 7 of the worksite. Since site inspection was also conducted in the morning of 29th December 2014 and no improper effluent discharge was observed, it is likely that the complainant observed the issue before 29th December 2014.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
Keil		Duce		Improper effluent discharge was observed during the site inspections on 3 rd , 10 th and 22 nd December 2014. Recommendations were given to the Contractor during the site inspections, and a further reminder was also given to the Contractor through email dated 22 nd December 2014. The improper effluent discharge was ceased as per the rectified photos given by the Contractor on 24 th	
				December 2014, as well as during the site inspection on 6 th January 2015. The discharge pipes were also connected to the discharge point via the sediment tank as per the photographic records given by the Contractor on 6 th January 2015 and from the site inspection on 7 th January 2015.	

APPENDIX K CONSTRUCTION PROGRAMME





faster Program No.7 for Contract					2014 2015 2016
ID Task Name		Duration	Start	Finish	2014 2015 2016
	rk removal & soil backfill	7 days	Fri 16/1/15	Thu 22/1/15	
4 ELS syst	em removal	5 days	Fri 23/1/15	Tue 27/1/15	I L
5 Bay 4 & 5 Foo	ing construction	52 days	Fri 23/1/15	Sun 15/3/15	
5 Excavati	on & surplus material disposal	12 days	Fri 23/1/15	Tue 3/2/15	
7 Forwork	erection & steel reinforcement fixing	18 days	Wed 4/2/15	Sat 21/2/15	
3 Concreting	g & curing	10 days	Sun 22/2/15	Tue 3/3/15	
) Formwor	k removal & soil backfill	7 days	Wed 4/3/15	Tue 10/3/15	
ELS syste	rm removal	5 days	Wed 11/3/15	Sun 15/3/15	
Bay 3 and 2 (2n	d portion of 7m span) Footing construction	52 days	Mon 16/3/15	Wed 6/5/15	
2 Excavation	n & surplus material disposal	12 days	Mon 16/3/15	Fri 27/3/15	i i i
Forwork	erection & steel reinforcement fixing	18 days	Sat 28/3/15	Tue 14/4/15	
1 Concretin	g & curing	10 days	Wed 15/4/15	Fri 24/4/15	
Formwork	removal & soil backfill	7 days	Sat 25/4/15	Fri 1/5/15	
ELS syste	m removal	5 days	Sat 2/5/15	Wed 6/5/15	
Noise Barrier Sy	tem Steelwork Erection	140 days	Wed 28/1/15	Tue 16/6/15	
Noise Barrier Pa	nel, cladding and gutter fixing	21 days	Wed 17/6/15	Tue 7/7/15	
New Sign Gantry const	ruction	283 days	Mon 1/9/14	Wed 10/6/15	
Shop drawing an	d E&M works submission and approval	150 days	Mon 1/9/14	Wed 28/1/15	
Footing modifica	tion	21 days	Thu 7/5/15	Wed 27/5/15	
Steelwork fabrica	tion, delivery & erection	14 days	Thu 28/5/15	Wed 10/6/15	
Drainage works		28 days	Thu 7/5/15	Wed 3/6/15	
. Carriageway construction	n	34 days	Thu 4/6/15	Tue 7/7/15	
St lighting duct laying a	nd street furniture provision	12 days	Thu 11/6/15	Mon 22/6/15	
Irrigation system constru	action	7 days	Tue 23/6/15	Mon 29/6/15	
Cycletracks & footpath	construction	14 days	Tue 23/6/15	Mon 6/7/15	
Landscaping works		27 days	Thu 11/6/15	Tue 7/7/15	
2nd stage modification of	f traffic signal at J/O Sha Tin Centre St & Lion Rock Tunnel Rd	1 day	Tue 7/7/15	Tue 7/7/15	
) Joint site inspection with	LCSD for handover posessed site	l day	Tue 7/7/15	Tue 7/7/15	i [†]
THE RESERVE AND ADDRESS OF SHE					'