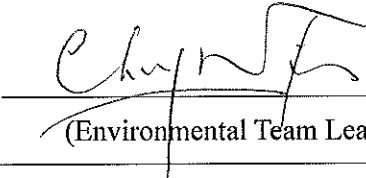


Civil Engineering and Development Department

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)
September 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

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EXECUTIVE SUMMARY

Introduction

1. This is the 16th 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 September 2015.
2. The major site activities undertaken in the reporting month included:
 - Road marking modification
 - Re-surfacing
 - Break up surplus material and soil backfill to the excavated area
 - Drainage and irrigation pipe laying
 - Hydroseeding & landscaping works

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	2*	0	N/A

* Exceedances occurred in the noise monitoring during the restricted hours (19:00-23:00hrs and 23:00-07:00 hrs) conducted for the evening and night-time construction works from 7th to 9th September 2015. No direct evidence showing that the exceedances were due to the Project as the measured impact noise level is influenced by nearby road traffic noise. Details of the exceedance investigation are given in **Appendix E**.

Construction Noise

5. All construction noise monitoring was conducted as scheduled in the reporting month. One Limit Level exceedance was recorded.

Environmental Licenses and Permits

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

Key Information in the Reporting Month

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

Table II Summary Table for Key Information in the Reporting Month

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	0	---	N/A	N/A	---
Changes to the assumptions and key construction / operation activities recorded	0	---	N/A	N/A	---
Status of submissions under EP	1	Monthly EM&A Report for (August 2015)	Submitted to EPD on 16 th September 2015.	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"> Hydroseeding & landscaping works <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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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 16th monthly EM&A report summarizing the EM&A works conducted for the Projects in September 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.
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	2618 2836	3007 8648
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:

- Road marking modification
- Re-surfacing
- Break up surplus material and soil backfill to the excavated area
- Drainage and irrigation pipe laying
- Hydroseeding & landscaping works

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	1

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) L _{eq} (5min) dB(A)*	0700-1900 hrs. on normal weekdays; 1900-2300hrs and 2300-0700 hrs on normal weekdays*	Once a week	Façade

* One set of measurements of impact noise monitoring during the restricted hours (1900-2300hrs and 2300-0700 hrs) were conducted for the night time construction works from 7th to 9th September 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 : 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 Two Limit Level exceedances for construction noise monitoring were 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 $L_{eq}(30min)$ / $L_{eq}(5min)$ * dB (A)	Action Level	Limit Level
N6	2 September 2015	66.7	When one documented complaint is received	75dB(A)
	10 September 2015	56.5		
	17 September 2015	50.4		
	24 September 2015	62.7 Measured \leq Baseline		
	8 September 2015	56.8*		55dB(A)**
		57.8*		
		57.1*		
	9 September 2015	50.6*		40dB(A)**
		51.0*		
		49.6*		

*Three consecutive $L_{eq}(5min)$ were measured for the impact noise monitoring during the restricted hours.

**The Project site area falls into Designated Areas, and Prescribed Construction Works would be carried out inside the site boundary during restricted hours. As specified in Technical Memorandum on Noise From Construction Work In Designated Areas, Acceptable Noise Level (ANL) of NSR with Area Sensitivity Rating 'C' for the time period 'All days during the night-time (19:00 to 23:00 hours and 23:00 to 0700 hours) are 55dB(A) and 40dB(A).

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, 9th, 16th and 25th September 2015 by ET. A joint site audit with the representative with IEC, ER, the Contractor and the ET was carried out on 25th September 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
	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	31/8/2019	Valid
Construction Noise Permit			
GW-RN0436-15	23/7/2015	22/9/2015	Expired

Status of Waste Management

- 3.5 There are 5.97 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
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 Observations and Recommendations of Site Audit

Parameters	Date	Observations	Remedial Actions
<i>Water Quality</i>	14 August 2015	Muddy runoff in u-channel should be cleared regularly.	Follow up action will be reported during the next reporting period.
	21 August 2015		
	28 August 2015		
	02 September 2015		
	09 September 2015		
	16 September 2015		
	25 September 2015	Sandbags should be placed along the boundary and clear muddy sand.	A pit was found. Contractor was reminded to clear muddy sand which outside the site boundary.
	21 August 2015		
	28 August 2015		
	02 September 2015		
	09 September 2015		
	16 September 2015		
<i>Air Quality</i>	16 September 2015	Muddy sand should be cleared along site boundary.	Muddy sand was cleared.
	25 September 2015	Unpaved slope should be sprayed with water.	Unpaved slope was observed wet.
<i>Noise</i>	N/A	N/A	N/A
<i>Waste/ Chemical Management</i>	25 September 2015	General refuse and construction waste should be cleared.	Construction waste was removed.
<i>Permit/ Licenses</i>	N/A	N/A	N/A

Summary of Exceedance

- 3.8 Two exceedance of monitoring results were 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 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 most updated version is provided by Contractor. The major construction activities were ended in August stated in the programme. Some minor construction activities in the coming month will include:

- Hydroseeding & landscaping works

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. Two Limit Level exceedances were 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)



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

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

Project Coordinator
- coordination of the Project and compile reports
Ivy 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

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

Team Leader: Ivy Tam
(Tel: 2151 2090)

Site Auditor: Carrie Leung (Tel: 2151 2078)

Title 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

Date

Aug-15

Project No.

MA13058

Figure

2

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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/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: 2016-01-04

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 : 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

TEST REPORT

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

Test Report No.: C/N/150828/1
Date of Issue: 2015-08-31
Date Received: 2015-08-28
Date Tested: 2015-08-28
Date Completed: 2015-08-31
Next Due Date: 2016-08-30

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. : 21455
Microphone No. : 43730
Equipment No. : N-08-07

Test conditions:

Room Temperature : 24 degree Celsius
Relative Humidity : 58%

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/150821/1
Date of Issue: 2015-08-24
Date Received: 2015-08-21
Date Tested: 2015-08-21
Date Completed: 2015-08-24
Next Due Date: 2016-08-23

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 : 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

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/141003/2
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: 1 of 1

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24791
Equipment No.	: N-09-04

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 September 2015

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

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 October 2015

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

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

Noise Monitoring Stations

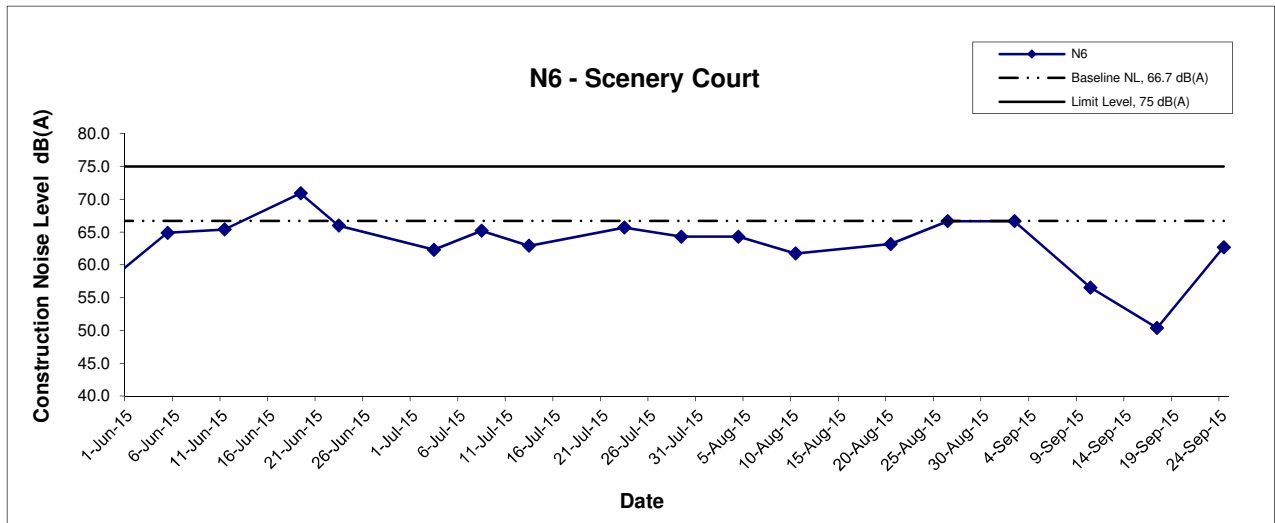
N6 - Scenery Court

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}
2-Sep-15	16:30	Cloudy	69.7	70.9	66.4	66.7	66.7
10-Sep-15	14:30	Sunny	67.1	70.2	64.9		56.5
17-Sep-15	17:30	Sunny	66.8	69.1	64.2		50.4
24-Sep-15	10:00	Sunny	62.7	64.7	59.5		62.7 Measured ≤ Baseline

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	
		Sep 15	D	

APPENDIX E
SUMMARY OF EXCEEDANCE

APPENDIX E – SUMMARY OF EXCEEDANCE

Reporting Month: September 2015

a) Exceedance Report for Construction Noise (NIL)

(Two limit level exceedance were recorded for the impact noise monitoring for the evening and night-time construction works during the restricted hours (17:00-23:00hr and 23:00-0700hr) on 8 and 9 September 2015. The limit level are 55dB(A) (Leq) and 40 dB(A) (Leq) respectively as the Project site area falls into Designated Areas, and Prescribed Construction Works would be carried out inside the site boundary during the restricted hours as per the Technical Memorandum on Noise From Construction Work In Designated Areas)

- **Cause of Exceedance:**

- Background noise monitoring was conducted before the commencement of works during the restricted hours (19:00-23:00hrs and 23:00-07:00hrs), the major noise source recorded in the background noise measurement was road traffic noise from Tai Po Road and East Rail, and both background noise levels had already exceeded the Limit Levels.
- During construction noise measurement, night works such as road resurfacing and roadmarking modification were carried out. Traffic noise from Tai Po Road and East Rail was still identified as the major noise source.
- During restricted hours (19:00-23:00hrs) on 8 September 2015, measured noise level was 57.1 dB(A) while the background noise level was 57.3 dB(A) which had already exceeded the Limit level (55 dB(A)).
- During restricted hours (23:00-07:00hrs) on 9 September 2015, measured noise level was 50.4 dB(A) while the background noise level was 51.1 dB(A) which had already exceeded the Limit level (40 dB(A)).
- With reference to the baseline noise measurement during the restricted hours (19:00-23:00hrs and 23:00-07:00 hrs), the major noise source recorded was road traffic from Tai Po Road and East Rail, the baseline noise level during 19:00-23:00hrs (65.7 dB(A)) and during 23:00-07:00hrs (62.5 dB(A)) had already exceeded the Limit Level.
- In view of background and baseline noise measurements which were higher than that of impact noise, the exceedance was considered to be contributed from the traffic noise and non-Project related.

- **ET's conclusion/recommendations for mitigation:**

- The exceedance was considered non-related to the Project works.
- No further mitigation measures would be required.

APPENDIX F
SITE AUDIT SUMMARY

Contract ST/2013/01

Sha Tin New Town Stage II

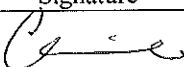
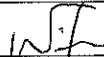
Road T3 and Associated Roadworks – Remaining Works, Phase III

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	150902
Date	02 September 2015 (Wednesday)
Time	14:00-15:00

Ref. No.	Non-Compliance	Related Item No.
	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
150902-O01	• Sandbags should be placed along the boundary and clear muddy sand.	B 2
150902-O02	• Muddy runoff in u-channel should be cleared.	B 8
	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. 150828), follow-up action is required for the item 150828-O01 which was renamed as 150902-O01 and item 150828-O02 was renamed as 150902-O02.	

	Name	Signature	Date
Recorded by	Carrie Leung		07 September 2015
Checked by	Dr. Priscilla Choy		07 September 2015

Contract ST/2013/01

Sha Tin New Town Stage II

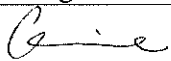

Road T3 and Associated Roadworks – Remaining Works, Phase III

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	150909
Date	09 September 2015 (Wednesday)
Time	14:00-15:00

Ref. No.	Non-Compliance	Related Item No.
	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
150909-O01	• Sandbags should be placed along the boundary and clear muddy sand.	B 2
150909-O02	• Muddy runoff in u-channel should be cleared.	B 8
	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. 150902), follow-up action is required for the item 150902-O01 which was renamed as 150909-O01 and item 150902-O02 was renamed as 150909-O02.	

	Name	Signature	Date
Recorded by	Carrie Leung		11 September 2015
Checked by	Dr. Priscilla Choy		11 September 2015

Contract ST/2013/01

Sha Tin New Town Stage II

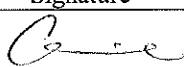

Road T3 and Associated Roadworks – Remaining Works, Phase III

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	150916
Date	16 September 2015 (Wednesday)
Time	14:00-15:00

Ref. No.	Non-Compliance	Related Item No.
	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
150916-002	• Muddy runoff in u-channel should be cleared.	B 8
	B. Air Quality	
150916-001	• Muddy sand should be cleared along site boundary.	C 2
	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. 150909), follow-up action is required for the item 150909-002 which was renamed as 150916-002.	

	Name	Signature	Date
Recorded by	Carrie Leung		17 September 2015
Checked by	Dr. Priscilla Choy		17 September 2015

Sha Tin New Town Stage II

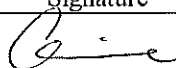
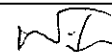
Road T3 and Associated Roadworks – Remaining Works, Phase III

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	150925
Date	25 September 2015 (Friday)
Time	10:00-12:00

Ref. No.	Non-Compliance	Related Item No.
	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
150925-O01	• Muddy runoff in u-channel should be cleared.	B 8
	B. Air Quality	
150925-O02	• Unpaved slope should be sprayed with water.	C 6
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Waste/Chemical Management	
150925-O03	• General refuse and construction waste should be cleared.	E 1i & 4ii
	E. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	F. Others	
	• Follow-up on previous site audit session (Ref. No. 150916), follow-up action is required for the item 150916-O02 which was renamed as 150925-O01.	

	Name	Signature	Date
Recorded by	Carrie Leung		29 September 2015
Checked by	Dr. Priscilla Choy		29 September 2015

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**

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	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 '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m³)
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 (Jan-Jun 2015)	1.045	0.018	0.000	0.000	1.027	0.000	0.000	0.000	0.000	0.000	0.000
Jul	0.064	0.038	0.000	0.000	0.026	0.000	0.000	0.000	0.000	0.000	0.000
Aug	0.692	0.000	0.000	0.000	0.692	0.000	0.000	0.000	0.000	0.000	0.000
Sep	0.006	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000
G.Total	0.762	0.038	0.000	0.000	0.724	0.000	0.000	0.000	0.000	0.000	0.000

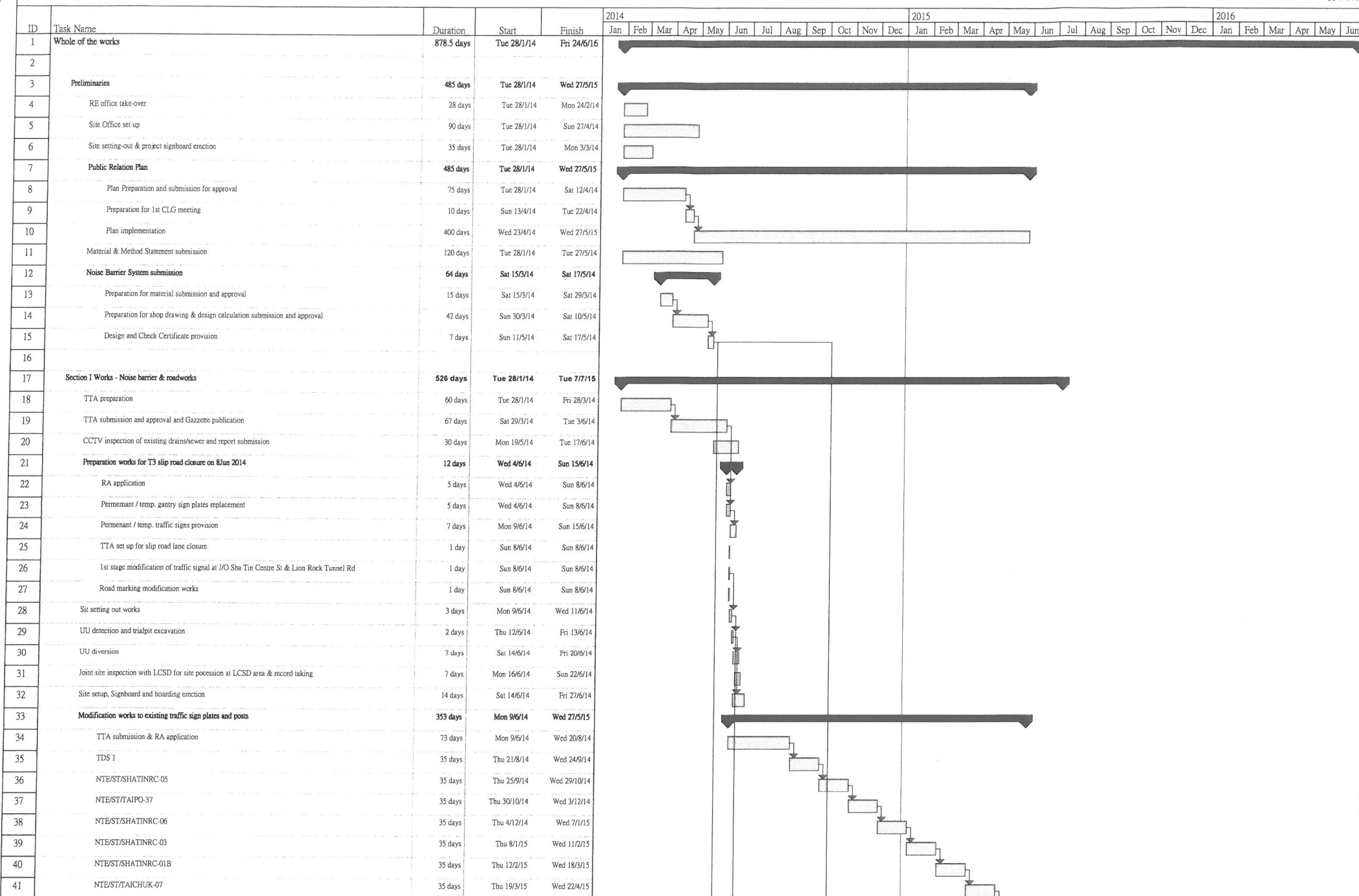
**APPENDIX J
COMPLAINT LOG**

APPENDIX J – COMPLAINT LOG**Reporting Month:** September 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.	<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
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.	<p>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.</p> <p>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.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>Improper effluent discharge was observed during the site inspections on 3rd, 10th and 22nd 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 22nd December 2014.</p> <p>The improper effluent discharge was ceased as per the rectified photos given by the Contractor on 24th December 2014, as well as during the site inspection on 6th 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 6th January 2015 and from the site inspection on 7th January 2015.</p>	

APPENDIX K
CONSTRUCTION PROGRAMME



Page 2

Page 3