

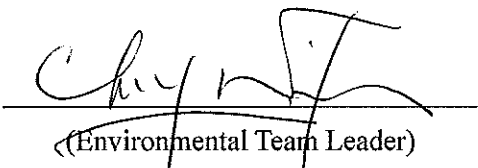
Civil Engineering and Development Department

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

Final EM&A Report

(Version 1.0)

April 2016

Certified By	 (Environmental Team Leader)
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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 Final Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for “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 of the Project.
2. The construction activities undertaken in the construction period were:
 1. Concrete breaking works;
 2. Formwork removal and soil backfilling works;
 3. Excavation works;
 4. Welding and cutting steel works;
 5. Noise barrier installation works;
 6. Re-surfacing and road marking works;
 7. Hydroseeding works.

Environmental Monitoring Works

4. Environmental monitoring for the Project was performed in accordance with the Project Specific EM&A Manual and the monitoring 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.
5. According to the Environmental Monitoring and Audit Manual (EM&A Manual) of the Project, the impact monitoring at the designated monitoring stations as required in Sha Tin New Town Stage II – Trunk Road T3 – Environmental Impact Assessment (EIA) Report under EP (EP-135/2002/J , has been conducted since June 2014.
6. With reference to the letter from the CEDD dated 2nd February 2016, the captioned project was terminated on 31st January 2016. Therefore, EM&A programme including noise monitoring and site audits were also terminated.
7. The implementation of the environmental mitigation measures and environmental complaint handling procedures were also checked.
8. Summary of the event and action taken in the reporting month is tabulated in **Table I**.

Table I Summary Table for Events Recorded Due to the Project

Parameter	No. of Exceedance		No. of Exceedance Due to this Project	Action Taken
	Action Level	Limit Level		
Noise	0	6*	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. 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 D**.

Construction Noise Monitoring

9. All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance related to the project was recorded throughout the whole project.

Complaints and Prosecutions

10. Two project-related environmental complaint were received over the Project period. Complaint log was shown in **Appendix F**.
11. No warning, summons and successful environmental prosecution was received since the commencement of the Project.

Conclusion

12. The EM&A programme were found to be effective in monitoring impacts arising from the Project. The findings of the environmental monitoring program suggest that no adverse impacts on sensitive receivers at the designated monitoring locations were brought about by the Project.
13. In conclusion the Project was environmentally acceptable in term of noise.

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 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 The Final EM&A report was prepared by Cinotech for the Project to summarize the finding of all EM&A Works associated with baseline monitoring and construction phase conducted between June 2014 and January 2016.

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 Limited.
 - Independent Environmental Checker (IEC) – AnewR Consulting Ltd. (AnewR).
 - Contractor – Sheen Billion Development Ltd.
- 1.8 The key contacts of the Project are shown in **Table 1.1**.

Table 1.1 Key Project Contacts

Party	Role	Name	Position	Phone No.	Fax No.
CEDD	Project	Mr. Bryan YUEN	Engineer	2301 1398	/

	Proponent	Mr. T.M. KONG	Engineer	2762 5392	2714 5174
AECOM	Engineer's Representative	Mr. Kelvin CHENG	Executive Director	3922 9000	3922 9797
Cinotech	Environmental Team Leader	Dr. Priscilla CHOY	Director	2151 2089	3107 1388
ANWR	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	

Summary of EM&A Requirements

- 1.9 The EM&A Manual designates locations for the ET to monitor environmental impacts in term of noise due to the Project. The Project area and monitoring location are depicted in **Figures 1**.
- 1.10 Monitoring works/ equipments were conducted/calibrated regularly in accordance with the EM&A Manual. Copies of calibration certificates are attached in the appendices of the Monthly Reports.
- 1.11 The environmental quality performance limits, i.e. Action and Limit Levels were derived from the baseline monitoring results. Should the measured environmental quality parameters exceed the Action/Limit Levels, the respective action plans would be implemented. The Action/Limit Levels for each environmental parameter are given in **Appendix A**.
- 1.12 Relevant mitigation measures as recommended in the project EIA report have been stipulated in the EM&A Manual for the Contractor to implement. A list of mitigation measures is given in **Appendix C**.
- 1.13 This Final EM&A Summary Report summarizes the finding of all EM&A Works associated with baseline monitoring and construction phase conducted between June 2014 and January 2016.

2. NOISE QUALITY

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.
- 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
Integrating Sound Level Meter	SVANTEK - SVAN 955 and SVAN 957
Calibrator	SVANTEK - SV30A and B&K - 4231

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;	Once a week	Façade

Monitoring Methodology and QA/QC Procedures

Field Monitoring

- 2.5 The monitoring procedures are as follows:
- The microphone head of the sound level meter was positioned 1m exterior of the noise sensitive facade and lowered sufficiently so that the building's external wall acts as a reflecting surface.
 - The battery condition was checked to ensure good functioning of the meter.
 - Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - frequency weighting : A
 - time weighting : Fast

- measurement time : 30 minutes

- Prior to and after noise measurement, the meter was calibrated using the calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement was considered invalid and repeat of noise measurement was required after re-calibration or repair of the equipment.
- The wind speed at the monitoring station was checked with the portable wind meter. Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s.
- Noise measurement was paused during periods of high intrusive noise if possible and observation was recorded when intrusive noise was not avoided.
- At the end of the monitoring period, the L_{eq} , L_{10} and L_{90} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.

Maintenance and Calibration

2.6 Maintenance and Calibration procedures were as follows:

- The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- The sound level meter and calibrator were checked and calibrated at yearly intervals.
- Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration levels from before and after the noise measurement agree to within 1.0 dB.

Results and Observations

- 2.7 Baseline noise monitoring was conducted at the designated stations N6 under the Contract No. ST/2013/01. The Action and Limit Levels were established in accordance with the EM&A manual.
- 2.8 The graphical presentations for baseline noise monitoring at N6 over the project period are shown in **Appendix B**.
- 2.9 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

2.10 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

Impact Monitoring

- 2.11 Impact noise monitoring was conducted at designated location as scheduled.
- 2.12 No Action Level exceedance was recorded over the project period. 6 Limit Level exceedances were recorded and they are non-related to project. The summary of exceedance record is shown in **Appendix D**.
- 2.13 The graphical presentation for impact noise monitoring at N6 over the project period is shown in **Appendix B**.
- 2.14 The graphs at N6 show that the trends throughout whole project is decreasing.

3. ENVIRONMENTAL AUDIT

Site Audits

- 3.1 Site audit provided a direct means to trigger and enforce the specified environmental protection and pollution control measures. The ET undertook site audits routinely to ensure that appropriate environmental protection and pollution control mitigation measures are properly implemented. Additionally, the ET was responsible for defining the scope of the inspections, detailing any deficiencies that are identified, and reporting any necessary action or mitigation measures that were implemented as a result of the audit.
- 3.2 Site audits were carried out by ET on weekly basis in construction phase. The areas of inspection included the general environmental conditions in the vicinity of site, pollution control and mitigation measure within the site, and also review the environmental conditions outside the site area which are likely to be affected, directly or indirectly, by the site activities.
- 3.3 The implementation of the environmental mitigation measures and environmental complaint handling procedures were also checked.
- 3.4 According to the information from the CEDD, this project was terminated and site audits were not available to conduct after 2nd February 2016.

Review of Environmental Monitoring Procedures

- 3.5 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.

Implementation Status of Environmental Mitigation Measures

- 3.6 The mitigation measures detailed in the Environmental Permit, the Manual and in the EIA report were implemented throughout the whole project period.
- 3.7 The EM&A programme was found effective in monitoring the environmental impacts of the Project. The data collected were useful in determining whether the Project has caused unacceptable impacts on the sensitive receivers. During the construction phase the impact data indicated whether exceedances would occurred and helped determine whether the exceedances were due to the works. Analysis of all EM&A data collected throughout the construction periods demonstrated the environmental acceptability of the Project.
- 3.8 No non-compliance was recorded during the site inspections throughout the construction

period. Observations and recommendations recorded during the site inspections were summarized in each of the Monthly EM&A Reports.

Waste management

- 3.9 In this Project, general refuse and C&D waste were delivered to public Fill and Landfill. Both the trip ticket system and chit accounting system for disposal of waste were operated smoothly.
- 3.10 2068m³ of inert C&D materials were generated and 2035m³ of the waste were delivered to Public Fill during the entire construction period. The amount of wastes generated by the activities of the Project was shown in the Monthly EM&A Reports.

Summary of Record of All Complaints Received

- 3.11 2 environmental complaints have been received during the construction period of the project. A complaint log is given in **Appendix F**.

Summary of Record of Notifications of Summons and Successful Prosecutions

- 3.12 No warning, summon and notification of successful prosecution was received since the commencement of the Project.

Comparison with EIA predictions

- 3.13 The environmental impacts caused by the Project during the Construction phase were generally in line with the predictions in EIA report based on the following.

Noise

Although it is identified in the EIA Report that there was a potential noise level exceedance at the NSR, there was no Limit Level exceedance recorded throughout the whole Project. There were two complaints related to construction noise received throughout the whole Project. Appropriate mitigation measures were implemented and items were closed.

- 3.14 With the environmental monitoring and site inspection to directly ensure the timely implementation of mitigation measures during the Project, the environmental performance of the Project was acceptable based on the reasons stated in sections 5. 8 and 5.13.

4. COMMENTS, CONCLUSIONS AND RECOMMENDATIONS

Comments on Overall EM&A Programme

- 4.1 The EM&A programme requires construction phase monitoring for air-borne construction noise and environmental site audit. Timely implementation of mitigation measures was carried out according to the environmental monitoring data obtained during the Project. According to the information from the CED, the EM&A programme of this contract was terminated on 2nd February 2016. Therefore, there was no site activities after 2nd February 2016 and the future environmental concerns under Contract No. ST/2013/01. The weekly site inspections were effective to ensure the implementation and efficiency of the mitigation measures. In addition, the recommendations made by the auditors of the ET could continuously improve the house keeping of the Contractor and maintain good site cleaning and tidiness. As a result, environmental nuisance to the public could be reduced to a minimal.
- 4.2 Therefore, the overall performance of the monitoring methodology adopted and environmental management system in this Project was effective.

Overall EM&A Data

- 4.3 Impact construction noise was conducted at the designated monitoring station in accordance with the Manual.

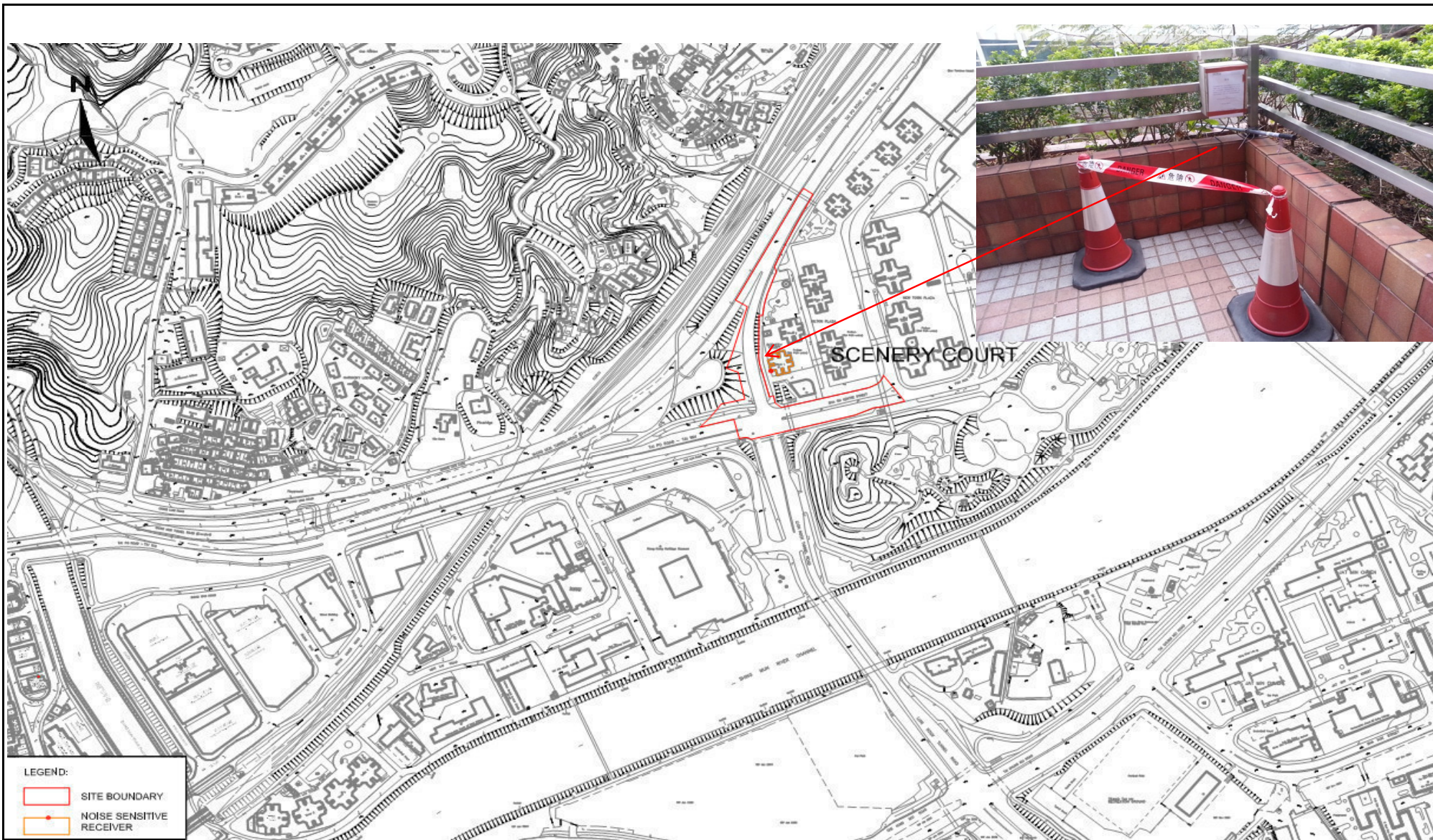
Noise

- 4.4 No Action/Limit Level exceedance for Construction Noise was recorded due to the Project. Two noise complaints were received throughout the whole Project. Appropriate mitigation measures were implemented and items were closed.

Recommendations and Conclusions

- 4.5 The EM&A programme was found to be effective in monitoring impacts arising from the Project. The findings of the environmental monitoring program suggest that no adverse impacts on sensitive receivers were brought about by the Project. In conclusion, the Project was environmentally acceptable in term of noise levels since no exceedance of Action and Limit Levels that is project-related was recorded throughout the Project with the proper implementation of mitigation measures, which is as predicted in the EIA. Environmental monitoring of noise at the monitoring station.
- 4.6 With the success of the overall EM&A programme, the deterioration of the environment caused by the Project was cost-effectively identified and necessary prompt effective mitigation measures were implemented to avoid any unacceptable impacts.

FIGURES



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

APPENDIX A
ACTION AND LIMIT LEVELS

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)

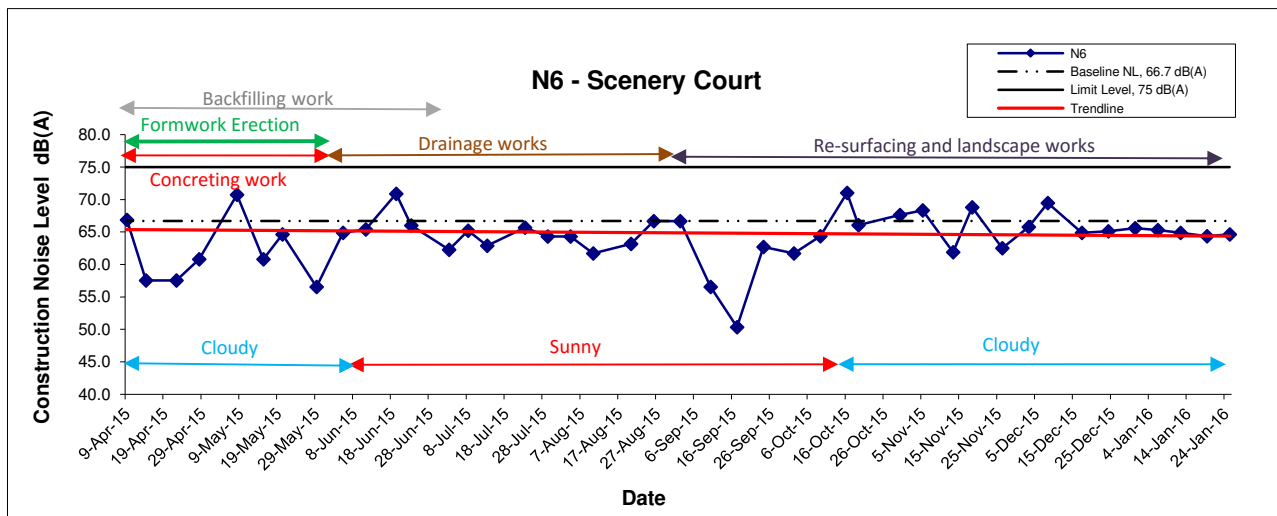
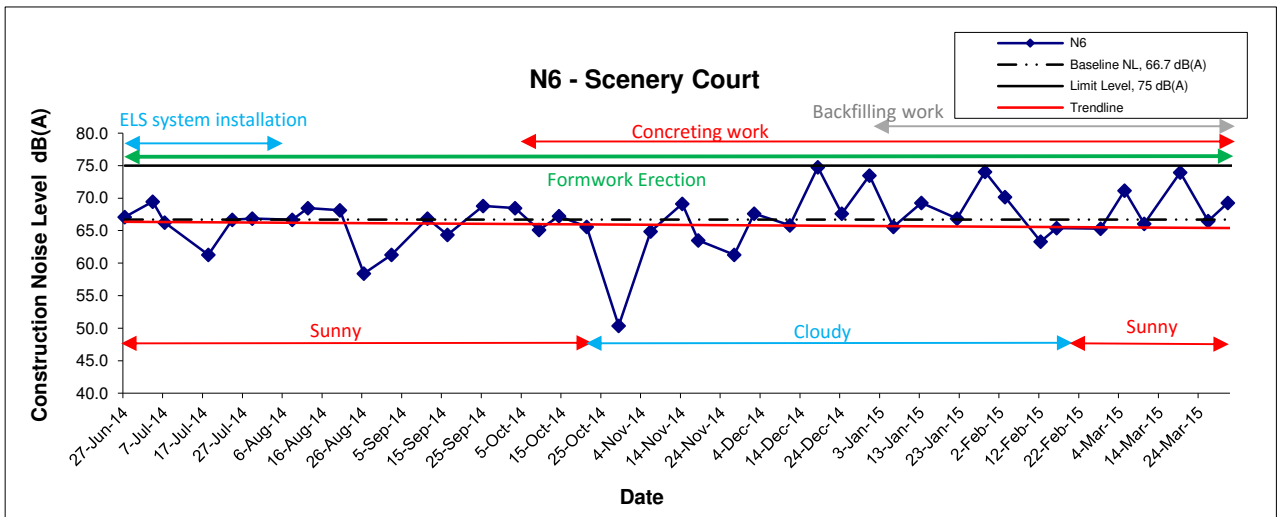
Notes:

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
NOISE MONITORING RESULTS AND
GRAPHICAL PRESENTATIONS

Noise Levels



Title	Sha Tin New Town Stage II Road T3 and Associated Road Works- Remaning Works, Phase III	Scale	N.T.S	Project No.	MA13058	CINOTECH
	Graphical Presentation of Construction Noise Monitoring Results	Date	Mar 16	Appendix	B	

**APPENDIX C
SUMMARY OF ENVIRONMENTAL
MITIGATION IMPLEMENTATION
SCHEDULE**

Appendix C - 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 D
SUMMARY OF EXCEEDANCE

APPENDIX D – SUMMARY OF EXCEEDANCE**Six Limit Level Exceedances were recorded in May, August, September and November 2015****1. Reporting Month: May 2015*****a) Exceedance Report for Construction Noise***

(One limit level exceedance was recorded for the impact noise monitoring for the night-time construction works during the restricted hours (23:00-0700hr) on 17 May 2015. The limit level is 40 dB(A) (Leq) 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:

- With reference to the baseline noise monitoring results during the restricted hours (23:00-07:00hrs), the major noise source recorded the baseline noise measurement was road traffic noise from Tai Po Road, and the baseline noise level (51.5 – 73.1 dB(A)) had already exceeded the Limit Level (40dB(A)).
- The major noise source recorded during the impact monitoring is road traffic noise from Tai Po Road.
- According to the Contractor during the time period of impact monitoring, Prescribed Construction Work (PCW) as described in section 4a of CNP No. GW-RN0235-15 was conducted. The tractor and lorry with crane were operated at the same time for the unloading of construction materials such as the metal frames of noise barrier, which remained for a short period of time and the tractor left the site area immediately after the construction materials were unloaded. For the installation of noise barrier during the impact monitoring, only aerial platform was operated.
- Noise barrier was erected near the aerial platform so that the base part and the alarm signal system of the aerial platform was screened from the line of sight of sensitive receiver (N6 – Scenery Court).
- According to the Contractor, walkie talkie is not necessary for site communication due to small working area. In addition, no whistles, horns, loudspeakers and shouting was noted from the construction site during impact monitoring.
- Three consecutive $L_{eq, 5min}$ readings (61.7 – 63.8dB(A)) were recorded during impact monitoring periods (1:20am-1:35am) which is well within the range of baseline noise level during the night-time (23:00 to 0700 hours) (i.e. 51.5 – 73.1 dB(A)).
- **ET's conclusion/recommendations for mitigation:**
 - No direct evidence that the exceedances were due to the Project as the measured impact noise level is influenced by nearby road traffic noise.
 - The night-time (23:00-07:00hrs) construction works were only conducted for a short period from 14th to 18th May 2015 under CNP No. GW-RN0235-15. Significant noise impact to the sensitive receiver is not anticipated.

- However, the Contractor is recommended to further review the noise mitigation measures on site before the commencement of construction works during restricted hours to ensure sufficient noise mitigation measures according to CNP and EM&A Manual are properly implemented to avoid potential noise impact.
- In case of any exceedances of noise limit level in the future, all construction works shall be stopped, if feasible for background noise measurement to determine the validity of noise exceedances.

2. **Reporting Month:** August 2015

a) Exceedance Report for Construction Noise (NIL)

(One limit level exceedance was recorded for the impact noise monitoring for the night-time construction works during the restricted hours (23:00-0700hr) on 18 August 2015. The limit level is 40 dB(A) (Leq) 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 (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 the background noise level (60.6-61.8 dB(A)) had already exceeded the Limit Level (40dB(A)).
- 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.
- Average measured background noise level (61.1 dB(A)) was higher than the average measured noise level (60.4 dB(A)).
- With reference to the baseline noise measurement during the restricted hours (23:00-07:00 hrs), the major noise source recorded was road traffic from Tai Po Road and East Rail, the baseline noise level (62.5 dB(A)) had already exceeded the Limit Level (40 dB(A)).
- In view of background and baseline noise measurements which are 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.

3. **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.

4. **Reporting Month:** November 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 19 and 20 November 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, roadmarking modification was 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 19 November 2015, measured noise level was 67.1 dB(A) while the background noise level was 67.4 dB(A) which had already exceeded the Limit level (55 dB(A)).
- During restricted hours (23:00-07:00hrs) on 20 November September 2015, measured noise level was 54.1 dB(A) while the background noise level was 54.3 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.
- In view of background noise measurements which was 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 E
EVENT ACTION PLANS

Appendix E 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 F
SUMMARIES OF ENVIRONMENTAL
COMPLAINT, WARNING, SUMMON
AND NOTIFICATION OF
SUCCESSFUL PROSECUTION**

APPENDIX F – Summaries of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

Over the project period:

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</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>issue before 29th December 2014.</p> <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>	