

# Civil Engineering and Development Department

**Contract No. ST/2013/01**

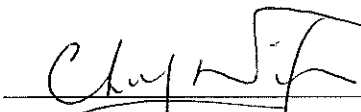
**Sha Tin New Town Stage II**

**Road T3 and Associated Roadworks –  
Remaining Works, Phase III**

Monthly EM&A Report

(Version 2.0)

June 2014

|              |   |
|--------------|---|
| Certified By | <br>(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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## TABLE OF CONTENTS

|  | Page      |
|--|-----------|
| <b>EXECUTIVE SUMMARY .....</b>                                   | <b>1</b>  |
| Introduction .....   | 1         |
| Environmental Monitoring and Audit Works .....                   | 1         |
| Environmental Licenses and Permits .....                         | 1         |
| Key Information in the Reporting Month .....                     | 1         |
| Future Key Issues .....  | 2         |
| <b>1 INTRODUCTION .....</b>                                      | <b>4</b>  |
| Background .....   | 4         |
| Construction Programme .....                                     | 5         |
| Summary of EM&A Requirements .....                               | 5         |
| <b>2 NOISE MONITORING .....</b>                                  | <b>6</b>  |
| Monitoring Requirements .....                                    | 6         |
| Monitoring Locations .....                                       | 6         |
| Monitoring Equipment .....                                       | 6         |
| Monitoring Parameters, Frequency and Duration .....              | 6         |
| Monitoring Methodology and QA/QC Procedures .....                | 7         |
| Results and Observations .....                                   | 7         |
| <b>3 ENVIRONMENTAL AUDIT .....</b>                               | <b>9</b>  |
| Site Audits .....  | 9         |
| Review of Environmental Monitoring Procedures .....              | 9         |
| Status of Environmental Licensing and Permitting .....           | 9         |
| Status of Waste Management .....                                 | 9         |
| Implementation Status of Environmental Mitigation Measures ..... | 10        |
| Summary of Exceedance .....                                      | 11        |
| Implementation Status of Event Action Plans .....                | 11        |
| Summary of Complaint and Prosecution .....                       | 11        |
| <b>4 FUTURE KEY ISSUES .....</b>                                 | <b>12</b> |
| Monitoring Schedule for the Next Month .....                     | 12        |
| Construction Program for the Next Month .....                    | 12        |
| <b>5 CONCLUSIONS AND RECOMMENDATIONS .....</b>                   | <b>13</b> |
| Conclusions .....  | 13        |
| Recommendations .....  | 13        |

### LIST OF TABLES

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

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

## **LIST OF FIGURE**

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

## **LIST OF APPENDICES**

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

**EXECUTIVE SUMMARY****Introduction**

1. This is the 1<sup>st</sup> 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 June 2014.
2. The major site activities undertaken in the reporting month included:
  - ELS system installation;
  - Concrete breaking; and
  - Site clearance and street furniture removal

**Environmental Monitoring and Audit Works**

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

**Table I Summary Table for Events Recorded in the Reporting Month**

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

*Construction Noise*

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

**Environmental Licenses and Permits**

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

**Key Information in the Reporting Month**

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

**Table II Summary Table for Key Information in the Reporting Month**

| Event   | Event Details |        | Action Taken | Status | Remark |
|---|---------------|--------|--------------|--------|--------|
|   | Number        | Nature |              |        |        |
| Complaint received  | 0             | ---    | N/A          | N/A    | ---    |
| Changes to the assumptions and key construction / operation activities recorded   | 0             | ---    | N/A          | N/A    | ---    |
| Status of submissions under EP  | 0             | ---    | N/A          | N/A    | ---    |
| Notifications of any summons & prosecutions   | 0             | ---    | N/A          | N/A    | ---    |
| <p><b>Future Key Issues</b></p> <p>Major site activities for the coming two months will include:</p> <ul style="list-style-type: none"> <li>• Surplus material disposal;</li> <li>• Formwork erection and reinforcement fixing;</li> <li>• Concreting and curing; and</li> <li>• Formwork removal and soil backfill</li> </ul> <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.<br><br>Environmental pollution control measures for minimizing construction dust impact as stipulated in the APCO.  | During the audit sessions, it was observed that:<br>• 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:<br>• 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<br><br>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.<br><br>All stockpiled areas should be covered.<br><br>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 19<sup>th</sup> 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 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 1<sup>st</sup> monthly EM&A report summarizing the EM&A works conducted for the Projects in June 2014.

### Project Organizations

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

**Table 1.1 Key Project Contacts**

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

**Construction Programme**

1.9 The site activities undertaken in the reporting month were:

- ELS system installation;
- Concrete breaking; and
- Site clearance and street furniture removal

**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 | 1        |
| 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 <sub>10</sub> (30 min.) dB(A)<br>L <sub>90</sub> (30 min.) dB(A)<br>L <sub>eq</sub> (30 min.) dB(A) | 0700-1900 hrs. on<br>normal weekdays | Once a week | Façade      |

## Monitoring Methodology and QA/QC Procedures

### *Field Monitoring*

2.5 The monitoring procedures are as follows:

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

### *Maintenance and Calibration*

2.6 Maintenance and Calibration procedures were as follows:

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

## Results and Observations

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

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

## 2.4.

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

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

2.9 The details of the monitoring results and graphical presentations are shown in **Appendix D**. The weather during the monitoring session was sunny. 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 | CNLs<br>$L_{eq}(30min)$ dB (A) | Action Level                              | Limit Level |
|-----------|--------------------------------|---|-------------|
|           |                                |   |             |
| N6        | 67.1                           | When one documented complaint is received | 75dB(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 11<sup>th</sup>, 18<sup>th</sup> and 27<sup>th</sup> June 2014 by ET. A joint site audit with the representative with IEC, ER, the Contractor and the ET was carried out on 27<sup>th</sup> June 2014. No site inspection was conducted by EPD during the reporting month. The details of observations during site audit can refer to **Table 3.3**.

#### Review of Environmental Monitoring Procedures

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

#### Noise Monitoring

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

#### Status of Environmental Licensing and Permitting

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

**Table 3.1 Summary of Environmental Licensing and Permit Status**

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

#### Status of Waste Management

- 3.5 There was 228m<sup>3</sup> of inert Construction and Demolition (C&D) materials generated in this reporting month. The table summarizing the quantities of waste generated in this reporting month is presented in **Appendix I**.

### Implementation Status of Environmental Mitigation Measures

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

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

|                    | Issues | Assumptions and Assessment  | Recommended Mitigation Measures  | Status of Implementation of Mitigation Measures   |
|--------------------|--------|---|--|---|
| Construction Phase | Air    | With the implementation of dust suppression mitigation measures, the level of construction dust would comply with the relevant AQO. | Watering the work area at least twice a day.<br><br>Environmental pollution control measures for minimizing construction dust impact as stipulated in the APCO.  | During the audit sessions, it was observed that:<br>• 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:<br>• 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<br><br>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.<br><br>All stockpiled areas should be covered.<br><br>All sediment removable facilities should be maintained and the deposited sediments should be removed regularly. | The construction of flyovers spanning to the upper Shing Mun River Channel was completed under Sha Tin New Town – Stage II, Trunk Road T3 Project in 2009 |

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

**Table 3.3 Observations and Recommendations of Site Audit**

| Parameters                         | Date         | Observations   | Remedial Actions  |
|------------------------------------|--------------|--|---|
| <i>Water Quality</i>               | 11 June 2014 | The Contractor was reminded to provide mitigation measure to prevent surface run-off and any construction material from direct entering to the gullies.                          | The observation was observed to be improved/rectified by the Contractor during the audit session on 27 June 2014. |
|                                    | 18 June 2014 | Mitigation measures should be provided to prevent surface run-off or construction material from entering the existing gullies.   | The observation was observed to be improved/rectified by the Contractor during the audit session on 27 June 2014. |
| <i>Air Quality</i>                 | N/A          | N/A  | N/A   |
| <i>Noise</i>                       | N/A          | N/A  | N/A   |
| <i>Waste / Chemical Management</i> | 18 June 2014 | Oil spillage was observed near the rock breaker of hydraulic soil excavator. The Contractor was reminded to clear the oil spillage and cover the breaker with impermeable sheet. | The observation was observed to be improved/rectified by the Contractor during the audit session on 27 June 2014. |
|                                    | 27 June 2014 | The Contractor was reminded to provide designated areas for the storage of chemicals and chemical waste.   | Follow up action will be reported in next reporting period.   |
| <i>Permit/ Licenses</i>            | 11 June 2014 | Environmental Permit should be displayed on site for public inspection.  | The observation was observed to be improved/rectified by the Contractor during the audit session on 18 June 2014. |

**Summary of Exceedance**

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

**Implementation Status of Event Action Plans**

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

**Summary of Complaint and Prosecution**

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

#### **4 FUTURE KEY ISSUES**

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

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

##### **Monitoring Schedule for the Next Month**

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

##### **Construction Program for the Next Month**

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

- Surplus material disposal
- Formwork erection and reinforcement fixing

## **5 CONCLUSIONS AND RECOMMENDATIONS**

### **Conclusions**

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

### **Recommendations**

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

#### ***Water Impact***

- Provide mitigation measure to prevent surface runoff or construction material from direct entering into the existing gullies

#### ***Waste / Chemical Management***

- Provide designated areas for the storage of chemicals and chemical wastes
- Provide mitigation measure to prevent oil spillage from construction equipments

#### ***Permit / Licenses***

- Display Environmental Permit (EP) on site for public inspection



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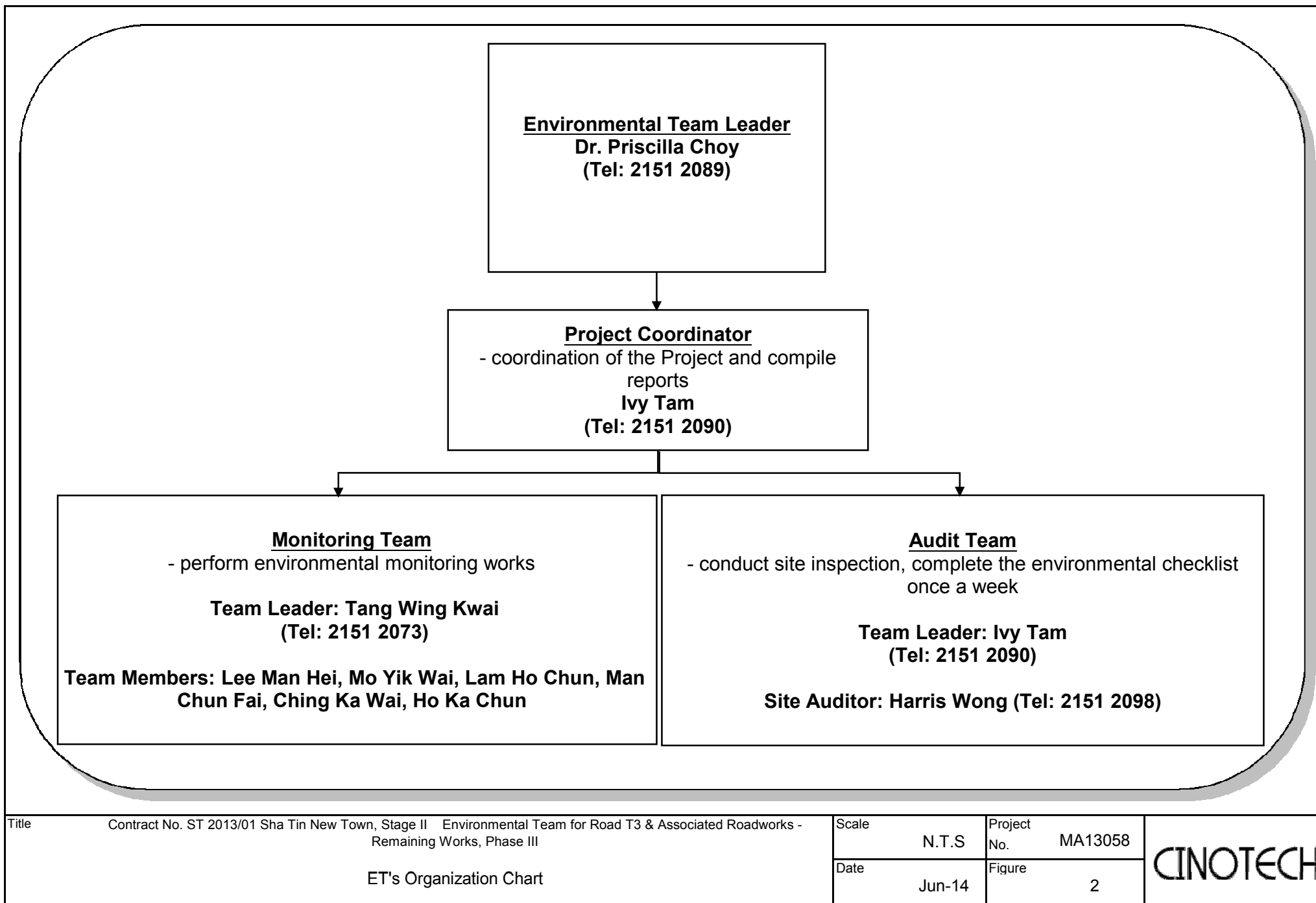
**FIGURE(S)**

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|  |                           |                                       |   |
|--|---------------------------|---------------------------------------|---|
| <p>Title</p> <p>Contract No. ST/2013/01 -<br/>Sha Tin New Town Stage II - Road T3 and Associated Roadworks –<br/>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<br/>No.</p> <p>MA13058</p> |  |
|  | <p>Date</p> <p>Feb-14</p> | <p>Figure</p> <p>1</p>                |   |



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**APPENDIX A**  
**ACTION AND LIMIT LEVEL**

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

| <b>Time Period</b>   | <b>Action Level</b>                       | <b>Limit Level</b> |
|--|---|--------------------|
| 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.

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**APPENDIX B  
COPIES OF CALIBRATION  
CERTIFCATES**

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## TEST REPORT

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

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

**ATTN:** Mr. W. K. Tang

Page: 1 of 1

### Certificate of Calibration

#### Item for calibration:

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

#### Test conditions:

Room Temperature : 19 degree Celsius  
Relative Humidity : 52%

#### Test Specifications:

Performance checking at 94 and 114 dB

#### Methodology:

In-house method, according to manufacturer instruction manual


#### Results:

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

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

*PREPARED AND CHECKED BY:*

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

  
**PATRICK TSE**  
Laboratory Manager

## TEST REPORT

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

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

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

### Item for calibration:

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

### Test conditions:

|                   |                     |
|-------------------|---------------------|
| Room Temperature  | : 22 degree Celsius |
| Relative Humidity | : 57%               |

### Methodology:

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

### Results:

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

*PREPARED AND CHECKED BY:*  
For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
Laboratory Manager



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**APPENDIX C  
ENVIRONMENTAL MONITORING  
SCHEDULES**

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**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 2014**

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

**Noise Monitoring Stations**

N6 - Scenery Court

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

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

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

**Noise Monitoring Stations**

N6 - Scenery Court

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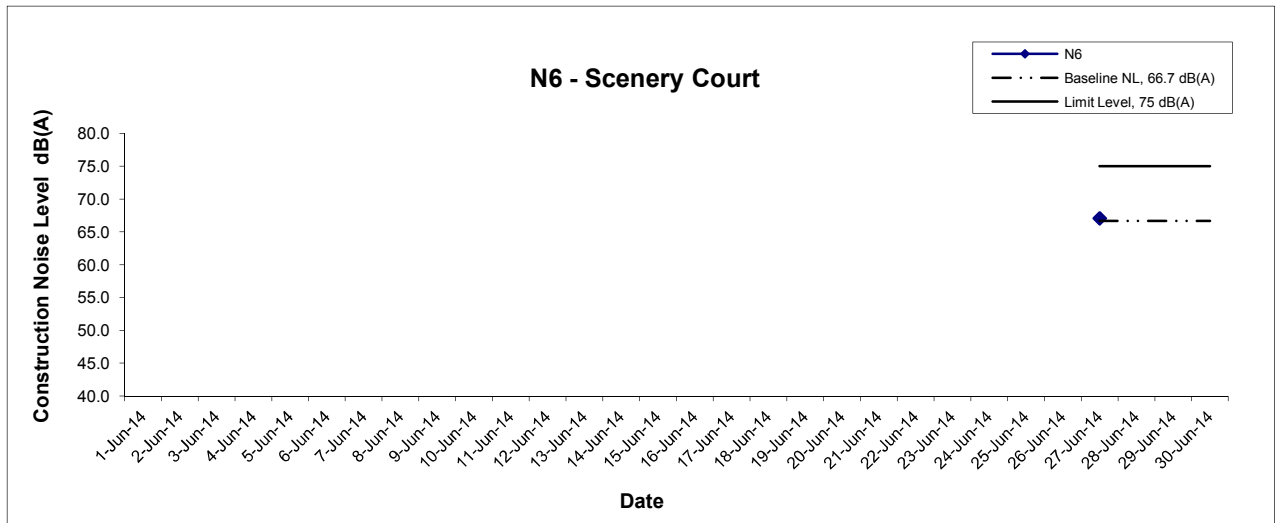
**APPENDIX D**  
**NOISE MONITORING RESULTS AND**  
**GRAPHICAL PRESENTATIONS**

---

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 <sub>eq</sub>       | L <sub>10</sub> | L <sub>90</sub> | L <sub>eq</sub> | L <sub>eq</sub>          |
| 27-Jun-14                   | 10:00 | Sunny   | 69.9                  | 71.2            | 68.4            | 66.7            | 67.1                     |

## Noise Levels



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

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**APPENDIX E**  
**SUMMARY OF EXCEEDANCE**

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## **APPENIDX E – SUMMARY OF EXCEEDANCE**

**Reporting Month:** June 2014

***a) Exceedance Report for Construction Noise (NIL)***



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**APPENDIX F**  
**SITE AUDIT SUMMARY**

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## 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 | 140611                   |
| Date                       | 11 June 2014 (Wednesday) |
| Time                       | 10:00-11:00              |

| Ref. No.   | Non-Compliance   | Related Item No. |
|------------|--|------------------|
|            | None identified  | -                |
| Ref. No.   | Remarks/Observations   | Related Item No. |
|            | <b>A. Water Quality</b>  |                  |
| 140611-R02 | <ul style="list-style-type: none"> <li>The Contractor was reminded to provide mitigation measure to prevent surface run-off and any construction material from direct entering to the gullies.</li> </ul>      | B2               |
|            | <b>B. Air Quality</b>  |                  |
|            | No environmental deficiency was identified during site inspection.   |                  |
|            | <b>C. Noise</b>  |                  |
|            | No environmental deficiency was identified during site inspection.   |                  |
|            | <b>D. Waste/Chemical Management</b>  |                  |
|            | No environmental deficiency was identified during site inspection.   |                  |
|            | <b>E. Permits/Licences</b>   |                  |
| 140611-R01 | <ul style="list-style-type: none"> <li>Environmental Permit should be displayed on site for public inspection.</li> </ul>  | F1               |
|            | <b>F. Others</b>   |                  |
|            | <ul style="list-style-type: none"> <li>Follow-up on previous site audit session (Ref. No. 140605), all environmental deficiencies were improved/rectified by Contractor during the site inspection.</li> </ul> |                  |

|             | Name               | Signature   | Date         |
|-------------|--------------------|---|--------------|
| Recorded by | Harris Wong        |  | 11 June 2014 |
| Checked by  | Dr. Priscilla Choy |  | 11 June 2014 |

## Sha Tin New Town Stage II



## Road T3 and Associated Roadworks – Remaining Works, Phase III

## Weekly Site Inspection Record Summary

## Inspection Information

|                            |                          |
|----------------------------|--------------------------|
| Checklist Reference Number | 140618                   |
| Date                       | 18 June 2014 (Wednesday) |
| Time                       | 10:00-11:00              |

| Ref. No.   | Non-Compliance   | Related Item No. |
|------------|--|------------------|
|            | None identified  | -                |
| Ref. No.   | Remarks/Observations   | Related Item No. |
|            | <b>A. Water Quality</b>  |                  |
| 140618-R01 | <ul style="list-style-type: none"> <li>Mitigation measures should be provided to prevent surface run-off or construction material from entering the existing gullies.</li> </ul>   | B2               |
|            |  |                  |
|            | <b>B. Air Quality</b>  |                  |
|            | No environmental deficiency was identified during site inspection.   |                  |
|            |  |                  |
|            | <b>C. Noise</b>  |                  |
|            | No environmental deficiency was identified during site inspection.   |                  |
|            |  |                  |
|            | <b>D. Waste/Chemical Management</b>  |                  |
| 140618-R02 | <ul style="list-style-type: none"> <li>Oil spillage was observed near the rock breaker of hydraulic soil excavator. The Contractor was reminded to clear the oil spillage and cover the breaker with impermeable sheet.</li> </ul>   | E7               |
|            |  |                  |
|            | <b>E. Permits/Licences</b>   |                  |
|            | No environmental deficiency was identified during site inspection.   |                  |
|            |  |                  |
|            | <b>F. Others</b>   |                  |
|            | <ul style="list-style-type: none"> <li>Follow-up on previous site audit session (Ref. No. 140611), items 140611-R01 was improved/rectified by Contractor during the site inspection. Follow-up action is required for item 140611-R02 which is renamed as 140618-R01.</li> </ul> |                  |

|             | Name               | Signature   | Date         |
|-------------|--------------------|---|--------------|
| Recorded by | Harris Wong        |  | 18 June 2014 |
| Checked by  | Dr. Priscilla Choy |  | 18 June 2014 |

Contract ST/2013/01

Sha Tin New Town Stage II

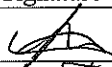

Road T3 and Associated Roadworks – Remaining Works, Phase III

Weekly Site Inspection Record Summary

Inspection Information

|                            |                       |
|----------------------------|-----------------------|
| Checklist Reference Number | 140627                |
| Date                       | 27 June 2014 (Friday) |
| Time                       | 10:00-11:00           |

| Ref. No.   | Non-Compliance  | Related Item No. |
|------------|---|------------------|
|            | None identified   | -                |
| Ref. No.   | Remarks/Observations  | Related Item No. |
|            | <b>A. Water Quality</b>   |                  |
|            | No environmental deficiency was identified during site inspection.  |                  |
|            | <b>B. Air Quality</b>   |                  |
|            | No environmental deficiency was identified during site inspection.  |                  |
|            | <b>C. Noise</b>   |                  |
|            | No environmental deficiency was identified during site inspection.  |                  |
|            | <b>D. Waste/Chemical Management</b>   |                  |
| 140627-R01 | • The Contractor was reminded to provide designated areas for the storage of chemicals and chemical waste.  | E3iii            |
|            | <b>E. Permits/Licences</b>  |                  |
|            | No environmental deficiency was identified during site inspection.  |                  |
|            | <b>F. Others</b>  |                  |
|            | • Follow-up on previous site audit session (Ref. No. 140618), items 140618-R01 and 140618-R02 were improved/rectified by Contractor during the site inspection. |                  |

|             | Name               | Signature   | Date         |
|-------------|--------------------|---|--------------|
| Recorded by | Harris Wong        |  | 27 June 2014 |
| Checked by  | Dr. Priscilla Choy |  | 27 June 2014 |

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**APPENDIX G**  
**EVENT ACTION PLAN**

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

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**APPENDIX H  
UPDATED ENVIRONMENTAL  
MITIGATION IMPLEMENTATION  
SCHEDULE**

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**Appendix H - Implementation Schedule of Environmental Mitigation Measures**

| EIA/ ERR<br>Ref. Ref.       | Recommended Mitigation Measures  | Who to implement<br>the measures? | Location of the<br>measures       | When to<br>Implement the measures? |
|-----------------------------|--|-----------------------------------|-----------------------------------|------------------------------------|
| <b>Construction Noise</b>   |  |                                   |                                   |                                    |
| 2.5.4 /<br>2.3              | <ul style="list-style-type: none"> <li>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.</li> <li>Where practicable, the Contractor shall use movable noise barriers and avoid simultaneous noisy activities.</li> </ul> | Contractor                        | At active construction locations. | Construction stage                 |
| <b>Air Quality</b>          |  |                                   |                                   |                                    |
| 3.5.3/<br>3.4.5             | Watering the works area at least twice a day   | Contractor                        | Work site                         | Construction stage                 |
| 3.5.4/<br>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                 |
| <b>Waste Management</b>     |  |                                   |                                   |                                    |
| 5.2 –<br>5.6/4.5            | Environmental pollution control measures for minimizing waste arising from the construction works.   | Contractor                        | Within the works boundary         | Construction stage                 |
| <b>Water Quality</b>        |  |                                   |                                   |                                    |
| 4.5.1/5.5.1                 | Environmental pollution control measures for minimizing impacts on water quality.  | Contractor                        | All construction sites            | Construction stage                 |
| <b>Landscape and Visual</b> |  |                                   |                                   |                                    |
| -/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



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

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**APPENDIX J  
COMPLAINT LOG**

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

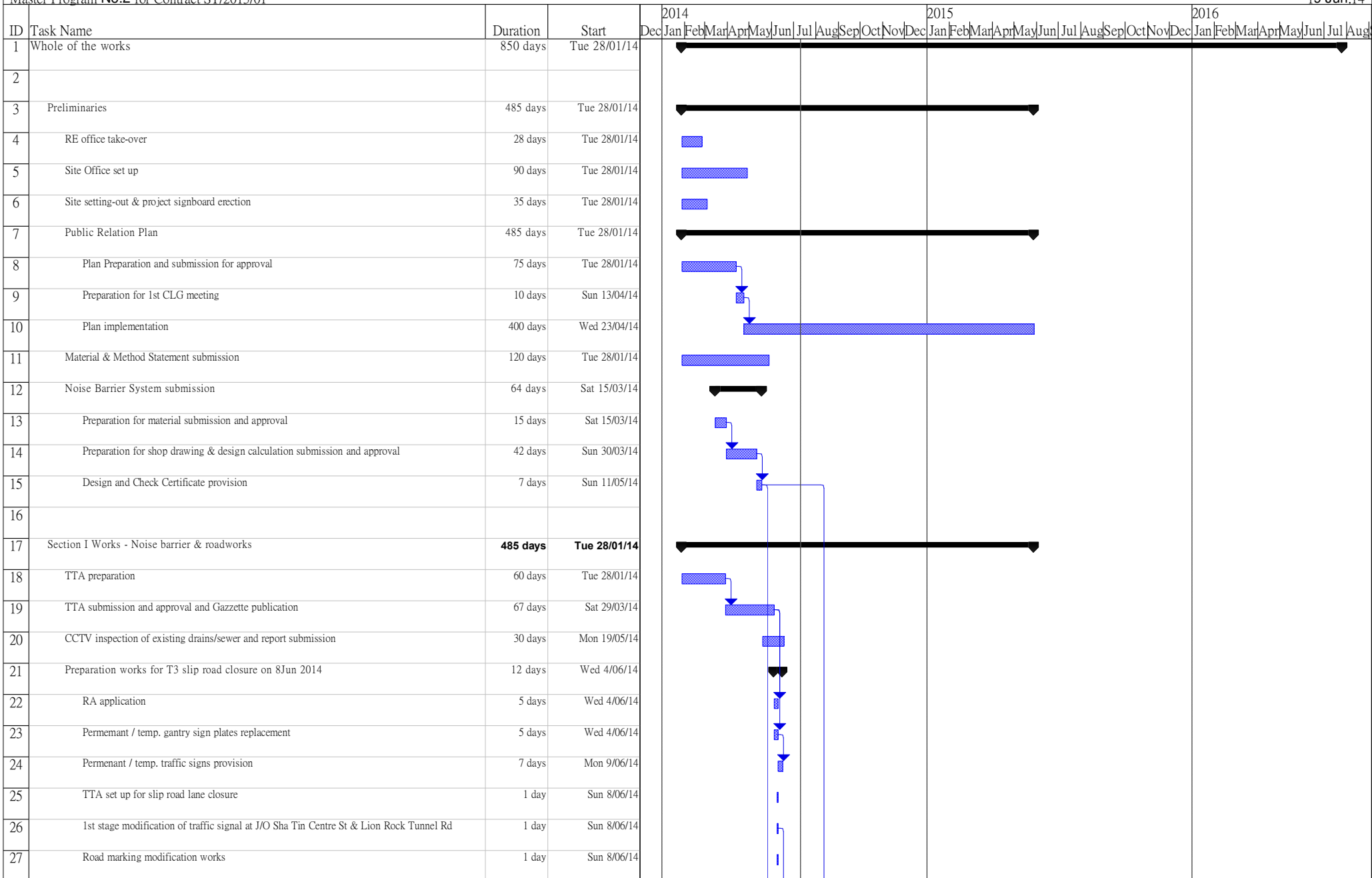
| <b>Log Ref.</b> | <b>Location</b> | <b>Received Date</b> | <b>Details of Complaint</b> | <b>Investigation/Mitigation Action</b> | <b>Status</b> |
|-----------------|-----------------|----------------------|-----------------------------|--|---------------|
| N/A             | N/A             | N/A                  | N/A                         | N/A                                    | N/A           |

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

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**APPENDIX K**  
**CONSTRUCTION PROGRAMME**

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| ID | Task Name  | Duration | Start        | 2014 |     |     |     |     |     |     |     |     |     |     |     | 2015 |     |     |     |     |     |     |     |     |     |     |     | 2016 |     |     |     |     |     |     |     |     |  |  |  |  |
|----|--|----------|--------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
|    |  |          |              | Dec  | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec  | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec  | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug |  |  |  |  |
| 28 | Sit setting out works  | 3 days   | Mon 9/06/14  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 29 | UU detection and trialpit excavation   | 2 days   | Thu 12/06/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 30 | UU diversion   | 7 days   | Sat 14/06/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 31 | Joint site inspection with LCSD for site possession at LCSD area & record taking | 7 days   | Mon 16/06/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 32 | Site setup, Signboard and hoarding erection                                      | 14 days  | Sat 14/06/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 33 | Modification works to existing traffic sign plates and posts                     | 308 days | Mon 9/06/14  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 34 | TTA submission & RA application  | 28 days  | Mon 9/06/14  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 35 | TDS 1  | 35 days  | Mon 7/07/14  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 36 | NTE/ST/SHATINRC-05   | 35 days  | Mon 11/08/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 37 | NTE/ST/TAIPO-37  | 35 days  | Mon 15/09/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 38 | NTE/ST/SHATINRC-06   | 35 days  | Mon 20/10/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 39 | NTE/ST/SHATINRC-03   | 35 days  | Mon 24/11/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 40 | NTE/ST/SHATINRC-01B  | 35 days  | Mon 29/12/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 41 | NTE/ST/TAICHUK-07  | 35 days  | Mon 2/02/15  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 42 | NTE/ST/MANLAM-01A  | 35 days  | Mon 9/03/15  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 43 | Site clearance and street furniture removal at slip road                         | 7 days   | Thu 12/06/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 44 | Noise barrier (NB) construction  | 352 days | Sun 18/05/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 45 | Material procurement and panel delivery  | 180 days | Sun 18/05/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 46 | Breakup & dispose of extg hard material  | 5 days   | Thu 19/06/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 47 | Bay 1 & 2 Footing construction   | 82 days  | Tue 24/06/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 48 | ELS system installation & surplus material disposal                              | 28 days  | Tue 24/06/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 49 | Forwork erection & steel reinforcement fixing                                    | 21 days  | Tue 22/07/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 50 | Concreting & curing  | 14 days  | Tue 12/08/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 51 | Formwork removal & soil backfill   | 7 days   | Tue 26/08/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 52 | Extg Sheetpile removal   | 7 days   | Tue 2/09/14  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 53 | ELS system removal   | 5 days   | Tue 9/09/14  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |
| 54 | Bay 3 & 4 Footing construction   | 72 days  | Sun 14/09/14 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |

| Master Program No.2 for Contract ST/2013/01 |  |          | 19 Jun.14    |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
|---|--|----------|--------------|------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|
| ID  | Task Name  | Duration | Start        | 2014 |     |     |     |     |     |     |     | 2015 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 2016 |     |     |     |     |     |     |     |     |
|   |  |          |              | Dec  | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug  | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec  | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug |
| 55  | ELS system installation & surplus material disposal    | 25 days  | Sun 14/09/14 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 56  | Forwork erection & steel reinforcement fixing          | 21 days  | Thu 9/10/14  |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 57  | Concreting & curing                                    | 14 days  | Thu 30/10/14 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 58  | Formwork removal & soil backfill                       | 7 days   | Thu 13/11/14 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 59  | ELS system removal                                     | 5 days   | Thu 20/11/14 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 60  | Bay 5 & 6 Footing construction                         | 72 days  | Tue 25/11/14 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 61  | ELS system installation & surplus material disposal    | 25 days  | Tue 25/11/14 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 62  | Forwork erection & steel reinforcement fixing          | 21 days  | Sat 20/12/14 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 63  | Concreting & curing                                    | 14 days  | Sat 10/01/15 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 64  | Formwork removal & soil backfill                       | 7 days   | Sat 24/01/15 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 65  | ELS system removal                                     | 5 days   | Sat 31/01/15 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 66  | Bay 7 Footing construction                             | 68 days  | Thu 5/02/15  |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 67  | ELS system installation & surplus material disposal    | 15 days  | Thu 5/02/15  |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 68  | Demolish extg boundary wall                            | 15 days  | Fri 20/02/15 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 69  | Forwork erection & steel reinforcement fixing          | 14 days  | Sat 7/03/15  |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 70  | Concreting & curing                                    | 14 days  | Sat 21/03/15 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 71  | Formwork removal & soil backfill                       | 5 days   | Sat 4/04/15  |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 72  | ELS system removal                                     | 5 days   | Thu 9/04/15  |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 73  | Steelwork Erection                                     | 140 days | Tue 25/11/14 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 74  | Noise Barrier Panel, cladding and gutter fixing        | 21 days  | Tue 14/04/15 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 75  | New Sign Gantry construction                           | 281 days | Fri 1/08/14  |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 76  | Shop drawing and E&M works submission and approval     | 120 days | Fri 1/08/14  |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 77  | Footing modification                                   | 21 days  | Sat 4/04/15  |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 78  | Steelwork & sign plate fixing                          | 14 days  | Sat 25/04/15 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 79  | Drainage works   | 7 days   | Sat 9/05/15  |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 80  | Carriageway construction                               | 7 days   | Sat 16/05/15 |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |
| 81  | St lighting duct laying and street furniture provision | 12 days  | Sat 9/05/15  |      |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |

Page 2



| ID | Task Name                      | Duration | Start        | 2014 |     |     |     |     |     |     |     |     |     |     |     | 2015 |     |     |     |     |     |     |     |     |     |     |     | 2016 |     |     |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |
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| 82 | Irrigation system construction | 7 days   | Thu 21/05/15 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | </ |