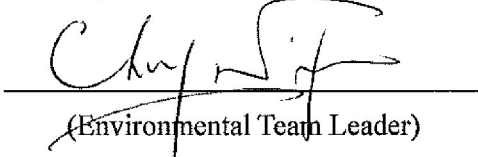


**Harbour Area Treatment Scheme Stage 2A**  
**Contract No. DC/2009/10, DC/2009/17**  
**and DC/2009/18**

**Consolidated Monthly Environmental**  
**Monitoring and Audit Report**  
**January 2016**

**(Version 1.0)**

Certified By   
(Environmental Team Leader)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties

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CE/Harbour Area Treatment Scheme  
Drainage Services Department  
Sewage Services Branch  
Harbour Area Treatment Scheme Division  
5/F, Western Magistracy  
2A Pokfulam Road, Hong Kong

19 February 2016  
By Post

**Attn: Mr. Danny Tang**

Dear Sir,

**Agreement No. CE 8/2009(EP)  
Harbour Area Treatment Scheme (HATS) Stage 2A  
Independent Environmental Checker for Construction Phase – Investigation**

**Submission of Monthly EM&A Consolidated Report for Stonecutters Island Sewage  
Treatment Works for January 2016 (Issue No. 74) Version 1.0**

We refer to the captioned report consolidating the individual ETL certified and IEC verified Monthly EM&A Reports for Contract Nos. DC/2009/10, DC/2009/17 and DC/2009/18 at Stonecutters Island STW works site for HATS Stage 2A. We hereby verify the consolidated report.

Yours faithfully  
for MOTT MACDONALD HONG KONG LIMITED

Dr. Anne F Kerr  
Independent Environmental Checker

c.c. Ove Arup & Partners HK Ltd.  
Cinotech Consultants Ltd.

Mr. Ted Y F Tang  
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Fax: 2370 4377  
By email

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## ABBREVIATION AND ACRONYM

|           |  |
|-----------|--|
| AL Levels | Action and Limit Levels                          |
| DSD       | Drainage Services Department                     |
| E / ER    | Engineer/Engineer's Representative               |
| EIA       | Environmental Impact Assessment                  |
| EM&A      | Environmental Monitoring and Audit               |
| EMIS      | Environmental Mitigation Implementation Schedule |
| EP        | Environmental Permit                             |
| EPD       | Environmental Protection Department              |
| ET        | Environmental Team                               |
| HVS       | High Volume Sampler                              |
| IEC       | Independent Environmental Checker                |
| RE        | Resident Engineer                                |
| RH        | Relative Humidity                                |
| QA/QC     | Quality Assurance / Quality Control              |
| SLM       | Sound Level Meter                                |
| WMP       | Waste Management Plan                            |
| SCISTW    | Stonecutters Island Sewage Treatment Works       |
| HATS 2A   | Harbour Area Treatment Scheme Stage 2A           |

## EXECUTIVE SUMMARY

### Introduction

1. This is the 74<sup>th</sup> Consolidated Environmental Monitoring and Audit (EM&A) Report summaries the key information of EM&A monthly reports for the following construction contracts at the Stonecutters Island Sewage Treatment Works (SCISTW) under the Project of Harbour Area Treatment Scheme Stage 2A (the Project) and prepared by Cinotech Consultants Limited, the Environmental Team (ET) for Contract no. DC/2009/10.
  - Contract no. DC/2009/17 – Upgrading Works at Stonecutters Island Sewage Treatment Works – Sludge Dewatering Facilities;
  - Contract no. DC/2009/10 – Upgrading Works at Stonecutters Island Sewage Treatment Works – Main Pumping Station, Sedimentation Tanks and Ancillary Facilities;
  - Contract no. DC/2009/18 – Upgrading Works at Stonecutters Island Sewage Treatment Works – Effluent Tunnel and Disinfection Facilities; and
2. The above-mentioned Contracts are under the same Environmental Permit (EP) No. EP-322/2008/G and separate ETs were appointed under each contract pursuant to Condition 2.1 of the EP.
3. This report is a contractual requirement under Contract No. DC/2009/10 to provide a consolidated monthly summary of the EM&A works at SCISTW for ease of reference. Each contract is administered under their respective contract by different project teams including the Engineer, the Engineer’s Representatives, the Contractor, and the ET.
4. Contract DC/2007/23 in the SCISTW has completed all major construction works in the Stonecutters Island on 16 October 2015.
5. Contract DC/2009/19 in the SCISTW was commenced on 1 September 2013 and major construction works of this contract had been completed on 5 March 2015.
6. No amendment of the information in the EM&A reports for each individual contract was made in this consolidated monthly report.
7. This Report documents the findings of EM&A Works for the Project covering the period in January 2016.
8. The details of the EM&A for individual contracts can be found in the separate EM&A monthly reports. In case of ambiguity and discrepancy, the individual EM&A report shall prevail. The Executive Summaries and Web Sites for the individual contracts are shown below:

**Table I Summary Table for Executive Summaries and Web Sites:**

| Contract no. | ES/Web Site       | Details:   |
|--------------|-------------------|--|
| DC/2009/17   | Executive Summary | The air quality and noise monitoring stations under this contract were covered by other contracts at SCISTW.<br>The monitoring data would be summarized in this monthly EM&A report. |
|              | Web Site          | <a href="http://www.hats2a-ema.com/RP_EMA/DC%202009%2017/EMA%20Report-DC200917.html">http://www.hats2a-ema.com/RP_EMA/DC%202009%2017/EMA%20Report-DC200917.html</a>                  |

|            |                   |   |
|------------|-------------------|---|
| DC/2009/10 | Executive Summary | At SCISTW, air quality monitoring station AM7, AM8 and noise monitoring station NM6 were monitored by ET for Contract no. DC/2009/10.                   |
|            | Web Site          | <a href="http://www.hats2a-ema.com/RP_EMA/DC200910/EMA%20Report-DC200910.html">http://www.hats2a-ema.com/RP_EMA/DC200910/EMA%20Report-DC200910.html</a> |
| DC/2009/18 | Executive Summary | At SCISTW, air quality monitoring station AM9 and noise monitoring station NM7 were monitored by ET for Contract no. DC/2009/18.                        |
|            | Web Site          | <a href="http://www.hats2a-ema.com/RP_EMA/DC200918/EMA%20Report-DC200918.html">http://www.hats2a-ema.com/RP_EMA/DC200918/EMA%20Report-DC200918.html</a> |

### Environmental Monitoring and Audit Works

9. The environmental monitoring works in the Project were covered by the ETs for the Contracts: DC/2009/10, DC/2009/17 and DC/2009/18. The site audits were conducted once per week for each contract by their ETs.
10. Summary of the non-compliance of the reporting month is tabulated in **Table II**.

**Table II Summary Table for Non-compliance Recorded in the Reporting Month**

| Monitored By | Monitoring Station  | Parameter | No. of Exceedance |             | No. of Exceedance Due to the Project |             | Action Taken |
|--------------|---------------------|-----------|-------------------|-------------|--------------------------------------|-------------|--------------|
|              |                     |           | Action Level      | Limit Level | Action Level                         | Limit Level |              |
| DC/2009/10   | AM6a <sup>(*)</sup> | 1-hr TSP  | 0                 | 0           | 0                                    | 0           | N/A          |
|              |                     | 24-hr TSP | 0                 | 0           | 0                                    | 0           |              |
|              | AM7                 | 1-hr TSP  | 0                 | 0           | 0                                    | 0           |              |
|              |                     | 24-hr TSP | 0                 | 0           | 0                                    | 0           |              |
|              | AM8                 | 1-hr TSP  | 0                 | 0           | 0                                    | 0           |              |
|              |                     | 24-hr TSP | 0                 | 0           | 0                                    | 0           |              |
| DC/2009/18   | AM9                 | 1-hr TSP  | 0                 | 0           | 0                                    | 0           |              |
|              |                     | 24-hr TSP | 0                 | 0           | 0                                    | 0           |              |
| DC/2009/10   | NM5                 | Noise     | 0                 | 0           | 0                                    | 0           |              |
|              | NM6                 |           | 0                 | 0           | 0                                    | 0           |              |
| DC/2009/18   | NM7                 |           | 0                 | 0           | 0                                    | 0           |              |

Remark:

<sup>(\*)</sup> Alternative location for AM6 was adopted in January 2016 as AM6a (Please refer to Section 2.2)

#### *1-hour TSP Monitoring*

11. All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

#### *24-hour TSP Monitoring*

12. All 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

#### *Construction Noise*

13. All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance for normal working hours and restricted hours were recorded in the reporting month.

### Key Information in the Reporting Month

14. Summary of key information in the reporting month is tabulated in **Table III**.

**Table III Monthly Consolidated Summary Table for Key Information**

| Event  | Event Details |   | Action Taken     | Status     | Remark |
|--|---------------|---|------------------|------------|--------|
|  | Number        | Nature  |                  |            |        |
| Complaint received                                   | 0             | ---   | N/A              | N/A        | ---    |
| Status of submissions under EP                       | 1             | Monthly Consolidated EM&A Report for Stonecutters Island Sewage Treatment Works for December 2015 | Submitted to EPD | No comment | ---    |
| Notifications of any summons & prosecutions received | 0             | --  | N/A              | N/A        | ---    |

### Key Information in the EIA Report

15. According to the EIA Report, air quality, noise, water quality, ecology and landscape and visual would be the key environmental issues during the construction of the project. Details of the implementation of mitigation measures for the three contracts are provided in the **Appendix J**.



## 1. INTRODUCTION

### Background

- 1.1 Harbour Area Treatment Scheme (HATS) Stage 2A is a designated project (Register No. : AEIAR-121/2008). The Environmental Permit (Permit No. EP-322/2008/G) for the Project was issued on 9<sup>th</sup> May 2014 by the Environmental Protection Department (hereinafter called EPD) to the Drainage Services Department (hereinafter called the DSD) as the Permit Holder.
- 1.2 The general location plan for the Contracts: DC/2009/10, DC/2009/17 and DC/2009/18 are shown in **Figures 1 to Figure 3**.
- 1.3 The environmental permit (EP) was issued for the whole HATS Stage 2A construction works. The ET for the Contract DC/2009/10 is contractually responsible for consolidating the key information from all monthly EM&A reports from the ETs of other Contracts at SCISTW into a single monthly summary for ease of reference.
- 1.4 The 1<sup>st</sup> to 11<sup>th</sup> consolidated monthly EM&A reports were prepared by Ove Arup & Partners Hong Kong Ltd (Arup) and submitted to EPD. From November 2010 onwards, the 12<sup>th</sup> and subsequent consolidated monthly EM&A report will be prepared and submitted by Cinotech Consultant Limited, the ET for the Contracts DC/2009/10, DC/2009/17 and DC/2009/18.
- 1.5 This is the 74<sup>th</sup> consolidated monthly EM&A report summarizing the EM&A works conducted for the Project at SCISTW in January 2016.
- 1.6 The monthly EM&A reports for each contract were prepared and certified by separate ETs and subsequently verified by the Independent Environmental Checker (IEC) for the Project. All individual monthly EM&A Reports are provided in the Project Website.

### Current Contracts at SCISTW

- 1.7 The major Contracts at SCISTW and their scope of works are provided below:

#### Contract no. DC/2009/10

- Construction of a main pumping station;
- The extension of chemically enhanced primary treatment tanks; and
- The construction of other ancillary facilities at Stonecutters Island Sewage Treatment Works.

#### Contract no. DC/2009/17

- Demolition of the existing structures including vehicle washing facilities, Sludge Silo Building, Sludge Dewatering Building, process water storage tanks, polyelectrolyte storage tanks, ADF barging facilities and all associated plant and equipment;
- Construction of Sludge Dewatering Building, Sludge Cake Silos, Sludge Conveyor Bridges, Sludge Storage Tank, Deodourisation Units, Workshop Building, Process Water Storage Tanks and Pumping System;
- Construction of roof landscaping including irrigation system for the Sludge Dewatering Building and Workshop Building;
- Construction of chemical unloading facilities and the chemical pipe trench for the Disinfection Facilities; and
- Construction of associated Electrical, Mechanical, Building Services, Fire Services and Process Installation, Odour Control System and Temporary Vehicle Wash Facilities.

Contract no. DC/2009/18

- The Construction of an 880m long effluent tunnel at Stonecutters Island; and
- The Construction of disinfection facilities at Stonecutters Island Sewage Treatment Works (SCISTW).

**Project Organizations**

1.8 The key contacts of current contracts are provided in Table 1.1.

**Table 1.1 Key Project Contacts**

| <b>Contract No./<br/>Position</b> | <b>DC/2009/10</b>  | <b>DC/2009/17</b>  |
|-----------------------------------|--|--|
| Contract Title:                   | Upgrading Works at SCISTW - Main Pumping Station, Sedimentation Tanks and Ancillary Facilities | Upgrading Works at Stonecutters Island Sewage Treatment Works – Sludge Dewatering Facilities |
| Consultant                        | Ove Arup & Partners HK Ltd   | Ove Arup & Partners HK Ltd   |
| The Engineer                      | S.Y.Chan<br>(Tel: 2528 3031)   | S.Y.Chan<br>(Tel: 2528 3031)   |
| The Engineer Representative       | Mr Ted Tang<br>(Tel: 2370 4311)  | Mr Ted Tang<br>(Tel: 2370 4311)  |
| ER's Coordinator                  | Ms Natalie Kwok<br>(Tel: 6794 8844)  | Mr Jason Yu<br>(Tel: 2371 9407)  |
| Independent Environmental Checker | Dr. Anne Kerr<br>(Tel:2828 5757)   | Dr. Anne Kerr<br>(Tel:2828 5757)   |
| Contractor                        | Sun Fook Kong – Biwater Joint Venture  | China State- ATAL Joint Venture  |
| Site Agent                        | Mr. Keith Ho<br>(Tel: 2620 0070)   | Mr. Charles Tse<br>(Tel: 9270 3384)  |
| Environmental Officer             | Mr. Albus Cheung<br>(Tel:2620 0070)  | Mr. K.K Tam<br>(Tel: 2370 3010)  |
| Environmental Team                | Cinotech Consultant Limited<br>Dr. Priscilla Choy<br>(Tel: 2151 2089)                          | Cinotech Consultant Limited<br>Dr. Priscilla Choy<br>(Tel: 2151 2089)                        |

**Table 1.1(cont'd) Key Project Contacts**

| <b>Contract No.</b>               | <b>DC/2009/18</b>   |
|-----------------------------------|---|
| Contract Title:                   | Upgrading Works at Stonecutters Island Sewage Treatment Works – Effluent Tunnel and Disinfection Facilities |
| Consultant                        | Ove Arup & Partners HK Ltd  |
| The Engineer                      | S.Y.Chan<br>(Tel: 2528 3031)  |
| The Engineer Representative       | Mr Ted Tang<br>(Tel: 2370 4311)   |
| ER's Coordinator                  | Mr Jason Yu<br>(Tel: 2371 9407)   |
| Independent Environmental Checker | Dr. Anne Kerr<br>(Tel:2828 5757)  |
| Contractor                        | Chun Wo – CEC Joint Venture   |
| Site Agent                        | Mr. W.C. Lee<br>(Tel: 3975 6388)  |
| Environmental Officer             | Mr. Shelton Chan<br>(Tel: 3975 6331)  |
| Environmental Team                | Cinotech Consultant Limited<br>Dr. Priscilla Choy<br>(Tel: 2151 2089)                                       |

### Construction Programme

- 1.9 The construction program for the three contracts at SCISTW are provided in **Appendix L**. Major construction works undertaken during the reporting month include:

**Table 1.2 Construction Works in the Reporting Month**

| <b>Contract No.</b> | <b>Construction Works in the Reporting Month</b>  |
|---------------------|---|
| DC/2009/17          | <p>Portion 5:</p> <ul style="list-style-type: none"> <li>Fabrication of steel staircase at SST no. 7 was delivered on site and will be installed after piling works.</li> </ul> <p>Portion 6:</p> <ul style="list-style-type: none"> <li>Section 5 piling works for Southern Sludge Cake Silos (SSCS) and Workshop Building (WB) were completed.</li> <li>Construction of sub structure of Southern Sludge Cake Silos (SSCS) was completed.</li> <li>Construction of superstructure of Southern Sludge Cake Silos (SSCS) was in progress.</li> <li>Construction of sub structure of Workshop Building (WB) was in progress.</li> <li>Construction of superstructure of Workshop Building (WB) was in progress.</li> </ul> <p>External Works:</p> <ul style="list-style-type: none"> <li>Connection of sludge feed pipes between existing sludge storage tank nos. 3 &amp; 4 at Zone C5 was completed. The installation of jet mixers for the said tanks was completed.</li> <li>The construction of underground utilities at Zone B7 was completed.</li> <li>Laying of watermains at Zone A1 was in progress.</li> <li>Laying of centrate pipe (CP1 and CP2) at Portion 6 was complete</li> </ul> |

|            |  |
|------------|--|
|            | <ul style="list-style-type: none"> <li>• Construction of Sludge Feed Pipe (SF2) and pile cap of Southern Sludge Cake Silo (SSCS) were in progress</li> </ul>   |
| DC/2009/10 | <ul style="list-style-type: none"> <li>• At MPS2, Installation of FRP Working Platform at Access Floor 1 (-32mPD).</li> <li>• For E&amp;M works, Hall A &amp; B sewage pumps under daily operation under SMC3A control mode and Installation of Monorail Cranes at Basement Floors.</li> <li>• At Portion 3, Installation of FRP covers at MDC, T&amp;C of Air Blowers and Air Balancing Test were in progress.</li> <li>• At Portion 8, Roof construction of SHSC was in progress.</li> <li>• For E&amp;M works, Dosing pump tests and Truck unloading pump test were in progress.</li> <li>• At Portion 6, Construction of wall of Valve Chamber.</li> <li>• At Portion 7, Polymer Storage Building, the piling works for foundation was in progress.</li> <li>• For External works, Construction of Overflow Pipe connection with Inlet Chamber and Construction of Chemical Pipe Trench were in progress.</li> </ul> |
| DC/2009/18 | <p><u>Portion 3:</u></p> <ul style="list-style-type: none"> <li>• E&amp;M Equipment Installation in Irrigation Pump House;</li> <li>• Equipment &amp; system T&amp;C;</li> <li>• ABWF Works at DCP;</li> <li>• Construction of surface channel around DCP;</li> <li>• Construction of pavement at Portion 12;</li> <li>• Installation of FRP Handrails at Chamber 15A; and</li> <li>• ELS Construction at Overflow Culvert.</li> </ul> <p><u>Portion 7:</u></p> <ul style="list-style-type: none"> <li>• Installation of E&amp;M Equipment and electrical work at DOU 4;</li> <li>• BS works at DOU 4 MCC Room;</li> <li>• Equipment &amp; system T&amp;C;</li> <li>• Installation of FRP Handrails at FDC No.2; and</li> <li>• Continue the 2<sup>nd</sup> contingency measure to remove the existing removable concrete panels by underwater cutting method.</li> </ul>  |

### Summary of EM&A Requirements

1.10 The EM&A programme requires construction phase monitoring for air quality and noise, as well as site audits covering environmental mitigation measures, including landscape and visual impact, waste/chemicals management, and general compliance with the EM&A Manual and relevant permits/licenses. The EM&A requirements for each parameter 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 4 of this report.
- 1.12 This report summarized the monitoring results, observations, locations, equipment, period, for required monitoring parameter namely dust, noise levels, and audit works conducted for the Project in January 2016, and the methodology and QA/QC procedures of the monitoring parameters.

## 2. AIR QUALITY

### Monitoring Requirements

- 2.1 1-hour and 24-hour TSP monitoring were conducted to monitor the air quality. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

### Monitoring Locations

- 2.2 Four designated monitoring stations, AM6a, AM7, AM8 and AM9 were selected for impact dust monitoring. The original location of AM6 was inaccessible due to planned construction works and therefore an alternative monitoring station AM6a was proposed and adopted for subsequent impact monitoring starting on 4<sup>th</sup> January 2016. **Table 2.1** describes the air quality monitoring locations, which are also depicted in **Figure 1 and 3**.

**Table 2.1 Locations for Air Quality Monitoring**

| Monitoring Station | Responsible Contracts | Location of Measurement  |
|--------------------|-----------------------|--|
| AM6a               | DC/2009/10            | Works site boundary  |
| AM7                |                       | North West Kowloon Sewage Pumping Station                      |
| AM8                |                       | Block A of Government Dockyard                                 |
| AM9                | DC/2009/18            | Work Site Boundary<br>(Near Ngong Shuen Chau Barracks Group 2) |

### Monitoring Equipment

- 2.3 **Table 2.2** summarizes the equipment used in the impact air monitoring programme. Copies of calibration certificates were shown in **Appendix C**.

**Table 2.2 Air Quality Monitoring Equipment**

| Contract No.              | DC/2009/10  | DC/2009/18  |
|---------------------------|---|---|
| <b>Laser Dust Monitor</b> | Sibata: LD-3B (S/N. 014750 and 095050)              | Sibata Model no. LD-3B (S/N. 853944, 014750 and 095050) |
| <b>HVS Sampler</b>        | TISCH: Model no. TE-5170 (S/N. 2353, 2355 and 3219) | Tisch Model no. TE-5170 (S/N. 2356)                     |
| <b>Calibrator</b>         | TISCH: Model TE-5025A (S/N. 2896)                   | Tisch Model TE-5025A (S/N.2896)                         |

### Monitoring Parameters, Frequency and Duration

- 2.4 **Table 2.3** summarizes the monitoring parameters and frequencies of impact dust monitoring for the whole construction period. The air quality monitoring schedule for the reporting period is shown in **Appendix B**.

**Table 2.3 Impact Dust Monitoring Parameters, Frequency and Duration**

| Monitoring Station | Parameter  | Period        | Frequency             |
|--------------------|------------|---------------|-----------------------|
| All monitoring     | 1-hour TSP | 0700-1900 hrs | 3 times/ every 6 days |

|           |             |               |                      |
|-----------|-------------|---------------|----------------------|
| locations | 24-hour TSP | 0000-2400 hrs | once in every 6 days |
|-----------|-------------|---------------|----------------------|

### Monitoring Methodology and QA/QC Procedure

- 2.5 The monitoring methodology and QA/QC procedure for monitoring equipment are presented in the monthly reports for Contracts DC/2009/10 and DC/2009/18.

### Results and Observations

- 2.6 **Table 2.4** summaries the air quality monitoring results at AM6a, AM7, AM8 and AM9 in reporting month.

**Table 2.4 Summary of 1-hour and 24-hour TSP Monitoring Results in Reporting Month**

| Air Quality Monitoring Station | Average $\mu\text{gm}^{-3}$ | Range $\mu\text{gm}^{-3}$ | Action Level $\mu\text{gm}^{-3}$ | Limit Level $\mu\text{gm}^{-3}$ |
|--------------------------------|-----------------------------|---------------------------|----------------------------------|---------------------------------|
| <b>1 hour TSP</b>              |                             |                           |                                  |                                 |
| AM6a                           | 84                          | 26 - 174                  | 346                              | 500                             |
| AM7                            | 132                         | 93 - 193                  | 322                              |                                 |
| AM8                            | 109                         | 74 - 162                  | 307                              |                                 |
| AM9                            | 128.9                       | 84.9 - 187.6              | 318                              |                                 |
| <b>24 hours TSP</b>            |                             |                           |                                  |                                 |
| AM6a                           | 114                         | 68 - 160                  | 196                              | 260                             |
| AM7                            | 118                         | 90 - 185                  | 207                              |                                 |
| AM8                            | 43                          | 25 - 66                   | 158                              |                                 |
| AM9                            | 76.2                        | 36.9 - 118                | 169                              |                                 |

- 2.7 All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded. Summary of exceedance is presented in **Appendix G**.
- 2.8 All 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded. Summary of exceedance is presented in **Appendix G**.
- 2.9 The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix D**.
- 2.10 According to the field observations, the identified dust sources at the monitoring stations were mainly from loading of material, vehicles movement and construction works in site.

### 3. NOISE

#### Monitoring Requirements

- 3.1 Three noise monitoring stations, namely NM5, NM6 and NM7 were designated in the EM&A Manual for impact monitoring. **Appendix A** shows the established Action and Limit Levels for the environmental monitoring works.

#### Monitoring Locations

- 3.2 Noise monitoring was conducted at three designated monitoring stations as listed in Table 3.1. **Figures 1 and 3** shows the locations of these stations.

**Table 3.1 Noise Monitoring Stations**

| Monitoring Station | Responsible Contracts | Location of Measurement                    |
|--------------------|-----------------------|--|
| NM5                | DC/2009/10            | Near FSD Diving Rescue and Training Centre |
| NM6                |                       | Customs' Marine Base                       |
| NM7                | DC/2009/18            | Open Area near Naval Base Barrack          |

#### Monitoring Equipment

- 3.3 Table 3.2 summarizes the noise monitoring equipment. Copies of calibration certificates were shown in **Appendix C**.

**Table 3.2 Noise Monitoring Equipment**

| Contract No.      | DC/2009/10  | DC/2009/18   |
|-------------------|---|--|
| Sound Level Meter | SVANTEK Model no: SVAN 955 (S/N. 12553 and 14303) | SVANTEK, Model no: SVAN 955 and 957 (S/N. 14303 and 21460) |
| Calibrator        | SVANTEK Model no: SV 30A (S/N. 24803 and 24791)   | SVANTEK, Model no: SV 30A (S/N. 10965 and 24791)           |

#### Monitoring Parameters, Frequency and Duration

- 3.4 Table 3.3 summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix B**.

**Table 3.3 Noise Monitoring Parameters, Frequency and Duration**

| Monitoring Stations | Parameter                          | Period                    | Frequency   |
|---------------------|------------------------------------|---------------------------|---|
| NM5<br>NM6<br>NM7   | $L_{eq}(30 \text{ min.})$<br>dB(A) | 0700-1900 hrs on weekdays | Once per week   |
|                     | $L_{eq}(5 \text{ min.})$<br>dB(A)  | During restricted hours   | Weekly monitoring to be conducted during the construction works |



### Monitoring Methodology and QA/QC Procedures

- 3.5 The monitoring methodology and QA/QC procedure are presented in the monthly reports of the Contract DC/2009/10 and DC/2009/18.

### Results and Observations

- 3.6 **Table 3.4** summaries the noise monitoring results at NM5, NM6 and NM7 in reporting month.

**Table 3.4 Summary of Noise Monitoring Results in Reporting Month**

| For the time period 0700-1900 hrs. on weekdays  |   |   |
|---|---|---|
| Monitoring Station  | Range, dB(A)<br>L <sub>eq</sub> (30 min.) | Limit Level ,dB(A)<br>L <sub>eq</sub> (30 min.) |
| NM5   | 67.2 - 70.6                               | 75.0  |
| NM6   | 65.0 - 69.4                               |   |
| NM7   | 68.2-72.4                                 |   |
| For the time period 1900-2300 hrs. on Normal Weekdays,<br>And 0700-2300 of Sundays and Public Holiday |   |   |
| Monitoring Station  | Range, dB(A)<br>L <sub>eq</sub> (5 min.)  | Limit Level ,dB(A)<br>L <sub>eq</sub> (5 min.)  |
| NM5   | 64.6 - 66.6                               | 70.0  |
| NM7   | 64.1-64.8                                 |   |
| All days during 2300 to 0700 hrs. of the next day   |   |   |
| NM7   | 58.2-58.6 <sup>(1)</sup>                  | 55.0  |

Remark:

<sup>(1)</sup> Since the construction noise levels recorded during restricted hours from 23:00 to 07:00 of were lower than the baseline level, the construction noise levels were considered to be non-valid exceedance of Limit Level.

- 3.7 All construction noise monitoring at three designated locations were conducted by their ETs as scheduled in the reporting month.
- 3.8 No Action/Limit Level exceedance for normal working hours and restricted hours was recorded in the reporting month. Summary of exceedance is presented in **Appendix G**.
- 3.9 Noise monitoring results and graphical presentations are shown in **Appendix E**.
- 3.10 The major noise sources identified at the designated noise monitoring stations during day time were the noise generated from onsite trucks movement, concreting work and the traffic noise from the Container Port Road South close to the site boundary of the SCISTW; while the major noise sources identified during the evening and night time period was the construction works of Contract No: DC/2009/18 and traffic noise from the nearby Container Port Road South and Stonecutters Bridge.

#### 4. ENVIRONMENTAL AUDIT

##### Site Audits

- 4.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the each Project site.
- 4.2 Environmental site audits were conducted in the reporting month for each Contract is the following. No non-compliance was observed during the site audits.

**Table 4.1 Summary of Date of Site Inspection**

| Contract No. | Date of Site Inspection       |
|--------------|-------------------------------|
| DC/2009/10   | 7, 14, 20 and 28 January 2016 |
| DC/2009/17   | 5, 12, 20 and 26 January 2016 |
| DC/2009/18   | 7, 14, 19 and 28 January 2016 |

- 4.3 Site inspections were undertaken to ensure and check that the implementation and maintenance of landscape and visual mitigation measures are being properly carried out in the reporting month in accordance to section 11.10 of the EM&A Manual. No non-compliance was observed during the site inspections.
- 4.4 The summaries of site audits for the three contracts are attached in **Appendix H**.

##### Review of Environmental Monitoring Procedures

- 4.5 The monitoring works conducted by the monitoring teams of respective Contracts and were inspected regularly by their ETs.

##### Status of Environmental Licensing and Permitting

- 4.6 All permits/licenses obtained for the each Contract are summarized in **Appendix F**.

##### Status of Waste Management

- 4.7 The amount of wastes generated by the activities of the three contracts in the reporting month is the following:

**Table 4.2 Summary of Amount of Waste Generated in Reporting Month**

| Contract          | Inert C&D <sup>1</sup> Materials | Other C&D <sup>2</sup> Waste      | Chemical Waste | Marine Deposit           |                          |                 |
|-------------------|----------------------------------|-----------------------------------|----------------|--------------------------|--------------------------|-----------------|
|                   |                                  |                                   |                | Type 1 (m <sup>3</sup> ) | Type 2 (m <sup>3</sup> ) | Type 3 (Tonnes) |
| <b>DC/2009/10</b> | 861 (m <sup>3</sup> )            | 1,110(kg) and 27(m <sup>3</sup> ) | 0              | 0                        | 0                        | 0               |
| <b>DC/2009/17</b> | 599(m <sup>3</sup> )             | 16 (ton)                          | 0              | 0                        | 0                        | 0               |
| <b>DC/2009/18</b> | 1,181(m <sup>3</sup> )           | 22(m <sup>3</sup> )               | 0              | 0                        | 0                        | 0               |

Remark\*: The amount of waste generated is from all sites in this Contract.

1: Inert C&D Materials includes Broken Concrete/Rock, Inert C&D waste reused in the Contract/other Project and those disposed to Public Fill.

2: Other C&D Waste includes Metals, Paper Cardboard packaging, plastic (kg) and other

General Refuse (m<sup>3</sup>, ton).

- 4.8 The disposal location of wastes generated by the activities of the three contracts is the following:

**Table 4.3 Summary of Disposal Location of Waste Generated in Reporting Month**

| <b>Contract No.</b> | <b>Disposal Location of Wastes in the Report Month</b>   |
|---------------------|--|
| <b>DC/2009/10</b>   | Tuen Mun Area 38 Fill Bank and NENT Landfill;<br>(300 kg of paper/cardboard and 810 kg of plastics were disposed during the reporting period.)   |
| <b>DC/2009/17</b>   | Tuen Mun Area 38 Fill Bank and NENT Landfill;<br>(9 ton of metals were disposed during the reporting period.)  |
| <b>DC/2009/18</b>   | Lam Tei Quarry, Tuen Mun Area 38 Fill Bank and NENT Landfill and Tseung Kwan O Area 137 Fill Bank;<br>(No non-inert C&D waste other than general refuse was disposed during the reporting period.) |

- 4.9 The summaries of amount of waste generated in the three contracts could be referred to respective monthly report.

#### **Implementation Status of Environmental Mitigation Measures**

- 4.10 Details of the implementation of mitigation measures for the three contracts are provided in the **Appendix J**.
- 4.11 During the weekly environmental site inspections in the reporting period, no non-conformance was identified. The observations and recommendations for the Projects are summarized in **Appendix H**.

#### **Implementation Status of Event Action Plans**

- 4.12 The Event Action Plans for air quality and noise are presented in **Appendix I**.

##### 1-hr TSP

- 4.13 No Action/Limit Level exceedance was recorded.

##### 24-hr TSP

- 4.14 No Action/Limit Level exceedance was recorded.

##### Construction Noise

- 4.15 No Action/Limit Level exceedance for normal working hours and restricted hours was recorded in the reporting month. Summary of exceedance is presented in **Appendix G**.

Landscape and Visual

4.16 No non-compliance was recorded.

**Summary of Complaints and Prosecutions**

4.17 No environmental complaint and prosecution was received at SCISTW for the three contracts in the reporting month.

4.18 There were no environmental complaint and prosecution received since the commencement of the three contracts. The Complaint Log is presented in **Appendix K**.

## 5. FUTURE KEY ISSUES

### Key Issues for the Coming Month

5.1 Key environmental issues in the coming month include:

- Generation of dust from stockpiles of excavated and dusty materials, unpaved site area and vehicle movement, road works, excavation works and loading and unloading dusty materials on-site;
- Noise from operation of equipment and machinery on-site;
- Storage of chemicals/fuel and chemical waste/waste oil on-site;
- Ponding water generated in pre-drillings;
- Drainage system should be well designed and maintained to prevent flooding and silty water getting into the public area;
- Oil leakage from equipment and spillage;
- Silty surface runoff generated from the site area during raining;
- Dust generation should be mitigated by adequate water spraying, especially in dry days;
- Stockpile should be covered by tarpaulin to reduce dust generation;
- Silt and dust getting into the public area by the leaving site vehicles at the site exits without adequate wheel washing facilities; and
- Proper tree and shrub protection zones should be provided when carrying out works near existing trees and shrubs.

### Monitoring Schedule for the Next Month

5.2 The tentative environmental monitoring schedules for the next month are shown in **Appendix B**.

### Construction Program for the Next Month

5.3 The tentative construction programs are provided in **Appendix L**.

## 6. CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

- 6.1 Environmental monitoring and audit works were performed in the reporting month and all monitoring results were checked and reviewed.

#### 1-hour TSP Monitoring

- 6.2 All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

#### 24-hour TSP Monitoring

- 6.3 All 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

#### Construction Noise Monitoring

- 6.4 No Action/Limit Level exceedance for normal working hours and restricted hours was recorded in the reporting month. Summary of exceedance is presented in **Appendix G**.

#### Environmental Audit

- 6.5 Environmental site audits were conducted on weekly basis in the reporting month. No non-compliance was recorded.

#### Complaint and Prosecution

- 6.6 No environmental complaint and prosecution was received in the reporting month.

### Recommendations for the coming reporting month:

- 6.7 The following recommendations were made for the coming reporting month:

#### *Air Quality*

- To regularly maintain the machinery and vehicles on site;
- To mitigate dust generation by adequate water spraying or covering by tarpaulin during dry days;
- To cover the stockpile with tarpaulin to reduce dust generation;
- To follow up any exceedance caused by the construction works; and
- To implement dust suppression measures on all haul roads, stockpiles, dried/unpaved surfaces and excavation/road breaking works.

#### *Noise*

- To inspect the noise sources inside the site;
- To follow up any exceedance caused by the construction works;
- To space out noisy equipment and position the equipment as far away as possible from

- sensitive receivers;
- To provide temporary noise barriers for operations of noisy equipment near the noise sensitive receivers in an appropriate location;

#### *Water Quality*

- To identify any potential discharge of surface run-off from the construction site;
- To avoid water accumulation on site and carry out larviciding against mosquito breeding for stagnant water when mosquito larvae are observed;
- To clear the sediment in the wastewater treatment tanks regularly;
- To provide adequate wastewater treatment facilities to treat the wastewater generated during construction works and heavy rain; and
- The discharged water quality must meet the requirements specified in the discharge licence.

#### *Waste/Chemical Management*

- To provide proper rubbish bins / skips for waste collection;
- To check for any accumulation of wasted materials or rubbish on site;
- To provide proper storage area or drip trays for oil containers/ equipment on site;
- To avoid any discharge or accidental spillage of chemical waste or oil directly from the equipment;
- To well maintain the equipment and drip trays to avoid oil leakage; and
- To avoid improper handling or storage of oil drum on site.

#### *Landscape and Visual*

- To erect and maintain the protection fence around the retained tree; and
- To avoid any construction materials being placed into tree protection zone.

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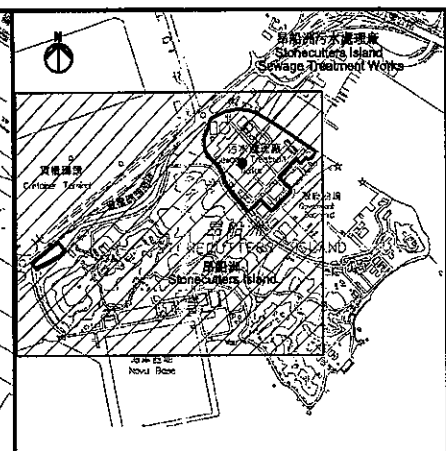
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## FIGURES

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**KEY PLAN**

- LEGEND:**
- BOUNDARY OF SCISTW
  - ALIGNMENT OF EFFLUENT TUNNEL

|     |                        |    |       |
|-----|------------------------|----|-------|
| 0   | ISSUE FOR CONSTRUCTION | PW | 06/11 |
| Rev | Description            | By | Date  |

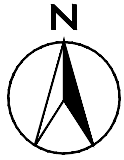
Consultant  
**ARUP** 奧雅納工程顧問  
 Ove Arup & Partners Hong Kong Limited

Project title  
 Contract No. DC/2009/18  
 Harbour Area Treatment Scheme Stage 2A-  
 Upgrading Works at  
 Stonecutters Island Sewage Treatment Works-  
 Effluent Tunnel and Disinfection Facilities

Drawing title  
**GENERAL LAYOUT  
 (SHEET 1)**

|                                   |               |                          |                |
|-----------------------------------|---------------|--------------------------|----------------|
| Drawing no. <b>24888/ETF/0021</b> |               | Rev. <b>0</b>            |                |
| Drawn<br>WM                       | Date<br>08/10 | Checked<br>PW            | Approved<br>DP |
| Scale 1:2000 @A1                  |               | Status<br><b>WORKING</b> |                |

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**DRAINAGE SERVICES DEPARTMENT**  
 GOVERNMENT OF THE  
 HONG KONG  
 SPECIAL ADMINISTRATIVE REGION



AM7  
North West Kowloon  
Sewage Pumping Station

NM5  
FSD Diving Rescue and  
Training Centre

AM6a  
Works Site Boundary

Stonecutters Island  
Sewage Treatment Plant

NM6  
Customs' Marine Base

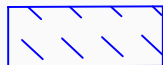
AM8  
Block A of  
Government Dockyard

LEGEND:

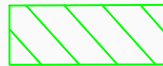
DC/2009/10' SITE AREA



DC/2009/17' SITE AREA



DC/2009/18' SITE AREA



AIR QUALITY MONITORING  
STATION



NOISE MONITORING STATION



Contract No: DC/2009/10  
HATS 2A - Upgrading Main Pumping Station, Sedimentation Tanks and Ancillary  
Facilities at SCISTW

General Location Plan of the Project and Locations of Air  
Quality and Noise Monitoring Stations

SCALE

N.T.S

DATE

11/2015

CHECK

-

DRAWN

VW

JOB No.

MA11007

FIGURE NO.

2

REV

-



Container Terminal 8  
(Modern Terminals Limited)

Stonecutters Island  
Sewage Treatment Plant

Off Park  
(Container Terminal)

NM7  
Open Area near Naval Base Barrack

AM9  
Work Site Boundary

**LEGEND:**

DC/2009/18' SITE AREA



AIR QUALITY MONITORING  
STATION



NOISE MONITORING STATION



**CINOTECH**  
Cinotech Consultants Limited

Contract No: DC/2009/18  
HATS 2A -Upgrading Works at Stonecutters Island Sewage Treatment  
Works - Effluent Tunnel and Disinfection Facilities

General Location Plan of the Project and Locations of Air  
Quality and Noise Monitoring Stations

SCALE

N.T.S

DATE

11/2015

CHECK

-

DRAWN

VW

JOB No.

MA11043

FIGURE NO.

3

REV

-

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**APPENDIX A  
ACTION AND LIMIT LEVELS FOR AIR  
QUALITY AND NOISE**

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## Appendix A Action and Limit Levels

**Table A-1 Action and Limit Levels for 1-Hour TSP and 24-Hour TSP**

| Monitoring Stations | Action Level ( $\mu\text{g}/\text{m}^3$ ) |         | Limit Level ( $\mu\text{g}/\text{m}^3$ ) |         |
|---------------------|---|---------|--|---------|
|                     | 1-hour                                    | 24-hour | 1-hour                                   | 24-hour |
| AM6a                | 346                                       | 196     | 500                                      | 260     |
| AM7                 | 322                                       | 207     | 500                                      | 260     |
| AM8                 | 307                                       | 158     | 500                                      | 260     |
| AM9                 | 318                                       | 169     | 500                                      | 260     |

**Table A-2 Action and Limit Level for Construction Noise**

| Monitoring Stations                    | Time Period  | Action Level                              | Limit Level in dB(A) |
|--|--|---|----------------------|
| <b>NM5</b><br><b>NM6</b><br><b>NM7</b> | 0700-1900 hours on normal weekdays   | When one documented complaint is received | 75                   |
|  | Restricted Hours (Evening Time)<br>All days during the evening (1900 to 2300 hours), and general holidays (including Sundays) during the day-time and evening (0700 to 2300 hours) | N/A                                       | 70 <sup>(1)</sup>    |
|  | Restricted Hours (Night Time)<br>All days during the night-time (2300 to 0700 hours)   | N/A                                       | 55 <sup>(1)</sup>    |

Note(1): Construction Noise Criteria for activity other than Percussive Piling.

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**APPENDIX B  
ENVIRONMENTAL MONITORING  
SCHEDULES**

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**DC/2009/10 HATS 2A Upgrading Main Pumping Station, Sedimentation Tanks and Ancillary Facilities at SCISTW  
Impact Air Quality and Noise Monitoring Schedule (January 2016)**

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

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

**Air Quality Monitoring Station**

AM7 - West Kowloon No.2 Sewage Pumping Station  
AM8 - Block A of Government Dockyard  
AM6a - Works Site Boundary

**Noise Monitoring Station**

NM6 - Customs' Marine Base (Block H of Government Dockyard) Rooftop  
NM5 - FSD Diving Training Centre

**DC/2009/10 HATS 2A Upgrading Main Pumping Station, Sedimentation Tanks and Ancillary Facilities at SCISTW  
Tentative Impact Air Quality and Noise Monitoring Schedule (February 2016)**

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

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

**Air Quality Monitoring Station**

AM7 - West Kowloon No.2 Sewage Pumping Station  
AM8 - Block A of Government Dockyard  
AM6a - Works Site Boundary

**Noise Monitoring Station**

NM6 - Customs' Marine Base (Block H of Government Dockyard) Rooftop  
NM5 - FSD Diving Training Centre



**Contract No. DC/2009/18**  
**HATS 2A -Upgrading Works at Stonecutters Island Sewage Treatment Works - Effluent Tunnel and Disinfection Facilities**  
**Tentative Impact Air Quality and Noise Monitoring Schedule (January 2016)**

| Sunday        | Monday   | Tuesday  | Wednesday  | Thursday   | Friday       | Saturday |
|---------------|--|--|--|--|--------------|----------|
|               |  |  |  |  | <b>1-Jan</b> | 2-Jan    |
|               |  |  |  |  |              |          |
| <b>3-Jan</b>  | 4-Jan  | 5-Jan  | 6-Jan  | 7-Jan  | 8-Jan        | 9-Jan    |
|               | 24 hr TSP  | 1hr TSP X 3<br>Noise<br>(Daytime, Evening and<br>Night Time) |  |  | 24 hr TSP    |          |
| <b>10-Jan</b> | 11-Jan   | 12-Jan   | 13-Jan   | 14-Jan   | 15-Jan       | 16-Jan   |
|               | 1hr TSP X 3<br>Noise<br>(Daytime, Evening and<br>Night Time) |  |  | 24 hr TSP  | 1hr TSP X 3  |          |
| <b>17-Jan</b> | 18-Jan   | 19-Jan   | 20-Jan   | 21-Jan   | 22-Jan       | 23-Jan   |
|               |  |  | 24 hr TSP  | 1hr TSP X 3<br>Noise<br>(Daytime, Evening and<br>Night Time) |              |          |
| <b>24-Jan</b> | 25-Jan   | 26-Jan   | 27-Jan   | 28-Jan   | 29-Jan       | 30-Jan   |
|               |  | 24 hr TSP  | 1hr TSP X 3<br>Noise<br>(Daytime, Evening and<br>Night Time) |  |              |          |
| <b>31-Jan</b> |  |  |  |  |              |          |
|               |  |  |  |  |              |          |

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

**Air Quality Monitoring Location:**

AM9 - Work Site Boundary (Near Ngong Shuen Chau Barracks Group 2)

**Noise Monitoring Location:**

NM7 - Open Area near Naval Base Barrack

**Contract No. DC/2009/18**  
**HATS 2A -Upgrading Works at Stonecutters Island Sewage Treatment Works - Effluent Tunnel and Disinfection Facilities**  
**Tentative Impact Air Quality and Noise Monitoring Schedule (February 2016)**

| Sunday        | Monday       | Tuesday  | Wednesday  | Thursday   | Friday  | Saturday                     |
|---------------|--------------|--|--|--|---|------------------------------|
|               | 1-Feb        | 2-Feb  | 3-Feb  | 4-Feb  | 5-Feb   | 6-Feb                        |
|               | 24 hr TSP    | 1hr TSP X 3<br>Noise<br>(Daytime, Evening and<br>Night Time) |  |  |   | 1hr TSP X 3<br><br>24 hr TSP |
| <b>7-Feb</b>  | <b>8-Feb</b> | <b>9-Feb</b>   | <b>10-Feb</b>  | 11-Feb   | 12-Feb  | 13-Feb                       |
|               |              |  |  |  | 1hr TSP X 3<br>Noise<br>(Daytime, Evening and<br>Night Time)<br>24 hr TSP |                              |
| <b>14-Feb</b> | 15-Feb       | 16-Feb   | 17-Feb   | 18-Feb   | 19-Feb  | 20-Feb                       |
|               |              |  | 24 hr TSP  | 1hr TSP X 3<br>Noise<br>(Daytime, Evening and<br>Night Time) |   |                              |
| <b>21-Feb</b> | 22-Feb       | 23-Feb   | 24-Feb   | 25-Feb   | 26-Feb  | 27-Feb                       |
|               |              | 24 hr TSP  | 1hr TSP X 3<br>Noise<br>(Daytime, Evening and<br>Night Time) |  |   |                              |
| <b>28-Feb</b> | 29-Feb       |  |  |  |   |                              |
|               | 24 hr TSP    |  |  |  |   |                              |

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

**Air Quality Monitoring Location:**

AM9 - Work Site Boundary (Near Ngong Shuen Chau Barracks Group 2)

**Noise Monitoring Location:**

NM7 - Open Area near Naval Base Barrack

---

**APPENDIX C  
CALIBRATION CERTIFICATES OF THE  
ENVIRONMENTAL MONITORING  
EQUIPMENT**

---

# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA11007/56/0002

Project No. AM6 - Works Site Boundary Operator: WK  
 Date: 15-Dec-15 Next Due Date: 14-Feb-16  
 Equipment No.: A-01-56 Serial No. 2353

| Ambient Condition   |       |                     |       |
|---------------------|-------|---------------------|-------|
| Temperature, Ta (K) | 292.7 | Pressure, Pa (mmHg) | 765.5 |

| Orifice Transfer Standard Information |          |  |        |               |          |
|---------------------------------------|----------|--|--------|---------------|----------|
| Equipment No.:                        | A-04-06  | Slope, mc (CFM)  | 0.0593 | Intercept, bc | -0.02195 |
| Last Calibration Date:                | 4-Feb-15 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ |        |               |          |
| Next Calibration Date:                | 3-Feb-16 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$  |        |               |          |

| Calibration of TSP Sampler |                                    |  |                     |                                |   |
|----------------------------|------------------------------------|--|---------------------|--------------------------------|---|
| Calibration Point          | Orifice                            |  |                     | HVS                            |   |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X - axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1                          | 12.8                               | 3.62   | 61.50               | 7.2                            | 2.72  |
| 2                          | 10.7                               | 3.31   | 56.27               | 6.1                            | 2.50  |
| 3                          | 7.5                                | 2.77   | 47.17               | 4.2                            | 2.08  |
| 4                          | 5.4                                | 2.35   | 40.08               | 3.1                            | 1.78  |
| 5                          | 3.3                                | 1.84   | 31.41               | 1.9                            | 1.40  |

**By Linear Regression of Y on X**

Slope, mw = 0.0440 Intercept, bw = 0.0118  
 Correlation coefficient\* = 0.9998

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.54

Remarks: \_\_\_\_\_

Conducted by: W.K. Tang Signature: Kwan Date: 15/12/15  
 Checked by: [Signature] Signature: \_\_\_\_\_ Date: 15 December 2015

# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA11007/55/0022

Station AM7 - North West Kowloon Sewage Pumping Station Operator: WK  
 Date: 9-Nov-15 Next Due Date: 8-Jan-16  
 Equipment No.: A-01-55 Serial No. 2355

| Ambient Condition   |       |                     |       |
|---------------------|-------|---------------------|-------|
| Temperature, Ta (K) | 302.3 | Pressure, Pa (mmHg) | 762.9 |

| Orifice Transfer Standard Information |          |  |        |               |          |
|---------------------------------------|----------|--|--------|---------------|----------|
| Equipment No.:                        | A-04-06  | Slope, mc(CFM)   | 0.0593 | Intercept, bc | -0.02195 |
| Last Calibration Date:                | 4-Feb-15 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ |        |               |          |
| Next Calibration Date:                | 3-Feb-16 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$  |        |               |          |

| Calibration of TSP Sampler |                                    |  |                     |                                |   |
|----------------------------|------------------------------------|--|---------------------|--------------------------------|---|
| Calibration Point          | Orifice                            |  |                     | HVS                            |   |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X - axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1                          | 12.8                               | 3.56   | 60.42               | 6.5                            | 2.54  |
| 2                          | 10.8                               | 3.27   | 55.53               | 5.5                            | 2.33  |
| 3                          | 7.5                                | 2.72   | 46.34               | 4.0                            | 1.99  |
| 4                          | 5.2                                | 2.27   | 38.65               | 2.9                            | 1.69  |
| 5                          | 3.4                                | 1.83   | 31.32               | 1.9                            | 1.37  |

**By Linear Regression of Y on X**

Slope, mw = 0.0395 Intercept, bw = 0.1499

Correlation coefficient\* = 0.9996

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

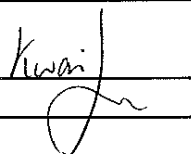
From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.45

Remarks: \_\_\_\_\_

Conducted by: Wk. Tang Signature:  Date: 9/11/15  
 Checked by: ATV Signature: \_\_\_\_\_ Date: 9 November 2015

# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA11007/55/0023

Station AM7 - North West Kowloon Sewage Pumping Station Operator: WK  
 Date: 5-Jan-16 Next Due Date: 4-Mar-16  
 Equipment No.: A-01-55 Serial No. 2355

| Ambient Condition   |       |                     |       |
|---------------------|-------|---------------------|-------|
| Temperature, Ta (K) | 292.9 | Pressure, Pa (mmHg) | 762.4 |

| Orifice Transfer Standard Information |          |  |        |               |          |
|---------------------------------------|----------|--|--------|---------------|----------|
| Equipment No.:                        | A-04-06  | Slope, mc(CFM)   | 0.0593 | Intercept, bc | -0.02195 |
| Last Calibration Date:                | 4-Feb-15 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ |        |               |          |
| Next Calibration Date:                | 3-Feb-16 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$  |        |               |          |

| Calibration of TSP Sampler |                            |   |                        |                        |  |
|----------------------------|----------------------------|---|------------------------|------------------------|--|
| Calibration Point          | Orifice                    |   |                        | HVS                    |  |
|                            | ΔH (orifice), in. of water | [ΔH x (Pa/760) x (298/Ta)] <sup>1/2</sup> | Qstd (CFM)<br>X - axis | ΔW (HVS), in. of water | [ΔW x (Pa/760) x (298/Ta)] <sup>1/2</sup> Y-axis |
| 1                          | 12.7                       | 3.60                                      | 61.12                  | 6.6                    | 2.60   |
| 2                          | 10.8                       | 3.32                                      | 56.39                  | 5.7                    | 2.41   |
| 3                          | 7.7                        | 2.80                                      | 47.67                  | 4.2                    | 2.07   |
| 4                          | 5.4                        | 2.35                                      | 39.98                  | 3.0                    | 1.75   |
| 5                          | 3.2                        | 1.81                                      | 30.87                  | 2.0                    | 1.43   |

**By Linear Regression of Y on X**

Slope, mw = 0.0389 Intercept, bw = 0.2146

Correlation coefficient\* = 0.9997

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

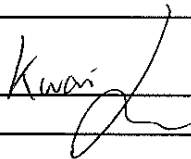
From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W = (mw x Qstd + bw)<sup>2</sup> x (760 / Pa) x (Ta / 298) = 3.49

Remarks: \_\_\_\_\_

Conducted by: Wk. Tang Signature:   
 Checked by: A Signature: \_\_\_\_\_

Date: 5/1/16  
 Date: 5 January 2016

# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA11007/68/0021

Station AM8 - Block A of Government Dockyard Operator: WK  
 Date: 9-Nov-15 Next Due Date: 8-Jan-16  
 Equipment No.: A-01-68 Serial No. 3219

| Ambient Condition   |       |                     |       |
|---------------------|-------|---------------------|-------|
| Temperature, Ta (K) | 302.3 | Pressure, Pa (mmHg) | 763.5 |

| Orifice Transfer Standard Information |          |  |        |               |          |
|---------------------------------------|----------|--|--------|---------------|----------|
| Equipment No.:                        | A-04-06  | Slope, mc(CFM)   | 0.0593 | Intercept, bc | -0.02195 |
| Last Calibration Date:                | 4-Feb-15 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ |        |               |          |
| Next Calibration Date:                | 3-Feb-16 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$  |        |               |          |

| Calibration of TSP Sampler |                                    |  |                     |                                |   |
|----------------------------|------------------------------------|--|---------------------|--------------------------------|---|
| Calibration Point          | Orifice                            |  |                     | HVS                            |   |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X - axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1                          | 11.8                               | 3.42   | 58.05               | 6.9                            | 2.61  |
| 2                          | 9.7                                | 3.10   | 52.67               | 5.5                            | 2.33  |
| 3                          | 7.4                                | 2.71   | 46.05               | 4.2                            | 2.04  |
| 4                          | 5.3                                | 2.29   | 39.03               | 3.2                            | 1.78  |
| 5                          | 3.3                                | 1.81   | 30.87               | 1.9                            | 1.37  |

By Linear Regression of Y on X

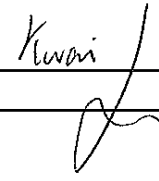
Slope,  $m_w =$  0.0446 Intercept,  $b_w =$  0.0038

Correlation coefficient\* = 0.9987

\*If Correlation Coefficient < 0.990, check and recalibrate.

| Set Point Calculation   |             |
|---|-------------|
| From the TSP Field Calibration Curve, take Qstd = 43 CFM                                    |             |
| From the Regression Equation, the "Y" value according to                                    |             |
| $m_w \times Qstd + b_w = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$                  |             |
| Therefore, Set Point; $W = (m_w \times Qstd + b_w)^2 \times (760 / Pa) \times (Ta / 298) =$ | <u>3.74</u> |

Remarks: \_\_\_\_\_

Conducted by: Wk Tang Signature:  Date: 9/11/15  
 Checked by: LA Signature: \_\_\_\_\_ Date: 9 November 2015

# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA11007/68/0022

Station AM8 - Block A of Government Dockyard Operator: WK  
 Date: 5-Jan-16 Next Due Date: 4-Mar-16  
 Equipment No.: A-01-68 Serial No. 3219

| Ambient Condition   |       |                     |       |
|---------------------|-------|---------------------|-------|
| Temperature, Ta (K) | 293.2 | Pressure, Pa (mmHg) | 762.4 |

| Orifice Transfer Standard Information |          |  |        |               |          |
|---------------------------------------|----------|--|--------|---------------|----------|
| Equipment No.:                        | A-04-06  | Slope, mc(CFM)   | 0.0593 | Intercept, bc | -0.02195 |
| Last Calibration Date:                | 4-Feb-15 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ |        |               |          |
| Next Calibration Date:                | 3-Feb-16 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$  |        |               |          |

| Calibration of TSP Sampler |                                    |  |                     |                                |   |
|----------------------------|------------------------------------|--|---------------------|--------------------------------|---|
| Calibration Point          | Orifice                            |  |                     | HVS                            |   |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X - axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1                          | 11.5                               | 3.42   | 58.15               | 7.0                            | 2.67  |
| 2                          | 9.4                                | 3.10   | 52.61               | 5.6                            | 2.39  |
| 3                          | 7.2                                | 2.71   | 46.09               | 4.3                            | 2.09  |
| 4                          | 5.2                                | 2.30   | 39.22               | 3.1                            | 1.78  |
| 5                          | 3.4                                | 1.86   | 31.79               | 1.9                            | 1.39  |

**By Linear Regression of Y on X**

Slope, mw = 0.0480 Intercept, bw : -0.1216  
 Correlation coefficient\* = 0.9997

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.70

Remarks: \_\_\_\_\_

Conducted by: wk. Tang

Signature: \_\_\_\_\_

*Kwai*

Date: 5/1/16

Checked by: Ar

Signature: \_\_\_\_\_

Date: 5 January 2016



# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA11043/63/0027

Project No. AM9 - Work Site Boundary (Near Ngong Shuen Chau Barracks Group 2)  
 Operator: WK  
 Date: 9-Nov-15 Next Due Date: 8-Jan-16  
 Equipment No.: A-01-63 Serial No. 2356

| Ambient Condition   |       |                     |       |
|---------------------|-------|---------------------|-------|
| Temperature, Ta (K) | 302.8 | Pressure, Pa (mmHg) | 762.5 |

| Orifice Transfer Standard Information |          |  |        |               |          |
|---------------------------------------|----------|--|--------|---------------|----------|
| Equipment No.:                        | A-04-06  | Slope, mc(CFM)   | 0.0593 | Intercept, bc | -0.02195 |
| Last Calibration Date:                | 4-Feb-15 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ |        |               |          |
| Next Calibration Date:                | 3-Feb-16 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$  |        |               |          |

| Calibration of TSP Sampler |                            |   |                        |                        |   |
|----------------------------|----------------------------|---|------------------------|------------------------|---|
| Calibration Point          | Orifice                    |   |                        | HVS                    |   |
|                            | ΔH (orifice), in. of water | [ΔH x (Pa/760) x (298/Ta)] <sup>1/2</sup> | Qstd (CFM)<br>X - axis | ΔW (HVS), in. of water | [ΔW x (Pa/760) x (298/Ta)] <sup>1/2</sup><br>Y-axis |
| 1                          | 12.7                       | 3.54                                      | 60.12                  | 6.6                    | 2.55  |
| 2                          | 9.9                        | 3.13                                      | 53.13                  | 5.1                    | 2.24  |
| 3                          | 7.5                        | 2.72                                      | 46.29                  | 4.0                    | 1.99  |
| 4                          | 5.2                        | 2.27                                      | 38.61                  | 2.9                    | 1.69  |
| 5                          | 3.3                        | 1.81                                      | 30.83                  | 1.8                    | 1.33  |

**By Linear Regression of Y on X**

Slope, mw = 0.0409 Intercept, bw = 0.0875  
 Correlation coefficient\* = 0.9993

\*If Correlation Coefficient < 0.990, check and recalibrate.

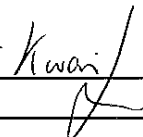
**Set Point Calculation**

From the TSP Field Calibration Curve, take Qstd = 43 CFM  
 From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.46

Remarks: \_\_\_\_\_

Conducted by: Wk. Tang Signature:  Date: 9/11/15  
 Checked by: htz Signature: \_\_\_\_\_ Date: 9 November 2015

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA11043/63/0028

Project No. AM9 - Work Site Boundary (Near Ngong Shuen Chau Barracks Group 2)  
 Operator: WK  
 Date: 5-Jan-16 Next Due Date: 4-Mar-16  
 Equipment No.: A-01-63 Serial No. 2356

| Ambient Condition   |       |                     |       |
|---------------------|-------|---------------------|-------|
| Temperature, Ta (K) | 293.7 | Pressure, Pa (mmHg) | 762.8 |

| Orifice Transfer Standard Information |          |  |        |               |          |
|---------------------------------------|----------|--|--------|---------------|----------|
| Equipment No.:                        | A-04-06  | Slope, mc(CFM)   | 0.0593 | Intercept, bc | -0.02195 |
| Last Calibration Date:                | 4-Feb-15 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ |        |               |          |
| Next Calibration Date:                | 3-Feb-16 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$  |        |               |          |

| Calibration of TSP Sampler |                                    |  |                     |                                |   |
|----------------------------|------------------------------------|--|---------------------|--------------------------------|---|
| Calibration Point          | Orifice                            |  |                     | HVS                            |   |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X - axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1                          | 12.7                               | 3.60   | 61.05               | 6.8                            | 2.63  |
| 2                          | 9.8                                | 3.16   | 53.68               | 5.4                            | 2.35  |
| 3                          | 7.6                                | 2.78   | 47.31               | 4.2                            | 2.07  |
| 4                          | 5.2                                | 2.30   | 39.20               | 2.9                            | 1.72  |
| 5                          | 3.4                                | 1.86   | 31.77               | 2.0                            | 1.43  |

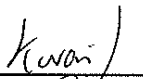

By Linear Regression of Y on X

Slope, mw = 0.0415 Intercept, bw : 0.1017  
 Correlation coefficient\* = 0.9998

\*If Correlation Coefficient < 0.990, check and recalibrate.

| Set Point Calculation   |  |
|---|--|
| From the TSP Field Calibration Curve, take Qstd = 43 CFM  |  |
| From the Regression Equation, the "Y" value according to  |  |
| $mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$                              |  |
| Therefore, Set Point; W = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ <u>3.50</u> |  |

Remarks: \_\_\_\_\_

Conducted by: Wk. Tang Signature:  Date: 5/1/16  
 Checked by: LA Signature:  Date: 5 January 2016



Equipment No A-04-06

TISCH ENVIRONMENTAL, INC.  
 145 SOUTH MIAMI AVE  
 VILLAGE OF CLEVELAND, OH  
 45002  
 513.467.9000  
 877.263.7610 TOLL FREE  
 513.467.9009 FAX

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Feb 04, 2015 Roots-meter S/N 0438320 Ta (K) - 293  
 Operator Tisch Orifice I.D. - 2896 Pa (mm) - 756.92

| PLATE OR Run # | VOLUME START (m3) | VOLUME STOP (m3) | DIFF VOLUME (m3) | DIFF TIME (min) | METER        | ORFICE         |
|----------------|-------------------|------------------|------------------|-----------------|--------------|----------------|
|                |                   |                  |                  |                 | DIFF Hg (mm) | DIFF H2O (in.) |
| 1              | NA                | NA               | 1.00             | 1.4590          | 3.2          | 2.00           |
| 2              | NA                | NA               | 1.00             | 1.0330          | 6.4          | 4.00           |
| 3              | NA                | NA               | 1.00             | 0.9250          | 7.9          | 5.00           |
| 4              | NA                | NA               | 1.00             | 0.8800          | 8.8          | 5.50           |
| 5              | NA                | NA               | 1.00             | 0.7260          | 12.7         | 8.00           |

DATA TABULATION

| Vstd                               | (x axis) Qstd | (y axis) | Va                        | (x axis) Qa | (y axis) |
|------------------------------------|---------------|----------|---------------------------|-------------|----------|
| 1.0086                             | 0.6913        | 1.4233   | 0.9958                    | 0.6825      | 0.8799   |
| 1.0044                             | 0.9723        | 2.0129   | 0.9916                    | 0.9599      | 1.2443   |
| 1.0023                             | 1.0835        | 2.2505   | 0.9895                    | 1.0697      | 1.3912   |
| 1.0011                             | 1.1377        | 2.3603   | 0.9884                    | 1.1231      | 1.4591   |
| 0.9959                             | 1.3718        | 2.8467   | 0.9832                    | 1.3542      | 1.7598   |
| Qstd slope (m) = 2.09317           |               |          | Qa slope (m) = 1.31071    |             |          |
| intercept (b) = -0.02195           |               |          | intercept (b) = -0.01357  |             |          |
| coefficient (r) = 0.99997          |               |          | coefficient (r) = 0.99997 |             |          |
| y axis = SQRT[H2O(Pa/760)(298/Ta)] |               |          | y axis = SQRT[H2O(Ta/Pa)] |             |          |

CALCULATIONS

Vstd = Diff. Vol [(Pa-Diff. Hg)/760] (298/Ta)  
 Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]  
 Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{ [SQRT(H2O(Pa/760)(298/Ta))] - b}  
 Qa = 1/m{ [SQRT H2O(Ta/Pa)] - b}

**TEST REPORT**

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

|                  |            |
|------------------|------------|
| Test Report No.: | C/160108/2 |
| Date of Issue:   | 2016-01-11 |
| Date Received:   | 2016-01-08 |
| Date Tested:     | 2016-01-08 |
| Date Completed:  | 2016-01-11 |
| Next Due Date:   | 2016-03-10 |

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

Page: 1 of 1

**Certificate of Calibration**

**Item for Calibration:**

Description : Laser Dust Monitor  
 Manufacturer : Sibata  
 Model No. : LD-3B  
 Serial No. : 853944  
 Sensitivity (K) 1 CPM : 0.001 mg/m<sup>3</sup>  
 Sen. Adjustment Scale Setting : 685 CPM  
 Equipment No. : A-02-04

**Test Conditions:**

Room Temperature : 22 degree Celsius  
 Relative Humidity : 59 %

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

**Results:**

|                         |        |
|-------------------------|--------|
| Correlation Factor (CF) | 0.0033 |
|-------------------------|--------|

\*\*\*\*\*

*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/160108/1 |
| Date of Issue:   | 2016-01-11 |
| Date Received:   | 2016-01-08 |
| Date Tested:     | 2016-01-08 |
| Date Completed:  | 2016-01-11 |
| Next Due Date:   | 2016-03-10 |

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**Certificate of Calibration**

**Item for Calibration:**

Description : Laser Dust Monitor  
 Manufacturer : Sibata  
 Model No. : LD-3B  
 Serial No. : 014750  
 Sensitivity (K) 1 CPM : 0.001 mg/m<sup>3</sup>  
 Sen. Adjustment Scale Setting : 790 CPM  
 Equipment No. : A-02-06

**Test Conditions:**

Room Temperature : 22 degree Celsius  
 Relative Humidity : 69 %

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

**Results:**

|                         |        |
|-------------------------|--------|
| Correlation Factor (CF) | 0.0031 |
|-------------------------|--------|

\*\*\*\*\*

*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/151224/2 |
| Date of Issue:   | 2015-12-28 |
| Date Received:   | 2015-12-24 |
| Date Tested:     | 2015-12-24 |
| Date Completed:  | 2015-12-28 |
| Next Due Date:   | 2016-02-27 |

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|                                   |
|-----------------------------------|
| <b>Certificate of Calibration</b> |
|-----------------------------------|

**Item for Calibration:**

|                               |                           |
|-------------------------------|---------------------------|
| Description                   | : Laser Dust Monitor      |
| Manufacturer                  | : Sibata                  |
| Model No.                     | : LD-3B                   |
| Serial No.                    | : 095050                  |
| Sensitivity (K) 1 CPM         | : 0.001 mg/m <sup>3</sup> |
| Sen. Adjustment Scale Setting | : 577 CPM                 |
| Equipment No.                 | : A-02-09                 |

**Test Conditions:**

|                   |                     |
|-------------------|---------------------|
| Room Temperature  | : 22 degree Celsius |
| Relative Humidity | : 59 %              |

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

**Results:**

|                         |        |
|-------------------------|--------|
| Correlation Factor (CF) | 0.0031 |
|-------------------------|--------|

\*\*\*\*\*

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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/150918/1 |
| Date of Issue:   | 2015-09-21   |
| Date Received:   | 2015-09-18   |
| Date Tested:     | 2015-09-18   |
| Date Completed:  | 2015-09-21   |
| Next Due Date:   | 2016-09-20   |

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### Certificate of Calibration

**Item for calibration:**

|                |   |
|----------------|---|
| Description    | : 'SVANTEK' Integrating Sound Level Meter |
| Manufacturer   | : SVANTEK                                 |
| Model No.      | : SVAN 955                                |
| Serial No.     | : 12553                                   |
| Microphone No. | : 35222                                   |
| Equipment No.  | : N-08-02                                 |

**Test conditions:**

|                   |                     |
|-------------------|---------------------|
| Room Temperature  | : 25 degree Celsius |
| Relative Humidity | : 58%               |

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

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

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**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/151231 |
| Date of Issue:   | 2016-01-04 |
| Date Received:   | 2015-12-31 |
| Date Tested:     | 2015-12-31 |
| Date Completed:  | 2016-01-04 |
| Next Due Date:   | 2017-01-03 |

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### Certificate of Calibration

**Item for calibration:**

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

**Test conditions:**

|                   |                     |
|-------------------|---------------------|
| Room Temperature  | : 22 degree Celsius |
| Relative Humidity | : 53%               |

**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.

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**PATRICK TSE**  
Laboratory Manager



**TEST REPORT**

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

|                  |              |
|------------------|--------------|
| Test Report No.: | C/N/150821/1 |
| Date of Issue:   | 2015-08-24   |
| Date Received:   | 2015-08-21   |
| Date Tested:     | 2015-08-21   |
| Date Completed:  | 2015-08-24   |
| Next Due Date:   | 2016-08-23   |

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**Certificate of Calibration**

**Item for calibration:**

|                |   |
|----------------|---|
| Description    | : 'SVANTEK' Integrating Sound Level Meter |
| Manufacturer   | : SVANTEK                                 |
| Model No.      | : SVAN 957                                |
| Serial No.     | : 21460                                   |
| Microphone No. | : 43679                                   |
| Equipment No.  | : N-08-09                                 |

**Test conditions:**

|                   |                     |
|-------------------|---------------------|
| Room Temperature  | : 22 degree Celsius |
| Relative Humidity | : 54%               |

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

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

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**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/151031/1 |
| Date of Issue:   | 2015-11-02   |
| Date Received:   | 2015-10-31   |
| Date Tested:     | 2015-10-31   |
| Date Completed:  | 2015-11-02   |
| Next Due Date:   | 2016-11-01   |

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### Item for calibration:

|               |                         |
|---------------|-------------------------|
| Description   | : Acoustical Calibrator |
| Manufacturer  | : SVANTEK               |
| Model No.     | : SV30A                 |
| Serial No.    | : 10965                 |
| Equipment No. | : N-09-02               |

### Test conditions:

|                   |                     |
|-------------------|---------------------|
| Room Temperature  | : 24 degree Celsius |
| Relative Humidity | : 56%               |

### Methodology:

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

### Results:

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

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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/151003/1 |
| Date of Issue:   | 2015-10-04   |
| Date Received:   | 2015-10-03   |
| Date Tested:     | 2015-10-03   |
| Date Completed:  | 2015-10-04   |
| Next Due Date:   | 2016-10-03   |

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### Item for calibration:

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

### Test conditions:

Room Temperature : 23 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 |

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**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/151003/3 |
| Date of Issue:   | 2015-10-04   |
| Date Received:   | 2015-10-03   |
| Date Tested:     | 2015-10-03   |
| Date Completed:  | 2015-10-04   |
| Next Due Date:   | 2016-10-03   |

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### Item for calibration:

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

### Test conditions:

|                   |                     |
|-------------------|---------------------|
| Room Temperature  | : 23 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 |

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



**PATRICK TSE**

Laboratory Manager

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**APPENDIX D  
1-HOUR AND 24-HOUR TSP  
MONITORING RESULTS AND  
GRAPHICAL PRESENTATIONS**

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## Appendix D - 1-hour TSP Monitoring Results

### Location AM6a - Works Site Boundary

| Start Date | Start Time | Weather Condition | Air Temp. (K) | Filter Weight (g) |        | Particulate weight (g) | Elapse Time |        | Sampling Time(hrs.) | Flow Rate (m <sup>3</sup> /min.) |       | Av. flow (m <sup>3</sup> /min) | Total vol. (m <sup>3</sup> ) | Conc. (µg/m <sup>3</sup> ) | Filter ID no. |
|------------|------------|-------------------|---------------|-------------------|--------|------------------------|-------------|--------|---------------------|----------------------------------|-------|--------------------------------|------------------------------|----------------------------|---------------|
|            |            |                   |               | Initial           | Final  |                        | Initial     | Final  |                     | Initial                          | Final |                                |                              |                            |               |
| 5-Jan-16   | 10:00      | Cloudy            | 293.7         | 3.2695            | 3.2754 | 0.0059                 | 3090.6      | 3091.6 | 1.0                 | 1.21                             | 1.21  | 1.21                           | 72.5                         | 81.4                       | 151203/053    |
| 5-Jan-16   | 11:00      | Cloudy            | 293.9         | 3.3259            | 3.3288 | 0.0029                 | 3091.6      | 3092.6 | 1.0                 | 1.21                             | 1.21  | 1.21                           | 72.5                         | 40.0                       | 151203/052    |
| 5-Jan-16   | 13:00      | Sunny             | 292.9         | 3.2953            | 3.3043 | 0.0090                 | 3092.6      | 3093.6 | 1.0                 | 1.21                             | 1.21  | 1.21                           | 72.5                         | 124.1                      | 151203/051    |
| 11-Jan-16  | 10:00      | Cloudy            | 289.7         | 3.2777            | 3.2858 | 0.0081                 | 3117.6      | 3118.6 | 1.0                 | 1.22                             | 1.22  | 1.22                           | 73.0                         | 110.9                      | 151204/080    |
| 11-Jan-16  | 11:00      | Cloudy            | 289.9         | 3.2599            | 3.2665 | 0.0066                 | 3118.6      | 3119.6 | 1.0                 | 1.22                             | 1.22  | 1.22                           | 73.0                         | 90.4                       | 151204/081    |
| 11-Jan-16  | 13:00      | Cloudy            | 292.9         | 3.2713            | 3.2788 | 0.0075                 | 3119.6      | 3120.6 | 1.0                 | 1.21                             | 1.21  | 1.21                           | 72.6                         | 103.4                      | 151204/082    |
| 15-Jan-16  | 10:00      | Cloudy            | 288.0         | 3.3031            | 3.3084 | 0.0053                 | 3144.6      | 3145.6 | 1.0                 | 1.22                             | 1.22  | 1.22                           | 73.2                         | 72.4                       | 160101/092    |
| 15-Jan-16  | 11:00      | Cloudy            | 288.1         | 3.2849            | 3.2885 | 0.0036                 | 3145.6      | 3146.6 | 1.0                 | 1.22                             | 1.22  | 1.22                           | 73.2                         | 49.2                       | 160101/093    |
| 15-Jan-16  | 13:00      | Cloudy            | 288.5         | 3.2685            | 3.2756 | 0.0071                 | 3146.6      | 3147.6 | 1.0                 | 1.22                             | 1.22  | 1.22                           | 73.1                         | 97.1                       | 160101/094    |
| 21-Jan-16  | 10:00      | Cloudy            | 288.3         | 3.2933            | 3.3033 | 0.0100                 | 3171.6      | 3172.6 | 1.0                 | 1.22                             | 1.22  | 1.22                           | 73.3                         | 136.4                      | 151204/056    |
| 21-Jan-16  | 11:00      | Cloudy            | 288.5         | 3.2861            | 3.2936 | 0.0075                 | 3172.6      | 3173.6 | 1.0                 | 1.22                             | 1.22  | 1.22                           | 73.3                         | 102.4                      | 151204/057    |
| 21-Jan-16  | 13:00      | Cloudy            | 288.9         | 3.3144            | 3.3271 | 0.0127                 | 3173.6      | 3174.6 | 1.0                 | 1.22                             | 1.22  | 1.22                           | 73.1                         | 173.7                      | 151204/058    |
| 27-Jan-16  | 10:00      | Cloudy            | 281.6         | 3.3382            | 3.3402 | 0.0020                 | 3198.6      | 3199.6 | 1.0                 | 1.24                             | 1.24  | 1.24                           | 74.4                         | 26.9                       | 160102/078    |
| 27-Jan-16  | 11:00      | Cloudy            | 281.8         | 3.3392            | 3.3411 | 0.0019                 | 3199.6      | 3200.6 | 1.0                 | 1.24                             | 1.24  | 1.24                           | 74.3                         | 25.6                       | 160102/079    |
| 27-Jan-16  | 13:00      | Cloudy            | 286.3         | 3.3291            | 3.3310 | 0.0019                 | 3200.6      | 3201.6 | 1.0                 | 1.23                             | 1.23  | 1.23                           | 73.6                         | 25.8                       | 160102/080    |
|            |            |                   |               |                   |        |                        |             |        |                     |                                  |       |                                | Min                          | 26                         |               |
|            |            |                   |               |                   |        |                        |             |        |                     |                                  |       |                                | Max                          | 174                        |               |
|            |            |                   |               |                   |        |                        |             |        |                     |                                  |       |                                | Average                      | 84                         |               |

## Appendix D - 1-hour TSP Monitoring Results

| Location AM7 - North West Kowloon Sewage Pumping Station |       |         |  |
|--|-------|---------|--|
| Date   | Time  | Weather | Particulate Concentration ( $\mu\text{g}/\text{m}^3$ ) |
| 5-Jan-16   | 14:00 | Cloudy  | 94   |
| 5-Jan-16   | 15:00 | Cloudy  | 97   |
| 5-Jan-16   | 16:00 | Cloudy  | 98   |
| 11-Jan-16  | 14:00 | Cloudy  | 94   |
| 11-Jan-16  | 15:00 | Cloudy  | 93   |
| 11-Jan-16  | 16:00 | Cloudy  | 93   |
| 15-Jan-16  | 14:00 | Cloudy  | 110  |
| 15-Jan-16  | 15:00 | Cloudy  | 116  |
| 15-Jan-16  | 16:00 | Cloudy  | 116  |
| 21-Jan-16  | 14:00 | Cloudy  | 193  |
| 21-Jan-16  | 15:00 | Cloudy  | 187  |
| 21-Jan-16  | 16:00 | Cloudy  | 192  |
| 27-Jan-16  | 14:00 | Cloudy  | 161  |
| 27-Jan-16  | 15:00 | Cloudy  | 167  |
| 27-Jan-16  | 16:00 | Cloudy  | 169  |
|  |       | Average | 132  |
|  |       | Maximum | 193  |
|  |       | Minimum | 93   |

| Location AM8 - Block A of Government Dockyard |       |         |  |
|---|-------|---------|--|
| Date  | Time  | Weather | Particulate Concentration ( $\mu\text{g}/\text{m}^3$ ) |
| 5-Jan-16                                      | 9:00  | Cloudy  | 74   |
| 5-Jan-16                                      | 10:00 | Cloudy  | 78   |
| 5-Jan-16                                      | 11:00 | Cloudy  | 79   |
| 11-Jan-16                                     | 9:00  | Cloudy  | 79   |
| 11-Jan-16                                     | 10:00 | Cloudy  | 79   |
| 11-Jan-16                                     | 11:00 | Cloudy  | 77   |
| 15-Jan-16                                     | 9:00  | Cloudy  | 93   |
| 15-Jan-16                                     | 10:00 | Cloudy  | 97   |
| 15-Jan-16                                     | 11:00 | Cloudy  | 95   |
| 21-Jan-16                                     | 9:00  | Cloudy  | 160  |
| 21-Jan-16                                     | 10:00 | Cloudy  | 162  |
| 21-Jan-16                                     | 11:00 | Cloudy  | 159  |
| 27-Jan-16                                     | 9:00  | Cloudy  | 131  |
| 27-Jan-16                                     | 10:00 | Cloudy  | 131  |
| 27-Jan-16                                     | 11:00 | Cloudy  | 137  |
|   |       | Average | 109  |
|   |       | Maximum | 162  |
|   |       | Minimum | 74   |

## Appendix D - 24-hour TSP Monitoring Results

### Location AM6a - Works Site Boundary

| Start Date | Weather Condition | Air Temp. (K) | Filter Weight (g) |        | Particulate weight (g) | Elapse Time |        | Sampling Time(hrs.) | Flow Rate (m <sup>3</sup> /min.) |       | Av. flow (m <sup>3</sup> /min) | Total vol. (m <sup>3</sup> ) | Conc. (µg/m <sup>3</sup> ) | Filter ID no. |
|------------|-------------------|---------------|-------------------|--------|------------------------|-------------|--------|---------------------|----------------------------------|-------|--------------------------------|------------------------------|----------------------------|---------------|
|            |                   |               | Initial           | Final  |                        | Initial     | Final  |                     | Initial                          | Final |                                |                              |                            |               |
| 4-Jan-16   | Cloudy            | 292.9         | 3.2894            | 3.4078 | 0.1184                 | 3066.6      | 3090.6 | 24.0                | 1.21                             | 1.21  | 1.21                           | 1746.5                       | 67.8                       | 151204/022    |
| 8-Jan-16   | Cloudy            | 291.3         | 3.3121            | 3.4636 | 0.1515                 | 3093.6      | 3117.6 | 24.0                | 1.22                             | 1.22  | 1.22                           | 1752.2                       | 86.5                       | 151203/050    |
| 14-Jan-16  | Cloudy            | 288.7         | 3.2795            | 3.4491 | 0.1696                 | 3120.6      | 3144.6 | 24.0                | 1.22                             | 1.22  | 1.22                           | 1759.6                       | 96.4                       | 151204/079    |
| 20-Jan-16  | Cloudy            | 287.9         | 3.2841            | 3.5657 | 0.2816                 | 3147.6      | 3171.6 | 24.0                | 1.22                             | 1.22  | 1.22                           | 1762.5                       | 159.8                      | 160101/091    |
| 26-Jan-16  | Cloudy            | 281.3         | 3.3137            | 3.5988 | 0.2851                 | 3174.6      | 3198.6 | 24.0                | 1.24                             | 1.24  | 1.24                           | 1789.5                       | 159.3                      | 151204/055    |
|            |                   |               |                   |        |                        |             |        |                     |                                  |       |                                | Min                          | 68                         |               |
|            |                   |               |                   |        |                        |             |        |                     |                                  |       |                                | Max                          | 160                        |               |
|            |                   |               |                   |        |                        |             |        |                     |                                  |       |                                | Average                      | 114                        |               |

### Location AM7 - North West Kowloon Sewage Pumping Station

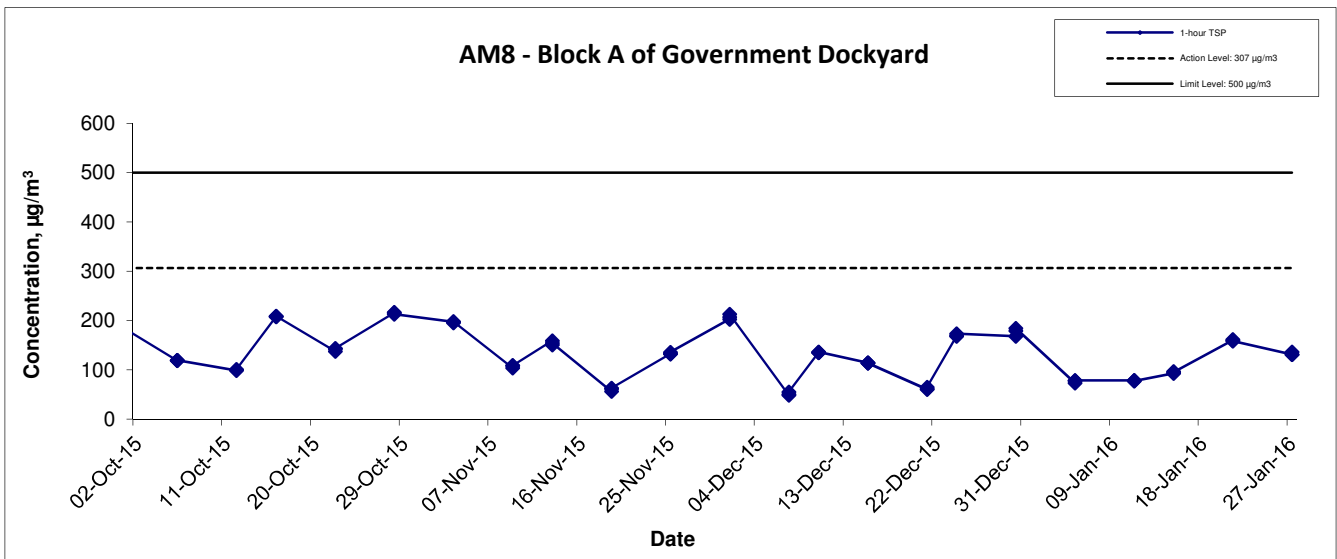
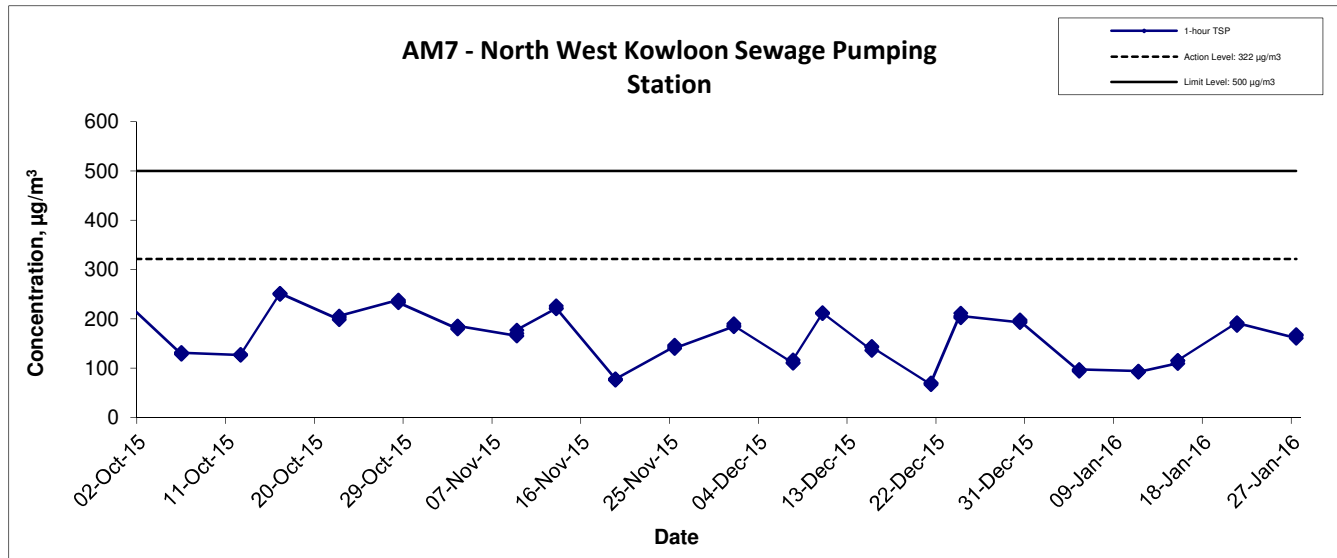
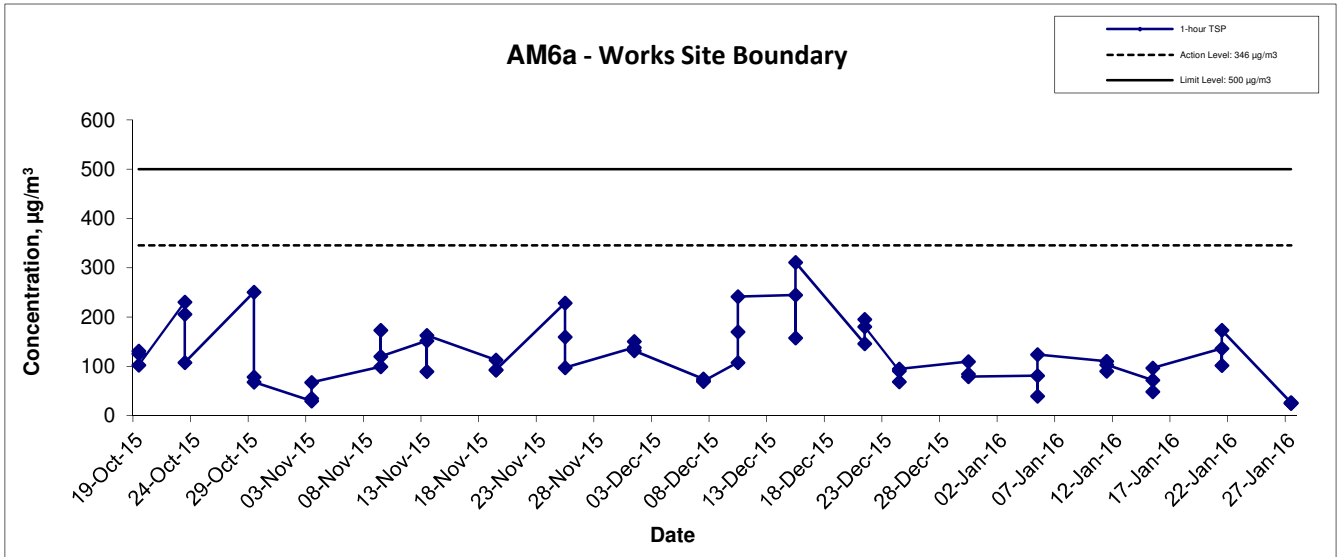
| Start Date | Weather Condition | Air Temp. (K) | Filter Weight (g) |        | Particulate weight (g) | Elapse Time |         | Sampling Time(hrs.) | Flow Rate (m <sup>3</sup> /min.) |       | Av. flow (m <sup>3</sup> /min) | Total vol. (m <sup>3</sup> ) | Conc. (µg/m <sup>3</sup> ) | Filter ID no. |
|------------|-------------------|---------------|-------------------|--------|------------------------|-------------|---------|---------------------|----------------------------------|-------|--------------------------------|------------------------------|----------------------------|---------------|
|            |                   |               | Initial           | Final  |                        | Initial     | Final   |                     | Initial                          | Final |                                |                              |                            |               |
| 4-Jan-16   | Cloudy            | 293.7         | 3.2835            | 3.4456 | 0.1621                 | 32513.3     | 32537.3 | 24.0                | 1.25                             | 1.25  | 1.25                           | 1800.6                       | 90.0                       | 151204/023    |
| 8-Jan-16   | Cloudy            | 291.8         | 3.3283            | 3.5264 | 0.1981                 | 32537.3     | 32561.3 | 24.0                | 1.23                             | 1.23  | 1.23                           | 1768.3                       | 112.0                      | 151103/054    |
| 14-Jan-16  | Cloudy            | 288.9         | 3.2492            | 3.4522 | 0.2030                 | 32561.3     | 32585.3 | 24.0                | 1.23                             | 1.23  | 1.23                           | 1776.8                       | 114.2                      | 151204/083    |
| 20-Jan-16  | Cloudy            | 287.6         | 3.2826            | 3.4446 | 0.1620                 | 32585.3     | 32609.3 | 24.0                | 1.24                             | 1.24  | 1.24                           | 1782.6                       | 90.9                       | 160101/096    |
| 26-Jan-16  | Cloudy            | 281.6         | 3.3179            | 3.6523 | 0.3344                 | 32609.3     | 32633.3 | 24.0                | 1.26                             | 1.26  | 1.26                           | 1810.7                       | 184.7                      | 151204/060    |
|            |                   |               |                   |        |                        |             |         |                     |                                  |       |                                | Min                          | 90                         |               |
|            |                   |               |                   |        |                        |             |         |                     |                                  |       |                                | Max                          | 185                        |               |
|            |                   |               |                   |        |                        |             |         |                     |                                  |       |                                | Average                      | 118                        |               |

### Location AM8 - Block A of Government Dockyard

| Start Date | Weather Condition | Air Temp. (K) | Filter Weight (g) |        | Particulate weight (g) | Elapse Time |        | Sampling Time(hrs.) | Flow Rate (m <sup>3</sup> /min.) |       | Av. flow (m <sup>3</sup> /min) | Total vol. (m <sup>3</sup> ) | Conc. (µg/m <sup>3</sup> ) | Filter ID no. |
|------------|-------------------|---------------|-------------------|--------|------------------------|-------------|--------|---------------------|----------------------------------|-------|--------------------------------|------------------------------|----------------------------|---------------|
|            |                   |               | Initial           | Final  |                        | Initial     | Final  |                     | Initial                          | Final |                                |                              |                            |               |
| 4-Jan-16   | Cloudy            | 293.4         | 3.2906            | 3.3357 | 0.0451                 | 6018.0      | 6042.0 | 24.0                | 1.23                             | 1.23  | 1.23                           | 1777.2                       | 25.4                       | 151204/024    |
| 8-Jan-16   | Cloudy            | 291.4         | 3.2830            | 3.3858 | 0.1028                 | 6042.0      | 6066.0 | 24.0                | 1.23                             | 1.23  | 1.23                           | 1765.2                       | 58.2                       | 151204/026    |
| 14-Jan-16  | Cloudy            | 289.7         | 3.2469            | 3.3174 | 0.0705                 | 6066.0      | 6090.0 | 24.0                | 1.23                             | 1.23  | 1.23                           | 1768.8                       | 39.9                       | 151204/084    |
| 20-Jan-16  | Cloudy            | 288.6         | 3.2761            | 3.3248 | 0.0487                 | 6090.0      | 6114.0 | 24.0                | 1.23                             | 1.23  | 1.23                           | 1772.7                       | 27.5                       | 160101/095    |
| 26-Jan-16  | Cloudy            | 282.5         | 3.2878            | 3.4066 | 0.1188                 | 6114.0      | 6138.0 | 24.0                | 1.25                             | 1.25  | 1.25                           | 1795.9                       | 66.1                       | 151204/061    |
|            |                   |               |                   |        |                        |             |        |                     |                                  |       |                                | Min                          | 25                         |               |
|            |                   |               |                   |        |                        |             |        |                     |                                  |       |                                | Max                          | 66                         |               |
|            |                   |               |                   |        |                        |             |        |                     |                                  |       |                                | Average                      | 43                         |               |

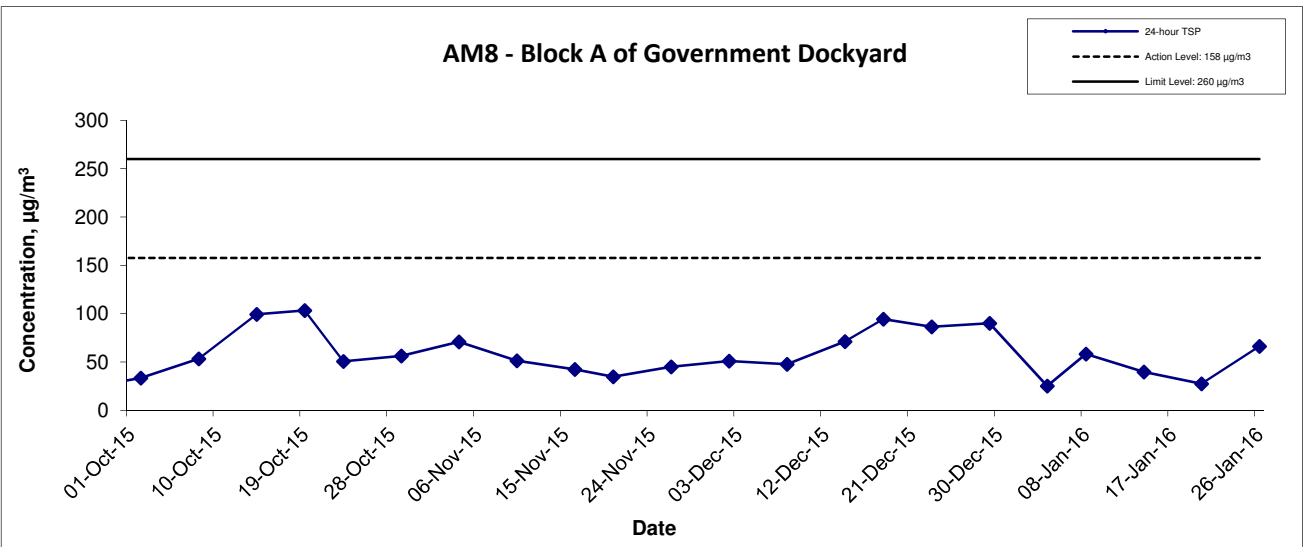
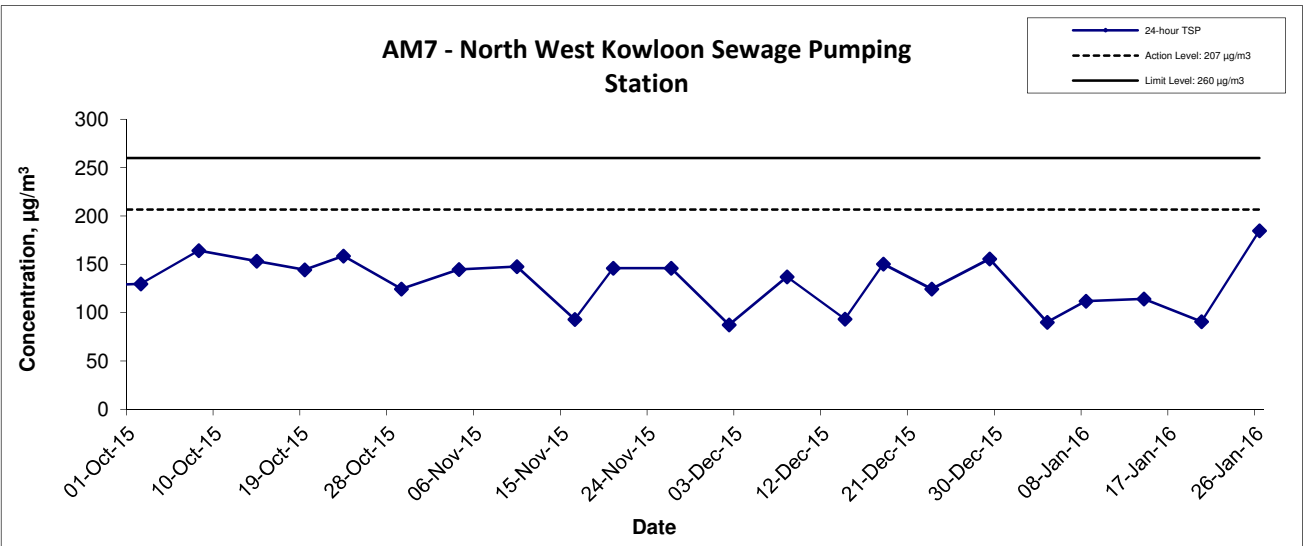
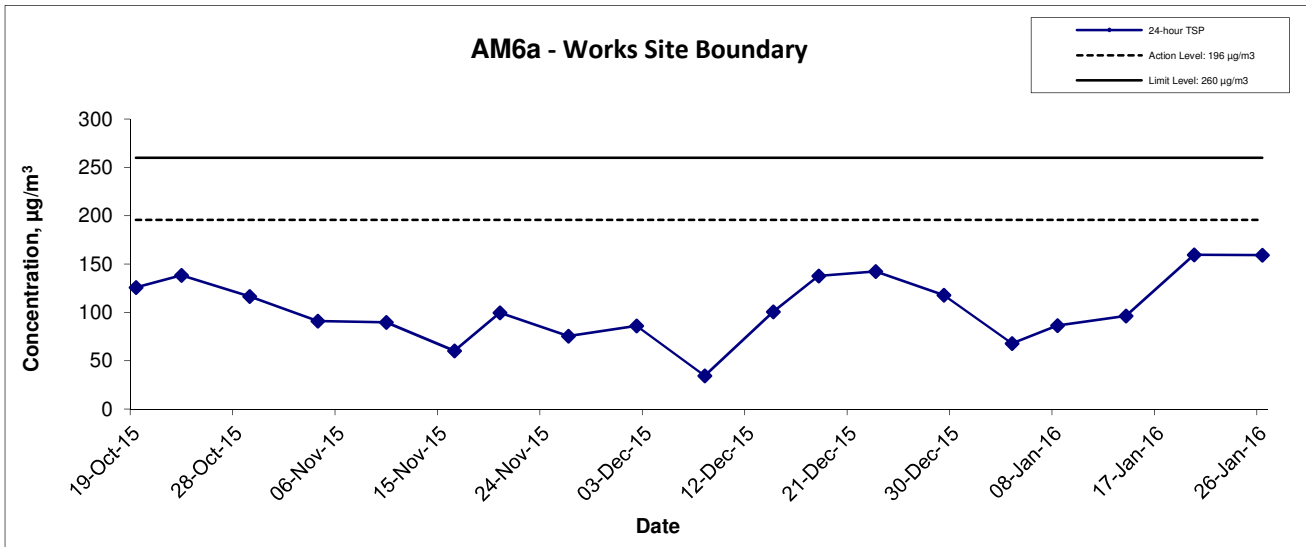


### 1-hr TSP Concentration Levels



|       |   |        |             |          |
|-------|---|--------|-------------|----------|
| Title | Contract No. DC/2009/10   | Scale  | Project     | CINOTECH |
|       | HATS 2A – Upgrading Works at SCISTW–<br>Main Pumping Station, Sedimentation Tanks and Ancillary | N.T.S  | No. MA11007 |          |
|       | Graphical Presentation of 1-hour TSP Monitoring Results   | Date   | Appendix    |          |
|       |   | Jan 16 | D           |          |

### 24-hr TSP Concentration Levels



|   |                |                        |  |
|---|----------------|------------------------|--|
| Title<br>Contract No. DC/2009/10<br>HATS 2A – Upgrading Works at SCISTW–<br>Main Pumping Station, Sedimentation Tanks and Ancillary<br>Graphical Presentation of 24-hour TSP Monitoring Results | Scale<br>N.T.S | Project<br>No. MA11007 |  |
|   | Date<br>Jan 16 | Appendix<br>D          |  |

## Appendix D - 1-hour TSP Monitoring Results

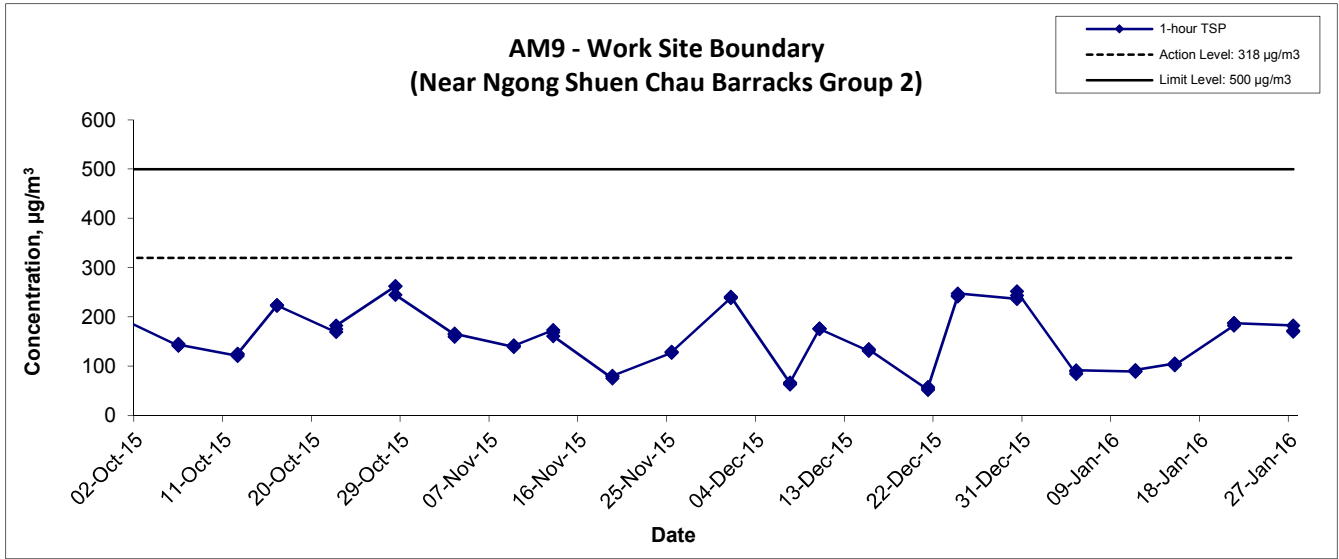
| Location AM9 - Work Site Boundary (Near Ngong Shuen Chau Barracks Group 2) |       |         |  |
|--|-------|---------|--|
| Date   | Time  | Weather | Particulate Concentration ( $\mu\text{g}/\text{m}^3$ ) |
| 5-Jan-16   | 9:00  | Cloudy  | 84.9   |
| 5-Jan-16   | 10:00 | Cloudy  | 89.2   |
| 5-Jan-16   | 11:00 | Cloudy  | 91.9   |
| 11-Jan-16  | 9:00  | Cloudy  | 89.2   |
| 11-Jan-16  | 10:00 | Cloudy  | 89.8   |
| 11-Jan-16  | 11:00 | Cloudy  | 92.5   |
| 15-Jan-16  | 9:00  | Cloudy  | 105.6  |
| 15-Jan-16  | 10:00 | Cloudy  | 105.7  |
| 15-Jan-16  | 11:00 | Cloudy  | 102.1  |
| 21-Jan-16  | 9:00  | Cloudy  | 183.0  |
| 21-Jan-16  | 10:00 | Cloudy  | 187.0  |
| 21-Jan-16  | 11:00 | Cloudy  | 187.6  |
| 27-Jan-16  | 9:00  | Cloudy  | 182.9  |
| 27-Jan-16  | 10:00 | Cloudy  | 172.0  |
| 27-Jan-16  | 11:00 | Cloudy  | 170.3  |
|  |       | Average | 128.9  |
|  |       | Maximum | 187.6  |
|  |       | Minimum | 84.9   |

## Appendix D - 24-hour TSP Monitoring Results

### Location AM9 - Work Site Boundary (Near Ngong Shuen Chau Barracks Group 2)

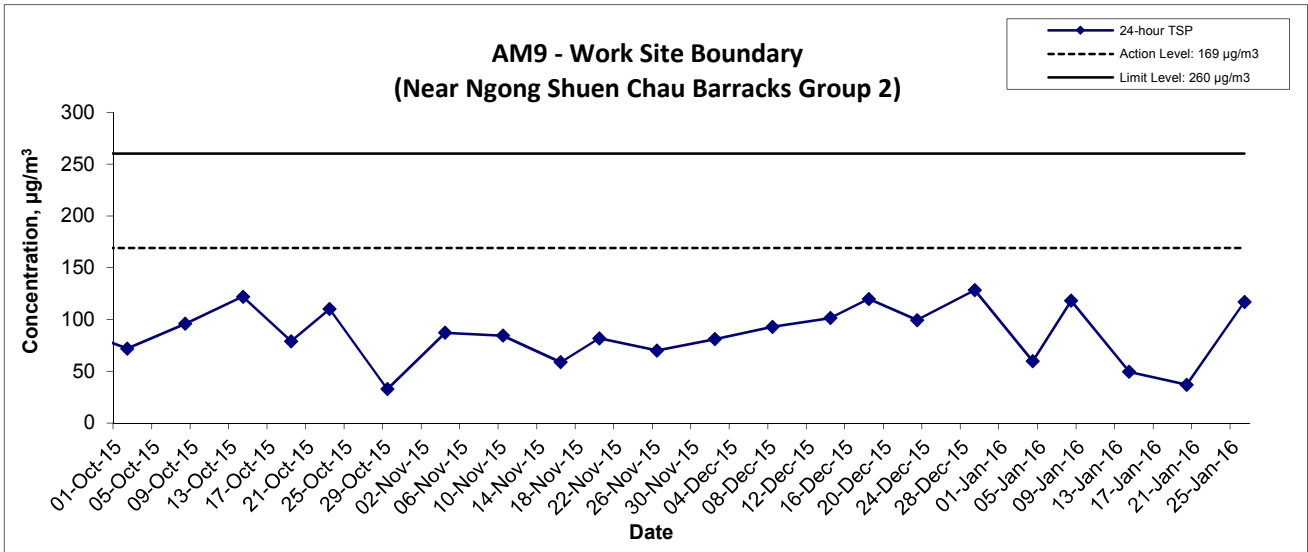
| Start Date | Weather Condition | Air Temp. (K) | Filter Weight (g) |        | Particulate Weight (g) | Elapse Time |        | Sampling Time(hrs.) | Flow Rate (m <sup>3</sup> /min.) |       | Av. flow (m <sup>3</sup> /min) | Total vol. (m <sup>3</sup> ) | Conc. (µg/m <sup>3</sup> ) |
|------------|-------------------|---------------|-------------------|--------|------------------------|-------------|--------|---------------------|----------------------------------|-------|--------------------------------|------------------------------|----------------------------|
|            |                   |               | Initial           | Final  |                        | Initial     | Final  |                     | Initial                          | Final |                                |                              |                            |
| 4-Jan-16   | Cloudy            | 292.4         | 3.2678            | 3.3754 | 0.1076                 | 5385.6      | 5409.6 | 24.0                | 1.25                             | 1.25  | 1.25                           | 1805.3                       | 59.6                       |
| 8-Jan-16   | Cloudy            | 291.6         | 3.3219            | 3.5306 | 0.2087                 | 5409.6      | 5433.6 | 24.0                | 1.23                             | 1.23  | 1.23                           | 1768.6                       | 118.0                      |
| 14-Jan-16  | Cloudy            | 288.4         | 3.2725            | 3.3602 | 0.0877                 | 5433.6      | 5457.6 | 24.0                | 1.23                             | 1.23  | 1.23                           | 1777.7                       | 49.3                       |
| 20-Jan-16  | Cloudy            | 287.7         | 3.2875            | 3.3533 | 0.0658                 | 5457.6      | 5481.6 | 24.0                | 1.24                             | 1.24  | 1.24                           | 1781.2                       | 36.9                       |
| 26-Jan-16  | Cloudy            | 281.6         | 3.3008            | 3.5121 | 0.2113                 | 5481.6      | 5505.6 | 24.0                | 1.26                             | 1.25  | 1.26                           | 1807.3                       | 116.9                      |
|            |                   |               |                   |        |                        |             |        |                     |                                  |       |                                | Min                          | 36.9                       |
|            |                   |               |                   |        |                        |             |        |                     |                                  |       |                                | Max                          | 118.0                      |
|            |                   |               |                   |        |                        |             |        |                     |                                  |       |                                | Average                      | 76.2                       |

### 1-hr TSP Concentration Levels



|  |                |                        |                 |
|--|----------------|------------------------|-----------------|
| Title<br>Contract No. DC/2009/18<br>HATS 2A – Upgrading Works at SCISTW–<br>Effluent Tunnel and Disinfection Facilities<br>Graphical Presentation of 1-hour TSP Monitoring Results | Scale<br>N.T.S | Project<br>No. MA11043 | <b>CINOTECH</b> |
|  | Date<br>Jan 16 | Appendix<br>D          |                 |

**24-hr TSP Concentration Levels**



|   |                |                        |                 |
|---|----------------|------------------------|-----------------|
| Title<br>Contract No. DC/2009/18<br>HATS 2A – Upgrading Works at SCISTW–<br>Effluent Tunnel and Disinfection Facilities<br>Graphical Presentation of 24-hour TSP Monitoring Results | Scale<br>N.T.S | Project<br>No. MA11043 | <b>CINOTECH</b> |
|   | Date<br>Jan 16 | Appendix<br>D          |                 |

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

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## Appendix E - Noise Monitoring Results

(0700-1900 hrs on Normal Weekdays)

| Location NM5 - Near FSD Diving Rescue and Training Centre |       |         |                       |                 |                 |
|---|-------|---------|-----------------------|-----------------|-----------------|
| Date  | Time  | Weather | Unit: dB (A) (30-min) |                 |                 |
|   |       |         | Measured Noise Level  |                 |                 |
|   |       |         | L <sub>eq</sub>       | L <sub>10</sub> | L <sub>90</sub> |
| 5-Jan-16  | 10:00 | Cloudy  | 69.2                  | 70.8            | 66.4            |
| 11-Jan-16   | 10:00 | Cloudy  | 67.2                  | 69.0            | 65.2            |
| 21-Jan-16   | 11:00 | Cloudy  | 70.6                  | 72.5            | 67.9            |
| 27-Jan-16   | 10:30 | Cloudy  | 69.2                  | 71.0            | 66.4            |
| Maximum   |       |         | 70.6                  |                 |                 |
| Minimum   |       |         | 67.2                  |                 |                 |

| Location NM6 - Customs' Marine Base<br>(Block H of Government Dockyard) Rooftop |       |         |                       |                 |                 |
|---|-------|---------|-----------------------|-----------------|-----------------|
| Date  | Time  | Weather | Unit: dB (A) (30-min) |                 |                 |
|   |       |         | Measured Noise Level  |                 |                 |
|   |       |         | L <sub>eq</sub>       | L <sub>10</sub> | L <sub>90</sub> |
| 5-Jan-16  | 11:00 | Cloudy  | 69.4                  | 70.8            | 67.6            |
| 11-Jan-16   | 11:00 | Cloudy  | 67.1                  | 69.3            | 64.6            |
| 21-Jan-16   | 13:00 | Cloudy  | 65.0                  | 66.5            | 63.2            |
| 27-Jan-16   | 13:00 | Cloudy  | 66.1                  | 67.4            | 64.5            |
| Maximum   |       |         | 69.4                  |                 |                 |
| Minimum   |       |         | 65.0                  |                 |                 |

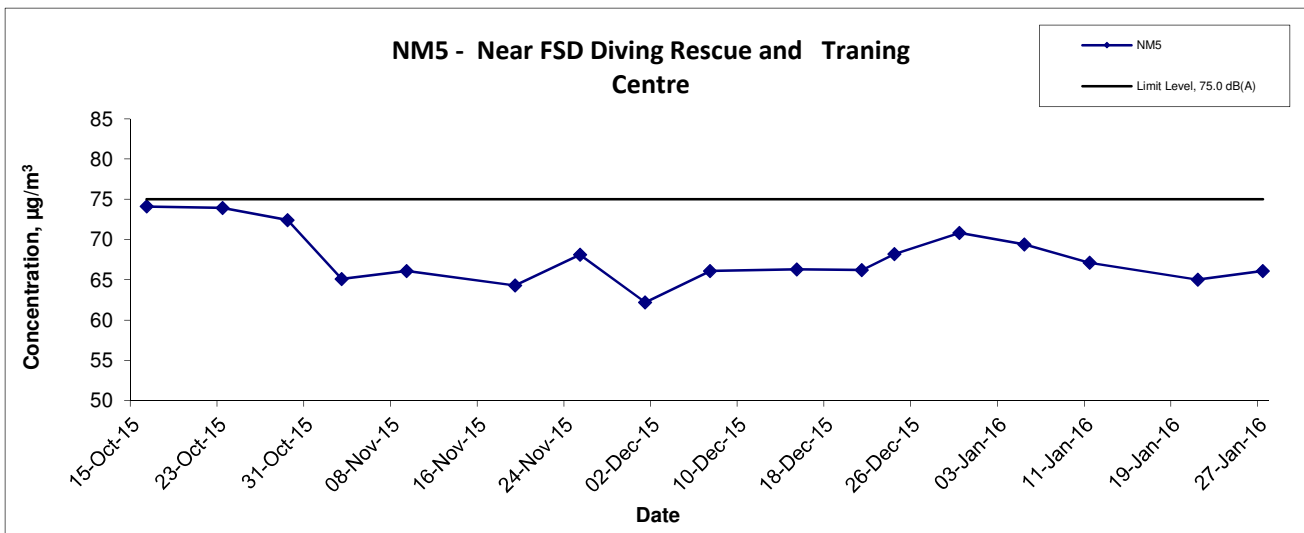
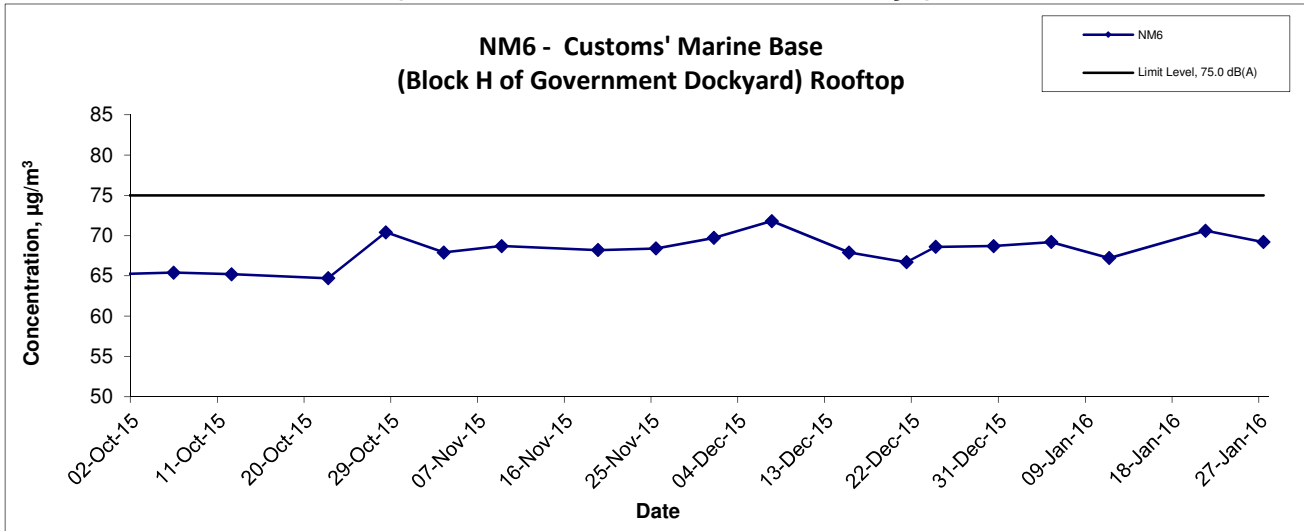
(Restricted Hours - 07:00 to 23:00 holidays & 19:00 to 23:00 on all other days )

| Location NM5 - Near FSD Diving Rescue and Training Centre |       |         |                 |                 |                 |                         |
|---|-------|---------|-----------------|-----------------|-----------------|-------------------------|
| Date  | Time  | Weather | dB (A) (5-min)  |                 |                 |                         |
|   |       |         | L <sub>eq</sub> | L <sub>10</sub> | L <sub>90</sub> | Average L <sub>eq</sub> |
| 5-Jan-16  | 19:00 | Fine    | 64.8            | 68.0            | 62.5            | 64.8                    |
|   | 19:05 |         | 65.0            | 67.8            | 62.7            |                         |
|   | 19:10 |         | 64.6            | 67.2            | 62.0            |                         |
| 11-Jan-16   | 19:00 | Fine    | 66.2            | 68.6            | 64.3            | 66.1                    |
|   | 19:05 |         | 66.6            | 68.9            | 63.9            |                         |
|   | 19:10 |         | 65.3            | 68.0            | 62.4            |                         |
| 21-Jan-16   | 19:00 | Fine    | 65.7            | 67.2            | 62.4            | 65.7                    |
|   | 19:05 |         | 66.1            | 68.5            | 62.7            |                         |
|   | 19:10 |         | 65.4            | 67.8            | 62.6            |                         |
| 27-Jan-16   | 19:00 | Fine    | 66.4            | 68.9            | 64.1            | 66.2                    |
|   | 19:05 |         | 66.5            | 68.9            | 63.8            |                         |
|   | 19:10 |         | 65.8            | 68.7            | 63.2            |                         |
| Maximum   |       |         | 66.6            |                 |                 |                         |
| Minimum   |       |         | 64.6            |                 |                 |                         |

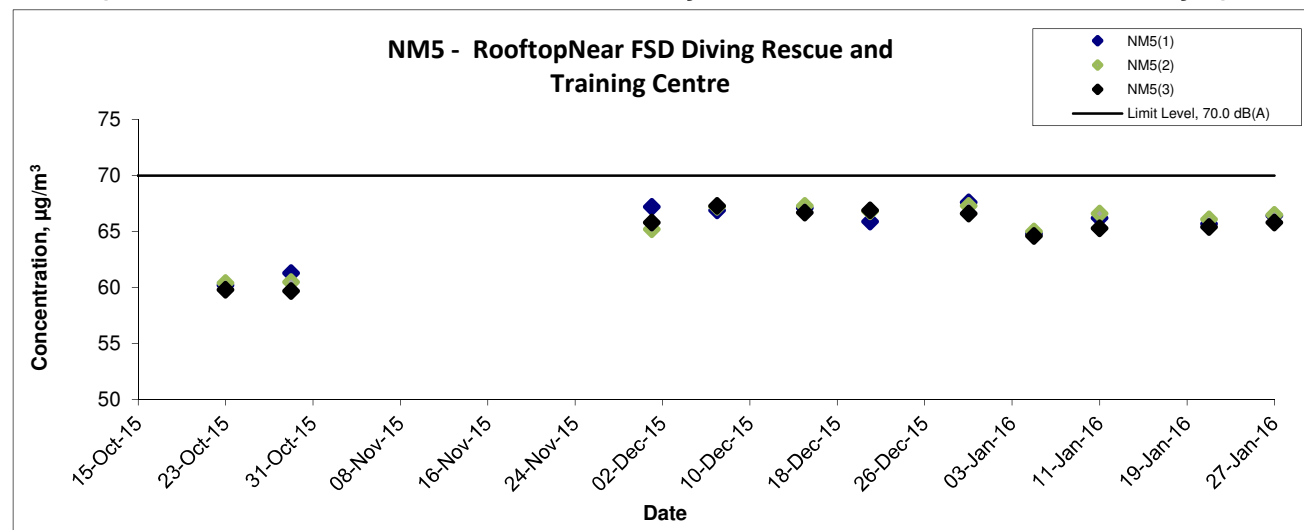


## Noise Levels

**(0700-1900 hrs on Normal Weekdays)**



**(Restricted Hours - 07:00 to 23:00 holidays & 19:00 to 23:00 on all other days)**



|  |                |                        |  |
|--|----------------|------------------------|--|
| Title<br>Contract No. DC/2009/10<br>HATS 2A – Upgrading Works at SCISTW–<br>Main Pumping Station, Sedimentation Tanks and Ancillary<br>Graphical Presentation of Noise Monitoring Result | Scale<br>N.T.S | Project No.<br>MA11007 |  |
|  | Date<br>Jan 16 | Appendix<br>E          |  |

## Appendix E - Noise Monitoring Results

(0700-1900 hrs on Normal Weekdays)

| Location NM7 - Open Area near Naval Base Barrack |      |         |                       |                 |                 |
|--|------|---------|-----------------------|-----------------|-----------------|
| Date   | Time | Weather | Unit: dB (A) (30-min) |                 |                 |
|  |      |         | Measured Noise Level  |                 |                 |
|  |      |         | L <sub>eq</sub>       | L <sub>10</sub> | L <sub>90</sub> |
| 5-Jan-16   | 9:10 | Cloudy  | 70.2                  | 72.4            | 67.8            |
| 11-Jan-16  | 9:05 | Cloudy  | 68.2                  | 70.3            | 66.2            |
| 21-Jan-16  | 9:05 | Cloudy  | 71.4                  | 74.6            | 66.3            |
| 27-Jan-16  | 9:05 | Cloudy  | 72.4                  | 74.5            | 67.8            |

(Restricted Hours - 07:00 to 23:00 holidays & 19:00 to 23:00 on all other days )

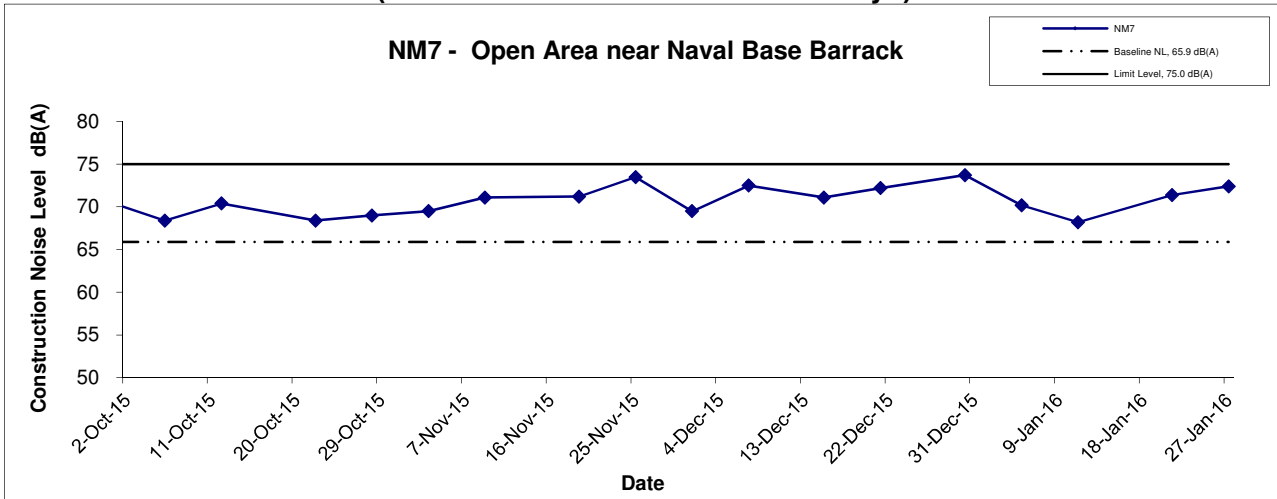
| Location NM7 - Open Area near Naval Base Barrack |       |         |                 |                 |                 |                         |
|--|-------|---------|-----------------|-----------------|-----------------|-------------------------|
| Date   | Time  | Weather | dB (A) (5-min)  |                 |                 |                         |
|  |       |         | L <sub>eq</sub> | L <sub>10</sub> | L <sub>90</sub> | Average L <sub>eq</sub> |
| 5-Jan-16   | 19:00 | Fine    | 64.6            | 66.9            | 59.8            | 64.2                    |
|  | 19:05 |         | 63.8            | 66.2            | 60.0            |                         |
|  | 19:10 |         | 64.1            | 66.5            | 59.5            |                         |
| 11-Jan-16  | 19:00 | Fine    | 64.5            | 66.5            | 60.2            | 64.8                    |
|  | 19:05 |         | 64.9            | 67.2            | 60.6            |                         |
|  | 19:10 |         | 65.1            | 67.4            | 61.2            |                         |
| 21-Jan-16  | 19:00 | Fine    | 63.8            | 65.7            | 59.9            | 64.1                    |
|  | 19:05 |         | 64.0            | 66.4            | 61.2            |                         |
|  | 19:10 |         | 64.6            | 67.1            | 61.3            |                         |
| 27-Jan-16  | 19:00 | Fine    | 64.8            | 66.9            | 61.4            | 64.7                    |
|  | 19:05 |         | 65.2            | 67.6            | 61.5            |                         |
|  | 19:10 |         | 63.9            | 66.3            | 60.4            |                         |

(Restricted Hours - 23:00 to 07:00 on all days )

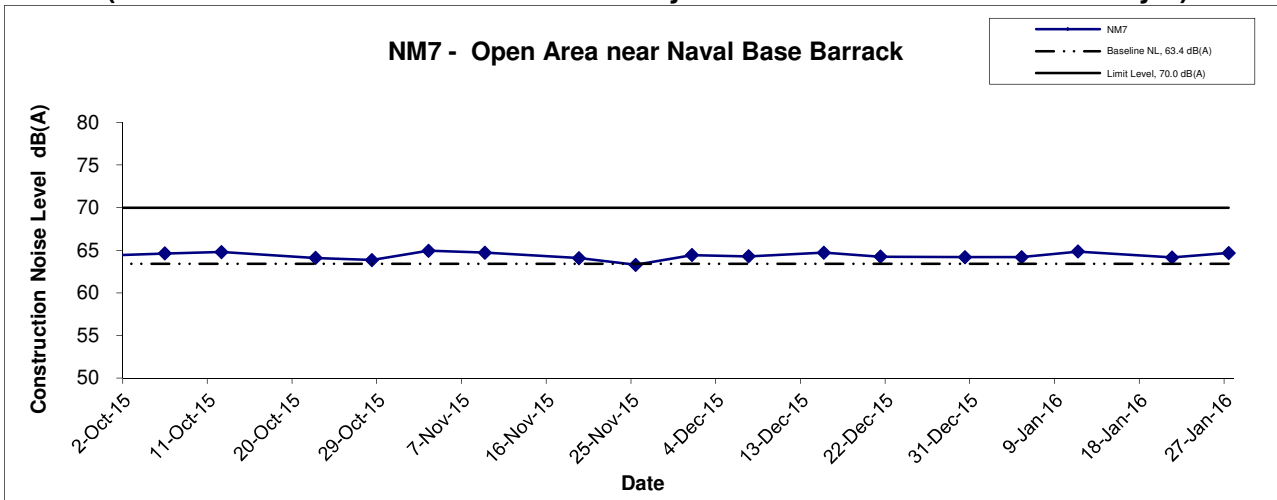
| Location NM7 - Open Area near Naval Base Barrack |       |         |                 |                 |                 |                         |                 |                          |      |                          |
|--|-------|---------|-----------------|-----------------|-----------------|-------------------------|-----------------|--------------------------|------|--------------------------|
| Date   | Time  | Weather | dB (A) (5-min)  |                 |                 |                         | Baseline Level  | Construction Noise Level |      |                          |
|  |       |         | L <sub>eq</sub> | L <sub>10</sub> | L <sub>90</sub> | Average L <sub>eq</sub> | L <sub>eq</sub> | L <sub>eq</sub>          |      |                          |
| 5-Jan-16   | 23:00 | Fine    | 59.2            | 61.4            | 55.8            | 58.5                    | 59.7            | 58.5 Measured ≤ Baseline |      |                          |
|  | 23:05 |         | 57.8            | 60.1            | 55.0            |                         |                 |                          |      |                          |
|  | 23:10 |         | 58.5            | 60.6            | 55.4            |                         |                 |                          |      |                          |
| 11-Jan-16  | 23:00 | Fine    | 57.9            | 59.9            | 55.5            | 58.2                    |                 |                          | 59.7 | 58.2 Measured ≤ Baseline |
|  | 23:05 |         | 58.3            | 60.2            | 55.7            |                         |                 |                          |      |                          |
|  | 23:10 |         | 58.5            | 60.6            | 55.9            |                         |                 |                          |      |                          |
| 21-Jan-16  | 23:00 | Fine    | 59.1            | 60.9            | 55.7            | 58.6                    | 59.7            | 58.6 Measured ≤ Baseline |      |                          |
|  | 23:05 |         | 58.4            | 60.7            | 55.2            |                         |                 |                          |      |                          |
|  | 23:10 |         | 58.1            | 60.3            | 55.1            |                         |                 |                          |      |                          |
| 27-Jan-16  | 23:00 | Fine    | 58.4            | 60.5            | 54.9            | 58.3                    |                 |                          | 59.7 | 58.3 Measured ≤ Baseline |
|  | 23:05 |         | 57.9            | 60.0            | 55.0            |                         |                 |                          |      |                          |
|  | 23:10 |         | 58.7            | 60.9            | 55.6            |                         |                 |                          |      |                          |

## Noise Levels

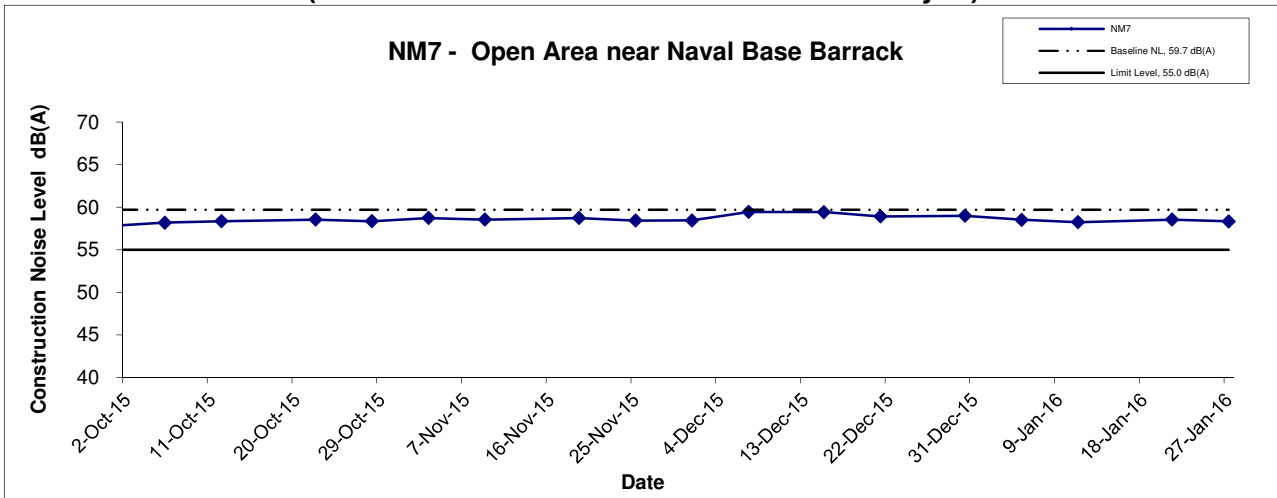
**(0700-1900 hrs on Normal Weekdays)**



**(Restricted Hours - 07:00 - 23:00 holidays & 19:00 - 23:00 on all other days )**



**(Restricted Hours - 23:00 to 07:00 on all days )**



|  |                |                        |  |
|--|----------------|------------------------|--|
| Title<br>Contract No. DC/2009/18<br>HATS 2A – Upgrading Works at SCISTW–<br>Effluent Tunnel and Disinfection Facilities<br><br>Graphical Presentation of Noise Monitoring Result (NM7) | Scale<br>N.T.S | Project<br>No. MA11043 |  |
|  | Date<br>Jan 16 | Appendix<br>E          |  |

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**APPENDIX F  
ENVIRONMENTAL PERMITS AND  
LICENSES**

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**APPENIDX F – Environmental Permits and Licenses**

**Table F.1 Summary of Environmental Licensing and Permit Status for Contract DC/2009/10**

| Reference Number  | Valid Period |           | Details                                    | Status |
|---|--------------|-----------|--|--------|
|   | From         | To        |  |        |
| <b><i>Water Discharge License</i></b>   |              |           |  |        |
| WT00009245-2011   | 1/6/2011     | 30/6/2016 | The application was approved on 1-6-2011.  | Valid  |
| WT00012151-2012   | 23/7/2014    | 28/2/2017 | The application was approved on 23-7-2014. | Valid  |
| WT00015128-2013   | 28/1/2013    | 31/1/2018 | The application was approved on 28-1-2013. | Valid  |
| WT00023103-2015   | 19/1/2016    | 31/1/2021 | The application was approved on 19-1-2016. | Valid  |
| <b><i>Registered Chemical Waste Producer</i></b>  |              |           |  |        |
| WPN5213-269-3584-01   | N/A          | N/A       | The application was approved on 4-5-2011.  | Valid  |
| <b><i>Billing Account for Disposal of Construction Waste</i></b>  |              |           |  |        |
| CSW01444  | 16/3/2011    | N/A       | The application was approved on 16-3-2011. | Valid  |
| <b><i>Notification of Works Under APCO</i></b>  |              |           |  |        |
| 327427  | N/A          | N/A       | Notice form received by EPD on 2-3-2011.   | N/A    |
| <b><i>Construction Noise Permit for use of mechanical equipment outside permitted working hours</i></b> |              |           |  |        |
| GW-RW0341-15  | 1/8/2015     | 31/1/2016 | Location: Portion 3 and 8                  | Valid  |
| GW-RW0342-15  | 1/8/2015     | 31/1/2016 | Location: Portion 6                        | Valid  |
| GW-RW0528-15  | 26/10/2015   | 25/4/2016 | Location: Portion 7                        | Valid  |
| GW-RW0655-15  | 25/12/2015   | 24/6/2016 | Location: Portion B                        | Valid  |
| GW-RW0656-15  | 25/12/2015   | 24/6/2016 | Location: Portion 4                        | Valid  |
| GW-RW0657-15  | 25/12/2015   | 20/6/2016 | Location: Portion 3 and 8                  | Valid  |

**Table F.2 Summary of Environmental Licensing and Permit Status for Contract DC/2009/17**

| Permit No.                                       | Valid Period |            | Details  | Status |
|--|--------------|------------|--|--------|
|  | From         | To         |  |        |
| <b><i>Water Discharge License</i></b>            |              |            |  |        |
| WT00021164-2015                                  | 13/3/2015    | 31/3/2020  | Location: Portion 6  | Valid  |
| WT000022776-2015                                 | 6/1/2016     | 31/10/2020 | Location: Portion 5  | Valid  |
| <b><i>Registered Chemical Waste Producer</i></b> |              |            |  |        |
| WPN5213-269-C3388-02                             | 19/10/2010   | N/A        | Major chemical waste types are: Spent battery, waste mechanical oil and spent lubricant. | Valid  |

| Permit No.  | Valid Period |           | Details                         | Status |
|---|--------------|-----------|---------------------------------|--------|
|   | From         | To        |                                 |        |
| <b>Billing Account for Disposal of Construction Waste</b> |              |           |                                 |        |
| A/C No.7011408  | 15/09/2010   | N/A       | N/A                             | Valid  |
| <b>Notification of Works Under APCO</b>                   |              |           |                                 |        |
| Ref:321235  | 7/09/2010    | N/A       | --                              | Valid  |
| <b>Construction Noise Permit</b>                          |              |           |                                 |        |
| GW-RW0524-15  | 21/10/2015   | 20/4/2016 | Location: Portion 3, 4, 5 and 6 | Valid  |
| GW-RW0526-15  | 21/10/2015   | 20/4/2016 | Location: Portion 3, 4, 5 and 6 | Valid  |
| GW-RW0013-16  | 15/1/2016    | 30/4/2016 | Location: Portion 3, 4, 5 and 6 | Valid  |

**Table F.3 Summary of Environmental Licensing and Permit Status for Contract DC/2009/18**

| Permit/ A/C Number  | Valid Period |            | Details   | Status |
|---|--------------|------------|---|--------|
|   | From         | To         |   |        |
| <b>Water Discharge License</b>                            |              |            |   |        |
| WT00010571-2011   | 18/03/2015   | 31/10/2016 | Location: Portion 7A and 15A  | Valid  |
| <b>Registered Chemical Waste Producer</b>                 |              |            |   |        |
| 5213-269-C3689-01   | 8/9/2011     | N/A        | Site Area under the Project   | Valid  |
| <b>Billing Account for Disposal of Construction Waste</b> |              |            |   |        |
| 7013233   | 18/7/2011    | N/A        | N/A   | Valid  |
| <b>Notification of Works Under APCO</b>                   |              |            |   |        |
| Ref: 332427   | 15/7/2011    | N/A        | N/A   | N/A    |
| <b>Construction Noise Permit</b>                          |              |            |   |        |
| GW-RW0375-15  | 18/8/2015    | 17/2/2016  | Location: Construction site at Stonecutters Island Sewage treatment works (Portion 3) | Valid  |
| GW-RW0388-15  | 28/8/2015    | 27/2/2016  | Location: Construction site at Stonecutters Island Sewage treatment works (Portion 7) | Valid  |

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**APPENDIX G  
SUMMARY OF EXCEEDANCE**

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## **APPENIDX G – SUMMARY OF EXCEEDANCE**

**Reporting Month:** January 2016

- a) Exceedance Report for 1-hr TSP (NIL)**
- b) Exceedance Report for 24-hr TSP (NIL)**
- c) Exceedance Report for Construction Noise (NIL)**

**No Exceedance of Action/Limit Level for normal working hours and restricted hours was recorded.**



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**APPENDIX H  
SITE AUDIT SUMMARY**

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Contract No: DC/2009/10

HATS 2A Upgrading Main Pumping Station,

Sedimentation Tanks and Ancillary Facilities at SCISTW

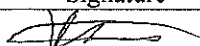
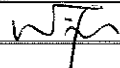
Record Summary of Environmental Site Inspection

Inspection Information

|                            |                           |
|----------------------------|---------------------------|
| Checklist Reference Number | 160107                    |
| Date                       | 7 January 2016 (Thursday) |
| Time                       | 09:30-11:00               |

| Ref. No. | Non-Compliance  | Related Item No. |
|----------|-----------------|------------------|
| -        | None identified | -                |

| Ref. No.   | Remarks/Observations  | Related Item No. |
|------------|---|------------------|
| 160107-003 | <p><b>Part A - Water Quality</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> <p><b>Part B - Landscape and Visual</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> <p><b>Part C - Air Quality</b></p> <ul style="list-style-type: none"><li>Used Rockwool materials should be contained and disposed to avoid dust emission (Portion 4); Opened cement bag should be covered.</li></ul> <p><b>Part D - Noise</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> | C 6              |
| 160107-001 | <p><b>Part E - Waste / Chemical Management</b></p> <ul style="list-style-type: none"><li>Oil leakage is observed at the drip tray; the drip tray should be repair or improved for chemical storage (Portion 7).</li></ul>   | E 7i             |
| 160107-002 | <ul style="list-style-type: none"><li>General refuse and other waste should be collected and disposed of regularly (Portion 3)</li></ul>  | E 1i & E 1ii     |
|            | <p><b>Part F - Permit / Licenses</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> <p><b>Others</b></p> <ul style="list-style-type: none"><li>-</li></ul> <p><b>Remark:</b></p> <ul style="list-style-type: none"><li>-</li></ul>  |                  |

|             | Name               | Signature  | Date           |
|-------------|--------------------|--|----------------|
| Recorded by | Victor Wong        |  | 7 January 2016 |
| Checked by  | Dr. Priscilla Choy |  | 7 January 2016 |

Contract No: DC/2009/10

HATS 2A Upgrading Main Pumping Station,

Sedimentation Tanks and Ancillary Facilities at SCISTW

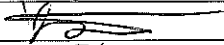

Record Summary of Environmental Site Inspection

Inspection Information

|                            |                            |
|----------------------------|----------------------------|
| Checklist Reference Number | 160114                     |
| Date                       | 14 January 2016 (Thursday) |
| Time                       | 09:30-11:30                |

| Ref. No. | Non-Compliance  | Related Item No. |
|----------|-----------------|------------------|
| -        | None identified | -                |

| Ref. No.                 | Remarks/Observations  | Related Item No. |
|--------------------------|---|------------------|
| 160114-O02<br>160114-R04 | <p><b>Part A - Water Quality</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> <p><b>Part B - Landscape and Visual</b></p> <ul style="list-style-type: none"><li>Covers for the site fencing should be set up properly (Portion 7).</li><li>Construction activities should avoid contact with tree branches (Portion 7).</li></ul> <p><b>Part C - Air Quality</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> <p><b>Part D - Noise</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> | B 5<br>B 1       |
| 160114-O01<br>160114-O03 | <p><b>Part E - Waste / Chemical Management</b></p> <ul style="list-style-type: none"><li>Oil containers should be provided with drip tray away from the site boundary (Portion 7).</li><li>General refuse should be sorted and contained for disposal (Portion 4)</li></ul> <p><b>Part F - Permit / Licenses</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> <p><b>Others</b></p> <ul style="list-style-type: none"><li>-</li></ul> <p><b>Remark:</b></p> <ul style="list-style-type: none"><li>-</li></ul>  | E 7ii<br>E 1i    |

|             | Name               | Signature  | Date            |
|-------------|--------------------|--|-----------------|
| Recorded by | Victor Wong        |  | 14 January 2016 |
| Checked by  | Dr. Priscilla Choy |   | 14 January 2016 |

Contract No: DC/2009/10

HATS 2A Upgrading Main Pumping Station,

Sedimentation Tanks and Ancillary Facilities at SCISTW

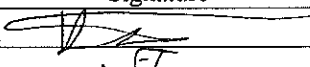

Record Summary of Environmental Site Inspection

Inspection Information

|                            |                             |
|----------------------------|-----------------------------|
| Checklist Reference Number | 160120                      |
| Date                       | 20 January 2016 (Wednesday) |
| Time                       | 09:30-11:00                 |

| Ref. No. | Non-Compliance  | Related Item No. |
|----------|-----------------|------------------|
| -        | None identified | -                |

| Ref. No.   | Remarks/Observations   | Related Item No. |
|------------|--|------------------|
| 160120-O02 | <p><b>Part A - Water Quality</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul>  | B 5              |
|            | <p><b>Part B - Landscape and Visual</b></p> <ul style="list-style-type: none"><li>Covers for the site fence should be the same height as the fence (Portion 7).</li></ul>  |                  |
|            | <p><b>Part C - Air Quality</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul>  |                  |
|            | <p><b>Part D - Noise</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul>  |                  |
|            | <p><b>Part E - Waste / Chemical Management</b></p> <ul style="list-style-type: none"><li>Construction waste and general refuse should be sorted for recycle or disposal (Portion 4).</li></ul>   |                  |
| 160120-O01 | <p><b>Part F - Permit / Licenses</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> <p><b>Others</b></p> <ul style="list-style-type: none"><li>-</li></ul> <p><b>Remark:</b></p> <ul style="list-style-type: none"><li>Following up on previous audit sessions (ref: 160114), item 160114-O02 is remarked as 160120-O02 for further improvement.</li></ul> | E Iiii           |

|             | Name               | Signature  | Date            |
|-------------|--------------------|--|-----------------|
| Recorded by | Victor Wong        |  | 20 January 2016 |
| Checked by  | Dr. Priscilla Choy |   | 20 January 2016 |

Contract No: DC/2009/10

HATS 2A Upgrading Main Pumping Station,

Sedimentation Tanks and Ancillary Facilities at SCISTW

Record Summary of Environmental Site Inspection

Inspection Information

|                            |                            |
|----------------------------|----------------------------|
| Checklist Reference Number | 160128                     |
| Date                       | 28 January 2016 (Thursday) |
| Time                       | 09:30-11:00                |

| Ref. No. | Non-Compliance  | Related Item No. |
|----------|-----------------|------------------|
| -        | None identified | -                |

| Ref. No.   | Remarks/Observations  | Related Item No. |
|------------|---|------------------|
| 160128-001 | <p><b>Part A - Water Quality</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> <p><b>Part B - Landscape and Visual</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> <p><b>Part C - Air Quality</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> <p><b>Part D - Noise</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> <p><b>Part E - Waste / Chemical Management</b></p> <ul style="list-style-type: none"><li>Waste sorting and removal should be provided to avoid accumulation (Portion 4)</li></ul> <p><b>Part F - Permit / Licenses</b></p> <ul style="list-style-type: none"><li>No environmental deficiency was identified during the site inspection.</li></ul> <p><b>Others</b></p> <ul style="list-style-type: none"><li>-</li></ul> <p><b>Remark:</b></p> <ul style="list-style-type: none"><li>Following up on previous audit sessions (ref: 160120), item 160120-001 is remarked as 160128-001 for further improvement.</li></ul> | E 4ii            |

|             | Name               | Signature  | Date            |
|-------------|--------------------|--|-----------------|
| Recorded by | Victor Wong        |  | 28 January 2016 |
| Checked by  | Dr. Priscilla Choy |   | 28 January 2016 |

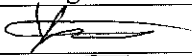

Record Summary of Environmental Site Inspection

Inspection Information

|                            |                          |
|----------------------------|--------------------------|
| Checklist Reference Number | 160105                   |
| Date                       | 5 January 2016 (Tuesday) |
| Time                       | 09:30 – 10:30            |

| Ref. No. | Non-Compliance  | Related Item No. |
|----------|-----------------|------------------|
| -        | None identified | -                |

| Ref. No.                 | Remarks/Observations  | Related Item No. |
|--------------------------|---|------------------|
| 160105-R01<br>160105-R02 | <p><b>Part A – Water Quality</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection</li> </ul> <p><b>Part B – Landscape and Visual</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part C – Air Quality</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part D – Noise</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part E – Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>The Contractor is reminded to remove stored waste regularly.</li> <li>Metal should be separated from excavated soil before removal.</li> </ul> <p><b>Part F – Permit / Licences</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Remark:</b></p> <ul style="list-style-type: none"> <li>Following up on previous audit sessions (ref: 151229), the items were observed to be improved/rectified by the Contractor.</li> </ul> | E 1i<br>E 4ii    |

|             | Name               | Signature  | Date           |
|-------------|--------------------|--|----------------|
| Recorded by | Victor Wong        |  | 5 January 2016 |
| Checked by  | Dr. Priscilla Choy |   | 5 January 2016 |

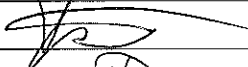
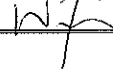
Record Summary of Environmental Site Inspection

Inspection Information

|                            |                           |
|----------------------------|---------------------------|
| Checklist Reference Number | 160112                    |
| Date                       | 12 January 2016 (Tuesday) |
| Time                       | 09:30 – 10:15             |

| Ref. No. | Non-Compliance  | Related Item No. |
|----------|-----------------|------------------|
| -        | None identified | -                |

| Ref. No.   | Remarks/Observations   | Related Item No. |
|------------|--|------------------|
| 160112-001 | <p><b>Part A - Water Quality</b></p> <ul style="list-style-type: none"> <li>Concrete water should be avoided near the drainage channel by redirecting it back to site area or to the AquaSed.</li> </ul> <p><b>Part B – Landscape and Visual</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part C - Air Quality</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part D – Noise</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part E – Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part F - Permit / Licences</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Remark:</b></p> <ul style="list-style-type: none"> <li>Following up on previous audit sessions (ref: 160105), the items were observed to be improved/rectified by the Contractor.</li> </ul> | A 1              |

|             | Name               | Signature  | Date            |
|-------------|--------------------|--|-----------------|
| Recorded by | Victor Wong        |  | 12 January 2016 |
| Checked by  | Dr. Priscilla Choy |   | 12 January 2016 |



Record Summary of Environmental Site Inspection

Inspection Information

|                            |                             |
|----------------------------|-----------------------------|
| Checklist Reference Number | 160120                      |
| Date                       | 20 January 2016 (Wednesday) |
| Time                       | 14:00 – 15:00               |

| Ref. No. | Non-Compliance  | Related Item No. |
|----------|-----------------|------------------|
| -        | None identified | -                |

| Ref. No.   | Remarks/Observations  | Related Item No. |
|------------|---|------------------|
| 160120-001 | <p><b>Part A – Water Quality</b></p> <ul style="list-style-type: none"> <li>The AquaSed should be desilted to improve discharge quality.</li> </ul> <p><b>Part B – Landscape and Visual</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part C – Air Quality</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part D – Noise</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part E – Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part F – Permit / Licences</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Remark:</b></p> <ul style="list-style-type: none"> <li>Following up on previous audit sessions (ref: 160112), the items were observed to be improved/rectified by the Contractor.</li> </ul> | A 5iv            |

|             | Name               | Signature  | Date            |
|-------------|--------------------|--|-----------------|
| Recorded by | Victor Wong        |  | 20 January 2016 |
| Checked by  | Dr. Priscilla Choy |   | 20 January 2016 |



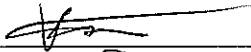

Record Summary of Environmental Site Inspection

Inspection Information

|                            |                           |
|----------------------------|---------------------------|
| Checklist Reference Number | 160126                    |
| Date                       | 26 January 2016 (Tuesday) |
| Time                       | 09:30 – 10:30             |

| Ref. No. | Non-Compliance  | Related Item No. |
|----------|-----------------|------------------|
| -        | None identified | -                |

| Ref. No.                 | Remarks/Observations  | Related Item No. |
|--------------------------|---|------------------|
| 160126-001               | <p><b>Part A – Water Quality</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part B – Landscape and Visual</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part C – Air Quality</b></p> <ul style="list-style-type: none"> <li>Mud track near the site boundary should be cleared.</li> </ul> <p><b>Part D – Noise</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> | C 3              |
| 160126-002<br>160126-003 | <p><b>Part E – Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>General refuse should be collected and stored regularly.</li> <li>Oil container should be provided with drip tray.</li> </ul> <p><b>Part F – Permit / Licences</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Remark:</b></p> <ul style="list-style-type: none"> <li>Following up on previous audit sessions (ref: 160120), the items were observed to be improved/rectified by the Contractor.</li> </ul>                                      | E 1i<br>E 7ii    |

|             | Name               | Signature  | Date            |
|-------------|--------------------|--|-----------------|
| Recorded by | Victor Wong        |  | 26 January 2016 |
| Checked by  | Dr. Priscilla Choy |   | 26 January 2016 |

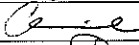
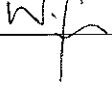
Record Summary of Environmental Site Inspection

Inspection Information

|                            |                            |
|----------------------------|----------------------------|
| Checklist Reference Number | 160107                     |
| Date                       | 07 January 2016 (Thursday) |
| Time                       | 14:00-15:45                |

| Ref. No. | Non-Compliance  | Related Item No. |
|----------|-----------------|------------------|
| -        | None identified | -                |

| Ref. No.   | Remarks/Observations   | Related Item No. |
|------------|--|------------------|
| 160107-O02 | <p><b>Part A - Water Quality</b></p> <ul style="list-style-type: none"> <li>Oil stains should be cleared. (Portion 3)</li> </ul>   | A 17             |
| 160107-R01 | <p><b>Part B - Landscape and Visual</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part C - Air Quality</b></p> <ul style="list-style-type: none"> <li>Contractor is reminded to cover the stockpile of dusty material after using. (Portion 3)</li> </ul> <p><b>Part D - Noise</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> | C 6              |
| 160107-O01 | <p><b>Part E - Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>Oil containers/ chemical containers should be provided with drip trays and oil in drip trays should also be cleared. (Portion 3)</li> </ul>  | E 7ii            |
| 160107-O02 | <ul style="list-style-type: none"> <li>Oil stains should be cleared. (Portion 3)</li> </ul> <p><b>Part F - Permit / Licenses</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Others / Remarks</b></p> <ul style="list-style-type: none"> <li>Follow-up on previous audit section (Ref. No.: 151231); item 151231-O01 was remarked as 160107-O01 and item 151231-O03 was remarked as 160107-O02.</li> </ul>        | E 7i             |

|             | Name               | Signature  | Date           |
|-------------|--------------------|--|----------------|
| Recorded by | Carrie Leung       |  | 8 January 2016 |
| Checked by  | Dr. Priscilla Choy |  | 8 January 2016 |

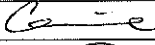

Record Summary of Environmental Site Inspection

Inspection Information

|                            |                            |
|----------------------------|----------------------------|
| Checklist Reference Number | 160114                     |
| Date                       | 14 January 2016 (Thursday) |
| Time                       | 14:00-15:45                |

| Ref. No. | Non-Compliance  | Related Item No. |
|----------|-----------------|------------------|
| -        | None identified | -                |

| Ref. No.   | Remarks/Observations   | Related Item No. |
|------------|--|------------------|
| 160114-O02 | <p><b>Part A - Water Quality</b></p> <ul style="list-style-type: none"> <li>Oil stains should be cleared and equipment should be well maintained to prevent any oil leakage. (Portion 3)</li> </ul> <p><b>Part B - Landscape and Visual</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part C - Air Quality</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part D - Noise</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> | A 17             |
| 160114-O01 | <p><b>Part E - Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>Oil containers/ chemical containers should be provided with drip trays and oil in drip trays should also be cleared. (Portion 3)</li> </ul>  | E 7ii            |
| 160114-O02 | <ul style="list-style-type: none"> <li>Oil stains should be cleared. (Portion 3)</li> </ul> <p><b>Part F - Permit / Licenses</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Others / Remarks</b></p> <ul style="list-style-type: none"> <li>Follow-up on previous audit section (Ref. No.: 160107): item 160107-O01 was remarked as 160114-O01 and item 160107-O02 was remarked as 160114-O02.</li> </ul>  | E 7i             |

|             | Name               | Signature  | Date            |
|-------------|--------------------|--|-----------------|
| Recorded by | Carrie Leung       |  | 15 January 2016 |
| Checked by  | Dr. Priscilla Choy |  | 15 January 2016 |

Record Summary of Environmental Site Inspection

Inspection Information

|                            |                           |
|----------------------------|---------------------------|
| Checklist Reference Number | 160119                    |
| Date                       | 19 January 2016 (Tuesday) |
| Time                       | 14:00-16:00               |

| Ref. No. | Non-Compliance  | Related Item No. |
|----------|-----------------|------------------|
| -        | None identified | -                |

| Ref. No.   | Remarks/Observations   | Related Item No. |
|------------|--|------------------|
| 160119-O01 | <p><b>Part A - Water Quality</b></p> <ul style="list-style-type: none"> <li>Oil stains should be cleared and equipment should be well maintained to prevent any oil leakage. (Portion 3)</li> </ul> <p><b>Part B - Landscape and Visual</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part C - Air Quality</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Part D - Noise</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> | A 17             |
| 160119-O01 | <p><b>Part E - Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>Oil stains should be cleared and equipment should be well maintained to prevent any oil leakage. (Portion 3)</li> </ul>  | E 7i             |
| 160119-O02 | <ul style="list-style-type: none"> <li>Oil/ chemical container should be provided with drip tray and label. (Portion 3 and 7)</li> </ul> <p><b>Part F - Permit / Licenses</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>Others / Remarks</b></p> <ul style="list-style-type: none"> <li>Follow-up on previous audit section (Ref. No.: 160114); item 160114-O02 was remarked as 160119-O01.</li> </ul>  | E 7ii            |

|             | Name               | Signature  | Date            |
|-------------|--------------------|--|-----------------|
| Recorded by | Carrie Leung       |  | 20 January 2016 |
| Checked by  | Dr. Priscilla Choy |   | 20 January 2016 |

Record Summary of Environmental Site Inspection

Inspection Information

|                            |                            |
|----------------------------|----------------------------|
| Checklist Reference Number | 160128                     |
| Date                       | 28 January 2016 (Thursday) |
| Time                       | 14:00-16:15                |

| Ref. No. | Non-Compliance  | Related Item No. |
|----------|-----------------|------------------|
| -        | None identified | -                |

| Ref. No.   | Remarks/Observations  | Related Item No. |
|------------|---|------------------|
| 160128-O01 | <p><b>Part A - Water Quality</b></p> <ul style="list-style-type: none"> <li>Oil stains should be cleared and stand water inside the drip tray should be cleared. (Portion 3)</li> </ul>               | A 17             |
| 160128-O02 | <ul style="list-style-type: none"> <li>Sandbags should be placed near gully and in u-channel near the discharge point to prevent any muddy runoff to the drainage. (Portion 3 &amp; 7)</li> </ul>     | A 1              |
| 160128-O03 | <ul style="list-style-type: none"> <li>Contractor is reminded to divert the sewage to treatment facility before discharge. (Portion 3)</li> </ul>   | A 1              |
| 160128-R01 | <ul style="list-style-type: none"> <li>Stockpile of dusty material should be covered. (Portion 3)</li> </ul>  | A 9              |
|            | <p><b>Part B - Landscape and Visual</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul>                                  |                  |
| 160128-R01 | <p><b>Part C - Air Quality</b></p> <ul style="list-style-type: none"> <li>Stockpile of dusty material should be covered. (Portion 3)</li> </ul>   | C 6              |
|            | <p><b>Part D - Noise</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul>   |                  |
| 160128-O01 | <p><b>Part E - Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>Oil stains should be cleared and stand water inside the drip tray should be cleared. (Portion 3)</li> </ul> | E 7i             |
|            | <p><b>Part F - Permit / Licenses</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul>                                     |                  |
|            | <p><b>Others / Remarks</b></p> <ul style="list-style-type: none"> <li>Follow-up on previous audit section (Ref. No.: 160119): item 160119-O01 was remarked as 160128-O01.</li> </ul>                  |                  |

|             | Name               | Signature  | Date            |
|-------------|--------------------|--|-----------------|
| Recorded by | Carrie Leung       |  | 29 January 2016 |
| Checked by  | Dr. Priscilla Choy |   | 29 January 2016 |

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**APPENDIX I  
EVENT ACTION PLANS**

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**APPENDIX I – Event / Action Plans**

**Table I-1 Event / Action Plan For Air Quality**

| EVENT   | ACTION  |   |  |   |
|---|---|---|--|---|
|   | ET  | IEC   | ER   | CONTRACTOR  |
| <b>ACTION LEVEL</b>                               |   |   |  |   |
| 1. Exceedance for one sample                      | 1. Identify source, investigate the causes of exceedance and propose remedial measures;<br>2. Inform IEC and ER;<br>3. Repeat measurement to confirm finding;<br>4. Increase monitoring frequency to daily.   | 1. Check monitoring data submitted by ET;<br>2. Check Contractor’s working method.  | 1. Notify Contractor.  | 1. Rectify any unacceptable practice;<br>2. Amend working methods if appropriate.   |
| 2. Exceedance for two or more consecutive samples | 1. Identify source;<br>2. Inform IEC and ER;<br>3. Advise the ER on the effectiveness of the proposed remedial measures;<br>4. Repeat measurements to confirm findings;<br>5. Increase monitoring frequency to daily;<br>6. Discuss with IEC and Contractor on remedial | 1. Check monitoring data submitted by ET;<br>2. Check Contractor’s working method;<br>3. Discuss with ET and Contractor on possible remedial measures;<br>4. Advise the ET on the effectiveness of the proposed remedial measures;<br>5. Supervise Implementation of remedial measures. | 1. Confirm receipt of notification of failure in writing;<br>2. Notify Contractor;<br>3. Ensure remedial measures properly implemented | 1. Submit proposals for remedial to ER within 3 working days of notification;<br>2. Implement the agreed proposals;<br>3. Amend proposal if appropriate |

| EVENT                        | ACTION  |  |  |   |
|------------------------------|---|--|--|---|
|                              | ET  | IEC  | ER   | CONTRACTOR  |
|                              | actions required;<br>7. If exceedance continues, arrange meeting with IEC and ER;<br>8. If exceedance stops, cease additional monitoring  |  |  |   |
| <b>LIMIT LEVEL</b>           |   |  |  |   |
| 1. Exceedance for one sample | 1. Identify source, investigate the causes of exceedance and propose remedial measures;<br>2. Inform ER, Contractor and EPD;<br>3. Repeat measurement to confirm finding;<br>4. Increase monitoring frequency to daily;<br>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results. | 1. Check monitoring data submitted by ET;<br>2. Check Contractor's working method;<br>3. Discuss with ET and Contractor on possible remedial measures;<br>4. Advise the ER on the effectiveness of the proposed remedial measures;<br>5. Supervise implementation of remedial measures | 1. Confirm receipt of notification of failure in writing;<br>2. Notify Contractor;<br>3. Ensure remedial measures properly implemented | 1. Take immediate action to avoid further exceedance;<br>2. Submit proposals for remedial actions to IEC within 3 working days of notification;<br>3. Implement the agreed proposals;<br>4. Amend proposal if appropriate |



| EVENT   | ACTION  |  |   |  |
|---|---|--|---|--|
|   | ET  | IEC  | ER  | CONTRACTOR   |
| 2. Exceedance for two or more consecutive samples | 1. Notify IEC, ER, Contractor and EPD;<br>2. Identify source;<br>3. Repeat measurement to confirm findings;<br>4. Increase monitoring frequency to daily;<br>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;<br>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken;<br>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;<br>8. If exceedance stops, cease additional monitoring | 1. Check monitoring data submitted by ET;<br>2. Check Contractor's working method;<br>3. Discuss amongst ER, ET, and Contractor on the potential remedial actions;<br>4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;<br>5. Supervise the implementation of remedial measures. | 1. Confirm receipt of notification of failure in writing;<br>2. Notify Contractor;<br>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;<br>4. Ensure remedial measures properly implemented;<br>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. | 1. Take immediate action to avoid further exceedance;<br>2. Submit proposals for remedial actions to IEC within 3 working days of notification;<br>3. Implement the agreed proposals;<br>4. Resubmit proposals if problem still not under control;<br>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated |

**Table I-2 Event / Action Plan For Construction Noise**

| EVENT                       | ACTION  |  |  |  |
|-----------------------------|---|--|--|--|
|                             | ET  | IEC  | ER   | CONTRACTOR   |
| Action Level being exceeded | <ol style="list-style-type: none"> <li>1. Notify ER, IEC and Contractor;</li> <li>2. Carry out investigation;</li> <li>3. Report the results of investigation to the IEC, ER and Contractor;</li> <li>4. Discuss with the IEC and Contractor on remedial measures required;</li> <li>5. Increase monitoring frequency to check mitigation effectiveness</li> </ol>  | <ol style="list-style-type: none"> <li>1. Review the investigation results submitted by the ET;</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly;</li> <li>3. Advise the ER on the effectiveness of the proposed remedial measures</li> </ol> | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>4. Supervise the implementation of remedial measures</li> </ol>  | <ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC and ER;</li> <li>2. Implement noise mitigation proposals</li> </ol>   |
| Limit Level being exceeded  | <ol style="list-style-type: none"> <li>1. Inform IEC, ER, Contractor and EPD;</li> <li>2. Repeat measurements to confirm findings;</li> <li>3. Increase monitoring frequency;</li> <li>4. Identify source and investigate the cause of exceedance;</li> <li>5. Carry out analysis of Contractor's working procedures;</li> <li>6. Discuss with the IEC, Contractor and ER on remedial measures required;</li> <li>7. Assess effectiveness of</li> </ol> | <ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.</li> </ol>                                | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>4. Supervise the implementation of remedial measures;</li> <li>5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance</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 IEC and ER within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Submit further proposal if problem still not under control;</li> <li>5. Stop the relevant portion of works as instructed by</li> </ol> |

| <b>EVENT</b> | <b>ACTION</b>  |            |                                |                                       |
|--------------|--|------------|--------------------------------|---------------------------------------|
|              | <b>ET</b>  | <b>IEC</b> | <b>ER</b>                      | <b>CONTRACTOR</b>                     |
|              | Contractor's remedial actions and keep IEC, EPD and ER informed of the results;<br>8. If exceedance stops, cease additional monitoring |            | until the exceedance is abated | the ER until the exceedance is abated |

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**APPENDIX J  
ENVIRONMENTAL MITIGATION  
IMPLEMENTATION SCHEDULE (EMIS)**

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**APPENDIX J IMPLEMENTATION SCHEDULE OF ENVIRONMENTAL MITIGATION MEASURES (EMIS)**

| EIA Ref. | Recommended Mitigation Measures  | Location of the measure | Implementation Contract |            |            |
|----------|--|-------------------------|-------------------------|------------|------------|
|          |  |                         | DC/2009/17              | DC/2009/10 | DC/2009/18 |
| <b>A</b> | <b>Air Quality</b>   |                         |                         |            |            |
| 3.74     | Skip hoist for material transport should be totally enclosed by impervious sheeting.   | All construction sites  | ^                       | ^          | ^          |
|          | Vehicle washing facilities should be provided at every vehicle exit point.   |                         | ^                       | ^          | ^          |
|          | The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcore.                                    |                         | ^                       | ^          | ^          |
|          | Where a site boundary adjoins a road, streets or other areas accessible to the public, hoarding of not less than 2.4 m high from ground level should be provided along the entire length except for a site entrance or exit. |                         | N/A                     | N/A        | N/A        |
|          | Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.   |                         | *                       | ^          | ^          |
|          | Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.                       |                         | ^                       | *          | *          |
|          | Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs  |                         | ^                       | ^          | *          |
|          | Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.   |                         | ^                       | ^          | ^          |
|          | Imposition of speed controls for vehicles on unpaved site roads. Ten kilometers per hour is the recommended limit.   |                         | ^                       | ^          | ^          |

| EIA Ref.  | Recommended Mitigation Measures   | Location of the measure | Implementation Contract |            |            |
|-----------|---|-------------------------|-------------------------|------------|------------|
|           |   |                         | DC/2009/17              | DC/2009/10 | DC/2009/18 |
|           | Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the 3 sides.                                  |                         | ^                       | ^          | ^          |
|           | Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.  |                         | ^                       | ^          | ^          |
| 3.74      | Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise. | All construction sites  | ^                       | ^          | ^          |
| <b>B</b>  | <b>Airborne Noise</b>   |                         |                         |            |            |
| 4.56–4.61 | Use of quiet PME, movable barriers and acoustic mats.   | All construction sites  | *                       | ^          | ^          |
| 4.67      | Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program.   | All construction sites  | *                       | ^          | ^          |
|           | Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program.   |                         | ^                       | ^          | ^          |
|           | Mobile plant, if any, shall be sited as far away from NSRs as possible.   |                         | ^                       | ^          | ^          |
|           | Machines and plant (such as trucks) that may be in intermittent use shall be shut down between works periods or shall be throttled down to a minimum.                                 |                         | ^                       | ^          | ^          |
| 4.67      | Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.                                  |                         | ^                       | ^          | ^          |
|           | Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities.                                |                         | ^                       | ^          | ^          |

| EIA Ref.       | Recommended Mitigation Measures  | Location of the measure | Implementation Contract |            |            |
|----------------|--|-------------------------|-------------------------|------------|------------|
|                |  |                         | DC/2009/17              | DC/2009/10 | DC/2009/18 |
| <b>C</b>       | <b>Water Quality</b>   |                         |                         |            |            |
| 6.349 to 6.375 | Construction Site Runoff and General Construction Activities<br>The mitigation measures as outlined in the ProPECC PN 1/94 Construction Site Drainage should be adopted where applicable.  | All construction sites  | ^                       | ^          | *          |
| 6.376          | Effluent Discharge<br>There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the WPCO license which is under the ambit of regional office (RO) of EPD.<br>Minimum distances of 100 m should be maintained between the discharge points of construction site effluent and the existing saltwater intakes. |                         | ^                       | ^          | *          |
| 6.377          | Accidental Spillage of Chemicals<br><br>Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.   |                         | ^                       | ^          | *          |
| 6.378          | Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving   |                         | ^                       | ^          | *          |
|                |  |                         |                         |            |            |

| EIA Ref. | Recommended Mitigation Measures  | Location of the measure | Implementation Contract |            |            |
|----------|--|-------------------------|-------------------------|------------|------------|
|          |  |                         | DC/2009/17              | DC/2009/10 | DC/2009/18 |
|          | activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.  |                         |                         |            |            |
| 6.379    | <p>Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows:</p> <ul style="list-style-type: none"> <li>• Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport.</li> <li>• Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents.</li> <li>• Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.</li> </ul> |                         | ^                       | ^          | *          |
| 6.380    | <p>Construction Works in Close Proximity of Storm Drains or Seafront</p> <p>To minimize the potential water quality impacts from the construction works located at or near any watercourse, the practices outlined below should be adopted where applicable.</p> <ul style="list-style-type: none"> <li>• The use of less or smaller construction plants may be specified to reduce the disturbance to the storm water courses or marine environment.</li> <li>• Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials</li> </ul>   | All construction sites  | ^                       | ^          | *          |



| EIA Ref. | Recommended Mitigation Measures   | Location of the measure | Implementation Contract |            |            |
|----------|---|-------------------------|-------------------------|------------|------------|
|          |   |                         | DC/2009/17              | DC/2009/10 | DC/2009/18 |
|          | <p>should be located well away from any water courses during carrying out of the construction works.</p> <ul style="list-style-type: none"> <li>• Stockpiling of construction materials and dusty materials should be covered and located away from any water courses.</li> <li>• Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers. Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.</li> <li>• Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert or sea.</li> </ul> |                         |                         |            |            |
| <b>D</b> | <b>Waste Management</b>   |                         |                         |            |            |
| 9.107    | <p>Reusable steel or concrete panel shutters, fencing and hoarding and signboard should be used as a preferred alternative to items made of wood, to minimize wastage of wood. Attention should be paid to WBTC No. 19/2001 - Metallic Site Hoardings and Signboards to reduce the amount of timber used on construction sites. Metallic alternatives to timber are readily available and should be used rather than new timber. Precast concrete units should be adopted wherever feasible to minimize the use of timber formwork.</p>   | All construction sites  | ^                       | ^          | ^          |
| 9.109    | <p>All waste materials should be segregated into categories covering:</p> <ul style="list-style-type: none"> <li>• excavated materials suitable for reuse on-site;</li> <li>• excavated materials suitable for public filling</li> </ul>  | All construction        | ^                       | *          | ^          |

| EIA Ref. | Recommended Mitigation Measures  | Location of the measure | Implementation Contract |            |            |
|----------|--|-------------------------|-------------------------|------------|------------|
|          |  |                         | DC/2009/17              | DC/2009/10 | DC/2009/18 |
|          | facilities; <ul style="list-style-type: none"> <li>• remaining C&amp;D waste for landfill;</li> <li>• chemical waste; and</li> <li>• general refuse for landfill.</li> </ul>   | sites                   |                         |            |            |
| 9.113    | Sort C&D waste from demolition of existing facilities to recover recyclable portions such as metals;   |                         | *                       | ^          | ^          |
|          | Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.   |                         | ^                       | ^          | ^          |
|          | Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force.                         |                         | ^                       | ^          | ^          |
|          | Any unused chemicals or those with remaining functional capacity shall be recycled.  |                         | ^                       | ^          | ^          |
|          | Proper storage and site practices to minimise the potential for damage or contamination of construction materials.   |                         | *                       | *          | ^          |
| 9.115    | Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site. |                         | ^                       | ^          | ^          |
|          | Training of site personnel in proper waste management and chemical waste handling procedures.  |                         | ^                       | ^          | ^          |
|          | Develop and provide toolbox talk for on-site sorting of C&D materials to enhance worker's awareness in handling, sorting, reuse and recycling of C&D materials.  |                         | ^                       | ^          | ^          |
|          | Provision of sufficient waste disposal points and regular collection of waste.   |                         | *                       | #          | ^          |

| EIA Ref. | Recommended Mitigation Measures   | Location of the measure | Implementation Contract |            |            |
|----------|---|-------------------------|-------------------------|------------|------------|
|          |   |                         | DC/2009/17              | DC/2009/10 | DC/2009/18 |
|          | Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.  |                         | ^                       | ^          | ^          |
| 9.125    | Bentonite slurries used in diaphragm wall construction should be reconditioned and reused wherever practicable. The disposal of residual used bentonite slurry should follow the good practice guidelines stated in ProPECC PN 1/94 "Construction Site Drainage"  | All construction sites  | N/A                     | ^          | ^          |
| 9.131    | Adequate number of portable toilets at temporary works areas or the PTWs to ensure that sewage from site staff would be properly collected.   |                         | ^                       | ^          | ^          |
| 9.133    | General refuse should be stored in enclosed bins, skips or compaction units separating from C&D material and disposed of at designated landfill.  |                         | ^                       | *          | ^          |
| 9.135    | The recyclable component of the municipal waste generated by the workforce, such as aluminium cans, paper and cleansed plastic containers should be separated from other waste. Provision and collection of recycling bins for different types of recyclable waste should be set up by the Contractor. The Contractor should also be responsible for arranging recycling companies to collect these materials.  |                         | ^                       | ^          | ^          |
| 9.137    | If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, |                         | ^                       | ^          | *          |

| EIA Ref. | Recommended Mitigation Measures  | Location of the measure | Implementation Contract |            |            |
|----------|--|-------------------------|-------------------------|------------|------------|
|          |  |                         | DC/2009/17              | DC/2009/10 | DC/2009/18 |
|          | oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.   |                         |                         |            |            |
| 9.142    | Prior to excavation of the marine deposit layer, the deposit should be tested in accordance with the ETWB TC(W) No. 34/2002 and the results should be presented in a Preliminary Sediment Quality Report. The marine deposit should be disposed of at the disposal site designated by the Marine Fill Committee (MFC) or Director of Environmental Protection (DEP) depending on the test results. |                         | N/A                     | N/A        | N/A        |
| <b>E</b> | <b>Terrestrial Ecology</b>   |                         |                         |            |            |
| 10.94    | To implement effective noise mitigation measures as recommended in Section 4 of EIA.   | All construction sites  | N/A                     | N/A        | N/A        |
| 10.95    | Dust control practices such as regular watering, complete coverage of any aggregate or dusty material storage piles, and re-schedule of dusty activities during high-wind conditions as well as other measures recommended in Section 3 of EIA, should be implemented.   |                         | ^                       | ^          | ^          |
| 10.96    | Fences/hoardings should be erected and installed along the boundary of the works areas.  |                         | ^                       | ^          | ^          |
| 10.97    | Standard good site practices as suggested in Section 10 of EIA should be implemented.  |                         | N/A                     | N/A        | N/A        |
| 10.98    | Provision of proper drainage system and runoff control measures such as use of sand/silt traps, oil/grease separators, sedimentation tanks, etc.   |                         | ^                       | ^          | ^          |
| <b>F</b> | <b>Landscape and Visual</b>  |                         |                         |            |            |
| Table    | Topsoil, where identified, should be stripped and  | All                     | ^                       | ^          | ^          |

| EIA Ref.            | Recommended Mitigation Measures  | Location of the measure  | Implementation Contract |            |            |
|---------------------|--|--|-------------------------|------------|------------|
|                     |  |  | DC/2009/17              | DC/2009/10 | DC/2009/18 |
| 13.7                | stored for re-use in the construction of the soft landscape works, where practical.<br>Existing trees to be retained on site should be carefully protected during construction.<br>Trees unavoidably affected by the works should be transplanted where practical.<br>Compensatory tree planting should be provided to compensate for felled trees.<br>Control of night-time lighting. | construction sites   |                         |            |            |
|                     |  |  | ^                       | *          | ^          |
|                     |  |  | ^                       | ^          | ^          |
|                     |  |  | ^                       | ^          | ^          |
|                     |  |  | ^                       | ^          | ^          |
| Table 13.7          | Erection of decorative screen hoarding compatible with the surrounding setting.  |  |                         | N/A        | #          |
| <b>G</b>            | <b>Marine Ecology</b>  |  |                         |            |            |
| 11.137              | To minimize the potential indirect impacts on water quality from construction site runoff and various construction activities, the practices outlined in ProPECC PN 1/94 Construction Site Drainage should be adopted.   | All construction sites   | ^                       | ^          | ^          |
| <b>H</b>            | <b>Hazard to Life</b>  |  |                         |            |            |
| 14A.201             | Limiting use of cranes in terms of locations, lifting height, swing angle and setting up safety zone.  | Exact location will be determined on construction site by the engineer | ^                       | ^          | ^          |
| <b>I</b>            | <b>Cultural Heritage</b>   |  |                         |            |            |
| Tables 15.8 - 15.11 | The construction vibration control limit (ppv of 25mm/s) shall be strictly followed.   | Identified historical buildings/struct                                 | N/A                     | N/A        | ^          |

| EIA Ref. | Recommended Mitigation Measures | Location of the measure   | Implementation Contract |            |            |
|----------|---------------------------------|---|-------------------------|------------|------------|
|          |                                 |   | DC/2009/17              | DC/2009/10 | DC/2009/18 |
|          |                                 | ures<br>as mentioned in<br>EM&A Manual<br>Tables 15.8,<br>15.9,<br>15.10 and<br>15.11 |                         |            |            |

|          |   |
|----------|---|
| Remarks: | ^ Compliance of mitigation measure;   |
|          | <> Compliance of mitigation measure but need improvement';                                    |
|          | N/A Not Applicable;   |
|          | * Recommendation was made during site audit but improved/rectified by the contractor.         |
|          | @ partially implemented   |
|          | X Non-compliance of mitigation measure;   |
|          | • Non-compliance but rectified by the contractor;   |
|          | # Recommendation was made during site audit and to be improved / rectified by the contractor. |

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**APPENDIX K  
COMPLAINT LOG**

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**APPENDIX K – COMPLAINT LOG**

**Reporting Month:** January 2016

| Log Ref.       | Location   | Received Date | Details of Complaint   | Investigation/Mitigation Action  | Status |
|----------------|--|---------------|--|--|--------|
| Com#1_22-07-13 | Construction site at Portion 3 and 7(DC/2009/18) | 22 July 2013  | The complaint was lodged by a complainant on 22 July 2013 concerning noise generated from the construction works at 03:00am on 19 July 2013. | <p>According to the information provided by the Contractor, mucking out excavated rocks was carried out 90m below ground within a noise enclosure area.</p> <p>Furthermore, the distance between the complainant's residence and the closest construction work is at least 1km away, which would have shapely minimized the chance of potential noise disturbance to the complainant's area.</p> <p>Based on the monitoring results and the other information collected, the complaint was considered not justifiable since no exceedance of the noise monitoring results was recorded in July</p> <p>The Contractor was reminded to make sure the noise enclosure door will be kept close during night time construction.</p> | Closed |

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



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**APPENDIX L**  
**CONSTRUCTION PROGRAMME**

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| Activity ID  | Activity Name   | Original Duration | Activity % Complete | Total Float | Start         | Finish                    | 2016  |     |     |     |     |     |     |     |     |     |     |     | 2017 |     |     |     |     |     |     |  |  |  |  |
|--|---|-------------------|---------------------|-------------|---------------|---------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|--|--|--|--|
|  |   |                   |                     |             |               |                           | Jan   | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan  | Feb | Mar | Apr | May | Jun | Jul |  |  |  |  |
| <b>TWP R9 (Completion for Section 3, 4 and 5)</b>    |   |                   |                     |             |               |                           | 29-Apr-2017, TWP R9   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>Section 3 (Phase A2)</b>                          |   |                   |                     |             |               |                           | 23-Jan-2016, Section 3 (Phase A2)   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| KD00015  | Turnflow Date (12 Dec 15)   | 0                 | 0%                  | 0           | 12-Dec-2015*  | Turnflow Date (12 Dec 15) |   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>MPS2</b>  |   |                   |                     |             |               |                           | 16-Jan-2016, MPS2   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>Wet Well A</b>                                    |   |                   |                     |             |               |                           | 18-Nov-2015, Wet Well A   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A4170  | Pump performance test #1-#4   | 12                | 45%                 | 528         | 30-Oct-2015 A | 08-Nov-2015               | Pump performance test #1-#4   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A4180  | VSD, Surge and closed valve test  | 2                 | 0%                  | 528         | 08-Nov-2015   | 10-Nov-2015               | VSD, Surge and closed valve test  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A4181  | 24 Hours Endurance test   | 8                 | 0%                  | 528         | 10-Nov-2015   | 18-Nov-2015               | 24 Hours Endurance test   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>External and civil works</b>                      |   |                   |                     |             |               |                           | 30-Nov-2015, External and civil works                                     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A2780  | Portable watermain laying for MPS, DOU3                                   | 45                | 75%                 | 429         | 12-Aug-2015 A | 14-Nov-2015               | Portable watermain laying for MPS, DOU3                                   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A2790  | Storm drainage pipe laying  | 45                | 45%                 | 416         | 30-Jul-2015 A | 30-Nov-2015               | Storm drainage pipe laying  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>Air Scouring System</b>                           |   |                   |                     |             |               |                           | 19-Nov-2015, Air Scouring System  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A3320  | E&M installation for Air scouring system                                  | 10                | 0%                  | 527         | 07-Nov-2015   | 16-Nov-2015               | E&M installation for Air scouring system                                  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A3330  | Testing and commissioning   | 3                 | 0%                  | 527         | 17-Nov-2015   | 19-Nov-2015               | Testing and commissioning   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>Smoke Extraction system (Basement floor)</b>      |   |                   |                     |             |               |                           | 18-Dec-2015, Smoke Extraction system (Basement floor)                     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A2470  | Ordering and manufacturing of extraction Fans                             | 75                | 75%                 | 491         | 26-May-2015   | 20-Nov-2015               | Ordering and manufacturing of extraction Fans                             |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A2480  | Smoke Extraction installation (Basement Floor)                            | 40                | 65%                 | 491         | 18-Aug-2015 A | 04-Dec-2015               | Smoke Extraction installation (Basement Floor)                            |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A2640  | Testing and commissioning   | 14                | 0%                  | 491         | 04-Dec-2015   | 18-Dec-2015               | Testing and commissioning   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>Staircase Pressurisation System (ST3)</b>         |   |                   |                     |             |               |                           | 16-Jan-2016, Staircase Pressurisation System (ST3)                        |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A2500  | Ordering and manufacturing of extraction Fans                             | 75                | 75%                 | 469         | 26-May-2015   | 20-Nov-2015               | Ordering and manufacturing of extraction Fans                             |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A2510  | Staircase Pressurisation (ST3)  | 40                | 10%                 | 469         | 18-Aug-2015 A | 26-Dec-2015               | Staircase Pressurisation (ST3)  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A2650  | Testing and commissioning   | 14                | 0%                  | 469         | 26-Dec-2015   | 09-Jan-2016               | Testing and commissioning   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A2750  | FSD inspection  | 7                 | 0%                  | 469         | 09-Jan-2016   | 16-Jan-2016               | FSD inspection  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>New CEPT</b>                                      |   |                   |                     |             |               |                           | 19-Dec-2015, New CEPT   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>Connection works at Northern Effluent Culvert</b> |   |                   |                     |             |               |                           | 23-Nov-2015, Connection works at Northern Effluent Culvert                |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| S0796  | Concrete slab inside effluent drop shaft                                  | 6                 | 26.67%              | 374         | 29-Oct-2015 A | 11-Nov-2015               | Concrete slab inside effluent drop shaft                                  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| S0805  | Water tightness test for the Northern effluent culvert                    | 7                 | 0%                  | 422         | 12-Nov-2015   | 19-Nov-2015               | Water tightness test for the Northern effluent culvert                    |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| S0815  | Dismantling of bulkhead at Northern effluent culvert                      | 3                 | 0%                  | 422         | 20-Nov-2015   | 23-Nov-2015               | Dismantling of bulkhead at Northern effluent culvert                      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>Hydro-Turbine</b>                                 |   |                   |                     |             |               |                           | 13-Nov-2015, Hydro-Turbine  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A6235  | E&M installation for Hydroturbine   | 14                | 75%                 | 374         | 15-Oct-2015 A | 05-Nov-2015               | E&M installation for Hydroturbine   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A6240  | E&M installation for scum pump room 13                                    | 14                | 15%                 | 530         | 29-Oct-2015 A | 13-Nov-2015               | E&M installation for scum pump room 13                                    |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>Architectural Builders and finishes works</b>     |   |                   |                     |             |               |                           | 19-Dec-2015, Architectural Builders and finishes works                    |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5450  | External wall painting (facing MPS2)                                      | 18                | 0%                  | 399         | 30-Nov-2015*  | 19-Dec-2015               | External wall painting (facing MPS2)                                      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>FRP Odour Containment cover</b>                   |   |                   |                     |             |               |                           | 21-Nov-2015, FRP Odour Containment cover                                  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5950  | Installation of FRP flat cover (PST (N), effluent launder and drop shaft) | 5                 | 0%                  | 525         | 12-Nov-2015   | 16-Nov-2015               | Installation of FRP flat cover (PST (N), effluent launder and drop shaft) |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5960  | Installation of FRP Cover at PST (N) 47-53                                | 4                 | 0%                  | 526         | 06-Nov-2015*  | 09-Nov-2015               | Installation of FRP Cover at PST (N) 47-53                                |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5970  | Installation of odour ductworks (branch, PSTs 47-53)                      | 3                 | 0%                  | 526         | 10-Nov-2015   | 12-Nov-2015               | Installation of odour ductworks (branch, PSTs 47-53)                      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5980  | Installation of odour ductworks (branch, FT and MDC)                      | 3                 | 0%                  | 526         | 13-Nov-2015   | 15-Nov-2015               | Installation of odour ductworks (branch, FT and MDC)                      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A6040  | Installation of FRP cover at RMT and FT5                                  | 12                | 45%                 | 429         | 16-Sep-2015 A | 09-Nov-2015               | Installation of FRP cover at RMT and FT5                                  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A6050  | Installation of FRP cover at MDC (N)                                      | 12                | 65%                 | 535         | 02-Oct-2015 A | 06-Nov-2015               | Installation of FRP cover at MDC (N)                                      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A6060  | Testing and commissioning (smoke test)                                    | 5                 | 0%                  | 525         | 17-Nov-2015   | 21-Nov-2015               | Testing and commissioning (smoke test)                                    |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>Scum Collection system</b>                        |   |                   |                     |             |               |                           | 19-Nov-2015, Scum Collection system                                       |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| S2500  | Process water and Protected water installation                            | 25                | 30%                 | 527         | 28-Sep-2015 A | 19-Nov-2015               | Process water and Protected water installation                            |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| S2550  | T&C for Scum collection systems at PSTs                                   | 3                 | 0%                  | 542         | 02-Nov-2015   | 04-Nov-2015               | T&C for Scum collection systems at PSTs                                   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>Sludge Scrapers</b>                               |   |                   |                     |             |               |                           | 20-Nov-2015, Sludge Scrapers  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5600  | Longitudinal Sludge scraper at FT5  | 5                 | 45%                 | 528         | 30-Oct-2015 A | 04-Nov-2015               | Longitudinal Sludge scraper at FT5  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5610  | Cross sludge scrapers at FT5  | 5                 | 45%                 | 528         | 30-Oct-2015 A | 04-Nov-2015               | Cross sludge scrapers at FT5  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5640  | Sludge scrapers at new Northern PSTs 47, 49, 51, 54                       | 12                | 50%                 | 525         | 30-Oct-2015 A | 07-Nov-2015               | Sludge scrapers at new Northern PSTs 47, 49, 51, 54                       |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5680  | T&C for sludge scrapers at FT and PSTs                                    | 3                 | 0%                  | 525         | 08-Nov-2015   | 10-Nov-2015               | T&C for sludge scrapers at FT and PSTs                                    |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5690  | Water filling for SAT Sludge pump   | 6                 | 0%                  | 423         | 11-Nov-2015   | 17-Nov-2015               | Water filling for SAT Sludge pump   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5740  | T&C for sludge piping system  | 3                 | 0%                  | 375         | 17-Nov-2015   | 20-Nov-2015               | T&C for sludge piping system  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>Polymer Dosing System</b>                         |   |                   |                     |             |               |                           | 22-Nov-2015, Polymer Dosing System  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5790  | Installation of PVC dosing pipes at FT5 and RMT                           | 12                | 0%                  | 524         | 06-Nov-2015*  | 17-Nov-2015               | Installation of PVC dosing pipes at FT5 and RMT                           |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5795  | Replacement of Temporary pipeworks  | 10                | 0%                  | 529         | 05-Nov-2015   | 15-Nov-2015               | Replacement of Temporary pipeworks  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5800  | Testing and commissioning   | 5                 | 0%                  | 524         | 18-Nov-2015   | 22-Nov-2015               | Testing and commissioning   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>FeCl3 Dosing System</b>                           |   |                   |                     |             |               |                           | 22-Nov-2015, FeCl3 Dosing System  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A6320  | Installation of PVC dosing pipes at FT5 and RMT                           | 12                | 0%                  | 524         | 06-Nov-2015*  | 17-Nov-2015               | Installation of PVC dosing pipes at FT5 and RMT                           |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A6330  | Replacement of Temporary pipeworks  | 10                | 0%                  | 529         | 05-Nov-2015   | 15-Nov-2015               | Replacement of Temporary pipeworks  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A6340  | Testing and commissioning   | 5                 | 0%                  | 524         | 18-Nov-2015   | 22-Nov-2015               | Testing and commissioning   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>Process Air System</b>                            |   |                   |                     |             |               |                           | 16-Nov-2015, Process Air System   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5530  | Water filling of MDC and FT5  | 5                 | 0%                  | 378         | 09-Nov-2015*  | 13-Nov-2015               | Water filling of MDC and FT5  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5540  | Testing and commissioning at MDC (N)                                      | 3                 | 0%                  | 530         | 14-Nov-2015   | 16-Nov-2015               | Testing and commissioning at MDC (N)                                      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A5550  | Testing and commissioning at FT5  | 3                 | 0%                  | 530         | 14-Nov-2015   | 16-Nov-2015               | Testing and commissioning at FT5  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>Static Mixer</b>                                  |   |                   |                     |             |               |                           | 13-Nov-2015, Static Mixer   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A6130  | Installation of Static mixer  | 2                 | 0%                  | 533         | 12-Nov-2015*  | 13-Nov-2015               | Installation of Static mixer  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| <b>DCS works</b>                                     |   |                   |                     |             |               |                           | 09-Dec-2015, DCS works  |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A6150  | Point to point test (DCS panels to HMI)                                   | 60                | 80%                 | 31          | 29-Jun-2015 A | 13-Nov-2015               | Point to point test (DCS panels to HMI)                                   |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |
| A6160  | End to end point test (Field to HMI)                                      | 30                | 60%                 | 31          | 06-Jul-2015 A | 25-Nov-2015               | End to end point test (Field to HMI)                                      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |

■ Actual Work  
■ Remaining Work  
■ Critical Remaining Work  
◆ Milestone  
▶ Summary

**Contract No. DC/2009/10**  
**HATS Stage 2A - Upgrading works at StoneCutters Island Sewage Treatment Works**  
**Target Works Programme (Revision 9)**

Sheet 1 of 5  
 DD: 6 Nov 2015

| Date        | Revision | Checked | Approved |
|-------------|----------|---------|----------|
| 19-Jun-2015 | Rev. 8A  |         |          |
| 30-Jun-2015 | Rev. 8B  |         |          |
| 10-Jul-2015 | Rev. 8C  |         |          |
| 17-Jul-2015 | Rev. 8D  |         |          |
| 31-Jul-2015 | Rev. 8E  |         |          |
| 17-Aug-2015 | Rev. 8F  |         |          |

| Activity ID   | Activity Name   | Original Duration | Activity % Complete | Total Float | Start         | Finish       | 2016 |     |     |     |     |     |     |     |     |     |     |     | 2017 |     |     |     |     |     |     |     |     |     |  |  |
|---|---|-------------------|---------------------|-------------|---------------|--------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
|   |   |                   |                     |             |               |              | Oct  | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct  | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul |  |  |
| A6170   | Software auto mode test   | 14                | 0%                  | 31          | 26-Nov-2015   | 09-Dec-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Inlet Chamber</b>  |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| A3530   | Installation Scum Pump and pipeworks  | 10                | 0%                  | 527         | 10-Nov-2015*  | 19-Nov-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Valve Chamber</b>  |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| A2870   | Installation of DN3600 KGV and Puddle Flange  | 15                | 90%                 | 462         | 17-Apr-2015 A | 03-Nov-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| A2890   | Water tightness test for Valve Chamber  | 21                | 0%                  | 462         | 03-Nov-2015   | 24-Nov-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| A2900   | RC works for perimeter basement wall and staircase  | 75                | 0%                  | 462         | 03-Nov-2015   | 17-Jan-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| A2910   | Installation of Multitpart cover  | 6                 | 0%                  | 462         | 17-Jan-2016   | 23-Jan-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Sodium Hypochloride Storage Compound</b>   |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>E&amp;M installation</b>   |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| A2610   | Steel Bracket installation and FRP Railing at Tank Top (2nd tank)   | 38                | 60%                 | 507         | 08-Apr-2015 A | 17-Nov-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| A2620   | Corrocoat Application (2nd tank)  | 24                | 80%                 | 507         | 20-May-2015   | 21-Nov-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| A2690   | Installation of NaOCL transfer system   | 45                | 60%                 | 507         | 22-Sep-2015 A | 09-Dec-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| A2700   | Installation of EOT crane (extension)   | 15                | 0%                  | 510         | 22-Nov-2015   | 06-Dec-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| A2740   | Installation of PV panels   | 15                | 0%                  | 506         | 26-Nov-2015   | 10-Dec-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Structural steel works (Roof Truss)</b>  |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| A2720   | Erection of roof truss  | 60                | 60%                 | 506         | 20-May-2015   | 25-Nov-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Works for Section 4</b>  |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Time for Sectional Completion</b>  |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| TC0091  | Commecement date of section 4   | 0                 | 0%                  | 0           | 13-Dec-2015*  |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| TC0095  | Forecasted Completion Date  | 0                 | 0%                  | 29          |               | 26-Jan-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Commissioning Test (with sewage water from HATS 2a PTW) (P.S. 45.07(1)(a)(iii)) &amp; T&amp;C Spec. Pt.1</b> |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Flow Turning Period (P.S. 45.09)</b>   |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| T01010  | Diversion of flows from each of the HATS 2a PTW's sea outfalls to MPS2 & the downstream processes (P.S. 45.09(1)) | 30                | 45%                 | 54          | 18-Sep-2015 A | 18-Nov-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| T01020  | Process Testing And Commissioning during Flow Turning Period (P.S. 45.09(7)(a))                                   | 30                | 55%                 | 57          | 01-Aug-2015 A | 15-Nov-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Reliability Test (P.S. 45.07(1)(a)(iii))</b>   |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| T02005  | Notification of Reliability Testing (28 Days Notice) (P.S. 45.04(3))  | 1                 | 0%                  | 29          | 28-Nov-2015   | 28-Nov-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| T02010  | Reliability Testing (P.S. 45.10) during Reliability Period (P.S. 45.10(1))  | 30                | 0%                  | 29          | 13-Dec-2015   | 11-Jan-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| T02020  | Process Testing And Commissioning during Reliability Tests (P.S. 45.10(15)(a))                                    | 30                | 0%                  | 29          | 13-Dec-2015   | 11-Jan-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| T02100  | Submission of Reliability Test Report (P.S. 45.10(14)(b))   | 1                 | 0%                  | 29          | 12-Jan-2016   | 12-Jan-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| T02110  | Approval of Reliability Test Report (P.S. 45.10(14)(c))   | 14                | 0%                  | 29          | 13-Jan-2016   | 26-Jan-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| T02290  | Date of Achievement of Works for Section 4  | 0                 | 0%                  | 29          |               | 26-Jan-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Works for Section 5</b>  |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Time for Sectional Completion</b>  |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| TC0110  | Duration for Section 5  | 1977              | 86.6%               | 279         | 24-Feb-2011 A | 23-Jul-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| TC0115  | Forecasted Completion Date  | 0                 | 0%                  | -1          |               | 29-Apr-2017  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| TC0120  | Contractual Completion Date (Possession date on 15 Oct 15)  | 0                 | 0%                  | 0           |               | 28-Apr-2017* |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Portion 7 (Polymer Building)</b>   |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Submission of design of E&amp;M works</b>  |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P501370   | Submission of design for the MEICA & BS works for Polymer Building  | 180               | 45%                 | 62          | 01-Jul-2015 A | 08-Feb-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P501380   | Approval/ comment for the design of the MEICA and BS works for Polymer Building                                   | 180               | 35%                 | 62          | 29-Jul-2015 A | 26-Feb-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Procurement/ Order/ Manufacturing/ Delivery</b>  |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P501870   | Procurement / Purchase Order of Lifting Appliance   | 30                | 0%                  | 62          | 27-Feb-2016   | 27-Mar-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P501880   | Manufacturing of Lifting Appliance  | 220               | 0%                  | 62          | 28-Mar-2016   | 02-Nov-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P501890   | Delivery of Lifting Appliance   | 30                | 0%                  | 62          | 03-Nov-2016   | 02-Dec-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P501900   | Procurement / Purchase Order of storage shelves   | 30                | 0%                  | 122         | 27-Feb-2016   | 27-Mar-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P501910   | Manufacturing of storage shelves  | 220               | 0%                  | 122         | 28-Mar-2016   | 02-Nov-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P501920   | Delivery of storage shelves   | 30                | 0%                  | 122         | 03-Nov-2016   | 02-Dec-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P501930   | Procurement / Purchase Order of building service equipment  | 30                | 0%                  | 116         | 27-Feb-2016   | 27-Mar-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P501940   | Manufacturing of building service equipment   | 180               | 0%                  | 116         | 28-Mar-2016   | 23-Sep-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P501950   | Delivery of building service equipment  | 30                | 0%                  | 116         | 24-Sep-2016   | 23-Oct-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Foundation Works</b>   |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P700030   | Mobilization of Piling Plant  | 10                | 0%                  | -1          | 08-Dec-2015   | 19-Dec-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Ground investigation</b>   |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P704200   | Predrilling (10 Nos)  | 30                | 15%                 | -1          | 26-Oct-2015 A | 01-Dec-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P704210   | Confirm founding level of piles   | 6                 | 0%                  | -1          | 01-Dec-2015   | 08-Dec-2015  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P704220   | Proof Drilling (2 Nos)  | 15                | 0%                  | -1          | 05-Apr-2016   | 22-Apr-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P704230   | Pile Load Test  | 7                 | 0%                  | -1          | 22-Apr-2016   | 30-Apr-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| <b>Rock Socketted Prebored H-pile</b>   |   |                   |                     |             |               |              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P700040   | Prebored and install casing (PS-1 to 3 & PS-11 to 14, 7Nos)   | 10                | 0%                  | -1          | 19-Dec-2015   | 04-Jan-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P700050   | Install H-pile  | 8                 | 0%                  | -1          | 04-Jan-2016   | 13-Jan-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P700060   | Grouting for prebored H-pile (PS-1 to 3 & PS-11 to 14, 7Nos)  | 5                 | 0%                  | -1          | 13-Jan-2016   | 19-Jan-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P700070   | Prebored and install casing (PS-21 to 23 & PS-31 to 33, 6Nos)   | 8                 | 0%                  | -1          | 19-Jan-2016   | 28-Jan-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P700150   | Install H-pile  | 9                 | 0%                  | -1          | 28-Jan-2016   | 11-Feb-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P700160   | Grouting for prebored H-pile (PS-21 to 23 & PS-31 to 33, 6Nos)  | 4                 | 0%                  | -1          | 11-Feb-2016   | 16-Feb-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P700170   | Prebored and install casing (PS-41 to 43 & PS-51 to 54, 7Nos)   | 10                | 0%                  | -1          | 16-Feb-2016   | 27-Feb-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P700180   | Install H-pile  | 8                 | 0%                  | -1          | 27-Feb-2016   | 08-Mar-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |
| P700190   | Grouting for prebored H-pile (PS-41 to 43 & PS-51 to 54, 7Nos)  | 5                 | 0%                  | -1          | 08-Mar-2016   | 14-Mar-2016  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |  |  |

█ Actual Work  
█ Remaining Work  
█ Critical Remaining Work  
◆ Milestone  
 Summary

Contract No. DC/2009/10

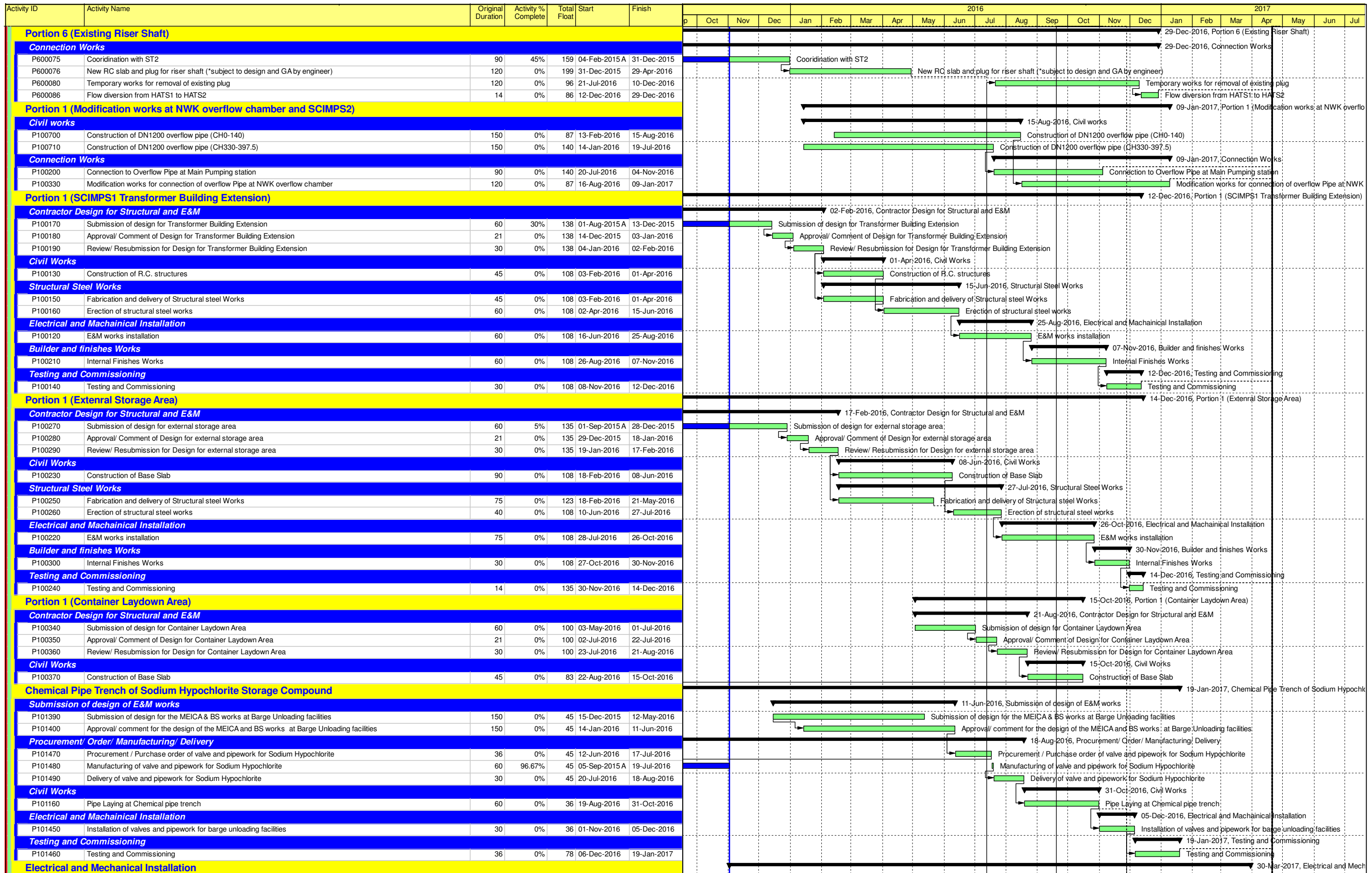
HATS Stage 2A - Upgrading works at StoneCutters Island Sewage Treatment Works

DD: 6 Nov 2015

Target Works Programme (Revision 9)

| Date        | Revision | Checked | Approved |
|-------------|----------|---------|----------|
| 19-Jun-2015 | Rev. 8A  |         |          |
| 30-Jun-2015 | Rev. 8B  |         |          |
| 10-Jul-2015 | Rev. 8C  |         |          |
| 17-Jul-2015 | Rev. 8D  |         |          |
| 31-Jul-2015 | Rev. 8E  |         |          |
| 17-Aug-2015 | Rev. 8F  |         |          |





- █ Actual Work
- █ Remaining Work
- █ Critical Remaining Work
- ◆ Milestone
- Summary

Contract No. DC/2009/10  
**HATS Stage 2A - Upgrading works at StoneCutters Island Sewage Treatment Works**  
 Target Works Programme (Revision 9)

Sheet 4 of 5  
 DD: 6 Nov 2015

| Date        | Revision | Checked | Approved |
|-------------|----------|---------|----------|
| 19-Jun-2015 | Rev. 8A  |         |          |
| 30-Jun-2015 | Rev. 8B  |         |          |
| 10-Jul-2015 | Rev. 8C  |         |          |
| 17-Jul-2015 | Rev. 8D  |         |          |
| 31-Jul-2015 | Rev. 8E  |         |          |
| 17-Aug-2015 | Rev. 8F  |         |          |

| Activity ID   | Activity Name   | Original Duration | Activity % Complete | Total Float | Start         | Finish      | 2016 |     |     |     |     |     |     |     |     |     |     |     | 2017 |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|-------------------|---------------------|-------------|---------------|-------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|   |   |                   |                     |             |               |             | Jan  | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan  | Feb | Mar | Apr | May | Jun | Jul |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Control System</b>   |   |                   |                     |             |               |             |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EM0010  | Submission of test plans for overall CEPT process T&C and final Construction Completion Report        | 100               | 0%                  | 29          | 26-Jan-2016   | 05-May-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EM0020  | Approval/ Comment of test plans for overall CEPT process T&C and final Construction Completion Report | 100               | 0%                  | 29          | 26-Feb-2016   | 05-Jun-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EM0021  | Carry out Condition survey at existing main pumping station   | 45                | 0%                  | 29          | 05-Jun-2016   | 20-Jul-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EM0030  | Carry out Overall CEPT Process Testing and Commissioning  | 60                | 0%                  | 29          | 20-Jul-2016   | 18-Sep-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EM0040  | Carry out Final Commissioning Test  | 24                | 0%                  | 80          | 05-Jul-2016   | 29-Jul-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EM0045  | Submission of Commissioning test report   | 35                | 0%                  | 29          | 18-Sep-2016   | 23-Oct-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EM0050  | Approval/ Comment of Commissioning test report  | 35                | 0%                  | 29          | 23-Oct-2016   | 27-Nov-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EM0060  | Implementation of the Expert System   | 180               | 0%                  | 199         | 02-Nov-2015   | 29-Apr-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EM0065  | Remote Operation terminals of DCS at PTW HATS stage 2A  | 210               | 0%                  | 169         | 02-Nov-2015   | 29-May-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EM0070  | Submission of Final O&M manual  | 90                | 0%                  | 29          | 27-Nov-2016   | 25-Feb-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EM0080  | Approval/ Comment of Final O&M manual   | 33                | 0%                  | 29          | 25-Feb-2017   | 30-Mar-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EM0090  | Submission of as-built drawings   | 120               | 0%                  | 169         | 30-May-2016   | 26-Sep-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EM0100  | Approval/ Comment of as-built drawings  | 45                | 0%                  | 169         | 27-Sep-2016   | 10-Nov-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>External Road and Drainage Works</b>   |   |                   |                     |             |               |             |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RW00010   | Road and Drainage works   | 180               | 75.56%              | 83          | 20-May-2015   | 01-Nov-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RW00020   | Dia 32mm watermain laying   | 60                | 0%                  | 83          | 20-Aug-2016   | 01-Nov-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RW00030   | Dia 600mm centrate Pipe   | 90                | 0%                  | 46          | 28-Sep-2016   | 17-Jan-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Landscaping Works</b>  |   |                   |                     |             |               |             |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LA00010   | Landscaping Planting Works  | 60                | 0%                  | 46          | 15-Dec-2016   | 02-Mar-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Architectural Refurbishment Works</b>  |   |                   |                     |             |               |             |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AR00010   | External Finishes Works of Existing building  | 450               | 67.56%              | 294         | 23-Oct-2014 A | 30-Apr-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Commissioning Test (P.S. 45.07(1)(a)(iv)) &amp; T&amp;C Spec. Pt.1 &amp; Pt.2</b>                                |   |                   |                     |             |               |             |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02105  | Submission of Drafted System Management Manual (SMM) (P.S. 45.11(9)(f))                               | 14                | 0%                  | 279         | 23-Mar-2016*  | 05-Apr-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02108  | Submission of Final System Management Manual (SMM) (P.S. 45.11(9)(g))                                 | 14                | 0%                  | 70          | 04-Feb-2017   | 17-Feb-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02125  | Submission of monthly report on CEPT Process Testing and Commissioning (P.S. 45.11(9)(d))             | 30                | 0%                  | 89          | 21-Dec-2016   | 19-Jan-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02127  | Submission of final CEPT process testing and commissioning report (P.S. 45.11(9)(d))                  | 10                | 0%                  | 74          | 04-Feb-2017   | 13-Feb-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Overall CEPT Process Testing and Commissioning (P.S. 45.11)</b>  |   |                   |                     |             |               |             |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02120  | Overall CEPT Process Testing and Commissioning (60days) (P.S. 45.11(2))                               | 60                | 0%                  | 45          | 06-Dec-2016   | 03-Feb-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02230  | Performance Tests for NWK (T&C Spec. Part 2 - (1))  | 16                | 0%                  | 45          | 06-Dec-2016   | 21-Dec-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02235  | Submission of Performance Test Report (P.S. 45.08(13)(b))   | 1                 | 0%                  | 45          | 22-Dec-2016   | 22-Dec-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02236  | Approval of Performance Test Report (P.S. 45.08(13)(c))   | 14                | 0%                  | 45          | 23-Dec-2016   | 05-Jan-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02242  | Notification of Reliability Testing (28 Days Notice) (P.S. 45.04(3))                                  | 1                 | 0%                  | 45          | 09-Dec-2016   | 09-Dec-2016 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02250  | Reliability period (excluding NWK Overflow) (14days) (T&C Spec. Part 2 - (2))                         | 14                | 0%                  | 45          | 06-Jan-2017   | 19-Jan-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02260  | Submission of Reliability Test Report (P.S. 45.10(14)(b))   | 1                 | 0%                  | 45          | 20-Jan-2017   | 20-Jan-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02270  | Approval of Reliability Test Report (P.S. 45.10(14)(c))   | 14                | 0%                  | 45          | 21-Jan-2017   | 03-Feb-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Final Commissioning(Divert flow of HATS1 to MPS2 via Interconnection Tunnel)(PS45.07(1)(a)(iv)&amp;45.09(6))</b> |   |                   |                     |             |               |             |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02200  | Final Commissioning Tests (P.S. 45.12(1))   | 24                | 0%                  | 45          | 04-Feb-2017   | 27-Feb-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02210  | Submission of Final Commissioning Test Report (P.S. 45.12(5)(b))                                      | 1                 | 0%                  | 45          | 28-Feb-2017   | 28-Feb-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02220  | Approval of Final Commissioning Test Report (P.S. 45.12(5)(c))  | 14                | 0%                  | 45          | 01-Mar-2017   | 14-Mar-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T02280  | Date of Achievement of Works for Section 5  | 0                 | 0%                  | 45          |               | 14-Mar-2017 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Actual Work  
Remaining Work  
Critical Remaining Work  
◆ Milestone  
▬ Summary

**Contract No. DC/2009/10**  
**HATS Stage 2A - Upgrading works at StoneCutters Island Sewage Treatment Works**  
**Target Works Programme (Revision 9)**

Sheet 5 of 5  
 DD: 6 Nov 2015

| Date        | Revision | Checked | Approved |
|-------------|----------|---------|----------|
| 19-Jun-2015 | Rev. 8A  |         |          |
| 30-Jun-2015 | Rev 8B   |         |          |
| 10-Jul-2015 | Rev 8C   |         |          |
| 17-Jul-2015 | Rev. 8D  |         |          |
| 31-Jul-2015 | Rev 8E   |         |          |
| 17-Aug-2015 | Rev. 8F  |         |          |

| Activity ID  | Activity Name                                      | Original Duration | BL Project Start | BL Project Finish | Start       | Finish    | 2016 |     |     |     |     |  |
|--|--|-------------------|------------------|-------------------|-------------|-----------|------|-----|-----|-----|-----|--|
|  |  |                   |                  |                   |             |           | Jan  | Feb | Mar | Apr | May |  |
| <b>DC/2009/17 Detailed Works Programme Revision 3B_Updated up to 31-Jan-16</b> |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| <b>Design of Permanent Works</b>   |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| <b>DDA2 (Southern Sludge Cake Silo)</b>  |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| <b>Sub-Package - A1</b>  |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| DP34440  | DDA: SSCS - ICE Approve Sub-structure Design       | 124               | 02-Sep-15        | 15-Jan-16         | 14-Jan-15 A | 06-Feb-16 |      |     |     |     |     |  |
| DP34442  | DDA: SSCS - Engineer Comment Sub-structure Design  | 28                | 06-Feb-16        | 10-Mar-16         | 06-Feb-16   | 10-Mar-16 |      |     |     |     |     |  |
| DP34444  | DDA: SSCS - Finalize Sub-structure Design          | 28                | 10-Mar-16        | 13-Apr-16         | 10-Mar-16   | 13-Apr-16 |      |     |     |     |     |  |
| DP34450  | DDA: SSCS - Engineer Approve Sub-structure Design  | 24                | 13-Apr-16        | 09-May-16         | 13-Apr-16   | 09-May-16 |      |     |     |     |     |  |
| <b>DDA7 (DOU5 and DGS)</b>   |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| <b>Sub-Package - A1</b>  |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| DP034170   | DDA: DOU5&DGS - Submit Sub-structure Design        | 160               | 29-Apr-15        | 19-Oct-15         | 17-Jul-14 A | 20-Feb-16 |      |     |     |     |     |  |
| DP034180   | DDA: DOU5&DGS - ICE Approve Sub-structure Design   | 81                | 18-Nov-15        | 17-Feb-16         | 30-Sep-15 A | 12-Apr-16 |      |     |     |     |     |  |
| DP034182   | DDA: DOU5&DGS - Engineer Comment Piling Design     | 21                | 12-Apr-16        | 05-May-16         | 12-Apr-16   | 05-May-16 |      |     |     |     |     |  |
| <b>Sub-Package - B</b>   |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| DP034210   | DDA: DOU5&DGS - Submit Structural Design           | 190               | 28-Apr-15        | 19-Nov-15         | 08-Jul-14 A | 02-Feb-16 |      |     |     |     |     |  |
| DP034220   | DDA: DOU5&DGS - ICE Approve Structural Design      | 107               | 02-Sep-15        | 28-Dec-15         | 29-Jan-15 A | 12-Apr-16 |      |     |     |     |     |  |
| DP034230   | DDA: DOU5&DGS - Engineer Comment Structural Design | 21                | 12-Apr-16        | 05-May-16         | 12-Apr-16   | 05-May-16 |      |     |     |     |     |  |
| <b>DDA5 (PWST &amp; Pumping System)</b>  |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| <b>Sub-Package - B</b>   |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| DP030210   | DDA: PWST&PS - Submit Structure Design             | 160               | 30-May-15        | 18-Nov-15         | 28-Jul-14 A | 29-Feb-16 |      |     |     |     |     |  |
| DP030220   | DDA: PWST&PS - ICE Approve Structure Design        | 108               | 01-Mar-16        | 29-Jun-16         | 01-Mar-16   | 29-Jun-16 |      |     |     |     |     |  |
| <b>Detailed Design Approval (DDA) Submission</b>                               |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| <b>DDA 35 - Workshop Equipment</b>   |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| DP008810   | DDA: Workshop (E&M) - Designer to Compile DDA      | 120               | 05-Apr-13        | 14-Aug-13         | 05-Apr-13 A | 01-Feb-16 |      |     |     |     |     |  |
| DP008815   | DDA: Workshop (E&M) - Comment, Review & Approval   | 63                | 01-Sep-15        | 07-Nov-15         | 08-Apr-15 A | 15-Feb-16 |      |     |     |     |     |  |
| DP008830   | DDA: Workshop (E&M) - Engineer Comment             | 14                | 31-Dec-15        | 16-Jan-16         | 21-Dec-15 A | 03-Feb-16 |      |     |     |     |     |  |
| DP008840   | DDA: Workshop (E&M) - Designer Response/Revision   | 21                | 01-Feb-16        | 25-Feb-16         | 01-Feb-16   | 25-Feb-16 |      |     |     |     |     |  |
| DP008850   | DDA: Workshop (E&M) - 2nd Submission & ICE Cert    | 7                 | 25-Feb-16        | 03-Mar-16         | 25-Feb-16   | 03-Mar-16 |      |     |     |     |     |  |
| DP008860   | DDA: Workshop (E&M) - Engineer Approval            | 32                | 03-Mar-16        | 09-Apr-16         | 03-Mar-16   | 09-Apr-16 |      |     |     |     |     |  |
| <b>Section 5 of the Works</b>  |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| <b>Workshop Building</b>   |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| <b>Structure</b>   |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| <b>Substructure</b>  |  |                   |                  |                   |             |           |      |     |     |     |     |  |
| S5002203   | WB: Excavation for Pilecap & Beam                  | 30                | 21-Dec-15        | 25-Jan-16         | 15-Dec-15 A | 04-Mar-16 |      |     |     |     |     |  |
| S5002206   | WB: Raft Foundation & other Pilecap                | 135               | 01-Feb-16        | 30-Jun-16         | 01-Feb-16   | 30-Jun-16 |      |     |     |     |     |  |

- ◆ Milestone
- Actual Work
- Remaining Work
- Critical Remaining Work

**Three Months Rolling Programme - February to April 2016**  
 (Based on Detail Works Programme Rev.3B)

| 3-M Rolling Programme |          |         |          |
|-----------------------|----------|---------|----------|
| Date                  | Revision | Checked | Approved |
| 31-Jan-16             |          |         |          |
|                       |          |         |          |
|                       |          |         |          |
|                       |          |         |          |

| Activity ID                                  | Activity Name   | Original Duration | BL Project Start | BL Project Finish | Start      | Finish    | 2016 |     |     |     |     |
|--|---|-------------------|------------------|-------------------|------------|-----------|------|-----|-----|-----|-----|
|  |   |                   |                  |                   |            |           | Jan  | Feb | Mar | Apr | May |
| <b>Procurement, Manufacture and Delivery</b> |   |                   |                  |                   |            |           |      |     |     |     |     |
| S5002910                                     | WB: Procure Balancing Machine for Centrifuge                    | 39                | 03-Mar-16        | 18-Apr-16         | 03-Mar-16  | 18-Apr-16 |      |     |     |     |     |
| S5002915                                     | WB: Manufacture Balancing Machine for Centrifuge                | 113               | 18-Apr-16        | 17-Aug-16         | 18-Apr-16  | 17-Aug-16 |      |     |     |     |     |
| S5002930                                     | WB: Procure various E&M Equipment / Material                    | 39                | 03-Mar-16        | 18-Apr-16         | 03-Mar-16  | 18-Apr-16 |      |     |     |     |     |
| S5002935                                     | WB: Manufacture various E&M Equipment / Material                | 135               | 18-Apr-16        | 09-Sep-16         | 18-Apr-16  | 09-Sep-16 |      |     |     |     |     |
| S5002950                                     | WB: Procurement of Travelling Crane                             | 40                | 18-Apr-16        | 01-Jun-16         | 18-Apr-16  | 01-Jun-16 |      |     |     |     |     |
| <b>Southern Sludge Cake Silo</b>             |   |                   |                  |                   |            |           |      |     |     |     |     |
| <b>Procurement, Manufacture and Delivery</b> |   |                   |                  |                   |            |           |      |     |     |     |     |
| S5003520                                     | SSCS: Procure Conveyor, Valve, Air Duct & Lifting Appliance     | 60                | 31-Oct-15        | 04-Jan-16         | 30-Sep-15  | 06-Feb-16 |      |     |     |     |     |
| S5003530                                     | SSCS: Manufacture Conveyor, Valve, Air Duct & Lifting Appliance | 177               | 16-Nov-15        | 31-May-16         | 15-Oct-15  | 14-Jul-16 |      |     |     |     |     |
| S5003550                                     | SSCS: Procure Vehicle Washing Machine                           | 68                | 06-Feb-16        | 25-Apr-16         | 06-Feb-16  | 25-Apr-16 |      |     |     |     |     |
| S5003555                                     | SSCS: Manufacture Vehicle Washing Machine                       | 130               | 25-Apr-16        | 10-Sep-16         | 25-Apr-16  | 10-Sep-16 |      |     |     |     |     |
| S5003585                                     | SSCS: Procurement of Silo (Body)                                | 68                | 01-Feb-16        | 18-Apr-16         | 01-Feb-16  | 18-Apr-16 |      |     |     |     |     |
| S5003590                                     | SSCS: Manufacturing of Silo (Body)                              | 101               | 01-Feb-16        | 25-May-16         | 01-Feb-16  | 25-May-16 |      |     |     |     |     |
| S5003595                                     | SSCS: FAT Test for 1st lot Silos (4 nos)                        | 15                | 19-Apr-16        | 05-May-16         | 19-Apr-16  | 05-May-16 |      |     |     |     |     |
| <b>Deodourization Unit 5 and DG Store</b>    |   |                   |                  |                   |            |           |      |     |     |     |     |
| <b>Procurement and Delivery</b>              |   |                   |                  |                   |            |           |      |     |     |     |     |
| S5008510                                     | DOU5 & DGS: Procurement of DOU5 & other E&M Equipment           | 60                | 01-Feb-16        | 11-Apr-16         | 01-Feb-16* | 11-Apr-16 |      |     |     |     |     |
| S5008520                                     | DOU5 & DGS: Manufacturing of DOU5 & other E&M Equipment         | 210               | 01-Feb-16        | 19-Sep-16         | 01-Feb-16  | 19-Sep-16 |      |     |     |     |     |
| <b>Process Water Storage Tank</b>            |   |                   |                  |                   |            |           |      |     |     |     |     |
| <b>Procurement, Manufacture and Delivery</b> |   |                   |                  |                   |            |           |      |     |     |     |     |
| S5009660                                     | PWST: Procure Tanks & other E&M Equipment / Material            | 62                | 15-Feb-16        | 23-Apr-16         | 15-Feb-16  | 23-Apr-16 |      |     |     |     |     |
| S5009670                                     | PWST: Manufacture Tanks & other E&M Equipment / Material        | 135               | 23-Apr-16        | 15-Sep-16         | 23-Apr-16  | 15-Sep-16 |      |     |     |     |     |
| <b>External (Civil) Works</b>                |   |                   |                  |                   |            |           |      |     |     |     |     |
| <b>SDB Area</b>                              |   |                   |                  |                   |            |           |      |     |     |     |     |
| S5009812                                     | Concrete pillar box   | 59                | 14-Nov-14        | 16-Jan-15         | 29-Sep-14  | 01-Feb-16 |      |     |     |     |     |
| S5009814                                     | Permanent carrigeway  | 59                | 14-Nov-14        | 16-Jan-15         | 29-Sep-14  | 06-Feb-16 |      |     |     |     |     |
| S5009818                                     | Cable duct and draw pit P29                                     | 14                | 06-Feb-16        | 24-Feb-16         | 06-Feb-16  | 24-Feb-16 |      |     |     |     |     |
| <b>General Area</b>                          |   |                   |                  |                   |            |           |      |     |     |     |     |
| S5009826                                     | Foul sewer & manholes F6A & F6C at portion 3 & 4                | 56                | 25-Feb-16        | 28-Apr-16         | 25-Feb-16  | 28-Apr-16 |      |     |     |     |     |
| S5009832                                     | Cable duct at portion 3 & 4                                     | 56                | 29-Mar-16        | 30-May-16         | 29-Mar-16  | 30-May-16 |      |     |     |     |     |
| S5009834                                     | Chemical pipe & trench  | 56                | 28-Apr-16        | 29-Jun-16         | 28-Apr-16  | 29-Jun-16 |      |     |     |     |     |
| <b>SSCS Area</b>                             |   |                   |                  |                   |            |           |      |     |     |     |     |
| S5009852                                     | Sludge feed pipe SF2 and access chamber 2                       | 55                | 01-Feb-16        | 05-Apr-16         | 01-Feb-16  | 05-Apr-16 |      |     |     |     |     |
| S5009862                                     | Cable duct and draw pits P8, P9 & P10                           | 55                | 06-Apr-16        | 03-Jun-16         | 06-Apr-16  | 03-Jun-16 |      |     |     |     |     |

- ◆ Milestone
- Actual Work
- Remaining Work
- Critical Remaining Work

**Three Months Rolling Programme - February to April 2016**  
 (Based on Detail Works Programme Rev.3B)

| 3-M Rolling Programme |          |         |          |
|-----------------------|----------|---------|----------|
| Date                  | Revision | Checked | Approved |
| 31-Jan-16             |          |         |          |
|                       |          |         |          |
|                       |          |         |          |
|                       |          |         |          |



| Activity ID                                    | Activity Name   | Start       | Finish      | Physical % Complete | 2015 |    |    |    |      |    |    |    |    |    |    |    | 2017 |
|--|---|-------------|-------------|---------------------|------|----|----|----|------|----|----|----|----|----|----|----|------|
|  |   |             |             |                     | 2015 |    |    |    | 2016 |    |    |    |    |    |    |    |      |
|  |   |             |             |                     | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |      |
| 18-64289N                                      | ET - Invert (I2) CH 813 - 805 Bay 9                         |             | 03-Mar-15 A | 100%                |      | ◆  |    |    |      |    |    |    |    |    |    |    |      |
| 18-64290N                                      | ET - Invert (I2) CH 821 - 813 Bay 8                         |             | 03-Mar-15 A | 100%                |      | ◆  |    |    |      |    |    |    |    |    |    |    |      |
| 18-64291N                                      | ET - Invert (I2) CH 829 - 821 Bay 7                         |             | 04-Mar-15 A | 100%                |      | ◆  |    |    |      |    |    |    |    |    |    |    |      |
| 18-64292N                                      | ET - Invert (I2) CH 837 - 829 Bay 6                         |             | 05-Mar-15 A | 100%                |      | ◆  |    |    |      |    |    |    |    |    |    |    |      |
| 18-64293N                                      | ET - Invert (I2) CH 845 - 837 Bay 5                         |             | 09-Mar-15 A | 100%                |      | ◆  |    |    |      |    |    |    |    |    |    |    |      |
| 18-64187N                                      | ET - Invert (I1) CH 23 - 14 Bay 106                         |             | 11-Mar-15 A | 100%                |      | ◆  |    |    |      |    |    |    |    |    |    |    |      |
| 18-64188N                                      | ET - Invert (I1) CH 14 - 10 Bay 107                         |             | 13-Mar-15 A | 100%                |      | ◆  |    |    |      |    |    |    |    |    |    |    |      |
| 18-64189N                                      | ET - Invert (I1) CH 10 - 2 Bay 108                          |             | 19-Mar-15 A | 100%                |      | ◆  |    |    |      |    |    |    |    |    |    |    |      |
| 18-57727N                                      | ET - DS Tunnel Lining (Invert) Formwork Dismantle           | 20-Mar-15 A | 23-Mar-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-64294N                                      | ET - Invert (I2) CH 853 - 845 Bay 4                         |             | 23-Mar-15 A | 100%                |      | ◆  |    |    |      |    |    |    |    |    |    |    |      |
| 18-64295N                                      | ET - Invert (I2) CH 861 - 853 Bay 3                         |             | 24-Mar-15 A | 100%                |      | ◆  |    |    |      |    |    |    |    |    |    |    |      |
| 18-64297N                                      | ET - Invert (I2) CH 865 - 861 Bay 2                         |             | 25-Mar-15 A | 100%                |      | ◆  |    |    |      |    |    |    |    |    |    |    |      |
| 18-64298N                                      | ET - Invert (I2) CH 873 - 865 Bay 1                         |             | 30-Mar-15 A | 100%                |      | ◆  |    |    |      |    |    |    |    |    |    |    |      |
| 18-57728N                                      | ET - RS Tunnel Lining (Invert) Formwork Dismantle           | 01-Apr-15 A | 05-Apr-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| <b>6.06.5 - Flow Distribution Chamber No.2</b> |   |             |             |                     |      |    |    |    |      |    |    |    |    |    |    |    |      |
| <b>6.06.5.1 - Demolition Works</b>             |   |             |             |                     |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-65810                                       | FDC2 - Prep & Sub of New Proposed Staircase to Engineer     | 15-Dec-11 A | 28-Dec-11 A | 100%                |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-65820                                       | FDC2 - Approve New Proposed Staircase from Engineer         | 29-Dec-11 A | 20-Jan-12 A | 100%                |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-65830                                       | FDC2 - Construction of New Staircase                        | 20-Feb-12 A | 10-Apr-12 A | 100%                |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-65800                                       | FDC2 - Demolition of Staircase                              | 19-Jun-12 A | 06-Jul-12 A | 100%                |      |    |    |    |      |    |    |    |    |    |    |    |      |
| <b>6.06.5.2 - Foundation</b>                   |   |             |             |                     |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-65780                                       | FDC2 - G.I. Pre Drilling (5 Nos.)                           | 14-Nov-11 A | 30-Dec-11 A | 100%                |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-65790                                       | FDC2 - Setting Out Pile Points                              | 21-Jan-12 A | 27-Jan-12 A | 100%                |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-65740                                       | FDC2 - Pre-Bored H-Pile 1st Group (4 nos)                   | 02-Feb-12 A | 13-Mar-12 A | 100%                |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-65750                                       | FDC2 - Pre-Bored H-Pile 2nd Group (4 nos)                   | 06-Mar-12 A | 17-Jul-12 A | 100%                |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-65760                                       | FDC2 - Pre-Bored H-Pile 3rd Group (4 nos)                   | 13-Jul-12 A | 26-Jul-12 A | 100%                |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-65770                                       | FDC2 - Pre-Bored H-Pile 4th Group (5 nos)                   | 27-Jul-12 A | 05-Aug-12 A | 100%                |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-58242                                       | FDC2 - Pre-Bored H-Pile 4th Group (5 nos)                   | 24-Aug-12 A | 24-Aug-12 A | 100%                |      |    |    |    |      |    |    |    |    |    |    |    |      |
| <b>6.06.5.3 - Temporary Works</b>              |   |             |             |                     |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-66000                                       | FDC2 - Remove Existing Footing and Sheet Pile Driving Works | 31-Dec-14 A | 28-Jul-15 A | 100%                | ■    |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-66010                                       | FDC2 - Pre-boring Works                                     | 10-Mar-15 A | 29-Jun-15 A | 100%                | ■    |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-66020                                       | FDC2 - ELS 1st Layer (Level +4.5 mPD)                       | 20-Apr-15 A | 11-May-15 A | 100%                | ■    |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-66030                                       | FDC2 - ELS 2nd Layer (Level +1.3 mPD)                       | 11-May-15 A | 23-May-15 A | 100%                | ■    |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-66040                                       | FDC2 - ELS Formation + Blinding                             | 24-May-15 A | 04-Jun-15 A | 100%                | ■    |    |    |    |      |    |    |    |    |    |    |    |      |
| <b>6.06.5.4 - Structure</b>                    |   |             |             |                     |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-66050                                       | FDC2 - Installation of Pile Head                            | 05-Jun-15 A | 15-Jun-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| <b>6.06.5.4.1 - Stage 1</b>                    |   |             |             |                     |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-66060                                       | FDC2 - Base Slab  | 16-Jun-15 A | 30-Jun-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66090                                       | FDC2 - Lower Wall (Level -0.425 to +5.5mPD)                 | 01-Jul-15 A | 31-Jul-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66120                                       | FDC2 - Removal of 2nd Layer Strut and Backfill              | 06-Aug-15 A | 07-Aug-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66080                                       | FDC2 - Removal of 1st Layer Strut                           | 08-Aug-15 A | 09-Aug-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66130                                       | FDC2 - Upper Wall (Level +5.5mPD to +13.5 mPD)              | 10-Aug-15 A | 15-Sep-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66850                                       | FDC2 - Installation of Stainless Steel Channel at Slot      | 26-Sep-15 A | 02-Oct-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66840                                       | FDC2 - Installation of Concrete Panels                      | 29-Sep-15 A | 07-Oct-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| <b>6.06.5.4.2 - Stage 2</b>                    |   |             |             |                     |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-66070                                       | FDC2 - Cutting of Diaphragm Wall                            | 17-Jun-15 A | 22-Jul-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66140                                       | FDC2 - Base Slab  | 15-Jul-15 A | 05-Aug-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66100                                       | FDC2 - ELS Works  | 17-Jul-15 A | 03-Aug-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66160                                       | FDC2 - Lower Wall (Level -0.4 to +5.2mPD)                   | 06-Aug-15 A | 18-Aug-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66250                                       | FDC2 - Removal of 2nd Layer Struct and Backfill             | 13-Aug-15 A | 21-Aug-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66150                                       | FDC2 - Removal of 1st Layer Struct and Backfill             | 22-Aug-15 A | 27-Aug-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66280                                       | FDC2 - Upper Wall (Level + 5.2 to +13.5 mPD)                | 26-Aug-15 A | 15-Sep-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66270                                       | FDC2 - Temporary Scaffolding for Wall Construction          | 26-Aug-15 A | 29-Aug-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| <b>6.06.5.5 - Finishing Works</b>              |   |             |             |                     |      |    |    |    |      |    |    |    |    |    |    |    |      |
| 18-66380                                       | FDC2 - PVC Liner Touch Up Work                              | 22-Sep-15 A | 10-Oct-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66310                                       | FDC2 - Install FRP Covers & Handrailing                     | 26-Sep-15 A | 29-Jan-16   | 80%                 |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66390                                       | FDC2 - Waterproofing System                                 | 01-Oct-15 A | 08-Oct-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66180                                       | FDC2 - Staircase  | 07-Oct-15 A | 12-Oct-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |
| 18-66290                                       | FDC2 - Install Temp Cover                                   | 12-Oct-15 A | 16-Oct-15 A | 100%                |      | ■  |    |    |      |    |    |    |    |    |    |    |      |



|                        |                         |
|------------------------|-------------------------|
| Actual Level of Effort | Remaining Work          |
| Primary Baseline       | Critical Remaining Work |
| Actual Work            | Milestone               |

### Updated Detail Works Programme

Data Date: 27-Jan-16      Run Date: 27-Jan-16

Project ID : C18DWPDI60127  
Layout : C18160127UDWP  
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| Detail Works Programme |                  |         |          |
|------------------------|------------------|---------|----------|
| Date                   | Revision         | Checked | Approved |
| 23-Dec-15              | DWP Rev D Update |         |          |
| 27-Jan-16              | DWP Rev D Update |         |          |

| Activity ID                       | Activity Name  | Start       | Finish      | Physical % Complete | 2015 |    |    |    | 2016 |    |    |    | 2017 |  |  |
|-----------------------------------|--|-------------|-------------|---------------------|------|----|----|----|------|----|----|----|------|--|--|
|                                   |  |             |             |                     | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   |  |  |
| 18-66190                          | FDC2 - Cladding Works                                  | 15-Feb-16*  | 30-Mar-16   | 0%                  |      |    |    |    |      |    |    |    |      |  |  |
| 18-66200                          | FDC2 - Painting Works                                  | 01-Apr-16   | 14-Apr-16   | 0%                  |      |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.5.6 - E&amp;M Works</b>   |  |             |             |                     |      |    |    |    |      |    |    |    |      |  |  |
| 18-66220                          | Static Mixer On-site Assembly                          | 19-Aug-15 A | 21-Sep-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-66170                          | Handover to E&M Works                                  | 22-Sep-15 A |             | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-66300                          | Install Static Mixer                                   | 24-Sep-15 A | 30-Sep-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-66240                          | Install Flow Measurement Sensor/Transducer             | 07-Oct-15 A | 19-Oct-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-66230                          | Install Air Duct                                       | 14-Jan-16 A | 17-Feb-16   | 10%                 |      |    |    |    |      |    |    |    |      |  |  |
| 18-66210                          | Install Power Supply System                            | 27-Jan-16   | 08-Feb-16*  | 0%                  |      |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.6 - Chamber 15A</b>       |  |             |             |                     |      |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.6.1 - Foundation</b>      |  |             |             |                     |      |    |    |    |      |    |    |    |      |  |  |
| 18-58650                          | Cham 15A - G.I. - Pre Drilling (4 Nos.)                | 11-Oct-11 A | 09-Nov-11 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-58700                          | Cham 15A - Setting Out Pile Points                     | 03-Nov-11 A | 09-Nov-11 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-58800                          | Cham 15A - H-Piles (15 nos.)                           | 30-Mar-12 A | 29-May-12 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.6.2 - Temporary Works</b> |  |             |             |                     |      |    |    |    |      |    |    |    |      |  |  |
| 18-58910                          | Cham 15A - Trial Pile                                  | 26-Aug-14 A | 30-Aug-14 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-58900                          | Cham 15A - Sheet Pile Driving Works                    | 13-Sep-14 A | 28-Nov-14 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-58950                          | Cham 15A - ELS 1st Layer                               | 03-Dec-14 A | 17-Jan-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-58960                          | Cham 15A - ELS 2nd Layer                               | 18-Jan-15 A | 09-Feb-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-58980                          | Cham 15A - ELS Formation + Blinding                    | 09-Feb-15 A | 12-Mar-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-59000                          | Cham 15A - ELS Removal + Backfill                      | 15-Apr-15 A | 23-May-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-58990                          | Cham 15A - Sheet Pile Removal                          | 22-Aug-15 A | 26-Aug-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.6.3 - Structure</b>       |  |             |             |                     |      |    |    |    |      |    |    |    |      |  |  |
| C181120                           | Cham 15A - Installation of Pile Head                   | 13-Mar-15 A | 20-Mar-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| C181140                           | Cham 15A - Diaphragm Wall Cutting Works                | 16-Mar-15 A | 14-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.6.3.1 Stage 1</b>         |  |             |             |                     |      |    |    |    |      |    |    |    |      |  |  |
| C183040                           | Cham 15A - Base Slab (Level -2.0 to 0 mPD)             | 20-Mar-15 A | 14-Apr-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| C181260                           | Cham 15A - Lower Wall (Level 0 to +5.15 mPD)           | 15-Apr-15 A | 20-May-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| C181530                           | Cham 15A - Upper Wall (Level + 5.15 to +11.5 mPD)      | 21-May-15 A | 02-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.6.3.2 Stage 2</b>         |  |             |             |                     |      |    |    |    |      |    |    |    |      |  |  |
| C181800                           | Cham 15A - Base Slab (Level -2.0 to 0 mPD)             | 15-Jun-15 A | 27-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| C181910                           | Cham 15A - Lower Wall (Level 0 to +5.2 mPD)            | 28-Jul-15 A | 17-Aug-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| C181900                           | Cham 15A - Removal of 1st Layer Struct and Backfill    | 19-Aug-15 A | 20-Aug-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| C181960                           | Cham 15A - Removal of 2nd Layer Struct and Backfill    | 21-Aug-15 A | 22-Aug-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| C182180                           | Cham 15A - Upper Wall (Level + 5.2 to +11.5 mPD)       | 22-Aug-15 A | 05-Sep-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| C181970                           | Cham 15A - Temporary Scaffolding for Wall Construction | 24-Aug-15 A | 28-Aug-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.6.4 - Finishing Works</b> |  |             |             |                     |      |    |    |    |      |    |    |    |      |  |  |
| 18-59060N                         | Cham 15A - Handover for Finishing Works                | 22-Sep-15 A |             | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-66320                          | Cham 15A - Install FRP Covers & Handrailing            | 23-Sep-15 A | 15-Dec-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-59110                          | Cham 15A - FRP Baffle Wall                             | 24-Sep-15 A | 19-Oct-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-59080                          | Cham 15A - Shanghai Render Panels                      | 15-Feb-16*  | 04-Apr-16   | 0%                  |      |    |    |    |      |    |    |    |      |  |  |
| 18-59090                          | Cham 15A - Cladding Works                              | 06-Mar-16   | 14-Apr-16   | 0%                  |      |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.6.5 - E&amp;M Works</b>   |  |             |             |                     |      |    |    |    |      |    |    |    |      |  |  |
| 18-59140                          | Cham 15A - Install Power Supply System                 | 01-Aug-15 A | 20-Nov-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-59150D                         | Cham 15A - Install TRC Measurement System              | 05-Aug-15 A | 26-Sep-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-59100D                         | Cham 15A - Install Penstock                            | 10-Aug-15 A | 22-Sep-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-59120                          | Cham 15A - Install Effluent Pumps                      | 25-Aug-15 A | 14-Nov-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-59099N                         | Chamber 15A Handover for E&M Works                     | 15-Sep-15 A |             | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-59100                          | Cham 15A - Install Chemical Dosing Unit                | 24-Sep-15 A | 02-Oct-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-59100D20                       | Cham 15A - Install Air Ducts at Area 2                 | 26-Sep-15 A | 20-Nov-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-59160                          | Cham 15A - Install Odour Ducts                         | 26-Sep-15 A | 20-Nov-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-59130                          | Cham 15A - Install Pipes & Valves                      | 26-Sep-15 A | 20-Nov-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.7 - Entry Culvert</b>     |  |             |             |                     |      |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.7.1 - Foundation</b>      |  |             |             |                     |      |    |    |    |      |    |    |    |      |  |  |
| 18-59550                          | Entry Culvert - G.I. - Pre-drilling (2 Nos.)           | 24-Nov-11 A | 07-Dec-11 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-59600                          | Entry Culvert - Pre-Bored H-Pile (6 Nos.@2d/no.)       | 04-Sep-12 A | 19-Sep-12 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.7.2 - Temporary Works</b> |  |             |             |                     |      |    |    |    |      |    |    |    |      |  |  |
| 18-59651N                         | Entry Culvert - Concrete Breaking                      | 25-Feb-13 A | 02-Mar-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |
| 18-59650D                         | Entry Culvert - Sheet Piling (194 sheet piles)         | 05-Mar-13 A | 17-Apr-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |  |



|  |                        |  |                         |
|--|------------------------|--|-------------------------|
|  | Actual Level of Effort |  | Remaining Work          |
|  | Primary Baseline       |  | Critical Remaining Work |
|  | Actual Work            |  | Milestone               |

## Updated Detail Works Programme

Data Date: 27-Jan-16

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### Detail Works Programme

| Date      | Revision         | Checked | Approved |
|-----------|------------------|---------|----------|
| 23-Dec-15 | DWP Rev D Update |         |          |
| 27-Jan-16 | DWP Rev D Update |         |          |

| Activity ID                                      | Activity Name   | Start       | Finish      | Physical % Complete | 2015 |    |    |    | 2016 |    |    |    | 2017 |  |
|--|---|-------------|-------------|---------------------|------|----|----|----|------|----|----|----|------|--|
|  |   |             |             |                     | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   |  |
| 18-59679N  | Entry Culvert - Excavation  | 18-Apr-13 A | 06-Aug-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59680N  | Existing Drop Shaft - Breaking of Existing D-wall   | 03-May-13 A | 12-Sep-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59660D  | Entry Culvert - ELS 1st Layer + Removal of Existing D-wall Panel                                      | 06-May-13 A | 14-Jun-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59662N  | Entry Culvert - Breaking of Underground RC Block  | 07-Jun-13 A | 04-Jul-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59670D  | Entry Culvert - ELS 2nd Layer + Removal of Existing D-wall Panel                                      | 12-Jul-13 A | 25-Sep-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59680D  | Entry Culvert - ELS Formation + Blinding  | 06-Aug-13 A | 10-Aug-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59681N  | Entry Culvert - ELS Formation + Blinding at C-Clamp Area  | 11-Sep-13 A | 13-Sep-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59682N  | Existing Drop Shaft - Coring of Holes for Installation of T25 Post Drill Links                        | 13-Sep-13 A | 29-Sep-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59683N  | Existing Drop Shaft - Trimming of CJ  | 18-Sep-13 A | 30-Sep-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| <b>6.06.7.3 - Structure</b>                      |   |             |             |                     |      |    |    |    |      |    |    |    |      |  |
| 18-59711N  | Entry Culvert - Installation of H-Pile Steel Top Plates   | 13-Aug-13 A | 31-Aug-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59712N  | Entry Culvert - Backfilling of Soft Spot Below the Foundation Layer                                   | 02-Sep-13 A | 17-Sep-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59710D  | Entry Culvert - Base Slab + Kicker  | 18-Sep-13 A | 21-Oct-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64295D  | Entry Culvert - Wall Construction   | 15-Oct-13 A | 06-Dec-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64296N  | Entry Culvert - Removal of Formworks  | 07-Dec-13 A | 19-Dec-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64315   | Entry Culvert - Backfill + ELS Removal  | 21-Dec-13 A | 14-Jan-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64340N  | Entry Culvert - Construct Remaining Top Slab of New Culvert   | 27-Jan-14 A | 26-Feb-14 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64350N  | Entry Culvert - Connection of Precast Top Slab and Entry Culvert                                      | 03-Jun-14 A | 12-Jul-14 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| <b>6.06.7.4 - E&amp;M Works</b>                  |   |             |             |                     |      |    |    |    |      |    |    |    |      |  |
| 18-64304N  | Entry Culvert Handover for E&M Works  | 23-Jun-15 A |             | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64355D  | Entry Culvert - TRC Measurement System  | 03-Jul-15 A | 26-Sep-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64335D  | Entry Culvert - Install Pipes & Valves  | 03-Jul-15 A | 26-Sep-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64345D  | Entry Culvert - Install Power Supply System   | 05-Jul-15 A | 29-Sep-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64360   | Entry Culvert - Install Odour Ducts [Remaining Works Will be Carried Out during Section 5]            | 22-Aug-15 A | 16-Mar-16   | 80%                 |      |    |    |    |      |    |    |    |      |  |
| 18-64305D  | Entry Culvert - Install Effluent Pumps  | 25-Aug-15 A | 29-Sep-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64365   | Entry Culvert - Functional Test for Equipments [Remaining Works Will be Carried Out during Section 5] | 29-Sep-15 A | 26-Mar-16   | 70%                 |      |    |    |    |      |    |    |    |      |  |
| 18-59533   | Existing Outfall Drop Shaft - Install FRP Cover   | 23-Nov-15 A | 01-Dec-15 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| <b>6.06.7.5 - Connect to Existing Drop Shaft</b> |   |             |             |                     |      |    |    |    |      |    |    |    |      |  |
| 18-59310N  | Temp Steel Panel - Trial Installation at Existing Chamber 15  | 29-Aug-13 A | 29-Aug-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59541N  | Initial Environmental Water Monitoring  | 18-Oct-13 A | 31-Oct-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59542N  | Impact Environmental Water Monitoring   | 01-Nov-13 A | 27-Feb-14 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59390   | Dry Season Onset 2013-2014  | 01-Nov-13 A |             | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59312N  | Temp Water Gate - Installation of Slot Material   | 04-Nov-13 A | 07-Nov-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59311N  | Temp Flow Diversion - Coring of Holes at Existing Drop Shaft as Advance Work for Pilot Wall Cutting   | 24-Nov-13 A | 24-Nov-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64337N  | Temp Flow Diversion - Stage 1 Pilot Wall Cutting L1-1 for Cantilever Beam Construction                | 26-Nov-13 A | 26-Nov-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64338N  | Temp Flow Diversion - Construction of Cantilever Beam   | 27-Nov-13 A | 06-Dec-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64341N  | Temp Flow Diversion - Construction of Strengthening Beam  | 27-Nov-13 A | 06-Dec-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64342N  | Temp Flow Diversion - Existing DS Top Slab Cutting and Modification Works                             | 07-Dec-13 A | 15-Dec-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64336N  | Temp Flow Diversion - Installation of Protective Railing  | 15-Dec-13 A | 15-Dec-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-64339N  | Temp Flow Diversion - Stage 2 Pilot Wall Cutting (L1 to L2 fr +7 to +3.625 mPD)                       | 16-Dec-13 A | 24-Dec-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59314N  | Temp Water Barrier Platform - Trial Assembly  | 21-Dec-13 A | 26-Dec-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59450D  | Temp Flow Diversion - Stage 3 Wall Cutting and Removal (L3 to L5 fr +3.625 to -0.5 mPD)               | 26-Dec-13 A | 16-Jan-14 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59420D  | Temp Flow Diversion - Erection of Temp Water Barrier Platform at Existing Drop Shaft                  | 26-Dec-13 A | 26-Dec-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59421N  | Temp Steel Panel - Installation at Existing Chamber 15  | 27-Dec-13 A | 27-Dec-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59410   | Divert Flow to Northwest Kowloon Outfall  | 27-Dec-13 A | 27-Dec-13 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59530N  | Temp Flow Diversion - Final Touch Up for New Entry Culvert and Existing DS Connection                 | 17-Jan-14 A | 26-Feb-14 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59313N  | Temp Water Gate - Installation of Temp Water Gate   | 22-Feb-14 A | 22-Feb-14 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59500   | Divert Flow Back to Existing Drop Shaft   | 27-Feb-14 A | 27-Feb-14 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59543N  | Post Environmental Water Monitoring   | 28-Feb-14 A | 13-Mar-14 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59530   | Dry Season End 2013-2014  | 28-Feb-14 A | 28-Feb-14 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59532N  | Temp Flow Diversion - Dismantle Temporary Water Barrier Platform                                      | 18-Apr-14 A | 18-Apr-14 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| <b>6.06.8 - Dechlorination Plant (DCP)</b>       |   |             |             |                     |      |    |    |    |      |    |    |    |      |  |
| <b>6.06.8.1 - DCP - Foundation</b>               |   |             |             |                     |      |    |    |    |      |    |    |    |      |  |
| 18-59800   | DCP - G.I- Pre Drilling (7 Nos.)  | 08-Dec-11 A | 31-Jan-12 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59810   | DCP -Setting Out Pile Points  | 05-Mar-12 A | 13-Mar-12 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59850   | DCP - Pre-Bore H-Piles (20 nos.)  | 14-Mar-12 A | 30-Jun-12 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| 18-59930   | DCP - Test Piles  | 06-Oct-12 A | 15-Oct-12 A | 100%                |      |    |    |    |      |    |    |    |      |  |
| <b>6.06.8.2 - DCP - Structure</b>                |   |             |             |                     |      |    |    |    |      |    |    |    |      |  |
| 18-60040N  | DCP - Mobilization and Breaking of Concrete Surface   | 10-Dec-12 A | 13-Dec-12 A | 100%                |      |    |    |    |      |    |    |    |      |  |



- █ Actual Level of Effort
- █ Remaining Work
- █ Primary Baseline
- █ Critical Remaining Work
- █ Actual Work
- ◆ Milestone

### Updated Detail Works Programme

Data Date: 27-Jan-16

Run Date: 27-Jan-16

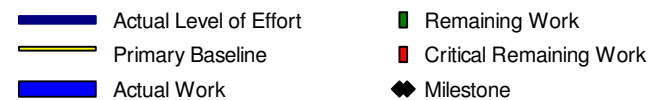
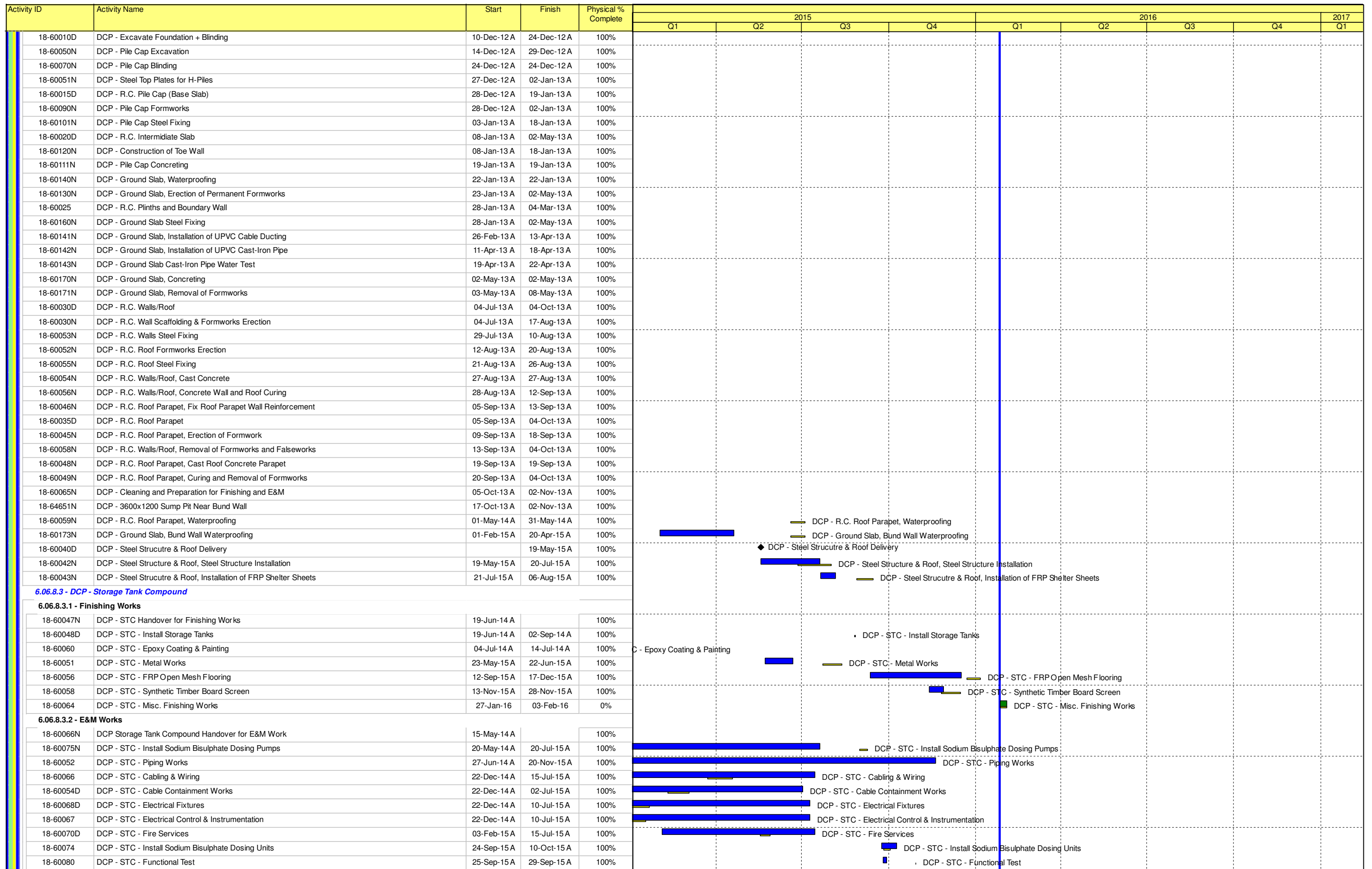
Project ID :C18DWPDP160127

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| Date      | Revision         | Checked | Approved |
|-----------|------------------|---------|----------|
| 23-Dec-15 | DWP Rev D Update |         |          |
| 27-Jan-16 | DWP Rev D Update |         |          |



### Updated Detail Works Programme

Data Date: 27-Jan-16

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#### Detail Works Programme

| Date      | Revision         | Checked | Approved |
|-----------|------------------|---------|----------|
| 23-Dec-15 | DWP Rev D Update |         |          |
| 27-Jan-16 | DWP Rev D Update |         |          |

| Activity ID   | Activity Name  | Start       | Finish      | Physical % Complete | 2015   |    |    |    | 2016 |    |    |    | 2017 |  |  |
|---|--|-------------|-------------|---------------------|--|----|----|----|------|----|----|----|------|--|--|
|   |  |             |             |                     | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   |  |  |
| <b>6.06.8.4 - DCP - Pump Hall</b>                   |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.8.4.1 - Finishing Works</b>                 |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-63555  | DCP - PH - Epoxy Coating & Painting                          | 16-Jun-14 A | 12-Jul-14 A | 100%                | Epoxy Coating & Painting                                     |    |    |    |      |    |    |    |      |  |  |
| 18-63493N   | DCP - PH Handover for Finishing Works                        | 15-Jul-14 A |             | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-63515  | DCP - PH - Door, Shutter and Louvre                          | 03-Nov-14 A | 17-Nov-14 A | 100%                | DCP - PH - Door, Shutter and Louvre                          |    |    |    |      |    |    |    |      |  |  |
| 18-63495  | DCP - PH - FRP Open Mesh Flooring                            | 12-Sep-15 A | 17-Dec-15 A | 100%                | DCP - PH - FRP Open Mesh Flooring                            |    |    |    |      |    |    |    |      |  |  |
| 18-63565  | DCP - PH - Misc. Finishing                                   | 27-Jan-16   | 03-Feb-16   | 0%                  | DCP - PH - Misc. Finishing                                   |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.8.4.2 - E&amp;M Works</b>                   |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-63485D   | DCP - PH - Airducts  | 14-Jul-14 A | 29-Apr-15 A | 100%                | DCP - PH - Airducts  |    |    |    |      |    |    |    |      |  |  |
| 18-63492D   | DCP - PH - Air Grilles                                       | 14-Jul-14 A | 29-Apr-15 A | 100%                | DCP - PH - Air Grilles                                       |    |    |    |      |    |    |    |      |  |  |
| 18-63474N   | DCP Pump Hall Handover for E&M Works                         | 15-Jul-14 A |             | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-63489  | DCP - PH - Electrical Fixture                                | 22-Dec-14 A | 10-Jul-15 A | 100%                | DCP - PH - Electrical Fixture                                |    |    |    |      |    |    |    |      |  |  |
| 18-63488D   | DCP - PH - Electrical Control & Instrumentation              | 22-Dec-14 A | 10-Jul-15 A | 100%                | DCP - PH - Electrical Control & Instrumentation              |    |    |    |      |    |    |    |      |  |  |
| 18-63480D   | DCP - PH - Cable Containment                                 | 22-Dec-14 A | 29-Apr-15 A | 100%                | DCP - PH - Cable Containment                                 |    |    |    |      |    |    |    |      |  |  |
| 18-63487D   | DCP - PH - Cabling & Wiring                                  | 22-Dec-14 A | 29-Apr-15 A | 100%                | DCP - PH - Cabling & Wiring                                  |    |    |    |      |    |    |    |      |  |  |
| 18-63478D   | DCP - PH - Piping Works                                      | 05-Jan-15 A | 20-Sep-15 A | 100%                | DCP - PH - Piping Works                                      |    |    |    |      |    |    |    |      |  |  |
| 18-63476D   | DCP - PH - Fume Recovery System                              | 15-Jan-15 A | 15-Jul-15 A | 100%                | DCP - PH - Fume Recovery System                              |    |    |    |      |    |    |    |      |  |  |
| 18-63490D   | DCP - PH - Fire Services                                     | 03-Feb-15 A | 10-Aug-15 A | 100%                | DCP - PH - Fire Services                                     |    |    |    |      |    |    |    |      |  |  |
| 18-63475D   | DCP - PH - Pump & Dehumidifier Install                       | 01-Jun-15 A | 15-Jun-15 A | 100%                | DCP - PH - Pump & Dehumidifier Install                       |    |    |    |      |    |    |    |      |  |  |
| 18-63494D   | DCP - PH - Functional Test                                   | 21-Sep-15 A | 29-Sep-15 A | 100%                | DCP - PH - Functional Test                                   |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.8.5 - DCP - Sensor Store Room</b>           |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.8.5.1 - Finishing Works</b>                 |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-63624N   | DCP - SSR Handover for Finishing Works                       | 15-Apr-14 A |             | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-63635D   | DCP - SSR - Epoxy Coating & Painting                         | 15-Apr-14 A | 05-Jun-14 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-63625  | DCP - SSR - Door & Louvres                                   | 03-Nov-14 A | 18-Nov-14 A | 100%                | DCP - SSR - Door & Louvres                                   |    |    |    |      |    |    |    |      |  |  |
| 18-63665  | DCP - SSR - Misc Finishing Works                             | 27-Jan-16   | 12-Feb-16   | 0%                  | DCP - SSR - Misc Finishing Works                             |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.8.5.2 - E&amp;M Works</b>                   |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-63574N   | DCP Sensor Store Room Handover for E&M Works                 | 15-May-14 A |             | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-63585D   | DCP - SSR - Airducts   | 14-Jul-14 A | 29-Apr-15 A | 100%                | DCP - SSR - Airducts   |    |    |    |      |    |    |    |      |  |  |
| 18-63655D   | DCP - SSR - Air Grilles                                      | 14-Jul-14 A | 29-Apr-15 A | 100%                | DCP - SSR - Air Grilles                                      |    |    |    |      |    |    |    |      |  |  |
| 18-63575D   | DCP - SSR - Cable Containment                                | 22-Dec-14 A | 01-Aug-15 A | 100%                | DCP - SSR - Cable Containment                                |    |    |    |      |    |    |    |      |  |  |
| 18-63595D   | DCP - SSR - Cabling & wiring                                 | 22-Dec-14 A | 10-Aug-15 A | 100%                | DCP - SSR - Cabling & wiring                                 |    |    |    |      |    |    |    |      |  |  |
| 18-63645D   | DCP - SSR - Electrical Fixtures                              | 22-Dec-14 A | 10-Jul-15 A | 100%                | DCP - SSR - Electrical Fixtures                              |    |    |    |      |    |    |    |      |  |  |
| 18-63491D   | DCP - SSR - Fire Services                                    | 03-Feb-15 A | 15-Jul-15 A | 100%                | DCP - SSR - Fire Services                                    |    |    |    |      |    |    |    |      |  |  |
| 18-63658D   | DCP - SSR - Functional Test                                  | 21-Sep-15 A | 22-Sep-15 A | 100%                | DCP - SSR - Functional Test                                  |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.8.6 - DCP - Control Room &amp; UPS Room</b> |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.8.6.1 - Finishing Works</b>                 |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-63709N   | DCP - CR/UPS Handover for Finishing Works                    | 31-Mar-14 A |             | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-63720N   | DCP - CR/UPS Partition Wall                                  | 31-Mar-14 A | 11-Apr-14 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-63725D   | DCP - CR/UPS - Epoxy Coating and Painting                    | 15-Apr-14 A | 05-Jun-14 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-63715  | DCP - CR/UPS - Door & Louvre                                 | 03-Nov-14 A | 18-Nov-14 A | 100%                | DCP - CR/UPS - Door & Louvre                                 |    |    |    |      |    |    |    |      |  |  |
| 18-63710  | DCP - CR/UPS - Metal Works                                   | 01-Jun-15 A | 19-Jun-15 A | 100%                | DCP - CR/UPS - Metal Works                                   |    |    |    |      |    |    |    |      |  |  |
| 18-64055  | DCP - CR/UPS - Misc. Finishing                               | 27-Jan-16   | 15-Feb-16   | 0%                  | DCP - CR/UPS - Misc. Finishing                               |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.8.6.2 - E&amp;M Works</b>                   |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-63604N   | DCP Handover for E&M Works at Control Room & UPS Room        | 15-May-14 A |             | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-63615D   | DCP - CR/UPS - Airducts                                      | 14-Jul-14 A | 29-Apr-15 A | 100%                | DCP - CR/UPS - Airducts                                      |    |    |    |      |    |    |    |      |  |  |
| 18-63705D   | DCP - CR/UPS - Air grilles                                   | 14-Jul-14 A | 29-Apr-15 A | 100%                | DCP - CR/UPS - Air grilles                                   |    |    |    |      |    |    |    |      |  |  |
| 18-63605D   | DCP - CR/UPS - Cable Containment                             | 22-Dec-14 A | 10-Jul-15 A | 100%                | DCP - CR/UPS - Cable Containment                             |    |    |    |      |    |    |    |      |  |  |
| 18-63685D   | DCP - CR/UPS - Cabling & Wiring                              | 22-Dec-14 A | 10-Jul-15 A | 100%                | DCP - CR/UPS - Cabling & Wiring                              |    |    |    |      |    |    |    |      |  |  |
| 18-63695D   | DCP - CR/UPS - Electrical Fixtures                           | 22-Dec-14 A | 10-Jul-15 A | 100%                | DCP - CR/UPS - Electrical Fixtures                           |    |    |    |      |    |    |    |      |  |  |
| 18-63495D   | DCP - CR/UPS - Fire Services                                 | 03-Feb-15 A | 15-Jul-15 A | 100%                | DCP - CR/UPS - Fire Services                                 |    |    |    |      |    |    |    |      |  |  |
| 18-63735  | DCP - CR/UPS - UPS Equipment                                 | 21-Sep-15 A | 20-Nov-15 A | 100%                | DCP - CR/UPS - UPS Equipment                                 |    |    |    |      |    |    |    |      |  |  |
| 18-63736  | DCP - CR/UPS - Control System Equipment                      | 21-Sep-15 A | 20-Nov-15 A | 100%                | DCP - CR/UPS - Control System Equipment                      |    |    |    |      |    |    |    |      |  |  |
| 18-63748  | DCP - CR/UPS - Functional Test                               | 23-Sep-15 A | 26-Dec-15 A | 100%                | DCP - CR/UPS - Functional Test                               |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.8.6.2.3 - Completion of DCS Works</b>       |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-63760  | DCS Pre-inspection Works Before Handover                     | 04-Jan-16 A | 29-Feb-16   | 20%                 | DCS Pre-inspection Works Before Handover                     |    |    |    |      |    |    |    |      |  |  |
| 18-63761  | DCS Handover Completed Works                                 |             | 29-Feb-16   | 0%                  | DCS Handover Completed Works                                 |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.8.6.2.3 - DCS Training</b>                  |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-63828  | DCS Training - Submission of Training Programme and Material | 01-Apr-15 A | 15-Apr-15 A | 100%                | DCS Training - Submission of Training Programme and Material |    |    |    |      |    |    |    |      |  |  |



- █ Actual Level of Effort
- █ Remaining Work
- █ Critical Remaining Work
- ▬ Primary Baseline
- █ Actual Work
- ◆ Milestone

### Updated Detail Works Programme

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| Detail Works Programme |                  |         |          |
|------------------------|------------------|---------|----------|
| Date                   | Revision         | Checked | Approved |
| 23-Dec-15              | DWP Rev D Update |         |          |
| 27-Jan-16              | DWP Rev D Update |         |          |

| Activity ID   | Activity Name   | Start       | Finish      | Physical % Complete | 2015 |    |    |    | 2016 |    |    |    | 2017 |
|---|---|-------------|-------------|---------------------|------|----|----|----|------|----|----|----|------|
|   |   |             |             |                     | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   |
| 18-63838  | DCS Training - Engineer's Review  | 02-Jul-15 A | 10-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63848  | DCS Training - Re-submission  | 05-Jan-16 A | 27-Jan-16   | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63858  | DCS Training - Engineer's Approval  | 11-Jan-16 A | 20-Feb-16   | 0%                  |      |    |    |    |      |    |    |    |      |
| 18-63868  | Conduct Training to DSD   | 22-Feb-16   | 23-Feb-16*  | 0%                  |      |    |    |    |      |    |    |    |      |
| 18-63878  | On-Site Demonstration   | 24-Feb-16   | 25-Feb-16*  | 0%                  |      |    |    |    |      |    |    |    |      |
| <b>6.06.8.6.2.1 - DCS On-Site Installation</b>      |   |             |             |                     |      |    |    |    |      |    |    |    |      |
| 18-63758  | DCS Equipment On-Site Installation (Including Control Panels, Work Station, and Control Desk) | 01-Aug-15 A | 27-Jan-16 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63768  | DCS Equipment Cabling Works   | 02-Aug-15 A | 30-Jan-16   | 80%                 |      |    |    |    |      |    |    |    |      |
| 18-63759  | DCS Commissioning Work  | 02-Nov-15 A | 29-Feb-16   | 40%                 |      |    |    |    |      |    |    |    |      |
| 18-63778  | DCS Functional Testing  | 20-Jan-16 A | 27-Jan-16 A | 100%                |      |    |    |    |      |    |    |    |      |
| <b>6.06.8.6.2.2 - DCS O&amp;M Manual Submission</b> |   |             |             |                     |      |    |    |    |      |    |    |    |      |
| 18-63788  | DCS O&M Manual Submission   | 22-Sep-15 A | 09-Oct-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63798  | DCS O&M Manual Submission - Engineer's Review and Comment                                     | 22-Sep-15 A | 24-Feb-16   | 60%                 |      |    |    |    |      |    |    |    |      |
| 18-63808  | DCS O&M Manual Submission - Re-submission   | 26-Oct-15 A | 15-Jan-16 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63818  | DCS O&M Manual Submission - Engineer's Approval   | 17-Feb-16   | 24-Feb-16   | 0%                  |      |    |    |    |      |    |    |    |      |
| <b>6.06.8.7 - DCP - Switch Room</b>                 |   |             |             |                     |      |    |    |    |      |    |    |    |      |
| <b>6.06.8.7.1 - Finishing Works</b>                 |   |             |             |                     |      |    |    |    |      |    |    |    |      |
| 18-63774N   | DCP - CR/UPS Switch Room Handover for Finishing Works   | 15-Apr-14 A |             | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63795D   | DCP - CR/UPS - Epoxy Coating and Painting   | 15-Apr-14 A | 05-Jun-14 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63785  | DCP - CR/UPS - Door and Lovre   | 03-Nov-14 A | 18-Nov-14 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63775  | DCP - SR - Metal Works  | 01-Jun-15 A | 19-Jun-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-64045  | DCP - SR - Misc. Finishing  | 27-Jan-16   | 15-Feb-16   | 0%                  |      |    |    |    |      |    |    |    |      |
| <b>6.06.8.7.2 - E&amp;M Works</b>                   |   |             |             |                     |      |    |    |    |      |    |    |    |      |
| 18-63754N   | DCP Switch Room Handover for E&M Works  | 15-May-14 A |             | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63765D   | DCP - SR - Airducts   | 14-Jul-14 A | 29-Apr-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63755D   | DCP - SR - Cable Containment  | 22-Dec-14 A | 10-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63825D   | DCP - SR - Electrical Fixture   | 22-Dec-14 A | 10-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63815D   | DCP - SR - Cabling and Wiring   | 22-Dec-14 A | 10-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63491D20   | DCP - SR - Fire Services  | 03-Feb-15 A | 15-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63805D   | DCP - SR - LV Switchboard   | 29-Jun-15 A | 20-Aug-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63835  | DCP - SR - Power on   | 20-Aug-15 A | 20-Aug-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| <b>6.06.8.8 - DCP - Potable Water Pump House</b>    |   |             |             |                     |      |    |    |    |      |    |    |    |      |
| <b>6.06.8.8.1 - Finishing Works</b>                 |   |             |             |                     |      |    |    |    |      |    |    |    |      |
| 18-63944N   | DCP - PWP Handover for Finishing Works  | 15-Apr-14 A |             | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63955D   | DCP - PWP - Epoxy Coating & Painting  | 15-Apr-14 A | 05-Jun-14 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63945  | DCP - PWP - Door and Louvre   | 03-Nov-14 A | 18-Nov-14 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63965  | DCP - PWP - Misc. Finishing   | 27-Jan-16   | 19-Feb-16   | 0%                  |      |    |    |    |      |    |    |    |      |
| <b>6.06.8.8.2 - E&amp;M Works</b>                   |   |             |             |                     |      |    |    |    |      |    |    |    |      |
| 18-63865D   | DCP - PWP - Cable Containment   | 22-Dec-14 A | 10-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63885D   | DCP - PWP - Cabling & Wiring  | 22-Dec-14 A | 10-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63905D   | DCP - PWP - Electrical Fixture  | 22-Dec-14 A | 10-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63895D   | DCP - PWP - Electrical Control & Instrumentation  | 22-Dec-14 A | 10-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63844N   | DCP Potable Water Pump House Handover for E&M Works   | 05-Jan-15 A |             | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63855D   | DCP - PWP - Piping Works  | 05-Jan-15 A | 05-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63915D   | DCP - PWP - Fire Services   | 03-Feb-15 A | 15-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63845D   | DCP - PWP - Pump Instal   | 25-Jul-15 A | 02-Aug-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-64415D   | DCP - PWP - Functional Test   | 26-Sep-15 A | 20-Nov-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| <b>6.06.8.9 - DCP - Spare Storage Room/Toilet</b>   |   |             |             |                     |      |    |    |    |      |    |    |    |      |
| <b>6.06.8.9.1 - Finishing Works</b>                 |   |             |             |                     |      |    |    |    |      |    |    |    |      |
| 18-63975D   | DCP - SSR - Partion Wall & Plaster  | 31-Mar-14 A | 11-Apr-14 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-64005D   | DCP - SSR - Epoxy Coating and Painting  | 15-Apr-14 A | 05-Jun-14 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63974N   | DCP - SSR Handover for Finishing Works  | 15-Apr-14 A |             | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63985  | DCP - SSR - Tile Works  | 28-Jun-14 A | 12-Jul-14 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63995  | DCP - SSR - Doors and Lovres  | 03-Nov-14 A | 17-Nov-14 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-64035  | DCP - SSR - Misc. Finishing   | 27-Jan-16   | 13-Feb-16   | 0%                  |      |    |    |    |      |    |    |    |      |
| <b>6.06.8.9.2 - E&amp;M Works</b>                   |   |             |             |                     |      |    |    |    |      |    |    |    |      |
| 18-64014N   | DCP Spare Storage Room/Toilet Handover for E&M Works  | 15-May-14 A |             | 100%                |      |    |    |    |      |    |    |    |      |
| 18-63896D   | DCP - SSR - MVAC System   | 22-Dec-14 A | 29-Apr-15 A | 100%                |      |    |    |    |      |    |    |    |      |
| 18-64015D   | DCP - SSR - Electrical Works  | 22-Dec-14 A | 10-Jul-15 A | 100%                |      |    |    |    |      |    |    |    |      |



- Actual Level of Effort
- Primary Baseline
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone

## Updated Detail Works Programme

Data Date: 27-Jan-16      Run Date: 27-Jan-16

Project ID : C18DWP160127

Layout : C18160127UDWP

### Detail Works Programme

| Date      | Revision         | Checked | Approved |
|-----------|------------------|---------|----------|
| 23-Dec-15 | DWP Rev D Update |         |          |
| 27-Jan-16 | DWP Rev D Update |         |          |

| Activity ID  | Activity Name   | Start       | Finish      | Physical % Complete | 2015  |    |    |    | 2016 |    |    |    | 2017 |  |  |
|--|---|-------------|-------------|---------------------|---|----|----|----|------|----|----|----|------|--|--|
|  |   |             |             |                     | Q1  | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   |  |  |
| 18-64025D  | DCP - SSR - Fire Services   | 03-Feb-15 A | 15-Jul-15 A | 100%                | DCP - SSR - Fire Services   |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.8.10 - DCP Statutory Inspection</b>          |   |             |             |                     |   |    |    |    |      |    |    |    |      |  |  |
| 18-60600   | WSD Inspection (Part 1)   | 10-Nov-15 A | 10-Nov-15 A | 100%                | WSD Inspection (Part 1)   |    |    |    |      |    |    |    |      |  |  |
| 18-60650   | Prep & Sub Form 314 to FSD  | 13-Nov-15 A | 19-Nov-15 A | 100%                | Prep & Sub Form 314 to FSD  |    |    |    |      |    |    |    |      |  |  |
| 18-60700   | Prep & Sub Form 501 to FSD  | 13-Nov-15 A | 19-Nov-15 A | 100%                | Prep & Sub Form 501 to FSD  |    |    |    |      |    |    |    |      |  |  |
| 18-60750   | FSD Inspection  | 25-Feb-16*  | 27-Feb-16   | 0%                  | FSD Inspection  |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.8.11 - DCP External Works</b>                |   |             |             |                     |   |    |    |    |      |    |    |    |      |  |  |
| 18-64649N  | Ext Works - RS Stage 1, DN 600 Manhole & Drain Pipe   | 25-Mar-14 A | 13-May-14 A | 100%                | Ext Works - RS Stage 1, DN 600 Manhole & Drain Pipe   |    |    |    |      |    |    |    |      |  |  |
| 18-64650N  | Ext Works - Riser Shaft - Stage 1 Before NE Demolition (Main Drainage, Ducting, Pipe Trench)              | 25-Mar-14 A | 02-Jun-14 A | 100%                | Main Drainage, Ducting, Pipe Trench   |    |    |    |      |    |    |    |      |  |  |
| 18-64647N  | Ext Works - RS Stage 1, Draw Pit & Cable Duct   | 25-Apr-14 A | 15-Jul-14 A | 100%                | Ext Works - RS Stage 1, Draw Pit & Cable Duct   |    |    |    |      |    |    |    |      |  |  |
| 18-64670N  | Ext Works - MH (SW) 01  |             | 25-Apr-14 A | 100%                | Ext Works - MH (SW) 01  |    |    |    |      |    |    |    |      |  |  |
| 18-64648N  | Ext Works - RS Stage 1, Pipe Trench & DN300 Pipe & DN150 Pipe   | 14-May-14 A | 06-Aug-14 A | 100%                | DN300 Pipe & DN150 Pipe   |    |    |    |      |    |    |    |      |  |  |
| 18-64668N  | Ext Works - E3 Cable Draw Pit   |             | 07-Jun-14 A | 100%                | Ext Works - E3 Cable Draw Pit   |    |    |    |      |    |    |    |      |  |  |
| 18-64667N  | Ext Works - MH (FS) 10  |             | 12-Jun-14 A | 100%                | Ext Works - MH (FS) 10  |    |    |    |      |    |    |    |      |  |  |
| 18-64666N  | Ext Works - E14 Cable Draw Pit  |             | 25-Jun-14 A | 100%                | Ext Works - E14 Cable Draw Pit  |    |    |    |      |    |    |    |      |  |  |
| 18-64687N  | Ext Works - E15 Cable Draw Pit  |             | 25-Jun-14 A | 100%                | Ext Works - E15 Cable Draw Pit  |    |    |    |      |    |    |    |      |  |  |
| 18-64660N  | Ext Works - Riser Shaft - Stage 2 After NE Demolition (Main Drainage, Ducting, Water Supply, Pipe Trench) | 27-Jun-14 A | 17-Jul-15 A | 100%                | Ext Works - Riser Shaft - Stage 2 After NE Demolition (Main Drainage, Ducting, Water Supply, Pipe Trench) |    |    |    |      |    |    |    |      |  |  |
| 18-64680N  | Ext Works - E13 Cable Draw Pit  |             | 27-Jun-14 A | 100%                | Ext Works - E13 Cable Draw Pit  |    |    |    |      |    |    |    |      |  |  |
| 18-64644N  | Ext Works - RS Stage 2, Draw Pit and Ducting and Water Mains  | 10-Jul-14 A | 10-Feb-16   | 80%                 | Ext Works - RS Stage 2, Draw Pit and Ducting and Water Mains  |    |    |    |      |    |    |    |      |  |  |
| 18-64690N  | Ext Works - MH (FS) 06  |             | 11-Jul-14 A | 100%                | Ext Works - MH (FS) 06  |    |    |    |      |    |    |    |      |  |  |
| 18-64665N  | Ext Works - MH (FS) 05  |             | 11-Jul-14 A | 100%                | Ext Works - MH (FS) 05  |    |    |    |      |    |    |    |      |  |  |
| 18-64688N  | Ext Works - E16 Cable Draw Pit  |             | 15-Jul-14 A | 100%                | Ext Works - E16 Cable Draw Pit  |    |    |    |      |    |    |    |      |  |  |
| 18-64662N  | Ext Works - MH (FS) 03  |             | 19-Jul-14 A | 100%                | Ext Works - MH (FS) 03  |    |    |    |      |    |    |    |      |  |  |
| 18-64663N  | Ext Works - Last Manhole  |             | 04-Oct-14 A | 100%                | Ext Works - Last Manhole  |    |    |    |      |    |    |    |      |  |  |
| 18-64646N  | Ext Works - RS Stage 2, Last Manhole and 1050mm Pipe  | 04-Oct-14 A | 06-Nov-14 A | 100%                | Ext Works - RS Stage 2, Last Manhole and 1050mm Pipe  |    |    |    |      |    |    |    |      |  |  |
| 18-64645N  | Ext Works - RS Stage 2, Remaining Pipe Trench   | 12-Jul-15 A | 17-Jul-15 A | 100%                | Ext Works - RS Stage 2, Remaining Pipe Trench   |    |    |    |      |    |    |    |      |  |  |
| 18-64661N  | Ext Works - Riser Shaft - Stage 3 Remaining Works   | 22-Jul-15 A | 16-Feb-16   | 60%                 | Ext Works - Riser Shaft - Stage 3 Remaining Works   |    |    |    |      |    |    |    |      |  |  |
| 18-64671N  | Ext Works - Installation of Access Control System and CCTV System   | 15-Sep-15 A | 22-Feb-16   | 90%                 | Ext Works - Installation of Access Control System and CCTV System   |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.8.12 - Interim Dechlorination Facilities</b> |   |             |             |                     |   |    |    |    |      |    |    |    |      |  |  |
| 18-64650D  | Propose & Approve Method for Interim Operation  | 27-Jan-16   | 04-Mar-16   | 0%                  | Propose & Approve Method for Interim Operation  |    |    |    |      |    |    |    |      |  |  |
| 18-64660D  | Interim Dechlorination Facilities Trial Run   | 05-Mar-16   | 18-Mar-16   | 0%                  | Interim Dechlorination Facilities Trial Run   |    |    |    |      |    |    |    |      |  |  |
| 18-64670D  | Operation of Interim Dechlorination Facilities  | 19-Mar-16   | 06-Apr-16   | 0%                  | Operation of Interim Dechlorination Facilities  |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.9 - DOU4</b>                                 |   |             |             |                     |   |    |    |    |      |    |    |    |      |  |  |
| 18-60800   | DOU4 - Plinth   | 10-Jul-15 A | 03-Aug-15 A | 100%                | DOU4 - Plinth   |    |    |    |      |    |    |    |      |  |  |
| 18-60100   | DOU4 Handover for E&M Works   | 05-Aug-15 A |             | 100%                | DOU4 Handover for E&M Works   |    |    |    |      |    |    |    |      |  |  |
| 18-61050   | DOU4 - Install Air Extraction Fan   | 22-Sep-15 A | 07-Nov-15 A | 100%                | DOU4 - Install Air Extraction Fan   |    |    |    |      |    |    |    |      |  |  |
| 18-61000   | DOU4 - Install Bio Tricking Filters   | 22-Sep-15 A | 14-Dec-15 A | 100%                | DOU4 - Install Bio Tricking Filters   |    |    |    |      |    |    |    |      |  |  |
| 18-61100   | DOU4 - Install Pumps  | 05-Oct-15 A | 04-Jan-16 A | 100%                | DOU4 - Install Pumps  |    |    |    |      |    |    |    |      |  |  |
| 18-66340   | DOU4 - MCC Room   | 15-Oct-15 A | 20-Nov-15 A | 100%                | DOU4 - MCC Room   |    |    |    |      |    |    |    |      |  |  |
| 18-61120   | DOU4 - Install Pipes & Valves   | 01-Nov-15 A | 12-Feb-16   | 75%                 | DOU4 - Install Pipes & Valves   |    |    |    |      |    |    |    |      |  |  |
| 18-66350   | DOU4 - Pipe Trench  | 04-Nov-15 A | 07-Dec-15 A | 100%                | DOU4 - Pipe Trench  |    |    |    |      |    |    |    |      |  |  |
| 18-61140   | DOU4 - Install Tanks  | 21-Nov-15 A | 08-Jan-16 A | 100%                | DOU4 - Install Tanks  |    |    |    |      |    |    |    |      |  |  |
| 18-61220   | DOU4 - External Works - Laying Cable Duct   | 01-Dec-15 A | 30-Dec-15 A | 100%                | DOU4 - External Works - Laying Cable Duct   |    |    |    |      |    |    |    |      |  |  |
| 18-61070   | DOU4 - Install FRP Air Duct & Accessories   | 05-Jan-16 A | 20-Feb-16   | 50%                 | DOU4 - Install FRP Air Duct & Accessories   |    |    |    |      |    |    |    |      |  |  |
| 18-61210   | DOU4 - External Works - Laying Water Pipe   | 27-Jan-16   | 27-Feb-16   | 0%                  | DOU4 - External Works - Laying Water Pipe   |    |    |    |      |    |    |    |      |  |  |
| 18-61160   | DOU4 - Install Power Supply System  | 05-Feb-16*  | 24-Feb-16   | 0%                  | DOU4 - Install Power Supply System  |    |    |    |      |    |    |    |      |  |  |
| 18-61275   | DOU4 - Drain Pipe and Odour Duct Connection to PWPS   | 05-Feb-16   | 24-Feb-16   | 0%                  | DOU4 - Drain Pipe and Odour Duct Connection to PWPS   |    |    |    |      |    |    |    |      |  |  |
| 18-61180   | DOU4 - Install Control Panel  | 16-Feb-16   | 30-Mar-16   | 0%                  | DOU4 - Install Control Panel  |    |    |    |      |    |    |    |      |  |  |
| 18-61230   | DOU4 - External Works - Odour Duct to MPS1  | 22-Feb-16*  | 21-Mar-16   | 0%                  | DOU4 - External Works - Odour Duct to MPS1  |    |    |    |      |    |    |    |      |  |  |
| 18-61200   | DOU4 - Functional Test for Equipments   | 31-Mar-16   | 29-Apr-16   | 0%                  | DOU4 - Functional Test for Equipments   |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.10 - DOU8</b>                                |   |             |             |                     |   |    |    |    |      |    |    |    |      |  |  |
| 18-61450   | DOU8 - Slab & Plinth  | 17-Jul-15 A | 24-Jul-15 A | 100%                | DOU8 - Slab & Plinth  |    |    |    |      |    |    |    |      |  |  |
| 18-61500D  | DOU8 - Install Air Extraction Pumps   | 25-Jul-15 A | 20-Sep-15 A | 100%                | DOU8 - Install Air Extraction Pumps   |    |    |    |      |    |    |    |      |  |  |
| 18-61550D  | DOU8 - Install Dehumidifiers  | 25-Jul-15 A | 20-Sep-15 A | 100%                | DOU8 - Install Dehumidifiers  |    |    |    |      |    |    |    |      |  |  |
| 18-61600D  | DOU8 - Install Activated Carbon Filters   | 25-Jul-15 A | 05-Aug-15 A | 100%                | DOU8 - Install Activated Carbon Filters   |    |    |    |      |    |    |    |      |  |  |
| 18-61710   | DOU8 - Control Panel  | 27-Jul-15 A | 25-Dec-15 A | 100%                | DOU8 - Control Panel  |    |    |    |      |    |    |    |      |  |  |
| 18-61499N  | DOU8 Handover for E&M Works   | 27-Jul-15 A |             | 100%                | DOU8 Handover for E&M Works   |    |    |    |      |    |    |    |      |  |  |
| 18-61650D  | DOU8 - Install Air Ducts & Accessories  | 10-Aug-15 A | 20-Nov-15 A | 100%                | DOU8 - Install Air Ducts & Accessories  |    |    |    |      |    |    |    |      |  |  |
| 18-61700   | DOU8 - Install Power Supply   | 10-Aug-15 A | 30-Dec-15 A | 100%                | DOU8 - Install Power Supply   |    |    |    |      |    |    |    |      |  |  |



- █ Actual Level of Effort
- █ Remaining Work
- █ Primary Baseline
- █ Critical Remaining Work
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- ◆ Milestone

### Updated Detail Works Programme

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#### Detail Works Programme

| Date      | Revision         | Checked | Approved |
|-----------|------------------|---------|----------|
| 23-Dec-15 | DWP Rev D Update |         |          |
| 27-Jan-16 | DWP Rev D Update |         |          |

| Activity ID   | Activity Name  | Start       | Finish      | Physical % Complete | 2015   |    |    |    | 2016 |    |    |    | 2017 |  |  |
|---|--|-------------|-------------|---------------------|--|----|----|----|------|----|----|----|------|--|--|
|   |  |             |             |                     | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   |  |  |
| <b>6.06.11 - Existing Chamber 15</b>                      |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.11.1 - E&amp;M Works</b>                          |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-62149N   | Existing Chamber 15 Handover for E&M Works                           | 15-Aug-12 A |             | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-62150D   | Installation of Pilot TRC Sensing Facilities                         | 15-Aug-12 A | 19-Sep-12 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-62200D   | Functional Test for Pilot TRC Sensing Facilities                     | 19-Sep-12 A | 25-Sep-12 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-62250D   | T&C of Pilot TRC Sensing Facilities                                  | 22-Jan-13 A | 26-Sep-13 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.12 - Testing &amp; Commissioning of Section 4</b> |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-11001N   | Section 4 - Substantial Completion                                   |             | 12-Oct-15 A | 100%                | ◆ Section 4 - Substantial Completion                                   |    |    |    |      |    |    |    |      |  |  |
| 18-62350D   | T&C of Effluent Tunnel   | 25-Jan-16 A | 21-Feb-16   | 0%                  | ■ T&C of Effluent Tunnel   |    |    |    |      |    |    |    |      |  |  |
| 18-62400  | Divert Flow to Effluent Tunnel from Exist. Culvert                   |             | 25-Jan-16 A | 100%                | ◆ Divert Flow to Effluent Tunnel from Exist. Culvert                   |    |    |    |      |    |    |    |      |  |  |
| 18-62375D   | Liaison Works with Operators and Other Parties                       | 27-Jan-16   | 29-Jan-16   | 0%                  | ■ Liaison Works with Operators and Other Parties                       |    |    |    |      |    |    |    |      |  |  |
| 18-62351N   | Section 4 - Complete Remaining Works                                 |             | 29-Apr-16   | 0%                  | ◆ Section 4 - Complete Remaining Works                                 |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.13 - Operation Manual</b>                         |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-64425  | Prepare and Submit 1st Draft of Operation Manual                     | 25-Feb-13 A | 01-Mar-13 A | 100%                | ■ Prepare and Submit 1st Draft of Operation Manual                     |    |    |    |      |    |    |    |      |  |  |
| 18-64445  | Engineer Review and Comment 1st Draft Operation Manual               | 01-Mar-13 A | 20-Mar-13 A | 100%                | ■ Engineer Review and Comment 1st Draft Operation Manual               |    |    |    |      |    |    |    |      |  |  |
| 18-64455  | Prepare and Submit 2nd Draft of Operation Manual                     | 08-Dec-15 A | 15-Jan-16 A | 100%                | ■ Prepare and Submit 2nd Draft of Operation Manual                     |    |    |    |      |    |    |    |      |  |  |
| 18-64465  | Engineer Review and Comment 2nd Draft Operation Manual               | 27-Jan-16   | 15-Feb-16   | 0%                  | ■ Engineer Review and Comment 2nd Draft Operation Manual               |    |    |    |      |    |    |    |      |  |  |
| 18-64485  | Training DSD Operation Staff   | 16-Feb-16   | 02-Mar-16   | 0%                  | ■ Training DSD Operation Staff   |    |    |    |      |    |    |    |      |  |  |
| 18-64475  | Submit Final Operation Manual  | 16-Feb-16   | 03-Mar-16   | 0%                  | ■ Submit Final Operation Manual  |    |    |    |      |    |    |    |      |  |  |
| <b>6.06.14 - Portion 14</b>                               |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-55763N   | Cable Detection  | 24-Sep-12 A | 24-Sep-12 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-55760N   | Erection of Chain Link Fence   | 28-Sep-12 A | 29-Sep-12 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-55759N   | Confirmation of Sub-Contractor                                       |             | 20-Mar-13 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-55764N   | Trial Pit  | 03-May-13 A | 03-May-13 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-55775N   | Discussion with WSD on Existing Firemain Protection                  |             | 30-Jul-13 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-55765N   | Trench Excavation  | 04-Oct-13 A | 02-Nov-13 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-55761N   | Laying of 300mm Pipe   | 04-Nov-13 A | 06-Nov-13 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-55762N   | Connection to Existing Manhole with Sewer Diversion                  | 07-Nov-13 A | 07-Nov-13 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-55771N   | Laying of DN40 Water Pipe  | 13-Nov-13 A | 19-Nov-13 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-55772N   | Laying of 150dia. Cable Duct   | 13-Nov-13 A | 19-Nov-13 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| 18-55767N   | Backfilling to Formation   | 20-Nov-13 A | 06-Dec-13 A | 100%                |  |    |    |    |      |    |    |    |      |  |  |
| <b>6.07 - Section 5</b>                                   |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| <b>6.07.1 - Extension of Chamber 15</b>                   |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| <b>6.07.1.1 - Foundation</b>                              |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-62520N   | Effluent Blocking Works of the Existing Culvert [Variation Order]    | 30-Jan-16   | 20-Feb-16   | 0%                  | ■ Effluent Blocking Works of the Existing Culvert [Variation Order]    |    |    |    |      |    |    |    |      |  |  |
| 18-62510N   | Mobilization of Piling Rig and Accessories                           | 14-Feb-16   | 18-Feb-16   | 0%                  | ■ Mobilization of Piling Rig and Accessories                           |    |    |    |      |    |    |    |      |  |  |
| 18-62500  | Pre-bore H-Piles (10 Nos@2 day/no.)                                  | 19-Feb-16   | 12-Mar-16   | 0%                  | ■ Pre-bore H-Piles (10 Nos@2 day/no.)                                  |    |    |    |      |    |    |    |      |  |  |
| 18-62580  | De-commissioning of Existing Box Culvert, Pipe Trench and TRC System |             | 21-Feb-16   | 0%                  | ◆ De-commissioning of Existing Box Culvert, Pipe Trench and TRC System |    |    |    |      |    |    |    |      |  |  |
| 18-62530  | Proof Test   | 13-Mar-16   | 17-Mar-16   | 0%                  | ■ Proof Test   |    |    |    |      |    |    |    |      |  |  |
| 18-62510  | Pile Loading Test  | 18-Mar-16   | 08-Apr-16   | 0%                  | ■ Pile Loading Test  |    |    |    |      |    |    |    |      |  |  |
| <b>6.07.1.2 - Temporary Works</b>                         |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-62550  | Sheet Piles Driving Works  | 30-Mar-16   | 05-May-16   | 0%                  | ■ Sheet Piles Driving Works  |    |    |    |      |    |    |    |      |  |  |
| 18-62600  | ELS Excavation & Strutting   | 06-May-16   | 06-Jun-16   | 0%                  | ■ ELS Excavation & Strutting   |    |    |    |      |    |    |    |      |  |  |
| 18-66400  | Demolition of the Existing Culvert                                   | 09-May-16   | 06-Jun-16   | 0%                  | ■ Demolition of the Existing Culvert                                   |    |    |    |      |    |    |    |      |  |  |
| <b>6.07.1.3 - Structure</b>                               |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-66640N   | Installation of H-Pile Head Plate                                    | 07-Jun-16   | 16-Jun-16   | 0%                  | ■ Installation of H-Pile Head Plate                                    |    |    |    |      |    |    |    |      |  |  |
| 18-62650  | Extension of Chamber 15 - Base Slab                                  | 17-Jun-16   | 05-Jul-16   | 0%                  | ■ Extension of Chamber 15 - Base Slab                                  |    |    |    |      |    |    |    |      |  |  |
| 18-66650N   | Extension of Chamber 15 - Lower Wall Construction                    | 06-Jul-16   | 03-Aug-16   | 0%                  | ■ Extension of Chamber 15 - Lower Wall Construction                    |    |    |    |      |    |    |    |      |  |  |
| 18-66660N   | Extension of Chamber 15 - Upper Wall Construction                    | 04-Aug-16   | 07-Sep-16   | 0%                  | ■ Extension of Chamber 15 - Upper Wall Construction                    |    |    |    |      |    |    |    |      |  |  |
| 18-66670N   | Extension of Chamber 15 - Falsework Dismantle                        | 08-Sep-16   | 13-Sep-16   | 0%                  | ■ Extension of Chamber 15 - Falsework Dismantle                        |    |    |    |      |    |    |    |      |  |  |
| <b>6.07.1.4 - Architectural incld. Exist. C15</b>         |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-62700  | Extension of Chamber 15 - Install FRP Cover and Handrail             | 14-Sep-16   | 08-Oct-16   | 0%                  | ■ Extension of Chamber 15 - Install FRP Cover and Handrail             |    |    |    |      |    |    |    |      |  |  |
| 18-62699  | Extension to Chamber 15 - Handover for Finishing Works               | 14-Sep-16   |             | 0%                  | ◆ Extension to Chamber 15 - Handover for Finishing Works               |    |    |    |      |    |    |    |      |  |  |
| <b>6.07.1.5 - E&amp;M</b>                                 |  |             |             |                     |  |    |    |    |      |    |    |    |      |  |  |
| 18-62749  | Extension of Chamber 15 - Handover for E&M Works                     | 08-Sep-16   |             | 0%                  | ◆ Extension of Chamber 15 - Handover for E&M Works                     |    |    |    |      |    |    |    |      |  |  |
| 18-62750  | Extension of Chamber 15 - Install Penstocks                          | 08-Sep-16   | 03-Oct-16   | 0%                  | ■ Extension of Chamber 15 - Install Penstocks                          |    |    |    |      |    |    |    |      |  |  |
| 18-62760N   | Extension of Chamber 15 - Install Odour Duct                         | 08-Sep-16   | 20-Sep-16   | 0%                  | ■ Extension of Chamber 15 - Install Odour Duct                         |    |    |    |      |    |    |    |      |  |  |
| 18-62770N   | Extension of Chamber 15 - Install Air Duct                           | 08-Sep-16   | 20-Sep-16   | 0%                  | ■ Extension of Chamber 15 - Install Air Duct                           |    |    |    |      |    |    |    |      |  |  |
| 18-62800  | T&C for Equipments in Section 5                                      | 04-Oct-16   | 14-Oct-16   | 0%                  | ■ T&C for Equipments in Section 5                                      |    |    |    |      |    |    |    |      |  |  |

|  <p>俊和-大陸工程聯營<br/>CHUN WO - CEC JOINT VENTURE</p> | <p>■ Actual Level of Effort</p> <p>■ Remaining Work</p> <p>■ Primary Baseline</p> <p>■ Critical Remaining Work</p> <p>■ Actual Work</p> <p>◆ Milestone</p> | <h3>Updated Detail Works Programme</h3> <p>Data Date: 27-Jan-16      Run Date: 27-Jan-16</p> |         | <p>Project ID : C18DWPDI60127</p> <p>Layout : C18160127UDWP</p> <p>Page 39 of 40</p> | <h4>Detail Works Programme</h4> <table border="1"> <thead> <tr> <th>Date</th> <th>Revision</th> <th>Checked</th> <th>Approved</th> </tr> </thead> <tbody> <tr> <td>23-Dec-15</td> <td>DWP Rev D Update</td> <td></td> <td></td> </tr> <tr> <td>27-Jan-16</td> <td>DWP Rev D Update</td> <td></td> <td></td> </tr> </tbody> </table> |  |  |  | Date | Revision | Checked | Approved | 23-Dec-15 | DWP Rev D Update |  |  | 27-Jan-16 | DWP Rev D Update |  |  |
|--|--|--|---------|--|---|--|--|--|------|----------|---------|----------|-----------|------------------|--|--|-----------|------------------|--|--|
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|  | 23-Dec-15  | DWP Rev D Update   |         |  |   |  |  |  |      |          |         |          |           |                  |  |  |           |                  |  |  |
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| Activity ID   | Activity Name   | Start       | Finish      | Physical % Complete | 2015 |    |    |    |    |    |    |    |    |  |  |  | 2016 |  |  |  | 2017 |
|---|---|-------------|-------------|---------------------|------|----|----|----|----|----|----|----|----|--|--|--|------|--|--|--|------|
|   |   |             |             |                     | Q1   | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 |  |  |  |      |  |  |  |      |
| <b>6.07.2 - Overflow Culvert</b>                            |   |             |             |                     |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| <b>6.07.2.1 - Temporary Works</b>                           |   |             |             |                     |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-62950  | Overflow Culvert - Sheet Piles Driving Works (with Pre-bored) | 07-Nov-15 A | 11-Dec-15 A | 100%                |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-63010  | Overflow Culvert - TAM Grout at Connection Zone               | 07-Dec-15 A | 19-Dec-15 A | 100%                |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-63000  | Overflow Culvert - ELS Excavation & Strutting                 | 21-Dec-15 A | 23-Jan-16 A | 100%                |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| <b>6.07.2.2 - Foundation</b>                                |   |             |             |                     |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-62850  | G.I-Pre-Drilling (3 Nos.)                                     | 12-Sep-12 A | 18-Sep-12 A | 100%                |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-62900  | Pre-bore H-Piles (6 Nos.@2day/no.)                            | 19-Sep-12 A | 29-Sep-12 A | 100%                |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| <b>6.07.2.3 - Structure</b>                                 |   |             |             |                     |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-63080N   | Overflow Culvert - Installation of H-Pile Head Plate          | 25-Jan-16 A | 15-Feb-16   | 5%                  |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-63050  | Overflow Culvert - Base Slab Construction                     | 16-Feb-16   | 03-Mar-16   | 0%                  |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-63060  | Overflow Culvert - Wall & Roof Slab Construction              | 04-Mar-16   | 06-Apr-16   | 0%                  |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-63070  | Overflow Culvert - ELS Removal and Backfilling                | 07-Apr-16   | 12-Apr-16   | 0%                  |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| <b>6.07.3 - Demolition of Existing Dechlorination Plant</b> |   |             |             |                     |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-63100  | Demolition of Existing Dechlorination Plant                   | 22-Feb-16   | 06-Apr-16   | 0%                  |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-63150  | External Work - Part 2 (Utilities)                            | 07-Apr-16   | 23-Apr-16   | 0%                  |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| <b>6.07.4 - Dechlorination Compound</b>                     |   |             |             |                     |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-63210N   | Concreting for Pavement                                       | 07-Apr-16   | 18-Apr-16   | 0%                  |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| <b>6.07.5 - Landscape Works</b>                             |   |             |             |                     |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-63200  | Landscaping Softwork  | 07-Apr-16   | 03-Jun-16   | 0%                  |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |
| 18-63300  | Irrigation System   | 04-Jun-16   | 04-Jul-16   | 0%                  |      |    |    |    |    |    |    |    |    |  |  |  |      |  |  |  |      |



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