Harbour Area Treatment Scheme Stage 2A

Contract No. DC/2009/10, DC/2009/17 and DC/2009/18

Consolidated Quarterly Environmental Monitoring and Audit Report March 2017 to May 2017

(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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Sewage Services Branch
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Attn: Mr. Danny Tang

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

Submission of Quarterly EM&A Consolidated Report (Version 1.0) for Stonecutters Island Sewage Treatment Works for March to May 2017 (No. 30)

Our Reference
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31 July 2017
By Post

Dear Sir,

We refer to the captioned report providing a quarterly summary of the construction phase EM&A works for Contract Nos. DC/2009/10, DC/2009/17 and DC/2009/18 at Stonecutters Island Sewage Treatment Works site under Harbour Area Treatment Scheme Stage 2A. We confirm we have no comment.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED

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c.c.

Ove Arup & Partners HK Ltd.	Mr. Ted Y F Tang	Fax: 2370 4377
Cinotech Consultants Ltd.	Dr. Priscilla Choy	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	Harbour Area Treatment Scheme

EXECUTIVE SUMMARY

Introduction

1. This is the 30th Consolidated Quarterly Environmental Monitoring and Audit (EM&A) Report summaries the key information of EM&A quarterly 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, DC/2009/17 and DC/2009/18.

   - 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; and
   - Contract no. DC/2009/18 - Upgrading Works at Stonecutters Island Sewage Treatment Works – Effluent Tunnel and Disinfection Facilities.

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 quarterly summary of the EM&A works at SCISTW for the purpose of ease of references. 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. The EM&A programme of Contract DC/2009/19 and DC/2007/23 have completed all major construction works in the Stonecutters Island respectively on 5 March 2015 and 16 October 2015.

5. No amendment of the information in the EM&A reports for each individual contract was made in this consolidated quarterly report.

6. This Report documents the findings of EM&A Works for the Project covering the period from March 2017 to May 2017.

7. The details of the EM&A for individual contracts can be found in the separate EM&A quarterly 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/2009/10	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	http://www.hats2a-ema.com/RP_EMA/DC200910/EMA%20Report-DC200910.html
DC/2009/17	Executive Summary	The air quality and noise monitoring stations under this contract were covered by other contracts at SCISTW. The monitoring data would be summarized in this monthly EM&A report.

Contract no.	ES/Web Site	Details:
	Web Site	http://www.hats2a-ema.com/RP_EMA/DC%202009%2017/EMA%20Report-DC200917.html
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	http://www.hats2a-ema.com/RP_EMA/DC200918/EMA%20Report-DC200918.html

Environmental Monitoring Works

8. The environmental monitoring works were conducted by the ETs for the Contract DC/2009/10 and DC/2009/18, while no monitoring work is requested for DC/2009/17 since the monitoring stations were duplicated. Site audits were conducted once per week for each contract by their ETs.

9. Summary of the non-compliance of the reporting quarter is tabulated in **Table II**.

Table II Summary Table for Non-compliance Recorded in the Reporting Quarter

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	1-hr TSP	0	0	0	0	N/A
		24-hr TSP	0	0	0	0	N/A
	AM7	1-hr TSP	0	0	0	0	N/A
		24-hr TSP	0	0	0	0	N/A
	AM8	1-hr TSP	0	0	0	0	N/A
		24-hr TSP	0	0	0	0	N/A
DC/2009/18	AM9	1-hr TSP	0	0	0	0	N/A
		24-hr TSP	0	0	0	0	N/A
DC/2009/10	NM5	Noise	0	0	0	0	N/A
	NM6		0	0	0	0	N/A
DC/2009/18	NM7		0	0	0	0	N/A

1-hour TSP Monitoring

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

24-hour TSP Monitoring

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

Construction Noise

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

Key Information in the Reporting Quarter

13. Summary of key information in the reporting quarter is tabulated in **Table III**.

Table III Summary Table for Key Information in the Reporting Quarter

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	0	---	N/A	N/A	---
Status of submissions under EP	3	Monthly Consolidated EM&A Reports for SCISTW For March, April and May 2017	Submitted to EPD	No comment	---
Notifications of any summons & prosecutions received	0	--	N/A	N/A	---

Key Information in the EIA Report

14. 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 G**.

1. INTRODUCTION

Background

1.1 Harbour Area Treatment Scheme (HATS) Stage 2A is a designated project with Register No.: AEIAR-121/2008. The Environmental Permit (Permit No. EP-322/2008/G) was issued on 9th 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 **Figure 1** and **2**.

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 responsible to coordinate all submissions from the ETs of other contractors at SCISTW as required in the EP, EIA Report and EM&A Manual for the Project.

1.4 The 1st to 3rd consolidated quarterly EM&A reports were prepared by Ove Arup & Partners Hong Kong Ltd (Arup) and submitted to EPD. From November 2010 and onwards, the 4th and subsequent consolidated quarterly EM&A report will be prepared and submitted by Cinotech Consultant Limited, the ET for the Contract DC/2009/17, DC/2009/10 and DC/2009/18.

1.5 This is the 30th consolidated quarterly EM&A report summarizing the EM&A works conducted for the Project at SCISTW during March 2017 to May 2017.

1.6 The quarterly 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 quarterly EM&A Reports are provided in the Project Website.

1.7 The environmental monitoring works in the Project were covered by the ETs for the Contracts: DC/2009/10 (AM6a, AM7, AM8; NM5 and NM6) and DC/2009/18 (AM9 and NM7).

Current Contracts at SCISTW

1.8 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

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

Table 1.1 Key Project Contacts

Contract No./ Position	**DC/2009/10**
Contract Title:	Upgrading Works at SCISTW - Main Pumping Station, Sedimentation Tanks and Ancillary Facilities
Consultant	Ove Arup & Partners HK Ltd
The Engineer	S.Y.Chan (Tel: 2528 3031)
The Engineer Representative	Mr Ted Tang (Tel: 2370 4311)
ER's Coordinator	Ms Natalie Kwok (Tel: 2370 4356)
Independent Environmental Checker	Dr. Anne Kerr (Tel:2828 5757)
Contractor	Sun Fook Kong – Biwater Joint Venture
Site Agent	Mr. Keith Ho (Tel: 2620 0070)
Environmental Officer	Mr. Leo Leung (Tel:2620 0070)
Environmental Team	Cinotech Consultant Limited Dr. Priscilla Choy (Tel: 2151 2089)

Table 1.1(cont'd) Key Project Contacts

Contract No.	DC/2009/17	DC/2009/18
Contract Title:	Upgrading Works at Stonecutters Island Sewage Treatment Works – Sludge Dewatering Facilities	Upgrading Works at Stonecutters Island Sewage Treatment Works – Effluent Tunnel and Disinfection Facilities
Consultant	Ove Arup & Partners HK Ltd	Ove Arup & Partners HK Ltd
The Engineer	S.Y.Chan (Tel: 2528 3031)	S.Y.Chan (Tel: 2528 3031)
The Engineer Representative	Mr Ted Tang (Tel: 2370 4311)	Mr Ted Tang (Tel: 2370 4311)
ER's Coordinator	Ms Natalie Kwok (Tel: 2370 4356)	Ms Natalie Kwok (Tel: 2370 4356)
Independent Environmental Checker	Dr. Anne Kerr (Tel:2828 5757)	Dr. Anne Kerr (Tel:2828 5757)
Contractor	China State- ATAL Joint Venture	Chun Wo – CEC Joint Venture
Site Agent	Mr. Charles Tse (Tel: 9270 3384)	Mr. W.C. Lee (Tel: 3975 6388)
Environmental Officer	Mr. Leo Leung (Tel: 2370 3010)	Mr. Shelton Chan (Tel: 3975 6331)
Environmental Team	Cinotech Consultant Limited Dr. Priscilla Choy (Tel: 2151 2089)	Cinotech Consultant Limited Dr. Priscilla Choy (Tel: 2151 2089)

Construction Programme

1.10 The construction program for the Contracts at SCISTW are provided in **Appendix J**.

1.11 The EM&A programme requires construction phase monitoring for air quality and construction noise, landscape and visual and environmental site audit. 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.

1.12 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 4 of this report.

1.13 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 from March 2017 to May 2017, 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. **Table 2.1** describes the air quality monitoring locations, which are also depicted in **Figure 1**.

Table 2.1 Locations for Air Quality Monitoring

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

Remark:
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 from 4th January 2016 onward.

Monitoring Equipment

2.3 The equipment used in the impact air monitoring programme and the copies of calibration certificates could be referred to the relevant monthly reports for the respective contracts.

Monitoring Parameters, Frequency and Duration

2.4 Table 2.2 summarizes the monitoring parameters and frequencies of impact dust monitoring for the whole construction period.

Table 2.2 Impact Dust Monitoring Parameters, Frequency and Duration

Monitoring Station	Parameter	Period	Frequency
All monitoring locations	1-hour TSP	0700-1900	3 times/ every 6 days
	24-hour TSP	0000-2400	once in every 6 days

Monitoring Methodology and QA/QC Procedure

2.5 The monitoring methodology, QA/QC procedure and copies of calibration certificates for monitoring equipment could be refer to the relevant monthly reports for respective Contract.

Results and Observations

2.6 All 1-hour TSP and 24-hour TSP monitoring were conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded. Summary of exceedance is presented in **Appendix D**.

2.7 The graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix B**.

2.8 According to 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 by the ETs of the responsible Contracts as listed in **Table 3.1**. **Figure 1** 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 Barracks

Monitoring Equipment

3.3 The equipment used in the impact noise monitoring programme and the copies of calibration certificates could be referred to the relevant monthly report for respective contracts.

Monitoring Parameters, Frequency and Duration

3.4 **Table 3.2** summarizes the monitoring parameters, frequency and total duration of monitoring.

Table 3.2 Noise Monitoring Parameters, Frequency and Duration

Monitoring Stations	Parameter	Period	Frequency
NM5 NM6 NM7	L_{eq}(30 min.) dB(A)	0700-1900 hrs on weekdays	Once per week
	L_{eq}(5 min.) 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, copies of calibration certificates for monitoring equipments and QA/QC procedure could be refer to the relevant monthly reports for Contract DC/2009/10 and DC/2009/18.

Results and Observations

3.6 No Action/Limit Level exceedance of Noise in normal working hours and restricted hours was recorded in the reporting quarter. Summary of exceedance is presented in **Appendix D**.

3.7 The graphical presentations of Noise monitoring results are shown in **Appendix C**.

3.8 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 restricted 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 AND MONITORING

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 each Project site.

4.2 No non-compliance was observed during the site audits.

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 quarter 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 were extracted from their reports and presented in **Appendix F.**

Implementation Status of Environmental Mitigation Measures

4.5 Details of the implementation of mitigation measures for the three contracts are provided in the **Appendix G**.

Review of Environmental Monitoring Procedures

4.6 The monitoring works conducted by the monitoring team of respective Contracts and were inspected regularly by their ETs.

Landscape and Visual Monitoring

4.7 Landscape and visual monitoring as described in the EM&A Manual has been implemented by the individual Contracts. The major findings and recommendations are summarized in **Appendix H.**

Status of Environmental Licensing and Permitting

4.8 All the construction site areas in the SCISTW have been checked for their environmental licences and permit during the site audits before allowing the construction works to proceed. The permits or licences obtained for each Contracts could be referred to the *Consolidated Monthly EM&A Reports, Appendix F***.**

Implementation Status of Event Action Plans

4.9 The Event Action Plans for air quality and noise are presented in **Appendix E.**

1-hr TSP

4.10 No Action/Limit Level exceedance was recorded.

24-hr TSP

4.11 No Action/Limit Level exceedance was recorded.

Construction Noise

4.12 No Action/Limit Level exceedance for normal working hours and restricted hours was recorded.

Summary of Complaints and Prosecutions

4.13 No environmental complaint and prosecution was received at SCISTW for the three contracts during the reporting quarterly period.

4.14 There was a total of 1 project-related environmental complaint received since the commencement of the three contracts. The Complaint Log is presented in **Appendix I**.

5 STATUS OF WASTE MANAGEMENT

5.1 The amount of Inert and Non Inert wastes generated by the activities of the three contracts in the reporting quarter is summarized in the waste flow tables as shown in **Appendix J**.

5.2 The disposal location of wastes generated by the activities of the three contracts is shown in **Table 5.1**.

Table 5.1 Summary of Disposal Location of Waste Generated in Reporting Quarter

Contract No.	Disposal Location of Wastes in Report Quarter
DC/2009/10	Tuen Mun Area 38 Fill Bank and NENT Landfill
DC/2009/17	Tuen Mun Area 38 Fill Bank and NENT Landfill
DC/2009/18	Lam Tei Quarry, Tuen Mun Area 38 Fill Bank and NENT Landfill and Tseung Kwan O Area 137 Fill Bank

6. FUTURE KEY ISSUES

Key Issues for the Coming Quarter

6.1 Key environmental issues in the coming quarter include:

- Generation of dust from stockpiles of excavated and dusty materials, unpaved site area and vehicle movement, roadworks, 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 works should be provided when carrying out works near existing trees and shrubs.

Construction Program for the Coming Quarter

6.2 The tentative construction programs for respective Contracts are provided in **Appendix K**.

7 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

7.1 Environmental monitoring and audit works were performed in the reporting quarter and all monitoring results were checked and reviewed.

1-hour TSP Monitoring

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

24-hour TSP Monitoring

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

Construction Noise Monitoring

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

Site Audit

7.5 Weekly Environmental Site Audits and Landscape and Visual Monitoring were conducted in a weekly basis during the reporting quarter. No non-compliance was recorded.

Complaint and Prosecution

7.6 There are no environmental related summonses, prosecutions and complaints in the reporting quarter.

Recommendations

7.7 The following recommendations were made for the coming reporting quarter:

Dust Impact

- 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.
- Non-Road Mobile Machinery (NRMM) labels must be demonstrated on the registered equipment for inspection.

Noise Impact

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

Water Impact

- 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.

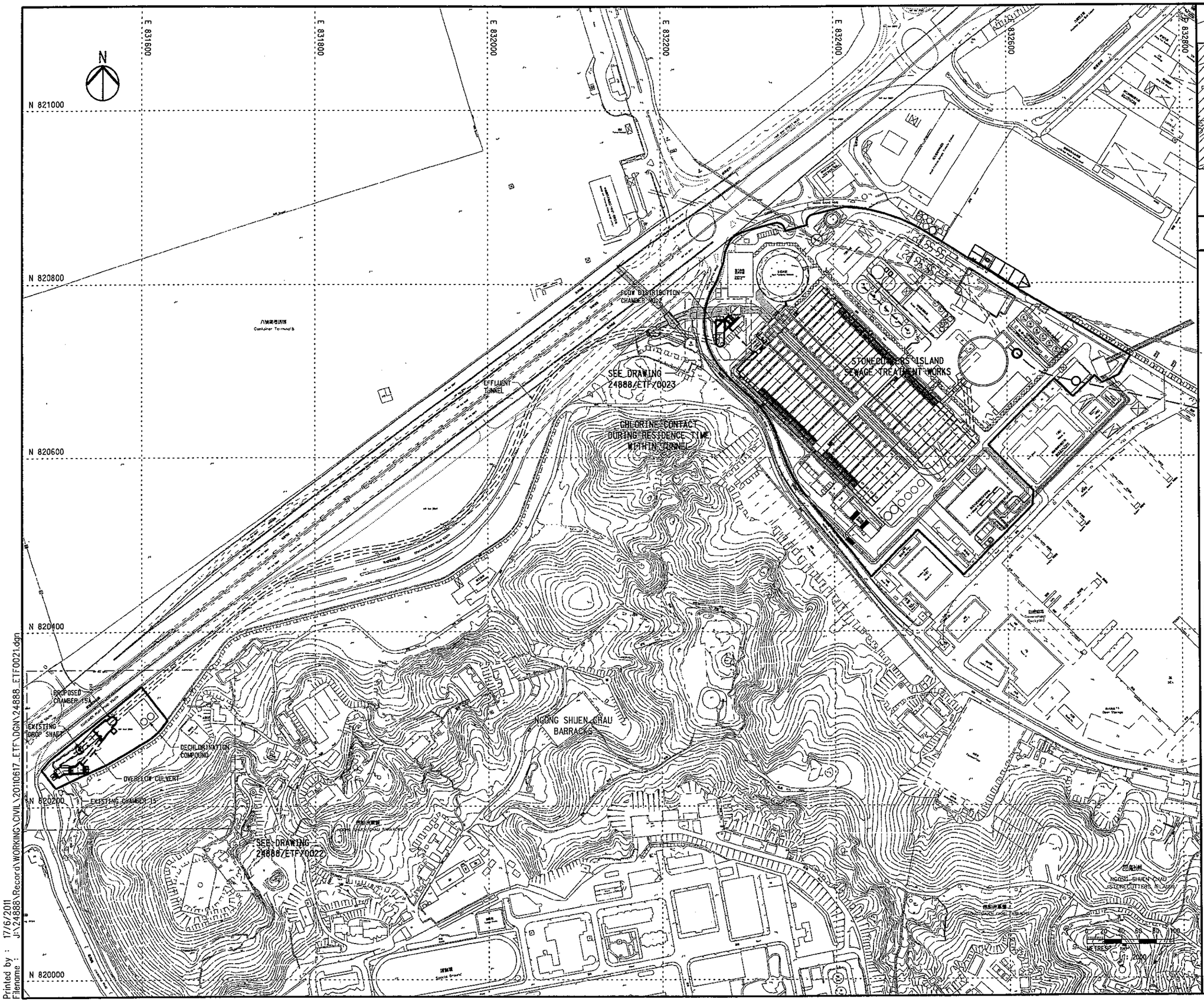
Waste/Chemical Management

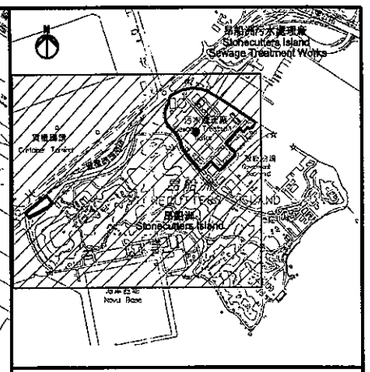
- To provide proper rubbish bins / skips for waste collection;
- To check for any accumulation of wasted materials or rubbish on site;
- To provide proper storage area or drip trays for oil containers/ equipments on site;
- To avoid any discharge or accidental spillage of chemical waste or oil directly from the equipment;
- To well maintain the equipments 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 within the tree protection zone.

FIGURES





KEY PLAN

LEGEND:

BOUNDARY OF SCISTW

ALIGNMENT OF EFFLUENT TUNNEL

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

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)

Fig. 1B

Drawing no.			Rev.
24888/ETF/0021			0
Drawn WM	Date 08/10	Checked PW	Approved DP
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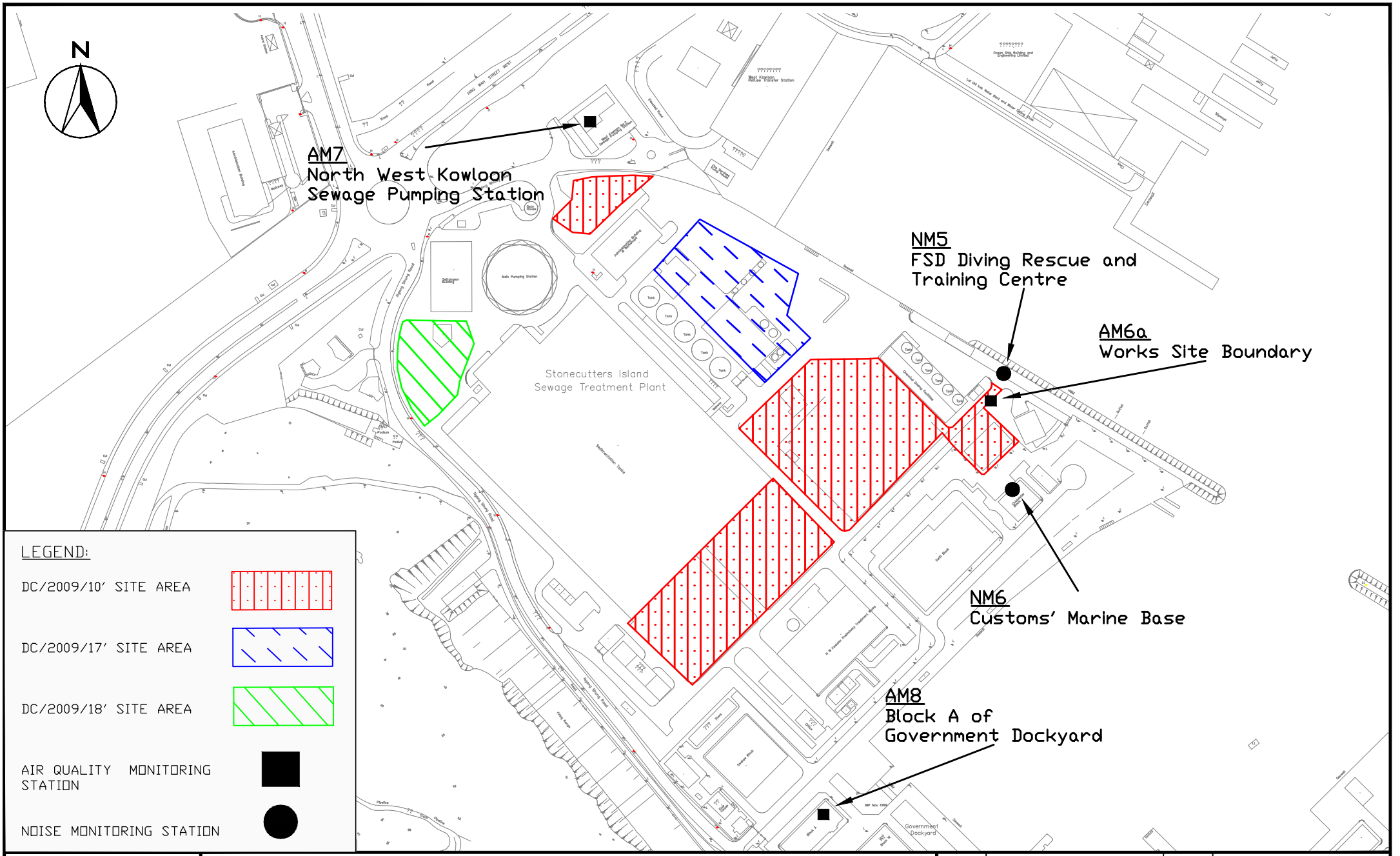
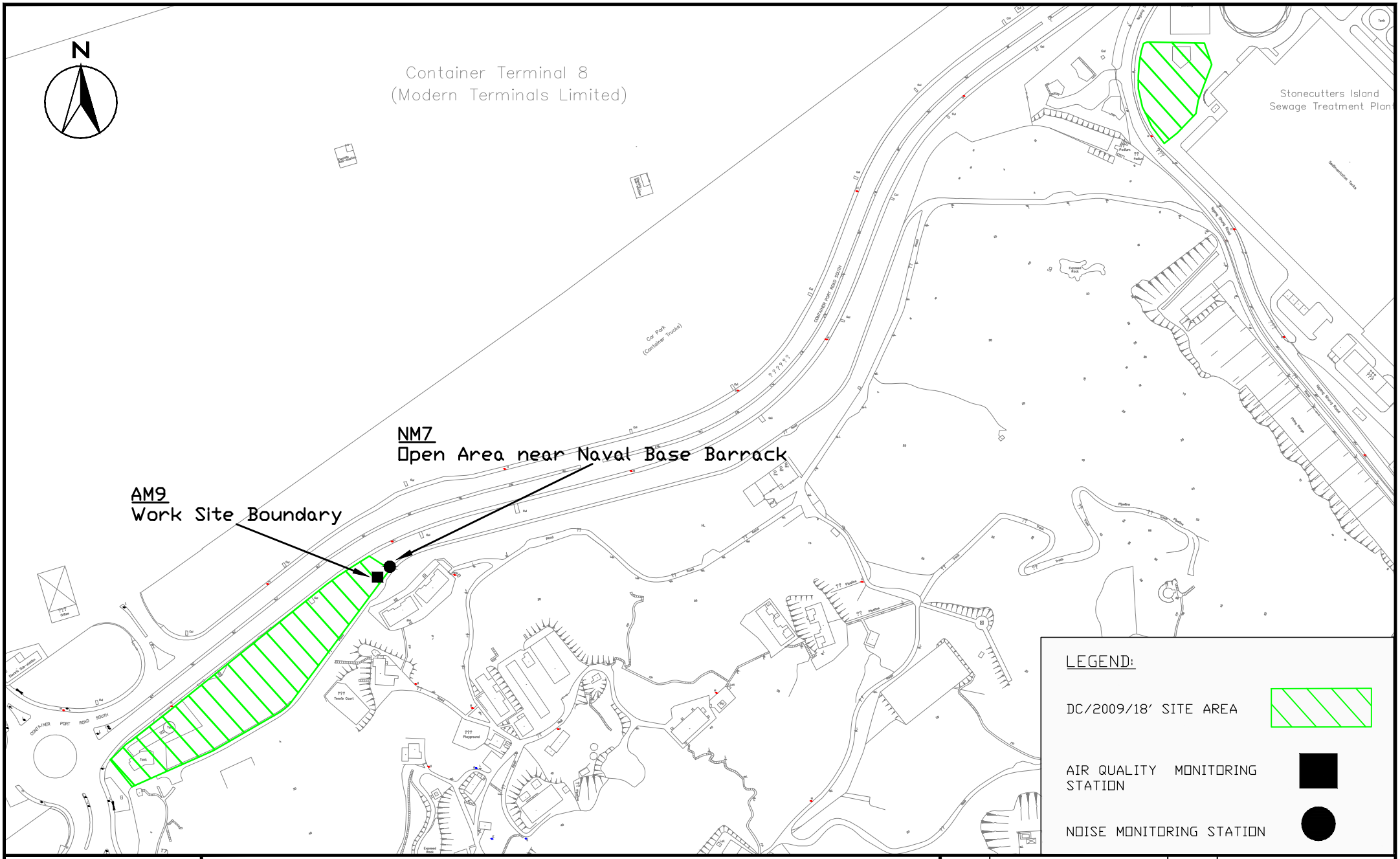


CINOTECH
Cinotech Consultants Limited

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	–



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	–

APPENDIX A
ACTION AND LIMIT LEVELS FOR AIR QUALITYAND NOISE QUALITY

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 ($\mu g/m^3$)		Limit Level ($\mu g/m^3$)	
	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

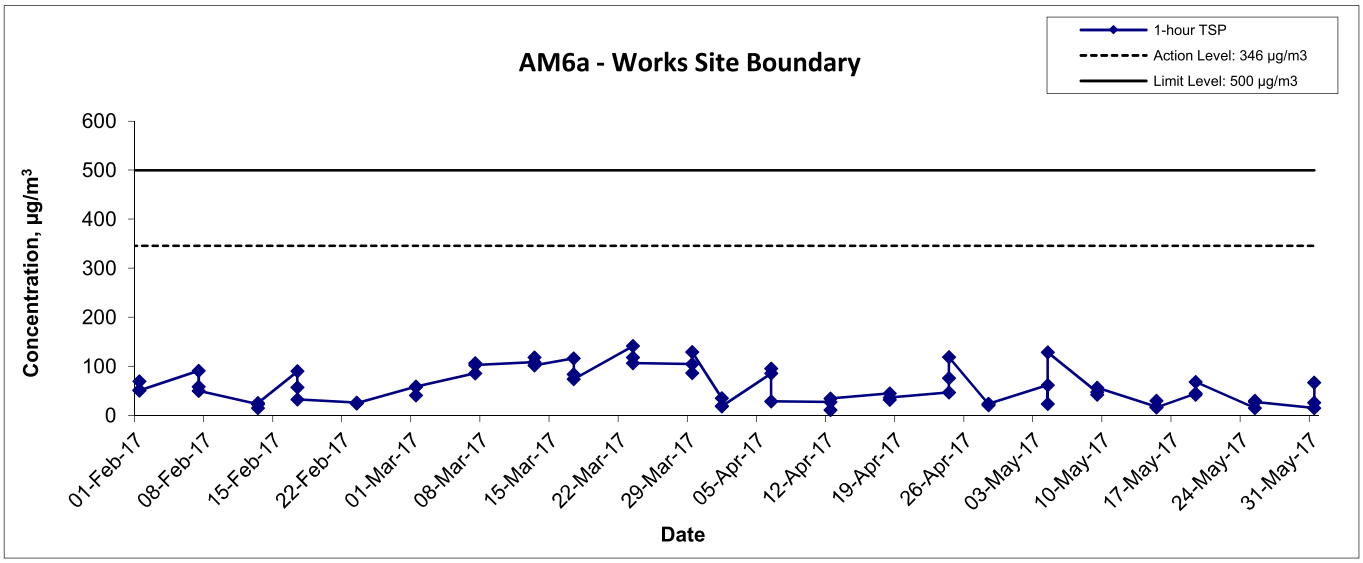
Table A-2 Action and Limit Level for Construction Noise

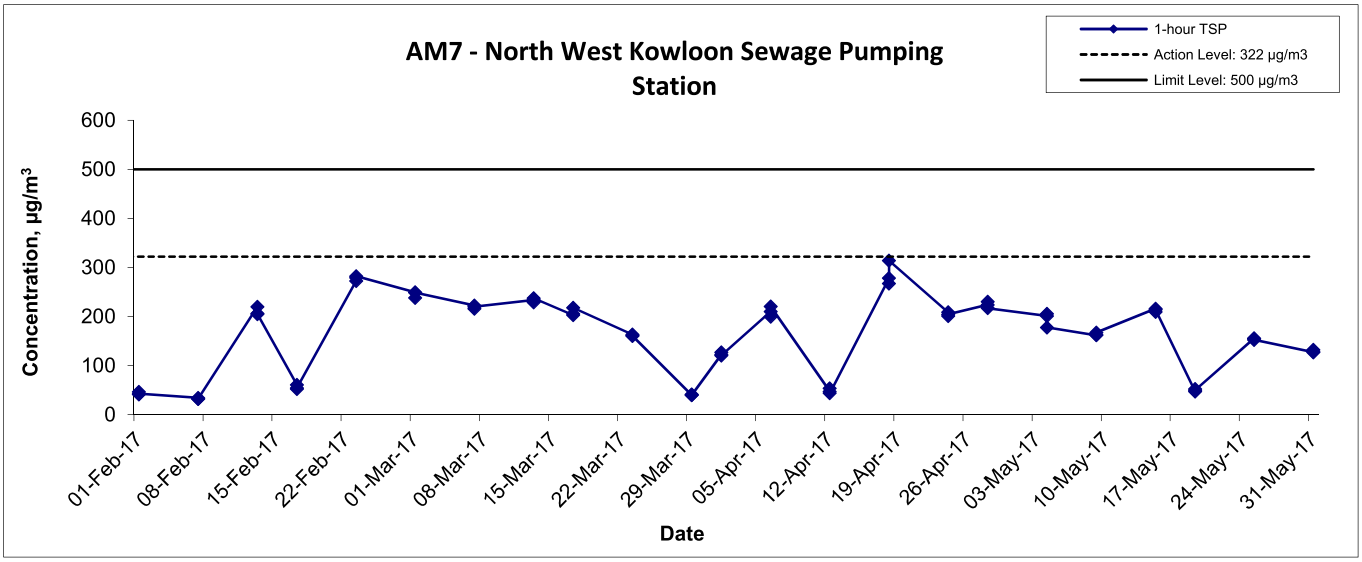
Monitoring Stations	Time Period	Action Level	Limit Level in dB(A)
NM5 **NM6** **NM7**	0700-1900 hours on normal weekdays	When one documented complaint is received	75
	Restricted Hours (Evening Time) All days during the evening (1900 to 2300 hours), and general holidays (including Sundays) during the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

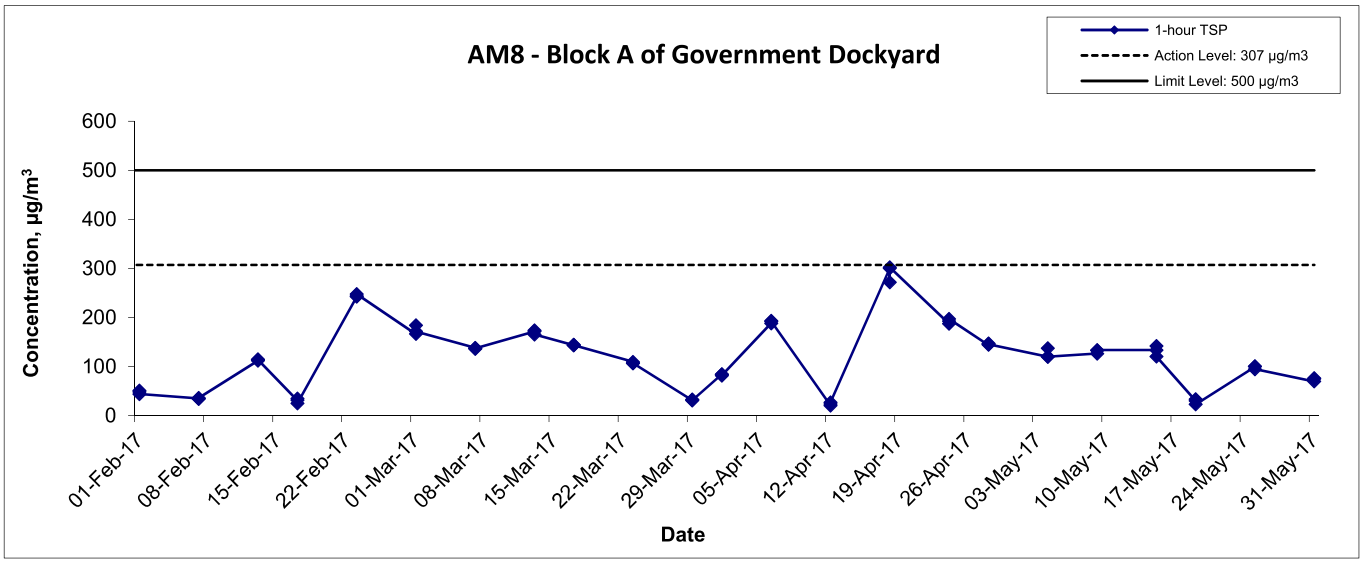
Note (1): Construction Noise Criteria for activity other than Percussive Pilling.

APPENDIX B
1-HOUR AND 24-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

1-hr TSP Concentration Levels



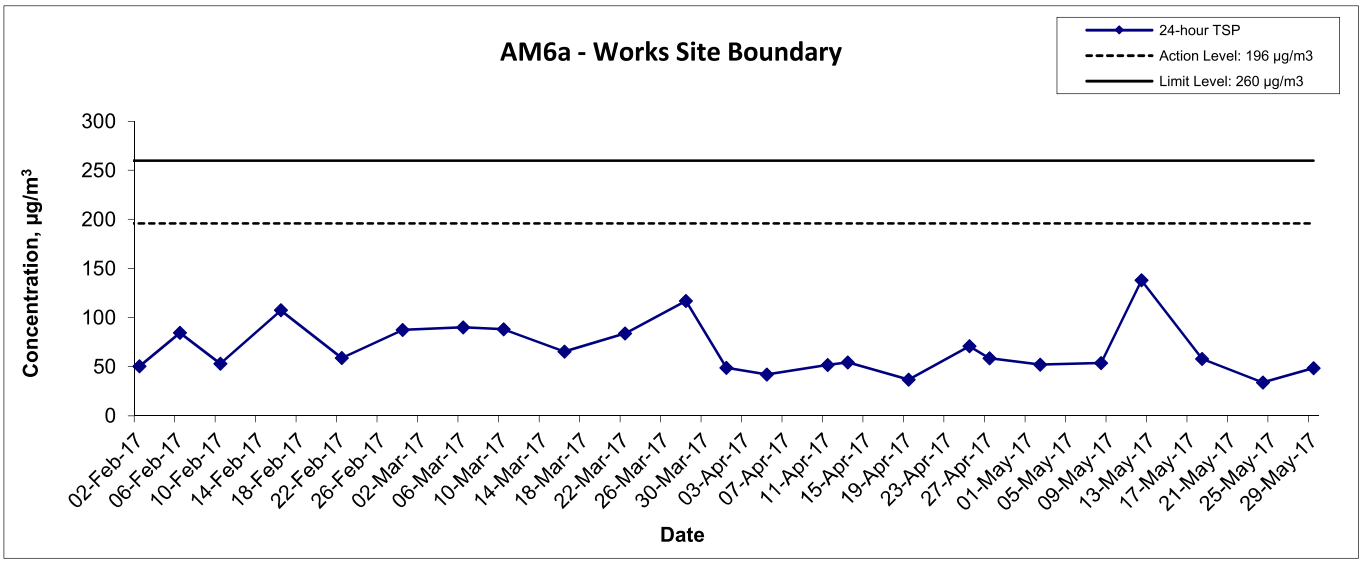


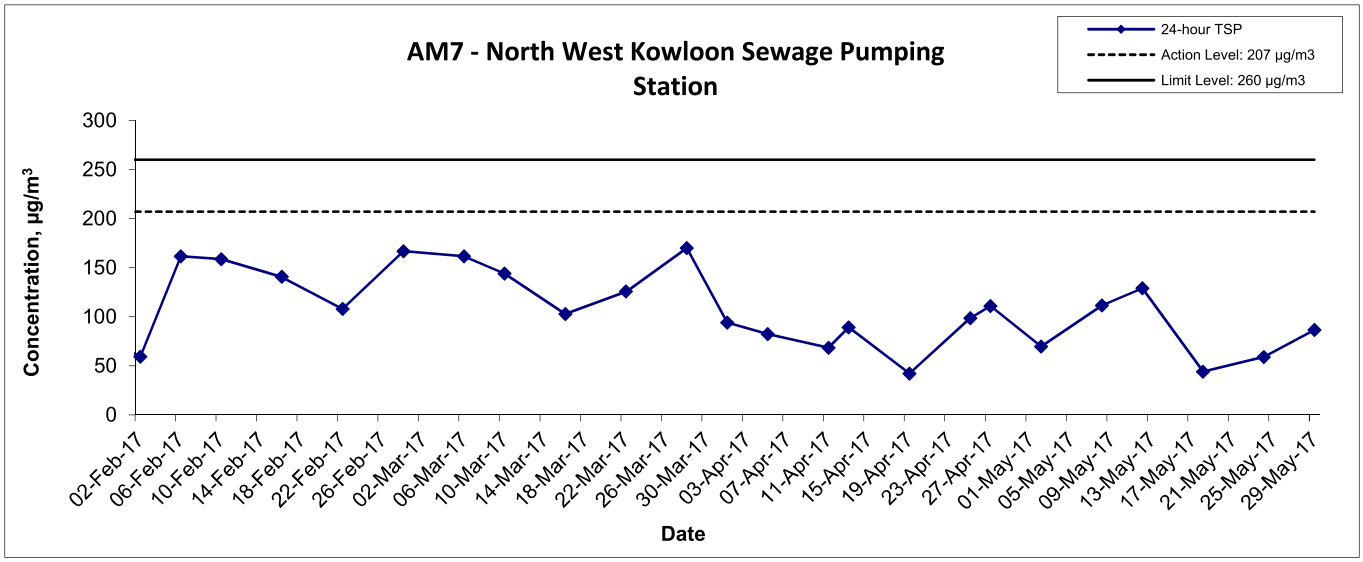


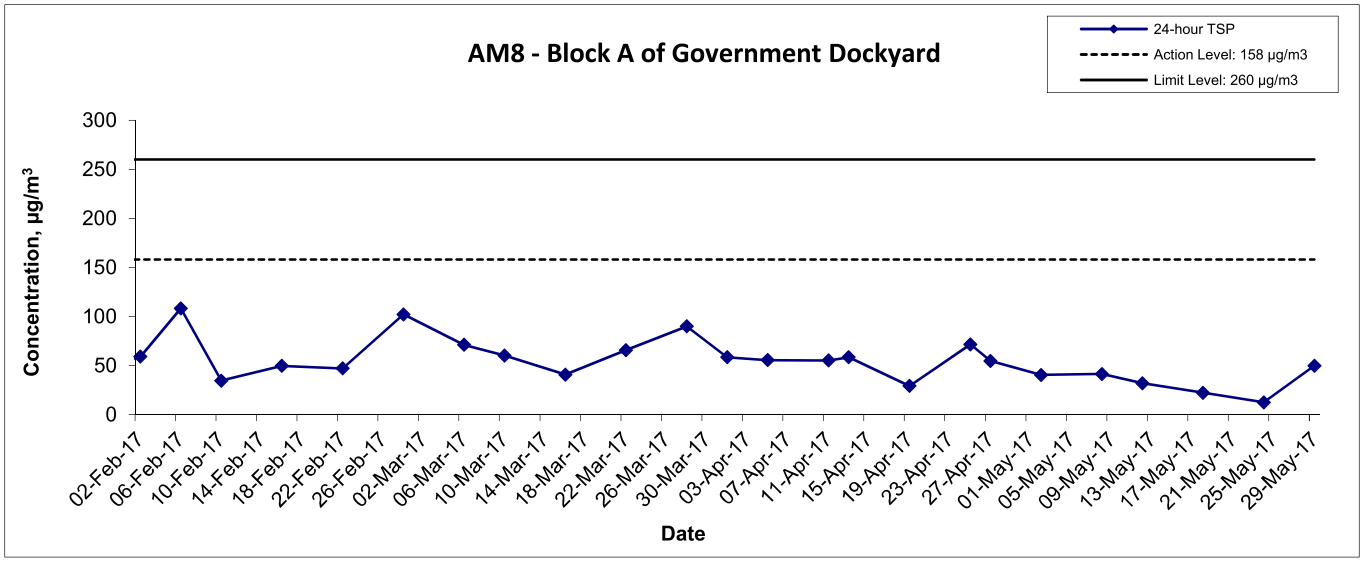
Title	Scale	Project No.
Contract No. DC/2009/10 HATS 2A – Upgrading Works at SCISTW– Main Pumping Station, Sedimentation Tanks and Ancillary Graphical Presentation of 1-hour TSP Monitoring Results	N.T.S Date May-17	MA11007

CINOTECH

24-hr TSP Concentration Levels

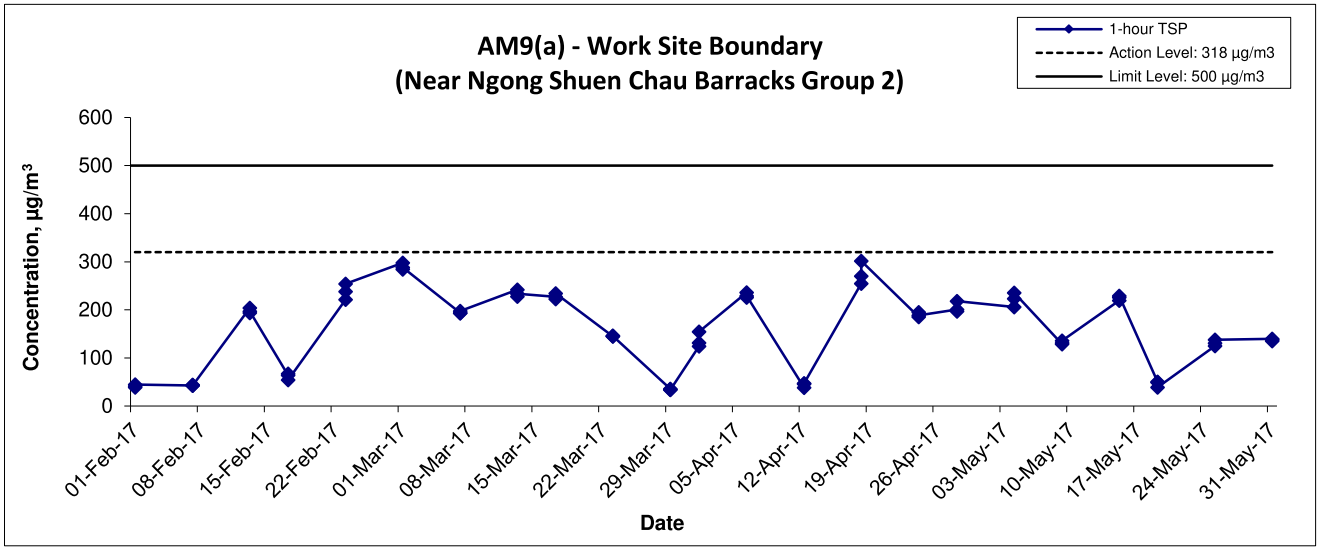






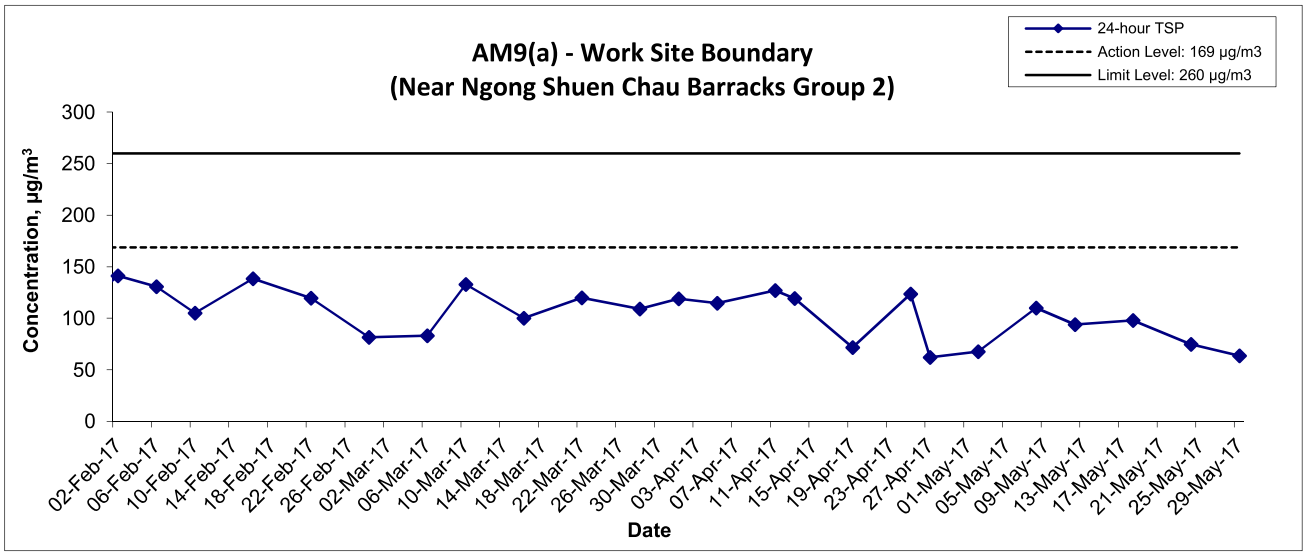
Title: Contract No. DC/2009/10 HATS 2A – Upgrading Works at SCISTW– Main Pumping Station, Sedimentation Tanks and Ancillary Graphical Presentation of 24-hour TSP Monitoring Results	Scale: N.T.S Date: May 17	Project No.: MA11007	CINOTECH

1-hr TSP Concentration Levels



Title	Contract No. DC/2009/15 HATS 2A – Upgrading Works at SCISTW– Effluent Tunnel and Disinfection Facilities Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S Date May 17	Project No. MA11043	CINOTECH

24-hr TSP Concentration Levels

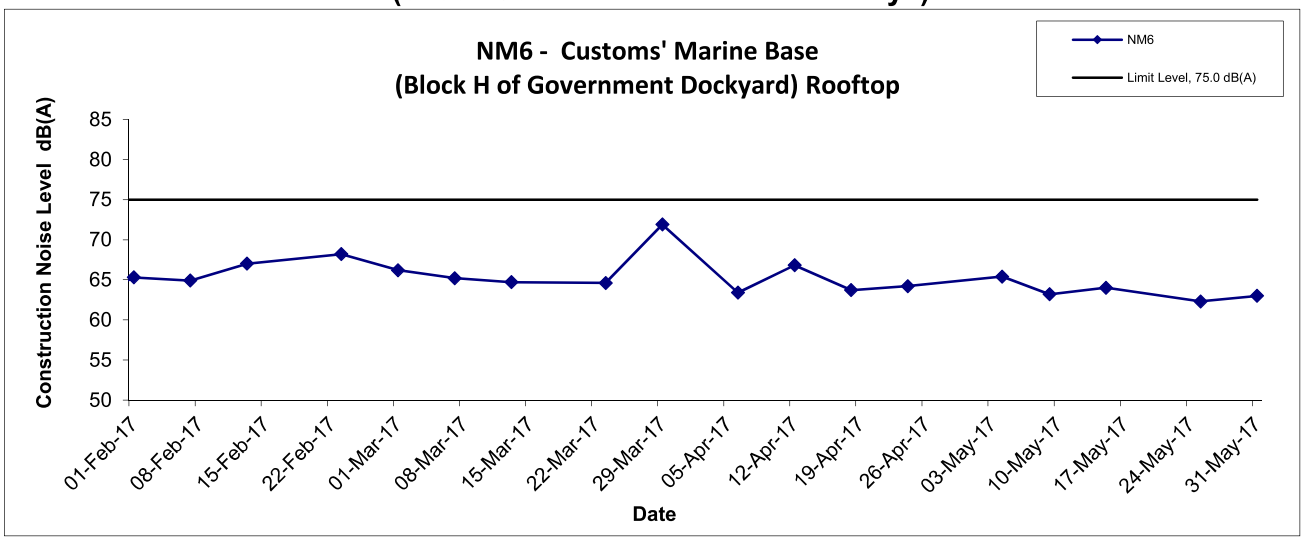


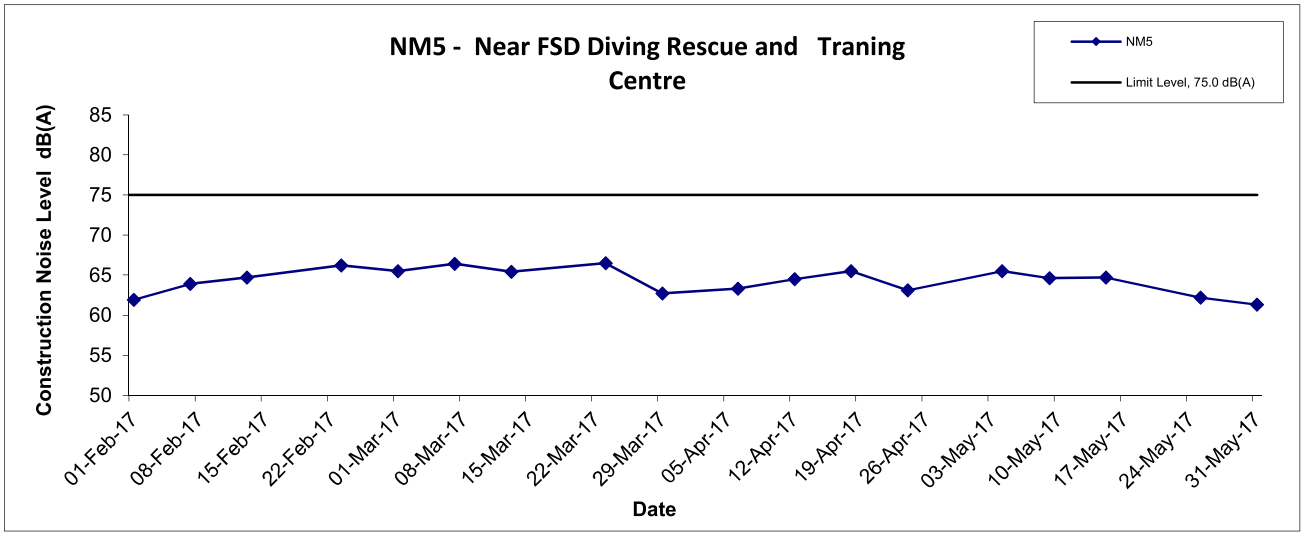
Title	Contract No. DC/2009/18 HATS 2A – Upgrading Works at SCISTW– Effluent Tunnel and Disinfection Facilities Graphical Presentation of 24-hour TSP Monitoring Results	Scale N.T.S	Project No. MA11043	CINOTECH
		Date May 17		

APPENDIX C
NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

Noise Levels

(0700-1900 hrs on Normal Weekdays)



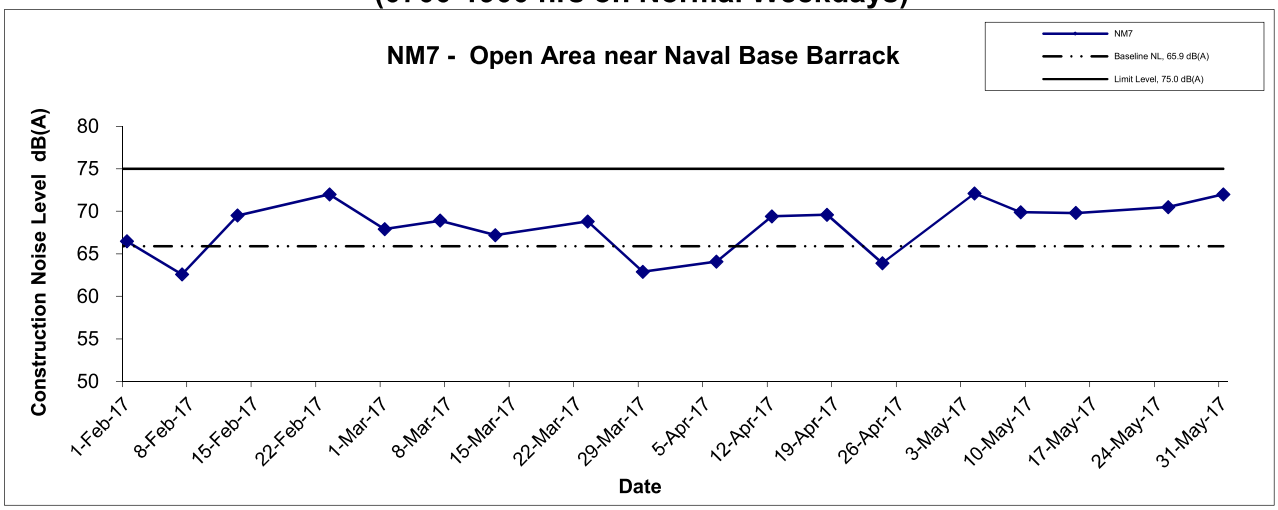


Title	Scale	Project No.
Contract No. DC/2009/10 HATS 2A – Upgrading Works at SCISTW– Main Pumping Station, Sedimentation Tanks and Ancillary Graphical Presentation of Noise Monitoring Result	N.T.S Date May 17	MA11007

CINOTECH

Noise Levels

(0700-1900 hrs on Normal Weekdays)



Title: Contract No. DC/2009/18 HATS 2A – Upgrading Works at SCISTW– Effluent Tunnel and Disinfection Facilities Graphical Presentation of Noise Monitoring Result (NM7)	Scale: N.T.S Date: May 17	Project No.: MA11043	CINOTECH

APPENDIX D
SUMMARY OF EXCEEDANCE

APPENDIX D – SUMMARY OF EXCEEDANCE

Reporting Quarter: March 2017 to May 2017

a) Exceedance Report for 1-hr TSP (NIL)

b) Exceedance Report for 24-hr TSP (NIL)

c) I: Exceedance Report for Construction Noise during normal working hours(NIL)
II: Exceedance Report for Construction Noise during restricted hours (NIL)

APPENDIX E
EVENT ACTION PLANS

APPENDIX E – Event / Action Plans

Table E-1 Event / Action Plan for Air Quality

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
ACTION LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and ER; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; 8. If exceedance stops, cease additional monitoring	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented	1. Submit proposals for remedial to ER within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
LIMIT LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 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; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate
2. Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 5. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 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	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
	8. If exceedance stops, cease additional monitoring		abated.	

Table E-2 Event / Action Plan for Construction Noise

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
Action Level being exceeded	1. Notify ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Advise the ER on the effectiveness of the proposed remedial measures	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures	1. Submit noise mitigation proposals to IEC and ER; 2. Implement noise mitigation proposals
Limit Level being exceeded	1. Inform IEC, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and ER on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the ER until the exceedance is abated

APPENDIX F
SITE AUDIT SUMMARY

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170302
Date	2 March 2017 (Thursday)
Time	09:30-11:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality • No environmental deficiency was identified during the site inspection.	
	Part B – Landscape and Visual • No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality • No environmental deficiency was identified during the site inspection.	
	Part D – Noise • No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
170302-O01	• To provide drip tray to chemical containers in Portion 6.	E 7ii
	Part F - Permit / Licence • No environmental deficiency was identified during the site inspection.	
	Others • -	
	Remark: • -	

	Name	Signature	Date
Recorded by	Victor Wong		2 March 2017
Checked by	Dr. Priscilla Choy		2 March 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170307
Date	7 March 2017 (Tuesday)
Time	11:00-11:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality • No environmental deficiency was identified during the site inspection.	
	Part B – Landscape and Visual • No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality	
170307-O02	• Dust near the Portion 7 entrance should be cleared.	C 3
	Part D – Noise • No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
170307-O01	• General refuse and construction waste should be sorted and disposed accordingly (Portion 4).	E 7ii
	Part F - Permit / Licence • No environmental deficiency was identified during the site inspection.	
	Others • -	
	Remark: • -	

	Name	Signature	Date
Recorded by	Victor Wong		7 March 2017
Checked by	Dr. Priscilla Choy		7 March 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170315
Date	15 March 2017 (Wednesday)
Time	09:30-11:00

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
170315-R01	• To be reminded to ensure the discharge hose is connected to the AquaSed when discharging site water (Portion 6).	A 1
	Part B – Landscape and Visual • No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality • No environmental deficiency was identified during the site inspection.	
	Part D – Noise • No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management • No environmental deficiency was identified during the site inspection.	
	Part F - Permit / Licence • No environmental deficiency was identified during the site inspection.	
	Others • -	
	Remark: • -	

	Name	Signature	Date
Recorded by	Victor Wong		15 March 2017
Checked by	Dr. Priscilla Choy		15 March 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170323
Date	23 March 2017 (Thursday)
Time	09:30-11:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
	• No environmental deficiency was identified during the site inspection.	A 1
	Part B – Landscape and Visual • No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality	
170323-O01	• Stockpile of dusty material at MPS 2 should be covered by impervious sheet.	C 6
170323-O03	• Cement bags should be covered properly by impervious sheet at Portion 7.	C 15
170323-O04	• Mixing activity at Portion 7 should be done within a 3 sides enclosure area.	C 10
	Part D – Noise • No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
170323-O02	• Accumulated waste at Portion 6 should be cleared.	E 1i, iii
	Part F - Permit / Licence • No environmental deficiency was identified during the site inspection.	
	Others • -	
	Remark: • -	

	Name	Signature	Date
Recorded by	Victor Wong		23 March 2017
Checked by	Dr. Priscilla Choy		23 March 2017

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	170330
Date	30 March 2017 (Thursday)
Time	09:30-11:30

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

Ref. No.	Remarks/Observations	Related Item No.
170330-O01	***Part A - Water Quality*** • No environmental deficiency was identified during the site inspection. ***Part B – Landscape and Visual*** • Fences should be provided to protect the tree zone. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***Part F - Permit / Licence*** • No environmental deficiency was identified during the site inspection. ***Others*** • - ***Remark:*** • -	B 2

	Name	Signature	Date
Recorded by	Victor Wong		30 March 2017
Checked by	Dr. Priscilla Choy		30 March 2017

Contract No: DC/2009/17
HATS 2A Sludge Dewatering Facilities at Stonecutters Island STW

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170307
Date	7 March 2017 (Tuesday)
Time	09:30 – 10:30

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

Ref. No.	Remarks/Observations	Related Item No.
170307-O01	***Part A - Water Quality*** • AquaSed should be desilted to improve the discharge quality.	A 1 & A 5iv
170307-O02	***Part B – Landscape and Visual*** • Fence should be provided to the tree zone to keep out construction materials (External Works).	B 2
	Part C - Air Quality • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***Part F - Permit / Licences*** • No environmental deficiency was identified during the site inspection. ***Remark:***	

	Name	Signature	Date
Recorded by	Victor Wong		7 March 2017
Checked by	Dr. Priscilla Choy		7 March 2017

Contract No: DC/2009/17
HATS 2A Sludge Dewatering Facilities at Stonecutters Island STW

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170315
Date	15 March 2017 (Wednesday)
Time	14:00 – 15:30

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

Ref. No.	Remarks/Observations	Related Item No.
170315-O01	***Part A - Water Quality*** • Sediment near the site boundary should be cleared, or the sand bag bunding should be emplaced. ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***Part F - Permit / Licences*** • No environmental deficiency was identified during the site inspection. ***Remark:***	A 2

	Name	Signature	Date
Recorded by	Victor Wong		15 March 2017
Checked by	Dr. Priscilla Choy		15 March 2017

Contract No: DC/2009/17
HATS 2A Sludge Dewatering Facilities at Stonecutters Island STW

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170322
Date	22 March 2017 (Wednesday)
Time	14:00 – 15:30

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

Ref. No.	Remarks/Observations	Related Item No.
170322-R01	***Part A - Water Quality*** • No environmental deficiency was identified during the site inspection. ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • Dusty stockpile should be properly covered to avoid potential dust generation. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***Part F - Permit / Licences*** • No environmental deficiency was identified during the site inspection. ***Remark:***	C 6

	Name	Signature	Date
Recorded by	KC Chung		22 March 2017
Checked by	Dr. Priscilla Choy		22 March 2017

Contract No: DC/2009/17

HATS 2A Sludge Dewatering Facilities at Stonecutters Island STW

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170328
Date	28 March 2017 (Tuesday)
Time	09:30 – 10:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
170328-O02	• pH sensor should be checked for malfunction (External works).	A 1
	Part B – Landscape and Visual	
	• No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality	
170328-O03	• Proper NRMM label should be attached on the equipment and maintained fore use.	C 6
170328-O04	• Mud track should be cleared; Stockpile near the access road should be avoided (Gate B).	C 3
	Part D – Noise	
	• No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
170328-O01	• Oily waste underneath the excavator should be cleared (External Works).	
	Part F - Permit / Licences	
	• No environmental deficiency was identified during the site inspection.	
	Remark:	

	Name	Signature	Date
Recorded by	Victor Wong		28 March 2017
Checked by	Dr. Priscilla Choy		28 March 2017

Contract No: DC/2009/18

HATS 2A - Effluent Tunnel and Disinfection Facilities

Record Summary of Environmental Site Inspection

-

Inspection Information

Checklist Reference Number	170302
Date	2 March 2017 (Thursday)
Time	14:00-15:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
	No environmental deficiency was identified during the site inspection.	
	Part B – Landscape and Visual	
170302-O01	• Construction materials should be placed away from tree protection area at Chamber 9.	B1
	Part C - Air Quality	
	• No environmental deficiency was identified during the site inspection.	
	Part D – Noise	
	• No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
170302-O01	• Construction materials should be placed away from tree protection area at Chamber 9.	E4ii
170302-O02	• Accumulated waste at Portion 3 should be cleared regularly.	E1i, iii
	Part F - Permit / Licenses	
	• No environmental deficiency was identified during the site inspection.	
	Others / Remarks	
	• Follow-up on previous audit section (Ref. No.:170221), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Cecilia Yang		2 March 2017
Checked by	Dr. Priscilla Choy		2 March 2017

Contract No: DC/2009/18

HATS 2A - Effluent Tunnel and Disinfection Facilities

Record Summary of Environmental Site Inspection

-

Inspection Information

Checklist Reference Number	170307
Date	7 March 2017 (Tuesday)
Time	11:00-11:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
	No environmental deficiency was identified during the site inspection.	
	Part B – Landscape and Visual	
170307-O01	• Fence should be provided to the tree to discourage placement of construction materials (Chamber 9).	B1, B2
	Part C - Air Quality	
	• No environmental deficiency was identified during the site inspection.	
	Part D – Noise	
	• No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
170307-O01	• Fence should be provided to the tree to discourage placement of construction materials (Chamber 9).	E4ii
170307-O02	• General refuse should be cleared and removed regularly (portion 3).	E1i
	Part F - Permit / Licenses	
	• No environmental deficiency was identified during the site inspection.	
	Others / Remarks	
	• Following up on previous audit sessions (ref: 170302), item 170302-O01 and 170302-O02 were found outstanding and remarked as 170307-O01 and 170307-O02. Review will be needed during next audit section.	

	Name	Signature	Date
Recorded by	Cecilia Yang		7 March 2017
Checked by	Dr. Priscilla Choy		7 March 2017

Contract No: DC/2009/18

HATS 2A - Effluent Tunnel and Disinfection Facilities

Record Summary of Environmental Site Inspection

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Inspection Information

Checklist Reference Number	170316
Date	16 March 2017 (Thursday)
Time	14:00-16:00

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
	• No environmental deficiency was identified during the site inspection.	
	Part B – Landscape and Visual	
	• No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality	
	• No environmental deficiency was identified during the site inspection.	
	Part D – Noise	
	• No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
	• No environmental deficiency was identified during the site inspection.	
	Part F - Permit / Licenses	
	• No environmental deficiency was identified during the site inspection.	
	Others / Remarks	
	• Following up on previous audit sessions (ref: 170307), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Cecilia Yang		16 March 2017
Checked by	Dr. Priscilla Choy		16 March 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170321
Date	21 March 2017 (Tuesday)
Time	09:30-10:30

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

Ref. No.	Remarks/Observations	Related Item No.
170321-R01	***Part A - Water Quality*** • No environmental deficiency was identified during the site inspection. ***Part B – Landscape and Visual*** • Cover should be applied to the tree roots for protection (Chamber 9). ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***Part F - Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***Others / Remarks*** • Following up on previous audit sessions (ref: 170316), all identified environmental deficiency was observed improved/rectified by the Contractor.	B 1

	Name	Signature	Date
Recorded by	Cecilia Yang		21 March 2017
Checked by	Dr. Priscilla Choy		21 March 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170330
Date	30 March 2017 (Tuesday)
Time	14:00-15:30

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

Ref. No.	Remarks/Observations	Related Item No.
170330-R01	***Part A - Water Quality*** • No environmental deficiency was identified during the site inspection. ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • Construction waste should be removed regularly. (Portion 3) ***Part F - Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***Others / Remarks***	1iii

	Name	Signature	Date
Recorded by	Cecilia Yang		30 March 2017
Checked by	Dr. Priscilla Choy		30 March 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170406
Date	6 April 2017 (Thursday)
Time	09:30-11:30

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

Ref. No.	Remarks/Observations	Related Item No.
170406-O01	***Part A - Water Quality*** • Sand near the drainage gully should be cleared (Portion 4). ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • Construction waste should be disposed and sorted (Portion 7). ***Part F - Permit / Licence*** • No environmental deficiency was identified during the site inspection. ***Others*** • - ***Remark:*** • -	C 3 E 1 iii

	Name	Signature	Date
Recorded by	Victor Wong		6 April 2017
Checked by	Dr. Priscilla Choy		6 April 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170412
Date	12 April 2017 (Wednesday)
Time	09:30-11:30

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

Ref. No.	Remarks/Observations	Related Item No.
170412-O02	***Part A - Water Quality*** • No environmental deficiency was identified during the site inspection. ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • Construction waste should be cleared regularly Portion 4). ***Part F - Permit / Licence*** • No environmental deficiency was identified during the site inspection. ***Others*** • - ***Remark:*** • -	E 1 iii

	Name	Signature	Date
Recorded by	Victor Wong		12 April 2017
Checked by	Dr. Priscilla Choy		12 April 2017

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	170420
Date	20 April 2017 (Thursday)
Time	09:30-11:00

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

Ref. No.	Remarks/Observations	Related Item No.
170420-O01	***Part A - Water Quality*** • Sediment at the side of the haul road should be cleared (Portion 6 and 7). ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***Part F - Permit / Licence*** • No environmental deficiency was identified during the site inspection. ***Others*** • - ***Remark:*** • -	A 14ii

	Name	Signature	Date
Recorded by	Victor Wong		20 April 2017
Checked by	Dr. Priscilla Choy		20 April 2017

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	170427
Date	27 April 2017 (Thursday)
Time	09:30-11:00

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

Ref. No.	Remarks/Observations	Related Item No.
170427-O01	***Part A - Water Quality*** • Site water should be pumped to the sedimentation tank for treatment before discharging (Portion 7). ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***Part F - Permit / Licence*** • No environmental deficiency was identified during the site inspection. ***Others*** • - ***Remark:*** • -	A 1

	Name	Signature	Date
Recorded by	Victor Wong		27 April 2017
Checked by	Dr. Priscilla Choy		27 April 2017

Contract No: DC/2009/17
HATS 2A Sludge Dewatering Facilities at Stonecutters Island STW

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170405
Date	5 April 2017 (Wednesday)
Time	09:30 – 10:30

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

Ref. No.	Remarks/Observations	Related Item No.
170405-O03	***Part A - Water Quality*** • It is reminded to desilt the AquaSed before discharge operation ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality***	A 1
170405-O01	• Stockpile should be covered to avoid sand blow out near the site entrance. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management***	C 3
170405-O02	• Chemical near the water intake point should be cleared (External Work). ***Part F - Permit / Licences*** • No environmental deficiency was identified during the site inspection. ***Remark:***	E 6

	Name	Signature	Date
Recorded by	Victor Wong		5 April 2017
Checked by	Dr. Priscilla Choy		5 April 2017

Contract No: DC/2009/17
HATS 2A Sludge Dewatering Facilities at Stonecutters Island STW

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170412
Date	12 April 2017 (Wednesday)
Time	14:00 – 15:00

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality • No environmental deficiency was identified during the site inspection ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***Part F - Permit / Licences*** • No environmental deficiency was identified during the site inspection. ***Remark:*** -	

	Name	Signature	Date
Recorded by	Victor Wong		12 April 2017
Checked by	Dr. Priscilla Choy		12 April 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170419
Date	19 April 2017 (Wednesday)
Time	09:30 – 10:30

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

Ref. No.	Remarks/Observations	Related Item No.
170419-O02	***Part A - Water Quality*** • AquaSed should be checked and desilted regularly before discharge operation. (Gate B and External Work)	A 5iv
	Part B – Landscape and Visual • No environmental deficiency was identified during the site inspection.	
170419-O01	***Part C - Air Quality*** • The sand at Gate B should be cleared.	C 3
	Part D – Noise • No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management • No environmental deficiency was identified during the site inspection.	
	Part F - Permit / Licences • No environmental deficiency was identified during the site inspection.	
	Remark: -	

	Name	Signature	Date
Recorded by	Victor Wong		19 April 2017
Checked by	Dr. Priscilla Choy		19 April 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170425
Date	25 April 2017 (Tuesday)
Time	09:30 – 11:30

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

Ref. No.	Remarks/Observations	Related Item No.
170425-R04	***Part A - Water Quality*** • The ponding water from rubbish bin & chemical storage area should be cleared.	A 11
	Part B – Landscape and Visual • No environmental deficiency was identified during the site inspection.	
170425-R02	***Part C - Air Quality*** • Wheel washing facility should be provided to prevent dust generation near Zone B.	C 7
170425-R03	• The impervious sheet should be repaired to prevent dust generation from stockpiles in Zone B.	C 6
	Part D – Noise • No environmental deficiency was identified during the site inspection.	
170425-R01	***Part E – Waste / Chemical Management*** • C&D materials should be sorted near Gate A.	B 4ii
	Part F - Permit / Licences • No environmental deficiency was identified during the site inspection.	
	Remark: -	

	Name	Signature	Date
Recorded by	Tommy Cheng		25 April 2017
Checked by	Dr. Priscilla Choy		25 April 2017

Record Summary of Environmental Site Inspection

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Inspection Information

Checklist Reference Number	170406
Date	6 April 2017 (Thursday)
Time	14:00-15:00

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

Ref. No.	Remarks/Observations	Related Item No.
170406-O02	***Part A - Water Quality*** • Sediment in the U-channel should be cleared (Portion 7).	A1
170406-O01	***Part B – Landscape and Visual*** • Tree Protection zone should be established when there are works nearby (Chamber 9).	B2
	Part C - Air Quality • No environmental deficiency was identified during the site inspection.	
	Part D – Noise • No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management • No environmental deficiency was identified during the site inspection.	
	Part F - Permit / Licenses • No environmental deficiency was identified during the site inspection.	
	Others / Remarks • Following up on previous audit sessions (ref: 170328), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Cecilia Yang		6 April 2017
Checked by	Dr. Priscilla Choy		6 April 2017

Record Summary of Environmental Site Inspection

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Inspection Information

Checklist Reference Number	170413
Date	13 April 2017 (Thursday)
Time	14:00-15:00

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality • No environmental deficiency was identified during the site inspection.	
	Part B – Landscape and Visual • No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality • No environmental deficiency was identified during the site inspection.	
	Part D – Noise • No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management • No environmental deficiency was identified during the site inspection.	
	Part F - Permit / Licenses • No environmental deficiency was identified during the site inspection.	
	Others / Remarks • Following up on previous audit sessions (ref: 170406), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Cecilia Yang		13 April 2017
Checked by	Dr. Priscilla Choy		13 April 2017

Record Summary of Environmental Site Inspection

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Inspection Information

Checklist Reference Number	170418
Date	18 April 2017 (Tuesday)
Time	09:30-10:45

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality • No environmental deficiency was identified during the site inspection. ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***Part F - Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***Others / Remarks*** • Following up on previous audit sessions (ref: 170413), no major environmental deficiency was observed during the site inspection.	

	Name	Signature	Date
Recorded by	Cecilia Yang		18 April 2017
Checked by	Dr. Priscilla Choy		18 April 2017

Record Summary of Environmental Site Inspection

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Inspection Information

Checklist Reference Number	170427
Date	27 April 2017 (Tuesday)
Time	14:00-15:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality • No environmental deficiency was identified during the site inspection. ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** 170427-O03 • Tyre marks near the site entrance of Portion 3 should be cleared and contractor was reminded to wash vehicles before leaving the site. C3 ***Part D – Noise*** 170427-O02 • Noise emission label should be provided to the handheld breaker at Portion 3. D2 ***Part E – Waste / Chemical Management*** 170427-O01 • General waste at Portion 3 should be cleared. E1i,iii ***Part F - Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***Others / Remarks*** • Following up on previous audit sessions (ref: 170418), no major environmental deficiency was observed during the site inspection.	

	Name	Signature	Date
Recorded by	Cecilia Yang		27 April 2017
Checked by	Dr. Priscilla Choy		27 April 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170502
Date	2 May 2017 (Tuesday)
Time	11:00-11:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality • No environmental deficiency was identified during the site inspection. ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***Part F - Permit / Licence*** • No environmental deficiency was identified during the site inspection. ***Others*** • - ***Remark:*** • -	

	Name	Signature	Date
Recorded by	Victor Wong		2 May 2017
Checked by	Dr. Priscilla Choy		2 May 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170511
Date	11 May 2017 (Thursday)
Time	09:30-11:00

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality 170511-R01 • Cover for the gully should be reinforced with material such as fabric (Portion 6). A 1 ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E – Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***Part F - Permit / Licence*** • No environmental deficiency was identified during the site inspection. ***Others*** • - ***Remark:*** • -	

	Name	Signature	Date
Recorded by	Victor Wong		11 May 2017
Checked by	Dr. Priscilla Choy		11 May 2017

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	170517
Date	17 May 2017 (Wednesday)
Time	09:30-11:00

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
	• No environmental deficiency was identified during the site inspection.	
	Part B – Landscape and Visual	
	• No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality	
170517-O01	• Sediment near the site entrance should be cleared (Portion 7).	C 3
170517-O02	• Site vehicles should be wheel washed before leaving (Portion 7).	C 7
	Part D – Noise	
	• No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
	• No environmental deficiency was identified during the site inspection.	
	Part F - Permit / Licence	
	• No environmental deficiency was identified during the site inspection.	
	Others	
	• -	
	Remark:	
	• -	

	Name	Signature	Date
Recorded by	Victor Wong		17 May 2017
Checked by	Dr. Priscilla Choy		17 May 2017

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	170525
Date	25 May 2017 (Thursday)
Time	14:00-15:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
170525-R01	• Muddy ponding water was observed within the haul road near Portion 6. Wastewater collection and treatment should be provided.	A 10
	Part B – Landscape and Visual	
	• No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality	
	• No environmental deficiency was identified during the site inspection.	
	Part D – Noise	
	• No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
170525-R02	• The general refuse should be disposed in waste basket properly and cleaned up regularly near external work area.	E 1iii
170525-R03	• The C&D materials should be sorted and stored in designed area properly near Portion 7.	E4ii
	Part F - Permit / Licence	
	• No environmental deficiency was identified during the site inspection.	
	Others	
	• -	
	Remark:	
	• -	

	Name	Signature	Date
Recorded by	Victor Wong		25 May 2017
Checked by	Dr. Priscilla Choy		25 May 2017

Contract No: DC/2009/17
HATS 2A Sludge Dewatering Facilities at Stonecutters Island STW

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170502
Date	2 May 2017 (Tuesday)
Time	09:30 – 11:00

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
170502-O02	• Bunding for the u-channel should be re-established to block off site water (Near Gate B).	A 1
	Part B – Landscape and Visual	
	• No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality	
	• No environmental deficiency was identified during the site inspection.	
	Part D – Noise	
	• No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
170502-O01	• General waste and other waste should be sorted and provided with covers or containers for storage (External works and Zone B).	E 4ii
	Part F - Permit / Licences	
	• No environmental deficiency was identified during the site inspection.	
	Remark:	
	-	

	Name	Signature	Date
Recorded by	Victor Wong		2 May 2017
Checked by	Dr. Priscilla Choy		2 May 2017

Contract No: DC/2009/17
HATS 2A Sludge Dewatering Facilities at Stonecutters Island STW

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170509
Date	9 May 2017 (Tuesday)
Time	09:30 – 11:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
170509-R02	• Ponding water should be avoided and the contractor was reminded to direct untreated water to water treatment facilities before discharge.	A 11
	Part B – Landscape and Visual	
	• No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality	
	• No environmental deficiency was identified during the site inspection.	
	Part D – Noise	
	• No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
170509-R01	• General waste and other waste should be sorted and provided with covers or containers for storage (External works and Zone B).	E 4ii
	Part F - Permit / Licences	
	• No environmental deficiency was identified during the site inspection.	
	Remark:	
	- Following up on previous audit sessions, item 170502-O01 is remarked as 170509-R01 for further improvement.	

	Name	Signature	Date
Recorded by	Andy Chan		9 May 2017
Checked by	Dr. Priscilla Choy		9 May 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170517
Date	17 May 2017 (Wednesday)
Time	09:30 – 10:30

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

Ref. No.	Remarks/Observations	Related Item No.
170517-O01	***Part A - Water Quality*** • pH indicator should be checked to ensure it function properly.	A 1
	Part B – Landscape and Visual • No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality • No environmental deficiency was identified during the site inspection.	
	Part D – Noise • No environmental deficiency was identified during the site inspection.	
170517-O02 170517-O03	***Part E – Waste / Chemical Management*** • Oil stain on the access should be cleared. • General refuse should be sorted and disposed.	E 7i E 1i
	Part F - Permit / Licences • No environmental deficiency was identified during the site inspection.	
	Remark: -	

	Name	Signature	Date
Recorded by	Victor Wong		17 May 2017
Checked by	Dr. Priscilla Choy		17 May 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170523
Date	23 May 2017 (Tuesday)
Time	09:30 – 10:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality • No environmental deficiency was identified during the site inspection.	
	Part B – Landscape and Visual • No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality • No environmental deficiency was identified during the site inspection.	
	Part D – Noise • No environmental deficiency was identified during the site inspection.	
170523-O01	***Part E – Waste / Chemical Management*** • General refuse should be collected for disposal or recycling.	E 1i
	Part F - Permit / Licences • No environmental deficiency was identified during the site inspection.	
	Remark: -	

	Name	Signature	Date
Recorded by	Victor Wong		23 May 2017
Checked by	Dr. Priscilla Choy		23 May 2017

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	170531
Date	31 May 2017 (Tuesday)
Time	09:30 – 11:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality • No environmental deficiency was identified during the site inspection.	
	Part B – Landscape and Visual • No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality	
170531-R02	• Pile stock should be covered by completed imperious sheet to prevent dust generation. (Near SCS)	C 6
170531-R03	• The sand materials should be removed within the haul road. And the frequent water spray should be provided within the haul road to dust generation. (Near SCS)	C 5
	Part D – Noise • No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
170531-R01	• C&D waste should be enclosure by fencing. (Near Gate 4)	E 4ii
	Part F - Permit / Licences • No environmental deficiency was identified during the site inspection.	
	Remark: - Following up on previous audit sessions, item 170502-O01 is remarked as 170509-R01 for further improvement.	

	Name	Signature	Date
Recorded by	Tommy Cheng		31 May 2017
Checked by	Dr. Priscilla Choy		31 May 2017

Record Summary of Environmental Site Inspection

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Inspection Information

Checklist Reference Number	170504
Date	04 May 2017 (Thursday)
Time	11:00 – 12:30

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

Ref. No.	Remarks/Observations	Related Item No.
170504-O01	***Part A - Water Quality*** • Sand bag should be placed to the u-channel at Portion 7 to prevent discharge out of site.	A1
	Part B – Landscape and Visual • No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality • No environmental deficiency was identified during the site inspection.	
	Part D – Noise • *No environmental deficiency was identified during the site inspection.*	
170504-O02	***Part E – Waste / Chemical Management*** • Housekeeping should be enhanced at Portion 3.	E1i, iii, 4ii
	Part F - Permit / Licenses • No environmental deficiency was identified during the site inspection.	
	Others / Remarks • Follow-up on previous audit section (Ref. No.:170427), item 170427-O01 was found outstanding and remarked as 170504-O02. Review will be needed during next audit section.	

	Name	Signature	Date
Recorded by	Cecilia Yang		04 May 2017
Checked by	Dr. Priscilla Choy		04 May 2017

Record Summary of Environmental Site Inspection

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Inspection Information

Checklist Reference Number	170509
Date	9 May 2017 (Tuesday)
Time	14:00 – 16:00

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
170509-R01	• Ponding water should be avoided at Portion 7.	A11
	Part B – Landscape and Visual	
	• No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality	
	• No environmental deficiency was identified during the site inspection.	
	Part D – Noise	
	• *No environmental deficiency was identified during the site inspection.*	
	Part E – Waste / Chemical Management	
170509-R02	• Accumulated waste should be cleared more frequently at Portion 7.	E1i
	Part F - Permit / Licenses	
	• No environmental deficiency was identified during the site inspection.	
	Others / Remarks	
	• Following up on previous audit sessions (ref: 170504), follow up action is required for the item 170504-R02.	

	Name	Signature	Date
Recorded by	Cecilia Yang		9 May 2017
Checked by	Dr. Priscilla Choy		9 May 2017

Record Summary of Environmental Site Inspection

-

Inspection Information

Checklist Reference Number	170517
Date	17 May 2017 (Wednesday)
Time	15:00 – 15:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
170517-R01	• U-channel should be maintained to avoid muddy water discharge.	A1
	Part B – Landscape and Visual	
	• No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality	
	• No environmental deficiency was identified during the site inspection.	
	Part D – Noise	
	• No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
	• No environmental deficiency was identified during the site inspection.	
	Part F - Permit / Licenses	
	• No environmental deficiency was identified during the site inspection.	
	Others / Remarks	
	• Following up on previous audit sessions (ref: 170509), follow up action is required for the item 170504-R02.	

	Name	Signature	Date
Recorded by	Cecilia Yang		17 May 2017
Checked by	Dr. Priscilla Choy		17 May 2017

Record Summary of Environmental Site Inspection

-

Inspection Information

Checklist Reference Number	170525
Date	25 May 2017 (Thursday)
Time	9:30-10:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
	• No environmental deficiency was identified during the site inspection.	
	Part B – Landscape and Visual	
	• No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality	
	• No environmental deficiency was identified during the site inspection.	
	Part D – Noise	
	• No environmental deficiency was identified during the site inspection.	
	Part E – Waste / Chemical Management	
	• No environmental deficiency was identified during the site inspection.	
	Part F - Permit / Licenses	
	• No environmental deficiency was identified during the site inspection.	
	Others / Remarks	
	• Following up on previous audit sessions (ref: 170517), all identified environmental deficiency was observed improved/rectified by the Contractor..	

	Name	Signature	Date
Recorded by	Cecilia Yang		25 May 2017
Checked by	Dr. Priscilla Choy		25 May 2017

APPENDIX G
ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

APPENDIX G 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
A	**Air Quality**				
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.		^	^	^
	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	^	^	^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract		
			DC/2009/17	DC/2009/10	DC/2009/18
B	**Airborne Noise**				
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.		^	^	*
	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.		^	^	^
C	**Water Quality**				
6.349 to 6.375	Construction Site Runoff and General Construction Activities 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 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. 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 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.		*	^	^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract		
			DC/2009/17	DC/2009/10	DC/2009/18
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 activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.		^	^	^
6.379	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: • Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. • Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. • Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.		*	^	^
6.380	Construction Works in Close Proximity of Storm Drains or Seafront 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. • The use of less or smaller construction plants may be specified to reduce the disturbance to the storm water courses or marine environment. • Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works. • Stockpiling of construction materials and dusty materials should be covered and located away from any water courses. • 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. • Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert or sea.	All construction sites	^	^	*

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract		
			DC/2009/17	DC/2009/10	DC/2009/18
D	**Waste Management**				
9.107	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.	All construction sites	^	^	^
9.109	All waste materials should be segregated into categories covering: • excavated materials suitable for reuse on-site; • excavated materials suitable for public filling facilities; • remaining C&D waste for landfill; • chemical waste; and • general refuse for landfill.	All construction 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.		^	^	*
	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.		^	^	^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract		
			DC/2009/17	DC/2009/10	DC/2009/18
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	^	^	^
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, 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
E	**Terrestrial Ecology**				
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.		^	^	^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract		
			DC/2009/17	DC/2009/10	DC/2009/18
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.		^	^	^
F	**Landscape and Visual**				
Table 13.7	Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical.	All construction sites	^	^	^
	Existing trees to be retained on site should be carefully protected during construction.		*	*	*
	Trees unavoidably affected by the works should be transplanted where practical.		^	^	^
	Compensatory tree planting should be provided to compensate for felled trees.		^	^	^
	Control of night-time lighting.		^	^	^
Table 13.7	Erection of decorative screen hoarding compatible with the surrounding setting.		N/A	N/A	N/A
G	**Marine Ecology**				
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	^	^	^
H	**Hazard to Life**				
14A.201	Limiting use of cranes in terms of locations, lifting height, swing angle and setting up safety zone.	Location determined on construction site by the engineer	^	^	^
I	**Cultural Heritage**				
Tables 15.8 - 15.11	The construction vibration control limit (ppv of 25mm/s) shall be strictly followed.	EM&A Manual Tables 15.8, 15.9, 15.10 and 15.11	N/A	N/A	^

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.

APPENDIX H
LANDSCAPE AND VISUAL SITE AUDIT

APPENDIX H – SUMMARY OF THE MONTHLY LANDSCAPE AND VISUAL SITE AUDIT

Reporting Month: March 2017 to May 2017

Reference no.	Contract no. / Location	Observation / Recommendation	Follow Up Action	Status
170302-O01	DC/2009/18	Construction materials should be placed away from tree protection area at Chamber 9.	Construction materials were still found near the tree protection area. This item was remarked as 170307-O01	Closed
170307-O01	DC/2009/18	Fence should be provided to the tree to discourage placement of construction materials (Chamber 9)	Fence is provided to the tree to discourage placement of construction materials (Chamber 9).	Closed
170321-O01	DC/2009/18	Cover should be applied to the tree roots for protection (Chamber 9).	This item was remarked as 170406-O01	Closed
170330-O01	DC/2009/10	Fences should be provided to protect the tree zone.	Fence has been provided the identified trees.	Closed
170307-O02	DC/2009/17	Fence should be provided to the tree zone to keep out construction materials (External Works).	Fence has been provided the identified tree.	Closed

Reference no.	Contract no. / Location	Observation / Recommendation	Follow Up Action	Status
170406-O01	DC/2009/18	Tree Protection zone should be established when there are works nearby (Chamber 9).	Tree protection zone was established at Chamber 9.	Closed

APPENDIX I
COMPLAINT LOG

APPENDIX I – COMPLAINT LOG

Reporting Quarter: March 2017 to May 2017

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.	According to the information provided by the Contractor, mucking out excavated rocks was carried out 90m below ground within a noise enclosure area. 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. 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 The Contractor was reminded to make sure the noise enclosure door will be kept close during night time construction.	Closed

APPENDIX J
WASTE FLOW TABLES

Name of Department: DSD

Contract No. : DC/2009/10

Monthly Summary Waste Flow Table for **2017** (year)

Month	Actual Quantities of inert C&D Materials Generated Monthly						Actual Quantities of C&D Materials Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard	Plastics (see Note 3)	Chemical Waste	Other, e.g. general refuse
	(In '000m^3)	(In '000m^3)	(In '000m^3)	(In '000m^3)	(In '000m^3)	(In '000m^3)	(In '000kg)	(In '000kg)	(In '000kg)	(In '000kg)	(In '000m^3)
Jan	0.725	0.725	0	0	0.725	0	0.000	0.000	0.000	0	0.002
Feb	0.191	0.191	0	0	0.191	0	0.000	0.230	0.000	0	0.014
Mar	0.608	0.608	0	0	0.608	0	0.000	0.000	0.000	0	0.014
Apr	0.347	0.347	0	0	0.347	0	0.000	0.000	0.000	0	0.008
May	0.278	0.278	0	0	0.278	0	0.000	0.000	0.000	0	0.008
June											
Sub-total	2.149	2.149	0.000	0.000	2.149	0.000	0.000	0.230	0.000	0.000	0.045
July											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	2.149	2.149	0	0	2.149	0	0.000	0.230	0.000	0	0.045
Total throughout project year	54.418	54.418	0.000	0.000	54.418	0.000	372.871	7.978	3.314	1.347	1.807

Notes:
(1) The performance targets are given in PS Clause 25.41(14).
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
(4) The conversion factor for tonne to m^3 for inert C&D materials is 1.9 tonne/m^3.
(5) The conversion factor for tonne to m^3 for general refuse is 1.8 tonne/m^3.

MONTHLY SUMMARY WASTE FLOW TABLE

Contract No.: DC/2009/17

Monthly summary waste Flow Table for 2017 (year)

Date	Actual Quantities of Inert C & D Materials Generated Monthly							Actual Quantities of non-inert C & D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Soil/Slurry	Reused in the contract	Reused in other Projects on site	Disposed to Public Fill	Imported Fill	Metals	Paper cardboard packaging	Plastics (see Note 3)	Chemical wastes	Others e.g. General refuses
	(in m^3)	(in m^3)	(in m^3)	(in m^3)	(in m^3)	(in m^3)	(in '000m^3)	(in Ton)	(in '000kg)	(in '000kg)	(in 'L)	(in 'TON)
2010 Aug to Dec	403.61	72.86	330.76	0	0	403.61	0	0	0	0	0	0
2011 Jan to Dec	16714.03	777.82	15936.21	0	0	16713.98	0	25.51	0.325	0	54	118.73
2012 Jan to Dec	2770.73	316.23	2454.50	0	0	2770.73	0	65.96	0.891	0.0085	0	343.97
2013 Jan to Dec	2837.06	377.29	2459.77	0	0	2837.06	0	28.13	1.59	0	200.0	314.32
2014 Jan to Dec	576.68	194.93	381.75	0	0	576.68	0	0.00	2.21	0	2000.0	145.52
2015 Jan to Dec	15878.75	1521.26	14073.58	40	244	15350.96	0	274.1	0.59	0	0	241.24
2016 Jan to Dec	2960.01	593.23	2005.86	361	0	2599.09	0	37.23	0	0	0	342.07
2017 Jan	91.33	77.10	14.24	0	0	91.33	0	0	0	0	0	172.97
2017 Feb	265.93	13.88	252.05	0	0	265.93	0	0	0	0	0	11.08
2017 Mar	368.91	97.06	271.85	0	0	368.91	0	0	0	0	0	36.23
2017 Apr	212.02	134.86	77.16	0	0	212.02	0	0	0	0	0	15.57
2017 May	73.13	50.52	22.62	0	0	73.13	0	0	0	0	0	16.91
Total	43152.19	4227.04	38280.32	400.92	243.91	42263.43	0.00	430.93	5.60	0.01	2254.00	1758.61

Forecast of Total quantities of C&D Materials to be Generated from the Contract							Forecast of Total quantities of non-inert C&d Materials to be Genated from the Contract				
Total Quantity Generated	Hard Rock and Large Broke Concrete	Soil/Slurry	Reused in the contract	Reused in other Projects	Disposed to Public Fill	Imported Fill	Metals	Paper cardboard packaging	Plasties (see Note 3)	Chemical wastes	Others e.g. General refues
(in m3)	(in m^3)	(in m^3)	(in m^3)	(in m^3)	(in m^3)	(in '000m^3)	(inTon)	(in '000kg)	(in '000kg)	(in 'L)	(inTon)
36,698	8,561	28,137	/	1,700	36,698	/	2000	100	20	15000	1650

Notes:

(1) The performance targets are given in PS Clause 6(14)

(2) The waste flow table shall also include C& D materials that are specified in the Contract to be imported for use at the Site

(3) Plastcs refer to plastic bottles/containers, Plastic sheets/form from packaging material.

(4) The Contractor shall also submit the latest forecast of the total amount of C& D materials aspected to be generated from the Works together with a breakdown of the nature where the total amount of C & D materials expected to be generated from the Works is equal to or exceeding 30,000m (PS Clause 8(4) (to refers)[Delete Note (4) and the table above on the foreman where inappilicable.

(5) The assumed density for inert C & D material and rock/broken concrete are 2000kg/m^3 and 2500kg/m^3 respectively. The asumed density for the general refuse is 1000kg/m^3.

Contract No.: DC/2009/18

Harbour Area Treatment Scheme Stage 2A, Upgrading Works at Stonecutters Island Sewage Treatment Works -

Effluent Tunnel and Disinfection Facilities

Monthly Summary Waste Flow Table for 2017(year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan	0.222	0	0	0	0.222	0	0	0	0	0	0.044
Feb	0.489	0	0	0	0.489	0	0	0	0	0	0.009
Mar	0.449	0	0	0	0.449	0	0	0	0	0	0.012
Apr	0.119	0	0	0	0.119	0	0	0	0	0	0.004
May	0.218	0	0	0	0.218	0	0	0	0	0	0.021
Jun	0	0	0	0	0	0	0	0	0	0	0
Sub-total	1.497	0	0	0	1.497	0	0	0	0	0	0.090
Jul	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0
Sep	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	0	0	0	0	0	0

Nov	0	0	0	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0	0	0	0
Total	1.497	0	0	0	1.497	0	0	0	0	0	0.090

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
84.405	78	0	60	84.405	0	500.000	4.000	0.600	18.000	3.500

Notes:

(1) The performance targets are given in PS Clause 25.41 (14).

(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material and waste will be collected by recycler for recycling

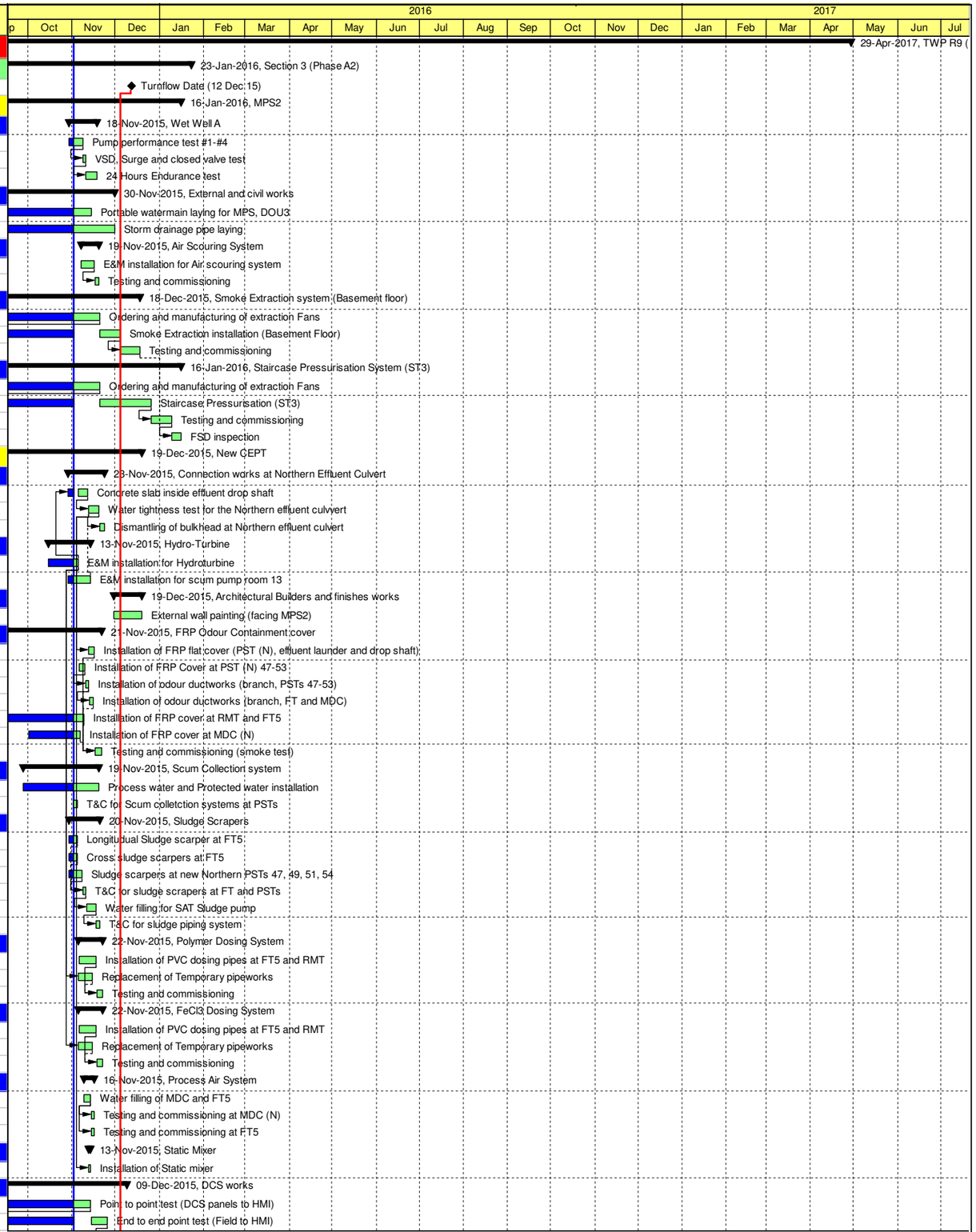
(4) Use the conversion factor, density of general refuse (1 t/m^3), soft inert C&D materials (2 t/m^3) and hard rocks or large broken concrete (2.5 t/m^3).

(5) Use the conversion factor for chemical waste (0.88kg/L)

(6) Inert material Reused in other Projects were delivered to Alternative Receiving Ground in Mainland China or HyD Contract No.: HY/2012/08

APPENDIX K
CONSTRUCTION PROGRAMMES

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



Actual Work
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Contract No. DC/2009/10

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

Target Works Programme (Revision 9)

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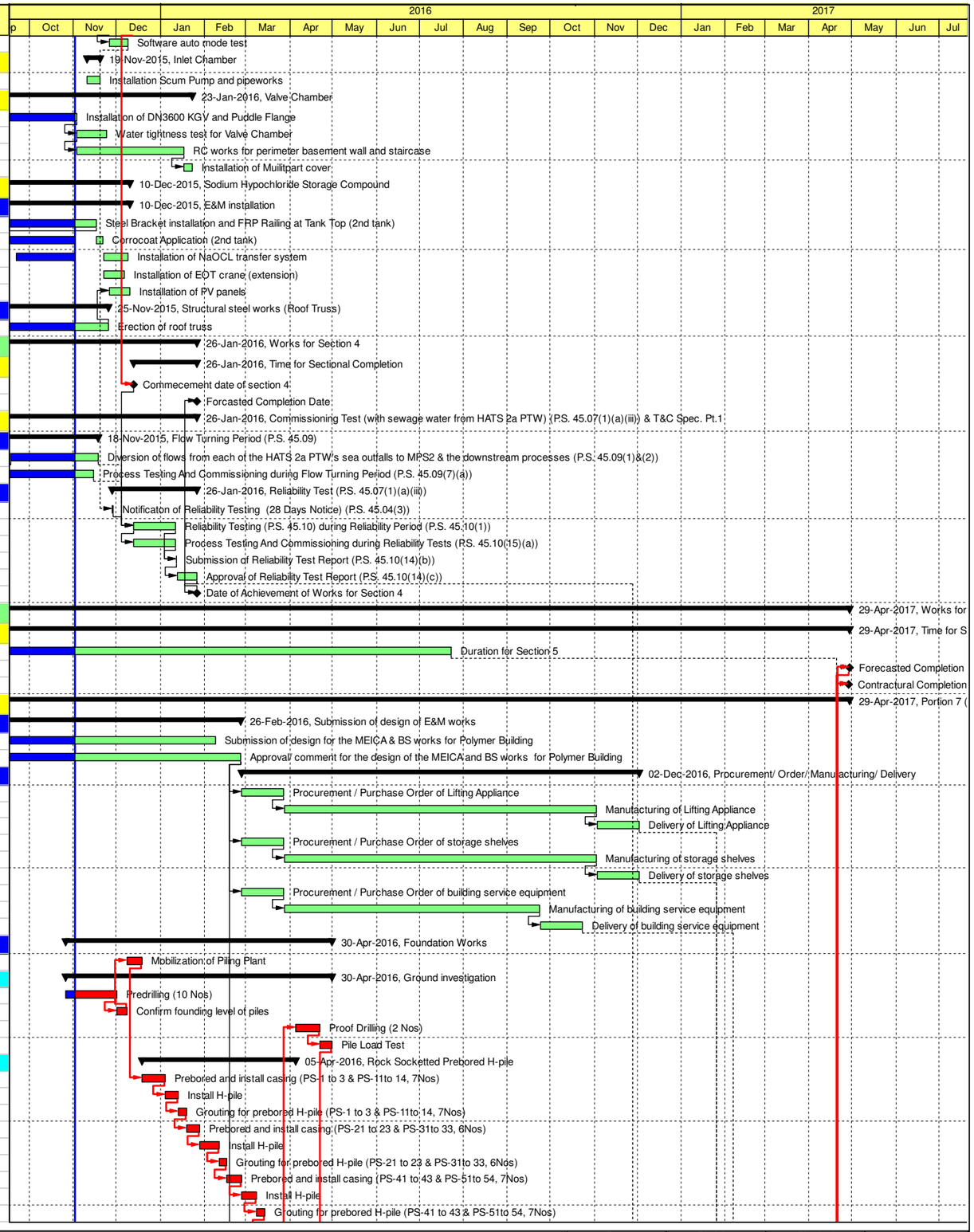
Date	Revision	Checked	Approved
19-Jun-2015	Rev. 8A		
30-Jun-2015	Rev 8B		
10-Jul-2015	Rev 8C		
17-Jul-2015	Rev. 8D		
31-Jul-2015	Rev 8E		
17-Aug-2015	Rev. 8F		

Activity ID	Activity Name	Original Duration	Activity % Complete	Total Float	Start	Finish
A6170	Software auto mode test	14	0%	31	26-Nov-2015	09-Dec-2015
Inlet Chamber						
A3530	Installation Scum Pump and pipeworks	10	0%	527	10-Nov-2015*	19-Nov-2015
Valve Chamber						
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 Muilitpart cover	6	0%	462	17-Jan-2016	23-Jan-2016
Sodium Hypochloride Storage Compound						
E&M installation						
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
Structural steel works (Roof Truss)						
A2720	Erection of roof truss	60	60%	506	20-May-2015	25-Nov-2015
Works for Section 4						
Time for Sectional Completion						
TC0091	Commecement date of section 4	0	0%	0	13-Dec-2015*	
TC0095	Forcasted Completion Date	0	0%	29		26-Jan-2016
Commissioning Test (with sewage water from HATS 2a PTW) (P.S. 45.07(1)(a)(iii)) & T&C Spec. Pt.1						
Flow Turning Period (P.S. 45.09)						
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
Reliability Test (P.S. 45.07(1)(a)(iii))						
T02005	Notificaton 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
Works for Section 5						
Time for Sectional Completion						
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	Contractural Completion Date (Possession date on 15 Oct 15)	0	0%	0		28-Apr-2017*
Portion 7 (Polymer Building)						
Submission of design of E&M works						
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
Procurement/ Order/ Manufacturing/ Delivery						
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
Foundation Works						
P700030	Mobilization of Piling Plant	10	0%	-1	08-Dec-2015	19-Dec-2015
Ground investigation						
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
Rock Socketted Prebored H-pile						
P700040	Prebored and install casing (PS-1 to 3 & PS-11to 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-11to 14, 7Nos)	5	0%	-1	13-Jan-2016	19-Jan-2016
P700070	Prebored and install casing (PS-21 to 23 & PS-31to 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-31to 33, 6Nos)	4	0%	-1	11-Feb-2016	16-Feb-2016
P700170	Prebored and install casing (PS-41 to 43 & PS-51to 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-51to 54, 7Nos)	5	0%	-1	08-Mar-2016	14-Mar-2016



Actual Work
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Contract No. DC/2009/10

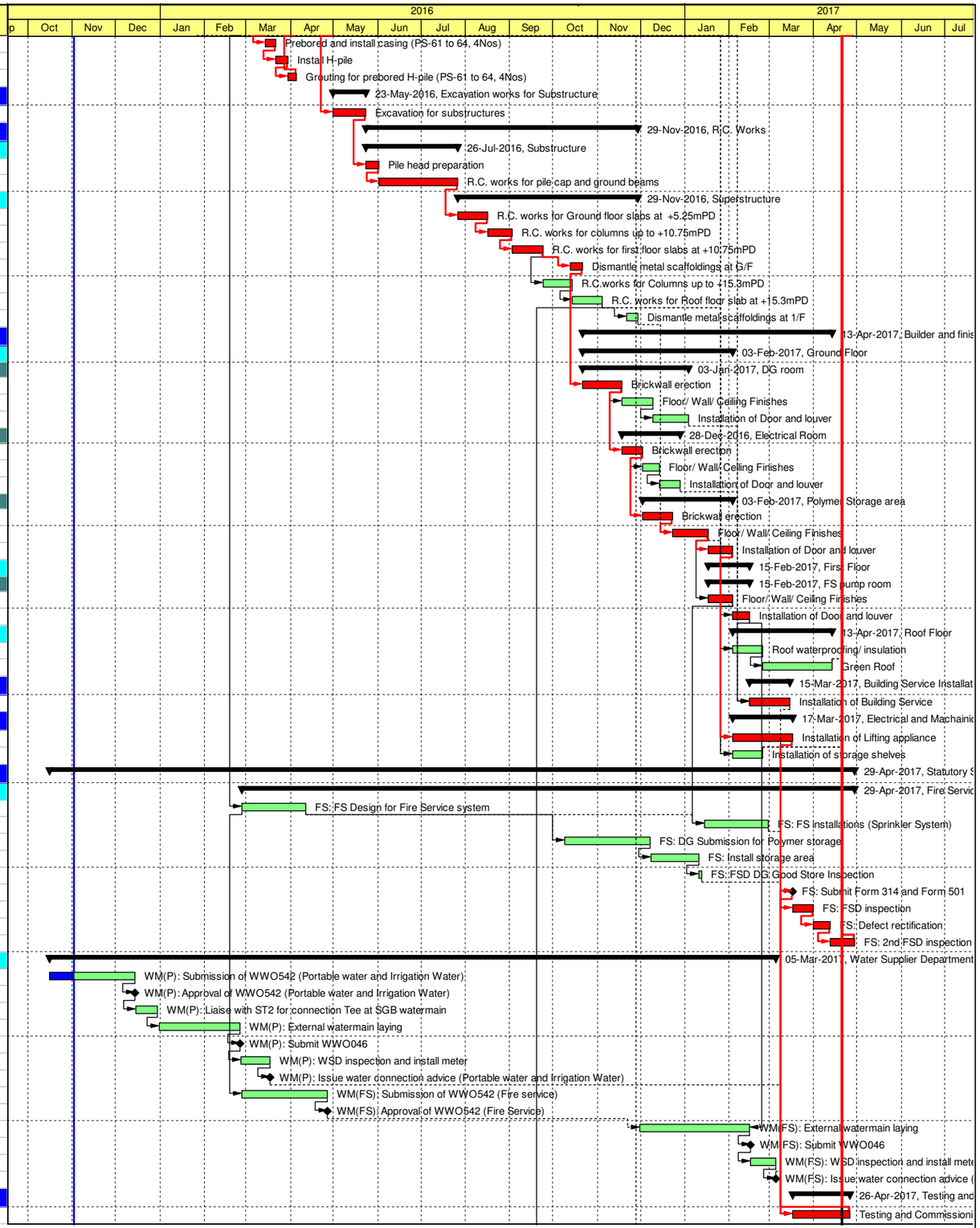
HATS Stage 2A - Upgrading works at StoneCutters Island Sewage Treatement Works

Target Works Programme (Revision 9)

DD: 6 ov 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
P700200	Prebored and install casing (PS-61 to 64, 4Nos)	6	0%	-1	14-Mar-2016	21-Mar-2016
P700210	Install H-pile	5	0%	-1	21-Mar-2016	30-Mar-2016
P700220	Grouting for prebored H-pile (PS-61 to 64, 4Nos)	4	0%	-1	30-Mar-2016	05-Apr-2016
Excavation works for Substructure						
P700240	Excavation for substructures	17	0%	-1	30-Apr-2016	23-May-2016
R.C. Works						
Substructure						
P700250	Pile head preparation	8	0%	-1	23-May-2016	01-Jun-2016
P700260	R.C. works for pile cap and ground beams	45	0%	-1	01-Jun-2016	26-Jul-2016
Superstructure						
P700265	R.C. works for Ground floor slabs at +5.25mPD	18	0%	-1	26-Jul-2016	16-Aug-2016
P700270	R.C. works for columns up to +10.75mPD	15	0%	-1	16-Aug-2016	02-Sep-2016
P700280	R.C. works for first floor slabs at +10.75mPD	18	0%	-1	02-Sep-2016	24-Sep-2016
P700285	Dismantle metal scaffoldings at G/F	7	0%	-1	13-Oct-2016	21-Oct-2016
P700290	R.C.works for Columns up to +15.3mPD	15	0%	21	24-Sep-2016	14-Oct-2016
P700300	R.C. works for Roof floor slab at +15.3mPD	18	0%	21	14-Oct-2016	04-Nov-2016
P700310	Dismantle metal scaffoldings at 1/F	7	0%	21	21-Nov-2016	29-Nov-2016
Builder and finishes Works						
Ground Floor						
DG room						
P701000	Brickwall erection	24	0%	-1	21-Oct-2016	18-Nov-2016
P701010	Floor/ Wall/ Ceiling Finishes	18	0%	36	18-Nov-2016	09-Dec-2016
P701020	Installation of Door and louver	18	0%	36	09-Dec-2016	03-Jan-2017
Electrical Room						
P701030	Brickwall erection	12	0%	-1	18-Nov-2016	02-Dec-2016
P701040	Floor/ Wall/ Ceiling Finishes	10	0%	40	02-Dec-2016	14-Dec-2016
P701050	Installation of Door and louver	10	0%	40	14-Dec-2016	28-Dec-2016
Polymer Storage area						
P701060	Brickwall erection	18	0%	-1	02-Dec-2016	23-Dec-2016
P701070	Floor/ Wall/ Ceiling Finishes	18	0%	-1	23-Dec-2016	17-Jan-2017
P701080	Installation of Door and louver	12	0%	-1	17-Jan-2017	03-Feb-2017
First Floor						
FS pump room						
P701090	Floor/ Wall/ Ceiling Finishes	12	0%	2	17-Jan-2017	03-Feb-2017
P701100	Installation of Door and louver	10	0%	2	03-Feb-2017	15-Feb-2017
Roof Floor						
P701110	Roof waterproofing/ insulation	18	0%	11	03-Feb-2017	24-Feb-2017
P701120	Green Roof	40	0%	11	24-Feb-2017	13-Apr-2017
Building Service Installation						
P700110	Installation of Building Service	24	0%	2	15-Feb-2017	15-Mar-2017
Electrical and Machainical Installation						
P700090	Installation of Lifting appliance	36	0%	-1	03-Feb-2017	17-Mar-2017
P700100	Installation of storage shelves	18	0%	51	03-Feb-2017	24-Feb-2017
Statutory Submission and Inspection						
Fire Service Department (FSD)						
P905340	FS: FS Design for Fire Service system	45	0%	81	27-Feb-2016	11-Apr-2016
P905350	FS: FS installations (Sprinkler System)	35	0%	15	14-Jan-2017	28-Feb-2017
P905360	FS: DG Submission for Polymer storage	60	0%	81	09-Oct-2016	07-Dec-2016
P905370	FS: Install storage area	26	0%	63	08-Dec-2016	10-Jan-2017
P905380	FS: FSD DG Good Store Inspection	2	0%	77	10-Jan-2017	12-Jan-2017
P905390	FS: Submit Form 314 and Form 501	0	0%	-1		17-Mar-2017
P905400	FS: FSD inspection	12	0%	-1	17-Mar-2017	31-Mar-2017
P905410	FS: Defect rectification	9	0%	-1	31-Mar-2017	12-Apr-2017
P905420	FS: 2nd FSD inspection	12	0%	-1	12-Apr-2017	29-Apr-2017
Water Supplier Department (WSD)						
P904970	WM(P): Submission of WWO542 (Portable water and Irrigation Water)	60	28.33%	364	16-Oct-2015 A	14-Dec-2015
P904980	WM(P): Approval of WWO542 (Portable water and Irrigation Water)	0	0%	364		14-Dec-2015
P904990	WM(P): Liaise with ST2 for connection Tee at SGB watermain	12	0%	295	15-Dec-2015	30-Dec-2015
P905000	WM(P): External watermain laying	45	0%	295	31-Dec-2015	25-Feb-2016
P905010	WM(P): Submit WWO046	0	0%	364		25-Feb-2016
P905020	WM(P): WSD inspection and install meter	18	0%	295	26-Feb-2016	17-Mar-2016
P905030	WM(P): Issue water connection advice (Portable water and Irrigation Water)	0	0%	364		17-Mar-2016
P905040	WM(FS): Submission of WWO542 (Fire service)	60	0%	229	27-Feb-2016	26-Apr-2016
P905050	WM(FS): Approval of WWO542 (Fire Service)	0	0%	229		26-Apr-2016
P905060	WM(FS): External watermain laying	60	0%	10	30-Nov-2016	15-Feb-2017
P905070	WM(FS): Submit WWO046	0	0%	12	15-Feb-2017	
P905080	WM(FS): WSD inspection and install meter	18	0%	12	15-Feb-2017	05-Mar-2017
P905090	WM(FS): Issue water connection advice (Portable water and process water)	0	0%	12		05-Mar-2017
Testing and Commissioning						
P400890	Testing and Commissioning	30	0%	-1	17-Mar-2017	26-Apr-2017



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

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17-Jul-2015	Rev. 8D		
31-Jul-2015	Rev 8E		
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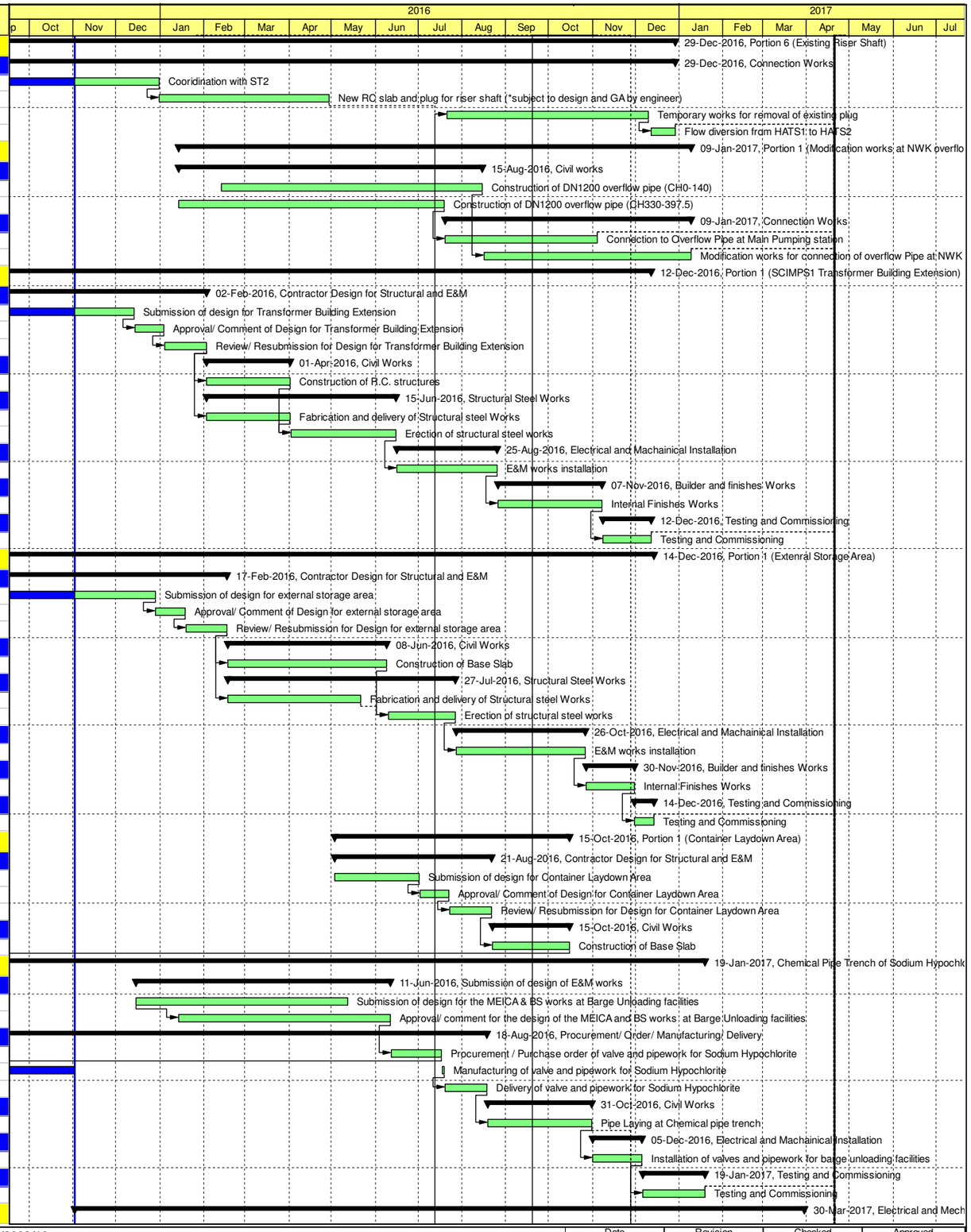
Activity ID	Activity Name	Original Duration	Activity % Complete	Total Float	Start	Finish
Portion 6 (Existing Riser Shaft)						
Connection Works						
P600075	Coordination with ST2	90	45%	159	04-Feb-2015 A	31-Dec-2015
P600076	New RC slab and plug for riser shaft (*subject to design and GA by engineer)	120	0%	199	31-Dec-2015	29-Apr-2016
P600080	Temporary works for removal of existing plug	120	0%	96	21-Jul-2016	10-Dec-2016
P600086	Flow diversion from HATS1 to HATS2	14	0%	86	12-Dec-2016	29-Dec-2016
Portion 1 (Modification works at NWK overflow chamber and SCIMPS2)						
Civil works						
P100700	Construction of DN1200 overflow pipe (CH0-140)	150	0%	87	13-Feb-2016	15-Aug-2016
P100710	Construction of DN1200 overflow pipe (CH330-397.5)	150	0%	140	14-Jan-2016	19-Jul-2016
Connection Works						
P100200	Connection to Overflow Pipe at Main Pumping station	90	0%	140	20-Jul-2016	04-Nov-2016
P100330	Modification works for connection of overflow Pipe at NWK overflow chamber	120	0%	87	16-Aug-2016	09-Jan-2017
Portion 1 (SCIMPS1 Transformer Building Extension)						
Contractor Design for Structural and E&M						
P100170	Submission of design for Transformer Building Extension	60	30%	138	01-Aug-2015 A	13-Dec-2015
P100180	Approval/ Comment of Design for Transformer Building Extension	21	0%	138	14-Dec-2015	03-Jan-2016
P100190	Review/ Resubmission for Design for Transformer Building Extension	30	0%	138	04-Jan-2016	02-Feb-2016
Civil Works						
P100130	Construction of R.C. structures	45	0%	108	03-Feb-2016	01-Apr-2016
Structural Steel Works						
P100150	Fabrication and delivery of Structural steel Works	45	0%	108	03-Feb-2016	01-Apr-2016
P100160	Erection of structural steel works	60	0%	108	02-Apr-2016	15-Jun-2016
Electrical and Machainical Installation						
P100120	E&M works installation	60	0%	108	16-Jun-2016	25-Aug-2016
Builder and finishes Works						
P100210	Internal Finishes Works	60	0%	108	26-Aug-2016	07-Nov-2016
Testing and Commissioning						
P100140	Testing and Commissioning	30	0%	108	08-Nov-2016	12-Dec-2016
Portion 1 (Extenral Storage Area)						
Contractor Design for Structural and E&M						
P100270	Submission of design for external storage area	60	5%	135	01-Sep-2015 A	28-Dec-2015
P100280	Approval/ Comment of Design for external storage area	21	0%	135	29-Dec-2015	18-Jan-2016
P100290	Review/ Resubmission for Design for external storage area	30	0%	135	19-Jan-2016	17-Feb-2016
Civil Works						
P100230	Construction of Base Slab	90	0%	108	18-Feb-2016	08-Jun-2016
Structural Steel Works						
P100250	Fabrication and delivery of Structural steel Works	75	0%	123	18-Feb-2016	21-May-2016
P100260	Erection of structural steel works	40	0%	108	10-Jun-2016	27-Jul-2016
Electrical and Machainical Installation						
P100220	E&M works installation	75	0%	108	28-Jul-2016	26-Oct-2016
Builder and finishes Works						
P100300	Internal Finishes Works	30	0%	108	27-Oct-2016	30-Nov-2016
Testing and Commissioning						
P100240	Testing and Commissioning	14	0%	135	30-Nov-2016	14-Dec-2016
Portion 1 (Container Laydown Area)						
Contractor Design for Structural and E&M						
P100340	Submission of design for Container Laydown Area	60	0%	100	03-May-2016	01-Jul-2016
P100350	Approval/ Comment of Design for Container Laydown Area	21	0%	100	02-Jul-2016	22-Jul-2016
P100360	Review/ Resubmission for Design for Container Laydown Area	30	0%	100	23-Jul-2016	21-Aug-2016
Civil Works						
P100370	Construction of Base Slab	45	0%	83	22-Aug-2016	15-Oct-2016
Chemical Pipe Trench of Sodium Hypochlorite Storage Compound						
Submission of design of E&M works						
P101390	Submission of design for the MEICA & BS works at Barge Unloading facilities	150	0%	45	15-Dec-2015	12-May-2016
P101400	Approval/ comment for the design of the MEICA and BS works at Barge Unloading facilities	150	0%	45	14-Jan-2016	11-Jun-2016
Procurement/ Order/ Manufacturing/ Delivery						
P101470	Procurement / Purchase order of valve and pipework for Sodium Hypochlorite	36	0%	45	12-Jun-2016	17-Jul-2016
P101480	Manufacturing of valve and pipework for Sodium Hypochlorite	60	96.67%	45	05-Sep-2015 A	19-Jul-2016
P101490	Delivery of valve and pipework for Sodium Hypochlorite	30	0%	45	20-Jul-2016	18-Aug-2016
Civil Works						
P101160	Pipe Laying at Chemical pipe trench	60	0%	36	19-Aug-2016	31-Oct-2016
Electrical and Machainical Installation						
P101450	Installation of valves and pipework for barge unloading facilities	30	0%	36	01-Nov-2016	05-Dec-2016
Testing and Commissioning						
P101460	Testing and Commissioning	36	0%	78	06-Dec-2016	19-Jan-2017
Electrical and Mechanical Installation						



Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

Contract No. DC/2009/10

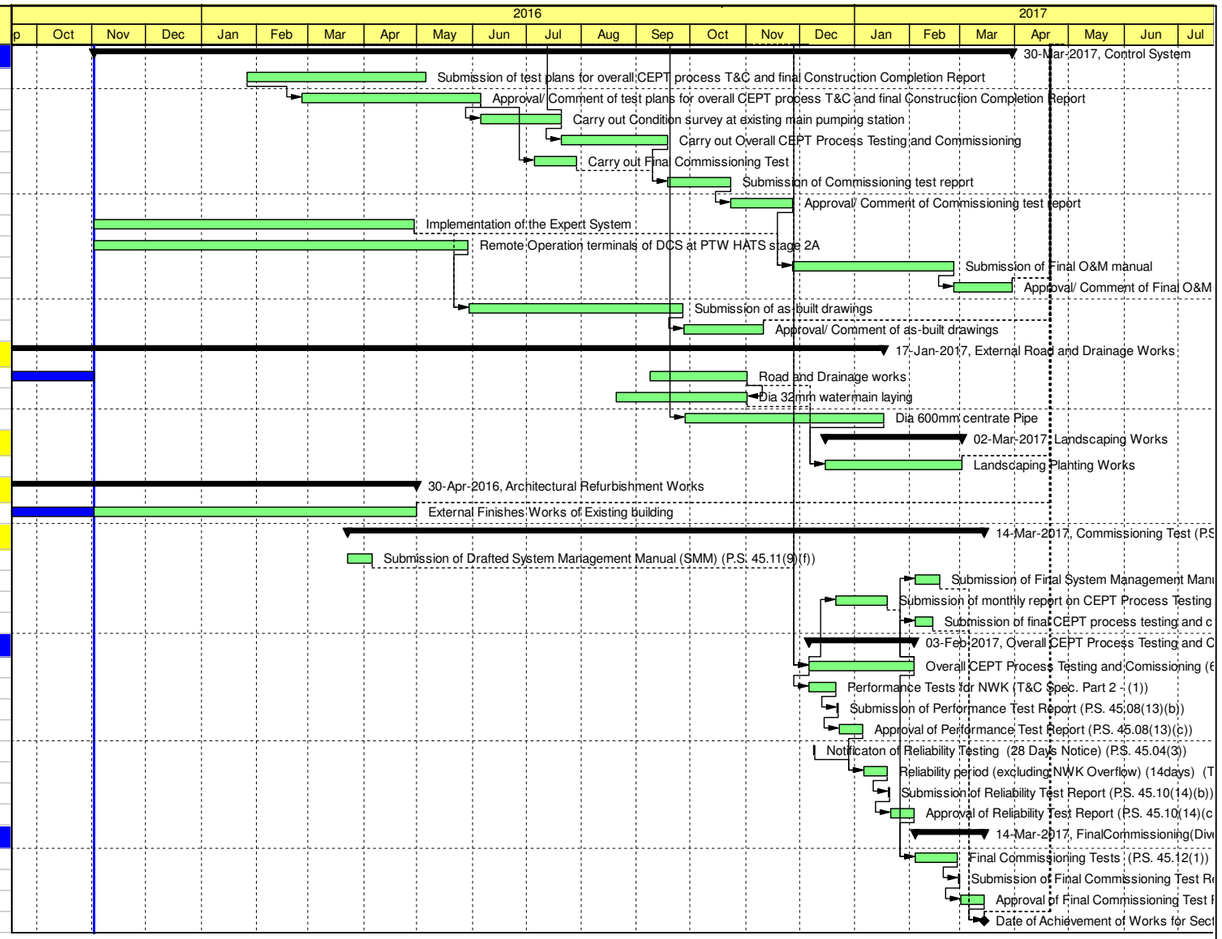
HATS Stage 2A - Upgrading works at StoneCutters Island Sewage Treatement Works

Target Works Programme (Revision 9)

DD: 6 ov 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
Control System						
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
External Road and Drainage Works						
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
Landscaping Works						
LA00010	Landscaping Planting Works	60	0%	46	15-Dec-2016	02-Mar-2017
Architectural Refurbishment Works						
AR00010	External Finishes Works of Existing building	450	67.56%	294	23-Oct-2014 A	30-Apr-2016
Commissioning Test (P.S. 45.07(1)(a)(iv)) & T&C Spec. Pt.1 & Pt.2						
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 Comissioning (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
Overall CEPT Process Testing and Commissioning (P.S. 45.11)						
T02120	Overall CEPT Process Testing and Comissioning (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	Notificaton 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
FinalCommissioning(Divert flow ofHATS1toMPS2 via Interconnection Tunnel)(PS45.07(1)(a)(iv)&45.09(6))						
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 Treatement Works

Target Works Programme (Revision 9)

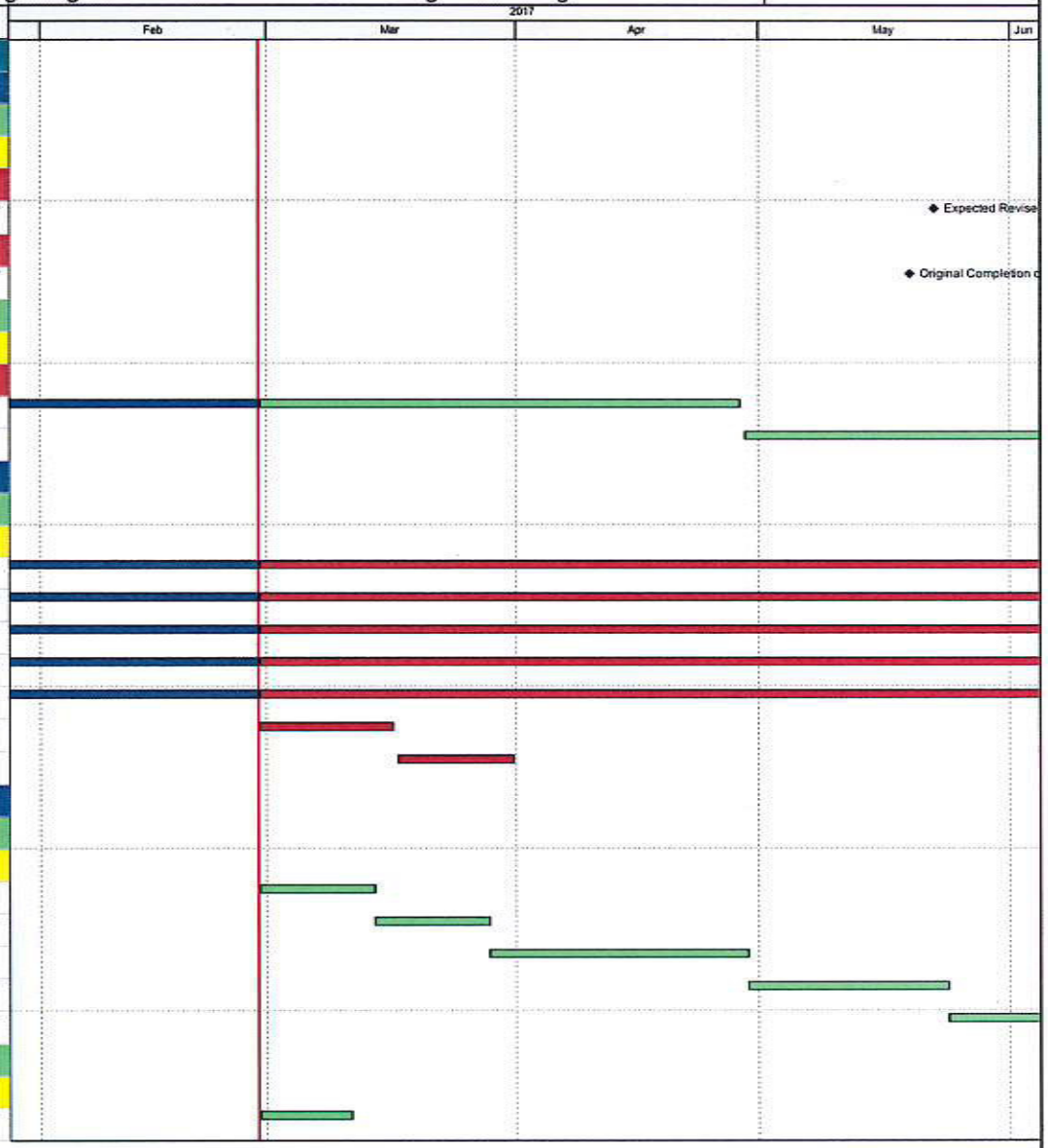
DD: 6 ov 2015

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		

C17TGPRev3B-1_170228

Harbour Area Treatment Scheme Stage 2A - Upgrading Works at Stonecutters Island - Sludge Dewatering Facilities

Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Start	Finish
DC/2009/17 Detailed Works Programme Revision 3B_Updated up to 28-Feb-17						
KEY DATE						
Contract Dates						
Commencement and Completion						
Section 5 of the Works						
KD0000582	Expected Revised (EOT=84) Completion of Section 5 of the Works (2463 days)	0d		22-May-17		22-May-17*
Maintenance Period						
KD000060	Original Completion of Maintenance Period	0d		19-May-17		19-May-17*
Completion						
Extension of Time						
Section 5 of the Works						
KD0000472	Section 5 of the Works expected 125days EOT	126d	25-Oct-16	27-Feb-17	25-Oct-16 A	28-Apr-17
KD0000473	Section 5 of the Works expected 84 days EOT	84d	29-Apr-17	21-Jul-17	29-Apr-17	21-Jul-17
Preliminaries and General Requirement						
General Requirements						
Initial Works						
PG000172	Maintenance and Security for Portion F	1300d	01-Jun-12	10-Jan-16	01-Jun-12 A	12-May-19
PG000190	Environmental Impact Monitoring	1778d	04-Dec-10	04-Dec-15	04-Dec-10 A	12-May-19
PG000260	Maintenance and Upkeeping of Portion D	1852d	25-Aug-10	21-Nov-15	25-Aug-10 A	12-May-19
PG000300	Maintenance and Security in Portion E	2095d	25-Aug-10	19-May-16	25-Aug-10 A	07-Aug-19
PG000310	Maintenance and Security in Portion G	1463d	01-Jun-12	02-Jun-16	01-Jun-12 A	07-Aug-19
PG000410	HAZOP Studies and Report	15d	28-Feb-17	16-Mar-17	28-Feb-17	16-Mar-17
PG000420	Approval on HAZOP Studies and Report	13d	17-Mar-17	31-Mar-17	17-Mar-17	31-Mar-17
Design of Permanent Works						
DDA2 (Southern Sludge Cake Silo)						
Sub-Package - B						
DP34310	DDA: SSCS - Submit Structural Design	12d	28-Feb-17	14-Mar-17	28-Feb-17	14-Mar-17
DP34320	DDA: SSCS - ICE Comment Structural Design	12d	14-Mar-17	28-Mar-17	14-Mar-17	28-Mar-17
DP34330	DDA: SSCS - Eng Comment Structural Design	25d	28-Mar-17	29-Apr-17	28-Mar-17	29-Apr-17
DP34340	DDA: SSCS - Finalize Structural Design	19d	29-Apr-17	24-May-17	29-Apr-17	24-May-17
DP34350	DDA: SSCS - Eng Approve Structural Design	21d	24-May-17	19-Jun-17	24-May-17	19-Jun-17
DDA1 (SDB and Associated Structure)						
Sub-Package- F						
DP024200	DDA: SDB - Submit Landscape Design	11d	28-Feb-17	11-Mar-17	28-Feb-17	11-Mar-17



◆ Milestone
Actual Work
Remaining Work
Critical Remaining Work

Three Months Rolling Programme - Feburary 2017 to April 2017

(Based on Detail Works Programme Rev.3B)

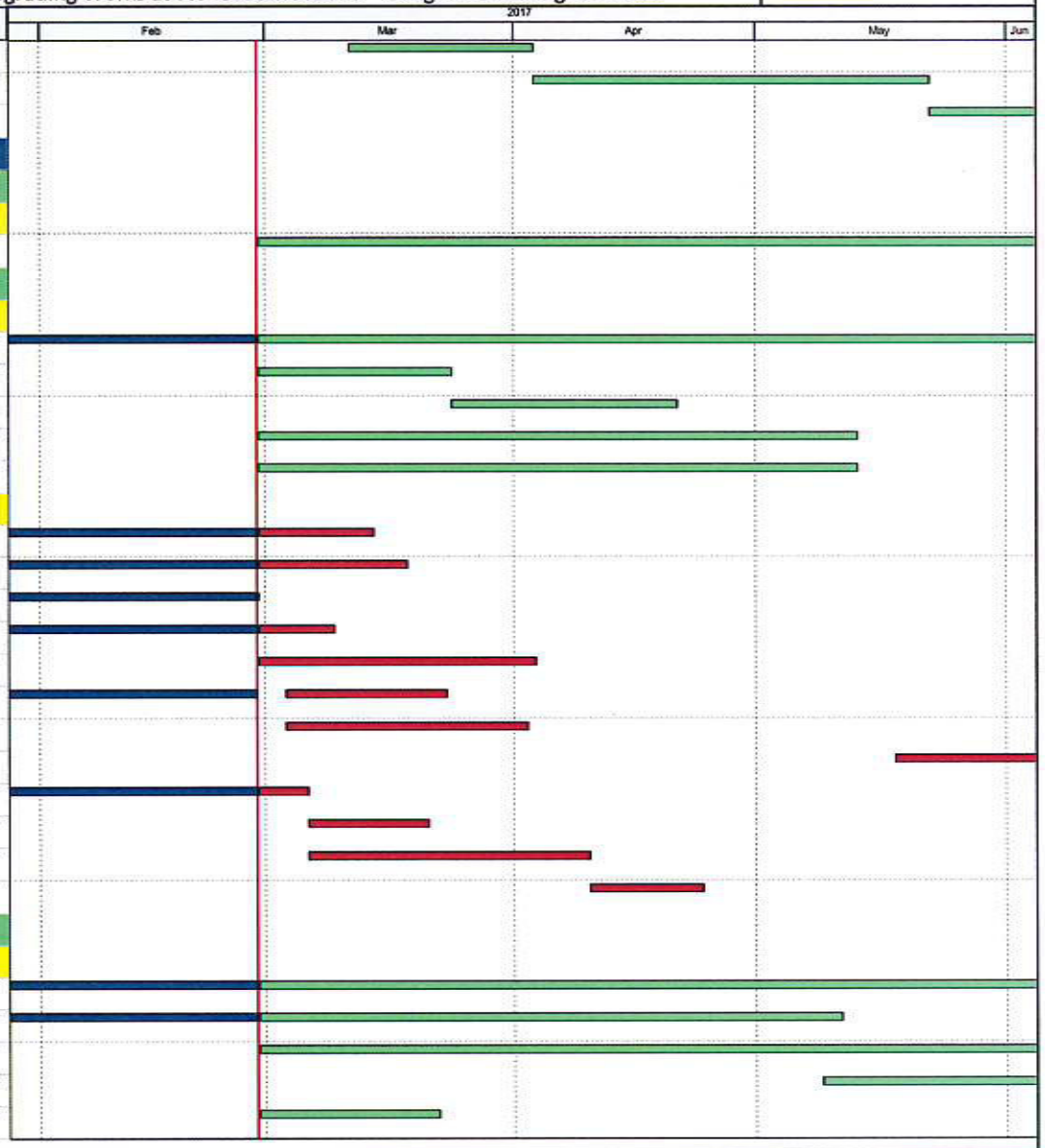
3-M Rolling Programme

Date	Revision	Checked	Approved
28-Feb-17			

C17TGPRev3B-1_170228

Harbour Area Treatment Scheme Stage 2A - Upgrading Works at Stonecutters Island - Sludge Dewatering Facilities

Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Start	Finish
DP024210	DDA: SDB - ICE Approve Landscape Design	19d	11-Mar-17	03-Apr-17	11-Mar-17	03-Apr-17
DP024220	DDA: SDB - Eng Comment on Landscape Design	37d	03-Apr-17	22-May-17	03-Apr-17	22-May-17
DP024230	DDA: SDB - Finalize Landscape Design	37d	22-May-17	06-Jul-17	22-May-17	06-Jul-17
Section 3 of the Works						
Sludge Container						
Design and Supply						
S3000270	NSCS: Construct &Test Re-designed Sludge Container (2nd Lot)	90d	28-Feb-17	19-Jun-17	28-Feb-17	19-Jun-17
Northern Sludge Cake Silo						
Architectural Finishes						
S3000450	NSCS: Building Finishes and Landscape	230d	03-Oct-12	15-Jul-13	29-Sep-12 A	21-Aug-17
S3000510	NSCS: Waterproofing on roof at VWF	21d	28-Feb-17	24-Mar-17	28-Feb-17	24-Mar-17
S3000530	NSCS: Waterproofing on roof at Double Door Enclosure	21d	24-Mar-17	21-Apr-17	24-Mar-17	21-Apr-17
S3000550	NSCS: Shanghai Render	60d	28-Feb-17	13-May-17	28-Feb-17	13-May-17
S3000570	NSCS: Landscape	60d	28-Feb-17	13-May-17	28-Feb-17	13-May-17
E&M Installation and T&C						
S3000810	NSCS: E&M Installation at G/F, B1 and B2	98d	31-Dec-12	07-Apr-13	02-Jan-13 A	14-Mar-17
S3000840	NSCS: Install 2 nos. of Vehical Washing Facilities	95d	31-Dec-12	04-Apr-13	14-Jan-13 A	18-Mar-17
S3000880	NSCS: E&M Installation at B2A, B3, B4 and B4A	75d	31-Dec-12	15-Mar-13	02-Jan-13 A	28-Feb-17
S3000960	NSCS: Building Services Equipment	66d	26-Jan-13	01-Apr-13	26-Jan-13 A	09-Mar-17
S3000966	NSCS: Install Lighting System	35d	28-Feb-17	03-Apr-17	28-Feb-17	03-Apr-17
S3000968	NSCS: T&C for BS System	20d	10-Oct-13	29-Oct-13	28-Oct-13 A	23-Mar-17
S3000970	NSCS: Site Acceptance Test (SAT)	30d	03-Mar-17	02-Apr-17	03-Mar-17	02-Apr-17
S3000980	NSCS: Testing and Commissioning	56d	18-May-17	13-Jul-17	18-May-17	13-Jul-17
S3001000	NSCS: Delivery of DOU6A, FRP Ductworks and Fittings	18d	16-Mar-13	02-Apr-13	25-Mar-13 A	06-Mar-17
S3001010	NSCS: Installation of E&M Equipment & Accessories	15d	06-Mar-17	21-Mar-17	06-Mar-17	21-Mar-17
S3001030	NSCS: Installation of FRP Ductworks and Fittings	35d	06-Mar-17	10-Apr-17	06-Mar-17	10-Apr-17
S3001040	NSCS: T&C for DOU6A System	14d	10-Apr-17	24-Apr-17	10-Apr-17	24-Apr-17
Sludge Dewatering Building and DOU6						
Architectural Finishes						
S3001380	SDB: Building Finishes and Landscape	385d	05-Jul-12	19-Oct-13	05-Jul-12 A	21-Sep-17
S3001515	SDB: External Finishes	145d	11-Dec-12	13-Jun-13	11-Dec-12 A	11-May-17
S3001520	SDB: Shanghai Render	80d	28-Feb-17	07-Jun-17	28-Feb-17	07-Jun-17
S3001525	SDB: Synthetic Timber Cladding	90d	09-May-17	24-Aug-17	09-May-17	24-Aug-17
S3001530	SDB: Irrigation system	20d	28-Feb-17	22-Mar-17	28-Feb-17	22-Mar-17



◆ Milestone
Actual Work
Remaining Work
Critical Remaining Work

Three Months Rolling Programme - Feburary 2017 to April 2017

(Based on Detail Works Programme Rev.3B)

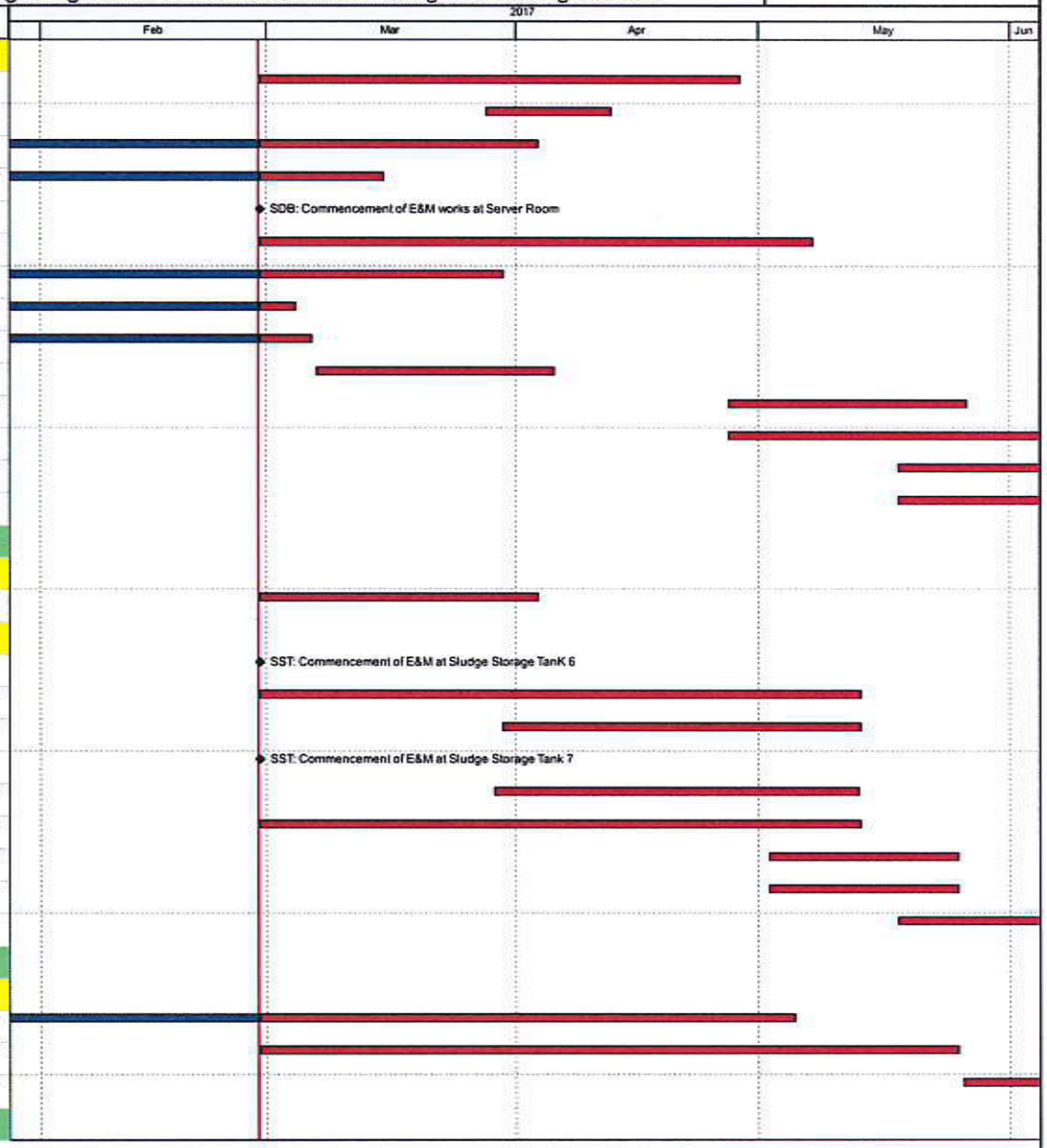
3-M Rolling Programme

Date	Revision	Checked	Approved
28-Feb-17			

C17TGPRev3B-1_170228

Harbour Area Treatment Scheme Stage 2A - Upgrading Works at Stonecutters Island - Sludge Dewatering Facilities

Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Start	Finish
E&M Installation and T&C						
S3003450	SDB: Install Pumping System at DGS	60d	28-Feb-17	28-Apr-17	28-Feb-17	28-Apr-17
S3003470	SDB: Install Cable	16d	28-Mar-17	12-Apr-17	28-Mar-17	12-Apr-17
S3003490	SDB: E&M Works at First Floor	175d	31-Oct-12	23-Apr-13	05-Oct-12 A	03-Apr-17
S3003690	SDB: Hydraulic Power Pack Room	79d	12-Jan-13	31-Mar-13	14-Jan-13 A	15-Mar-17
S3003730	SDB: Commencement of E&M works at Server Room	0d	28-Feb-17		28-Feb-17	
S3003740	SDB: DCS Server Room	69d	28-Feb-17	07-May-17	28-Feb-17	07-May-17
S3003790	SDB: E&M Works at Roof Floor	202d	31-Oct-12	20-May-13	03-Oct-12 A	30-Mar-17
S3003830	SDB: Install Cable on Roof	24d	25-Aug-13	17-Sep-13	25-Aug-13 A	04-Mar-17
S3003930	SDB: Install Sanitary Fitting & Plumbing System	35d	31-Jul-13	03-Sep-13	31-Jul-13 A	06-Mar-17
S3003950	SDB: T&C for BS System	30d	07-Mar-17	05-Apr-17	07-Mar-17	05-Apr-17
S3004000	SDB: Precommissioning Test	30d	27-Apr-17	26-May-17	27-Apr-17	26-May-17
S3004010	SDB: Liaise with ST2 to Decommission Extg Plant	60d	27-Apr-17	10-Jul-17	27-Apr-17	10-Jul-17
S3004020	SDB: Testing and Commissioning	183d	18-May-17	16-Nov-17	18-May-17	16-Nov-17
S3004030	SDB: Group 1 (5 nos Centrifuge) Performance Test	56d	18-May-17	12-Jul-17	18-May-17	12-Jul-17
Sludge Storage Tank 6 and 7						
Structure						
S3005850	SST: External Painting for Tank 6	30d	28-Feb-17	03-Apr-17	28-Feb-17	03-Apr-17
E&M Installation and T&C						
S3006670	SST: Commencement of E&M at Sludge Storage TanK 6	0d	28-Feb-17		28-Feb-17	
S3006680	SST: Install Sludge Feed Pipe, Recirculation Pipe and Scum Pipe at Tank 6	75d	28-Feb-17	13-May-17	28-Feb-17	13-May-17
S3006685	SST: Install Jet Mixer at Sludge Storage Tank 6	45d	30-Mar-17	13-May-17	30-Mar-17	13-May-17
S3006700	SST: Commencement of E&M at Sludge Storage Tank 7	0d	28-Feb-17		28-Feb-17	
S3006710	SST: Install Jet Mixer at Sludge Storage Tank 7	45d	29-Mar-17	13-May-17	29-Mar-17	13-May-17
S3006720	SST: Install Sludge Feed Pipe, Recirculation Pipe and Scum Pipe at Tank 7	75d	28-Feb-17	13-May-17	28-Feb-17	13-May-17
S3006730	SST: Site Acceptance Test (SAT)	24d	02-May-17	25-May-17	02-May-17	25-May-17
S3006740	SST: Testing and commissioning (Internal T&C)	24d	02-May-17	25-May-17	02-May-17	25-May-17
S3006750	SST: Final T&C with Dewatering Centrifuges	56d	18-May-17	12-Jul-17	18-May-17	12-Jul-17
System						
Pump, Piping and Ducting						
S3009940	Firemains bet External Suppy Point to Zone B1	105d	28-Feb-13	08-Jul-13	01-Mar-13 A	05-May-17
S3009950	Additional Fire Signal Duct bet Admin Bldg - SDB	70d	28-Feb-17	25-May-17	28-Feb-17	25-May-17
S3009960	Additional Fire Signal Cable bet Admin Bldg -SDB	30d	26-May-17	24-Jun-17	26-May-17	24-Jun-17
External (Civil) Works						



◆ Milestone
Actual Work
Remaining Work
Critical Remaining Work

Three Months Rolling Programme - Feburary 2017 to April 2017

(Based on Detail Works Programme Rev.3B)

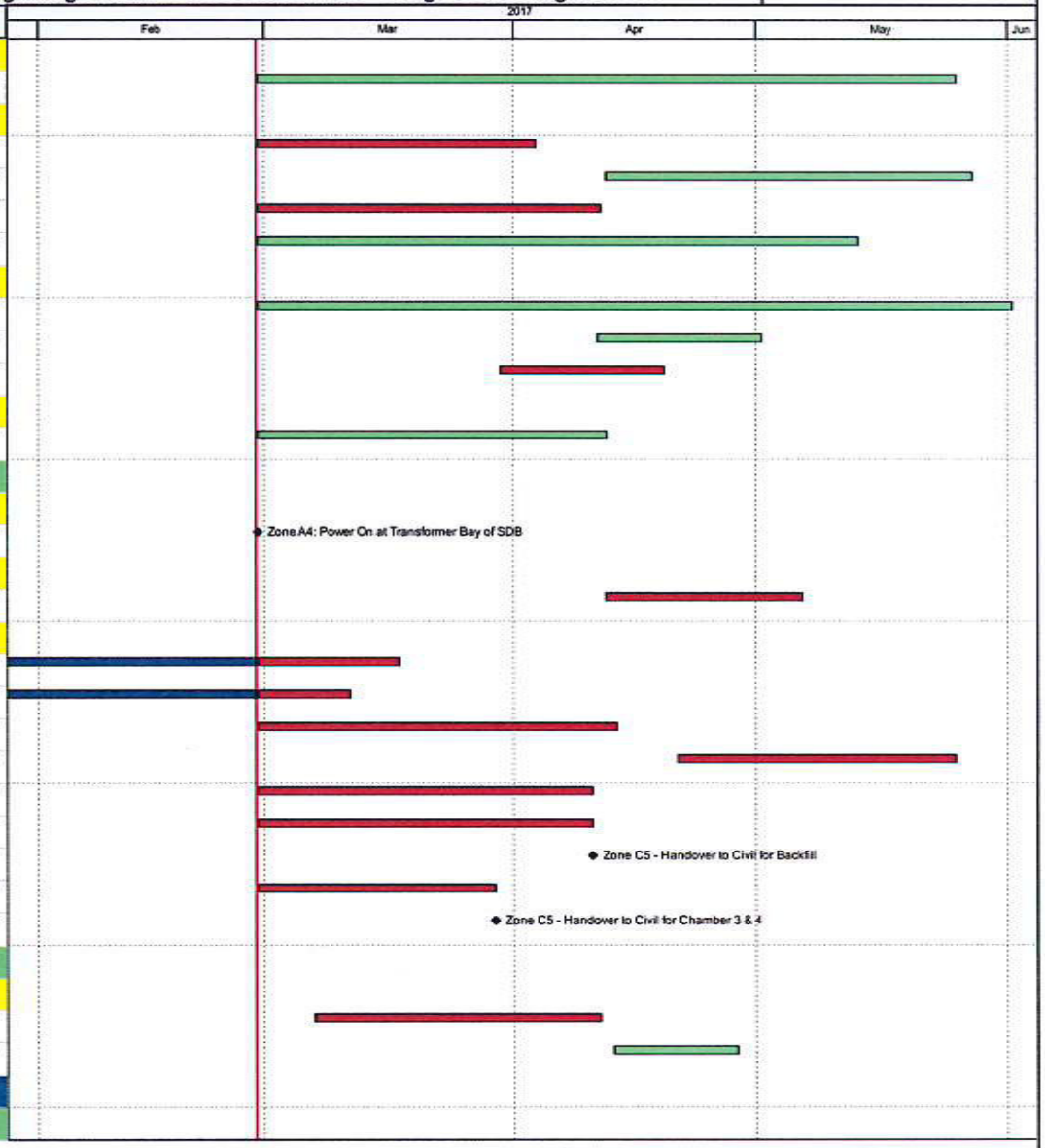
3-M Rolling Programme

Date	Revision	Checked	Approved
28-Feb-17			

C17TGPRev3B-1_170228

Harbour Area Treatment Scheme Stage 2A - Upgrading Works at Stonecutters Island - Sludge Dewatering Facilities

Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Start	Finish
Zone A						
S3008440	Zone A5: Cabe Trough to MPS	70d	28-Feb-17	25-May-17	28-Feb-17	25-May-17
Zone B						
S3008585	Zone B2b-2 - Chemical Pipe Trench	30d	28-Feb-17	03-Apr-17	28-Feb-17	03-Apr-17
S3008670	Zone B3b: Chemical Pipe Trench	36d	12-Apr-17	27-May-17	12-Apr-17	27-May-17
S3008690	Zone B3b - Centrate Pipe bet C1 to MPS Stage 1	36d	28-Feb-17	11-Apr-17	28-Feb-17	11-Apr-17
S3009010	Zone B6-1&2: Chemical Pipe Trench	60d	28-Feb-17	13-May-17	28-Feb-17	13-May-17
Zone C						
S3009520	Zone C3 - Storm Drain bet S51 to Extg S52	75d	28-Feb-17	01-Jun-17	28-Feb-17	01-Jun-17
S3009710	Zone C5 - Backfill / Reinstate Trench to SST5	21d	11-Apr-17	01-May-17	11-Apr-17	01-May-17
S3009760	Zone C5 - Backfill / Reinstate bet Chamber 3 & 4	21d	30-Mar-17	19-Apr-17	30-Mar-17	19-Apr-17
Road and Drain						
S3011400	Zone B3a: Foul Drain between F6 to F6A to F6C and F6D	36d	28-Feb-17	12-Apr-17	28-Feb-17	12-Apr-17
External (E&M) Works						
Zone A						
S3008438	Zone A4: Power On at Transformer Bay of SDB	0d		28-Feb-17		28-Feb-17
Zone B						
S3008720	Zone B - Cable Laying bet SDB to Extg SST 1 and NSCS	25d	12-Apr-17	06-May-17	12-Apr-17	06-May-17
Zone C						
S3009475	Zone C3 - Pipework at valve pit 4 for SST6 & 7	45d	07-Mar-13	20-Apr-13	07-Mar-13 A	17-Mar-17
S3009478	Zone C3 - Pipework at valve pit 5	30d	21-Mar-13	19-Apr-13	18-Feb-13 A	11-Mar-17
S3009480	Zone C3 - Pipework at Roof of SST 5 to 7	45d	28-Feb-17	13-Apr-17	28-Feb-17	13-Apr-17
S3009820	Zone C5 - Pipework at Roof Level of SST 5 to 1	35d	21-Apr-17	25-May-17	21-Apr-17	25-May-17
S3009700	Zone C5 - Replace Sludge Feed Pipe to SST5	42d	28-Feb-17	10-Apr-17	28-Feb-17	10-Apr-17
S3009705	Zone C5 - Install Jet Mixing System for SST5	42d	28-Feb-17	10-Apr-17	28-Feb-17	10-Apr-17
S3009708	Zone C5 - Handover to Civil for Backfill	0d		10-Apr-17		10-Apr-17
S3009750	Zone C5 - Laying Pipe bet Chamber 3 & 4	30d	28-Feb-17	29-Mar-17	28-Feb-17	29-Mar-17
S3009755	Zone C5 - Handover to Civil for Chamber 3 & 4	0d		29-Mar-17		29-Mar-17
Statutory Inspection and Training						
E&M Installation and T&C						
S3013095	S3 Work: Liaison with WSD for Fresh & Salt Water	30d	07-Mar-17	11-Apr-17	07-Mar-17	11-Apr-17
S3013130	S3 Work: Inspect DG Store by FSD	12d	13-Apr-17	28-Apr-17	13-Apr-17	28-Apr-17
Section 4 of the Works						
Completion						



◆ Milestone
Actual Work
Remaining Work
Critical Remaining Work

Three Months Rolling Programme - Feburary 2017 to April 2017

(Based on Detail Works Programme Rev.3B)

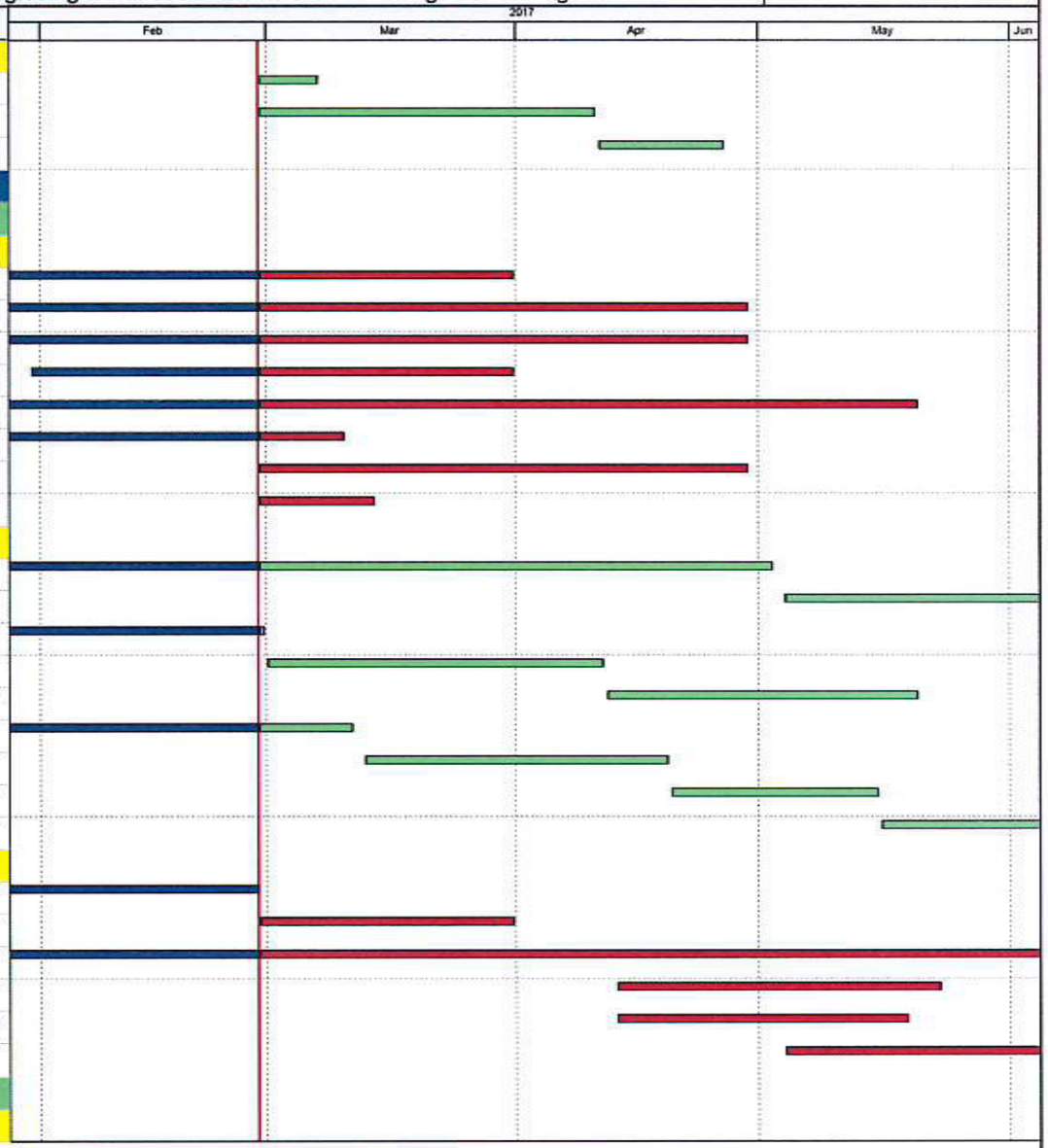
3-M Rolling Programme

Date	Revision	Checked	Approved
28-Feb-17			

C17TGPRev3B-1_170228

Harbour Area Treatment Scheme Stage 2A - Upgrading Works at Stonecutters Island - Sludge Dewatering Facilities

Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Start	Finish
Initial Works						
S4000070	Notify Engineer on the Extent of Work	6d	28-Feb-17	07-Mar-17	28-Feb-17	07-Mar-17
S4000080	TTA Scheme Submission & Approval	35d	28-Feb-17	10-Apr-17	28-Feb-17	10-Apr-17
S4000085	Implement Temporary Traffic Arrangement	12d	11-Apr-17	26-Apr-17	11-Apr-17	26-Apr-17
Section 5 of the Works						
Workshop Building						
Architectural Finishes						
S5002620	WB: Window and Door	45d	30-Nov-16	23-Jan-17	29-Nov-16 A	31-Mar-17
S5002630	WB: Plaster and Tile	45d	16-Dec-16	13-Feb-17	15-Nov-16 A	29-Apr-17
S5002650	WB: Painting	30d	13-Jan-17	21-Feb-17	05-Dec-16 A	29-Apr-17
S5002660	WB: Shanghai Rendering	60d	06-Feb-17	19-Apr-17	31-Jan-17 A	31-Mar-17
S5002670	WB: Irrigation System	35d	09-Jan-17	22-Feb-17	08-Dec-16 A	20-May-17
S5002680	WB: Synthetic Timber Cladding	52d	02-Feb-17	03-Apr-17	06-Jan-17 A	10-Mar-17
S5002690	WB: Landscape on Roof	30d	01-Mar-17	05-Apr-17	01-Mar-17 A	29-Apr-17
S5002695	WB: Site Clearance	12d	28-Feb-17	14-Mar-17	28-Feb-17*	14-Mar-17
Procurement, Manufacture and Delivery						
S5002915	WB: Manufacture Balancing Machine for Centrifuge	100d	30-Dec-16	06-May-17	30-Nov-16 A	02-May-17
S5002920	WB: FAT for Balancing Machine for Centrifuge	53d	04-May-17	07-Jul-17	04-May-17	07-Jul-17
S5002935	WB: Manufacture various E&M Equipment / Material	45d	30-Dec-16	25-Feb-17	30-Nov-16 A	25-Feb-17
S5002940	WB: FAT Test for various E&M Equipment / Material	35d	01-Mar-17	11-Apr-17	01-Mar-17	11-Apr-17
S5002945	WB: Delivery of various E&M Equipment / Materials	30d	12-Apr-17	20-May-17	12-Apr-17	20-May-17
S5002950	WB: Procurement of Travelling Crane	36d	30-Dec-16	15-Feb-17	30-Nov-16 A	11-Mar-17
S5002955	WB: Manufacturing of Travelling Crane	30d	13-Mar-17	19-Apr-17	13-Mar-17	19-Apr-17
S5002960	WB: FAT Test for Travelling Crane	20d	20-Apr-17	15-May-17	20-Apr-17	15-May-17
S5002965	WB: Delivery of Travelling Crane	30d	16-May-17	20-Jun-17	16-May-17	20-Jun-17
E&M Installation and T&C						
S5002968	WB: E&M installation	35d	10-Jun-17	22-Jul-17	01-Nov-16 A	17-Aug-17
S5002970	WB: Installation of Travelling Crane	28d	28-Feb-17	31-Mar-17	28-Feb-17*	31-Mar-17
S5002980	WB: Building Services	30d	10-Jun-17	17-Jul-17	12-Dec-16 A	19-Sep-17
S5002985	WB: Site Acceptance Test (SAT)	30d	13-Apr-17	23-May-17	13-Apr-17*	23-May-17
S5002990	WB: Testing and Commissioning	27d	13-Apr-17	19-May-17	13-Apr-17*	19-May-17
S5002995	WB: Submit As-constructed Drawings	73d	04-May-17	29-Jul-17	04-May-17*	29-Jul-17
Southern Sludge Cake Silo						
Architecture Finishes						



◆ Milestone
Actual Work
Remaining Work
Critical Remaining Work

Three Months Rolling Programme - Feburary 2017 to April 2017

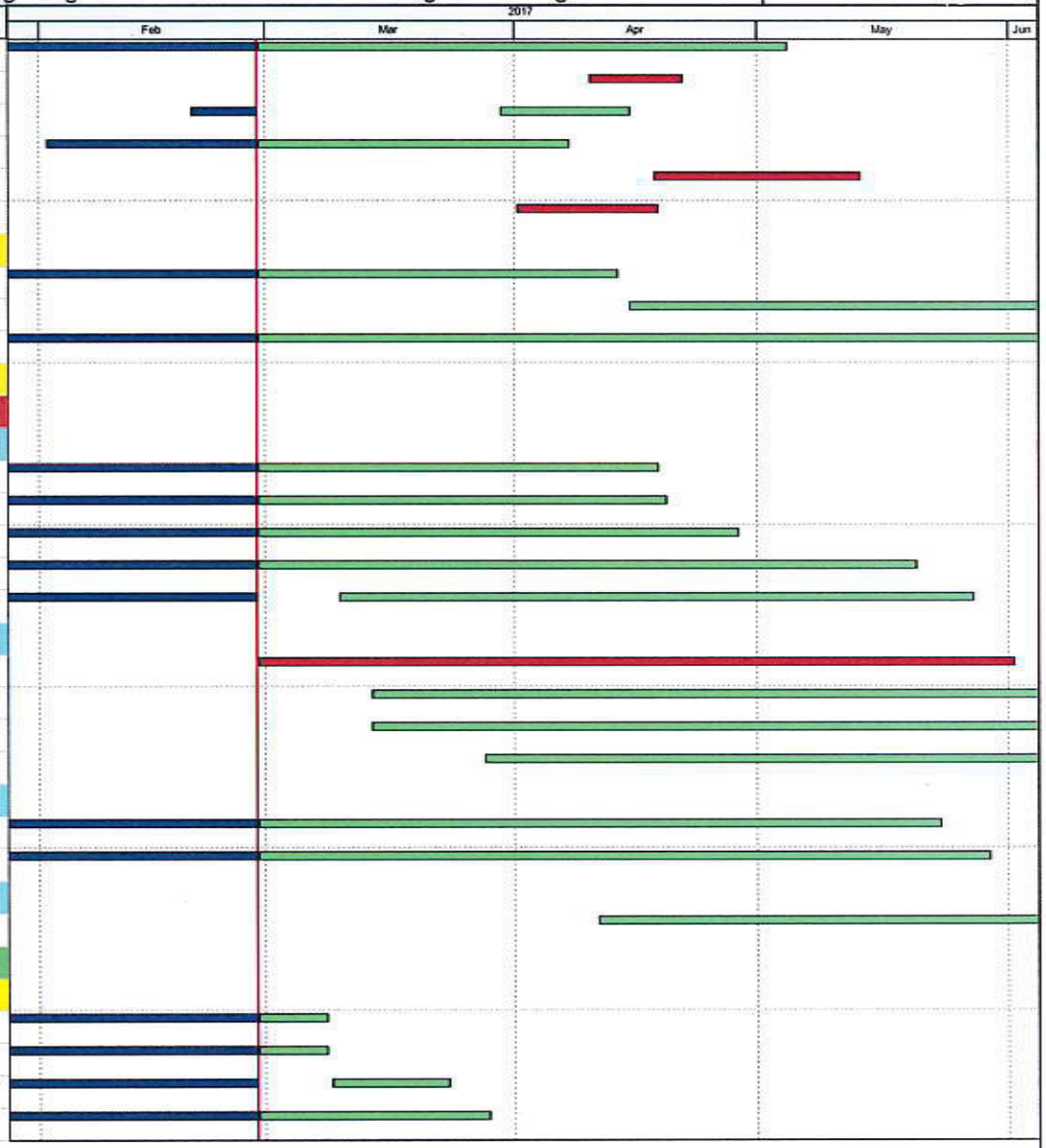
(Based on Detail Works Programme Rev.3B)

3-M Rolling Programme			
Date	Revision	Checked	Approved
28-Feb-17			

C17TGPRev3B-1_170228

Harbour Area Treatment Scheme Stage 2A - Upgrading Works at Stonecutters Island - Sludge Dewatering Facilities

Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Start	Finish
S5003320	SSCS: Painting and Skirting	35d	03-Jan-17	17-Feb-17	15-Nov-16 A	04-May-17
S5003386	SSCS: Waterproofing on Roof at VWF	9d	10-Apr-17	21-Apr-17	10-Apr-17*	21-Apr-17
S5003400	SSCS: Shanghai Render	28d	08-May-17	09-Jun-17	20-Feb-17 A	15-Apr-17
S5003410	SSCS: Install Synthetic Timber Cladding	45d	08-May-17	29-Jun-17	02-Feb-17 A	07-Apr-17
S5003420	SSCS: Landscape	21d	18-Apr-17	13-May-17	18-Apr-17*	13-May-17
S5003430	SSCS: Site Clearance	12d	01-Apr-17	18-Apr-17	01-Apr-17*	18-Apr-17
	Procurement, Manufacture and Delivery					
S5003530	SSCS: Manufacture Conveyor, Valve, Air Duct & Lifting Appliance	157d	16-Nov-15	31-May-16	15-Oct-15 A	13-Apr-17
S5003535	SSCS: Factory Acceptance Test for Conveyor	53d	15-Apr-17	21-Jun-17	15-Apr-17	21-Jun-17
S5003555	SSCS: Manufacture Vehicle Washing Machine	116d	30-Dec-16	25-May-17	30-Nov-16 A	20-Jun-17
	E&M Installation and T&C					
	E&M Works					
	Level GF, B1 & B2					
S5004020	SSCS: Install DOU Ductwork	65d	30-Dec-16	21-Mar-17	30-Nov-16 A	18-Apr-17
S5004030	SSCS: Sliding Frame & Discharge Screw Conveyor	53d	30-Dec-16	08-Mar-17	14-Dec-16 A	19-Apr-17
S5004040	SSCS: Install VWF below Silo	50d	14-Jan-17	17-Mar-17	29-Dec-16 A	28-Apr-17
S5004050	SSCS: Install Cable Tray	87d	14-Jan-17	07-Apr-17	29-Dec-16 A	20-May-17
S5004060	SSCS: Install Cable	76d	10-Jan-17	15-Apr-17	23-Dec-16 A	27-May-17
	Level B2A, B3, B4 & B4A					
S5004080	SSCS: Install Solid Pump & Pipework	75d	28-Feb-17	01-Jun-17	28-Feb-17*	01-Jun-17
S5004090	SSCS: Install DOU Ductwork	77d	14-Mar-17	17-Jun-17	14-Mar-17	17-Jun-17
S5004100	SSCS: Install Cable Tray	77d	14-Mar-17	17-Jun-17	14-Mar-17	17-Jun-17
S5004110	SSCS: Install Cable	77d	28-Mar-17	03-Jul-17	28-Mar-17	03-Jul-17
	Miscellaneous					
S5004130	SSCS: Install Pipework	78d	30-Dec-16	06-Apr-17	17-Dec-16 A	23-May-17
S5004140	SSCS: Building Services Equipment	76d	30-Dec-16	03-Apr-17	27-Dec-16 A	29-May-17
	Site Acceptance Test (SAT)					
S5004170	SSCS: Submit As-constructed Drawings	76d	11-Apr-17	15-Jul-17	11-Apr-17	15-Jul-17
	Deodourization Unit 5 and DG Store					
	Procurement and Delivery					
S5008510	DOU5 & DGS: Procurement of DOU5 & other E&M Equipment	53d	31-Aug-16	04-Nov-16	31-Aug-16 A	08-Mar-17
S5008520	DOU5 & DGS: Manufacturing of DOU5 & other E&M Equipment	187d	31-Aug-16	19-Apr-17	31-Aug-16 A	08-Mar-17
S5008525	DOU5 & DGS: FAT Test for DOU5	27d	10-Jan-17	14-Feb-17	21-Dec-16 A	23-Mar-17
S5008530	DOU5 & DGS: Delivery of DOU5 and other E&M Equipment	49d	30-Dec-16	02-Mar-17	30-Nov-16 A	28-Mar-17



◆ Milestone
Actual Work
Remaining Work
Critical Remaining Work

Three Months Rolling Programme - Feburary 2017 to April 2017

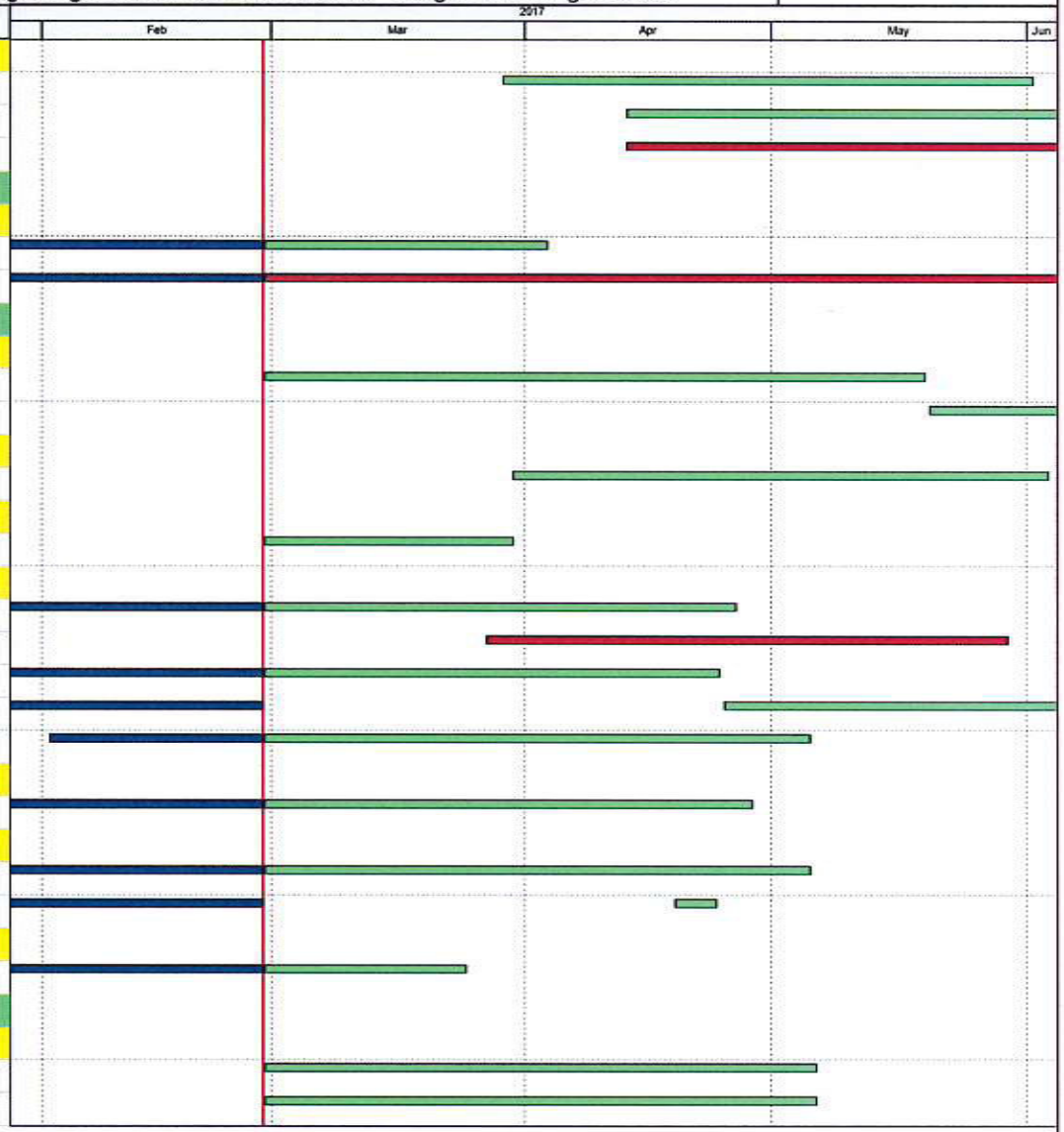
(Based on Detail Works Programme Rev.3B)

3-M Rolling Programme			
Date	Revision	Checked	Approved
28-Feb-17			

C17TGPRev3B-1_170228

Harbour Area Treatment Scheme Stage 2A - Upgrading Works at Stonecutters Island - Sludge Dewatering Facilities

Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Start	Finish
E&M Installation and T&C						
S5008560	DOU5 & DGS: E&M Work	50d	29-Mar-17	01-Jun-17	29-Mar-17	01-Jun-17
S5008570	DOU5 & DGS: Installation of DOU5	50d	13-Apr-17	15-Jun-17	13-Apr-17	15-Jun-17
S5008700	DOU5 & DGS: Submit As-constructed Drawings	150d	13-Apr-17	12-Oct-17	13-Apr-17*	12-Oct-17
Process Water Storage Tank						
Procurement, Manufacture and Delivery						
S5009660	PWST: Procure Tanks & other E&M Equipment / Material	55d	30-Dec-16	09-Mar-17	30-Nov-16 A	03-Apr-17
S5009670	PWST: Manufacture Tanks & other E&M Equipment / Material	120d	30-Dec-16	31-May-17	06-Dec-16 A	09-Jun-17
External (Civil) Works						
Initial Works						
S5009735	Submit/Approve TTA Scheme for Section 5 -Stage 1	65d	28-Feb-17	19-May-17	28-Feb-17	19-May-17
S5009752	Implement TTA Scheme for Section 5 - Stage 1	12d	20-May-17	05-Jun-17	20-May-17	05-Jun-17
Pipe Works						
S5009750	Centrale pipe to manhole MH7	50d	30-Mar-17	03-Jun-17	30-Mar-17	03-Jun-17
SDB Area						
S5009816	Zone C3 - Ducting around Tank 6 & 7	27d	28-Feb-17	30-Mar-17	28-Feb-17	30-Mar-17
General Area						
S5009838	Foul sewer & manholes F10 & F11 along area adjacent to gate 4	50d	30-Nov-16	02-Feb-17	08-Nov-16 A	26-Apr-17
S5009846	Storm water drainage & catch pit S8 along portion 5	50d	27-Mar-17	29-May-17	27-Mar-17*	29-May-17
S5009868	Storm water drainage & catch pits S10 & S10A	48d	23-Dec-16	24-Feb-17	01-Jun-16 A	24-Apr-17
S5009872	Sodium Hypochlorite Pipe in Chemical Trench	48d	24-Feb-17	25-Apr-17	01-Jun-16 A	19-Jun-17
S5009876	Sludge chamber No.1	48d	28-Feb-17	27-Apr-17	02-Feb-17 A	05-May-17
WB Area						
S5009842	Storm water drainage & catch pit S41 & S43 around WB	47d	30-Dec-16	28-Feb-17	02-Dec-16 A	28-Apr-17
SSCS Area						
S5009878	Storm drainage and catch pits S23, S51A & S27	49d	26-Sep-16	23-Nov-16	01-Jun-16 A	05-May-17
S5009882	Process watermain & chamber	49d	24-Nov-16	21-Jan-17	01-Jun-16 A	24-Apr-17
PWST Area						
S5009844	Storm water drainage & cable duct adjacent to PWST	47d	05-Jul-16	29-Aug-16	01-Jun-16 A	24-Mar-17
Statutory Inspection and Training						
E&M: Testing and Commissionings						
S5010250	S5: Preparation & Submit Modified O&M Manuals	53d	28-Feb-17	06-May-17	28-Feb-17	06-May-17
S5010260	S5: Preparation & Submit Final O&M Manuals	53d	28-Feb-17	06-May-17	28-Feb-17	06-May-17



◆ Milestone
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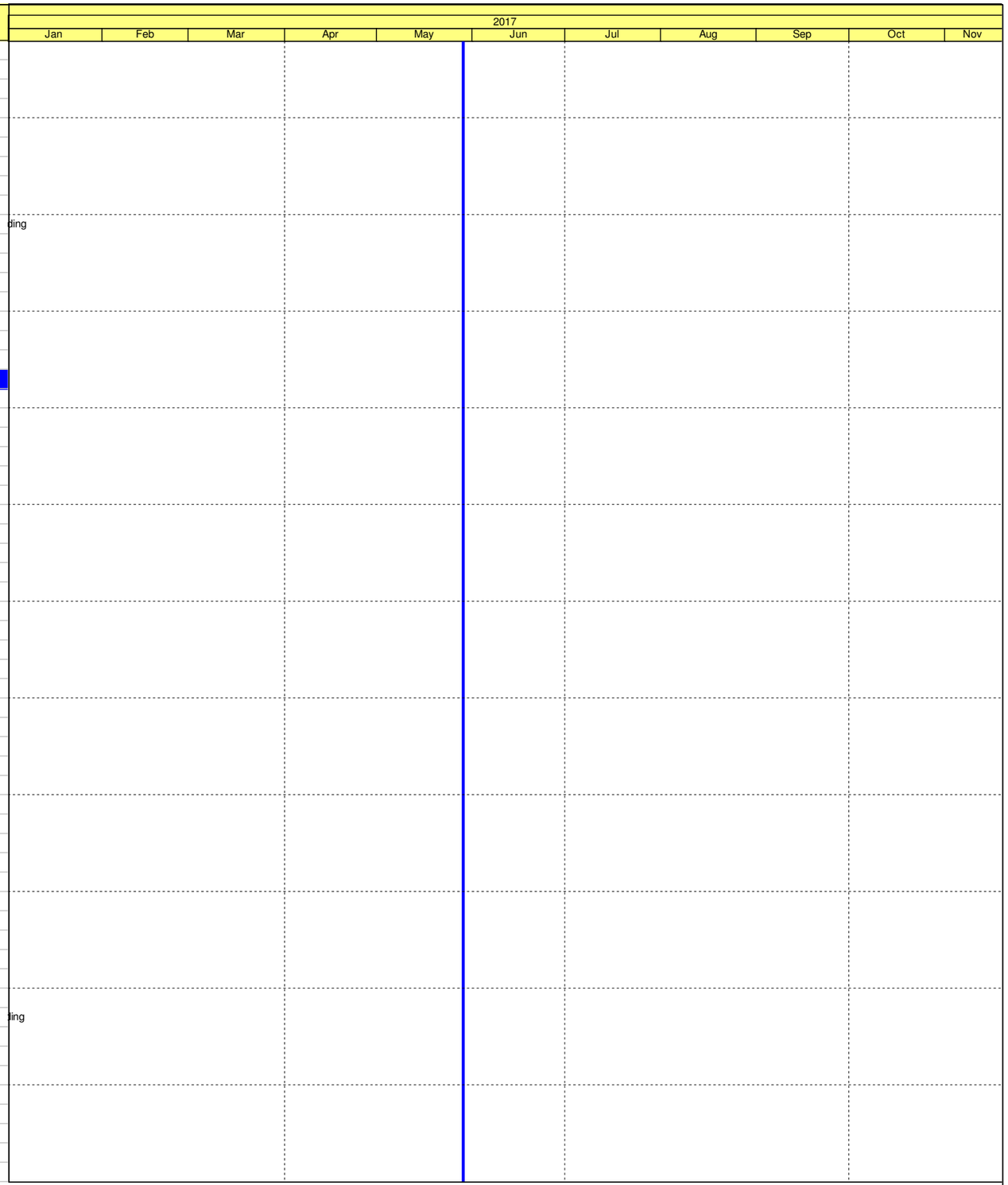
Three Months Rolling Programme - Feburary 2017 to April 2017

(Based on Detail Works Programme Rev.3B)

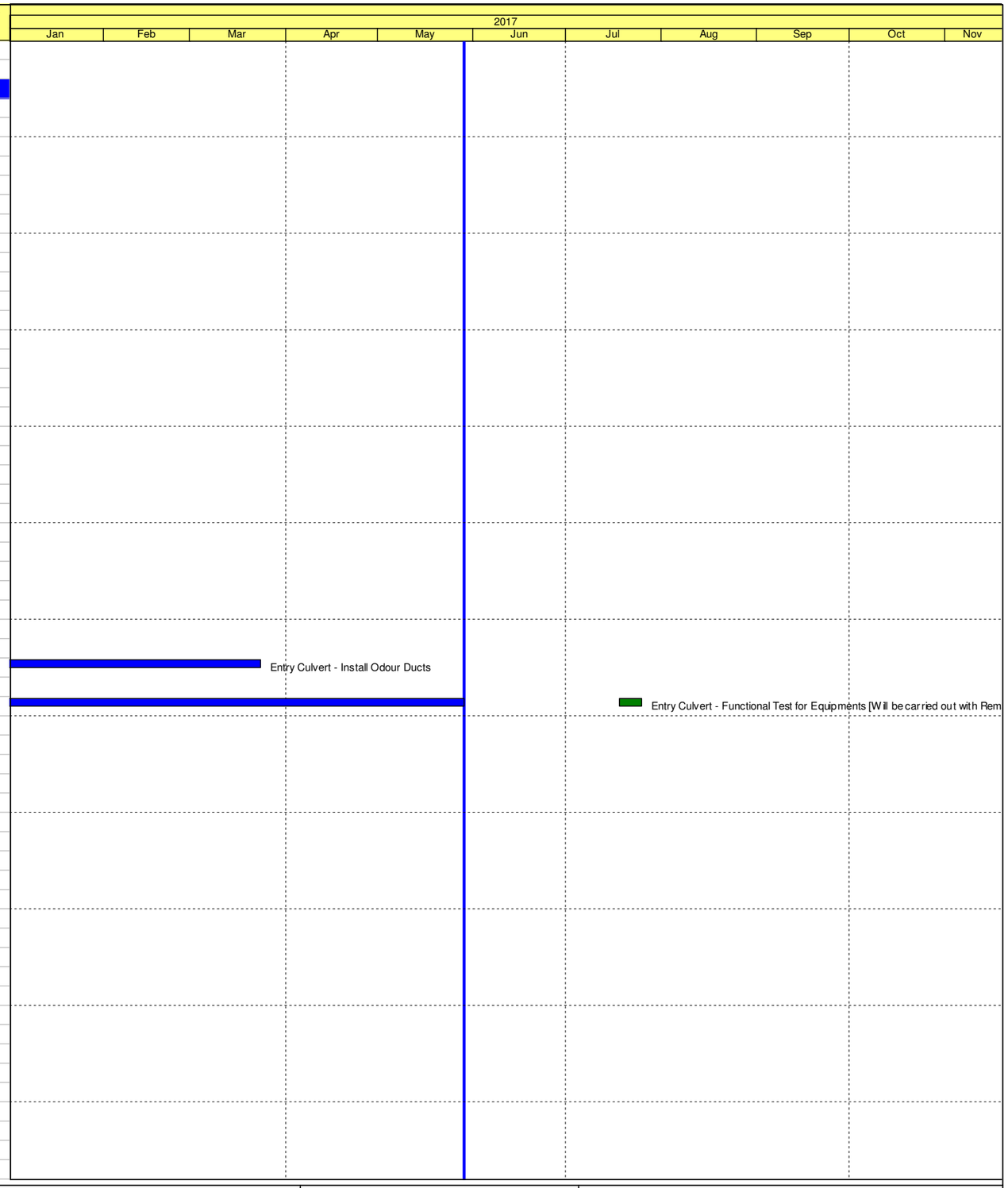
3-M Rolling Programme

Date	Revision	Checked	Approved
28-Feb-17			

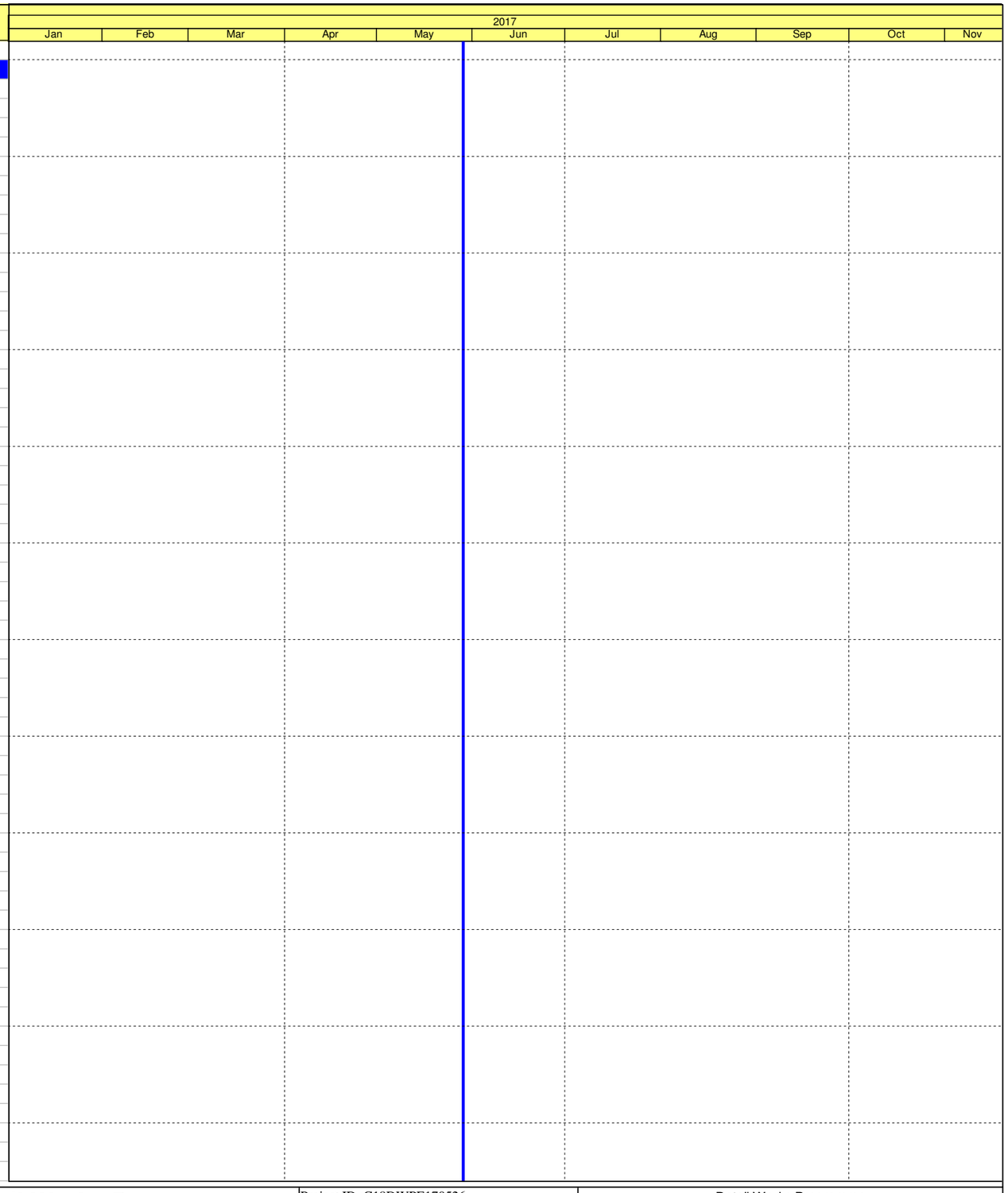
Activity ID	Activity Name	Start	Finish	Physical % Complete
	6.06.5.5 - Finishing Works			
18-66320N	FDC2- PVC Liner Touch Up Work	22-Sep-15 A	10-Oct-15 A	100%
18-66310	FDC2- Install FRP Covers & Handrail	26-Sep-15 A	06-Feb-16 A	100%
18-66330N	FDC2- Waterproofing System	01-Oct-15 A	08-Oct-15 A	100%
18-66180	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%
18-66890	FDC2 - Installation of Precast Concrete Panel	08-Apr-16 A	22-Jul-16 A	100%
18-66900	FDC2 - Erection of Bamboo Scaffolding	23-Jul-16 A	03-Aug-16 A	100%
18-66200	FDC2 - Painting Works	05-Aug-16 A	26-Aug-16 A	100%
18-66190	FDC2 - Installation of Timber Board Cladding	27-Sep-16 A	29-Oct-16 A	100%
	6.06.5.6 - E&M Works			
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	08-Oct-15 A	19-Oct-15 A	100%
18-66230	Install Air Duct	14-Jan-16 A	18-Mar-16 A	100%
18-66210	Install Power Supply System	07-Mar-16 A	10-Jun-16 A	100%
	6.06.6 - Chamber 15A			
	6.06.6.1 - Foundation			
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%
	6.06.6.2 - Temporary Works			
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%
	6.06.6.3 - Structure			
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%
	6.06.6.3.1 Stage 1			
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%
	6.06.6.3.2 Stage 2			
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%
	6.06.6.4 - Finishing Works			
18-59060N	Cham 15A - Handover for Finishing Works	22-Sep-15 A		100%
18-66320	Cham 15A - Install FRP Covers & Handrail	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	22-Jun-16 A	01-Aug-16 A	100%
18-66910	Cham 15A - Painting Works	02-Aug-16 A	26-Aug-16 A	100%
18-59090	Cham 15A - Installation of Timber Board Cladding	27-Aug-16 A	23-Sep-16 A	100%
	6.06.6.5 - E&M Works			
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%
18-59100D10	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	14-Nov-15 A	100%



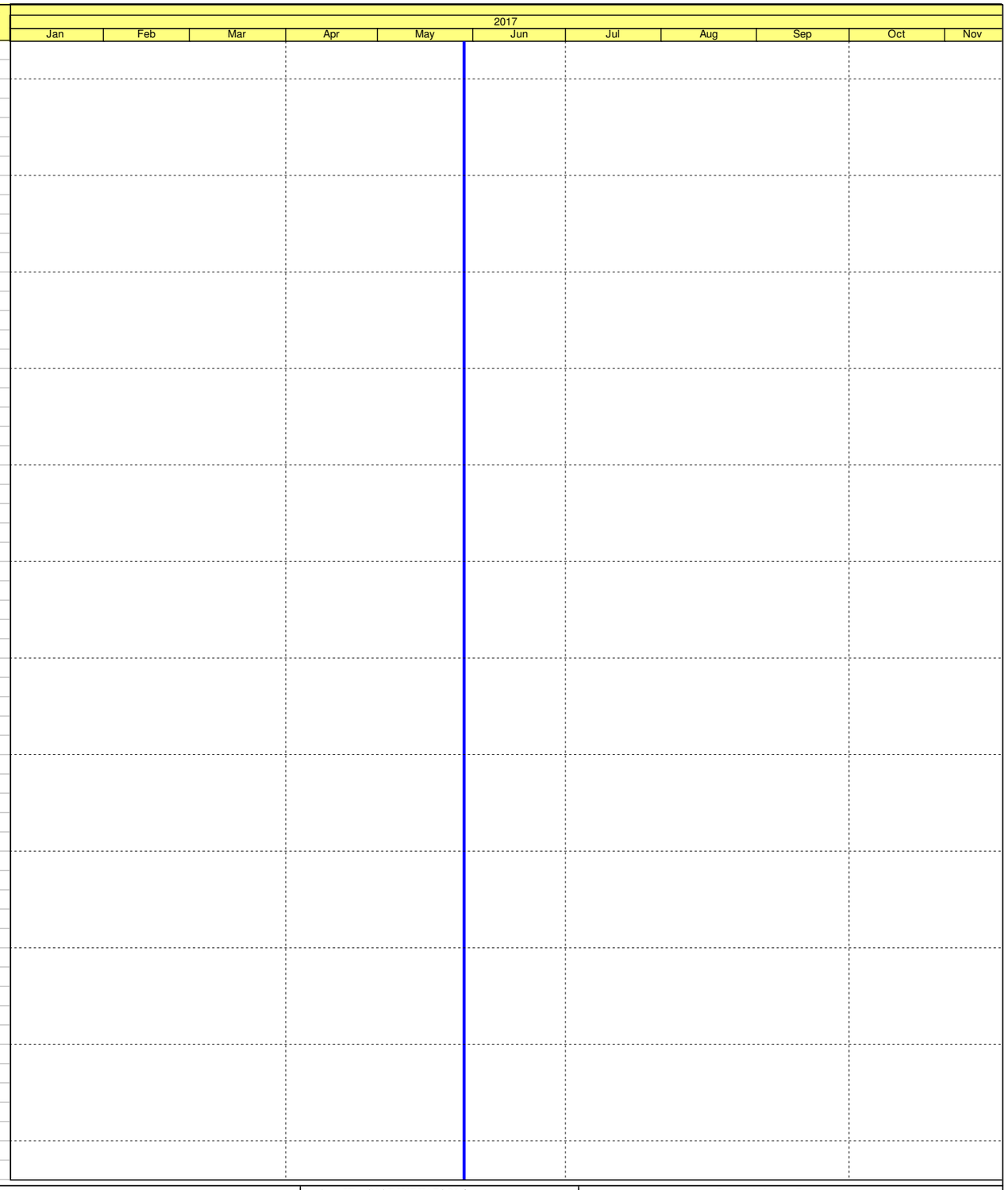
Activity ID	Activity Name	Start	Finish	Physical % Complete
18-59160	Cham 15A - Install Odour Ducts	26-Sep-15 A	14-Nov-15 A	100%
18-59130	Cham 15A - Install Pipes & Valves	26-Sep-15 A	20-Nov-15 A	100%
6.06.7 - Entry Culvert				
6.06.7.1 - Foundation				
18-59550	Entry Culvert - G.I - Pre-drilling (2 Nos.)	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%
6.06.7.2 - Temporary Works				
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%
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%
6.06.7.3 - Structure				
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%
6.06.7.4 - E&M Works				
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	22-Aug-15 A	24-Mar-17 A	100%
18-64305D	Entry Culvert - Install Effluent Pumps	25-Aug-15 A	29-Sep-15 A	100%
18-64365	Entry Culvert - Functional Test for Equipments [Will be carried out with Remaining in CH15E]	29-Sep-15 A	25-Jul-17	60%
6.06.7.5 - Connect to Existing Drop Shaft				
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%
18-59390	Dry Season Onset 2013-2014	01-Nov-13 A		100%
18-59542N	Impact Environmental Water Monitoring	01-Nov-13 A	27-Feb-14 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	100%
18-59532N	Temp Flow Diversion - Dismantle Temporary Water Barrier Platform	18-Apr-14 A	18-Apr-14 A	100%



Activity ID	Activity Name	Start	Finish	Physical % Complete
18-59533	Existing Outfall Drop Shaft - Installation of FRP Cover	23-Nov-15 A	01-Dec-15 A	100%
6.06.8 - Dechlorination Plant (DCP)				
6.06.8.1 - DCP - Foundation				
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%
6.06.8.2 - DCP - Structure				
18-60040N	DCP - Mobilization and Breaking of Concrete Surface	10-Dec-12 A	13-Dec-12 A	100%
18-60010D	DCP - Excavate Foundation + Blinding	10-Dec-12 A	24-Dec-12 A	100%
18-60050N	DCP - Pile Cap Excavation	14-Dec-12 A	29-Dec-12 A	100%
18-60070N	DCP - Pile Cap Blinding	24-Dec-12 A	24-Dec-12 A	100%
18-60051N	DCP - Steel Top Plates for H-Piles	27-Dec-12 A	02-Jan-13 A	100%
18-60090N	DCP - Pile Cap Formworks	28-Dec-12 A	02-Jan-13 A	100%
18-60015D	DCP - R.C. Pile Cap (Base Slab)	28-Dec-12 A	19-Jan-13 A	100%
18-60101N	DCP - Pile Cap Steel Fixing	03-Jan-13 A	18-Jan-13 A	100%
18-60020D	DCP - R.C. Intermidiate Slab	08-Jan-13 A	02-May-13 A	100%
18-60120N	DCP - Construction of Toe Wall	08-Jan-13 A	18-Jan-13 A	100%
18-60111N	DCP - Pile Cap Concreting	19-Jan-13 A	19-Jan-13 A	100%
18-60140N	DCP - Ground Slab, Waterproofing	22-Jan-13 A	22-Jan-13 A	100%
18-60130N	DCP - Ground Slab, Erection of Permanent Formworks	23-Jan-13 A	02-May-13 A	100%
18-60025	DCP - R.C. Plinths and Boundary Wall	28-Jan-13 A	04-Mar-13 A	100%
18-60160N	DCP - Ground Slab Steel Fixing	28-Jan-13 A	02-May-13 A	100%
18-60141N	DCP - Ground Slab, Installation of UPVC Cable Ducting	26-Feb-13 A	13-Apr-13 A	100%
18-60142N	DCP - Ground Slab, Installation of UPVC Cast-Iron Pipe	11-Apr-13 A	18-Apr-13 A	100%
18-60143N	DCP - Ground Slab Cast-Iron Pipe Water Test	19-Apr-13 A	22-Apr-13 A	100%
18-60170N	DCP - Ground Slab, Concreting	02-May-13 A	02-May-13 A	100%
18-60171N	DCP - Ground Slab, Removal of Formworks	03-May-13 A	08-May-13 A	100%
18-60030D	DCP - R.C. Walls/Roof	04-Jul-13 A	04-Oct-13 A	100%
18-60030N	DCP - R.C. Wall Scaffolding & Formworks Erection	04-Jul-13 A	17-Aug-13 A	100%
18-60053N	DCP - R.C. Walls Steel Fixing	29-Jul-13 A	10-Aug-13 A	100%
18-60052N	DCP - R.C. Roof Formworks Erection	12-Aug-13 A	20-Aug-13 A	100%
18-60055N	DCP - R.C. Roof Steel Fixing	21-Aug-13 A	26-Aug-13 A	100%
18-60054N	DCP - R.C. Walls/Roof, Cast Concrete	27-Aug-13 A	27-Aug-13 A	100%
18-60056N	DCP - R.C. Walls/Roof, Concrete Wall and Roof Curing	28-Aug-13 A	12-Sep-13 A	100%
18-60046N	DCP - R.C. Roof Parapet, Fix Roof Parapet Wall Reinforcement	05-Sep-13 A	13-Sep-13 A	100%
18-60035D	DCP - R.C. Roof Parapet	05-Sep-13 A	04-Oct-13 A	100%
18-60045N	DCP - R.C. Roof Parapet, Erection of Formwork	09-Sep-13 A	18-Sep-13 A	100%
18-60058N	DCP - R.C. Walls/Roof, Removal of Formworks and Falseworks	13-Sep-13 A	04-Oct-13 A	100%
18-60048N	DCP - R.C. Roof Parapet, Cast Roof Concrete Parapet	19-Sep-13 A	19-Sep-13 A	100%
18-60049N	DCP - R.C. Roof Parapet, Curing and Removal of Formworks	20-Sep-13 A	04-Oct-13 A	100%
18-60065N	DCP - Cleaning and Preparation for Finishing and E&M	05-Oct-13 A	02-Nov-13 A	100%
18-64651N	DCP - 3600x1200 Sump Pit Near Bund Wall	17-Oct-13 A	02-Nov-13 A	100%
18-60059N	DCP - R.C. Roof Parapet, Waterproofing	01-May-14 A	31-May-14 A	100%
18-60173N	DCP - Ground Slab, Bund Wall Waterproofing	01-Feb-15 A	20-Apr-15 A	100%
18-60040D	DCP - Steel Strucutre & Roof Delivery		19-May-15 A	100%
18-60042N	DCP - Steel Structure & Roof, Steel Structure Installation	19-May-15 A	20-Jul-15 A	100%
18-60043N	DCP - Steel Strucutre & Roof, Installation of FRP Shelter Sheets	21-Jul-15 A	06-Aug-15 A	100%
6.06.8.3 - DCP - Storage Tank Compound				
6.06.8.3.1 - Finishing Works				
18-60047N	DCP - STC Handover for Finishing Works	19-Jun-14 A		100%
18-60048D	DCP - STC - Install Storage Tanks	19-Jun-14 A	02-Sep-14 A	100%
18-60060	DCP - STC - Epoxy Coating & Painting	04-Jul-14 A	14-Jul-14 A	100%
18-60051	DCP - STC - Metal Works	23-May-15 A	22-Jun-15 A	100%
18-60056	DCP - STC - FRP Open Mesh Flooring	12-Sep-15 A	09-Jan-16 A	100%
18-60058	DCP - STC - Synthetic Timber Board Screen	13-Nov-15 A	28-Nov-15 A	100%
6.06.8.3.2 - E&M Works				
18-60066N	DCP Storage Tank Compound Handover for E&M Work	15-May-14 A		100%
18-60075N	DCP - STC - Install Sodium Bisulphate Dosing Pumps	20-May-14 A	20-Jul-15 A	100%



Activity ID	Activity Name	Start	Finish	Physical % Complete
18-60052D	DCP - STC - Piping Works	27-Jun-14 A	20-Nov-15 A	100%
18-60054D	DCP - STC - Cable Containment Works	22-Dec-14 A	02-Jul-15 A	100%
18-60066	DCP - STC - Cabling & Wiring	22-Dec-14 A	15-Jul-15 A	100%
18-60068D	DCP - STC - Electrical Fixtures	22-Dec-14 A	10-Jul-15 A	100%
18-60067	DCP - STC - Electrical Control & Instrumentation	22-Dec-14 A	10-Jul-15 A	100%
18-60070D	DCP - STC - Fire Services	03-Feb-15 A	15-Jul-15 A	100%
18-60074N	DCP - STC - Install Sodium Bisulphate Dosing Units	24-Sep-15 A	10-Oct-15 A	100%
18-60080	DCP - STC - Functional Test	25-Sep-15 A	29-Sep-15 A	100%
6.06.8.4 - DCP - Pump Hall				
6.06.8.4.1 - Finishing Works				
18-63555	DCP - PH - Epoxy Coating & Painting	16-Jun-14 A	12-Jul-14 A	100%
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%
18-63495	DCP - PH - FRP Open Mesh Flooring	12-Sep-15 A	09-Jan-16 A	100%
6.06.8.4.2 - E&M Works				
18-63485D	DCP - PH - Airducts	14-Jul-14 A	29-Apr-15 A	100%
18-63492D	DCP - PH - Air Grilles	14-Jul-14 A	29-Apr-15 A	100%
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%
18-63480D	DCP - PH - Cable Containment	22-Dec-14 A	29-Apr-15 A	100%
18-63487D	DCP - PH - Cabling & Wiring	22-Dec-14 A	29-Apr-15 A	100%
18-63488D	DCP - PH - Electrical Control & Instrumentation	22-Dec-14 A	10-Jul-15 A	100%
18-63478D	DCP - PH - Piping Works	05-Jan-15 A	20-Sep-15 A	100%
18-63476D	DCP - PH - Fume Recovery System	15-Jan-15 A	15-Jul-15 A	100%
18-63490D	DCP - PH - Fire Services	03-Feb-15 A	10-Aug-15 A	100%
18-63475D	DCP - PH - Pump & Dehumidifier Install	01-Jun-15 A	15-Jun-15 A	100%
18-63494D	DCP - PH - Functional Test	21-Sep-15 A	29-Sep-15 A	100%
6.06.8.5 - DCP - Sensor Store Room				
6.06.8.5.1 - Finishing Works				
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%
6.06.8.5.2 - E&M Works				
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%
18-63655D	DCP - SSR - Air Grilles	14-Jul-14 A	29-Apr-15 A	100%
18-63595D	DCP - SSR - Cabling & wiring	22-Dec-14 A	10-Aug-15 A	100%
18-63575D	DCP - SSR - Cable Containment	22-Dec-14 A	01-Aug-15 A	100%
18-63645D	DCP - SSR - Electrical Fixtures	22-Dec-14 A	10-Jul-15 A	100%
18-63491D	DCP - SSR - Fire Services	03-Feb-15 A	15-Jul-15 A	100%
18-63658D	DCP - SSR - Functional Test	21-Sep-15 A	22-Sep-15 A	100%
6.06.8.6 - DCP - Control Room & UPS Room				
6.06.8.6.1 - Finishing Works				
18-63709N	DCP - CR/UPS Handover for Finshing 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%
18-63710	DCP - CR/UPS - Metal Works	01-Jun-15 A	19-Jun-15 A	100%
6.06.8.6.2 - E&M Works				
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%
18-63705D	DCP - CR/UPS - Air grilles	14-Jul-14 A	29-Apr-15 A	100%
18-63605D	DCP - CR/UPS - Cable Containment	22-Dec-14 A	10-Jul-15 A	100%
18-63685D	DCP - CR/UPS - Cabling & Wiring	22-Dec-14 A	10-Jul-15 A	100%
18-63695D	DCP - CR/UPS - Electrical Fixtures	22-Dec-14 A	10-Jul-15 A	100%
18-63495D	DCP - CR/UPS - Fire Services	03-Feb-15 A	15-Jul-15 A	100%
18-63736	DCP - CR/UPS - Control System Equipment	21-Sep-15 A	20-Nov-15 A	100%
18-63748	DCP - CR/UPS - Functional Test	23-Sep-15 A	26-Dec-15 A	100%
18-63735	DCP - CR/UPS - UPS Equipment	09-Nov-15 A	20-Nov-15 A	100%



俊和－大陸工程聯營
CHUN WO – CEC JOINT VENTURE

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

Updated Detail Works Programme

Data Date: 29-May-17

Run Date: 29-May-17

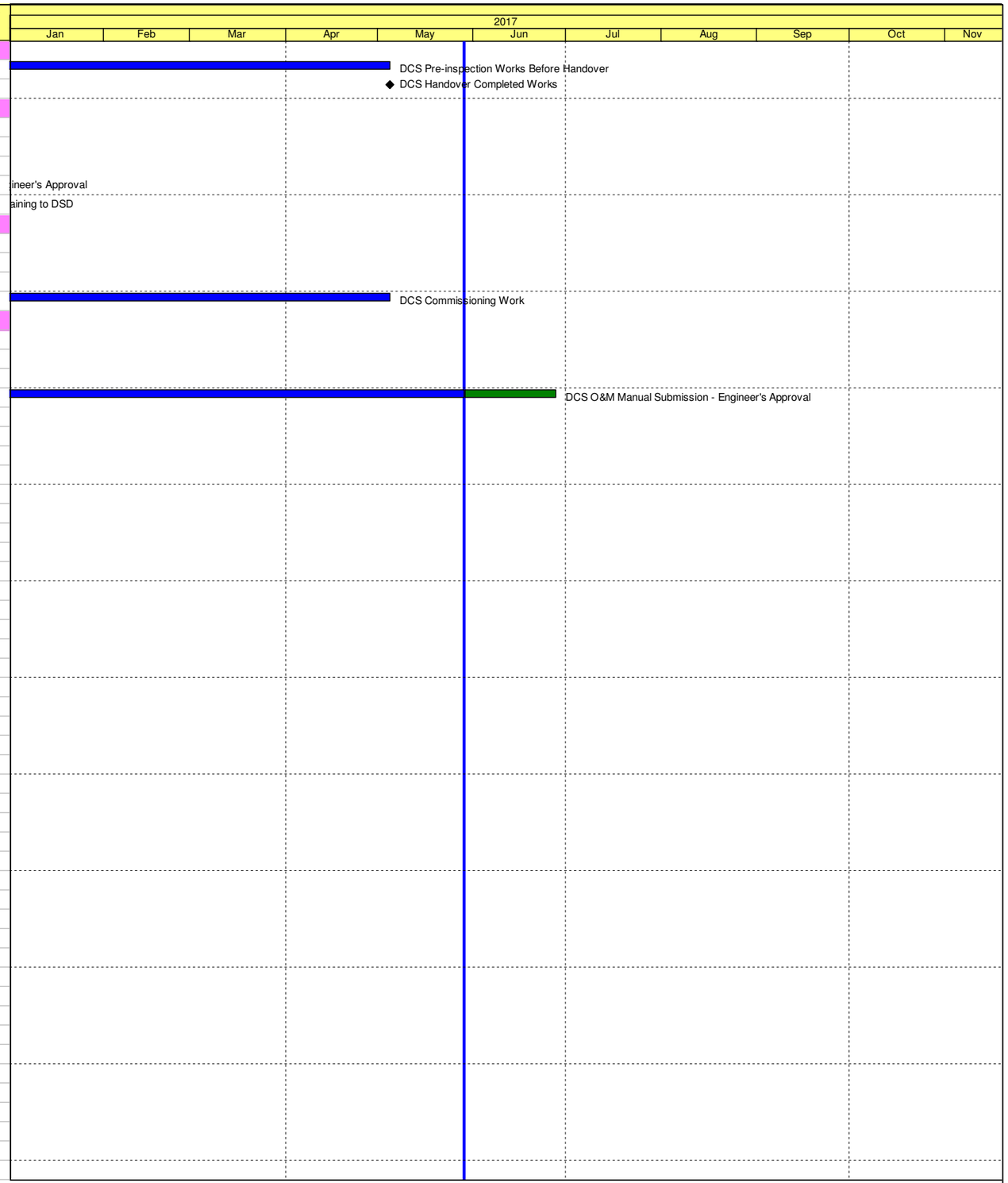
Project ID :C18DWPE170526

Layout : C18170529UDWP

Detail Works Programme

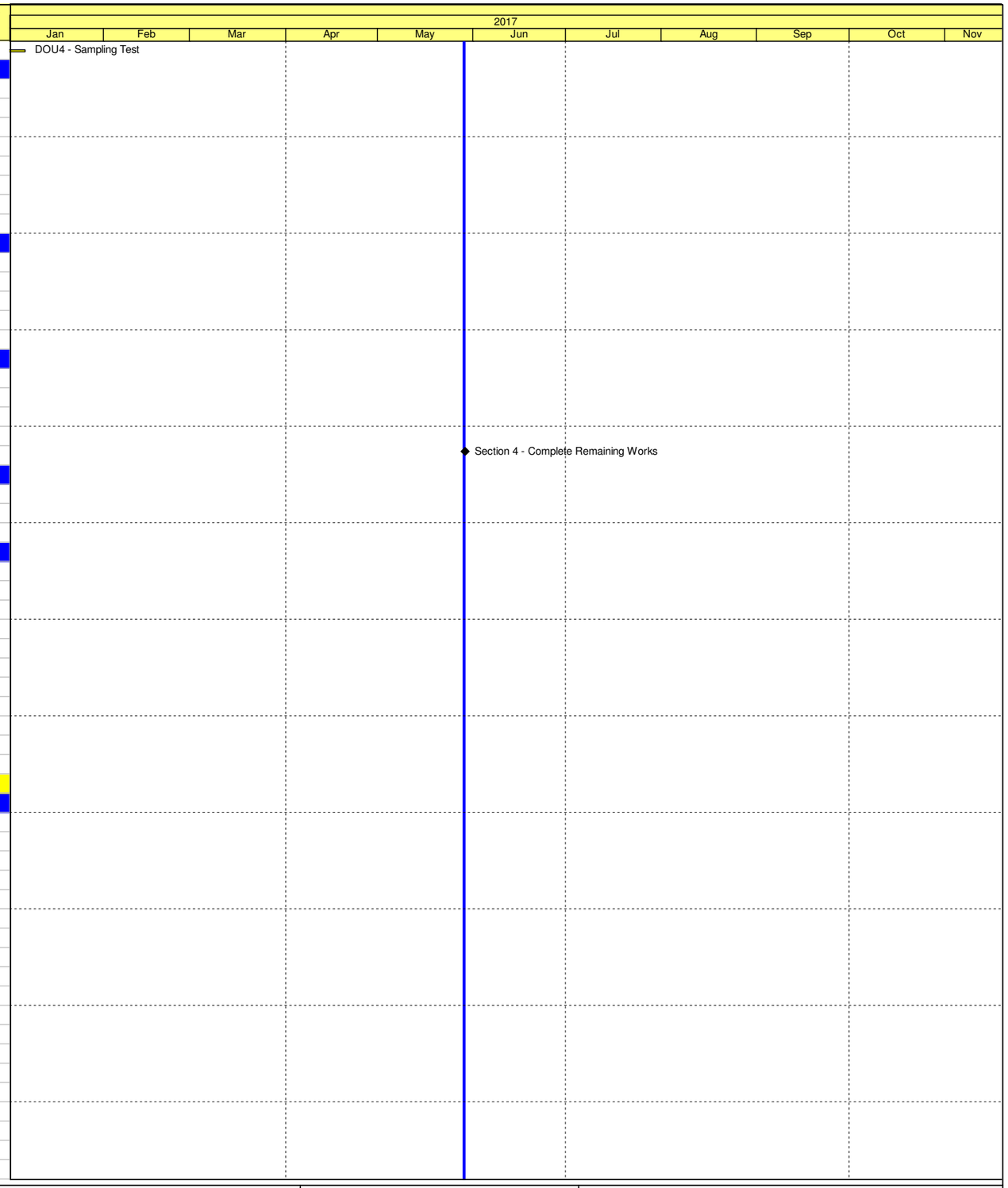
Date	Revision	Checked	Approved
29-Apr-17	DWP Rev E Update		
29-May-17	DWP Rev E Update		

Activity ID	Activity Name	Start	Finish	Physical % Complete
6.06.8.6.2.3 - Completion of DCS Works				
18-63760	DCS Pre-inspection Works Before Handover	04-Jan-16 A	05-May-17 A	100%
18-63761	DCS Handover Completed Works		05-May-17 A	100%
6.06.8.6.2.3 - DCS Training				
18-63828N	DCS Training - Submission of Training Programme and Material	01-Apr-15 A	15-Apr-15 A	100%
18-63838N	DCS Training - Engineer's Review	02-Jul-15 A	10-Jul-15 A	100%
18-63848	DCS Training - Re-submission	05-Jan-16 A	19-Apr-16 A	100%
18-63858	DCS Training - Engineer's Approval	11-Jan-16 A	01-Dec-16 A	100%
18-63868	Conduct Training to DSD	28-Sep-16 A	01-Dec-16 A	100%
6.06.8.6.2.1 - DCS On-Site Installation				
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 A	100%
18-63778	DCS Functional Testing	20-Jan-16 A	27-Jan-16 A	100%
18-63759	DCS Commissioning Work	22-Feb-16 A	05-May-17 A	100%
6.06.8.6.2.2 - DCS O&M Manual Submission				
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	23-Sep-15 A	18-Aug-16 A	100%
18-63808	DCS O&M Manual Submission - Re-submission	08-Dec-15 A	15-Jan-16 A	100%
18-63818	DCS O&M Manual Submission - Engineer's Approval	19-Aug-16 A	27-Jun-17	90%
6.06.8.7 - DCP - Switch Room				
6.06.8.7.1 - Finishing Works				
18-63774N	DCP - CR/UPS Switch Room Handover for Finshing 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%
6.06.8.7.2 - E&M Works				
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%
6.06.8.8 - DCP - Potable Water Pump House				
6.06.8.8.1 - Finishing Works				
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 - ABWF Works	16-Mar-16 A	15-Aug-16 A	100%
6.06.8.8.2 - E&M Works				
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 Install	25-Jul-15 A	02-Aug-15 A	100%
18-64415D	DCP - PWP - Functional Test	26-Sep-15 A	20-Nov-15 A	100%
6.06.8.9 - DCP - Spare Storage Room/Toilet				
6.06.8.9.1 - Finishing Works				
18-63975D	DCP - SSR - Partion Wall & Plaster	31-Mar-14 A	11-Apr-14 A	100%
18-63974N	DCP - SSR Handover for Finishing Works	15-Apr-14 A		100%
18-64005D	DCP - SSR - Epoxy Coating and Painting	15-Apr-14 A	05-Jun-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%
6.06.8.9.2 - E&M Works				
18-64014N	DCP Spare Storage Room/Toilet Handover for E&M Works	15-May-14 A		100%

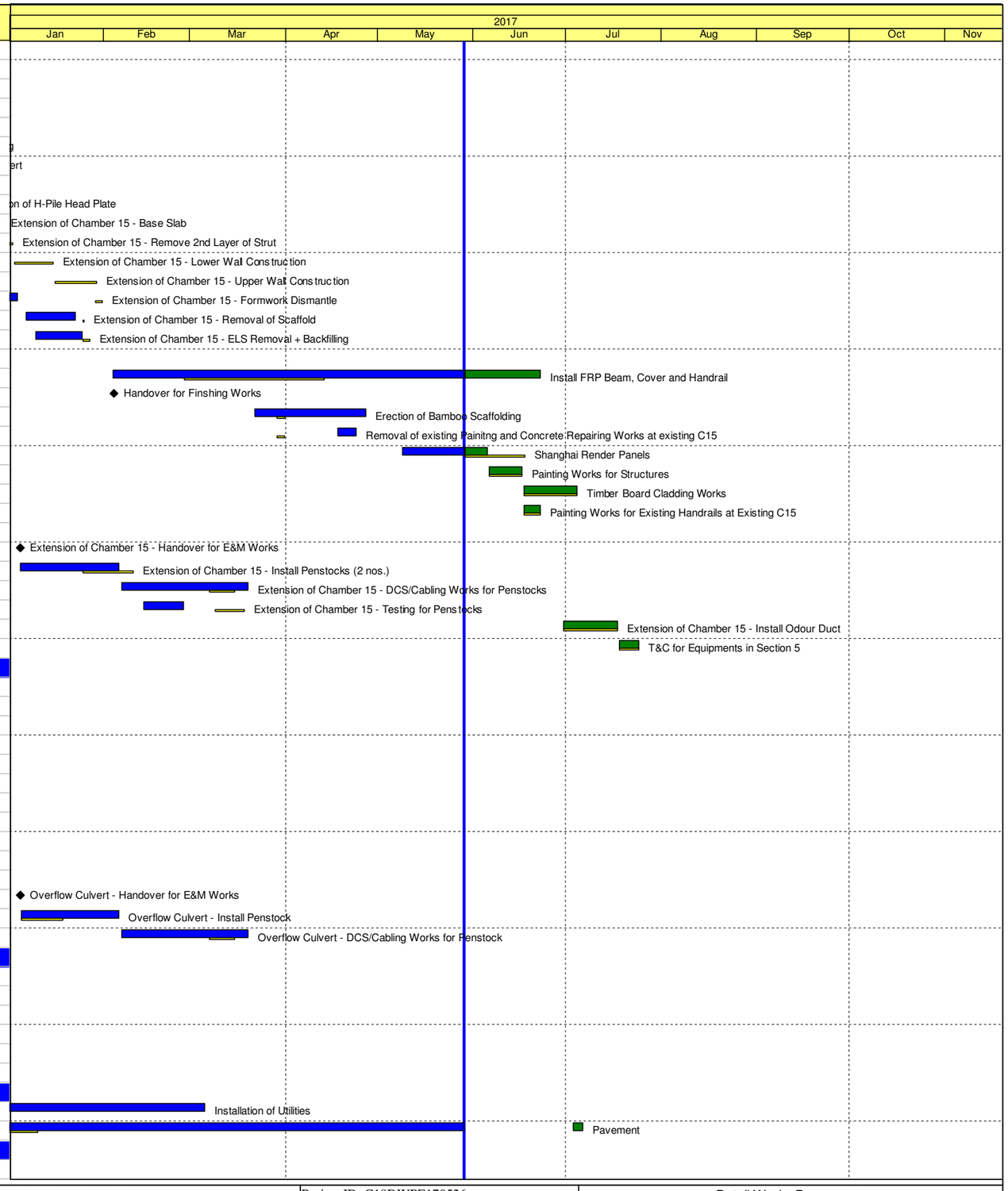
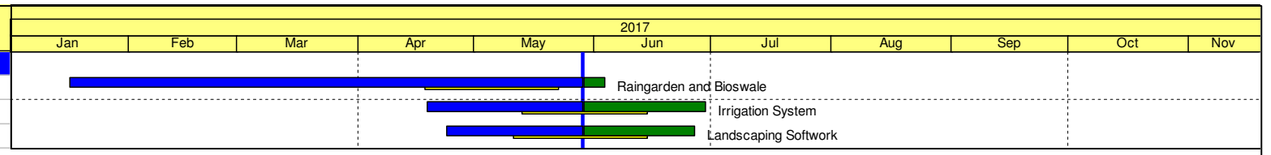


Activity ID	Activity Name	Start	Finish	Physical % Complete
18-63896D	DCP - SSR - MVAC System	22-Dec-14 A	29-Apr-15 A	100%
18-64015D	DCP - SSR - Electrical Works	22-Dec-14 A	10-Jul-15 A	100%
18-64025D	DCP - SSR - Fire Services	03-Feb-15 A	15-Jul-15 A	100%
6.06.8.10 - DCP Statutory Inspection				
18-60600	WSD Connection	28-Oct-15 A	12-Nov-15 A	100%
18-60650	Prep & Sub Form 314 to FSD	13-Nov-15 A	19-Nov-15 A	100%
18-60700	Prep & Sub Form 501 to FSD	13-Nov-15 A	19-Nov-15 A	100%
18-60750	FSD Inspection	11-Mar-16 A	11-Mar-16 A	100%
6.06.8.11 - DCP External Works				
18-64649N	Ext Works - RS Stage 1, DN 600 Manhole & Drain Pipe	25-Mar-14 A	13-May-14 A	100%
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%
18-64647N	Ext Works - RS Stage 1, Draw Pit & Cable Duct	25-Apr-14 A	15-Jul-14 A	100%
18-64670N	Ext Works - MH (SW) 01		25-Apr-14 A	100%
18-64648N	Ext Works - RS Stage 1, Pipe Trench & DN300 Pipe & DN150 Pipe	14-May-14 A	06-Aug-14 A	100%
18-64668N	Ext Works - E3 Cable Draw Pit		07-Jun-14 A	100%
18-64667N	Ext Works - MH (FS) 10		12-Jun-14 A	100%
18-64666N	Ext Works - E14 Cable Draw Pit		25-Jun-14 A	100%
18-64687N	Ext Works - E15 Cable Draw Pit		25-Jun-14 A	100%
18-64660N	Ext Works - Riser Shaft - Stage 2 After NE Demolition (Main Drainage, Ducting, Water Supply, Pipe Trenc	27-Jun-14 A	17-Jul-15 A	100%
18-64680N	Ext Works - E13 Cable Draw Pit		27-Jun-14 A	100%
18-64644	Ext Works - RS Stage 2, Draw Pit and Ducting and Water Mains	10-Jul-14 A	29-Feb-16 A	100%
18-64690N	Ext Works - MH (FS) 06		11-Jul-14 A	100%
18-64665N	Ext Works - MH (FS) 05		11-Jul-14 A	100%
18-64688N	Ext Works - E16 Cable Draw Pit		15-Jul-14 A	100%
18-64662N	Ext Works - MH (FS) 03		19-Jul-14 A	100%
18-64646N	Ext Works - RS Stage 2, Last Manhole and 1050mm Pipe	04-Oct-14 A	06-Nov-14 A	100%
18-64663N	Ext Works - Last Manhole		04-Oct-14 A	100%
18-64645N	Ext Works - RS Stage 2, Remaining Pipe Trench	12-Jul-15 A	17-Jul-15 A	100%
18-64661	Ext Works - Riser Shaft - Stage 3 Remaining Works	22-Jul-15 A	29-Feb-16 A	100%
18-64671	Ext Works - Installation of Access Control System and CCTV System	21-Nov-16 A	13-Jan-17 A	100%
6.06.9 - DOU4 (Variation Order No. 0092)				
18-60800	DOU4 - Plinth [Part 1]	10-Jul-15 A	03-Aug-15 A	100%
18-60100	DOU4 Handover for E&M Works	05-Aug-15 A		100%
18-61050	DOU4 - Install Air Extraction Fan	22-Sep-15 A	07-Nov-15 A	100%
18-61000	DOU4 - Install Bio Trickling Filters	22-Sep-15 A	14-Dec-15 A	100%
18-61100	DOU4 - Install Pumps	05-Oct-15 A	04-Jan-16 A	100%
18-66340	DOU4 - MCC Room	15-Oct-15 A	20-Nov-15 A	100%
18-61120	DOU4 - Install Pipes & Valves	01-Nov-15 A	25-Feb-16 A	100%
18-66360	DOU4 - Pipe Trench	04-Nov-15 A	07-Dec-15 A	100%
18-61140	DOU4 - Install Tanks	21-Nov-15 A	08-Jan-16 A	100%
18-61220	DOU4 - External Works - Laying Cable Duct	01-Dec-15 A	30-Dec-15 A	100%
18-61170	DOU4 - MCC Room - Install BS Electrical	15-Dec-15 A	29-Jan-16 A	100%
18-60110	DOU4 - Plinth [Part 2]	19-Dec-15 A	11-Jan-16 A	100%
18-61070	DOU4 - Install FRP Air Duct & Accessories	05-Jan-16 A	29-Feb-16 A	100%
18-61110	DOU4 - MCC Room - Install MVAC	11-Jan-16 A	20-Feb-16 A	100%
18-61310	DOU4 - MCC Room - Install FS System	15-Jan-16 A	29-Feb-16 A	100%
18-61160	DOU4 - Install Power Supply System	27-Jan-16 A	17-Feb-16 A	100%
18-61260	DOU4 - MCC Room - Install Electrical Field Equipment	15-Feb-16 A	08-Jul-16 A	100%
18-61210	DOU4 - External Works - Laying Water Pipe	23-Feb-16 A	07-Jul-16 A	100%
18-61180	DOU4 - Install Control Panel	28-Mar-16 A	08-Jul-16 A	100%
18-61275	DOU4 - Drain Pipe and Odour Duct Connection to Sed. Tank	25-Apr-16 A	23-Jun-16 A	100%
18-61280	DOU4 - MCC Room - UPS System	01-Jun-16 A	06-Oct-16 A	100%
18-61290	DOU4 - MCC Room - DCS System	01-Jun-16 A	14-Jul-16 A	100%
18-61270	DOU4 - Switch Room in Sed. Tank - Install ATS Panel for Dual Source	01-Jun-16 A	02-Jun-16 A	100%
18-61230	DOU4 - External Works - Odour Duct to MPS1	27-Jun-16 A	09-Jan-17 A	100%
18-61250	DOU4 - Install CCTV Remote Monitoring & FS Common Alarm to MPS1	11-Jul-16 A	09-Jan-17 A	100%
18-61200	DOU4 - Functional Test for Equipments	18-Jul-16 A	11-Jan-17 A	100%
18-61190	DOU4 - Bacterial Incubation	22-Jul-16 A	14-Oct-16 A	100%
18-61300	DOU4 - MCC Room - Install CCTV	25-Jul-16 A	12-Aug-16 A	100%

Activity ID	Activity Name	Start	Finish	Physical % Complete
18-61240	DOU4 - Sampling Test	22-Sep-16 A	19-Oct-16 A	100%
6.06.10 - DOU8				
18-61450	DOU8 - Slab & Plinth	17-Jul-15 A	24-Jul-15 A	100%
18-61500D	DOU8 - Install Air Extraction Pumps	25-Jul-15 A	20-Sep-15 A	100%
18-61550D	DOU8 - Install Dehumidifiers	25-Jul-15 A	20-Sep-15 A	100%
18-61600D	DOU8 - Install Activated Carbon Filters	25-Jul-15 A	05-Aug-15 A	100%
18-61710	DOU8 - Control Panel	27-Jul-15 A	25-Dec-15 A	100%
18-61499N	DOU8 Handover for E&M Works	27-Jul-15 A		100%
18-61650D	DOU8 - Install Air Ducts & Accessories	10-Aug-15 A	20-Nov-15 A	100%
18-61700	DOU8 - Install Power Supply	10-Aug-15 A	30-Dec-15 A	100%
6.06.11 - Existing Chamber 15				
6.06.11.1 - E&M Works				
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%
6.06.12 - Testing & Commissioning of Section 4				
18-62400	Divert Flow to Effluent Tunnel from Exist. Culvert		20-Jan-16 A	100%
18-62350	T&C of Effluent Tunnel	25-Jan-16 A	22-Feb-16 A	100%
18-11001	Section 4 - Substantial Completion		22-Feb-16 A	100%
18-62375	Liaison Works with Operators and Other Parties	08-Apr-16 A	20-Apr-16 A	100%
18-62351	Section 4 - Complete Remaining Works		29-May-17	0%
6.06.13 - Operation Manual				
18-64425	Prepare and Submit 1st Draft of Operation Manual	22-Sep-15 A	09-Oct-15 A	100%
18-64445	Enginer Review and Comment 1st Draft Operation Manual	23-Sep-15 A	17-Oct-15 A	100%
18-64455	Prepare and Submit 2nd Draft of Operation Manual	08-Dec-15 A	15-Jan-16 A	100%
6.06.14 - Portion 14				
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 Firemains 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%
6.07 - Section 5				
6.07.1 - Extension of Chamber 15				
6.07.1.1 - Condition Survey at Existing Box Culvert [Variation Order]				
18-66800	Fabrication of Temporary Steel Panels for Chamber 15	15-Feb-16 A	27-Feb-16 A	100%
18-66780	Fabrication of Temporary Steel Panels for Chamber 9	15-Feb-16 A	30-Mar-16 A	100%
18-62610	Effluent Blocking Works of Existing Box Culvert at Chamber 14 [Not Effective]	16-Feb-16 A	07-Mar-16 A	100%
18-62590	Condition Survey at Existing Box Culvert	03-Mar-16 A	08-Mar-16 A	100%
18-62560	Installation of Temporary Steel Panels at Chamber 15 [Not Effective]	14-Mar-16 A	19-Mar-16 A	100%
18-66770	Installation of Temporary Steel Panels at Chamber 9	30-Mar-16 A	18-Apr-16 A	100%
18-66830	Re-installation of Steel Panels at Chamber 15 [1st attempt]	22-Apr-16 A	27-Apr-16 A	100%
18-66850	Underwater Sealing Up Works at Chamber 15 [2nd attempt]	12-May-16 A	04-Jun-16 A	100%
18-66790	Dewatering of Existing Box Culvert	28-May-16 A	25-Jun-16 A	100%
18-66920	Underwater Sealing Up Works at Chamber 9 [2nd attempt]	22-Jun-16 A	23-Jun-16 A	100%
18-66930	Underwater Sealing Up Works at Chamber 15 [3rd attempt]	23-Jun-16 A	23-Jun-16 A	100%
6.07.1.2 - Foundation				
18-62580	De-commissioning of Existing Box Culvert, Pipe Trench and TRC System	04-May-16 A	16-Jun-16 A	100%
18-66760	Mobilization of Piling Rig and Accessories	13-May-16 A	18-May-16 A	100%
18-66720	Pre-bore H-Piles (6 Nos@2 day/no.) (EOC03 - EOC08)	19-May-16 A	07-Jun-16 A	100%
18-66940	Pre-bore H-Piles (2 Nos@2 day/no.) (EOC01 - EOC02)	05-Jun-16 A	09-Jul-16 A	100%
18-66950	Boring Works to Overcome Unforeseen Obstructions for EOC01 and EOC02	10-Jun-16 A	29-Jun-16 A	100%
18-66880	Demolition of Portion of Existing Box Culvert	13-Jun-16 A	27-Jun-16 A	100%



Activity ID	Activity Name	Start	Finish	Physical % Complete
18-66860	Pre-bore H-Piles (2 Nos@2 day/no.) (EOC09 - EOC10)	28-Jun-16 A	30-Jun-16 A	100%
18-66970	Proof Drilling	15-Jul-16 A	19-Jul-16 A	100%
18-66740	Pile Loading Test	25-Jul-16 A	10-Aug-16 A	100%
6.07.1.3 - Temporary Works				
18-62550	Installation of Sheet Piles with Pre-boring Works	12-Aug-16 A	24-Sep-16 A	100%
18-62600	ELS Excavation & Strutting	26-Sep-16 A	20-Nov-16 A	100%
18-66400	Demolition of the Existing Culvert	13-Oct-16 A	11-Nov-16 A	100%
6.07.1.4 - Structure				
18-66640	Installation of H-Pile Head Plate	16-Nov-16 A	21-Nov-16 A	100%
18-62650	Extension of Chamber 15 - Base Slab	16-Nov-16 A	01-Dec-16 A	100%
18-66730	Extension of Chamber 15 - Remove 2nd Layer of Strut	02-Dec-16 A	03-Dec-16 A	100%
18-66650	Extension of Chamber 15 - Lower Wall Construction	03-Dec-16 A	17-Dec-16 A	100%
18-66660	Extension of Chamber 15 - Upper Wall Construction	18-Dec-16 A	30-Dec-16 A	100%
18-66670	Extension of Chamber 15 - Formwork Dismantle	31-Dec-16 A	04-Jan-17 A	100%
18-66750	Extension of Chamber 15 - Removal of Scaffold	07-Jan-17 A	23-Jan-17 A	100%
18-66680	Extension of Chamber 15 - ELS Removal + Backfilling	10-Jan-17 A	25-Jan-17 A	100%
6.07.1.5 - Architectural incld. Exist. C15				
18-62700	Install FRP Beam, Cover and Handrail	04-Feb-17 A	22-Jun-17	70%
18-62699	Handover for Finshing Works	04-Feb-17 A		100%
18-67060	Erection of Bamboo Scaffolding	22-Mar-17 A	27-Apr-17 A	100%
18-67070	Removal of existing Painitng and Concrete Repairing Works at existing C15	18-Apr-17 A	24-Apr-17 A	100%
18-62709	Shanghai Render Panels	09-May-17 A	05-Jun-17	40%
18-62729	Painting Works for Structures	06-Jun-17	16-Jun-17	0%
18-62719	Timber Board Cladding Works	17-Jun-17	04-Jul-17	0%
18-62739	Painting Works for Existing Handrails at Existing C15	17-Jun-17	22-Jun-17	0%
6.07.1.6 - E&M				
18-62749	Extension of Chamber 15 - Handover for E&M Works	05-Jan-17 A		100%
18-62750	Extension of Chamber 15 - Install Penstocks (2 nos.)	05-Jan-17 A	06-Feb-17 A	100%
18-62770	Extension of Chamber 15 - DCS/Cabling Works for Penstocks	07-Feb-17 A	20-Mar-17 A	100%
18-62780	Extension of Chamber 15 - Testing for Penstocks	14-Feb-17 A	27-Feb-17 A	100%
18-62760	Extension of Chamber 15 - Install Odour Duct	30-Jun-17	17-Jul-17	0%
18-62800	T&C for Equipments in Section 5	18-Jul-17	24-Jul-17	0%
6.07.2 - Overflow Culvert				
6.07.2.1 - Temporary Works				
18-62950	Overflow Culvert - Installation of Sheet Piles with Pre-boring Works	05-Nov-15 A	11-Dec-15 A	100%
18-63000	Overflow Culvert - ELS Excavation & Strutting	21-Dec-15 A	23-Jan-16 A	100%
6.07.2.2 - Foundation				
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%
6.07.2.3 - Structure				
18-63050	Overflow Culvert - Base Slab Construction	15-Feb-16 A	29-Feb-16 A	100%
18-63060	Overflow Culvert - Wall & Roof Slab Construction	01-Mar-16 A	21-Mar-16 A	100%
18-63070	Overflow Culvert - ELS Removal + Backfilling	22-Mar-16 A	20-Aug-16 A	100%
6.07.2.4 - E&M				
18-66810	Overflow Culvert - Handover for E&M Works	05-Jan-17 A		100%
18-66820	Overflow Culvert - Install Penstock	05-Jan-17 A	06-Feb-17 A	100%
18-66870	Overflow Culvert - DCS/Cabling Works for Penstock	07-Feb-17 A	20-Mar-17 A	100%
6.07.3 - Demolition of Existing Dechlorination Plant				
18-63130	Liaison with ST2	03-Feb-16 A	23-Feb-16 A	100%
18-63140	Relocation of Existing ADF PLC from Existing DCP to New DCP	25-Feb-16 A	23-Mar-16 A	100%
18-63110	De-commsioning of E&M System	08-Apr-16 A	20-Apr-16 A	100%
18-63120	Inspection with ST2	12-Apr-16 A	20-Apr-16 A	100%
18-63100	Demolition of Existing Dechlorination Plant	21-Apr-16 A	28-May-16 A	100%
18-66960	Backfilling of the Area up to Existing Ground Level	07-Jun-16 A	23-Jun-16 A	100%
6.07.4 - External Works				
18-63150	Installation of Utilities	28-Jun-16 A	06-Mar-17 A	100%
18-63210	Pavement	23-Aug-16 A	06-Jul-17	95%
6.07.5 - DOU4 - Chemical Scrubber (Variation Order No. 0092)				
18-63310	Construction of Plinth	11-Mar-16 A	15-Mar-16 A	100%



Activity ID	Activity Name	Start	Finish	Physical % Complete
6.07.6 - Landscape Works				
18-63220	Raingarden and Bioswale	17-Jan-17 A	03-Jun-17	95%
18-63300	Irrigation System	19-Apr-17 A	29-Jun-17	30%
18-63200	Landscaping Softwork	24-Apr-17 A	26-Jun-17	40%