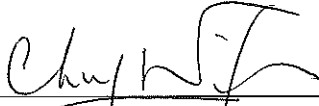


Harbour Area Treatment Scheme Stage 2A

**Contract No. DC/2007/23, DC/2009/10,
DC/2009/17, DC/2009/18 and
DC/2009/19**

**Consolidated Quarterly Environmental
Monitoring and Audit Report
March 2014 to May 2014**

(Version 1.0)

Certified By	 _____ (Environmental Team Leader)
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REMARKS:

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

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

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

14 August 2014
By Post

Attn: Mr. Danny Tang

Dear Sir,

**Agreement No. CE 8/2009(EP)
Harbour Area Treatment Scheme (HATS) Stage 2A
Independent Environmental Checker for Construction Phase – Investigation
Submission of Quarterly EM&A Consolidated Report (Version 1.0) for Stonecutters
Island Sewage Treatment Works for March to May 2014 (Issue No. 18)**

We refer to the captioned report consolidating the individual ETL certified and IEC verified Quarterly EM&A Reports for Contracts No. DC/2007/23, DC/2009/10, DC/2009/17, DC/2009/18 and DC/2009/19 for Stonecutters Island works site for HATS Stage 2A. We confirm we have no comment.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED

A handwritten signature in black ink, appearing to read "Anne F Kerr".

Dr. Anne F Kerr
Independent Environmental Checker

c.c. Ove Arup & Partners HK Ltd.

Mr. Ted Y F Tang

Fax: 2370 4377

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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 18th 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, DC/2009/18 and DC/2009/19.
 - Contract no. DC/2007/23 – Construction of Sewage Conveyance System from North Point to Stonecutters Island;
 - Contract no. DC/2009/17 - Upgrading Works at Stonecutters Island Sewage Treatment Works – Sludge Dewatering Facilities; and
 - Contract no. DC/2009/10 - Upgrading Works at Stonecutters Island Sewage Treatment Works – Main Pumping Station, Sedimentation Tanks and Ancillary Facilities;
 - Contract no. DC/2009/18 - Upgrading Works at Stonecutters Island Sewage Treatment Works – Effluent Tunnel and Disinfection Facilities; and
 - Contract no. DC/2009/19 – Upgrading Woks at Stonecutters Island Sewage Treatment Works – Sludge Handling and Disposal 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 was commenced on 1 September 2013.
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 2014 to May 2014.
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/2007/23	Executive Summary	At SCISTW, air quality monitoring station AM6 and noise monitoring station NM5 were monitored by ET for Contract no. DC/2007/23.
	Web Site	http://www.hats2a-ema.com/RP_EMA/DC200723/EM&A%20Report-DC200723.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.
	Web Site	http://www.hats2a-ema.com/RP_EMA/DC%202009%2017/EM&A%20Report-DC200917.html
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/EM&A%20Report-DC200910.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/EM&A%20Report-DC200918.html
DC/2009/19	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.
	Web Site	http://www.hats2a-ema.com/RP_EMA/DC200919/EMA%20Report-DC200919.html

Environmental Monitoring Works

- The environmental monitoring works were conducted by the ETs for the Contracts DC/2007/23, DC/2009/10 and DC/2009/18, while no monitoring work is requested for DC/2009/17 and DC/2009/19 since the monitoring stations were duplicated. Site audits were conducted once per week for each contract by their ETs.
- 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/2007/23	AM6	1-hr TSP	0	0	0	0	N/A
		24-hr TSP	0	0	0	0	N/A
DC/2009/10	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/2007/23	NM5	Noise	0	0	0	0	N/A
DC/2009/10	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 2014	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 five contracts are provided in the **Appendix H**.

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/2007/23, DC/2009/10, DC/2009/17, DC/2009/18 and DC/2009/19 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 18th consolidated quarterly EM&A report summarizing the EM&A works conducted for the Project at SCISTW during March 2014 to May 2014.
- 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 Since the construction works of Contract DE/2009/02 was scheduled to be substantially completed at the end of August 2012. The environmental monitoring works at air quality monitoring station AM8 had been handed over from the ET of Contract DE/2009/02 to Cinotech, the ET of Contract DC/2009/10 from September 2012.

Current Contracts at SCISTW

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

Contract no. DC/2007/23

- Construction of sewage conveyance system between Sai Ying Pun junction shaft and Stonecutters Island Sewage treatment Works;
- Construction of riser shaft at Stonecutters Island Sewage Treatment Works;
- Construction of Stage 2 Connecting Adit between the riser shaft and Stage 2 Main Pumping Station side chamber (by others) at Stonecutters Island Sewage Treatment works.

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).

Contract no. DC/2009/19

- Construction of two brand new purpose-built self-propelled vessels with cranes mounted on vessels;
- Construction of ultimate 400 number of sludge containers for transporting dewatered sludge; and
- Improvement and refurbishment works at 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/2007/23	DC/2009/10
Contract Title:	Construction of Sewage Conveyance System from North Point to Stonecutters Island;	Upgrading Works at SCISTW - Main Pumping Station, Sedimentation Tanks and Ancillary Facilities
Consultant	Metcalf & Eddy – AECOM JV	Ove Arup & Partners HK Ltd
The Engineer	Keith Tsang (Tel:2605 6262)	S.Y.Chan (Tel: 2528 3031)
The Engineer Representative	Y.H. Fung (Tel: 3713 3110)	Ted Tang (Tel: 2370 4311)
ER's Coordinator	Y.H. Fung (Tel: 3713 3110)	Natalie Kwok (Tel: 6794 8844)
Independent Environmental Checker	Dr. Anne Kerr (Tel:28285757)	Dr. Anne Kerr (Tel:28285757)
Contractor	Gammon Construction Ltd	Sun Fook Kong – Biwater Joint Venture
Site Agent	Max Ko (Tel: 9033 1292)	Mr. Ivan Tse (Tel: 6200 2149)
Environmental Officer	Leo Chow (Tel:9300 2013)	Mr. Ray Cheung (Tel: 2620 0070)

Contract No./ Position	DC/2007/23	DC/2009/10
Environmental Team	Environmental Resources Management Ms. Winnie Ko (Tel: 2271 3000)	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	Ted Tang (Tel: 2370 4311)	Ted Tang (Tel: 2370 4311)
ER's Coordinator	Natalie Kwok (Tel: 6794 8844)	William Yu (Tel: 9705 9566)
Independent Environmental Checker	Dr. Anne Kerr (Tel:28285757)	Dr. Anne Kerr (Tel:28285757)
Contractor	China State- ATAL Joint Venture	Chun Wo – CEC Joint Venture
Site Agent	Mr. Ken Chong (Tel: 2370 3166)	Mr. W.C. Lee (Tel: 3975 6388)
Environmental Officer	Mr. Vincent Lai (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)
Contract No.	DC/2009/19	
Contract Title:	Upgrading Woks at Stonecutters Island Sewage Treatment Works – Sludge Handling and Disposal Facilities	
Consultant	Ove Arup & Partners HK Ltd	
The Engineer	Mr. Tang (Tel: 2990 6992)	
The Engineer Representative	Mr. Johnny Mak (Tel: 2990 6986)	
Independent Environmental Checker	Dr. Anne Kerr (Tel:2828 5757)	
Contractor	SITA – ATAL Joint Venture	
Senior Project Manager	Mr. Laurent Bickert (Tel: 2590 5680)	
Environmental Team	Material Lab Consultants Limited Mr. Joseph Poon (Tel: 2450 8238)	

Construction Programme

- 1.10 The construction program for the Contracts at SCISTW are provided in **Appendix L**. Major construction works undertaken during the reporting quarter include:

Table 1.2 Construction Works in the Reporting Quarter

Contract No.	Construction Works in the Reporting Quarter
DC/2007/23	<p><u>March 2014:</u> Riser Shaft:</p> <ul style="list-style-type: none"> • Construction of lower shaft. <p>Production Shaft (Tunnel L):</p> <ul style="list-style-type: none"> • Pre-excavation grouting; and • Drilling and blasting. <p><u>April 2014:</u> Riser Shaft:</p> <ul style="list-style-type: none"> • Construction of shaft permanent lining. <p>Production Shaft (Tunnel L):</p> <ul style="list-style-type: none"> • Pre-excavation grouting; and • Drilling and blasting. <p><u>May 2014:</u> Riser Shaft:</p> <ul style="list-style-type: none"> • Construction of shaft permanent lining. <p>Production Shaft (Tunnel L):</p> <ul style="list-style-type: none"> • Pre-excavation grouting; and • Drilling and blasting.
DC/2009/17	<p><u>March 2014:</u> Portion 3:</p> <ul style="list-style-type: none"> • Installation of FRP works was in progress. • Waterproofing works on R/F of vehicle washing bay were completed. • Epoxy painting on G/F was in progress. <p>Portion 4:</p> <ul style="list-style-type: none"> • Installation of green roof system was in progress. • Finishing works of external walls were in progress. • Installation of Linwood decking on R/F of SDB was in progress. • Installation of FRP works was in progress. • Epoxy painting on 1/F & 2/F of SDB was in progress. <p>Portion 5:</p> <ul style="list-style-type: none"> • Nil <p>External Works:</p> <ul style="list-style-type: none"> • SWAC / PMAC submission and implementation of TTA for the commencement of external works were in progress. • Construction of cable trench and reinstatement works at Zone A5 (Stage 1) were completed. Breaking of concrete pavement for its Stage 2 was in progress. • Reinstatement works at Zone C2 (Stage 4) were completed. • Backfilling works at Zone C3 were in progress. • ELS works for laying of centrate pipes at Zone C3a (stage 2) were completed. The laying of pipes was in progress. • Backfilling works at Zone C5 were in progress. • ELS works for laying of sludge pipes between existing sludge storage

	<p>tank nos. 3 & 4 at Zone C5 were completed.</p> <ul style="list-style-type: none">• Construction of U-channel around SDB was in progress.• Construction of footpath near seafront of NSCS was in progress.• Laying of pipe-in-pipe for chemical and sodium hypochlorite pipe on the roof of CEPT Tank was in progress.• WSD commenced the excavation works for connecting of our constructed watermains.• Installation of pipeworks and ductworks for the following systems were in progress. <p><u>April 2014:</u></p> <p>Portion 3:</p> <ul style="list-style-type: none">• Installation of FRP works was in progress.• Epoxy painting on G/F was in progress. <p>Portion 4:</p> <ul style="list-style-type: none">• Installation of green roof system was in progress.• Finishing works of external walls were in progress.• Installation of Linwood decking on R/F of SDB was in progress.• Installation of FRP works was in progress.• Epoxy painting on 1/F & 2/F of SDB was in progress. <p>Portion 5:</p> <ul style="list-style-type: none">• Nil <p>External Works:</p> <ul style="list-style-type: none">• SWAC / PMAC submission and implementation of TTA for the commencement of external works were in progress.• Construction of cable trench and reinstatement works at Zone A5 (Stage 1) were completed. Breaking of concrete pavement for its Stage 2 was in progress.• Reinstatement works at Zone C2 (Stage 4) were completed.• Backfilling works at Zone C3 were in progress.• ELS works for laying of centrate pipes at Zone C3a (stage 2) were completed. The laying of pipes was in progress.• Backfilling works at Zone C5 were in progress.• ELS works for laying of sludge pipes between existing sludge storage tank nos. 3 & 4 at Zone C5 were completed.• Construction of U-channel around SDB was in progress.• Construction of footpath near seafront of NSCS was in progress.• Laying of pipe-in-pipe for chemical and sodium hypochlorite pipe on the roof of CEPT Tank was in progress.• WSD commenced the excavation works for connecting of our constructed watermains.• Installation of pipeworks and ductworks for the Deodourisation systems were in progress. <p><u>May 2014:</u></p> <p>Portion 3:</p> <ul style="list-style-type: none">• Installation of FRP works was in progress.• Epoxy painting on G/F was in progress. <p>Portion 4:</p> <ul style="list-style-type: none">• Installation of green roof system was in progress.• Finishing works of external walls were in progress.• Installation of FRP works was in progress.• Epoxy painting on 1/F & 2/F of SDB was in progress.
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	<p>Portion 5:</p> <ul style="list-style-type: none"> • Installation of FRP covers for pipe openings at roof of SST nos. 6 & 7 was completed. <p>External Works:</p> <ul style="list-style-type: none"> • SWAC / PMAC submission and implementation of TTA for the commencement of external works were in progress. • Construction of cable trench at Zone A5 (Stage 2) was completed. And the reinstatement works were in progress. • Backfilling works at Zone C3 were in progress. • Laying of centrate pipes at Zone C3a (stage 2) was completed. The construction of manholes and cable ducts & drawpit at Zone C3a (Stage2) were completed. And the backfilling works were in progress. • Backfilling works at Zone C5 were in progress. • Replacement of sludge feed pipes between existing sludge storage tank nos. 3 & 4 at Zone C5 was in progress. • Construction of U-channel and footpath around SDB were in progress. • Construction of footpath near seafront of NSCS was in progress. • WSD tee connection works for existing salt and fresh watermains were completed. Cleaning, Stabilization and water sampling works for FS fresh watermain were completed with satisfactory results. And the concerned salt and fresh watermains was connected to the existing ones. • Erection of hoarding (Phase 1) around site boundary of Portion 6 (i.e. near Northern Sludge Cake Silo and existing Cake Silo Facilities) facilitating the demolition works was in progress. • Installation of pipeworks and ductworks for the Deodourisation systems were in progress.
DC/2009/10	<p><u>March 2014:</u></p> <ul style="list-style-type: none"> • At MPS2, Construction of Roof Floor at Sector 2 was scheduled on 26 Mar 2014 (completed). Construction of Office Floor at Sector 1 was scheduled on 30 Mar 2014 (completed). Construction of perimeter wall, RC wall (W3) at Sector 1 up to +25.9mPD are in progress and the construction of perimeter wall and lift shaft at Sector 3 are in progress. • At Switchgear Building, the external finishing work, handrail installation and green roof construction are in progress. • At Portion 3, construction of RC slab at +10.30mPD of G.L. A-C/29-33 and construction of RC wall at G.L 31/K-M were completed. Rebar Fixing for Wall of Distribution Channel at +13.20mPD is in progress. Erection of Bulkhead wall for connection works at Northern Effluent Culvert is completed. • Driven H-pile works piling for the Main Flow Culvert, Odour Duct Bridge and DOU No.3 were completed during this report period. Piles foundation for service duct was completed (28/28, 100% completed) and sheet piling for Main Flow Culvert is in progress. • At Portion 8, construction of base slab for Sodium Hypochlorite Storage Compound was completed and the construction of RC column and footing are in progress. <p><u>April 2014:</u></p> <ul style="list-style-type: none"> • At MPS2, the construction of Roof floor at Sector 1 is in progress. The construction of perimeter wall and lift shaft at Sector 3 up to +18.9mPD completed and the construction of Office floor are in progress.

	<ul style="list-style-type: none"> • At Switchgear Building, the external finishing work, handrail installation and green roof construction are in progress. • At Portion 3, construction of RC slab at +10.30mPD of G.L. B-C/29-33 was completed. Rebar Fixing for Wall at +13.20mPD of G.L. M-N/29-33 and Rebar fixing for slab at +5.0mPD of G.L B-E/34-38 are in progress. • Driven H-pile works piling for the Main Flow Culvert, Odour Duct Bridge and DOU No.3 were completed. Sheet piling for service duct between MPS2 and SGB was completed and construction of service duct is in progress and TAM grouting for Main Flow Culvert is in progress • At Portion 8, construction of column for Sodium Hypochlorite Storage Compound is in progress. <p><u>May 2014:</u></p> <ul style="list-style-type: none"> • At MPS2, Construction of Roof Floor at Sector 1 completed on 25 May 2014. Construction of Office Floor at Sector 4 completed 6 May 2014 and Construction of Office Floor at Sector 3 completed on 13 May 2014. • At Switchgear Building, the external finishing work, handrail installation and green roof construction are in progress. • At Portion 3, construction of RC slab at +4.80mPD of G.L. B-E/34-38 was completed on 16 May 2014. Construction of RC slab at +14.50mPD of G.L. B-C/32-33 and G.L L-M/32-33 were completed. Rebar Fixing for Base Slab at +4.80mPD of G.L. B-C/33-35 is in progress. • ELS at Main Flow Culvert has started and is in progress, Sub-structure of Odour Duct Bridge is in progress and Breakthrough for service duct between MPS2 and SGB is in progress • At Portion 8, construction of column for Sodium Hypochlorite Storage Compound is in progress.
DC/2009/18	<p><u>March 2014:</u></p> <p>Portion 3:</p> <ul style="list-style-type: none"> • Blasting and rock excavation at Riser Shaft Tunnel Extension; • Assembly of Tunnel Shutter for Tunnel Lining; and • ABWF Works at Dechlorination Compound. <p>Portion 7:</p> <ul style="list-style-type: none"> • Blasting and rock excavation at Drop Shaft Tunnel Extension. <p><u>April 2014:</u></p> <p>Portion 3:</p> <ul style="list-style-type: none"> • Blasting and rock excavation at Riser Shaft Tunnel Extension; • Assembly of Tunnel Shutter for Tunnel Lining; and • ABWF Works at Dechlorination Compound. <p>Portion 7:</p> <ul style="list-style-type: none"> • Blasting and rock excavation at Drop Shaft Tunnel Extension. <p><u>May 2014:</u></p> <p>Portion 3:</p> <ul style="list-style-type: none"> • Assembly of Tunnel Shutter for Tunnel Lining at Riser Shaft Tunnel

	<p>Extension;</p> <ul style="list-style-type: none"> • Concreting of Tunnel Shutter for Tunnel Lining at Riser Shaft Tunnel Extension; and • ABWF Works at Dechlorination Compound. <p>Portion 7:</p> <ul style="list-style-type: none"> • Blasting and rock excavation at Drop Shaft Tunnel Extension.
DC/2009/19	<p><u>March 2014:</u></p> <ul style="list-style-type: none"> • Interim Operation commenced on 1 November 2013. No construction works have been carried out during the reporting quarterly period. <p><u>April 2014:</u></p> <ul style="list-style-type: none"> • Interim Operation commenced on 1 November 2013. No construction works have been carried out during the reporting quarterly period. <p><u>May 2014:</u></p> <ul style="list-style-type: none"> • Interim Operation commenced on 1 November 2013. No construction works have been carried out during the reporting quarterly period.

Summary of EM&A Requirements

- 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 2014 to May 2014, 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, AM6, 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	Monitored under Contract No.	Location of Measurement
AM6	DC/2007/23	Works site boundary of DC/2007/23
AM7	DC/2009/10	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)

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 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 **Table 2.3** summaries the air quality monitoring results at AM6, AM7, AM8 and AM9 in reporting quarter.

Table 2.3 Summary of 1-hour and 24-hour TSP Monitoring Results

Air Quality Monitoring Station	Reporting Month	Average μgm^{-3}	Range μgm^{-3}	Action Level μgm^{-3}	Limit Level μgm^{-3}
1 hour TSP					
AM6	Mar 2014	162	115 - 193	346	500
	Apr 2014	191	109 - 236		
	May 2014	164	113 - 224		
AM7	Mar 2014	91	18 - 313	322	
	Apr 2014	110	27 - 266		
	May 2014	34	15 - 89		
AM8	Mar 2014	87	20 - 304	307	
	Apr 2014	104	23 - 256		
	May 2014	32	11 - 92		
AM9	Mar 2014	213.3	121.8 – 296.2	318	
	Apr 2014	110.4	24.0 – 271.3		
	May 2014	92.5	30.0 – 178.0		
24 hour TSP					
AM6	Mar 2014	101	82 - 131	196	
	Apr 2014	107	95 - 113		
	May 2014	84	60 - 109		
AM7	Mar 2014	129	88 - 161	207	
	Apr 2014	146	101 - 179		
	May 2014	80	56 - 133		
AM8	Mar 2014	72	48 - 92	158	
	Apr 2014	62	28 - 98		
	May 2014	42	26 - 71		
AM9	Mar 2014	118.7	55.5 - 144.5	169	
	Apr 2014	114.5	95.8 - 124.0		
	May 2014	85.1	46.1 – 105.4		

- 2.7 All 1-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded. Summary of exceedance is presented in **Appendix E**.
- 2.8 All 24-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded. Summary of exceedance is presented in **Appendix E**.
- 2.9 The graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix B**.
- 2.10 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 two designated monitoring stations as listed in **Table 3.1**. **Figure 1** shows the locations of these stations.

Table 3.1 Noise Monitoring Stations

Monitoring Station	Monitored under Contract No.	Location of Measurement
NM5	DC/2007/23	Near DSF Diving Rescue and Training Centre
NM6	DC/2009/10	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	$L_{eq}(30 \text{ min.})$ dB(A)	0700-1900 hrs on weekdays	Once per week
NM6 NM7	$L_{eq}(5 \text{ min.})$ 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/2007/23, DC/2009/10 and DC/2009/18.

Results and Observations

- 3.6 **Table 3.3** summaries the noise monitoring results at NM5, NM6 and NM7 in reporting quarter.

Table 3.3 Summary of Noise Monitoring Results

For the time period 0700-1900 hrs. on weekdays			
Monitoring Station	Reporting Month	Range, dB(A) L _{eq} (30 min.)	Limit Level ,dB(A) L _{eq} (30 min.)
NM5	Mar 2014	61 - 63	75.0
	Apr 2014	60 - 63	
	May 2014	59 - 62	
NM6	Mar 2014	63.2 - 65.6	
	Apr 2014	63.5 - 67.3	
	May 2014	64.6 - 68.2	
NM7	Mar 2014	64.8 - 67.6	
	Apr 2014	66.5 - 69.8	
	May 2014	65.4 - 72.8	
For the time period 1900-2300 hrs on weekdays/ For the time period 0700-2300 hrs on Public Holiday			
NM5	Mar 2014	60 - 63	70.0
	Apr 2014	55 - 60	
	May 2014	57 - 60	
NM7	Mar 2014	64.4 - 64.7	
	Apr 2014	63.3 - 64.7	
	May 2014	63.7 - 64.2	
All days during 2300 to 0700 hours of the next day			
NM7	Mar 2014	58.8 - 59.5*	55.0
	Apr 2014	58.8 - 59.6*	
	May 2014	58.9 - 59.4*	

Remarks*: Since the construction noise levels recorded in restricted hour from 23:00 to 07:00 of the next day were lower than the baseline level (i.e. 59.7 dB (A)), the recorded noise levels were considered non-valid exceedance of Limit Level.

- 3.7 All construction noise monitoring at two designated locations were conducted by their ETs as scheduled in the reporting quarter.
- 3.8 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 G**.
- 3.9 The graphical presentations of Noise monitoring results are shown in **Appendix C**.
- 3.10 The major noise sources identified at the designated noise monitoring stations during day time were the noise generated from trucks movement outside the noise enclosure, concreting work and the traffic noise from the Container Port Road South close to the site boundary of Contract No: DC/2009/18; while the major noise sources identified during the evening and night time was the traffic noise from the Container Port Road South and Stonecutters Bridge near to the Project area since the Construction works were mainly conducted within the noise enclosure during restricted hours.

4 ENVIRONMENTAL AUDIT

Site Audits

- 4.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in 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 five contracts were extracted from their reports and presented in **Appendix F**.

Review of Environmental Monitoring Procedures

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

Status of Environmental Licensing and Permitting

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

5 STATUS OF WASTE MANAGEMENT

5.1 The amount of wastes generated by the activities of contracts in the reporting quarter is the following:

Table 5.1 Summary of Amount of Waste Generated in Reporting Quarter

Contract	Reporting Month	Inert C&D ¹ Materials	Other C&D ² Waste	Chemical Waste	Marine Deposit		
					Type 1 (m ³)	Type 2 (m ³)	Type 3 (Tonnes)
DC/2007/23	Mar 2014	14,770*(m ³)	188*(kg) and 174*(m ³)	0*	0*	0*	0*
	Apr 2014	13,433*(m ³)	4*(kg) and 121*(m ³)	0*	0*	0*	0*
	May 2014	16,433*(m ³)	9*(kg) and 136*(m ³)	0*	0*	0*	0*
DC/2009/10	Mar 2014	541(m ³)	109(kg) and 43(m ³)	0	0	0	0
	Apr 2014	582(m ³)	1,547(kg) and 67(m ³)	0	0	0	0
	May 2014	1,509(m ³)	670(kg) and 42(m ³)	0	0	0	0
DC/2009/17	Mar 2014	80(m ³)	190(kg) and 7(tons)	0	0	0	0
	Apr 2014	101(m ³)	170(kg) and 8(tons)	0	0	0	0
	May 2014	11(m ³)	150(kg) and 9(tons)	0	0	0	0
DC/2009/18	Mar 2014	9,643 (m ³)	3,460(kg) and 7 (m ³)	0	0	0	0
	Apr 2014	5,571 (m ³)	113(kg) and 8(m ³)	0	0	0	0
	May 2014	4,865 (m ³)	11(m ³)	352(kg)	0	0	0
DC/2009/19	Mar 2014	0	0	0	0	0	0
	Apr 2014	0	0	0	0	0	0
	May 2014	0	0	0	0	0	0

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

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

2: Other C&D Waste includes Metals, Paper Cardboard packaging, plastic and other General Refuse.

5.2 The disposal location of wastes generated by the activities of the five contracts is the following:

Table 5.2 Summary of Disposal Location of Waste Generated in Reporting Quarter

Contract No.	Disposal Location of Wastes in Report Quarter
DC/2007/23	Tuen Mun Area 38 Fill Bank, Tseung Kwan O Area 137 Fill Bank, Chai Wan Barging Point and SENT Landfill. Broken rock has been transferred to Lam Tei Quarry/SENT Landfill. The non-inert C&D materials other than steel and paper/cardboard packaging

	were disposed of at SENT Landfill. Paper/cardboard packaging and steels were generated and sent to recyclers for recycling.
DC/2009/17	Tuen Mun Area 38 Fill Bank and NENT Landfill Plastics, paper/cardboard packaging and metals were sent to recyclers for recycling and during the reporting quarterly period no chemical waste was collected by licensed collector.
DC/2009/10	Tuen Mun Area 38 Fill Bank and NENT Landfill Plastics, paper/cardboard packaging and metals were sent to recyclers for recycling and during the reporting quarterly period no chemical waste was collected by licensed collector.
DC/2009/18	Lam Tei Quarry, Tuen Mun Area 38 Fill Bank and NENT Landfill and Tseung Kwan O Area 137 Fill Bank. Metals and paper/cardboard packaging were sent to recyclers for recycling during the reporting quarterly period.
DC/2009/19	No waste was generated during the reporting quarterly period.

Landscape and Visual Monitoring

5.3 Landscape and visual monitoring as described in the EM&A Manual has been implemented in the individual Contracts.

The major findings and recommendations are summarized as below:

Contract No. DC/2007/23

5.4 Refer to Section 7.5.3 of the quarterly report of Contract No. DC/2007/23. Implementation and maintenance of landscape and visual mitigation measures are fully achieved and no major findings were observed during the reporting quarterly period.

Contract No. DC/2009/17

5.5 Three landscape and visual audits were conducted within the environmental site inspection conducted in reporting period and the implementation and maintenance of landscape and visual mitigation measures are fully achieved and no major findings were observed during the reporting quarterly period.

Contract No. DC/2009/10

5.6 Three landscape and visual audits were conducted within the environmental site inspection conducted in reporting period and the implementation and maintenance of landscape and visual mitigation measures are fully achieved and no major findings were observed during the reporting quarterly period.

Contract No. DC/2009/18

5.7 Three landscape and visual audits were conducted within the environmental site inspection conducted in reporting period and the implementation and maintenance of landscape and visual mitigation measures are fully achieved and no major findings were observed during the reporting quarterly period.

Contract No. DC/2009/19

- 5.8 Three landscape and visual audits were conducted within the environmental site inspection conducted in reporting period and the implementation and maintenance of landscape and visual mitigation measures are fully achieved and no major findings were observed during the reporting quarterly period.

Implementation Status of Environmental Mitigation Measures

- 5.9 Details of the implementation of mitigation measures for the five contacts are provided in the **Appendix H**.
- 5.10 In the weekly environmental site inspections during the reporting quarterly period, no non-conformance was identified. The observations and recommendations for the Projects are summarized in **Appendix F**.

Implementation Status of Event Action Plans

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

1-hr TSP

- 5.15 No Action/Limit Level exceedance was recorded.

24-hr TSP

- 5.16 No Action/Limit Level exceedance was recorded.

Construction Noise

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

Landscape and Visual

- 5.18 No non-compliance was recorded.

Summary of Complaints and Prosecutions

- 5.19 No environmental complaint and prosecution was received at SCISTW for the five contracts during the reporting quarterly period.
- 5.20 There was a total of 1 project-related environmental complaint received since the commencement of the five contracts. The Complaint Log is presented in **Appendix I**.

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 J**.

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.

Environmental Audit

- 7.5 Environmental site audits were conducted as weekly basis in 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.

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 discharge of wastewater 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; and
- The discharged water quality must meet the requirements specified in the discharge licence.

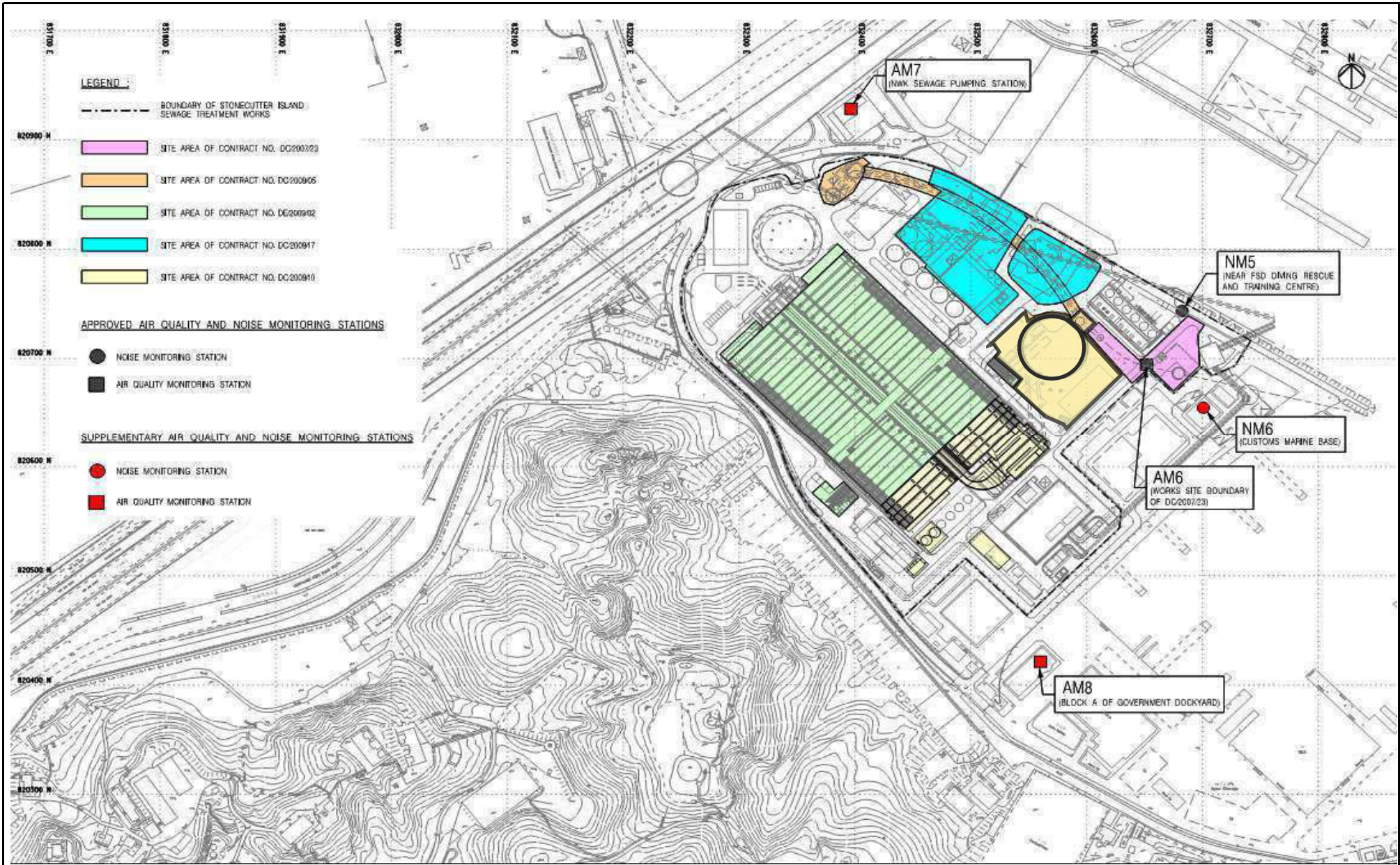
Waste/Chemical Management

- 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.

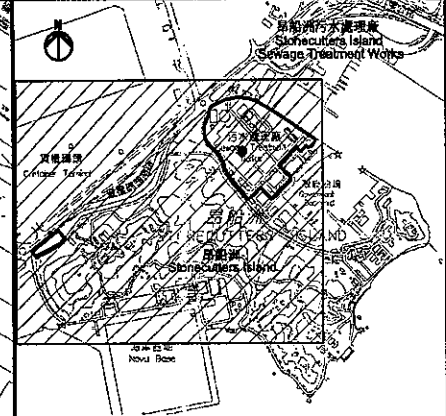
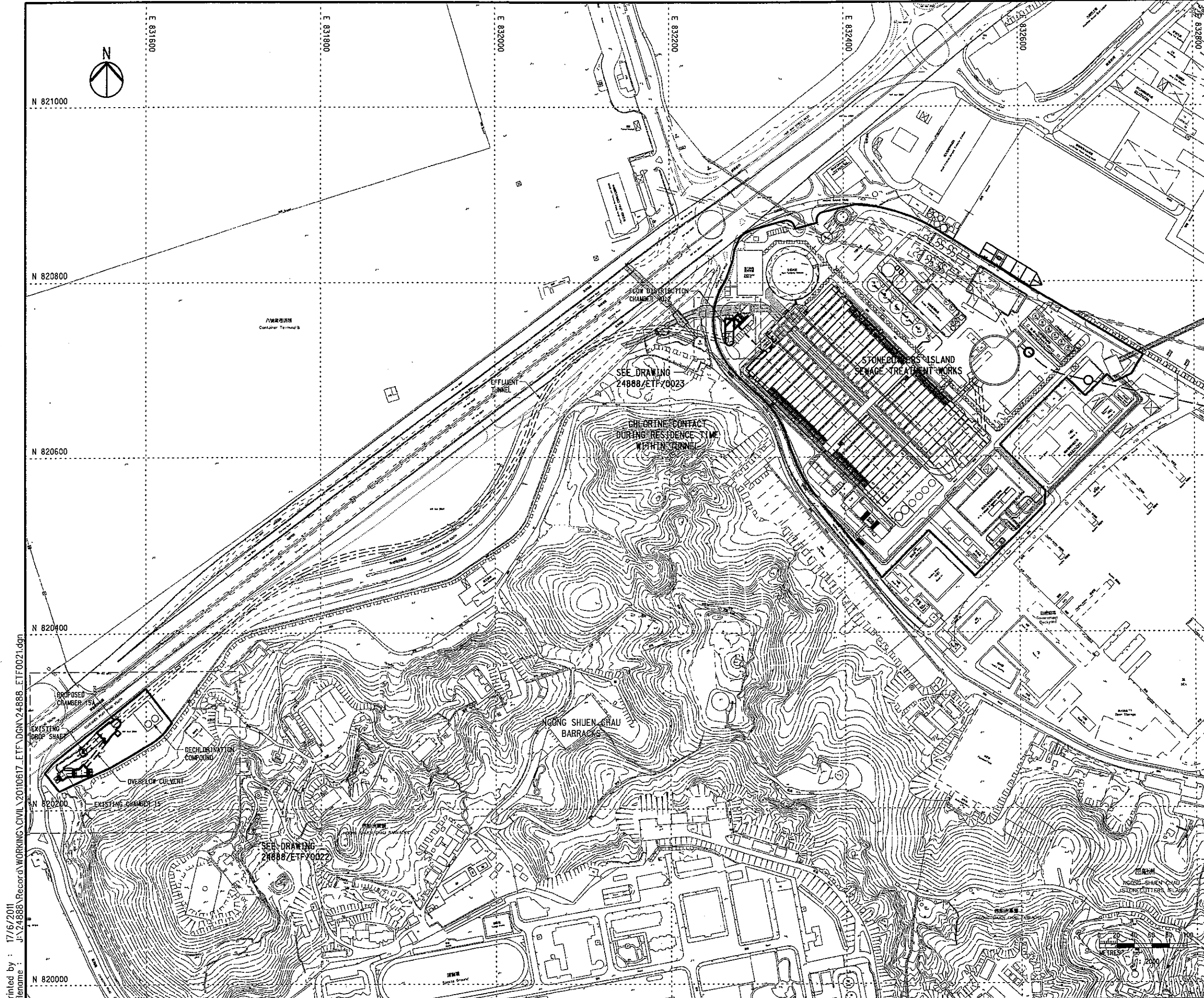
Landscape and Visual

- To erect and maintain the protection fence around the retaining tree; and
- To avoid any heavy materials placed into tree protection zone.

FIGURES



Title	Contract No: DC/2009/10 HATS 2A - Upgrading Main Pumping Station, Sedimentation Tanks and Ancillary Facilities at SCISTW	Scale N.T.S	Project No. MA11007	CINOTECH
	General Location Plan of the Project and Locations of Air Quality and Noise Monitoring Stations	Date 8/2011	Figure 1A	



KEY PLAN

LEGEND:

- BOUNDARY OF SCISTW
- ALIGNMENT OF EFFLUENT TUNNEL

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

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

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

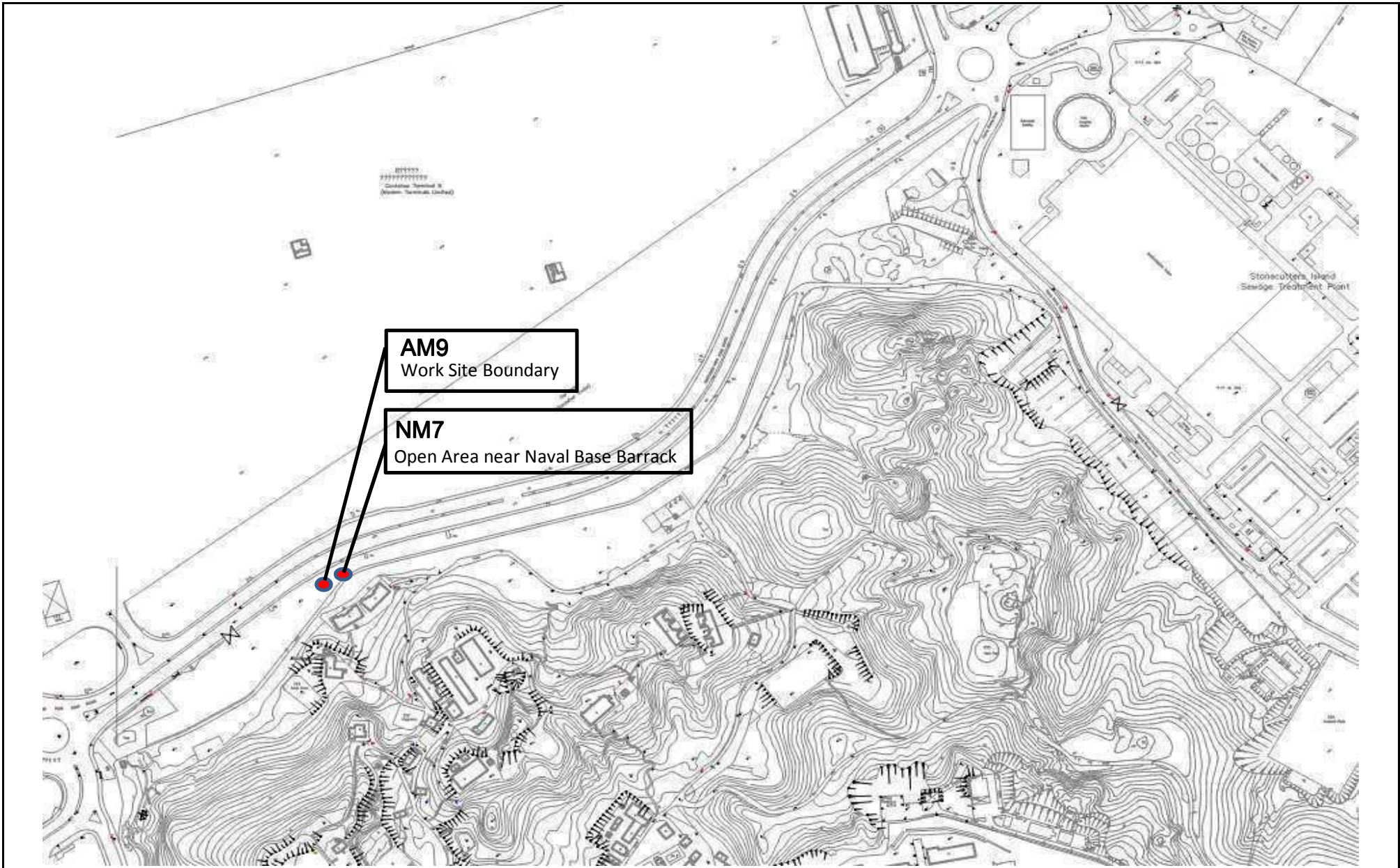
Drawing title
**GENERAL LAYOUT
 (SHEET 1)**
 Fig. 1B

Drawing no. 24888/ETF/0021		Rev. 0	
Drawn WM	Date 08/10	Checked PW	Approved DP
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Title	Contract No. DC/2009/18	Scale	Project	CINOTECH
	HATS 2A -Upgrading Works at Stonecutters Island Sewage Treatment Works - Effluent Tunnel and Disinfection Facilities	N.T.S	No. MA11043	
	Locations of Impact Air Quality and Noise Monitoring Stations	Date	Figure	
		2/2012	1C	

**APPENDIX A
ACTION AND LIMIT LEVELS FOR AIR
QUALITY AND 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 ($\mu\text{g}/\text{m}^3$)		Limit Level ($\mu\text{g}/\text{m}^3$)	
	1-hour	24-hour	1-hour	24-hour
AM6	346	196	500	260
AM7	322	207	500	260
AM8	307	158	500	260
AM9	318	169	500	260

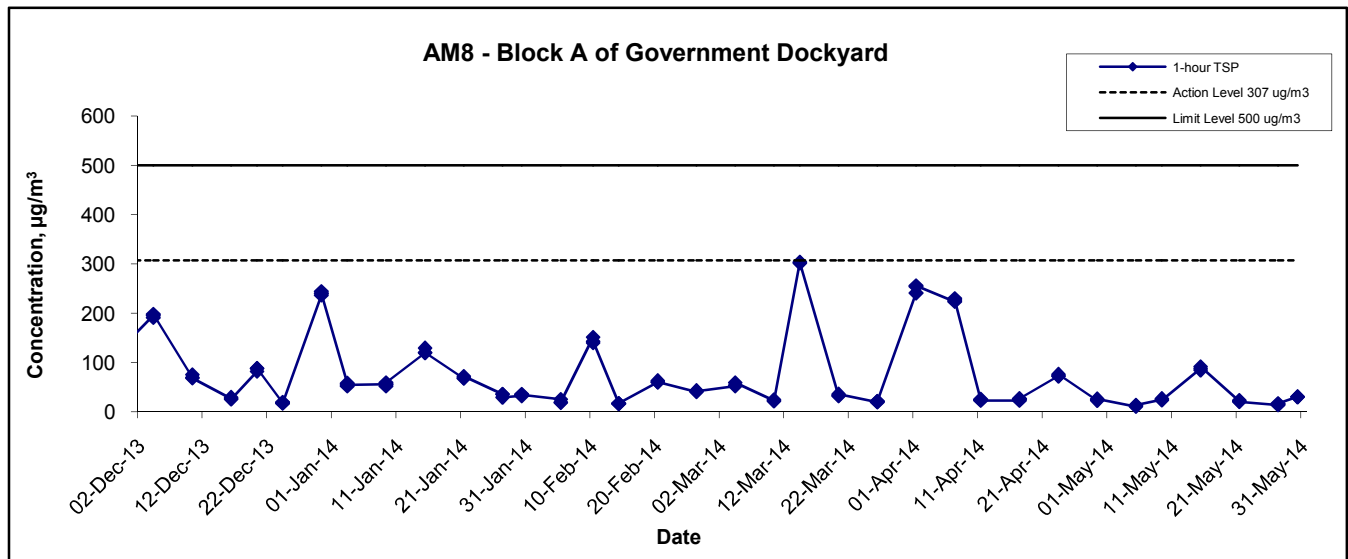
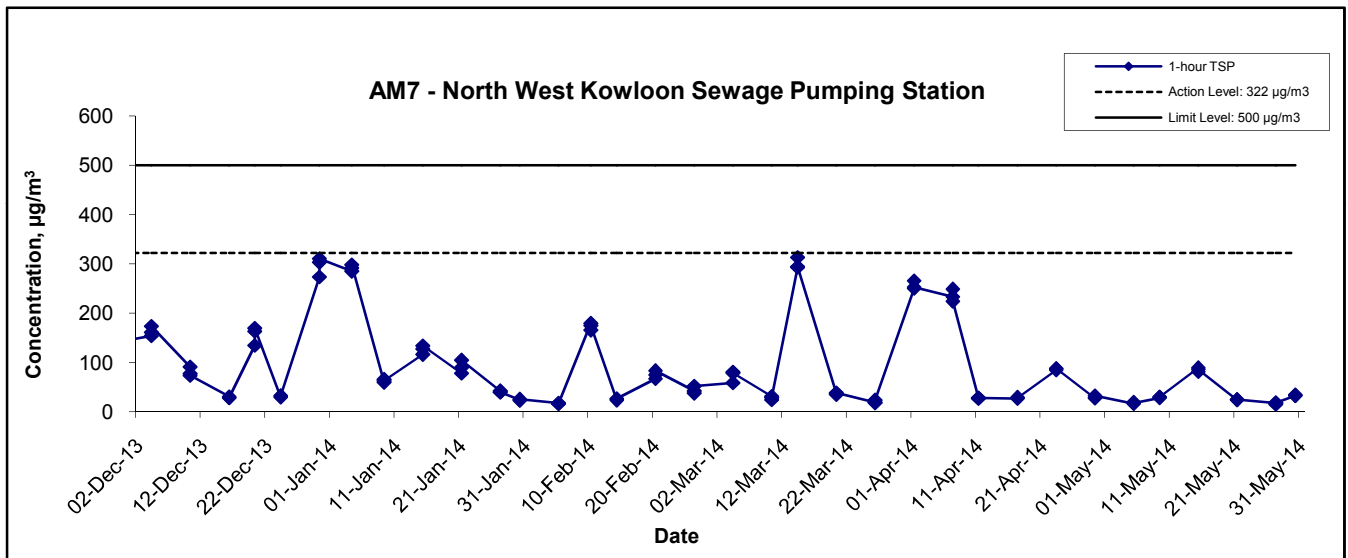
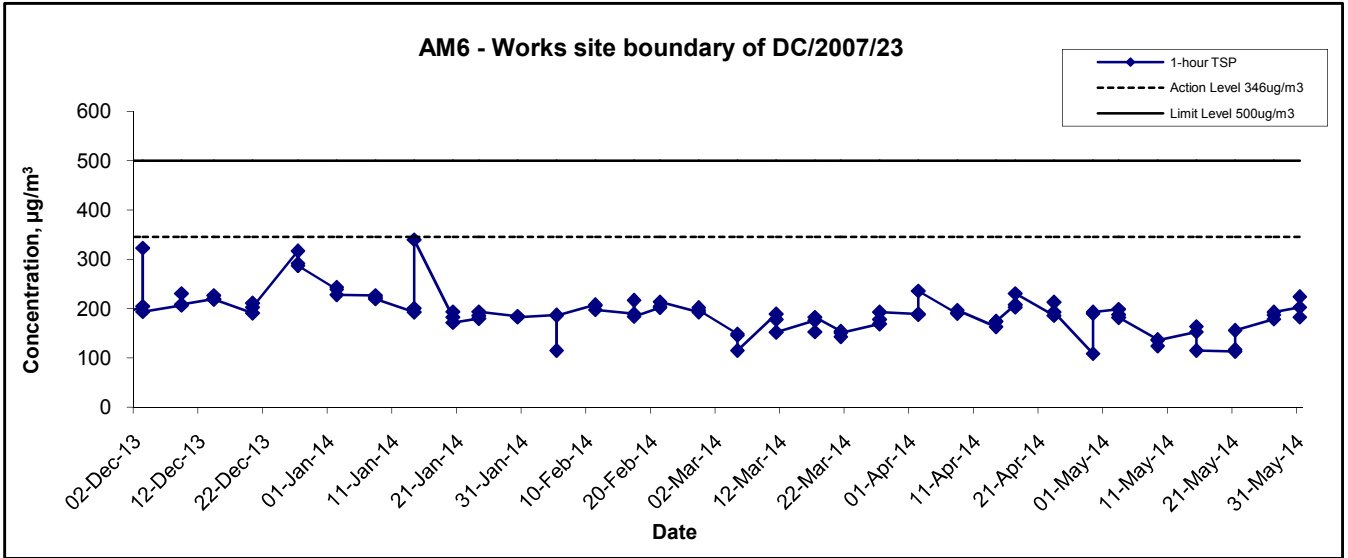
Table A-2 Action and Limit Level for Construction Noise

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 Piling.

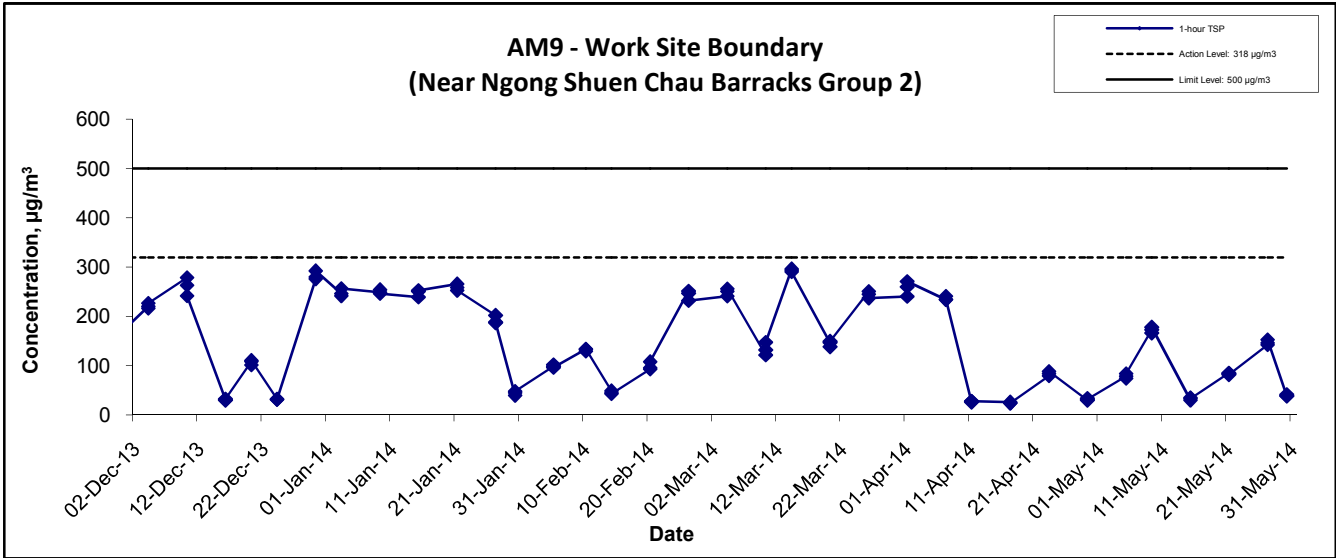
**APPENDIX B
GRAPHICAL PRESENTATIONS OF 1-
HOUR AND 24-HOUR TSP MONITORING
RESULTS**

1-hr TSP Concentration Levels



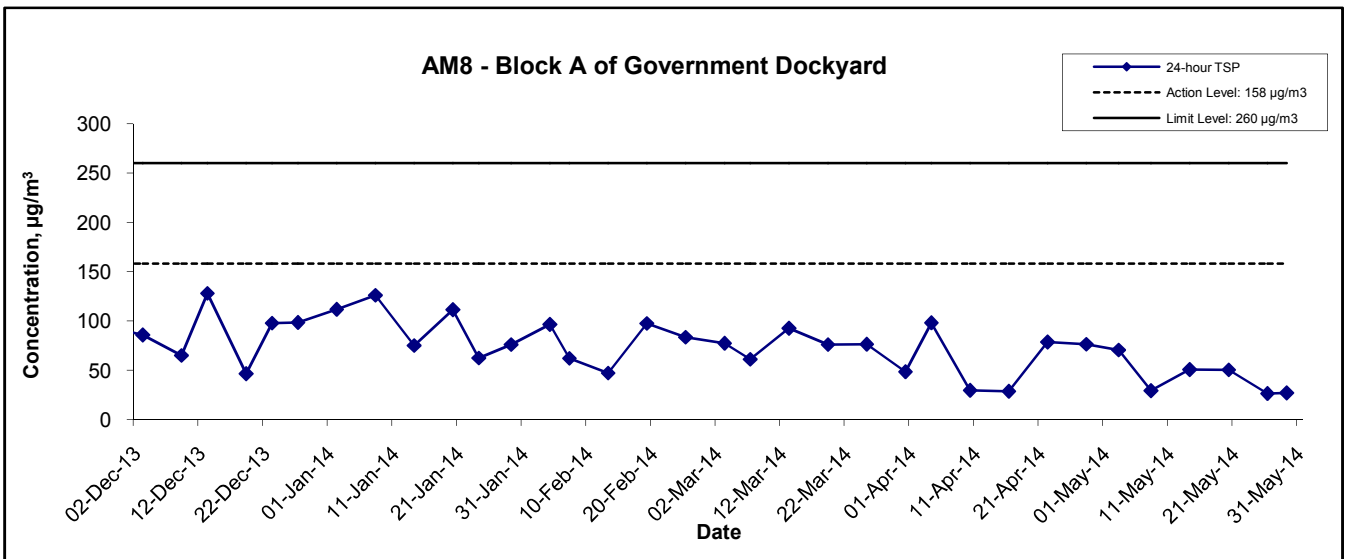
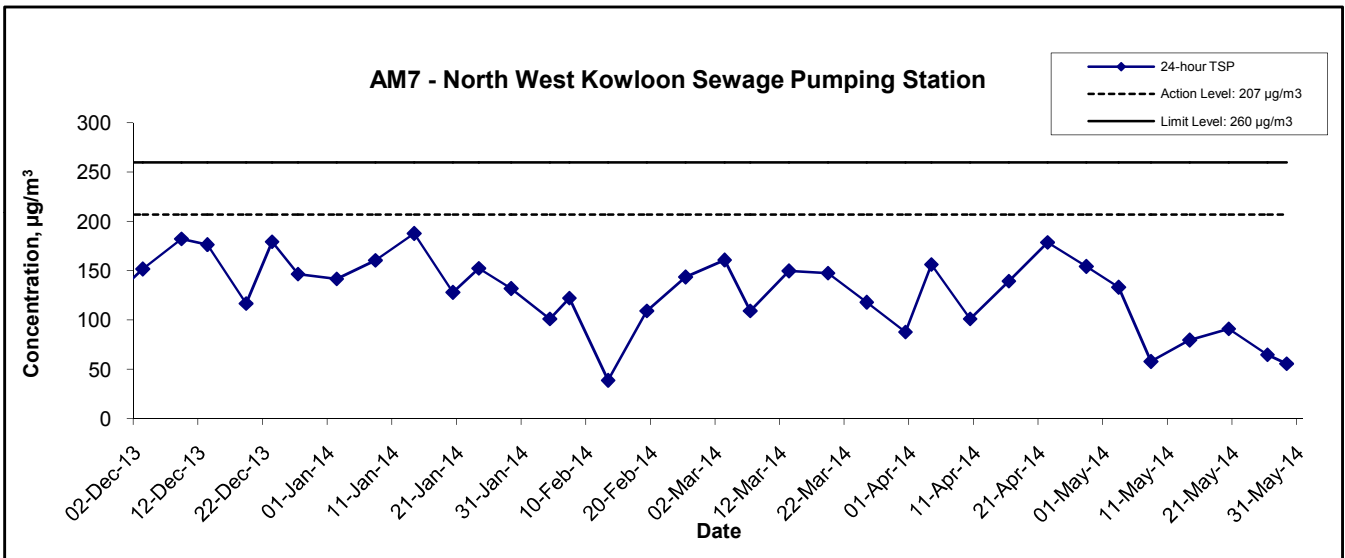
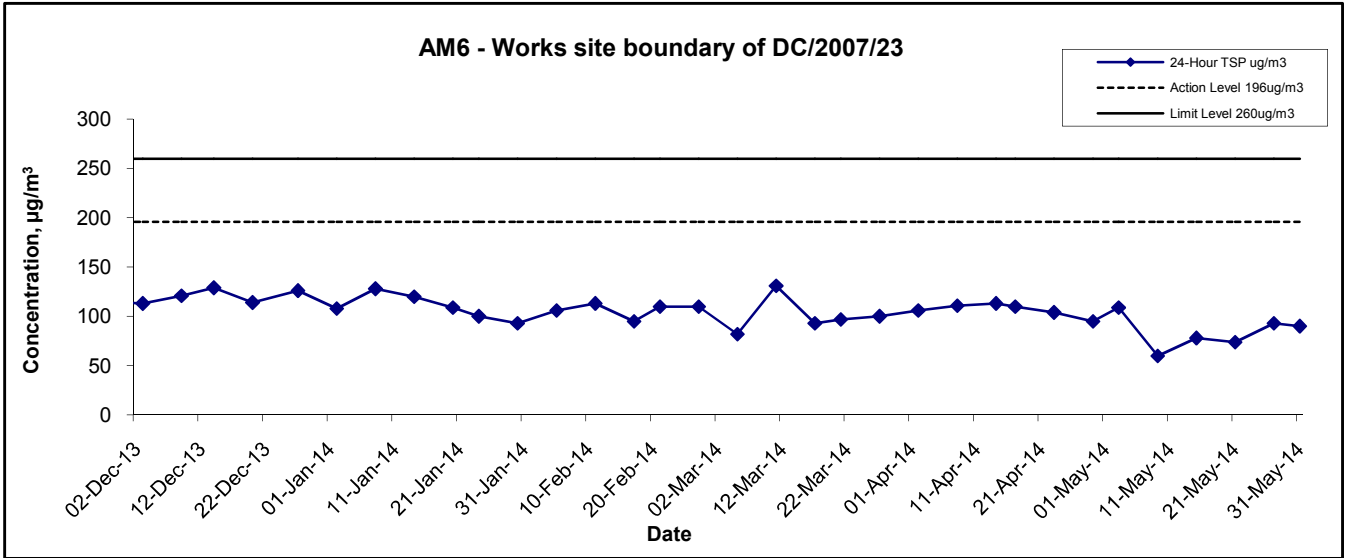
Title Contract No. DC/2009/10 HATS Stage 2A – Upgrading Works at Stonecutters Island Sewage Treatment Works - Main Pumping Station, Sedimentation Tanks and Ancillary Facilities Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S	Project No. MA11007	CINOTECH
	Date 'May 14	Appendix B	

1-hr TSP Concentration Levels



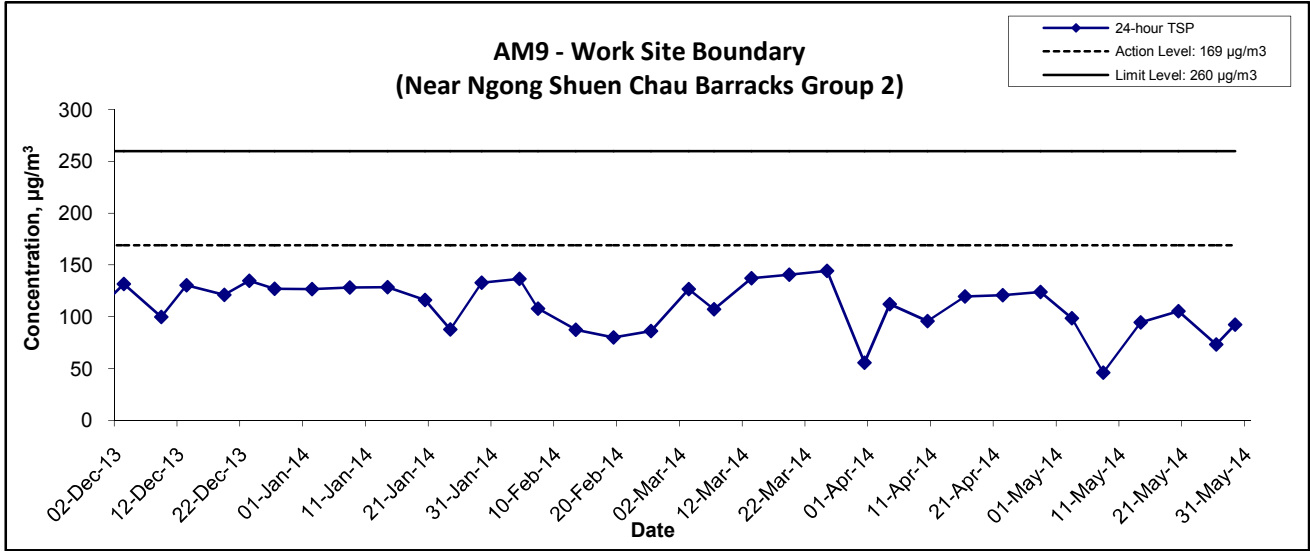
Title Contract No. DC/2009/18 HATS 2A – Upgrading Works at SCISTW– Effluent Tunnel and Disinfection Facilities Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S	Project No. MA11043	CINOTECH
	Date May 14	Appendix B	

24-hr TSP Concentration Levels



Title Contract No. DC/2009/10 HATS Stage 2A – Upgrading Works at Stonecutters Island Sewage Treatment Works - Main Pumping Station, Sedimentation Tanks and Ancillary Facilities Graphical Presentation of 24-hour TSP Monitoring Results	Scale N.T.S	Project No. MA11007	CINOTECH
	Date 'May 14	Appendix B	

24-hr TSP Concentration Levels

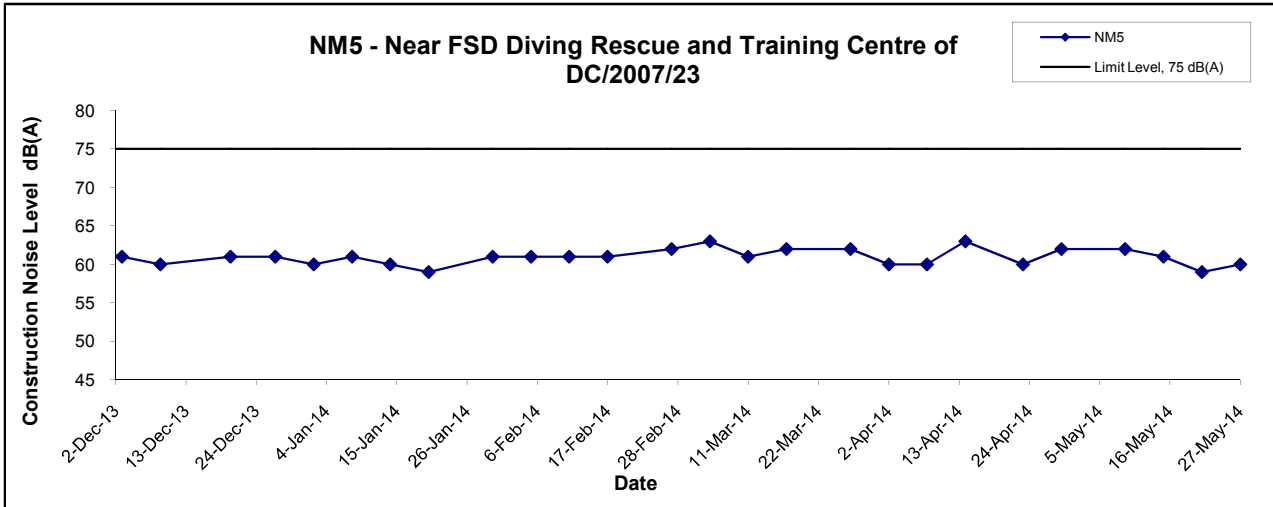


Title Contract No. DC/2009/18 HATS 2A – Upgrading Works at SCISTW– Effluent Tunnel and Disinfection Facilities Graphical Presentation of 24-hour TSP Monitoring Results	Scale N.T.S	Project No. MA11043	CINOTECH
	Date May 14	Appendix B	

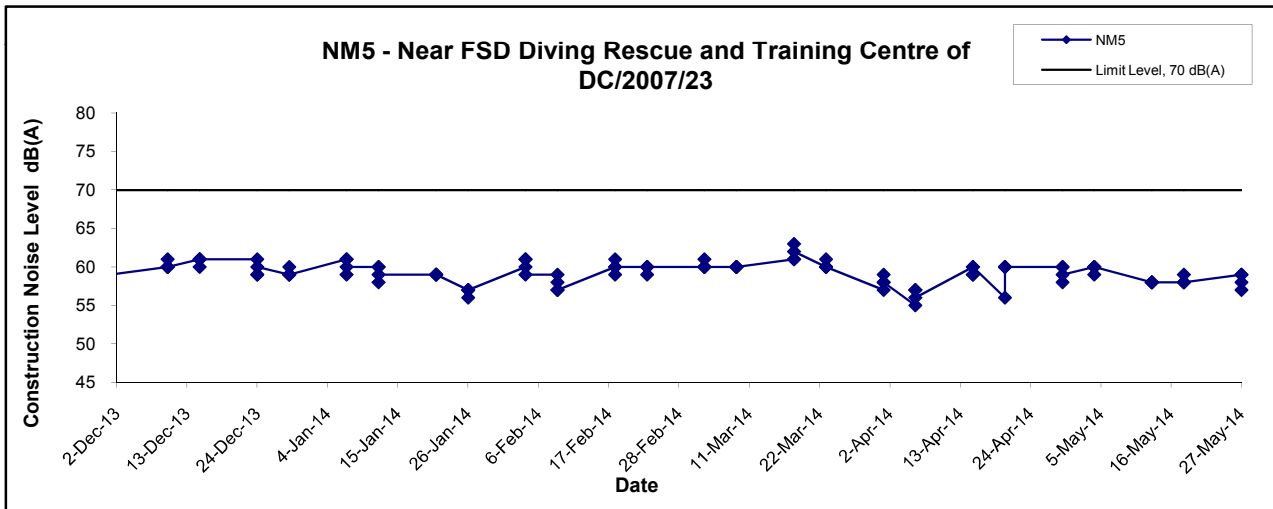
**APPENDIX C
GRAPHICAL PRESENTATIONS OF
NOISE MONITORING RESULTS**

Noise Levels

(Daytime Noise - 0700 to 1900 hrs on normal weekdays)

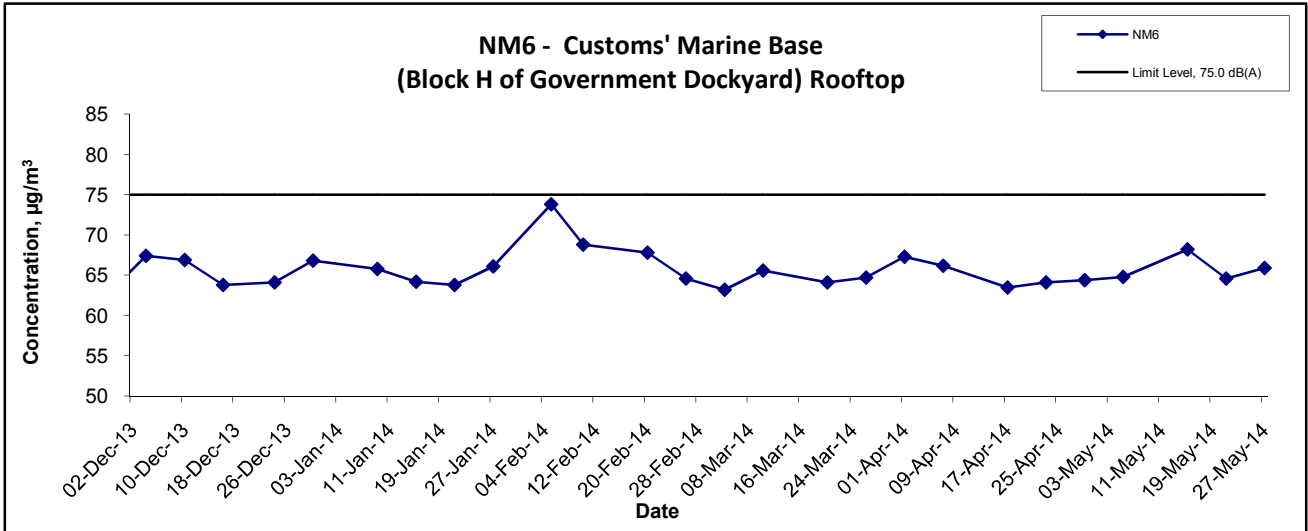


(For the time period 1900-2300 hrs. on Normal Weekdays, and 0700-2300 of Sundays and Public Holiday)



Noise Levels

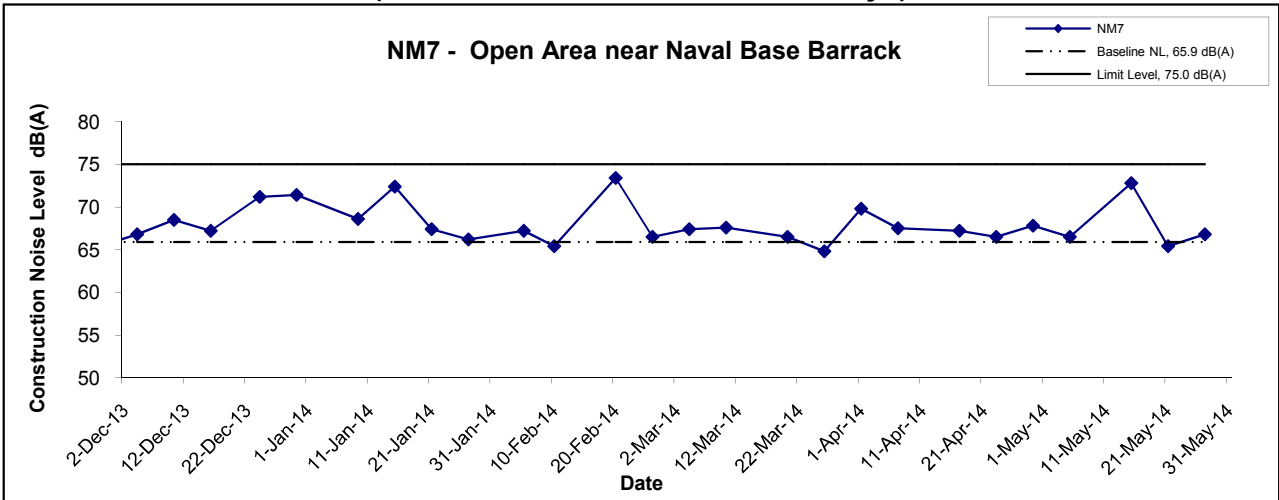
(0700-1900 hrs on Normal Weekdays)



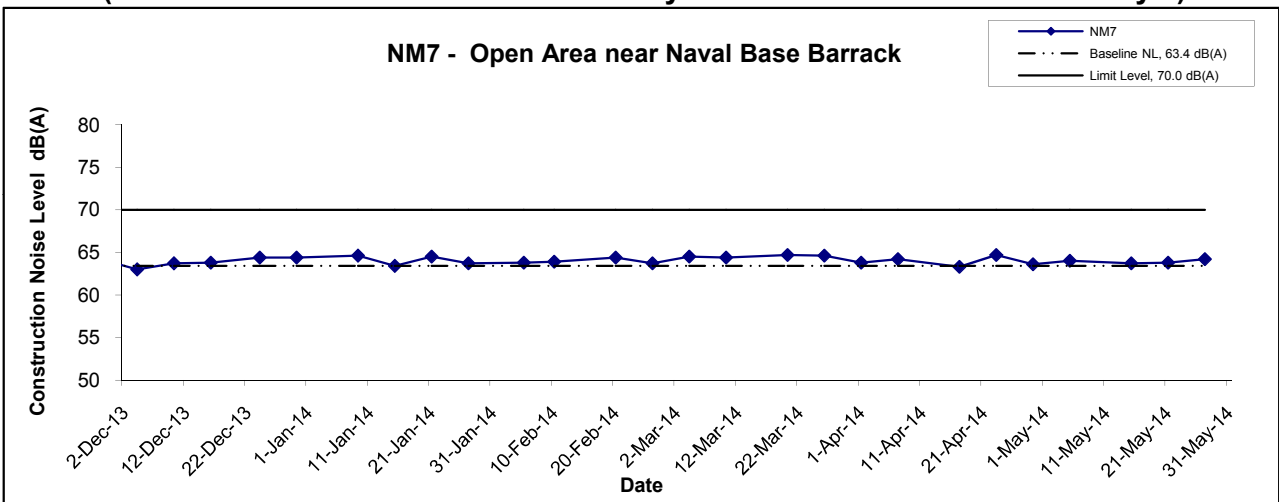
Title Contract No. DC/2009/10 HATS 2A – Upgrading Works at SCISTW– Main Pumping Station, Sedimentation Tanks and Ancillary Graphical Presentation of Noise Monitoring Result	Scale N.T.S	Project No. MA11007	CINOTECH
	Date May 14	Appendix C	

Noise Levels

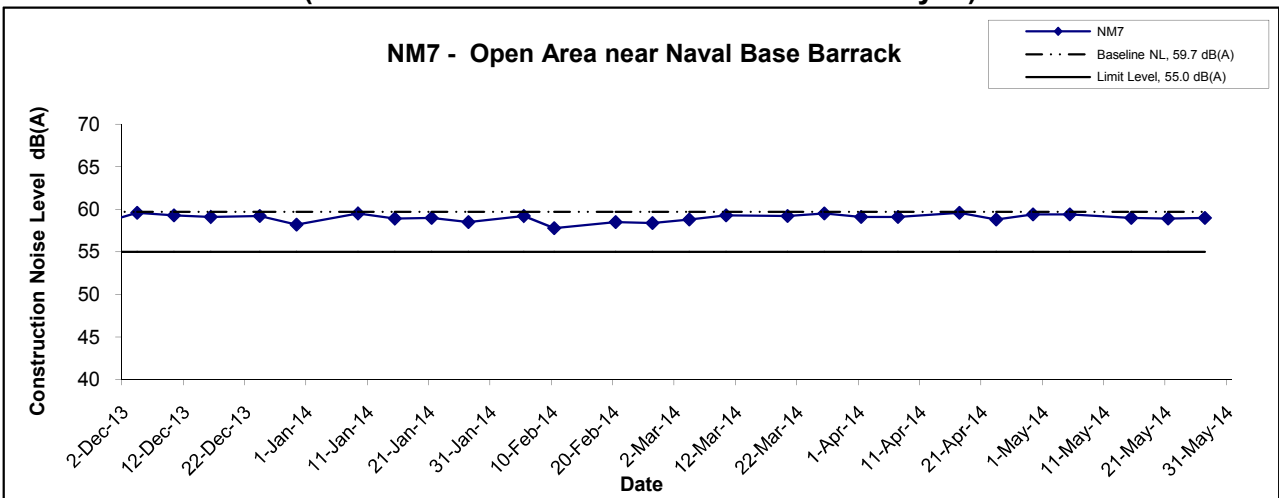
(0700-1900 hrs on Normal Weekdays)



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



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



Title 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	Project No. MA11043	<h1 style="margin: 0;">CINOTECH</h1>
	Date May 14	Appendix C	

**APPENDIX D
ENVIRONMENTAL PERMITS AND
LICENSES**

APPENIDX D – Environmental Permits and Licenses

Table D.1 Summary of Environmental Licensing and Permit Status for Contract DC/2007/23

Permit No.	Valid Period		Details	Status
	From	To		
<i>Wastewater Discharge License</i>				
WT0000506 9-2009	3/11/2010	31/10/2014	Location: Stonecutters Island Production Shaft and Riser Shaft	Valid
<i>Chemical Waste Producer Registration</i>				
5213-269- G2449-07	--	--	Location: Stonecutters Island Production Shaft and Riser Shaft	Valid
<i>Construction Noise Permit</i>				
GW- RW0692-13	23/10/2013	22/4/2014	Location: Stonecutters Island Production Shaft and Riser Shaft	Expired
GW- RW0238-14	23/4/2014	22/10/2014	Location: Stonecutters Island Production Shaft and Riser Shaft	Valid
GW- RW0914-13	9/1/2014	8/7/2014	Location: Stonecutters Island Area K-1	Valid

Table D.2 Summary of Environmental Licensing and Permit Status for Contract DC/2009/10

Reference Number	Valid Period		Details	Status
	From	To		
<i>Water Discharge License</i>				
WT00009245- 2011	1/6/2011	30/6/2016	The application was approved on 1-6-2011.	Valid
WT00012151- 2012	28/2/2012	28/2/2017	The application was approved on 28-2- 2012.	Valid
WT00015128- 2013	28/1/2013	31/1/2018	The application was approved on 28-1- 2013.	Valid
<i>Registered Chemical Waste Producer</i>				
WPN5213-269- 3584-01	N/A	N/A	The application was approved on 4-5-2011.	Valid
<i>Billing Account for Disposal of Construction Waste</i>				
CSW01444	16/3/2011	N/A	The application was approved on 16-3-2011.	Valid
<i>Notification of Works Under APCO</i>				
327427	N/A	N/A	Notice form received by EPD on 2-3-2011.	N/A
<i>Construction Noise Permit for use of mechanical equipment outside permitted working hours</i>				
GW-RW0882- 13	25/12/2013	24/6/2014	Location: Portion 4&5	Valid
GW-RW0851- 13	25/12/2013	24/6/2014	Location: Portion B	Valid
GW-RW0938- 13	1/2/2014	31-7-2014	Location: Portion 3 and 8	Valid

Reference Number	Valid Period		Details	Status
	From	To		
GW-RW0937-13	1/2/2014	31-7-2014	Location: Portion 6	Valid
<i>Renewal of Admission Ticket for Disposal of Special Waste (Grit) at Landfills</i>				
No. 11032	1/12/2013	31/3/2014	N/A	Expired
No. 11290	1-4-2014	30-9-2014	N/A	Valid

Table D.3 Summary of Environmental Licensing and Permit Status for Contract DC/2009/17

Permit No.	Valid Period		Details	Status
	From	To		
<i>Water Discharge License</i>				
WT00007763-2010	22/10/2010	31/10/2015	Location: Portion 5	Valid
WT00007921-2010	23/11/2010	30/11/2015	Location: Portion C	Valid
WT00007982-2010	3/12/2010	31/12/2015	Location: Portion 3&4	Valid
<i>Registered Chemical Waste Producer</i>				
5213-239-C3388-02	19/10/2010	N/A	Major chemical waste types are: Spent battery, waste mechanical oil and spent lubricant.	Valid
<i>Billing Account for Disposal of Construction Waste</i>				
A/C No.7011408	15/09/2010	N/A	N/A	Valid
Notification of Works Under APCO				
Ref:321235	7/09/2010	N/A	--	Valid
<i>Construction Noise Permit</i>				
GW-RW0727-13	22/10/2013	20/4/2014	Location: Portion 3, 4 and 5	Expired
GW-RW0757-13	22/10/2013	20/4/2014	Location: Portion 3, 4 and 5	Expired
GW-RW0282-14	21/4/2014	20/10/2014	Location: Portion 3, 4 and 5	Valid
GW-RW0303-14	21/4/2014	20/10/2014	Location: Portion 3, 4 and 5	Valid

Table D.4 Summary of Environmental Licensing and Permit Status for Contract DC/2009/18

Permit/ A/C Number	Valid Period		Details	Status
	From	To		
<i>Water Discharge License</i>				
WT00010571-2011	13/10/2011	31/10/2016	Location: Portion 7A and 15A	Valid
<i>Registered Chemical Waste Producer</i>				

Permit/ A/C Number	Valid Period		Details	Status
	From	To		
5213-269-C3689-01	8/9/2011	N/A	Site Area under the Project	Valid
Billing Account for Disposal of Construction Waste				
7013233	18/7/2011	N/A	N/A	Valid
Notification of Works Under APCO				
Ref: 332427	15/7/2011	N/A	N/A	N/A
Construction Noise Permit				
GW-RW0665-13	13/11/2013	12/5/2014	Location: Construction site at Stonecutters Island Sewage treatment works (Barging Point)	Expired
GW-RW0759-13	13/11/2013	12/5/2014	Location: Construction site at Stonecutters Island Sewage treatment works (Portion 3)	Expired
GW-RW0835-13	1/12/2013	31/5/2014	Location: Construction site at Stonecutters Island Sewage treatment works (Portion 7)	Valid
GW-RW0868-13	14/12/2013	13/6/2014	Location: Construction site at Stonecutters Island Sewage treatment works (Portion 3)	Valid
GW-RW0942-13	8/1/2014	7/7/2014	Location: Construction site at Stonecutters Island Sewage treatment works (Portion C2)	Valid
GW-RW0284-14	17/4/2014	16/10/2014	Location: Construction site at Stonecutters Island Sewage treatment works (Portion 3)	Valid
GW-RW0347-14	13/5/2014	12/11/2014	Location: Construction site at Stonecutters Island Sewage treatment works (Barging Point)	Valid

Table D.5 Summary of Environmental Licensing and Permit Status for Contract DC/2009/19

Permits and/or Licences	Reference No.	Valid Period	Status
Environmental Permit	EP-322/2008/G	N/A	Valid
Waste Disposal Account	Account No.: 7017913	N/A	Valid
Chemical Waste Producer (WENT)	9210-431-S3757-01	N/A	Valid
Admission Ticket (WENT)	11150	01 Feb 2014 to 30 Apr 2014	Expired
Admission Ticket (NENT)	10839	01 Nov 2014 to 30 Apr 2014	Expired
Admission Ticket (SENT)	10838	01 Nov 2014 to 30 Apr 2014	Expired
Admission Ticket (WENT)	11335	01 May 2014 to 31 July 2014	Valid
Admission Ticket (NENT)	11337	01 May 2014 to 31 Oct 2014	Valid
Admission Ticket (SENT)	11336	01 May 2014 to 31 Oct 2014	Valid
APCO (Notification only)	N/A	N/A	Notification submitted on 16 Sept 2013

APPENDIX E
SUMMARY OF EXCEEDANCE

APPENDIX E – SUMMARY OF EXCEEDANCE

Reporting Quarter: March 2014 to May 2014

- 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 F
SITE AUDIT SUMMARY IN REPORTING
QUARTER**

Contract No: DC/2007/23

Inspection date: 6 March 2014

Follow-up Actions Taken after Previous Site Audit

Stonecutters Island Production Shaft

- The liquid on the floor of the workshop had been removed.

Sai Ying Pun Production Shaft

- Chemical containers in the works area had been removed; and
- Stagnant water in the drain behind the noise enclosure had been removed.

North Point Production Shaft

- The Contractor was further reminded to store the waste batteries in designated chemical waste storage area.

Central Drop Shaft

- This is a follow-up item for site audit on 20 February since Central Drop Shaft works area had not been inspected in the last inspection – Sufficient drip trays had been provided for chemical containers.

Wan Chai East Production Shaft

Mixtures of chemicals observed accumulating inside the chemical storage area have been removed.

Observations and Recommendations

Stonecutters Island Production Shaft

- The Contractor was reminded to provide a drip tray for the chemical container found in the workshop; and
- The Contractor was reminded to place chemical waste containers in designated storage area.

Central Drop Shaft

- Chemical containers and other foreign objects are found in the tree protection zone. The Contractor was reminded to remove the objects, place the chemical containers within drip trays and erect a steadfast tree protection zone to protect the vegetation.

Wan Chai East Production Shaft

- Chemical waste was observed being stored in the chemical storage area. The Contractor was reminded to put the chemical waste in the chemical waste store.

Inspection date: 13 March 2014

Follow-up Actions Taken after Previous Site Audit

Stonecutters Island Production Shaft

- The chemical container had been removed from the workshop; and
- The chemical waste containers had been relocated to the chemical waste storage area.

Central Drop Shaft

- The majority of the chemical containers within the tree-protection zone as observed in the last site audit on 6 March 2014 had been removed. Yet there is chemical container containing oil residue still placed inside the tree-protection zone. The Contractor was further reminded to remove the oil container and store / dispose of it properly.

Wan Chai East Production Shaft

- Chemical waste observed in the chemical storage area has been removed.

Observations and Recommendations

Stonecutters Island Production Shaft

- The Contractor was reminded to provide sufficient drip trays for chemical containers in the workshop.

Sai Ying Pun Production Shaft

- The Contractor was reminded to provide sufficient drip trays for chemical containers placed beside the waste water treatment facility.

Central Drop Shaft

- Please also see Follow-up Actions for Central Drop Shaft – An oil container can still be observed in the tree protection zone in the works area. The Contractor was further reminded to remove the oil container and store / dispose of it properly.

Wan Chai East Production Shaft

- Several chemical drums were observed without drip trays outside the noise enclosure. The Contractor was reminded to provide drip trays for the chemical drums.

North Point Production Shaft

- Chemical stains were observed near the wheel washing bay. The Contractor was reminded to remove the chemical stains and dispose of as chemical waste.
- age.

Inspection date: 20 March 2014

Follow-up Actions Taken after Previous Site Audit

Stonecutters Island Production Shaft

- The chemical containers had been removed from the workshop.

Sai Ying Pun Production Shaft

- The free-standing chemical containers placed next to the wastewater treatment facility as observed in the last inspection had been removed.

Central Drop Shaft

- The Contractor had confirmed that the chemical containers in the tree-protection zone had been removed.

Wan Chai East Production Shaft

- The Contractor had provided sufficient drip trays for chemical containers outside the noise enclosure.

North Point Production Shaft

- The Contractor had removed the oil stain near the wheel washing bay and had disposed of it properly as chemical waste.

Observations and Recommendations

K1 Area

- A small patch of oil stain was observed near the site entrance. The Contractor was reminded to remove the oil stain and dispose of it properly as chemical waste; and
- Chemical containers were observed without secondary containment near the site entrance. The Contractor was reminded to provide them with secondary containment to prevent potential leakage.

Wan Chai Production Shaft

- Waste car batteries and barrels of hydraulic fluid were observed being stored at the workshop area and outside the noise enclosure without proper secondary containment. The Contractor was reminded to store the waste car batteries in designated chemical waste storage area and to provide secondary containment to all chemical containers.

North Point Production Shaft

- Chemicals were observed being stored outside the chemical storage area without secondary containment. The Contractor was reminded to provide the chemical containers with secondary containment.

Inspection date: 27 March 2014

Follow-up Actions Taken after Previous Site Audit

K1 Area

- The Contractor had confirmed that the oil stain had been removed; and
- Drip trays had been provided for free-standing chemical containers in the K1 area.

Wan Chai East Production Shaft

- The Contractor had confirmed that the waste car batteries were relocated and stored in designated chemical waste storage area. The chemical containers at the workshop area and outside the noise enclosure had been provided with drip trays.

North Point Production Shaft

- The Contractor had provided drip trays for free-standing chemical containers with drip trays.

Observations and Recommendations

Stonecutters Island Production Shaft

- There was a water-dripping air-conditioner in the storage room, which is located next to the tree-protection zone. The Contractor was reminded to repair the air-conditioner and remove the water in order to prevent the breeding of mosquitoes; and
- The label for the chemical waste storage fell off to the ground and the Contractor has provided the label immediately during the audit. The Contractor was reminded to label the designated chemical waste storage area properly.

Wan Chai Production Shaft

- The Contractor was reminded to provide sufficient drip trays for chemical containers found inside the noise enclosure to prevent leakage; and
- The Contractor was reminded to remove the stagnant water and rubbish found inside the waste skip.

Contract No: DC/2007/23

Inspection date: 3 April 2014

Follow-up Actions Taken after Previous Site Audit

Stonecutters Island Production Shaft

- The Contractor had confirmed that the air-conditioner has been repaired and water removed.

Wan Chai Production Shaft

- The Contractor had confirmed that drip trays have been provided for chemical containers; and
- The Contractor had confirmed that the stagnant water and rubbish has been cleared from the waste skip.

Observations and Recommendations

Stonecutters Island Production Shaft

- Chemical containers were observed to be placed outside of drip trays. The Contractor was reminded to provide sufficient drip trays for chemical containers to prevent leakage.

Wan Chai Production Shaft

- Stagnant water was observed accumulated on the tarpaulin sheet. The Contractor was reminded to remove the stagnant water.

Inspection date: 10 April 2014

Follow-up Actions Taken after Previous Site Audit

Stonecutters Island Production Shaft

- Sufficient drip trays had been provided for free-standing chemical containers.

Wan Chai Production Shaft

- Stagnant water has been cleared.

Observations and Recommendations

Stonecutters Island Production Shaft

- Some rubbish was found within the tree protection zone. The Contractor was reminded to remove the rubbish and to maintain a decent housekeeping practice.

Central Drip Shaft

- Stagnant water was found at the site entrance. The Contractor was reminded to remove it for the sake of preventing breeding of mosquitoes.

North Point Production Shaft

- Chemical containers were observed to be placed outside of the chemical storage area without drip trays. The Contractor was reminded to provide sufficient drip trays for chemical containers to prevent leakage.

Inspection date: 17 April 2014

Follow-up Actions Taken after Previous Site Audit

Stonecutters Island Production Shaft

- Rubbish within the tree protection zone has been removed.

Central Drop Shaft

- Stagnant water has been cleared.

North Point Production Shaft

- Chemical containers have been relocated to chemical storage area.

Observations and Recommendations

Stonecutters Island Production Shaft

- Chemical containers were observed to be missing chemical labels. The Contractor was reminded to provide proper chemical labels for the containers.

Sai Ying Pun Production Shaft

- Stagnant water was observed in boots after washing. The Contractor was reminded to remove the water to prevent breeding of mosquitoes.

Wan Chai Production Shaft

- The Contractor was reminded to remove any objects stored inside the tree protection zone.

North Point Production Shaft

- The Contractor was reminded to provide drip trays for chemical containers to prevent leakage.

Inspection date: 23 April 2014

Follow-up Actions Taken after Previous Site Audit

Stonecutters Island Production Shaft

- Labels had been properly provided for the chemical containers.

Sai Ying Pun Production Shaft

- Stagnant water had been removed in the boots.

Wan Chai Production shaft

- Rubbish in the tree protection zone had been removed.

North Point Production Shaft

- Sufficient drip trays had been provided for the chemical containers.

Observations and Recommendations

Stonecutters Island Production Shaft

- Chemical containers were observed placed at the fringe of the drip tray next to the wastewater treatment facility. It was also observed that some of the chemical containers were stacking inside the drip tray. The Contractor was reminded to provide sufficient drip trays for the chemical containers.
- Oil stains were observed on the ground at the entrance of the workshop. The Contractor was reminded to remove the oil stains and treat them properly as chemical wastes.

Sai Ying Pun Production Shaft

- The Contractor was reminded to dispose of empty chemical containers on a regular basis. Otherwise, they need to be relocated to chemical waste storage area for temporary storage.

North Point Drop Shaft

- Stagnant water was observed at the site entrance of North Point Drop Shaft. The Contractor was reminded to remove the stagnant water to prevent breeding of mosquitoes.

Inspection date: 30 April 2014

Follow-up Actions Taken after Previous Site Audit

Stonecutters Island Production Shaft

- Chemical containers have been provided with drip trays.
- Oil stains were observed on the ground at the entrance of the workshop were observed to be removed.

Sai Ying Pun Production Shaft

- Empty chemical containers have been removed.

-

North Point Production Shaft

- Stagnant water has been removed from the site entrance of North Point Drop Shaft.

Observations and Recommendations

Stonecutters Island Production Shaft

- The Contractor was reminded to remove stagnant water in a storage tank at the Drop Shaft
- The Contractor was reminded to repair the water-dripping air-conditioner.

Wan Chai Production Shaft

- The Contractor was reminded to remove general refuse inside the tree protection zone.
- Stagnant water was observed on the tarpaulin covers. The Contractor was reminded to remove the stagnant water to prevent breeding of mosquitoes
- The Contractor was reminded to remove the accumulated chemicals from the chemical drip trays and dispose of appropriately as chemical waste.

North Point Production Shaft

- The Contractor was reminded to provide drip trays for chemical containers outside the chemical storage area.

APPENDIX F - SITE AUDIT SUMMARY IN THE REPORTING MONTH (DC/2007/23)

Inspection date: 8 May 2014

Follow-up Actions Taken after Previous Site Audit

Stonecutters Island Production Shaft

- Stagnant water in a storage tank at the Drop Shaft has been removed.

Wan Chai Production Shaft

- General refuse inside the tree protection zone.
- Stagnant water was observed on the tarpaulin covers. The Contractor was reminded to remove the stagnant water to prevent breeding of mosquitoes
- The Contractor was reminded to remove the accumulated chemicals from the chemical drip trays and dispose of appropriately as chemical waste.

North Point Production Shaft

- The Contractor was reminded to provide drip trays for chemical containers outside the chemical storage area.

Observations and Recommendations

Stonecutters Island Production Shaft

- Air conditioning unit was still observed to be dripping water. The Contractor was reminded to provide a collection tray for air conditioning water and to regularly clear the tray of accumulated water to prevent breeding of mosquitoes.
- General refuse and equipment was observed piled near the works area. The Contractor was reminded to maintain good housekeeping.

Wan Chai Production Shaft

- Chemical was stored in an unlabeled bottle without secondary containment outside the noise barrier. The Contractor was reminded to provide appropriate chemical labels and provide drip trays for chemical containers stored outside the chemical storage area.
- Construction waste was found piled up at the waste storage area. The Contractor was reminded to provide regular collection of construction waste.

North Point Production Shaft

- Oil stain was observed at the entrance of the noise barrier. The Contractor was reminded to remove the oil stain and dispose of appropriately as chemical waste.

Inspection date: 15 May 2014

Follow-up Actions Taken after Previous Site Audit

Stonecutters Island Production Shaft

- Refuse in the waste skip was removed. The Contractor has been maintaining a good house-keep practice.

Wan Chai Production Shaft

- Chemical labels and drip trays have been provided for chemical containers stored outside chemical storage area.
- Construction waste has been cleared from waste storage area.

North Point Production Shaft

- Oil stain at the entrance of the noise barrier has been removed.

Observations and Recommendations

Stonecutters Island Production Shaft

- Air conditioning unit was still observed to be dripping water. The Contractor was further reminded to provide a collection tray for air conditioning water and to regularly clear the tray of accumulated water to prevent breeding of mosquitoes.
- Stagnant water was observed outside the noise enclosure. The contractor was reminded to remove the stagnant water to prevent the breeding of mosquitoes.

Wan Chai Production Shaft

- Equipment was observed to be accumulated outside the opening of the chemical waste storage area, blocking the doors. The Contractor was reminded to clear the equipment to provide access to the chemical waste storage and maintain good housekeeping.
- Stagnant water was observed accumulated on tarpaulins.

North Point Production Shaft

- Chemicals were observed to be stored outside the chemical storage area without secondary containment. The Contractor was reminded to provide adequate bunded containment.
- Stagnant water was observed to be accumulated in open containers. The Contractor was reminded to remove the stagnant water and cover the containers to prevent water from accumulating.

Inspection date: 22 May 2014

Follow-up Actions Taken after Previous Site Audit

Stonecutters Island Production Shaft

- The Contractor had placed a container beneath the water-dripping air-conditioner to collect the water.
- Stagnant water behind the noise enclosure had been pumped away by the Contractor. .

Wan Chai Production Shaft

- The opening of the chemical waste storage area has been cleared to provide access to the chemical waste storage.
- Stagnant water has been cleared from tarpaulins.

North Point Production Shaft

- Stagnant water has been removed from open containers.

Observations and Recommendations

Wan Chai Production Shaft

- Stagnant water was observed next to the drop shaft.

North Point Production Shaft

- Chemicals were still observed to be stored outside the chemical storage area, outside the noise barrier and near the site entrance without secondary containment. The Contractor was reminded to provide adequate bunded containment.
- Stagnant water was observed to be accumulated on tarpaulins covering construction equipment.
- Oil stains were observed in a pool of stagnant water outside the entrance of the noise barrier. The Contractor was reminded to remove the oil stains and dispose of appropriately as chemical waste.

Inspection date: 28 May 2014

Follow-up Actions Taken after Previous Site Audit

Wan Chai Production shaft

- The works area had not been inspected during the site inspection due to SSEMC after the site walk.

North Point Production Shaft

- The Contractor was further reminded to place all chemical containers in secondary containment to prevent leakage.
- Stagnant water had been removed.

Observations and Recommendations

North Point Drop Shaft

- Oil stains were found on one of the access roads. Impervious sheetings had been placed on the oil stains to absorb them. The Contractor was reminded to remove the oil stains and treat them as chemical wastes.
- Chemical containers in the storage area were found without drip trays. It was noted that the chemical containers were placed on hard paved ground. The Contractor was reminded to provide sufficient drip trays for the free-standing chemical containers to prevent leakage.

SITE AUDIT SUMMARY IN THE REPORTING QUARTER (DC/2009/10, DC/2009/17 and DC/2009/18)

DC/2009/10:

March 2014

Parameters	Ref. Number	Observations	Follow Up Action
Water Quality	140327-O02	The pH meter on Portion 4 WetSep indicated a slightly high pH level despite no water is being discharged. The Contractor is reminded to ensure the WetSep is functional to prevent unsuitable water discharge.	The pH level in Portion 4's WetSep has returned to an acceptable range.
	140306-O01	The site area should be kept tidy and clear any oil stain and general refuses regularly. (Portion 4 and 3)	Oil stain and general refuses have been cleared from the identified areas.
Waste/ Chemical Management	140313-O01	Oil containers should be contained by drip tray or placed in designated area (Portion 4).	The oil containers and the associated air compressor have been removed from the site area.
	140320-O01	Chemical containers should be contained by drip tray or stored in designated area (Portion 4, -18 area); Chemical label should be provided on the chemical container.	No containers were observed in area.
	140320-R02	<u>Reminder:</u> General refuse should be cleared regularly to prevent accumulation (Portion 4).	General refuse was cleared regularly.
	140327-O01	Oil containers should be contained within drip tray and any oil spillage should be cleared up in Portion 4 (steel fixing area).	No oil containers were observed in the steel fixing area, while the oil stain was still observable on the pavement and will be followed and remarked as ref no. 140403-O01.

April 2014

Parameters	Ref. Number	Observations	Follow Up Action
Water Quality	140417-O01	The drainage outlet should be protected by bunding to prevent muddy runoff from entering (Portion 4), and subsequently blocking the drainage channel.	A Bunding was installed to block off the muddy runoff.
	140417-R03	<u>Reminder:</u> The Contractor is reminded to prevent wheel washing water from directly leaving the site entrance; vehicle washing should take place in designated area behind the entrance bunding (Portion 4).	A bunding was installed to contain the washing water.
	140424-O01	The Contractor should check the pH meter for malfunction and ensure the WetSep tank is functioning properly. (Portion 3)	The pH level for the discharged water was observed to be within the required levels.
	140424-R02	<u>Reminder:</u> The Contractor is reminded to maintain the bunding if the stockpile is not in use. (Portion 3)	The bunding was reestablished near the stockpile.
Waste/ Chemical Management	140403-O01	Oil stain should be cleared from the pavement in Portion 4(steel fixing area).	The Contractor has cleared the oil stain on the pavement.

	140403-O02	General refuse should be cleared regularly in Portion 3.	The Contractor has been regularly removing the general refuse in the identified area and provided a skip to retain the refuse.
	140410-O01	Oil containers should be contained by drip tray in Portion 4.	The oil containers were removed.
	140410-O02	General refuse should be cleared regularly in Portion 4.	The general refuse was cleared from the identified area.
	140417-O02	General refuse should be cleared regularly to avoid accumulation in Portion 4 (-18 level).	The general refuse was cleared.

May 2014

Parameters	Ref. Number	Observations	Follow Up Action
Water Quality	140508-O01	The Contractor should check the pH level of the water in the WetSep before discharging. (Portion 4)	The WetSep tank is switched off for removal to another location within the site; No waste water discharge was observed in the identified area.
	140515-O04	Ponding water should be cleared regularly to avoid accumulation (Portion 4).	Water pump was provided to remove the ponding water.
	140515-R05	The Contractor is reminded to treat the muddy water on site before discharging (Portion 4).	Water pump was installed within the drainage outlet to redirect the muddy water back to the retention area.
	140529-O02	The Contractor should check the pH level of the water in the WetSep tank before discharging (Portion 4).	This observation was found outstanding on 5 June, 2014. Follow-up status will be provided in the next reporting quarter.
Waste/ Chemical Management	140502-R01	General refuse should be collected regularly to prevent accumulation (-18 floor and Portion 3).	The Contractor has cleared the general refuse regularly.
	140515-O01	General refuse should be cleared regularly (Portion 4).	General refuse was cleared on a regular basis.
	140515-O02	Chemical waste on the ground should be treated properly (Portion 4).	The Contractor has cleared the chemical waste.
	140515-O03	Chemical label should be provided on the chemical drums (Portion 4).	The identified chemical drums were removed from the area.
	140522-O01	Oil container should be covered properly or treated as chemical waste. (Portion 4)	The container has been removed.
	140529-O01	Oil container should be contained by drip tray or treated as chemical waste (Portion 4).	The container was removed.

DC/2009/17:

March 2014

Parameters	Ref. Number	Observations	Follow Up Action
Water Quality	140320-O01	Stockpiles should be covered properly to prevent dust emission and formation of muddy run-off (Portion 4 barging point and Portion 5); Bunding should be provided in the barging point along the shoreline to prevent muddy run-off from entering the sea.	The identified dusty stockpiles have been covered; A sand bag bunding has been placed near the dusty materials in the Barging point to trap potential muddy run-off.
	140305-R02	<u>Reminder:</u> The dusty material should be covered by impervious material to prevent the dust emission at Portion 4 and Portion 5.	Remarked as ref. 140312-O02
	140312-O02	Stockpile should be covered properly to prevent dust emission and muddy-runoff formation (Portion 4 and 5).	The identified stockpiles have been covered with tarpaulin.
Air Quality	140320-O01	Stockpiles should be covered properly to prevent dust emission and formation of muddy run-off (Portion 4 barging point and Portion 5); Bunding should be provided in the barging point along the shoreline to prevent muddy run-off from entering the sea.	The identified dusty stockpiles have been covered; A sand bag bunding has been placed near the dusty materials in the Barging point to trap potential muddy run-off.
	140226-O01	Oil stain on the surface of the concrete pavement should be cleared in Portion 4; Equipments should be handled properly to prevent oil leakage.	Remarked as ref. 140305-O01
	140305-O01	Properly clear the oil stain on the concrete pavement and the unpaved area at Portion 4 and Portion 3.	The identified oil stains were cleared and the pavement has been washed.
Waste/ Chemical Management	140312-O01	Chemical containers should be stored properly in designated area (Portion 4).	The chemical containers have been removed from site.
	140326-O01	The environmental permit should be displayed near the site entrance in Portion 4.	The permit is attached near the site entrance.

April 2014

Parameters	Ref. Number	Observations	Follow Up Action
Water Quality	140402-O01	Chemical containers for the WetSep should be labeled properly; The Contractor is reminded to ensure the WetSep tanks are functional by refilling the required chemicals regularly (Portion 3 and 5), and to avoid untreated water discharge.	The WetSep tanks were observed to be functioning properly, while the information on the chemical containers' labels still require further update and is remarked as ref no.140409-O01.
	140402-O02	Ponding water should be removed to avoid overflow into the sea (Portion 4, barging point).	Water retention in the identified area is avoided.
	140409-R03	Drainage channel should be properly maintained to avoid blockage (Portion 3).	The Contractor has cleared the channel regularly.
	140423-O01	Bunding should be set up near dusty stockpile to prevent muddy run-off from leaving the site area (Portion 5).	Sand bag bunding was provided to protect the stockpile.

	140430-003	The water pipe should be repaired to prevent discharge water from leaking (Portion 5).	The water pipe was repaired and no leakage was observed.
Air Quality	140430-001	Stockpile that contains fine materials should be covered properly (Portion 4).	Additional tarpaulin was provided to cover the materials.
Waste/Chemical Management	140409-001	The chemical labels on the containers of the WetSep tank in Portion 3 and 5 should indicate the proper name of the chemical component in use for verification.	The chemical labels were provided accordingly.
	140409-002	Oil containers should be contained by drip trays or stored with in designated place (External Work B2a).	The oil containers were removed.
	140417-001	Chemical containers should be contained by drip tray in Portion 3.	The containers were covered and banded properly.
	140430-002	Oily stain should be cleared from the surface in Portion 4.	Remarked as ref. 140507-002

May 2014

Parameters	Ref. Number	Observations	Follow Up Action
Water Quality	140515-001	The Contractor should review the drainage system in Portion 4 and 5 to avoid discharging untreated waste water.	No water was observed to be discharged from the identified area in Portion 4 and the water pipe in Portion 5 has been reconnected.
	140515-003	Ponding water should be cleared and should be treated by the WetSep tank in Portion 4.	The Contractor has been manually clearing the ponding water regularly.
	140521-001	Bunding should be properly set up to block off surface run-off in Portion 4.	Concrete bundings were established to block off the surface run-off.
	140521-003	Chemicals for the WetSep tank should be refilled regularly to prevent untreated water discharge in Portion 5.	The pH level has returned to an acceptable range.
	140528-R01	<u>Reminder:</u> The Contractor is reminded to treat the accumulated water using the sedimentation tank before discharging (Portion 4, A5 and Portion 5).	No untreated water was being discharged.
	140528-002	The sediment in the WetSep tank in Portion 5 should be cleared to ensure it functions properly.	The Contractor has cleared the accumulated materials from the WetSep and no water was being discharged.
Waste/Chemical Management	140507-001	Chemical and oil containers should be removed if not in use, or stored in designated area (Portion 4 roof top and Portion 5).	Remarked as ref. 140515-002
	140507-002	Oily stain should be cleared from near the drainage channel (Portion 4).	The Contractor has cleared the oil stain and prevented oil leakage from the facility's equipments.
	140515-002	Chemical container should be placed in designated area or provided with drip tray (Portion 4 and 5).	The chemical containers were removed.
	140515-004	Waste water should be contained properly and deposited through sewage treatment (Portion 5).	The Contractor has sealed the container properly to avoid leakage
	140521-002	Chemical container should be provided with drip tray or stored in designated area (Portion 4).	The container has been removed.

	140521-O04	General refuse should be cleared properly in Portion 5.	The general refuse has been cleared.
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DC/2009/18:

March 2014

Parameters	Ref. Number	Observations	Follow Up Action
Water Quality	140319-O04	The discharged water should be improved in Portion 7.	Remarked as ref. 140325-O03
	140325-O02	The mud outside the vehicle washing facility should be cleared regularly (Portion 7).	The contractor has cleared the mud from haul road.
	140325-O03	Cloudy water is observed in the sedimentation tank. The contractor is reminded to review the quality of the discharge water regularly (Portion 3).	The discharged water quality has improved and the WetSep tank was functional in Portion 3, while the cloudy water was still observed in Portion 7's tank and will be followed and remarked as ref no. 140402-O03.
Waste/ Chemical Management	140305-O01	Oil stain should be cleared from the pavement in Portion 7.	The Contractor has mobbed up the oil.
	140305-R02	Drip tray in Portion 3 should be maintained properly to avoid any waste accumulation.	The waste water has been cleared from the drip tray.
	140312-O01	Oil stain should be cleared from the surface; equipment should be properly maintained to prevent oil leakage (Portion 3 and 7).	Remarked as ref. 140319-O01
	140312-O02	Oil containers should be stored properly in designated area or provided with drip tray (Portion 3 and 7).	Remarked as ref. 140319-O02
	140312-O03	General refuse should be cleared regularly in Portion 7.	Remarked as ref. 140319-O03
	140319-O01	Oil stain should be cleared from the pavement in Portion 3.	The oil stain has been cleared.
	140319-O02	Oil containers should be contained by drip trays in Portion 3 and 7.	The oil container in Portion 3 has been used up and removed; While oil containers in Portion 7 was still observed and remarked as 140325-O01
	140319-O03	General refuse should be cleared regularly in Portion 7.	The general refuse has been cleared.
	140325-O01	Oil containers should be contained by drip tray in Portion 7.	Remarked as ref. 140402-O02

April 2014

Parameters	Ref. Number	Observations	Follow Up Action
Water Quality	140402-O03	Cloudy water is observed in the WetSep tank of Portion 7. The Contractor is reminded to prevent untreated water from discharging.	The Contractor has improved the quality of the discharged water in Portion 7.

Air Quality	140430-O02	Sand stockpile and dusty materials should be covered properly for dust suppression (Portion 3).	Water hoses were used to spray the stockpile.
	140430-O03	Dust was observed on the haul road; the Contractor is reminded to spray water on the road for dust suppression (Portion 3 and 7).	The haul road was sprayed with water.
Waste/ Chemical Management	140402-O01	Oil stains are observed on the pavement in Portion 3 and 7. The Contractor is reminded to avoid equipment's oil leakage.	No oil stains were observed in Portion 3 and 7 on 9 April 2014.
	140402-O02	Oil containers and drums should be contained by drip tray to prevent oil spillage. (Portion 3 and 7), with adequate capacity.	Oil containers were contained within drip trays.
	140409-O01	Drip trays for air compressor and oil drums should be properly maintained to avoid oil and water accumulation (Portion 3 and 7).	Remarked as ref. 140416-O01
	140416-O01	Oil stain in the drip tray should be cleared to prevent overflow. (Portion 3 and 7)	The tray in Portion 3 was being cleaned with oil absorbing material, while oil stain was found near the drip tray in Portion 7 and will be followed and remarked as ref no. 140423-O01
	140423-O01	Oil stains on the pavement should be cleared (Portion 7); The Contractor should ensure all chemical and oil containers are contained by drip tray.	Remarked as ref. 140430-O01
	140430-O01	Oil stain on the pavement should be cleared in Portion 3 and 7.	Oily equipment was covered and the oil stain was cleaned.
	140430-O04	Oil containers should be contained by drip tray in Portion 7 to prevent oil spillage.	The oil containers were removed from the site.

May 2014

Parameters	Ref. Number	Observations	Follow Up Action
Water Quality	140507-O02	The Contractor should check the condition of the WetSep tanks to ensure the waste water was treated properly (Portion 3 and 7).	The Contractor has removed the oil and sediment from the sedimentation tanks to improve the discharge quality in the WetSep Tank.
	140528-O02	Muddy water should be cleared and prevented from directly leaving the site (Portion 7).	No muddy water was observed on the floor and surface water was diverted to appropriate u-channel.
	140528-R04	The Contractor should review the efficiency of the WetSep tank to prevent untreated water from discharging (Portion 3).	The discharging water was observed to be improved in Portion 3.
Air Quality	140528-O03	Water should be sprayed on the dusty road of Portion 3 and stockpiles area of Portion C2.	Water was sprayed on the haul road and dusty stockpiles.
Waste/ Chemical Management	140507-O01	Oily stain should be cleared properly from the drip tray in Portion 3.	Remarked as ref. 140514-O01
	140514-O01	Oil stain is observed near the drip tray and on the haul road (Portion 3).	The Contractor has cleared the identified oil stains
	140514-O02	Bunding and drip tray should be provided to the oil containers storage area (Portion 3)	Remarked as ref. 140521-O02

	140521-O01	Drip tray should be cleared regularly to avoid accumulation of water and oil in Portion 3; Oil stain near the excavator in portion 7 should be cleared.	The identified oil stain were cleared and contained.
	140521-O02	More drip tray should be provided for the chemical containers and oil pump in Portion 7 and 3.	The identified oil containers and equipments were removed.
	140528-O01	Oil drums and containers should be contained by drip tray or treated as chemical waste (Portion 1 and 7).	The oil containers and oil drums were contained and covered properly.

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**DC/2009/19 Harbour Area Treatment Scheme Stage 2A
Upgrading Works at Stonecutters Island Sewage Treatment Works –
Sludge Handling and Disposal Facilities**

Remarks / Recommendations for Contractor

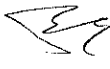
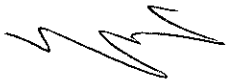


Date of Site Audit: 07 Mar 2014

Observation and/or Recommended Measures:

- The Contractor was reminded to remove the oil-stain at the Workshop Area of Nir Bay.
- The Contractor was reminded to enhance the Dust Control Measures at the Workshop Area of Nir Bay.

Target Date of Completion: *Immediately & Continuously.*

Signatures:

ET's Representative	
Contractor's Representative	
SO's Representative	
IEC's Representative	

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**DC/2009/19 Harbour Area Treatment Scheme Stage 2A
Upgrading Works at Stonecutters Island Sewage Treatment Works –
Sludge Handling and Disposal Facilities**

Remarks / Recommendations for Contractor

Date of Site Audit: 13 Mar 2014

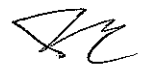



Observation and/or Recommended Measures:

1. The contractor was reminded to clear the O.I. basin for the Pier at SCISTW and the Workshop Area at Nim Bay.

2. The contractor was reminded to maintain the U-channel properly for the Workshop Area at Nim Bay.

Target Date of Completion: Immediately & continuously

Signatures:

ET's Representative	
Contractor's Representative	
SO's Representative	
IEC's Representative	

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**DC/2009/19 Harbour Area Treatment Scheme Stage 2A
Upgrading Works at Stonecutters Island Sewage Treatment Works –
Sludge Handling and Disposal Facilities**

Remarks / Recommendations for Contractor

Date of Site Audit: 17 Mar 2014

Observation and/or Recommended Measures:

The Contractor was reminded to maintain the Container Handling Unit's engine properly at SCISW.

Target Date of Completion: Immediately & Continuously

Signatures:

ET's Representative	
Contractor's Representative	
SO's Representative	(WILLIAM YU)
IEC's Representative	

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**DC/2009/19 Harbour Area Treatment Scheme Stage 2A
Upgrading Works at Stonecutters Island Sewage Treatment Works –
Sludge Handling and Disposal Facilities**

Remarks / Recommendations for Contractor

Date of Site Audit: 28 Mar 2014

Observation and/or Recommended Measures:

The Contractor was reminded to ~~immediately~~ enhance the house-keeping property at SCISTW and Nim Bay's Workshops Area.

Target Date of Completion: Immediately & continuously

Signatures:

ET's Representative	
Contractor's Representative	
SO's Representative	
IEC's Representative	

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**DC/2009/19 Harbour Area Treatment Scheme Stage 2A
Upgrading Works at Stonecutters Island Sewage Treatment Works –
Sludge Handling and Disposal Facilities**

Remarks / Recommendations for Contractor

Date of Site Audit: 04 April 2014

Observation and/or Recommended Measures:

- 1. The Contractor was reminded to remove the Stagnant Water for the Workshop Area at Vim Bay.
- 2. The Contractor was reminded to remove the Oil-Stain for the Workshop Area at Vim Bay.

Target Date of Completion: *Immediately & Continuously*

Signatures:

ET's Representative	
Contractor's Representative	
SO's Representative	
IEC's Representative	

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**DC/2009/19 Harbour Area Treatment Scheme Stage 2A
Upgrading Works at Stonecutters Island Sewage Treatment Works –
Sludge Handling and Disposal Facilities**

Remarks / Recommendations for Contractor

Date of Site Audit: 11 April 2014

Observation and/or Recommended Measures:

1. The Contractor was reminded to remove the Stagnant Water at the Workshop Area of SCISTW.

2. The Contractor was reminded to remove the Construction Wastes at the Workshop Area of SCISTW.

Target Date of Completion: Immediately & continuously

Signatures:

ET's Representative	Yu Lap Bung
Contractor's Representative	Hong WAN
SO's Representative	 Patrick Lau (ROW)
IEC's Representative	

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**DC/2009/19 Harbour Area Treatment Scheme Stage 2A
Upgrading Works at Stonecutters Island Sewage Treatment Works –
Sludge Handling and Disposal Facilities**

Remarks / Recommendations for Contractor

Date of Site Audit: 14 April 2014

Observation and/or Recommended Measures:

1. The Contractor was reminded to clean the waste water underneath the sludge container at the pier of SCISTW and prevent leakage.

2. The Contractor was reminded to clear the General Refuse beside the sidewalk at the pier of SCISTW.

Target Date of Completion: Immediately & Continuously

Signatures:

ET's Representative	Yu Lap Tung
Contractor's Representative	HONG WAN
SO's Representative	WILLIAM YU
IEC's Representative	Tom Kong Terence Kong

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**DC/2009/19 Harbour Area Treatment Scheme Stage 2A
Upgrading Works at Stonecutters Island Sewage Treatment Works –
Sludge Handling and Disposal Facilities**

Remarks / Recommendations for Contractor

Date of Site Audit: 25 April 2014

Observation and/or Recommended Measures:

No Particular ~~Issues~~ ^{is} Found

Target Date of Completion: N/A

Signatures:

	Name	Signature
ET's Representative	Bong Yu	
Contractor's Representative	Hong WAN	
SO's Representative	Patrick Lau	
IEC's Representative		

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**DC/2009/19 Harbour Area Treatment Scheme Stage 2A
Upgrading Works at Stonecutters Island Sewage Treatment Works –
Sludge Handling and Disposal Facilities**

Remarks / Recommendations for Contractor

Date of Site Audit: 02 May 2014

Observation and/or Recommended Measures:

The Contractor was reminded to remove the Oil-Stain at the Workshop Area of Slim Bay.

Target Date of Completion: Immediately

Signatures:

	Name	Signature
ET's Representative	Bong Tu	
Contractor's Representative	Hong WAN	
SO's Representative	Patrick Lau	
IEC's Representative		

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**DC/2009/19 Harbour Area Treatment Scheme Stage 2A
Upgrading Works at Stonecutters Island Sewage Treatment Works –
Sludge Handling and Disposal Facilities**

Remarks / Recommendations for Contractor

Date of Site Audit: 09 May 2014

Observation and/or Recommended Measures:

1. The Contractor was reminded to enhance House-keeping beside the Site Office and the Pier of SCZSTW.
2. The Contractor was reminded to remove the Stagnant Water after the Rainfall for the Workshop, Area of NW Bay.

Target Date of Completion: Immediately & Continuously

Signatures:

	Name	Signature
ET's Representative	Bong Tu	
Contractor's Representative	Hony WAM	
SO's Representative	Patrick Can	
IEC's Representative		

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**DC/2009/19 Harbour Area Treatment Scheme Stage 2A
Upgrading Works at Stonecutters Island Sewage Treatment Works –
Sludge Handling and Disposal Facilities**

Remarks / Recommendations for Contractor

Date of Site Audit: 16 May 2014

Observation and/or Recommended Measures:

The Contractor was reminded to remove the stagnant water accumulated in the Workshop Area of Nim Day

Target Date of Completion: Immediately & continuously

Signatures:

	Name	Signature
ET's Representative	Bong Yu	
Contractor's Representative	Hong WAN	
SO's Representative	Patrick Lam	
IEC's Representative	Joanne Ng	

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**DC/2009/19 Harbour Area Treatment Scheme Stage 2A
Upgrading Works at Stonecutters Island Sewage Treatment Works –
Sludge Handling and Disposal Facilities**

Remarks / Recommendations for Contractor

Date of Site Audit: 20 May 2014

Observation and/or Recommended Measures:

- 1. The Contractor is recommended to improve house-keeping at the site office.
- 2. The Contractor is recommended to clean up excess water on the ground within site area.
- 3. The Contractor is recommended to ^{investigate} ~~prevent~~ foul smell at the site.

Target Date of Completion: Immediately & Continuously

Signatures:

	Name	Signature
ET's Representative	Xindi Huang	
Contractor's Representative	Hong WAM	
SO's Representative	WILLIAM YU	
IEC's Representative		

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**DC/2009/19 Harbour Area Treatment Scheme Stage 2A
Upgrading Works at Stonecutters Island Sewage Treatment Works –
Sludge Handling and Disposal Facilities**

Remarks / Recommendations for Contractor

Date of Site Audit: 30 May 2014

Observation and/or Recommended Measures:

1. The Contractor was reminded to enhance house-keeping for the Workshop Area of Nim Bung.

2. The Contractor was reminded to clear the oil-stain at the Workshop Area of Nim Bung.

Target Date of Completion: Immediately & Continuously

Signatures:

	Name	Signature
ET's Representative	Bong Yu	
Contractor's Representative	Hong WAI	
SO's Representative	Patrick Chan	
IEC's Representative		

APPENDIX G
EVENT ACTION PLANS

APPENDIX G – Event / Action Plans

Table G-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

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

Table G-2 Event / Action Plan For Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level being exceeded	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC and ER; 2. Implement noise mitigation proposals
Limit Level being exceeded	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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 H
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)**

APPENDIX H IMPLEMENTATION SCHEDULE OF ENVIRONMENTAL MITIGATION MEASURES (EMIS)

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract				
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18	DC/2009/19
A	Air Quality						
3.74	Skip hoist for material transport should be totally enclosed by impervious sheeting.	All construction sites	^	^	^	^	N/A
	Vehicle washing facilities should be provided at every vehicle exit point.		^	^	^	N/A	
	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.		^	^	^	N/A	
	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	N/A	
	Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.		^	^	*	N/A	
	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.		*	^	*	N/A	
	Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs		^	^	^	N/A	
	Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.		^	^	^	N/A	

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract				
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18	DC/2009/19
	Imposition of speed controls for vehicles on unpaved site roads. Ten kilometers per hour is the recommended limit.			^	^	^	N/A
	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.			^	^	^	N/A
	Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.			^	^	^	N/A
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		^	^	^	N/A
B	Airborne Noise						
4.56–4.61	Use of quiet PME, movable barriers and acoustic mats.	All construction sites	^	^	^	^	N/A
4.67	Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program.		^	^	^	^	N/A
	Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program.		^	^	^	^	N/A
	Mobile plant, if any, shall be sited as far away from NSRs as possible.		^	^	^	^	N/A
	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.		^	^	^	^	N/A

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract				
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18	DC/2009/19
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.		^	^	^	^	N/A
	Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities.		^	^	^	^	N/A
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	^	*	*	*	N/A
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.		^	*	#	*	N/A

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract				
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18	DC/2009/19
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.		<>	*	*	*	N/A
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.		^	^	^	^	N/A
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: <ul style="list-style-type: none"> • 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. 		<>	^	^	^	N/A

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract				
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18	DC/2009/19
	<ul style="list-style-type: none"> Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area. 						
6.380	<p>Construction Works in Close Proximity of Storm Drains or Seafront</p> <p>To minimize the potential water quality impacts from the construction works located at or near any watercourse, the practices outlined below should be adopted where applicable.</p> <ul style="list-style-type: none"> 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. 	All construction sites	^	*	*	*	N/A

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract				
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18	DC/2009/19
	<ul style="list-style-type: none"> Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert or sea. 						
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	^	^	^	^	N/A
9.109	All waste materials should be segregated into categories covering: <ul style="list-style-type: none"> 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	^	^	^	^	N/A
9.113	Sort C&D waste from demolition of existing facilities to recover recyclable portions such as metals;		^	^	^	^	N/A
	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.			^	^	^	N/A

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract				
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18	DC/2009/19
	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.			^	^	^	N/A
	Any unused chemicals or those with remaining functional capacity shall be recycled.			^	^	^	N/A
	Proper storage and site practices to minimise the potential for damage or contamination of construction materials.			*	*	*	N/A
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.		<>	^	^	^	N/A
	Training of site personnel in proper waste management and chemical waste handling procedures.			^	^	^	N/A
	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.			^	^	^	N/A
	Provision of sufficient waste disposal points and regular collection of waste.			^	*	^	N/A
	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.			^	^	^	N/A
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	All construction sites	N/A	N/A	^	^	N/A

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract				
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18	DC/2009/19
	Drainage”						
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.		^	^	^	^	N/A
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.		<>	*	*	*	N/A
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.		^	^	^	^	N/A
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,		^	*	*	*	N/A

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract				
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18	DC/2009/19
	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	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	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.		^	^	^	^	N/A
10.96	Fences/hoardings should be erected and installed along the boundary of the works areas.		^	^	^	^	N/A
10.97	Standard good site practices as suggested in Section 10 of EIA should be implemented.		^	N/A	N/A	N/A	N/A

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract				
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18	DC/2009/19
10.98	Provision of proper drainage system and runoff control measures such as use of sand/silt traps, oil/grease separators, sedimentation tanks, etc.		^	^	^	^	N/A
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	^	^	^	^	N/A
	Existing trees to be retained on site should be carefully protected during construction.			^	^	^	N/A
	Trees unavoidably affected by the works should be transplanted where practical.			^	^	^	N/A
	Compensatory tree planting should be provided to compensate for felled trees.			^	^	^	N/A
	Control of night-time lighting.			^	^	^	N/A
Table 13.7	Erection of decorative screen hoarding compatible with the surrounding setting.			N/A	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	^	^	^	^	N/A
H	Hazard to Life						
14A.201	Limiting use of cranes in terms of locations, lifting height, swing angle and setting up safety zone.	Exact location will be determined on construction site by the engineer	^	^	^	^	N/A

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Contract				
			DC/2007/23	DC/2009/17	DC/2009/10	DC/2009/18	DC/2009/19
I	Cultural Heritage						
Tables 15.8 - 15.11	The construction vibration control limit (ppv of 25mm/s) shall be strictly followed.	Identified historical buildings/structures as mentioned in EM&A Manual Tables 15.8, 15.9, 15.10 and 15.11	NA. Vibration monitoring has not been launched during the reporting period	N/A	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 I
COMPLAINT LOG**

APPENDIX I – COMPLAINT LOG

Reporting Quarter: March 2014 to May 2014

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

APPENDIX J
CONSTRUCTION PROGRAMME

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	% Comp	2010												2011												2012												2013												2014																							
HATS Stage 2A - Contract DC/2007/23																																																																													
Stonecutters Island STW Production Shaft																																																																													
Preliminaries Works																																																																													
SCPS10070	SCPS: Construct/Install Blast Protection	2	22SEP10	24SEP10	0																																																																								
SCPS10075	SCPS: Site Inspection from Mines	1	25SEP10	25SEP10	0																																																																								
SCPS10080	SCPS: Issue Blasting Permit	1	27SEP10	27SEP10	0																																																																								
EBS, Env. & Geotechnical Instrumentations																																																																													
Markers/UMP's/Others(Same note as Piez.)																																																																													
SCPS0391	SCPS: Install GS Markers (17 Nos.)	74	01SEP09A	01FEB10	85																																																																								
SCPS0393	SCPS: Joint Survey & Establish Baseline Readings GSM	14	02FEB10	20FEB10	0																																																																								
Piezometers(NearbyPTWorPScovered in this Installn)																																																																													
SCPS0375	SCPS: BH907 Piezometer Baseline Establishment	26	10NOV09A	23JAN10	85																																																																								
SCPS0381	SCPS: BH908 Piezometer Baseline Establishment	26	10NOV09A	27JAN10	73																																																																								
SCPS0387	SCPS: BH906 Piezometer Baseline Establishment	26	15JAN10A	06FEB10	40																																																																								
Electrical & Mechanical Installations																																																																													
SCPS0620	SCPS: Installation Works for 11KV Application	60	08APR10	18JUN10	0																																																																								
SCPS0625	SCPS: 11 KV Connection & Power On	4	19JUN10	23JUN10	0																																																																								
Marine Dumping Permit																																																																													
SCPS0370	SCPS: Request for Disposal Site & Get Permit	24	02JAN10A	05FEB10	38																																																																								
Diaphragm Wall																																																																													
SCPS0279	SCPS: Excavate 3rd Panel to Formation Level	12	16JAN10A	20JAN10	92																																																																								
SCPS0281	SCPS: 3rd Panel Desanding & Preparation Works	4	21JAN10	25JAN10	0																																																																								
SCPS0282	SCPS: Grouting Works Phase 1	45	21JAN10	17MAR10	0																																																																								
SCPS0283	SCPS: 3rd Panel Rebar Cage Installation	3	26JAN10	28JAN10	0																																																																								
SCPS0285	SCPS: 3rd Panel Concreting Works	1	29JAN10	29JAN10	0																																																																								
SCPS0287	SCPS: Excavate 4th Panel to Formation Level	23	30JAN10	01MAR10	0																																																																								
SCPS0289	SCPS: 4th Panel Desanding & Preparation Works	9	02MAR10	11MAR10	0																																																																								
SCPS0291	SCPS: 4th Panel Rebar Cage Installation	6	12MAR10	18MAR10	0																																																																								
SCPS0292	SCPS: Grouting Works Phase 2	45	18MAR10	11MAY10	0																																																																								
SCPS0293	SCPS: 4th Panel Concreting Works	1	19MAR10	19MAR10	0																																																																								
SCPS0297	SCPS: Excavate 5th Panel to Formation Level	8	20MAR10	29MAR10	0																																																																								
SCPS0299	SCPS: 5th Panel Desanding & Preparation Works	3	30MAR10	01APR10	0																																																																								
SCPS0301	SCPS: 5th Panel Rebar Cage Installation	2	02APR10	03APR10	0																																																																								
SCPS0303	SCPS: 5th Panel Concreting Works	1	06APR10	06APR10	0																																																																								
SCPS0307	SCPS: Excavate 6th Panel to Formation Level	23	07APR10	04MAY10	0																																																																								
SCPS0309	SCPS: 6th Panel Desanding & Preparation Works	9	05MAY10	14MAY10	0																																																																								
SCPS0310	SCPS: Grouting Works Phase 3	50	12MAY10	10JUL10	0																																																																								
SCPS0311	SCPS: 6th Panel Rebar Cage Installation	6	15MAY10	21MAY10	0																																																																								
SCPS0313	SCPS: 6th Panel Concreting Works	1	22MAY10	22MAY10	0																																																																								
SCPS0317	SCPS: Excavate 7th Panel to Formation Level	8	24MAY10	01JUN10	0																																																																								
SCPS0319	SCPS: 7th Panel Desanding & Preparation Works	3	02JUN10	04JUN10	0																																																																								
SCPS0321	SCPS: 7th Panel Rebar Cage Installation	2	05JUN10	07JUN10	0																																																																								
SCPS0323	SCPS: 7th Panel Concreting Works	1	08JUN10	08JUN10	0																																																																								
SCPS0327	SCPS: Excavate 8th Panel to Formation Level	8	09JUN10	18JUN10	0																																																																								
SCPS0329	SCPS: 8th Panel Desanding & Preparation Works	3	19JUN10	22JUN10	0																																																																								
SCPS0331	SCPS: 8th Panel Rebar Cage Installation	2	23JUN10	24JUN10	0																																																																								
SCPS0333	SCPS: 8th Panel Concreting Works	1	25JUN10	25JUN10	0																																																																								
SCPS0335	SCPS: Install Dewatering Wells for Pump-test	12	05JUL10	17JUL10	0																																																																								
SCPS0337	SCPS: Pumping Test	6	19JUL10	24JUL10	0																																																																								
SCPS0338	SCPS: Submission of Pumping Test Report	6	26JUL10	31JUL10	0																																																																								
SCPS0341	SCPS: Demobilization	6	26JUL10	31JUL10	0																																																																								
Shaft Excavation																																																																													
SCPS0500	SCPS: Construct Capping Beam & Shaft Collar	12	26JUL10	07AUG10	0																																																																								
SCPS0510	SCPS: Initial Excavation of Shaft (7m)	4	09AUG10	12AUG10	0																																																																								
SCPS0520	SCPS: Set-Up Equipment for Shaft Sink	12	13AUG10	26AUG10	0																																																																								
SCPS0525	SCPS: Erect Noise Enclosure at Shaft Top	12	13AUG10	26AUG10	0																																																																								
SCPS0530	SCPS: Excavate Soil & Ring Beams (50m)	22	27AUG10	21SEP10	0																																																																								
SCPS0575	SCPS: Probe, Grout, D&B Rock, Muck Out (87m)	100	28SEP10	26JAN11	0																																																																								
SCPS0640	SCPS: Construct Sump at Shaft Bottom	2	27JAN11	28JAN11	0																																																																								
SCPS0665	SCPS: Erect Tunnel Hoist & Muck Out System	10	29JAN11	12FEB11	0																																																																								
Backfill, Reinstatement & Landscaping																																																																													
SCPS0910	SCPS: Backfill Shaft (20%)	8	12SEP13	21SEP13	0																																																																								
SCPS0920	SCPS: Backfill Shaft (40%)	8	23SEP13	02OCT13	0																																																																								
SCPS0930	SCPS: Backfill Shaft (60%)	8	03OCT13	11OCT13	0																																																																								
SCPS0940	SCPS: Backfill Shaft (80%)	8	12OCT13	22OCT13	0																																																																								
SCPS0950	SCPS: Backfill Shaft (100%)	8	23OCT13	31OCT13	0																																																																								
SCPS0960	SCPS: Reinstatement Around PS Area	12	01NOV13	14NOV13	0																																																																								
SCPS0970	SCPS: Demobilise Clear Area	6	15NOV13	21NOV13	0																																																																								
SCPS0975	SCPS: Complete All Works at SCI PS (KD-11)	0		21NOV13	0																																																																								
SCPS0980	SCPS: Landscaping & Planting Works	60	22NOV13*	20JAN14	0																																																																								
SCPS0990	SCPS: Period of Establishment Works	360	21JAN14	15JAN15	0																																																																								
SCPS1000	SCPS: End of Establishment Period	0		15JAN15	0																																																																								

Start Date	31JUL09	Early Bar
Finish Date	15JAN15	Progress Bar
Data Date	20JAN10	Critical Activity
Run Date	01FEB10 10:42	




WPU7 Sheet 1 of 1
Labour Area Treatment Scheme Stage 2A
 Contract No. DC/2007/23 - Construction of Sewage
 Conveyance from North Point to Stonecutters Island
 Programme
 Annex G8 Construction Programme for the Project



Date	Revision	Checked/Approved

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	% Comp	2010												2011												2012												2013												2014											
SCRS2060	SCRS: Period of Establishment Works	360	07NOV13	01NOV14	0	SCRS: Period of Establishment Works																																																											
SCRS2070	SCRS: End of Establishment Period	0		01NOV14	0	SCRS: End of Establishment Period																																																											
Connecting Adit																																																																	
SCRS2040	SCRS: Construct RS Connecting Adit	192	14OCT10	03JUN11	0	SCRS: Construct RS Connecting Adit																																																											
SCRS2050	SCRS: Complete Excav & Lining at SCI RS Adit	0		03JUN11	0	SCRS: Complete Excav & Lining at SCI RS Adit																																																											

Start Date 31JUL09
 Finish Date 15JAN15
 Data Date 20JAN10
 Run Date 01FEB10 10:50

 Early Bar
 Progress Bar
 Critical Activity

WPU7 Sheet 2 of 2
Harbour Area Treatment Scheme Stage 2A
 Contract No. DC/2007/23 - Construction of Sewage
 Conveyance from North Point to Stonecutters Island
 Programme
 Annex G8 Construction Programme for the Project



Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Total Float	Activity % Complete	Start	Finish	Qtr 2, 2014		Qtr 3, 2014		
							May	Jun	Jul	Aug	Sep
C10TGP05UTGP											
Civil and Geotechnical Submission											
Contractor Design, Submission and Approval											
Detailed Design Approval (DDA) Submission for Structural/ Builder Works											
CCD00270	Resubmission of Architecture and Builder Works Design	90	101	0%	23-May-2014	20-Aug-2014					Resubmission of Architecture and Builder Works Design
CCD00280	Final Approval of Architecture and Builder Works Design	45	101	0%	21-Aug-2014	04-Oct-2014					Final Approval of Architecture and Builder Works Design
DDA4 (SCIMPS2 and Inlet Chamber)											
CCD00175	Comment of Structural Design of RC manifold at Inlet chamber	14	0	42.86%	17-May-2014 A	30-May-2014					Comment of Structural Design of RC manifold at Inlet chamber
CCD00185	Resubmission of Structural Design of RC manifold at Inlet chamber	14	0	0%	31-May-2014	13-Jun-2014					Resubmission of Structural Design of RC manifold at Inlet chamber
CCD00215	Final approval of Structural Design of RC manifold at Inlet chamber	14	0	0%	14-Jun-2014	27-Jun-2014					Final approval of Structural Design of RC manifold at Inlet chamber
DDA5 (SCIMPS No. 1 Valve Chamber)											
CCD00133	Resubmission of Structural Design of RC for Manifold and SCIMPS No.1 Valve Chamber	14	0	50%	16-May-2014 A	29-May-2014					Resubmission of Structural Design of RC for Manifold and SCIMPS No.1 Valve Chamber
CCD00134	Final Approval of Structural Design of RC for Manifold and SCIMPS No.1 Valve Chamber	14	0	0%	30-May-2014	12-Jun-2014					Final Approval of Structural Design of RC for Manifold and SCIMPS No.1 Valve Chamber
DDA10 (Polymer Bldg)											
CCD00171	Prepare/ Submission of Structural Design of RC for Polymer Bldg (DD)	120	168	0%	08-Jun-2014	05-Oct-2014					Prepare/ Submission of Structural Design of RC for Polymer Bldg (DD)
CCD00410	Prepare/ Submission of Geotechnical Design review of Structures	70	139	0%	07-Jun-2014	15-Aug-2014					Prepare/ Submission of Geotechnical Design review of Structures
CCD00420	Comment of Geotechnical Design review of Structures	28	139	0%	16-Aug-2014	12-Sep-2014					Comment of Geotechnical Design review of Structures
CCD00430	Resubmission of Geotechnical Design review of Structures	28	139	0%	13-Sep-2014	10-Oct-2014					Resubmission of Geotechnical Design review of Structures
DDA11 (DOU No. 3 and DOU No. 1b)											
CCD00221	Comment of Structural Design of RC for for DOU No. 3	14	78	0%	23-May-2014	05-Jun-2014					Comment of Structural Design of RC for for DOU No. 3
CCD00222	Resubmission of Structural Design of RC for DOU No. 3	24	78	0%	06-Jun-2014	29-Jun-2014					Resubmission of Structural Design of RC for DOU No. 3
CCD00223	Final Approval of Structural Design of RC for DOU No. 3	14	78	0%	30-Jun-2014	13-Jul-2014					Final Approval of Structural Design of RC for DOU No. 3
DDA12 (Odour Duct Bridge)											
CCD00184	Final Approval of Structural Design of RC for Odour Duct bridge	21	91	53.57%	11-May-2014 A	01-Jun-2014					Final Approval of Structural Design of RC for Odour Duct bridge
Infrastructure Construction Works											
Works for Section 2											
Portion 4 (Switchgear Building)											
Electrical and Mechanical Installation											
First Floor											
VSD Room 1 - 4											
P904115	VSD: VSD panels +6.6KV switchboard	36	135	70%	08-Mar-2014 A	05-Jun-2014					VSD: VSD panels +6.6KV switchboard
P904116	VSD: Cables installation and termination	12	135	10%	05-May-2014 A	05-Jun-2014					VSD: Cables installation and termination
Capacitor Bank Room											
P904000	CB: Capacitor bank and cabling	24	122	0%	23-May-2014	20-Jun-2014					CB: Capacitor bank and cabling
Roof Floor											
P410010	RF: Air-conditioning units	24	188	95%	03-Jan-2014 A	24-May-2014					RF: Air-conditioning units
P410020	RF: VSD Heat Exchangers	60	56	80%	03-Jan-2014 A	03-Jun-2014					RF: VSD Heat Exchangers
Instrumentation and Control Automation (ICA) installation											
Hardware Installation at New Switchgear Building											
First Floor											
Control Room											
P420000	CON: Console installation	45	77	0%	23-May-2014	16-Jul-2014					CON: Console installation
P420010	CON: Fibre cable laying from HATS1 Switchgear Building	60	104	70%	14-May-2013 A	13-Jun-2014					CON: Fibre cable laying from HATS1 Switchgear Building
Statutory Submission and Inspection											
Water Supply Department (WSD)											
P449030	WM(P): External watermain laying	45	128	5%	23-Apr-2014 A	14-Jul-2014					WM(P): External watermain laying
P449040	WM(P): Submit WWO046	0	153	0%		14-Jul-2014					WM(P): Submit WWO046
P449050	WM(P): WSD inspection and install meter	18	128	0%	14-Jul-2014	04-Aug-2014					WM(P): WSD inspection and install meter
P449060	WM(P): Issue water connection advice (Potable water and Irrigation S	0	156	0%		04-Aug-2014					WM(P): Issue water connection advice (Potable water and Irrigation S
P451020	WM(FS): External Watermain Pipe laying	60	60	15%	12-May-2014 A	23-Jul-2014					WM(FS): External Watermain Pipe laying
P451030	WM(FS): Submit WWO046	0	60	0%		23-Jul-2014					WM(FS): Submit WWO046
P451040	WM(FS): WSD inspection and install meter	30	60	0%	24-Jul-2014	27-Aug-2014					WM(FS): WSD inspection
P451050	WM(FS): Issue Water Connection advice	0	60	0%		27-Aug-2014					WM(FS): Issue Water Con
Fire Service Department (FSD)											
P440048	FS: DG store inspection	18	175	60%	23-Apr-2014 A	31-May-2014					FS: DG store inspection
P440050	FS: Submit Form 314 and Form 501	0	108	0%		27-Aug-2014					FS: Submit Form 314 and F
P440060	FS: 1st Inspection	12	108	0%	28-Aug-2014	11-Sep-2014					FS: 1st Inspection
P440070	FS: Defect rectification	3	108	0%	12-Sep-2014	15-Sep-2014					FS: Defect rectification
P440080	FS: 2nd inspection	12	108	0%	16-Sep-2014	29-Sep-2014					FS: 2nd inspection
Testing and Commissioning											
P400200	Testing and commissioning for ICA system in SGB Control room	24	77	0%	17-Jul-2014	13-Aug-2014					Testing and commissioning for ICA system in SGB Con
Works for Section 3											
Key Date for Completion of Section 3											
S3KD0026	Start of DCS installation at Control Room 1/F	0	59	0%	06-Jun-2014						Start of DCS installation at Control Room 1/F
S3KD0036	Completion of RC slab of Upper Roof at +30.5mPD	0	80	0%		23-Jul-2014					Completion of RC slab of Upper Roof at +30.5mPD
S3KD0040	Start of E&M installation at Motor Hall A	0	-30	0%	27-May-2014						Start of E&M installation at Motor Hall A
S3KD0050	Start of cabling works via Service duct connection to Hall A	0	-51	0%	14-Jun-2014						Start of cabling works via Service duct connection to Hall A
Portion 1 (Existing CEPT tanks)											
Procurement/ Order/ Manufacturing/ Delivery											
P106132	Manufacturing of Level Sump Pumps for upgrading	180	-27	62.22%	31-Jan-2014 A	29-Jul-2014					Manufacturing of Level Sump Pumps for upgrading
P106133	Delivery of Sump Pumps for upgrading	21	-27	0%	30-Jul-2014	19-Aug-2014					Delivery of Sump Pumps for upgrading
Electrical and Mechanical Installation											
P106170	PST #9 to #46 - Power upgrading for sump pump replacement at Exist	180	106	46.71%	06-Feb-2014 A	15-Sep-2014					PST #9 to #46 - Power upgrading for sump pump replacement at Exist
P106173	PST #9 to #46 - Modification of sump transfer piping	180	-22	0%	16-Jul-2014	17-Feb-2015					PST #9 to #46 - Modification of sump transfer piping

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

Contract No. DC/2009/10

Sheet 1 of 8

Date	Revision	Checked	Approved

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

Three Months Rolling Programme (24 May 2014 to 24 Aug 2014)

Activity ID	Activity Name	Original Duration	Total Float	Activity % Complete	Start	Finish	Qtr 2, 2014			Qtr 3, 2014		
							May	Jun	Jul	Aug	Sep	
P106200	PST #17, #19, #21, #23 - Installation of 1st scum pump replacement	24	29	0%	20-Aug-2014	12-Sep-2014						
P106220	PST #39, #41, #43, #45 - Installation of 2nd Actuator and cabling	12	-37	25%	20-May-2014 A	03-Jun-2014						
P106230	PST #39, #41, #43, #45 - Installation of 2nd scum pump replacement	24	29	0%	13-Sep-2014	06-Oct-2014						
P106235	PST #25, #27, #29, #31 - Installation of 3rd FRP baffles and SS cover	32	-30	75%	23-Apr-2014 A	31-May-2014						
P106250	PST #25, #27, #29, #31 - Installation of 3rd Actuator and cabling	12	-37	0%	04-Jun-2014	17-Jun-2014						
P106265	PST #33, #35, #37 - Installation of 4th FRP baffles and SS cover repla	32	-30	0%	03-Jun-2014	10-Jul-2014						
P106270	PST #33, #35, #37 - Installation of 4th Level sensors and gear assemnt	32	-30	0%	03-Jun-2014	10-Jul-2014						
P106280	PST #33, #35, #37 - Installation of 4th Actuator and cabling	32	-30	0%	03-Jun-2014	10-Jul-2014						
P905785	PST #9, #11, #13, #15 - Installation of 5th FRP baffles and SS cover r	32	-30	0%	11-Jul-2014	16-Aug-2014						
P905790	PST #9, #11, #13, #15 - Installation of 5th Level sensors and gear ass	32	-30	0%	11-Jul-2014	16-Aug-2014						
P905800	PST #9, #11, #13, #15 - Installation of 5th Actuator and cabling	32	-30	0%	11-Jul-2014	16-Aug-2014						
P905815	PST #10, #12, #14, #16 - Installation of 6th FRP baffles and SS cover	32	-30	0%	18-Aug-2014	24-Sep-2014						
P905820	PST #10, #12, #14, #16 - Installation of 6th Level sensors and gear as	32	-30	0%	18-Aug-2014	24-Sep-2014						
P905830	PST #10, #12, #14, #16 - Installation of 6th Actuator and cabling	32	-30	0%	18-Aug-2014	24-Sep-2014						
P905835	PST #10, #12, #14, #16 - Installation of 6th scum pump replacement	32	0	0%	20-Aug-2014	26-Sep-2014						
Portion 3 (Extension of CEPT Tank)												
Interface between Civil/ ABWF/ E&M works (CEPT tanks)												
CEPT020	PSTs tanks handover for start of installation of Scum and sludge scar	0	-41	0%		10-Sep-2014						
CEPT045	Flocculation tanks handover for start of penstock installation	0	-19	0%		25-Aug-2014						
Submission of design of E&M works												
P301032	Approval/ comment for CMS of the Scum collection system	90	-35	85%	18-Apr-2013 A	05-Jun-2014						
P301490	Approval/ comment for CMS of the Process water flushing and protect	90	28	75%	25-Feb-2013 A	14-Jun-2014						
P301530	Approval/ comment for CMS of the Chemical (FeCl3 and polymer) dos	90	-91	60%	15-Apr-2013 A	27-Jun-2014						
P906010	DDA No. 46-07 to 11 and 14 to 19 - Control Philosophy for CEPT (11 F	60	55	90%	18-Feb-2013 A	28-May-2014						
P906020	Approval/ comment for the DDA of Control Philosophy for CEPT	30	55	75%	20-Apr-2013 A	05-Jun-2014						
P906030	DDA No. 47-01 to 06 - I/O schedule for CEPT (6 Packages)	40	78	90%	17-Dec-2012 A	09-Jun-2014						
P906040	Approval/ comment for the DDA of I/O schedule for CEPT tanks	30	78	85%	28-Feb-2013 A	13-Jun-2014						
P906050	DDA No. 42-02- Software Development for DCS system for CEPT tar	40	55	70%	28-Jun-2012 A	17-Jun-2014						
P906060	Approval/ comment for the DDA of Software Development for DCS sy	30	55	35%	31-Jul-2012 A	06-Jul-2014						
Procurement/ Order/ Manufacturing/ Delivery												
P301690	Manufacturing of Process air supply system for flocculation tanks	300	71	95%	26-Apr-2013 A	06-Jun-2014						
P301700	Delivery of Process air supply system for flocculation tanks	60	71	0%	07-Jun-2014	05-Aug-2014						
P301730	Delivery of sludge pumping systems	45	32	15%	09-May-2014 A	30-Jun-2014						
P301731	Procurement / Purchase Order of scum collection systems	28	-35	0%	05-Jun-2014	03-Jul-2014						
P301732	Manufacturing of scum collection systems	120	-35	0%	03-Jul-2014	31-Oct-2014						
P301740	Procurement / Purchase Order of Process water flushing and protect	21	28	0%	14-Jun-2014	05-Jul-2014						
P301750	Manufacturing of Process water flushing and protected water system	45	28	0%	05-Jul-2014	19-Aug-2014						
P301760	Delivery of Process water flushing and protected water system	21	28	0%	19-Aug-2014	09-Sep-2014						
P301800	Procurement / Purchase Order of Chemical (FeCl3 and polymer) dosi	28	-91	0%	28-Jun-2014	25-Jul-2014						
P301810	Manufacturing of Chemical (FeCl3 and polymer) dosing system	90	-91	0%	26-Jul-2014	23-Oct-2014						
P301840	Manufacturing of Lifting Appliance	120	-6	75%	12-Apr-2013 A	21-Jun-2014						
P301850	Delivery of Lifting Appliance	60	-6	0%	22-Jun-2014	20-Aug-2014						
P906190	Procurement / Purchase Order for DCS hardware and associated eq	10	55	73%	16-Oct-2013 A	09-Jul-2014						
P906200	Manufacturing of DCS hardware and associated equipment (Included	60	55	0%	09-Jul-2014	07-Sep-2014						
P906210	Delivery of DCS hardware and associated equipment	30	55	0%	07-Sep-2014	07-Oct-2014						
Foundation Works												
Extension/ trimming of Existing Daido Piles												
Row M												
P902600	Extension for M1 to M 59 (40Nos)	18	-16	45%	14-May-2014 A	09-Jun-2014						
Excavation and Lateral Support for Substructure												
Cofferdam No. 2 (GL34-36, A)												
P904300	CO2: Install steel girder beam for temporary support of existing servic	15	-37	45%	06-Sep-2013 A	03-Jun-2014						
P904360	CO2: Excavation down to -1.0mPD	12	1	0%	03-Jun-2014	17-Jun-2014						
P904370	CO2: Install 3rd layer of walling and strut at -1.5mPD	21	1	0%	17-Jun-2014	12-Jul-2014						
P904380	CO2: Steel lagging under existing service ducts	21	1	0%	17-Jun-2014	12-Jul-2014						
P904390	CO2: Excavation down to final excavation level -3.4mPD	15	1	0%	12-Jul-2014	30-Jul-2014						
R.C. Works												
Substructure												
GL 33-38 & GL B1-B9 (Disturbance Channel)												
P334012	DC: Backfilling for pile caps and ground beams GL B1-B6	14	-16	75%	21-Jan-2014 A	27-May-2014						
P334019	DC: Ground floor slab at +4.0mPD and +5.3mPD	24	-15	0%	27-May-2014	25-Jun-2014						
GL 34-37 & GL A-B (Flocculation tanks connecting to MFC)												
P332500	FLOC: Base slab at -3.0mPD	18	1	0%	30-Jul-2014	20-Aug-2014						
P332510	FLOC: Wall up to +1.0mPD	15	1	0%	20-Aug-2014	06-Sep-2014						
P332520	FLOC: Wall up to +5.0mPD	15	1	0%	06-Sep-2014	25-Sep-2014						
GL 33-38 & GL B-C (Flocculation tanks)												
P332521	FLOC: Pile head preparation	6	-16	45%	08-Apr-2014 A	30-May-2014						
P332522	FLOC: Pile caps (4 Pours)	42	-16	35%	02-May-2014 A	03-Jul-2014						
Superstructure												
GL33-29 & GL A-B (Northern Effluent Culvert)												
Preloading (Northern CEPT tanks)												
P330261	CEPT(N): Filling water	16	13	0%	23-Jun-2014	09-Jul-2014						
P330271	CEPT(N): Settlement monitoring	14	13	0%	09-Jul-2014	23-Jul-2014						
GL33-29 & GL M-N (Southern Effluent Culvert)												
Preloading (Southern CEPT tanks)												

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

Contract No. DC/2009/10

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Date	Revision	Checked	Approved

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

Three Months Rolling Programme (24 May 2014 to 24 Aug 2014)

Activity ID	Activity Name	Original Duration	Total Float	Activity % Complete	Start	Finish	Qtr 2, 2014			Qtr 3, 2014		
							May	Jun	Jul	Aug	Sep	
P300617	CEPT(S): Filling water	16	-18	0%	14-Jun-2014	30-Jun-2014						
P300627	CEPT (S): Settlement monitoring	14	-18	0%	30-Jun-2014	14-Jul-2014						
GL 33-29 & GL B-D (Northern CEPT tanks)												
P330243	CEPT(N): Channel wall_GL32 (From +10.5 to 14.0mPD)_Bay 1-3	15	20	75%	06-May-2014 A	27-May-2014						
P330253	CEPT(N): Channel wall_GL33 (From +10.5 to 14.0mPD)_Bay 1-3	18	17	60%	12-May-2014 A	31-May-2014						
P330254	CEPT(N): Corbels_GL29 (From +14.0 to 14.5mPD)	12	11	15%	19-May-2014 A	05-Jun-2014						
P330256	CEPT(N): Corbels_GL30 (From +14.0 to 14.5mPD)	12	26	15%	13-May-2014 A	05-Jun-2014						
P330257	CEPT(N): Corbels_GL31 (From +14.0 to 14.5mPD)	12	24	0%	23-May-2014	06-Jun-2014						
P330258	CEPT(N): Corbels_GL32 (From +14.0 to 14.5mPD)	12	20	0%	27-May-2014	11-Jun-2014						
P330260	CEPT(N): Corbels_GL33 (From +14.0 to 14.5mPD)	12	17	0%	31-May-2014	16-Jun-2014						
Water tightness test (Northern CEPT tanks)												
P330275	CEPT (N): Pump out water from 2nos of PSTs	18	13	0%	06-Aug-2014	24-Aug-2014						
P330305	CEPT (N): Water tightness test for structures (#47 and #49)	10	13	0%	24-Aug-2014	03-Sep-2014						
P330315	CEPT (N): Pump out water From #47, 49 to #51, 53	18	13	0%	03-Sep-2014	21-Sep-2014						
GL 33-29 & GL M-K (Southern CEPT tanks)												
P300602	CEPT(S): Corbels_GL29 (From +14.0 to 14.5mPD)	12	-4	30%	05-May-2014 A	03-Jun-2014						
P300605	CEPT(S): Corbels_GL30 (From +14.0 to 14.5mPD)	12	-15	25%	28-Apr-2014 A	03-Jun-2014						
P300608	CEPT(S): Corbels_GL31 (From +14.0 to 14.5mPD)	12	-15	25%	30-Apr-2014 A	03-Jun-2014						
Water Tightness Test (Southern CEPT Tanks)												
P300615	CEPT (S): Pump out water from 2nos of PSTs	18	-44	0%	23-Aug-2014	10-Sep-2014						
P300625	CEPT (S): Water Tightness test (#48 and #50)	10	-44	0%	10-Sep-2014	20-Sep-2014						
GL 33-29 & GL D-K (Disturbution Channel)												
Preloading (Disturbution Channel)												
P330360	DC: Filling water	10	120	0%	23-Jun-2014	05-Jul-2014						
P330390	DC: Settlement Monitoring	10	144	0%	05-Jul-2014	15-Jul-2014						
GL 33-38 & GL C-E (Disturbution Channel)												
P330320	DC: Columns	21	-1	15%	16-May-2014 A	18-Jun-2014						
P330330	DC: Channel deck at +10.3mPD	40	-15	0%	25-Jun-2014	12-Aug-2014						
P330340	DC: Channel Curve wall at +15.3mPD	40	-15	0%	04-Aug-2014	20-Sep-2014						
GL 33-38 & GL B-C (Flocculation tanks)												
P330375	FLOC: Wall up to +9.0mPD	15	-16	0%	04-Jul-2014	21-Jul-2014						
P330376	FLOC: Wall up to +13.0mPD	15	-16	0%	22-Jul-2014	07-Aug-2014						
P330377	FLOC: Wall up to +17.0mPD	15	-16	0%	08-Aug-2014	25-Aug-2014						
Electrical and Mechanical Installation												
P300440	Installation of sludge collection system at 1st 2 new PSTs	42	-34	0%	11-Sep-2014	31-Oct-2014						
P300460	Installation of Process water flushing and protected water system at 1	24	22	0%	09-Sep-2014	09-Oct-2014						
P300500	Installation of penstocks and stoplogs at Disturbution channels	50	140	0%	23-May-2014	22-Jul-2014						
P300510	Installation of penstocks and stoplogs at Flocculation Tanks	65	-16	0%	26-Aug-2014	12-Nov-2014						
P300530	Installation of penstocks at 2nd 4 new PSTs (N)	50	11	70%	15-Apr-2014 A	23-Jun-2014						
P300620	Installation of Lifting appliance	120	-5	0%	21-Aug-2014	14-Jan-2015						
Effluent Culvert Connection works												
P300285	Connection of Effluent Culvert at Northern CEPT tanks	14	13	0%	23-Jul-2014	06-Aug-2014						
P300377	Construction of bulkhead wall at existing Southern culvert and installati	45	-37	0%	18-Jun-2014	09-Aug-2014						
P300380	Connection of Effluent Culvert at Southern CEPT tanks	14	-44	0%	09-Aug-2014	23-Aug-2014						
Disturbution Channel Connection works												
P904935	Construction of bulkhead wall at existing disturbution channels	45	143	53.33%	23-Apr-2014 A	17-Jun-2014						
P904940	Connection of distribution channels	14	104	0%	23-Aug-2014	06-Sep-2014						
Portion 4 (Main Pumping Station)												
Submission of design of E&M works												
P301320	DDA No. 46-22 - Control Philosophy for MPS and SGB	90	-35	97%	23-Mar-2013 A	25-May-2014						
P301330	Approval/ comment for the DDA of Control Philosophy for MPS and SC	90	-68	95%	28-May-2013 A	27-May-2014						
P301340	DDA No. 47-11 to 18 - I/O schedule for MPS and SGB	60	25	75%	29-Dec-2012 A	11-Jun-2014						
P301350	Approval/ comment for the DDA of I/O schedule for MPS and SGB	45	25	35%	28-Feb-2013 A	10-Jul-2014						
P301360	DDA No. 42-05 - Software Development for DCS system for SGB and	60	21	75%	25-Jul-2013 A	11-Jun-2014						
P301370	Approval/ Comment for the DDA of Software Development for DCS sy	45	21	25%	12-Sep-2012 A	15-Jul-2014						
Procurement/ Order/ Manufacturing/ Delivery												
P302390	Delivery of Cooling water system for pump bearing and motors	21	35	45%	31-Jan-2014 A	03-Jun-2014						
P302423	Delivery of Piping system for NWK overflow	60	32	30%	09-Apr-2014 A	03-Jul-2014						
P302432	Delivery of Piping system for recirculation	55	43	30%	10-Apr-2014 A	30-Jun-2014						
P302443	Delivery of Piping system for centrate flow	55	30	30%	31-Mar-2014 A	30-Jun-2014						
P302445	Manufacturing of flushing water system for MPS and inlet chamber	60	62	50%	28-Jan-2014 A	21-Jun-2014						
P302446	Delivery of flushing water system for MPS and inlet chamber	30	62	0%	22-Jun-2014	21-Jul-2014						
P302470	Manufacturing of Air Mixing system of wet well	60	-110	15%	20-Mar-2014 A	12-Jul-2014						
P302480	Delivery of Air Mixing system of wet well	14	-110	0%	13-Jul-2014	26-Jul-2014						
P302520	Procurement / Purchase Order of DCS and Interfacing control system	10	-68	70%	18-Dec-2013 A	30-May-2014						
P302530	Manufacturing for DCS hardware and Interfacing control system	120	-68	0%	30-May-2014	27-Sep-2014						
P906350	Manufacturing of 1st batch of DN3000 Super Duplex puddle Pipe	210	-33	73%	01-Mar-2014 A	18-Jul-2014						
P906360	Delivery of 1st batch of DN3000 Super Duplex puddle Pipe	14	-33	0%	18-Jul-2014	01-Aug-2014						
Interface between Civil/ ABWF/ E&M works (Access Floor No. 1, -32.0mPD)												
MPS0015	Access Floor No. 1 (-32.0mPD) interface for start of FRP access floor	0	33	0%		05-Jun-2014						
Interface between Civil/ ABWF/ E&M works (Access Floor No. 4, -2.0mPD)												
MPS0040	Access Floor No. 4 (-2.0mPD) interface for start of installation of BS a	0	-59	0%		23-Jul-2014						
Interface between Civil/ ABWF/ E&M works (G/F level, +5.90mPD)												
MPS0050	Motor Hall (RHS) handover for start of installation of BS and E&M equi	0	-29	0%		10-Jun-2014						

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

Three Months Rolling Programme (24 May 2014 to 24 Aug 2014)

Activity ID	Activity Name	Original Duration	Total Float	Activity % Complete	Start	Finish	Qtr 2, 2014			Qtr 3, 2014		
							May	Jun	Jul	Aug	Sep	
MPS0070	Maintenance Area handover for start of installation of BS and E&M equ	0	70	0%		26-Jul-2014						◆ Maintenance Area handover for start of installation of BS and E&M equipment
Interface between Civil/ ABWF/ E&M works (1/F level, +20.40mPD)												
MPS0080	Control Room Handover for start of installation of BS and E&M equipm	0	59	0%		06-Jun-2014		◆ Control Room Handover for start of installation of BS and E&M equipment				
MPS0090	Computer and UPS room handover for start of installation of BS and E	0	86	0%		23-Jun-2014		◆ Computer and UPS room handover for start of installation of BS and E&M equipment				
MPS0100	Freigh lift room handover for start of installation of BS and E&M equipr	0	191	0%		31-May-2014		◆ Freigh lift room handover for start of installation of BS and E&M equipment				
MPS0110	LV switchroom handover for start of installation of BS and E&M equipm	0	-29	0%		08-Jul-2014			◆ LV switchroom handover for start of installation of BS and E&M equipment			
MPS0120	Fan Room handover for start of installation of BS and E&M equipment	0	-28	0%		12-Aug-2014				◆ Fan Room handover for start of installation of BS and E&		
MPS0130	Stop Log Room handover for start of installation of BS and E&M equipr	0	-20	0%		11-Jul-2014			◆ Stop Log Room handover for start of installation of BS and E&M equipment			
MPS0150	Store Room Handover for start of installation of BS and E&M equipmer	0	149	0%		28-May-2014		◆ Store Room Handover for start of installation of BS and E&M equipment				
MPS0160	Offices Area Handover to start of installation of BS and E&M equipmen	0	78	0%		08-Jul-2014			◆ Offices Area Handover to start of installation of BS and E&M equipment			
MPS0170	Corridor Area Handover for start of installation of BS and E&M equipm	0	191	0%		31-May-2014		◆ Corridor Area Handover for start of installation of BS and E&M equipment				
MPS0180	O&M Manual Room Handover for start of installatio of BS and E&M ec	0	50	0%		29-Aug-2014						◆ O&M Manual Room Ha
Interface between Civil/ ABWF/ E&M works (R/F level, +25.90mPD)												
MPS0140	Roof level handover for start of installation of BS and E&M equipment	0	8	0%		26-Aug-2014						◆ Roof level handover for start
R.C. Works												
Access Floor No. 1 (-32.0mPD)												
E&M features												
P400285	AC1: Hydraulic features at wet well (Mass concrete fill)	48	-71	5%	30-Apr-2014 A	17-Jul-2014						AC1: Hydraulic features at wet well (Mass concrete fill)
P400315	AC1: Install DN3000 Super Duplex puddle Pipe (LHS, w/ 2Nos of site v	30	-28	0%	01-Aug-2014	05-Sep-2014						AC1: Inst
P400325	AC1: R.C. works for Puddle pipe at wet well wall (LHS)	18	-28	0%	05-Sep-2014	27-Sep-2014						
P400335	AC1: Install blank flange inside wet well (LHS)	18	-28	0%	05-Sep-2014	27-Sep-2014						
P400338	AC1: Install DN3000 Super Duplex puddle Pipe (RHS, w/ 2Nos of site	30	-11	0%	05-Sep-2014	14-Oct-2014						
Ground floor slab (+5.9mPD)												
Floor slab and beams (+5.9mPD)												
P903630	GF: Dismantle metal scaffold (RHS)	12	-26	0%	27-May-2014	11-Jun-2014						GF: Dismantle metal scaffold (RHS)
1/f slab (+20.4mPD)												
Floor slab and beams (+20.4mPD)												
P903100	1F: Dismantle Metal scaffold (RHS)	10	-26	65%	14-Apr-2014 A	27-May-2014						1F: Dismantle Metal scaffold (RHS)
Roof Floor slab (+25.9mPD)												
P903095	RF: Construction of drainaga channels and downpipes (external)	30	66	0%	23-Jul-2014	27-Aug-2014						RF: Construction of drainag
Floor slab and beams (+25.9mPD)												
P902990	RF: +25.9mPD Floor slab and beam (RHS)	18	-24	90%	19-Apr-2014 A	24-May-2014						RF: +25.9mPD Floor slab and beam (RHS)
P902994	RF: +25.9mPD Floor slab and beam (Mid)	18	-28	20%	14-May-2014 A	06-Jun-2014						RF: +25.9mPD Floor slab and beam (Mid)
P902996	RF: Dismantle metal scaffold (RHS)	10	-24	0%	11-Jun-2014	23-Jun-2014						RF: Dismantle metal scaffold (RHS)
Upper Roof slab (+30.5mPD)												
P903080	URF: Floor slab and beam at +30.5mPD	15	66	0%	05-Jul-2014	23-Jul-2014						URF: Floor slab and beam at +30.5mPD
Columns C2 (10 Nos)												
P903060	RF: Column C2 (1-5) up to +30.5mPD	12	-23	0%	06-Jun-2014	20-Jun-2014						RF: Column C2 (1;5) up to +30.5mPD
P903070	RF: Column C2 (5-10) up to +30.5mPD	12	-23	0%	20-Jun-2014	05-Jul-2014						RF: Column C2 (5-10) up to +30.5mPD
Builder and finishes Works												
Access Floor No. 1 (-32.0mPD)												
P400355	AC1: FRP Access flooring	140	27	0%	06-Jun-2014	20-Nov-2014						
Access Floor No. 2 (-18.0mPD)												
P400485	AC2: Heavy duty epoxy floor paints	18	125	0%	05-Jul-2014	25-Jul-2014						AC2: Heavy duty epoxy floor paints
Access Floor No. 3 (-10.0mPD)												
P400535	AC3: Heavy duty epoxy floor paints	12	107	0%	02-Aug-2014	15-Aug-2014						AC3: Heavy duty epoxy floor paints
Access Floor No. 4 (-2.0mPD)												
P400565	AC4: Wall/ ceiling finishes (fair face)	12	-49	0%	09-Jul-2014	23-Jul-2014						AC4: Wall/ ceiling finishes (fair face)
Motor Hall (+5.9mPD)												
Motor Hall (RHS)												
P400655	MOT: Wall/ ceiling finishes (fair face)	11	-24	0%	27-May-2014	10-Jun-2014						MOT: Wall/ ceiling finishes (fair face)
P400665	MOT: Install roller shutters, door and lourvers	24	139	0%	10-Jun-2014	09-Jul-2014						MOT: Install roller shutters, door and lourvers
Motor Hall (LHS)												
P400705	MOT: Install roller shutters, door and lourvers	24	115	0%	09-Jul-2014	06-Aug-2014						MOT: Install roller shutters, door and lourvers
P400715	MOT: Heavy duty epoxy floor paints	12	119	0%	19-Jul-2014	02-Aug-2014						MOT: Heavy duty epoxy floor paints
Maintenance area												
P903940	MA: Wall/ ceiling finishes (fair face)	10	12	0%	15-Jul-2014	26-Jul-2014						MA: Wall/ ceiling finishes (fair face)
P903950	MA: Install roller shutters, door and lourvers	24	100	0%	26-Jul-2014	23-Aug-2014						MA: Install roller shutters, door and
First Floor (+20.4mPD)												
Control Room												
P400725	CON: Wall plastering/ painting	12	49	85%	02-May-2014 A	24-May-2014						CON: Wall plastering/ painting
P400735	CON: Raised flooring	10	49	0%	24-May-2014	06-Jun-2014						CON: Raised flooring
P400736	CON: Door and window installation	6	53	0%	24-May-2014	31-May-2014						CON: Door and window installation
P400737	CON: Suspended ceiling	6	142	0%	27-Jun-2014	05-Jul-2014						CON: Suspended ceiling
Store Room												
P400745	STO: Wall plastering/ painting	12	120	75%	02-May-2014 A	28-May-2014						STO: Wall plastering/ painting
P400755	STO: Flooring/ Suspended ceiling	12	161	0%	28-May-2014	12-Jun-2014						STO: Flooring/ Suspended ceiling
Corridor												
P400765	COR: Wall plastering/ painting	12	120	75%	02-May-2014 A	31-May-2014						COR: Wall plastering/ painting
P400775	COR: Raised flooring/ Suspended ceiling	12	158	0%	31-May-2014	16-Jun-2014						COR: Raised flooring/ Suspended ceiling
Computer and UPS Room												
P400785	COM: Wall plastering/ painting	12	54	0%	09-Jun-2014	23-Jun-2014						COM: Wall plastering/ painting
P400795	COM: Raised flooring/ Suspended ceiling	18	54	0%	23-Jun-2014	15-Jul-2014						COM: Raised flooring/ Suspended ceiling
Offices												
P400805	OFF: Wall plastering/ painting	12	66	0%	23-Jun-2014	08-Jul-2014						OFF: Wall plastering/ painting
P400815	OFF: Raised flooring/ Suspended ceiling	24	66	0%	08-Jul-2014	05-Aug-2014						OFF: Raised flooring/ Suspended ceiling

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

Three Months Rolling Programme (24 May 2014 to 24 Aug 2014)

Activity ID	Activity Name	Original Duration	Total Float	Activity % Complete	Start	Finish	Qtr 2, 2014		Qtr 3, 2014			
							May	Jun	Jul	Aug	Sep	
LV switchroom												
P400825	LV: Wall plastering/ painting	12	-24	0%	23-Jun-2014	08-Jul-2014						
P400835	LV: Raised flooring/ Suspended ceiling	18	-24	0%	08-Jul-2014	29-Jul-2014						
Fan Room												
P400845	FAN: Wall plastering/ painting	12	-24	0%	29-Jul-2014	12-Aug-2014						
P400865	FAN: Flooring/ Suspended ceiling	12	-24	0%	12-Aug-2014	26-Aug-2014						
Toilet												
P400895	TO: Wall plastering/ tiling	15	21	0%	12-Aug-2014	29-Aug-2014						
P400905	TO: Floor tiling/ Ceiling painting	18	21	0%	29-Aug-2014	20-Sep-2014						
Stop Log Room												
P400875	SL: Wall painting	12	-16	0%	26-Jun-2014	11-Jul-2014						
P400885	SL: Floor screeding/ sealer paints	18	70	0%	09-Sep-2014	30-Sep-2014						
O&M Manual Room												
P400915	OM: Wall plastering/ painting	12	40	0%	15-Aug-2014	29-Aug-2014						
P400925	OM: Raised flooring/ Suspended ceiling	15	40	0%	29-Aug-2014	17-Sep-2014						
FS room												
P400935	FS: Wall/ ceiling plastering/ painting	12	40	0%	11-Jul-2014	25-Jul-2014						
P400945	FS: Floor finishes	18	40	0%	25-Jul-2014	15-Aug-2014						
Roof Floor (+25.9mPD)												
P400985	RF: Floor screeding and waterproof	30	-23	0%	22-Jul-2014	26-Aug-2014						
P400995	RF: Green Roof	30	37	0%	26-Aug-2014	03-Oct-2014						
Building Service Installation												
Access Floor No. 4 (-2.0mPD)												
P400370	AC4: Building services equipment	36	-49	0%	23-Jul-2014	03-Sep-2014						
Motor Hall (+5.9mPD)												
Motor Hall (RHS)												
P400440	MOT: Building services equipment	42	-24	0%	10-Jun-2014	30-Jul-2014						
Motor Hall (LHS)												
P400450	MOT: Building services equipment	42	-21	16.37%	15-May-2014 A	19-Aug-2014						
Maintenance Area												
P401810	MA: Building services equipment	36	56	0%	26-Jul-2014	06-Sep-2014						
First Floor (+20.4mPD)												
Control Room												
P400460	CON: Building services equipment	18	49	0%	06-Jun-2014	27-Jun-2014						
Store Room												
P400480	STO: Building services equipment	18	123	0%	28-May-2014	19-Jun-2014						
Corridor												
P400470	COR: Installation of Building services equipment	18	120	0%	31-May-2014	23-Jun-2014						
Computer and UPS Room												
P401610	COM: Building services equipment	12	54	0%	15-Jul-2014	29-Jul-2014						
Offices												
P401630	OFF: Building services equipment	18	66	0%	05-Aug-2014	26-Aug-2014						
LV switchroom												
P401640	LV: Building services equipment	18	0	0%	29-Jul-2014	19-Aug-2014						
Fan Room												
P401620	FAN: Building services equipment	18	-24	0%	26-Aug-2014	17-Sep-2014						
Stop Log Room												
P401780	SL: Building services equipment	24	-16	0%	11-Jul-2014	08-Aug-2014						
O&M Manual Room												
P401790	OM: Building services equipment	24	40	0%	29-Aug-2014	27-Sep-2014						
FS room												
P401800	FS: Building services equipment	24	70	0%	25-Jul-2014	22-Aug-2014						
Roof Floor (+25.9mPD)												
A1080	RF: Staircase Pressurize System	60	7	0%	26-Aug-2014	07-Nov-2014						
Electrical and Mechanical Installation												
Access Floor No. 1 (-32.0mPD)												
P903755	AC1: Main Sewage Pump No.1 - 4 (RHS)	150	149	90%	17-Jan-2014 A	26-Jul-2014						
P903770	AC1: Main Sewage Pumps pipeworks (Main Sewage Pump No.3 & 4)	45	44	45%	08-Apr-2014 A	07-Aug-2014						
P903775	AC1: Main Sewage Pump No.5 - 8 (LHS)	180	61	90%	16-Nov-2013 A	13-Jun-2014						
P903790	AC1: Main Sewage Pumps pipeworks (Main Sewage Pump No.7 & 8)	55	27	80%	27-Jan-2014 A	05-Jun-2014						
P904070	AC1: Air Mixing Pipeworks (-32mPD to -2mPD)	60	-88	0%	28-Jul-2014	08-Oct-2014						
P904640	AC1: Piping system for recirculation (-32mPD to -2mPD)	90	36	0%	30-Jun-2014	17-Oct-2014						
P904650	AC1: Piping system for centrate flow	45	25	0%	30-Jun-2014	22-Aug-2014						
P904652	AC1: Piping system for NWK overflow	85	27	0%	04-Jul-2014	14-Oct-2014						
Access Floor No. 2 (-18.0mPD)												
P903830	AC2: Pipeworks and associated cabling works (Main Sewage Pump N	24	55	0%	09-Jul-2014	06-Aug-2014						
P903840	AC2: Pipeworks and associated cabling works (Main Sewage Pump N	24	44	0%	26-Jul-2014	23-Aug-2014						
P903850	AC2: Pipeworks and associated cabling works (Main Sewage Pump N	24	35	0%	09-Jul-2014	06-Aug-2014						
P903860	AC2: Pipeworks and associated cabling works (Main Sewage Pump N	24	63	0%	06-Jun-2014	04-Jul-2014						
Access Floor No. 3 (-10.0mPD)												
P903960	AC3: Pipeworks and associated cabling works (Main Sewage Pump N	24	55	0%	25-Jul-2014	22-Aug-2014						
P903970	AC3: Pipeworks and associated cabling works (Main Sewage Pump N	24	44	0%	12-Aug-2014	10-Sep-2014						
P903980	AC3: Pipeworks and associated cabling works (Main Sewage Pump N	24	35	0%	06-Aug-2014	03-Sep-2014						
P903990	AC3: Pipeworks and associated cabling works (Main Sewage Pump N	24	63	0%	05-Jul-2014	01-Aug-2014						
Access Floor No. 4 (-2.0mPD)												
P903891	AC4: Pipeworks and associated cabling works (Main Sewage Pump N	24	55	0%	11-Aug-2014	09-Sep-2014						

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Three Months Rolling Programme (24 May 2014 to 24 Aug 2014)

Activity ID	Activity Name	Original Duration	Total Float	Activity % Complete	Start	Finish	Qtr 2, 2014			Qtr 3, 2014		
							May	Jun	Jul	Aug	Sep	
P903892	AC4: Pipeworks and associated cabling works (Main Sewage Pump N	24	44	0%	26-Aug-2014	24-Sep-2014						
P903893	AC4: Pipeworks and associated cabling works (Main Sewage Pump N	24	35	0%	03-Sep-2014	04-Oct-2014						
P903894	AC4: Pipeworks and associated cabling works (Main Sewage Pump N	24	63	0%	02-Aug-2014	29-Aug-2014						
P903900	AC4: Cooling water system (Main Sewage Pump No.1 - 4)	60	-49	0%	03-Sep-2014	15-Nov-2014						
P903915	AC4: Cooling Water Pumps for pump bearing	45	20	0%	23-Jul-2014	15-Sep-2014						
P904400	AC4: Process Water Tank	24	35	0%	03-Sep-2014	04-Oct-2014						
P904680	AC4: Flushing water system for MPS and Inlet chamber	45	52	0%	22-Jul-2014	12-Sep-2014						
P904780	AC4: Piping for Centrate Pipeworks	45	14	0%	03-Sep-2014	29-Oct-2014						
Motor Hall (+5.9mPD)												
Motor Hall (RHS)												
P903810	MOT: 40 Ton Lifting appliance at Motor Hall (RHS)	35	-24	0%	10-Jun-2014	22-Jul-2014						
P904750	MOT: Cooling Water Pipeworks for Motors	30	20	0%	15-Sep-2014	22-Oct-2014						
P904770	MOT: Sewage pump motor	120	-24	0%	22-Jul-2014	12-Dec-2014						
Motor Hall (LHS)												
P903820	MOT: 40T Lifting appliance at Motor Hall (LHS)	35	-21	75%	10-Apr-2014 A	19-Jul-2014						
P904760	MOT: Cooling Water Pipeworks for Motors	30	20	0%	15-Sep-2014	22-Oct-2014						
P904800	MOT: Sewage pump motor	120	-21	0%	19-Jul-2014	10-Dec-2014						
Maintenance Area												
P903890	MA: Lifting appliance at Maintenance Area	80	12	0%	26-Jul-2014	31-Oct-2014						
First Floor (+20.4mPD)												
Freigh Lift Room												
P401650	LT: Freigh Lift Car	121	-71	0%	15-Sep-2014	09-Feb-2015						
LV swtichroom												
P903922	LV: Switchboard and cabling	90	0	0%	29-Jul-2014	14-Nov-2014						
Fan Room												
P903870	FAN: Lifting appliance at Fan Room	90	-24	0%	26-Aug-2014	12-Dec-2014						
Stop Log Room												
P903923	STO: stoplogs	50	-16	0%	11-Jul-2014	09-Sep-2014						
P904830	STO: Pipeworks and associated cabling works (Main Sewage Pump N	24	-16	0%	09-Sep-2014	09-Oct-2014						
Statutory Submission and Inspection												
Water Supplier Department (WSD)												
P402500	WM(S): Submission of WWO542 (Toilet Flushing and process water)	80	40	0%	24-Jun-2014	12-Sep-2014						
P402501	WM(S): Approval of WWO542 (Toilet Flushing and process water)	0	40	0%		12-Sep-2014						
P402502	WM(S): Liaise with ST2 for TTA at external area	12	32	0%	13-Sep-2014	26-Sep-2014						
P402605	WM(P): Approval of WWO542 (Potable water and Irrigation Water)	0	74	0%		27-Aug-2014						
P402610	WM(P): Liaise with ST2 for Tee connection reserved at SGB watermai	12	60	0%	28-Aug-2014	11-Sep-2014						
P402615	WM(P): External watermain laying	45	60	0%	12-Sep-2014	05-Nov-2014						
P402635	WM(FS): Submission of WWO542 (Fire service)	75	32	0%	24-Jun-2014	07-Sep-2014						
P402640	WM(FS): Approval of WWO542 (Fire Service)	0	32	0%		07-Sep-2014						
P402660	WM(FS): External watermain laying	60	25	0%	09-Sep-2014	19-Nov-2014						
Fire Service Department (FSD)												
P402710	FS: FS installation	120	116	45%	14-Mar-2014 A	09-Aug-2014						
Portion 4 (Main flow Culvert)												
Excavation and Lateral Support Works for Substructure (Near MPS2)												
P903440	Excavation down to +4.0mPD	6	-43	15%	17-May-2014 A	29-May-2014						
P903450	Install 1st layer of wailing and strut at +4.5mPD	15	-43	0%	29-May-2014	17-Jun-2014						
P903460	Excavation down to +1.5mPD	12	-43	0%	13-Jun-2014	27-Jun-2014						
P903470	Install 2nd layer of wailing and strut at +2.0mPD	15	-43	0%	27-Jun-2014	16-Jul-2014						
P903490	Excavation down to -1.0mPD	12	-43	0%	16-Jul-2014	30-Jul-2014						
P903500	Install 3rd layer of wailing and strut at -1.5mPD	18	-43	0%	30-Jul-2014	20-Aug-2014						
P903520	Excavation down to final excavation level -3.4mPD	15	-43	0%	13-Aug-2014	30-Aug-2014						
R.C. Works												
P404000	R.C. works for Siphons No. 1 and No. 2	50	-43	0%	23-Aug-2014	24-Oct-2014						
P404010	R.C. works for base slab of MFC (CH0-25)	12	-43	0%	23-Aug-2014	06-Sep-2014						
P404020	R.C. works for Channel wall of MFC (CH0-25)	10	-43	0%	06-Sep-2014	19-Sep-2014						
P404030	R.C. works for Channel soffit of MFC (CH0-25)	10	-43	0%	19-Sep-2014	03-Oct-2014						
P404070	R.C. works for base slab of MFC (CH25-55)	12	-30	0%	06-Sep-2014	22-Sep-2014						
Portion 4 (Deodorization Unit No. 3 & 1b and Odour duct bridge)												
Submission of design of E&M works												
P906070	DDA No. 46-12 - Control Philosophy for DOU 1b for MWKPS wet wee	90	64	75%	01-Mar-2013 A	14-Jun-2014						
P906080	Approval/ comment for the DDA of Control Philosophy for DOU 1b for	45	64	85%	20-Apr-2013 A	21-Jun-2014						
P906090	DDA No. 47-09 - I/O schedule for DOU1b	60	64	63%	20-Dec-2012 A	13-Jul-2014						
P906100	Approval/ comment for the DDA of I/O schedule for CEPT tanks	30	64	75%	28-Feb-2013 A	20-Jul-2014						
P906110	DDA No. 42-06- Software Development for DCS system for DOU 1b	60	70	80%	30-Jul-2013 A	03-Jul-2014						
P906120	Approval/ comment for the DDA of Software Development for DOU 1b	30	70	60%	13-Sep-2013 A	15-Jul-2014						
P906130	DDA No. 46-13 - Control Philosophy for DOU 3 System	90	64	75%	24-Oct-2013 A	14-Jun-2014						
P906140	Approval/ comment for the DDA of Control Philosophy for DOU 3 Syst	45	64	85%	20-Dec-2013 A	21-Jun-2014						
P906150	DDA No. 47-10 - I/O schedule for DOU3	60	64	63%	27-Dec-2012 A	13-Jul-2014						
P906160	Approval/ comment for the DDA of I/O schedule for DOU 3	30	64	75%	28-Feb-2013 A	20-Jul-2014						
P906170	DDA No. 42-06- Software Development for DCS system for DOU 3	60	70	80%	19-Jul-2012 A	03-Jul-2014						
P906180	Approval/ comment for the DDA of Software Development for DOU 3	30	70	60%	17-Aug-2012 A	15-Jul-2014						
Procurement/ Order/ Manufacturing/ Delivery												
P403090	Manufacturing of equipment for DOU No. 3	240	24	60%	19-Jul-2013 A	26-Aug-2014						
P403100	Delivery of equipment for DOU No. 3	40	24	0%	27-Aug-2014	05-Oct-2014						

█ Actual Work ◆ Milestone
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HATS Stage 2A - Upgrading works at StoneCutters Island Sewage Treatment Works
Three Months Rolling Programme (24 May 2014 to 24 Aug 2014)

Activity ID	Activity Name	Original Duration	Total Float	Activity % Complete	Start	Finish	Qtr 2, 2014			Qtr 3, 2014		
							May	Jun	Jul	Aug	Sep	
P403120	Manufacturing of ductworks for DOU No. 3	240	100	80%	19-Jul-2013 A	09-Jul-2014						
P403130	Delivery of ductworks for DOU No. 3	40	100	0%	10-Jul-2014	18-Aug-2014						
P403210	Manufacturing of switchboard and LCPs	360	50	70%	18-Apr-2013 A	07-Sep-2014						
P403220	Delivery of switchboard and LCPs	60	50	0%	08-Sep-2014	06-Nov-2014						
P906220	Procurement / Purchase Order for DCS hardware and associated eq.	10	64	50%	15-Aug-2013 A	25-Jul-2014						
P906230	Manufacturing of DCS hardware and associated equipment for DOU (60	64	0%	25-Jul-2014	23-Sep-2014						
Excavation and lateral support for Substructures												
Odour Duct Bridge												
P400600	ODB: Install sheetpile cofferdam	10	-31	0%	30-Aug-2014	12-Sep-2014						
P401150	ODB: Excavation down to +4.5mPD	6	-31	0%	12-Sep-2014	19-Sep-2014						
P401160	ODB: Install waling and strut at +4.8mPD	10	-31	0%	19-Sep-2014	03-Oct-2014						
Statutory Submission and Inspection												
Fire Service Department (FSD)												
P905205	FS: DG Submission for Sodium Hydroxide Tanks	60	43	0%	03-Sep-2014	02-Nov-2014						
Portion 4 (Service Ducts)												
Excavation and lateral support for substructure												
Service Duct (Type 1)												
P401270	ELS for service ducts at CH20-37 (SGB to MPS2 Hall B)	18	-41	0%	16-Jun-2014	07-Jul-2014						
P401290	ELS for service ducts at CH72-95 (SGB to MPS2 Hall B)	18	-41	0%	14-Aug-2014	03-Sep-2014						
R.C. Works												
Service Duct (Type 1)												
P400560	R.C. works of service Ducts at CH0-20 (SGB to MPS2 Hall A)	25	-41	24%	16-May-2014 A	14-Jun-2014						
P401250	R.C. works of service ducts at CH20-37 (SGB to MPS2 Hall B)	18	-41	0%	08-Jul-2014	28-Jul-2014						
P401280	R.C. works of service ducts at CH72-95 (SGB to MPS2 Hall B)	30	-41	0%	04-Sep-2014	11-Oct-2014						
Civil Works												
P400585	Dia 600mm Centrate Pipes near MPS	45	6	0%	08-Jul-2014	28-Aug-2014						
Portion 5 (Inlet Chamber)												
Procurement/ Order/ Manufacturing/ Delivery												
P501530	Delivery of Knife Gate Valves (#4)	60	132	64.17%	14-Apr-2014 A	13-Jun-2014						
P501550	Manufacturing of DN3000 and DN3600 Super duplex pipeworks	240	46	61.25%	27-Dec-2013 A	23-Aug-2014						
P501560	Delivery of DN3000 and DN3600 Super duplex pipeworks	14	46	0%	24-Aug-2014	06-Sep-2014						
Interface between Civil/ ABWF/ E&M works (Inlet chamber)												
IC0010	Plinth and DW opening completion for start of installation pipeworks an	0	1051	0%		06-Sep-2014						
R.C. Works												
P400631	Drill and fix rebars at the DN3000 puddle pipe	6	0	0%	20-Jun-2014	26-Jun-2014						
P400632	R.C. works for base slab of Lower Manifold	12	0	0%	27-Jun-2014	11-Jul-2014						
P400633	Installation of bulkhead wall for DC200723 tunnel	10	0	0%	12-Jul-2014	23-Jul-2014						
P400634	R.C. works for wall and top slab of lower manifold	18	0	0%	24-Jul-2014	13-Aug-2014						
P400641	Installation of bulkhead wall for interconnection tunnel	15	0	0%	14-Aug-2014	30-Aug-2014						
P400642	R.C. works for wall and top slab of upper manifold (with recess for pu	18	0	0%	01-Sep-2014	22-Sep-2014						
Diaphragm Wall opening												
P400629	Breaking Diaphragm wall for inlet pipe for riser shaft (interface with DC	21	0	0%	30-May-2014	24-Jun-2014						
Portion 6 (Valve Chamber)												
Procurement/ Order/ Manufacturing/ Delivery												
P501710	Delivery of Lifting Appliance	60	203	25.5%	07-May-2014 A	06-Jul-2014						
P501730	Manufacturing of DN3600 Knife gate Valves (#3)	450	68	97%	22-Oct-2012 A	05-Jun-2014						
P501740	Delivery of DN3600 Knife gate Valves (#3)	60	68	0%	05-Jun-2014	04-Aug-2014						
P905730	Manufacturing of Super Duplex Puddle flange pipes	240	41	64%	31-Dec-2013 A	17-Aug-2014						
P905740	Delivery of Super Duplex Puddle flange pipes	14	41	0%	17-Aug-2014	31-Aug-2014						
R.C. Works												
P600010	Installation of waterproofing membrane	150	49	0%	13-Jun-2014	09-Dec-2014						
P600020	R.C. works for 2.1m thk internal wall up to -15.0mPD	35	0	0%	13-Jun-2014	24-Jul-2014						
P600090	R.C. works for Base slabs and concrete chamber	35	0	0%	25-Jul-2014	03-Sep-2014						
P600100	R.C. works for 1.1m thk internal wall up to +2.8mPD	50	0	0%	04-Sep-2014	04-Nov-2014						
Portion 8 (Extension of Sodium Hypochlorite Storage Compound)												
Submission of design of E&M works												
P906250	DDA No. 46-25 - Control Philosophy for Chlorination Plant	60	14	60%	24-Oct-2013 A	15-Jun-2014						
P906260	Approval/ comment for the DDA of Control Philosophy for Chlorination	30	14	80%	17-Dec-2013 A	21-Jun-2014						
P906270	DDA No. 47 - I/O schedule for Chlorination Plant	40	14	0%	22-Jun-2014	31-Jul-2014						
P906280	Approval/ comment for the DDA of I/O schedule for Chlorination Plant	30	14	0%	01-Aug-2014	30-Aug-2014						
P906290	DDA No. 42 - Software Development for DCS system for Chlorination	40	21	18%	14-Apr-2014 A	24-Jul-2014						
P906300	Approval/ comment for the DDA of Software Development for DCS sy	30	21	0%	24-Jul-2014	23-Aug-2014						
Procurement/ Order/ Manufacturing/ Delivery												
P801150	Manufacturing of NaOCl Storage Tanks	120	-80	80%	17-Nov-2013 A	15-Jun-2014						
P801160	Delivery of NaOCl Storage Tanks	14	-80	0%	16-Jun-2014	29-Jun-2014						
P801180	Manufacturing of valves and pipeworks	150	39	60%	15-Nov-2013 A	21-Jul-2014						
P801190	Delivery of valves and pipeworks	30	39	0%	22-Jul-2014	20-Aug-2014						
P801210	Manufacturing of chemical pumps and associated equipment	150	39	60%	15-Nov-2013 A	21-Jul-2014						
P801220	Delivery of chemical pumps and associated equipment	30	39	0%	22-Jul-2014	20-Aug-2014						
P906310	Procurement / Purchase Order for DCS hardware and associated eq.	10	14	0%	31-Aug-2014	09-Sep-2014						
P906320	Manufacturing of DCS hardware and associated equipment for Chlorin	60	14	0%	10-Sep-2014	08-Nov-2014						
R.C. Works												
P905490	R.C. works for Columns (8Nos, up to +22.6mPD)	45	37	15%	06-Mar-2014 A	09-Jul-2014						
Electrical and Mechanical Installation												
P905500	On site assembling for storage tanks	72	-62	0%	30-Jun-2014	23-Sep-2014						

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

Three Months Rolling Programme (24 May 2014 to 24 Aug 2014)

Activity ID	Activity Name	Original Duration	Total Float	Activity % Complete	Start	Finish	Qtr 2, 2014			Qtr 3, 2014		
							May	Jun	Jul	Aug	Sep	
P905505	Weld test (internal and external)	12	-62	0%	10-Sep-2014	23-Sep-2014						
P905510	Internal Lining	36	-62	0%	06-Sep-2014	21-Oct-2014						
P905520	External Painting	36	-4	0%	21-Aug-2014	04-Oct-2014						
Statutory Submission and Inspection												
Fire Service Department (FSD)												
P905640	FS: DG Submission for Chemicals	90	157	33.33%	23-Apr-2014 A	21-Jul-2014						
Sai Ying Pun Junction Shaft												
Electrical and Mechanical Installation												
P801290	Installation of instrumentation at Sai Ying Pun Junction	60	111	8.33%	17-May-2014 A	28-Jul-2014						
P801300	Installation of control equipment at Sai Ying Pun Junction	60	111	8.33%	17-May-2014 A	28-Jul-2014						
P801310	Installation of electrical cabling works at Sai Ying Pun Junction	90	81	5.56%	17-May-2014 A	01-Sep-2014						
P801320	T&C	50	81	0%	02-Sep-2014	01-Nov-2014						

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

Three Months Rolling Programme (24 May 2014 to 24 Aug 2014)

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Start	Finish	Rem Dur	2012				
						May	Jun	Jul	Aug	Sep
DC/2009/17 - Interfacing Works Programme										
KEY DATE										
Contract Dates										
Commencement and Completion										
AD000100	Possession of Portion F of the Site (565 days)	0	05-Jul-12		0					
AD000110	Possession of Portion G of the Site (565 days)	0	05-Jul-12		0					
Preliminaries and General Requirement										
General										
Initial Works										
PG000172	Maintenance and Security for Portion F	1429	05-Jul-12	02-Jun-16	1429					
PG000190	Environmental Impact Monitoring	1600	04-Dec-10 A	01-Jun-16	1179					
PG000260	Maintenance and Upkeeping of Portion D	2095	25-Aug-10 A	02-Jun-16	1464					
PG000300	Maintenance and Security in Portion E	2095	25-Aug-10 A	02-Jun-16	1464					
PG000310	Maintenance and Security in Portion G	1429	05-Jul-12	02-Jun-16	1429					
Design of Permanent Works										
Design Submission and Approval										
Detailed Design Approval (DDA) for Civil / Builder Work										
Package										
DDA1 (SDB, DOU6, DGS and Transformer Bay)										
Sub-Package- F										
DP024190	DDA: SDB - Landscape Design and Approval	175	25-May-12 A	15-Nov-12	169					
DP024200	DDA: SDB - Submit Landscape Design	49	25-May-12 A	12-Jul-12	43					
DP024210	DDA: SDB - ICE Approve Landscape Design	21	13-Jul-12	02-Aug-12	21					
DP024220	DDA: SDB - Eng Comment on Landscape Design	42	03-Aug-12	13-Sep-12	42					
DDA6 (Sludge Feed Pipework Chambers)										
Sub-Package - A										
DP031105	DDA: SFP Chamber - Fdn/ Struct Design & Approval	70	30-Jun-12	07-Sep-12	70					
DP031110	DDA: SFP Chamber - Submit Fdn / Struct Design	14	30-Jun-12	13-Jul-12	14					
DP031120	DDA: SFP Chamber - ICE Comment Fdn/Struct Design	14	14-Jul-12	27-Jul-12	14					
DP031130	DDA: SFP Chamber - Eng Comment Fdn/Struct Design	14	28-Jul-12	10-Aug-12	14					
DP031140	DDA: SFP Chamber - Finalize Fdn/Struct Design	14	11-Aug-12	24-Aug-12	14					
DP031150	DDA: SFP Chamber - Eng Approve Fdn/Struct Design	14	25-Aug-12	07-Sep-12	14					
Detailed Design Approval (DDA) Submission										
Submission and Approval of DDA30 (Sludge Cakes Silos System)										
DP007890	DDA: Re-submission for Sliding Frame, Conveyor & PVWM	7	31-May-12	06-Jun-12	7					
DP007900	DDA: Engineer Approval for Sliding Frame, Conveyor & PVWM	18	07-Jun-12	24-Jun-12	18					
Submission and Approval of DDA36 (Building Services System)										
DP009015	DDA: BS (E&M) - Comment, Review and Approval	63	23-Jan-12 A	01-Jun-12	2					
DP009060	DDA: BS (E&M) - Engineer Approval	14	26-Mar-12 A	01-Jun-12	2					
SECTION 3 OF THE WORKS										
NORTHERN SLUDGE CAKE SILO										
Structure										
S3000236	NSCS: Remaining Piling and Structure	518	28-Jan-11 A	21-Aug-12	70					
Superstructure Construction										
S3000391	NSCS: Zone 1 (GL5-7/A-B & GL7-8/A-E)	120	02-Jan-12 A	11-Jul-12	35					
S3000400	NSCS: Level B3C to B4 (+23.768 to +24.8mPD)	16	01-Jun-12	19-Jun-12	16					
S3000402	NSCS: Level B4 to B4A (+24.8 to +28.364mPD)	18	20-Jun-12	11-Jul-12	18					
S3000404	NSCS: Zone 2 (GL5-7/D-E, GL4-5/A-E & GL2-4/A-B)	118	06-Feb-12 A	11-Jul-12	35					
S3000412	NSCS: Level B3A to B3C (+19.00 to +23.768mPD)	17	27-Apr-12 A	31-May-12	1					
S3000414	NSCS: Level B3C to B4 (+23.768 to +24.8mPD)	16	01-Jun-12	19-Jun-12	16					
S3000416	NSCS: Level B3C to B4 (+24.8 to +28.364mPD)	18	20-Jun-12	11-Jul-12	18					
S3000418	NSCS: Zone 3 (GL2-4/D-E, GL1-2/A-E & Vehicle Washing Faciliti	110	04-Apr-12 A	21-Aug-12	70					
S3000426	NSCS: Level B3 to B3A (+14.782 to +19.00mPD)	18	31-May-12	20-Jun-12	18					
S3000428	NSCS: Level B3A to B3C (+19.00 to +23.768mPD)	18	21-Jun-12	12-Jul-12	18					
S3000430	NSCS: Level B3C to B4(+23.768 to +24.8mPD)	16	13-Jul-12	31-Jul-12	16					
S3000432	NSCS: Level B4 to B4A(+24.8 to +28.364mPD)	18	01-Aug-12	21-Aug-12	18					
Building Finishes including Landscaping										
S3000450	NSCS: Building Finishes and Landscape	217	12-Jun-12	05-Mar-13	217					
S3000460	NSCS: Floor Finishes at Ground Floor	40	12-Jun-12	28-Jul-12	40					
S3000480	NSCS: Construct/Install Floor Finishes at Level B1 - B4	60	12-Jun-12	21-Aug-12	60					
S3000490	NSCS: Install Stair at Level B1 - B4	60	12-Jul-12	19-Sep-12	60					
S3000520	NSCS: Epoxy Paint	60	26-Jun-12	04-Sep-12	60					
E&M Procurement, Installation, Testing & Commissioning										
Manufacture and Delivery										
S3000600	NSCS: Procurement and Delivery of E&M Equipment/ Material	396	02-Dec-11 A	31-Dec-12	215					
S3000620	NSCS: Manufacturing of Conveyors, Valves, Air Ducts & Lifting Ap	150	03-Apr-12 A	16-Aug-12	78					
S3000645	NSCS: Delivery of Conveyors, Valves, Air Ducts & Lifting Appliance	44	17-Aug-12	29-Sep-12	44					
S3000665	NSCS: Manufacturing of Vehicle Washing Machine	144	05-Mar-12 A	26-Jul-12	57					
S3000685	NSCS: Delivery of Vehicle Washing Machine	35	27-Jul-12	30-Aug-12	35					

█ Actual Work ◆ ◆ Milestone
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Activity ID	Activity Name	Original Duration	Start	Finish	Rem Dur	2012				
						May	Jun	Jul	Aug	Sep
E&M Installation and Testing & Commissioning										
S3000680	NSCS: Vehicle Washing Machine (2 nos)	120	31-Aug-12	28-Dec-12	120					
SLUDGE DEWATERING BUILDING and DOU6										
Superstructure Construction										
S3001200	SDB: Remaining Piling and Structure	484	31-Oct-11 A	20-Aug-12	69					SDB: Remaining Piling and Structure, SDB: Remaining Piling
S3001290	SDB: DG Store	60	01-Mar-12 A	17-Jul-12	40					SDB: DG Store, SDB: DG Store
Structure Ground Floor at +5.4										
S3001241	SDB: Ground Level to First Floor (+12.90)	88	31-Dec-11 A	13-Aug-12	63					SDB: Ground Level to First Floor (+12.90); SDB: Ground Level to First Floor
S3001243	SDB: GFSlab Grid 1 to 3	6	07-Aug-12	13-Aug-12	6					SDB: GFSlab Grid 1 to 3
Structure First Floor at +12.90										
S3001252	SDB: Upper Structure	124	03-Jan-12 A	20-Aug-12	69					SDB: Upper Structure, SDB: Upper Structure
S3001273	SDB: Bay 1 4th Lift (GL9-13 / A1-D, from +16.8 to +19.1mPD) - Re	4	13-Jun-12	16-Jun-12	4					SDB: Bay 1 4th Lift (GL9-13 / A1-D, from +16.8 to +19.1mPD) - Remove Scaffold
S3001286	SDB: Bay 2, 4th Lift (GL5-9 / A1-D, from +16.8 to +19.1mPD)	18	22-May-12 A	20-Jun-12	18					SDB: Bay 2, 4th Lift (GL5-9 / A1-D, from +16.8 to +19.1mPD)
S3001287	SDB: Bay 2, 4th Lift (GL5-9 / A1-D, from +16.8 to +19.1mPD) - Rer	4	09-Jul-12	12-Jul-12	4					SDB: Bay 2, 4th Lift (GL5-9 / A1-D, from +16.8 to +19.1mPD) - Remove Scaffold
S3001298	SDB: Bay 3, 2nd Lift (GL1-5 / A1-D, from +9.15 to 12.9mPD)	18	23-Apr-12 A	13-Jun-12	12					SDB: Bay 3, 2nd Lift (GL1-5 / A1-D, from +9.15 to 12.9mPD)
S3001302	SDB: Bay 3, 3rd Lift (GL1-5 / A1-D, from +12.9 to 16.8mPD)	18	18-Jun-12	10-Jul-12	18					SDB: Bay 3, 3rd Lift (GL1-5 / A1-D, from +12.9 to 16.8mPD)
S3001304	SDB: Bay 3, 4th Lift (GL1-5 / A1-D, from +16.8 to 19.1mPD)	18	10-Jul-12	30-Jul-12	18					SDB: Bay 3, 4th Lift (GL1-5 / A1-D, from +16.8 to 19.1mPD)
S3001306	SDB: Bay 3, 4th Lift (GL5-9 / A1-D, from +16.8 to +19.1mPD) - Rer	4	16-Aug-12	20-Aug-12	4					SDB: Bay 3, 4th Lift (GL5-9 / A1-D, from +16.8 to +19.1mPD)
S3001314	SDB: Bay 3, Ground Floor Slab at Grid 1-2 / B-C	12	07-Aug-12	20-Aug-12	12					SDB: Bay 3, Ground Floor Slab at Grid 1-2 / B-C
Roof Level Structure										
S3001280	SDB: Staircase Roof	21	07-Jun-12	30-Jun-12	21					SDB: Staircase Roof
Building Finishes including Landscaping										
S3001380	SDB: Building Finishes and Landscape	203	07-Jun-12	06-Feb-13	203					SDB: Building Finishes and Landscape
S3001400	SDB: Window, Door and Louver	45	13-Jun-12	04-Aug-12	45					SDB: Window, Door and Louver
S3001410	SDB: Plaster and Tiles	45	07-Jun-12	30-Jul-12	45					SDB: Plaster and Tiles
S3001420	SDB: Chequer Plate Floor	30	21-Jun-12	26-Jul-12	30					SDB: Chequer Plate Floor
S3001430	SDB: External Working Platform	18	06-Aug-12	25-Aug-12	18					SDB: External Working Platform
S3001440	SDB: Epoxy Coating	45	07-Jul-12	28-Aug-12	45					SDB: Epoxy Coating
S3001450	SDB: Skylight	60	07-Jul-12	14-Sep-12	60					SDB: Skylight
S3001460	SDB: DG Store Finishes	30	25-Jul-12	28-Aug-12	30					SDB: DG Store Finishes
S3001470	SDB: Shanghai Render	80	27-Aug-12	30-Nov-12	80					SDB: Shanghai Render
E&M Procurement, Installation/ Testing & Commissioning										
Manufacture & Delivery										
S3001550	SDB&DOU6: Procure/ Delivery of E&M Eq't / Mat	390	26-Nov-11 A	23-Dec-12	207					SDB&DOU6: Procure/ Delivery of E&M Eq't / Mat
S3001570	SDB&DOU6: Manufacturing of Centrifuge and Local Control Panel	260	06-Dec-11 A	23-Jun-12	24					SDB&DOU6: Manufacturing of Centrifuge and Local Control Panel, SDB&DOU6: Manufacturing of Centrifuge and Local Control Panel
S3001581	SDB&DOU6: Witness FAT Test for Centrifuge second lot	7	24-Jun-12	30-Jun-12	7					SDB&DOU6: Witness FAT Test for Centrifuge second lot
S3001582	SDB&DOU6: Delivery of 1st lot Centrifuge and Control Panel	36	09-Jun-12	14-Jul-12	36					SDB&DOU6: Delivery of 1st lot Centrifuge and Control Panel
S3001584	SDB&DOU6: Delivery of 2nd lot Centrifuge and Control Panel	36	10-Jul-12	14-Aug-12	36					SDB&DOU6: Delivery of 2nd lot Centrifuge and Control Panel
S3001586	SDB&DOU6: Delivery of 3rd lot Centrifuge and Control Panel	36	10-Aug-12	14-Sep-12	36					SDB&DOU6: Delivery of 3rd lot Centrifuge and Control Panel
S3001594	SDB&DOU6: Manufacturing of DOU6	140	06-Feb-12 A	24-Jun-12	25					SDB&DOU6: Manufacturing of DOU6, SDB&DOU6: Manufacturing of DOU6
S3001598	SDB&DOU6: Delivery of Deodorization Odour Units (DOU6)	21	25-Jun-12	15-Jul-12	21					SDB&DOU6: Delivery of Deodorization Odour Units (DOU6)
S3001610	SDB&DOU6: Manufacturing of Distributed Control System	110	02-Apr-12 A	28-Jul-12	59					SDB&DOU6: Manufacturing of Distributed Control System, SDB&DOU6: Manufacturing of Distributed Control System
S3001630	SDB&DOU6: Delivery of Distributed Control System	32	29-Jul-12	29-Aug-12	32					SDB&DOU6: Delivery of Distributed Control System
S3001650	SDB&DOU6: Manufacturing of Sludge Conveyor	125	21-Mar-12 A	18-Jul-12	49					SDB&DOU6: Manufacturing of Sludge Conveyor, SDB&DOU6: Manufacturing of Sludge Conveyor
S3001660	SDB&DOU6: Factory Acceptance Test for Sludge Conveyor	30	19-Jul-12	17-Aug-12	30					SDB&DOU6: Factory Acceptance Test for Sludge Conveyor
S3001670	SDB&DOU6: Delivery of Sludge Conveyor	28	18-Aug-12	14-Sep-12	28					SDB&DOU6: Delivery of Sludge Conveyor
S3001852	SDB&DOU6: Manufacturing of Polyelectrolyte Preparation Units	147	05-Mar-12 A	02-Aug-12	64					SDB&DOU6: Manufacturing of Polyelectrolyte Preparation Units, SDB&DOU6: Manufacturing of Polyelectrolyte Preparation Units
S3001854	SDB&DOU6: Delivery of Polyelectrolyte Preparation Units	33	03-Aug-12	04-Sep-12	33					SDB&DOU6: Delivery of Polyelectrolyte Preparation Units
S3001862	SDB&DOU6: Manufacturing of Prototype Polyelectrolyte Preparation Unit	147	05-Mar-12 A	02-Aug-12	64					SDB&DOU6: Manufacturing of Prototype Polyelectrolyte Preparation Unit, SDB&DOU6: Manufacturing of Prototype Polyelectrolyte Preparation Unit
S3001864	SDB&DOU6: Delivery of Prototype Polyelectrolyte Preparation Unit	33	03-Aug-12	04-Sep-12	33					SDB&DOU6: Delivery of Prototype Polyelectrolyte Preparation Unit
S3001872	SDB&DOU6: Manufacturing of Polyelectrolyte Transfer Pumps	112	19-Mar-12 A	08-Jul-12	39					SDB&DOU6: Manufacturing of Polyelectrolyte Transfer Pumps, SDB&DOU6: Manufacturing of Polyelectrolyte Transfer Pumps
S3001874	SDB&DOU6: Delivery of Polyelectrolyte Transfer Pumps	37	09-Jul-12	14-Aug-12	37					SDB&DOU6: Delivery of Polyelectrolyte Transfer Pumps
S3001882	SDB&DOU6: Manufacturing of Polyelectrolyte Dosing Pumps	112	19-Mar-12 A	08-Jul-12	39					SDB&DOU6: Manufacturing of Polyelectrolyte Dosing Pumps, SDB&DOU6: Manufacturing of Polyelectrolyte Dosing Pumps
S3001884	SDB&DOU6: Delivery of Polyelectrolyte Dosing Pumps	37	09-Jul-12	14-Aug-12	37					SDB&DOU6: Delivery of Polyelectrolyte Dosing Pumps
S3001900	SDB&DOU6: Manufacturing of Sludge Feed Pumps	110	19-Mar-12 A	08-Jul-12	39					SDB&DOU6: Manufacturing of Sludge Feed Pumps, SDB&DOU6: Manufacturing of Sludge Feed Pumps
S3001915	SDB&DOU6: Delivery of Sludge Feed Pumps	37	09-Jul-12	14-Aug-12	37					SDB&DOU6: Delivery of Sludge Feed Pumps
S3001935	SDB&DOU6: Manufacturing of Main Switchboard & Control Panel	110	02-Apr-12 A	06-Jul-12	37					SDB&DOU6: Manufacturing of Main Switchboard & Control Panel LV System, SDB&DOU6: Manufacturing of Main Switchboard & Control Panel LV System
S3001995	SDB&DOU6: FAT Test for Main Switchboard	31	26-Jun-12	26-Jul-12	31					SDB&DOU6: FAT Test for Main Switchboard
S3002000	SDB&DOU6: Delivery of Main Switchboard & Control Panel LV Sy	24	27-Jul-12	19-Aug-12	24					SDB&DOU6: Delivery of Main Switchboard & Control Panel LV System
S3002010	SDB&DOU6: Procurement of E&M BS Eqpt/ Materials	24	22-May-12 A	13-Jun-12	14					SDB&DOU6: Procurement of E&M BS Eqpt/ Materials, SDB&DOU6: Procurement of E&M BS Eqpt/ Materials
S3002015	SDB&DOU6: Manufacture of E&M BS Eqpt/Materials	90	14-Jun-12	11-Sep-12	90					SDB&DOU6: Manufacture of E&M BS Eqpt/Materials
S3002030	SDB&DOU6: Manufacturing of Lifting Appliances	90	15-Mar-12 A	17-Jun-12	18					SDB&DOU6: Manufacturing of Lifting Appliances, SDB&DOU6: Manufacturing of Lifting Appliances
S3002040	SDB&DOU6: Delivery of Lifting Appliances	44	18-Jun-12	31-Jul-12	44					SDB&DOU6: Delivery of Lifting Appliances
S3002046	SDB&DOU6: Manufacture of Process Water Pumping System	210	13-Feb-12 A	09-Sep-12	102					SDB&DOU6: Manufacture of Process Water Pumping System
S3002052	SDB&DOU6: Manufacture of DOU 6	140	06-Feb-12 A	24-Jun-12	25					SDB&DOU6: Manufacture of DOU 6, SDB&DOU6: Manufacture of DOU 6
S3002054	SDB&DOU6: Delivery of DOU 6	31	25-Jun-12	25-Jul-12	31					SDB&DOU6: Delivery of DOU 6
S3002058	SDB&DOU6: Manufacture of Solid Pumps	200	19-Mar-12 A	23-Nov-12	177					SDB&DOU6: Manufacture of Solid Pumps
E&M Installation and Other Equipment										
S3001822	SDB: Arrival of Mono Rail LA (5 nos)	0	25-Jul-12		0					◆ SDB: Arrival of Mono Rail LA (5 nos)
S3001824	SDB: Material Inspection for Mono Rail LA (5 nos)	5	25-Jul-12	29-Jul-12	5					■ SDB: Material Inspection for Mono Rail LA (5 nos)

■ Actual Work ◆ Milestone
■ Remaining Work
■ Critical Remaining Work

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Start	Finish	Rem Dur	2012				
						May	Jun	Jul	Aug	Sep
S3001826	SDB: Arrival of 10 tons Lifting Appliances (2 nos)	0	25-Jul-12		0				◆ SDB: Arrival of 10 tons Lifting Appliances (2 nos)	
S3001828	SDB: Material Inspection of 10 tons Lifting Appliances (2 nos)	5	25-Jul-12	29-Jul-12	5				■ SDB: Material Inspection of 10 tons Lifting Appliances (2 nos)	
S3001830	SDB: Arrival of 5 tons Lifting Appliances (2 nos)	0	25-Jul-12		0				◆ SDB: Arrival of 5 tons Lifting Appliances (2 nos)	
S3001832	SDB: Material Inspection of 5 tons Lifting Appliances (2 nos)	5	25-Jul-12	29-Jul-12	5				■ SDB: Material Inspection of 5 tons Lifting Appliances (2 nos)	
S3002120	SDB: Arrival of Polyelectrolyte Mixing Tank (4 nos)	0	20-Jul-12		0				◆ SDB: Arrival of Polyelectrolyte Mixing Tank (4 nos)	
S3002130	SDB: Material Inspection at Storage Area for Polyelectrolyte Mixing Tank (4 nos.)	3	20-Jul-12	22-Jul-12	3				■ SDB: Material Inspection at Storage Area for Polyelectrolyte Mixing Tank (4 nos.)	
S3002210	SDB: Arrival of Polyelectrolyte Transfer Pumps (2 nos.)	0	15-Aug-12		0				◆ SDB: Arrival of Polyelectrolyte Transfer Pumps (2 nos.)	
S3002220	SDB: Material Inspection at Storage Area for Polyelectrolyte Transfer Pumps (2 nos.)	7	15-Aug-12	21-Aug-12	7				■ SDB: Material Inspection at Storage Area for Polyelectrolyte Transfer Pumps (2 nos.)	
S3002225	SDB: Arrival of Polyelectrolyte Storage Tank (4 nos.)	0	20-Jul-12		0				◆ SDB: Arrival of Polyelectrolyte Storage Tank (4 nos.)	
S3002230	SDB: Material Inspection of Polyelectrolyte Storage Tank (4 nos.)	3	20-Jul-12	22-Jul-12	3				■ SDB: Material Inspection of Polyelectrolyte Storage Tank (4 nos.)	
S3002240	SDB: Arrival of Polyelectrolyte Dosing Pumps (14 nos.)	0	15-Aug-12		0				◆ SDB: Arrival of Polyelectrolyte Dosing Pumps (14 nos.)	
S3002245	SDB: Material Inspection of Polyelectrolyte Dosing Pumps (14 nos)	7	15-Aug-12	21-Aug-12	7				■ SDB: Material Inspection of Polyelectrolyte Dosing Pumps (14 nos)	
S3002250	SDB: Arrival of Sludge Feed Pipe	0	20-Jul-12		0				◆ SDB: Arrival of Sludge Feed Pipe	
S3002255	SDB: Material Inspection at Storage Area for Sludge Feed Pipe	7	20-Jul-12	26-Jul-12	7				■ SDB: Material Inspection at Storage Area for Sludge Feed Pipe	
S3002260	SDB: Arrival of Sludge Feed Pumps (14 nos)	0	15-Aug-12		0				◆ SDB: Arrival of Sludge Feed Pumps (14 nos)	
S3002265	SDB: Material Inspection at Storage Area for Sludge Feed Pumps (14 nos)	18	15-Aug-12	01-Sep-12	18				■ SDB: Material Inspection at Storage Area for Sludge Feed Pumps (14 nos)	
S3002310	SDB: Arrival of Process Water Pipe	0	20-Jul-12		0				◆ SDB: Arrival of Process Water Pipe	
S3002315	SDB: Material Inspection at Storage Area for Process Water Pipe	7	20-Jul-12	26-Jul-12	7				■ SDB: Material Inspection at Storage Area for Process Water Pipe	
S3002320	SDB: Arrival of Cable Tray	0	31-Jul-12		0				◆ SDB: Arrival of Cable Tray	
S3002325	SDB: Material Inspection of Cable Tray	3	31-Jul-12	02-Aug-12	3				■ SDB: Material Inspection of Cable Tray	
S3002340	SDB: Install Mono Rail LA (5 nos)	14	28-Aug-12	11-Sep-12	14				■ SDB: Install Mono Rail LA (5 nos)	
S3002380	SDB: Polyelectrolyte Dosing System	66	30-Jul-12	04-Oct-12	66				■ SDB: Polyelectrolyte Dosing System	
S3002390	SDB: Install Polyelectrolyte Storage Tank (4 nos)	20	30-Jul-12	19-Aug-12	20				■ SDB: Install Polyelectrolyte Storage Tank (4 nos)	
S3003100	SDB: Sludge Feed Pipe	99	30-Jul-12	06-Nov-12	99				■ SDB: Sludge Feed Pipe	
S3003110	SDB: Install Sludge Feed Pipe - South (High Level) [Grid 1 to 6]	14	30-Jul-12	13-Aug-12	14				■ SDB: Install Sludge Feed Pipe - South (High Level) [Grid 1 to 6]	
S3003120	SDB: Install Sludge Feed Pipe - South (High Level) [Grid 6 to 12]	16	13-Aug-12	29-Aug-12	16				■ SDB: Install Sludge Feed Pipe - South (High Level) [Grid 6 to 12]	
S3003130	SDB: Install Sludge Feed Pipe - North (High Level) [Grid 1 to 6]	14	06-Aug-12	19-Aug-12	14				■ SDB: Install Sludge Feed Pipe - North (High Level) [Grid 1 to 6]	
S3003140	SDB: Install Sludge Feed Pipe - North (High Level) [Grid 6 to 12]	16	20-Aug-12	04-Sep-12	16				■ SDB: Install Sludge Feed Pipe - North (High Level) [Grid 6 to 12]	
S3003220	SDB: Process Water Pipe	35	30-Jul-12	03-Sep-12	35				■ SDB: Process Water Pipe	
S3003230	SDB: Install Process Water Pipe - South (High Level) [Grid 1 to 6]	14	30-Jul-12	13-Aug-12	14				■ SDB: Install Process Water Pipe - South (High Level) [Grid 1 to 6]	
S3003240	SDB: Install Process Water Pipe - South (High Level) [Grid 6 to 12]	16	13-Aug-12	29-Aug-12	16				■ SDB: Install Process Water Pipe - South (High Level) [Grid 6 to 12]	
S3003250	SDB: Install Process Water Pipe - North (High Level) [Grid 1 to 6]	14	04-Aug-12	18-Aug-12	14				■ SDB: Install Process Water Pipe - North (High Level) [Grid 1 to 6]	
S3003260	SDB: Install Process Water Pipe - North (High Level) [Grid 6 to 12]	16	18-Aug-12	03-Sep-12	16				■ SDB: Install Process Water Pipe - North (High Level) [Grid 6 to 12]	
S3003340	SDB: Cables	191	03-Aug-12	10-Feb-13	191				■ SDB: Cables	
S3003350	SDB: Install Cable Tray	170	03-Aug-12	20-Jan-13	170				■ SDB: Install Cable Tray	
S3003360	SDB: Install Cable	166	28-Aug-12	10-Feb-13	166				■ SDB: Install Cable	
S3003400	SDB: Arrival of Distribute Control System	0	30-Aug-12		0				◆ SDB: Arrival of Distribute Control System	
S3003410	SDB: Material Inspection at Storage Area for Distribute Control System	14	30-Aug-12	12-Sep-12	14				■ SDB: Material Inspection at Storage Area for Distribute Control System	
S3003450	SDB: Arrival of Centrifuges (1st lot of 5 nos)	0	15-Jul-12		0				◆ SDB: Arrival of Centrifuges (1st lot of 5 nos)	
S3003460	SDB: Arrival of Centrifuges (2nd lot of 5 nos)	0	15-Aug-12		0				◆ SDB: Arrival of Centrifuges (2nd lot of 5 nos)	
S3003480	SDB: Material Inspection for Centrifuge (1st lot of 5 nos)	14	15-Jul-12	28-Jul-12	14				■ SDB: Material Inspection for Centrifuge (1st lot of 5 nos)	
S3003490	SDB: Material Inspection for Centrifuge (2nd lot of 5 nos)	14	15-Aug-12	28-Aug-12	14				■ SDB: Material Inspection for Centrifuge (2nd lot of 5 nos)	
S3003600	SDB: E&M Installation at 1/F	188	01-Aug-12	05-Feb-13	188				■ SDB: E&M Installation at 1/F	
S3003610	SDB: Install 10 tons Lifting Appliances (2 nos)	25	01-Aug-12	26-Aug-12	25				■ SDB: Install 10 tons Lifting Appliances (2 nos)	
S3003620	SDB: Install 5 tons Lifting Appliances (2 nos)	20	26-Aug-12	15-Sep-12	20				■ SDB: Install 5 tons Lifting Appliances (2 nos)	
S3003650	SDB: Install Centrifuges (1st lot of 5 nos)	43	26-Aug-12	08-Oct-12	43				■ SDB: Install Centrifuges (1st lot of 5 nos)	
S3003660	SDB: Install Centrifuges (2nd lot of 5 nos)	42	29-Aug-12	09-Oct-12	42				■ SDB: Install Centrifuges (2nd lot of 5 nos)	
S3003750	SDB: Arrival of Main Switchboard & Contron Panel LV System	0	20-Aug-12		0				◆ SDB: Arrival of Main Switchboard & Contron Panel LV System	
S3003760	SDB: Material Inspection of Main Switchboard & Contron Panel LV System	9	20-Aug-12	28-Aug-12	9				■ SDB: Material Inspection of Main Switchboard & Contron Panel LV System	
S3003770	SDB: Install Main Switchboard & Contron Panel LV System	60	29-Aug-12	27-Oct-12	60				■ SDB: Install Main Switchboard & Contron Panel LV System	
S3003800	SDB: Arrival of DOU 6 at Ground Floor and Roof	0	26-Jul-12		0				◆ SDB: Arrival of DOU 6 at Ground Floor and Roof	
S3003810	SDB: Material Inspection at Storage Area for DOU 6	14	26-Jul-12	08-Aug-12	14				■ SDB: Material Inspection at Storage Area for DOU 6	
S3003900	SDB: Building Services	356	10-Mar-12 A	10-Mar-13	284				■ SDB: Building Services	
S3003905	SDB: Cast-in Floor Drain	88	10-Mar-12 A	05-Jul-12	36				■ SDB: Cast-in Floor Drain, SDB: Cast-in Floor Drain	
S3003910	SDB: Drainage Pipe Line / RWO	90	18-Aug-12	16-Nov-12	90				■ SDB: Drainage Pipe Line / RWO	
S3003915	SDB: Plumbing	139	18-Aug-12	04-Jan-13	139				■ SDB: Plumbing	
S3003920	SDB: Pipe Line for Plumbing	90	18-Aug-12	16-Nov-12	90				■ SDB: Pipe Line for Plumbing	
S3004000	SDB: Fire Services	199	28-Aug-12	15-Mar-13	199				■ SDB: Fire Services	
S3004010	SDB: Fire Services Pipe Line	91	28-Aug-12	27-Nov-12	91				■ SDB: Fire Services Pipe Line	
S3004200	SDB: BS Small Power and Lighting System	209	28-Aug-12	25-Mar-13	209				■ SDB: BS Small Power and Lighting System	
S3004210	SDB: Conduit & Trunking for BS	131	28-Aug-12	06-Jan-13	131				■ SDB: Conduit & Trunking for BS	
SLUDGE STORAGE TANK 6 & 7										
Structure										
S3005505	Piling and Structure for Sludge Storage Tanks	349	28-Feb-11 A	20-Sep-12	96				■ Piling and Structure for Sludge Storage Tanks	
S3005830	SST: Water Tightness Test to Tank 6	18	08-Jun-12	28-Jun-12	18				■ SST: Water Tightness Test to Tank 6	
S3005840	SST: Install Railing for Tank 6	18	29-Jun-12	20-Jul-12	18				■ SST: Install Railing for Tank 6	
S3005850	SST: External Painting for Tank 6	21	21-Jul-12	14-Aug-12	21				■ SST: External Painting for Tank 6	
S3005870	SST: Clearance for Tank 6	6	15-Aug-12	21-Aug-12	6				■ SST: Clearance for Tank 6	
S3006110	SST: Wall Stem for Tank 7	84	30-Mar-12 A	30-Aug-12	78				■ SST: Wall Stem for Tank 7, SST: Wall Stem for Tank 7, SST: Wall Stem for Tank 7 (+5.2 to 9.2)	
S3006120	SST: Wall Stem for Tank 7 (+5.2 to 9.2)	18	30-Mar-12 A	13-Jun-12	12				■ SST: Wall Stem for Tank 7 (+5.2 to 9.2); SST: Wall Stem for Tank 7 (+5.2 to 9.2)	

■ Actual Work ◆ ◆ Milestone
■ Remaining Work
■ Critical Remaining Work

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Start	Finish	Rem Dur	2012				
						May	Jun	Jul	Aug	Sep
S3006130	SST: Wall Stem for Tank 7 (+9.2 to 13.2)	21	14-Jun-12	09-Jul-12	21			SST: Wall Stem for Tank 7 (+9.2 to 13.2)		
S3006140	SST: Wall Stem for Tank 7 (+13.2 to 17.2)	21	10-Jul-12	02-Aug-12	21			SST: Wall Stem for Tank 7 (+13.2 to 17.2)		
S3006150	SST: Wall Stem for Tank 7 (+13.2 to 17.2)	21	03-Aug-12	27-Aug-12	21				SST: Wall Stem for Tank 7 (+13.2 to 17.2)	
S3006160	SST: Touch-up Concrete Surface for Tank 7 (+9.2 to 13.2)	12	28-Aug-12	10-Sep-12	12					SST: Tou
S3006310	SST: Finishes for Tank 6 and 7	116	29-Jun-12	15-Nov-12	116					
E&M Procurement Installation/ Testing & Commissioning										
Manufacture & Delivery										
S3006450	SST: Procurement & Delivery of E&M Equipment/ Materials	290	25-Nov-11 A	11-Nov-12	165					
S3006470	SST: Manufacturing of Submersible Mixers	135	01-Feb-12 A	28-Jul-12	59			SST: Manufacturing of Submersible Mixers, SST: Manufacturing of Submersible Mixers		
S3006480	SST: Delivery of Submersible Mixers	40	29-Jul-12	06-Sep-12	40				SST: Delivery of S	
S3006590	SST: Manufacturing of Pipe & Valves and other E&M Equipment	90	30-Apr-12 A	28-Jul-12	59			SST: Manufacturing of Pipe & Valves and other E&M Equipment, SST: Manufacturing of Pipe & Valves and other E&		
S3006610	SST: Delivery of Pipe & Valves and other Equipment	30	29-Jul-12	27-Aug-12	30				SST: Delivery of Pipe & Valves and other E	
E&M Testing & Commissioning										
S3006750	SST: Install Temporary Pipe from Tank nos 3 - 5 to Existing Recirc	60	25-Jul-12	23-Sep-12	60					
Transformer Bay										
Structure										
S3007010	TB: Structure and Finishes	168	21-Nov-11 A	26-Jul-12	48			TB: Structure and Finishes, TB: Structure and Finishes		
S3007310	TB: Finishes	42	07-Jun-12	26-Jul-12	42			TB: Finishes		
S3007320	TB: Install GMS Gate	12	07-Jun-12	20-Jun-12	12			TB: Install GMS Gate		
S3007330	TB: Painting Coat	12	21-Jun-12	05-Jul-12	12			TB: Painting Coat		
S3007340	TB: Shanghai Rendering	18	06-Jul-12	26-Jul-12	18			TB: Shanghai Rendering		
E&M Procurement, Installation & T&C										
Manufacture & Delivery										
S3007410	TB: Procurement & Delivery of E&M Eq't / Mat'l	195	08-Mar-12 A	31-Aug-12	93					TB: Procurement & Delivery of E
S3007430	TB: Manufacturing of HV Power Transformer	125	01-Apr-12 A	02-Jul-12	33			TB: Manufacturing of HV Power Transformer, TB: Manufacturing of HV Power Transformer		
S3007435	TB: Factory Acceptance Test for HV Power Transformer	30	03-Jul-12	01-Aug-12	30			TB: Factory Acceptance Test for HV Power Transformer		
S3007440	TB: Delivery of HV Power Transformer	30	02-Aug-12	31-Aug-12	30					TB: Delivery of HV Power Transf
S3007460	TB: Manufacturing of HV Ring Main Units	130	03-Apr-12 A	02-Jul-12	33			TB: Manufacturing of HV Ring Main Units, TB: Manufacturing of HV Ring Main Units		
S3007470	TB: Factory Acceptance Test for HV Ring Main Units	30	03-Jul-12	01-Aug-12	30			TB: Factory Acceptance Test for HV Ring Main Units		
S3007480	TB: Delivery of HV Ring Main Units	30	02-Aug-12	31-Aug-12	30					TB: Delivery of HV Ring Main Un
S3007550	TB: Manufacturing of Cables	90	30-Apr-12 A	30-Jul-12	59			TB: Manufacturing of Cables, TB: Manufacturing of Cables		
S3007560	TB: Delivery of Cables	30	31-Jul-12	29-Aug-12	30					TB: Delivery of Cables
E&M Installation & Testing & Commissioning										
S3007555	TB: Arrival of Cable	0	30-Aug-12		0					◆ TB: Arrival of Cable
S3007565	TB: Material Inspection of Cable	3	30-Aug-12	01-Sep-12	3					■ TB: Material Inspection of Cab
System										
Pump, Piping and Ducting										
Manufacture & Delivery										
S3008215	Manufacture of Process Water Pump, Pipe & Valves	173	13-Feb-12 A	10-Sep-12	87					Manufac
Pump, Pipe and Duct Installation										
S3008350	Zone A: External System	120	31-May-12	22-Oct-12	120					
S3008360	Zone A1: Cable Duct and Watermain	40	31-May-12	17-Jul-12	40			Zone A1: Cable Duct and Watermain		
S3008365	Zone A1: Implement Temp Traffic Arrangement (TTA)	1	31-May-12	31-May-12	1			Zone A1: Implement Temp Traffic Arrangement (TTA)		
S3008370	Zone A1: Break up Existing Pavement	3	01-Jun-12	04-Jun-12	3			Zone A1: Break up Existing Pavement		
S3008375	Zone A1: Excavate Trench	10	05-Jun-12	15-Jun-12	10			Zone A1: Excavate Trench		
S3008380	Zone A1: Lay Cable Duct and Concrete Surround	4	16-Jun-12	20-Jun-12	4			Zone A1: Lay Cable Duct and Concrete Surround		
S3008385	Zone A1: Construct Drawpit	6	16-Jun-12	22-Jun-12	6			Zone A1: Construct Drawpit		
S3008390	Zone A1: Laying DN200 Watermain	10	23-Jun-12	05-Jul-12	10			Zone A1: Laying DN200 Watermain		
S3008395	Zone A1: Backfill to Trench	6	06-Jul-12	12-Jul-12	6			Zone A1: Backfill to Trench		
S3008400	Zone A1: Reinstatement of Road Pavement	4	13-Jul-12	17-Jul-12	4			Zone A1: Reinstatement of Road Pavement		
S3008410	Zone A2: Cable Duct and Watermain	40	18-Jul-12	01-Sep-12	40					Zone A2: Cable Duct and Wat
S3008430	Zone A4: Cable Trough	75	18-Jul-12	16-Oct-12	75					
S3008530	Zone B2a: Cable Duct and Chemical Pipe Trench	51	18-Jul-12	14-Sep-12	51					
S3008535	Zone B2a: Implement TTA	1	18-Jul-12	18-Jul-12	1			Zone B2a: Implement TTA		
S3008540	Zone B2a: Break up Existing Pavement	4	19-Jul-12	23-Jul-12	4			Zone B2a: Break up Existing Pavement		
S3008545	Zone B2a: Excavate Trench	12	24-Jul-12	06-Aug-12	12			Zone B2a: Excavate Trench		
S3008550	Zone B2a: Lay Cable Duct and Construct Drawpits	10	07-Aug-12	17-Aug-12	10			Zone B2a: Lay Cable Duct and Construct Drawpits		
S3008555	Zone B2a: Construct Chemical Pipe Trench	14	18-Aug-12	03-Sep-12	14			Zone B2a: Construct Cher		
S3008610	Zone B3a: Centrate Pipe and Ducting	75	16-Jun-12	12-Sep-12	75					Zone B3a: Implement TTA
S3008620	Zone B3a: Implement TTA	1	16-Jun-12	16-Jun-12	1			Zone B3a: Implement TTA		
S3008630	Zone B3a: Break up Existing Pavement	4	18-Jun-12	21-Jun-12	4			Zone B3a: Break up Existing Pavement		
S3008640	Zone B3a: Sheet Piling for Centrate Pipe between Valve Chamber	9	22-Jun-12	03-Jul-12	9			Zone B3a: Sheet Piling for Centrate Pipe between Valve Chamber and Manhole C3A		
S3008645	Zone B3a: Excavation for Centrate Pipe & Valve Chamber C1	12	04-Jul-12	17-Jul-12	12			Zone B3a: Excavation for Centrate Pipe & Valve Chamber C1		
S3008655	Zone B3a: Valve Chamber C1	15	18-Jul-12	03-Aug-12	15			Zone B3a: Valve Chamber C1		
S3008660	Zone B3a: Laying Centrate Pipe between Valve Chamber C1 and	6	04-Aug-12	10-Aug-12	6			Zone B3a: Laying Centrate Pipe between Valve Chamber C1 and Manhole C3A		
S3008665	Zone B3a: Backfill between Valve Chamber C1 and Manhole C3A	8	11-Aug-12	20-Aug-12	8			Zone B3a: Backfill between Valve Chamber C1 and Manhole		
S3008940	Zone B6: Centrate Pipe & Sludge Feed Pipe Connection at SDB	24	10-Jul-12	06-Aug-12	24			Zone B6: Centrate Pipe & Sludge Feed Pipe Connection at SDB		
S3008942	Zone B6: Excavation and Shoring for centrate Pipe & Sludge Feed	10	10-Jul-12	20-Jul-12	10			Zone B6: Excavation and Shoring for centrate Pipe & Sludge Feed Pipe Connection at SDB		
S3008944	Zone B6: Connection of DN350 and DN600 Centrate Pipe at SDB	4	21-Jul-12	25-Jul-12	4			Zone B6: Connection of DN350 and DN600 Centrate Pipe at SDB		
S3008946	Zone B6: Connection of Sludge Feed Pipe SF1/SFT/SF2 at SDB	4	26-Jul-12	30-Jul-12	4			Zone B6: Connection of Sludge Feed Pipe SF1/SFT/SF2 at SDB		

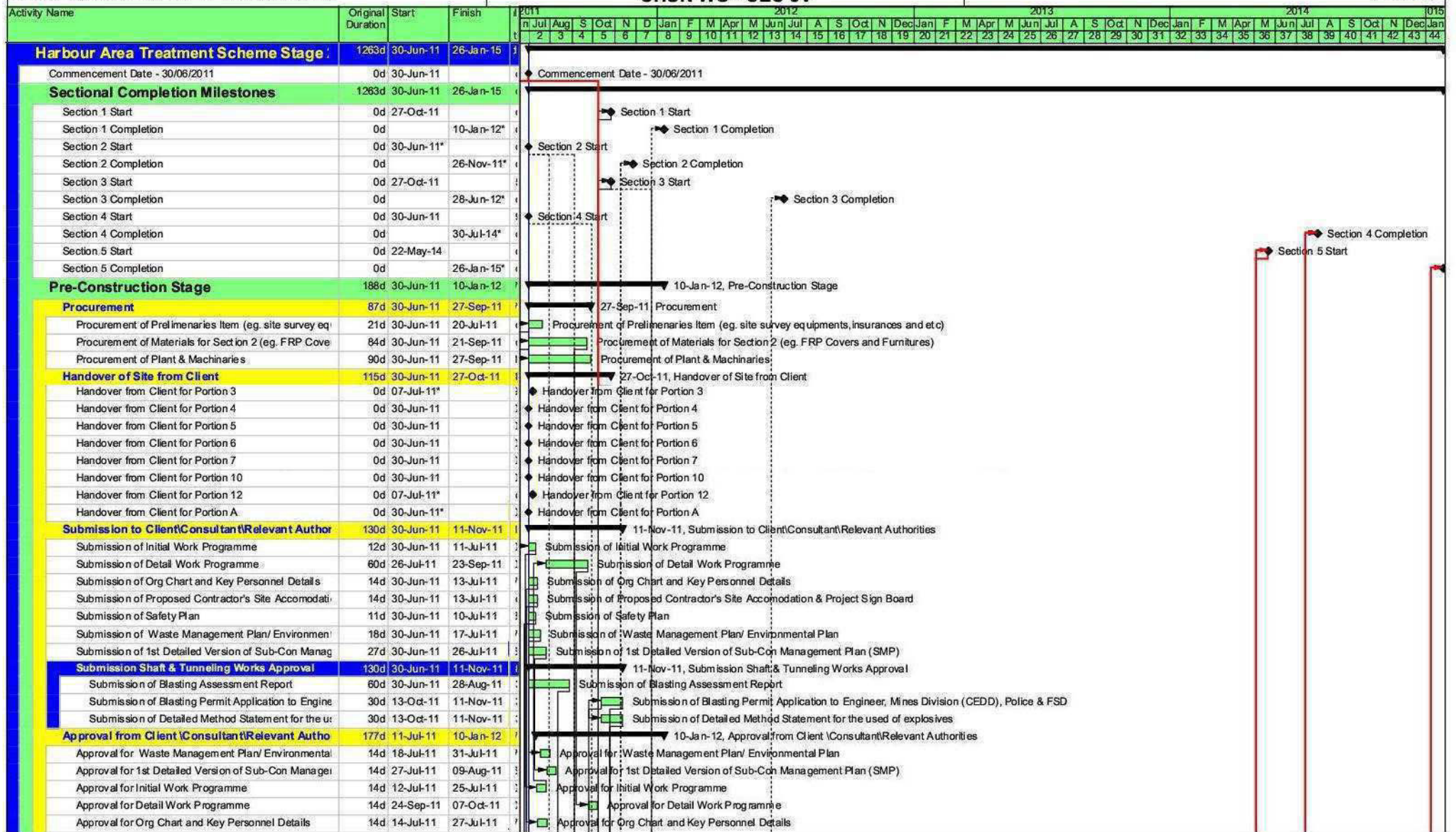
■ Actual Work ◆ Milestone
■ Remaining Work
■ Critical Remaining Work

Date	Revision	Checked	Approved

Activity ID	Activity Name	Original Duration	Start	Finish	Rem Dur	2012				
						May	Jun	Jul	Aug	Sep
S3008956	Zone B6: Backfill to Pipe Trench at SDB	6	31-Jul-12	06-Aug-12	6				Zone B6: Backfill to Pipe Trench at SDB	
S3009210	Zone C2: DN600 Sludge Feed Pipe SF1 and SFT	124	26-Jun-12	21-Nov-12	124					
S3009220	Zone C2: Implement TTA (Decking on Fresh Concrete at Zone C1	1	26-Jun-12	26-Jun-12	1			Zone C2: Implement TTA (Decking on Fresh Concrete at Zone C1		
S3009230	Zone C2: Break up Existing Pavement	4	27-Jun-12	30-Jun-12	4			Zone C2: Break up Existing Pavement		
S3009240	Zone C2: Sheet Piling	6	03-Jul-12	09-Jul-12	6			Zone C2: Sheet Piling		
S3009250	Zone C2: Excavate Trench	6	10-Jul-12	16-Jul-12	6			Zone C2: Excavate Trench		
S3009260	Zone C2: Cast Base of Access Chamber 1	4	17-Jul-12	20-Jul-12	4			Zone C2: Cast Base of Access Chamber 1		
S3009270	Zone C2: Laying SF1 and SFT	4	21-Jul-12	25-Jul-12	4			Zone C2: Laying SF1 and SFT		
S3009280	Zone C2: Construct Access Chamber 1	6	26-Jul-12	01-Aug-12	6			Zone C2: Construct Access Chamber 1		
S3009290	Zone C2: Backfill & Remove Sheet Pile to SF1 and SFT	7	02-Aug-12	09-Aug-12	7			Zone C2: Backfill & Remove Sheet Pile to SF1 and SFT		
S3009300	Zone C2: Reinstatement of Existing Pavement	4	10-Aug-12	14-Aug-12	4			Zone C2: Reinstatement of Existing Pavement		
S3009310	Zone C2: Concrete Curing	7	15-Aug-12	22-Aug-12	7			Zone C2: Concrete Curing		
S3009320	Zone C2: Centrate Pipe and Manhole CT5	38	03-Jul-12	15-Aug-12	38			Zone C2: Centrate Pipe and Manhole CT5		
S3009330	Zone C2: Break up Existing Pavement	1	03-Jul-12	03-Jul-12	1			Zone C2: Break up Existing Pavement		
S3009340	Zone C2: Sheet Piling to Centrate Pipe	2	10-Jul-12	11-Jul-12	2			Zone C2: Sheet Piling to Centrate Pipe		
S3009350	Zone C2: Excavation for Centrate Pipe	4	12-Jul-12	16-Jul-12	4			Zone C2: Excavation for Centrate Pipe		
S3009360	Zone C2: Cast Base of Manhole CT5	4	17-Jul-12	20-Jul-12	4			Zone C2: Cast Base of Manhole CT5		
S3009370	Zone C2: Laying Centrate Pipe and Connection to Sludge Feed P	3	26-Jul-12	28-Jul-12	3			Zone C2: Laying Centrate Pipe and Connection to Sludge Feed Pipe		
S3009380	Zone C2: Construct Manhole CT5	6	30-Jul-12	04-Aug-12	6			Zone C2: Construct Manhole CT5		
S3009390	Zone C2: Backfill and Remove Sheet Pile	6	06-Aug-12	11-Aug-12	6			Zone C2: Backfill and Remove Sheet Pile		
S3009400	Zone C2: Reinstatement of Existing Pavement	4	13-Aug-12	16-Aug-12	4			Zone C2: Reinstatement of Existing Pavement		
S3009560	Zone C5: Excavation to expose Extg Sludge Feed Pipe Tank 3 to	24	27-Jun-12	25-Jul-12	24			Zone C5: Excavation to expose Extg Sludge Feed Pipe Tank 3 to 5		
S3009570	Zone C5: Install Temporary Pipe from Tank 3 - 5 to existing Recirc	30	25-Jul-12	24-Aug-12	30			Zone C5: Install Temporary Pipe from Tank 3 - 5 to		
S3009580	Zone C5: Install Flanage Adaptor for Existing Sludge Feed Pipe T	10	24-Aug-12	03-Sep-12	10			Zone C5: Install Flanage A		
External Works										
Road and Drainage										
S3011400	Zone B3a: Foul Drain between F6 to F6A to F6C and Manholes F	12	21-Aug-12	03-Sep-12	12				Zone B3a: Foul Drain bet	

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

Date	Revision	Checked	Approved



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

DC/2009/18 - HARBOUR AREA TREATMENT SCHEME STAGE 2A - Upgrading Works at Stonecutters Island Sewer Treatment Works - Effluent Tunnel and Disinfection Facilities.

INITIAL WORK PROGRAMME, REV.0 (1st Submission)

Date	Revision	Checked	Approved
11-Jul-11	Initial Work Programme		

