Leader and JEC Joint Venture

Contract No. DC/2009/24
HATS Stage 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau

Monthly Environmental Monitoring and Audit Report April 2013

(Version 1.1)

Certified By _____

(Environmental Team Leader)

REMARKS:

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

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

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

14 May 2013
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

Contract No. DC/2009/24
Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau
Condition 4.4 – Submission of Monthly EM&A Report for April 2013 (no. 16)

I refer to the revised Monthly EM&A for April 2013 (version 1.1) submitted by ET on 13 May 2013 via email. Pursuant to Condition 4.4 of Environmental Permit No. EP-322/2008/F, I hereby verify the captioned Monthly EM&A Report.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED

Dr. Anne F Kerr
Independent Environmental Checker

c.c.	Ove Arup & Partners HK Ltd.	Mr. Ted Y F Tang	Fax: 2370 4377
	Leader - JEC Joint Venture	Mr. Patrick Wong	By email
	Cinotech Consultants Ltd.	Dr. Priscilla Choy	By email

TABLE OF CONTENTS

Page

EXECUTIVE SUMMARY **1**

Introduction 1
Environmental Monitoring Works 1
Environmental Licenses and Permits 2
Environmental Mitigation Implementation Schedule 2
Key Information in the Reporting Month 2
Summary of Complaints and Prosecutions 3
Future Key Issues: 3

1. INTRODUCTION **4**

Background 4
Project Organizations 4
Construction Programme 5
Summary of EM&A Requirements 5

2. AIR QUALITY **6**

Monitoring Requirements 6
Monitoring Locations 6
Monitoring Equipment 6
Monitoring Parameters, Frequency and Duration 6
Monitoring Methodology and QA/QC Procedure 6
Results and Observations 7

3 NOISE **8**

Monitoring Requirements 8
Monitoring Locations 8
Monitoring Equipment 8
Monitoring Parameters, Frequency and Duration 8
Monitoring Methodology and QA/QC Procedures 9
Results and Observations 9

4 ENVIRONMENTAL AUDIT **10**

Site Audits 10
Review of Environmental Monitoring Procedures 10
Status of Environmental Licensing and Permitting 10
Status of Waste Management 11
Implementation Status of Event Action Plans 12
Summary of Complaints and Prosecutions 13

5. FUTURE KEY ISSUES **14**

Key Issues for the Coming Month 14
Monitoring Schedule for the Next Month 14
Construction Program for the Next Month 14

6. CONCLUSIONS AND RECOMMENDATIONS **15**

Conclusions 15
Recommendations 15

LIST OF TABLES

Table I	Summary Table for Non-compliance Recorded in the Reporting Month
Table II	Summary Table for Key Information in the Reporting Month
Table 1.1	Key Project Contacts
Table 2.1	Locations for Air Quality Monitoring
Table 2.2	Impact Dust Monitoring Parameters, Frequency and Duration
Table 2.3	Summary of 1-hour and 24-hour TSP Monitoring Result in Reporting Month
Table 3.1	Locations for Noise Monitoring Stations
Table 3.2	Noise Monitoring Parameters, Frequency and Duration
Table 3.3	Summary the Noise Monitoring Results in Reporting Month
Table 4.1	Summary of Environmental Licensing and Permit Status
Table 4.2	Observations and Recommendations of Site Audit

LIST OF FIGURES

Figure 1	General Location Plan of the Project and Locations of Air Quality and Noise Monitoring Stations
Figure 2	ET Organization Chart

LIST OF APPENDICES

A	Action and Limit Levels for Air Quality and Noise
B	Summary of Exceedance
C	Site Audit Summary
D	Summary of Amount of Waste Generated
E	Event Action Plans
F	Environmental Mitigation Implementation Schedule (EMIS)
G	Complaint Log
H	Construction Programme

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
HATS 2A	Harbour Area Treatment Scheme Stage 2A
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

EXECUTIVE SUMMARY

Introduction

1. This is the 16th Monthly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for DSD Contract No. DC/2009/24 "HATS Stage 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau" (The Project) which documents the key information of EM&A of Contract No. DC/2009/24 and environmental monitoring results from Contract DC/2007/24 and DC/2008/09 HATS Stage 2A with same Environmental Permit (Permit No. EP-322/2008/F) for April 2013.

2. The site activities undertaken for in the reporting month included:
   - Wah Fu PTW – Temporary plant operation, Pre-bored H-pile construction;
   - Ap Lei Chau PTW – Plant operation, Excavation in progress;
   - Aberdeen PTW – Plant operation, Construction for the structure, Laying blinding layer, Pipe Laying;
   - Sandy Bay PTW – ELS for construction of chamber, Chamber construction; and
   - Cyberport – NIL.

Environmental Monitoring Works

3. The environmental monitoring works of the Project was conducted by the ET for the Contract: DC/2007/24 and DC/2008/09 under HATS 2A with same Environmental Permit and in accordance with the EM&A Manual. The monitoring results were checked and reviewed. Site audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.

4. Summary of the non-compliance of the reporting month is tabulated in **Table I**.

Table I Summary Table for Non-compliance Recorded in the Reporting Month

Monitoring Station	Parameter	No. of Exceedance		No. of Exceedance Due to the Project		Action Taken
		Action Level	Limit Level	Action Level	Limit Level	
CM_CB1a	1-hr TSP	0	0	0	0	N/A
	24-hr TSP	0	0	0	0	N/A
CM_WF1a	1-hr TSP	0	0	0	0	N/A
	24-hr TSP	0	0	0	0	N/A
CM_AB1a	1-hr TSP	0	0	0	0	N/A
	24-hr TSP	0	0	0	0	N/A
M5	Noise (Day Time)	0	0	0	0	N/A
M6a		0	0	0	0	N/A
M7a		0	0	0	0	N/A
M8		0	0	0	0	N/A
M9		0	0	0	0	N/A

1-hour TSP Monitoring

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

6. The air quality monitoring results recorded on 15 and 17 April 2013, which were considered invalid by the ET of DC/2007/24. Details could be found in the Appendix M of the DC/2007/24 monthly EM&A report.

24-hour TSP Monitoring

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

Construction Noise

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

Environmental Licenses and Permits

9. Licenses/Permits granted to the Project include the Environmental Permit (EP), Notification of Works under APCO, Water Discharge Licences and Registered as a Chemical Waste Producer for Sandy Bay, Cyberport, Ap Lei Chau, Aberdeen, Wah Fu PTWs sites.

Environmental Mitigation Implementation Schedule

10. According to the EIA Report Section 3.74, 4.56, 6.384, 9.154 and 13.44, air quality, noise, water quality, waste management and landscape and visual would be the key environmental issues and mitigation measures shall be implemented during the construction phase. Details of the implementation of mitigation measures are provided in the **Appendix F**.

Key Information in the Reporting Month

11. Summary of key information in the reporting month is tabulated in **Table II**.

Table II Summary Table for Key Information in the Reporting Month

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	0	---	N/A	N/A	---
Status of submissions under EP	1	Environmental Monitoring and Audit Monthly Report – March 2013	Submitted to EPD on 16 April 2013	No comment	---
Notifications of any summons & prosecutions received	0	---	N/A	N/A	---

Summary of Complaints and Prosecutions

12. No environmentally related summons, prosecutions or complaints were received for the Project in the reporting month.

13. There was no environmental prosecution or notification of summons received while one complaint was received since the Project commencement. The Complaint Log is presented in **Appendix G.**

Future Key Issues:

14. Major site activities for the coming two months include:
    - Wah Fu PTW: Piling works for building, Plant operation;
    - Aberdeen PTW: Construction of inlet chamber & fine screen structure, Permanent diversion of rising main, Plant operation, Temporary diversion channel;
    - Ap Lei Chau PTW: ELS for 1st stage of permanent structure, Construction of 1st stage of permanent structure, Plant operation; and
    - Sandy Bay PTW: Chambers & flume channel construction.
    - Cyberport – NIL

15. The environmental concerns in coming months are mainly on chemicals storage, surface run off, spillage of wastewater during rainstorm and dust generated from the construction works.

1. INTRODUCTION

Background

1.1 The Project 'HATS Stage 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau' with Contract No: DC/2009/24 mainly comprises the following major works:

- The construction of screens, grit traps, deodourisation rooms, workshop and administration buildings, and modification of existing inlet pumping stations at the preliminary treatment works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau.

1.2 The general location plan of the Project is shown in **Figure 1**.

1.3 The Project is under Harbour Area Treatment Scheme (HATS) Stage 2A and is a designated project (Register No. : AEIAR-121/2008). The environmental permit: (Permit No. EP-322/2008/F) which was issued on 10th October 2012 to the Drainage Services Department (hereinafter called the DSD) as the Permit Holder.

1.4 Leader and JEC Joint Venture (hereafter called the LJJV) was commissioned by the DSD to undertake the construction of the Contract No. DC/2009/24 "Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau".

1.5 Cinotech Consultants Limited was commissioned by LJJV to undertake the Environmental Monitoring and Audit (EM&A) works for the project and was appointed as the Environmental Team (ET) of the Project under Condition 2.1 of the EP.

1.6 The construction works at Wah Fu PTW and Ap Lei Chau PTW were commenced in the January 2012.

1.7 The construction phase of EM&A programme of the Project commenced in January 2012.

1.8 This is the 16th monthly EM&A report summarizing the EM&A works conducted for the Project in April 2013.

Project Organizations

1.9 The contacts of the Project are shown in **Table 1.1** and the organization chart of ET for Contract is shown in **Figure 2**.

Table 1.1 Key Project Contacts

Party	Role	Name	Position	Phone No.
Drainage Services Department	Project Proponent	Mr. P. K. Kwok	Senior Engineer 2	2159 3403
Ove Arup & Partners Hong Kong Ltd	Engineer's Representative	Mr. Ted Tang	Principal Resident Engineer	2370-4311
	Coordinator	Ms. Natalie Kwok	Resident Engineer	6794 8844

Party	Role	Name	Position	Phone No.
Cinotech	Environmental Team	Dr. Priscilla Choy	ET Leader	2151 2089
		Ms. Janet Wai	Project Coordinator & Audit Team Leader	2151 2078
Mott MacDonald	Independent Environmental Checker	Dr. Anne Kerr	Independent Environmental Checker	2828 5757
Leader and JEC Joint Venture	Contractor	Mr. Wilson Chan	Site Agent	9656 8865
		Mr. Patrick Wong	Environmental Officer	9019 7270

Construction Programme

1.10 The site activities undertaken in the reporting month included:

- Wah Fu PTW – Temporary plant operation, Pre-bored H-pile construction;
- Ap Lei Chau PTW – Plant operation, Excavation in progress;
- Aberdeen PTW – Plant operation, Construction for the structure, Laying blinding layer, Pipe Laying;
- Sandy Bay PTW – ELS for construction of chamber, Chamber construction; and
- Cyberport – NIL.

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 presents the monitoring results, observations, locations, equipment, period, for required monitoring parameter namely dust, noise levels, and audit works conducted for the Project in April 2013. For the methodology and QA/QC procedures of the monitoring parameters, please refer to the monthly report for the Contract DC/2007/24 and DC/2008/09.

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 Three designated monitoring stations, CM_CB1a, CM_WF1a and CM_AB1a were selected for impact dust monitoring for the Project. **Table 2.1** describes the air quality monitoring locations and the responsible ETs who are carrying out the impact air quality monitoring. The monitoring locations which are also depicted in **Figure 1**.

Table 2.1 Locations for Air Quality Monitoring

Monitoring Station	Monitored by	Location of Measurement
CM_CB1a(1)	DC/2007/24	The Arcade, Cyberport
CM_WF1a(1)	DC/2007/24	Wah Ming House, Wah Fu Estate
CM_AB1a	DC/2007/24	The Hong Kong Ice and Cold Storage, formerly known as Dairy Farm Ice and Cold Storage

Remarks:
1: Refer to the monthly report of DC/2007/24, revision to the original monitoring location in EM&A Manual was made and was verified by IEC on 19 November 2009 and subsequently approved by EPD on 27 November 2009.

Monitoring Equipment

2.3 The details of the equipment used in the impact air monitoring programme could be referred to Section 4.2 of the monthly report of Contact No. DC/2007/24.

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. The air quality monitoring schedules could be found in Appendix G in the monthly report for the Contract DC/2007/24.

Table 2.2 Impact Dust Monitoring Parameters, Frequency and Duration

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

Monitoring Methodology and QA/QC Procedure

2.5 The monitoring methodology and QA/QC procedures are presented in the Section 4.1 and 4.3 of monthly report for Contract DC/2007/24.

Results and Observations

2.6 **Table 2.3** summarizes the monitoring results at CM_CM1a, CM_WF1a and CM_AB1a in the reporting month.

Table 2.3 Summary of 1-hour and 24-hour TSP Monitoring Result in Reporting Month

Air Quality Monitoring Station	Average $\mu g/m^3$	Range $\mu g/m^3$	Action Level $\mu g/m^3$	Limit Level $\mu g/m^3$
1 hour TSP				
CM_CB1a	218	53.3-278.1[1]	280	500
CM_WF1a	133	55.9-227.6[2]	285	
CM_AB1a	216	94.8-280.7[1]	283	
24 hours TSP				
CM_CB1a	57	26-82	178	260
CM_WF1a	50	29-83	185	
CM_AB1a	78	53-101	174	

Remark:
1. This range of the 1hour TSP value omitted the monitoring results recorded on 17 April 2013, which were considered invalid by the ET of DC/2007/24. Details could be found in the Appendix M of the DC/2007/24 monthly EM&A report.
2. This range of the 1hour TSP value omitted the monitoring results recorded on 15 April 2013, which were considered invalid by the ET of DC/2007/24. Details could be found in the Appendix M of the DC/2007/24 monthly EM&A report.

2.7 The details of exceedances in the reporting month are presented in the Section 5 of the monthly report for DC /2007/24.

2.8 The detailed monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results could be referred to Appendix J of monthly report of Contract DC/2007/24.

2.9 The air quality monitoring results recorded on 15 and 17 April 2013, which were considered invalid by the ET of DC/2007/24. Details could be referred to Appendix M of the DC/2007/24 monthly EM&A report.

2.10 All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded. Summary of exceedance is presented in **Appendix B.**

2.11 All 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded. Summary of exceedance is presented in **Appendix B.**

2.12 The identified dust sources at the monitoring stations were mainly from tunnel works, drilling, loading, rock out, operation of mobile crane and excavator.

3 NOISE

Monitoring Requirements

3.1 Five noise monitoring stations, namely M5, M6a, M7a, M8 and M9 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 five designated monitoring stations as listed in **Table 3.1.**

Table 3.1 Location of Noise Monitoring Stations

Monitoring Station	Monitored By	Location of Measurement
M5 (Sandy Bay PTW)	DC/2007/24	Chuk Lam Ming Tong
M6a(1) (Cyberport PTW)		Aegean Terrace
M7a(1) (Wah Fu PTW)		Wah Ming House
M8 (Aberdeen PTW)		Wah Lai House
M9 (Ap Lei Chau PTW)	DC/2008/09	Mei Chun Court, South Horizons

Remark 1: Refer to the monthly report of DC/2007/24, revision to the original monitoring location in EM&A Manual was made and was verified by IEC on 19 November 2009 and subsequently approved by EPD on 27 November 2009.

Monitoring Equipment

3.3 The details of the equipment used in the impact noise monitoring programme could be referred to Section 4.2 of the monthly report of Contact No. DC/2007/24 and Section 2.2 of the monthly report of Contact No. DC/2008/09.

Monitoring Parameters, Frequency and Duration

3.4 **Table 3.2** summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedules could be found in Appendix G in the monthly report for the Contract DC/2007/24 and Appendix D in the monthly report for the Contract DC/2008/09.

3.5 As advised by the Contractor, no construction work under Contract DC/2009/24 was conducted during the restricted hours in reporting month.

Table 3.2 Noise Monitoring Parameters, Frequency and Duration

Monitoring Stations	Parameter	Period	Frequency
M5 M6a M7a M8 M9	L_{eq}(30 min.) dB(A)	0700-1900 hrs. on normal weekdays	Once per week

M5 M6a M7a M8 M9	L_{eq}(5 min.) dB(A)	During restricted hours	Weekly monitoring to be conducted during the construction works

Monitoring Methodology and QA/QC Procedures

3.6 The monitoring methodology and QA/QC procedure could be referring to the monthly reports for Contract DC/2007/24 and DC/2008/09.

Results and Observations

3.7 **Table 3.3** summarizes the monitoring results at M5, M6a, M7a, M8 and M9 in reporting month.

Table 3.3 Summary the Noise Monitoring Results in Reporting Month

For the time period 0700-1900 hrs. on weekdays		
Monitoring Station	Range, dB(A) L_{eq}(30 min.)	Limit Level, dB(A) L_{eq}(30 min.)
M5	62.8-71.6	75.0
M6a	57.0-59.5	
M7a	61.0-70.4	
M8	65.5-66.0	
M9	52.7-65.7	

3.8 The construction noise monitoring at the designated locations was conducted by the ET of Contract: DC/2007/24 and DC/2008/09 as scheduled in the reporting month. The monitoring results and graphical presentation are provided in Appendix H and I of the monthly report for Contract DC/2007/24 and Appendix E of the monthly report for Contract DC/2008/09.

3.9 No Action/Limit Level exceedance was recorded. Summary of exceedance is presented in **Appendix B**.

3.10 The major noise sources identified at the designated noise monitoring stations were from road traffic noise, operation of excavator, gantry, drilling works and mobile crane.

4 ENVIRONMENTAL AUDIT

Site Audits

4.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site.

4.2 Environmental site audits were conducted on 5, 11, 19 and 26 April 2013. 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 mitigation measures for Air Quality, Noise, Water Quality, Waste Management, Landscape and Visual are being properly carried out in the reporting month in accordance to section 14.1 of the EM&A Manual. No non-compliance was observed during the site inspections.

4.4 The summaries of site audits are attached in **Appendix C**.

Review of Environmental Monitoring Procedures

4.5 The monitoring works conducted by the monitoring team of Contract DC/2007/24 and DC/2008/09. The monitoring procedures were reviewed by their ETs.

Status of Environmental Licensing and Permitting

4.6 All permits/licenses obtained for the Contract DC/2009/24 are summarized in **Table 4.1**.

Table 4.1 Summary of Environmental Licensing and Permit Status for Contract DC/2009/24

Permit Number	Valid Period		Details	Status
	From	To		
Water Discharge License				
WT000116 29-2012	N/A	31/1/2017	Location: Sandy Bay PTW	Valid
WT000116 33-2012	N/A	31/1/2017	Location: Cyber Port PTW	
WT000116 32-2012	N/A	31/1/2017	Location: Ap Lei Chau	
WT000116 24-2012 and WT000120 53-2012	N/A	31/1/2017	Location: Aberdeen PTW	
WT000116 27-2012	N/A	31/1/2017	Location: Wah Fu PTW	
Notification of Works Under APCO				
334694	6/9/2011	N/A	All PTWs	N/A
Registered Chemical Waste Producer				
5218-171-L2783-01	14/12/2011	N/A	Location: Sandy Bay PTW	Valid

5218-171-L2783-02	30/12/2011	N/A	Location: Cyber Port PTW	
5218-171-L2783-03	30/12/2011	N/A	Location: Ap Lei Chau	
5218-171-L2783-04	30/12/2011	N/A	Location: Aberdeen PTW	
5218-171-L2783-05	30/12/2011	N/A	Location: Wah Fu PTW	

Status of Waste Management

4.7 The amount of wastes generated by the activities of the Project in the reporting month is shown in **Appendix D.**

Implementation Status of Environmental Mitigation Measures

4.8 Details of the implementation of mitigation measures are provided in the **Appendix F.**

4.9 During the weekly environmental site inspections in the reporting period, no non-conformance was identified. The observations and recommendations for the Projects are summarized in **Table 4.2.**

Table 4.2 Observations and Recommendations of Site Audit

Parameters	Ref. Number	Observations	Follow Up Action
Water Quality	130405-R01	It is reminded to remove stagnant water on Ap Lei Chau-PTW during rainy/wet season.	The stagnant water was not observed.
	130411-R01	Clear the muddy water near the site entrance at Wah Fu-PTW.	No muddy water was observed at entrance of Wah Fu-PTW.
	130419-O01	Oil leakage was observed from hydraulic crane lorry (Number on License plate: GY3724) in Sandy Bay PTW. The Contractor was reminded to properly remove the leaked oil and adopt adequate measures to avoid leakage into public drainage system. It is also reminded the sand used for soaking the leaked oil should be stored at designated area and disposed as chemical wastes.	The oil leakage was not observed at Sandy Bay-PTW. The workers' training of disposition of chemical wastes was held every day on site.
	130426-R01	Clear the ponding water in the site area and the muddy water near the site entrance at Sandy Bay Storage Yard.	The ponding water and the muddy water were not observed at Sandy Bay Storage Yard.
Air Quality	--	--	--

Waste/ Chemical Management	130405-R03	ALC-PTW: The oil leakage from the equipment was observed at ALC-PTW. The Contractor is reminded to check and maintain the equipment in the good conditions. Wah Fu-PTW: Provide the drip trays to the chemical containers next to the air compressor at Wah Fu-PTW.	ALC-PTW: No oil leakage from the equipment was observed at ALC-PTW. Wah Fu-PTW: The drip tray was provided to the chemical containers next to the air compressor at Wah Fu-PTW.
	130419-O01	Oil leakage was observed from hydraulic crane lorry (Number on License plate: GY3724) in Sandy Bay PTW. The Contractor was reminded to properly remove the leaked oil and adopt adequate measures to avoid leakage into public drainage system. It is also reminded the sand used for soaking the leaked oil should be stored at designated area and disposed as chemical wastes.	The oil leakage was not observed at Sandy Bay-PTW. The workers' training of disposition of chemical wastes was held every day on site.
	130426-R02	The oil leakage from PMEs was observed at ALC-PTW. The Contractor was reminded to keep PMEs in a good condition and clear the oil stain properly.	The oil leakage from PMEs was not observed at ALC-PTW. The oil stain was cleared.
Noise	--	--	--
Landscape and Visual	130405-R02	Some of the trees on Aberdeen-PTW were not labeled. It is reminded to properly label the trees according to the findings of latest tree survey for identifying their status. (i.e. identifying the trees with the status of "to be retained", "to be transplanted" or "to be felled".)	The trees were labeled on Abd-PTW, and the Contractor would be added those plants which are grown up to trees in the latest tree survey.
Permit/ Licenses	--	--	--

Implementation Status of Event Action Plans

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

1-hr TSP

4.11 No Action/Limit Level exceedance was recorded.

24-hr TSP

4.12 No Action/Limit Level exceedance was recorded.

Construction Noise

4.13 No Action/Limit Level exceedance was recorded.

Landscape and Visual

4.14 No non-compliance was recorded.

Summary of Complaints and Prosecutions

4.15 No environmentally related summons, prosecutions or complaints were received for the Project in the reporting month.

4.16 There was no environmental prosecution or notification of summons received while one complaint was received since the Project commencement. The Complaint Log is presented in **Appendix G.**

5. FUTURE KEY ISSUES

Key Issues for the Coming Month

5.1 Key environmental issues in the coming month include:

- Generation of dust from stockpiles of excavated and dusty materials, unpaved site area and vehicle movement, roadworks, excavation works and loading and unloading dusty materials on-site;
- Noise from operation of equipment and machinery on-site;
- Provision well maintenance on the storage facilities 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 during and after rainstorm;
- Spillage of wastewater during the rainstorm;
- Silty surface runoff generated from the site area; and
- Silt and dust getting into the public area by the leaving site vehicles at the site exits without adequate wheel washing facilities.

Monitoring Schedule for the Next Month

5.2 The tentative environmental monitoring schedules for the next month could be found in the Appendix G and Appendix D of the monthly report of Contracts DC/2007/24 and DC/2008/09 respectively.

Construction Program for the Next Month

5.3 The tentative construction program is provided in **Appendix H.**

6. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

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

1-hour TSP Monitoring

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

6.3 The air quality monitoring results recorded on 15 and 17 April 2013, which were considered invalid by the ET of DC/2007/24. Details could be referred to Appendix M of the DC/2007/24 monthly EM&A report.

24-hour TSP Monitoring

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

Construction Noise Monitoring

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

Environmental Audit

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

Complaint and Prosecution

6.7 No environmentally related summons, prosecutions or complaints were received in the reporting month.

Recommendations

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

Water Impact

- To identify any discharge of wastewater from the construction site;
- To avoid any discharge of wastewater by-pass/ without the desilting facilities from the construction site;
- To provide adequate sedimentation for temporarily storage of runoff during rainstorm;
- To avoid water from accumulation on site and carry out larviciding against mosquito breeding for stagnant water when mosquito larvae are observed.

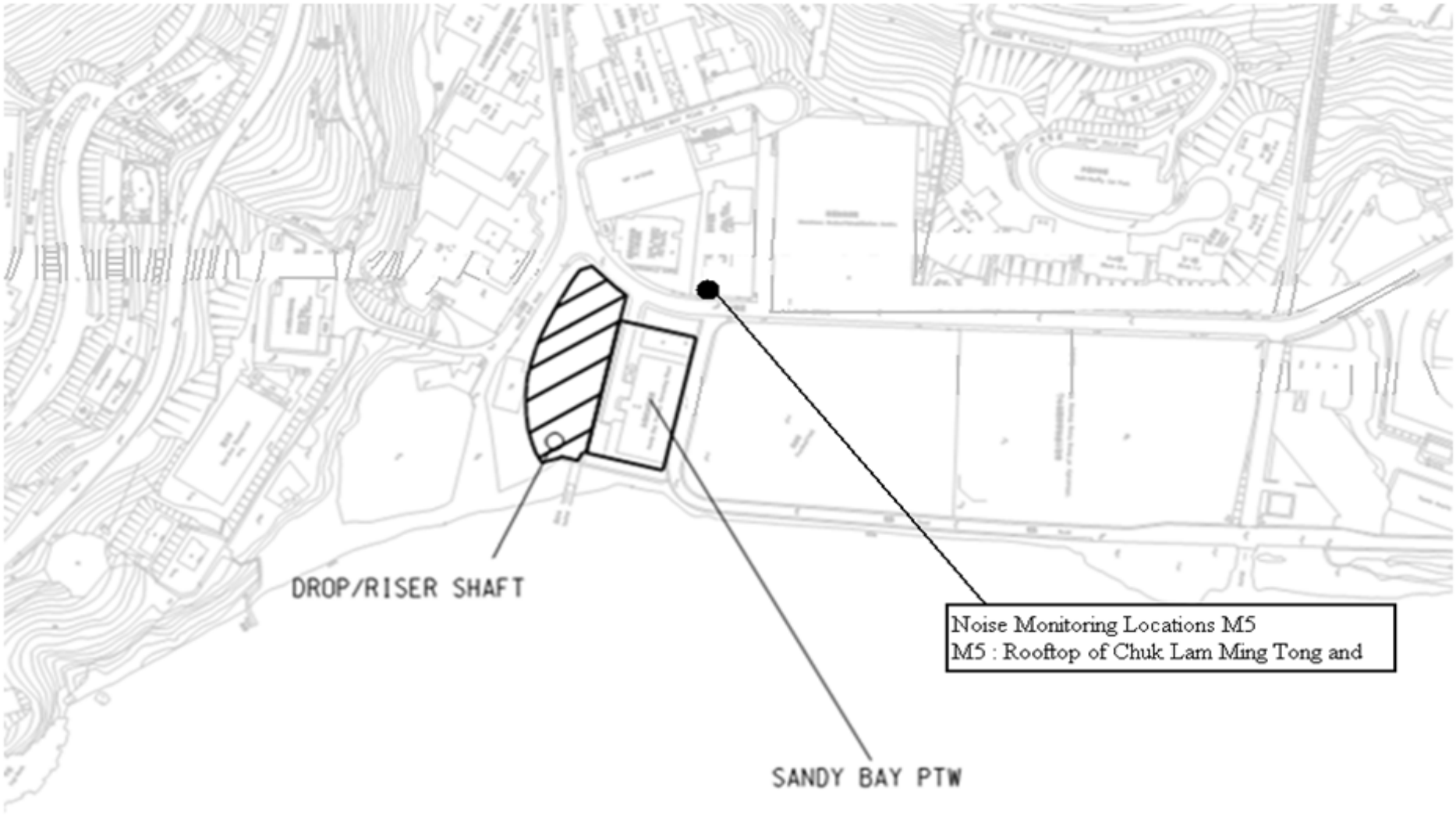
Waste/Chemical Management

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

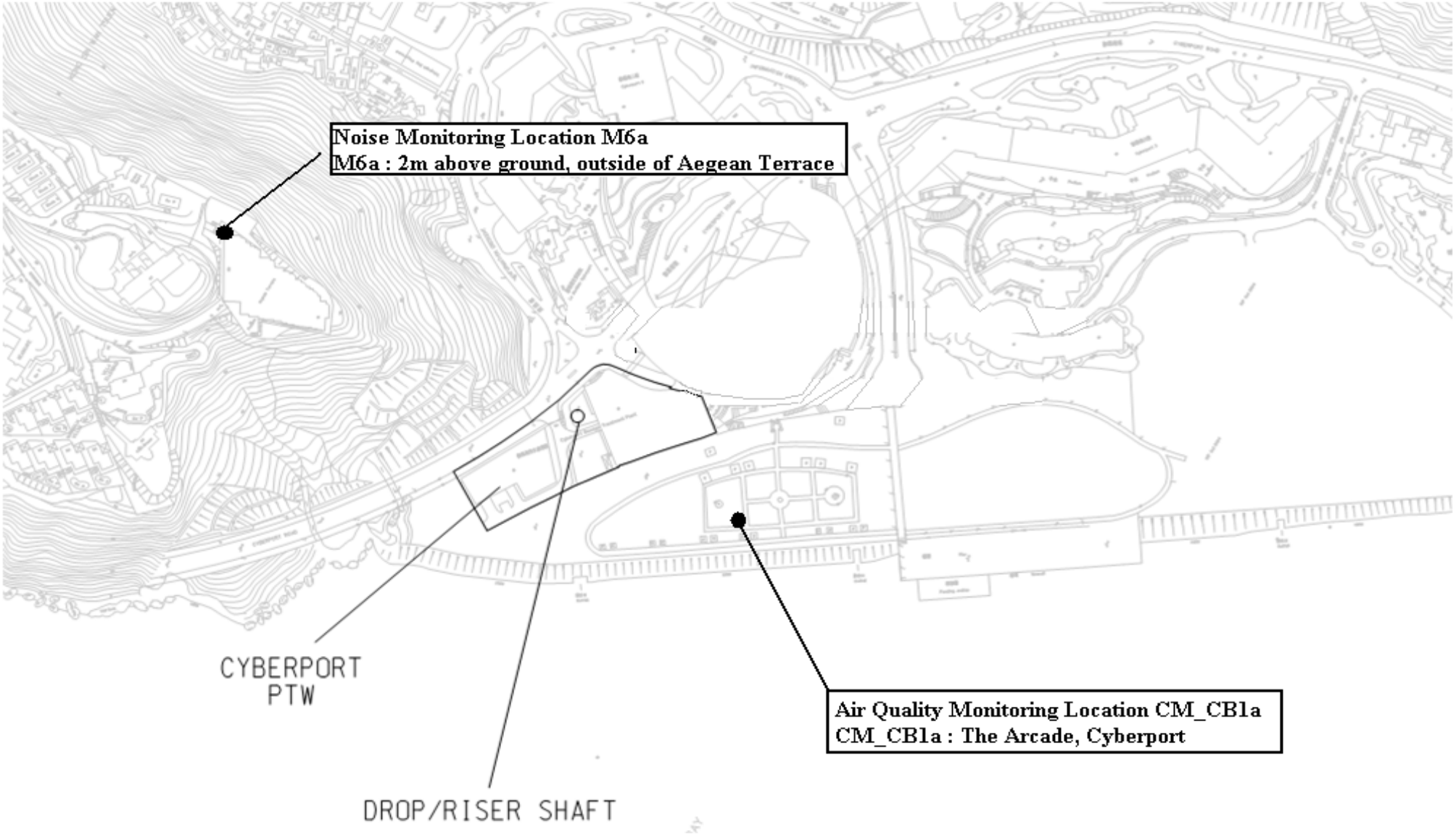
Landscape and Visual

- To erect and maintain the protection fence around the retaining tree;
- To label the trees in site for better identification; and
- To avoid any heavy materials placed into tree protection zone.

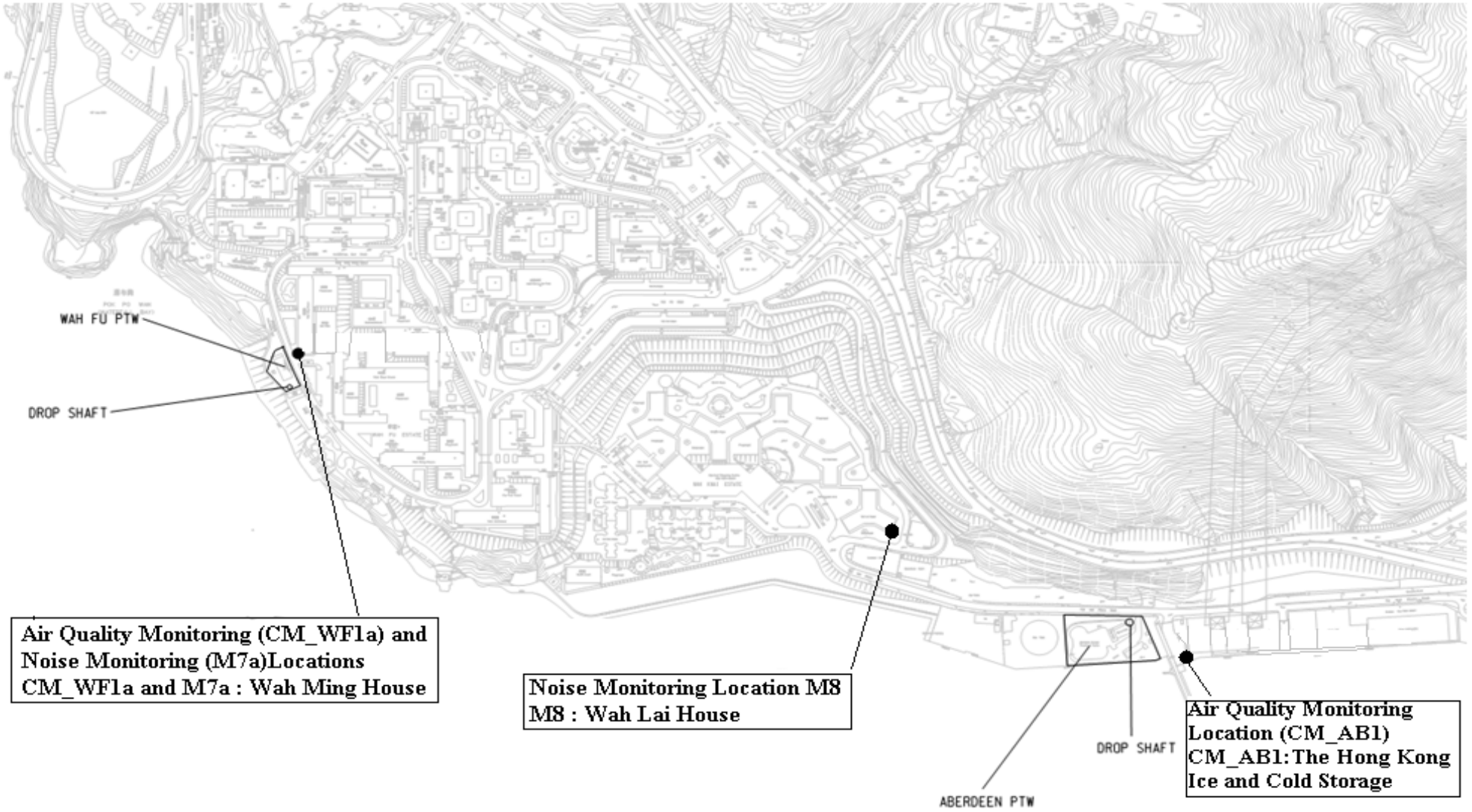
FIGURES



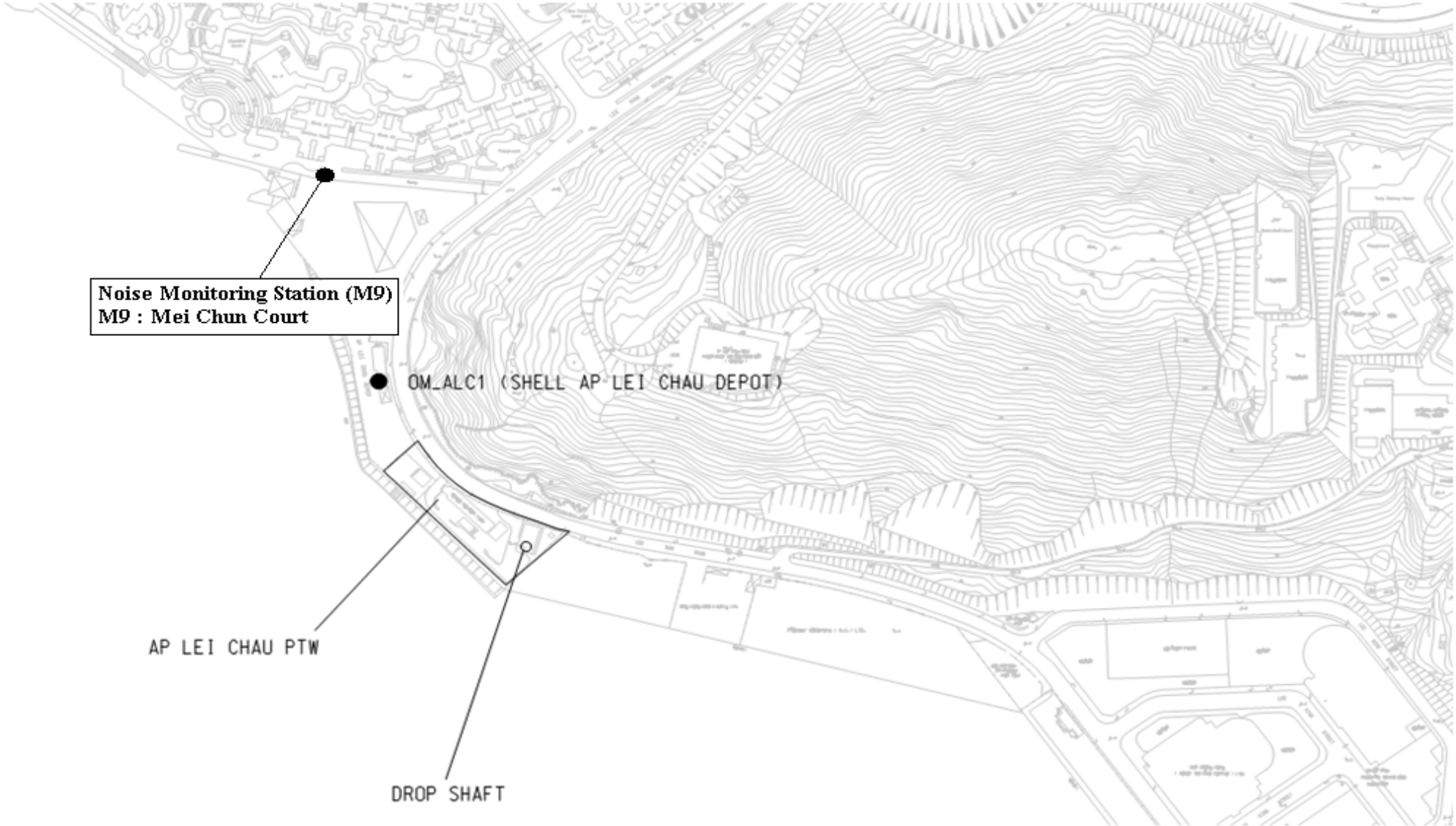
Title	Contract No: DC/2009/24 HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	Scale N.T.S	Project No. MA11060	CINOTECH
	General Location Plan of Sandy Bay PTW and Locations of Noise Monitoring Stations	Date 01/2012	Figure 1a	



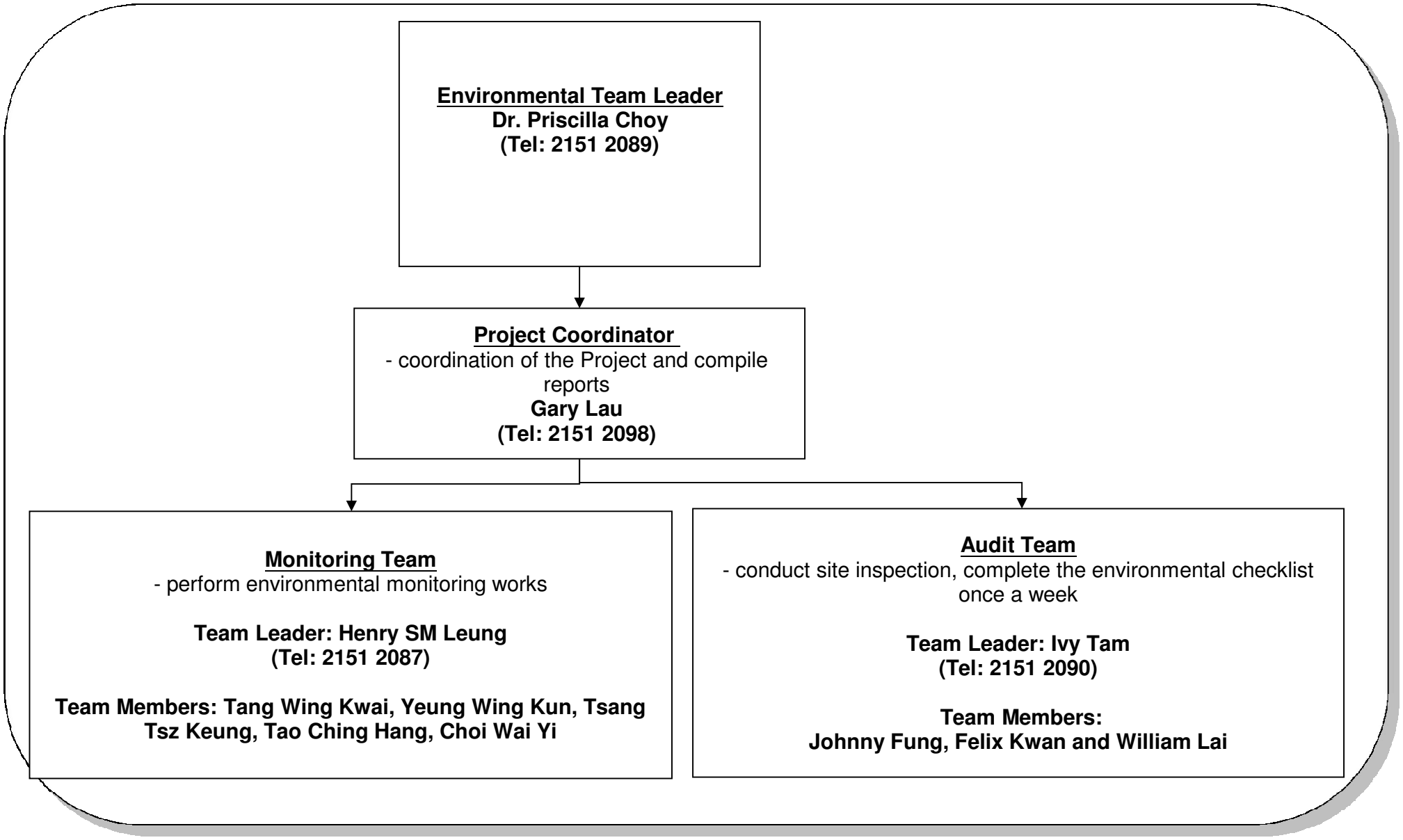
Title	Contract No: DC/2009/24 HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	Scale N.T.S	Project No. MA11060	CINOTECH
	General Location Plan of Cyberport PTW and Locations of Air Quality and Noise Monitoring Stations	Date 01/2012	Figure 1B	



Title	Contract No: DC/2009/24 HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	Scale N.T.S	Project No. MA11060	CINOTECH
	Location of Wah Fu and Aberdeen PTW and Locations of Air Quality and Noise Monitoring Locations	Date 1/2012	Figure 1C	



Title	Contract No: DC/2009/24 HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	Scale N.T.S	Project No. MA11060	CINOTECH
	Locations of AP LEI CHAU PTW and the Noise Monitoring Location	Date 1/2012	Figure 1D	



Title	Contract No: DC/2009/24 HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	Scale N.T.S	Project No. MA11060	CINOTECH
	ET's Organization Chart	Date Feb-12	Figure 2	

APPENDIX A
ACTION AND LIMIT LEVELS FOR AIR QUALITYAND NOISE

Appendix A Action and Limit Levels

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

Monitoring Stations	Action Level ($\mu g/m^3$)		Limit Level ($\mu g/m^3$)	
	1-hour	24-hour	1-hour	24-hour
CM_CB1a	280	178	500	260
CM_WF1a	285	185		
CM_AB1a	283	174		

Table A-2 Action and Limit Level for Construction Noise

Monitoring Stations	Time Period	Action Level	Limit Level in dB(A)
M5 **M6a** **M7a** **M8** **M9**	0700-1900 hours on normal weekdays	When one documented complaint is received	75[(1)]

Remark: 1: 70dB(A) and 65 dB(A) for schools during normal teaching periods and school examination periods, respectively.

APPENDIX B
SUMMARY OF EXCEEDANCE

APPENDIX B – SUMMARY OF EXCEEDANCE

Reporting Month: April 2013

a) Exceedance Report for 1-hr TSP (0)

b) Exceedance Report for 24-hr TSP (0)

c) Exceedance Report for Construction Noise on normal week days (0)

APPENDIX C
SITE AUDIT SUMMARY

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	130405
Date	5 April 2013(Friday)
Time	14:15 – 16:00

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

Ref. No.	Remarks/Observations	Related Item No.
130405-R01	***Part A - Water Quality*** • It is reminded to remove stagnant water on Ap Lei Chau-PTW during rainy/wet season.	A11
130405-R02	***Part B – Landscape and Visual*** • Some of the trees on Aberdeen-PTW were not labeled. It is reminded to properly label the trees according to the findings of latest tree survey for identifying their status. (i.e. identifying the trees with the status of "to be retained", "to be transplanted" or "to be felled".)	B1
	Part C - Air Quality • No environmental deficiency was identified during the site inspection.	
	Part D – Noise • No environmental deficiency was identified during the site inspection.	
130405-R03	***Part E –Waste / Chemical Management*** • Provide the drip trays to the chemical containers at Wah Fu-PTW. • The oil leakage from the equipment was observed at ALC-PTW. The Constructor is reminded to check and maintain the equipment in the good conditions.	E7ii E7i
	Part F - Permit / Licenses • No environmental deficiency was identified during the site inspection.	
	Others • Follow-up on previous audit sessions: Outstanding items 130328-R02 & 130328-R03 are remarked as 130405-R03 which will be reviewed in next weekly site inspection (Ref. No.130328).	
	Remark: • N/A	

	Name	Signature	Date
Recorded by	Ken Cheng	Ken	8 April 2013
Checked by	Dr. Priscilla Choy	WF	8 April 2013

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	130411
Date	11 April 2013(Thursday)
Time	14:00 – 15:45

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

Ref. No.	Remarks/Observations	Related Item No.
130411-R01	***Part A - Water Quality*** • Clear the muddy water near the site entrance at Wah Fu-PTW. ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E –Waste / Chemical Management*** • No environmental deficiency was identified during the site inspection. ***Part F - Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***Others*** • Follow-up on previous audit sessions: All identified environmental deficiency was observed improved/rectified by the Contractor (Ref. No.130405). ***Remark:*** • N/A	A11

	Name	Signature	Date
Recorded by	Janet Wai		11 April 2013
Checked by	Dr. Priscilla Choy		11 April 2013

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	130419
Date	19 April 2013(Friday)
Time	14:15 – 16:00

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

Ref. No.	Remarks/Observations	Related Item No.
130419-O01	***Part A - Water Quality*** • Oil leakage was observed from hydraulic crane lorry in Sandy Bay PTW. The Contractor was reminded to properly remove the leaked oil and adopt adequate measures to avoid leakage into public drainage system. It is also reminded the sand used for soaking the leaked oil should be stored at designated area and disposed as chemical wastes. ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection.	A17.
130419-O01	***Part E –Waste / Chemical Management*** • Oil leakage was observed from hydraulic crane lorry in Sandy Bay PTW. The Contractor was reminded to properly remove the leaked oil and adopt adequate measures to avoid leakage into public drainage system. It is also reminded the sand used for soaking the leaked oil should be stored at designated area and disposed as chemical wastes. ***Part F - Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***Others*** • Follow-up on previous audit sessions: All identified environmental deficiency was observed improved/rectified by the Contractor (Ref. No.130411). ***Remark:*** • N/A	E7i.

	Name	Signature	Date
Recorded by	Ken Cheng		19 April 2013
Checked by	Dr. Priscilla Choy		22 April 2013

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	130426
Date	26 April 2013(Friday)
Time	14:00 – 15:45

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

Ref. No.	Remarks/Observations	Related Item No.
130426-R01	***Part A - Water Quality*** • Clear the ponding water in the site area and the muddy water near the site entrance at Sandy Bay Storage Yard. ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E –Waste / Chemical Management***	A11
130426-R02	• The oil leakage from PMEs was observed at ALC-PTW. The Contractor was reminded to keep PMEs in a good condition and clear the oil stain properly. ***Part F - Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***Others*** • Follow-up on previous audit sessions: All identified environmental deficiency was observed improved/rectified by the Contractor (Ref. No.130419). ***Remark:*** • N/A	E7i.

	Name	Signature	Date
Recorded by	Janet Wai		26 April 2013
Checked by	Dr. Priscilla Choy		26 April 2013

APPENDIX D
SUMMARY OF AMOUNT OF WASTE GENERATED

Name of Department: DSD

Name of Contract : Harbour Area Treatment Scheme Stage 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Ap Lei Chau and Aberdeen **Contract No. : DC/2009/24**

APPENDIX D MONTHLY SUMMARY WASTE FLOW TABLE FOR 2013 (YEAR)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Broken Concrete (4)	Reused in the Contract	Reused in other Projects	Disposal as Public Fill	Import Fill	Metals	Paper / Cardboard Packaging	Plastics (3)	Chemical Waste	Other, e.g. general refuse
	[in '000m^3]	[in '000m^3]	[in '000m^3]	[in '000m^3]	[in '000m^3]	[in '000m^3]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000m^3]
Year2012	1.051282	0.000000	0.000000	0.000000	1.051282	0.000000	6.680000	0.070000	0.070000	0.100000	0.012750
JAN	0.332955	0	0	0	0.332955	0	5.37	0	0	0	0.00448
FEB	0.15074	0	0	0	0.15074	0	0	0	0	0	0.00121
MAR	0.2769	0	0	0	0.2769	0	0	0	0	0	0.00334
APR	0.111455	0	0	0	0.111455	0	0	0	0	0	0.00276
MAY	0										
JUNE	0										
SUB-TOTAL	1.923332	0.000000	0.000000	0.000000	1.923332	0.000000	12.050000	0.070000	0.070000	0.100000	0.024540
JULY	0										
AUG	0										
SEPT	0										
OCT	0										
NOV	0										
DEC	0										
TOTAL	1.923332	0.000000	0.000000	0.000000	1.923332	0.000000	12.050000	0.070000	0.070000	0.100000	0.024540

Forecast of Total Quantities of C&D materials to be Generated from the Contracts *										
Total Quantity Generated	Hard Rock and Broken Concrete (4)	Reused in the Contract	Reused in other Projects	Disposal as Public Fill	Import Fill	Metals	Paper / Cardboard Packaging	Plastics (3)	Chemical Waste	Other, e.g. general refuse
[in '000m^3]	[in '000m^3]	[in '000m^3]	[in '000m^3]	[in '000m^3]	[in '000m^3]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000m^3]
7.64	1.544	1.73	0	6.096	0	10	0.5	0.5	1	0.956

Notes :

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

(2) Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material.

(3) The contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where to total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m3. (PS Clause 5(4)(b) referes).
[Delete Note (4) and the table above on the forecast, where inapplicable].

* (4) The assumed density (kg/m^3) for both C&D material and general refuse.
C&D material 2000kg/m3
General refuse 1.0 tonnes/m3

(5) Conversion factors for reporting purpose:
in-situ: rock = 2.5 tonnes/m3 ; soil = 2.0 tonnes/m3
excavated: rock = 2.0 tonnes/m3 ; soil = 1.8 tonnes/m3
broken concrete and bitumen = 2.5 tonnes/m3
C&D Waste = 1.0 tonnes/m3
bentonite slurry = 2.8 tonnes/m3
Paper = 800kg/m3
Chemical = 800kg/m3

APPENDIX E
EVENT ACTION PLANS

APPENDIX E – Event / Action Plans

Table E-1 Event / Action Plan For Air Quality

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
ACTION LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and ER; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial	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 failurein 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**
	actions required; 7. If exceedance continues, arrange meeting with IEC and ER; 8. If exceedance stops, cease additional monitoring			
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 E-2 Event / Action Plan For Construction Noise

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
Action Level being exceeded	1. Notify ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Advise the ER on the effectiveness of the proposed remedial measures	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures	1. Submit noise mitigation proposals to IEC and ER; 2. Implement noise mitigation proposals
Limit Level being exceeded	1. Inform IEC, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and ER on remedial measures required; 7. Assess effectiveness of	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance	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

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
	Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring		until the exceedance is abated	the ER until the exceedance is abated

APPENDIX F
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)

APPENDIX F IMPLEMENTATION SCHEDULE OF ENVIRONMENTAL MITIGATION MEASURES (EMIS)

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
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.		^
	The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcore.		^
	Where a site boundary adjoins a road, streets or other areas accessible to the public, hoarding of not less than 2.4 m high from ground level should be provided along the entire length except for a site entrance or exit.		^
	Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.		^
	Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.		^
	Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.		^
	Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.		^
	Imposition of speed controls for vehicles on unpaved site roads. Ten kilometers per hour is the recommended limit.		^
	Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the 3 sides.		^
	Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.		^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
3.74	Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.	All construction sites	^
B	**Airborne Noise**		
4.56–4.61	Use of quiet PME, movable barriers and acoustic mats.	All construction sites	^
4.67	Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program.		^
	Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program.		^
	Mobile plant, if any, shall be sited as far away from NSRs as possible.		^
	Machines and plant (such as trucks) that may be in intermittent use shall be shut down between works periods or shall be throttled down to a minimum.		^
4.67	Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.		^
	Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities.		^
C	**Water Quality**		
6.349 to 6.375	Construction Site Runoff and General Construction Activities The mitigation measures as outlined in the ProPECC PN 1/94 Construction Site Drainage should be adopted where applicable.	All construction sites	*
6.376	Effluent Discharge There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the WPCO license which is under the ambit of regional office (RO) of EPD.		*

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
	Minimum distances of 100 m should be maintained between the discharge points of construction site effluent and the existing saltwater intakes.		
6.377	Accidental Spillage of Chemicals Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.		*
6.378	Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.		^
6.379	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: • Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. • Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. • Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.		*
6.380	Construction Works in Close Proximity of Storm Drains or Seafront: To minimize the potential water quality impacts from the construction works located at or near any watercourse, the practices outlined below should be adopted where applicable. • The use of less or smaller construction plants may be specified to reduce the disturbance to the storm water courses or marine environment. • Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works. • Stockpiling of construction materials and dusty materials should be covered and	All construction sites	^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
	located away from any water courses. • Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers. • Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable. • Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert or sea.		
D	**Waste Management**		
9.107	Reusable steel or concrete panel shutters, fencing and hoarding and signboard should be used as a preferred alternative to items made of wood, to minimize wastage of wood. Attention should be paid to WBTC No. 19/2001 - Metallic Site Hoardings and Signboards to reduce the amount of timber used on construction sites. Metallic alternatives to timber are readily available and should be used rather than new timber. Precast concrete units should be adopted wherever feasible to minimize the use of timber formwork.	All construction sites	^
9.109	All waste materials should be segregated into categories covering: • excavated materials suitable for reuse on-site; • excavated materials suitable for public filling facilities; • remaining C&D waste for landfill; • chemical waste; and • general refuse for landfill.	All construction sites	^
9.113	Sort C&D waste from demolition of existing facilities to recover recyclable portions such as metals.		^
	Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.		^
	Encourage collection of aluminum cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force.		^
	Any unused chemicals or those with remaining functional capacity shall be recycled.		^
	Proper storage and site practices to minimize the potential for damage or contamination of construction materials.		^

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

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
	toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.		
9.142	Prior to excavation of the marine deposit layer, the deposit should be tested in accordance with the ETWB TC(W) No. 34/2002 and the results should be presented in a Preliminary Sediment Quality Report. The marine deposit should be disposed of at the disposal site designated by the Marine Fill Committee (MFC) or Director of Environmental Protection (DEP) depending on the test results.		N/A
E	**Terrestrial Ecology**		
10.94	To implement effective noise mitigation measures as recommended in Section 4 of EIA.	All construction sites	N/A
10.95	Dust control practices such as regular watering, complete coverage of any aggregate or dusty material storage piles, and re-schedule of dusty activities during high-wind conditions as well as other measures recommended in Section 3 of EIA, should be implemented.		^
10.96	Fences/hoardings should be erected and installed along the boundary of the works areas.		^
10.97	Standard good site practices as suggested in Section 10 of EIA should be implemented.		N/A
10.98	Provision of proper drainage system and runoff control measures such as use of sand/silt traps, oil/grease separators, sedimentation tanks, etc.		^
F	**Landscape and Visual**		
Table 13.7	Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical.	All construction sites	^
	Existing trees to be retained on site should be carefully protected during construction.		^
	Trees unavoidably affected by the works should be transplanted where practical.		^
	Compensatory tree planting should be provided to compensate for felled trees.		^
	Control of night-time lighting.		^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
Table 13.7	Erection of decorative screen hoarding compatible with the surrounding setting.	All construction sites	N/A
G	**Marine Ecology**		
11.137	To minimize the potential indirect impacts on water quality from construction site runoff and various construction activities, the practices outlined in ProPECC PN 1/94 Construction Site Drainage should be adopted.	All construction sites	^
H	**Hazard to Life**		
14A.201	Limiting use of cranes in terms of locations, lifting height, swing angle and setting up safety zone.	Exact location will be determined on construction site by the engineer	^

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

APPENDIX G
COMPLAINT LOG

APPENDIX G – COMPLAINT LOG

Reporting Month: April 2013

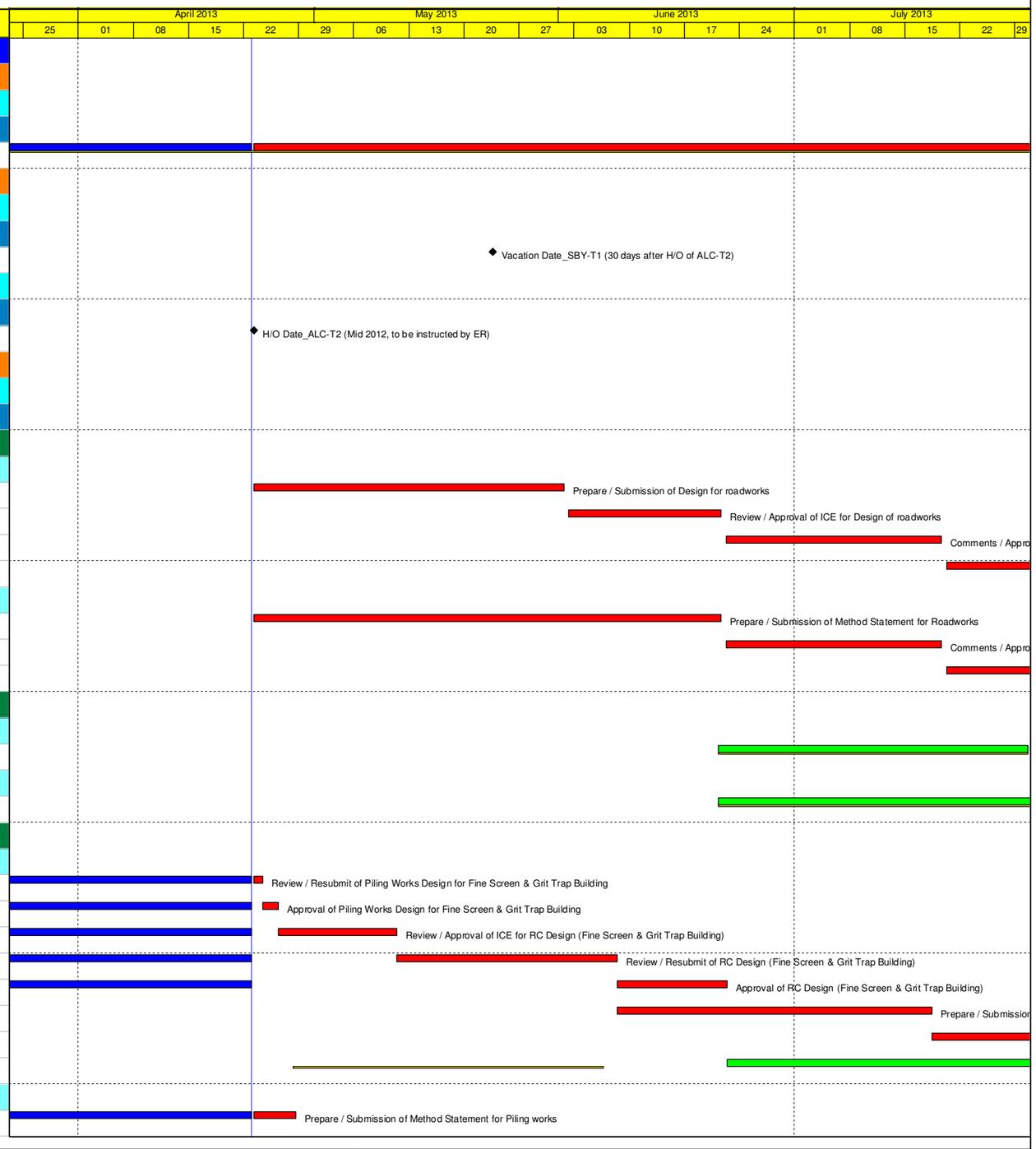
Cumulative complaints received:

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
CIR#1_121228	DSD's Preliminary Treatment Work (PTW) at Ap Lei Chau	28th December 2012	The residents of South Horizons and Ap Lei Chau Estate complained about the noise generated from our construction site at Ap Lei Chau PTW. The ETL of the Project was informed of the complaint through the e-mail on 31st December 2012 and initiated the complaint investigation procedures. According to the information provided by the Contractor, major construction activities that contributed to the noise at Ap Lei Chau during the time of complaint include: general site works and safety works; maintenance and handling of plants; and drilling works for pipe pile wall.	There was no exceedance report received from Contract DC/2008/09 at noise monitoring stations M9 for Ap Lei Chau PTW in December 2012. Resident site staff also revealed that rock excavation works and other construction activities were being carried out at nearby construction sites on 29 & 31 December 2012. After complaint received, the Contractor has taken initiative to minimize noise nuisance to the nearby residents by implementation of mitigation measures as below: • Adopting a relatively low-noise construction method - small drilling rig to install the pipe piles; • Equipping noise reducing jacket on the small drilling rig. The Contractor was recommended to continue the following mitigation measures in order to minimize the potential construction noise nuisance to the nearby community: • To adopt movable noise barrier; • To use silenced equipment where practicable; • To avoid concurrent uses of noisy equipment near the sensitive area; • To ensure the equipment are maintaining in good operation condition; and • To turned off any idle equipment on site.	Closed

Remarks: No environmental complaint was received in April 2013.

APPENDIX H
CONSTRUCTION PROGRAMME

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish	Printing
DSD - HATSS2 Upgrading of PTW (DC/2009/24)								
Particulars								
Key Dates								
Commencement / Completion								
24GEN00020	Time for Completion of Project	0%	1309	31-Aug-11 A	28-May-15	31-Aug-11	31-Mar-15	
Portion of the Site (MILESTONE)								
Sandy Bay PTW								
Possession / Vacation of Portions								
24MSBY00025	Vacation Date_SBY-T1 (30 days after H/O of ALC-T2)	0%	0		23-May-13*		31-Jul-12	
Ap Lei Chau PTW								
Possession / Vacation of Portions								
24MALC00050	H/O Date_ALC-T2 (Mid 2012, to be instructed by ER)	0%	0	23-Apr-13		01-Jul-12		
Civil & Geo. Submission								
Contractor's Design, Submission / Approval & Procurement								
Technical Information & Drawings								
Sandy Bay								
Major Technical Data / Civil Works Design								
24DSBY00350	Prepare / Submission of Design for roadworks	0%	40	23-Apr-13	01-Jun-13	24-Jun-12	02-Aug-12	
24DSBY00360	Review / Approval of ICE for Design of roadworks	0%	20	02-Jun-13	21-Jun-13	03-Aug-12	22-Aug-12	
24DSBY00370	Comments / Approval of Design for roadworks	0%	28	22-Jun-13	19-Jul-13	23-Aug-12	19-Sep-12	
24DSBY00380	Review / Resubmit of Design for roadworks	0%	28	20-Jul-13	16-Aug-13	20-Sep-12	17-Oct-12	
Method Statement								
24DSBY02200	Prepare / Submission of Method Statement for Roadworks	0%	60	23-Apr-13	21-Jun-13	01-Nov-12	30-Dec-12	
24DSBY02210	Comments / Approval of Method Statement for Roadworks	0%	28	22-Jun-13	19-Jul-13	31-Dec-12	27-Jan-13	
24DSBY02220	Review / Resubmit of Method Statement for Roadworks	0%	14	20-Jul-13	02-Aug-13	28-Jan-13	10-Feb-13	
Cyberport								
Major Technical Data / Civil Works Design								
24DCPT00300	Prepare / Submission of Design for pipe trench from drop shaft to existing CPT PTW for odour pipe installation	0%	40	21-Jun-13*	30-Jul-13	21-Jun-13	30-Jul-13	
Method Statement								
24DCPT02160	Prepare / Submission of Method Statement for Trench, Chambers and Channels	0%	60	21-Jun-13*	19-Aug-13	21-Jun-13	19-Aug-13	
Wah Fu								
Major Techinical Data / Civil Works Design								
24DWFU00130	Review / Resubmit of Piling Works Design for Fine Screen & Grit Trap Building	100%	28	22-Dec-11 A	24-Apr-13	30-Jun-12	27-Jul-12	
24DWFU00140	Approval of Piling Works Design for Fine Screen & Grit Trap Building	0%	14	23-May-12 A	26-Apr-13	28-Jul-12	10-Aug-12	
24DWFU00160	Review / Approval of ICE for RC Design (Fine Screen & Grit Trap Building)	85%	20	08-Feb-12 A	11-May-13	20-Sep-12	09-Oct-12	
24DWFU00180	Review / Resubmit of RC Design (Fine Screen & Grit Trap Building)	85%	28	08-Feb-12 A	08-Jun-13	07-Nov-12	04-Dec-12	
24DWFU00190	Approval of RC Design (Fine Screen & Grit Trap Building)	50%	14	18-Jul-12 A	22-Jun-13	05-Dec-12	18-Dec-12	
24DWFU00200	Prepare / Submission of Design for Finishing Works (Fine Screen & Grit Trap Building)	0%	40	08-Jun-13	18-Jul-13	05-Dec-12	13-Jan-13	
24DWFU00210	Review / Approval of ICE for Design of Finishing Works (Fine Screen & Grit Trap Building)	0%	20	18-Jul-13	07-Aug-13	14-Jan-13	02-Feb-13	
24DWFU00400	Prepare / Submission of Design for Flume Channels & Chambers	0%	40	22-Jun-13	01-Aug-13	28-Apr-13	06-Jun-13	
Method Statement for Major Works								
24DWFU02000	Prepare / Submission of Method Statement for Piling works	0%	60	01-Nov-12 A	28-Apr-13	11-Aug-12	09-Oct-12	



Start Date: 25-Jun-11

Finish Date: 27-May-16

Date Date: 23-Apr-13

Run Date: 24-Apr-13

- Primary Baseline
- Actual Work
- Critical Remaining Work
- Baseline Milestone
- Current Bar Labels
- Milestone

HATSS2A Contract No. DC/2009/24

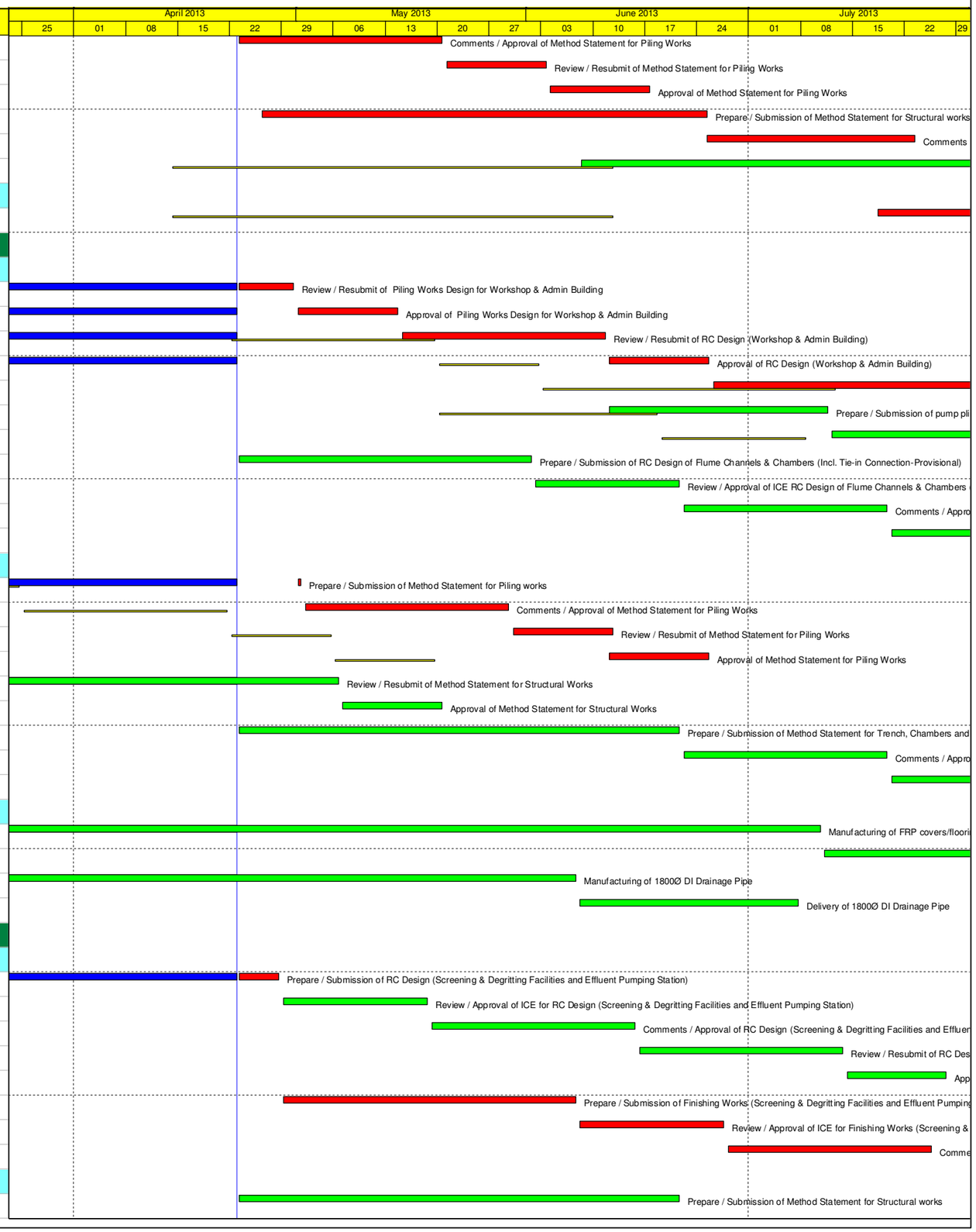
3 MONTHS ROLLING PROGRAMME

APRIL 2013

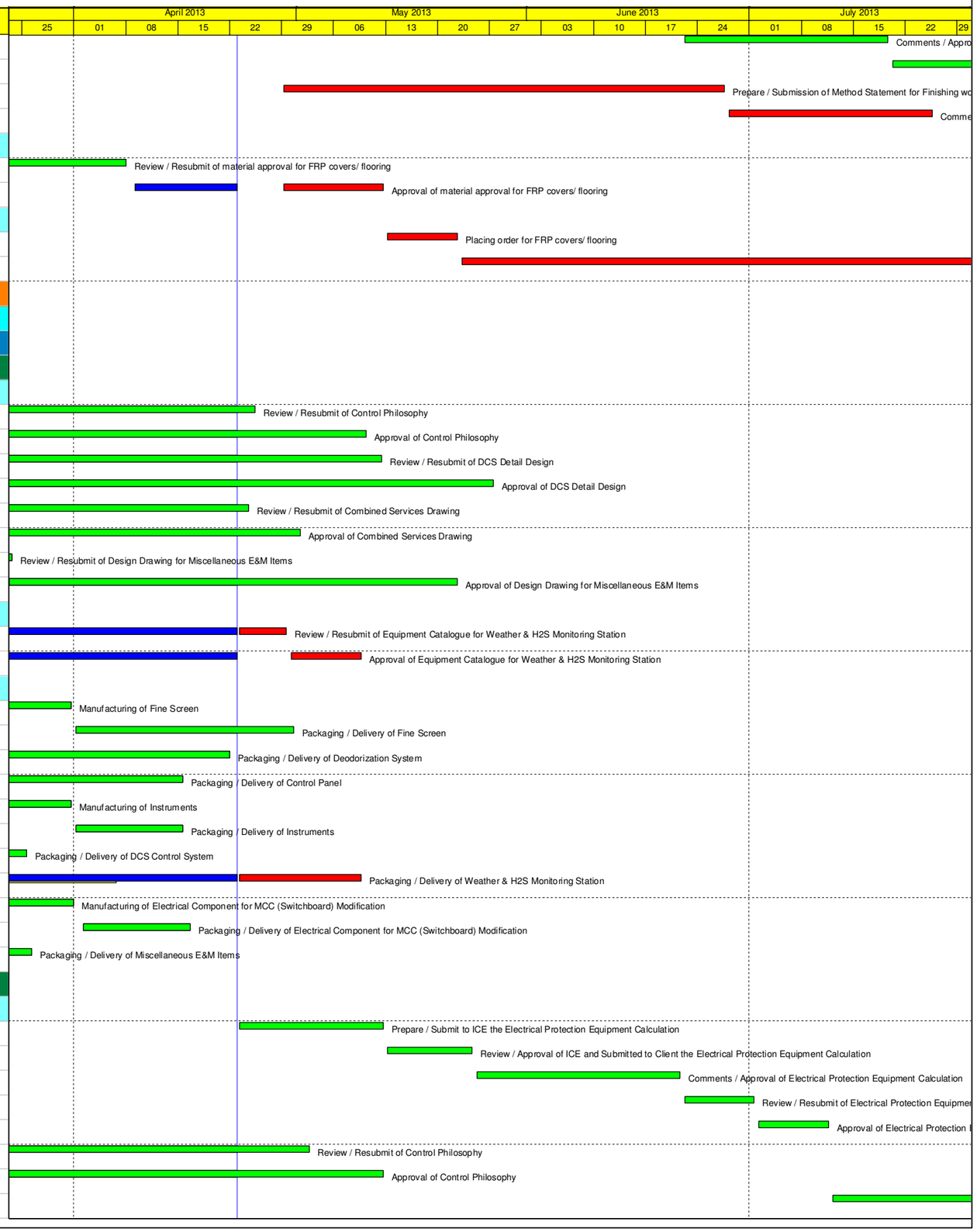
DETAILED WORKS PROGRAMME - DC/2009/24

Date	Revision	Checked	Approved
30-Mar-12	DWP - REVISION 0		
14-Dec-12	DWP - REVISION 2		
23-Apr-13	UDWP - REVISION 2		

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish	Printing
24DWFU02010	Comments / Approval of Method Statement for Piling Works	0%	28	23-Apr-13	20-May-13	10-Oct-12	06-Nov-12	
24DWFU02020	Review / Resubmit of Method Statement for Piling Works	0%	14	21-May-13	03-Jun-13	07-Nov-12	20-Nov-12	
24DWFU02030	Approval of Method Statement for Piling Works	0%	14	04-Jun-13	17-Jun-13	21-Nov-12	04-Dec-12	
24DWFU02080	Prepare / Submission of Method Statement for Structural works	0%	60	26-Apr-13	25-Jun-13	19-Dec-12	16-Feb-13	
24DWFU02090	Comments / Approval of Method Statement for Structural Works	0%	28	25-Jun-13	23-Jul-13	17-Feb-13	16-Mar-13	
24DWFU02120	Prepare / Submission of Method Statement for Finishing works	0%	60	08-Jun-13	07-Aug-13	14-Apr-13	12-Jun-13	
Material Submission / Approval								
24DWFU02320	Prepare / Submission of Material Approval for Roller Shutter	0%	60	18-Jul-13	16-Sep-13	14-Apr-13	12-Jun-13	
Aberdeen								
Major Technical Data / Civil Works Design								
24DABN00180	Review / Resubmit of Piling Works Design for Workshop & Admin Building	0%	28	22-Dec-11 A	30-Apr-13	13-Dec-12	09-Jan-13	
24DABN00190	Approval of Piling Works Design for Workshop & Admin Building	0%	14	24-Mar-12 A	14-May-13	10-Jan-13	23-Jan-13	
24DABN00230	Review / Resubmit of RC Design (Workshop & Admin Building)	0%	28	07-Feb-12 A	11-Jun-13	22-Apr-13	19-May-13	
24DABN00240	Approval of RC Design (Workshop & Admin Building)	0%	14	18-Jul-12 A	25-Jun-13	20-May-13	02-Jun-13	
24DABN00300	Prepare / Submission of RC Design (Seawater Pumping Station)	0%	40	26-Jun-13*	04-Aug-13	03-Jun-13	12-Jul-13	
24DABN00341	Prepare / Submission of pump plinth modification (inlet pumping station)	0%	30	12-Jun-13	11-Jul-13	20-May-13	18-Jun-13	
24DABN00342	Review / Approval of ICE pump plinth modification (inlet pumping station)	0%	20	12-Jul-13	31-Jul-13	19-Jun-13	08-Jul-13	
24DABN00350	Prepare / Submission of RC Design of Flume Channels & Chambers (Incl. Tie-in Connection-Provisional)	0%	40	23-Apr-13	01-Jun-13	01-May-12	09-Jun-12	
24DABN00360	Review / Approval of ICE RC Design of Flume Channels & Chambers (Incl. Tie-in Connection-Provisional)	0%	20	02-Jun-13	21-Jun-13	10-Jun-12	29-Jun-12	
24DABN00370	Comments / Approval of RC Design of Flume Channels & Chambers (Incl. Tie-in Connection-Provisional)	0%	28	22-Jun-13	19-Jul-13	30-Jun-12	27-Jul-12	
24DABN00380	Review / Resubmit of RC Design of Flume Channels & Chambers (Incl. Tie-in Connection-Provisional)	0%	28	20-Jul-13	16-Aug-13	28-Jul-12	24-Aug-12	
Method Statement for Major Works								
24DABN02000	Prepare / Submission of Method Statement for Piling works	0%	60	24-Jan-13 A	01-May-13	24-Jan-13	24-Mar-13	
24DABN02010	Comments / Approval of Method Statement for Piling Works	0%	28	02-May-13	29-May-13	25-Mar-13	21-Apr-13	
24DABN02020	Review / Resubmit of Method Statement for Piling Works	0%	14	30-May-13	12-Jun-13	22-Apr-13	05-May-13	
24DABN02030	Approval of Method Statement for Piling Works	0%	14	12-Jun-13	25-Jun-13	06-May-13	19-May-13	
24DABN02100	Review / Resubmit of Method Statement for Structural Works	0%	14	02-Feb-13 A	06-May-13	28-Jul-12	10-Aug-12	
24DABN02110	Approval of Method Statement for Structural Works	0%	14	07-May-13	20-May-13	11-Aug-12	24-Aug-12	
24DABN02160	Prepare / Submission of Method Statement for Trench, Chambers and Channels	0%	60	23-Apr-13	21-Jun-13	08-Sep-12	06-Nov-12	
24DABN02170	Comments / Approval of Method Statement for Trench, Chambers and Channels	0%	28	22-Jun-13	19-Jul-13	07-Nov-12	04-Dec-12	
24DABN02180	Review / Resubmit of Method Statement for Trench, Chambers and Channels	0%	14	20-Jul-13	02-Aug-13	05-Dec-12	18-Dec-12	
Order / Manufacturing / Shipment / Delivery								
24DABN02530	Manufacturing of FRP covers/flooring	0%	90	14-Jan-13 A	10-Jul-13	04-Sep-12	02-Dec-12	
24DABN02540	Delivery of FRP covers/flooring	0%	30	11-Jul-13	09-Aug-13	03-Dec-12	01-Jan-13	
24DABN02590	Manufacturing of 1800Ø DI Drainage Pipe	0%	90	11-Dec-12 A	07-Jun-13	03-May-12	31-Jul-12	
24DABN02600	Delivery of 1800Ø DI Drainage Pipe	0%	30	08-Jun-13	07-Jul-13	01-Aug-12	30-Aug-12	
Ap Lei Chau								
Major Tech. Data / Civil Works Design								
24DALC00100	Prepare / Submission of RC Design (Screening & Degritting Facilities and Effluent Pumping Station)	0%	40	01-Aug-12 A	28-Apr-13	30-Oct-11	08-Dec-11	
24DALC00110	Review / Approval of ICE for RC Design (Screening & Degritting Facilities and Effluent Pumping Station)	0%	20	29-Apr-13	18-May-13	09-Dec-11	28-Dec-11	
24DALC00120	Comments / Approval of RC Design (Screening & Degritting Facilities and Effluent Pumping Station)	0%	28	19-May-13	15-Jun-13	29-Dec-11	25-Jan-12	
24DALC00130	Review / Resubmit of RC Design (Screening & Degritting Facilities and Effluent Pumping Station)	0%	28	16-Jun-13	13-Jul-13	26-Jan-12	22-Feb-12	
24DALC00140	Approval of RC Design (Screening & Degritting Facilities and Effluent Pumping Station)	0%	14	14-Jul-13	27-Jul-13	23-Feb-12	07-Mar-12	
24DALC00150	Prepare / Submission of Finishing Works (Screening & Degritting Facilities and Effluent Pumping Station)	0%	40	29-Apr-13	07-Jun-13	08-Mar-12	16-Apr-12	
24DALC00160	Review / Approval of ICE for Finishing Works (Screening & Degritting Facilities and Effluent Pumping Station)	0%	20	08-Jun-13	27-Jun-13	17-Apr-12	06-May-12	
24DALC00170	Comments / Approval of Finishing Works (Screening & Degritting Facilities and Effluent Pumping Station)	0%	28	28-Jun-13	25-Jul-13	07-May-12	03-Jun-12	
Method Statement for Major Works								
24DALC02080	Prepare / Submission of Method Statement for Structural works	0%	60	23-Apr-13	21-Jun-13	08-Mar-12	06-May-12	

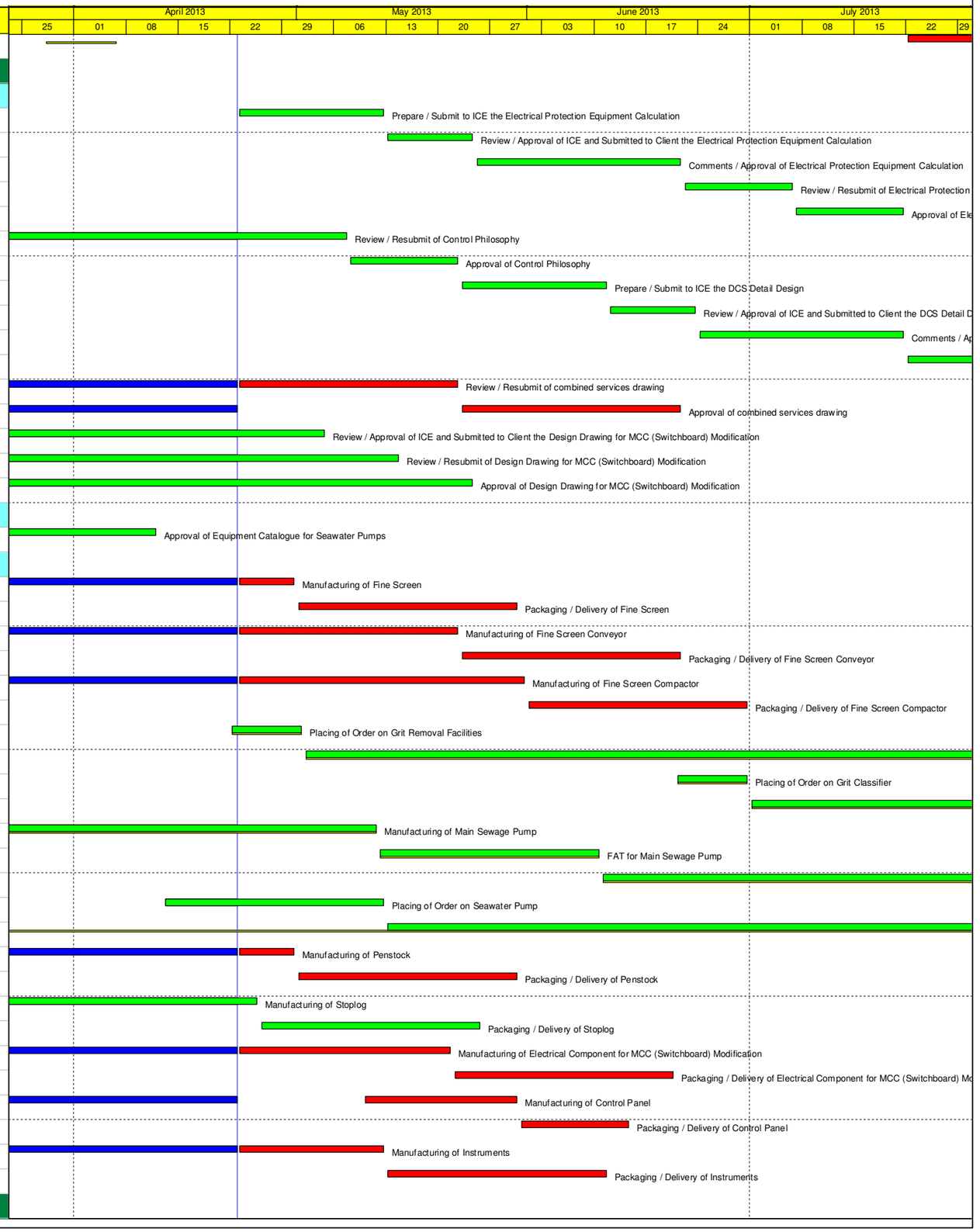


Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish	Printing
24DALC02090	Comments / Approval of Method Statement for Structural Works	0%	28	22-Jun-13	19-Jul-13	07-May-12	03-Jun-12	
24DALC02100	Review / Resubmit of Method Statement for Structural Works	0%	14	20-Jul-13	02-Aug-13	04-Jun-12	17-Jun-12	
24DALC02120	Prepare / Submission of Method Statement for Finishing works	0%	60	29-Apr-13	27-Jun-13	16-Jul-12	13-Sep-12	
24DALC02130	Comments / Approval of Method Statement for Finishing works	0%	28	28-Jun-13	25-Jul-13	14-Sep-12	11-Oct-12	
Material Submission / Approval								
24DALC02460	Review / Resubmit of material approval for FRP covers/ flooring	100%	14	24-Feb-13 A	08-Apr-13 A	12-Oct-12	25-Oct-12	
24DALC02470	Approval of material approval for FRP covers/ flooring	0%	14	09-Apr-13 A	12-May-13	26-Oct-12	08-Nov-12	
Order / Manufacturing / Shipment / Delivery								
24DALC02600	Placing order for FRP covers/ flooring	0%	10	13-May-13	22-May-13	09-Nov-12	18-Nov-12	
24DALC02610	Manufacturing of FRP covers/ flooring	0%	90	23-May-13	20-Aug-13	19-Nov-12	16-Feb-13	
Electrical and Mechanical Submission								
Contractor's Design, Submission / Approval and Procurement								
Technical Information & Drawings								
Sandy Bay								
Major Technical Data / E&M Works Design								
24DSBY03600	Review / Resubmit of Control Philosophy	95%	15	08-Feb-12 A	25-Apr-13	28-Jan-12	11-Feb-12	
24DSBY03610	Approval of Control Philosophy	95%	15	04-May-12 A	10-May-13	12-Feb-12	26-Feb-12	
24DSBY03650	Review / Resubmit of DCS Detail Design	95%	15	30-Nov-12 A	12-May-13	27-Apr-12	11-May-12	
24DSBY03660	Approval of DCS Detail Design	95%	15	07-Feb-13 A	27-May-13	12-May-12	26-May-12	
24DSBY03663	Review / Resubmit of Combined Services Drawing	95%	30	17-Oct-12 A	24-Apr-13	25-Aug-12	23-Sep-12	
24DSBY03664	Approval of Combined Services Drawing	90%	30	07-Nov-12 A	01-May-13	24-Sep-12	23-Oct-12	
24DSBY03667	Review / Resubmit of Design Drawing for Miscellaneous E&M Items	100%	30	02-Feb-13 A	23-Mar-13 A	27-May-12	25-Jun-12	
24DSBY03668	Approval of Design Drawing for Miscellaneous E&M Items	0%	30	23-Mar-13 A	22-May-13	26-Jun-12	25-Jul-12	
Equipment Submission/Approval								
24DSBY03180	Review / Resubmit of Equipment Catalogue for Weather & H2S Monitoring Station	100%	10	21-Apr-12 A	29-Apr-13	19-Sep-12	28-Sep-12	
24DSBY03190	Approval of Equipment Catalogue for Weather & H2S Monitoring Station	0%	10	07-Jun-12 A	09-May-13	29-Sep-12	08-Oct-12	
Order / Manufacturing / Shipment / Delivery								
24PSBY01010	Manufacturing of Fine Screen	100%	145	23-Oct-12 A	31-Mar-13 A	20-Aug-12	11-Jan-13	
24PSBY01020	Packaging / Delivery of Fine Screen	0%	30	01-Apr-13 A	30-Apr-13	12-Jan-13	10-Feb-13	
24PSBY01200	Packaging / Delivery of Deodorization System	100%	21	11-Mar-13 A	22-Apr-13 A	13-Nov-12	12-Dec-12	
24PSBY01230	Packaging / Delivery of Control Panel	100%	15	11-Feb-13 A	15-Apr-13 A	18-Dec-12	01-Jan-13	
24PSBY01250	Manufacturing of Instruments	100%	110	04-Sep-12 A	31-Mar-13 A	04-Sep-12	22-Dec-12	
24PSBY01260	Packaging / Delivery of Instruments	100%	15	01-Apr-13 A	15-Apr-13 A	23-Dec-12	21-Jan-13	
24PSBY01300	Packaging / Delivery of DCS Control System	100%	30	10-Feb-13 A	25-Mar-13 A	07-Jan-13	05-Feb-13	
24PSBY01330	Packaging / Delivery of Weather & H2S Monitoring Station	0%	30	16-Mar-13 A	09-May-13	08-Mar-13	06-Apr-13	
24PSBY01332	Manufacturing of Electrical Component for MCC (Switchboard) Modification	100%	90	29-Oct-12 A	01-Apr-13 A	05-Aug-12	02-Nov-12	
24PSBY01333	Packaging / Delivery of Electrical Component for MCC (Switchboard) Modification	100%	15	02-Apr-13 A	16-Apr-13 A	03-Nov-12	02-Dec-12	
24PSBY01336	Packaging / Delivery of Miscellaneous E&M Items	100%	30	24-Feb-13 A	26-Mar-13 A	01-Feb-13	02-Mar-13	
Cyberport								
Major Technical Data / E&M Works Design								
24DCPT03340	Prepare / Submit to ICE the Electrical Protection Equipment Calculation	0%	20	23-Apr-13	12-May-13	25-Aug-12	13-Sep-12	
24DCPT03350	Review / Approval of ICE and Submitted to Client the Electrical Protection Equipment Calculation	0%	12	13-May-13	24-May-13	14-Sep-12	25-Sep-12	
24DCPT03360	Comments / Approval of Electrical Protection Equipment Calculation	0%	28	25-May-13	21-Jun-13	26-Sep-12	23-Oct-12	
24DCPT03370	Review / Resubmit of Electrical Protection Equipment Calculation	0%	10	22-Jun-13	01-Jul-13	24-Oct-12	02-Nov-12	
24DCPT03380	Approval of Electrical Protection Equipment Calculation	0%	10	02-Jul-13	11-Jul-13	03-Nov-12	12-Nov-12	
24DCPT03420	Review / Resubmit of Control Philosophy	0%	10	08-Feb-12 A	02-May-13	24-Oct-12	02-Nov-12	
24DCPT03430	Approval of Control Philosophy	0%	10	10-May-12 A	12-May-13	03-Nov-12	12-Nov-12	
24DCPT03440	Prepare / Submit to ICE the DCS Detail Design	0%	20	12-Jul-13	31-Jul-13	13-Nov-12	02-Dec-12	

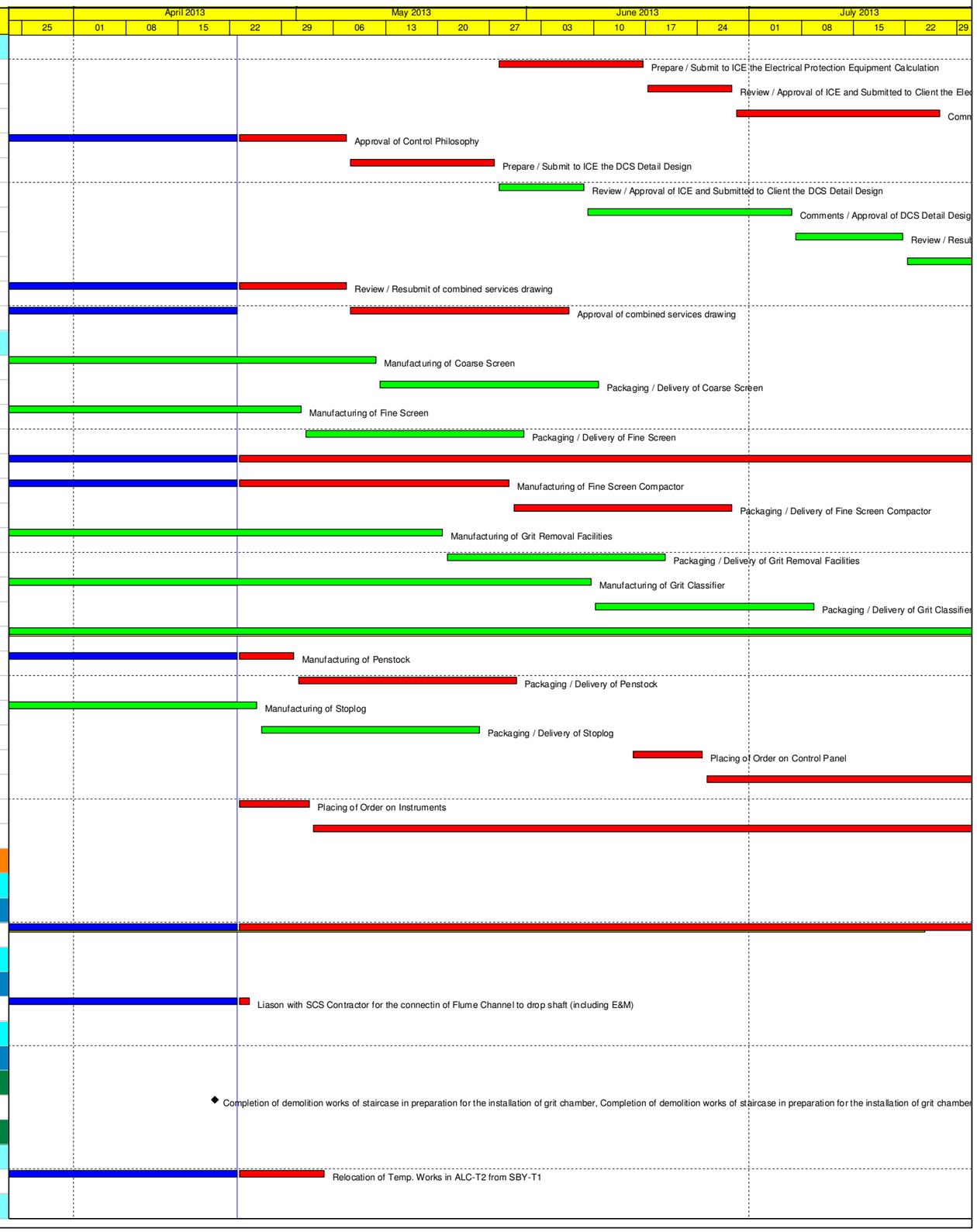


Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish	Printing
24DCPT03483	Review / Resubmit of combined services drawing	100%	30	07-Feb-13 A	24-Mar-13 A	02-May-13	31-May-13	
24DCPT03484	Approval of combined services drawing	0%	30	23-Apr-13	22-May-13	01-Jun-13	30-Jun-13	
24DCPT03488	Review / Resubmit of Design Drawing for MCC (Switchboard) Modification	100%	10	27-Sep-12 A	19-May-13	12-Jan-13	21-Jan-13	
24DCPT03489	Approval of Design Drawing for MCC (Switchboard) Modification	0%	10	17-Jan-13 A	22-May-13	22-Jan-13	31-Jan-13	
24DCPT03490	Prepare / Submit the Design Drawing for Miscellaneous E&M Items	0%	60	12-Jul-13	09-Sep-13	01-Jul-13	29-Aug-13	
Order / Manufacturing / Shipment / Delivery								
24PCPT01100	Manufacturing of Deodorization System	0%	160	23-Dec-12 A	22-Jun-13	23-Dec-12	31-May-13	
24PCPT01110	Packaging / Delivery of Deodorization System	0%	30	23-Jun-13	22-Jul-13	01-Jun-13	30-Jun-13	
24PCPT01241	Placing of Order on Electrical Component for MCC (Switchboard) Modification	100%	10	02-Apr-13 A	11-Apr-13 A	02-Apr-13	11-Apr-13	
24PCPT01242	Manufacturing of Electrical Component for MCC (Switchboard) Modification	0%	90	12-Apr-13 A	10-Jul-13	12-Apr-13	10-Jul-13	
24PCPT01243	Packaging / Delivery of Electrical Component for MCC (Switchboard) Modification	0%	30	11-Jul-13	09-Aug-13	11-Jul-13	09-Aug-13	
Wah Fu								
Major Technical Data / E&M Works Design								
24DWFU04080	Prepare / Submit to ICE the Electrical Protection Equipment Calculation	0%	20	23-Apr-13	12-May-13	16-Jul-12	04-Aug-12	
24DWFU04090	Review / Approval of ICE and Submitted to Client the Electrical Protection Equipment Calculation	0%	12	13-May-13	24-May-13	05-Aug-12	16-Aug-12	
24DWFU04100	Comments / Approval of Electrical Protection Equipment Calculation	0%	28	25-May-13	21-Jun-13	17-Aug-12	13-Sep-12	
24DWFU04110	Review / Resubmit of Electrical Protection Equipment Calculation	0%	15	22-Jun-13	06-Jul-13	14-Sep-12	28-Sep-12	
24DWFU04120	Approval of Electrical Protection Equipment Calculation	0%	15	07-Jul-13	21-Jul-13	29-Sep-12	13-Oct-12	
24DWFU04170	Approval of Control Philosophy	0%	15	08-May-12 A	07-May-13	28-Dec-12	11-Jan-13	
24DWFU04180	Prepare / Submit to ICE the DCS Detail Design	0%	20	08-May-13	27-May-13	12-Jan-13	31-Jan-13	
24DWFU04190	Review / Approval of ICE and Submitted to Client the DCS Detail Design	0%	12	28-May-13	08-Jun-13	01-Feb-13	12-Feb-13	
24DWFU04200	Comments / Approval of DCS Detail Design	0%	28	09-Jun-13	06-Jul-13	13-Feb-13	12-Mar-13	
24DWFU04210	Review / Resubmit of DCS Detail Design	0%	15	07-Jul-13	21-Jul-13	13-Mar-13	27-Mar-13	
24DWFU04220	Approval of DCS Detail Design	0%	15	22-Jul-13	05-Aug-13	28-Mar-13	11-Apr-13	
24DWFU04226	Review / Approval of ICE and Submitted to Client the Design Drawing for New MCC (Switchboard)	0%	12	22-Sep-12 A	28-Apr-13	05-Aug-12	16-Aug-12	
24DWFU04228	Review / Resubmit of Design Drawing for New MCC (Switchboard)	0%	15	22-Sep-12 A	05-May-13	14-Sep-12	28-Sep-12	
24DWFU04229	Approval of Design Drawing for New MCC (Switchboard)	0%	15	12-Dec-12 A	12-May-13	29-Sep-12	13-Oct-12	
Order / Manufacturing / Shipment / Delivery								
24PWFU01180	Placing of Order on Coarse Screen	0%	10	08-May-13*	17-May-13	28-Mar-13	06-Apr-13	
24PWFU01190	Manufacturing of Coarse Screen	0%	145	18-May-13	09-Oct-13	07-Apr-13	29-Aug-13	
24PWFU01210	Placing of Order on Fine Screen	0%	10	08-May-13*	17-May-13	28-Mar-13	06-Apr-13	
24PWFU01220	Manufacturing of Fine Screen	0%	145	18-May-13	09-Oct-13	07-Apr-13	29-Aug-13	
24PWFU01231	Placing of Order on Fine Screen Conveyor	0%	10	08-May-13*	17-May-13	28-Mar-13	06-Apr-13	
24PWFU01232	Manufacturing of Fine Screen Conveyor	0%	145	18-May-13	09-Oct-13	07-Apr-13	29-Aug-13	
24PWFU01270	Placing of Order on Grit Removal Facilities	0%	10	08-May-13*	17-May-13	12-Apr-13	21-Apr-13	
24PWFU01280	Manufacturing of Grit Removal Facilities	0%	175	18-May-13	08-Nov-13	22-Apr-13	13-Oct-13	
24PWFU01300	Placing of Order on Grit Classifier	0%	10	11-Jun-13*	20-Jun-13	11-Jun-13	20-Jun-13	
24PWFU01310	Manufacturing of Grit Classifier	0%	145	21-Jun-13	12-Nov-13	21-Jun-13	12-Nov-13	
24PWFU01330	Placing of Order on Penstock	0%	10	17-May-13*	26-May-13	17-May-13	26-May-13	
24PWFU01340	Manufacturing of Penstock	0%	140	27-May-13	13-Oct-13	27-May-13	13-Oct-13	
24PWFU01360	Placing of Order on Stoplog	0%	10	06-Jul-13*	15-Jul-13	06-Jul-13	15-Jul-13	
24PWFU01370	Manufacturing of Stoplog	0%	140	16-Jul-13	02-Dec-13	16-Jul-13	02-Dec-13	
24PWFU01390	Placing of Order on Deodorization System	0%	10	23-Apr-13*	02-May-13	12-Apr-13	21-Apr-13	
24PWFU01400	Manufacturing of Deodorization System	0%	140	03-May-13	19-Sep-13	22-Apr-13	08-Sep-13	
24PWFU01420	Placing of Order on MCC (Switchboard) Panel	0%	10	13-May-13	22-May-13	12-Jan-13	21-Jan-13	
24PWFU01430	Manufacturing of MCC (Switchboard) Panel	0%	190	13-May-13	18-Nov-13	22-Jan-13	30-Jul-13	
24PWFU01560	Placing of Order on Lifting Appliance	0%	10	08-May-13*	17-May-13	28-Mar-13	06-Apr-13	
24PWFU01570	Manufacturing of Lifting Appliance	0%	80	18-May-13	05-Aug-13	07-Apr-13	25-Jun-13	

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish	Printing
24PWFU01620	Placing of Order on Emergency Generator Set	0%	10	22-Jul-13	31-Jul-13	28-Mar-13	06-Apr-13	
Aberdeen								
Major Technical Data / E&M Works Design								
24DABN03780	Prepare / Submit to ICE the Electrical Protection Equipment Calculation	0%	20	23-Apr-13	12-May-13	28-Jan-12	16-Feb-12	
24DABN03790	Review / Approval of ICE and Submitted to Client the Electrical Protection Equipment Calculation	0%	12	13-May-13	24-May-13	17-Feb-12	28-Feb-12	
24DABN03800	Comments / Approval of Electrical Protection Equipment Calculation	0%	28	25-May-13	21-Jun-13	29-Feb-12	27-Mar-12	
24DABN03810	Review / Resubmit of Electrical Protection Equipment Calculation	0%	15	22-Jun-13	06-Jul-13	28-Mar-12	11-Apr-12	
24DABN03820	Approval of Electrical Protection Equipment Calculation	0%	15	07-Jul-13	21-Jul-13	12-Apr-12	26-Apr-12	
24DABN03860	Review / Resubmit of Control Philosophy	0%	15	06-Jun-12 A	07-May-13	28-Mar-12	11-Apr-12	
24DABN03870	Approval of Control Philosophy	0%	15	08-May-13	22-May-13	12-Apr-12	26-Apr-12	
24DABN03880	Prepare / Submit to ICE the DCS Detail Design	0%	20	23-May-13	11-Jun-13	27-Apr-12	16-May-12	
24DABN03890	Review / Approval of ICE and Submitted to Client the DCS Detail Design	0%	12	12-Jun-13	23-Jun-13	17-May-12	28-May-12	
24DABN03900	Comments / Approval of DCS Detail Design	0%	28	24-Jun-13	21-Jul-13	29-May-12	25-Jun-12	
24DABN03910	Review / Resubmit of DCS Detail Design	0%	15	22-Jul-13	05-Aug-13	26-Jun-12	10-Jul-12	
24DABN03923	Review / Resubmit of combined services drawing	25%	30	05-Sep-12 A	22-May-13	24-Oct-12	22-Nov-12	
24DABN03924	Approval of combined services drawing	25%	30	10-Oct-12 A	21-Jun-13	23-Nov-12	22-Dec-12	
24DABN03926	Review / Approval of ICE and Submitted to Client the Design Drawing for MCC (Switchboard) Modification	50%	12	22-Sep-12 A	04-May-13	17-Feb-12	28-Feb-12	
24DABN03928	Review / Resubmit of Design Drawing for MCC (Switchboard) Modification	50%	10	22-Sep-12 A	14-May-13	28-Mar-12	06-Apr-12	
24DABN03929	Approval of Design Drawing for MCC (Switchboard) Modification	0%	10	09-Jan-13 A	24-May-13	07-Apr-12	16-Apr-12	
Equipment Submission/Approval								
24DABN03230	Approval of Equipment Catalogue for Seawater Pumps	100%	10	15-Nov-12 A	12-Apr-13 A	12-Jan-13	21-Jan-13	
Order / Manufacturing / Shipment / Delivery								
24PABN01010	Manufacturing of Fine Screen	0%	145	09-Jun-12 A	30-Apr-13	07-May-12	28-Sep-12	
24PABN01020	Packaging / Delivery of Fine Screen	0%	30	01-May-13	30-May-13	29-Sep-12	28-Oct-12	
24PABN01022	Manufacturing of Fine Screen Conveyor	0%	145	24-Nov-12 A	22-May-13	07-May-12	28-Sep-12	
24PABN01023	Packaging / Delivery of Fine Screen Conveyor	0%	30	23-May-13	21-Jun-13	29-Sep-12	28-Oct-12	
24PABN01040	Manufacturing of Fine Screen Compactor	0%	140	15-Jul-12 A	31-May-13	21-Jul-12	07-Dec-12	
24PABN01050	Packaging / Delivery of Fine Screen Compactor	0%	30	01-Jun-13	30-Jun-13	08-Dec-12	06-Jan-13	
24PABN01060	Placing of Order on Grit Removal Facilities	0%	10	22-Apr-13 A	01-May-13	22-Apr-13	01-May-13	
24PABN01070	Manufacturing of Grit Removal Facilities	0%	175	02-May-13	23-Oct-13	02-May-13	23-Oct-13	
24PABN01090	Placing of Order on Grit Classifier	0%	10	21-Jun-13*	30-Jun-13	21-Jun-13	30-Jun-13	
24PABN01100	Manufacturing of Grit Classifier	0%	145	01-Jul-13	22-Nov-13	01-Jul-13	22-Nov-13	
24PABN01130	Manufacturing of Main Sewage Pump	0%	335	11-Jun-12 A	11-May-13	11-Jun-12	11-May-13	
24PABN01140	FAT for Main Sewage Pump	0%	30	12-May-13	10-Jun-13	12-May-13	10-Jun-13	
24PABN01150	Packaging / Delivery of Main Sewage Pump	0%	60	11-Jun-13	09-Aug-13	11-Jun-13	09-Aug-13	
24PABN01160	Placing of Order on Seawater Pump	0%	30	13-Apr-13 A	12-May-13	22-Jan-13	20-Feb-13	
24PABN01170	Manufacturing of Seawater Pump	0%	335	13-May-13	12-Apr-14	21-Feb-13	21-Jan-14	
24PABN01210	Manufacturing of Penstock	0%	140	15-Jul-12 A	30-Apr-13	07-Apr-12	24-Aug-12	
24PABN01220	Packaging / Delivery of Penstock	0%	30	01-May-13	30-May-13	25-Aug-12	23-Sep-12	
24PABN01240	Manufacturing of Stoplog	0%	140	15-Jul-12 A	25-Apr-13	06-Jun-12	23-Oct-12	
24PABN01250	Packaging / Delivery of Stoplog	0%	30	26-Apr-13	25-May-13	24-Oct-12	22-Nov-12	
24PABN01300	Manufacturing of Electrical Component for MCC (Switchboard) Modification	0%	90	05-Aug-12 A	21-May-13	05-Aug-12	02-Nov-12	
24PABN01310	Packaging / Delivery of Electrical Component for MCC (Switchboard) Modification	0%	30	22-May-13	20-Jun-13	03-Nov-12	02-Dec-12	
24PABN01330	Manufacturing of Control Panel	0%	50	11-Mar-13 A	30-May-13	19-Oct-12	07-Dec-12	
24PABN01340	Packaging / Delivery of Control Panel	0%	15	31-May-13	14-Jun-13	08-Dec-12	22-Dec-12	
24PABN01360	Manufacturing of Instruments	0%	110	04-Sep-12 A	12-May-13	04-Sep-12	22-Dec-12	
24PABN01370	Packaging / Delivery of Instruments	0%	30	13-May-13	11-Jun-13	23-Dec-12	21-Jan-13	
Ap Lei Chau								



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish	Printing
Major Technical Data / E&M Works Design								
24DALC03780	Prepare / Submit to ICE the Electrical Protection Equipment Calculation	0%	20	28-May-13	16-Jun-13	25-Aug-12	13-Sep-12	
24DALC03790	Review / Approval of ICE and Submitted to Client the Electrical Protection Equipment Calculation	0%	12	17-Jun-13	28-Jun-13	14-Sep-12	25-Sep-12	
24DALC03800	Comments / Approval of Electrical Protection Equipment Calculation	0%	28	29-Jun-13	26-Jul-13	26-Sep-12	23-Oct-12	
24DALC03870	Approval of Control Philosophy	0%	15	27-Apr-12 A	07-May-13	12-May-12	26-May-12	
24DALC03880	Prepare / Submit to ICE the DCS Detail Design	0%	20	08-May-13	27-May-13	27-May-12	15-Jun-12	
24DALC03890	Review / Approval of ICE and Submitted to Client the DCS Detail Design	0%	12	28-May-13	08-Jun-13	16-Jun-12	27-Jun-12	
24DALC03900	Comments / Approval of DCS Detail Design	0%	28	09-Jun-13	06-Jul-13	28-Jun-12	25-Jul-12	
24DALC03910	Review / Resubmit of DCS Detail Design	0%	15	07-Jul-13	21-Jul-13	26-Jul-12	09-Aug-12	
24DALC03920	Approval of DCS Detail Design	0%	15	22-Jul-13	05-Aug-13	10-Aug-12	24-Aug-12	
24DALC03923	Review / Resubmit of combined services drawing	0%	30	07-Jul-12 A	07-May-13	23-Nov-12	22-Dec-12	
24DALC03924	Approval of combined services drawing	0%	30	25-Jul-12 A	06-Jun-13	23-Dec-12	21-Jan-13	
Order / Manufacturing / Shipment / Delivery								
24PALC01010	Manufacturing of Coarse Screen	0%	145	20-Aug-12 A	11-May-13	20-Aug-12	11-Jan-13	
24PALC01020	Packaging / Delivery of Coarse Screen	0%	30	12-May-13	10-Jun-13	12-Jan-13	10-Feb-13	
24PALC01040	Manufacturing of Fine Screen	0%	145	10-Aug-12 A	01-May-13	22-May-12	13-Oct-12	
24PALC01050	Packaging / Delivery of Fine Screen	0%	30	02-May-13	31-May-13	14-Oct-12	12-Nov-12	
24PALC01052	Manufacturing of Fine Screen Conveyor	0%	145	24-Nov-12 A	15-Aug-13	22-May-12	13-Oct-12	
24PALC01070	Manufacturing of Fine Screen Compactor	0%	140	12-Sep-12 A	29-May-13	05-Aug-12	22-Dec-12	
24PALC01080	Packaging / Delivery of Fine Screen Compactor	0%	30	30-May-13	28-Jun-13	23-Dec-12	21-Jan-13	
24PALC01100	Manufacturing of Grit Removal Facilities	0%	175	30-Jul-12 A	20-May-13	06-Jun-12	27-Nov-12	
24PALC01110	Packaging / Delivery of Grit Removal Facilities	0%	30	21-May-13	19-Jun-13	28-Nov-12	27-Dec-12	
24PALC01130	Manufacturing of Grit Classifier	0%	145	18-Sep-12 A	09-Jun-13	05-Aug-12	27-Dec-12	
24PALC01140	Packaging / Delivery of Grit Classifier	0%	30	10-Jun-13	09-Jul-13	28-Dec-12	26-Jan-13	
24PALC01160	Manufacturing of Effluent Pump	0%	335	23-Mar-13 A	23-Mar-14	23-Mar-13	20-Feb-14	
24PALC01200	Manufacturing of Penstock	0%	140	20-Jun-12 A	30-Apr-13	07-May-12	23-Sep-12	
24PALC01210	Packaging / Delivery of Penstock	0%	30	01-May-13	30-May-13	24-Sep-12	23-Oct-12	
24PALC01230	Manufacturing of Stoplog	0%	140	30-Jul-12 A	25-Apr-13	06-Jul-12	22-Nov-12	
24PALC01240	Packaging / Delivery of Stoplog	0%	30	26-Apr-13	25-May-13	23-Nov-12	22-Dec-12	
24PALC01320	Placing of Order on Control Panel	0%	10	15-Jun-13	24-Jun-13	23-Dec-12	01-Jan-13	
24PALC01330	Manufacturing of Control Panel	0%	50	25-Jun-13	13-Aug-13	02-Jan-13	20-Feb-13	
24PALC01350	Placing of Order on Instruments	0%	10	23-Apr-13	02-May-13	24-Oct-12	02-Nov-12	
24PALC01360	Manufacturing of Instruments	0%	110	03-May-13	20-Aug-13	03-Nov-12	20-Feb-13	
Sandy Bay PTW								
Key Dates								
Time of Completion								
24SBY01000	Time for Completion of Section 1	0%	694	31-Aug-11 A	31-Aug-13	31-Aug-11	24-Jul-13	
Interface and Liaison								
Interface with other contractrors								
24MSBY00060	Liason with SCS Contractor for the connectin of Flume Channel to drop shaft (including E&M)	90%	90	25-Jun-12 A	24-Apr-13	25-May-12	22-Aug-12	
Works for Section 1								
PTW Building								
Interface between Civil / ABWF / E&M Works								
24MSBY00090	Completion of demolition works of staircase in preparation for the installation of grit chamber	100%	0		20-Apr-13 A		01-Nov-12	
Civil Works								
Site Clearance and Preparation Works								
24SBY02050	Relocation of Temp. Works in ALC-T2 from SBY-T1	0%	25	18-Sep-12 A	04-May-13	03-Jul-12	31-Jul-12	
Modification Works in PTW Building								

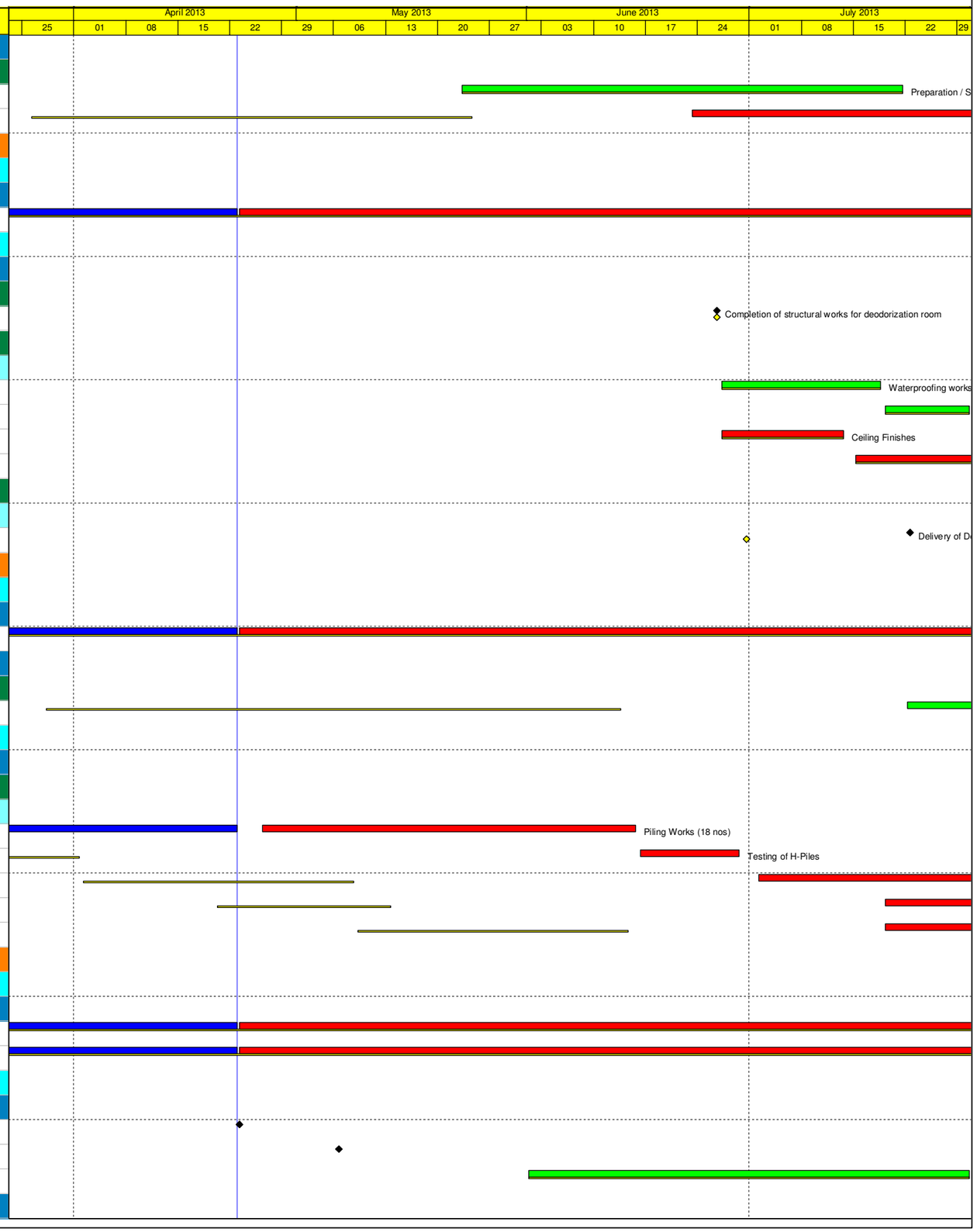


Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish	Printing
24SBY02551	Excavation for L-shape chamber	0%	6	13-May-13	20-May-13	23-Aug-12	29-Aug-12	
24SBY02552	Formworks for base slab of L-shape chamber	0%	4	21-May-13	24-May-13	30-Aug-12	03-Sep-12	
24SBY02553	Rebarworks for base slab of L-shape chamber	0%	3	25-May-13	28-May-13	04-Sep-12	06-Sep-12	
24SBY02554	Concrete for base slab of L-shape chamber	0%	2	29-May-13	30-May-13	07-Sep-12	08-Sep-12	
24SBY02555	Formworks for wall of L-shape chambers	0%	10	31-May-13	11-Jun-13	10-Sep-12	20-Sep-12	
24SBY02556	Rebarworks for wall of L-shape chambers	0%	4	07-Jun-13	11-Jun-13	17-Sep-12	20-Sep-12	
24SBY02557	Concrete for wall of L-shape chambers	0%	2	13-Jun-13	14-Jun-13	21-Sep-12	22-Sep-12	
24SBY02558	Installation of air-tight multi-part cover	0%	3	15-Jun-13	18-Jun-13	24-Sep-12	25-Sep-12	
24SBY02570	Formwoks for construction of new staircase near L-shape chamber	0%	12	19-Jun-13	03-Jul-13	26-Sep-12	11-Oct-12	
24SBY02574	Rebarworks for new staircase near L-shape chamber	0%	6	28-Jun-13	05-Jul-13	08-Oct-12	13-Oct-12	
24SBY02575	Concrete for new staircase near L-shape chamber	0%	6	06-Jul-13	12-Jul-13	15-Oct-12	20-Oct-12	
24SBY02576	Installation of handrail/railings on new staircase	0%	4	13-Jul-13	17-Jul-13	22-Oct-12	26-Oct-12	
24SBY02579	Site preparation for the installation of new grit chambers (incl. plate load test and plinth construction)	100%	16	26-Jan-13 A	20-Apr-13 A	25-Sep-12	01-Nov-12	
24SBY02581	Construction of concrete plinth for Activated Carbon Filter	100%	14	25-Mar-13 A	16-Apr-13 A			
24SBY02582	Construction of concrete plinth for Bio Trickling Filter	0%	10	31-May-13	11-Jun-13			
Electrical and Mechanical Works								
E&M Material / Equipment Delivery on Site								
24SBY02130	Delivery of Fine Screen Equipment	0%	0		30-Apr-13		10-Feb-13	
24SBY02190	Delivery of Deodorization System	100%	0		22-Apr-13 A		12-Dec-12	
24SBY02200	Delivery of Control Panel	100%	0		15-Apr-13 A		21-Jan-13	
24SBY02210	Delivery of Instruments	100%	0		15-Apr-13 A		21-Jan-13	
24SBY02220	Delivery of DCS Control System	100%	0		25-Mar-13 A		05-Feb-13	
24SBY02230	Delivery of Weather and H2S Monitoring Station	0%	0		09-May-13		06-Apr-13	
Mechanical Works								
24SBY02240	Decommissioning of existing fine screen no. 1	0%	4	18-May-13	22-May-13	04-Mar-13	08-Mar-13	
24SBY02250	Install new fine screen no. 1	0%	14	23-May-13	07-Jun-13	09-Mar-13	25-Mar-13	
24SBY02260	Decommissioning of existing fine screen no. 2	0%	4	14-Jun-13	18-Jun-13	02-Apr-13	08-Apr-13	
24SBY02270	Install new fine screen no. 2	0%	14	19-Jun-13	05-Jul-13	09-Apr-13	24-Apr-13	
24SBY02280	Install grit chamber no. 1	0%	20	23-Apr-13	16-May-13	02-Nov-12	24-Nov-12	
24SBY02290	Install grit chamber no. 2	0%	20	18-May-13	10-Jun-13	26-Nov-12	18-Dec-12	
24SBY02300	Install grit pumps	0%	12	11-Jun-13	25-Jun-13	28-Dec-12	14-Jan-13	
24SBY02310	Install grit classifier	0%	8	22-Jun-13	02-Jul-13	15-Jan-13	22-Jan-13	
24SBY02320	Install sewage pipework	0%	37	18-May-13	02-Jul-13	19-Dec-12	15-Feb-13	
Electrical Works								
24SBY02361	Cable Tray installation for the modificaiton of existing MCC (Switchboard)	0%	15	25-Mar-13 A	10-May-13	02-Nov-12	19-Nov-12	
24SBY02362	Cabling works for the modification of existing MCC (Switchboard)	0%	7	23-Apr-13	30-Apr-13	03-Dec-12	10-Dec-12	
24SBY02363	Megger test for the modification of existing MCC (Switchboard)	0%	5	02-May-13	07-May-13	11-Dec-12	15-Dec-12	
24SBY02364	Cable termination for the modification of existing MCC (Switchboard)	0%	5	08-May-13	13-May-13	17-Dec-12	21-Dec-12	
24SBY02365	Cable tray installation for new grit trap no. 1 and 2	0%	6	02-May-13	08-May-13	11-Dec-12	05-Jan-13	
24SBY02366	Cable laying for grit trap no. 1 and 2	0%	6	09-May-13	15-May-13	07-Jan-13	17-Jan-13	
24SBY02367	Megger test in cables of grit trap no. 1 and 2	0%	7	16-May-13	24-May-13	18-Jan-13	25-Jan-13	
24SBY02368	Cable termination for grit trap no. 1 and 2	0%	7	25-May-13	01-Jun-13	26-Jan-13	02-Feb-13	
24SBY02369	Cable Tray installation for new classifier	0%	10	09-May-13	21-May-13	07-Jan-13	17-Jan-13	
24SBY02371	Cabling laying for new classifier	0%	5	22-May-13	27-May-13	18-Jan-13	23-Jan-13	
24SBY02372	Megger test in cables of new classifier	0%	3	28-May-13	30-May-13	24-Jan-13	26-Jan-13	
24SBY02373	Cable termination for new classifier	0%	3	28-Jun-13	02-Jul-13	28-Jan-13	30-Jan-13	
24SBY02374	Cabling laying for UPS system	0%	10	09-May-13	21-May-13	18-Jan-13	29-Jan-13	
24SBY02375	Megger test in cables for UPS system	0%	7	22-May-13	29-May-13	30-Jan-13	06-Feb-13	

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish	Printing
24SBY02376	Cable termination for UPS system	0%	5	30-May-13	04-Jun-13	07-Feb-13	15-Feb-13	
24SBY02377	Installation of electrical equipment incl. local manual control, lighting, sockets, etc.	0%	10	05-Jun-13	17-Jun-13	16-Feb-13	27-Feb-13	
24SBY02378	Disconnect and disposal of existing cabling for fine screen no. 1	0%	5	18-May-13	23-May-13	28-Feb-13	05-Mar-13	
24SBY02379	Cabling laying for new fine screen no. 1	0%	8	24-May-13	01-Jun-13	06-Mar-13	14-Mar-13	
24SBY02381	Megger test in cables of new fine screen no. 1	0%	3	03-Jun-13	05-Jun-13	15-Mar-13	18-Mar-13	
24SBY02382	Cable termination for new fine screen no. 1	0%	3	06-Jun-13	08-Jun-13	22-Mar-13	25-Mar-13	
24SBY02383	Disconnect and disposal of existing cabling for fine screen no. 2	0%	5	14-Jun-13	19-Jun-13	02-Apr-13	08-Apr-13	
24SBY02384	Cabling laying for new fine screen no. 2	0%	6	20-Jun-13	26-Jun-13	09-Apr-13	17-Apr-13	
24SBY02385	Megger test in cables of new fine screen no. 2	0%	3	27-Jun-13	29-Jun-13	18-Apr-13	20-Apr-13	
24SBY02386	Cable termination for new fine screen no. 2	0%	3	03-Jul-13	05-Jul-13	22-Apr-13	24-Apr-13	
24SBY02390	E&M miscellaneous works	0%	30	23-May-13	27-Jun-13	06-Mar-13	13-Apr-13	
HVAC System (Deodorization/Air Conditioning / Ventilation)								
24SBY02387	Install activated carbon filter	0%	14	23-Apr-13	09-May-13	02-Nov-12	17-Nov-12	
24SBY02388	Divert the existing air ductwork to the newly installed activated carbon filter	0%	7	10-May-13	18-May-13	19-Nov-12	26-Nov-12	
24SBY02389	Distmantle and disposal of existing carbon filter	0%	10	20-May-13	30-May-13	27-Nov-12	07-Dec-12	
24SBY02391	Install of new deodorization unit	0%	14	13-Jun-13	28-Jun-13	13-Dec-12	31-Dec-12	
24SBY02392	Installation of new air ductwork	0%	17	29-Jun-13	19-Jul-13	02-Jan-13	05-Feb-13	
24SBY02393	Cable Tray installation for new deodorization unit	0%	14	13-Jun-13	28-Jun-13	09-Jan-13	24-Jan-13	
24SBY02394	Cabling laying for new deodorization unit	0%	10	21-Jun-13	03-Jul-13	25-Jan-13	05-Feb-13	
24SBY02395	Megger test in cables of new deodorization unit	0%	3	04-Jul-13	06-Jul-13	06-Feb-13	08-Feb-13	
24SBY02396	Cable termination for new deodorization unit	0%	3	08-Jul-13	10-Jul-13	09-Feb-13	15-Feb-13	
24SBY02397	Re-divert the existing air ductwork to the newly installed deodorization unit	0%	4	20-Jul-13	24-Jul-13	16-Feb-13	23-Feb-13	
Control and Monitoring Services incl. Instrumentation								
24SBY02350	Installation of support / hangers for instrumentations	0%	6	23-Apr-13	29-Apr-13	07-Jan-13	17-Jan-13	
24SBY02351	Installation of instrumentations	0%	8	30-Apr-13	09-May-13	22-Jan-13	07-Feb-13	
24SBY02352	Equipment installation for monitoring and control system	0%	8	30-Apr-13	09-May-13	08-Feb-13	27-Feb-13	
24SBY02353	Installation of cable tray for monitoring and control system	0%	8	10-May-13	20-May-13	08-Feb-13	07-Mar-13	
24SBY02354	Cabling laying for monitoring and control system	0%	6	15-May-13	22-May-13	08-Mar-13	23-Mar-13	
24SBY02355	Megger test in cables of monitoring and control system	0%	4	23-May-13	27-May-13	25-Mar-13	05-Apr-13	
24SBY02356	Cable termination for monitoring and control system	0%	4	28-May-13	31-May-13	06-Apr-13	13-Apr-13	
24SBY02421	DCS panel fabrication	100%	21	26-Mar-13 A	23-Apr-13 A	08-Mar-13	05-Apr-13	
24SBY02422	Modification of existing DCS system	0%	14	23-Apr-13	09-May-13	06-Apr-13	22-Apr-13	
24SBY02423	PLC programming and SCADA editing	0%	21	28-May-13	21-Jun-13	23-Apr-13	18-May-13	
24SBY02424	Installation of cable tray for DCS outstation and instrumentation	0%	21	26-Mar-13 A	18-May-13	08-Mar-13	05-Apr-13	
24SBY02425	Cabling laying for DCS outstation and instrumentation	0%	14	23-Apr-13	09-May-13	22-Mar-13	11-Apr-13	
24SBY02426	Megger test in cables of DCS outstation and instrumentation	0%	7	10-May-13	18-May-13	12-Apr-13	19-Apr-13	
24SBY02427	Cable termination for DCS outstation and instrumentation	0%	7	20-May-13	27-May-13	20-Apr-13	27-Apr-13	
24SBY02428	Migration of existing DCS system to newly installed DCS system	0%	14	22-Jun-13	09-Jul-13	20-May-13	04-Jun-13	
24SBY02429	DCS interface with contract DC/2009/10	0%	49	23-Apr-13	21-Jun-13	06-Apr-13	04-Jun-13	
24SBY02431	Installation of cable tray for weather and H2S monitoring station	0%	21	20-May-13	13-Jun-13	06-Apr-13	30-Apr-13	
24SBY02432	Cabling laying for weather and H2S monitoring station	0%	14	05-Jun-13	21-Jun-13	23-Apr-13	09-May-13	
24SBY02433	Megger test in cables of weather and H2S monitoring station	0%	7	22-Jun-13	29-Jun-13	10-May-13	18-May-13	
24SBY02434	Cable termination for weather and H2S monitoring station	0%	7	02-Jul-13	09-Jul-13	20-May-13	27-May-13	
24SBY02435	Installation of weather monitoring station	0%	14	05-Jun-13	21-Jun-13	23-Apr-13	09-May-13	
24SBY02436	Installation of H2S monitoring sensors	0%	35	05-Jun-13	17-Jul-13	23-Apr-13	04-Jun-13	
Earthing and Lightning System								
24SBY02470	Modification and installation of earthing and lightning system for newly installed equipment	0%	21	18-May-13	11-Jun-13	22-Jan-13	26-Feb-13	
P&D Services								

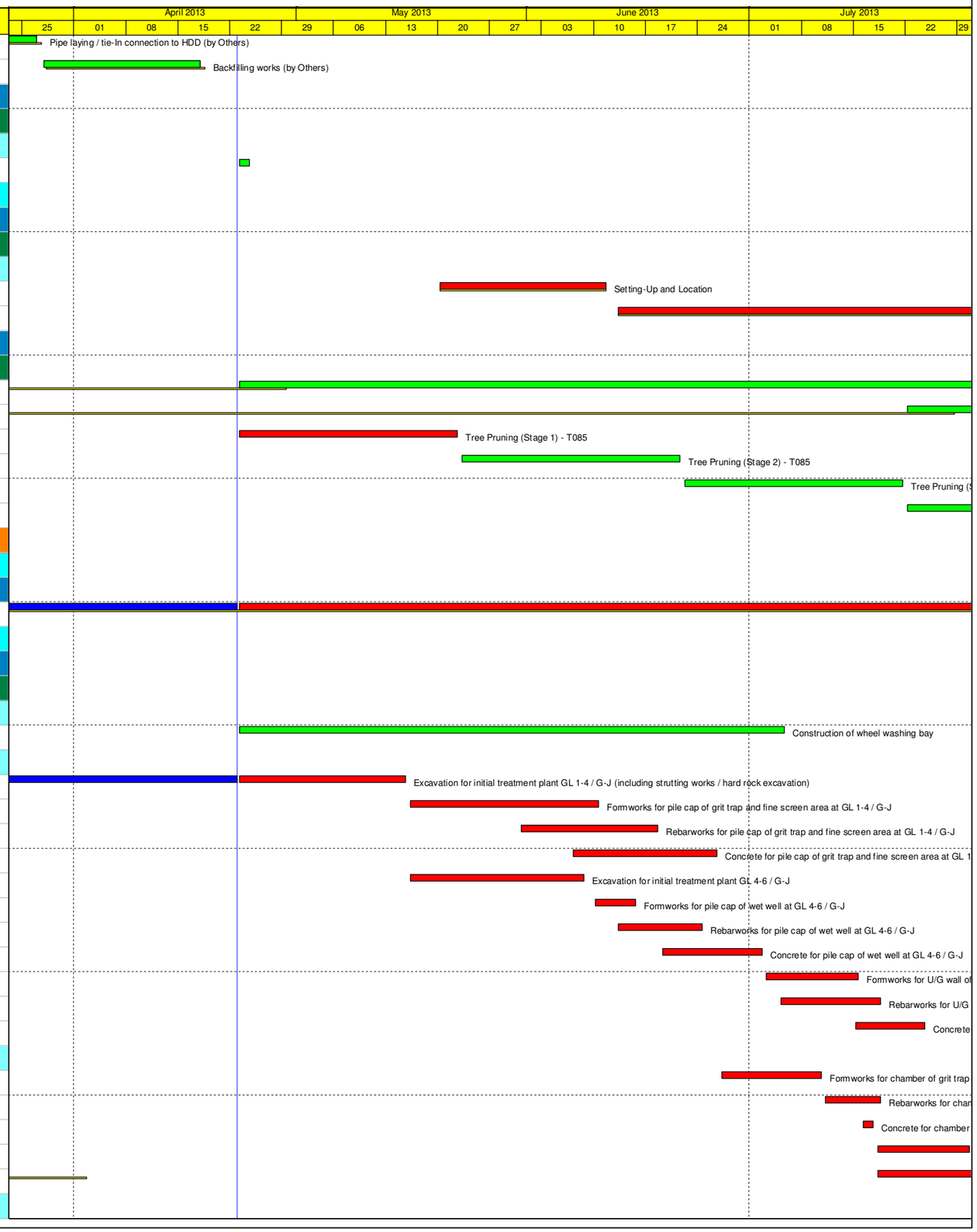
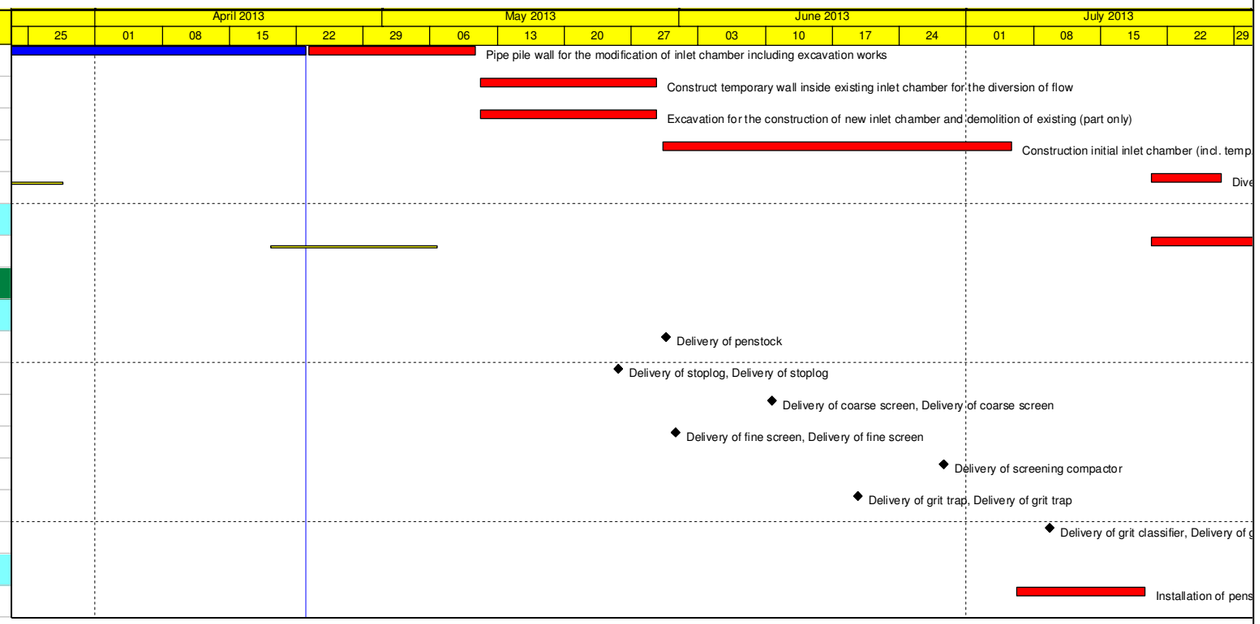
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish	Printing
24SBY02480	Installation of FRP water tank	0%	7	20-May-13	27-May-13	06-Feb-13	16-Feb-13	
24SBY02490	Installation of cleansing water pipe	0%	20	28-May-13	20-Jun-13	18-Feb-13	12-Mar-13	
Preliminary Testing and Commissioning								
Mechanical Works								
24SBY02501	SAT of fine screen no. 1	0%	3	10-Jun-13	13-Jun-13	26-Mar-13	28-Mar-13	
24SBY02502	SAT of fine screen no. 2	0%	3	06-Jul-13	09-Jul-13	25-Apr-13	27-Apr-13	
24SBY02503	SAT of grit chambers and air lift pumps	0%	6	26-Jun-13	03-Jul-13	04-Feb-13	02-Mar-13	
24SBY02504	SAT of grit classifier	0%	6	03-Jul-13	09-Jul-13	31-Jan-13	27-Feb-13	
Electrical Works								
24SBY02505	Functional test of modified existing switchboard	0%	7	14-May-13	22-May-13	22-Dec-12	02-Jan-13	
Earthing and Lightning System								
24SBY02540	Earthing & lightning test	0%	5	13-Jun-13	18-Jun-13	27-Feb-13	04-Mar-13	
P&D Services								
24SBY02550	Pipework hydrostatic pressure test	0%	5	03-Jul-13	08-Jul-13	16-Feb-13	21-Feb-13	
Flume Channels and Chambers								
Interface between Civil / ABWF / E&M Works								
24MSBY00070	Completion of structural works for flume channel	0%	0		22-Jun-13		18-Feb-13	
24MSBY00080	Completion of E&M works at flume channel	0%	0		22-Jul-13		04-May-13	
Civil Works (incl. footing of existing fence modification)								
24SBY02562	Formworks for base slab of FC-1 chamber including back drop manhole	0%	4	25-Apr-13	29-Apr-13	03-Nov-12	16-Nov-12	
24SBY02563	Rebarworks for base slab of FC-1 chamber including back drop manhole	0%	4	27-Apr-13	02-May-13	10-Nov-12	16-Nov-12	
24SBY02564	Concrete for base slab of FC-1 chamber including back drop manhole	0%	1	03-May-13	03-May-13	17-Nov-12	19-Nov-12	
24SBY02565	Formworks for wall of FC-1 chamber including back drop manhole	0%	4	04-May-13	08-May-13	20-Nov-12	03-Dec-12	
24SBY02566	Rebarworks for wall of FC-1 chamber including back drop manhole	0%	4	07-May-13	10-May-13	27-Nov-12	03-Dec-12	
24SBY02567	Concrete for wall of FC-1 chamber including back drop manhole	0%	1	11-May-13	11-May-13	04-Dec-12	05-Dec-12	
24SBY02569	Demolition of existing manhole (58a) and modification on existing 900Ø overflow pipe	0%	6	13-May-13	20-May-13	06-Dec-12	28-Dec-12	
24SBY02571	Installation of support for existing site boundary wall footing modification	0%	6	25-Apr-13	02-May-13	08-Nov-12	21-Nov-12	
24SBY02572	Modification works on existing site boundary wall footing	0%	12	03-May-13	16-May-13	15-Nov-12	12-Dec-12	
24SBY02700	Formworks for base slab of flume channels	0%	12	18-May-13	31-May-13	20-Dec-12	05-Jan-13	
24SBY02701	Rebarworks for base slab of flume channels	0%	6	25-May-13	31-May-13	29-Dec-12	05-Jan-13	
24SBY02702	Concrete for base slab of flume channels	0%	1	01-Jun-13	01-Jun-13	07-Jan-13	08-Jan-13	
24SBY02703	Formworks for Wall of Flume Channel	0%	12	03-Jun-13	17-Jun-13	09-Jan-13	07-Feb-13	
24SBY02704	Rebarworks for Flume Channel	0%	10	10-Jun-13	21-Jun-13	28-Jan-13	07-Feb-13	
24SBY02705	Concrete for Wall of Flume Channel	0%	1	22-Jun-13	22-Jun-13	08-Feb-13	18-Feb-13	
24SBY02706	Backfilling works on Flume Channels	0%	9	24-Jun-13	04-Jul-13	19-Feb-13	28-Feb-13	
24SBY02707	Modification of Existing Effluent Chamber connected to new Flume Chamber	0%	12	24-Jun-13	08-Jul-13	19-Feb-13	25-Mar-13	
24SBY02708	Drawpits and cable ducts	0%	12	24-Jun-13	08-Jul-13	19-Feb-13	25-Mar-13	
24SBY02709	Installation of air tight multi-part cover in flume channels and chambers	0%	12	09-Jul-13	22-Jul-13	06-May-13	20-May-13	
Electrical and Mechanical Works								
24SBY02730	Installation of penstock	0%	10	24-Jun-13	05-Jul-13	19-Feb-13	25-Mar-13	
24SBY02740	Installation of stoplog	0%	10	24-Jun-13	05-Jul-13	26-Mar-13	04-May-13	
24SBY02750A	Installation of hydrostatic pressure level transmitter at drop shaft	0%	2	09-Jul-13	10-Jul-13	26-Mar-13	02-Apr-13	
24SBY02750B	Installation of level sensor at drop shaft	0%	2	11-Jul-13	12-Jul-13	03-Apr-13	08-Apr-13	
24SBY02750C	Installation of level sensor c/w transmitter at flume channel measuring flume	0%	2	13-Jul-13	15-Jul-13	09-Apr-13	12-Apr-13	
24SBY02750D	Cable laying via cable ducts and drawpits going to control room (including termination)	0%	6	16-Jul-13	22-Jul-13	13-Apr-13	04-May-13	
Preliminary Testing and Commissioning								
24SBY02751	Water test of penstock	0%	14	06-Jul-13	22-Jul-13	26-Mar-13	15-Apr-13	
24SBY02752	Water test of stoplogs	0%	14	06-Jul-13	22-Jul-13	06-May-13	22-May-13	

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish	Printing
Completion of Works in Section 1								
Submission of Manuals								
24SBY03040	Preparation / Submission of modified O&M manual	0%	60	23-May-13*	21-Jul-13	23-May-13	21-Jul-13	
24SBY03060	As-Built Drawings Submission / Approval for Sandy Bay PTW	0%	60	23-Jun-13	21-Aug-13	26-Mar-13	24-May-13	
Cyberport PTW								
Key Dates								
Time of Completion								
24CPT01000	Time for Completion of Section 2	0%	1280	31-Aug-11 A	02-Mar-15	31-Aug-11	02-Mar-15	
Works for Section 2								
Modification Inside Cyberport PTW Complex incl. Deodorization Room								
Interface between Civil / ABWF / E&M Works								
24MCPT00120	Completion of structural works for deodorization room	0%	0		26-Jun-13		26-Jun-13	
Civil Works								
Construction of Deodorization Room (Cancelled via VO-009)								
24CPT02240	Waterproofing works of Deodorization Room	0%	18	27-Jun-13	18-Jul-13	27-Jun-13	18-Jul-13	
24CPT02250	Backfilling works on Deodorization Room	0%	10	19-Jul-13	30-Jul-13	19-Jul-13	30-Jul-13	
24CPT02260	Ceiling Finishes	0%	14	27-Jun-13	13-Jul-13	27-Jun-13	13-Jul-13	
24CPT02270	Wall Finishes	0%	16	15-Jul-13	01-Aug-13	15-Jul-13	01-Aug-13	
Electrical and Mechanical Works								
Material / Equipment Delivery on Site								
24CPT02340	Delivery of Deodorization System	0%	0		22-Jul-13		30-Jun-13	
Wah Fu PTW								
Key Dates								
Time of Completion								
24WFU1010	Time for Completion of Section 4	0%	1255	31-Aug-11 A	10-Apr-15	31-Aug-11	05-Feb-15	
Statutory and Utility Applications and Approvals								
Enviromental Protection Department (EPD)								
24WFU1119	Statutory submission to EPD (Chimney Design)	0%	60	22-Jul-13	30-Sep-13	28-Mar-13	13-Jun-13	
Works for Section 4								
Screen and Grit Trap Building								
Civil Works								
Foundation Works								
24WFU02220A20	Piling Works (18 nos)	45%	72	09-Mar-13 A	15-Jun-13	18-Dec-12	18-Mar-13	
24WFU02220A30	Testing of H-Piles	0%	14	16-Jun-13	29-Jun-13	19-Mar-13	01-Apr-13	
24WFU02230A05	Sheet Piling Works including waling (GL 1-3)	0%	30	02-Jul-13	05-Aug-13	02-Apr-13	08-May-13	
24WFU02230A10	Excavation Works in preparation for Pile Cap (GL 1-3)	0%	19	19-Jul-13	09-Aug-13	20-Apr-13	13-May-13	
24WFU02230A50	Sheet Piling Works including waling (GL 3-5)	0%	30	19-Jul-13	22-Aug-13	09-May-13	14-Jun-13	
Aberdeen PTW								
Key Dates								
Time of Completion								
24ABN00300	Time for Completion of Section 5	0%	1179	31-Aug-11 A	14-Feb-15	31-Aug-11	21-Nov-14	
24ABN00310	Time for Completion of Section 6	0%	1309	31-Aug-11 A	31-Mar-15	31-Aug-11	31-Mar-15	
Interface and Liaison								
Interface with ST2/DSD								
24MABN00170	Application of PMAC/SWAC for Demolition of Temp. Channel	0%	0	23-Apr-13		31-May-14		
24MABN00180	Proposed Approval date of PMAC/SWAC for Demolition of Temp. Channel	0%	0		06-May-13		13-Jun-14	
24MABN00190	Coordinate with DSD/ST2 regarding design requirement for Temp. Office at ABN	0%	60	01-Jun-13*	30-Jul-13	01-Jun-13	30-Jul-13	
Interface with other contractrors								



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish	Printing
24MABN00260	HDD Tunnel Completion (assumed only)	0%	0		23-Apr-13		29-Jun-12	
24MABN00270	Liason with HDD Tunnel Contractor for Tie-In connection (Provisional Item)	0%	90	27-Jun-12 A	25-Apr-13	30-Jun-12	27-Sep-12	
Works for Section 5								
FS & GT Bldg - Fine Screen and Inlet Chamber (Stage 1)								
Interface between Civil / ABWF / E&M Works								
24MABN00280	Completion of new fine screen and inlet chamber (stage 1)	0%	0		15-Jun-13		10-Dec-12	
Civil Works								
RC Structural Works for FS and Inlet Chamber								
24ABN00720A20	Formworks for base slab of fine screen channel and inlet chamber	0%	12	23-Apr-13	07-May-13	15-Nov-12	21-Nov-12	
24ABN00720A30	Rebarworks for base slab of fine screen channel and inlet chamber	0%	12	08-May-13	22-May-13	20-Nov-12	23-Nov-12	
24ABN00720A40	Concrete for base slab of fine screen channel and inlet chamber	0%	2	23-May-13	24-May-13	24-Nov-12	26-Nov-12	
24ABN00720A50	Formworks for wall and top slab of fine screen channel and inlet chamber	0%	12	25-May-13	07-Jun-13	27-Nov-12	07-Dec-12	
24ABN00720A60	Rebarworks for wall and top slab of fine screen channel and inlet chamber	0%	12	30-May-13	13-Jun-13	01-Dec-12	07-Dec-12	
24ABN00720A70	Concrete for wall and top slab of fine screen channel and inlet chamber	0%	2	14-Jun-13	15-Jun-13	08-Dec-12	10-Dec-12	
24ABN00720B30	Construction of screening handling room area	0%	30	25-May-13	29-Jun-13	27-Nov-12	21-Jan-13	
Construction of Temporary Diversion Channel								
24ABN00745B11	Sheetpiling for the const. of temporary channel and temp. channel from existing grit trap area to outflow chamber	0%	15	01-Jun-13*	19-Jun-13	23-Jul-13	08-Aug-13	
24ABN00745B20	Excavation for the construction of temporary channel from existing grit trap area to outflow chamber	0%	15	11-Jun-13	28-Jun-13	01-Aug-13	17-Aug-13	
24ABN00745B30	Formworks for base slab of temporary channel from existing grit trap area to outflow chamber	0%	6	29-Jun-13	06-Jul-13	19-Aug-13	24-Aug-13	
24ABN00745B40	Rebarworks for base slab of temporary channel from existing grit trap area to outflow chamber	0%	3	04-Jul-13	06-Jul-13	22-Aug-13	24-Aug-13	
24ABN00745B50	Concrete for base slab of temporary channel from existing grit trap area to outflow chamber	0%	1	08-Jul-13	08-Jul-13	26-Aug-13	26-Aug-13	
24ABN00745B60	Formworks for wall of temporary channel from existing grit trap area to outflow chamber	0%	7	09-Jul-13	16-Jul-13	27-Aug-13	03-Sep-13	
24ABN00745B70	Rebarworks for wall of temporary channel from existing grit trap area to outflow chamber	0%	5	11-Jul-13	16-Jul-13	29-Aug-13	03-Sep-13	
24ABN00745B80	Concrete for wall of temporary channel from existing grit trap area to outflow chamber	0%	1	17-Jul-13	17-Jul-13	04-Sep-13	04-Sep-13	
24ABN00745B90	Formworks for top slab of temporary channel from existing grit trap area to outflow chamber	0%	6	18-Jul-13	24-Jul-13	05-Sep-13	11-Sep-13	
24ABN00745C10	Rebarworks for top slab of temporary channel from existing grit trap area to outflow chamber	0%	3	22-Jul-13	24-Jul-13	09-Sep-13	11-Sep-13	
Electrical and Mechanical Works								
Material / Equipment Delivery on Site								
24ABN00530	Delivery of fine screen	0%	0		30-May-13		28-Oct-12	
24ABN00531	Delivery of fine screen conveyor	0%	0		21-Jun-13		28-Oct-12	
24ABN00540	Delivery of fine screen compactor	0%	0		30-Jun-13		06-Jan-13	
Mechanical Works								
24ABN01201	Installation of stoplog no. 1 (fine screen inlet chamber)	0%	20	17-Jun-13	10-Jul-13	11-Dec-12	05-Jan-13	
24ABN01202	Installation of stoplog no. 2 (fine screen inlet chamber)	0%	20	28-Jun-13	22-Jul-13	22-Dec-12	17-Jan-13	
24ABN01203	Installation of stoplog no. 5 (fine screen outlet chamber)	0%	20	11-Jul-13	02-Aug-13	07-Jan-13	29-Jan-13	
24ABN01204	Installation of penstock no. 1 - no. 3 (fine screen inlet)	0%	21	17-Jun-13	11-Jul-13	11-Dec-12	17-Jan-13	
24ABN01205	Installation of penstock no. 4 - no. 6 (fine screen outlet)	0%	21	05-Jul-13	29-Jul-13	31-Dec-12	04-Feb-13	
24ABN01207	Installation of fine screen no. 1 - no. 3	0%	40	17-Jun-13	02-Aug-13	11-Dec-12	09-Feb-13	
24ABN01208	Installation of screening conveyor no. 1 and no. 2	0%	20	11-Jul-13	02-Aug-13	30-Jan-13	25-Feb-13	
Electrical Works								
24ABN02001	Replacement / upgrading of motor starter and panel cover in existing switchboard (for fine screen no. 1 - no. 3)	0%	6	24-Jun-13	29-Jun-13	14-Feb-13	23-Feb-13	
24ABN02002	Replacement / upgrading the power, control & indication circuitry in existing switchboard (for penstock no. 1 - no. 9)	0%	7	02-Jul-13	09-Jul-13	25-Feb-13	12-Mar-13	
24ABN02003	Removal of existing aged cables	0%	7	02-Jul-13	09-Jul-13	25-Feb-13	04-Mar-13	
24ABN02004	Installation of additional cable tray	0%	7	10-Jul-13	17-Jul-13	05-Mar-13	20-Mar-13	
24ABN02005	Cable laying for the new fine screen and penstocks	0%	14	18-Jul-13	02-Aug-13	13-Mar-13	18-Apr-13	
FS & GT Bldg - Flume Channels and Chambers (Stage 4)								
Civil Works								
Tie-In at HDD Tunnel (Provisional Item-By Others)								

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish	Printing
24ABN02284	Pipe laying / tie-In connection to HDD (by Others)	100%	12	14-Mar-13 A	27-Mar-13 A	14-Mar-13	27-Mar-13	
24ABN02285	Backfilling works (by Others)	100%	15	28-Mar-13 A	18-Apr-13 A	28-Mar-13	18-Apr-13	
Seawater Pumping Station								
Civil Works								
RC Structural Works								
24ABN02250B90	Installation of air tight mulit-part cover	0%	2	23-Apr-13	24-Apr-13	26-Jul-14	28-Jul-14	
Works for Section 6								
Workshop and Administration Building								
Civil Works								
Foundation Works								
24ABN02200A10	Setting-Up and Location	0%	20	20-May-13*	11-Jun-13	20-May-13	11-Jun-13	
24ABN02200A20	Piling Works (31 nos) - 1 set of equipment at 4 days per pile	0%	124	13-Jun-13	08-Nov-13	13-Jun-13	08-Nov-13	
Roadworks, Landscape and Modification of Fence								
Landscaping Works								
24ABN02190A30	Tree Pruning (Stage 3) - T023	0%	180	23-Apr-13	19-Oct-13	01-Nov-12	29-Apr-13	
24ABN02190A40	Tree Pruning (Stage 4) and Transplantation off-site - T023	0%	180	22-Jul-13	17-Jan-14	30-Jan-13	28-Jul-13	
24ABN02190A90	Tree Pruning (Stage 1) - T085	0%	30	23-Apr-13	22-May-13	03-Aug-12	01-Sep-12	
24ABN02190B10	Tree Pruning (Stage 2) - T085	0%	30	23-May-13	21-Jun-13	02-Sep-12	01-Oct-12	
24ABN02190B20	Tree Pruning (Stage 3) - T085	0%	30	22-Jun-13	21-Jul-13	02-Oct-12	31-Oct-12	
24ABN02190B30	Tree Pruning (Stage 4) and Transplantation off-site - T085	0%	30	22-Jul-13	20-Aug-13	01-Nov-12	30-Nov-12	
Ap Lei Chau PTW								
Key Dates								
Time of Completion								
24ALC00300	Time for Completion of Section 7	0%	1264	31-Aug-11 A	28-May-15	31-Aug-11	14-Feb-15	
Works for Section 7								
Stage 1 of ALC Upgarde - Initial Treatment Plant								
Civil Works								
Site Clearance and Preparation Works								
24ALC00702A20	Construction of wheel washing bay	0%	60	23-Apr-13	05-Jul-13	12-Apr-12	22-Jun-12	
Foundation Works								
24ALC00730A20	Excavation for initial treatment plant GL 1-4 / G-J (including strutting works / hard rock excavation)	0%	18	19-Mar-13 A	15-May-13	25-Sep-12	10-Nov-12	
24ALC00730A30	Formworks for pile cap of grit trap and fine screen area at GL 1-4 / G-J	0%	21	16-May-13	10-Jun-13	12-Nov-12	15-Dec-12	
24ALC00730A40	Rebarworks for pile cap of grit trap and fine screen area at GL 1-4 / G-J	0%	15	31-May-13	18-Jun-13	10-Dec-12	28-Dec-12	
24ALC00730A50	Concrete for pile cap of grit trap and fine screen area at GL 1-4 / G-J	0%	16	07-Jun-13	26-Jun-13	17-Dec-12	07-Jan-13	
24ALC00730A90	Excavation for initial treatment plant GL 4-6 / G-J	0%	20	16-May-13	08-Jun-13	12-Nov-12	04-Dec-12	
24ALC00730B10	Formworks for pile cap of wet well at GL 4-6 / G-J	0%	5	10-Jun-13	15-Jun-13	05-Dec-12	10-Dec-12	
24ALC00730B20	Rebarworks for pile cap of wet well at GL 4-6 / G-J	0%	10	13-Jun-13	24-Jun-13	07-Dec-12	18-Dec-12	
24ALC00730B30	Concrete for pile cap of wet well at GL 4-6 / G-J	0%	11	19-Jun-13	02-Jul-13	13-Dec-12	27-Dec-12	
24ALC00730B40	Formworks for U/G wall of wet well at GL between 4-5 / G-J	0%	11	03-Jul-13	15-Jul-13	28-Dec-12	10-Jan-13	
24ALC00730B50	Rebarworks for U/G wall of wet well at GL between 4-5 / G-J	0%	12	05-Jul-13	18-Jul-13	31-Dec-12	14-Jan-13	
24ALC00730B60	Concrete for U/G wall of wet well at GL between 4-5 / G-J	0%	9	15-Jul-13	24-Jul-13	10-Jan-13	19-Jan-13	
RC Structural Works								
24ALC00730A60	Formworks for chamber of grit trap and fine screen area at GL 1-5 / G-J at elev. 2.0 to 6.15	0%	11	27-Jun-13	10-Jul-13	08-Jan-13	19-Jan-13	
24ALC00730A70	Rebarworks for chamber of grit trap and fine screen area at GL 1-5 / G-J at elev. 2.0 to 6.15	0%	7	11-Jul-13	18-Jul-13	21-Jan-13	28-Jan-13	
24ALC00730A80	Concrete for chamber of grit trap and fine screen area at GL 1-5 / G-J at elev. 2.0 to 6.15	0%	2	16-Jul-13	17-Jul-13	25-Jan-13	05-Feb-13	
24ALC00740A10	Formworks for column of grit trap and fine screen area at GL 1-4 / G-J	0%	11	18-Jul-13	30-Jul-13	06-Feb-13	21-Feb-13	
24ALC00740A70	Formworks for wall at fine screen and grit trap area incl. screening and grit handling at GL 2-4 / G-J	0%	15	18-Jul-13	03-Aug-13	13-Mar-13	02-Apr-13	
Modification of Inlet Chamber (Partial)								



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish	Printing
24ALC00854	Pipe pile wall for the modification of inlet chamber including excavation works	50%	30	18-Feb-13 A	10-May-13	02-Nov-12	06-Dec-12	
24ALC00855	Construct temporary wall inside existing inlet chamber for the diversion of flow	0%	15	11-May-13	29-May-13	07-Dec-12	24-Dec-12	
24ALC00856	Excavation for the construction of new inlet chamber and demolition of existing (part only)	0%	15	11-May-13	29-May-13	07-Dec-12	24-Dec-12	
24ALC00857	Construction initial inlet chamber (incl. temp. wall)	0%	30	30-May-13	05-Jul-13	27-Dec-12	21-Feb-13	
24ALC00858	Diversion of waste discharge to partial inlet chamber	0%	7	20-Jul-13	27-Jul-13	12-Mar-13	28-Mar-13	
Modification of Outfall Chamber								
24ALC00901	Fabricate steel tank with Ø800 mm steel pipe	0%	12	20-Jul-13	02-Aug-13	19-Apr-13	06-May-13	
Electrical and Mechanical Works								
Material / Equipment Delivery on Site								
24ALC00530	Delivery of penstock	0%	0		30-May-13		23-Oct-12	
24ALC00540	Delivery of stoplog	0%	0		25-May-13		22-Dec-12	
24ALC00550	Delivery of coarse screen	0%	0		10-Jun-13		10-Feb-13	
24ALC00560	Delivery of fine screen	0%	0		31-May-13		12-Nov-12	
24ALC00570	Delivery of screening compactor	0%	0		28-Jun-13		21-Jan-13	
24ALC00580	Delivery of grit trap	0%	0		19-Jun-13		27-Dec-12	
24ALC00600	Delivery of grit classifier	0%	0		09-Jul-13		26-Jan-13	
Mechanical Works								
24ALC03010	Installation of penstock no. 13 (bypass penstock)	0%	12	06-Jul-13	19-Jul-13	22-Feb-13	11-Mar-13