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 May 2014

(Version 1.0)

Certified By _____
(Environmental Team Leader)

REMARKS:

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

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

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

16 June 2014
By Post

Attn: Mr. Danny Tang

Dear Sir,

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

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 May 2014 (no. 29)

I refer to the revised Monthly EM&A for May 2014 (version 1.0) submitted by ET on 16 June 2014 via email. Pursuant to Condition 4.4 of Environmental Permit No. EP-322/2008/G, 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

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

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 29th 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/G) for May 2014.

2. The site activities undertaken for in the reporting month included:
   - Wah Fu PTW – Plant operation, Construction for the FSGT structure, Excavation of grit trap in progress;
   - Ap Lei Chau PTW – Plant operation, FSGT building construction;
   - Aberdeen PTW – Plant operation, Construction for the FSGT structure, Flume channel construction, Rising Main construction;
   - Sandy Bay PTW – Reinstatement works for boundary wall, Staircase construction; and
   - Cyberport – Installation of fine screen, Installation of DO unit.

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. 1-hour TSP monitoring was conducted as scheduled in the reporting month while the 1-hour TSP monitoring at CM_WF1a conducted on 9 May 2014 was suspended to 12 May 2014 by ET of DC/2007/24 due to the adverse weather. No Action/Limit Level exceedance was recorded. Details could be referred to Appendix G of the DC/2007/24 EM&A report.

24-hour TSP Monitoring

6. 24-hour TSP monitoring was conducted as scheduled in the reporting month while the 24-hour TSP monitoring at CM_WF1a conducted on 9 May 2014 was suspended to 12 May 2014 by ET of DC/2007/24 due to the adverse weather. No Action/Limit Level exceedance was recorded. Details could be referred to Appendix G of the DC/2007/24 EM&A report.

Construction Noise

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

Environmental Licenses and Permits

8. 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

9. 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

10. 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 – April 2014	Submitted to EPD on 15 May 2014	No comment	---

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Notifications of any summons & prosecutions received	0	---	N/A	N/A	---

Summary of Complaints and Prosecutions

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

12. There was no environmental prosecution or notification of summons received while three complaints were already received since the Project commencement. The Complaint Log is presented in **Appendix G.**

Future Key Issues:

13. Major site activities for the coming two months include:
    - Wah Fu PTW: FSGT structure construction, Plant operation;
    - Aberdeen PTW: Construction of FSGT structure, E&M equipment installation, Plant operation, Rising main construction, Flume channel construction;
    - Ap Lei Chau PTW: Plant operation, Construction of FSGT structure, Relocation of nightsoil discharge point, Pipe pile construction;
    - Sandy Bay PTW: Staircase construction, Reinstatement of boundary wall, Odour pipe/ drawpit/ ducting construction; and
    - Cyberport – Installation of fine screen, Installation of DO unit.

14. 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/G) which was issued on 9th May 2014 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 29th monthly EM&A report summarizing the EM&A works conducted for the Project in May 2014.

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
Cinotech	Environmental	Dr. Priscilla Choy	ET Leader	2151 2089

Party	Role	Name	Position	Phone No.
	Team	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. Kelvin Cheung	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 – Plant operation, Construction for the FSGT structure, Excavation of grit trap in progress;
- Ap Lei Chau PTW – Plant operation, FSGT building construction;
- Aberdeen PTW – Plant operation, Construction for the FSGT structure, Flume channel construction, Rising Main construction;
- Sandy Bay PTW – Reinstatement works for boundary wall, Staircase construction; and
- Cyberport – Installation of fine screen, Installation of DO unit.

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 May 2014. 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 µg/m³	Range µg/m³	Action Level µg/m³	Limit Level µg/m³
1 hour TSP				
CM_CB1a	68	24.2-136.1	280	500
CM_WF1a	128	55.3-207.7	285	
CM_AB1a	89	31.8-139.9	283	
24 hours TSP				
CM_CB1a	39	24-77	178	260
CM_WF1a	31	24-36	185	
CM_AB1a	43	35-52	174	

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 1-hour TSP monitoring was conducted as scheduled in the reporting month while the 1-hour TSP monitoring at CM_WF1a conducted on 9 May 2014 was suspended to 12 May 2014 by ET of DC/2007/24 due to the adverse weather. No Action/Limit Level exceedance was recorded. Details could be referred to Appendix G of the DC/2007/24 EM&A report. Summary of exceedance is presented in **Appendix B.**

2.10 24-hour TSP monitoring was conducted as scheduled in the reporting month while the 24-hour TSP monitoring at CM_WF1a conducted on 9 May 2014 was suspended to 12 May 2014 by ET of DC/2007/24 due to the adverse weather. No Action/Limit Level exceedance was recorded. Details could be referred to Appendix G of the DC/2007/24 EM&A report. Summary of exceedance is presented in **Appendix B**.

2.11 The identified dust sources at the monitoring stations were mainly from operation of mobile crane and gantry, tunnel works, loading and loading concrete.

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	61-66	75.0
M6a	51-59(1)	
M7a	68-71	
M8	67-67	
M9	52-54	

Remark: (1) Free-field measurement, +3dB correction.

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, road traffic noise from Shek Pai Wan Road, loading, loading, concrete loading, operation of excavator, forklift and gantry 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 2, 9, 16, 23 and 30 May 2014. 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				
WT00011629-2012	N/A	31/1/2017	Location: Sandy Bay PTW	Valid
WT00011633-2012	N/A	31/1/2017	Location: Cyber Port PTW	
WT00011632-2012	N/A	31/1/2017	Location: Ap Lei Chau	
WT00016242-2013	N/A	31/3/2017	Location: Aberdeen PTW	
WT00016837-2013	N/A	31/8/2018	Location: Wah Fu PTW	
WT00011627-2012	N/A	31/1/2017	Location: Wah Fu PTW	Expiry
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	
5218-174-L2783-03	30/12/2011	N/A	Location: Ap Lei Chau	
5218-173-L2783-04	30/12/2011	N/A	Location: Aberdeen PTW	
5218-172-L2783-05	30/12/2011	N/A	Location: Wah Fu PTW	
Special Waste Admission Ticket				
10387	23/2/2013	22/2/2014	Location: Ap Lei Chau	Expiry
10428	16/3/2013	15/3/2014	Location: Aberdeen PTW	
10815	22/8/2013	21/8/2014	Location: Wah Fu PTW	
11196	24/2/2014	23/5/2014	Location: Ap Lei Chau	Valid
11195	24/2/2014	23/5/2014	Location: Aberdeen PTW	
11197	24/2/2014	23/5/2014	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 observatios 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	140509-O01	The water quality of the sediment tank at Abd-PTW should be fulfilled the requirement of the WPCO's wastewater discharge license. The Contractor was reminded to provide the maintenance of the sediment tank.	The maintenance of the sediment tank was provided and the water quality of the sediment tank at Abd-PTW was fulfilled the requirement of the WPCO's wastewater discharge license.
	140509-R03	Properly clear the ponding water at all PTWs.	The ponding water was cleared at all PTWs.

	140523-O01	The water quality of the sediment tank at Wah Fu-PTW should be fulfilled the requirement of the WPCO's wastewater discharge license before discharging out.	The water in the sediment tank was cleared and not observed at Wah Fu-PTW.
Air Quality	140530-R04	The dusty materials should be cleared properly or covered by the imperivous materials at Cyberport-PTW and ALC-PTW.	The follow up action will be reported during site inspections in June 2014.
Waste/ Chemical Management	140516-R01	Properly clear the oil stain at Wah Fu-PTW.	The oil stain was cleared at Wah Fu-PTW.
	140523-R02	Properly clear the general refuse at Cyberport-PTW.	Please refer to 140530-R03.
	140523-R03	Properly clear the oil stain near the drip tray at Wah Fu-PTW.	The oil stain near the drip tray was cleared at Wah Fu-PTW.
	140530-O01	The oil leakage was observed from the excavator at Abd-PTW. The Contractor was reminded to keep it in a good condition.	The oil leakage was not observed from the excavator at Abd-PTW.
	140530-R02	The chemical containers should be provided with the drip tray at Wah Fu-PTW and Abd-PTW.	The chemical container were provided with the drip tray at Wah Fu-PTW and the chemical container was not observed at Abd-PTW.
	140530-R03	Properly clear the general refuse at Cyberport-PTW.	The general refuse was cleared at Cyberport-PTW.
Noise	--	--	--
Landscape and Visual	140502-O01	The tree protective zone should be enlarged and free of construction materials. (SB-PTW, storage area)	The construction materials were removed in the tree protection zone at the storage area of Sandy Bay-PTW.
	140509-R02	The vehicle should be parked far away the tree protection area to prevent the damage of the existing tree at Wah Fu-PTW.	No vehicle was observed around the tree protection area at Wah Fu-PTW.
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 There was no environmental prosecution or notification of summons received while three complaints were already 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 nuisance 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;
- Maintenance of de-silting facilities and drainage system such as U-channels;
- Blockage of U-channel by accumulated silt;
- Ponding water generated in pre-drillings;
- Dust generation should be mitigated by adequate water spraying, especially in dry days;
- 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 1-hour TSP monitoring was conducted as scheduled in the reporting month while the 1-hour TSP monitoring at CM_WF1a conducted on 9 May 2014 was suspended to 12 May 2014 by ET of DC/2007/24 due to the adverse weather. No Action/Limit Level exceedance was recorded. Details could be referred to Appendix G of the DC/2007/24 EM&A report.

24-hour TSP Monitoring

6.3 24-hour TSP monitoring was conducted as scheduled in the reporting month while the 24-hour TSP monitoring at CM_WF1a conducted on 9 May 2014 was suspended to 12 May 2014 by ET of DC/2007/24 due to the adverse weather. No Action/Limit Level exceedance was recorded. Details could be referred to Appendix G of the DC/2007/24 EM&A report.

Construction Noise Monitoring

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

Environmental Audit

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

Complaint and Prosecution

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

Recommendations

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

Water Impact

- To provide the maintenance of the sediment tank regularly and make sure the sediment tank is non-malfunctioned; and
- To avoid accumulation of stagnant / ponding water on site.

Air Quality

- To remain good site practice on handling excavated or dusty material for dust suppression (e.g. stockpiles of material shall be covered by tarpaulin).

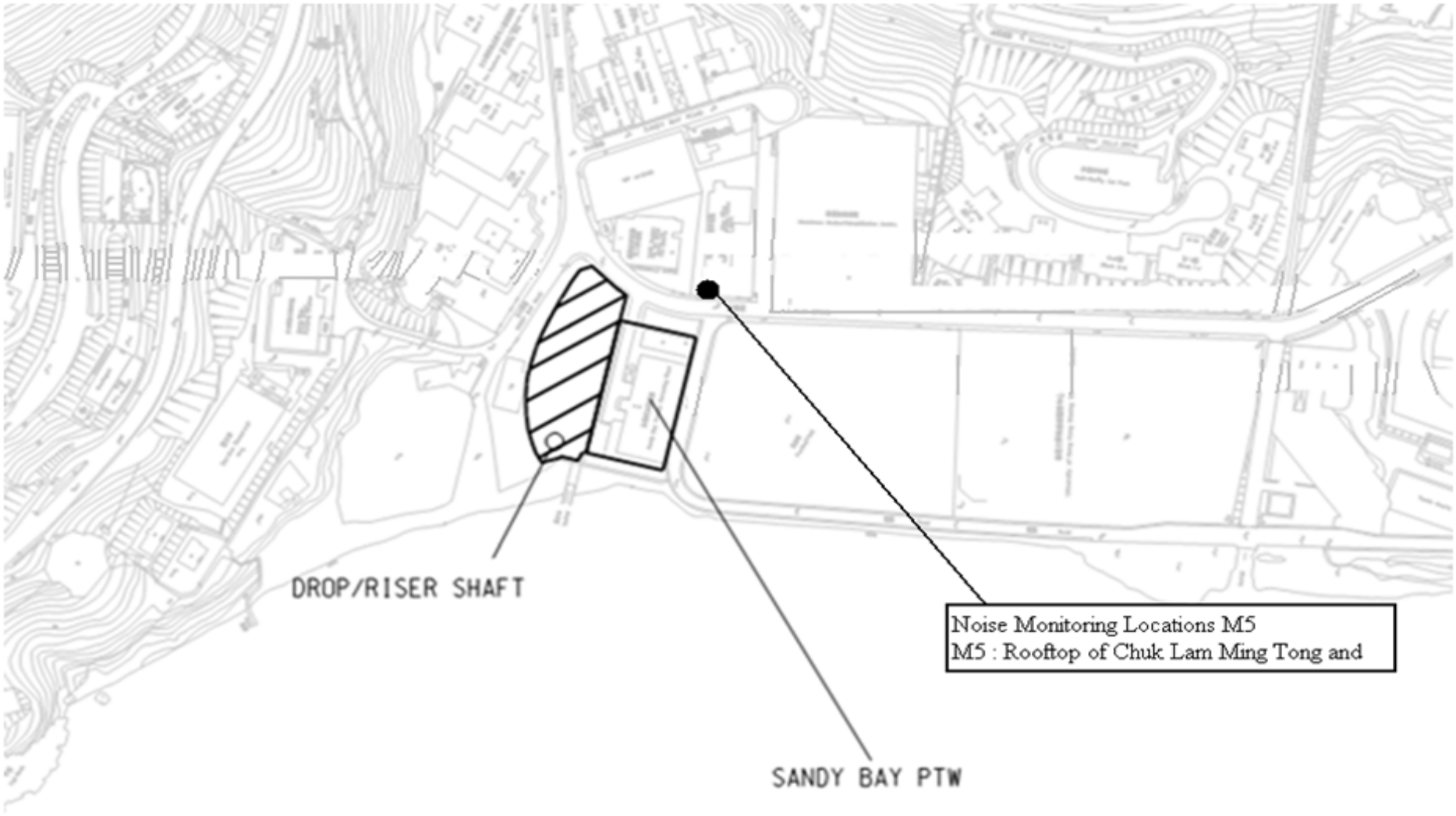
Waste/Chemical Management

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

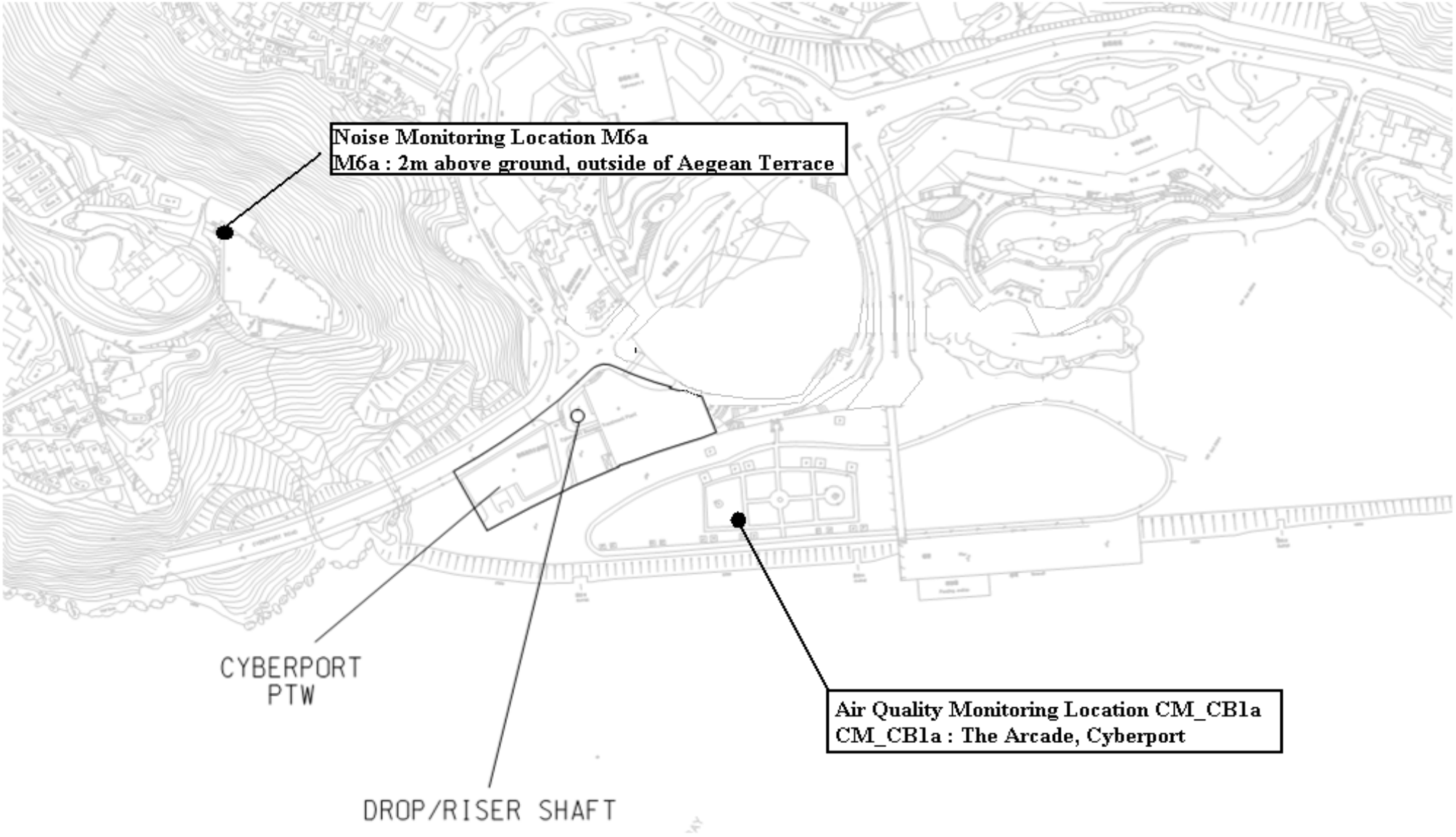
Landscape and Visual

- To avoid any heavy materials placed into tree protection zone; and
- To provide proper distance between vehicle parking and tree protection zone.

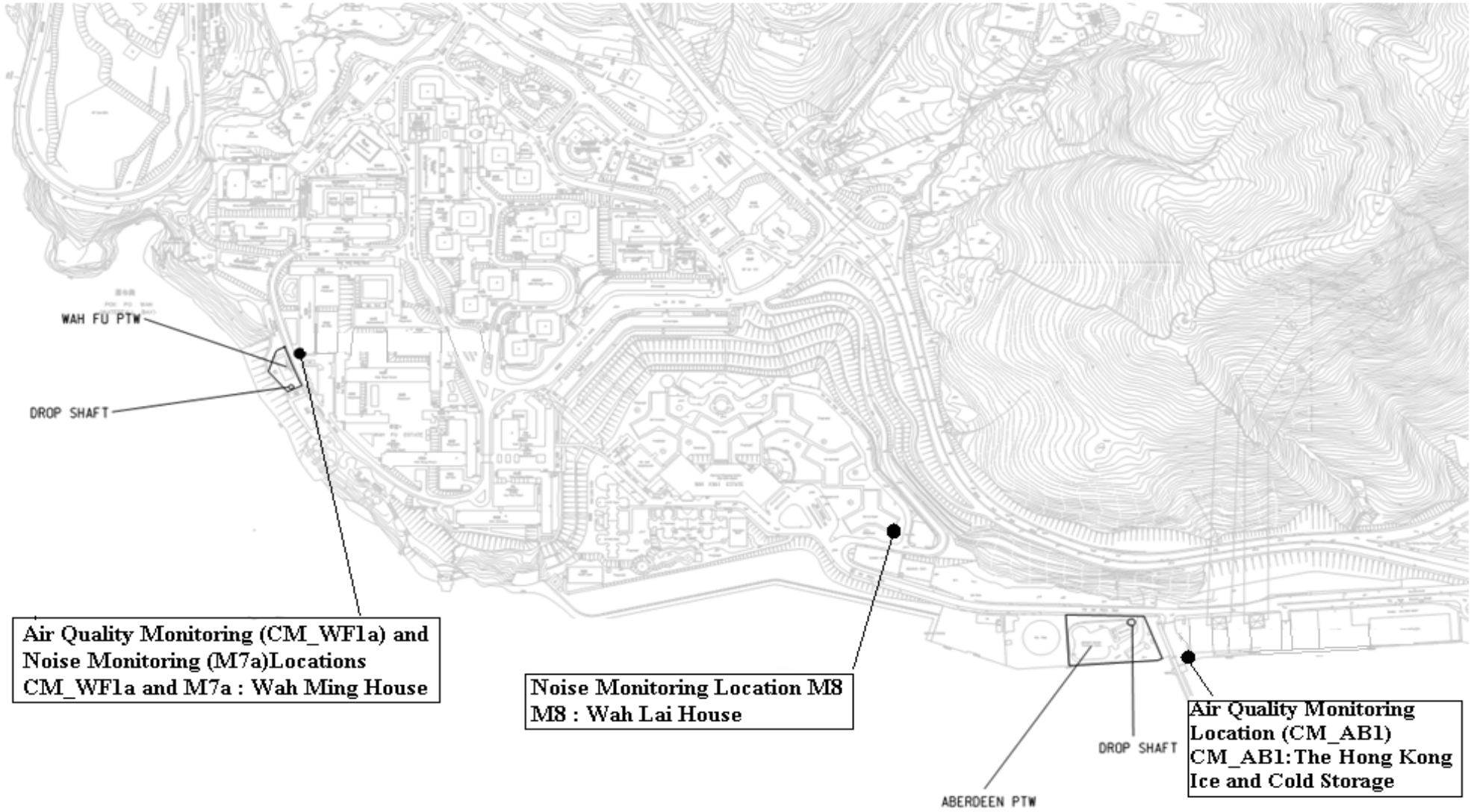
FIGURES



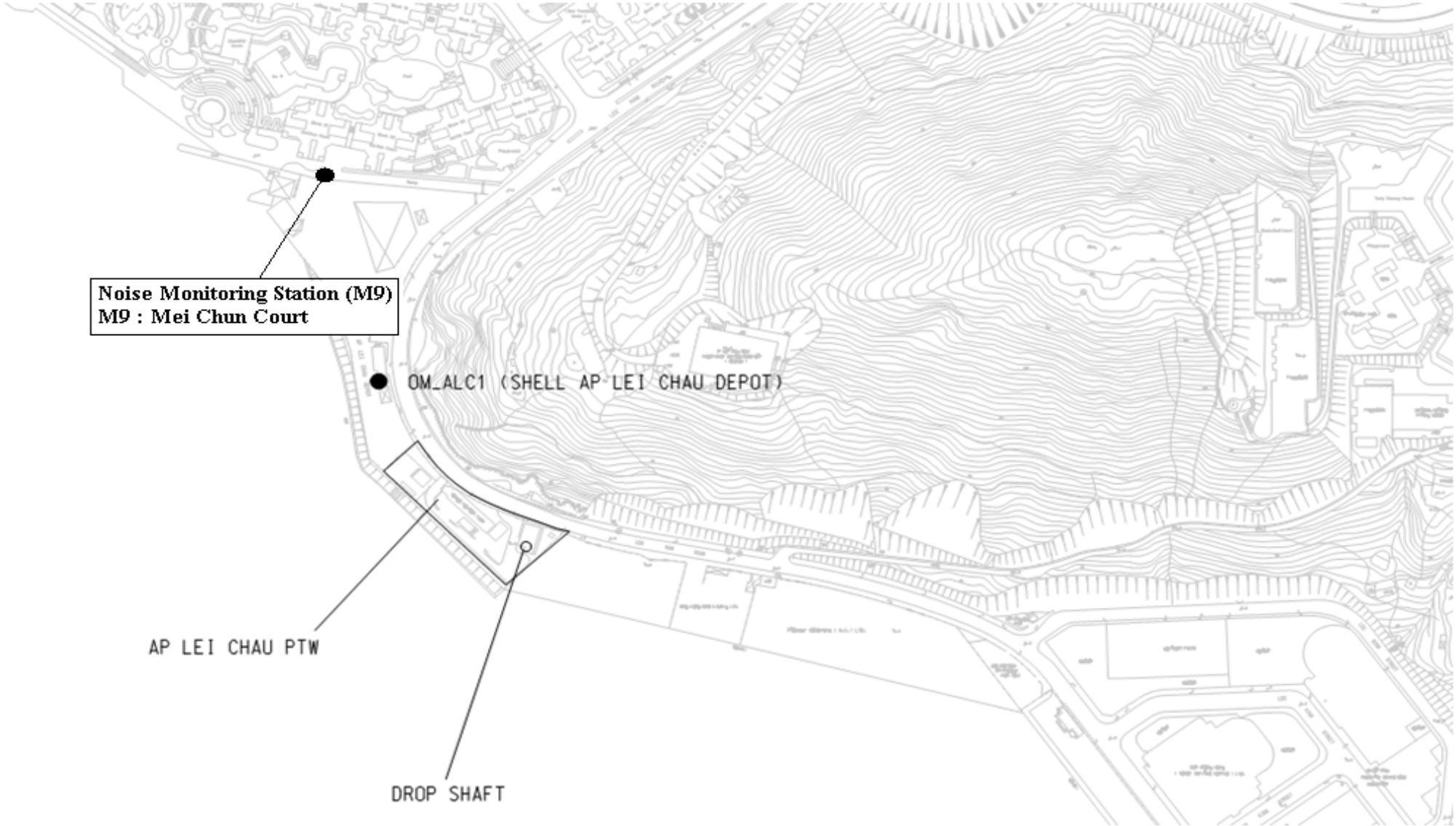
Title	Contract No: DC/2009/24 HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	Scale N.T.S	Project No. MA11060	CINOTECH
	General Location Plan of Sandy Bay PTW and Locations of Noise Monitoring Stations	Date 01/2012	Figure 1a	



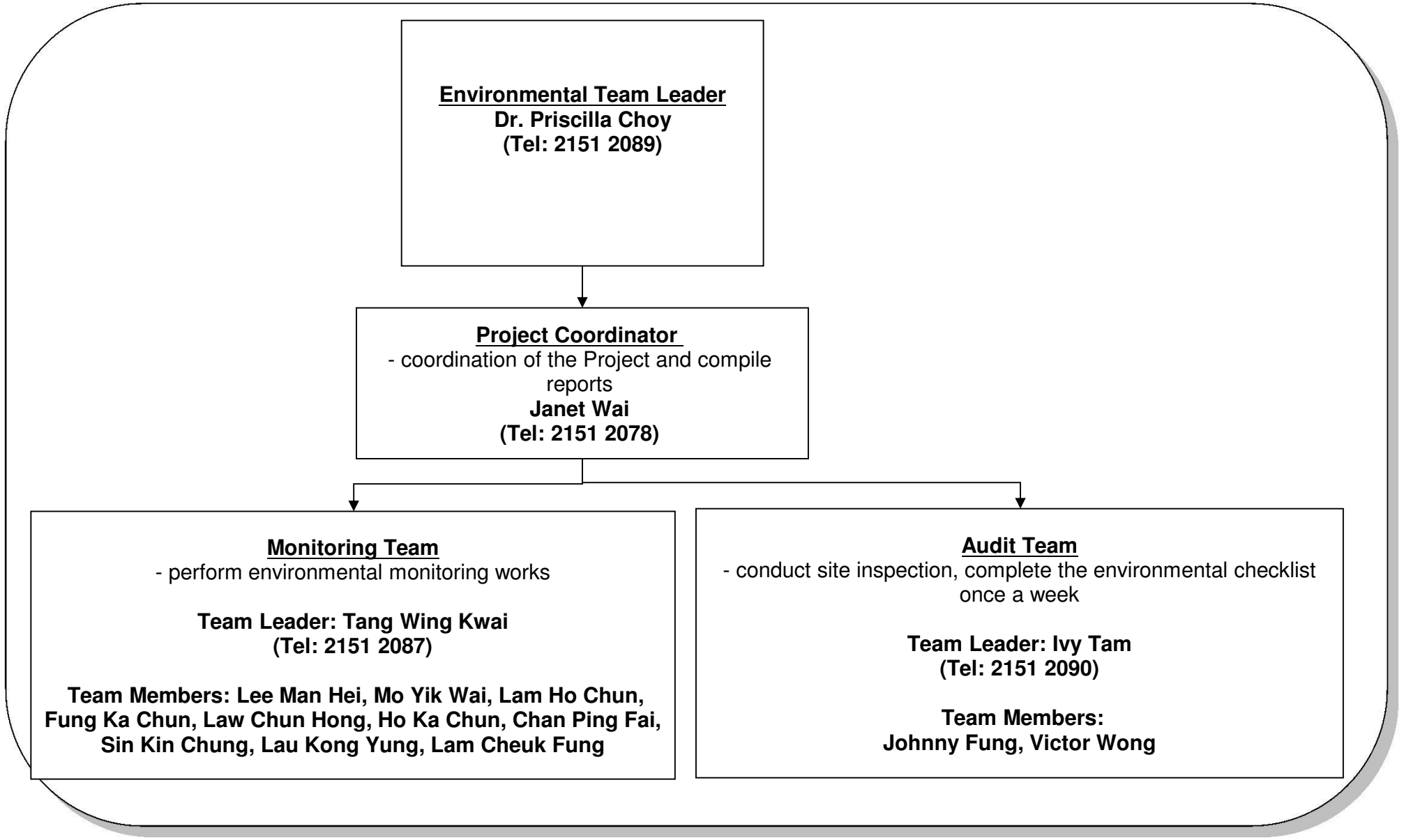
Title	Contract No: DC/2009/24 HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	Scale N.T.S	Project No. MA11060	CINOTECH
	General Location Plan of Cyberport PTW and Locations of Air Quality and Noise Monitoring Stations	Date 01/2012	Figure 1B	



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 Stage 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau ET's Organization Chart	Scale N.T.S	Project No. MA11060	CINOTECH
		Date Jul-13	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: May 2014

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	140502
Date	2 May 2014 (Friday)
Time	09:30 – 11:30

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

Ref. No.	Remarks/Observations	Related Item No.
140502-O01	***Part A - Water Quality*** • No environmental deficiency was identified during the site inspection. ***Part B – Landscape and Visual*** • The tree protective zone should be enlarged and free of construction materials. (SB-PTW, storage area) ***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: On previous audit session (Ref. No. 140425), all environmental deficiencies were improved by the Contractor. ***Remark:*** • N/A	B 1 & B 2

	Name	Signature	Date
Recorded by	Victor Wong		2 May 2014
Checked by	Ivy Tam		2 May 2014

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	140509
Date	9 May 2014 (Friday)
Time	09:30 – 11:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
140509-O01	• The water quality of the sediment tank at Abd-PTW should be fulfilled the requirement of the WPCO's wastewater discharge license. The Contractor was reminded to provide the maintenance of the sediment tank.	A 5iii
140509-R03	• Properly clear the ponding water at all PTWs.	A11
	Part B – Landscape and Visual	
140509-R02	• The vehicle should be parked far away the tree protection area to prevent the damage of the existing tree at Wah Fu-PTW.	B 1
	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: On previous audit session (Ref. No. 140502), all environmental deficiencies were improved by the Contractor.	
	Remark:	
	• N/A	

	Name	Signature	Date
Recorded by	Janet Wai		9 May 2014
Checked by	Dr. Priscilla Choy		9 May 2014

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	140516
Date	16 May 2014 (Friday)
Time	09:30 – 11:00

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

Ref. No.	Remarks/Observations	Related Item No.
140516-R01	***Part A - Water Quality*** • No environmental deficiency was identified during the site inspection. ***Part B – Landscape and Visual*** • No environmental deficiency was identified during the site inspection. ***Part C - Air Quality*** • No environmental deficiency was identified during the site inspection. ***Part D – Noise*** • No environmental deficiency was identified during the site inspection. ***Part E –Waste / Chemical Management*** • Properly clear the oil stain at Wah Fu-PTW. ***Part F - Permit / Licenses*** • No environmental deficiency was identified during the site inspection. ***Others*** • Follow-up on previous audit sessions: On previous audit session (Ref. No. 140509), all environmental deficiencies were improved by the Contractor. ***Remark:*** • N/A	E 7i

	Name	Signature	Date
Recorded by	Janet Wai		16 May 2014
Checked by	Dr. Priscilla Choy		16 May 2014

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	140523
Date	23 May 2014 (Friday)
Time	09:30 – 11:00

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
140523-O01	• The water quality of the sediment tank at Wah Fu-PTW should be fulfilled the requirement of the WPCO's wastewater discharge license before discharging out.	A 5iv
	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	
140523-R02	• Properly clear the general refuse at Cyberport-PTW.	E 1iii
140523-R03	• Properly clear the oil stain near the drip tray at Wah Fu-PTW.	E 7i
	Part F - Permit / Licenses	
	• No environmental deficiency was identified during the site inspection.	
	Others	
	• Follow-up on previous audit sessions: On previous audit session (Ref. No. 140516), all environmental deficiencies were improved by the Contractor.	
	Remark:	
	• N/A	

	Name	Signature	Date
Recorded by	Janet Wai		23 May 2014
Checked by	Dr. Priscilla Choy		23 May 2014

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	140530
Date	30 May 2014 (Friday)
Time	09:30 – 11:30

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

Ref. No.	Remarks/Observations	Related Item No.
	Part A - Water Quality	
	• No environmental deficiency was identified during the site inspection.	
	Part B – Landscape and Visual	
	• No environmental deficiency was identified during the site inspection.	
	Part C - Air Quality	
140530-R04	• The dusty materials should be cleared properly or covered by the imperivous materials at Cyberport-PTW and ALC-PTW.	C 6
	Part D – Noise	
	• No environmental deficiency was identified during the site inspection.	
	Part E –Waste / Chemical Management	
140530-O01	• The oil leakage was observed from the excavator at Abd-PTW. The Contractor was reminded to keep it in a good condition.	E 7i
140530-R02	• The chemical containers should be provided with the drip tray at Wah Fu-PTW and Abd-PTW.	E 7ii
140530-R03	• Properly clear the general refuse at Cyberport-PTW.	E 1iii
	Part F - Permit / Licenses	
	• No environmental deficiency was identified during the site inspection.	
	Others	
	• Follow-up on previous audit sessions: On previous audit session (Ref. No. 140523), outstanding item 140523-R02 is required to be followed up and remarked as 140530-R03 which will be reviewed in next weekly site inspection (Ref No. 140606).	
	Remark:	
	• N/A	

	Name	Signature	Date
Recorded by	Janet Wai		30 May 2014
Checked by	Dr. Priscilla Choy		30 May 2014

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 2014 (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	Special Waste
	[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]	[in '000ton]
Year2012	1.002910	0.000000	0.000000	0.000000	1.002910	0.000000	6.680000	0.070000	0.070000	0.100000	0.014000	2.406456
Year2013	4.264035	0.000000	0.000000	0.000000	4.264035	0.000000	10.750000	0.000000	0.000000	0.350000	0.064890	2.232710
JAN	0.433305	0	0	0	0.433305	0	0	0	0	0.06	0.00796	0.2032
FEB	0.040615	0	0	0	0.040615	0	0	0	0	0	0.00334	0.16182
MAR	1.061525	0	0	0	1.061525	0	0	0	0	0	0.00929	0.17807
APR	0.368995	0	0	0	0.368995	0	0	0	0	0	0.00434	0.15738
MAY	0.31617	0	0	0	0.316170	0	0	0	0	0	0.00862	0.15547
JUNE	0											
SUB-TOTAL	2.220610	0.000000	0.000000	0.000000	2.220610	0.000000	0.000000	0.000000	0.000000	0.060000	0.033550	0.855940
JULY	0											
AUG	0											
SEPT	0											
OCT	0											
NOV	0											
DEC	0											
TOTAL	7.487555	0.000000	0.000000	0.000000	7.487555	0.000000	17.430000	0.070000	0.070000	0.510000	0.112440	5.495106

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	Special Waste
[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]	[in '000ton]
8.31	1.544	1.73	0	8.496	0	30	1	1	4	0.956	9.6

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, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport		^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
	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.		^
Table	Erection of decorative screen hoarding compatible with the surrounding setting.	All construction sites	N/A

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
13.7			
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: May 2014

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

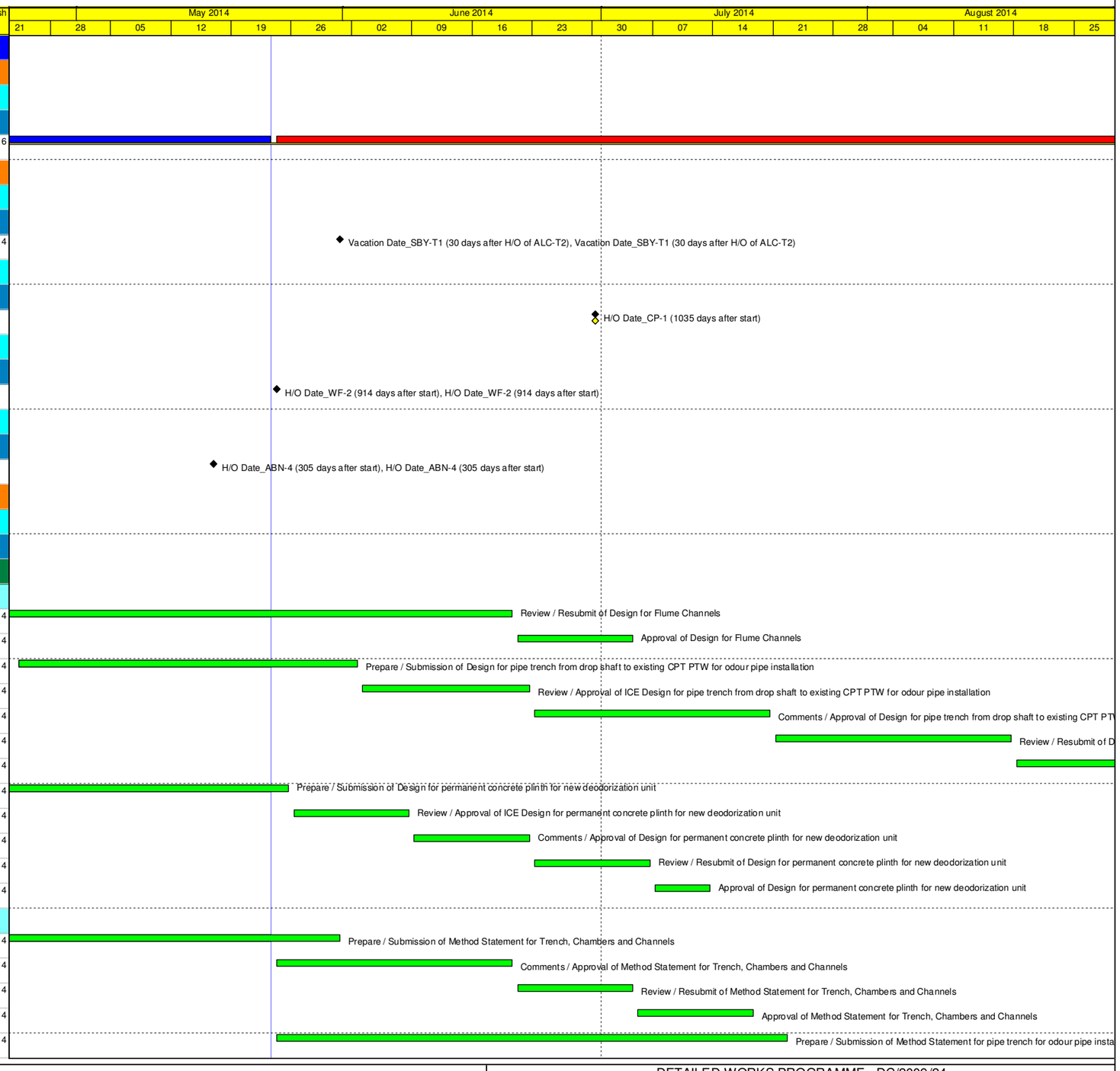
Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
CIR#2_130809	DSD's Preliminary Treatment Work (PTW) at Wah Fu	9th August 2013	One anonymous complainant complained about the noise generated from Contract DC/2009/24 construction site at Wah Fu PTW. The ETL of the Contract was informed of the complaint through the e-mail on 12th August 2013 and initiated the complaint investigation procedures. According to the information provided by the Contractor, major construction activities that contributed to the noise at Wah Fu during the time of complaint include: pipe pile wall construction.	There was no exceedance report received from Contract DC/2007/24 at noise monitoring stations M7a for Wah Fu PTW in August 2013. After complaint received, the Contractor has taken initiative to minimize noise nuisance to the nearby residents by implementation of mitigation measures as below: • Properly maintained and operated the construction plant (well-greased, damage and worn parts promptly replaced); • To install movable noise absorption screen located close to the operating PME/noisy works (noise sources); • To enclose or wrap the breaking tip with sound insulating materials to reduce the noise. According to the complaint, the Contractor had enhanced the movable noise barrier by increasing the height of the noise barrier and adding the upper sloped section which could further reduce the noise generated from construction works in Wah Fu PTW.	Closed
CIR#3_131119	DSD's Preliminary Treatment Work (PTW) at Wah Fu	19th November 2013	One anonymous complainant complained about the noise generated from Contract DC/2009/24 construction site at Wah Fu PTW. The ETL of the Contract was informed of the complaint through the e-mail on 29th November 2013 and initiated the complaint investigation procedures. According to the information provided by the Contractor, major construction activities that contributed to the noise at Wah Fu	There was no exceedance report received from Contract DC/2007/24 at noise monitoring stations M7a for Wah Fu PTW in November 2013. After complaint received, the Contractor has taken initiative to minimize noise nuisance to the nearby residents by implementation of mitigation measures as below: • Properly maintained and operated the construction plant (well-greased, damage and worn parts promptly replaced); • To install the erected noise absorption screen located close to the operating PME/noisy works (noise sources). According to the site diary, the Contractor had provided the sound insulating materials to enclose and wrap the breaking tip which could further reduce the noise generated from	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			during the time of complaint include: pipe pile wall construction, grout curtain construction and ELS in progress.	construction works in Wah Fu PTW.	

Remarks: No environmental complaint was received in May 2014.

APPENDIX H
CONSTRUCTION PROGRAMME

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
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	18-Nov-16
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		31-May-14
Cyberport PTW					
Possession / Vacation of Portions					
24MCPT00010	H/O Date_CP-1 (1035 days after start)	0%	0	30-Jun-14	
Wah Fu PTW					
Possession / Vacation of Portions					
24MWFU00030	H/O Date_WF-2 (914 days after start)	0%	0	24-May-14	
Aberdeen PTW					
Possession / Vacation of Portions					
24MABN00070	H/O Date_ABN-4 (305 days after start)	100%	0	17-May-14 A	
Civil & Geo. Submission					
Contractor's Design, Submission / Approval & Procurement					
Technical Information & Drawings					
Cyberport					
Major Technical Data / Civil Works Design					
24DCPT00294	Review / Resubmit of Design for Flume Channels	0%	28	28-Jul-13 A	20-Jun-14
24DCPT00295	Approval of Design for Flume Channels	0%	14	21-Jun-14	04-Jul-14
24DCPT00300	Prepare / Submission of Design for pipe trench from drop shaft to existing CPT PTW for odour pipe installation	0%	40	24-Apr-14 A	02-Jun-14
24DCPT00310	Review / Approval of ICE Design for pipe trench from drop shaft to existing CPT PTW for odour pipe installation	0%	20	03-Jun-14	22-Jun-14
24DCPT00320	Comments / Approval of Design for pipe trench from drop shaft to existing CPT PTW for odour pipe installation	0%	28	23-Jun-14	20-Jul-14
24DCPT00330	Review / Resubmit of Design for pipe trench from drop shaft to existing CPT PTW for odour pipe installation	0%	28	21-Jul-14	17-Aug-14
24DCPT00340	Approval of Design for pipe trench from drop shaft to existing CPT PTW for odour pipe installation	0%	14	18-Aug-14	31-Aug-14
24DCPT00346	Prepare / Submission of Design for permanent concrete plinth for new deodorization unit	0%	30	01-Mar-14 A	25-May-14
24DCPT00347	Review / Approval of ICE Design for permanent concrete plinth for new deodorization unit	0%	14	26-May-14	08-Jun-14
24DCPT00348	Comments / Approval of Design for permanent concrete plinth for new deodorization unit	0%	14	09-Jun-14	22-Jun-14
24DCPT00349	Review / Resubmit of Design for permanent concrete plinth for new deodorization unit	0%	14	23-Jun-14	06-Jul-14
24DCPT00350	Approval of Design for permanent concrete plinth for new deodorization unit	0%	7	07-Jul-14	13-Jul-14
Method Statement					
24DCPT02160	Prepare / Submission of Method Statement for Trench, Chambers and Channels	0%	60	23-Feb-14 A	31-May-14
24DCPT02170	Comments / Approval of Method Statement for Trench, Chambers and Channels	0%	28	24-May-14	20-Jun-14
24DCPT02180	Review / Resubmit of Method Statement for Trench, Chambers and Channels	0%	14	21-Jun-14	04-Jul-14
24DCPT02190	Approval of Method Statement for Trench, Chambers and Channels	0%	14	05-Jul-14	18-Jul-14
24DCPT02200	Prepare / Submission of Method Statement for pipe trench for odour pipe installation	0%	60	24-May-14	22-Jul-14



Start Date: 25-Jun-11

Finish Date: 18-Nov-17

Date Date: 23-May-14

Run Date: 26-May-14

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

HATSS2A Contract No. DC/2009/24

3 MONTHS ROLLING PROGRAMME

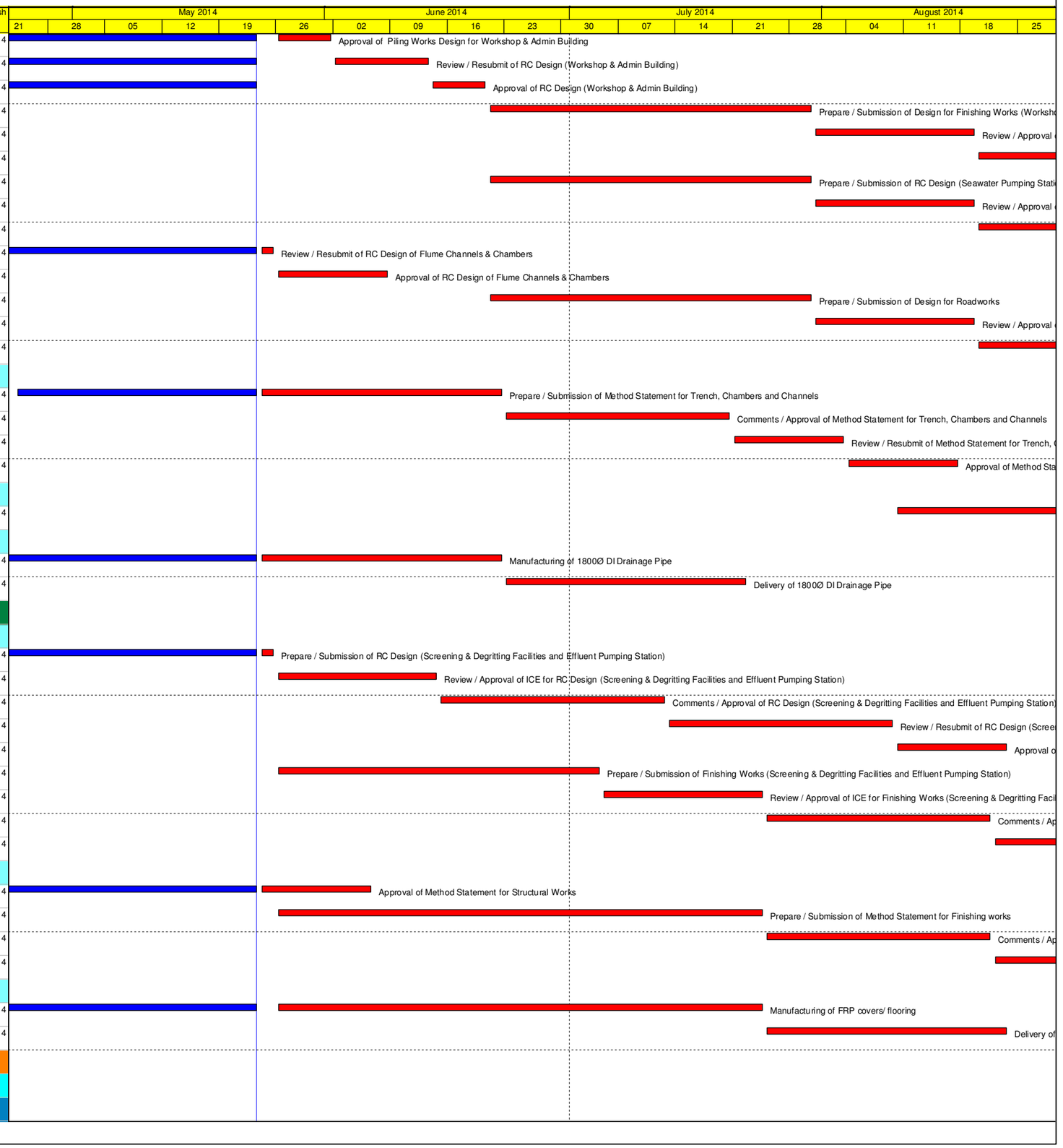
MAY 2014

DETAILED WORKS PROGRAMME - DC/2009/24

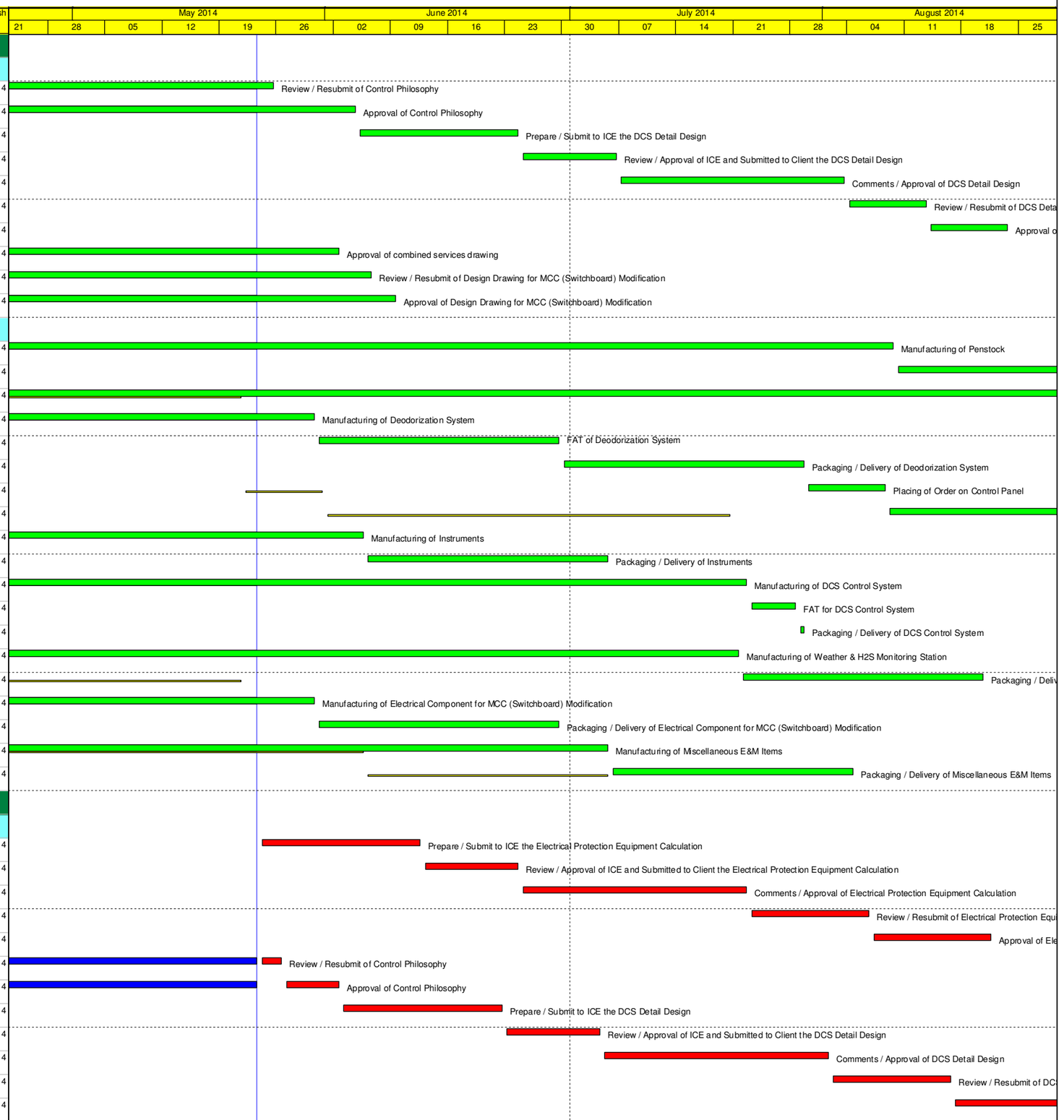
Date	Revision	Checked	Approved
30-Mar-12	DWP - REVISION 0		
14-Dec-12	DWP - REVISION 2		
23-May-14	UDWP - REVISION 2		

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24DCPT02210	Comments / Approval of Method Statement for pipe trench for odour pipe installation	0%	28	23-Jul-14	19-Aug-14
24DCPT02220	Review / Resubmit of Method Statement for pipe trench for odour pipe installation	0%	14	20-Aug-14	02-Sep-14
Order / Manufacturing / Shipment / Delivery					
24DCPT02360	Manufacturing of 700Ø DI Pipe, valves and accessories	0%	90	11-Feb-14 A	12-Jun-14
24DCPT02370	Delivery of 700Ø DI Pipe, valves and accessories	0%	21	13-Jun-14	03-Jul-14
Wah Fu					
Major Techinical Data / Civil Works Design					
24DWFU00130	Review / Resubmit of Piling Works Design for Fine Screen & Grit Trap Building	98%	28	22-Dec-11 A	25-May-14
24DWFU00140	Approval of Piling Works Design for Fine Screen & Grit Trap Building	50%	14	23-May-12 A	27-May-14
24DWFU00160	Review / Approval of ICE for RC Design (Fine Screen & Grit Trap Building)	85%	20	08-Feb-12 A	29-May-14
24DWFU00180	Review / Resubmit of RC Design (Fine Screen & Grit Trap Building)	85%	28	08-Feb-12 A	31-May-14
24DWFU00190	Approval of RC Design (Fine Screen & Grit Trap Building)	50%	14	18-Jul-12 A	07-Jun-14
24DWFU00200	Prepare / Submission of Design for Finishing Works (Fine Screen & Grit Trap Building)	0%	40	01-Jun-14	10-Jul-14
24DWFU00210	Review / Approval of ICE for Design of Finishing Works (Fine Screen & Grit Trap Building)	0%	20	11-Jul-14	30-Jul-14
24DWFU00220	Comments / Approval of Design for Finishing Works (Fine Screen & Grit Trap Building)	0%	28	31-Jul-14	27-Aug-14
24DWFU00400	Prepare / Submission of Design for Flume Channels & Chambers	0%	40	08-Jun-14	17-Jul-14
24DWFU00410	Review / Approval of ICE for Design for Flume Channels & Chambers	0%	20	18-Jul-14	06-Aug-14
24DWFU00420	Comments / Approval of Design for Flume Channels & Chambers	0%	28	07-Aug-14	03-Sep-14
Method Statement for Major Works					
24DWFU02090	Comments / Approval of Method Statement for Structural Works	0%	28	20-Feb-14 A	24-Jun-14
24DWFU02100	Review / Resubmit of Method Statement for Structural Works	0%	14	28-May-14	10-Jun-14
24DWFU02110	Approval of Method Statement for Structural Works	0%	14	11-Jun-14	24-Jun-14
24DWFU02120	Prepare / Submission of Method Statement for Finishing works	0%	60	01-Jun-14	30-Jul-14
24DWFU02130	Comments / Approval of Method Statement for Finishing works	0%	28	31-Jul-14	27-Aug-14
24DWFU02160	Prepare / Submission of Method Statement for Trench, Chambers and Channels	0%	60	06-Jul-14	03-Sep-14
Material Submission / Approval					
24DWFU02320	Prepare / Submission of Material Approval for Roller Shutter	0%	28	01-Jun-14	28-Jun-14
24DWFU02330	Review / Approval of Material Approval for Roller Shutter	0%	28	29-Jun-14	26-Jul-14
24DWFU02340	Review / Resubmit of Material Approval for Roller Shutter	0%	14	27-Jul-14	09-Aug-14
24DWFU02350	Approval of Material Approval for Roller Shutter	0%	14	10-Aug-14	23-Aug-14
Order / Manufacturing / Shipment / Delivery					
24DWFU02400	Placing order for Roller Shutter	0%	10	14-Aug-14	23-Aug-14
24DWFU02430	Placing order for FRP cover/flooring	0%	10	24-May-14*	02-Jun-14
24DWFU02440	Manufacturing of FRP cover/flooring	0%	90	03-Jun-14	31-Aug-14
Aberdeen					
Temporary Works Design					
24DABN00650	Prepare / Submission of Tech. Data and Shop Drawings for Construction of Temp. Office	0%	40	23-Jun-14	01-Aug-14
24DABN00660	Review / Approval of ICE Design for Construction of Temp. Office	0%	20	02-Aug-14	21-Aug-14
24DABN00670	Comments / Approval of Tech. Data and Shop Drawings for Construction of Temp. Office	0%	28	22-Aug-14	18-Sep-14
Method Statement for Temporary Works					
24DABN02670	Prepare / Submission of Method Statement for construction of Temp. Office	0%	30	23-Jun-14	22-Jul-14
24DABN02680	Comments / Approval of Method Statement for construction of Temp. Office	0%	14	23-Jul-14	05-Aug-14
24DABN02690	Review / Resubmit of Method Statement for construction of Temp. Office	0%	14	06-Aug-14	19-Aug-14
24DABN02700	Approval of Method Statement for construction of Temp. Office	0%	14	20-Aug-14	02-Sep-14
Major Technical Data / Civil Works Design					
24DABN00180	Review / Resubmit of Piling Works Design for Workshop & Admin Building	0%	28	22-Dec-11 A	25-May-14

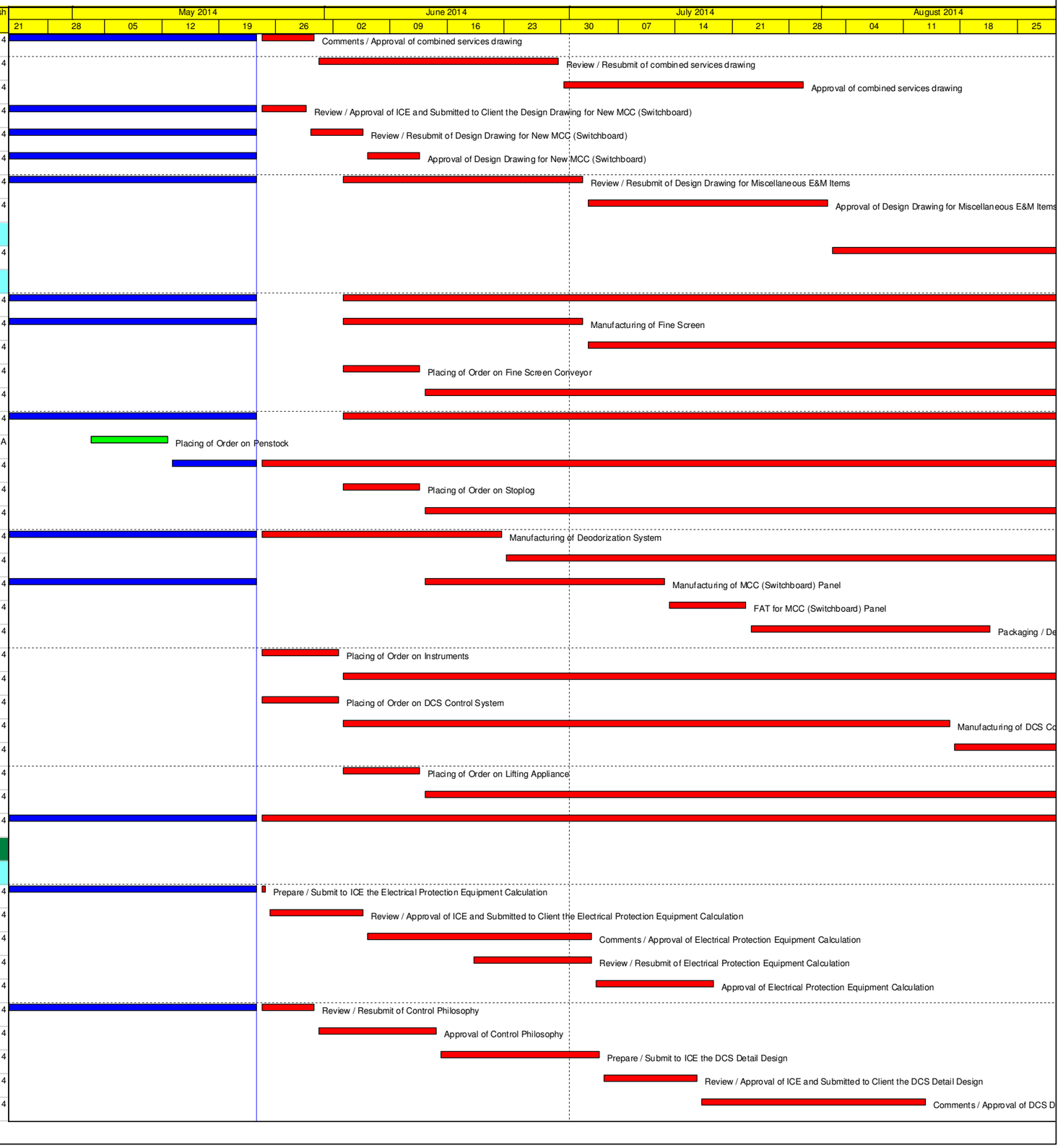
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24DABN00190	Approval of Piling Works Design for Workshop & Admin Building	0%	14	24-Mar-12 A	01-Jun-14
24DABN00230	Review / Resubmit of RC Design (Workshop & Admin Building)	0%	28	07-Feb-12 A	13-Jun-14
24DABN00240	Approval of RC Design (Workshop & Admin Building)	0%	14	18-Jul-12 A	20-Jun-14
24DABN00250	Prepare / Submission of Design for Finishing Works (Workshop & Admin Building)	0%	40	21-Jun-14	30-Jul-14
24DABN00260	Review / Approval of ICE Design for Finishing Works (Workshop & Admin Building)	0%	20	31-Jul-14	19-Aug-14
24DABN00270	Comments / Approval of Design for Finishing Works (Workshop & Admin Building)	0%	28	20-Aug-14	16-Sep-14
24DABN00300	Prepare / Submission of RC Design (Seawater Pumping Station)	0%	40	21-Jun-14*	30-Jul-14
24DABN00310	Review / Approval of ICE RC Design (Seawater Pumping Station)	0%	20	31-Jul-14	19-Aug-14
24DABN00320	Comments / Approval of RC Design (Seawater Pumping Station)	0%	28	20-Aug-14	16-Sep-14
24DABN00380	Review / Resubmit of RC Design of Flume Channels & Chambers	0%	28	13-Jul-13 A	25-May-14
24DABN00390	Approval of RC Design of Flume Channels & Chambers	0%	14	26-May-14	08-Jun-14
24DABN00450	Prepare / Submission of Design for Roadworks	0%	40	21-Jun-14	30-Jul-14
24DABN00460	Review / Approval of ICE Design for Roadworks	0%	20	31-Jul-14	19-Aug-14
24DABN00470	Comments / Approval of Design for Roadworks	0%	28	20-Aug-14	16-Sep-14
Method Statement for Major Works					
24DABN02160	Prepare / Submission of Method Statement for Trench, Chambers and Channels	0%	60	24-Apr-14 A	22-Jun-14
24DABN02170	Comments / Approval of Method Statement for Trench, Chambers and Channels	0%	28	23-Jun-14	20-Jul-14
24DABN02180	Review / Resubmit of Method Statement for Trench, Chambers and Channels	0%	14	21-Jul-14	03-Aug-14
24DABN02190	Approval of Method Statement for Trench, Chambers and Channels	0%	14	04-Aug-14	17-Aug-14
Material Submission / Approval					
24DABN02360	Prepare / Submission of Material approval for Roller Shutter	0%	60	10-Aug-14	08-Oct-14
Order / Manufacturing / Shipment / Delivery					
24DABN02590	Manufacturing of 1800Ø DI Drainage Pipe	100%	90	11-Dec-12 A	22-Jun-14
24DABN02600	Delivery of 1800Ø DI Drainage Pipe	0%	30	23-Jun-14	22-Jul-14
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	25-May-14
24DALC00110	Review / Approval of ICE for RC Design (Screening & Degritting Facilities and Effluent Pumping Station)	0%	20	26-May-14	14-Jun-14
24DALC00120	Comments / Approval of RC Design (Screening & Degritting Facilities and Effluent Pumping Station)	0%	28	15-Jun-14	12-Jul-14
24DALC00130	Review / Resubmit of RC Design (Screening & Degritting Facilities and Effluent Pumping Station)	0%	28	13-Jul-14	09-Aug-14
24DALC00140	Approval of RC Design (Screening & Degritting Facilities and Effluent Pumping Station)	0%	14	10-Aug-14	23-Aug-14
24DALC00150	Prepare / Submission of Finishing Works (Screening & Degritting Facilities and Effluent Pumping Station)	0%	40	26-May-14	04-Jul-14
24DALC00160	Review / Approval of ICE for Finishing Works (Screening & Degritting Facilities and Effluent Pumping Station)	0%	20	05-Jul-14	24-Jul-14
24DALC00170	Comments / Approval of Finishing Works (Screening & Degritting Facilities and Effluent Pumping Station)	0%	28	25-Jul-14	21-Aug-14
24DALC00180	Review / Resubmit of Finishing Works (Screening & Degritting Facilities and Effluent Pumping Station)	0%	28	22-Aug-14	18-Sep-14
Method Statement for Major Works					
24DALC02110	Approval of Method Statement for Structural Works	0%	14	15-Feb-14 A	06-Jun-14
24DALC02120	Prepare / Submission of Method Statement for Finishing works	0%	60	26-May-14	24-Jul-14
24DALC02130	Comments / Approval of Method Statement for Finishing works	0%	28	25-Jul-14	21-Aug-14
24DALC02140	Review / Resubmit of Method Statement for Finishing works	0%	14	22-Aug-14	04-Sep-14
Order / Manufacturing / Shipment / Delivery					
24DALC02610	Manufacturing of FRP covers/ flooring	0%	90	06-May-13 A	24-Jul-14
24DALC02620	Delivery of FRP covers/ flooring	0%	30	25-Jul-14	23-Aug-14
Electrical and Mechanical Submission					
Contractor's Design, Submission / Approval and Procurement					
Technical Information & Drawings					



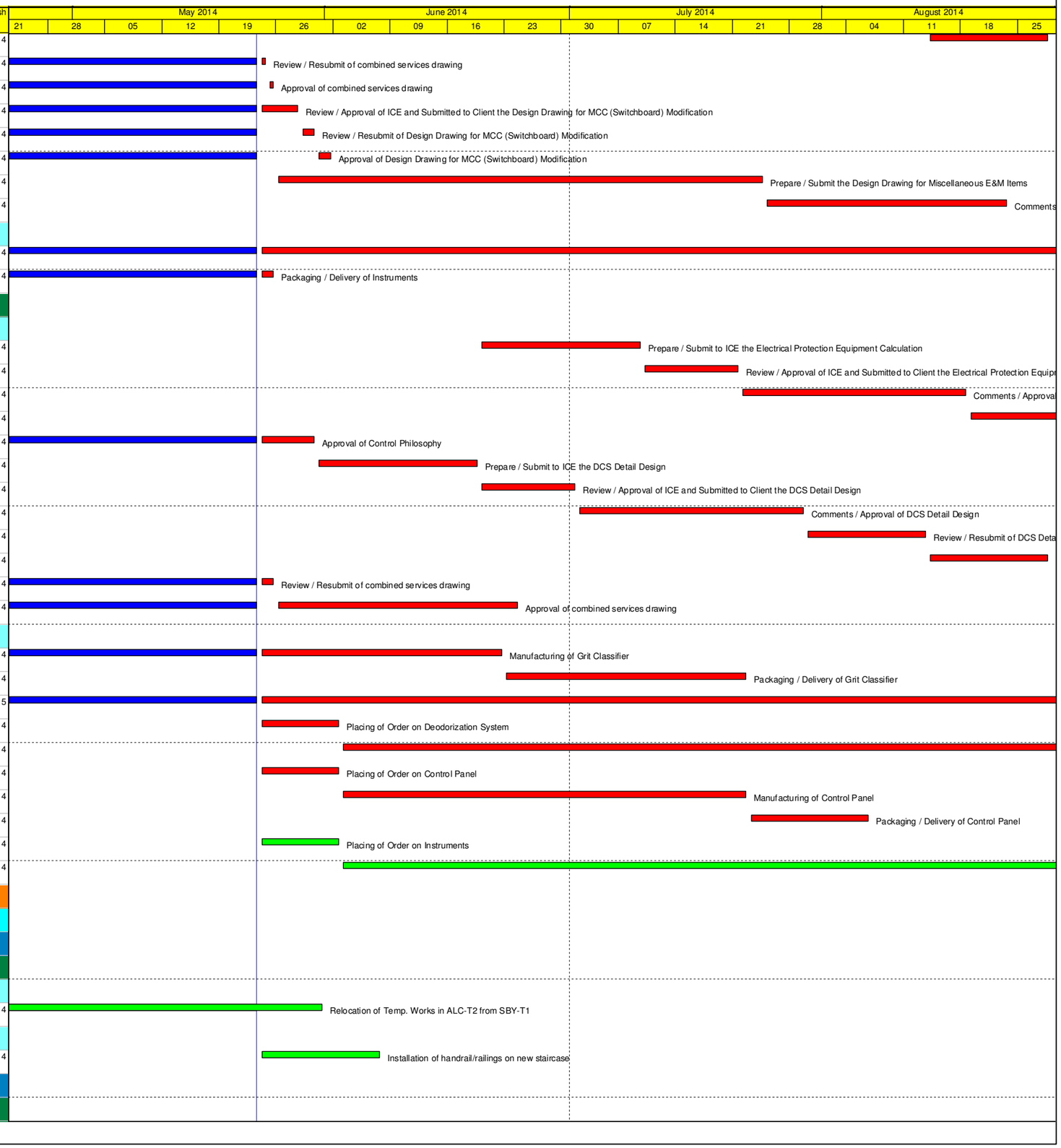
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
Cyberport					
Major Technical Data / E&M Works Design					
24DCPT03420	Review / Resubmit of Control Philosophy	0%	10	08-Feb-12 A	25-May-14
24DCPT03430	Approval of Control Philosophy	100%	10	10-May-12 A	04-Jun-14
24DCPT03440	Prepare / Submit to ICE the DCS Detail Design	0%	20	05-Jun-14	24-Jun-14
24DCPT03450	Review / Approval of ICE and Submitted to Client the DCS Detail Design	0%	12	25-Jun-14	06-Jul-14
24DCPT03460	Comments / Approval of DCS Detail Design	0%	28	07-Jul-14	03-Aug-14
24DCPT03470	Review / Resubmit of DCS Detail Design	0%	10	04-Aug-14	13-Aug-14
24DCPT03480	Approval of DCS Detail Design	0%	10	14-Aug-14	23-Aug-14
24DCPT03484	Approval of combined services drawing	0%	30	09-Apr-13 A	02-Jun-14
24DCPT03488	Review / Resubmit of Design Drawing for MCC (Switchboard) Modification	100%	10	27-Sep-12 A	06-Jun-14
24DCPT03489	Approval of Design Drawing for MCC (Switchboard) Modification	0%	10	17-Jan-13 A	09-Jun-14
Order / Manufacturing / Shipment / Delivery					
24PCPT01040	Manufacturing of Penstock	0%	140	26-Jan-14 A	09-Aug-14
24PCPT01050	Packaging / Delivery of Penstock	0%	30	10-Aug-14	08-Sep-14
24PCPT01070	Manufacturing of Stoplog	0%	140	26-Jan-14 A	10-Sep-14
24PCPT01100	Manufacturing of Deodorization System	0%	160	11-Mar-13 A	30-May-14
24PCPT01105	FAT of Deodorization System	0%	30	31-May-14	29-Jun-14
24PCPT01110	Packaging / Delivery of Deodorization System	0%	30	30-Jun-14	29-Jul-14
24PCPT01120	Placing of Order on Control Panel	0%	10	30-Jul-14*	08-Aug-14
24PCPT01130	Manufacturing of Control Panel	0%	50	09-Aug-14	27-Sep-14
24PCPT01160	Manufacturing of Instruments	0%	110	18-Nov-13 A	05-Jun-14
24PCPT01170	Packaging / Delivery of Instruments	0%	30	06-Jun-14	05-Jul-14
24PCPT01190	Manufacturing of DCS Control System	100%	75	18-Nov-13 A	22-Jul-14
24PCPT01200	FAT for DCS Control System	0%	6	23-Jul-14	28-Jul-14
24PCPT01210	Packaging / Delivery of DCS Control System	0%	1	29-Jul-14	29-Jul-14
24PCPT01230	Manufacturing of Weather & H2S Monitoring Station	0%	140	13-Nov-13 A	21-Jul-14
24PCPT01240	Packaging / Delivery of Weather & H2S Monitoring Station	0%	30	22-Jul-14	20-Aug-14
24PCPT01242	Manufacturing of Electrical Component for MCC (Switchboard) Modification	100%	90	12-Apr-13 A	30-May-14
24PCPT01243	Packaging / Delivery of Electrical Component for MCC (Switchboard) Modification	0%	30	31-May-14	29-Jun-14
24PCPT01245	Manufacturing of Miscellaneous E&M Items	60%	90	08-Mar-14 A	05-Jul-14
24PCPT01246	Packaging / Delivery of Miscellaneous E&M Items	0%	30	06-Jul-14	04-Aug-14
Wah Fu					
Major Technical Data / E&M Works Design					
24DWFU04080	Prepare / Submit to ICE the Electrical Protection Equipment Calculation	0%	20	24-May-14	12-Jun-14
24DWFU04090	Review / Approval of ICE and Submitted to Client the Electrical Protection Equipment Calculation	0%	12	13-Jun-14	24-Jun-14
24DWFU04100	Comments / Approval of Electrical Protection Equipment Calculation	0%	28	25-Jun-14	22-Jul-14
24DWFU04110	Review / Resubmit of Electrical Protection Equipment Calculation	0%	15	23-Jul-14	06-Aug-14
24DWFU04120	Approval of Electrical Protection Equipment Calculation	0%	15	07-Aug-14	21-Aug-14
24DWFU04160	Review / Resubmit of Control Philosophy	100%	15	08-Feb-12 A	26-May-14
24DWFU04170	Approval of Control Philosophy	0%	15	08-May-12 A	02-Jun-14
24DWFU04180	Prepare / Submit to ICE the DCS Detail Design	0%	20	03-Jun-14	22-Jun-14
24DWFU04190	Review / Approval of ICE and Submitted to Client the DCS Detail Design	0%	12	23-Jun-14	04-Jul-14
24DWFU04200	Comments / Approval of DCS Detail Design	0%	28	05-Jul-14	01-Aug-14
24DWFU04210	Review / Resubmit of DCS Detail Design	0%	15	02-Aug-14	16-Aug-14
24DWFU04220	Approval of DCS Detail Design	0%	15	17-Aug-14	31-Aug-14



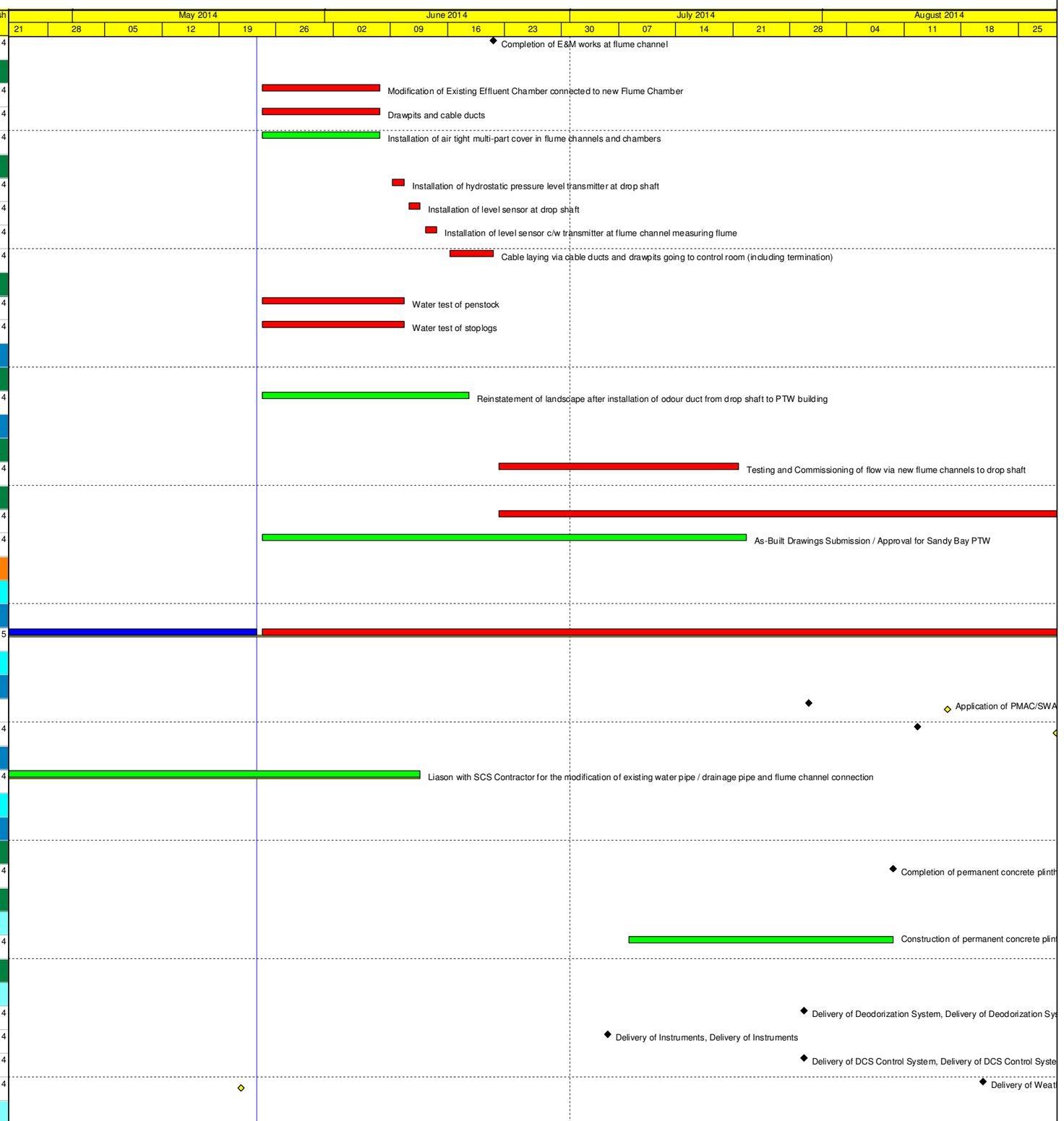
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24DWFU04222	Comments / Approval of combined services drawing	50%	30	06-Jun-12 A	30-May-14
24DWFU04223	Review / Resubmit of combined services drawing	0%	30	31-May-14	29-Jun-14
24DWFU04224	Approval of combined services drawing	0%	30	30-Jun-14	29-Jul-14
24DWFU04226	Review / Approval of ICE and Submitted to Client the Design Drawing for New MCC (Switchboard)	0%	12	22-Sep-12 A	29-May-14
24DWFU04228	Review / Resubmit of Design Drawing for New MCC (Switchboard)	0%	15	22-Sep-12 A	05-Jun-14
24DWFU04229	Approval of Design Drawing for New MCC (Switchboard)	0%	15	12-Dec-12 A	12-Jun-14
24DWFU04232	Review / Resubmit of Design Drawing for Miscellaneous E&M Items	0%	30	08-Dec-13 A	02-Jul-14
24DWFU04233	Approval of Design Drawing for Miscellaneous E&M Items	0%	30	03-Jul-14	01-Aug-14
Equipment Submission/Approval					
24DWFU03821	Prepare / Submission of Miscellaneous E&M Items	0%	40	02-Aug-14	10-Sep-14
Order / Manufacturing / Shipment / Delivery					
24PWFU01190	Manufacturing of Coarse Screen	0%	145	08-May-13 A	31-Aug-14
24PWFU01220	Manufacturing of Fine Screen	0%	145	08-May-13 A	02-Jul-14
24PWFU01225	FAT of Fine Screen	0%	90	03-Jul-14	30-Sep-14
24PWFU01231	Placing of Order on Fine Screen Conveyor	0%	10	03-Jun-14*	12-Jun-14
24PWFU01232	Manufacturing of Fine Screen Conveyor	0%	145	13-Jun-14	04-Nov-14
24PWFU01280	Manufacturing of Grit Removal Facilities	0%	175	22-Jul-13 A	10-Sep-14
24PWFU01330	Placing of Order on Penstock	100%	10	03-May-14 A	12-May-14 A
24PWFU01340	Manufacturing of Penstock	0%	140	13-May-14 A	29-Sep-14
24PWFU01360	Placing of Order on Stoplog	0%	10	03-Jun-14*	12-Jun-14
24PWFU01370	Manufacturing of Stoplog	0%	140	13-Jun-14	30-Oct-14
24PWFU01400	Manufacturing of Deodorization System	0%	140	14-Mar-13 A	22-Jun-14
24PWFU01405	FAT of Deodorization System	0%	90	23-Jun-14	20-Sep-14
24PWFU01430	Manufacturing of MCC (Switchboard) Panel	0%	190	21-Jun-13 A	12-Jul-14
24PWFU01440	FAT for MCC (Switchboard) Panel	0%	10	13-Jul-14	22-Jul-14
24PWFU01450	Packaging / Delivery of MCC (Switchboard) Panel	0%	30	23-Jul-14	21-Aug-14
24PWFU01490	Placing of Order on Instruments	0%	10	24-May-14*	02-Jun-14
24PWFU01500	Manufacturing of Instruments	0%	110	03-Jun-14	20-Sep-14
24PWFU01520	Placing of Order on DCS Control System	0%	10	24-May-14*	02-Jun-14
24PWFU01530	Manufacturing of DCS Control System	0%	75	03-Jun-14	16-Aug-14
24PWFU01540	FAT for DCS Control System	0%	30	17-Aug-14	15-Sep-14
24PWFU01560	Placing of Order on Lifting Appliance	0%	10	03-Jun-14*	12-Jun-14
24PWFU01570	Manufacturing of Lifting Appliance	0%	80	13-Jun-14	31-Aug-14
24PWFU01630	Manufacturing of Emergency Generator Set	20%	200	07-Apr-13 A	20-Sep-14
Aberdeen					
Major Technical Data / E&M Works Design					
24DABN03780	Prepare / Submit to ICE the Electrical Protection Equipment Calculation	0%	20	25-Jul-13 A	24-May-14
24DABN03790	Review / Approval of ICE and Submitted to Client the Electrical Protection Equipment Calculation	0%	12	25-May-14	05-Jun-14
24DABN03800	Comments / Approval of Electrical Protection Equipment Calculation	0%	28	06-Jun-14	03-Jul-14
24DABN03810	Review / Resubmit of Electrical Protection Equipment Calculation	0%	15	19-Jun-14	03-Jul-14
24DABN03820	Approval of Electrical Protection Equipment Calculation	0%	15	04-Jul-14	18-Jul-14
24DABN03860	Review / Resubmit of Control Philosophy	0%	15	06-Jun-12 A	30-May-14
24DABN03870	Approval of Control Philosophy	0%	15	31-May-14	14-Jun-14
24DABN03880	Prepare / Submit to ICE the DCS Detail Design	0%	20	15-Jun-14	04-Jul-14
24DABN03890	Review / Approval of ICE and Submitted to Client the DCS Detail Design	0%	12	05-Jul-14	16-Jul-14
24DABN03900	Comments / Approval of DCS Detail Design	0%	28	17-Jul-14	13-Aug-14



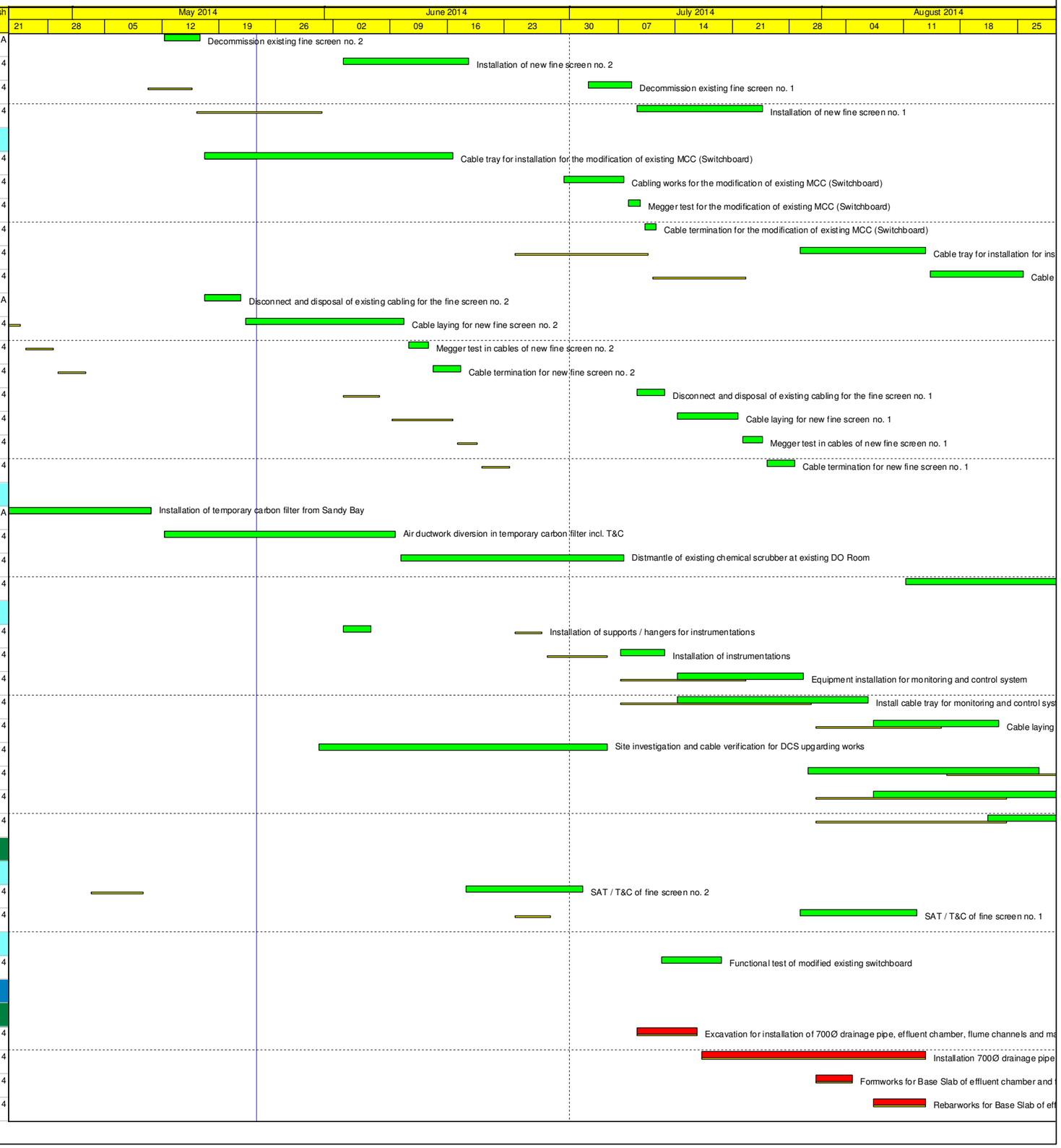
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24DABN03910	Review / Resubmit of DCS Detail Design	0%	15	14-Aug-14	28-Aug-14
24DABN03923	Review / Resubmit of combined services drawing	25%	30	05-Sep-12 A	24-May-14
24DABN03924	Approval of combined services drawing	25%	30	10-Oct-12 A	25-May-14
24DABN03926	Review / Approval of ICE and Submitted to Client the Design Drawing for MCC (Switchboard) Modification	50%	12	22-Sep-12 A	28-May-14
24DABN03928	Review / Resubmit of Design Drawing for MCC (Switchboard) Modification	50%	10	22-Sep-12 A	30-May-14
24DABN03929	Approval of Design Drawing for MCC (Switchboard) Modification	0%	10	09-Jan-13 A	01-Jun-14
24DABN03930	Prepare / Submit the Design Drawing for Miscellaneous E&M Items	0%	60	26-May-14	24-Jul-14
24DABN03931	Comments / Approval of Design Drawing for Miscellaneous E&M Items	0%	30	25-Jul-14	23-Aug-14
Order / Manufacturing / Shipment / Delivery					
24PABN01170	Manufacturing of Seawater Pump	0%	335	13-May-13 A	20-Sep-14
24PABN01370	Packaging / Delivery of Instruments	0%	30	25-Jun-13 A	25-May-14
Ap Lei Chau					
Major Technical Data / E&M Works Design					
24DALC03780	Prepare / Submit to ICE the Electrical Protection Equipment Calculation	0%	20	20-Jun-14	09-Jul-14
24DALC03790	Review / Approval of ICE and Submitted to Client the Electrical Protection Equipment Calculation	0%	12	10-Jul-14	21-Jul-14
24DALC03800	Comments / Approval of Electrical Protection Equipment Calculation	0%	28	22-Jul-14	18-Aug-14
24DALC03810	Review / Resubmit of Electrical Protection Equipment Calculation	0%	15	19-Aug-14	02-Sep-14
24DALC03870	Approval of Control Philosophy	0%	15	27-Apr-12 A	30-May-14
24DALC03880	Prepare / Submit to ICE the DCS Detail Design	0%	20	31-May-14	19-Jun-14
24DALC03890	Review / Approval of ICE and Submitted to Client the DCS Detail Design	0%	12	20-Jun-14	01-Jul-14
24DALC03900	Comments / Approval of DCS Detail Design	0%	28	02-Jul-14	29-Jul-14
24DALC03910	Review / Resubmit of DCS Detail Design	0%	15	30-Jul-14	13-Aug-14
24DALC03920	Approval of DCS Detail Design	0%	15	14-Aug-14	28-Aug-14
24DALC03923	Review / Resubmit of combined services drawing	0%	30	07-Jul-12 A	25-May-14
24DALC03924	Approval of combined services drawing	0%	30	25-Jul-12 A	24-Jun-14
Order / Manufacturing / Shipment / Delivery					
24PALC01130	Manufacturing of Grit Classifier	0%	145	18-Sep-12 A	22-Jun-14
24PALC01140	Packaging / Delivery of Grit Classifier	0%	30	23-Jun-14	22-Jul-14
24PALC01160	Manufacturing of Effluent Pump	0%	335	01-Apr-13 A	18-Jan-15
24PALC01250	Placing of Order on Deodorization System	0%	10	24-May-14*	02-Jun-14
24PALC01260	Manufacturing of Deodorization System	0%	160	03-Jun-14	09-Nov-14
24PALC01320	Placing of Order on Control Panel	0%	10	24-May-14	02-Jun-14
24PALC01330	Manufacturing of Control Panel	0%	50	03-Jun-14	22-Jul-14
24PALC01340	Packaging / Delivery of Control Panel	0%	15	23-Jul-14	06-Aug-14
24PALC01350	Placing of Order on Instruments	0%	10	24-May-14	02-Jun-14
24PALC01360	Manufacturing of Instruments	0%	110	03-Jun-14	20-Sep-14
Sandy Bay PTW					
Works for Section 1					
PTW Building					
Civil Works					
Site Clearance and Preparation Works					
24SBY02050	Relocation of Temp. Works in ALC-T2 from SBY-T1	0%	25	18-Sep-12 A	31-May-14
Modification Works in PTW Building					
24SBY02576	Installation of handrail/railings on new staircase	0%	12	24-May-14	07-Jun-14
Flume Channels and Chambers					
Interface between Civil / ABWF / E&M Works					



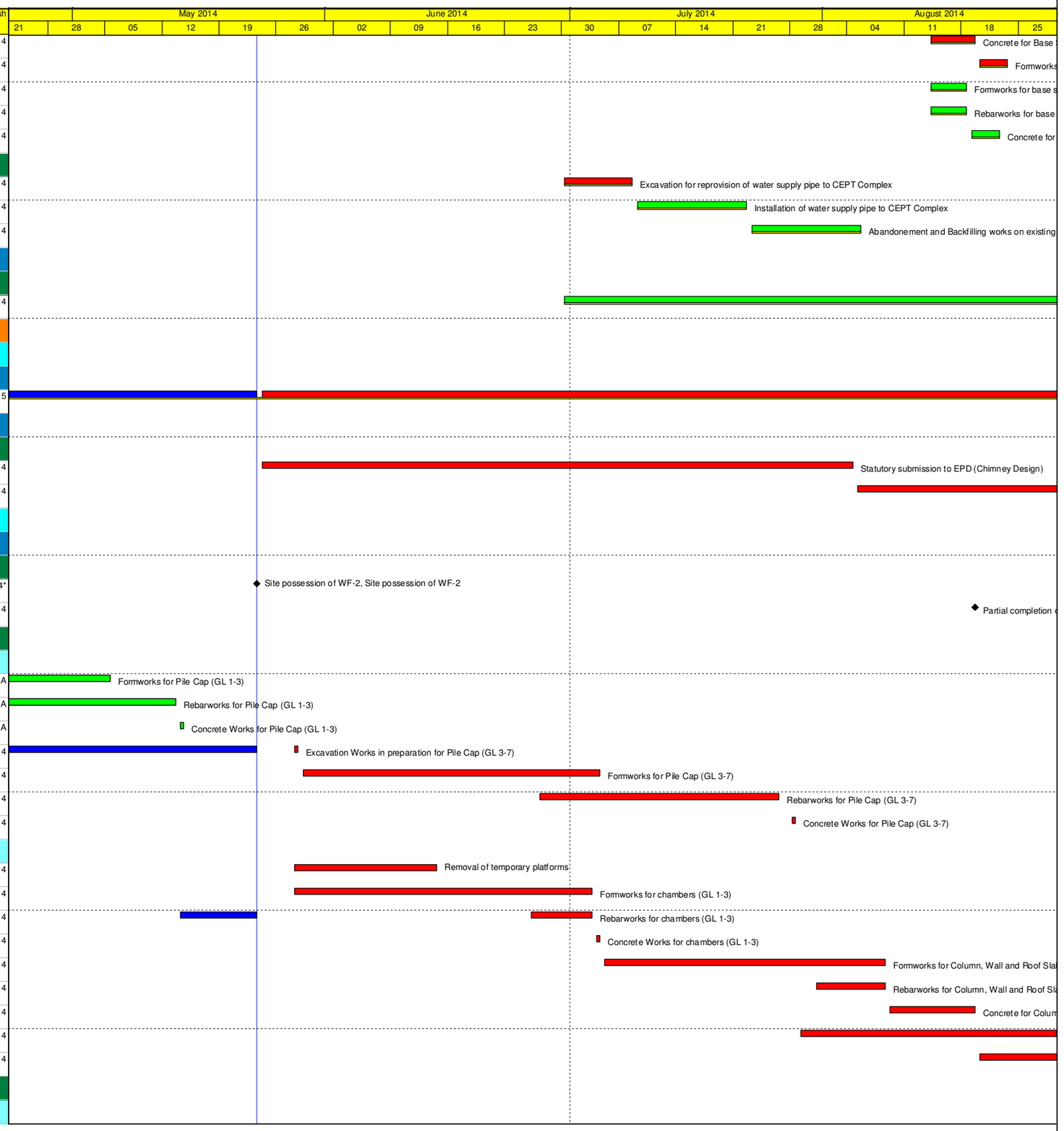
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24MSBY00080	Completion of E&M works at flume channel	0%	0		21-Jun-14
Civil Works (incl. footing of existing fence modification)					
24SBY02707	Modification of Existing Effluent Chamber connected to new Flume Chamber	0%	12	24-May-14	07-Jun-14
24SBY02708	Drawpits and cable ducts	0%	12	24-May-14	07-Jun-14
24SBY02709	Installation of air tight multi-part cover in flume channels and chambers	0%	12	24-May-14	07-Jun-14
Electrical and Mechanical Works					
24SBY02750A	Installation of hydrostatic pressure level transmitter at drop shaft	0%	2	09-Jun-14	10-Jun-14
24SBY02750B	Installation of level sensor at drop shaft	0%	2	11-Jun-14	12-Jun-14
24SBY02750C	Installation of level sensor c/w transmitter at flume channel measuring flume	0%	2	13-Jun-14	14-Jun-14
24SBY02750D	Cable laying via cable ducts and drawpits going to control room (including termination)	0%	6	16-Jun-14	21-Jun-14
Preliminary Testing and Commissioning					
24SBY02751	Water test of penstock	0%	14	24-May-14	10-Jun-14
24SBY02752	Water test of stoplogs	0%	14	24-May-14	10-Jun-14
Roadworks and Landscaping Works					
Landscaping Works					
24SBY02780	Reinstatement of landscape after installation of odour duct from drop shaft to PTW building	0%	21	24-May-14	18-Jun-14
Completion of Works in Section 1					
Final Testing and Commisioning					
24SBY03010	Testing and Commissioning of flow via new flume channels to drop shaft	0%	30	22-Jun-14	21-Jul-14
Submission of Manuals					
24SBY03050	Preparation / Submission of final O&M manual	0%	90	22-Jun-14	19-Sep-14
24SBY03060	As-Built Drawings Submission / Approval for Sandy Bay PTW	0%	60	24-May-14	22-Jul-14
Cyberport PTW					
Key Dates					
Time of Completion					
24CPT01000	Time for Completion of Section 2	0%	1280	31-Aug-11 A	02-Mar-15
Interface and Liaison					
Interface with ST2/DSD					
24MCPT00090	Application of PMAC/SWAC for Modification of Existing Control Room	0%	0	30-Jul-14	
24MCPT00100	Proposed Approval date of PMAC/SWAC for Modification of Existing Control Room	0%	0		12-Aug-14
Interface with other contractrors					
24MCPT00110	Liason with SCS Contractor for the modification of existing water pipe / drainage pipe and flume channel connection	0%	90	15-Mar-14 A	12-Jun-14
Works for Section 2					
Modification Inside Cyberport PTW Complex incl. Deodorization Room					
Interface between Civil / ABWF / E&M Works					
24MCPT00130	Completion of permanent concrete plinth for new deodorization unit	0%	0		09-Aug-14
Civil Works					
Construction of Plinth for DO Unit Installation					
24CPT02303	Construction of permanent concrete plinth for new deodorization unit	0%	29	08-Jul-14	09-Aug-14
Electrical and Mechanical Works					
Material / Equipment Delivery on Site					
24CPT02340	Delivery of Deodorization System	0%	0		29-Jul-14
24CPT02360	Delivery of Instruments	0%	0		05-Jul-14
24CPT02370	Delivery of DCS Control System	0%	0		29-Jul-14
24CPT02380	Delivery of Weather & H2S monitoring station	0%	0		20-Aug-14
Mechanical Works					



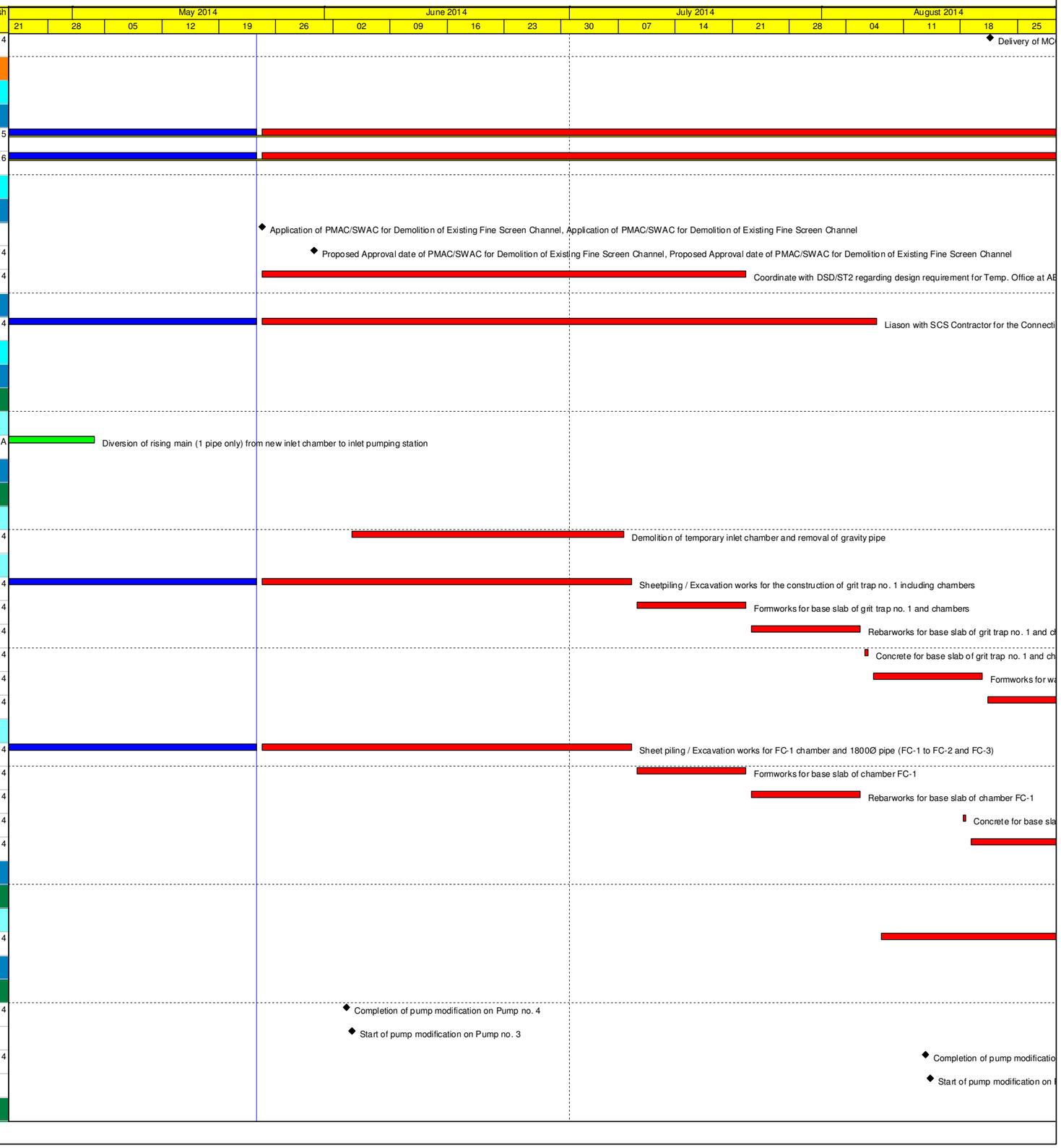
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24CPT02390	Decommission existing fine screen no. 2	100%	5	12-May-14 A	16-May-14 A
24CPT02400	Installation of new fine screen no. 2	0%	14	03-Jun-14	18-Jun-14
24CPT02410	Decommission existing fine screen no. 1	0%	5	03-Jul-14	08-Jul-14
24CPT02420	Installation of new fine screen no. 1	0%	14	09-Jul-14	24-Jul-14
	Electrical Works				
24CPT02431	Cable tray for installation for the modification of existing MCC (Switchboard)	0%	12	17-May-14 A	16-Jun-14
24CPT02432	Cabling works for the modification of existing MCC (Switchboard)	0%	6	30-Jun-14	07-Jul-14
24CPT02433	Megger test for the modification of existing MCC (Switchboard)	0%	2	08-Jul-14	09-Jul-14
24CPT02434	Cable termination for the modification of existing MCC (Switchboard)	0%	2	10-Jul-14	11-Jul-14
24CPT02435	Cable tray for installation for installation of UPS system	0%	14	29-Jul-14	13-Aug-14
24CPT02436	Cable laying for UPS system	0%	10	14-Aug-14	25-Aug-14
24CPT02441	Disconnect and disposal of existing cabling for the fine screen no. 2	100%	4	17-May-14 A	21-May-14 A
24CPT02442	Cable laying for new fine screen no. 2	0%	7	22-May-14 A	10-Jun-14
24CPT02443	Megger test in cables of new fine screen no. 2	0%	3	11-Jun-14	13-Jun-14
24CPT02444	Cable termination for new fine screen no. 2	0%	3	14-Jun-14	17-Jun-14
24CPT02445	Disconnect and disposal of existing cabling for the fine screen no. 1	0%	4	09-Jul-14	12-Jul-14
24CPT02446	Cable laying for new fine screen no. 1	0%	7	14-Jul-14	21-Jul-14
24CPT02447	Megger test in cables of new fine screen no. 1	0%	3	22-Jul-14	24-Jul-14
24CPT02448	Cable termination for new fine screen no. 1	0%	3	25-Jul-14	28-Jul-14
	HVAC System (Deodorization / Air Conditioning / Ventilation)				
24CPT02481	Installation of temporary carbon filter from Sandy Bay	100%	22	08-Apr-14 A	10-May-14 A
24CPT02482	Air ductwork diversion in temporary carbon filter incl. T&C	0%	14	12-May-14 A	09-Jun-14
24CPT02483	Distmantle of existing chemical scrubber at existing DO Room	0%	23	10-Jun-14	07-Jul-14
24CPT02490	Installation of new deodorization unit	0%	20	11-Aug-14	02-Sep-14
	Control and Monitoring Services incl. Instrumentation				
24CPT02529	Installation of supports / hangers for instrumentations	0%	4	03-Jun-14	06-Jun-14
24CPT02530	Installation of instrumentations	0%	6	07-Jul-14	12-Jul-14
24CPT02531	Equipment installation for monitoring and control system	0%	14	14-Jul-14	29-Jul-14
24CPT02539	Install cable tray for monitoring and control system	0%	21	14-Jul-14	06-Aug-14
24CPT02540	Cable laying for monitoring and control system	0%	14	07-Aug-14	22-Aug-14
24CPT02560	Site investigation and cable verification for DCS upgarding works	0%	29	31-May-14*	05-Jul-14
24CPT02561	DCS panel fabrication	0%	25	30-Jul-14	27-Aug-14
24CPT02564	Install cable tray for DCS outstation and instrumentation	0%	21	07-Aug-14	30-Aug-14
24CPT02571	Install cable tray for weather and H2S monitoring station	0%	21	21-Aug-14	15-Sep-14
	Preliminary Testing and Commissioning				
	Mechanical Works				
24CPT02590	SAT / T&C of fine screen no. 2	0%	15	18-Jun-14	02-Jul-14
24CPT02600	SAT / T&C of fine screen no. 1	0%	15	29-Jul-14	12-Aug-14
	Electrical Works				
24CPT02610	Functional test of modified existing switchboard	0%	7	12-Jul-14	19-Jul-14
	Flume Channels, Chambers and Manhole incl. U/G Utility Works				
	Civil Works for Flume Channel, Chambers and Manhole				
24CPT03000	Excavation for installation of 700Ø drainage pipe, effluent chamber, flume channels and manholes	0%	7	09-Jul-14	16-Jul-14
24CPT03010	Installation 700Ø drainage pipe	0%	24	17-Jul-14	13-Aug-14
24CPT03020	Formworks for Base Slab of effluent chamber and flume channels	0%	4	31-Jul-14	04-Aug-14
24CPT03030	Rebarworks for Base Slab of effluent chamber and flume channels	0%	6	07-Aug-14	13-Aug-14



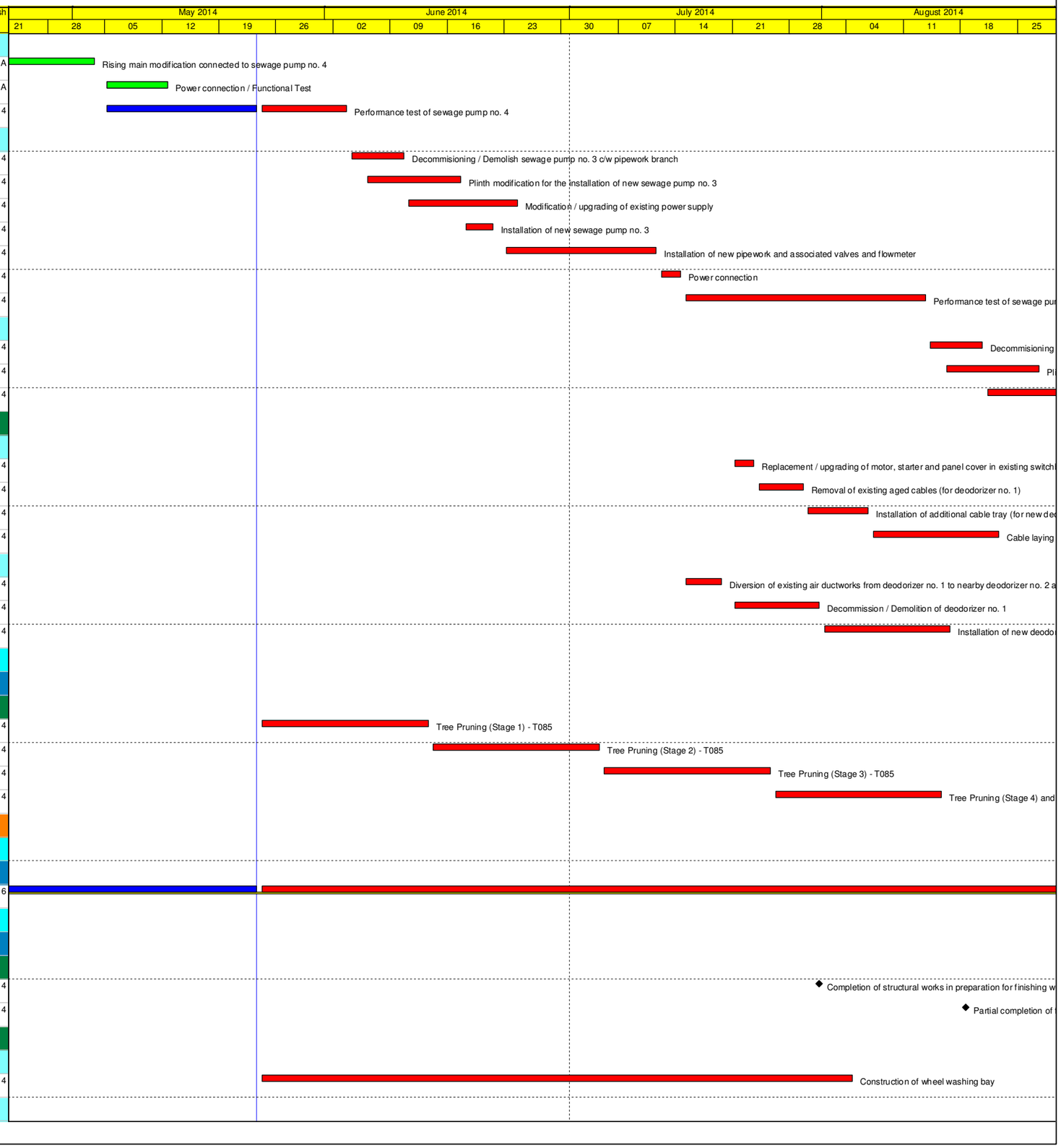
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24CPT03040	Concrete for Base Slab of effluent chamber and flume channels	0%	5	14-Aug-14	19-Aug-14
24CPT03050	Formworks for walls of effluent chamber and flume channels	0%	4	20-Aug-14	23-Aug-14
24CPT03090	Formworks for base slab of manholes (2 nos)	0%	4	14-Aug-14	18-Aug-14
24CPT03100	Rebarworks for base slab of manholes (2 nos)	0%	4	14-Aug-14	18-Aug-14
24CPT03110	Concrete for base slab of manholes (2 nos)	0%	4	19-Aug-14	22-Aug-14
U/G Utility Works					
24CPT03250	Excavation for reprovision of water supply pipe to CEPT Complex	0%	7	30-Jun-14	08-Jul-14
24CPT03260	Installation of water supply pipe to CEPT Complex	0%	12	09-Jul-14	22-Jul-14
24CPT03270	Abandonement and Backfilling works on existing water pipe	0%	12	23-Jul-14	05-Aug-14
Roadworks and Landscaping Works					
Landscaping Works					
24CPT04000	Shrubs and Tree planting at CP-3	0%	60	30-Jun-14	08-Sep-14
Wah Fu PTW					
Key Dates					
Time of Completion					
24WFU1010	Time for Completion of Section 4	0%	1255	31-Aug-11 A	05-Sep-15
Statutory and Utility Applications and Approvals					
Enviromental Protection Department (EPD)					
24WFU1119	Statutory submission to EPD (Chimney Design)	0%	60	24-May-14*	04-Aug-14
24WFU1120	Comment & re-submission to EPD	0%	30	05-Aug-14	08-Sep-14
Works for Section 4					
Screen and Grit Trap Building					
Interface between Civil / ABWF / E&M Works					
24MWFU00205	Site possession of WF-2	0%	0		23-May-14*
24MWFU00210	Partial completion of structural works in preparation to start architectural works	0%	0		19-Aug-14
Civil Works					
Foundation Works					
24WFU02230A20	Formworks for Pile Cap (GL 1-3)	100%	26	10-Feb-14 A	05-May-14 A
24WFU02230A30	Rebarworks for Pile Cap (GL 1-3)	100%	12	10-Apr-14 A	13-May-14 A
24WFU02230A40	Concrete Works for Pile Cap (GL 1-3)	100%	1	14-May-14 A	14-May-14 A
24WFU02230A51	Excavation Works in preparation for Pile Cap (GL 3-7)	0%	19	20-Nov-13 A	28-May-14
24WFU02230A52	Formworks for Pile Cap (GL 3-7)	0%	30	29-May-14	04-Jul-14
24WFU02230A53	Rebarworks for Pile Cap (GL 3-7)	0%	25	27-Jun-14	26-Jul-14
24WFU02230A54	Concrete Works for Pile Cap (GL 3-7)	0%	1	28-Jul-14	28-Jul-14
RC Structural Works					
24WFU02235	Removal of temporary platforms	0%	15	28-May-14	14-Jun-14
24WFU02240A10	Formworks for chambers (GL 1-3)	0%	30	28-May-14	03-Jul-14
24WFU02240A20	Rebarworks for chambers (GL 1-3)	0%	6	14-May-14 A	03-Jul-14
24WFU02240A30	Concrete Works for chambers (GL 1-3)	0%	1	04-Jul-14	04-Jul-14
24WFU02240A40	Formworks for Column, Wall and Roof Slab at Elev. +21.80	0%	30	05-Jul-14	08-Aug-14
24WFU02240A50	Rebarworks for Column, Wall and Roof Slab at Elev. +21.80	0%	8	31-Jul-14	08-Aug-14
24WFU02240A60	Concrete for Column, Wall and Roof Slab at Elev. +21.80	0%	9	09-Aug-14	19-Aug-14
24WFU02240A70	Formworks for chambers (GL 3-5)	0%	28	29-Jul-14	29-Aug-14
24WFU02240B90	Formworks for Stairs	0%	29	20-Aug-14	23-Sep-14
Electrical and Mechanical Works					
Material / Equipment Delivery on Site					



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24WFU3280	Delivery of MCC	0%	0		21-Aug-14
Aberdeen PTW					
Key Dates					
Time of Completion					
24ABN00300	Time for Completion of Section 5	0%	1179	31-Aug-11 A	20-Nov-15
24ABN00310	Time for Completion of Section 6	0%	1309	31-Aug-11 A	18-Nov-16
Interface and Liaison					
Interface with ST2/DSD					
24MABN00130	Application of PMAC/SWAC for Demolition of Existing Fine Screen Channel	0%	0	24-May-14	
24MABN00140	Proposed Approval date of PMAC/SWAC for Demolition of Existing Fine Screen Channel	0%	0		30-May-14
24MABN00190	Coordinate with DSD/ST2 regarding design requirement for Temp. Office at ABN	0%	60	24-May-14	22-Jul-14
Interface with other contractrors					
24MABN00250	Liason with SCS Contractor for the Connection of Flume Channels at drop shaft	0%	90	10-Mar-14 A	07-Aug-14
Works for Section 5					
FS & GT Bldg - Fine Screen and Inlet Chamber (Stage 1)					
Civil Works					
Relocation of Rising Main					
24ABN02700A10	Diversion of rising main (1 pipe only) from new inlet chamber to inlet pumping station	100%	12	10-Feb-14 A	03-May-14 A
FS & GT Bldg - Grit Trap No. 1 and FC-1 Chamber (Stage 2)					
Civil Works					
Temporary Works / Demolition Works					
24ABN00745B15	Demolition of temporary inlet chamber and removal of gravity pipe	0%	28	04-Jun-14	07-Jul-14
RC Structural Works for Grit Trap No. 1					
24ABN00775B20	Sheetpiling / Excavation works for the construction of grit trap no. 1 including chambers	0%	24	17-Dec-13 A	08-Jul-14
24ABN00775B30	Formworks for base slab of grit trap no. 1 and chambers	0%	12	09-Jul-14	22-Jul-14
24ABN00775B40	Rebarworks for base slab of grit trap no. 1 and chambers	0%	12	23-Jul-14	05-Aug-14
24ABN00775B50	Concrete for base slab of grit trap no. 1 and chambers	0%	1	06-Aug-14	06-Aug-14
24ABN00775B60	Formworks for wall of grit trap no. 1 and chambers	0%	12	07-Aug-14	20-Aug-14
24ABN00775B70	Rebarworks for wall of grit trap no. 1 and chambers	0%	12	21-Aug-14	03-Sep-14
RC Works for FC-1 Chamber					
24ABN00745A09	Sheet piling / Excavation works for FC-1 chamber and 1800Ø pipe (FC-1 to FC-2 and FC-3)	0%	45	17-Dec-13 A	08-Jul-14
24ABN00745A20	Formworks for base slab of chamber FC-1	0%	12	09-Jul-14	22-Jul-14
24ABN00745A30	Rebarworks for base slab of chamber FC-1	0%	12	23-Jul-14	05-Aug-14
24ABN00745A40	Concrete for base slab of chamber FC-1	0%	1	18-Aug-14	18-Aug-14
24ABN00745A45	Installation of 1800Ø pipe from FC-1 to FC-2	0%	24	19-Aug-14	16-Sep-14
FS & GT Bldg - Flume Channels and Chambers (Stage 4)					
Civil Works					
RC Works for Flume Channel (1st stage)					
24ABN02260A10	Excavation for the construction of Flume Channels	0%	40	08-Aug-14	24-Sep-14
Modification at Inlet Pumping Station					
Interface between Civil / ABWF / E&M Works					
24MABN00410	Completion of pump modification on Pump no. 4	0%	0		03-Jun-14
24MABN00420	Start of pump modification on Pump no. 3	0%	0	04-Jun-14	
24MABN00430	Completion of pump modification on Pump no. 3	0%	0		13-Aug-14
24MABN00440	Start of pump modification on Pump no. 2	0%	0	14-Aug-14	
Modification of Pumps					



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
Sewage Pump No. 4					
24ABN03031	Rising main modification connected to sewage pump no. 4	100%	32	13-Jan-14 A	03-May-14 A
24ABN03040	Power connection / Functional Test	100%	6	05-May-14 A	12-May-14 A
24ABN03050	Performance test of sewage pump no. 4	0%	30	05-May-14 A	03-Jun-14
Sewage Pump No. 3					
24ABN3060	Decommisioning / Demolish sewage pump no. 3 c/w pipework branch	0%	6	04-Jun-14	10-Jun-14
24ABN3061	Plinth modification for the installation of new sewage pump no. 3	0%	10	06-Jun-14	17-Jun-14
24ABN3070	Modification / upgrading of existing power supply	0%	12	11-Jun-14	24-Jun-14
24ABN3080	Installation of new sewage pump no. 3	0%	4	18-Jun-14	21-Jun-14
24ABN3090	Installation of new pipework and associated valves and flowmeter	0%	16	23-Jun-14	11-Jul-14
24ABN3100	Power connection	0%	2	12-Jul-14	14-Jul-14
24ABN3110	Performance test of sewage pump no. 3	0%	30	15-Jul-14	13-Aug-14
Sewage Pump No. 2					
24ABN3120	Decommisioning / Demolish sewage pump no. 2 c/w pipework branch	0%	6	14-Aug-14	20-Aug-14
24ABN3121	Plinth modification for the installation of new sewage pump no. 2	0%	10	16-Aug-14	27-Aug-14
24ABN3130	Modification / upgrading of existing power supply	0%	12	21-Aug-14	03-Sep-14
Modification of Deodorization System and DCS System					
Electrical Works					
24ABN03271	Replacement / upgrading of motor, starter and panel cover in existing switchboard (for deodorizer no. 1)	0%	3	21-Jul-14	23-Jul-14
24ABN03272	Removal of existing aged cables (for deodorizer no. 1)	0%	5	24-Jul-14	29-Jul-14
24ABN03273	Installation of additional cable tray (for new deodorizer no. 1)	0%	7	30-Jul-14	06-Aug-14
24ABN03274	Cable laying for the new deodorizer no. 1	0%	14	07-Aug-14	22-Aug-14
HVAC System (Deodorization / Air Conditioning / Ventilation)					
24ABN03283	Diversion of existing air ductworks from deodorizer no. 1 to nearby deodorizer no. 2 and no. 3	0%	5	15-Jul-14	19-Jul-14
24ABN03284	Decommission / Demolition of deodorizer no. 1	0%	10	21-Jul-14	31-Jul-14
24ABN03285	Installation of new deodorizer no. 1	0%	14	01-Aug-14	16-Aug-14
Works for Section 6					
Roadworks, Landscape and Modification of Fence					
Landscaping Works					
24ABN02190A90	Tree Pruning (Stage 1) - T085	0%	21	24-May-14	13-Jun-14
24ABN02190B10	Tree Pruning (Stage 2) - T085	0%	21	14-Jun-14	04-Jul-14
24ABN02190B20	Tree Pruning (Stage 3) - T085	0%	21	05-Jul-14	25-Jul-14
24ABN02190B30	Tree Pruning (Stage 4) and Transplantation off-site - T085	0%	21	26-Jul-14	15-Aug-14
Ap Lei Chau PTW					
Key Dates					
Time of Completion					
24ALC00300	Time for Completion of Section 7	0%	1264	31-Aug-11 A	04-Jul-16
Works for Section 7					
Stage 1 of ALC Upgarde - Initial Treatment Plant					
Interface between Civil / ABWF / E&M Works					
24MALC00220	Completion of structural works in preparation for finishing works	0%	0		31-Jul-14
24MALC00230	Partial completion of finishing works in preparation for E&M works	0%	0		18-Aug-14
Civil Works					
Site Clearance and Preparation Works					
24ALC00702A20	Construction of wheel washing bay	0%	60	24-May-14	04-Aug-14
Relocation and Demolition Works					



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24ALC00722	Final H/O of ALC-2	0%	0		23-May-14*
24ALC00723	Excavation Permit Application (for remaining half of initial treatment facilities)	0%	47	24-May-14	19-Jul-14
24ALC00724	Relocation of Site Entrance and Share Access	0%	47	24-May-14	19-Jul-14
Foundation Works					
Remaining Half of Initial Treatment Facilities					
24ALC00730C10	Pipe pile walls installation including grouting works	0%	60	21-Jul-14	29-Sep-14
RC Structural Works					
1st Half of Initial Treatment Facilities					
24ALC00730A60	Formworks for chamber of grit trap and fine screen area at GL 1-5 / G-J at elev. 2.0 to 6.15	100%	11	18-Mar-14 A	28-Apr-14 A
24ALC00730A70	Rebarworks for chamber of grit trap and fine screen area at GL 1-5 / G-J at elev. 2.0 to 6.15	100%	7	18-Mar-14 A	08-May-14 A
24ALC00730A80	Concrete for chamber of grit trap and fine screen area at GL 1-5 / G-J at elev. 2.0 to 6.15	100%	2	09-May-14 A	10-May-14 A
24ALC00740A10	Formworks for column of grit trap and fine screen area at GL 1-4 / G-J	0%	11	12-May-14 A	07-Jun-14
24ALC00740A20	Rebarworks for column of grit trap and fine screen area at GL 1-4 / G-J	0%	6	17-May-14 A	07-Jun-14
24ALC00740A30	Concrete for column of grit trap and fine screen area at GL 1-4 / G-J	0%	2	09-Jun-14	10-Jun-14
24ALC00740A40	Formworks for floor beam and slab of screening compactor area at GL 1-4 / G-J elev. 6.15	0%	14	11-Jun-14	26-Jun-14
24ALC00740A50	Rebarworks for floor beam and slab of screening compactor area at GL 1-4 / G-J elev. 6.15	0%	7	19-Jun-14	26-Jun-14
24ALC00740A60	Concrete for floor beam and slab of screening compactor area at GL 1-4 / G-J elev. 6.15	0%	2	24-Jun-14	25-Jun-14
24ALC00740A70	Formworks for wall at fine screen and grit trap area incl. screening and grit handling at GL 2-4 / G-J	0%	24	26-May-14	23-Jun-14
24ALC00740A80	Rebarworks for wall at fine screen and grit trap area incl. screening and grit handling at GL 2-4 / G-J	0%	10	12-Jun-14	23-Jun-14
24ALC00740A90	Concrete for wall at fine screen and grit trap area incl. screening and grit handling at GL 2-4 / G-J	0%	2	24-Jun-14	25-Jun-14
24ALC00740B10	Formworks for roof beam and slab of grit trap and fine screen area at GL 1-4 / G-J elev. 13.65	0%	24	26-Jun-14	24-Jul-14
24ALC00740B20	Rebarworks for roof beam and slab of grit trap and fine screen area at GL 1-4 / G-J elev. 13.65	0%	8	16-Jul-14	24-Jul-14
24ALC00740B30	Concrete for roof beam and slab of grit trap and fine screen area at GL 1-4 / G-J elev. 13.65	0%	6	25-Jul-14	31-Jul-14
Finishing Works (Internal and External)					
24ALC00750A10	Ceiling finishes (painting) at fine screen and grit trap area incl. screening and grit handling at GL 2-4 / G-J	0%	15	01-Aug-14	18-Aug-14
24ALC00750A20	Wall finishes (painting) at fine screen and grit trap area incl. screening and grit handling at GL 2-4 / G-J	0%	17	19-Aug-14	06-Sep-14
Modification of Inlet Chamber (Partial)					
24ALC00856	Excavation for the construction of new inlet chamber and demolition of existing (part only)	100%	15	23-Apr-14 A	30-Apr-14 A
24ALC00857	Construction initial inlet chamber (incl. temp. wall)	0%	30	02-May-14 A	28-Jun-14
24ALC00858	Diversion of waste discharge to partial inlet chamber	0%	7	15-Jul-14	22-Jul-14
Modification of Outfall Chamber					
24ALC00900	Diverted the flow from Fine Screen Building to LHS of measuring flume channel	0%	2	01-Aug-14	02-Aug-14
24ALC00901	Fabricate steel tank with Ø800 mm steel pipe	0%	12	15-Jul-14	28-Jul-14
24ALC00902	Install the steel tank with Ø800mm steel pipe into RHS measuring flume channel and Ø900mm submarine outfall	0%	4	04-Aug-14	07-Aug-14
24ALC00903	Seal up between Ø800mm pipe and Ø900mm pipe measuring flume channel and steel tank	0%	2	08-Aug-14	09-Aug-14
24ALC00904	Driving sheet pile for the existing terminal manhole	0%	6	08-Aug-14	14-Aug-14
24ALC00905	Demolition and excavation for the terminal manhole by saw cutting method up to 500mm underneath 1st layer waling	0%	4	15-Aug-14	19-Aug-14
24ALC00906	Installation of 1st layer waling & strutting	0%	6	20-Aug-14	26-Aug-14
Electrical and Mechanical Works					
Material / Equipment Delivery on Site					
24ALC00561	Delivery of fine screen conveyor	0%	0		23-May-14
24ALC00600	Delivery of grit classifier	0%	0		22-Jul-14
Mechanical Works					
24ALC03001	Installation of temporary diversion pipe from new FS&GT bldg to existing outfall chamber	0%	30	01-Aug-14	04-Sep-14
24ALC03010	Installation of penstock no. 13 (bypass penstock)	0%	12	30-Jun-14	14-Jul-14
24ALC03020	Installation of penstock no. 2 & 4 (coarse screen no. 2 inlet / outlet)	0%	18	01-Aug-14	21-Aug-14

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24ALC03030	Installation of penstock no. 6 (fine screen inlet bypass penstock)	0%	12	22-Aug-14	04-Sep-14
24ALC03040	Installation of penstock no. 7 & 9 (fine screen no. 2 inlet / outlet)	0%	18	22-Aug-14	12-Sep-14
Electrical Works					
24ALC03140	Installation of temporary switchboard	0%	7	19-Aug-14	26-Aug-14