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

Quarterly Environmental Monitoring and Audit Report
October to December 2013

(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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Drainage Services Department
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11 February 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
Submission of 8th Quarterly EM&A Report for October to December 2013 (Version 1.0)

We refer to the Quarterly EM&A Report for October to December 2013 (version 1.0) received 29 January 2014 and we confirm that we have no further comment.

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
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ABBREVIATION AND ACRONYM

AL Levels	Action and Limit Levels
DSD	Drainage Services Department
E / ER	Engineer/Engineer's Representative
EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring and Audit
EMIS	Environmental Mitigation Implementation Schedule
EP	Environmental Permit
EPD	Environmental Protection Department
ET	Environmental Team
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 8th Quarterly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for DSD Contract No. DC/2009/24 "HATS Stage 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau" (The Project) which documents the key information of EM&A of Contract No. DC/2009/24 and environmental monitoring results from Contract DC/2007/24 and DC/2008/09 HATS Stage 2A with same Environmental Permit (Permit No. EP-322/2008/F) for October to December 2013.

2. The site activities undertaken for in the reporting quarter included:

October 2013:
- Wah Fu PTW – Pipe pile wall construction, Grout curtain construction;
- Ap Lei Chau PTW – Plant operation, Rock excavation in progress, Grip trap construction, Wet well construction;
- Aberdeen PTW – Plant operation, Construction for the structure, Temporary diversion works;
- Sandy Bay PTW – Concrete plinth construction, Chamber construction, Reinstatement works for boundary wall; and
- Cyberport – NIL

November 2013:
- Wah Fu PTW – Pipe pile wall construction, Grout curtain construction, ELS in progress;
- Ap Lei Chau PTW – Plant operation, Rock excavation in progress, Grip trap construction, Wet well construction;
- Aberdeen PTW – Plant operation, Construction for the structure, Temporary diversion works;
- Sandy Bay PTW – Concrete plinth construction, Chamber construction, Reinstatement works for boundary wall; and
- Cyberport – NIL

December 2013:
- Wah Fu PTW – Pipe pile wall construction, ELS in progress, Plant operation;
- Ap Lei Chau PTW – Plant operation, Grip trap construction, Wet well construction;
- Aberdeen PTW – Plant operation, Construction for the structure, Temporary diversion works;
- Sandy Bay PTW – Reinstatement works for boundary wall, Chamber construction; and
- Cyberport – NIL

Environmental Monitoring Works

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

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

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

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

1-hour TSP Monitoring

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

24-hour TSP Monitoring

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

7. The 24-hour TSP monitoring result of CM_CB1a recorded on 16 and 28 October 2013, which were found invalid by the ET of DC/2007/24. Details could be found in the Appendix J of the DC/2007/24 (October 2013) monthly EM&A report.

Construction Noise

8. All construction noise monitoring was conducted as scheduled in the reporting quarter. One Action Level exceedance was recorded.

Environmental Complaint and Prosecution

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

10. There was no environmental prosecution or notification of summons received, however, there was one complaint received from Environmental Protection Department in the reporting quarter. And two complaint were already received since the Project commencement. The Complaint Log is presented in **Appendix H.**

Environmental Licenses and Permits

11. 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.

Future Key Issues:

12. Major site activities for the coming two months include:
    - Wah Fu PTW: ELS for permanent structure, Structure construction, Plant operation;
    - Aberdeen PTW: Construction of grit trap structure, E&M equipment installation, Plant operation, Temporary diversion pipe & channel, Existing E&M equipment dismantling, Piling works for administration building;
    - Ap Lei Chau PTW: Plant operation, Construction of 1st stage of permanent structure;
    - Sandy Bay PTW: Chambers & flume channel construction, Reinstatement of boundary wall; and
    - Cyberport – NIL

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

1. INTRODUCTION

Background

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

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

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

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

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

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

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

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

1.8 This is the 8th quarterly EM&A report summarizing the EM&A works conducted for the Project in October to December 2013.

2 PROJECT CHARACTERISTICS

Project Organization and Contacts of Key Management

2.1 Different parties with different levels of involvement in the project organization include:
- Project Proponent – The Drainage Services Department (DSD)
- Engineer's Representative (ER) – Ove Arup & Partners Hong Kong Ltd.
- Contractor –Leader and JEC Joint Venture (LJJV)
- Environmental Team (ET) – Cinotech Consultants Ltd.
- Independent Environmental Checker (IEC) –Mott MacDonald Hong Kong Ltd.

2.2 The key contacts of the Project and the ET organization chart and are shown in **Appendix A** and **Figure 2**.

Construction Programme and Synopsis of Work

2.3 The construction programme is presented in **Appendix B**. The site activities undertaken during the reporting quarter included:

October 2013:
- Wah Fu PTW – Pipe pile wall construction, Grout curtain construction;
- Ap Lei Chau PTW – Plant operation, Rock excavation in progress, Grip trap construction, Wet well construction;
- Aberdeen PTW – Plant operation, Construction for the structure, Temporary diversion works;
- Sandy Bay PTW – Concrete plinth construction, Chamber construction, Reinstatement works for boundary wall; and
- Cyberport – NIL

November 2013:
- Wah Fu PTW – Pipe pile wall construction, Grout curtain construction, ELS in progress;
- Ap Lei Chau PTW – Plant operation, Rock excavation in progress, Grip trap construction, Wet well construction;
- Aberdeen PTW – Plant operation, Construction for the structure, Temporary diversion works;
- Sandy Bay PTW – Concrete plinth construction, Chamber construction, Reinstatement works for boundary wall; and
- Cyberport – NIL

December 2013:
- Wah Fu PTW – Pipe pile wall construction, ELS in progress, Plant operation;
- Ap Lei Chau PTW – Plant operation, Grip trap construction, Wet well construction;
- Aberdeen PTW – Plant operation, Construction for the structure, Temporary diversion works;
- Sandy Bay PTW – Reinstatement works for boundary wall, Chamber construction; and
- Cyberport – NIL

3. ENVIRONMENTAL MONITORING & AUDIT REQUIREMENTS

Monitoring Parameters and Monitoring Locations

3.1 In accordance with the EM&A Manual, 1-hour and 24-hour Total Suspended Particulates (TSP) and Noise monitoring were conducted to monitor the air quality and the impact noise. The general layout plan of the Project and the monitoring locations are shown in **Figures 1**, **Appendix C** gives details of monitoring requirements.

Monitoring Methodology and Calibration Details

3.2 Monitoring works/equipments were conducted/calibrated regularly in accordance with the Project Specific EM&A Manual. Copies of calibration certificates are attached in the appendices of the Monthly Reports of DC/2007/24 and DC/2008/09.

Environmental Quality Performance Limits (Action and Limit Levels)

3.3 The environmental quality performance limits, i.e. Action and Limit Levels were derived from the baseline monitoring results. Should the measured environmental quality parameters exceed the Action/Limit Levels, the respective action plans would be implemented. The Action/Limit Levels for each environmental parameter are given in **Appendix D**.

Environmental Mitigation Measures

3.4 Relevant mitigation measures as recommended in the project EIA report have been stipulated in the Project Specific EM&A Manual for the Contractor to implement. A summary of the Environmental Mitigation Implementation Schedule (EMIS) is given in **Appendix E**.

4. MONITORING RESULTS

Weather Conditions

4.1 The weather conditions during monitoring sessions were mainly sunny and sometimes cloudy. The weather conditions for each individual monitoring session were presented in the field record sheets and they could be found in the Appendices of the corresponding monthly EM&A reports.

Air Quality

1-hr TSP Monitoring and 24-hr TSP Monitoring

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

4.3 The 24-hour TSP monitoring result of CM_CB1a recorded on 16 and 28 October 2013, which were found invalid by the ET of DC/2007/24. Details could be found in the Appendix J of the DC/2007/24 (October 2013) monthly EM&A report. No Action/Limit Level exceedance was recorded.

4.4 No Action/Limit Level exceedance was recorded in the reporting quarter. Summary of exceedance is presented in **Appendix I.**

4.5 **Table 4.1** summarizes the dust monitoring results which were extracted from the monthly reports for the Contract DC/2007/24.

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

Table 4.1 Summary of 1-hour and 24-hour TSP Monitoring Result in Reporting Quarter

Reporting Months	Air Quality Monitoring Station	Average µg/m³	Range µg/m³	Action Level µg/m³	Limit Level µg/m³
1 hour TSP					
October 2013	CM_CB1a	178	67.3-263.3	280	500
	CM_WF1a	203	97.2-283.9	285	
	CM_AB1a	196	87.6-263.3	283	
November 2013	CM_CB1a	148	73.8-259.5	280	
	CM_WF1a	190	97.2-280.1	285	
	CM_AB1a	150	50.9-273.4	283	
December 2013	CM_CB1a	233	99.2-276.0	280	
	CM_WF1a	193	45.7-283.9	285	
	CM_AB1a	208	99.2-277.3	283	
24 hours TSP					
October 2013	CM_CB1a	106	62-133[1]	178	260
	CM_WF1a	97	46-131	185	
	CM_AB1a	119	64-167	174	
November 2013	CM_CB1a	80	28-106	178	
	CM_WF1a	77	48-95	185	
	CM_AB1a	85	61-124	174	

December 2013	CM_CB1a	123	61-170	178	
	CM_WF1a	134	60-183	185	
	CM_AB1a	133	70-167	174	

Remark:
1. 24-hour TSP values recorded on 16 and 28 October 2013 were found invalid by the ET of DC/2007/24. Details could be found in the Appendix J of the DC/2007/24 (October 2013) monthly EM&A report.

Noise

4.7 All construction noise monitoring was conducted as scheduled in the reporting quarter.

4.8 One Action Level exceedance was recorded in the reporting quarter. Summary of exceedance is presented in **Appendix I.**

4.9 A complaint was raised by one anonymous complainant on 19th November 2013, however, there was no exceedance report received from Contract DC/2007/24 at noise monitoring stations M7a for Wah Fu PTW since last two years, and the Contractor has performed noise mitigation measures that will be continued until the end of the construction works. The Contractor had also enhanced the noise mitigation measure by providing the sound insulating materials to enclose and wrap the breaking tip which could further reduce the noise generated from the construction works in Wah Fu PTW. Detailed mitigation actions can be referred to **Appendix H** and **Investigation Report for environmental complaints of construction noise nuisance at Wah Fu PTW (November 2013)**. Summary of exceedance is presented in **Appendix I**.

4.10 **Table 4.2** summarizes the noise monitoring results which were extracted from the monthly reports for the Contract DC/2007/24 and DC/2008/09.

4.11 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 D of the quarterly report for Contract DC/2007/24 and Appendix J of the quarterly report for Contract DC/2008/09.

Table 4.2 Summary of Noise Monitoring Result in Reporting Quarter

Reporting Months	Noise Quality Monitoring Station	Range, dB(A) Leq(30 min.)	Limit Level, dB(A) Leq(30 min.)
October 2013	M5	61-65	75.0
	M6a	56-63(1)	
	M7a	62-75	
	M8	65-68	
	M9	54.5-56.4	
November 2013	M5	64-64	
	M6a	55-57(1)	
	M7a	61-68	
	M8	66-66	
	M9	52.2-55.0	
December 2013	M5	64-70	
	M6a	54-61(1)	
	M7a	65-73	
	M8	65-69	
	M9	54.5-59.3	

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

5 ENVIRONMENTAL AUDIT

Implementation Status of Environmental Mitigation Measures

5.1 The implementation status of the Environmental Mitigation Implementation Schedule (EMIS) is given in **Appendix E**.

Site Audit Summary

5.2 During site inspections in the reporting period, no non-conformance was identified. The observations and recommendations made in each site audit session in the reporting period are summarized in **Table 5.1.**

Table 5.1 ET's Observations and Recommendations of Site Audits

Parameters	Date/Ref. Number	Observations	Follow Up Action
Water Quality	131004-R06	Properly clear the debris in the U-channel at ALC-PTW.	The debris was cleared in the U-channel at ALC-PTW.
	131011-O01	The water quality of the sediment tank at ALC-PTW should be fulfilled the requirement of the WPCO's wastewater discharge license before discharging out to the public sewer.	The water quality of the sediment tank at ALC-PTW was fulfilled the requirement of the WPCO's wastewater discharge license before discharging out to the public sewer.
	131011-R03	Properly clear the stagnant water on the paved area at Wah Fu-PTW.	The stagnant water on the paved area at Wah Fu-PTW was cleared.
	131018-R03	The stagnant water was observed at sum pit at Abd-PTW. The Contractor was reminded to clear it properly.	The stagnant water was not observed at sum pit at Abd-PTW.
	131025-O01	The stagnant water in the sediment tank should be cleared regularly to prevent the formation of lichen at ALC-PTW and Wah Fu-PTW.	Please refer to 131101-O01.
	131025-R03	The Contractor was reminded to provide the chemical toilets at Wah Fu-PTW.	The workers were advised to go to the public toilet outside the site area of Wah Fu-PTW if necessary.
	131101-O01	The stagnant water in the sediment tank should be cleared regularly to prevent the formation of lichen at Wah Fu-PTW.	The stagnant water in the sediment tank was cleared at Wah Fu-PTW.
	131101-O02	The collection tank of the sediment tank should be kept in a good condition to prevent the water overflow to the U-channel at ALC-PTW.	The collection tank of the sediment tank was kept in a good condition at ALC-PTW.
	131115-O02	The Contractor was reminded to provide the maintenance of the sediment tank to prevent the water leakage at ALC-PTW.	Please refer to 131122-O02.

	131115-R05	The Contractor was reminded to provide the wheel washing facility at the site exit/entrance of Wah Fu-PTW.	Please refer to 131122-R04.
	131115-R08	Properly clear the stagnant water near the sum pit and sewage channel at Abd-PTW.	The water pump was provided by the Contractor at the sum pit to reduce the stagnant water; and the mosquito control and prevention in the DSD's sewage channel were done by the Contractor at Abd-PTW.
	131122-O02	The Contractor was reminded to provide the maintenance of the sediment tank to prevent the water leakage at ALC-PTW.	Please refer to 131129-O02.
	131122-R04	The Contractor was reminded to provide the wheel washing facility at the site exit/entrance of Wah Fu-PTW.	The wheel washing facility was provided by the Contractor at the site exit of Wah Fu-PTW.
	131129-O02	The Contractor was reminded to provide the maintenance of the sediment tank to prevent the water leakage at ALC-PTW.	Please refer to 131206-O02.
	131129-O03	The water leakage from the underground pipe was observed at Abd-PTW. The Contractor was reminded to clear the ponding water properly.	The ponding water was cleared and not observed at Abd-PTW.
	131206-O02	The Contractor was reminded to provide the maintenance of the sediment tank to prevent the water leakage at ALC-PTW.	The temporary measure was provided by the Contractor to prevent the overflow of leaking water from the sediment tank at ALC-PTW, thus, the Contractor was ordered the new fitting to replace the old one.
	131220-R04	The sand bags should be provided for bunding to prevent the water runoff to the public access road at Abd-PTW.	The identified area was work in progress during the site inspection at Abd-PTW.
	131227-O03	The small volume flow of wastewater was observed from the sediment tank at Wah Fu-PTW which was unproportional to the work process. The Contractor was reminded to ensure the sediment tank is not mal-functioned and in use.	Follow up actions will be reported during site inspections in January 2014.
Air Quality	131004-R02	The dusty material should be covered by impervious material at Sandy Bay-PTW.	The dusty material was covered by tarpaulin at Sandy Bay-PTW.
	131004-R07	Properly clear the sand on the paved access road and unpaved area near the site entrance at Abd-PTW.	The sand on the paved access road and unpaved area near the site entrance was cleared at Abd-PTW.

	131018-R01	The unpaved site area should be sprayed water regularly to prevent the dust generation at Wah Fu-PTW.	Please refer to 131025-R02.
	131025-R02	The unpaved site area should be sprayed water regularly to prevent the dust generation at Wah Fu-PTW.	The unpaved site area was sprayed water at Wah Fu-PTW.
	131101-R03	The sand bags should be kept in a good condition to prevent the dust emission at Sandy Bay-PTW and ALC-PTW.	The sand bags were kept in a good condition at Sandy Bay-PTW and ALC-PTW.
	131101-R04	The dusty material should be covered by impervious materials at ALC-PTW.	The dusty material was not observed at ALC-PTW.
	131115-R03	The dusty materials should be covered by impervious materials to prevent the dust emission at Sandy Bay-PTW and Abd-PTW.	Please refer to 131122-R05.
	131122-O03	The Contractor was reminded to provide the maintenance of the generation to prevent the dark smoke emission at ALC-PTW.	The dark smoke emission was not observed from the generator at ALC-PTW.
	131122-R05	The dusty materials should be covered by impervious materials to prevent the dust emission at Sandy Bay-PTW and Abd-PTW.	The dusty materials were covered by impervious materials and removed at Sandy Bay-PTW and Abd-PTW.
	131129-R04	The dusty materials should be covered by impervious materials to prevent the dust emission at ALC-PTW and Abd-PTW.	Please refer to 131206-R04.
	131206-R04	The dusty materials should be covered by impervious materials to prevent the dust emission at ALC-PTW and Abd-PTW.	Please refer to 131213-R02.
	131213-R02	The dusty materials should be covered by impervious materials to prevent the dust emission at Wah Fu-PTW and the dusty materials should be removed at Abd-PTW.	Please refer to 131220-R02.
	131213-R03	The mixing activities should be done in the proper enclosure area at Wah Fu-PTW.	The mixing activities were not observed at Wah Fu-PTW.
	131220-R02	The dusty materials should be covered by impervious materials or sprayed water to prevent the dust emission at Wah Fu-PTW and Abd-PTW.	Please refer to 131227-R04.
	131227-R04	The dusty materials should be covered by impervious materials or sprayed water to prevent the dust emission at Wah Fu-PTW and Abd-PTW.	Follow up actions will be reported during site inspections in January 2014.
Waste/ Chemical Management	131004-O01	The oil leakage was observed from the excavators at ALC-PTW. The Contractor was reminded to keep them in a good condition.	Please refer to 131011-O02.
	131004-R03	Properly sort out the general refuse as inert waste and non-inert waste and depose properly at Sandy Bay-PTW.	The general refuse was sorted out as inert waste and non-inert waste separately at Sandy Bay-PTW.

	131004-R04	Properly clear the oil stain as chemical waste at Wah Fu-PTW.	The oil stain was not observed at Wah Fu-PTW.
	131004-R05	Provide the drip tray for the chemical container at Wah Fu-PTW.	The chemical container was removed and not observed at Wah Fu-PTW.
	131011-O02	The oil leakage was observed from the excavator at ALC-PTW. The Contractor was reminded to keep it in a good condition.	The oil leakage was not observed from the excavator at ALC-PTW.
	131011-R04	Provide the drip tray for the chemical container at Wah Fu-PTW.	The chemical container at Wah Fu-PTW was not observed.
	131018-R02	The Contractor was reminded to keep the drip tray of the boring machine in a good condition at Wah Fu-PTW.	The drip tray of the boring machine at Wah Fu-PTW was in a good condition.
	131108-R01	The chemical container should be provided with drip tray at ALC-PTW.	Please refer to 131115-R07.
	131108-R02	Properly clear the construction waste at ALC-PTW.	The construction waste was cleared at ALC-PTW.
	131108-R03	The rubbish bins should be labelled for sorting out the general refuse at Abd-PTW.	The rubbish bins were labelled properly for sorting out the general refuse at Abd-PTW.
	131115-R04	Properly clear the construction waste and general refuse in the tree protection area, the planter and the site area at Wah Fu-PTW, Sandy Bay-PTW and Abd-PTW.	The construction waste was cleared in the tree protection area and the planter at Wah Fu-PTW and Abd-PTW; and the construction waste around the site area was sorted out tidily in the site area and would be recycled to use at Sandy Bay-PTW.
	131115-R06	Properly place the oil pumper in the drip tray at ALC-PTW.	The oil pumper was placed in the drip tray at ALC-PTW.
	131115-R07	The chemical container should be provided with the drip tray and added the label at ALC-PTW.	The chemical container was removed and not observed at ALC-PTW.
	131213-R04	Properly clear the empty containers at ALC-PTW.	The empty containers were not observed at ALC-PTW.
	131213-R05	The chemical containers should be provided with the drip trays at ALC-PTW.	Please refer to 131220-R03.
	131213-R06	Locks should be provided for the chemical waste storage facility at ALC-PTW.	The chemical waste storage facility was locked at ALC-PTW.
	131220-R03	The chemical containers should be provided with the drip tray at ALC-PTW.	Please refer to 131227-R05.
	131227-O02	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.

	131227-R05	The chemical containers should be stored in the proper chemical waste storage facility with the proper labels at Wah Fu-PTW, ALC-PTW and Abd-PTW.	Follow up actions will be reported during site inspections in January 2014.
Landscape and Visual	131025-R04	Properly remove the construction materials around the tree protection area at Abd-PTW.	The construction materials around the tree protection area at Abd-PTW were removed.
	131115-O01	The Contractor was reminded to provide the support for the existing tree in the planter to avoid the risk of tree collapsion at Wah Fu-PTW.	Please refer to 131122-O01.
	131115-R04	Properly clear the construction waste and general refuse in the tree protection area, the planter and the site area at Wah Fu-PTW, Sandy Bay-PTW and Abd-PTW.	The construction waste was cleared at Wah Fu-PTW and Abd-PTW; and the construction waste was sorted out tidily and would be recycled to use at Sandy Bay-PTW.
	131115-R09	The Contractor was reminded to provide the fence for the existing trees to protect them properly at Abd-PTW.	The fence was provided by the Contractor to protect the existing trees at Abd-PTW.
	131122-O01	The Contractor was reminded to provide the support for the existing tree in the planter to avoid the risk of tree collapsion at Wah Fu-PTW.	Please refer to 131129-O01.
	131129-O01	The Contractor was reminded to provide the support for the existing tree in the planter to avoid the risk of tree collapsion at Wah Fu-PTW.	Please refer to 131206-O01.
	131206-O01	The support of the existing tree in the planter was installed at Wah Fu-PTW but the proper method was under review.	Please refer to 131213-O01.
	131206-R03	Properly remove the equipements in the planter at Wah Fu-PTW.	The equipements in the planter were removed at Wah Fu-PTW.
	131213-O01	The support of the existing tree in the planter was installed at Wah Fu-PTW but the proper method was under review.	Please refer to 131220-O01.
	131220-O01	The support of the existing tree in the planter was installed at Wah Fu-PTW but the proper method was under review.	Please refer to 131227-O01.
	131227-O01	The support of the existing tree in the planter was installed at Wah Fu-PTW but the proper method was under review.	Follow up actions will be reported during site inspections in January 2014.
Noise	--	--	--
Permit/ Licenses	131213-R07	The Environmental Permit should be displayed at the specific location at Sandy Bay-PTW.	The Environmental Permit was displayed at the specific location at Sandy Bay-PTW.

Status of Environmental Licensing and Permitting

5.3 Environmental licenses and permits including the Billing Account for Disposal of Construction Waste, Chemical Waste Producer and Wastewater Discharge were in place and valid during the reporting quarter. A summary status of licenses and permits is given in

Appendix F.

Advice on Waste Management Status

5.4 The amount of wastes generated by the activities of the Project in the reporting period was attached in the appendices of the monthly reports for October to December 2013 and was shown in **Appendix G**.

6. NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS (ACTION AND LIMIT LEVELS)

Summary of Exceedances

6.1 Environmental monitoring works were performed in the reporting quarter and all monitoring results were checked and reviewed. A summary of exceedance is attached in **Appendix I**.

6.2 No Action/Limit Level exceedance of 1-hour TSP and 24-hour TSP was recorded in the reporting quarter.

6.3 One Action Level exceedance of Noise was recorded in the reporting quarter.

Review of the Reasons for and the Implications of Non-compliance

6.4 There was no non-compliance from the site audits in the reporting quarter. The observations and recommendations made in each individual site audit session were presented in **Table 5.1**.

Summary of action taken in the event of and follow-up on non-compliance

6.5 There was no particular action taken since no non-compliance was observed from the site audits in the reporting quarter.

7 ENVIRONMENTAL COMPLAINTS

7.1 No environmentally related summons, prosecutions were received for the Project in the reporting quarter while one complaint was raised by one anonymous complainant on 19th November 2013. However, there was no exceedance report received from Contract DC/2007/24 at noise monitoring stations M7a for Wah Fu PTW since last two years, and the Contractor has performed noise mitigation measures that will be continued until the end of the construction works. The Contractor had also enhanced the noise mitigation measure by providing the sound insulating materials to enclose and wrap the breaking tip which could further reduce the noise generated from the construction works in Wah Fu PTW. The updated Complaint Log is attached in **Appendix H.**

8 NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

8.1 No environmental prosecution was recorded in the reporting quarter.

9. COMMENTS, CONCLUSIONS AND RECOMMENDATIONS

9.1 Key environmental issues for the coming months 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.

9.2 According to the environmental audit performed in the reporting quarter, the following recommendations were made:

Water Impact

- To avoid any discharge of wastewater/ muddy water by-pass/ without the desilting facilities from the construction site;
- To avoid blockage of U channel and drainage system by sediment;
- To regularly check the water quality fulfill the requirement of WPCO's wastewater discharge licence;
- To provide the chemical toilets in the construction site; and
- To avoid water from accumulation on site and carry out larviciding against mosquito breeding for stagnant water when mosquito larvae are observed.

Air Quality

- To provide water spraying on dried site areas or materials regularly;
- To remain good site practice on handling excavated or dusty material for dust suppression (e.g. stockpiles of material shall be covered by tarpaulin);
- To regularly check and maintain the mechanical equipments to avoid black smoke emission;
- To mitigate the dust generation by adequate water spraying in dry days; and
- To provide the maintenance of the sediment tank for runoff discharge from the construction site.

Waste/Chemical Management

- To provide proper and sufficient storage area or drip trays for oil containers on site;
- To properly remove the contaminated earth as chemical waste;
- To properly sort out and depose the general refuse as inert waste and non-inert waste;
- To avoid and check for any accumulation of waste materials or rubbish on site;
- To avoid any discharge of sewage water by-pass/ without the desilting facilities from the

construction site; and

- To avoid any discharge or accidental spillage of chemical waste or oil directly from the equipment.

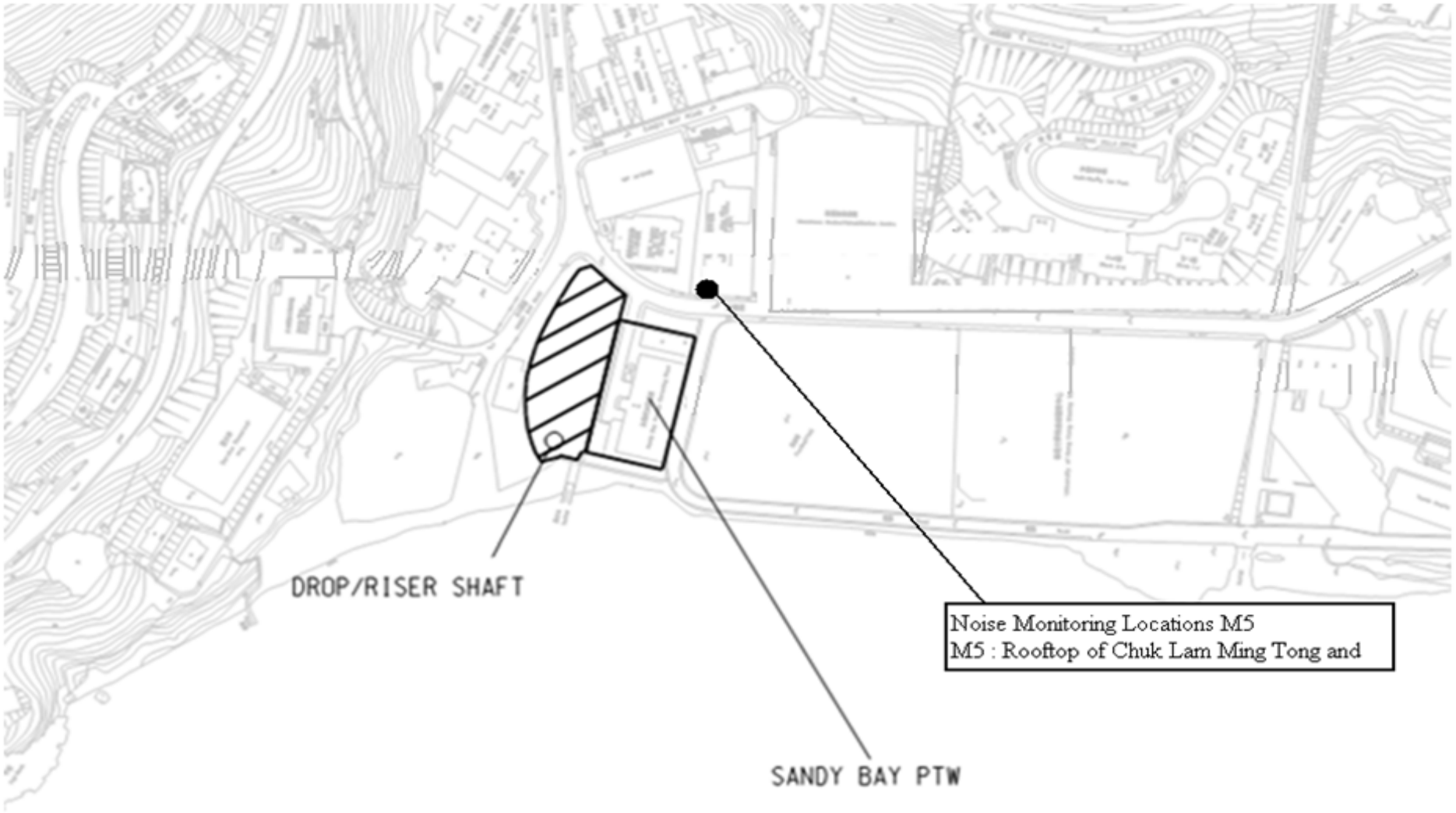
Landscape and Visual

- To avoid any heavy/ construction materials placed into tree protection zone;
- To erect and maintain the protection fence around the retaining tree; and
- To provide the support for the existing trees to avoid the risk of tree collapsion if necessary.

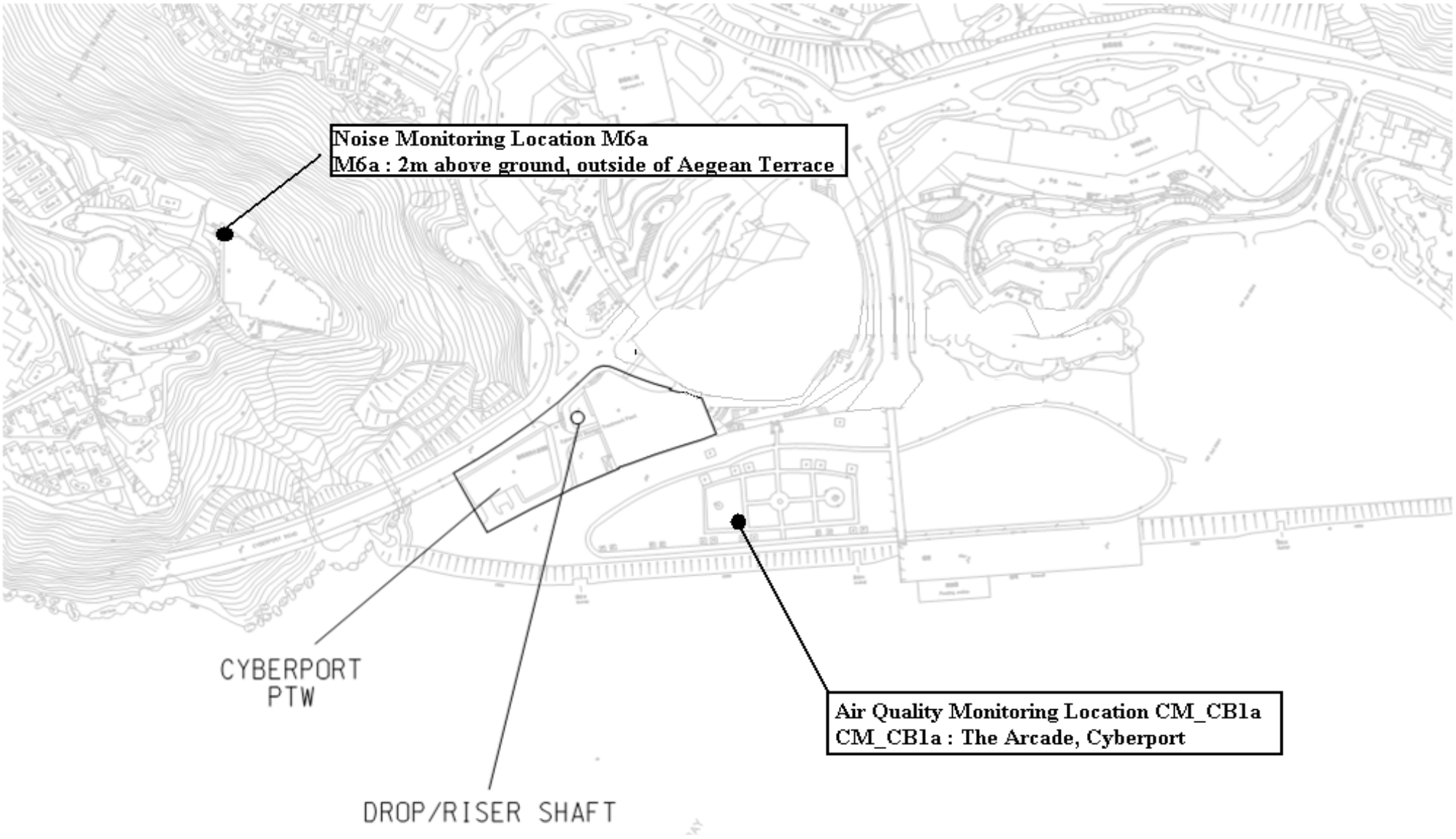
Permit/Licenses

- To keep the permit/licenses in a good condition posted on the site for inspection;
- To keep the permit/licenses in a full version posted on the site for inspection; and
- To display the Environmental Permit conspicuously on site.

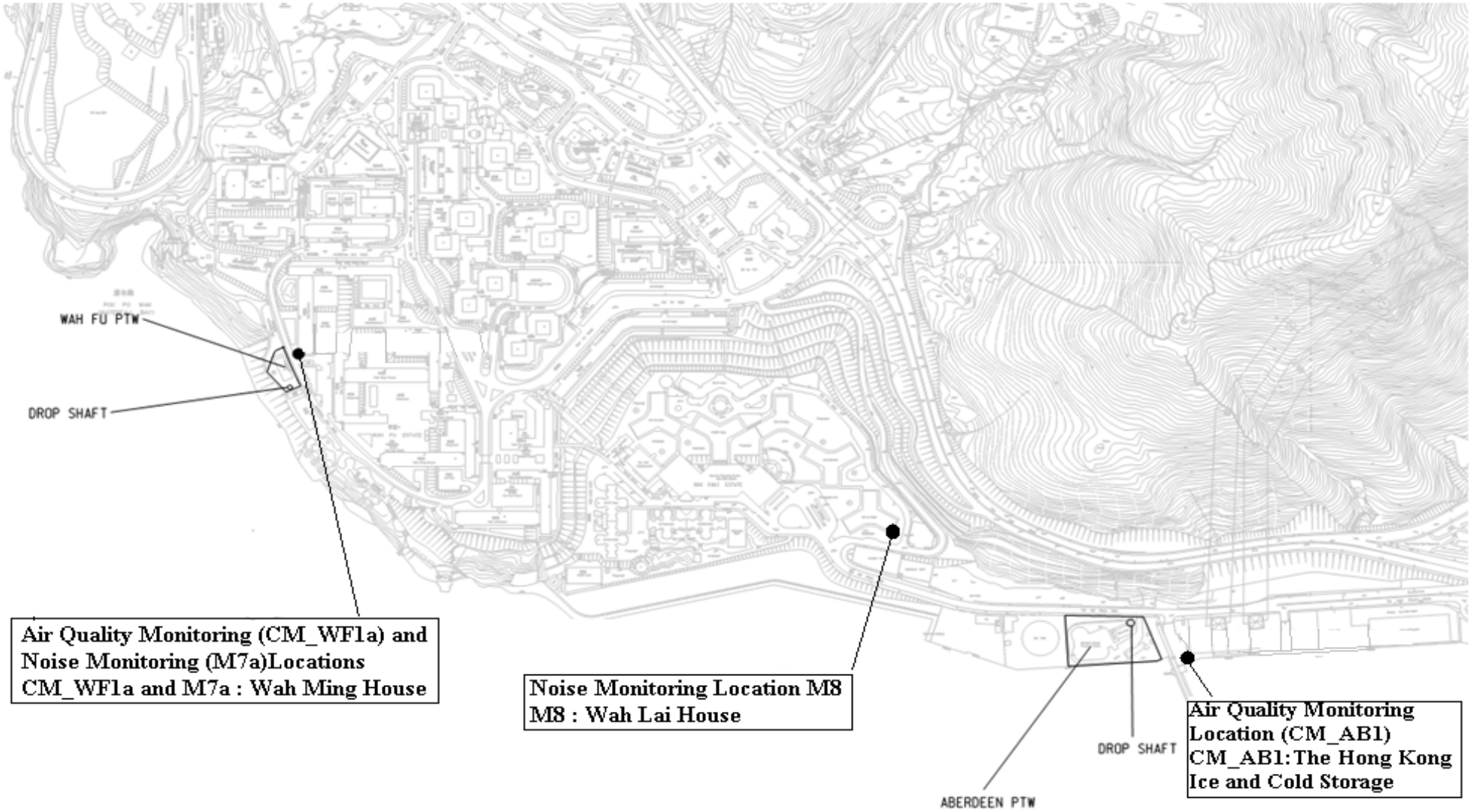
FIGURES



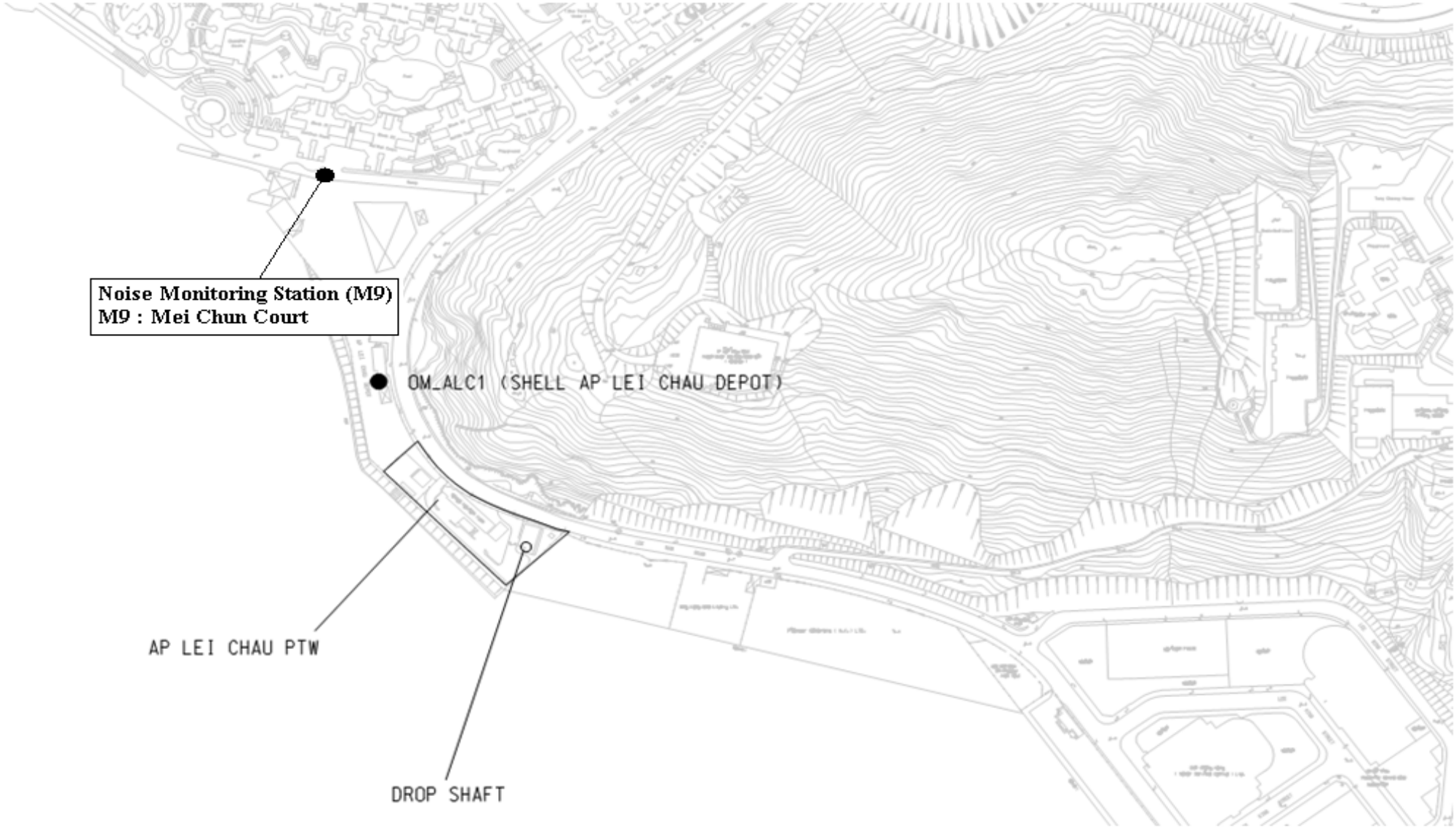
Title	Contract No: DC/2009/24 HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	Scale N.T.S	Project No. MA11060	CINOTECH
	General Location Plan of Sandy Bay PTW and Locations of Noise Monitoring Stations	Date 01/2012	Figure 1a	



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	

Environmental Team Leader
Dr. Priscilla Choy
(Tel: 2151 2089)

Project Coordinator
- coordination of the Project and compile reports
Janet Wai
(Tel: 2151 2078)

Monitoring Team
- perform environmental monitoring works

Team Leader: Tang Wing Kwai
(Tel: 2151 2087)

Team Members: Lee Man Hei, Mo Yik Wai, Lam Ho Chun, Fung Ka Chun, Law Chun Hong, Ho Ka Chun, Chan Ping Fai, Sin Kin Chung, Lau Kong Yung, Lam Cheuk Fung

Audit Team
- conduct site inspection, complete the environmental checklist once a week

Team Leader: Ivy Tam
(Tel: 2151 2090)

Team Members:
Johnny Fung, Victor Wong, Robin Cheung

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	

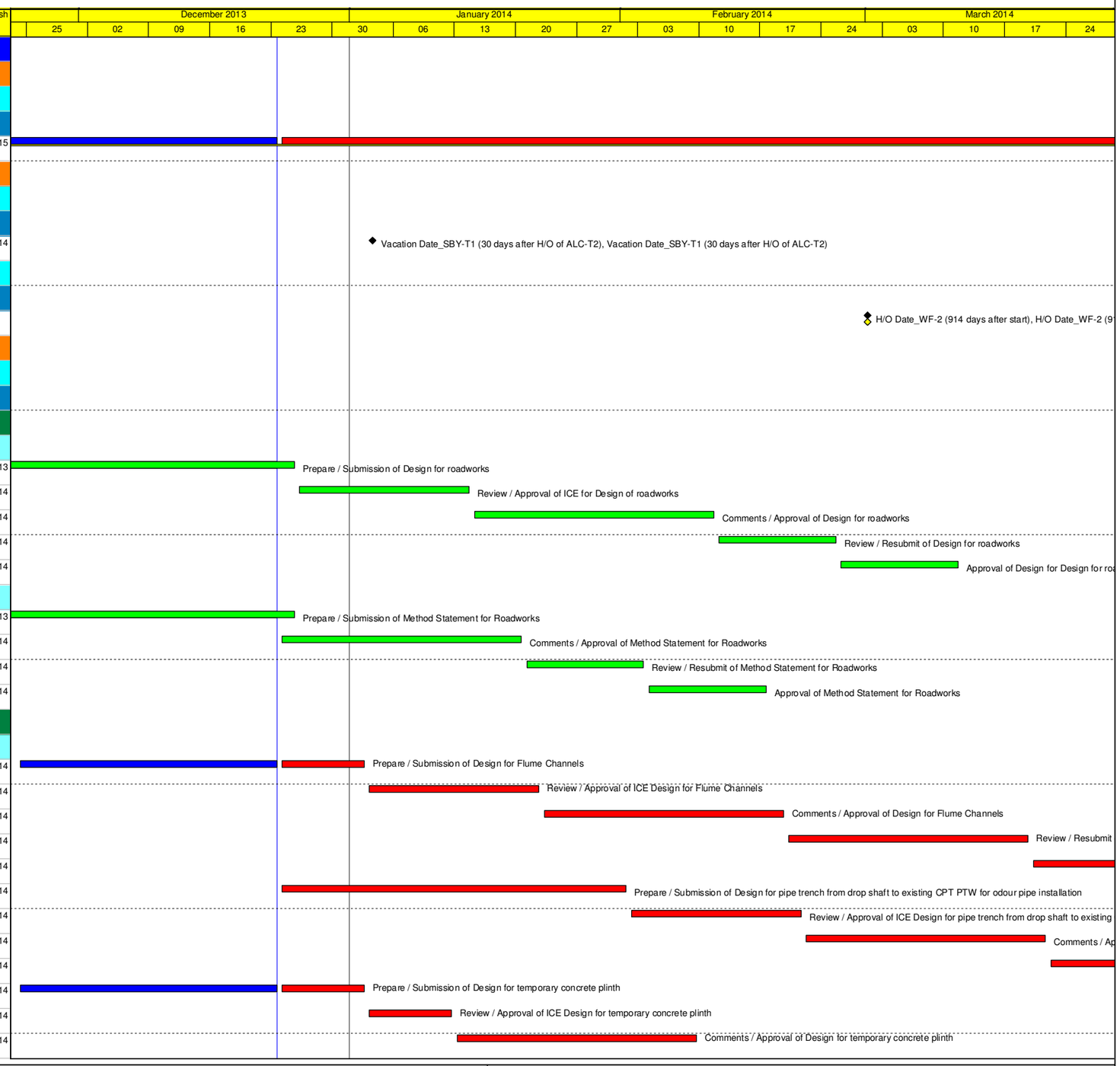
APPENDIX A
CONTACT DETAILS OF THE PROJECT ORGANISATION

Appendix A - Contact Details of the Project Organization

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 Team	Dr. Priscilla Choy	ET Leader	2151 2089
		Ms. Janet Wai	Project Coordinator & Audit Team Leader	2151 2078
Mott MacDonald	Independent Environmental Checker	Dr. Anne Kerr	Independent Environmental Checker	2828 5757
Leader and JEC Joint Venture	Contractor	Mr. Wilson Chan	Site Agent	9656 8865
		Mr. Patrick Wong	Environmental Officer	9019 7270

APPENDIX B
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	16-Sep-15
Portion of the Site (MILESTONE)					
Sandy Bay PTW					
Possession / Vacation of Portions					
24MSBY00025	Vacation Date_SBY-T1 (30 days after H/O of ALC-T2)	0%	0		03-Jan-14
Wah Fu PTW					
Possession / Vacation of Portions					
24MWFU00030	H/O Date_WF-2 (914 days after start)	0%	0	01-Mar-14	
Civil & Geo. Submission					
Contractor's Design, Submission / Approval & Procurement					
Technical Information & Drawings					
Sandy Bay					
Major Technical Data / Civil Works Design					
24DSBY00350	Prepare / Submission of Design for roadworks	0%	40	25-Apr-13 A	25-Dec-13
24DSBY00360	Review / Approval of ICE for Design of roadworks	0%	20	26-Dec-13	14-Jan-14
24DSBY00370	Comments / Approval of Design for roadworks	0%	28	15-Jan-14	11-Feb-14
24DSBY00380	Review / Resubmit of Design for roadworks	0%	14	12-Feb-14	25-Feb-14
24DSBY00390	Approval of Design for Design for roadworks	0%	14	26-Feb-14	11-Mar-14
Method Statement					
24DSBY02200	Prepare / Submission of Method Statement for Roadworks	0%	60	05-Apr-13 A	25-Dec-13
24DSBY02210	Comments / Approval of Method Statement for Roadworks	0%	28	24-Dec-13	20-Jan-14
24DSBY02220	Review / Resubmit of Method Statement for Roadworks	0%	14	21-Jan-14	03-Feb-14
24DSBY02230	Approval of Method Statement for Roadworks	0%	14	04-Feb-14	17-Feb-14
Cyberport					
Major Technical Data / Civil Works Design					
24DCPT00291	Prepare / Submission of Design for Flume Channels	0%	40	24-Nov-13 A	02-Jan-14
24DCPT00292	Review / Approval of ICE Design for Flume Channels	0%	20	03-Jan-14	22-Jan-14
24DCPT00293	Comments / Approval of Design for Flume Channels	0%	28	23-Jan-14	19-Feb-14
24DCPT00294	Review / Resubmit of Design for Flume Channels	0%	28	20-Feb-14	19-Mar-14
24DCPT00295	Approval of Design for Flume Channels	0%	14	20-Mar-14	02-Apr-14
24DCPT00300	Prepare / Submission of Design for pipe trench from drop shaft to existing CPT PTW for odour pipe installation	0%	40	24-Dec-13	01-Feb-14
24DCPT00310	Review / Approval of ICE Design for pipe trench from drop shaft to existing CPT PTW for odour pipe installation	0%	20	02-Feb-14	21-Feb-14
24DCPT00320	Comments / Approval of Design for pipe trench from drop shaft to existing CPT PTW for odour pipe installation	0%	28	22-Feb-14	21-Mar-14
24DCPT00330	Review / Resubmit of Design for pipe trench from drop shaft to existing CPT PTW for odour pipe installation	0%	28	22-Mar-14	18-Apr-14
24DCPT00341	Prepare / Submission of Design for temporary concrete plinth	0%	30	24-Nov-13 A	02-Jan-14
24DCPT00342	Review / Approval of ICE Design for temporary concrete plinth	0%	10	03-Jan-14	12-Jan-14
24DCPT00343	Comments / Approval of Design for temporary concrete plinth	0%	28	13-Jan-14	09-Feb-14



Start Date: 25-Jun-11

Finish Date: 28-Oct-16

Date Date: 23-Dec-13

Run Date: 20-Dec-13

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

HATSS2A Contract No. DC/2009/24

3 MONTHS ROLLING PROGRAMME

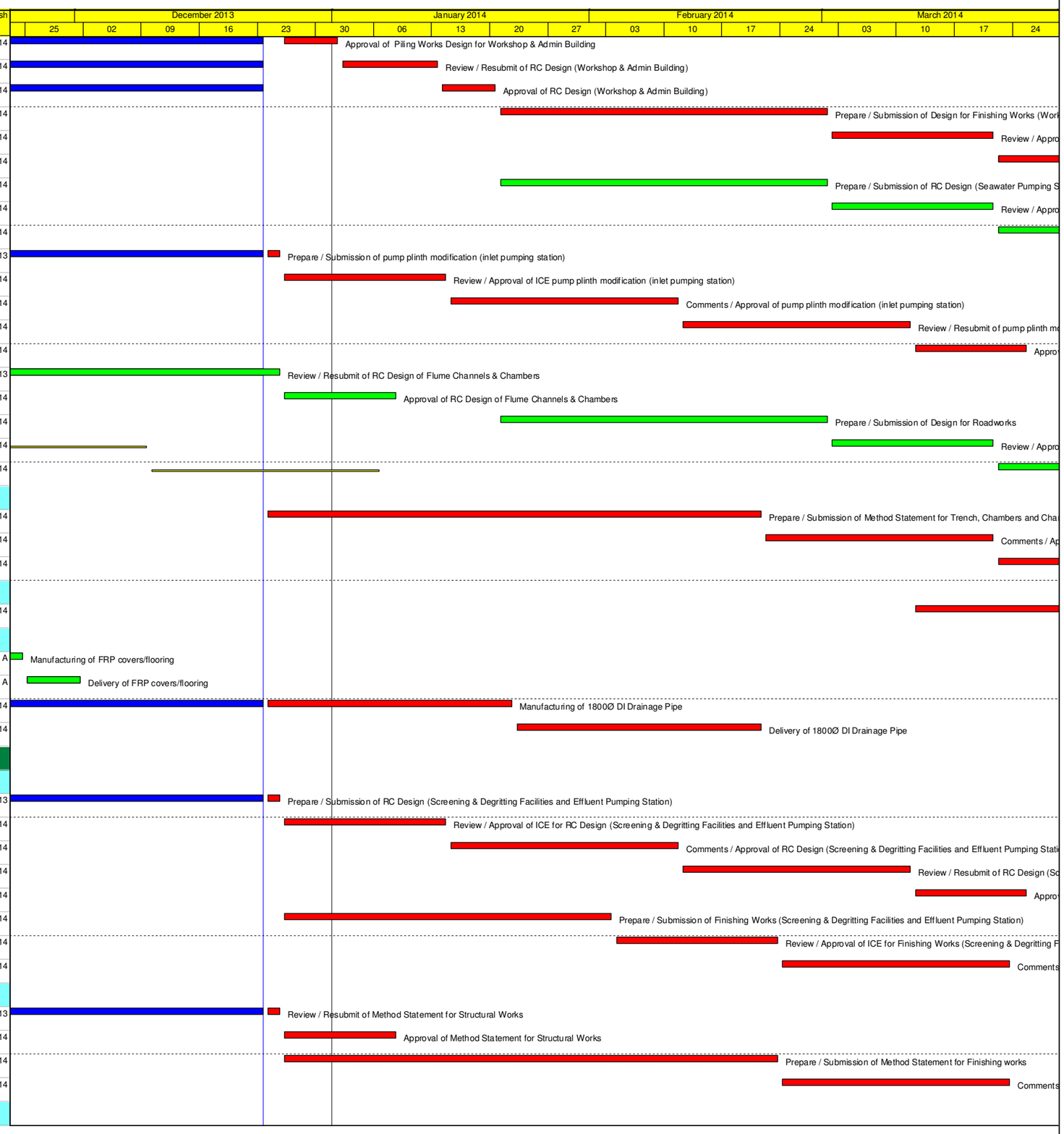
DECEMBER 2013

DETAILED WORKS PROGRAMME - DC/2009/24

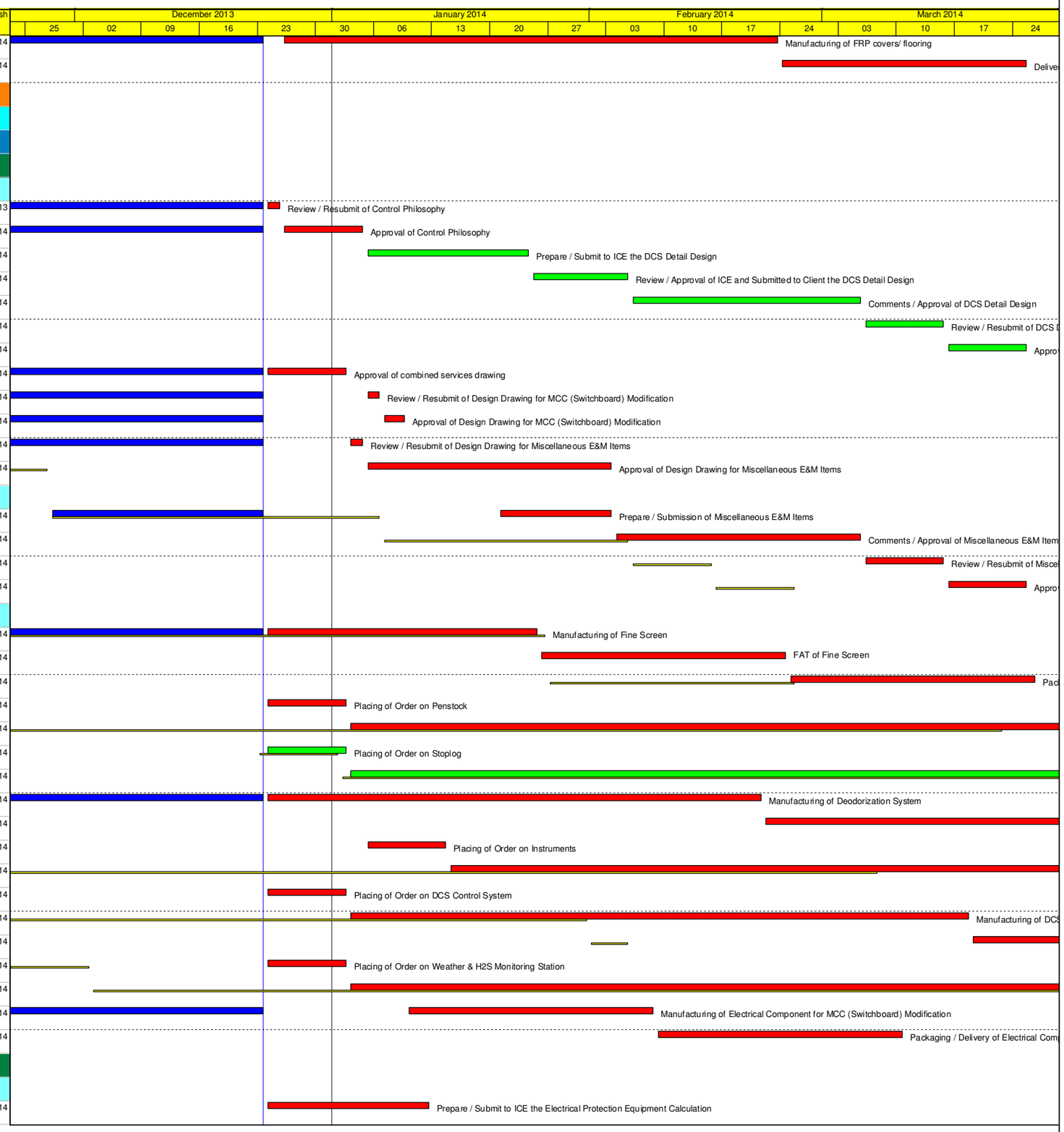
Date	Revision	Checked	Approved
30-Mar-12	DWP - REVISION 0		
14-Dec-12	DWP - REVISION 2		
23-Dec-13	UDWP - REVISION 2		

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24DCPT00344	Review / Resubmit of Design for temporary concrete plinth	0%	14	10-Feb-14	23-Feb-14
24DCPT00345	Approval of Design for temporary concrete plinth	0%	14	24-Feb-14	09-Mar-14
24DCPT00346	Prepare / Submission of Design for permanent concrete plinth for new deodorization unit	0%	40	13-Jan-14	21-Feb-14
24DCPT00347	Review / Approval of ICE Design for permanent concrete plinth for new deodorization unit	0%	20	22-Feb-14	13-Mar-14
24DCPT00348	Comments / Approval of Design for permanent concrete plinth for new deodorization unit	0%	28	14-Mar-14	10-Apr-14
Method Statement					
24DCPT02160	Prepare / Submission of Method Statement for Trench, Chambers and Channels	0%	60	24-Dec-13*	21-Feb-14
24DCPT02170	Comments / Approval of Method Statement for Trench, Chambers and Channels	0%	28	22-Feb-14	21-Mar-14
24DCPT02180	Review / Resubmit of Method Statement for Trench, Chambers and Channels	0%	14	22-Mar-14	04-Apr-14
Order / Manufacturing / Shipment / Delivery					
24DCPT02350	Placing order for 700Ø DI Pipe, valves and accessories	0%	10	24-Dec-13	02-Jan-14
24DCPT02360	Manufacturing of 700Ø DI Pipe, valves and accessories	0%	90	03-Jan-14	02-Apr-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-Dec-13
24DWFU00140	Approval of Piling Works Design for Fine Screen & Grit Trap Building	50%	14	23-May-12 A	27-Dec-13
24DWFU00160	Review / Approval of ICE for RC Design (Fine Screen & Grit Trap Building)	85%	20	08-Feb-12 A	29-Dec-13
24DWFU00180	Review / Resubmit of RC Design (Fine Screen & Grit Trap Building)	85%	28	08-Feb-12 A	31-Dec-13
24DWFU00190	Approval of RC Design (Fine Screen & Grit Trap Building)	50%	14	18-Jul-12 A	07-Jan-14
24DWFU00200	Prepare / Submission of Design for Finishing Works (Fine Screen & Grit Trap Building)	0%	40	01-Jan-14	09-Feb-14
24DWFU00210	Review / Approval of ICE for Design of Finishing Works (Fine Screen & Grit Trap Building)	0%	20	10-Feb-14	01-Mar-14
24DWFU00220	Comments / Approval of Design for Finishing Works (Fine Screen & Grit Trap Building)	0%	28	02-Mar-14	29-Mar-14
24DWFU00400	Prepare / Submission of Design for Flume Channels & Chambers	0%	40	08-Jan-14	16-Feb-14
24DWFU00410	Review / Approval of ICE for Design for Flume Channels & Chambers	0%	20	17-Feb-14	08-Mar-14
24DWFU00420	Comments / Approval of Design for Flume Channels & Chambers	0%	28	09-Mar-14	05-Apr-14
Method Statement for Major Works					
24DWFU02080	Prepare / Submission of Method Statement for Structural works	0%	60	25-Apr-13 A	29-Dec-13
24DWFU02090	Comments / Approval of Method Statement for Structural Works	0%	28	28-Dec-13	24-Jan-14
24DWFU02100	Review / Resubmit of Method Statement for Structural Works	0%	14	25-Jan-14	07-Feb-14
24DWFU02110	Approval of Method Statement for Structural Works	0%	14	08-Feb-14	21-Feb-14
24DWFU02120	Prepare / Submission of Method Statement for Finishing works	0%	60	01-Jan-14	01-Mar-14
24DWFU02130	Comments / Approval of Method Statement for Finishing works	0%	28	02-Mar-14	29-Mar-14
24DWFU02160	Prepare / Submission of Method Statement for Trench, Chambers and Channels	0%	60	19-Mar-14	17-May-14
Material Submission / Approval					
24DWFU02320	Prepare / Submission of Material Approval for Roller Shutter	0%	28	01-Jan-14	28-Jan-14
24DWFU02330	Review / Approval of Material Approval for Roller Shutter	0%	28	29-Jan-14	25-Feb-14
24DWFU02340	Review / Resubmit of Material Approval for Roller Shutter	0%	14	26-Feb-14	11-Mar-14
24DWFU02350	Approval of Material Approval for Roller Shutter	0%	14	12-Mar-14	25-Mar-14
Order / Manufacturing / Shipment / Delivery					
24DWFU02400	Placing order for Roller Shutter	0%	10	16-Mar-14	25-Mar-14
Aberdeen					
Temporary Works Design					
24DABN00650	Prepare / Submission of Tech. Data and Shop Drawings for Construction of Temp. Office	0%	40	22-Feb-14	02-Apr-14
Major Technical Data / Civil Works Design					
24DABN00140	Approval of RC Design for Fine Screen & Grit Trap Building	100%	14	18-Jul-12 A	27-Nov-13 A
24DABN00180	Review / Resubmit of Piling Works Design for Workshop & Admin Building	0%	28	22-Dec-11 A	25-Dec-13

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-Jan-14
24DABN00230	Review / Resubmit of RC Design (Workshop & Admin Building)	0%	28	07-Feb-12 A	13-Jan-14
24DABN00240	Approval of RC Design (Workshop & Admin Building)	0%	14	18-Jul-12 A	20-Jan-14
24DABN00250	Prepare / Submission of Design for Finishing Works (Workshop & Admin Building)	0%	40	21-Jan-14	01-Mar-14
24DABN00260	Review / Approval of ICE Design for Finishing Works (Workshop & Admin Building)	0%	20	02-Mar-14	21-Mar-14
24DABN00270	Comments / Approval of Design for Finishing Works (Workshop & Admin Building)	0%	28	22-Mar-14	18-Apr-14
24DABN00300	Prepare / Submission of RC Design (Seawater Pumping Station)	0%	40	21-Jan-14*	01-Mar-14
24DABN00310	Review / Approval of ICE RC Design (Seawater Pumping Station)	0%	20	02-Mar-14	21-Mar-14
24DABN00320	Comments / Approval of RC Design (Seawater Pumping Station)	0%	28	22-Mar-14	18-Apr-14
24DABN00341	Prepare / Submission of pump plinth modification (inlet pumping station)	0%	30	02-Sep-13 A	25-Dec-13
24DABN00342	Review / Approval of ICE pump plinth modification (inlet pumping station)	0%	20	26-Dec-13	14-Jan-14
24DABN00343	Comments / Approval of pump plinth modification (inlet pumping station)	0%	28	15-Jan-14	11-Feb-14
24DABN00344	Review / Resubmit of pump plinth modification (inlet pumping station)	0%	28	12-Feb-14	11-Mar-14
24DABN00345	Approval of pump plinth modification (inlet pumping station)	0%	14	12-Mar-14	25-Mar-14
24DABN00380	Review / Resubmit of RC Design of Flume Channels & Chambers	0%	28	13-Jul-13 A	25-Dec-13
24DABN00390	Approval of RC Design of Flume Channels & Chambers	0%	14	26-Dec-13	08-Jan-14
24DABN00450	Prepare / Submission of Design for Roadworks	0%	40	21-Jan-14	01-Mar-14
24DABN00460	Review / Approval of ICE Design for Roadworks	0%	20	02-Mar-14	21-Mar-14
24DABN00470	Comments / Approval of Design for Roadworks	0%	28	22-Mar-14	18-Apr-14
Method Statement for Major Works					
24DABN02160	Prepare / Submission of Method Statement for Trench, Chambers and Channels	0%	60	24-Dec-13	21-Feb-14
24DABN02170	Comments / Approval of Method Statement for Trench, Chambers and Channels	0%	28	22-Feb-14	21-Mar-14
24DABN02180	Review / Resubmit of Method Statement for Trench, Chambers and Channels	0%	14	22-Mar-14	04-Apr-14
Material Submission / Approval					
24DABN02360	Prepare / Submission of Material approval for Roller Shutter	0%	60	12-Mar-14	10-May-14
Order / Manufacturing / Shipment / Delivery					
24DABN02530	Manufacturing of FRP covers/flooring	100%	90	14-Jan-13 A	24-Nov-13 A
24DABN02540	Delivery of FRP covers/flooring	100%	7	25-Nov-13 A	01-Dec-13 A
24DABN02590	Manufacturing of 1800Ø DI Drainage Pipe	100%	90	11-Dec-12 A	22-Jan-14
24DABN02600	Delivery of 1800Ø DI Drainage Pipe	0%	30	23-Jan-14	21-Feb-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-Dec-13
24DALC00110	Review / Approval of ICE for RC Design (Screening & Degritting Facilities and Effluent Pumping Station)	0%	20	26-Dec-13	14-Jan-14
24DALC00120	Comments / Approval of RC Design (Screening & Degritting Facilities and Effluent Pumping Station)	0%	28	15-Jan-14	11-Feb-14
24DALC00130	Review / Resubmit of RC Design (Screening & Degritting Facilities and Effluent Pumping Station)	0%	28	12-Feb-14	11-Mar-14
24DALC00140	Approval of RC Design (Screening & Degritting Facilities and Effluent Pumping Station)	0%	14	12-Mar-14	25-Mar-14
24DALC00150	Prepare / Submission of Finishing Works (Screening & Degritting Facilities and Effluent Pumping Station)	0%	40	26-Dec-13	03-Feb-14
24DALC00160	Review / Approval of ICE for Finishing Works (Screening & Degritting Facilities and Effluent Pumping Station)	0%	20	04-Feb-14	23-Feb-14
24DALC00170	Comments / Approval of Finishing Works (Screening & Degritting Facilities and Effluent Pumping Station)	0%	28	24-Feb-14	23-Mar-14
Method Statement for Major Works					
24DALC02100	Review / Resubmit of Method Statement for Structural Works	0%	14	22-Oct-13 A	25-Dec-13
24DALC02110	Approval of Method Statement for Structural Works	0%	14	26-Dec-13	08-Jan-14
24DALC02120	Prepare / Submission of Method Statement for Finishing works	0%	60	26-Dec-13	23-Feb-14
24DALC02130	Comments / Approval of Method Statement for Finishing works	0%	28	24-Feb-14	23-Mar-14
Order / Manufacturing / Shipment / Delivery					

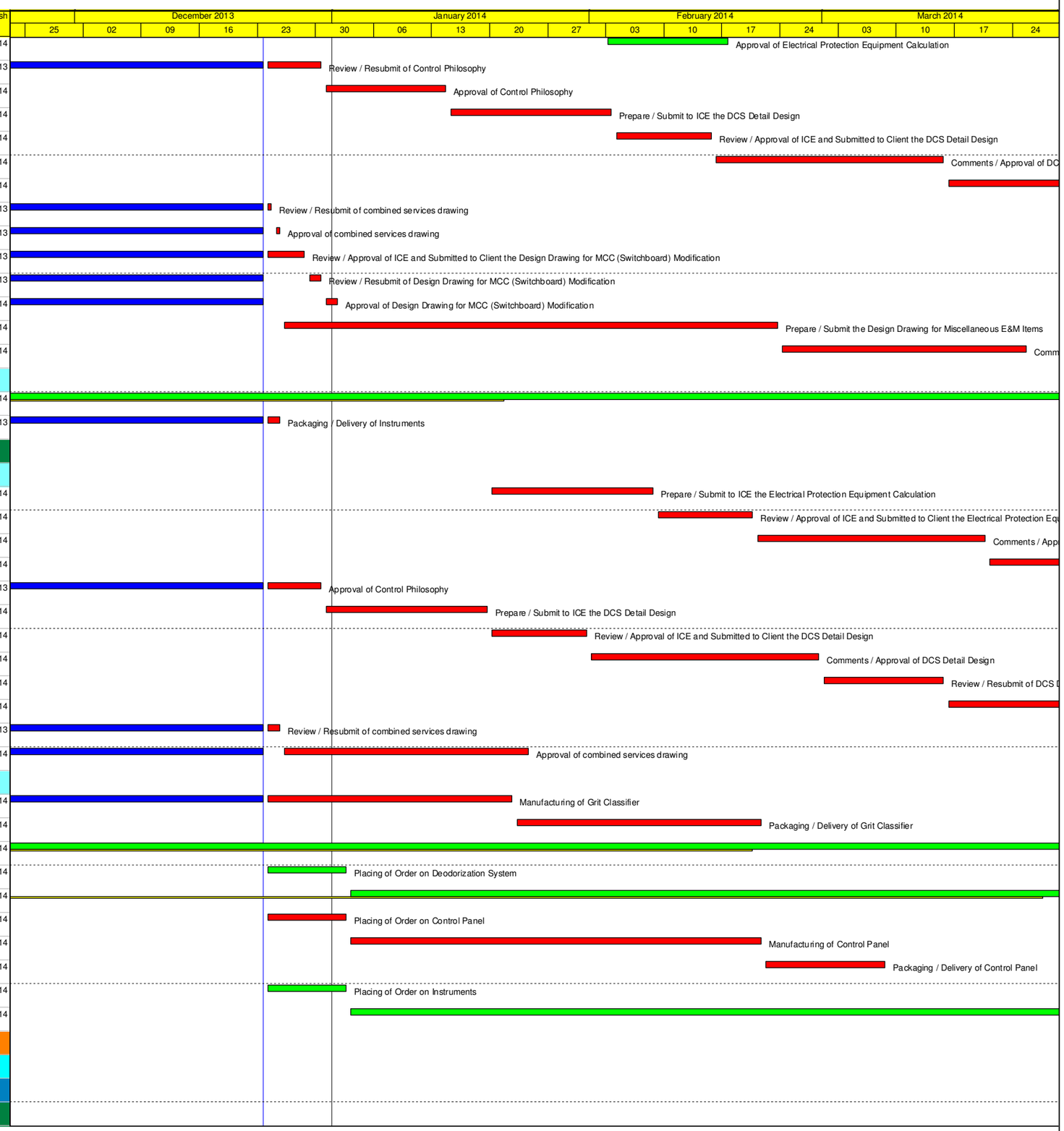


Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24DALC02610	Manufacturing of FRP covers/ flooring	0%	90	06-May-13 A	23-Feb-14
24DALC02620	Delivery of FRP covers/ flooring	0%	30	24-Feb-14	25-Mar-14
Electrical and Mechanical Submission					
Contractor's Design, Submission / Approval and Procurement					
Technical Information & Drawings					
Cyberport					
Major Technical Data / E&M Works Design					
24DCPT03420	Review / Resubmit of Control Philosophy	0%	10	08-Feb-12 A	25-Dec-13
24DCPT03430	Approval of Control Philosophy	100%	10	10-May-12 A	04-Jan-14
24DCPT03440	Prepare / Submit to ICE the DCS Detail Design	0%	20	05-Jan-14	24-Jan-14
24DCPT03450	Review / Approval of ICE and Submitted to Client the DCS Detail Design	0%	12	25-Jan-14	05-Feb-14
24DCPT03460	Comments / Approval of DCS Detail Design	0%	28	06-Feb-14	05-Mar-14
24DCPT03470	Review / Resubmit of DCS Detail Design	0%	10	06-Mar-14	15-Mar-14
24DCPT03480	Approval of DCS Detail Design	0%	10	16-Mar-14	25-Mar-14
24DCPT03484	Approval of combined services drawing	0%	30	09-Apr-13 A	02-Jan-14
24DCPT03488	Review / Resubmit of Design Drawing for MCC (Switchboard) Modification	100%	10	27-Sep-12 A	06-Jan-14
24DCPT03489	Approval of Design Drawing for MCC (Switchboard) Modification	0%	10	17-Jan-13 A	09-Jan-14
24DCPT03492	Review / Resubmit of Design Drawing for Miscellaneous E&M Items	0%	30	29-Sep-13 A	04-Jan-14
24DCPT03493	Approval of Design Drawing for Miscellaneous E&M Items	0%	30	05-Jan-14	03-Feb-14
Equipment Submission/Approval					
24DCPT03235	Prepare / Submission of Miscellaneous E&M Items	0%	40	28-Nov-13 A	03-Feb-14
24DCPT03236	Comments / Approval of Miscellaneous E&M Items	0%	30	04-Feb-14	05-Mar-14
24DCPT03237	Review / Resubmit of Miscellaneous E&M Items	0%	10	06-Mar-14	15-Mar-14
24DCPT03238	Approval of Miscellaneous E&M Items	0%	10	16-Mar-14	25-Mar-14
Order / Manufacturing / Shipment / Delivery					
24PCPT01010	Manufacturing of Fine Screen	0%	145	09-May-13 A	25-Jan-14
24PCPT01015	FAT of Fine Screen	0%	30	26-Jan-14	24-Feb-14
24PCPT01020	Packaging / Delivery of Fine Screen	0%	30	25-Feb-14	26-Mar-14
24PCPT01030	Placing of Order on Penstock	0%	10	24-Dec-13*	02-Jan-14
24PCPT01040	Manufacturing of Penstock	0%	140	03-Jan-14	22-May-14
24PCPT01060	Placing of Order on Stoplog	0%	10	24-Dec-13*	02-Jan-14
24PCPT01070	Manufacturing of Stoplog	0%	140	03-Jan-14	22-May-14
24PCPT01100	Manufacturing of Deodorization System	0%	160	11-Mar-13 A	21-Feb-14
24PCPT01105	FAT of Deodorization System	0%	90	22-Feb-14	22-May-14
24PCPT01150	Placing of Order on Instruments	0%	10	05-Jan-14*	14-Jan-14
24PCPT01160	Manufacturing of Instruments	0%	110	15-Jan-14	04-May-14
24PCPT01180	Placing of Order on DCS Control System	0%	10	24-Dec-13*	02-Jan-14
24PCPT01190	Manufacturing of DCS Control System	0%	75	03-Jan-14	18-Mar-14
24PCPT01200	FAT for DCS Control System	0%	60	19-Mar-14	17-May-14
24PCPT01220	Placing of Order on Weather & H2S Monitoring Station	0%	10	24-Dec-13*	02-Jan-14
24PCPT01230	Manufacturing of Weather & H2S Monitoring Station	0%	140	03-Jan-14	22-May-14
24PCPT01242	Manufacturing of Electrical Component for MCC (Switchboard) Modification	0%	90	12-Apr-13 A	08-Feb-14
24PCPT01243	Packaging / Delivery of Electrical Component for MCC (Switchboard) Modification	0%	30	09-Feb-14	10-Mar-14
Wah Fu					
Major Technical Data / E&M Works Design					
24DWFU04080	Prepare / Submit to ICE the Electrical Protection Equipment Calculation	0%	20	24-Dec-13	12-Jan-14

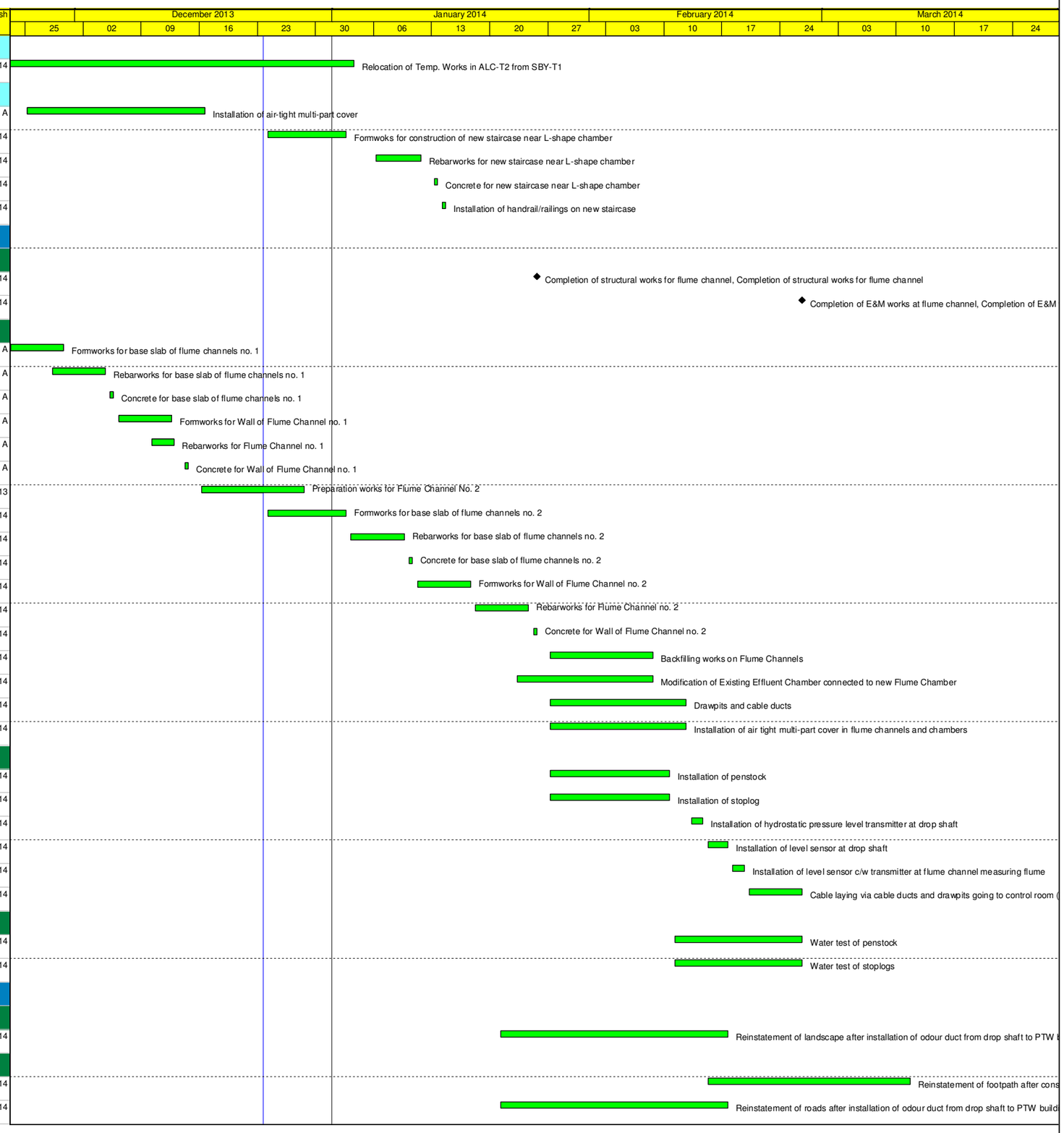


Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24DWFU04090	Review / Approval of ICE and Submitted to Client the Electrical Protection Equipment Calculation	0%	12	13-Jan-14	24-Jan-14
24DWFU04100	Comments / Approval of Electrical Protection Equipment Calculation	0%	28	25-Jan-14	21-Feb-14
24DWFU04110	Review / Resubmit of Electrical Protection Equipment Calculation	0%	15	22-Feb-14	08-Mar-14
24DWFU04120	Approval of Electrical Protection Equipment Calculation	0%	15	09-Mar-14	23-Mar-14
24DWFU04170	Approval of Control Philosophy	0%	15	08-May-12 A	30-Dec-13
24DWFU04180	Prepare / Submit to ICE the DCS Detail Design	0%	20	31-Dec-13	19-Jan-14
24DWFU04190	Review / Approval of ICE and Submitted to Client the DCS Detail Design	0%	12	20-Jan-14	31-Jan-14
24DWFU04200	Comments / Approval of DCS Detail Design	0%	28	01-Feb-14	28-Feb-14
24DWFU04210	Review / Resubmit of DCS Detail Design	0%	15	01-Mar-14	15-Mar-14
24DWFU04220	Approval of DCS Detail Design	0%	15	16-Mar-14	30-Mar-14
24DWFU04226	Review / Approval of ICE and Submitted to Client the Design Drawing for New MCC (Switchboard)	0%	12	22-Sep-12 A	29-Dec-13
24DWFU04228	Review / Resubmit of Design Drawing for New MCC (Switchboard)	0%	15	22-Sep-12 A	05-Jan-14
24DWFU04229	Approval of Design Drawing for New MCC (Switchboard)	0%	15	12-Dec-12 A	12-Jan-14
24DWFU04231	Comments / Approval of Design Drawing for Miscellaneous E&M Items	100%	30	08-Nov-13 A	07-Dec-13 A
24DWFU04232	Review / Resubmit of Design Drawing for Miscellaneous E&M Items	0%	30	08-Dec-13 A	29-Jan-14
24DWFU04233	Approval of Design Drawing for Miscellaneous E&M Items	0%	30	30-Jan-14	28-Feb-14
Equipment Submission/Approval					
24DWFU03821	Prepare / Submission of Miscellaneous E&M Items	0%	40	01-Mar-14	09-Apr-14
Order / Manufacturing / Shipment / Delivery					
24PWFU01190	Manufacturing of Coarse Screen	0%	145	08-May-13 A	30-Mar-14
24PWFU01220	Manufacturing of Fine Screen	0%	145	08-May-13 A	29-Jan-14
24PWFU01225	FAT of Fine Screen	0%	90	30-Jan-14	29-Apr-14
24PWFU01231	Placing of Order on Fine Screen Conveyor	0%	10	31-Dec-13*	09-Jan-14
24PWFU01232	Manufacturing of Fine Screen Conveyor	0%	145	10-Jan-14	03-Jun-14
24PWFU01280	Manufacturing of Grit Removal Facilities	0%	175	22-Jul-13 A	09-Apr-14
24PWFU01330	Placing of Order on Penstock	0%	10	31-Dec-13*	09-Jan-14
24PWFU01340	Manufacturing of Penstock	0%	140	10-Jan-14	29-May-14
24PWFU01360	Placing of Order on Stoplog	0%	10	31-Dec-13*	09-Jan-14
24PWFU01370	Manufacturing of Stoplog	0%	140	10-Jan-14	29-May-14
24PWFU01400	Manufacturing of Deodorization System	0%	140	14-Mar-13 A	22-Jan-14
24PWFU01405	FAT of Deodorization System	0%	90	23-Jan-14	22-Apr-14
24PWFU01430	Manufacturing of MCC (Switchboard) Panel	0%	190	21-Jun-13 A	11-Feb-14
24PWFU01440	FAT for MCC (Switchboard) Panel	0%	10	12-Feb-14	21-Feb-14
24PWFU01450	Packaging / Delivery of MCC (Switchboard) Panel	0%	30	22-Feb-14	23-Mar-14
24PWFU01520	Placing of Order on DCS Control System	0%	10	24-Dec-13*	02-Jan-14
24PWFU01530	Manufacturing of DCS Control System	0%	75	03-Jan-14	18-Mar-14
24PWFU01540	FAT for DCS Control System	0%	60	19-Mar-14	17-May-14
24PWFU01560	Placing of Order on Lifting Appliance	0%	10	31-Dec-13*	09-Jan-14
24PWFU01570	Manufacturing of Lifting Appliance	0%	80	10-Jan-14	30-Mar-14
24PWFU01630	Manufacturing of Emergency Generator Set	20%	200	07-Apr-13 A	22-Apr-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-Dec-13
24DABN03790	Review / Approval of ICE and Submitted to Client the Electrical Protection Equipment Calculation	0%	12	25-Dec-13	05-Jan-14
24DABN03800	Comments / Approval of Electrical Protection Equipment Calculation	0%	28	06-Jan-14	02-Feb-14
24DABN03810	Review / Resubmit of Electrical Protection Equipment Calculation	0%	15	19-Jan-14	02-Feb-14

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24DABN03820	Approval of Electrical Protection Equipment Calculation	0%	15	03-Feb-14	17-Feb-14
24DABN03860	Review / Resubmit of Control Philosophy	0%	15	06-Jun-12 A	30-Dec-13
24DABN03870	Approval of Control Philosophy	0%	15	31-Dec-13	14-Jan-14
24DABN03880	Prepare / Submit to ICE the DCS Detail Design	0%	20	15-Jan-14	03-Feb-14
24DABN03890	Review / Approval of ICE and Submitted to Client the DCS Detail Design	0%	12	04-Feb-14	15-Feb-14
24DABN03900	Comments / Approval of DCS Detail Design	0%	28	16-Feb-14	15-Mar-14
24DABN03910	Review / Resubmit of DCS Detail Design	0%	15	16-Mar-14	30-Mar-14
24DABN03923	Review / Resubmit of combined services drawing	25%	30	05-Sep-12 A	24-Dec-13
24DABN03924	Approval of combined services drawing	25%	30	10-Oct-12 A	25-Dec-13
24DABN03926	Review / Approval of ICE and Submitted to Client the Design Drawing for MCC (Switchboard) Modification	50%	12	22-Sep-12 A	28-Dec-13
24DABN03928	Review / Resubmit of Design Drawing for MCC (Switchboard) Modification	50%	10	22-Sep-12 A	30-Dec-13
24DABN03929	Approval of Design Drawing for MCC (Switchboard) Modification	0%	10	09-Jan-13 A	01-Jan-14
24DABN03930	Prepare / Submit the Design Drawing for Miscellaneous E&M Items	0%	60	26-Dec-13	23-Feb-14
24DABN03931	Comments / Approval of Design Drawing for Miscellaneous E&M Items	0%	30	24-Feb-14	25-Mar-14
Order / Manufacturing / Shipment / Delivery					
24PABN01170	Manufacturing of Seawater Pump	0%	335	13-May-13 A	22-Apr-14
24PABN01370	Packaging / Delivery of Instruments	0%	30	25-Jun-13 A	25-Dec-13
Ap Lei Chau					
Major Technical Data / E&M Works Design					
24DALC03780	Prepare / Submit to ICE the Electrical Protection Equipment Calculation	0%	20	20-Jan-14	08-Feb-14
24DALC03790	Review / Approval of ICE and Submitted to Client the Electrical Protection Equipment Calculation	0%	12	09-Feb-14	20-Feb-14
24DALC03800	Comments / Approval of Electrical Protection Equipment Calculation	0%	28	21-Feb-14	20-Mar-14
24DALC03810	Review / Resubmit of Electrical Protection Equipment Calculation	0%	15	21-Mar-14	04-Apr-14
24DALC03870	Approval of Control Philosophy	0%	15	27-Apr-12 A	30-Dec-13
24DALC03880	Prepare / Submit to ICE the DCS Detail Design	0%	20	31-Dec-13	19-Jan-14
24DALC03890	Review / Approval of ICE and Submitted to Client the DCS Detail Design	0%	12	20-Jan-14	31-Jan-14
24DALC03900	Comments / Approval of DCS Detail Design	0%	28	01-Feb-14	28-Feb-14
24DALC03910	Review / Resubmit of DCS Detail Design	0%	15	01-Mar-14	15-Mar-14
24DALC03920	Approval of DCS Detail Design	0%	15	16-Mar-14	30-Mar-14
24DALC03923	Review / Resubmit of combined services drawing	0%	30	07-Jul-12 A	25-Dec-13
24DALC03924	Approval of combined services drawing	0%	30	25-Jul-12 A	24-Jan-14
Order / Manufacturing / Shipment / Delivery					
24PALC01130	Manufacturing of Grit Classifier	0%	145	18-Sep-12 A	22-Jan-14
24PALC01140	Packaging / Delivery of Grit Classifier	0%	30	23-Jan-14	21-Feb-14
24PALC01160	Manufacturing of Effluent Pump	0%	335	01-Apr-13 A	20-Aug-14
24PALC01250	Placing of Order on Deodorization System	0%	10	24-Dec-13*	02-Jan-14
24PALC01260	Manufacturing of Deodorization System	0%	160	03-Jan-14	11-Jun-14
24PALC01320	Placing of Order on Control Panel	0%	10	24-Dec-13	02-Jan-14
24PALC01330	Manufacturing of Control Panel	0%	50	03-Jan-14	21-Feb-14
24PALC01340	Packaging / Delivery of Control Panel	0%	15	22-Feb-14	08-Mar-14
24PALC01350	Placing of Order on Instruments	0%	10	24-Dec-13	02-Jan-14
24PALC01360	Manufacturing of Instruments	0%	110	03-Jan-14	22-Apr-14
Sandy Bay PTW					
Works for Section 1					
PTW Building					
Civil Works					



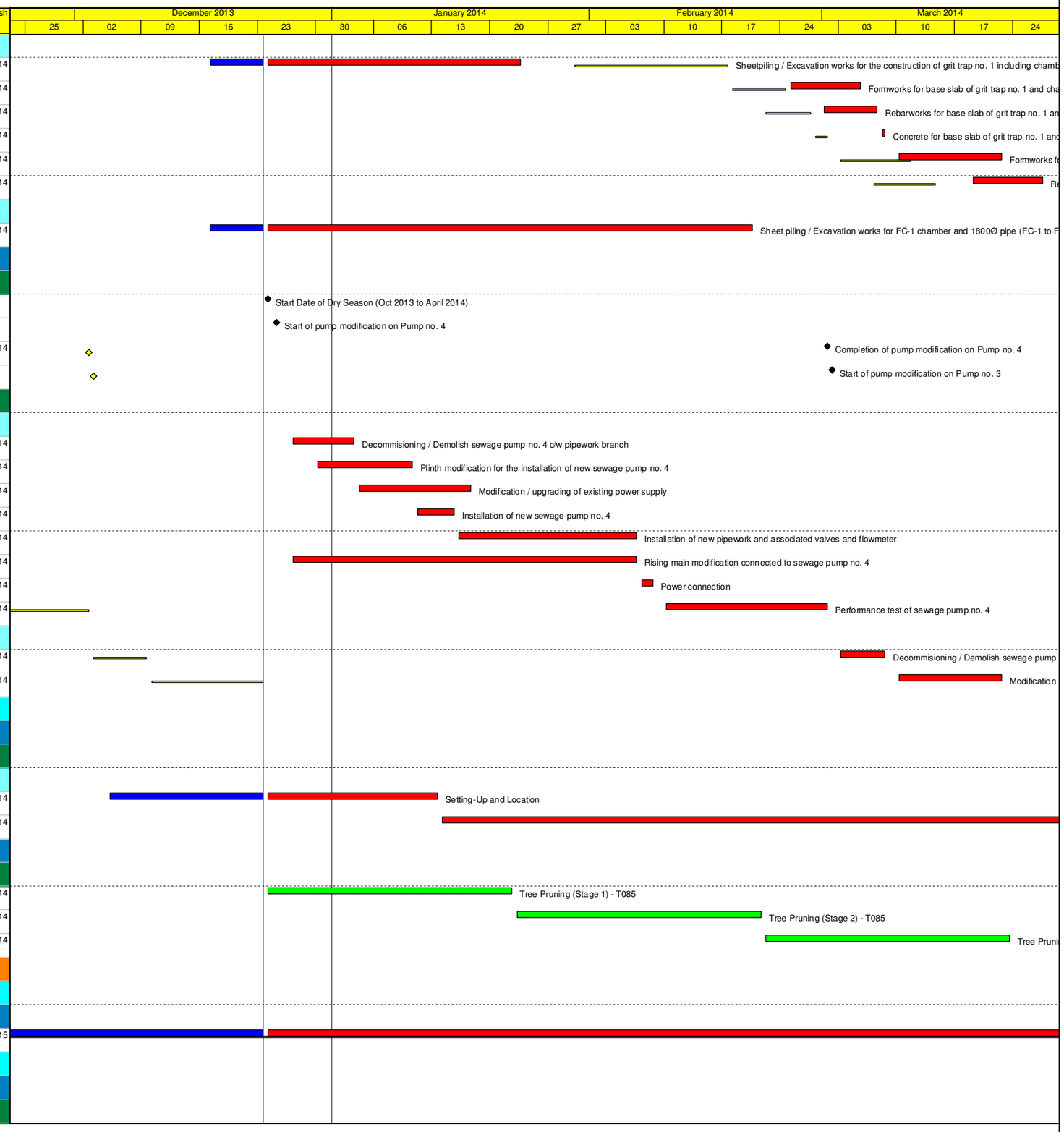
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
Site Clearance and Preparation Works					
24SBY02050	Relocation of Temp. Works in ALC-T2 from SBY-T1	0%	25	18-Sep-12 A	03-Jan-14
Modification Works in PTW Building					
24SBY02558	Installation of air-tight multi-part cover	100%	19	25-Nov-13 A	16-Dec-13 A
24SBY02570	Formwoks for construction of new staircase near L-shape chamber	0%	6	24-Dec-13	02-Jan-14
24SBY02574	Rebarworks for new staircase near L-shape chamber	0%	6	06-Jan-14	11-Jan-14
24SBY02575	Concrete for new staircase near L-shape chamber	0%	1	13-Jan-14	13-Jan-14
24SBY02576	Installation of handrail/railings on new staircase	0%	1	14-Jan-14	14-Jan-14
Flume Channels and Chambers					
Interface between Civil / ABWF / E&M Works					
24MSBY00070	Completion of structural works for flume channel	0%	0		25-Jan-14
24MSBY00080	Completion of E&M works at flume channel	0%	0		26-Feb-14
Civil Works (incl. footing of existing fence modification)					
24SBY02700	Formworks for base slab of flume channels no. 1	100%	6	23-Nov-13 A	29-Nov-13 A
24SBY02701	Rebarworks for base slab of flume channels no. 1	100%	6	28-Nov-13 A	04-Dec-13 A
24SBY02702	Concrete for base slab of flume channels no. 1	100%	1	05-Dec-13 A	05-Dec-13 A
24SBY02703	Formworks for Wall of Flume Channel no. 1	100%	6	06-Dec-13 A	12-Dec-13 A
24SBY02704	Rebarworks for Flume Channel no. 1	100%	6	10-Dec-13 A	13-Dec-13 A
24SBY02705	Concrete for Wall of Flume Channel no. 1	100%	1	14-Dec-13 A	14-Dec-13 A
24SBY02705-01	Preparation works for Flume Channel No. 2	0%	6	16-Dec-13 A	28-Dec-13
24SBY02705-02	Formworks for base slab of flume channels no. 2	0%	6	24-Dec-13	02-Jan-14
24SBY02705-03	Rebarworks for base slab of flume channels no. 2	0%	6	03-Jan-14	09-Jan-14
24SBY02705-04	Concrete for base slab of flume channels no. 2	0%	1	10-Jan-14	10-Jan-14
24SBY02705-05	Formworks for Wall of Flume Channel no. 2	0%	6	11-Jan-14	17-Jan-14
24SBY02705-06	Rebarworks for Flume Channel no. 2	0%	6	18-Jan-14	24-Jan-14
24SBY02705-07	Concrete for Wall of Flume Channel no. 2	0%	1	25-Jan-14	25-Jan-14
24SBY02706	Backfilling works on Flume Channels	0%	9	27-Jan-14	08-Feb-14
24SBY02707	Modification of Existing Effluent Chamber connected to new Flume Chamber	0%	12	23-Jan-14	08-Feb-14
24SBY02708	Drawpits and cable ducts	0%	12	27-Jan-14	12-Feb-14
24SBY02709	Installation of air tight multi-part cover in flume channels and chambers	0%	12	27-Jan-14	12-Feb-14
Electrical and Mechanical Works					
24SBY02730	Installation of penstock	0%	10	27-Jan-14	10-Feb-14
24SBY02740	Installation of stoplog	0%	10	27-Jan-14	10-Feb-14
24SBY02750A	Installation of hydrostatic pressure level transmitter at drop shaft	0%	2	13-Feb-14	14-Feb-14
24SBY02750B	Installation of level sensor at drop shaft	0%	2	15-Feb-14	17-Feb-14
24SBY02750C	Installation of level sensor c/w transmitter at flume channel measuring flume	0%	2	18-Feb-14	19-Feb-14
24SBY02750D	Cable laying via cable ducts and drawpits going to control room (including termination)	0%	6	20-Feb-14	26-Feb-14
Preliminary Testing and Commissioning					
24SBY02751	Water test of penstock	0%	14	11-Feb-14	26-Feb-14
24SBY02752	Water test of stoplogs	0%	14	11-Feb-14	26-Feb-14
Roadworks and Landscaping Works					
Landscaping Works					
24SBY02780	Reinstatement of landscape after installation of odour duct from drop shaft to PTW building	0%	21	21-Jan-14	17-Feb-14
Roadworks					
24SBY02760	Reinstatement of footpath after construction of flume channels and chamber	0%	21	15-Feb-14	11-Mar-14
24SBY02770	Reinstatement of roads after installation of odour duct from drop shaft to PTW building	0%	21	21-Jan-14	17-Feb-14



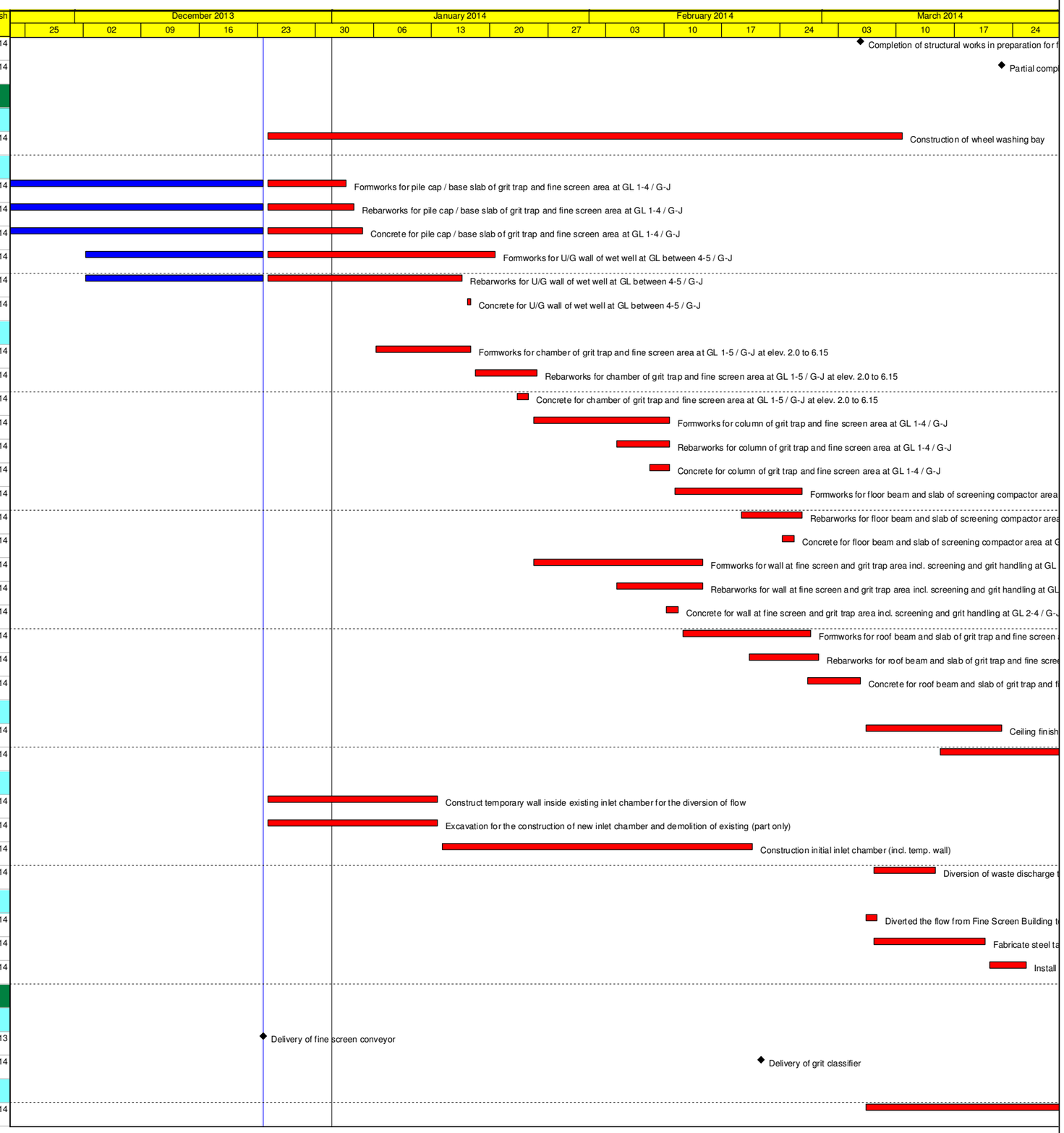
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
Completion of Works in Section 1					
Final Testing and Commisioning					
24SBY03010	Testing and Commissioning of flow via new flume channels to drop shaft	0%	30	27-Feb-14	28-Mar-14
Submission of Manuals					
24SBY03060	As-Built Drawings Submission / Approval for Sandy Bay PTW	0%	60	24-Dec-13	21-Feb-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 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*	12-Jun-14
Works for Section 2					
Modification Inside Cyberport PTW Complex incl. Deodorization Room					
Civil Works					
Construction of Plinth for DO Unit Installation					
24CPT02302	Construction of temp. concrete plinth for carbon filter	0%	21	10-Mar-14	02-Apr-14
Wah Fu PTW					
Key Dates					
Time of Completion					
24WFU1010	Time for Completion of Section 4	0%	1255	31-Aug-11 A	14-Sep-15
Works for Section 4					
Screen and Grit Trap Building					
Civil Works					
Foundation Works					
24WFU02230A10	Excavation Works in preparation for Pile Cap (GL 1-3)	0%	80	22-Nov-13 A	31-Mar-14
24WFU02230A51	Excavation Works in preparation for Pile Cap (GL 4-6)	0%	19	20-Nov-13 A	16-Jan-14
24WFU02230A52	Formworks for Pile Cap (GL 4-6)	0%	30	17-Jan-14	24-Feb-14
24WFU02230A53	Rebarworks for Pile Cap (GL 4-6)	0%	6	18-Feb-14	24-Feb-14
24WFU02230A54	Concrete Works for Pile Cap (GL 4-6)	0%	1	25-Feb-14	25-Feb-14
RC Structural Works					
24WFU02240A70	Formworks for chambers (GL 3-5)	0%	28	26-Feb-14	29-Mar-14
Aberdeen PTW					
Key Dates					
Time of Completion					
24ABN00300	Time for Completion of Section 5	0%	1179	31-Aug-11 A	23-Apr-15
24ABN00310	Time for Completion of Section 6	0%	1309	31-Aug-11 A	15-Jul-15
Interface and Liaison					
Interface with ST2/DSD					
24MABN00130	Application of PMAC/SWAC for Demolition of Existing Fine Screen Channel	0%	0	24-Dec-13	
24MABN00140	Proposed Approval date of PMAC/SWAC for Demolition of Existing Fine Screen Channel	0%	0		30-Dec-13
24MABN00190	Coordinate with DSD/ST2 regarding design requirement for Temp. Office at ABN	0%	60	24-Dec-13	21-Feb-14
Interface with other contractrors					
24MABN00250	Liason with SCS Contractor for the Connection of Flume Channels at drop shaft	0%	90	24-Dec-13	23-Mar-14
Works for Section 5					
FS & GT Bldg - Fine Screen and Inlet Chamber (Stage 1)					

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
Interface between Civil / ABWF / E&M Works					
24MABN00290	Completion of E&M works for new fine screen and inlet chamber (stage 1)	0%	0		01-Jan-14
24MABN00300	Acceptance of new fine screen and inlet chamber (stage 1)	0%	0		01-Jan-14
Civil Works					
Relocation of Rising Main					
24ABN02700A05	Temporary Rising Main	100%	8	09-Dec-13 A	17-Dec-13 A
24ABN02700A10	Diversion of rising main (1 pipe only) from new inlet chamber to inlet pumping station	0%	12	03-Mar-14	15-Mar-14
24ABN02700A20	Diversion of rising main (2nd pipe) from new inlet chamber to inlet pumping station	0%	12	17-Mar-14	29-Mar-14
RC Structural Works for FS and Inlet Chamber					
24ABN00720B20	Installation of air tight multi-part cover at fine screen channel and inlet chamber	100%	12	12-Dec-13 A	21-Dec-13 A
Construction of Temporary Diversion Channel					
24ABN00745B86	Opening for existing grit trap area and outflow chamber to divert the flow	100%	4	02-Dec-13 A	05-Dec-13 A
Electrical and Mechanical Works					
Mechanical Works					
24ABN01208	Installation of screening conveyor no. 1 and no. 2	100%	12	14-Nov-13 A	20-Dec-13 A
24ABN01209	Installation of screening compactor no. 1 and no. 2	100%	10	02-Dec-13 A	12-Dec-13 A
Electrical Works					
24ABN02001	Replacement / upgrading of motor starter and panel cover in existing switchboard (for fine screen no. 1 - no. 3)	100%	8	15-Nov-13 A	20-Dec-13 A
24ABN02002	Replacement / upgrading the power, control & indication circuitry in existing switchboard (for penstock no. 1 - no. 9)	100%	8	20-Nov-13 A	20-Dec-13 A
24ABN02004	Installation of additional cable tray	100%	8	15-Nov-13 A	07-Dec-13 A
24ABN02005	Cable laying for the new fine screen and penstocks	100%	14	21-Nov-13 A	12-Dec-13 A
24ABN02006	Megger test in cables for the new fine screen and penstocks	100%	3	13-Dec-13 A	16-Dec-13 A
24ABN02007	Cable termination for the new fine screen and penstocks	100%	3	17-Dec-13 A	21-Dec-13 A
Control and Monitoring Services incl. Instrumentation					
24ABN02008	Installation of local manual control (fine screen 1 - 3)	100%	4	16-Dec-13 A	19-Dec-13 A
24ABN02009	Installation of local manual control (screening conveyor 1 & 2)	100%	2	16-Dec-13 A	17-Dec-13 A
24ABN02010	Installation of local manual control (screening compactor 1 & 2)	100%	2	16-Dec-13 A	17-Dec-13 A
24ABN02011	Installation of level sensor c/w transmitter (fine screen 1 - 3)	100%	4	16-Dec-13 A	19-Dec-13 A
24ABN02012	Installation of level sensors for level limit sensing (screening conveyor 1 & 2)	100%	2	16-Dec-13 A	17-Dec-13 A
Earthing and Lightning System					
24ABN02013	Installation of earthing protection	100%	14	16-Dec-13 A	21-Dec-13 A
Preliminary Testing and Commissioning					
Mechanical Works					
24ABN02014	Water test of penstock & stoplog incl. flow test for new fine screen and inlet chamber via rising main no. 1	100%	21	07-Nov-13 A	07-Dec-13 A
24ABN2110	SAT of fine screen no. 1 - no. 3	100%	3	19-Dec-13 A	21-Dec-13 A
24ABN2120	SAT of screening conveyor no. 1 and no. 2	100%	3	19-Dec-13 A	21-Dec-13 A
24ABN2130	SAT of screening compactor no. 1 and no. 2	100%	3	19-Dec-13 A	21-Dec-13 A
24ABN4881	Functional Test of equipment	100%	7	14-Dec-13 A	21-Dec-13 A
24ABN4882	T&C of new fine screen and inlet chamber	0%	7	02-Jan-14	08-Jan-14
Earthing and Lightning System					
24ABN2030	Earthing protection test	100%	10	19-Dec-13 A	21-Dec-13 A
FS & GT Bldg - Grit Trap No. 1 and FC-1 Chamber (Stage 2)					
Civil Works					
Temporary Works / Demolition Works					
24ABN00745C50	Decommission remaining existing fine screen	0%	12	24-Jan-14	10-Feb-14
24ABN00745C60	Demolish remaining existing fine screen chamber	0%	12	11-Feb-14	24-Feb-14

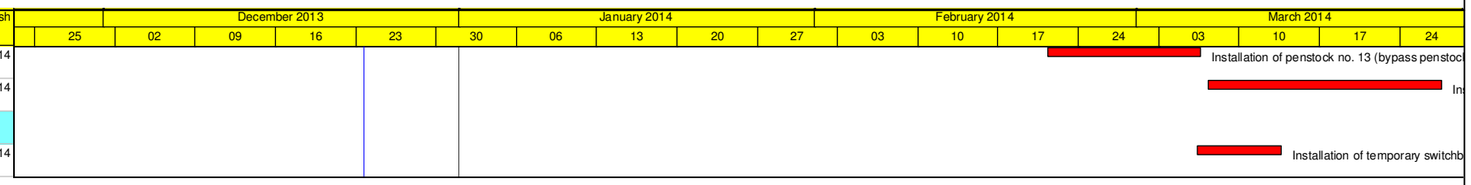
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
RC Structural Works for Grit Trap No. 1					
24ABN00775B20	Sheetpiling / Excavation works for the construction of grit trap no. 1 including chambers	0%	24	17-Dec-13 A	23-Jan-14
24ABN00775B30	Formworks for base slab of grit trap no. 1 and chambers	0%	8	25-Feb-14	05-Mar-14
24ABN00775B40	Rebarworks for base slab of grit trap no. 1 and chambers	0%	6	01-Mar-14	07-Mar-14
24ABN00775B50	Concrete for base slab of grit trap no. 1 and chambers	0%	1	08-Mar-14	08-Mar-14
24ABN00775B60	Formworks for wall of grit trap no. 1 and chambers	0%	12	10-Mar-14	22-Mar-14
24ABN00775B70	Rebarworks for wall of grit trap no. 1 and chambers	0%	8	19-Mar-14	27-Mar-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	20-Feb-14
Modification at Inlet Pumping Station					
Interface between Civil / ABWF / E&M Works					
24MABN00390	Start Date of Dry Season (Oct 2013 to April 2014)	0%	0	24-Dec-13*	
24MABN00400	Start of pump modification on Pump no. 4	0%	0	25-Dec-13	
24MABN00410	Completion of pump modification on Pump no. 4	0%	0		01-Mar-14
24MABN00420	Start of pump modification on Pump no. 3	0%	0	02-Mar-14	
Modification of Pumps					
Sewage Pump No. 4					
24ABN03000	Decommisioning / Demolish sewage pump no. 4 c/w pipework branch	0%	6	27-Dec-13*	03-Jan-14
24ABN03001	Plinth modification for the installation of new sewage pump no. 4	0%	10	30-Dec-13	10-Jan-14
24ABN03010	Modification / upgrading of existing power supply	0%	12	04-Jan-14	17-Jan-14
24ABN03020	Installation of new sewage pump no. 4	0%	4	11-Jan-14	15-Jan-14
24ABN03030	Installation of new pipework and associated valves and flowmeter	0%	16	16-Jan-14	06-Feb-14
24ABN03031	Rising main modification connected to sewage pump no. 4	0%	32	27-Dec-13	06-Feb-14
24ABN03040	Power connection	0%	2	07-Feb-14	08-Feb-14
24ABN03050	Performance test of sewage pump no. 4	0%	18	10-Feb-14	01-Mar-14
Sewage Pump No. 3					
24ABN3060	Decommisioning / Demolish sewage pump no. 3 c/w pipework branch	0%	6	03-Mar-14	08-Mar-14
24ABN3070	Modification / upgrading of existing power supply	0%	12	10-Mar-14	22-Mar-14
Works for Section 6					
Workshop and Administration Building					
Civil Works					
Foundation Works					
24ABN02200A10	Setting-Up and Location	0%	20	05-Dec-13 A	13-Jan-14
24ABN02200A20	Piling Works (31 nos) - 1 set of equipment at 4 days per pile	0%	90	14-Jan-14	08-May-14
Roadworks, Landscape and Modification of Fence					
Landscaping Works					
24ABN02190A90	Tree Pruning (Stage 1) - T085	0%	30	24-Dec-13	22-Jan-14
24ABN02190B10	Tree Pruning (Stage 2) - T085	0%	30	23-Jan-14	21-Feb-14
24ABN02190B20	Tree Pruning (Stage 3) - T085	0%	30	22-Feb-14	23-Mar-14
Ap Lei Chau PTW					
Key Dates					
Time of Completion					
24ALC00300	Time for Completion of Section 7	0%	1264	31-Aug-11 A	16-Sep-15
Works for Section 7					
Stage 1 of ALC Upgarde - Initial Treatment Plant					
Interface between Civil / ABWF / E&M Works					



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24MALC00220	Completion of structural works in preparation for finishing works	0%	0		05-Mar-14
24MALC00230	Partial completion of finishing works in preparation for E&M works	0%	0		22-Mar-14
Civil Works					
Site Clearance and Preparation Works					
24ALC00702A20	Construction of wheel washing bay	0%	60	24-Dec-13	10-Mar-14
Foundation Works					
24ALC00730A30	Formworks for pile cap / base slab of grit trap and fine screen area at GL 1-4 / G-J	30%	21	13-Sep-13 A	02-Jan-14
24ALC00730A40	Rebarworks for pile cap / base slab of grit trap and fine screen area at GL 1-4 / G-J	30%	15	19-Sep-13 A	03-Jan-14
24ALC00730A50	Concrete for pile cap / base slab of grit trap and fine screen area at GL 1-4 / G-J	30%	16	08-Oct-13 A	04-Jan-14
24ALC00730B40	Formworks for U/G wall of wet well at GL between 4-5 / G-J	0%	21	02-Dec-13 A	20-Jan-14
24ALC00730B50	Rebarworks for U/G wall of wet well at GL between 4-5 / G-J	0%	18	02-Dec-13 A	16-Jan-14
24ALC00730B60	Concrete for U/G wall of wet well at GL between 4-5 / G-J	0%	1	17-Jan-14	17-Jan-14
RC Structural Works					
24ALC00730A60	Formworks for chamber of grit trap and fine screen area at GL 1-5 / G-J at elev. 2.0 to 6.15	0%	11	06-Jan-14	17-Jan-14
24ALC00730A70	Rebarworks for chamber of grit trap and fine screen area at GL 1-5 / G-J at elev. 2.0 to 6.15	0%	7	18-Jan-14	25-Jan-14
24ALC00730A80	Concrete for chamber of grit trap and fine screen area at GL 1-5 / G-J at elev. 2.0 to 6.15	0%	2	23-Jan-14	24-Jan-14
24ALC00740A10	Formworks for column of grit trap and fine screen area at GL 1-4 / G-J	0%	11	25-Jan-14	10-Feb-14
24ALC00740A20	Rebarworks for column of grit trap and fine screen area at GL 1-4 / G-J	0%	6	04-Feb-14	10-Feb-14
24ALC00740A30	Concrete for column of grit trap and fine screen area at GL 1-4 / G-J	0%	2	08-Feb-14	10-Feb-14
24ALC00740A40	Formworks for floor beam and slab of screening compactor area at GL 1-4 / G-J elev. 6.15	0%	14	11-Feb-14	26-Feb-14
24ALC00740A50	Rebarworks for floor beam and slab of screening compactor area at GL 1-4 / G-J elev. 6.15	0%	7	19-Feb-14	26-Feb-14
24ALC00740A60	Concrete for floor beam and slab of screening compactor area at GL 1-4 / G-J elev. 6.15	0%	2	24-Feb-14	25-Feb-14
24ALC00740A70	Formworks for wall at fine screen and grit trap area incl. screening and grit handling at GL 2-4 / G-J	0%	15	25-Jan-14	14-Feb-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	04-Feb-14	14-Feb-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	10-Feb-14	11-Feb-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%	14	12-Feb-14	27-Feb-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	20-Feb-14	28-Feb-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	27-Feb-14	05-Mar-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	06-Mar-14	22-Mar-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	15-Mar-14	03-Apr-14
Modification of Inlet Chamber (Partial)					
24ALC00855	Construct temporary wall inside existing inlet chamber for the diversion of flow	0%	15	24-Dec-13	13-Jan-14
24ALC00856	Excavation for the construction of new inlet chamber and demolition of existing (part only)	0%	15	24-Dec-13	13-Jan-14
24ALC00857	Construction initial inlet chamber (incl. temp. wall)	0%	30	14-Jan-14	20-Feb-14
24ALC00858	Diversion of waste discharge to partial inlet chamber	0%	7	07-Mar-14	14-Mar-14
Modification of Outfall Chamber					
24ALC00900	Diverted the flow from Fine Screen Building to LHS of measuring flume channel	0%	2	06-Mar-14	07-Mar-14
24ALC00901	Fabricate steel tank with Ø800 mm steel pipe	0%	12	07-Mar-14	20-Mar-14
24ALC00902	Install the steel tank with Ø800mm steel pipe into RHS measuring flume channel and Ø900mm submarine outfall	0%	4	21-Mar-14	25-Mar-14
Electrical and Mechanical Works					
Material / Equipment Delivery on Site					
24ALC00561	Delivery of fine screen conveyor	0%	0		23-Dec-13
24ALC00600	Delivery of grit classifier	0%	0		21-Feb-14
Mechanical Works					
24ALC03001	Installation of temporary diversion pipe from new FS&GT bldg to existing outfall chamber	0%	30	06-Mar-14	10-Apr-14



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish
24ALC03010	Installation of penstock no. 13 (bypass penstock)	0%	12	21-Feb-14	06-Mar-14
24ALC03020	Installation of penstock no. 2 & 4 (coarse screen no. 2 inlet / outlet)	0%	18	07-Mar-14	27-Mar-14
Electrical Works					
24ALC03140	Installation of temporary switchboard	0%	7	06-Mar-14	13-Mar-14



APPENDIX C
MONITORING REQUIREMENTS

APPENDIX C – Monitoring Requirements

Type of Monitoring	Parameter	Frequency	Monitored by	Locations of Measurement
Air Quality	1-hour TSP	3 times / 6-day	DC/2007/24	**CM_CB1a**(1): The Arcade, Cyberport **CM_WF1a**(1): Wah Ming House, Wah Fu Estate **CM_AB1a**: The Hong Kong Ice and Cold Storage, formally known as Dairy Farm Ice and Cold Storage
	24-hour TSP	Once / 6-day		
Noise	L_{eq}(30 min.) dB(A) (0700 to 1900 hrs. on weekdays) / L_{eq}(5 min.) dB(A) (During restricted hours)	Once / week	DC/2007/24	M5 (Sandy Bay PTW): Chuk Lam Ming Tong M6a(1) (Cyberport PTW): Aegean Terrace M7a(1) (Wah Fu PTW): Wah Ming House M8 (Aberdeen PTW): Wah Lai House
			DC/2008/09	M9 (Ap Lei Chau PTW): Mei Chun Court, South Horizons

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.

APPENDIX D
ACTION AND LIMIT LEVELS

Appendix D Action and Limit Levels

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

Monitoring Stations	Action Level (μg/m^3)		Limit Level (μg/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 D-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 E
IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES (EMIS)

APPENDIX E 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.		^
3.74	Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.	All construction sites	^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
B	**Airborne Noise**		
4.56–4.61	Use of quiet PME, movable barriers and acoustic mats.	All construction sites	^
4.67	Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program.		^
	Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program.		^
	Mobile plant, if any, shall be sited as far away from NSRs as possible.		^
	Machines and plant (such as trucks) that may be in intermittent use shall be shut down between works periods or shall be throttled down to a minimum.		^
4.67	Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.		^
	Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities.		^
C	**Water Quality**		
6.349 to 6.375	Construction Site Runoff and General Construction Activities The mitigation measures as outlined in the ProPECC PN 1/94 Construction Site Drainage should be adopted where applicable.	All construction sites	*
6.376	Effluent Discharge There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the WPCO license which is under the ambit of regional office (RO) of EPD. Minimum distances of 100 m should be maintained between the discharge points of construction site effluent and the existing saltwater intakes.		#
6.377	Accidental Spillage of Chemicals Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General)		*

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
	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 located away from any water courses. • Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers. • Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable. • Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert or sea.	All construction sites	*

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
D	**Waste Management**		
9.107	Reusable steel or concrete panel shutters, fencing and hoarding and signboard should be used as a preferred alternative to items made of wood, to minimize wastage of wood. Attention should be paid to WBTC No. 19/2001 - Metallic Site Hoardings and Signboards to reduce the amount of timber used on construction sites. Metallic alternatives to timber are readily available and should be used rather than new timber. Precast concrete units should be adopted wherever feasible to minimize the use of timber formwork.	All construction sites	^
9.109	All waste materials should be segregated into categories covering: • excavated materials suitable for reuse on-site; • excavated materials suitable for public filling facilities; • remaining C&D waste for landfill; • chemical waste; and • general refuse for landfill.	All construction sites	*
9.113	Sort C&D waste from demolition of existing facilities to recover recyclable portions such as metals.		^
	Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.		*
	Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force.		^
	Any unused chemicals or those with remaining functional capacity shall be recycled.		^
	Proper storage and site practices to minimize the potential for damage or contamination of construction materials.		#
9.115	Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.		^
	Training of site personnel in proper waste management and chemical waste handling procedures.		^
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		*

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
	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 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

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

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

APPENDIX F
SUMMARY OF ENVIRONMENTAL LICENSES AND PERMITS

Appendix F - Summary of Environmental Licenses and Permits

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	Valid
10428	16/3/2013	15/3/2014	Location: Aberdeen PTW	
10815	22/8/2013	21/8/2014	Location: Wah Fu PTW	

APPENDIX G
SUMMARY OF AMOUNT OF WASTE GENERATED IN THE REPORTING PERIOD

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 G MONTHLY SUMMARY WASTE FLOW TABLE FOR 2013 (YEAR)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rock and Broken Concrete (4)	Reused in the Contract	Reused in other Projects	Disposal as Public Fill	Import Fill	Metals	Paper / Cardboard Packaging	Plastics (3)	Chemical Waste	Other, e.g. general refuse	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
JAN	0.332955	0	0	0	0.332955	0	5.37	0	0	0	0.00448	0.18193
FEB	0.15074	0	0	0	0.15074	0	0	0	0	0	0.00121	0.175
MAR	0.485905	0	0	0	0.485905	0	0	0	0	0	0.00334	0.19753
APR	0.111455	0	0	0	0.111455	0	0	0	0	0	0.00276	0.20875
MAY	0.740475	0	0	0	0.740475	0	0	0	0	0.35	0.00138	0.19792
JUNE	0.66145	0	0	0	0.66145	0	0	0	0	0	0.00573	0.17737
SUB-TOTAL	3.485890	0.000000	0.000000	0.000000	3.485890	0.000000	12.050000	0.070000	0.070000	0.450000	0.032900	3.544956
JULY	0.3883	0	0	0	0.3883	0	0	0	0	0	0.01179	0.18473
AUG	0.39114	0	0	0	0.39114	0	0	0	0	0	0.00763	0.19388
SEPT	0.40017	0	0	0	0.40017	0	0	0	0	0	0.00518	0.1772
OCT	0.05986	0	0	0	0.05986	0	0	0	0	0	0.00669	0.17811
NOV	0.289445	0	0	0	0.289445	0	5.38	0	0	0	0.00595	0.18315
DEC	0.25214	0	0	0	0.25214	0	0	0	0	0	0.00875	0.17714
TOTAL	5.266945	0.000000	0.000000	0.000000	5.266945	0.000000	17.430000	0.070000	0.070000	0.450000	0.078890	4.639166

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]
7.64	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

(6) The actual quantities of non-inert C&D materials generated in August 2013 and October 2013 were amended with the updated information by Contractor in the reporting quarter (October to December 20

APPENDIX H
COMPLAINT LOG

APPENDIX H – COMPLAINT LOG

Reporting Period: October to November 2013

Remarks: One environmental complaint was received in the reporting period.

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

APPENDIX I
SUMMARY OF EXCEEDANCE

APPENDIX I – SUMMARY OF EXCEEDANCE

Reporting Period: October to December 2013

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

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

c) Exceedance Report for Construction Noise on normal week days (1)