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 July to September 2015

(Version 1.0)

Certified By _____
(Environmental Team Leader)

REMARKS:

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

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

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CE/Harbour Area Treatment Scheme
Drainage Services Department
Sewage Services Branch
Harbour Area Treatment Scheme Division
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26 November 2015
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 15th Quarterly EM&A Report for July to September 2015 (Version 1.0)

We refer to the Quarterly EM&A Report for July to September 2015 (version 1.0) received on 24 November 2015 and we confirm that we have no 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. Kelvin Cheung / Ms. S P Ngan	By email
	Cinotech Consultants Ltd.	Dr. Priscilla Choy	By email

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ABBREVIATION AND ACRONYM

AL Levels	Action and Limit Levels
DSD	Drainage Services Department
E / ER	Engineer/Engineer's Representative
EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring and Audit
EMIS	Environmental Mitigation Implementation Schedule
EP	Environmental Permit
EPD	Environmental Protection Department
ET	Environmental Team
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 15th 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/2009/24 HATS Stage 2A with same Environmental Permit (Permit No. EP-322/2008/G) for July to September 2015.

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

July 2015:
- Wah Fu PTW – Inlet Chamber and additional connection channel construction, Foundation of D.O. room construction, Install temporary submersible pump for early flow turning;
- Ap Lei Chau PTW – Flume Channel construction, DN900 Rising Main & flowmeter chamber construction, Install effluent pumps and pipeworks;
- Aberdeen PTW – Construction of De-silting Chamber and Sea Water Pumping Station, Flowmeter chamber construction, Install flow measuring and drop shaft sensors, DN300 seawater twin pipes installation;
- Sandy Bay PTW – Outstanding works construction and defects rectification; and
- Cyberport PTW – ELS for DN700 Inlet & outlet pipe construction, Install new DOU.

August 2015:
- Wah Fu PTW – Commissioning of new FSGT facilities, Dismantling of Temporary Treatment Plant, Install temporary submersible pump for early flow turning;
- Ap Lei Chau PTW – Flume Channel construction, DN900 Rising Main & flowmeter chamber construction, Install effluent pumps and pipeworks;
- Aberdeen PTW – Piling Works for the Workshop and Administration Building, Commissioning of new Grit Trap and channels, Installing RM2 between existing Inlet Pumping Station and Inlet Chamber, Signaling test of flow measuring device and drop shaft sensors;
- Sandy Bay PTW – Outstanding works construction and defects rectification; and
- Cyberport PTW – DN700 Inlet & outlet pipe construction, Install new DOU.

September 2015:
- Wah Fu PTW –Dismantling of Temporary Treatment Plant, Construction of side wall and upper slab of Grit Handling Room, Erection of Temporary Decking on top of Drop Shaft, Continuous interim operation and maintenance of new FSGT facilities;
- Ap Lei Chau PTW – Continuous interim operation and maintenance of the ALC PTW, T&C of effluent pump, pipeworks and mini remote monitoring system;
- Aberdeen PTW – Piling Works for the Workshop and Administration Building, Continuous interim operation and maintenance of the ABN PTW, Installing RM2 between existing Inlet Pumping Station and Inlet Chamber, New DOU and associated equipment installation;
- Sandy Bay PTW – Outstanding works construction and defects rectification; and
- Cyberport PTW – DN700 Inlet & outlet pipe construction and backfilling, Install new DOU, Sheet piling for permanent diversion of 2 nos. of water main.

Environmental Monitoring Works

3. The environmental monitoring works of the Project was conducted by the ET for the Contract: DC/2007/24 and DC/2009/24 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.

Air Quality and Noise

4. The monitoring of air quality monitoring station at Wah Ming House, Wah Fu Estate (CM_WF1a) and noise monitoring station at Aegean Terrace (M6a), Wah Ming House (M7a) and Wah Ling House (M8) was handed over to Contract No. DC/2009/24 from Contract No. DC/2007/24 in July 2014. The noise monitoring station at Mei Chun Court, South Horizons (M9) was handed over to Contract No. DC/2009/24 from Contract No. DC/2008/09 on 28 July 2014. The air quality and noise monitoring stations was set up by Cinotech Consultants Limited (ET for this project) to monitor the air quality and noise in the vicinity of the sensitive receivers starting from July 2014.

5. Furthermore, the monitoring of air quality monitoring station at The Arcade, Cyberport (CM_CB1a) and The Hong Kong Ice and Cold Storage (CM_AB1a) were handed over to Contract No. DC/2009/24 from Contract No. DC/2007/24 in August 2014. The air quality monitoring stations was set up by Cinotech Consultants Limited (ET for this project) to monitor the air quality in the vicinity of the sensitive receivers starting from August 2014.

6. However, the air quality monitoring at CM_AB1a had been rejected and could not be continued, the proposed location (CM_AB1b – Works Site Boundary of Aberdeen PTW) was approved by ER on 22 July 2014 and approved by EPD on 5 December 2014. The air quality monitoring stations was set up by Cinotech Consultants Limited (ET for this project) to monitor the air quality and noise in the vicinity of the sensitive receivers starting from August 2014. The location of CM_AB1b is shown in **Figure 1c-2**.

Noise (Sandy Bay PTW)

7. The Proposal for Termination of Construction Phase EM&A Works for Contract No. DC/2007/24 was submitted by its ET to EPD in July 2015. The proposal, including the termination of noise monitoring at Chuk Lam Ming Tong (M5), was approved by the EPD on 27 July 2015. The result of noise monitoring at M5 would not be reported from 27 July 2015 , based on section 15.11 of the EM&A Manual of this Project as below:

   i) Construction activities including the remaining outstanding construction works for Sandy Bay PTW have been completed by the Contractor of this Project, therefore, no major environmental impact from Sandy Bay PTW in anticipated due to the Project.

8. 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_AB1b	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

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

24-hour TSP Monitoring

10. Due to the interruption of power supply of High Volume Sampler at CM_CB1a on 15 July 2015, the 24-hour TSP monitoring was rescheduled and conducted on 17 July 2015. No Action/Limit Level exceedance was recorded.

Construction Noise

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

Environmental Complaint and Prosecution

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

Environmental Licenses and Permits

13. 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:

14. Major site activities for the coming two months include:
    - Wah Fu PTW: Operation of New Treatment Plant, Formwork, rebar fixing, scaffolding and concreting to side wall and upper slab of grit handling room, Dismantling the temporary treatment plant, Pipe pile wall installation for flume channel, ELS and Construction of Cable Shaft Room and Cable Trench;
    - Aberdeen PTW: Operation of PTW, Installation of Rising Main No. 2 from Existing Pumping Station to Inlet Chamber, Excavation and Construction of the Workshop and Administration Building, Excavation and Demolition of Existing Medium Channels and Grit Trap and Temporary Channel, Installation of New DOU system;
    - Ap Lei Chau PTW: Operation of PTW, Pipe Pile Wall Installation for the Remaining Part of Screening and Degritting Facilities and Effluent Pumping Station;
    - Sandy Bay PTW: N/A; and
    - Cyberport PTW: Installation and Backfilling of DN700 Inlet Pipe, Installation of New DOU system.

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

1. INTRODUCTION

Background

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

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

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

1.3 The Project is under Harbour Area Treatment Scheme (HATS) Stage 2A and is a designated project (Register No. : AEIAR-121/2008). The environmental permit: (Permit No. EP-322/2008/G) 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 15th quarterly EM&A report summarizing the EM&A works conducted for the Project in July to September 2015.

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:

July 2015:
- Wah Fu PTW – Inlet Chamber and additional connection channel construction, Foundation of D.O. room construction, Install temporary submersible pump for early flow turning;
- Ap Lei Chau PTW – Flume Channel construction, DN900 Rising Main & flowmeter chamber construction, Install effluent pumps and pipeworks;
- Aberdeen PTW – Construction of De-silting Chamber and Sea Water Pumping Station, Flowmeter chamber construction, Install flow measuring and drop shaft sensors, DN300 seawater twin pipes installation;
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- Ap Lei Chau PTW – Continuous interim operation and maintenance of the ALC PTW, T&C of effluent pump, pipeworks and mini remote monitoring system;
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- Sandy Bay PTW – Outstanding works construction and defects rectification; and

- Cyberport PTW – DN700 Inlet & outlet pipe construction and backfilling, Install new DOU, Sheet piling for permanent diversion of 2 nos. of water main.

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 this Project.

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 G**.

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

4.3 **Table 4.1** summarizes the dust monitoring results which were extracted from the monthly reports for this Project.

4.4 The detailed monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results could be referred to **Appendix E** of this report.

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					
July 2015	CM_CB1a	107	33-205	280	500
	CM_WF1a	130	30-270	285	
	CM_AB1b	127	48-222	283	
August 2015	CM_CB1a	151	72-263	280	
	CM_WF1a	103	37-263	285	
	CM_AB1b	121	36-265	283	
September 2015	CM_CB1a	70	52-110	280	
	CM_WF1a	74	48-134	285	
	CM_AB1b	89	54-151	283	
24 hours TSP					
July 2015	CM_CB1a	54	32-85	178	260
	CM_WF1a	37	24-49	185	
	CM_AB1b	83	33-140	174	
August 2015	CM_CB1a	41	33-52	178	
	CM_WF1a	43	23-107	185	
	CM_AB1b	77	38-121	174	
September 2015	CM_CB1a	36	24-54	178	
	CM_WF1a	39	33-47	185	
	CM_AB1b	76	46-109	174	

Noise

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

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

4.7 **Table 4.2** summarizes the noise monitoring results which were extracted from the monthly reports for the Contract DC/2007/24 and this Project.

4.8 The construction noise monitoring at the designated locations was conducted by the ET of Contract: DC/2007/24 and this Project as scheduled in the reporting quarter. The monitoring results and graphical presentation are provided in Appendix D of the quarterly report for Contract DC/2007/24 and **Appendix F** of this report.

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.)
July 2015	M5	62-63	75.0
	M6a	41-58(1)	
	M7a	53-56	
	M8	60-67	
	M9	43-56	
August 2015	M6a	48-57(1)	
	M7a	55-56	
	M8	60-67	
	M9	52-61	
September 2015	M6a	51-57(1)	
	M7a	52-66	
	M8	61-65	
	M9	54-63	

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 G**.

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	150709-R02	Properly clear the stagnant water of the WetSep regularly at ALC-PTW.	The stagnant water of the WetSep was cleared regularly at ALC-PTW.
	150717-R02	The bunding should be provided to prevent the muddy water runoff to the access road at ALC-PTW.	The muddy materials near the access road were cleared and not observed at ALC-PTW.
	150723-R03	Properly clear the muddy water near the site entrance of Abd-PTW.	The muddy water was cleared near the site entrance of Abd-PTW.
	150821-R03	The bunding should be enhanced to avoid the muddy water runoff on the site at Abd-PTW.	Please refer to 150828-O02.
	150821-R04	The sediment tank should be maintained to prevent the wastewater leakage and the Contractor was reminded to clear the mud properly at Abd-PTW.	The sediment tank was removed and not observed at Abd-PTW.
	150828-O02	The bunding should be enhanced to avoid the muddy water runoff on the site at Abd-PTW.	Please refer to 150904-O01.
	150904-O01	The bunding should be enhanced to avoid the muddy water runoff on the site at Abd-PTW.	Please refer to 150911-O01.
	150904-O02	The discharging point of the WetSep at Abd-PTW should be fulfilled the location of the WPCO's wastewater discharge license for discharging out.	Please refer to 150911-O02.
	150911-O01	The bunding should be enhanced to avoid the muddy water runoff on the site at Abd-PTW.	The muddy water runoff was not observed at Abd-PTW.
	150911-O02	The discharging point of the WetSep at Abd-PTW should be fulfilled the location of the WPCO's wastewater discharge license for discharging out.	The discharging point of the WetSep at Abd-PTW was fulfilled the location of the WPCO's wastewater discharge license for discharging out.

	150925-R02	Properly clear stagnant water in the seawater pumping station at Abd-PTW.	The stagnant water in the seawater pumping station was cleared at Abd-PTW.
Air Quality	150626-R02	Properly clear the broken sand bags at Abd-PTW.	Please refer to 150703-R02.
	150703-R02	Properly clear the broken sand bags at Abd-PTW.	The broken sand bags were cleared and not observed at Abd-PTW.
	150717-R05	Properly clear the broken sand bags at Abd-PTW.	The broken sand bags were cleared and not observed at Abd-PTW.
	150723-R02	The dusty materials should be cleared or covered by impervious materials at ALC-PTW.	The dusty materials were covered by impervious materials at ALC-PTW.
	150814-R01	Properly clear the broken sand bag and debris at ALC-PTW.	The broken sand bag and debris were cleared at ALC-PTW.
	150911-R03	Properly clear and replace the broken sand bags at Cyberport-PTW.	The broken sand bags were cleared and replaced at Cyberport-PTW.
	150918-R01	Properly clear and replace the broken sand bags at Abd-PTW.	Please refer to 150925-R01.
	150925-R01	Properly clear and replace the broken sand bags at Abd-PTW.	The broken sand bags were cleared and removed at Abd-PTW.
Waste/ Chemical Management	150703-R01	Properly clear the oil stain in the drip tray of the air compressor at ALC-PTW.	Please refer to 150709-R01.
	150703-R03	The drip tray should be well maintained to prevent the oil leakage at Abd-PTW.	The drip tray with the generator was removed and not observed at Abd-PTW.
	150709-R01	Properly clear the oil stain in the drip tray of the air compressor at ALC-PTW.	The oil stain in the drip tray of the air compressor was cleared at ALC-PTW.
	150717-R01	The recycle bins should be labelled properly at ALC-PTW.	Please refer to 150723-R01.
	150717-R03	The construction materials should be cleared on the cover of the chemical wastes storage area at ALC-PTW.	The construction materials were cleared on the cover of the chemical wastes storage area at ALC-PTW.
	150717-R04	The chemical containers should be provided with the drip tray at ALC-PTW.	The chemical containers were provided with the drip tray at ALC-PTW.
	150723-R01	The recycle bins should be labelled properly at ALC-PTW.	Please refer to 150731-R01.
	150731-R01	The recycle bins should be labelled properly at ALC-PTW.	The recycle bins were labelled properly at ALC-PTW.
	150807-O01	The oil leakage was observed from the excavator at Wah Fu-PTW. The Contractor was reminded to provide the maintenance and clear the oil stain properly.	The maintenance of the excavator was provided by the Contractor; the oil leakage was not observed from the excavator and the oil stain was cleared at Wah Fu-PTW.

	150821-O01	The oil leakage was observed from the excavator at Cyberport-PTW. The Contractor was reminded to provide the maintenance and clear the oil stain properly.	The excavator was removed and not observed at Cyberport-PTW.
Landscape and Visual	--	--	--
Noise	150814-R02	The doors of the air compressors should be closed to fulfil the Noise Emission Label of the air compressor at Abd-PTW.	Please refer to 150821-O02.
	150821-O02	The doors of the air compressors should be closed to fulfil the Noise Emission Label of the air compressor at Abd-PTW.	Please refer to 150828-O01.
	150828-O01	The doors of the air compressors should be closed to fulfil the Noise Emission Label of the air compressor at Abd-PTW.	The doors of the air compressors were closed at Abd-PTW.
Permit/ Licenses	150717-R06	The Environmental Permit should be displayed at the site entrance of Abd-PTW.	The Environmental Permit was displayed on the board at the site entrance of Abd-PTW.
	150731-R02	The Environmental Permit should be displayed in full version at ALC-PTW.	Please refer to 150807-R02.
	150807-R02	The Environmental Permit should be displayed in full version at ALC-PTW.	The Environmental Permit was displayed in full version at ALC-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 H**.

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 July to September 2015 and was shown in **Appendix I**.

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 K**.

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

6.3 No Action/Limit 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 complaint was received for the Project in the reporting quarter. The updated Complaint Log is attached in **Appendix J.**

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 accumulation of stagnant/ muddy water on site;
- To avoid formation of mud trail near the site entrance;
- To provide maintenance of the sediment tank to prevent the wastewater leakage on the site;
- To ensure the discharging point of the WetSep is fulfilled the location of the WPCO's wastewater discharge license for discharging out; and
- To provide the bunding for prevention the water runoff to the access road.

Air Quality

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

Waste/Chemical Management

- To provide the maintenance of the drip tray and excavator to prevent the oil leakage;
- To proper label the recycle bins for correct usage on the site;
- To keep clear the cover of the chemical wastes storage area; and
- To provide proper and sufficient storage area or drip trays for chemical containers on site.

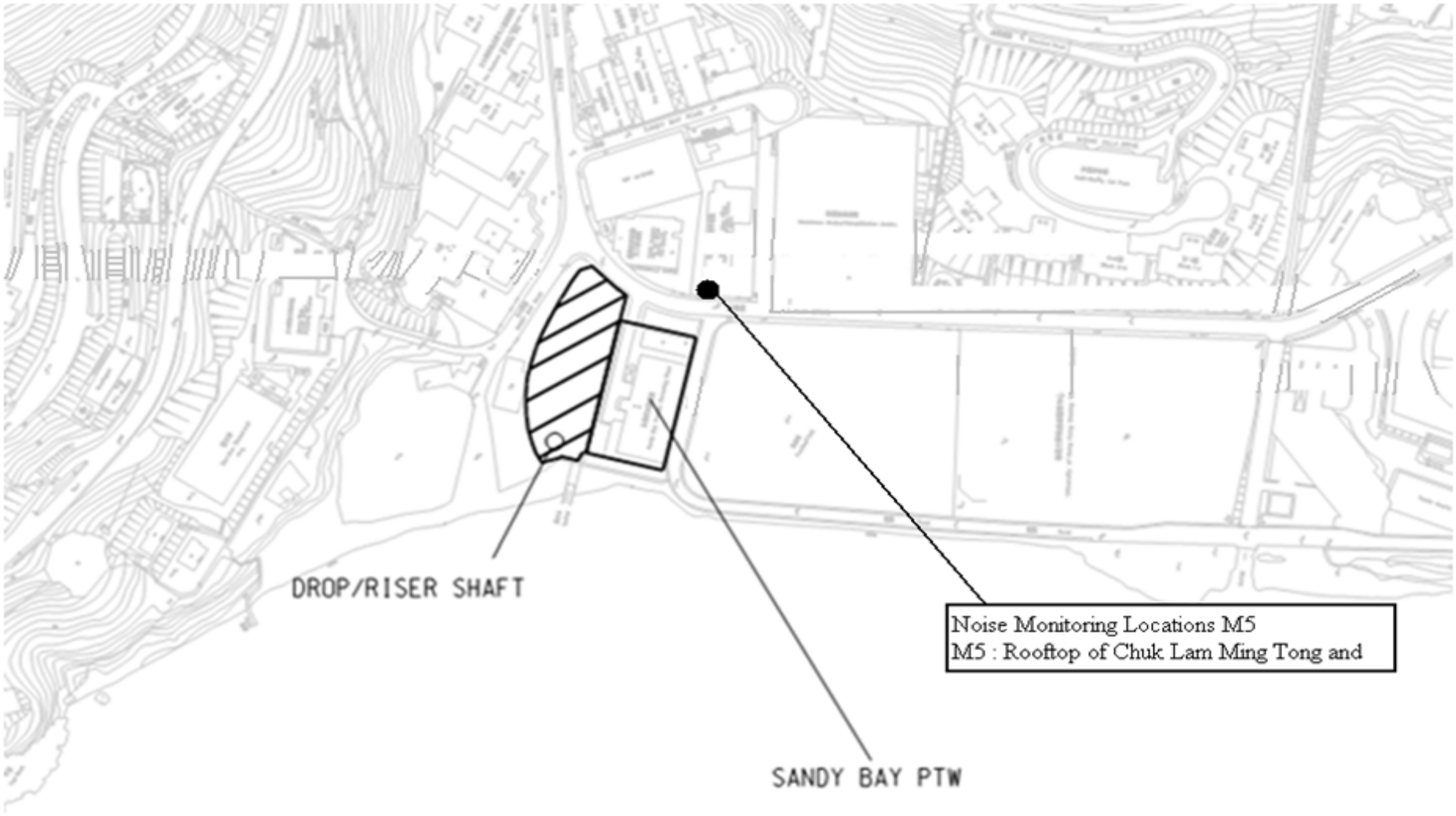
Noise

- To ensure the door of air compressor be closed to fulfil the Noise Emission Label.

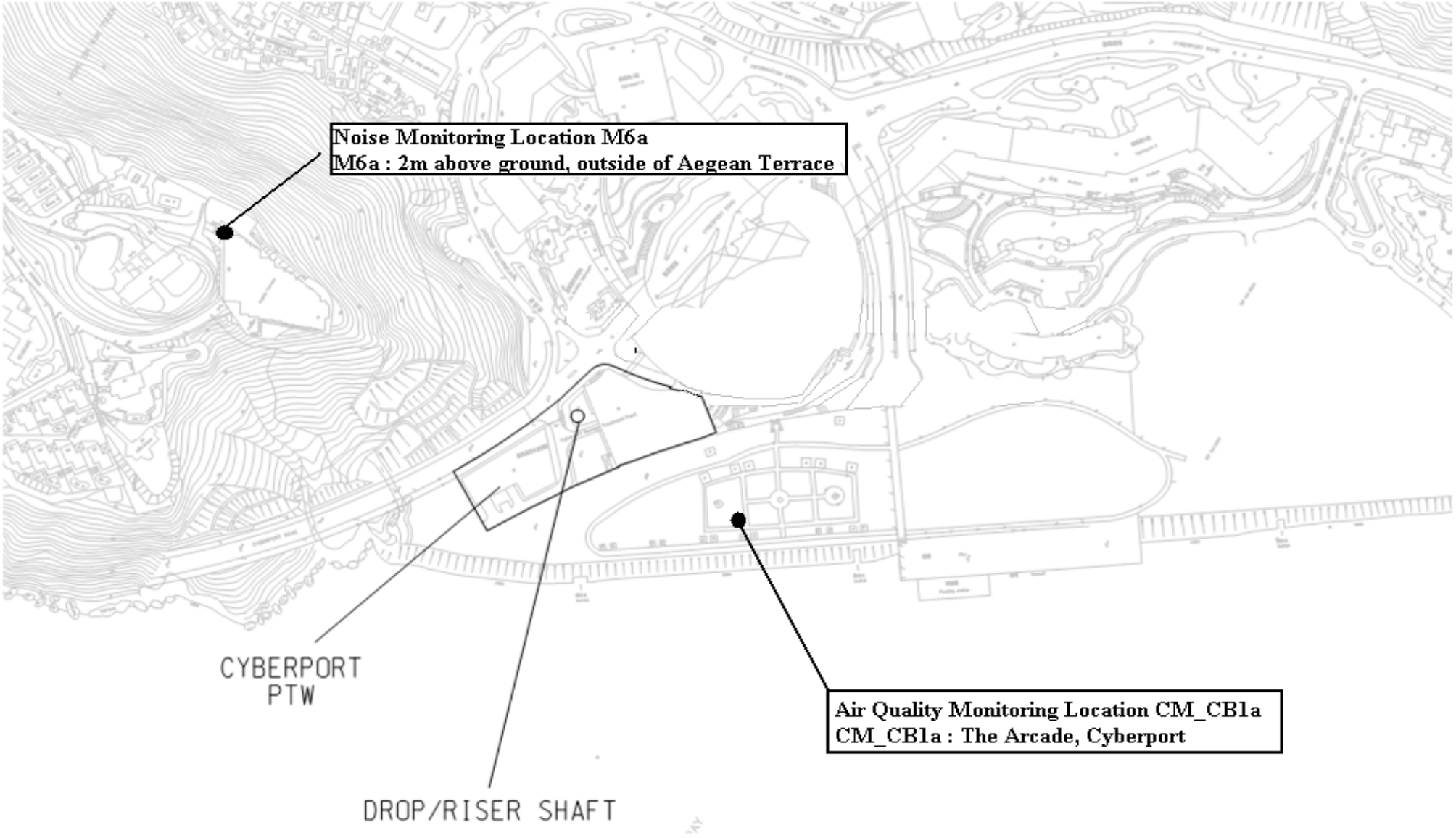
Permit/Licenses

- To display the Environmental Permit in the full version at every site entrance.

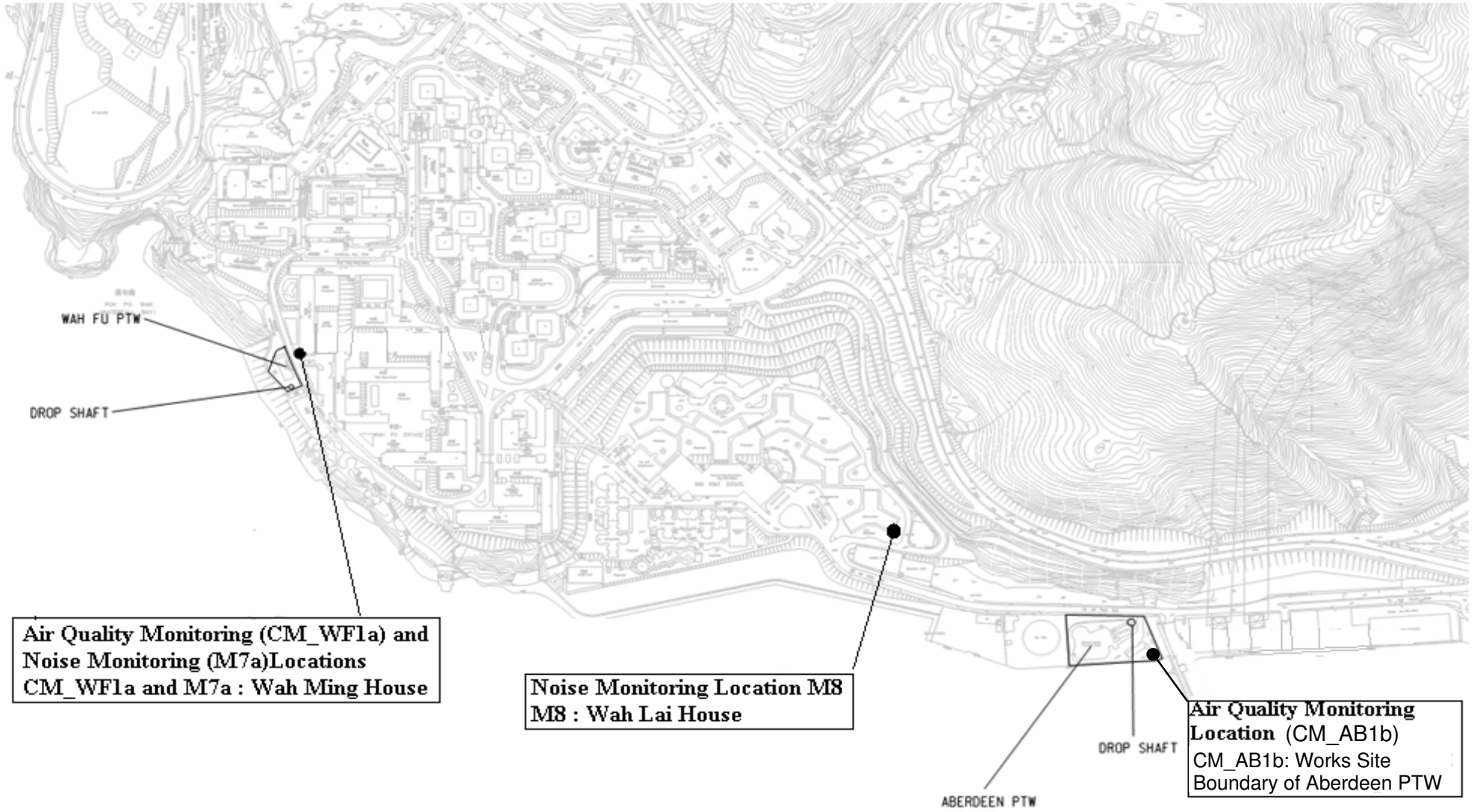
FIGURES



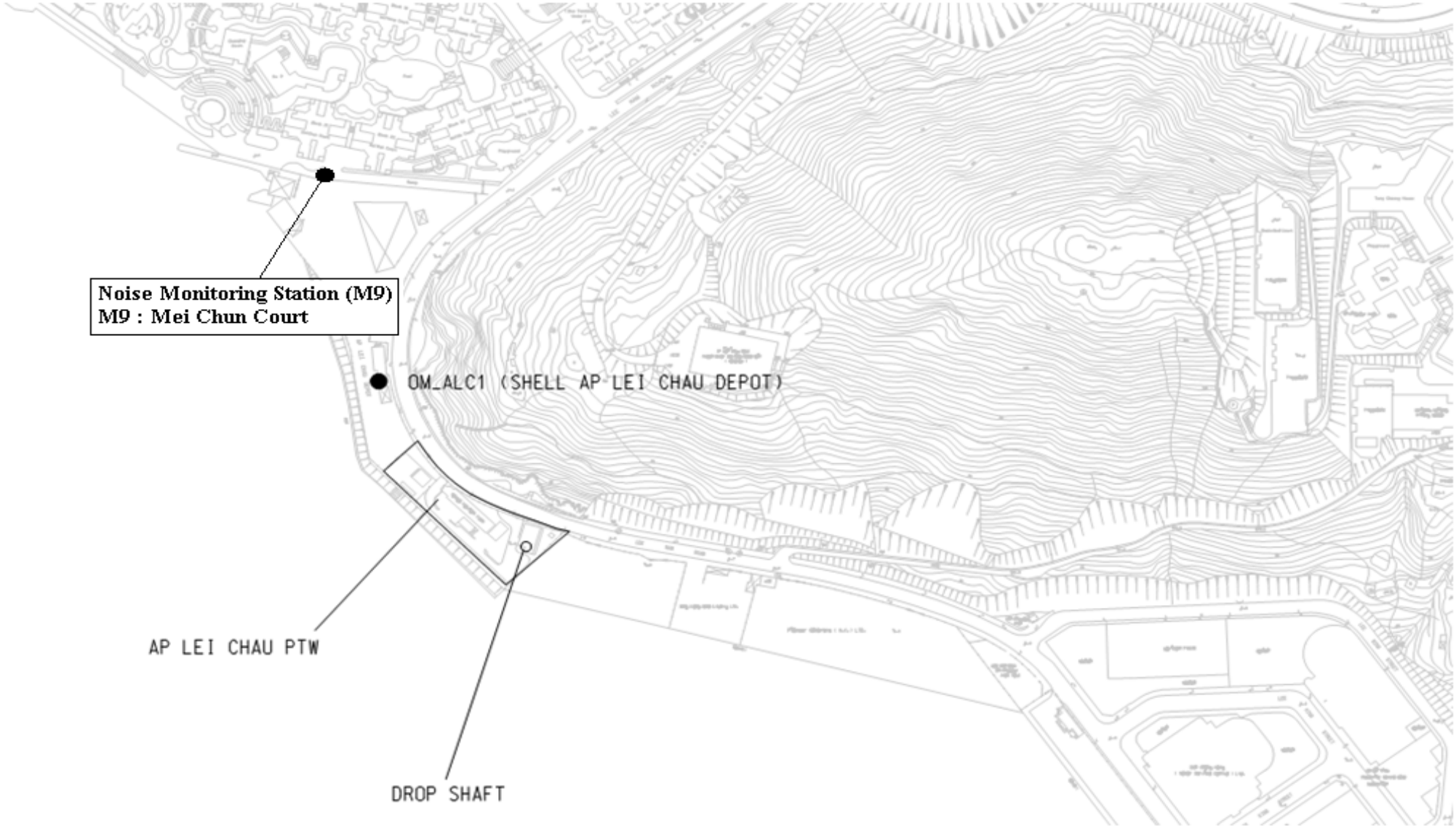
Title	Contract No: DC/2009/24 HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	Scale N.T.S	Project No. MA11060	CINOTECH
	General Location Plan of Sandy Bay PTW and Locations of Noise Monitoring Stations	Date 01/2012	Figure 1a	



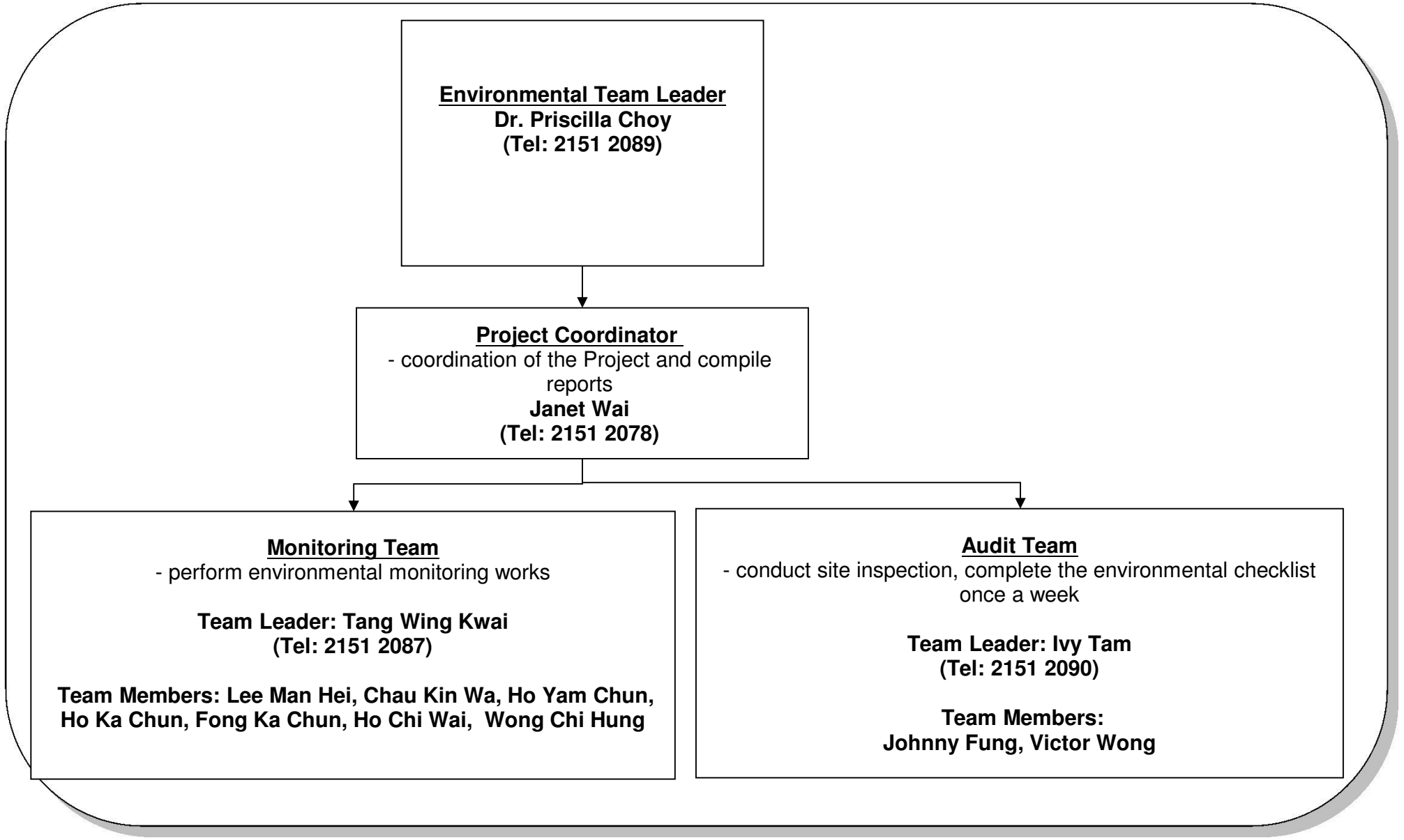
Title	Contract No: DC/2009/24 HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	Scale N.T.S	Project No. MA11060	CINOTECH
	General Location Plan of Cyberport PTW and Locations of Air Quality and Noise Monitoring Stations	Date 01/2012	Figure 1B	



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 07/2014	Figure 1C -2	



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



Title	Contract No. DC/2009/24 HATS Stage 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau ET's Organization Chart	Scale N.T.S	Project No. MA11060	CINOTECH
		Date Mar-15	Figure 2	

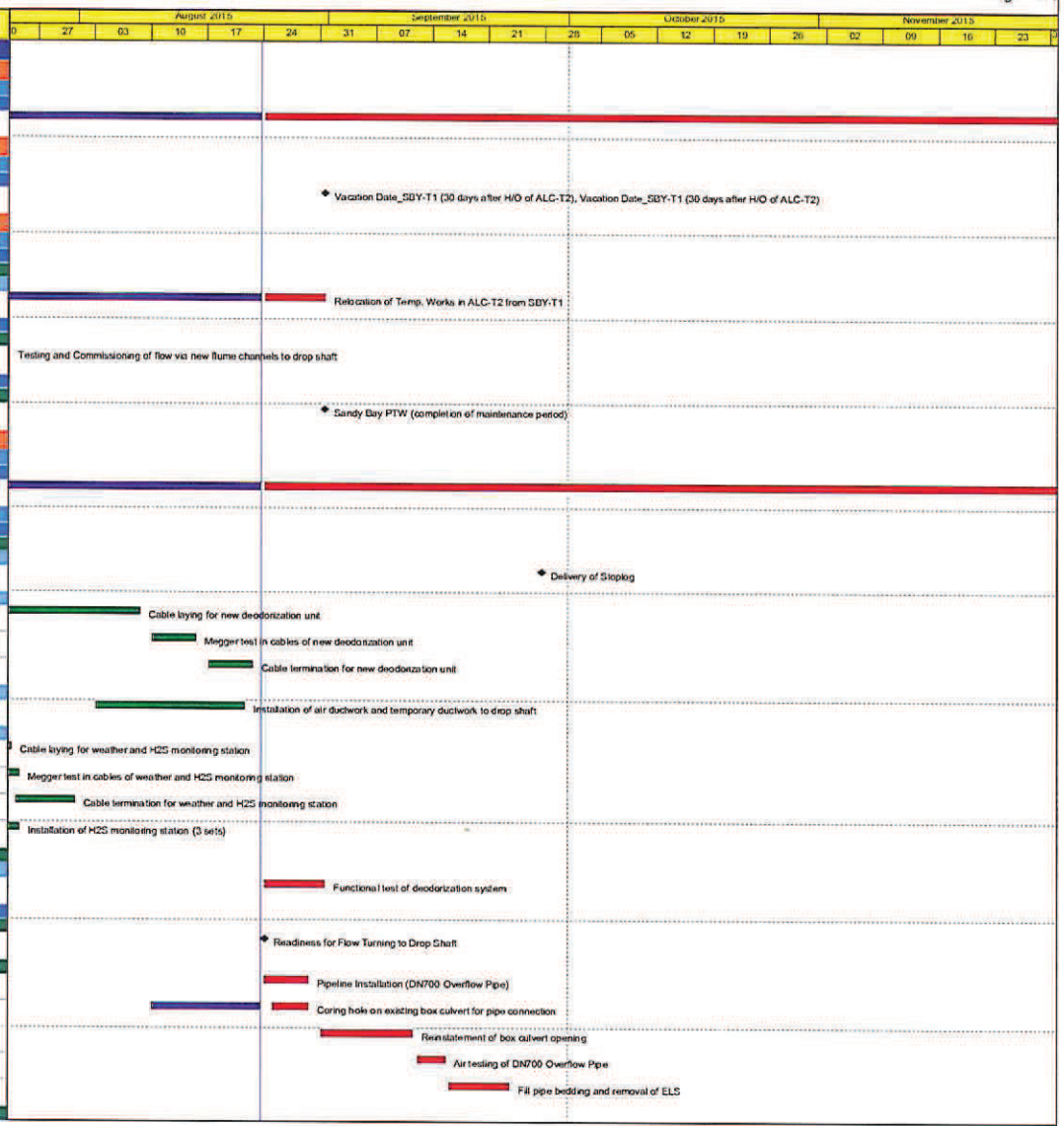
APPENDIX A
CONTACT DETAILS OF THE PROJECT ORGANISATION

Appendix A - Contact Details of the Project Organization

Party	Role	Name	Position	Phone No.
Drainage Services Department	Project Proponent	Mr. Vincent Y. K. Wong	Senior Engineer 2	2159 3406
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. Kelvin Cheung	Site Agent	9656 8865
		Ms. S.P. Ngan	Environmental Officer	9516 9431

APPENDIX B
CONSTRUCTION PROGRAMME

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish
DSD - HATSS2 Upgrading of PTW (DC/2009/24)							
Particulars							
Key Dates							
Commencement / Completion							
24CLN00020	Time for Completion of Project	0%	1309	31-Aug-11 A	27-Mar-17	24-May-14	24-Jan-17
Portion of the Site (MILESTONE)							
Sandy Bay PTW							
Possession / Vacation of Portions							
24MSBY00025	Vacation Date_SBY-T1 (30 days after H/O of ALC-T2)	0%	0		31-Aug-15		31-May-14
Sandy Bay PTW							
Works for Section 1							
PTW Building							
Civil Works							
Site Clearance and Preparation Works							
24SBY02050	Relocation of Temp. Works in ALC-T2 from SBY-T1	0%	25	18-Sep-12 A	31-Aug-15	24-May-14	31-May-14
Remaining Works needed for Flow Turning at Drop Shaft							
Readiness for Flow Turning							
24SBYNW01120	Testing and Commissioning of flow via new flume channels to drop shaft	100%	30	23-Jul-15 A	23-Jul-15 A	01-Mar-15	30-Mar-15
Completion of Works in Section 1							
Hand Over Date							
24SBY03025	Sandy Bay PTW (completion of maintenance period)	0%	0		31-Aug-15*		30-Mar-15
Cyberport PTW							
Key Dates							
Time of Completion							
24CPT01000	Time for Completion of Section 2	0%	1280	31-Aug-11 A	16-Apr-16	24-May-14	17-Sep-15
Works for Section 2							
Modification Inside Cyberport PTW Complex incl. Deodorization Room							
Electrical and Mechanical Works							
Material / Equipment Delivery on Site							
24CPT02330	Delivery of Stoplog	0%	0		27-Sep-15		30-Apr-15
Electrical Works							
24CPT02452	Cable laying for new deodorization unit	100%	12	18-May-15 A	08-Aug-15 A	09-Jan-15	19-Jan-15
24CPT02453	Megger test in cables of new deodorization unit	100%	6	10-Aug-15 A	15-Aug-15 A	20-Jan-15	26-Jan-15
24CPT02454	Cable termination for new deodorization unit	100%	6	17-Aug-15 A	22-Aug-15 A	27-Jan-15	02-Feb-15
HVAC System (Deodorization / Air Conditioning / Ventilation)							
24CPT02500	Installation of air ductwork and temporary ductwork to drop shaft	100%	17	03-Aug-15 A	21-Aug-15 A	20-Jan-15	09-Feb-15
Control and Monitoring Services incl. Instrumentation							
24CPT02572	Cable laying for weather and H2S monitoring station	100%	13	09-Jul-15 A	23-Jul-15 A	09-Jan-15	23-Jan-15
24CPT02573	Megger test in cables of weather and H2S monitoring station	100%	7	20-Jul-15 A	24-Jul-15 A	24-Jan-15	31-Jan-15
24CPT02574	Cable termination for weather and H2S monitoring station	100%	7	24-Jul-15 A	31-Jul-15 A	02-Feb-15	09-Feb-15
24CPT02576	Installation of H2S monitoring station (3 sets)	100%	33	15-Jun-15 A	24-Jul-15 A	19-Jan-15	28-Feb-15
Preliminary Testing and Commissioning							
HVAC System (Deodorization / Air Conditioning / Ventilation)							
24CPT02502	Functional test of deodorization system	0%	7	24-Aug-15	31-Aug-15	16-Feb-15	02-Mar-15
External Works including Temporary Works for Flow Turning to Drop Shaft							
Enhancement / Temporary Works for Flow Turning							
24CPTEX01070	Readiness for Flow Turning to Drop Shaft	0%	0		24-Aug-15*		15-Apr-15
DN700 Overflow Pipe (13m)							
24CPTEX01290	Pipeline Installation (DN700 Overflow Pipe)	0%	6	24-Aug-15	29-Aug-15	12-Feb-15	18-Feb-15
24CPTEX01310	Coring hole on existing box culvert for pipe connection	0%	21	10-Aug-15 A	29-Aug-15	03-Feb-15	02-Mar-15
24CPTEX01320	Reinstatement of box culvert opening	0%	10	31-Aug-15	11-Sep-15	03-Mar-15	13-Mar-15
24CPTEX01330	Air testing of DN700 Overflow Pipe	0%	3	12-Sep-15	15-Sep-15	14-Mar-15	17-Mar-15
24CPTEX01340	Fill pipe bedding and removal of ELS	0%	7	16-Sep-15	23-Sep-15	18-Mar-15	25-Mar-15
DN700 Inlet Pipe (18m)							



Start Date: 25-Jun-11

Finish Date: 27-Mar-18

Date Date: 23-Aug-15

Run Date: 27-Aug-15

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

HATSS2A Contract No. DC/2009/24

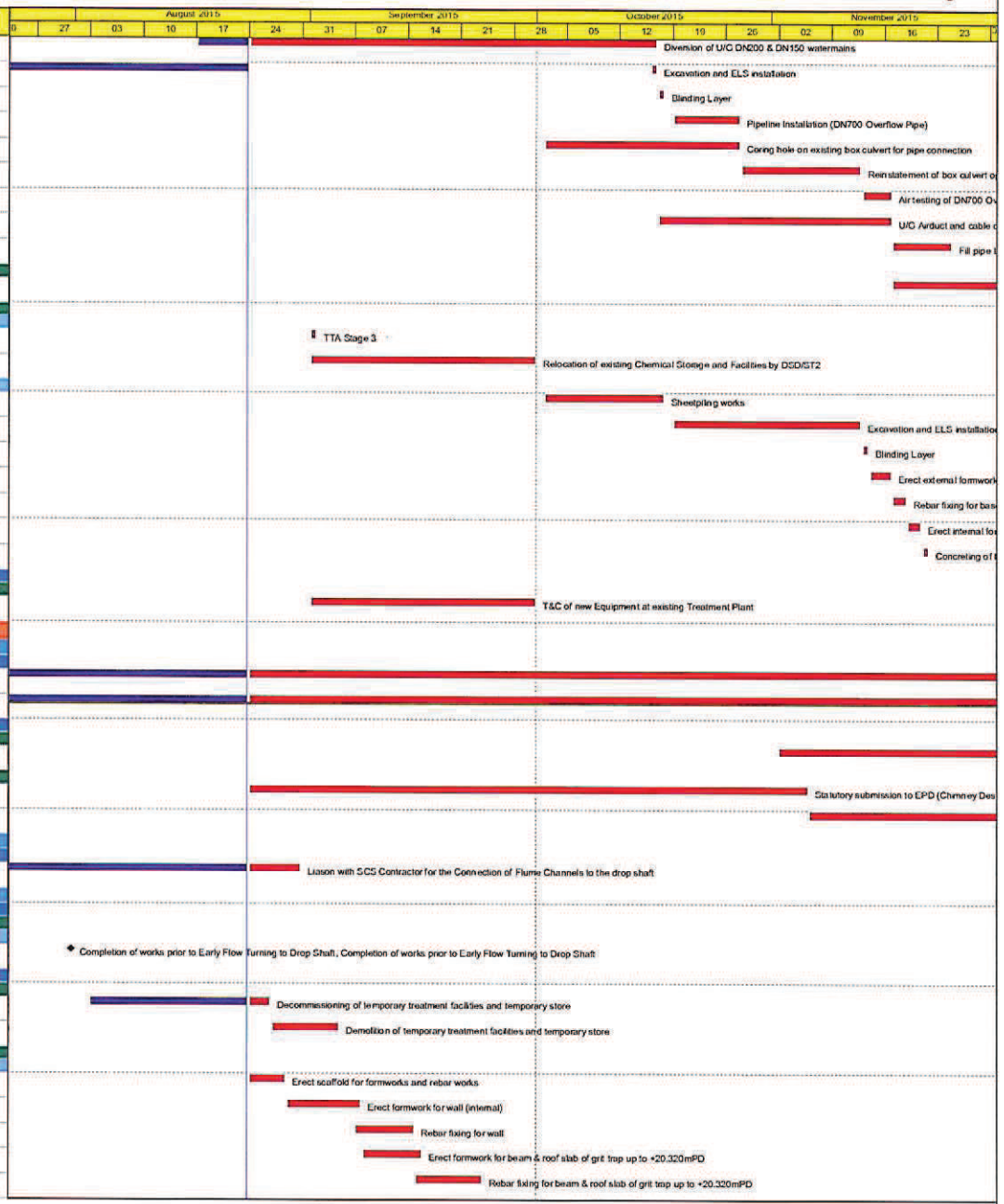
3 MONTHS ROLLING PROGRAMME

AUGUST 2015

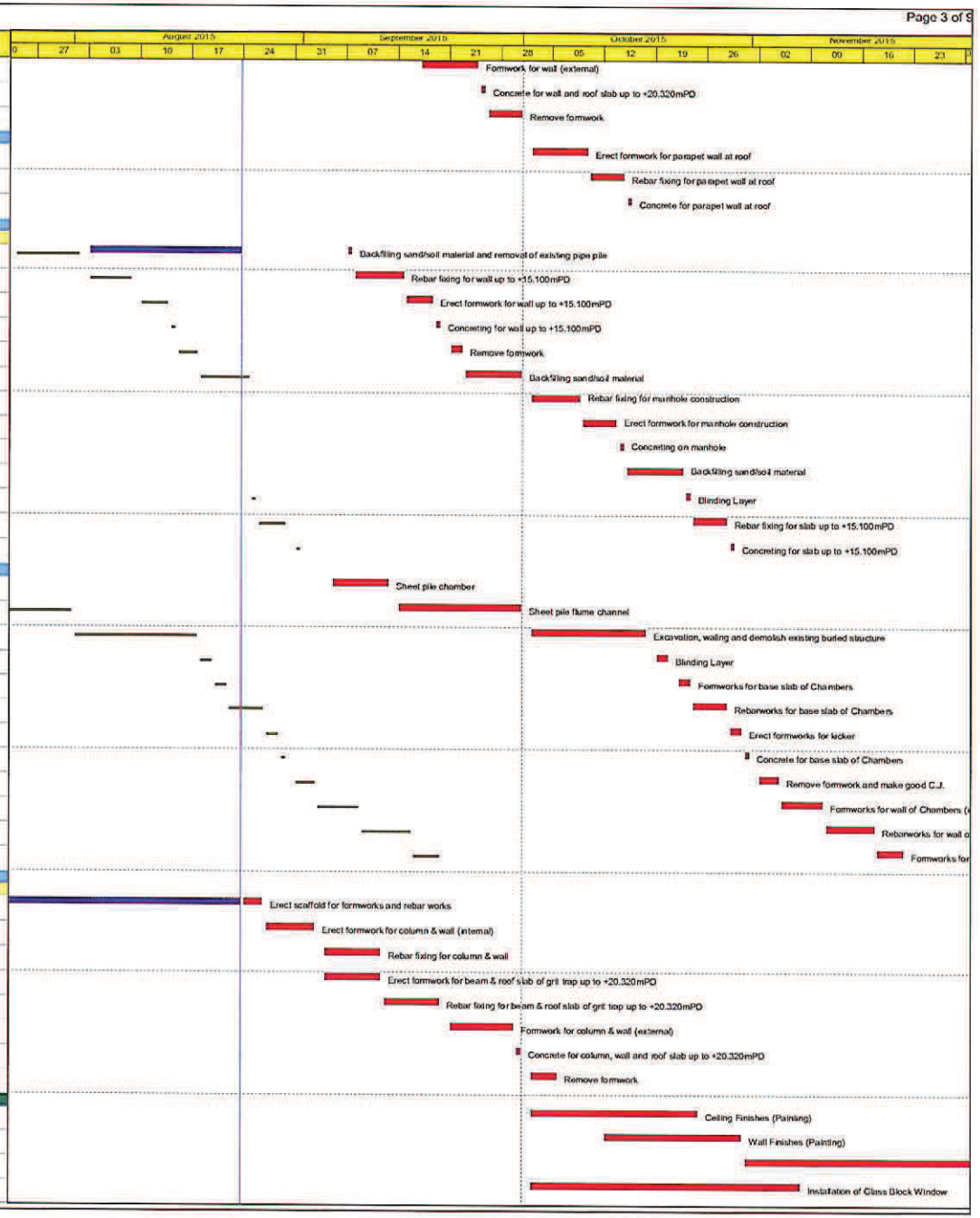
DETAILED WORKS PROGRAMME - DC/2009/24

Date	Revision	Checked	Approved
30-Mar-12	DWP - REVISION 0		
14-Dec-12	DWP - REVISION 2		
17-Jun-14	DWP - REVISION 3 (S5, 6 & 7)		
23-Aug-15 12:00 AM	UDWP - REVISION 3		

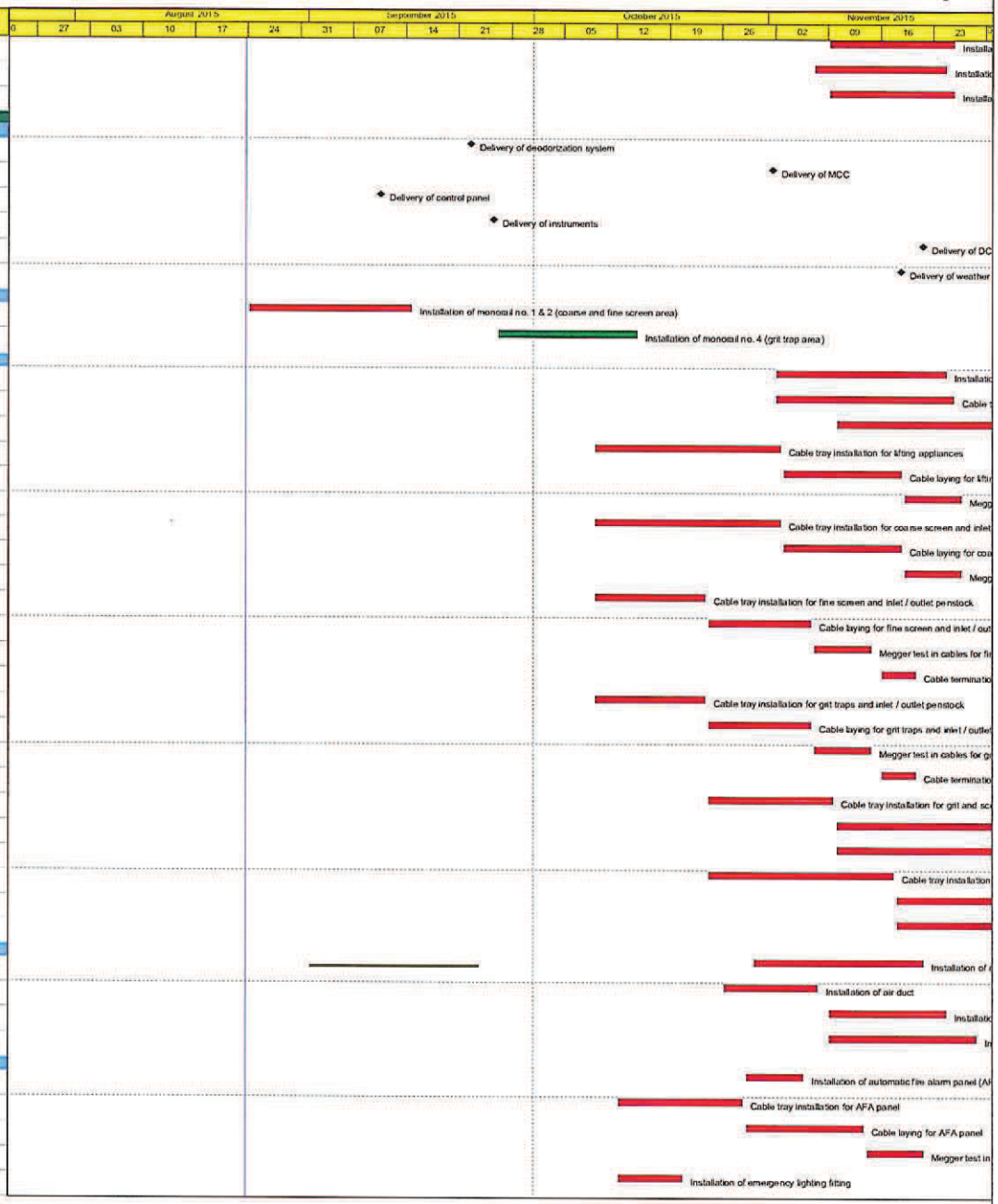
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish
24CPTEX01350	Diversion of U/C DN200 & DN150 watermains	0%	50	17-Aug-15 A	16-Oct-15	01-Nov-14	31-Dec-14
24CPTEX01390	Excavation and ELS installation	0%	21	18-May-15 A	16-Oct-15	11-Feb-15	10-Mar-15
24CPTEX01400	Blinding Layer	0%	1	17-Oct-15	17-Oct-15	11-Mar-15	11-Mar-15
24CPTEX01410	Pipeline Installation (DN700 Overflow Pipe)	0%	7	19-Oct-15	27-Oct-15	12-Mar-15	19-Mar-15
24CPTEX01420	Coring hole on existing box culvert for pipe connection	0%	21	02-Oct-15	27-Oct-15	24-Feb-15	19-Mar-15
24CPTEX01430	Reinstatement of box culvert opening	0%	14	28-Oct-15	12-Nov-15	20-Mar-15	06-Apr-15
24CPTEX01440	Air testing of DN700 Overflow Pipe	0%	3	13-Nov-15	16-Nov-15	09-Apr-15	11-Apr-15
24CPTEX01445	U/C Arduct and cable duct installation	0%	25	17-Oct-15	16-Nov-15	11-Mar-15	11-Apr-15
24CPTEX01450	Fill pipe bedding and removal of ELS	0%	7	17-Nov-15	24-Nov-15	13-Apr-15	20-Apr-15
Flume Channel (Remaining 5m)							
24CPTEX01585	U/G Airduct and cable duct installation	0%	50	17-Nov-15	16-Jan-16	13-Apr-15	11-Jun-15
DN 700 By-Pass Pipeline							
Relocation of existing Chemical Storage and Facilities by DSD/ST2							
24CPTEX01700	TTA Stage 3	0%	1	01-Sep-15	01-Sep-15	16-Apr-15	16-Apr-15
24CPTEX01710	Relocation of existing Chemical Storage and Facilities by DSD/ST2	0%	30	01-Sep-15	30-Sep-15	16-Apr-15	15-May-15
DN 700 By-Pass Pipeline between Manhole MH-E & MH-F							
24CPTEX01720	Sheetpiling works	0%	14	02-Oct-15	17-Oct-15	16-May-15	02-Jun-15
24CPTEX01730	Excavation and ELS installation	0%	21	19-Oct-15	12-Nov-15	03-Jun-15	27-Jun-15
24CPTEX01740	Blinding Layer	0%	1	13-Nov-15	13-Nov-15	29-Jun-15	29-Jun-15
24CPTEX01750	Erect external formwork for base slab of MH-F	0%	2	14-Nov-15	16-Nov-15	30-Jun-15	02-Jul-15
24CPTEX01760	Rebar fixing for base slab of MH-F	0%	2	17-Nov-15	18-Nov-15	03-Jul-15	04-Jul-15
24CPTEX01770	Erect internal formwork for base slab of MH-F	0%	2	19-Nov-15	20-Nov-15	06-Jul-15	07-Jul-15
24CPTEX01780	Concreting of base slab of MH-F	0%	1	21-Nov-15	21-Nov-15	06-Jul-15	06-Jul-15
Completion of Works in Section 2							
Final Testing and Commissioning							
24CPT05000	T&C of new Equipment at existing Treatment Plant	0%	30	01-Sep-15	30-Sep-15	03-Mar-15	01-Apr-15
Wah Fu PTW							
Key Dates							
Time of Completion							
24WFU1010	Time for Completion of Section 4	0%	1255	31-Aug-11 A	21-Sep-16	24-May-14	07-Mar-16
24WFU1012	Claim for Additional Extension of Time - under review	0%	398	23-Mar-15 A	21-Sep-16	23-Mar-15	07-Mar-16
Statutory and Utility Applications and Approvals							
Hong Kong Electric (HEC)							
24WFU1114	Prepare / Submit Application form to HEC	0%	26	02-Nov-15	01-Dec-15	17-Apr-15	18-May-15
Environmental Protection Department (EPD)							
24WFU1119	Statutory submission to EPD (Chimney Design)	0%	60	24-Aug-15	05-Nov-15	02-Mar-15	14-May-15
24WFU1120	Comment & re-submission to EPD	0%	30	06-Nov-15	10-Dec-15	15-May-15	19-Jun-15
Interface and Liaison							
Interface with other contractors							
24MWFU00170	Liason with SCS Contractor for the Connection of Flume Channels to the drop shaft	0%	60	02-Nov-14 A	30-Aug-15	02-Nov-14	31-Dec-14
Works for Section 4							
Screen and Grit Trap Building							
Other Works prior to Early Flow Turning							
Temporary Works							
24WFUTE01040	Completion of works prior to Early Flow Turning to Drop Shaft	100%	0		31-Jul-15 A		30-May-15
Remaining Works After Early Flow Turning							
Demolition of Temporary Treatment Plant							
24WFU02280A10	Decommissioning of temporary treatment facilities and temporary store	0%	11	03-Aug-15 A	26-Aug-15	15-Jun-15	27-Jun-15
24WFU02280A20	Demolition of temporary treatment facilities and temporary store	0%	7	27-Aug-15	04-Sep-15	29-Jun-15	07-Jul-15
Civil Works							
Up to Roof Slab Construction of Grit Trap Area (+20.320mPD)							
24WFUGT01310	Erect scaffold for formworks and rebar works	0%	5	24-Aug-15	28-Aug-15	04-Dec-14	09-Dec-14
24WFUGT01320	Erect formwork for wall (internal)	0%	7	29-Aug-15	07-Sep-15	10-Dec-14	17-Dec-14
24WFUGT01330	Rebar fixing for wall	0%	7	07-Sep-15	14-Sep-15	17-Dec-14	24-Dec-14
24WFUGT01340	Erect formwork for beam & roof slab of grit trap up to +20.320mPD	0%	7	08-Sep-15	15-Sep-15	18-Dec-14	27-Dec-14
24WFUGT01350	Rebar fixing for beam & roof slab of grit trap up to +20.320mPD	0%	8	15-Sep-15	23-Sep-15	27-Dec-14	06-Jan-15



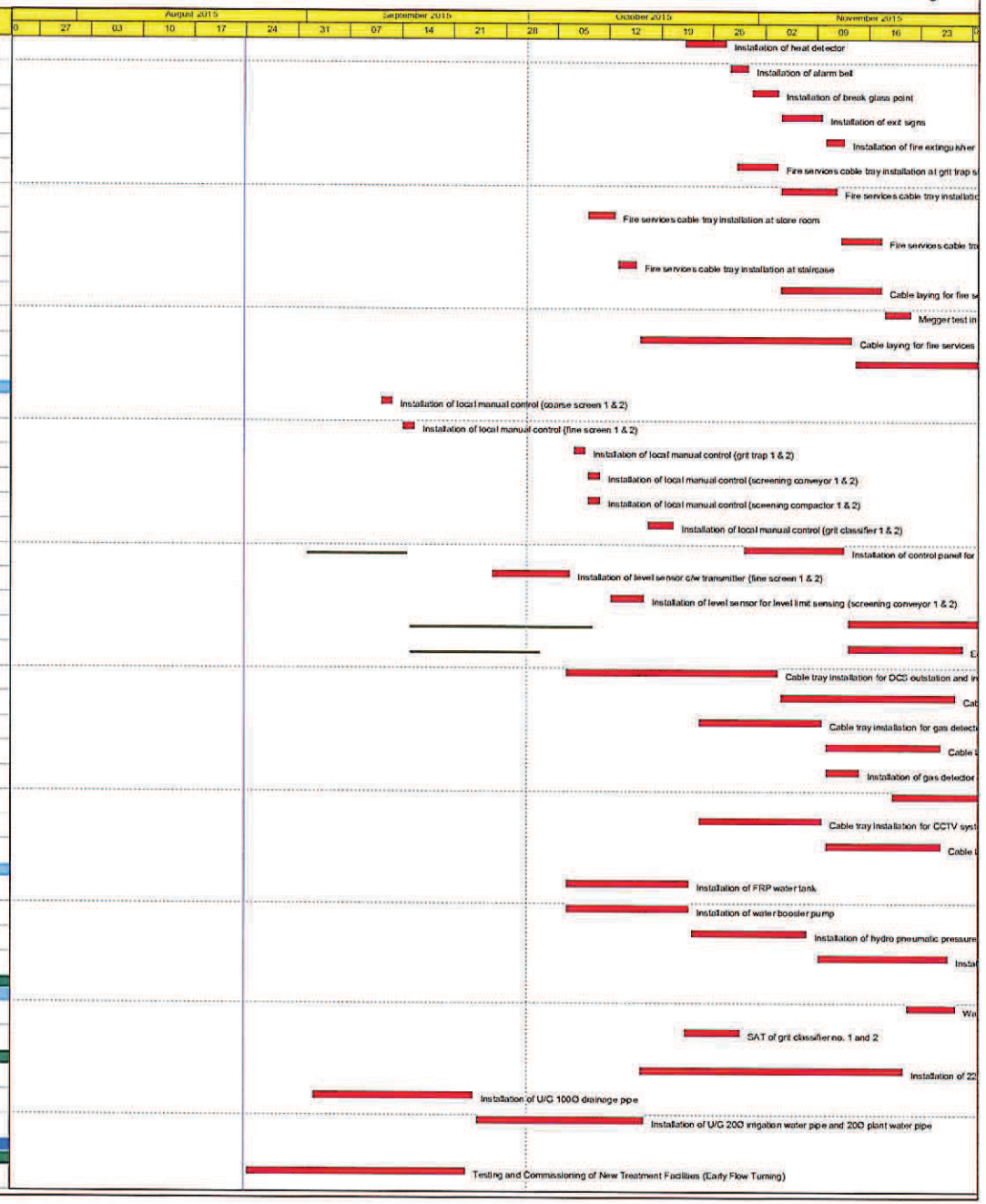
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish
24WFUGT01360	Formwork for wall (external)	0%	7	17-Sep-15	24-Sep-15	30-Dec-14	07-Jan-15
24WFUGT01370	Concrete for wall and roof slab up to +20.320mPD	0%	1	25-Sep-15	25-Sep-15	08-Jan-15	08-Jan-15
24WFUGT01380	Remove formwork	0%	3	26-Sep-15	30-Sep-15	09-Jan-15	12-Jan-15
Parapet Wall at Roof Floor							
24WFUFS01330	Erect formwork for parapet wall at roof	0%	7	02-Oct-15	09-Oct-15	14-Feb-15	25-Feb-15
24WFUFS01340	Rebar fixing for parapet wall at roof	0%	4	10-Oct-15	14-Oct-15	26-Feb-15	02-Mar-15
24WFUFS01350	Concrete for parapet wall at roof	0%	1	15-Oct-15	15-Oct-15	03-Mar-15	03-Mar-15
Deodorization Room - GL 1-3 / A-B							
Base Slab (+15.100mPD)							
24WFUDO01070	Backfilling sand/soil material and removal of existing pipe pile	0%	8	03-Aug-15 A	07-Sep-15	24-Jul-15	01-Aug-15
24WFUDO01080	Rebar fixing for wall up to +15.100mPD	0%	6	08-Sep-15	14-Sep-15	03-Aug-15	08-Aug-15
24WFUDO01090	Erect formwork for wall up to +15.100mPD	0%	4	15-Sep-15	18-Sep-15	10-Aug-15	13-Aug-15
24WFUDO01100	Concreting for wall up to +15.100mPD	0%	1	19-Sep-15	19-Sep-15	14-Aug-15	14-Aug-15
24WFUDO01110	Remove formwork	0%	2	21-Sep-15	22-Sep-15	15-Aug-15	17-Aug-15
24WFUDO01120	Backfilling sand/soil material	0%	6	23-Sep-15	30-Sep-15	18-Aug-15	24-Aug-15
24WFUDO01121	Rebar fixing for manhole construction	0%	6	02-Oct-15	08-Oct-15		
24WFUDO01122	Erect formwork for manhole construction	0%	4	09-Oct-15	13-Oct-15		
24WFUDO01123	Concreting on manhole	0%	1	14-Oct-15	14-Oct-15		
24WFUDO01124	Backfilling sand/soil material	0%	6	15-Oct-15	22-Oct-15		
24WFUDO01130	Blinding Layer	0%	1	23-Oct-15	23-Oct-15	25-Aug-15	25-Aug-15
24WFUDO01140	Rebar fixing for slab up to +15.100mPD	0%	4	24-Oct-15	28-Oct-15	26-Aug-15	29-Aug-15
24WFUDO01150	Concreting for slab up to +15.100mPD	0%	1	29-Oct-15	29-Oct-15	31-Aug-15	31-Aug-15
Flume Channel and Chamber FC-02							
24WFUFCC01000	Sheet pile chamber	0%	7	05-Sep-15	12-Sep-15	08-Jul-15	15-Jul-15
24WFUFCC01010	Sheet pile flume channel	0%	14	14-Sep-15	30-Sep-15	16-Jul-15	31-Jul-15
24WFUFCC01020	Excavation, waling and demolish existing buried structure	0%	14	02-Oct-15	17-Oct-15	01-Aug-15	17-Aug-15
24WFUFCC01030	Blinding Layer	0%	2	19-Oct-15	20-Oct-15	18-Aug-15	19-Aug-15
24WFUFCC01040	Formworks for base slab of Chambers	0%	2	22-Oct-15	23-Oct-15	20-Aug-15	21-Aug-15
24WFUFCC01050	Rebarworks for base slab of Chambers	0%	4	24-Oct-15	28-Oct-15	22-Aug-15	26-Aug-15
24WFUFCC01060	Erect formworks for kicker	0%	2	29-Oct-15	30-Oct-15	27-Aug-15	28-Aug-15
24WFUFCC01070	Concrete for base slab of Chambers	0%	1	31-Oct-15	31-Oct-15	29-Aug-15	29-Aug-15
24WFUFCC01080	Remove formwork and make good C.J.	0%	3	02-Nov-15	04-Nov-15	31-Aug-15	02-Sep-15
24WFUFCC01090	Formworks for wall of Chambers (internal)	0%	5	05-Nov-15	10-Nov-15	03-Sep-15	08-Sep-15
24WFUFCC01100	Rebarworks for wall of Chambers	0%	6	11-Nov-15	17-Nov-15	09-Sep-15	15-Sep-15
24WFUFCC01110	Formworks for wall of Chambers (external)	0%	4	18-Nov-15	21-Nov-15	16-Sep-15	19-Sep-15
Switch Room and Control Room - GL 4-6 / C-D							
Wall and Roof Slab (+20.320mPD)							
24WFUSR01100	Erect scaffold for formworks and rebar works	0%	3	22-Jun-15 A	26-Aug-15	05-Mar-15	07-Mar-15
24WFUSR01110	Erect formwork for column & wall (internal)	0%	6	27-Aug-15	02-Sep-15	09-Mar-15	14-Mar-15
24WFUSR01120	Rebar fixing for column & wall	0%	7	04-Sep-15	11-Sep-15	16-Mar-15	23-Mar-15
24WFUSR01130	Erect formwork for beam & roof slab of grit trap up to +20.320mPD	0%	7	04-Sep-15	11-Sep-15	16-Mar-15	23-Mar-15
24WFUSR01140	Rebar fixing for beam & roof slab of grit trap up to +20.320mPD	0%	7	12-Sep-15	19-Sep-15	24-Mar-15	31-Mar-15
24WFUSR01150	Formwork for column & wall (external)	0%	7	21-Sep-15	29-Sep-15	01-Apr-15	11-Apr-15
24WFUSR01160	Concrete for column, wall and roof slab up to +20.320mPD	0%	1	30-Sep-15	30-Sep-15	13-Apr-15	13-Apr-15
24WFUSR01170	Remove formwork	0%	3	02-Oct-15	05-Oct-15	14-Apr-15	16-Apr-15
Finishing Works							
24WFU02250A10	Ceiling Finishes (Painting)	0%	19	02-Oct-15	24-Oct-15	14-Feb-15	11-Mar-15
24WFU02250A20	Wall Finishes (Painting)	0%	16	12-Oct-15	30-Oct-15	07-Mar-15	25-Mar-15
24WFU02250A40	Floor Finishes (Painting)	0%	33	31-Oct-15	08-Dec-15	26-Mar-15	07-May-15
24WFU02250A50	Installation of Glass Block Window	0%	31	02-Oct-15	07-Nov-15	14-Feb-15	25-Mar-15



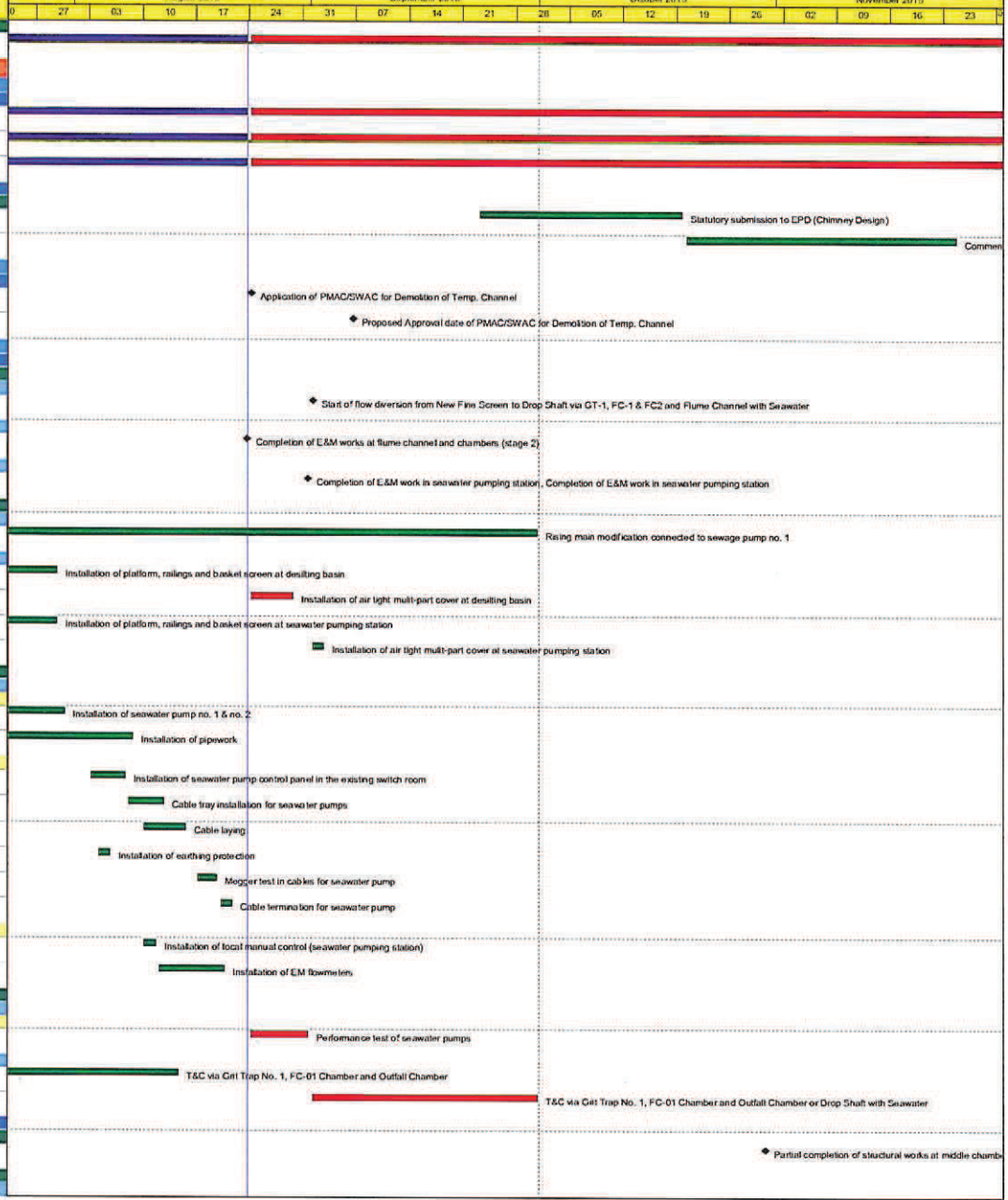
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish
24WFU02250A60	Installation of Louver	0%	15	09-Nov-15	25-Nov-15	26-Mar-15	15-Apr-15
24WFU02250A70	Installation of Roller Shutter	0%	15	07-Nov-15	24-Nov-15	26-Mar-15	15-Apr-15
24WFU02270A10	Installation of Guardrail at Roof	0%	15	09-Nov-15	25-Nov-15	26-Mar-15	15-Apr-15
Electrical and Mechanical Works							
Material / Equipment Delivery on Site							
24WFU3270	Delivery of deodorization system	0%	0		22-Sep-15		29-Oct-14
24WFU3280	Delivery of MCC	0%	0		01-Nov-15		21-Aug-14
24WFU3290	Delivery of control panel	0%	0		10-Sep-15		14-Nov-14
24WFU3300	Delivery of instruments	0%	0		25-Sep-15		20-Oct-14
24WFU3310	Delivery of DCS control system	0%	0		21-Nov-15		15-Oct-14
24WFU3340	Delivery of weather & H2S monitoring station	0%	0		18-Nov-15		27-Feb-15
Mechanical Works							
24WFU3350	Installation of monorail no. 1 & 2 (coarse and fine screen area)	0%	18	24-Aug-15	14-Sep-15	03-Mar-15	23-Mar-15
24WFU3370	Installation of monorail no. 4 (grit trap area)	0%	14	26-Sep-15	14-Oct-15	01-Apr-15	20-Apr-15
Electrical Works							
24WFU03540	Installation of new MCC switchboard	0%	20	02-Nov-15	24-Nov-15	17-Apr-15	11-May-15
24WFU03541	Cable tray installation for the new MCC switchboard	0%	21	02-Nov-15	25-Nov-15	17-Apr-15	12-May-15
24WFU03542	Cable laying for main power supply	0%	30	10-Nov-15	14-Dec-15	25-Apr-15	01-Jun-15
24WFU03548	Cable tray installation for lifting appliances	0%	20	09-Oct-15	02-Nov-15	25-Feb-15	19-Mar-15
24WFU03549	Cable laying for lifting appliances	0%	14	03-Nov-15	18-Nov-15	20-Mar-15	08-Apr-15
24WFU03550	Megger test in cables for lifting appliances	0%	7	19-Nov-15	26-Nov-15	09-Apr-15	16-Apr-15
24WFU03552	Cable tray installation for coarse screen and inlet / outlet penstock	0%	20	09-Oct-15	02-Nov-15	25-Feb-15	19-Mar-15
24WFU03553	Cable laying for coarse screen and inlet / outlet penstock	0%	14	03-Nov-15	18-Nov-15	20-Mar-15	08-Apr-15
24WFU03554	Megger test in cables for coarse screen and inlet / outlet penstock	0%	7	19-Nov-15	26-Nov-15	09-Apr-15	16-Apr-15
24WFU03556	Cable tray installation for fine screen and inlet / outlet penstock	0%	12	09-Oct-15	23-Oct-15	25-Feb-15	19-Mar-15
24WFU03557	Cable laying for fine screen and inlet / outlet penstock	0%	12	24-Oct-15	06-Nov-15	20-Mar-15	08-Apr-15
24WFU03558	Megger test in cables for fine screen and inlet / outlet penstock	0%	7	07-Nov-15	14-Nov-15	09-Apr-15	16-Apr-15
24WFU03559	Cable termination for fine screen and inlet / outlet penstock	0%	5	16-Nov-15	20-Nov-15	17-Apr-15	22-Apr-15
24WFU03560	Cable tray installation for grit traps and inlet / outlet penstock	0%	12	09-Oct-15	23-Oct-15	25-Feb-15	19-Mar-15
24WFU03561	Cable laying for grit traps and inlet / outlet penstock	0%	12	24-Oct-15	06-Nov-15	20-Mar-15	08-Apr-15
24WFU03562	Megger test in cables for grit traps and inlet / outlet penstock	0%	7	07-Nov-15	14-Nov-15	09-Apr-15	16-Apr-15
24WFU03563	Cable termination for gat traps and inlet / outlet penstock	0%	5	16-Nov-15	20-Nov-15	17-Apr-15	22-Apr-15
24WFU03564	Cable tray installation for grit and screenings handling area	0%	14	24-Oct-15	09-Nov-15	20-Mar-15	08-Apr-15
24WFU03565	Cable laying for grit and screenings handling area	0%	21	10-Nov-15	03-Dec-15	09-Apr-15	04-May-15
24WFU03568	Installation of lighting fittings	0%	20	10-Nov-15	02-Dec-15	09-Apr-15	02-May-15
24WFU03570	Cable tray installation for lighting	0%	21	24-Oct-15	17-Nov-15	20-Mar-15	16-Apr-15
24WFU03571	Cable laying for lighting	0%	12	18-Nov-15	01-Dec-15	17-Apr-15	30-Apr-15
24WFU03574	Installation of electical lighting switch, fuse switch, power sockets, etc.	0%	18	18-Nov-15	08-Dec-15	17-Apr-15	08-May-15
HVAC System (Deodorization / Air Conditioning / Ventilation)							
24WFU02706	Installation of new deodorization system	0%	20	30-Oct-15	21-Nov-15	01-Sep-15	23-Sep-15
24WFU02708	Installation of air duct	0%	12	26-Oct-15	07-Nov-15	12-Mar-15	07-Apr-15
24WFU02709	Installation of activated carbon filter (for grit trap & screening handling room)	0%	14	09-Nov-15	24-Nov-15	06-Apr-15	23-Apr-15
24WFU02713	Installation of ventilation fan c/w air duct at coarse & fine screen area	0%	18	09-Nov-15	28-Nov-15	06-Apr-15	06-May-15
Fire Protection / Detection System							
24WFU02851	Installation of automatic fire alarm panel (AFA panel)	0%	7	29-Oct-15	05-Nov-15	26-Mar-15	06-Apr-15
24WFU02852	Cable tray installation for AFA panel	0%	14	12-Oct-15	29-Oct-15	12-Mar-15	27-Mar-15
24WFU02853	Cable laying for AFA panel	0%	14	29-Oct-15	13-Nov-15	26-Mar-15	16-Apr-15
24WFU02854	Megger test in cables for AFA panel	0%	7	14-Nov-15	21-Nov-15	17-Apr-15	24-Apr-15
24WFU02856	Installation of emergency lighting fitting	0%	8	12-Oct-15	20-Oct-15	12-Mar-15	20-Mar-15



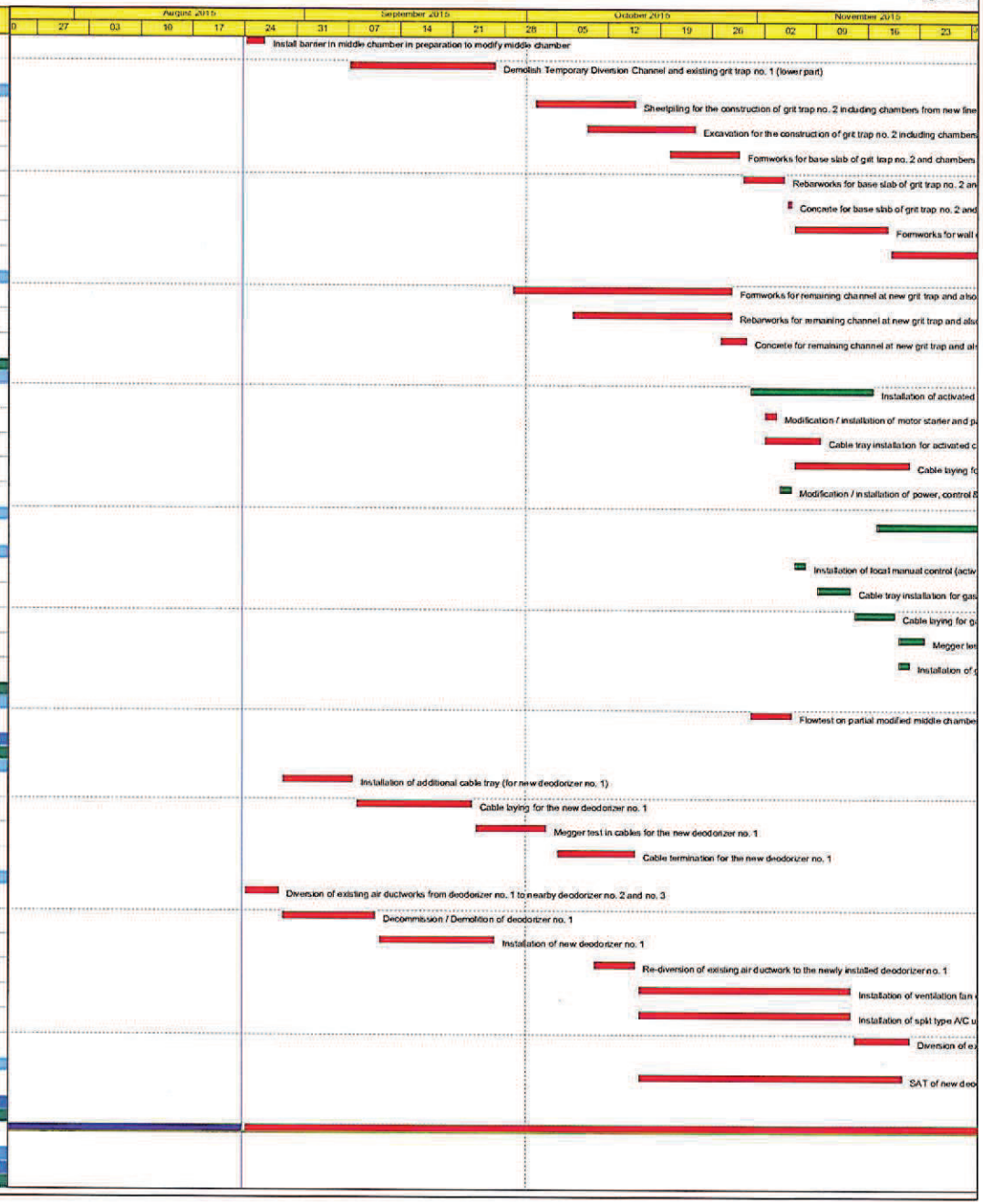
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish
24WFU02857	Installation of heat detector	0%	5	22-Oct-15	27-Oct-15	21-Mar-15	26-Mar-15
24WFU02858	Installation of alarm bell	0%	3	28-Oct-15	30-Oct-15	27-Mar-15	30-Mar-15
24WFU02859	Installation of break glass point	0%	3	31-Oct-15	03-Nov-15	31-Mar-15	02-Apr-15
24WFU02860	Installation of exit signs	0%	5	04-Nov-15	09-Nov-15	07-Apr-15	11-Apr-15
24WFU02861	Installation of fire extinguisher	0%	3	10-Nov-15	12-Nov-15	13-Apr-15	15-Apr-15
24WFU02863	Fire services cable tray installation at grit trap shelter area	0%	5	29-Oct-15	03-Nov-15	28-Mar-15	02-Apr-15
24WFU02866	Fire services cable tray installation at coarse and fine screen area	0%	7	04-Nov-15	11-Nov-15	07-Apr-15	14-Apr-15
24WFU02867	Fire services cable tray installation at store room	0%	3	09-Oct-15	12-Oct-15	25-Feb-15	27-Feb-15
24WFU02868	Fire services cable tray installation at grit and screening handling area	0%	5	12-Nov-15	17-Nov-15	15-Apr-15	20-Apr-15
24WFU02869	Fire services cable tray installation at staircase	0%	3	13-Oct-15	15-Oct-15	28-Feb-15	03-Mar-15
24WFU02870	Cable laying for fire services equipment	0%	12	04-Nov-15	17-Nov-15	07-Apr-15	27-Apr-15
24WFU02871	Megger test in cables for fire services equipment	0%	4	18-Nov-15	21-Nov-15	28-Apr-15	14-May-15
24WFU02879	Cable laying for fire services equipment	0%	24	16-Oct-15	13-Nov-15	04-Mar-15	31-Mar-15
24WFU02889	Megger test in cables for fire services equipment	0%	14	14-Nov-15	30-Nov-15	01-Apr-15	20-Apr-15
Control and Monitoring Services incl. Instrumentation							
24WFU02801	Installation of local manual control (coarse screen 1 & 2)	0%	2	11-Sep-15	12-Sep-15	22-Apr-15	23-Apr-15
24WFU02802	Installation of local manual control (fine screen 1 & 2)	0%	2	14-Sep-15	15-Sep-15	24-Apr-15	25-Apr-15
24WFU02803	Installation of local manual control (grit trap 1 & 2)	0%	2	07-Oct-15	08-Oct-15	06-May-15	07-May-15
24WFU02804	Installation of local manual control (screening conveyor 1 & 2)	0%	2	09-Oct-15	10-Oct-15	08-May-15	09-May-15
24WFU02805	Installation of local manual control (screening compactor 1 & 2)	0%	2	09-Oct-15	10-Oct-15	08-May-15	09-May-15
24WFU02806	Installation of local manual control (grit classifier 1 & 2)	0%	3	17-Oct-15	20-Oct-15	16-May-15	18-May-15
24WFU02807	Installation of control panel for deodorizer	0%	12	30-Oct-15	12-Nov-15	01-Sep-15	14-Sep-15
24WFU02808	Installation of level sensor c/w transmitter (fine screen 1 & 2)	0%	7	29-Sep-15	06-Oct-15	27-Apr-15	05-May-15
24WFU02809	Installation of level sensor for level limit sensing (screening conveyor 1 & 2)	0%	5	12-Oct-15	16-Oct-15	11-May-15	15-May-15
24WFU02810	Installation of instruments for deodorization system	0%	20	13-Nov-15	05-Dec-15	15-Sep-15	09-Oct-15
24WFU02811	Equipment installation for monitoring and control system	0%	14	13-Nov-15	28-Nov-15	15-Sep-15	02-Oct-15
24WFU02818	Cable tray installation for DCS outstation and instrumentation	0%	24	06-Oct-15	03-Nov-15	17-Apr-15	15-May-15
24WFU02819	Cable laying for DCS outstation and instrumentation	0%	21	04-Nov-15	27-Nov-15	16-May-15	10-Jun-15
24WFU02824	Cable tray installation for gas detection system (CH4, H2S & O2 detector)	0%	14	24-Oct-15	09-Nov-15	20-Mar-15	08-Apr-15
24WFU02825	Cable laying for gas detection system	0%	14	10-Nov-15	25-Nov-15	09-Apr-15	24-Apr-15
24WFU02828	Installation of gas detector (CH4, H2S & O2 detector)	0%	5	10-Nov-15	14-Nov-15	09-Apr-15	14-Apr-15
24WFU02829	Cable tray installation for weather and H2S monitoring station	0%	21	19-Nov-15	12-Dec-15	17-Apr-15	12-May-15
24WFU02835	Cable tray installation for CCTV system	0%	14	24-Oct-15	09-Nov-15	20-Mar-15	08-Apr-15
24WFU02836	Cable laying for CCTV system	0%	14	10-Nov-15	25-Nov-15	09-Apr-15	24-Apr-15
Plumbing Services							
24WFU03890	Installation of FRP water tank	0%	14	06-Oct-15	22-Oct-15	14-Feb-15	05-Mar-15
24WFU03900	Installation of water booster pump	0%	14	06-Oct-15	22-Oct-15	06-Mar-15	21-Mar-15
24WFU03910	Installation of hydro pneumatic pressure vessel	0%	14	23-Oct-15	07-Nov-15	23-Mar-15	10-Apr-15
24WFU03920	Installation of 20mmD water pipe	0%	16	09-Nov-15	26-Nov-15	11-Apr-15	16-May-15
Preliminary Testing and Commissioning							
Mechanical Works							
24WFU03386	Water test for penstock	0%	7	21-Nov-15	27-Nov-15	01-May-15	30-May-15
24WFU03392	SAT of grit classifier no. 1 and 2	0%	7	22-Oct-15	29-Oct-15	10-May-15	27-May-15
U/G Utility Works							
24WFU02300A10	Installation of 225 U channel sewerage around HS & GT bldg.	0%	30	16-Oct-15	20-Nov-15	04-Mar-15	10-Apr-15
24WFU02300A20	Installation of U/G 100D drainage pipe	0%	18	02-Sep-15	23-Sep-15	18-Feb-15	13-Mar-15
24WFU02300A30	Installation of U/G 200 irrigation water pipe and 200 plant water pipe	0%	18	24-Sep-15	16-Oct-15	14-Mar-15	07-Apr-15
Completion of Works in Section 4							
Final Testing and Commissioning							
24WFU03200	Testing and Commissioning of New Treatment Facilities (Early Flow Turning)	0%	30	24-Aug-15	22-Sep-15	31-May-15	29-Jun-15



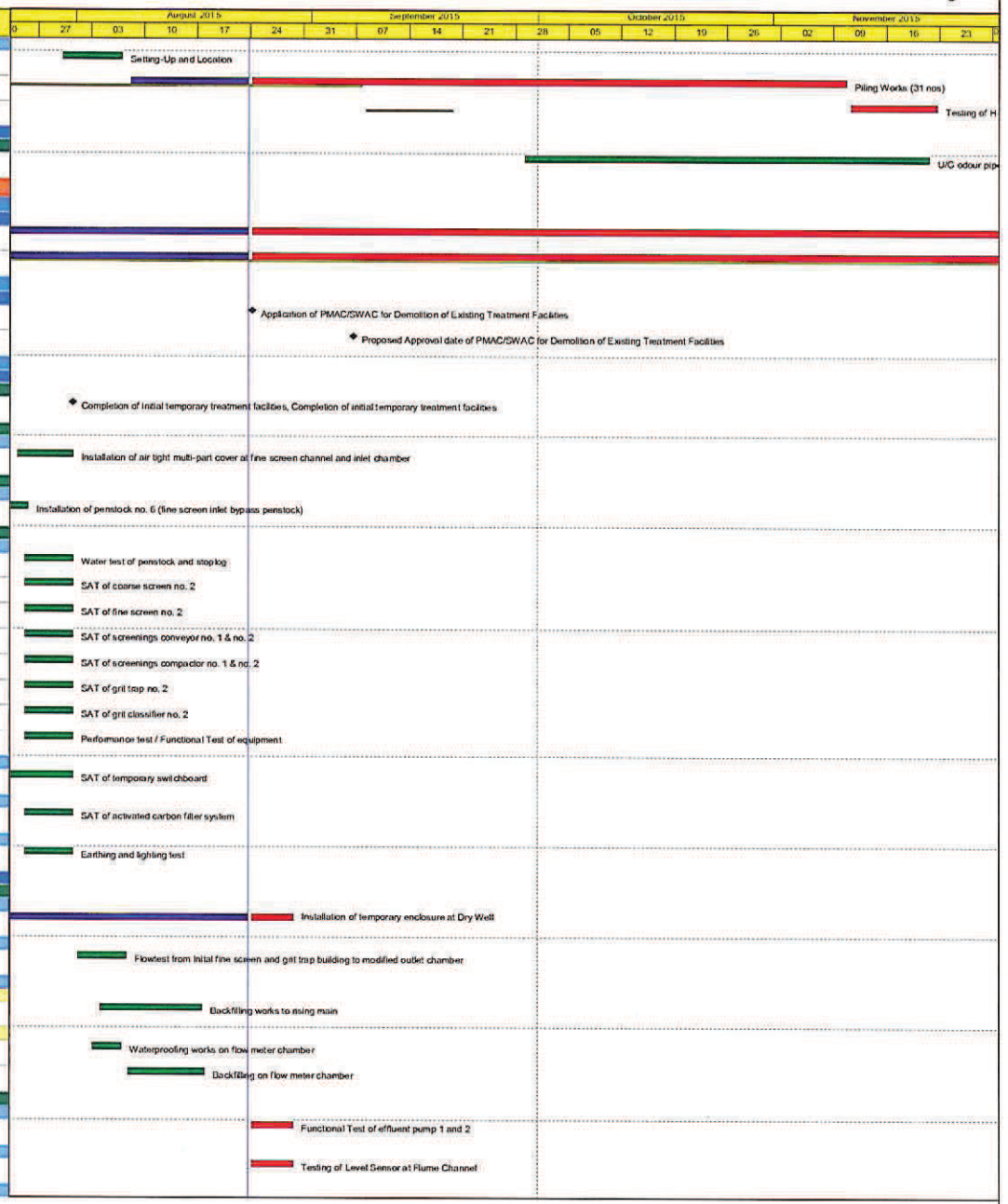
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish
EoT Claim							
24WFU00252	Claim for Additional Extension of Time - under review	0%	396	24-Mar-15 A	21-Sep-16	24-Mar-15	07-Mar-16
Aberdeen PTW							
Key Dates							
Time of Completion							
24AUN00300	Time for Completion of Section 5	0%	1179	31-Aug-11 A	21-Jul-16*	25-May-14	13-Feb-16
24AUN00302	Claim for Additional Extension of Time - under review	0%	394	15-Jan-15 A	21-Jul-16	15-Jan-15	12-Feb-16
24AUN00310	Time for Completion of Section 6	0%	1309	31-Aug-11 A	27-Mar-17	24-May-14	24-Jan-17
Statutory and Utility Applications and Approvals							
Enviromental Protection Department (EPD)							
24AUN00434	Statutory submission to EPD (Chimney Design)	0%	21	23-Sep-15	19-Oct-15	13-Sep-14	09-Oct-14
24AUN00435	Comment & resubmission to EPD	0%	30	20-Oct-15	24-Nov-15	10-Oct-14	13-Nov-14
Interface and Liaison							
Interface with ST2/DSD							
24MAUN00170	Application of PMAC/SWAC for Demolition of Temp. Channel	0%	0	24-Aug-15		13-Jan-15	
24MAUN00180	Proposed Approval date of PMAC/SWAC for Demolition of Temp. Channel	0%	0		06-Sep-15		26-Jan-15
Works for Section 5							
FS & GT Bldg - Grit Trap No. 1, FC-1 & FC-2 Chamber, Flume Channel & Seawater Pumping (Stage 2)							
Interface between Civil / ADWF / E&M Works							
Interface between Civil / ADWF / E&M Works (Grit Trap No. 1)							
24MAUN00331	Start of flow diversion from New Fine Screen to Drop Shaft via GT-1, FC-1 & FC2 and Flume Channel with Seawater	0%	0	01-Sep-15		01-Apr-15	
Interface between Civil / ADWF / E&M Works for Flume Channel							
24MAUN00320	Completion of E&M works at flume channel and chambers (stage 2)	0%	0		23-Aug-15		29-Jan-15
Interface between Civil / ADWF / E&M Works for Seawater							
24MAUN00520	Completion of E&M work in seawater pumping station	0%	0		31-Aug-15		31-Mar-15
Civil Works							
Relocation of Rising Main No. 2							
24AUN3211	Rising main modification connected to sewage pump no. 1	0%	10	23-Apr-15 A	30-Sep-15	28-Aug-14	07-Oct-14
RC Structural Works for Seawater Pumping							
24AUN02250A00	Installation of platform, railings and basket screen at desilting basin	100%	6	23-Jul-15 A	29-Jul-15 A	24-Jan-15	30-Jan-15
24AUN02250D10	Installation of air tight multi-part cover at desilting basin	0%	6	24-Aug-15	29-Aug-15	31-Jan-15	12-Feb-15
24AUN02250D80	Installation of platform, railings and basket screen at seawater pumping station	100%	6	23-Jul-15 A	29-Jul-15 A	27-Dec-14	03-Jan-15
24AUN02250D90	Installation of air tight multi-part cover at seawater pumping station	0%	2	01-Sep-15	02-Sep-15	01-Apr-15	02-Apr-15
Electrical and Mechanical Works							
Electrical and Mechanical Works (Seawater Pumping Station)							
Mechanical Works							
24AUN03590	Installation of seawater pump no. 1 & no. 2	100%	7	24-Jun-15 A	30-Jul-15 A	30-Jan-15	25-Feb-15
24AUN03600	Installation of pipework	100%	8	03-Jul-15 A	08-Aug-15 A	26-Feb-15	14-Mar-15
Electrical Works							
24AUN03610	Installation of seawater pump control panel in the existing switch room	100%	5	03-Aug-15 A	07-Aug-15 A	30-Jan-15	04-Feb-15
24AUN03620	Cable tray installation for seawater pumps	100%	4	08-Aug-15 A	12-Aug-15 A	05-Feb-15	10-Feb-15
24AUN03630	Cable laying	100%	6	10-Aug-15 A	15-Aug-15 A	11-Feb-15	02-Mar-15
24AUN03640	Installation of earthing protection	100%	2	04-Aug-15 A	05-Aug-15 A	03-Mar-15	04-Mar-15
24AUN03650	Megger test in cables for seawater pump	100%	3	17-Aug-15 A	19-Aug-15 A	05-Mar-15	09-Mar-15
24AUN03660	Cable termination for seawater pump	100%	2	20-Aug-15 A	21-Aug-15 A	10-Mar-15	12-Mar-15
Control and Monitoring Services incl. Instrumentation							
24AUN03670	Installation of local manual control (seawater pumping station)	100%	2	10-Aug-15 A	11-Aug-15 A	26-Feb-15	27-Feb-15
24AUN03680	Installation of EM flowmeters	100%	8	12-Aug-15 A	20-Aug-15 A	28-Feb-15	11-Mar-15
Preliminary Testing and Commissioning							
Preliminary Testing and Commissioning (Seawater Pumping Station)							
Mechanical Works							
24AUN03685	Performance test of seawater pumps	0%	7	24-Aug-15 A	31-Aug-15	16-Mar-15	31-Mar-15
Flow Diversion							
24AUN03845	T&C via Grit Trap No. 1, FC-01 Chamber and Outfall Chamber	100%	30	16-Jul-15 A	14-Aug-15 A	01-Mar-15	30-Mar-15
24AUN03846	T&C via Grit Trap No. 1, FC-01 Chamber and Outfall Chamber or Drop Shaft with Seawater	0%	30	01-Sep-15	30-Sep-15	01-Apr-15	30-Apr-15
FS & GT Bldg - Grit Trap No. 2 incl. Middle Chamber (Stage 3)							
Interface between Civil / ADWF / E&M Works							
24MAUN00370	Partial completion of structural works at middle chamber (stage 3)	0%	0		30-Oct-15		29-May-15
Civil Works							
Temporary Works / Demolition Works							



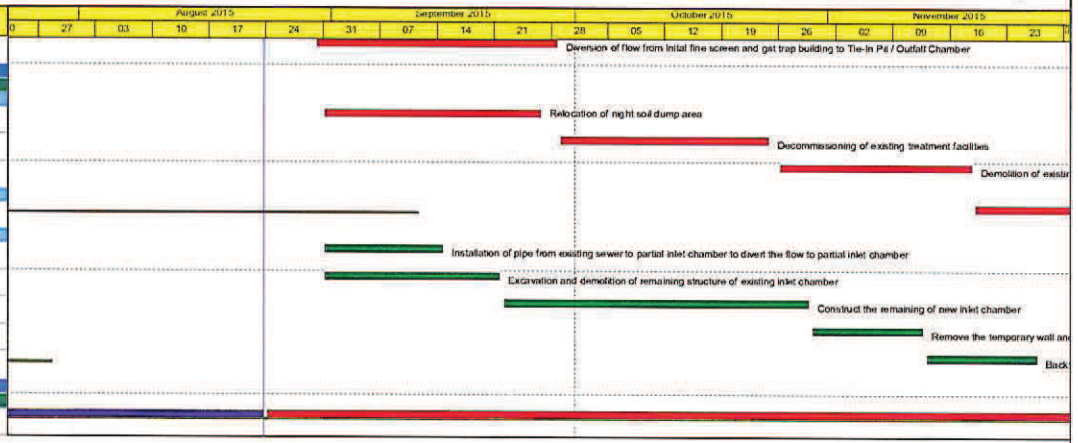
Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish
24ABN00780A05	Install barrier in middle chamber in preparation to modify middle chamber	0%	3	24-Aug-15	26-Aug-15	31-Mar-15	02-Apr-15
24ABN00780A10	Demolish Temporary Diversion Channel and existing grit trap no. 1 (lower part)	0%	18	07-Sep-15	26-Sep-15	07-Apr-15	27-Apr-15
RC Structural Works for Grit Trap No. 2							
24ABN00775A01	Sheetpiling for the construction of grit trap no. 2 including chambers from new fine screen chamber to FC-1	0%	12	02-Oct-15	15-Oct-15	02-May-15	15-May-15
24ABN00775A10	Excavation for the construction of grit trap no. 2 including chambers from new fine screen chamber to FC-1	0%	12	09-Oct-15	23-Oct-15	09-May-15	22-May-15
24ABN00775A20	Formworks for base slab of grit trap no. 2 and chambers	0%	8	20-Oct-15	29-Oct-15	20-May-15	29-May-15
24ABN00775A30	Rebarworks for base slab of grit trap no. 2 and chambers	0%	5	30-Oct-15	04-Nov-15	30-May-15	04-Jun-15
24ABN00775A40	Concrete for base slab of grit trap no. 2 and chambers	0%	1	05-Nov-15	05-Nov-15	05-Jun-15	05-Jun-15
24ABN00775A50	Formworks for wall of grit trap no. 2 and chambers	0%	11	06-Nov-15	18-Nov-15	06-Jun-15	18-Jun-15
24ABN00775A60	Rebarworks for wall of grit trap no. 2 and chambers	0%	12	19-Nov-15	02-Dec-15	19-Jun-15	04-Jul-15
RC Structural Works for Middle Chamber							
24ABN00795A20	Formworks for remaining channel at new grit trap and also for the wall of middle chamber near existing grit trap no. 1	0%	24	29-Sep-15	28-Oct-15	28-Apr-15	27-May-15
24ABN00795A30	Rebarworks for remaining channel at new grit trap and also for the wall of middle chamber near existing grit trap no. 1	0%	18	07-Oct-15	28-Oct-15	06-May-15	27-May-15
24ABN00795A40	Concrete for remaining channel at new grit trap and also for the wall of middle chamber near existing grit trap no. 1	0%	4	27-Oct-15	30-Oct-15	26-May-15	29-May-15
Electrical and Mechanical Works							
Electrical Works							
24ABN01270	Installation of activated carbon filter (for grit & screenings handling equipment)	0%	14	31-Oct-15	16-Nov-15	30-May-15	15-Jun-15
24ABN03931	Modification / installation of motor starter and panel cover in existing switchboard (for activated carbon filter)	0%	2	02-Nov-15	03-Nov-15	01-Jun-15	02-Jun-15
24ABN03932	Cable tray installation for activated carbon filter	0%	7	02-Nov-15	09-Nov-15	01-Jun-15	08-Jun-15
24ABN03933	Cable laying for activated carbon filter	0%	14	06-Nov-15	21-Nov-15	05-Jun-15	22-Jun-15
24ABN03936	Modification / installation of power, control & indication circuitry in existing switchboard (for weather & H2S)	0%	2	04-Nov-15	05-Nov-15	03-Jun-15	04-Jun-15
HVAC System (Deodorization / Air Conditioning / Ventilation)							
24ABN03910	Installation of air duct for activated carbon filter system	0%	21	17-Nov-15	10-Dec-15	16-Jun-15	11-Jul-15
Control and Monitoring Services incl. Instrumentation							
24ABN03911	Installation of local manual control (activated carbon filter)	0%	2	06-Nov-15	07-Nov-15	05-Jun-15	06-Jun-15
24ABN03912	Cable tray installation for gas detection system (for screenings handling area)	0%	5	09-Nov-15	13-Nov-15	08-Jun-15	12-Jun-15
24ABN03913	Cable laying for gas detection system (for screenings handling area)	0%	5	14-Nov-15	19-Nov-15	13-Jun-15	18-Jun-15
24ABN03914	Megger test in cables for gas detection system (for screenings handling area)	0%	3	20-Nov-15	23-Nov-15	19-Jun-15	23-Jun-15
24ABN03916	Installation of gas detector	0%	2	20-Nov-15	21-Nov-15	19-Jun-15	22-Jun-15
Preliminary Testing and Commissioning							
Mechanical Works							
24ABN00795A41	Flowtest on partial modified middle chamber	0%	6	31-Oct-15	05-Nov-15	30-May-15	04-Jun-15
Modification at Inlet Pumping Station							
Modification of Deodorization System and DCS System							
Electrical Works							
24ABN03273	Installation of additional cable tray (for new deodorizer no. 1)	0%	7	29-Aug-15	07-Sep-15	13-Sep-14	20-Sep-14
24ABN03274	Cable laying for the new deodorizer no. 1	0%	14	08-Sep-15	23-Sep-15	22-Sep-14	09-Oct-14
24ABN03275	Megger test in cables for the new deodorizer no. 1	0%	7	24-Sep-15	03-Oct-15	10-Oct-14	17-Oct-14
24ABN03276	Cable termination for the new deodorizer no. 1	0%	10	05-Oct-15	15-Oct-15	18-Oct-14	29-Oct-14
HVAC System (Deodorization / Air Conditioning / Ventilation)							
24ABN03283	Diversion of existing air ductworks from deodorizer no. 1 to nearby deodorizer no. 2 and no. 3	0%	5	24-Aug-15	28-Aug-15	28-Aug-14	02-Sep-14
24ABN03284	Decommission / Demolition of deodorizer no. 1	0%	10	29-Aug-15	10-Sep-15	03-Sep-14	15-Sep-14
24ABN03285	Installation of new deodorizer no. 1	0%	14	11-Sep-15	26-Sep-15	16-Sep-14	03-Oct-14
24ABN03290	Re-diversion of existing air ductwork to the newly installed deodorizer no. 1	0%	5	10-Oct-15	15-Oct-15	24-Oct-14	29-Oct-14
24ABN03291	Installation of ventilation fan c/w air duct (switchroom at G/F)	0%	24	16-Oct-15	13-Nov-15	30-Oct-14	26-Nov-14
24ABN03292	Installation of split type A/C unit (switchroom at G/F)	0%	24	16-Oct-15	13-Nov-15	30-Oct-14	26-Nov-14
24ABN03293	Diversion of existing air ductworks from deodorizer no. 2 and no. 3 to the new deodorizer no. 1	0%	7	14-Nov-15	21-Nov-15	27-Nov-14	04-Dec-14
Preliminary Testing and Commissioning							
24ABN03314	SAT of new deodorizer no. 1	0%	30	16-Oct-15	20-Nov-15	30-Oct-14	03-Dec-14
Completion of Works in Section 5							
EoT Claim							
24ABN03216	Claim for Additional Extension of Time - under review	0%	393	16-Jan-15 A	21-Jul-16	16-Jan-15	12-Feb-16
Works for Section 6							
Workshop and Administration Building							
Civil Works							



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish
Foundation Works							
24ABN02200A21	Setting-Up and Location	100%	6	30-Jul-15 A	07-Aug-15 A	01-Apr-15	10-Apr-15
24ABN02200A22	Piling Works (31 nos)	0%	124	08-Aug-15 A	10-Nov-15	11-Apr-15	07-Sep-15
24ABN02200A30	Testing of H-Piles	0%	12	11-Nov-15	22-Nov-15	08-Sep-15	19-Sep-15
U/G Utility Works							
U/G Utility Works							
24ABN02821A10	U/G odour pipe installation	0%	45	25-Sep-15	21-Nov-15	28-Apr-15	22-Jun-15
Ap Lei Chau PTW							
Key Dates							
Time of Completion							
24ALC00300	Time for Completion of Section 7	0%	1264	31-Aug-11 A	07-Feb-17	24-May-14	05-Oct-16
24ALC00302	Claim for Additional Extension of Time - under review	0%	657	31-Mar-15 A	07-Feb-17	31-Mar-15	05-Oct-16
Interface and Liaison							
Interface with ST2/DSD							
24MALC00110	Application of PMAC/SWAC for Demolition of Existing Treatment Facilities	0%	0	24-Aug-15		14-Nov-14	
24MALC00120	Proposed Approval date of PMAC/SWAC for Demolition of Existing Treatment Facilities	0%	0		06-Sep-15		27-Nov-14
Works for Section 7							
Stage 1A of ALC Upgarde - Initial Treatment Plant							
Interface between Civil / ADWF / E&M Works							
24MALC00240	Completion of initial temporary treatment facilities	100%	0		31-Jul-15 A		30-Apr-15
Civil Works							
Finishing Works (Internal and External)							
24ALC00750A40	Installation of air tight multi-part cover at fine screen channel and inlet chamber	100%	6	24-Jul-15 A	31-Jul-15 A	24-Sep-14	09-Oct-14
Electrical and Mechanical Works							
Mechanical Works							
24ALC03030	Installation of penstock no. 6 (fine screen inlet bypass penstock)	100%	12	13-Jul-15 A	25-Jul-15 A	05-Aug-14	18-Aug-14
Preliminary Testing and Commissioning							
Mechanical Works							
24ALC03400	Water test of penstock and stoplog	100%	7	25-Jul-15 A	31-Jul-15 A	14-Nov-14	13-Dec-14
24ALC03410	SAT of coarse screen no. 2	100%	6	25-Jul-15 A	31-Jul-15 A	14-Nov-14	21-Nov-14
24ALC03420	SAT of fine screen no. 2	100%	6	25-Jul-15 A	31-Jul-15 A	22-Nov-14	29-Nov-14
24ALC03430	SAT of screenings conveyor no. 1 & no. 2	100%	6	25-Jul-15 A	31-Jul-15 A	01-Dec-14	08-Dec-14
24ALC03440	SAT of screenings compactor no. 1 & no. 2	100%	6	25-Jul-15 A	31-Jul-15 A	09-Dec-14	16-Dec-14
24ALC03450	SAT of grit trap no. 2	100%	6	25-Jul-15 A	31-Jul-15 A	17-Dec-14	23-Dec-14
24ALC03460	SAT of grit classifier no. 2	100%	6	25-Jul-15 A	31-Jul-15 A	24-Dec-14	30-Dec-14
24ALC03461	Performance test / Functional Test of equipment	100%	7	25-Jul-15 A	31-Jul-15 A	31-Dec-14	29-Jan-15
Electrical Works							
24ALC03470	SAT of temporary switchboard	100%	21	20-Jul-15 A	31-Jul-15 A	14-Nov-14	08-Dec-14
HVAC System (Deodorization / Air Conditioning / Ventilation)							
24ALC03480	SAT of activated carbon filter system	100%	14	25-Jul-15 A	31-Jul-15 A	14-Nov-14	29-Nov-14
Earthing and Lightning System							
24ALC03490	Earthing and lighting test	100%	10	25-Jul-15 A	31-Jul-15 A	02-Sep-14	13-Sep-14
Stage 1B of ALC Upgarde - Initial Wet Well and Effluent Pumping Station							
Civil Works							
Initial Wet well and Effluent Pumping Station (GL 4-7 / G-I)							
24ALC00730C19	Installation of temporary enclosure at Dry Well	0%	36	08-May-15 A	29-Aug-15		
Permanent Flume Channels							
24ALC05611	Flowtest from Initial fine screen and grit trap building to modified outlet chamber	100%	6	01-Aug-15 A	07-Aug-15 A	17-Feb-15	26-Feb-15
Tie-ins, Rising Main and Flow Meter Chamber							
Installation of Rising Main							
24ALC4340	Backfilling works to rising main	100%	12	04-Aug-15 A	17-Aug-15 A	09-Apr-15	25-Apr-15
Construction of Flow Meter Chamber							
24ALC4280	Waterproofing works on flow meter chamber	100%	8	03-Aug-15 A	07-Aug-15 A	31-Mar-15	11-Apr-15
24ALC4290	Backfilling on flow meter chamber	100%	8	08-Aug-15 A	18-Aug-15 A	13-Apr-15	21-Apr-15
Preliminary Testing and Commissioning							
Mechanical Works							
24ALC05341	Functional Test of effluent pump 1 and 2	0%	6	24-Aug-15	29-Aug-15	15-Apr-15	30-Apr-15
Control and Monitoring Services incl. Instrumentation							
24ALC03485	Testing of Level Sensor at Flume Channel	0%	6	24-Aug-15	29-Aug-15	13-Mar-15	26-Mar-15
Flow Diversion from Initial Treatment Plant to Drop Shaft / Outfall Chamber							



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	BL Project Early Start	BL Project Early Finish
24AL005342	Diversion of flow from Initial fine screen and grit trap building to Tie-In Pit / Outfall Chamber	0%	30	30-Aug-15	28-Sep-15	01-May-15	30-May-15
Stage 2 of ALC Upgrade (Completion of Remaining Works)							
CivilWorks							
Decommission / Demolition of Existing Treatment Plant							
24AL00770A05	Relocation of night soil dump area	0%	23	31-Aug-15	29-Sep-15		
24AL00770A10	Decommissioning of existing treatment facilities	0%	21	29-Sep-15	24-Oct-15	01-Jun-15	25-Jun-15
24AL00770A20	Demolition of existing treatment facilities	0%	21	26-Oct-15	18-Nov-15	26-Jun-15	21-Jul-15
Foundation Works							
24AL00780A10	Pipe pile wall including grouting works	0%	45	19-Nov-15	13-Jan-16	22-Jul-15	11-Sep-15
Completion of Inlet Chamber							
24AL00859	Installation of pipe from existing sewer to partial inlet chamber to divert the flow to partial inlet chamber	0%	12	31-Aug-15	14-Sep-15	02-May-15	15-May-15
24AL00860	Excavation and demolition of remaining structure of existing inlet chamber	0%	18	31-Aug-15	21-Sep-15	02-May-15	22-May-15
24AL00861	Construct the remaining of new inlet chamber	0%	30	22-Sep-15	29-Oct-15	23-May-15	29-Jun-15
24AL00862	Remove the temporary wall and pipe inside the new inlet chamber	0%	12	30-Oct-15	12-Nov-15	30-Jun-15	14-Jul-15
24AL00863	Backfill around the new inlet chamber	0%	12	13-Nov-15	26-Nov-15	15-Jul-15	28-Jul-15
Completion of Works in Section 7							
EoT Claim							
24AL01781	Claim for Additional Extension of Time - under review	0%	656	01-Apr-15 A	05-Feb-17	01-Apr-15	05-Oct-16



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/2009/24	**CM_CB1a**(1): The Arcade, Cyberport **CM_WF1a**(1): Wah Ming House, Wah Fu Estate **CM_AB1b**(2): Works Site Boundary of Aberdeen PTW
	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(3) (Sandy Bay PTW): Chuk Lam Ming Tong
			DC/2009/24	M6a(1) (Cyberport PTW): Aegean Terrace M7a(1) (Wah Fu PTW): Wah Ming House M8 (Aberdeen PTW): Wah Lai House M9 (Ap Lei Chau PTW): 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.

2: Relocation of the air quality monitoring station was verified by IEC on 15 July 2014; and approved by ER on 22 July 2014 and approved by EPD on 5 December 2014.

3: Refer to the information from DC/2007/24, termination of the noise monitoring station was verified by IEC on 12 June 2015; and approved by ER on 19 June 2015 and approved by the EPD on 27 July 2015.

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 ($\mu g/m^3$)		Limit Level ($\mu g/m^3$)	
	1-hour	24-hour	1-hour	24-hour
CM_CB1a	280	178	500	260
CM_WF1a	285	185		
CM_AB1b	283	174		

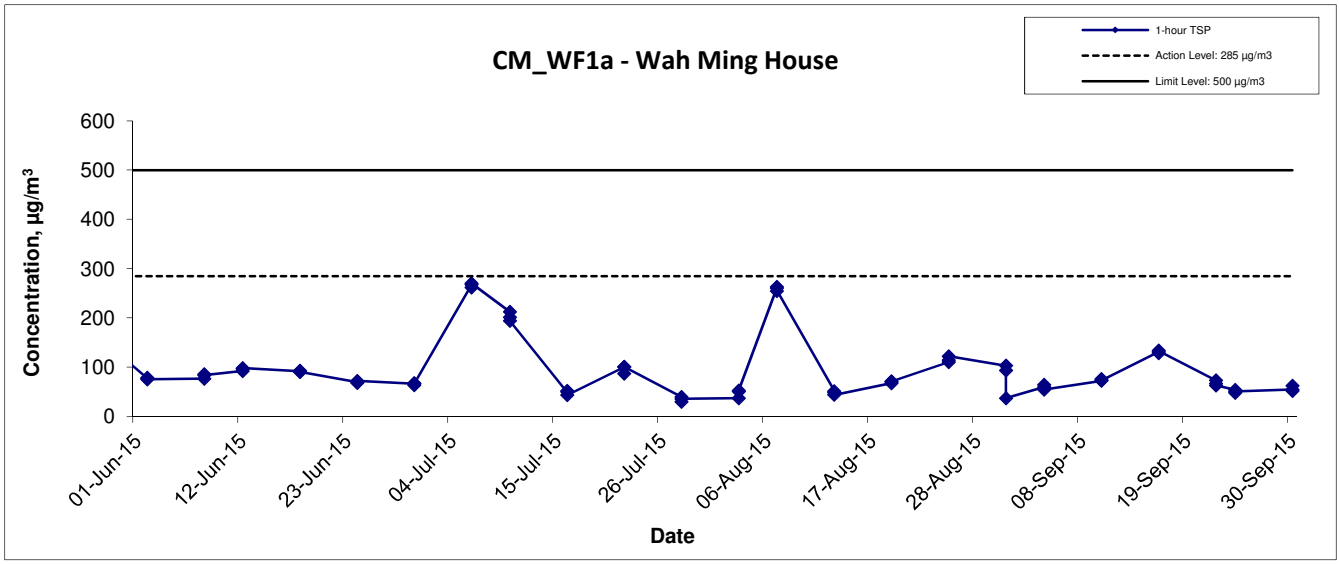
Table D-2 Action and Limit Level for Construction Noise

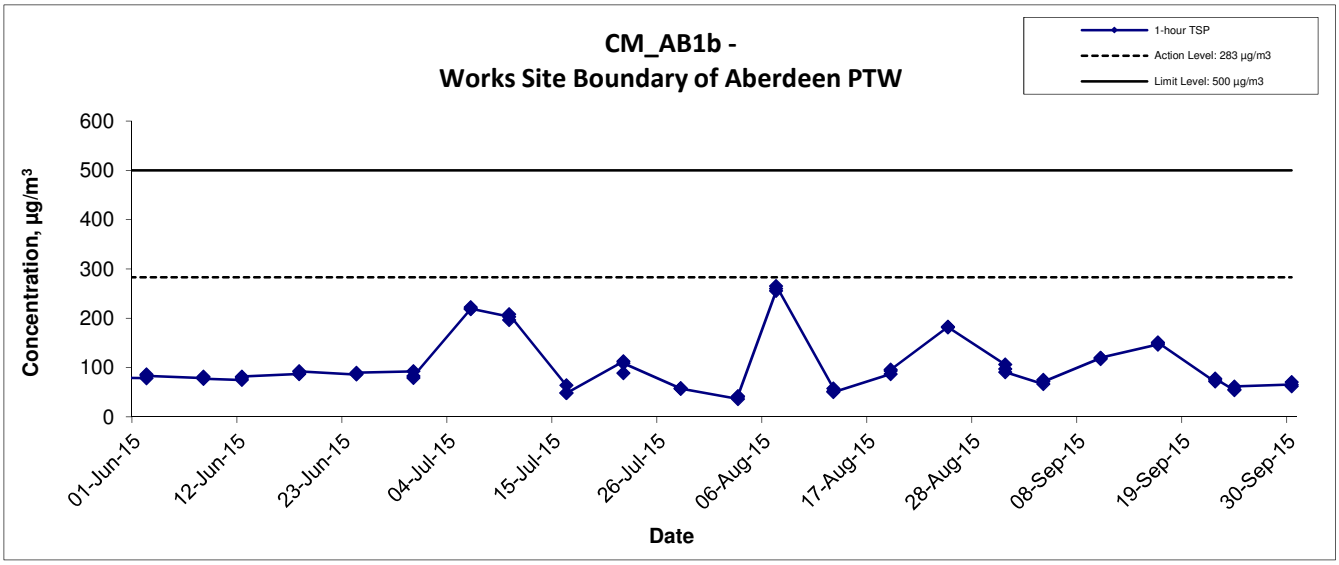
Monitoring Stations	Time Period	Action Level	Limit Level in dB(A)
M5 **M6a** **M7a** **M8** **M9**	0700-1900 hours on normal weekdays	When one documented complaint is received	75[(1)]

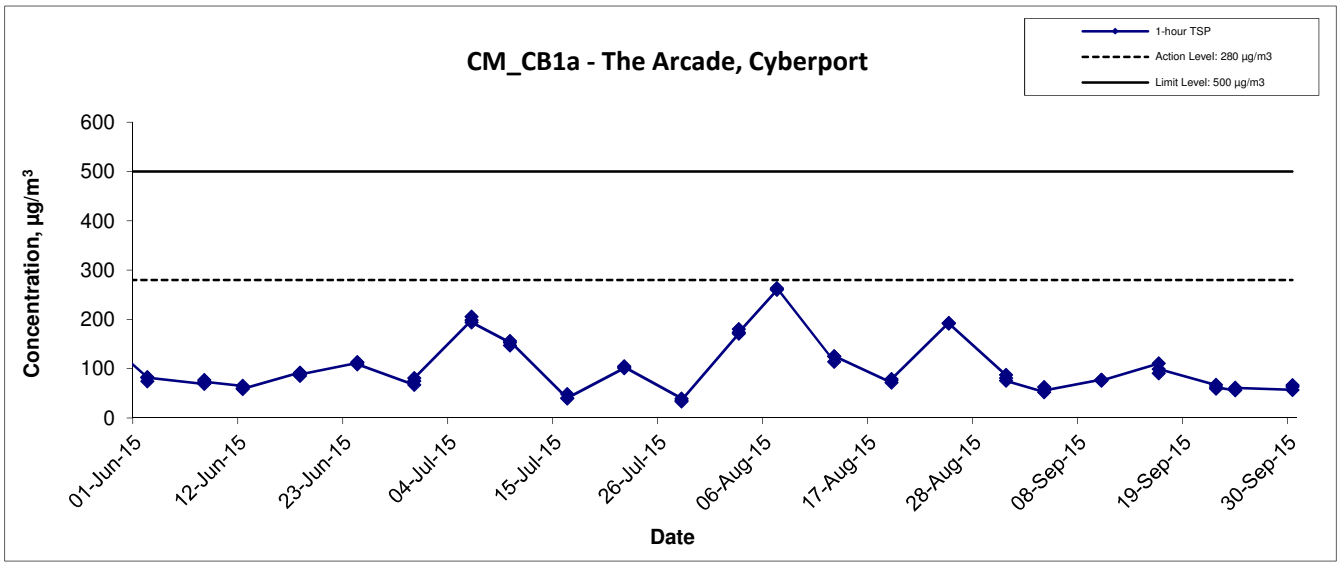
Remark: 1: 70dB(A) and 65 dB(A) for schools during normal teaching periods and school examination periods, respectively.

APPENDIX E
GRAPHICAL PRESENTATION OF AIR QUALITY MONITORING RESULTS

1-hr TSP Concentration Levels

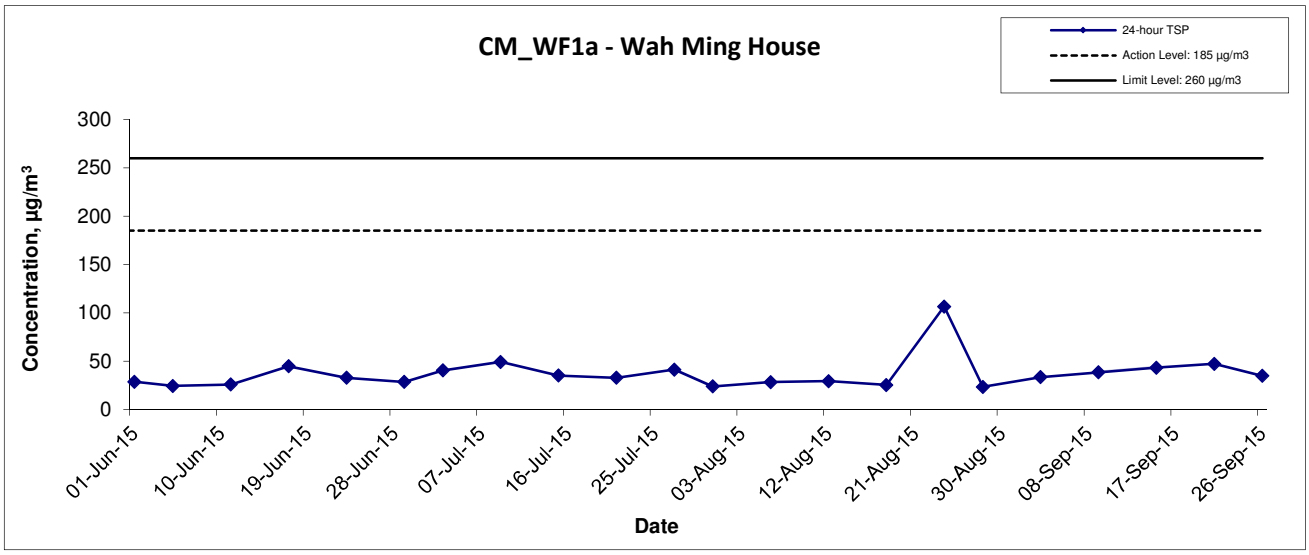


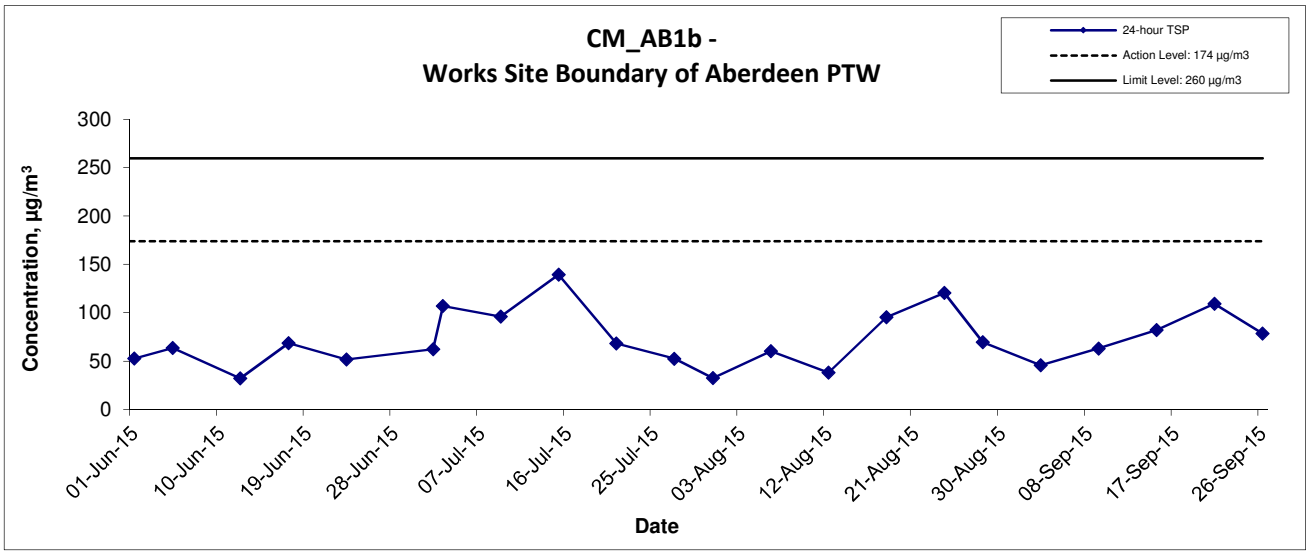


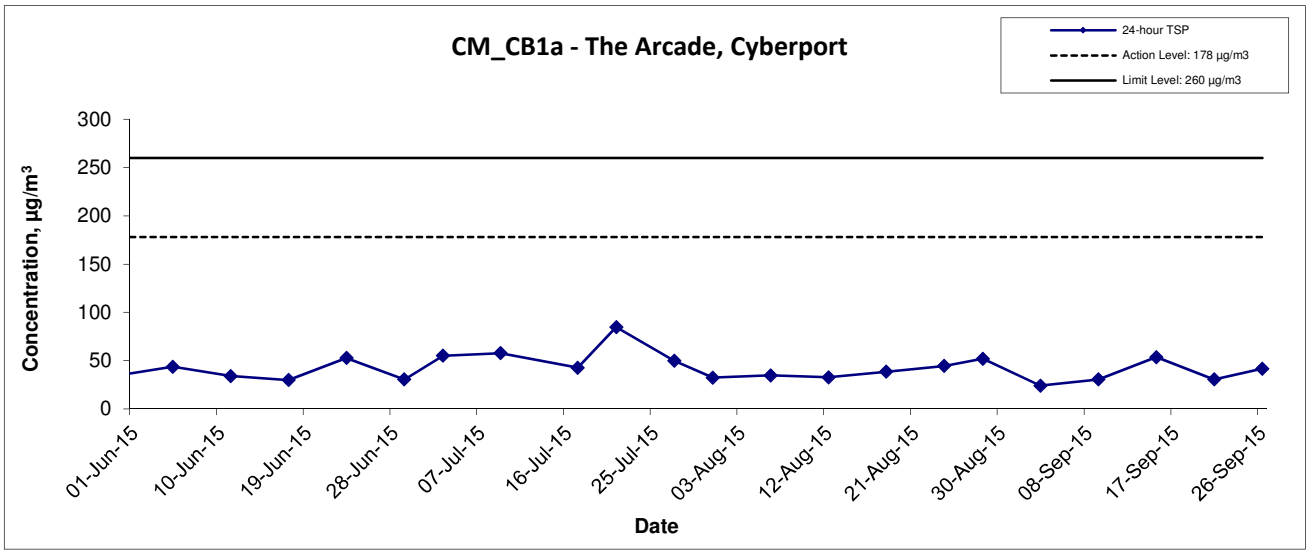


Title: Contract No. DC/2009/24 HATS 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau Graphical Presentation of 1-hour TSP Monitoring Results	Scale: N.T.S Date: Sep 15	Project No.: MA11060 Appendix: E	CINOTECH

24-hr TSP Concentration Levels





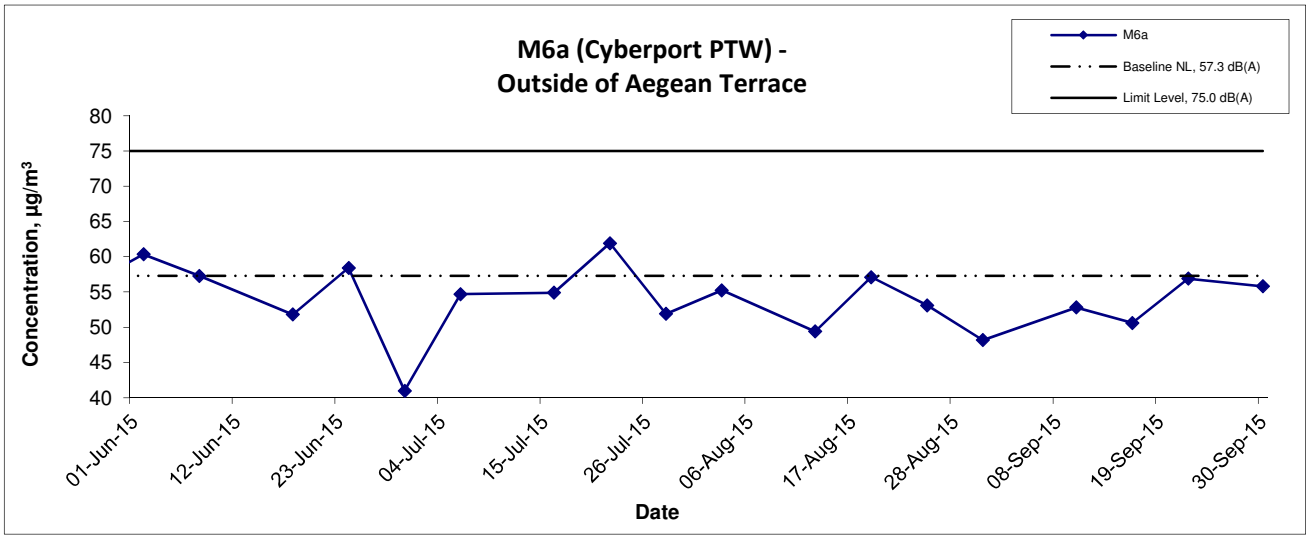


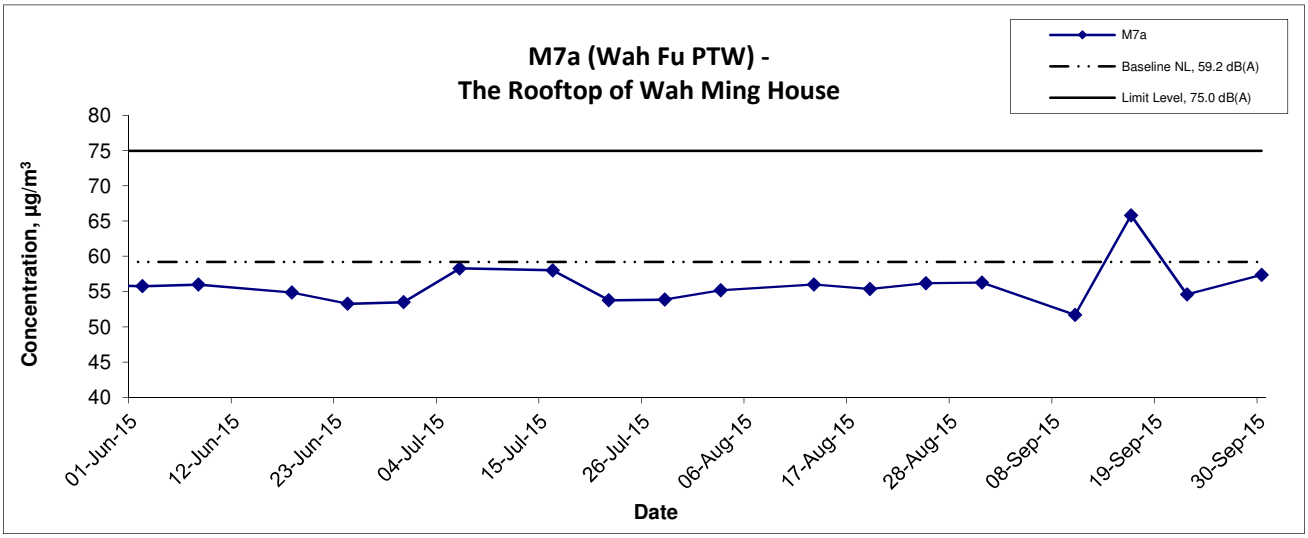
Title: Contract No. DC/2009/24 HATS 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau Graphical Presentation of 24-hour TSP Monitoring Results	Scale: N.T.S Date: Sep 15	Project No.: MA11060 Appendix: E	CINOTECH

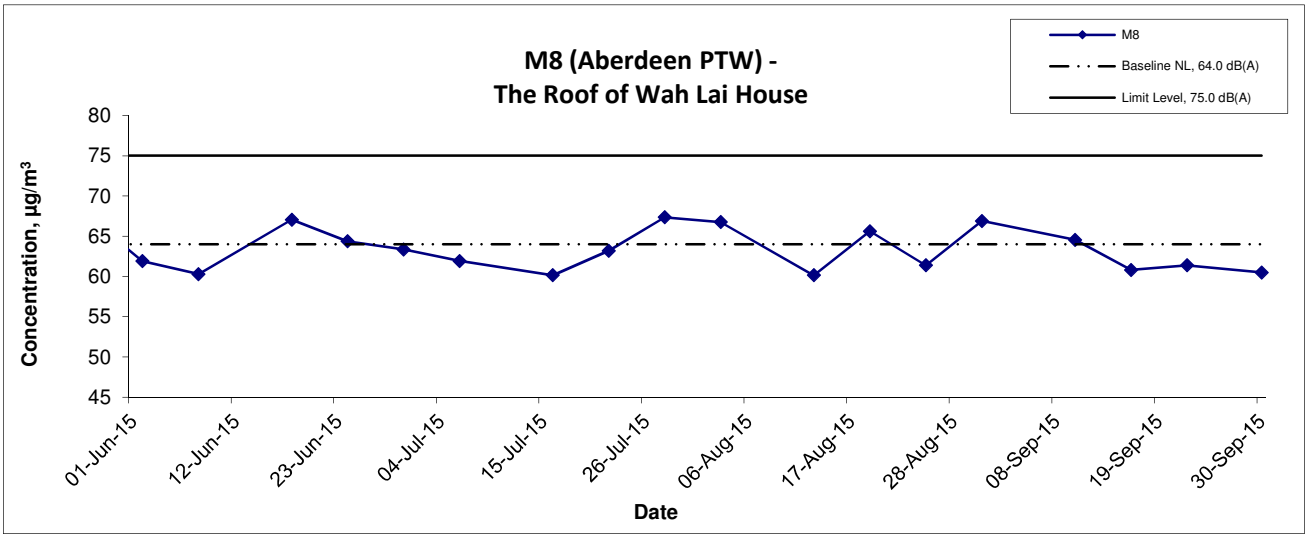
APPENDIX F
GRAPHICAL PRESENTATION OF NOISE MONITORING RESULTS

Noise Levels

(0700-1900 hrs on Normal Weekdays)





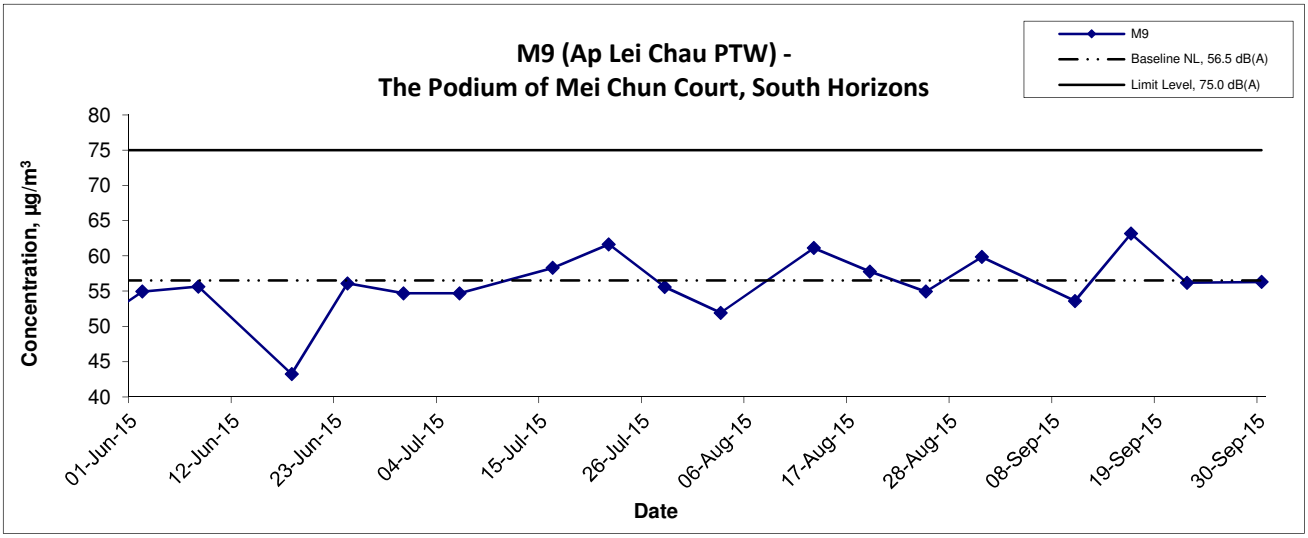


Title	Scale	Project No.
Contract No. DC/2009/24 HATS 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Abredeen and Ap Lei Chau Graphical Presentation of Noise Monitoring Result	N.T.S	MA11060
	Date Sep 15	Appendix F

CINOTECH

Noise Levels

(0700-1900 hrs on Normal Weekdays)



Title	Contract No. DC/2009/24 HATS 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Abredeen and Ap Lei Chau Graphical Presentation of Noise Monitoring Result	Scale N.T.S Date Sep 15	Project No. MA11060 Appendix F	CINOTECH

APPENDIX G
IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES (EMIS)

APPENDIX G 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 H
SUMMARY OF ENVIRONMENTAL LICENSES AND PERMITS

Appendix H - 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	
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				
12258	24/5/2015	23/8/2015	Location: Ap Lei Chau	Valid until 23/8/2015
12257	24/5/2015	23/8/2015	Location: Aberdeen PTW	Valid until 23/8/2015
12259	24/5/2015	23/8/2015	Location: Wah Fu PTW	Valid until 23/8/2015
12446	24/8/2015	23/11/2015	Location: Ap Lei Chau	Valid
12447	24/8/2015	23/11/2015	Location: Aberdeen PTW	Valid
12445	24/8/2015	23/11/2015	Location: Wah Fu PTW	Valid

APPENDIX I
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 I MONTHLY SUMMARY WASTE FLOW TABLE FOR 2015 (YEAR)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rock and Broken Concrete (4)	Reused in the Contract	Reused in other Projects	Disposal as Public Fill	Import Fill	Metals	Paper / Cardboard Packaging	Plastics (3)	Chemical Waste	Other, e.g. general refuse	Special Waste
	[in '000m^3]	[in '000m^3]	[in '000m^3]	[in '000m^3]	[in '000m^3]	[in '000m^3]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000m^3]	[in '000ton]
Year2012	1.002910	0.000000	0.000000	0.000000	1.002910	0.000000	6.680000	0.070000	0.070000	0.100000	0.014000	2.406456
Year2013	4.264035	0.000000	0.000000	0.000000	4.264035	0.000000	10.750000	0.000000	0.000000	0.350000	0.064890	2.232710
Year2014	4.639730	0.000000	0.000000	0.000000	4.639730	0.000000	0.000000	0.000000	0.000000	0.450000	0.145370	1.832460
JAN	0.921395	0	0	0	0.921395	0	0	0	0	0	0.0112	0.12827
FEB	0.145405	0	0	0	0.145405	0	0	0	0.031	0	0.01901	0.10553
MAR	0.51156	0	0	0	0.51156	0	0	0	0	0	0.01676	0.10203
APR	0.69157	0	0	0	0.69157	0	0	0	0	0	0.02722	0.07945
MAY	0.318355	0	0	0	0.318355	0	0	0	0	0	0.03746	0.08964
JUNE	0.119775	0	0	0	0.119775	0	0	0	0	0	0.0421	0.08198
SUB-TOTAL	12.614735	0.000000	0.000000	0.000000	12.614735	0.000000	17.430000	0.070000	0.101000	0.900000	0.378010	7.058526
JULY	0.04194	0	0	0	0.04194	0	0	0	0	0	0.11106	0.965
AUG	0.27276	0	0	0	0.27276	0	0	0	0	0	0.0462	0.7069
SEPT	0.197565	0	0	0	0.197565	0	0	0	0	0	0.03732	0.8438
OCT	0	0	0	0	0	0	0	0	0	0	0	0
NOV	0	0	0	0	0	0	0	0	0	0	0	0
DEC	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	13.127000	0.000000	0.000000	0.000000	13.127000	0.000000	17.430000	0.070000	0.101000	0.900000	0.572590	9.574226

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]
19.77	1.544	1.73	0	16.496	0	30	1	1	4	0.967	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
Special waste = 0.6m3 / container

APPENDIX J
COMPLAINT LOG

APPENDIX J – COMPLAINT LOG

Reporting Period: July to September 2015

Remarks: No environmental complaint was received in the reporting quarter.

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

APPENDIX K
SUMMARY OF EXCEEDANCE

APPENDIX K – SUMMARY OF EXCEEDANCE

Reporting Period: July to September 2015

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 (NIL)