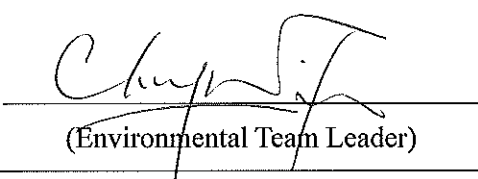


**Contract No. DC/2009/24  
HATS Stage 2A – Upgrading of  
Preliminary Treatment Works at  
Sandy Bay, Cyberport, Wah Fu,  
Aberdeen and Ap Lei Chau**

**Quarterly Environmental  
Monitoring and Audit Report  
January to March 2015**

**(Version 1.0)**

Certified By	 (Environmental Team Leader)
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**REMARKS:**

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

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

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Your ref -

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

29 April 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 13<sup>th</sup> Quarterly EM&A Report for January to March 2015 (Version 1.0)**

We refer to the Quarterly EM&A Report for January to March 2015 (version 1.0) received on 22 April 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 / Mr. Patrick Wong	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

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## EXECUTIVE SUMMARY

### Introduction

1. This is the 13<sup>th</sup> 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 January to March 2015.
2. The site activities undertaken for in the reporting quarter included:

#### *January 2015:*

- Wah Fu PTW – Plant operation, Construction for the FSGT structure;
- Ap Lei Chau PTW – Plant operation, FSGT building construction, Excavation of dry/wet well;
- Aberdeen PTW – Plant operation, Construction for the FSGT structure, Flume channel and chamber construction;
- Sandy Bay PTW – Odour pipe/drawpit/ducting construction, Construction of staircase; and
- Cyberport PTW– Installation of fine screen, Installation of DO unit.

#### *February 2015:*

- Wah Fu PTW – Plant operation, Construction for the FSGT structure;
- Ap Lei Chau PTW – Plant operation, FSGT building construction, Construction of dry/wet well;
- Aberdeen PTW – Plant operation, Construction for the FSGT structure, Flume channel and chamber construction;
- Sandy Bay PTW – Odour pipe/drawpit/ducting construction, Construction of staircase; and
- Cyberport PTW– Installation of fine screen, Installation of DO unit, Chamber construction.

#### *March 2015:*

- Wah Fu PTW – Plant operation, Construction for the FSGT structure;
- Ap Lei Chau PTW – Plant operation, FSGT building construction, Construction of dry/wet well;
- Aberdeen PTW – Plant operation, Construction for the FSGT structure, Flume channel and chamber construction;
- Sandy Bay PTW – Odour pipe/drawpit/ducting construction, Construction of staircase; and
- Cyberport PTW– Installation of fine screen, Installation of DO unit, Chamber construction.

### 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**.
7. 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*

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

*24-hour TSP Monitoring*

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

#### *Construction Noise*

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

#### **Environmental Complaint and Prosecution**

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

#### **Environmental Licenses and Permits**

12. 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:**

13. Major site activities for the coming two months include:
- Wah Fu PTW: FSGT structure construction, Plant operation, Chamber construction;
  - Aberdeen PTW: Construction of FSGT structure, E&M equipment installation, Plant operation, Chamber, seawater pipe and rising main no.2 construction;
  - Ap Lei Chau PTW: Plant operation, Construction of FSGT structure & tie in pit pipe laying;
  - Sandy Bay PTW: Staircase construction, Odour pipe construction; and
  - Cyberport PTW: Installation of DO unit, Pipeline & chamber construction.
14. The environmental concerns in coming months are mainly on chemicals storage, surface run off, spillage of wastewater during rainstorm and dust generated from the construction works.



## 1. INTRODUCTION

### Background

- 1.1 The Project ‘HATS Stage 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau’ with Contract No: DC/2009/24 mainly comprises the following major works:
  - The construction of screens, grit traps, deodourisation rooms, workshop and administration buildings, and modification of existing inlet pumping stations at the preliminary treatment works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau.
- 1.2 The general location plan of the Project is shown in **Figure 1**.
- 1.3 The Project is under Harbour Area Treatment Scheme (HATS) Stage 2A and is a designated project (Register No. : AEIAR-121/2008). The environmental permit: (Permit No. EP-322/2008/G) which was issued on 10<sup>th</sup> 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 13<sup>th</sup> quarterly EM&A report summarizing the EM&A works conducted for the Project in January to March 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:

#### *January 2015:*

- Wah Fu PTW – Plant operation, Construction for the FSGT structure;
- Ap Lei Chau PTW – Plant operation, FSGT building construction, Excavation of dry/wet well;
- Aberdeen PTW – Plant operation, Construction for the FSGT structure, Flume channel and chamber construction;
- Sandy Bay PTW – Odour pipe/drawpit/ducting construction, Construction of staircase; and
- Cyberport PTW – Installation of fine screen, Installation of DO unit.

#### *February 2015:*

- Wah Fu PTW – Plant operation, Construction for the FSGT structure;
- Ap Lei Chau PTW – Plant operation, FSGT building construction, Construction of dry/wet well;
- Aberdeen PTW – Plant operation, Construction for the FSGT structure, Flume channel and chamber construction;
- Sandy Bay PTW – Odour pipe/drawpit/ducting construction, Construction of staircase; and
- Cyberport PTW – Installation of fine screen, Installation of DO unit, Chamber construction.

#### *March 2015:*

- Wah Fu PTW – Plant operation, Construction for the FSGT structure;
- Ap Lei Chau PTW – Plant operation, FSGT building construction, Construction of dry/wet well;
- Aberdeen PTW – Plant operation, Construction for the FSGT structure, Flume channel and chamber construction;
- Sandy Bay PTW – Odour pipe/drawpit/ducting construction, Construction of staircase; and
- Cyberport PTW – Installation of fine screen, Installation of DO unit, Chamber construction.

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### **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 the Contract DC/2007/24 and 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 quarterly report of Contract DC/2007/24 and **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 $\mu\text{g}/\text{m}^3$	Range $\mu\text{g}/\text{m}^3$	Action Level $\mu\text{g}/\text{m}^3$	Limit Level $\mu\text{g}/\text{m}^3$
1 hour TSP					
January 2015	CM_CB1a	172	73-236	280	500
	CM_WF1a	177	74-248	285	
	CM_AB1b	180	73-249	283	
February 2015	CM_CB1a	240	213-276	280	
	CM_WF1a	258	232-282	285	
	CM_AB1b	252	230-270	283	
March 2015	CM_CB1a	151	108-210	280	
	CM_WF1a	152	106-218	285	
	CM_AB1b	160	104-253	283	
24 hours TSP					
January 2015	CM_CB1a	52	38-73	178	260
	CM_WF1a	63	34-83	185	
	CM_AB1b	87	43-119	174	
February 2015	CM_CB1a	88	40-133	178	
	CM_WF1a	90	43-138	185	
	CM_AB1b	109	66-165	174	
March 2015	CM_CB1a	65	38-95	178	
	CM_WF1a	53	42-68	185	
	CM_AB1b	112	60-143	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.)
January 2015	M5	67-73	75.0
	M6a	52-67 <sup>(1)</sup>	
	M7a	56-65	
	M8	64-73	
	M9	54-62	
February 2015	M5	62-69	
	M6a	52-65 <sup>(1)</sup>	
	M7a	43-61	
	M8	68-69	
	M9	52-60	
March 2015	M5	61-69	
	M6a	41-56 <sup>(1)</sup>	
	M7a	56-65	
	M8	62-68	
	M9	51-58	

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	150102-R02	Properly clear the stagnant water at ALC-PTW.	The stagnant water was cleared at ALC-PTW.
	150109-R02	The bunding should be enhanced to prevent the muddy water runoff to the access road at Abd-PTW.	The bunding was enhanced to prevent the muddy water runoff to the access road at Abd-PTW.
	150116-R01	Properly clear the stagnant water of the sediment tank regularly at Wah Fu-PTW.	The stagnant water of the sediment tank was cleared at Wah Fu-PTW.
	150116-R02	The water pipe of the WetSep at Wah Fu-PTW should be enhanced and maintained to prevent the water leakage before discharging out.	The water pipe of the WetSep at Wah Fu-PTW was enhanced and maintained by the Contractor.
	150123-R04	Properly clear the stagnant water of the WetSep at Abd-PTW.	The stagnant water of the WetSep was cleared at Abd-PTW.
	150130-O01	The water quality of the WetSep at ALC-PTW should be fulfilled the requirement of the WPCO's license before discharging out.	The water quality of the WetSep at ALC-PTW was fulfilled the requirement of the WPCO's license before discharging out.
	150130-R02	The sediment tank should be desilted at ALC-PTW.	The sediment tank was desilted at ALC-PTW.
	150206-O02	The water quality of the WetSep at Abd-PTW should be fulfilled the requirement of the WPCO's wastewater discharge license before discharging out.	The pH level has returned to an acceptable level.
	150206-R03	Properly clear the stagnant water at ALC-PTW.	Please refer to 150213-R03.
	150206-R04	The bunding should be enhanced to prevent the muddy water runoff to the access road at Abd-PTW.	The identified stockpile has been removed.
	150213-R03	Stagnant water should be cleared (ALC-PTW).	The stagnant water was cleared at ALC-PTW.
	150227-R02	Properly clear the stagnant water at Abd-PTW.	The stagnant water was cleared at Abd-PTW.

	150306-R02	Properly clear the slurry water at Wah Fu-PTW to prevent the water overflow the public access road.	The slurry water was cleared at Wah Fu-PTW.
	150313-R03	The bunding should be provided to prevent the muddy water runoff to the public sewer at Abd-PTW.	The dusty material near the public sewer was cleared and the muddy water was not observed at Abd-PTW.
	150320-R01	Properly clear the stagnant water at Wah Fu-PTW.	Please refer to 150327-R01.
	150327-R01	Properly clear the stagnant water regularly at Wah Fu-PTW and Abd-PTW.	The excavators at Abd-PTW were removed and not observed.
<b>Air Quality</b>	150109-R01	Properly clear the dusty materials at ALC-PTW.	Please refer to 150116-R04.
	150116-R04	Properly clear the dusty materials at ALC-PTW.	Please refer to 150123-R01.
	150123-R01	Properly clear the dusty materials at ALC-PTW and Abd-PTW.	The dusty materials were cleared at ALC-PTW and Abd-PTW.
	150213-R02	Dust should be removed and maintained within site boundary regularly (Cyberport).	Dust was removed and maintained within site boundary regularly at Cyberport-PTW.
	150306-R03	The dusty material should be covered by the impervious material at Wah Fu-PTW.	The dusty material was removed and not observed at Wah Fu-PTW.
	150313-R02	Properly clear the dusty materials at ALC-PTW and Abd-PTW.	The dusty materials were cleared at ALC-PTW and Abd-PTW.
	150327-R03	The broken sand bags should be cleared properly and replaced with the new sand bags at Abd-PTW.	The broken sand bags were cleared and replaced with the new sand bags at Abd-PTW.
<b>Waste/ Chemical Management</b>	150102-R01	The chemical containers should be provided with the drip tray at Wah Fu-PTW.	The chemical containers were cleared and not observed at Wah Fu-PTW.
	150116-R03	The construction waste / general refuse should be sorted out in the proper storage containers at Wah Fu-PTW.	The storage container at Wah Fu-PTW was clarified to store the general refuse and the construction waste was cleared properly by the Contractor.
	150123-R02	Properly clear the oil stain at ALC-PTW.	The oil stain was cleared at ALC-PTW.
	150123-R03	The chemical container should be provided with the drip tray at ALC-PTW.	The chemical container was cleared and not observed at ALC-PTW.
	150206-O01	The oil leakage from the excavator at Abd-PTW was observed. The Contractor was reminded to provide the maintenance and keep it in a good condition.	The oil leakage has been cleared.
	150213-O01	Litter is observed in the drainage outlet (ALC-PTW).	Litter was cleared in the drainage outlet at ALC-PTW.
	150217-R01	The chemical containers should be provided with drip trays at Wah Fu-PTW and ALC-PTW.	The chemical containers were provided with drip trays at Wah Fu-PTW and ALC-PTW.

	150217-R02	Properly sort out the construction waste at ALC-PTW.	The construction waste was sorted out by the Contractor at ALC-PTW.
	150227-R01	The chemical container should be provided with the drip tray at ALC-PTW.	The chemical container was removed and not observed at ALC-PTW.
	150306-001	The oil leakage was observed from the excavator at Abd-PTW. The Contractor was reminded to provide the maintenance and keep it in a good condition.	The oil leakage was not observed from the excavator at Abd-PTW. The maintenance was provided by the Contractor.
	150306-R04	Properly clear the muddy substance at Abd-PTW.	The muddy substance was cleared at Abd-PTW.
	150313-001	The oil leakage was observed from the excavators at Abd-PTW. The Contractor was reminded to provide the maintenance and keep them in a good condition.	The excavators at Abd-PTW were removed and not observed.
	150327-R02	Properly clear the oil stain at ALC-PTW.	The oil stain was cleared at ALC-PTW.
<b>Landscape and Visual</b>	--	--	--
<b>Noise</b>	--	--	--
<b>Permit/ Licenses</b>	--	--	--

### 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 January to March 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 There was one complaint received from Environmental Protection Department 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 provide the maintenance of the water pipe of the WetSep to prevent the water leakage on site;
- To provide the bunding to prevent the muddy water runoff on site;
- To avoid accumulation of stagnant/ slurry water on site;
- To ensure the water quality of the WetSep to fulfill the requirement of the WPCO's wastewater discharge license before discharging out; and
- To keep the sediment tank free from silt and sediment.

#### *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); and
- To replace the broken sand bags to prevent the dust emission.

#### *Waste/Chemical Management*

- To provide the maintenance of the PME to prevent the oil leakage;
- To sort out the construction wastes properly on the site;
- To avoid accumulation of the general refuse/ muddy substance on site/ in the drainage outlet;
- To provide the labels for the recycle bins for proper assortment of general refuse on the site; and
- To provide proper and sufficient storage area or drip trays for oil/ chemical containers on site.

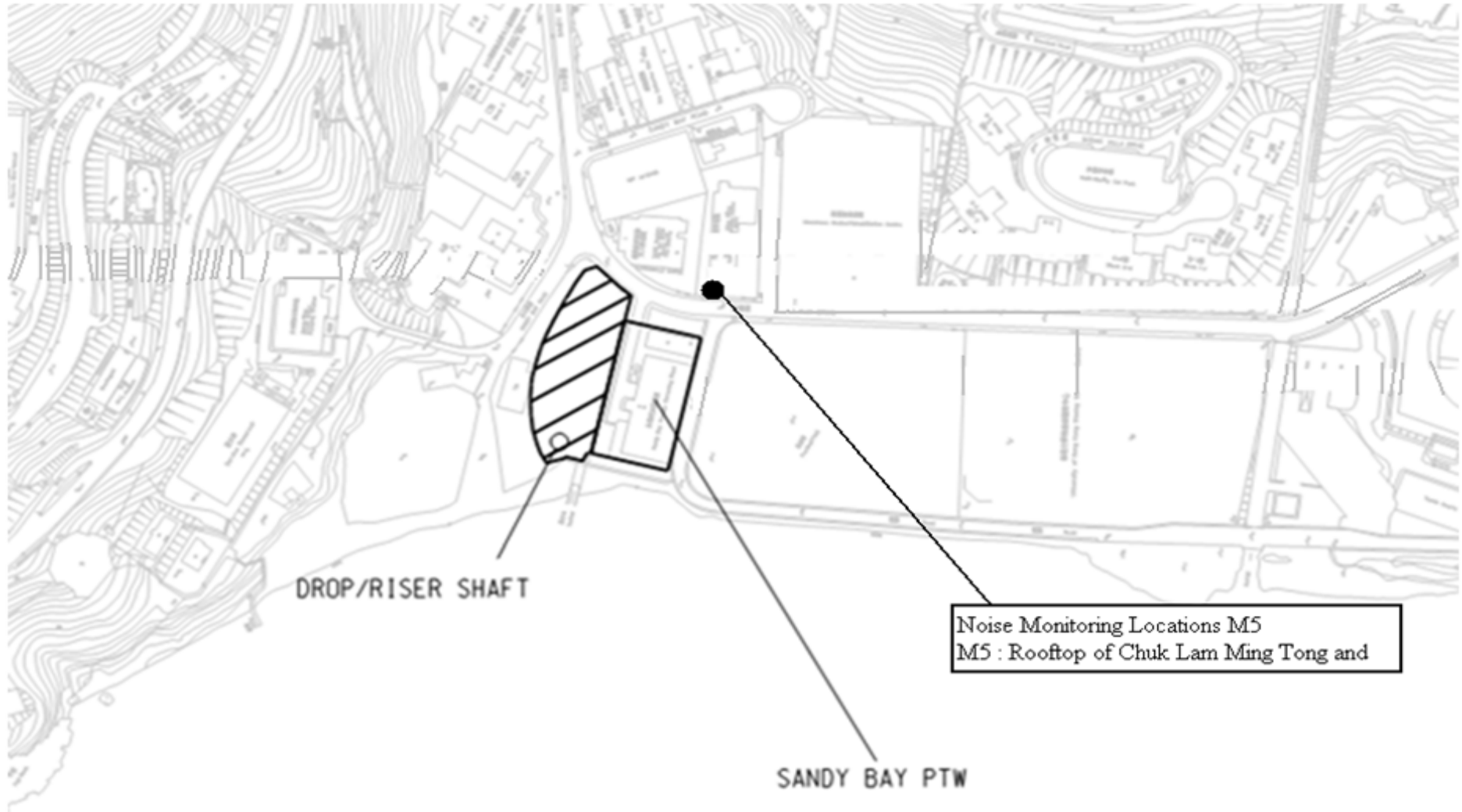
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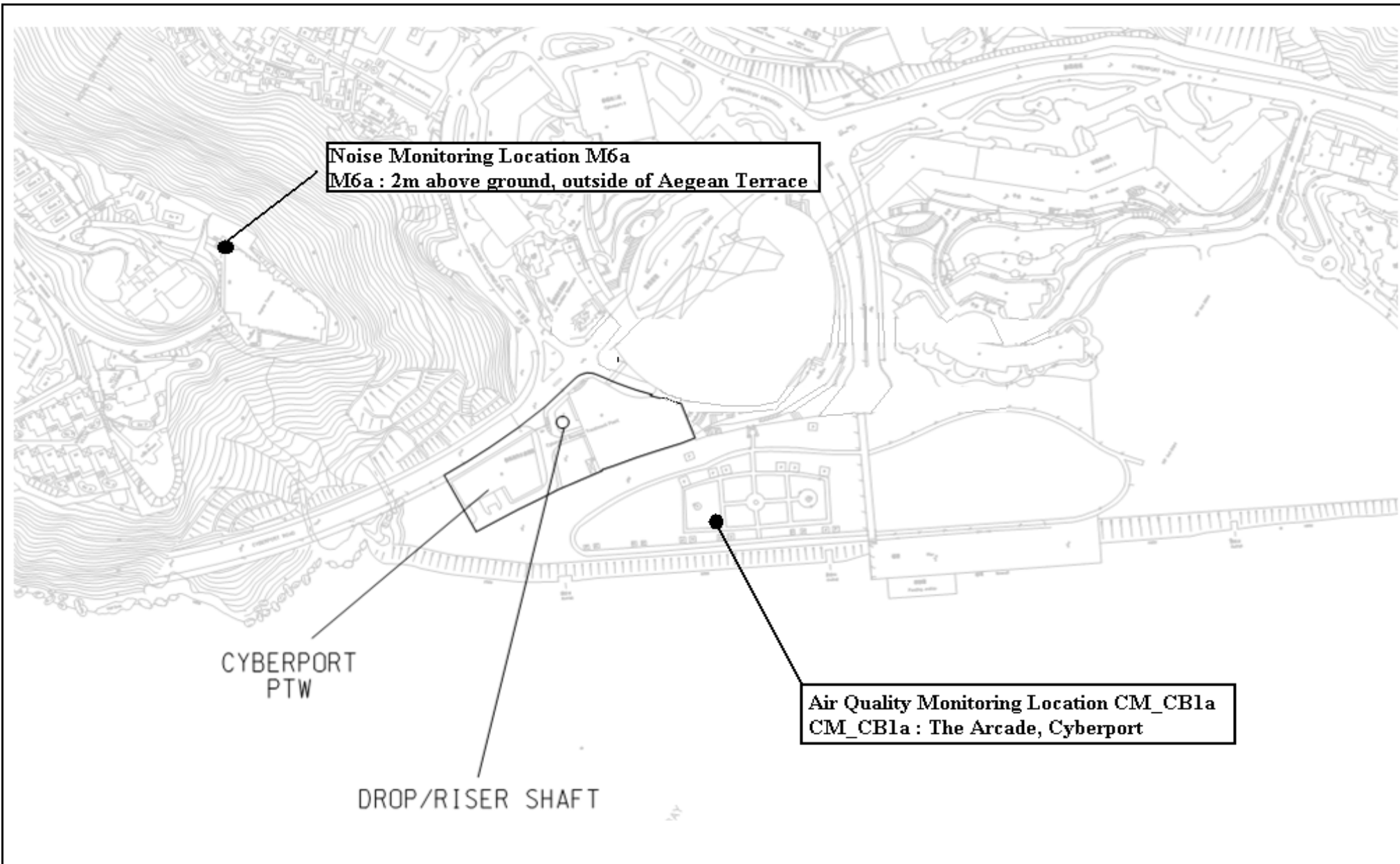
## FIGURES

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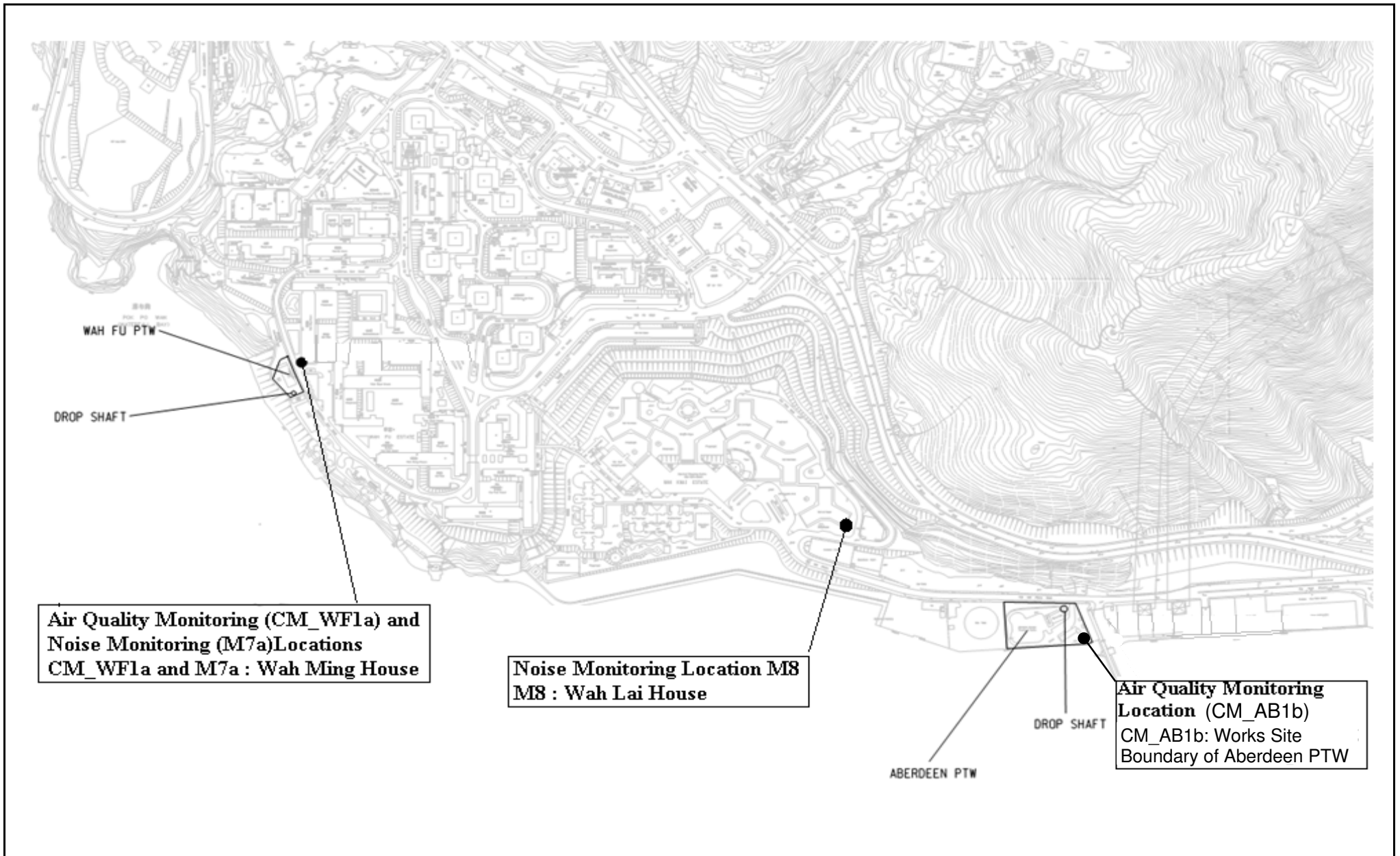
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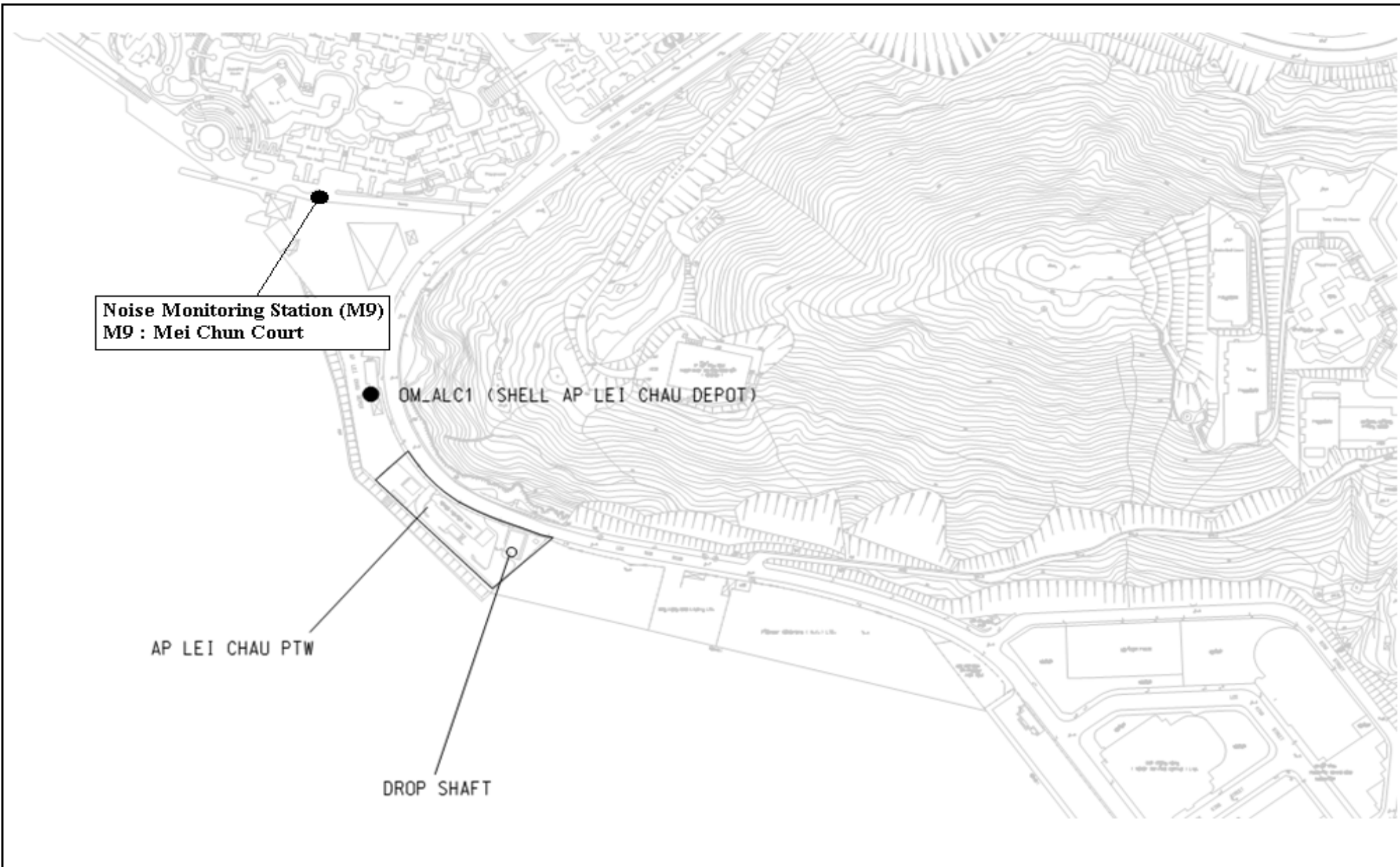
Title	Contract No: DC/2009/24	Scale	Project	CINOTECH
	HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	N.T.S	No. MA11060	
	General Location Plan of Sandy Bay PTW and Locations of Noise Monitoring Stations	Date	Figure	
		01/2012	1a	



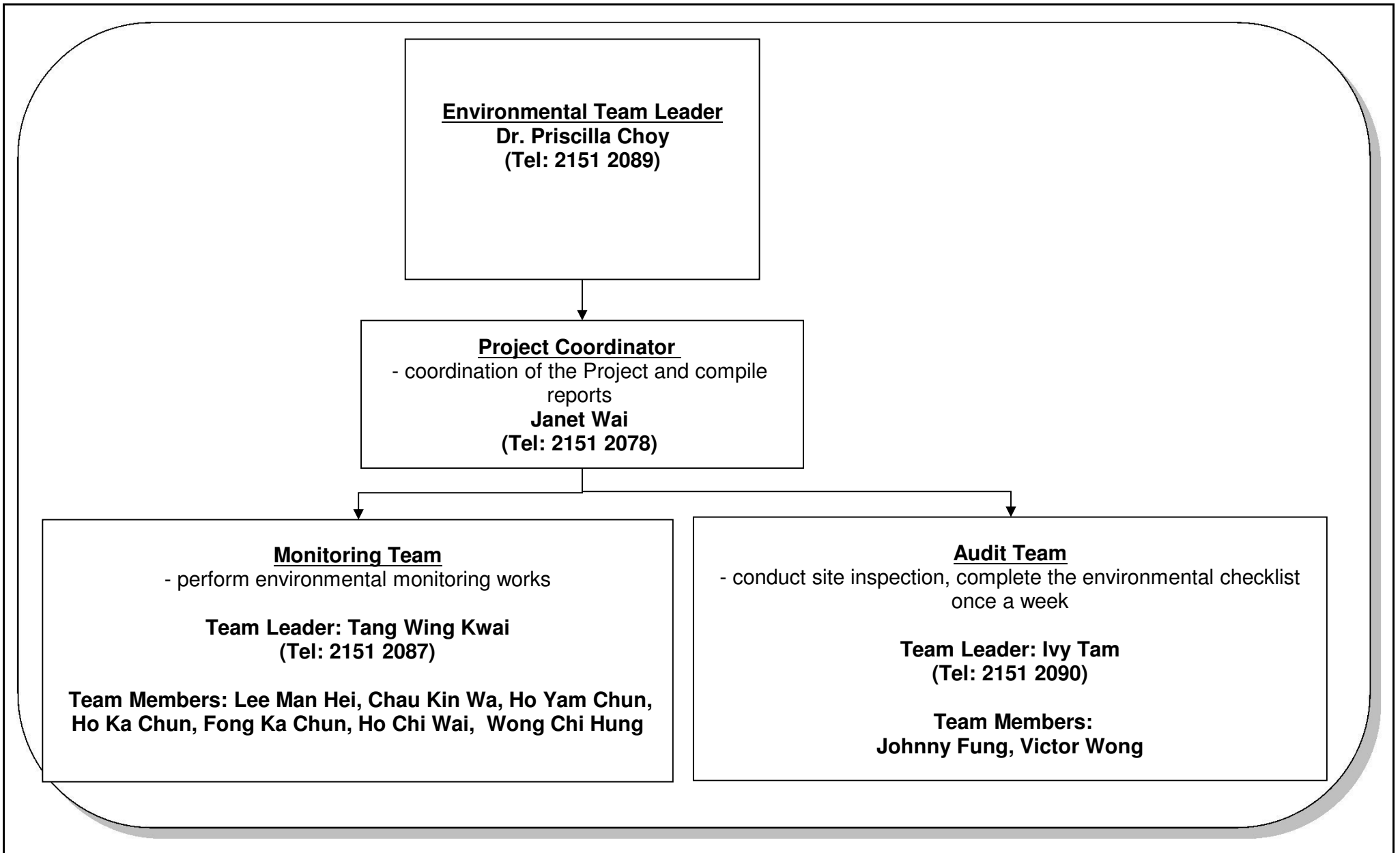
Title	Contract No: DC/2009/24	Scale	Project	CINOTECH
	HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	N.T.S	No. MA11060	
	General Location Plan of Cyberport PTW and Locations of Air Quality and Noise Monitoring Stations	Date	Figure	
		01/2012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



Title	Contract No: DC/2009/24	Scale	Project	CINOTECH
	HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	N.T.S	No. MA11060	
	Location of Wah Fu and Aberdeen PTW and Locations of Air Quality and Noise Monitoring Locations	Date	Figure	
		07/2014	1C-2	



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



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**APPENDIX A  
CONTACT DETAILS OF THE PROJECT  
ORGANISATION**

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## Appendix A - Contact Details of the Project Organization

<b>Party</b>	<b>Role</b>	<b>Name</b>	<b>Position</b>	<b>Phone No.</b>
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
		Mr. Patrick Wong	Environmental Officer	9019 7270

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**APPENDIX B**  
**CONSTRUCTION PROGRAMME**

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Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	March 2015				April 2015				May 2015				June 2015			
						23	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08
<b>DSD - HATSS2 Upgrading of PTW (DC/2009/24)</b>																					
<b>Particulars</b>																					
<b>Key Dates</b>																					
Commencement / Completion																					
24GEN00020	Time for Completion of Project	0%	1309	31-Aug-11 A	30-Apr-17																
<b>Portion of the Site (MILESTONE)</b>																					
<b>Sandy Bay PTW</b>																					
Possession / Vacation of Portions																					
24MSBY00025	Vacation Date_SBY-T1 (30 days after H/O of ALC-T2)	0%	0		30-Mar-15	◆ Vacation Date_SBY-T1 (30 days after H/O of ALC-T2), Vacation Date_SBY-T1 (30 days after H/O of ALC-T2)															
<b>Civil &amp; Geo. Submission</b>																					
<b>Contractor's Design, Submission / Approval &amp; Procurement</b>																					
<b>Technical Information &amp; Drawings</b>																					
<b>Cyberport</b>																					
<b>Major Technical Data / Civil Works Design</b>																					
24DCPT00294	Review / Resubmit of Design for Flume Channels	0%	28	28-Jul-13 A	27-Mar-15	Review / Resubmit of Design for Flume Channels															
24DCPT00295	Approval of Design for Flume Channels	0%	14	28-Mar-15	10-Apr-15	Approval of Design for Flume Channels															
24DCPT00346	Prepare / Submission of Design for permanent concrete plinth for new deodorization unit	0%	30	24-Dec-14 A	27-Mar-15	Prepare / Submission of Design for permanent concrete plinth for new deodorization unit															
24DCPT00347	Review / Approval of ICE Design for permanent concrete plinth for new deodorization unit	0%	14	28-Mar-15	10-Apr-15	Review / Approval of ICE Design for permanent concrete plinth for new deodorization unit															
24DCPT00348	Comments / Approval of Design for permanent concrete plinth for new deodorization unit	0%	14	11-Apr-15	24-Apr-15	Comments / Approval of Design for permanent concrete plinth for new deodorization unit															
24DCPT00349	Review / Resubmit of Design for permanent concrete plinth for new deodorization unit	0%	14	25-Apr-15	08-May-15	Review / Resubmit of Design for permanent concrete plinth for new deodorization unit															
24DCPT00350	Approval of Design for permanent concrete plinth for new deodorization unit	0%	7	09-May-15	15-May-15	Approval of Design for permanent concrete plinth for new deodorization unit															
<b>Method Statement</b>																					
24DCPT02190	Approval of Method Statement for Trench, Chambers and Channels	0%	14	19-Dec-14 A	29-Mar-15	Approval of Method Statement for Trench, Chambers and Channels															
<b>Order / Manufacturing / Shipment / Delivery</b>																					
24DCPT02360	Manufacturing of 700Ø DI Pipe, valves and accessories	100%	90	11-Feb-14 A	29-Mar-15	Manufacturing of 700Ø DI Pipe, valves and accessories															
24DCPT02370	Delivery of 700Ø DI Pipe, valves and accessories	0%	21	30-Mar-15	19-Apr-15	Delivery of 700Ø DI Pipe, valves and accessories															
<b>Wah Fu</b>																					
<b>Major Technical Data / Civil Works Design</b>																					
24DWFU00130	Review / Resubmit of Piling Works Design for Fine Screen & Grit Trap Building	98%	28	22-Dec-11 A	24-Mar-15	Review / Resubmit of Piling Works Design for Fine Screen & Grit Trap Building															
24DWFU00140	Approval of Piling Works Design for Fine Screen & Grit Trap Building	50%	14	23-May-12 A	26-Mar-15	Approval of Piling Works Design for Fine Screen & Grit Trap Building															
24DWFU00160	Review / Approval of ICE for RC Design (Fine Screen & Grit Trap Building)	85%	20	08-Feb-12 A	28-Mar-15	Review / Approval of ICE for RC Design (Fine Screen & Grit Trap Building)															
24DWFU00180	Review / Resubmit of RC Design (Fine Screen & Grit Trap Building)	85%	28	08-Feb-12 A	30-Mar-15	Review / Resubmit of RC Design (Fine Screen & Grit Trap Building)															
24DWFU00190	Approval of RC Design (Fine Screen & Grit Trap Building)	50%	14	18-Jul-12 A	06-Apr-15	Approval of RC Design (Fine Screen & Grit Trap Building)															
24DWFU00200	Prepare / Submission of Design for Finishing Works (Fine Screen & Grit Trap Building)	0%	40	24-Dec-14 A	31-Mar-15	Prepare / Submission of Design for Finishing Works (Fine Screen & Grit Trap Building)															
24DWFU00210	Review / Approval of ICE for Design of Finishing Works (Fine Screen & Grit Trap Building)	0%	20	01-Apr-15	20-Apr-15	Review / Approval of ICE for Design of Finishing Works (Fine Screen & Grit Trap Building)															
24DWFU00220	Comments / Approval of Design for Finishing Works (Fine Screen & Grit Trap Building)	0%	28	21-Apr-15	18-May-15	Comments / Approval of Design for Finishing Works (Fine Screen & Grit Trap Building)															
24DWFU00230	Review / Resubmit of Design for Finishing Works (Fine Screen & Grit Trap Building)	0%	28	19-May-15	15-Jun-15	Review / Resubmit of Design for Finishing Works (Fine Screen & Grit Trap Building)															
24DWFU00240	Approval of Design for Finishing Works (Fine Screen & Grit Trap Building)	0%	14	16-Jun-15	29-Jun-15	Approval of Design for Finishing Works (Fine Screen & Grit Trap Building)															
24DWFU00400	Prepare / Submission of Design for Flume Channels & Chambers	0%	40	07-Apr-15	16-May-15	Prepare / Submission of Design for Flume Channels & Chambers															
24DWFU00410	Review / Approval of ICE for Design for Flume Channels & Chambers	0%	20	17-May-15	05-Jun-15	Review / Approval of ICE for Design for Flume Channels & Chambers															
24DWFU00420	Comments / Approval of Design for Flume Channels & Chambers	0%	28	06-Jun-15	03-Jul-15	Comments / Approval of Design for Flume Channels & Chambers															

Start Date: 25-Jun-11  
 Finish Date: 30-Apr-18  
 Date Date: 23-Mar-15  
 Run Date: 31-Mar-15

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

HATSS2A Contract No. DC/2009/24

**3 MONTHS ROLLING PROGRAMME**

**MARCH 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-Mar-15	UDWP - REVISION 3		

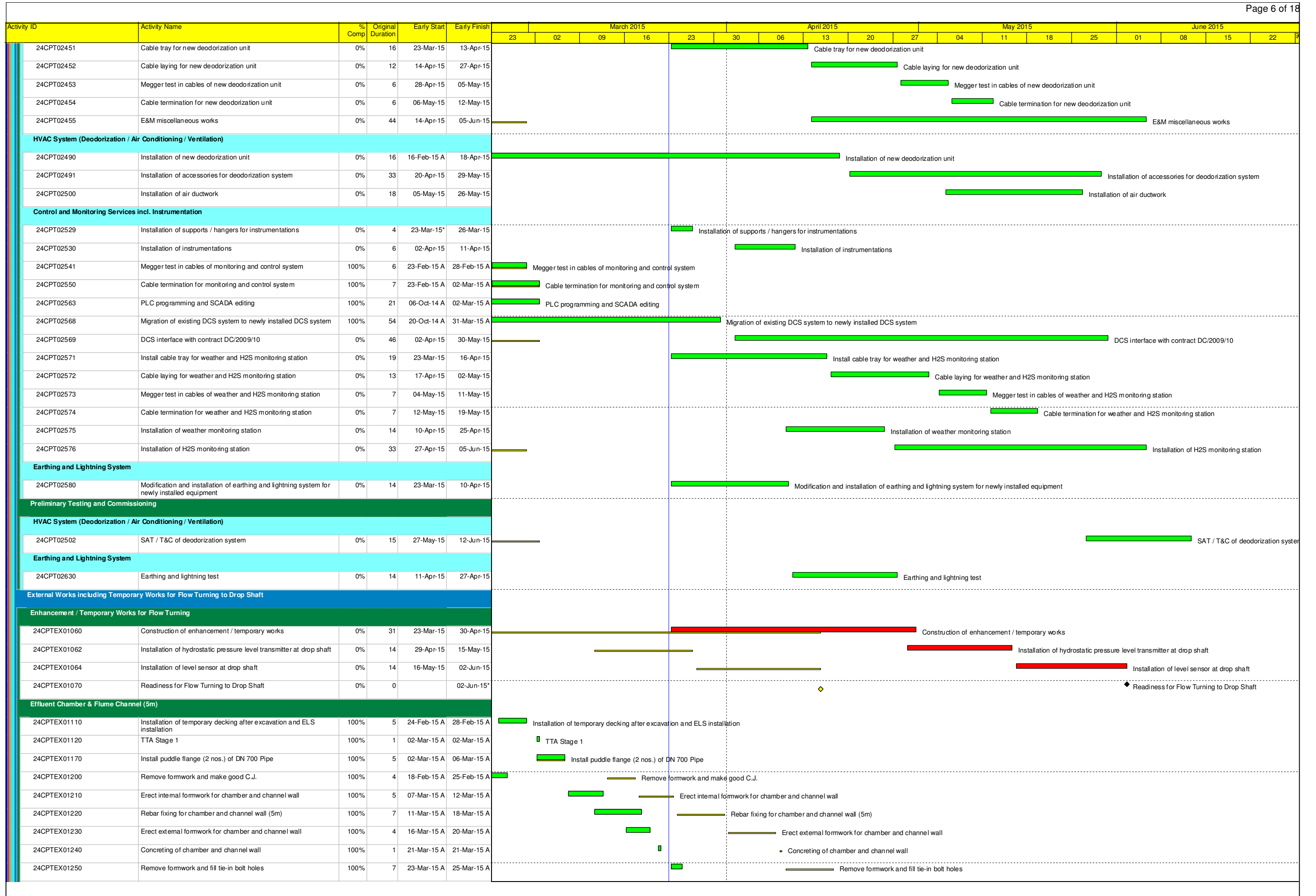






Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	March 2015				April 2015				May 2015				June 2015					
						23	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22
24PALC01260	Manufacturing of Deodorization System	0%	160	02-Apr-15	08-Sep-15																		
24PALC01320	Placing of Order on Control Panel	0%	10	23-Mar-15	01-Apr-15																		
24PALC01330	Manufacturing of Control Panel	0%	50	02-Apr-15	21-May-15																		
24PALC01340	Packaging / Delivery of Control Panel	0%	15	22-May-15	05-Jun-15																		
24PALC01350	Placing of Order on Instruments	0%	10	23-Mar-15	01-Apr-15																		
24PALC01360	Manufacturing of Instruments	0%	110	02-Apr-15	20-Jul-15																		
<b>Sandy Bay PTW</b>																							
<b>Works for Section 1</b>																							
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	30-Mar-15																		
Remaining Works needed for Flow Turning at Drop Shaft																							
Cable Duct and Draw Pit Construction																							
24SBYR01000	Cable duct and draw pit construction	100%	50	24-Jan-15 A	21-Mar-15 A																		
E&M Works for Flume Channel and Drop Shaft																							
24SBYR01010	H/O of Flume Channel and Drop Shaft from other Contractor (LLNSJV)	100%	0	09-Mar-15 A																			
24SBYR01020	Measuring Flume with alignment check and backfilling	0%	20	09-Mar-15 A	30-Mar-15																		
24SBYR01030	Installation of level sensor and transmitter for measuring flume	0%	4	26-Mar-15	30-Mar-15																		
24SBYR01040	Installation of hydrostatic level sensor c/w transmitter at drop shaft	0%	4	23-Mar-15	26-Mar-15																		
24SBYR01050	Installation of microwave level sensor c/w transmitter at drop shaft	0%	6	27-Mar-15	02-Apr-15																		
24SBYR01060	Installation of H2S monitoring station	0%	7	07-Apr-15	14-Apr-15																		
24SBYR01070	Cable laying	0%	12	28-Mar-15	14-Apr-15																		
24SBYR01080	Megger test	0%	5	15-Apr-15	20-Apr-15																		
24SBYR01090	Cable termination	0%	5	21-Apr-15	25-Apr-15																		
24SBYR01100	Functional test	0%	10	27-Apr-15	08-May-15																		
Readiness for Flow Turning																							
24SBYR01110	Readiness for Flow Turning to Drop Shaft	0%	0		08-May-15																		
24SBYR01120	Testing and Commissioning of flow via new flume channels to drop shaft	0%	30	09-May-15	07-Jun-15																		
Completion of Works in Section 1																							
Hand Over Date																							
24SBY03025	Sandy Bay PTW (completion of maintenance period)	0%	0		07-Jun-15																		
<b>Cyberport PTW</b>																							
<b>Key Dates</b>																							
Time of Completion																							
24CPT01000	Time for Completion of Section 2	0%	1280	31-Aug-11 A	19-Nov-15																		
Interface and Liaison																							
Interface with other contractors																							
24MCPT00110	Liaison with SCS Contractor for the modification of existing water pipe / drainage pipe and flume channel connection	0%	90	15-Mar-14 A	11-Apr-15																		
<b>Works for Section 2</b>																							
Modification Inside Cyberport PTW Complex incl. Deodorization Room																							
Electrical and Mechanical Works																							
Material / Equipment Delivery on Site																							
24CPT02330	Delivery of Stoplog	0%	0		27-May-15																		
24CPT02350	Delivery of Control Panel	0%	0		22-Apr-15																		
Electrical Works																							



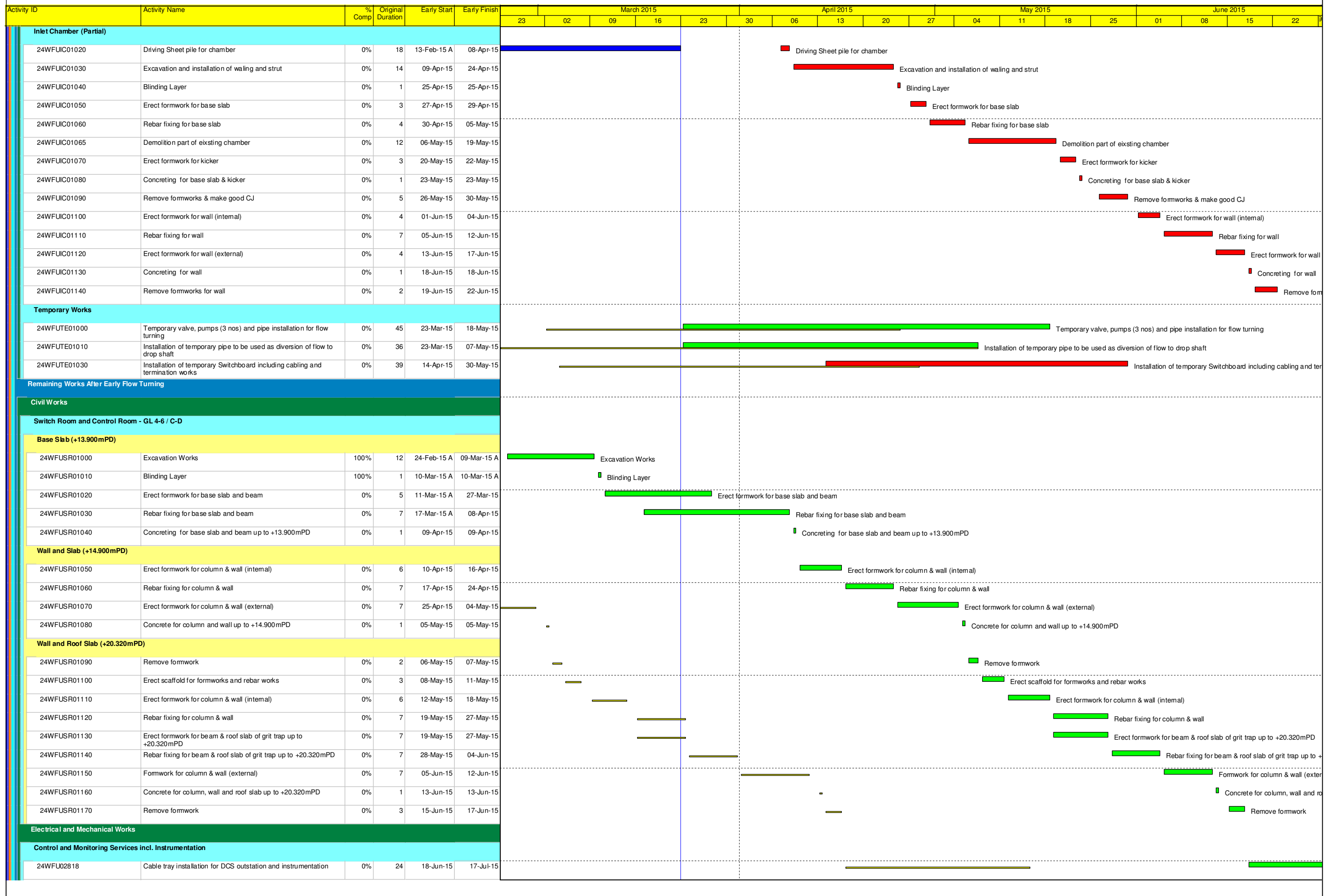




Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	March 2015				April 2015				May 2015				June 2015						
						23	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22	
24WFU1010H	Extension of Time Order No. 8 - Claim No. PTS/001 - 015 (Inclement Weather in September 2013)	100%	3	20-Mar-15 A	23-Mar-15 A	Extension of Time Order No. 8 - Claim No. PTS/001 - 015 (Inclement Weather in September 2013)																		
24WFU1011	Revised Completion Date for Section 4 with EoT awarded	100%	0		23-Mar-15 A	Revised Completion Date for Section 4 with EoT awarded, Revised Completion Date for Section 4 with EoT awarded																		
24WFU1012	Claim for Additional Extension of Time - under review	0%	398	23-Mar-15 A	23-Apr-16	[Red bar indicating delay]																		
<b>Statutory and Utility Applications and Approvals</b>																								
<b>Hong Kong Electric (HEC)</b>																								
24WFU1114	Prepare / Submit Application form to HEC	0%	26	18-Jun-15	20-Jul-15	[Green bar]																		
<b>Environmental Protection Department (EPD)</b>																								
24WFU1119	Statutory submission to EPD (Chimney Design)	0%	60	23-Mar-15	05-Jun-15	[Green bar] Statutory submission to EPD (Chimney Design)																		
24WFU1120	Comment & re-submission to EPD	0%	30	06-Jun-15	13-Jul-15	[Green bar]																		
<b>Interface and Liaison</b>																								
<b>Interface with other contractors</b>																								
24MWFU00170	Liason with SCS Contractor for the Connection of Flume Channels to the drop shaft	0%	60	23-Mar-15	21-May-15	[Green bar] Liason with SCS Contractor for the Connection of Flume Channels to the drop shaft																		
<b>Works for Section 4</b>																								
<b>Screen and Grit Trap Building</b>																								
<b>Interface between Civil / ABWF / E&amp;M Works</b>																								
24MWFU00210	Partial completion of structural works in preparation to start architectural works	0%	0		30-Apr-15	[Green bar] Partial completion of structural works in preparation to start architectural works																		
24MWFU00220	Partial completion of architectural works in preparation to start E&M works	0%	0		08-May-15	[Green bar] Partial completion of architectural works in preparation to start E&M works																		
<b>Civil Works</b>																								
<b>RC Structural Works</b>																								
<b>Fine Screen &amp; Grit Handling Area - GL 1-3 / B-D up to +22.100mPD</b>																								
<b>Up to Roof Slab Construction of Fine Screen Area (+22.100mPD)</b>																								
24WFUFS01280	Erect formwork for beam & roof slab of fine screen up to +22.100mPD	0%	5	12-Feb-15 A	07-Apr-15	[Red bar] Erect formwork for beam & roof slab of fine screen up to +22.100mPD																		
24WFUFS01290	Rebar fixing for beam & roof slab of fine screen up to +22.100mPD	100%	6	17-Feb-15 A	07-Apr-15	[Red bar] Rebar fixing for beam & roof slab of fine screen up to +22.100mPD																		
24WFUFS01300	Formwork for wall (external)	100%	7	12-Mar-15 A	07-Apr-15	[Red bar] Formwork for wall (external)																		
24WFUFS01310	Concrete for wall and slab up to +22.100mPD	0%	1	08-Apr-15	08-Apr-15	[Red bar] Concrete for wall and slab up to +22.100mPD																		
24WFUFS01320	Remove formwork	0%	4	09-Apr-15	13-Apr-15	[Red bar] Remove formwork																		
24WFUFS01330	Erect formwork for parapet wall at roof	0%	7	14-Apr-15	21-Apr-15	[Green bar] Erect formwork for parapet wall at roof																		
24WFUFS01340	Rebar fixing for parapet wall at roof	0%	4	22-Apr-15	25-Apr-15	[Green bar] Rebar fixing for parapet wall at roof																		
24WFUFS01350	Concrete for parapet wall at roof	0%	1	27-Apr-15	27-Apr-15	[Green bar] Concrete for parapet wall at roof																		
<b>Grit Trap Area - GL 3-4 / A-D up to +20.320mPD</b>																								
<b>Up to Roof Slab Construction of Grit Trap Area (+20.320mPD)</b>																								
24WFUGT01310	Erect scaffold for formworks and rebar works	0%	5	23-Mar-15	27-Mar-15	[Red bar] Erect scaffold for formworks and rebar works																		
24WFUGT01320	Erect formwork for wall (internal)	0%	7	28-Mar-15	08-Apr-15	[Red bar] Erect formwork for wall (internal)																		
24WFUGT01330	Rebar fixing for wall	0%	7	08-Apr-15	15-Apr-15	[Red bar] Rebar fixing for wall																		
24WFUGT01340	Erect formwork for beam & roof slab of grit trap up to +20.320mPD	0%	7	09-Apr-15	16-Apr-15	[Red bar] Erect formwork for beam & roof slab of grit trap up to +20.320mPD																		
24WFUGT01350	Rebar fixing for beam & roof slab of grit trap up to +20.320mPD	0%	8	16-Apr-15	24-Apr-15	[Red bar] Rebar fixing for beam & roof slab of grit trap up to +20.320mPD																		
24WFUGT01360	Formwork for wall (external)	0%	7	18-Apr-15	25-Apr-15	[Red bar] Formwork for wall (external)																		
24WFUGT01370	Concrete for wall and roof slab up to +20.320mPD	0%	1	27-Apr-15	27-Apr-15	[Red bar] Concrete for wall and roof slab up to +20.320mPD																		
24WFUGT01380	Remove formwork	0%	3	28-Apr-15	30-Apr-15	[Red bar] Remove formwork																		
<b>Stairs</b>																								
24WFU02240B90	Formworks for Stairs	50%	30	25-Nov-14 A	29-Apr-15	[Green bar] Formworks for Stairs																		
24WFU02240C10	Rebarworks for Stairs	50%	26	01-Dec-14 A	24-Apr-15	[Green bar] Rebarworks for Stairs																		
24WFU02240C20	Concrete Works for Stairs	50%	5	15-Jan-15 A	30-Apr-15	[Green bar] Concrete Works for Stairs																		
<b>Finishing Works (Internal and External)</b>																								
24WFU02250A10	Ceiling Finishes (Painting)	0%	19	02-May-15	23-May-15	[Red bar] Ceiling Finishes (Painting)																		
24WFU02250A20	Wall Finishes (Painting)	0%	16	20-May-15	08-Jun-15	[Red bar] Wall Finishes (Painting)																		



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	March 2015				April 2015				May 2015				June 2015					
						23	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22
24WFO3565	Cable laying for grit and screenings handling area	0%	21	19-Jun-15	15-Jul-15																		
24WFO3568	Installation of lighting fittings	0%	20	19-Jun-15	14-Jul-15																		
24WFO3570	Cable tray installation for lighting	0%	21	03-Jun-15	27-Jun-15																		
<b>HVAC System (Deodorization / Air Conditioning / Ventilation)</b>																							
24WFO2708	Installation of air duct	0%	12	26-May-15	08-Jun-15																		
24WFO2709	Installation of activated carbon filter (for grit trap & screening handling room)	0%	14	09-Jun-15	25-Jun-15																		
24WFO2713	Installation of ventilation fan c/w air duct at coarse & fine screen area	0%	18	09-Jun-15	30-Jun-15																		
<b>Control and Monitoring Services incl. Instrumentation</b>																							
24WFO2801	Installation of local manual control (coarse screen 1 & 2)	0%	2	29-May-15	30-May-15																		
24WFO2802	Installation of local manual control (fine screen 1 & 2)	0%	2	01-Jun-15	02-Jun-15																		
24WFO2803	Installation of local manual control (grit trap 1 & 2)	0%	2	11-Jun-15	12-Jun-15																		
24WFO2804	Installation of local manual control (screening conveyor 1 & 2)	0%	2	13-Jun-15	15-Jun-15																		
24WFO2805	Installation of local manual control (screening compactor 1 & 2)	0%	2	13-Jun-15	15-Jun-15																		
24WFO2808	Installation of level sensor c/w transmitter (fine screen 1 & 2)	0%	7	03-Jun-15	10-Jun-15																		
24WFO2809	Installation of level sensor for level limit sensing (screening conveyor 1 & 2)	0%	5	16-Jun-15	22-Jun-15																		
24WFO2824	Cable tray installation for gas detection system (CH4, H2S & O2 detector)	0%	14	03-Jun-15	18-Jun-15																		
24WFO2825	Cable laying for gas detection system	0%	14	19-Jun-15	07-Jul-15																		
24WFO2828	Installation of gas detector (CH4, H2S & O2 detector)	0%	5	19-Jun-15	25-Jun-15																		
24WFO2835	Cable tray installation for CCTV system	0%	14	03-Jun-15	18-Jun-15																		
24WFO2836	Cable laying for CCTV system	0%	14	19-Jun-15	07-Jul-15																		
<b>Fire Protection / Detection System</b>																							
24WFO2851	Installation of automatic fire alarm panel (AFA panel)	0%	7	29-May-15	05-Jun-15																		
24WFO2852	Cable tray installation for AFA panel	0%	14	12-May-15	28-May-15																		
24WFO2853	Cable laying for AFA panel	0%	14	29-May-15	13-Jun-15																		
24WFO2854	Megger test in cables for AFA panel	0%	7	15-Jun-15	23-Jun-15																		
24WFO2856	Installation of emergency lighting fitting	0%	8	12-May-15	20-May-15																		
24WFO2857	Installation of heat detector	0%	5	21-May-15	27-May-15																		
24WFO2858	Installation of alarm bell	0%	3	28-May-15	30-May-15																		
24WFO2859	Installation of break glass point	0%	3	01-Jun-15	03-Jun-15																		
24WFO2860	Installation of exit signs	0%	5	04-Jun-15	09-Jun-15																		
24WFO2861	Installation of fire extinguisher	0%	3	10-Jun-15	12-Jun-15																		
24WFO2863	Fire services cable tray installation at grit trap shelter area	0%	5	29-May-15	03-Jun-15																		
24WFO2866	Fire services cable tray installation at coarse and fine screen area	0%	7	04-Jun-15	11-Jun-15																		
24WFO2868	Fire services cable tray installation at grit and screening handling area	0%	5	12-Jun-15	17-Jun-15																		
24WFO2870	Cable laying for fire services equipment	0%	12	04-Jun-15	17-Jun-15																		
24WFO2871	Megger test in cables for fire services equipment	0%	6	18-Jun-15	25-Jun-15																		
<b>Plumbing Services</b>																							
24WFO3890	Installation of FRP water tank	0%	14	14-Apr-15	29-Apr-15																		
24WFO3900	Installation of water booster pump	0%	14	30-Apr-15	16-May-15																		
24WFO3910	Installation of hydro pneumatic pressure vessel	0%	14	18-May-15	03-Jun-15																		
24WFO3920	Installation of 20mmØ water pipe	0%	30	04-Jun-15	10-Jul-15																		
<b>Preliminary Testing and Commissioning</b>																							
<b>Mechanical Works</b>																							
24WFO3389	SAT of screening conveyor no. 1 and 2	0%	7	20-May-15	28-May-15																		
24WFO3390	SAT of screening compactor no. 1 and 2	0%	7	22-May-15	30-May-15																		
<b>Other Works prior to Early Flow Turning</b>																							







Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	March 2015				April 2015				May 2015				June 2015					
						23	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22
24ABN02250A20	Installation of 1000Ø pipe from desilting basin to seawater pumping station	0%	20	14-Apr-15	07-May-15																		
24ABN02250A30	Formworks for base slab of desilting basin	0%	5	08-May-15	13-May-15																		
24ABN02250A40	Rebarworks for base slab of desilting basin	0%	4	11-May-15	14-May-15																		
24ABN02250A50	Concrete for base slab of desilting basin	0%	4	15-May-15	19-May-15																		
24ABN02250A60	Formworks for wall of desilting basin	0%	13	20-May-15	04-Jun-15																		
24ABN02250A70	Rebarworks for wall of desilting basin	0%	6	26-May-15	01-Jun-15																		
24ABN02250A80	Concrete for wall of desilting basin	0%	6	02-Jun-15	08-Jun-15																		
24ABN02250A90	Installation of platform, railings and basket screen	0%	6	09-Jun-15	15-Jun-15																		
24ABN02250B10	Installation of air tight multi-part cover	0%	8	16-Jun-15	25-Jun-15																		
24ABN02250B20	Formworks for base slab of seawater pumping station	0%	6	23-Mar-15	28-Mar-15																		
24ABN02250B30	Rebarworks for base slab of seawater pumping station	0%	6	27-Mar-15	02-Apr-15																		
24ABN02250B40	Concrete for base slab of seawater pumping station	0%	6	07-Apr-15	13-Apr-15																		
24ABN02250B50	Formworks for wall of seawater pumping station	0%	8	14-Apr-15	22-Apr-15																		
24ABN02250B60	Rebarworks for wall of seawater pumping station	0%	8	18-Apr-15	27-Apr-15																		
24ABN02250B70	Concrete for wall of seawater pumping station	0%	6	28-Apr-15	05-May-15																		
24ABN02250B80	Installation of platform, railings and basket screen	0%	6	06-May-15	12-May-15																		
24ABN02250B85	Installation of twin DN300 pipe	0%	30	06-May-15	10-Jun-15																		
<b>Electrical and Mechanical Works</b>																							
<b>Electrical and Mechanical Works (Grit Trap No. 1)</b>																							
<b>Material / Equipment Delivery on Site</b>																							
24ABN03360	Delivery of grit classifier	0%	0		21-May-15																		
<b>Mechanical Works</b>																							
24ABN03370	Installation of stoplog no. 3 (fine screen outlet chamber)	0%	10	23-Mar-15	02-Apr-15																		
24ABN03420	Installation of penstock no. 17 (flowchamber outlet)	0%	10	07-Apr-15	17-Apr-15																		
24ABN03690	Installation of penstock no. 10 (flow distribution chamber inlet near grit trap no. 1)	0%	10	18-Apr-15	29-Apr-15																		
24ABN03700	Installation of penstock no. 13 (grit trap no. 1 inlet)	0%	10	30-Apr-15	12-May-15																		
24ABN03730	Installation of grit classifier no. 1	0%	7	07-Apr-15	14-Apr-15																		
24ABN03740	Installation of interconnecting pipe for grit classifier no. 1	0%	10	15-Apr-15	25-Apr-15																		
24ABN03851	Installation of penstock no. 17 (flow chamber outlet)	0%	15	29-Apr-15	16-May-15																		
<b>Electrical Works</b>																							
24ABN03478	Replacement / upgrading of motor starter and panel cover in existing switchboard (grit trap 1 & classifier 1)	0%	6	07-Apr-15	13-Apr-15																		
24ABN03479	Replacement / upgrading the power, control & indication circuitry in existing switchboard (for penstock)	0%	9	14-Apr-15	23-Apr-15																		
24ABN03480	Removal of existing aged cables	0%	7	24-Apr-15	02-May-15																		
24ABN03481	Installation of additional cable tray	0%	14	24-Apr-15	11-May-15																		
24ABN03482	Cable laying for the new grit trap no. 1 and penstock	0%	21	04-May-15	28-May-15																		
24ABN03483	Megger test in cables for the new grit trap no. 1 and penstocks	0%	14	20-May-15	05-Jun-15																		
24ABN03484	Cable termination for the new grit trap no. 1 and penstocks	0%	10	06-Jun-15	17-Jun-15																		
<b>Control and Monitoring Services incl. Instrumentation</b>																							
24ABN03810	Installation of local manual control (grit trap no. 1)	0%	2	06-Jun-15	08-Jun-15																		
24ABN03820	Installation of local manual control (grit classifier 1)	0%	2	09-Jun-15	10-Jun-15																		
<b>Earthing and Lightning System</b>																							
24ABN03790	Installation of earthing protection for grit trap no. 1	0%	14	06-Jun-15	23-Jun-15																		
<b>Electrical and Mechanical Works (Flume Channel)</b>																							
<b>Mechanical Works for Flume Channel</b>																							
24ABN03850	Installation of stoplog no. 4 (flume channel inlet)	0%	15	23-Mar-15	11-Apr-15																		
<b>Electrical and Mechanical Works (Seawater Pumping Station)</b>																							



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	March 2015				April 2015				May 2015				June 2015				
						23	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15
<b>Material / Equipment Delivery on Site</b>																						
24ABN03570	Delivery of seawater pump	0%	0		02-May-15																◆ Delivery of seawater pump	
<b>Mechanical Works</b>																						
24ABN03580	Installation of stoplog no. 1 - no. 3	0%	30	06-May-15	10-Jun-15																Installation of stoplog no. 1 - no. 3	
24ABN03590	Installation of seawater pump no. 1 & no. 2	0%	16	23-May-15	11-Jun-15																Installation of seawater pump no. 1 & no. 2	
24ABN03600	Installation of pipework	0%	12	12-Jun-15	26-Jun-15																Installation of pipework	
<b>Electrical Works</b>																						
24ABN03610	Installation of seawater pump control panel in the existing switch room	0%	5	23-May-15	29-May-15																Installation of seawater pump control panel in the existing switch room	
24ABN03620	Cable tray installation for seawater pumps	0%	5	30-May-15	04-Jun-15																Cable tray installation for seawater pumps	
24ABN03630	Cable laying	0%	8	05-Jun-15	13-Jun-15																Cable laying	
24ABN03640	Installation of earthing protection	0%	2	15-Jun-15	16-Jun-15																Installation of earthing protection	
24ABN03650	Megger test in cables for seawater pump	0%	4	17-Jun-15	22-Jun-15																Megger test in cables for seawater pump	
<b>Control and Monitoring Services incl. Instrumentation</b>																						
24ABN03670	Installation of local manual control (seawater pumping station)	0%	2	12-Jun-15	13-Jun-15																Installation of local manual control (seawater pumping station)	
24ABN03680	Installation of EM flowmeters	0%	10	15-Jun-15	26-Jun-15																Installation of EM flowmeters	
<b>Preliminary Testing and Commissioning</b>																						
<b>Preliminary Testing and Commissioning (Grit Trap No. 1)</b>																						
<b>Mechanical Works</b>																						
24ABN03710	Water test of penstock (for grit trap no. 1)	0%	14	13-May-15	26-May-15																Water test of penstock (for grit trap no. 1)	
24ABN03830	Performance test of grit trap no. 1	0%	14	18-Jun-15	06-Jul-15																Performance test of grit trap no. 1	
24ABN03840	Performance test of grit classifier no. 1	0%	14	18-Jun-15	06-Jul-15																Performance test of grit classifier no. 1	
<b>Preliminary Testing and Commissioning (Flume Channel)</b>																						
<b>Mechanical Works</b>																						
24ABN3860	Water test of stoplog no. 4	0%	14	13-Apr-15	28-Apr-15																Water test of stoplog no. 4	
<b>Modification at Inlet Pumping Station</b>																						
<b>Interface between Civil / ABWF / E&amp;M Works</b>																						
24MABN00490	Completion of pump modification on Pump no. 1	0%	0		30-May-15																◆ Completion of pump modification on Pump no. 1, Completion of	
<b>Modification of Pumps</b>																						
<b>Sewage Pump No. 1</b>																						
24ABN3181	Plinth modification for the installation of new sewage pump no. 1	100%	10	16-Feb-15 A	06-Mar-15 A																Plinth modification for the installation of new sewage pump no. 1	
24ABN3190	Modification / upgrading of existing power supply	100%	12	24-Feb-15 A	09-Mar-15 A																Modification / upgrading of existing power supply	
24ABN3200	Installation of new sewage pump no. 1	100%	4	07-Mar-15 A	11-Mar-15 A																Installation of new sewage pump no. 1	
24ABN3210	Installation of new pipework and associated valves and flowmeter	0%	16	12-Mar-15 A	28-Apr-15																Installation of new pipework and associated valves and flowmeter	
24ABN3220	Power connection	0%	2	29-Apr-15	30-Apr-15																Power connection	
24ABN3230	Performance test of sewage pump no. 1	0%	30	01-May-15	30-May-15																Performance test of sewage pump no. 1	
<b>Modification of Deodorization System and DCS System</b>																						
<b>Electrical Works</b>																						
24ABN03271	Replacement / upgrading of motor, starter and panel cover in existing switchboard (for deodorizer no. 1)	100%	3	16-Mar-15 A	18-Mar-15 A																Replacement / upgrading of motor, starter and panel cover in existing switchboard (for deodorizer no. 1)	
24ABN03272	Removal of existing aged cables (for deodorizer no. 1)	100%	5	19-Mar-15 A	24-Mar-15 A																Removal of existing aged cables (for deodorizer no. 1)	
24ABN03273	Installation of additional cable tray (for new deodorizer no. 1)	0%	7	13-Apr-15	20-Apr-15																Installation of additional cable tray (for new deodorizer no. 1)	
24ABN03274	Cable laying for the new deodorizer no. 1	0%	14	21-Apr-15	07-May-15																Cable laying for the new deodorizer no. 1	
24ABN03275	Megger test in cables for the new deodorizer no. 1	0%	7	08-May-15	15-May-15																Megger test in cables for the new deodorizer no. 1	
24ABN03276	Cable termination for the new deodorizer no. 1	0%	10	16-May-15	28-May-15																Cable termination for the new deodorizer no. 1	
<b>HVAC System (Deodorization / Air Conditioning / Ventilation)</b>																						
24ABN03283	Diversion of existing air ductworks from deodorizer no. 1 to nearby deodorizer no. 2 and no. 3	0%	5	07-Apr-15	11-Apr-15																Diversion of existing air ductworks from deodorizer no. 1 to nearby deodorizer no. 2 and no. 3	
24ABN03284	Decommission / Demolition of deodorizer no. 1	0%	10	13-Apr-15	23-Apr-15																Decommission / Demolition of deodorizer no. 1	

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	March 2015				April 2015				May 2015				June 2015					
						23	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22
24ABN03285	Installation of new deodorizer no. 1	0%	14	24-Apr-15	11-May-15																		
24ABN03290	Re-diversion of existing air ductwork to the newly installed deodorizer no. 1	0%	5	22-May-15	28-May-15																		
24ABN03291	Installation of ventilation fan c/w air duct (switchroom at G/F)	0%	24	29-May-15	26-Jun-15																		
24ABN03292	Installation of split type A/C unit (switchroom at G/F)	0%	24	29-May-15	26-Jun-15																		
<b>Preliminary Testing and Commissioning</b>																							
24ABN03314	SAT of new deodorizer no. 1	0%	30	29-May-15	04-Jul-15																		
<b>Completion of Works in Section 5</b>																							
<b>EoT Claim</b>																							
24ABN03216	Claim for Additional Extension of Time - under review	0%	393	16-Jan-15 A	15-Jun-16																		
<b>Submission of Manuals</b>																							
24ABN3990	Preparation / Submission of draft O&M manual	0%	90	16-May-15	13-Aug-15																		
<b>Works for Section 6</b>																							
<b>U/G Utility Works</b>																							
24ABN02821A50	Installation of external signal and power cable including ducting works and drawpit	0%	45	23-Mar-15	18-May-15																		
<b>Ap Lei Chau PTW</b>																							
<b>Key Dates</b>																							
<b>Time of Completion</b>																							
24ALC00300	Time for Completion of Section 7	0%	1264	31-Aug-11 A	15-Jan-17																		
24ALC00300E	Extension of Time Order No.4 - Claim No. PTN/001 - 008 and 009 (Inclement Weather from November to December 2012)	100%	4	19-Feb-15 A	23-Feb-15 A																		
24ALC00300F	Extension of Time Order No. 5 - Claim Nos. PTS/001 - 010 and 011 (Inclement Weather in March 2013 and April 2013)	100%	5	23-Feb-15 A	27-Feb-15 A																		
24ALC00300G	Extension of Time Order No. 6 - Claim Nos PTS/001 - 012 and 013 (Inclement Weather from May to July 2013)	100%	18	28-Feb-15 A	17-Mar-15 A																		
24ALC00300H	EOT No. 7 - Claim Nos PTS/001-014 and 013 (Inclement Weather from Aug 2013) and Reassessment (Apr-Jul13)	0%	11	18-Mar-15 A	28-Mar-15																		
24ALC00300I	Extension of Time Order No. 8 - Claim No. PTS/001 - 015 (Inclement Weather in September 2013)	0%	3	28-Mar-15	31-Mar-15																		
24ALC00301	Revised Completion Date for Section 7 with EoT awarded	0%	0		31-Mar-15																		
24ALC00302	Claim for Additional Extension of Time - under review	0%	657	31-Mar-15	15-Jan-17																		
<b>Interface and Liaison</b>																							
<b>Interface with ST2/DSD</b>																							
24MALC00110	Application of PMAC/SWAC for Demolition of Existing Treatment Facilities	0%	0	20-Jun-15																			
<b>Works for Section 7</b>																							
<b>Stage 1A of ALC Upgrade - Initial Treatment Plant</b>																							
<b>Interface between Civil / ABWF / E&amp;M Works</b>																							
24MALC00220	Completion of structural works in preparation for finishing works	0%	0		09-Apr-15																		
<b>Civil Works</b>																							
<b>Finishing Works (Internal and External)</b>																							
24ALC00750A30	Floor finishes (painting) at fine screen and grit trap area incl. screening and grit handling at GL 1-5 / G-J	0%	18	23-Mar-15	15-Apr-15																		
24ALC00750A40	Installation of air tight multi-part cover at fine screen channel and inlet chamber	0%	12	22-Jun-15	06-Jul-15																		
<b>Electrical and Mechanical Works</b>																							
<b>Material / Equipment Delivery on Site</b>																							
24ALC00561	Delivery of fine screen conveyor	0%	0		23-Mar-15																		
24ALC00600	Delivery of grit classifier	0%	0		28-Apr-15																		
<b>Mechanical Works</b>																							
24ALC03010	Installation of penstock no. 13 (bypass penstock)	0%	12	23-Mar-15	08-Apr-15																		
24ALC03020	Installation of penstock no. 2 & 4 (coarse screen no. 2 inlet / outlet)	0%	18	09-Apr-15	29-Apr-15																		
24ALC03030	Installation of penstock no. 6 (fine screen inlet bypass penstock)	0%	12	30-Apr-15	14-May-15																		
24ALC03040	Installation of penstock no. 7 & 9 (fine screen no. 2 inlet / outlet)	0%	18	30-Apr-15	21-May-15																		



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	March 2015				April 2015				May 2015				June 2015							
						23	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22		
24ALC03490	Earthing and lighting test	0%	10	15-May-15	27-May-15																				
<b>Stage 1B of ALC Upgrade - Initial Wet Well and Effluent Pumping Station</b>																									
<b>Civil Works</b>																									
<b>Initial Wet well and Effluent Pumping Station (GL 4-7 / G-I)</b>																									
24ALC00730C15	Formworks for U/G wall of wet well and effluent pumping station at GL 5-7 / G-I	0%	21	23-Feb-15 A	10-Apr-15																				
24ALC00730C16	Rebarworks for U/G wall of wet well and effluent pumping station at GL 5-7 / G-I	0%	18	16-Feb-15 A	08-Apr-15																				
24ALC00730C17	Concrete for U/G wall of wet well and effluent pumping station at GL 5-7 / G-I	0%	1	09-Apr-15	09-Apr-15																				
24ALC00730C18	Preparation works prior to E&M Works	0%	30	10-Apr-15	15-May-15																				
<b>Permanent Flume Channels</b>																									
24ALC00852A20	Backfilling works up to level for base slab of flume channel	0%	30	10-Apr-15	15-May-15																				
24ALC05510	Formworks for base slab of permanent flume channels	0%	4	16-May-15	20-May-15																				
24ALC05520	Rebarworks for base slab of permanent flume channels	0%	4	21-May-15	26-May-15																				
24ALC05530	Concrete for base slab of permanent flume channels	0%	1	27-May-15	27-May-15																				
24ALC05540	Formworks for wall of permanent flume channels	0%	6	28-May-15	03-Jun-15																				
24ALC05550	Rebarworks for wall of permanent flume channels	0%	6	04-Jun-15	10-Jun-15																				
24ALC05560	Concrete for wall of temporary permanent channels	0%	1	11-Jun-15	11-Jun-15																				
24ALC05570	Formworks for top slab/cover of permanent flume channels	0%	7	12-Jun-15	19-Jun-15																				
24ALC05580	Rebarworks for top slab/cover of permanent flume channels	0%	4	19-Jun-15	24-Jun-15																				
<b>Tie-Ins, Rising Main and Flow Meter Chamber</b>																									
<b>Installation of Rising Main</b>																									
24ALC4310	Installation of 900mmØ DI rising main pipe	0%	45	23-Mar-15	18-May-15																				
24ALC4330	Installation of electromagnetic flowmeter (2 set for HDD pipe)	0%	16	19-May-15	06-Jun-15																				
<b>Construction of Flow Meter Chamber</b>																									
24ALC4180	Excavation for flow meter chamber	0%	8	19-May-15	28-May-15																				
24ALC4190	Formworks for base slab of flow meter chamber	0%	6	29-May-15	04-Jun-15																				
24ALC4200	Rebarworks for base slab of flow meter chamber	0%	4	05-Jun-15	09-Jun-15																				
24ALC4210	Concrete for base slab of flow meter chamber	0%	4	10-Jun-15	13-Jun-15																				
24ALC4220	Formworks for wall of flow meter chamber	0%	6	15-Jun-15	22-Jun-15																				
24ALC4230	Rebarworks for wall of flow meter chamber	0%	5	18-Jun-15	24-Jun-15																				
<b>Electrical and Mechanical Works</b>																									
<b>Mechanical Works</b>																									
24ALC04150	Installation of effluent pump no. 3 c/w associated pipework (no dry season limitation in the PS for Pump Replacement)	0%	18	16-May-15	06-Jun-15																				
24ALC04160	Installation of effluent pump no. 4 c/w associated pipework (incl. connection to installed 900Ø pipe to HDD tunnel)	0%	18	08-Jun-15	29-Jun-15																				
<b>Electrical Works</b>																									
24ALC04161	Cable tray installation for power supply on effluent pump no. 3 and 4	0%	12	08-Jun-15	22-Jun-15																				
<b>Control and Monitoring Services incl. Instrumentation</b>																									
24ALC04165	Installation of local manual control (effluent pumps 3 and 4)	0%	7	01-Jun-15	08-Jun-15																				
24ALC04166	Installation of level sensor for wet well	0%	10	09-Jun-15	19-Jun-15																				
24ALC04167	Install cable tray for monitoring and control system	0%	21	01-Jun-15	25-Jun-15																				
24ALC04168	Cable laying for monitoring and control system	0%	21	06-Jun-15	02-Jul-15																				
<b>Stage 2 of ALC Upgrade (Completion of Remaining Works)</b>																									
<b>Electrical and Mechanical Works</b>																									
<b>Material / Equipment Delivery on Site</b>																									
24ALC03995	Delivery of effluent pump	0%	0		20-Jun-15																				
<b>Completion of Works in Section 7</b>																									
<b>EoT Claim</b>																									

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	March 2015					April 2015					May 2015					June 2015			
						23	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22	
24ALC01780A	EoT adjustment due to Claim No. PTN/001 - 001 to 015 (Inclement Weather up to Sep 2013)	0%	45	15-Feb-15 A	31-Mar-15	EoT adjustment due to Claim No. PTN/001 - 001 to 015 (Inclement Weather up to Sep 2013)																		
24ALC01781	Claim for Additional Extension of Time - under review	0%	656	01-Apr-15	15-Jan-17																			

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**APPENDIX C  
MONITORING REQUIREMENTS**

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## 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	<b>CM_CB1a<sup>(1)</sup></b> : The Arcade, Cyberport <b>CM_WF1a<sup>(1)</sup></b> : Wah Ming House, Wah Fu Estate <b>CM_AB1b<sup>(2)</sup></b> : 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 (Sandy Bay PTW): Chuk Lam Ming Tong
			DC/2009/24	M6a <sup>(1)</sup> (Cyberport PTW): Aegean Terrace M7a <sup>(1)</sup> (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.

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**APPENDIX D  
ACTION AND LIMIT LEVELS**

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## 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 ( $\mu\text{g}/\text{m}^3$ )		Limit Level ( $\mu\text{g}/\text{m}^3$ )	
	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 <sup>(1)</sup>

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

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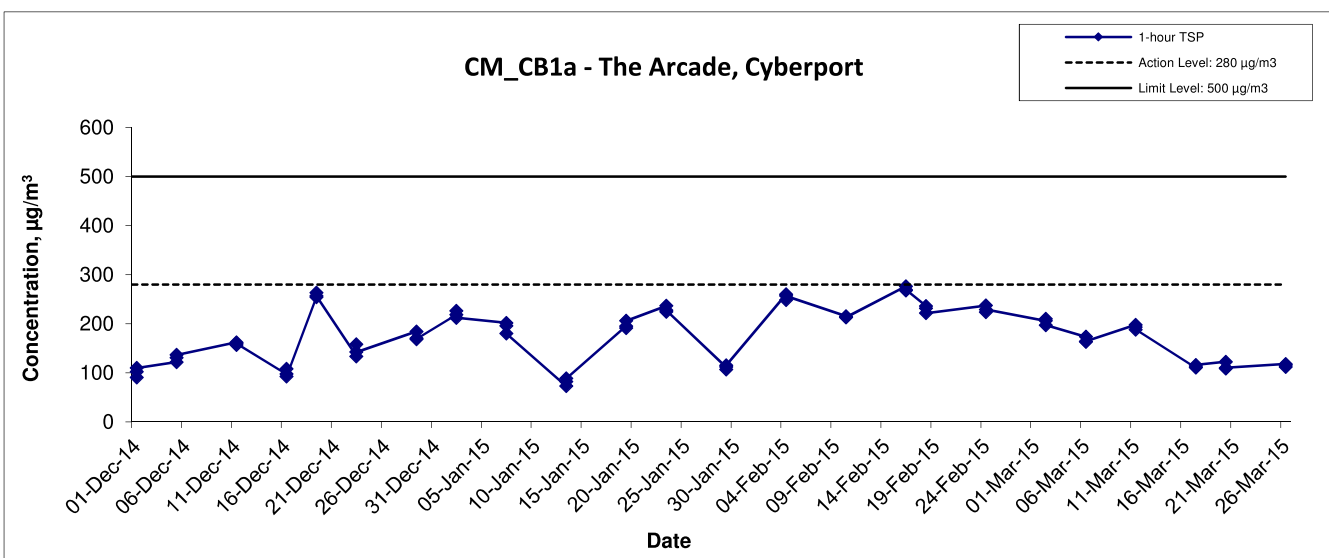
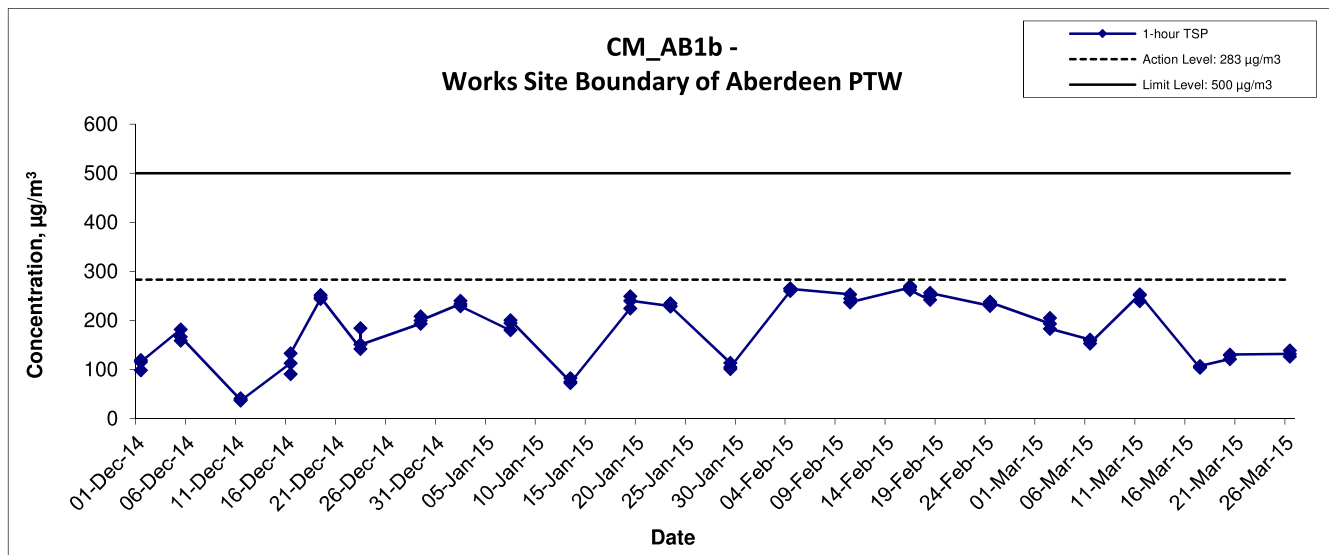
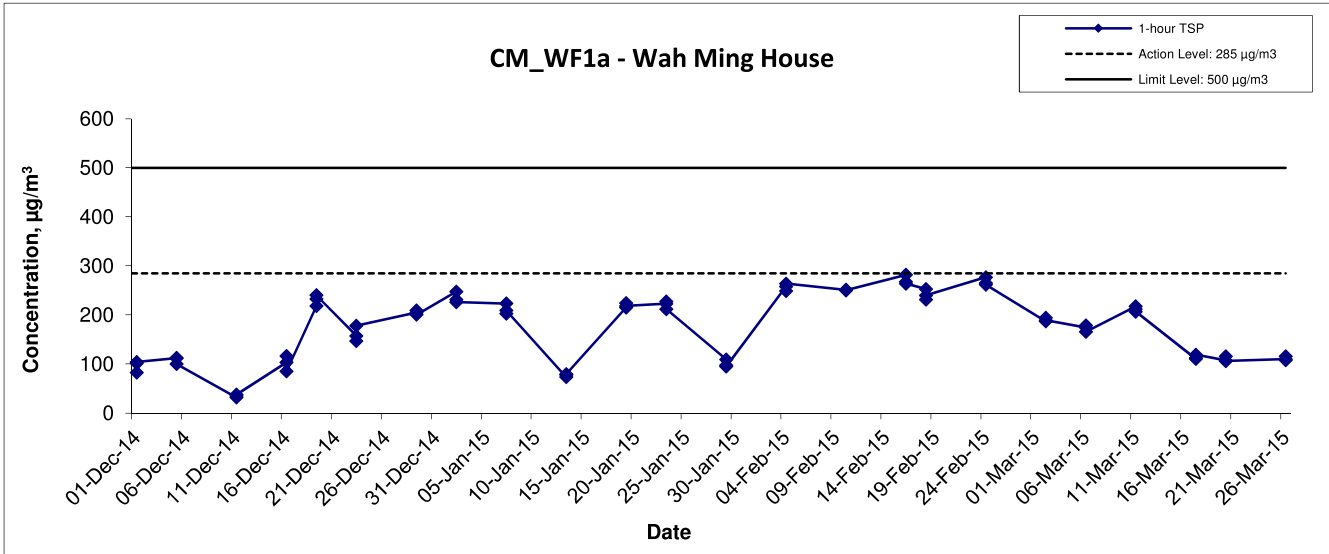
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**APPENDIX E  
GRAPHICAL PRESENTATION OF AIR  
QUALITY MONITORING RESULTS**

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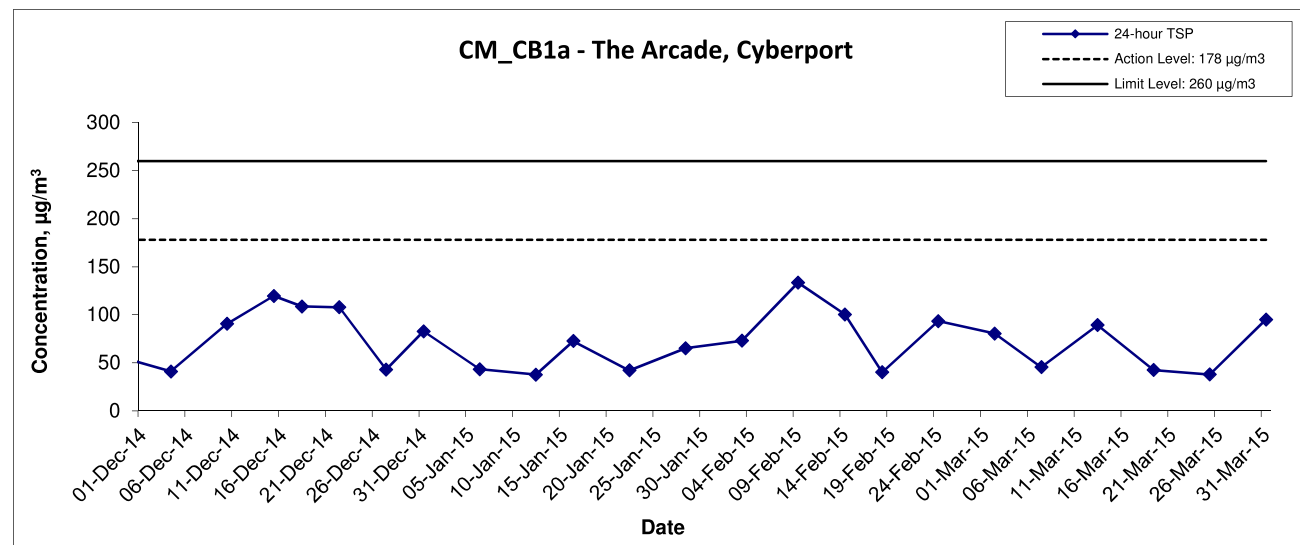
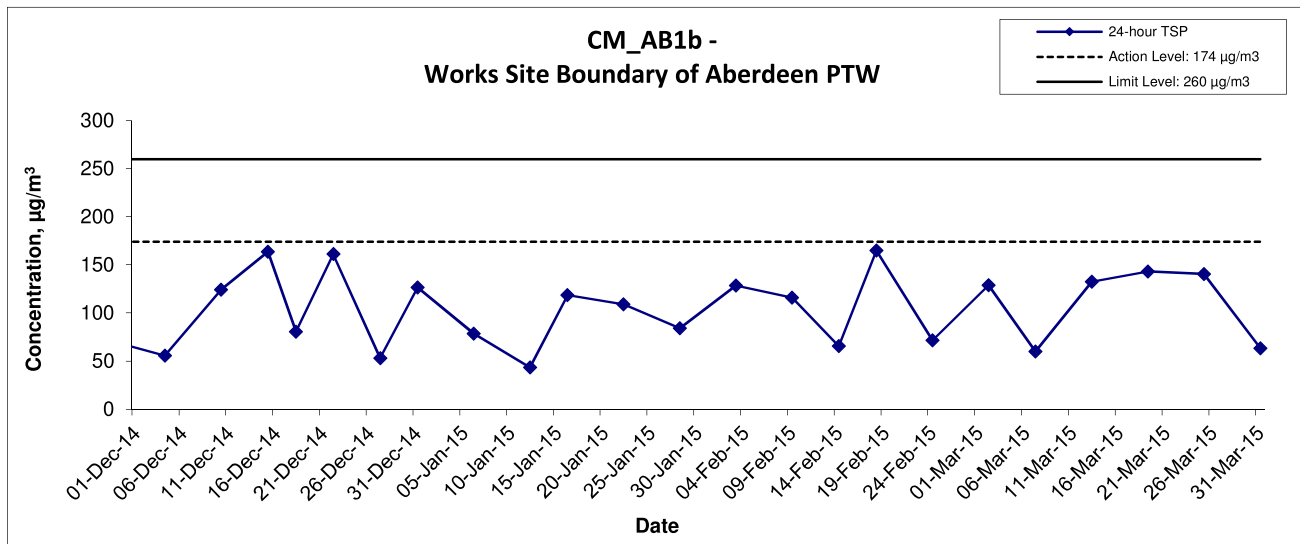
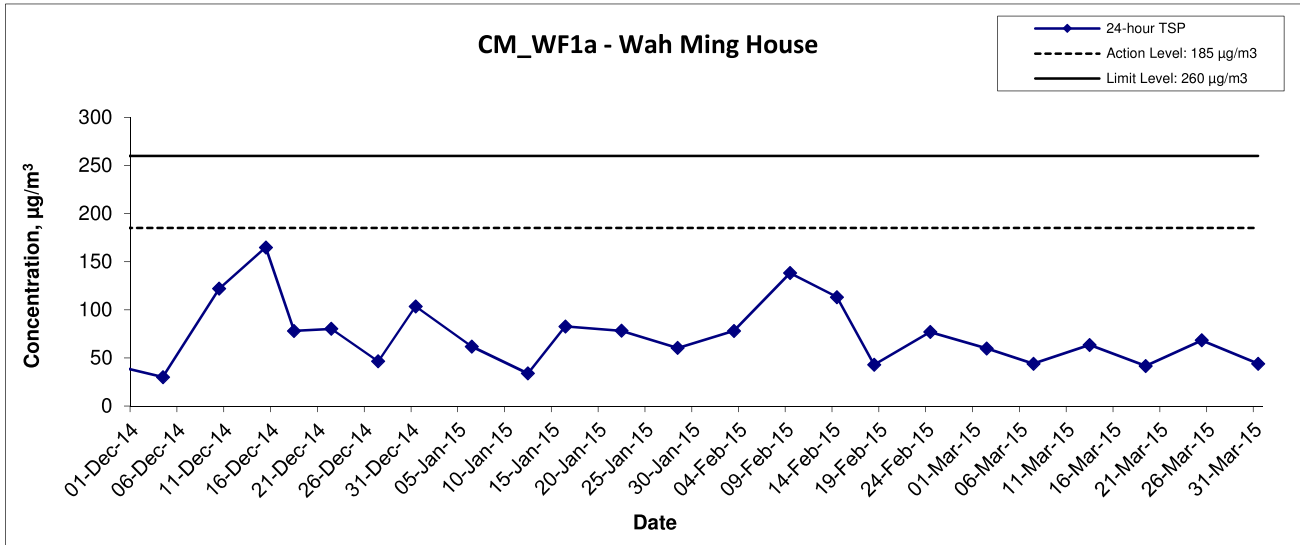
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### 1-hr TSP Concentration Levels



Title 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	Contract No. DC/2009/24	Scale N.T.S	Project No. MA11060	<b>CINOTECH</b>
		Date Mar 15	Appendix E	

### 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	Project No. MA11060	
	Date Mar 15	Appendix E	

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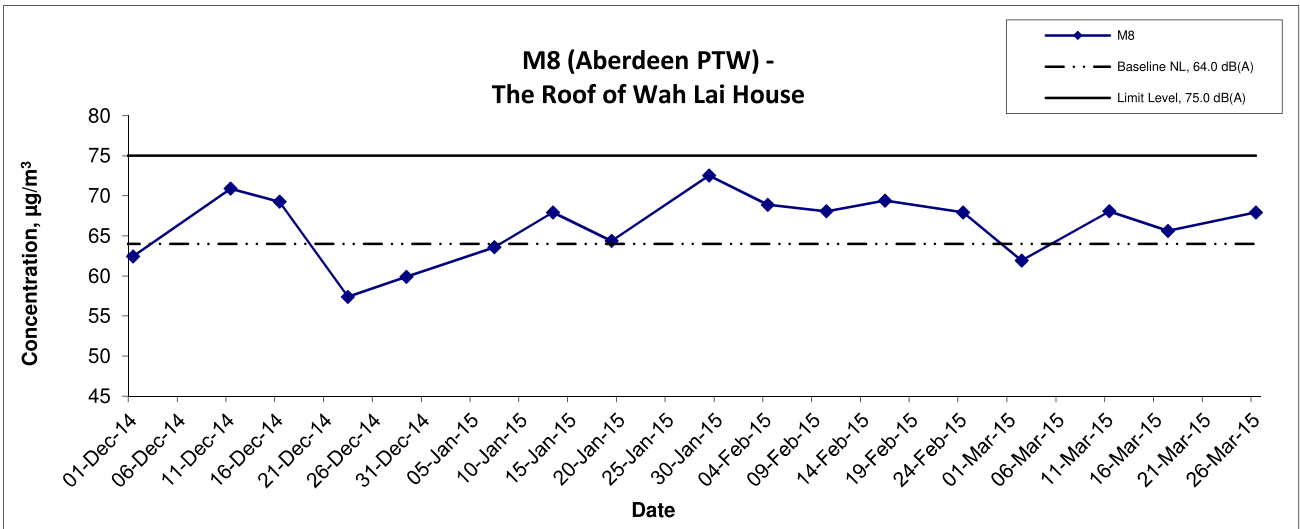
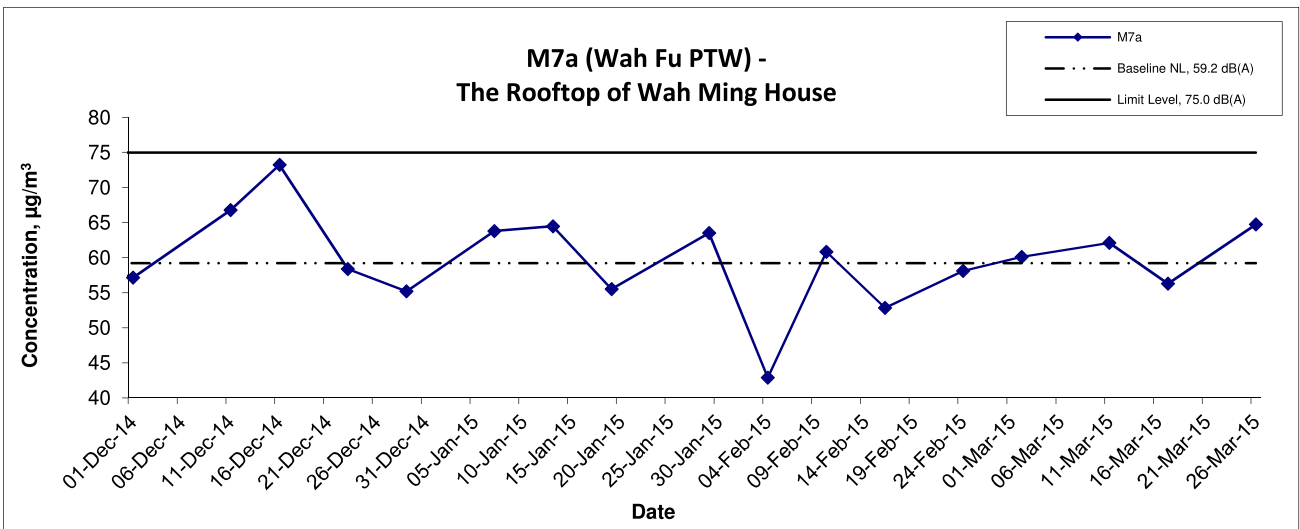
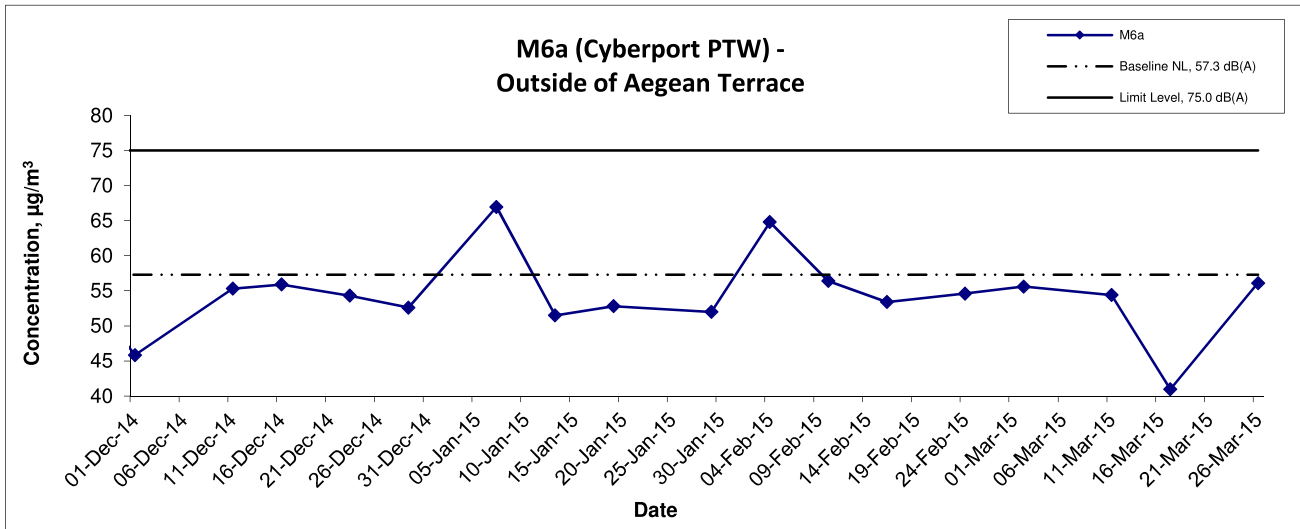
**APPENDIX F  
GRAPHICAL PRESENTATION OF  
NOISE MONITORING RESULTS**

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## Noise Levels

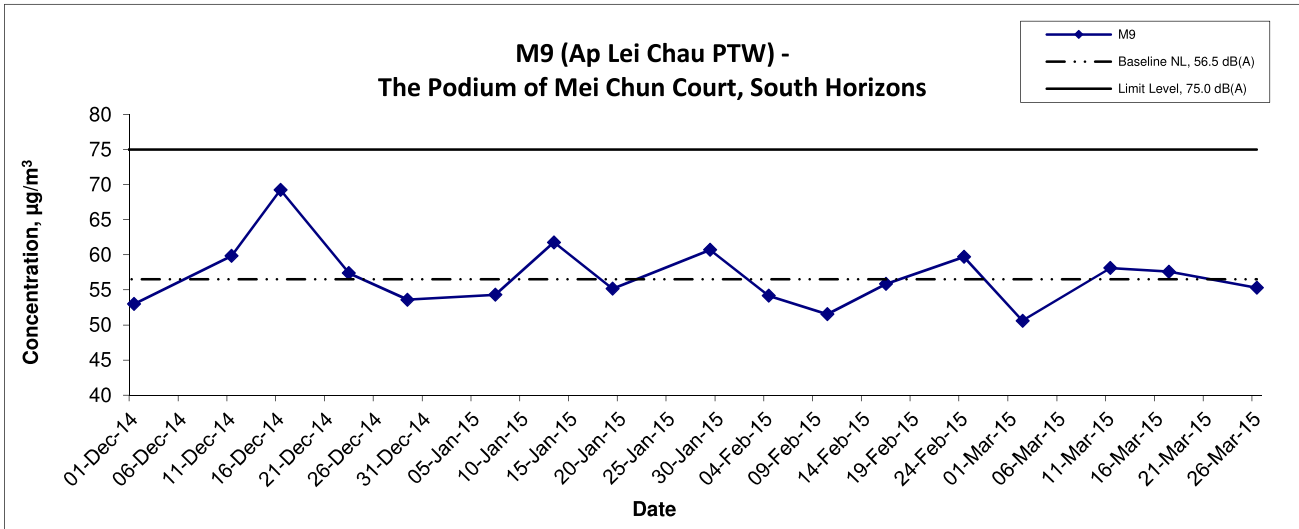
(0700-1900 hrs on Normal Weekdays)



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	Project No. MA11060	
	Date Mar 15	Appendix F	

## 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	Project No. MA11060	CINOTECH
	Date Mar 15	Appendix F	

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**APPENDIX G  
IMPLEMENTATION STATUS OF  
ENVIRONMENTAL MITIGATION  
MEASURES (EMIS)**

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**APPENDIX G IMPLEMENTATION SCHEDULE OF ENVIRONMENTAL MITIGATION MEASURES (EMIS)**

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
<b>A</b>	<b>Air Quality</b>		
3.74	<p>Skip hoist for material transport should be totally enclosed by impervious sheeting.</p> <p>Vehicle washing facilities should be provided at every vehicle exit point.</p> <p>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.</p> <p>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.</p> <p>Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.</p> <p>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.</p> <p>Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.</p> <p>Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.</p> <p>Imposition of speed controls for vehicles on unpaved site roads. Ten kilometers per hour is the recommended limit.</p> <p>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.</p> <p>Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.</p>	All construction sites	<p>N/A</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>*</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>
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>B</b>	<b>Airborne Noise</b>		
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.		^
<b>C</b>	<b>Water Quality</b>		
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	<p>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:</p> <ul style="list-style-type: none"> <li>• Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport.</li> <li>• Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents.</li> <li>• Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.</li> </ul>		*
6.380	<p>Construction Works in Close Proximity of Storm Drains or Seafront:</p> <p>To minimize the potential water quality impacts from the construction works located at or near any watercourse, the practices outlined below should be adopted where applicable.</p> <ul style="list-style-type: none"> <li>• The use of less or smaller construction plants may be specified to reduce the disturbance to the storm water courses or marine environment.</li> <li>• 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.</li> <li>• Stockpiling of construction materials and dusty materials should be covered and located away from any water courses.</li> <li>• 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.</li> <li>• Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.</li> <li>• Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert or sea.</li> </ul>	All construction sites	^

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
<b>D</b>	<b>Waste Management</b>		
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: <ul style="list-style-type: none"> <li>• excavated materials suitable for reuse on-site;</li> <li>• excavated materials suitable for public filling facilities;</li> <li>• remaining C&amp;D waste for landfill;</li> <li>• chemical waste; and</li> <li>• general refuse for landfill.</li> </ul>	All construction sites	*
9.113	Sort C&D waste from demolition of existing facilities to recover recyclable portions such as metals.	All construction sites	^
	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.	All construction sites	^
	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

<b>EIA Ref.</b>	<b>Recommended Mitigation Measures</b>	<b>Location of the measure</b>	<b>Implementation Status</b>
<b>E</b>	<b>Terrestrial Ecology</b>		
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.		^
<b>F</b>	<b>Landscape and Visual</b>		
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
<b>G</b>	<b>Marine Ecology</b>		
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	*
<b>H</b>	<b>Hazard to Life</b>		
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;

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**APPENDIX H  
SUMMARY OF ENVIRONMENTAL  
LICENSES AND PERMITS**

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Appendix H - Summary of Environmental Licenses and Permits

Permit Number	Valid Period		Details	Status
	From	To		
<b>Water Discharge License</b>				
WT000116 29-2012	N/A	31/1/2017	Location: Sandy Bay PTW	Valid
WT000116 33-2012	N/A	31/1/2017	Location: Cyber Port PTW	
WT000116 32-2012	N/A	31/1/2017	Location: Ap Lei Chau	
WT000162 42-2013	N/A	31/3/2017	Location: Aberdeen PTW	
WT000168 37-2013	N/A	31/8/2018	Location: Wah Fu PTW	
<b>Notification of Works Under APCO</b>				
334694	6/9/2011	N/A	All PTWs	N/A
<b>Registered Chemical Waste Producer</b>				
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	
<b>Special Waste Admission Ticket</b>				
11817	24/11/2014	23/2/2015	Location: Ap Lei Chau	Valid until 23/2/2015
12014	24/2/2015	23/5/2015	Location: Ap Lei Chau	Valid
11818	24/11/2014	23/2/2015	Location: Aberdeen PTW	Valid until 23/2/2015
12015	24/2/2015	23/5/2015	Location: Aberdeen PTW	Valid
11815	24/11/2014	23/2/2015	Location: Wah Fu PTW	Valid until 23/2/2015
12012	24/2/2015	23/5/2015	Location: Wah Fu PTW	Valid

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**APPENDIX I  
SUMMARY OF AMOUNT OF WASTE  
GENERATED IN THE REPORTING  
PERIOD**

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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 <sup>3</sup> ]	[in '000m <sup>3</sup> ]	[in '000m <sup>3</sup> ]	[in '000m <sup>3</sup> ]	[in '000m <sup>3</sup> ]	[in '000m <sup>3</sup> ]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000m <sup>3</sup> ]	[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	0	0	0	0	0	0	0	0	0	0	0
MAY	0	0	0	0	0	0	0	0	0	0	0	0
JUNE	0	0	0	0	0	0	0	0	0	0	0	0
SUB-TOTAL	1.578360	0.000000	0.000000	0.000000	1.578360	0.000000	0.000000	0.000000	0.031000	0.000000	0.046970	0.335830
JULY	0	0	0	0	0	0	0	0	0	0	0	0
AUG	0	0	0	0	0	0	0	0	0	0	0	0
SEPT	0	0	0	0	0	0	0	0	0	0	0	0
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	11.485035	0.000000	0.000000	0.000000	11.485035	0.000000	17.430000	0.070000	0.101000	0.900000	0.271230	6.807456

Forecast of Total Quantities of C&D materials to be Generated from the Contracts *											
Total Quantity Generated	Hard Rock and Broken	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 <sup>3</sup> ]	[in '000m <sup>3</sup> ]	[in '000m <sup>3</sup> ]	[in '000m <sup>3</sup> ]	[in '000m <sup>3</sup> ]	[in '000m <sup>3</sup> ]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000m <sup>3</sup> ]	[in '000ton]
19.77	1.544	1.73	0	16.496	0	30	1	1	4	0.956	9.6

- Notes :
- (1) The performance targets are given in PS Clause 6(14).
  - (2) Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material.
  - (3) The contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where to total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m<sup>3</sup>. (PS Clause 5(4)(b) refers).  
[Delete Note (4) and the table above on the forecast, where inapplicable].

\* (4) The assumed density (kg/m<sup>3</sup>) for both C&D material and general refuse.

C&D material 2000kg/m<sup>3</sup>  
General refuse 1.0 tonnes/m<sup>3</sup>

(5) Conversion factors for reporting purpose:

in-situ: rock = 2.5 tonnes/m<sup>3</sup> ; soil = 2.0 tonnes/m<sup>3</sup>  
excavated: rock = 2.0 tonnes/m<sup>3</sup> ; soil = 1.8 tonnes/m<sup>3</sup>  
broken concrete and bitumen = 2.5 tonnes/m<sup>3</sup>  
C&D Waste = 1.0 tonnes/m<sup>3</sup>  
bentonite slurry = 2.8 tonnes/m<sup>3</sup>  
Paper = 800kg/m<sup>3</sup>  
Chemical = 800kg/m<sup>3</sup>  
Special waste = 0.6m<sup>3</sup> / container

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**APPENDIX J  
COMPLAINT LOG**

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**APPENDIX J – COMPLAINT LOG**

**Reporting Period:** January to March 2015

**Remarks:** One environmental complaint was received in the reporting quarter.

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
CIR#4_150330	DSD's Preliminary Treatment Work (PTW) at Wah Fu	30 <sup>th</sup> March 2015	<p>One anonymous complainant complained about the dark smoke emission generated from Contract DC/2009/24 construction site at Wah Fu PTW. The ETL of the Contract was informed of the complaint through the e-mail on 30<sup>th</sup> March 2015 and initiated the complaint investigation procedures. According to the information provided by the Contractor, there was no dark smoke emission was observed at Wah Fu PTW at the date of the complaint. Referring to the information of the Contractor, the potential construction machine that might generate the dark smoke emission at the date of the complaint was sheet piling machine for the sheet piling works (installation of sheet piles).</p>	<p>After complaint received, the Contractor has taken initiative to prevent dark smoke emission to the nearby residents by implementation of mitigation measures as below:</p> <ul style="list-style-type: none"> <li>• Remove the sheet piling machine that had generated the dark smoke emission on 31<sup>st</sup> March 2015;</li> <li>• Properly maintained and operated the construction plant (well-greased, damage and worn parts promptly replaced).</li> </ul> <p>The Contractor was reminded to determine the darkness of smoke generated from mechanical equipment. With comparison to the shade of smoke to the shades on a Ringelmann Chart or other approved devices to ensure the emitting smoke is lighter than shade 1 on the Ringelmann Chart. Referring to the Air Pollution Control (Smoke) Regulations, the Contractor was also reminded to avoid any dark smoke emission generated from mechanical equipment for more than 6 minutes in any period of 4 hours or for more than 3 minutes continuously at any one time; and remove the carbon deposits from the muffler and keep the mesh at the inlet of the air blower clear frequently which could further prevent the dark smoke emission generated from construction machines of construction works in Wah Fu PTW.</p>	The situation is to be kept in view.

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**APPENDIX K**  
**SUMMARY OF EXCEEDANCE**

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## **APPENDIX K – SUMMARY OF EXCEEDANCE**

**Reporting Period:** January to March 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)**