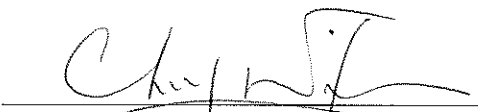


**Contract No. DC/2009/24  
HATS Stage 2A – Upgrading of  
Preliminary Treatment Works at  
Sandy Bay, Cyberport, Wah Fu,  
Aberdeen and Ap Lei Chau**

**Quarterly Environmental  
Monitoring and Audit Report  
October to December 2017**

**(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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CE/Harbour Area Treatment Scheme  
Drainage Services Department  
Sewage Services Branch  
Harbour Area Treatment Scheme Division  
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**Attn: Mr. Danny Tang**

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

**Our Reference**  
GCB/AFK/DC/bw/  
T261332/22.01/L-1325

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

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**Submission of 24<sup>th</sup> Quarterly EM&A Report for October to December 2017  
(v1.0)**

19 April 2018

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Dear Sir,

We refer to the captioned Quarterly EM&A Report for October to December 2017 (v1.0) received on 18 April 2018 and confirm that we have no comment.

Yours faithfully  
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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 24<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/2009/24 HATS Stage 2A with the Environmental Permit (Permit No. EP-322/2008/G) for October to December 2017.
2. The site activities undertaken for in the reporting quarter included:

#### *October 2017:*

- Wah Fu PTW – Boundary wall construction adjacent to sea side, Plumbing installation work in FSGT building, Continuous interim operation and maintenance of new FSGT facilities;
- Ap Lei Chau PTW – Continuous interim operation and maintenance of the ALC PTW, Construction of Remaining Part of Screening and Degritting Facilities and Effluent Pumping Station, Installation the effluent pumping raising main for pump no.1 & 2;
- Aberdeen PTW – Continuous interim operation and maintenance of the ABN PTW, Underground drainage construction, Internal & external finishing works installation inside Admin. & Workshop Building, Modification of existing outfall chamber, DCS cable tray and cabling work from existing inlet pumping station to control room in administration building, Modify the existing switchboard compartments for upgraded plant equipment in existing switch room, Building services installation of Administration Building, Installation of new ACF filter tank;
- Sandy Bay PTW – N/A;
- Cyberport PTW – N/A.

#### *November 2017:*

- Wah Fu PTW – Boundary wall construction adjacent to sea side, Plumbing installation work in FSGT building, Continuous interim operation and maintenance of new FSGT facilities;
- Ap Lei Chau PTW – Continuous interim operation and maintenance of the ALC PTW, Construction of Remaining Part of Screening and Degritting Facilities and Effluent Pumping Station, Installation the effluent pumping raising main for pump no.1 & 2, Staircase construction is progress at Effluent Pumping Station, Installation of cable tray in switch room;
- Aberdeen PTW – Continuous interim operation and maintenance of the ABN PTW, Underground drainage construction, Internal & external finishing works installation inside Admin. & Workshop Building, Modification of existing outfall chamber, DCS cable tray and cabling work from existing inlet pumping station to control room in administration building, Modify the existing switchboard compartments for upgraded plant equipment in existing switch room, Building services installation of Administration Building, Installation of new ACF filter tank;
- Sandy Bay PTW – N/A;
- Cyberport PTW – Irrigation works for landscaping.

#### *December 2017:*

- Wah Fu PTW – Plumbing installation work in FSGT building, Continuous interim operation and maintenance of new FSGT facilities;
- Ap Lei Chau PTW – Continuous interim operation and maintenance of the ALC PTW,

Construction of Remaining Part of Screening and Degritting Facilities and Effluent Pumping Station, Installation the effluent pumping raising main for pump no.1 & 2, Staircase construction is progress at Effluent Pumping Station, Installation of cable tray in switch room;

- Aberdeen PTW – Continuous interim operation and maintenance of the ABN PTW, Underground drainage construction, Internal & external finishing works installation inside Admin. & Workshop Building, DCS cable tray and cabling work from existing inlet pumping station to control room in administration building, Modify the existing switchboard compartments for upgraded plant equipment in existing switch room, Building services installation of Administration Building, Installation of new ACF filter tank;
- Sandy Bay PTW – N/A;
- Cyberport PTW – N/A.

### **Environmental Monitoring Works**

3. The environmental monitoring works of the Project was conducted by the ET for the Contract: DC/2009/24 under HATS 2A with the Environmental Permit and in accordance with the EM&A Manual. The monitoring results were checked and reviewed. Site audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.

### **Air Quality and Noise**

4. The monitoring of air quality monitoring station at Wah Ming House, Wah Fu Estate (CM\_WF1a) and noise monitoring station at Aegean Terrace (M6a), Wah Ming House (M7a) and Wah Ling House (M8) was handed over to Contract No. DC/2009/24 from Contract No. DC/2007/24 in July 2014. The noise monitoring station at Mei Chun Court, South Horizons (M9) was handed over to Contract No. DC/2009/24 from Contract No. DC/2008/09 on 28 July 2014. The air quality and noise monitoring stations was set up by Cinotech Consultants Limited (ET for this project) to monitor the air quality and noise in the vicinity of the sensitive receivers starting from July 2014.
5. Furthermore, the monitoring of air quality monitoring station at The Arcade, Cyberport (CM\_CB1a) and The Hong Kong Ice and Cold Storage (CM\_AB1a) were handed over to Contract No. DC/2009/24 from Contract No. DC/2007/24 in August 2014. The air quality monitoring stations was set up by Cinotech Consultants Limited (ET for this project) to monitor the air quality in the vicinity of the sensitive receivers starting from August 2014.
6. However, the air quality monitoring at CM\_AB1a had been rejected and could not be continued, the proposed location (CM\_AB1b – Works Site Boundary of Aberdeen PTW) was approved by ER on 22 July 2014 and approved by EPD on 5 December 2014. The air quality monitoring stations was set up by Cinotech Consultants Limited (ET for this project) to monitor the air quality and noise in the vicinity of the sensitive receivers starting from August 2014. The location of CM\_AB1b is shown in **Figure 1c-2**.

### **Noise (Sandy Bay PTW)**

7. The Proposal for Termination of Construction Phase EM&A Works for Contract No. DC/2007/24 was submitted by its ET to EPD in July 2015. The proposal, including the termination of noise monitoring at Chuk Lam Ming Tong (M5), was approved by the EPD on

27 July 2015. The result of noise monitoring at M5 would not be reported from 27 July 2015 , based on section 15.11 of the EM&A Manual of this Project as below:

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

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

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

Monitoring Station	Parameter	No. of Exceedance		No. of Exceedance Due to the Project		Action Taken
		Action Level	Limit Level	Action Level	Limit Level	
CM_CB1a	1-hr TSP	0	0	0	0	N/A
	24-hr TSP	0	0	0	0	N/A
CM_WF1a	1-hr TSP	0	0	0	0	N/A
	24-hr TSP	0	0	0	0	N/A
CM_AB1b	1-hr TSP	0	0	0	0	N/A
	24-hr TSP	0	0	0	0	N/A
M6a	Noise (Day Time)	0	0	0	0	N/A
M7a		0	0	0	0	N/A
M8		0	0	0	0	N/A
M9		0	0	0	0	N/A

*1-hour TSP Monitoring*

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

*24-hour TSP Monitoring*

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

*Construction Noise*

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

**Environmental Complaint and Prosecution**

12. There was no environmentally related summons, prosecutions or complaints received for the Project in the reporting quarter. And six complaints were already received since the Project commencement. The Complaint Log is presented in **Appendix J**.



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**Environmental Licenses and Permits**

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

**Future Key Issues:**

14. Major site activities for the coming two months include:
- Wah Fu PTW: Operation of New Treatment Plant;
  - Aberdeen PTW: Operation of PTW, Finishing Works of the Workshop and Administration Building, Building Service Installation of the Workshop and Administration Building, Road & Drainage Works along access road, Erection of 5m<sup>3</sup> Skip Enclosure, Construction of Cable Drawpits and Cable Ducts, Boundary Wall Fencing and Footing, Green roof installation;
  - Ap Lei Chau PTW: Operation of PTW, Building Service installation of Screening and Degritting Facilities and Effluent Pumping Station, Boundary Wall Fencing and Footing, Finishing Works of Screening and Degritting Facilities and Effluent Pumping Station;
  - Sandy Bay PTW: N/A; and
  - Cyberport PTW: N/A.
15. The environmental concerns in coming months are mainly on chemicals storage, surface run off, spillage of wastewater during rainstorm and dust generated from the construction works.

## 1. INTRODUCTION

### Background

- 1.1 The Project ‘HATS Stage 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau’ with Contract No: DC/2009/24 mainly comprises the following major works:
  - The construction of screens, grit traps, deodourisation rooms, workshop and administration buildings, and modification of existing inlet pumping stations at the preliminary treatment works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau.
- 1.2 The general location plan of the Project is shown in **Figure 1**.
- 1.3 The Project is under Harbour Area Treatment Scheme (HATS) Stage 2A and is a designated project (Register No. : AEIAR-121/2008). The environmental permit: (Permit No. EP-322/2008/G) which was issued on 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 24<sup>th</sup> quarterly EM&A report summarizing the EM&A works conducted for the Project in October to December 2017.

## 2 PROJECT CHARACTERISTICS

### Project Organization and Contacts of Key Management

- 2.1 Different parties with different levels of involvement in the project organization include:
- Project Proponent – The Drainage Services Department (DSD)
  - Engineer’s Representative (ER) – Ove Arup & Partners Hong Kong Ltd.
  - Contractor – Leader and JEC Joint Venture (LJJV)
  - Environmental Team (ET) – Cinotech Consultants Ltd.
  - Independent Environmental Checker (IEC) – Mott MacDonald Hong Kong Ltd.
- 2.2 The key contacts of the Project and the ET organization chart and are shown in **Appendix A** and **Figure 2**.

### Construction Programme and Synopsis of Work

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

#### *October 2017:*

- Wah Fu PTW – Boundary wall construction adjacent to sea side, Plumbing installation work in FSGT building, Continuous interim operation and maintenance of new FSGT facilities;
- Ap Lei Chau PTW – Continuous interim operation and maintenance of the ALC PTW, Construction of Remaining Part of Screening and Degritting Facilities and Effluent Pumping Station, Installation the effluent pumping raising main for pump no.1 & 2;
- Aberdeen PTW – Continuous interim operation and maintenance of the ABN PTW, Underground drainage construction, Internal & external finishing works installation inside Admin. & Workshop Building, Modification of existing outfall chamber, DCS cable tray and cabling work from existing inlet pumping station to control room in administration building, Modify the existing switchboard compartments for upgraded plant equipment in existing switch room, Building services installation of Administration Building, Installation of new ACF filter tank;
- Sandy Bay PTW – N/A;
- Cyberport PTW – N/A.

#### *November 2017:*

- Wah Fu PTW – Boundary wall construction adjacent to sea side, Plumbing installation work in FSGT building, Continuous interim operation and maintenance of new FSGT facilities;
- Ap Lei Chau PTW – Continuous interim operation and maintenance of the ALC PTW, Construction of Remaining Part of Screening and Degritting Facilities and Effluent Pumping Station, Installation the effluent pumping raising main for pump no.1 & 2, Staircase construction is progress at Effluent Pumping Station, Installation of cable tray in switch room;
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- Sandy Bay PTW – N/A;
- Cyberport PTW – Irrigation works for landscaping.

*December 2017:*

- Wah Fu PTW –Plumbing installation work in FSGT building, Continuous interim operation and maintenance of new FSGT facilities;
- Ap Lei Chau PTW – Continuous interim operation and maintenance of the ALC PTW, Construction of Remaining Part of Screening and Degritting Facilities and Effluent Pumping Station, Installation the effluent pumping raising main for pump no.1 & 2, Staircase construction is progress at Effluent Pumping Station, Installation of cable tray in switch room;
- Aberdeen PTW – Continuous interim operation and maintenance of the ABN PTW, Underground drainage construction, Internal & external finishing works installation inside Admin. & Workshop Building, DCS cable tray and cabling work from existing inlet pumping station to control room in administration building, Modify the existing switchboard compartments for upgraded plant equipment in existing switch room, Building services installation of Administration Building, Installation of new ACF filter tank;
- Sandy Bay PTW – N/A;
- Cyberport PTW – N/A.

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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 this Project.

#### **Environmental Quality Performance Limits (Action and Limit Levels)**

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

#### **Environmental Mitigation Measures**

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

**4. MONITORING RESULTS**

**Weather Conditions**

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

**Air Quality**

*1-hr TSP Monitoring and 24-hr TSP Monitoring*

- 4.2 No Action/Limit Level exceedance was recorded in the reporting quarter. Summary of exceedance is presented in **Appendix K**.
- 4.3 **Table 4.1** summarizes the dust monitoring results which were extracted from the monthly reports for this Project.
- 4.4 The detailed monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results could be referred to **Appendix E** of this report.

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

Reporting Months	Air Quality Monitoring Station	Average $\mu\text{g}/\text{m}^3$	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					
October 2017	CM_CB1a	101	11-153	280	500
	CM_WF1a	97	15-153	285	
	CM_AB1b	111	13-175	283	
November 2017	CM_CB1a	141	13-222	280	
	CM_WF1a	132	29-231	285	
	CM_AB1b	159	15-255	283	
December 2017	CM_CB1a <sup>(1)</sup>	16	15-18	280	
	CM_WF1a	60	11-232	285	
	CM_AB1b	62	13-255	283	
24 hours TSP					
October 2017	CM_CB1a	73	50-111	178	260
	CM_WF1a	56	37-106	185	
	CM_AB1b	82	53-131	174	
November 2017	CM_CB1a	110	48-151	178	
	CM_WF1a	79	31-127	185	
	CM_AB1b	71	50-115	174	
December 2017	CM_CB1a <sup>(1)</sup>	148	148-148	178	
	CM_WF1a	130	109-153	185	
	CM_AB1b	120	100-137	174	

Remark 1: The termination of air quality monitoring at CM\_CB1a – The Arcade, Cyberport was approved by EPD on 7 December 2017.

**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 this Project.
- 4.8 The construction noise monitoring at the designated locations was conducted by the ET of this Project as scheduled in the reporting quarter. The monitoring results and graphical presentation are provided in **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.)
October 2017	M6a	51-57 <sup>(1)</sup>	75.0
	M7a	52-59	
	M8	56-64	
	M9	45-58	
November 2017	M6a	52-56 <sup>(1)</sup>	
	M7a	52-59	
	M8	54-66	
	M9	49-60	
December 2017	M6a <sup>(2)</sup>	66-66 <sup>(1)</sup>	
	M7a	56-59	
	M8	58-64	
	M9	46-67	

Remarks:

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

(2)The termination of noise monitoring at M6a – Aegean Terrace was approved by EPD on 7 December 2017.

**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	171013-R01	The sediment in the U-channel should be cleared properly and regularly at Wah Fu-PTW.	The sediment in the U-channel was cleared at Wah Fu-PTW.
	171027-R02	The bund should be improved to prevent the slurry water runoff from the site boundary of ALC-PTW.	The bund was improved at ALC-PTW.
	171208-R01	The debris and construction waste should be cleared regularly and properly near the seafront at Abd-PTW.	The debris and construction waste was cleared regularly and properly near the seafront at Abd-PTW.
Air Quality	171013-R02	The mixing activity should be done in the enclosed area at Wah Fu-PTW.	Please refer to 171020-R01.
	171020-R01	The mixing activity should be done in the enclosed area at Wah Fu-PTW.	The mixing activity was not observed at Wah Fu-PTW.
	171027-R01	The dusty material should be covered by impervious material to prevent the dust emission at Cyberport-PTW.	The dusty material was covered at Cyberport-PTW.
	171103-R02	The dusty stockpiles should be covered by impervious material to prevent the dust emission at Abd-PTW.	Please refer to 171110-R02.
	171103-R03	The mixing activity should be done in the proper enclosed area at Abd-PTW.	The mixing activity was not observed at Abd-PTW.
	171110-R02	The dusty stockpiles should be covered by impervious material to prevent the dust emission at Abd-PTW.	The dusty stockpiles was covered by impervious material at Abd-PTW.
	171124-R01	The dusty material should be cleared properly at ALC-PTW.	Please refer to 171201-R01.
	171201-R01	The dusty material should be cleared properly at ALC-PTW.	The dusty material was cleared and covered by impervious material at ALC-PTW.
Waste/ Chemical Management	171013-O03	The oil leakage was observed from the excavators at Abd-PTW. The Contractor was reminded to provide the maintenance and clear the oil stain properly.	The oil leakage was not observed from the excavators at Abd-PTW.



	171027-R03	The drip tray should be provided for the chemical container at Abd-PTW.	The drip tray was provided for the chemical container at Abd-PTW.
	171110-R01	The drip tray should be provided for the chemical container to prevent the oil leakage at Abd-PTW.	The chemical container was cleared and not observed at Abd-PTW.
	171229-R01	The chemical container should be provided with the drip tray at Abd-PTW.	The chemical container was moved and not observed at Abd-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 October to December 2017 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 Construction Noise was recorded in the reporting quarter.

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

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

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

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

## 7 ENVIRONMENTAL COMPLAINTS

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

### 7.2 Sandy Bay PTW:

There was no environmental prosecution or notification of summons since the Project commencement. The updated Complaint Log is attached in **Appendix J**.

### Cyberport PTW:

There was no environmental prosecution or notification of summons since the Project commencement. The updated Complaint Log is attached in **Appendix J**.

### Wah Fu PTW:

There was no environmental prosecution or notification of summons in the reporting month while five complaints were already received since the Project commencement. The updated Complaint Log is attached in **Appendix J**.

### Aberdeen PTW:

There was no environmental prosecution or notification of summons since the Project commencement. The updated Complaint Log is attached in **Appendix J**.

### Ap Lei Chau PTW:

There was no environmental prosecution or notification of summons in the reporting month while one complaint was already received since the Project commencement. 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;
- 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 Quality*

- The bund should be provided to prevent the muddy/slurry water runoff near the site area;
- The sediment/silt should be cleared properly and regularly in the U-channel in the site area; and
- The debris and construction waste should be cleared regularly and properly near the seafront.

#### *Air Quality*

- The dusty material should be covered by impervious material to prevent the dust generation in the site area; and
- The proper enclosed area should be provided for the main dust-generating activities in the site area.

#### *Waste/ Chemical Management*

- The drip tray should be provided for the chemical containers to prevent the chemical/oil spillage in the site area; and
- The maintenance of the excavators should be provided to prevent the oil spillage in the site area.

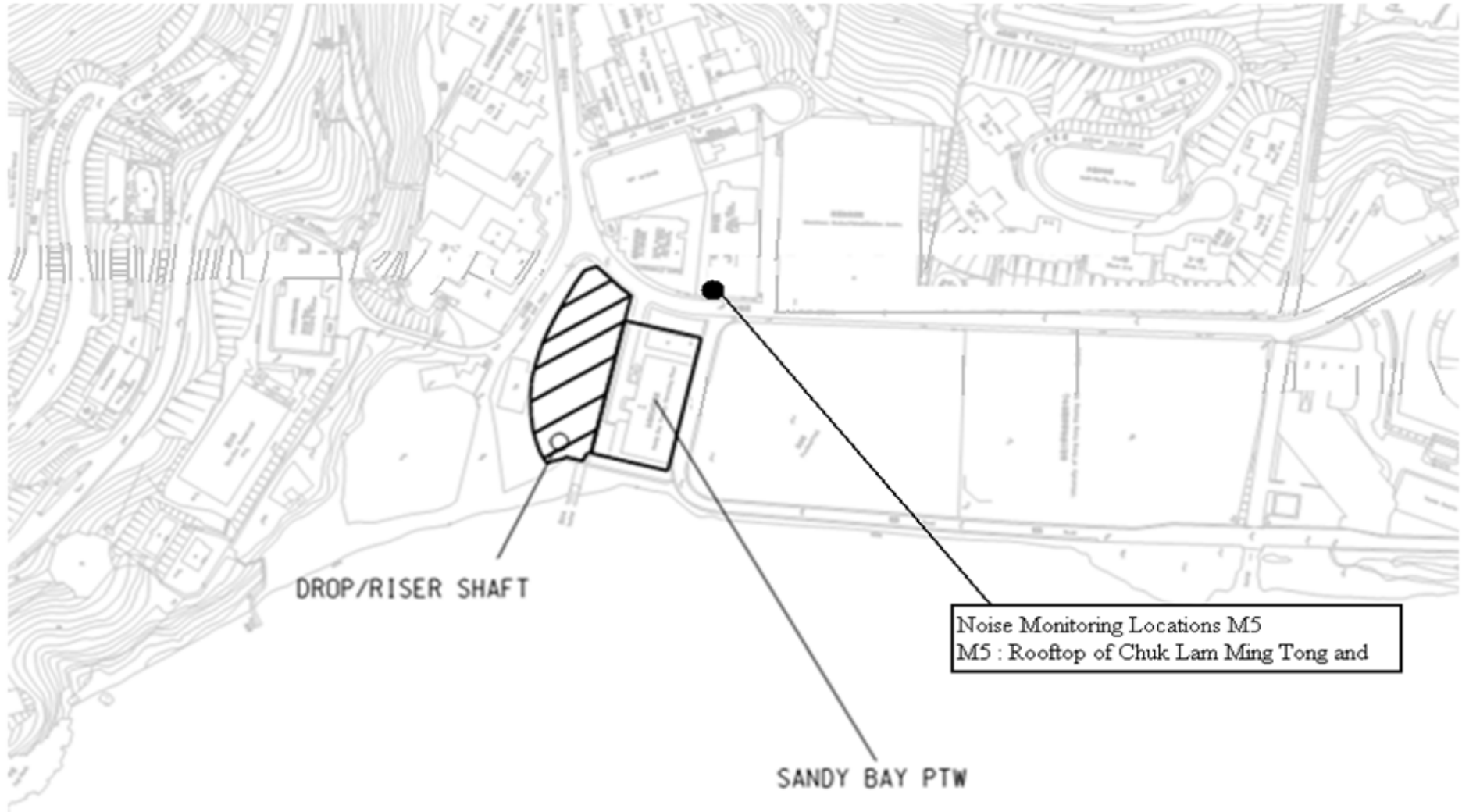
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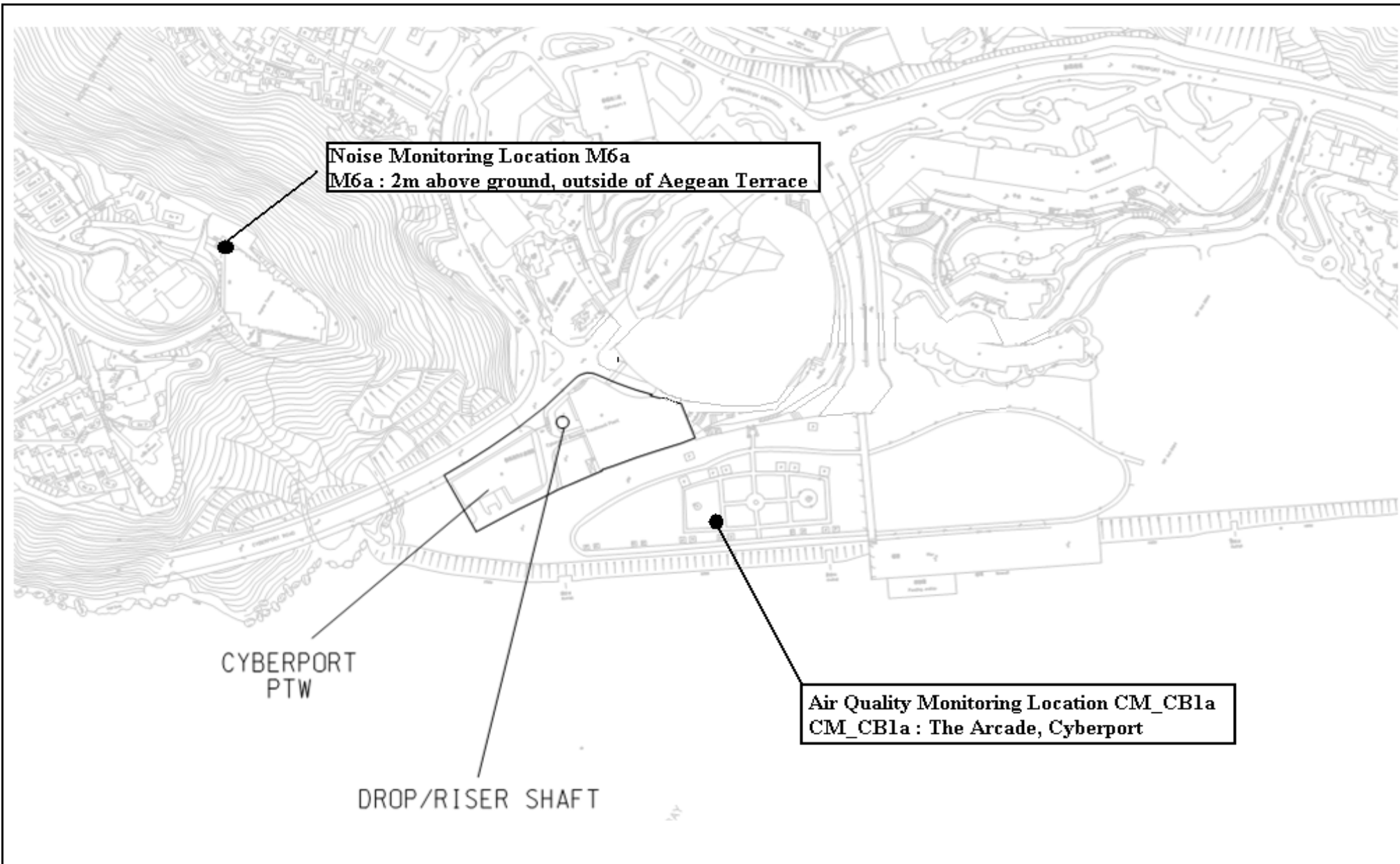
## FIGURES

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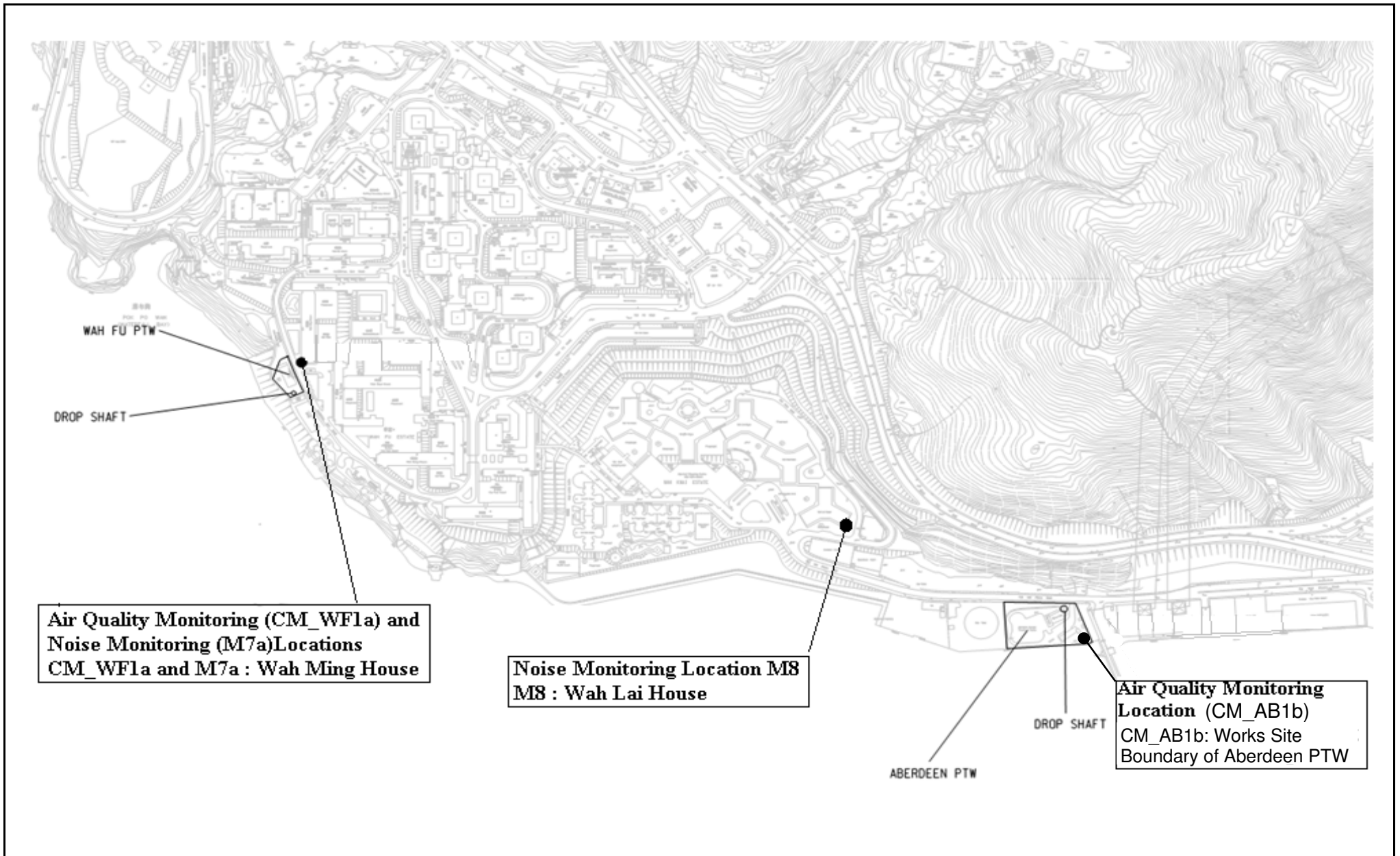
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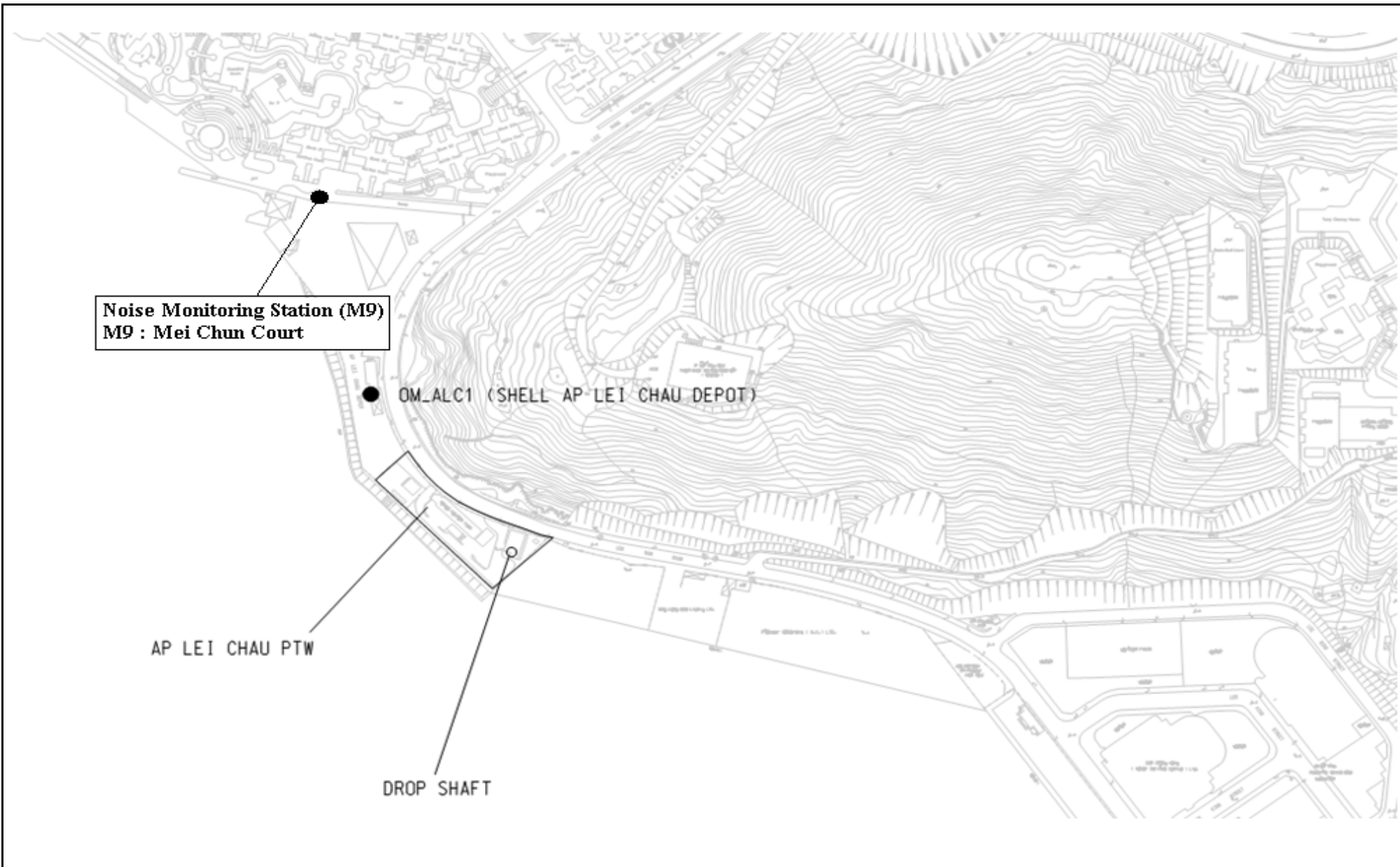
Title	Contract No: DC/2009/24	Scale	Project	CINOTECH
	HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	N.T.S	No. MA11060	
	General Location Plan of Sandy Bay PTW and Locations of Noise Monitoring Stations	Date	Figure	
		01/2012	1a	



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	

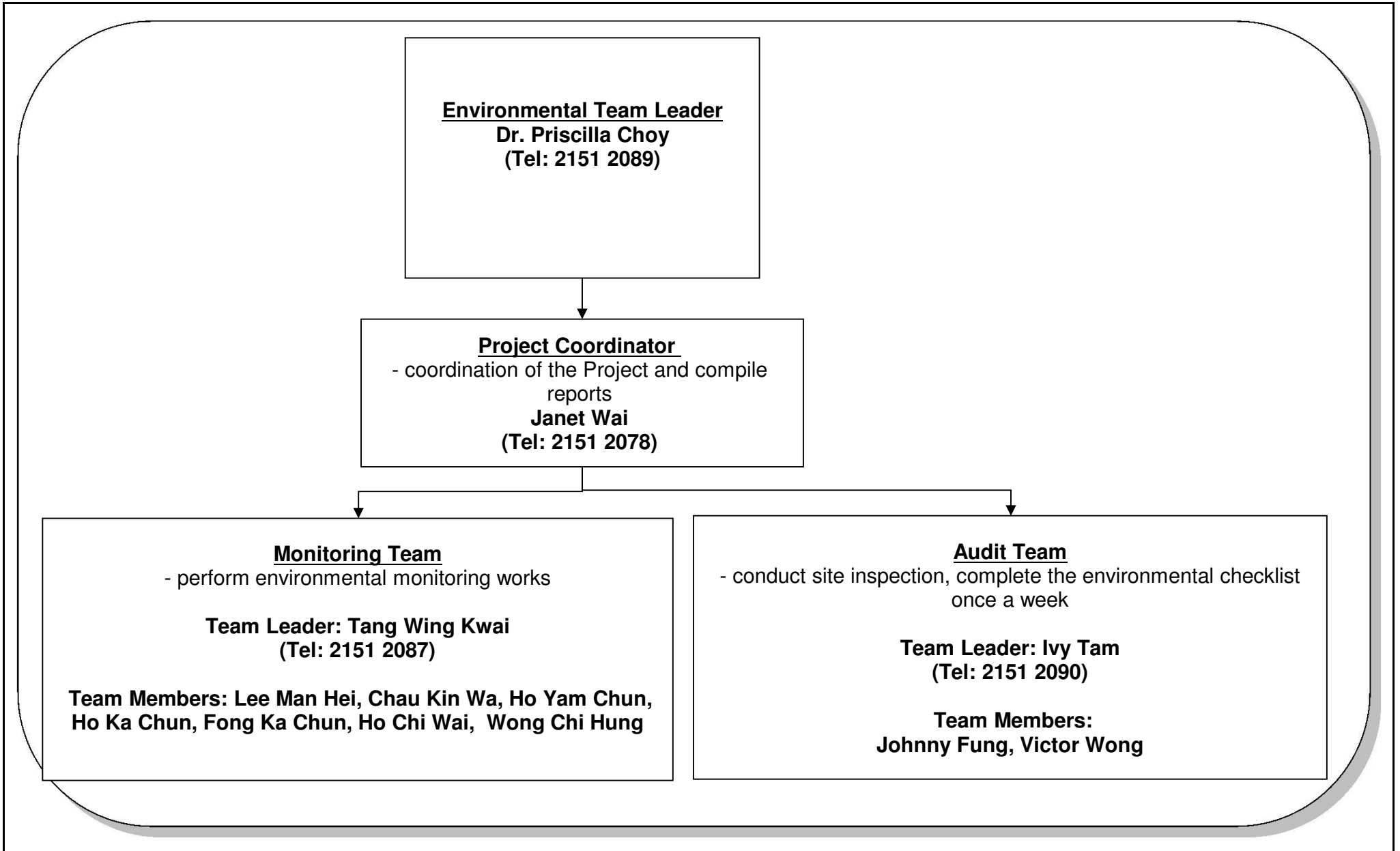


Title	Contract No: DC/2009/24	Scale	Project	CINOTECH
	HATS 2A - Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau	N.T.S	No. MA11060	
	Location of Wah Fu and Aberdeen PTW and Locations of Air Quality and Noise Monitoring Locations	Date	Figure	
		07/2014	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	2157 3879
Mott MacDonald	Independent Environmental Checker	Dr. Anne Kerr	Independent Environmental Checker	2828 5757
Leader and JEC Joint Venture	Contractor	Mr. Kelvin Cheung	Site Agent	9656 8865
		Ms. S.P. Ngan	Environmental Officer	9516 9431

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

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Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	November 2017					December 2017					January 2018				February 2018			
						23	30	06	13	20	27	04	11	18	25	01	08	15	22	29	05	12	19
<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	14-Mar-18																		
<b>Portion of the Site (MILESTONE)</b>																							
<b>Aberdeen PTW</b>																							
Possession / Vacation of Portions																							
24MABN00020	Vacation Date_ABN-1 (28 days after Completion of Section 6)	0%	0		03-Jan-18*	◆ Vacation Date_ABN-1 (28 days after Completion of Section 6)																	
24MABN00040	Vacation Date_ABN-2 (28 days after Completion of Section 6)	0%	0		03-Jan-18*	◆ Vacation Date_ABN-2 (28 days after Completion of Section 6)																	
24MABN00060	Vacation Date_ABN-3 (28 days after Completion of Section 6)	0%	0		03-Jan-18*	◆ Vacation Date_ABN-3 (28 days after Completion of Section 6)																	
24MABN00080	Vacation Date_ABN-4 (28 days after Completion of Section 6)	0%	0		03-Jan-18*	◆ Vacation Date_ABN-4 (28 days after Completion of Section 6)																	
24MABN00082	Vacation Date_ABN-5 (28 days after Completion of Section 6)	0%	0		03-Jan-18*	◆ Vacation Date_ABN-5 (28 days after Completion of Section 6)																	
<b>Ap Lei Chau PTW</b>																							
Possession / Vacation of Portions																							
24MALC00040	Vacation Date_ALC-T1 (28 days after Completion of Section 6)	0%	0		03-Jan-18*	◆ Vacation Date_ALC-T1 (28 days after Completion of Section 6)																	
24MALC00060	Vacation Date_ALC-T2 (28 days after Completion of Section 6)	0%	0		03-Jan-18*	◆ Vacation Date_ALC-T2 (28 days after Completion of Section 6)																	
<b>Civil &amp; Geo. Submission</b>																							
<b>Contractor's Design, Submission / Approval &amp; Procurement</b>																							
Technical Information & Drawings																							
Wah Fu																							
Major Technical Data / Civil Works Design																							
24DWFU00390	Approval of Design for Landscaping Works	0%	14	23-Nov-17	06-Dec-17	Approval of Design for Landscaping Works																	
24DWFU00490	Approval of Design for Modification of Boundary Fence	0%	14	06-Oct-16 A	01-Dec-17	Approval of Design for Modification of Boundary Fence																	
Aberdeen																							
Major Technical Data / Civil Works Design																							
24DABN00500	Prepare / Submission of Design for Landscaping Works	0%	40	04-Jul-16 A	29-Nov-17	Prepare / Submission of Design for Landscaping Works																	
24DABN00510	Review / Approval of ICE Design for Landscaping Works	0%	20	30-Nov-17	19-Dec-17	Review / Approval of ICE Design for Landscaping Works																	
24DABN00520	Comments / Approval of Design for Landscaping Works	0%	28	20-Dec-17	16-Jan-18	Comments / Approval of Design for Landscaping Works																	
24DABN00530	Review / Resubmit of Design for Landscaping Works	0%	28	17-Jan-18	13-Feb-18	Review / Resubmit of Design for Landscaping Works																	
24DABN00540	Approval of Design for Landscaping Works	0%	14	14-Feb-18	27-Feb-18	Approval of Design for Landscaping Works																	
24DABN00560	Review / Approval of ICE Design for Modification of Boundary Fence	0%	20	23-Nov-17	12-Dec-17	Review / Approval of ICE Design for Modification of Boundary Fence																	
24DABN00580	Review / Resubmit of Design for Modification of Boundary Fence	0%	28	25-Jan-17 A	12-Dec-17	Review / Resubmit of Design for Modification of Boundary Fence																	
24DABN00590	Approval of Design for Modification of Boundary Fence	0%	14	13-Dec-17	26-Dec-17	Approval of Design for Modification of Boundary Fence																	
<b>Electrical and Mechanical Submission</b>																							
<b>Contractor's Design, Submission / Approval and Procurement</b>																							
Technical Information & Drawings																							
Ap Lei Chau																							
Order / Manufacturing / Shipment / Delivery																							
24PALC01265	FAT of Deodorization System	100%	30	01-May-17 A	30-Oct-17 A	FAT of Deodorization System																	
24PALC01270	Packaging / Delivery of Deodorization System	100%	7	31-Oct-17 A	07-Nov-17 A	Packaging / Delivery of Deodorization System																	

Start Date: 25-Jun-11  
 Finish Date: 14-Mar-19  
 Date Date: 23-Nov-17  
 Run Date: 27-Nov-17

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

HATSS2A Contract No. DC/2009/24

**3 MONTHS ROLLING PROGRAMME**

**NOVEMBER 2017**

DETAILED WORKS PROGRAMME - DC/2009/24			
Date	Revision	Checked	Approved
14-Dec-12	DWP - REVISION 2		
17-Jun-14	DWP - REVISION 3 (S5, 6 & 7)		
06-Apr-16	DWP - REVISION 4		
15-May-17	DWP - REVISION 5		
23-Nov-17	UDWP - REVISION 5		

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	November 2017					December 2017					January 2018				February 2018					
						23	30	06	13	20	27	04	11	18	25	01	08	15	22	29	05	12	19	26	
24PALC01360	Manufacturing of Instruments	100%	110	04-Apr-16 A	26-Oct-17 A	Manufacturing of Instruments																			
24PALC01370	Packaging / Delivery of Instruments	100%	7	27-Oct-17 A	02-Nov-17 A	Packaging / Delivery of Instruments																			
24PALC01410	Packaging / Delivery of DCS Control System	100%	1	23-Oct-17 A	23-Oct-17 A	Packaging / Delivery of DCS Control System																			
<b>Cyberport PTW</b>																									
<b>Walkway Construction (Variation Order)</b>																									
24CPTVO-00300	Install the irrigation system	100%	10	03-Oct-17 A	11-Nov-17 A	Install the irrigation system																			
<b>Wah Fu PTW</b>																									
<b>Key Dates</b>																									
Statutory and Utility Applications and Approvals																									
Fire Services Department (FSD)																									
24WFU1111	Remedial works as per FSD inspection comment	100%	14	05-Sep-17 A	31-Oct-17 A	Remedial works as per FSD inspection comment																			
24WFU1112	2nd round on site inspection of FSD	100%	7	01-Nov-17 A	13-Nov-17 A	2nd round on site inspection of FSD																			
24WFU1113	Issuance of FS Completion certificate	0%	14	14-Nov-17 A	08-Dec-17	Issuance of FS Completion certificate																			
<b>Works for Section 4</b>																									
Remaining Works After Early Flow Turning																									
Finishing Works																									
24WFOU2270A30	Installation of Irrigation System and Green Roof	100%	66	13-Jan-17 A	03-Nov-17 A	Installation of Irrigation System and Green Roof																			
Roadworks, Landscape and Modification of Fence																									
Roadworks																									
24WFOU2300A40	Roadworks (footpath around FS & GT Bldg)	100%	45	16-Jan-17 A	18-Nov-17 A	Roadworks (footpath around FS & GT Bldg)																			
Landscaping Works																									
24WFOU2300A50	Grasscrete and Soft landscaping works	30%	60	06-Jul-17 A	30-Dec-17	Grasscrete and Soft landscaping works																			
Modification of Fence																									
24WFOU2320A30	Installation of Ceramic Face or natural stone facing on boundary fence	100%	45	24-Jul-17 A	11-Nov-17 A	Installation of Ceramic Face or natural stone facing on boundary fence																			
24WFOU2320A40	Installation of Synthetic diagonal timber board fencing	0%	45	24-Jul-17 A	30-Dec-17	Installation of Synthetic diagonal timber board fencing																			
24WFOU2320A50	Installation of gate	100%	13	06-Nov-17 A	20-Nov-17 A	Installation of gate																			
Completion of Works in Section 4																									
Hand Over Date																									
24WFOU3255	Wah Fu PTW (completion of maintenance period)	0%	0		30-Dec-17*	Wah Fu PTW (completion of maintenance period)																			
Trainings for DSD Staff																									
24WFOU4100	Final Training of DSD staff for modified control system	0%	3	23-Nov-17	25-Nov-17	Final Training of DSD staff for modified control system																			
<b>Aberdeen PTW</b>																									
<b>Key Dates</b>																									
Time of Completion																									
24ABN00310	Time for Completion of Section 6	0%	1309	31-Aug-11 A	06-Dec-17	Time for Completion of Section 6																			
Statutory and Utility Applications and Approvals																									
Fire Services Department (FSD)																									
24ABN00420	Prepare / Submit Application for FSD Inspection	0%	90	03-Oct-16 A	30-Nov-17	Prepare / Submit Application for FSD Inspection																			
24ABN00430	1st round on-site inspection by FSD	0%	3	01-Dec-17	04-Dec-17	1st round on-site inspection by FSD																			
24ABN00431	Remedial works as per FSD inspection comment	0%	7	05-Dec-17	12-Dec-17	Remedial works as per FSD inspection comment																			
24ABN00432	2nd round on-site inspection by FSD	0%	3	02-Jan-18	04-Jan-18	2nd round on-site inspection by FSD																			
24ABN00433	Issuance of FS completion certificate	0%	3	05-Jan-18	08-Jan-18	Issuance of FS completion certificate																			
<b>Works for Section 5</b>																									
FS & GT Bldg - Grit Trap No. 2 incl. Middle Chamber (Stage 3)																									
Electrical and Mechanical Works																									
Electrical Works																									

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	November 2017					December 2017					January 2018					February 2018								
						23	30	06	13	20	27	04	11	18	25	01	08	15	22	29	05	12	19	26					
24ABN03936	Modification / installation of power, control & indication circuitry in existing switchboard (for weather & H2S)	0%	2	23-Nov-17	24-Nov-17																								
24ABN03937	Cable tray installation of weather and H2S monitoring station	0%	12	23-Nov-17	06-Dec-17																								
24ABN03938	Cable laying for weather and H2S monitoring station	0%	16	28-Nov-17	15-Dec-17																								
24ABN03939	Megger test in cables for weather and H2S monitoring station	0%	7	16-Dec-17	23-Dec-17																								
24ABN03940	Cable termination for weather and H2S monitoring station	0%	7	27-Dec-17	03-Jan-18																								
<b>Control and Monitoring Services incl. Instrumentation</b>																													
24ABN03917	Installation of weather monitoring station	0%	14	23-Nov-17	08-Dec-17																								
24ABN03918	Installation of H2S monitoring sensors	0%	33	23-Nov-17	02-Jan-18																								
<b>Preliminary Testing and Commissioning</b>																													
<b>Control and Monitoring Services incl. Instrumentation</b>																													
24ABN03952	SAT of weather and H2S monitoring station	0%	14	04-Jan-18	19-Jan-18																								
<b>Completion of Works in Section 5</b>																													
<b>Final Testing and Commissioning</b>																													
24ABN01730	Final Testing and Commissioning of upgraded Grit Traps and Fine Screen	0%	30	07-Dec-17*	05-Jan-18																								
<b>Hand Over Date</b>																													
24ABN03219	Aberdeen PTW - Fine Screen & Grit Trap Building (completion of maintenance period)	0%	0		19-Jan-18*																								
<b>Submission of Manuals</b>																													
24ABN4020	As-Built Drawings Submission / Approval for Aberdeen PTW - Fine Screen and Grit Trap Building	0%	60	01-Aug-17 A	30-Dec-17																								
<b>Trainings for DSD Staff</b>																													
24ABN4030	Interim Training of DSD	0%	3	07-Dec-17	09-Dec-17																								
24ABN4040	Final Training of DSD	0%	3	30-Dec-17	01-Jan-18																								
<b>Works for Section 6</b>																													
<b>Workshop and Administration Building</b>																													
<b>Interface between Civil / ABWF / E&amp;M Works</b>																													
24MABN00560	Completion of E&M works	0%	0		06-Dec-17																								
<b>Temporary Works / Demolition Works</b>																													
24ABN00745C70	Relocate from temporary office to new Admin & Workshop Building	0%	12	13-Dec-17	28-Dec-17																								
24ABN00745C80	Demolition of temporary office	0%	10	29-Dec-17	09-Jan-18																								
<b>Civil Works</b>																													
<b>Finishing Works (Internal and External)</b>																													
24ABN02230B10	Ceiling Finishes at 1st Floor (Suspended Board) after E&M	100%	7	23-Oct-17 A	31-Oct-17 A																								
24ABN02230B50	Installation of Roller Shutter at Ground Floor	0%	30	23-Nov-17	29-Dec-17																								
24ABN02230B60	Installation of Doors, Windows and Louver at Ground Floor	0%	30	03-Jul-17 A	19-Dec-17																								
24ABN02230B70	Installation of Doors, Windows and Louver at 1st Floor	0%	30	07-Aug-17 A	29-Dec-17																								
24ABN02230B90	Installation of railing at stairs	100%	30	23-Oct-17 A	18-Nov-17 A																								
24ABN02240A40	Installation of Irrigation System and Green Roof	0%	100	05-Jun-17 A	29-Dec-17																								
<b>Electrical and Mechanical Works</b>																													
<b>Electrical Works</b>																													
24ABN04337	Megger test for electrical services	100%	24	01-Aug-17 A	31-Oct-17 A																								
24ABN04338	Cable termination for electrical services	100%	24	11-Sep-17 A	31-Oct-17 A																								
24ABN04344	Cable laying for emergency generator set	100%	10	18-Sep-17 A	31-Oct-17 A																								
24ABN04345	Megger test in cables for generator switchboard	100%	4	01-Nov-17 A	04-Nov-17 A																								
24ABN04346	Cable termination for generator switchboard	100%	3	06-Nov-17 A	08-Nov-17 A																								
24ABN04349	Megger test in cables for UPS system	100%	3	23-Oct-17 A	25-Oct-17 A																								
24ABN04350	Cable termination for UPS system	100%	3	26-Oct-17 A	30-Oct-17 A																								
<b>Control and Monitoring Services incl. Instrumentation</b>																													

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	November 2017					December 2017					January 2018				February 2018					
						23	30	06	13	20	27	04	11	18	25	01	08	15	22	29	05	12	19	26	
24ABN4860	PLC programming and SCADA editing	0%	30	07-Sep-17 A	30-Nov-17	PLC programming and SCADA editing																			
24ABN4870	Migration of existing DCS system to newly installed DCS system	0%	5	01-Dec-17	06-Dec-17	Migration of existing DCS system to newly installed DCS system																			
24ABN4880	DCS interface with contract DC/2009/10	0%	34	07-Sep-17 A	06-Dec-17	DCS interface with contract DC/2009/10																			
<b>Fire Protection / Detection System</b>																									
24ABN04547	Installation of fire exit sign	100%	45	24-Jul-17 A	31-Oct-17 A	Installation of fire exit sign																			
24ABN04548	Installation of fire extinguisher	0%	7	23-Nov-17	30-Nov-17	Installation of fire extinguisher																			
24ABN04549	Installation of water pump for hose reel system	100%	30	24-Jul-17 A	31-Oct-17 A	Installation of water pump for hose reel system																			
24ABN04550	Installation of water pipe for hose reel system	100%	45	24-Jul-17 A	31-Oct-17 A	Installation of water pipe for hose reel system																			
24ABN04551	Installation of hose reel	100%	20	09-Oct-17 A	31-Oct-17 A	Installation of hose reel																			
24ABN04552	Installation of water pump for sprinkler system	100%	30	24-Jul-17 A	25-Oct-17 A	Installation of water pump for sprinkler system																			
24ABN04553	Installation of water pipe for sprinkler system	100%	45	24-Jul-17 A	31-Oct-17 A	Installation of water pipe for sprinkler system																			
<b>Roadworks, Landscape and Modification of Fence</b>																									
<b>Roadworks</b>																									
24ABN02320A05	U/G drainage and sewerage	100%	45	16-Jan-17 A	16-Dec-17	U/G drainage and sewerage																			
24ABN02320A07	Abandoned and filled of existing drainage and sewerage	0%	14	18-Dec-17	04-Jan-18	Abandoned and filled of existing drainage and sewerage																			
24ABN02320A10	Roadworks	0%	60	24-Aug-17 A	04-Jan-18	Roadworks																			
<b>Landscaping Works</b>																									
24ABN02320A20	Landscaping (Shurbs planting)	0%	80	24-Nov-17*	27-Feb-18	Landscaping (Shurbs planting)																			
24ABN02320A30	Planting of new tree	0%	60	18-Dec-17	27-Feb-18	Planting of new tree																			
24ABN02330A10	Tree Transplantation from off site to site area	0%	60	18-Dec-17*	27-Feb-18	Tree Transplantation from off site to site area																			
<b>Modification of Fence</b>																									
24ABN02325A10	Demolition on some part of existing boundary fence	0%	30	24-Aug-17 A	19-Dec-17	Demolition on some part of existing boundary fence																			
24ABN02325A20	Construct new boundary fence	0%	30	02-Sep-17 A	30-Dec-17	Construct new boundary fence																			
24ABN02325A30	Installation of Ceramic Face or natural stone facing on boundary fence	0%	40	01-Jan-18	15-Feb-18	Installation of Ceramic Face or natural stone facing on boundary fence																			
24ABN02325A40	Installation of Synthetic diagonal timber board fencing	0%	40	01-Jan-18	15-Feb-18	Installation of Synthetic diagonal timber board fencing																			
<b>Completion of Works for Section 6</b>																									
<b>Final Testing and Commissioning</b>																									
24ABN03225	Final Testing and Commissioning of Aberdeen PTW	0%	30	07-Dec-17	05-Jan-18	Final Testing and Commissioning of Aberdeen PTW																			
<b>Hand Over Date</b>																									
24ABN03260	Completion of the works for section 6 - Aberdeen PTW	0%	0		06-Dec-17	Completion of the works for section 6 - Aberdeen PTW																			
<b>Submission of Manuals</b>																									
24ABN4760	Preparation / Submission of final O&M manuals	0%	90	05-Aug-17 A	01-Dec-17	Preparation / Submission of final O&M manuals																			
24ABN4770	As-Built Drawings Submission / Approval for Aberdeen PTW - Workshop and Administration Building	0%	60	01-Sep-17 A	31-Dec-17	As-Built Drawings Submission / Approval for Aberdeen PTW - Workshop and Administration Building																			
<b>Trainings for DSD Staff</b>																									
24ABN4780	Interim Training of DSD	0%	3	23-Nov-17*	25-Nov-17	Interim Training of DSD																			
24ABN4790	Final Training of DSD	0%	3	17-Dec-17	19-Dec-17	Final Training of DSD																			
<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	14-Mar-18	Time for Completion of Section 7																			
24ALC00302	Claim for Additional Extension of Time - under review	0%	657	31-Mar-15 A	14-Mar-18	Claim for Additional Extension of Time - under review																			
<b>Statutory and Utility Applications and Approvals</b>																									
<b>Fire Services Department (FSD)</b>																									
24ALC00410	Prepare / Submit Application for FSD Inspection	0%	60	24-May-17 A	13-Jan-18	Prepare / Submit Application for FSD Inspection																			
24ALC00420	1st round on-site inspection by FSD	0%	14	15-Jan-18	30-Jan-18	1st round on-site inspection by FSD																			
24ALC00421	Remedial works as per FSD inspection comment	0%	14	31-Jan-18	15-Feb-18	Remedial works as per FSD inspection comment																			



Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	November 2017					December 2017					January 2018				February 2018						
						23	30	06	13	20	27	04	11	18	25	01	08	15	22	29	05	12	19	26		
24ALC00422	2nd round on-site inspection by FSD	0%	7	16-Feb-18	23-Feb-18																					
<b>Interface and Liaison</b>																										
<b>Interface with ST2/DSD</b>																										
24MALC00130	Application of PMAC/SWAC for Demolition of Temp. Control Room	0%	0	26-Jan-18																						Application of PMAC/SWAC for Demolition of Temp. Control Room
24MALC00140	Proposed Approval date of PMAC/SWAC for Demolition of Temp. Control Room	0%	0		08-Feb-18																					Proposed Approval date of PMAC/SWAC
24MALC00150	Application of PMAC/SWAC for Relocation from Existing to New Workshop Bldg.	0%	0	23-Nov-17																						Application of PMAC/SWAC for Relocation from Existing to New Workshop Bldg.
24MALC00160	Proposed Approval date of PMAC/SWAC for Relocation from Existing to New Workshop Bldg.	0%	0		06-Dec-17																					Proposed Approval date of PMAC/SWAC for Relocation from Existing to New Workshop Bldg.
24MALC00170	Application of PMAC/SWAC for Demolition of Temporary Workshop Bldg.	0%	0	07-Dec-17																						Application of PMAC/SWAC for Demolition of Temporary Workshop Bldg.
24MALC00180	Proposed Approval date of PMAC/SWAC for Demolition of Temporary Workshop Bldg.	0%	0		20-Dec-17																					Proposed Approval date of PMAC/SWAC for Demolition of Temporary Workshop Bldg.
<b>Works for Section 7</b>																										
<b>Stage 2 of ALC Upgrade (Completion of Remaining Works)</b>																										
<b>Interface between Civil / ABWF / E&amp;M Works</b>																										
24MALC00260	Partial completion of finishing works in preparation for E&M works	100%	0		31-Oct-17 A																					Partial completion of finishing works in preparation for E&M works, Partial completion of finishing works in preparation for E&M works
<b>Civil Works</b>																										
<b>Relocation of Temp. Control Room to New Control Room (incl. Demolition)</b>																										
24ALC00810A05	Relocation of temporary to new control room	0%	15	26-Jan-18	12-Feb-18																					Relocation of temporary to new control room
24ALC00810A10	Demolition of Temporary Control Room	0%	15	13-Feb-18	01-Mar-18																					Demolition of Temporary Control Room
<b>Finishing Works (Internal and External)</b>																										
24ALC00800A10	Ceiling finishes (painting) at fine screen and grit trap area incl. screening and grit handling at GL 2-4 / C-G	100%	15	24-Jul-17 A	31-Oct-17 A																					Ceiling finishes (painting) at fine screen and grit trap area incl. screening and grit handling at GL 2-4 / C-G
24ALC00800A20	Wall finishes (painting) at fine screen and grit trap area incl. screening and grit handling at GL 2-4 / C-G	100%	18	24-Jul-17 A	31-Oct-17 A																					Wall finishes (painting) at fine screen and grit trap area incl. screening and grit handling at GL 2-4 / C-G
24ALC00800A30	Floor finishes (painting) at fine screen and grit trap area incl. screening and grit handling at GL 2-4 / C-G	100%	12	28-Aug-17 A	31-Oct-17 A																					Floor finishes (painting) at fine screen and grit trap area incl. screening and grit handling at GL 2-4 / C-G
24ALC00840A10	Ceiling finishes (painting) at deodorization room and effluent pumping	100%	12	18-Sep-17 A	06-Nov-17 A																					Ceiling finishes (painting) at deodorization room and effluent pumping
24ALC00840A20	Wall finishes (painting) at deodorization room and effluent pumping	100%	25	18-Sep-17 A	21-Nov-17 A																					Wall finishes (painting) at deodorization room and effluent pumping
24ALC00840A30	Floor finishes (painting) at deodorization room and effluent pumping	100%	23	25-Oct-17 A	21-Nov-17 A																					Floor finishes (painting) at deodorization room and effluent pumping
24ALC00840A60	Floor finishes (painting) at switch room and HEC room	100%	19	07-Aug-17 A	14-Nov-17 A																					Floor finishes (painting) at switch room and HEC room
24ALC00840A70	Installation of Glass Block at GL 4-7 / C-1	100%	18	07-Aug-17 A	14-Nov-17 A																					Installation of Glass Block at GL 4-7 / C-1
24ALC00840A80	Installation of Louver at GL 4-7 / C-1	100%	15	14-Aug-17 A	14-Nov-17 A																					Installation of Louver at GL 4-7 / C-1
24ALC00840A90	Installation of Roller Shutter	0%	15	04-Sep-17 A	09-Dec-17																					Installation of Roller Shutter
24ALC00840B10	Installation of Doors	0%	15	04-Sep-17 A	09-Dec-17																					Installation of Doors
24ALC00840B20	Installation of Stair no. 2, 3, 4, and 5 including platform and railings	0%	30	23-Nov-17	29-Dec-17																					Installation of Stair no. 2, 3, 4, and 5 including platform and railings
24ALC00850A10	Installation of guardrail at roof	0%	30	23-Nov-17	29-Dec-17																					Installation of guardrail at roof
24ALC00850A20	Installation of deodorizer stack	0%	15	23-Nov-17	09-Dec-17																					Installation of deodorizer stack
24ALC00850A30	Installation of skylights	0%	15	23-Nov-17	09-Dec-17																					Installation of skylights
24ALC00850A40	Installation of Irrigation System and Green Roof	0%	60	23-Nov-17*	02-Feb-18																					Installation of Irrigation System and Green Roof
24ALC00850A50	Installation of Stair no. 1 including platform and railings	0%	30	23-Nov-17	29-Dec-17																					Installation of Stair no. 1 including platform and railings
24ALC00850A60	Installation of tiles at external wall	0%	45	14-Aug-17 A	29-Dec-17																					Installation of tiles at external wall
<b>Electrical and Mechanical Works</b>																										
<b>Material / Equipment Delivery on Site</b>																										
24ALC03997	Delivery of deodorization unit	0%	0		23-Nov-17																					Delivery of deodorization unit
24ALC03998	Delivery of DCS panel	0%	0		23-Nov-17																					Delivery of DCS panel
<b>Mechanical Works</b>																										
24ALC04020	Installation of penstock no. 10 (wet well 1 inlet)	0%	15	23-Nov-17	09-Dec-17																					Installation of penstock no. 10 (wet well 1 inlet)
24ALC04030	Installation of penstock no. 12 (wet well interconnecting penstock)	0%	10	11-Dec-17	21-Dec-17																					Installation of penstock no. 12 (wet well interconnecting penstock)
24ALC04070	Installation of grit classifier no. 1	0%	7	23-Nov-17	30-Nov-17																					Installation of grit classifier no. 1
24ALC04090	Installation of monorail (for fine screen area)	100%	12	23-Oct-17 A	06-Nov-17 A																					Installation of monorail (for fine screen area)
24ALC04100	Installation of monorail (for screening compactor area)	100%	12	07-Nov-17 A	20-Nov-17 A																					Installation of monorail (for screening compactor area)

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	November 2017					December 2017					January 2018				February 2018					
						23	30	06	13	20	27	04	11	18	25	01	08	15	22	29	05	12	19	26	
24AL004110	Installation of monorail (for deodorizer room)	0%	12	23-Nov-17	06-Dec-17	Installation of monorail (for deodorizer room)																			
24AL004120	Installation of electric overhead travelling crane (for effluent pumping station)	0%	24	07-Nov-17 A	20-Dec-17	Installation of electric overhead travelling crane (for effluent pumping station)																			
<b>Electrical Works</b>																									
24AL004180	Cable tray installation for fine screen no. 1 and inlet / outlet penstock	100%	10	23-Oct-17 A	03-Nov-17 A	Cable tray installation for fine screen no. 1 and inlet / outlet penstock																			
24AL004190	Cable tray installation for grit trap no. 1	100%	5	30-Oct-17 A	03-Nov-17 A	Cable tray installation for grit trap no. 1																			
24AL004200	Cable tray installation for coarse screen no. 1 and inlet / outlet penstock	100%	3	04-Nov-17 A	07-Nov-17 A	Cable tray installation for coarse screen no. 1 and inlet / outlet penstock																			
24AL004210	Cable tray installation for grit classifier no. 1	100%	3	04-Nov-17 A	07-Nov-17 A	Cable tray installation for grit classifier no. 1																			
24AL004220	Cable laying for the 2nd half treatment equipment	100%	16	03-Nov-17 A	21-Nov-17 A	Cable laying for the 2nd half treatment equipment																			
24AL004230	Megger test in cables for the 2nd half treatment equipment	0%	6	23-Nov-17	29-Nov-17	Megger test in cables for the 2nd half treatment equipment																			
24AL004240	Cable termination for the 2nd half treatment equipment	0%	6	30-Nov-17	06-Dec-17	Cable termination for the 2nd half treatment equipment																			
24AL004260	Cable tray installation for the new MCC switchboard	0%	10	13-Jan-17 A	30-Nov-17	Cable tray installation for the new MCC switchboard																			
24AL004270	Cable laying for main power supply	0%	30	01-Dec-17	06-Jan-18	Cable laying for main power supply																			
24AL004280	Megger test in cables for main power supply	0%	12	08-Jan-18	20-Jan-18	Megger test in cables for main power supply																			
24AL004290	Cable termination for main power supply	0%	12	22-Jan-18	03-Feb-18	Cable termination for main power supply																			
24AL004300	Cable laying for UPS system	0%	10	01-Dec-17	12-Dec-17	Cable laying for UPS system																			
24AL004310	Megger test in cables for UPS system	0%	3	13-Dec-17	15-Dec-17	Megger test in cables for UPS system																			
24AL004320	Cable termination for UPS system	0%	3	16-Dec-17	19-Dec-17	Cable termination for UPS system																			
24AL004330	Division of cables from temporary switchboard to new MCC room / switchboard c/w megger test	0%	45	20-Dec-17	12-Feb-18	Division of cables from temporary switchboard to new MCC room / switchboard c/w megger test																			
24AL004340	Cable tray installation for lifting appliances	100%	6	07-Nov-17 A	13-Nov-17 A	Cable tray installation for lifting appliances																			
24AL004350	Cable laying for lifting appliances	100%	6	14-Nov-17 A	20-Nov-17 A	Cable laying for lifting appliances																			
24AL004360	Megger test in cables for lifting appliances	0%	4	23-Nov-17	27-Nov-17	Megger test in cables for lifting appliances																			
24AL004370	Cable termination for lifting appliances	0%	2	28-Nov-17	29-Nov-17	Cable termination for lifting appliances																			
24AL004380	Cable tray installation for effluent pumping station	0%	7	01-Dec-17	08-Dec-17	Cable tray installation for effluent pumping station																			
24AL004390	Cable laying for effluent pumping station	0%	8	09-Dec-17	18-Dec-17	Cable laying for effluent pumping station																			
24AL004400	Megger test in cables for effluent pumping station	0%	7	19-Dec-17	28-Dec-17	Megger test in cables for effluent pumping station																			
24AL004410	Cable termination for effluent pumping station	0%	7	29-Dec-17	05-Jan-18	Cable termination for effluent pumping station																			
24AL004420	Cable tray installation for lightings	100%	14	07-Nov-17 A	22-Nov-17 A	Cable tray installation for lightings																			
24AL004430	Cable laying for lightings fittings	100%	14	07-Nov-17 A	22-Nov-17 A	Cable laying for lightings fittings																			
24AL004440	Megger test in cables for lightings fittings	0%	10	23-Nov-17	04-Dec-17	Megger test in cables for lightings fittings																			
24AL004450	Cable termination for lightings fittings	0%	7	05-Dec-17	12-Dec-17	Cable termination for lightings fittings																			
24AL004460	Installation of lightings fittings	0%	30	07-Nov-17 A	29-Dec-17	Installation of lightings fittings																			
24AL004470	Installation of outdoor lightings fittings	0%	30	07-Nov-17 A	29-Dec-17	Installation of outdoor lightings fittings																			
24AL004480	Installation of electrical lighting switch, fuse switch, power sockets, etc.	0%	30	06-Nov-17 A	29-Dec-17	Installation of electrical lighting switch, fuse switch, power sockets, etc.																			
<b>HVAC System (Deodorization / Air Conditioning / Ventilation)</b>																									
24AL004490	Installation of ventilation fan c/w air duct (grit traps and screen room)	0%	21	23-Oct-17 A	16-Dec-17	Installation of ventilation fan c/w air duct (grit traps and screen room)																			
24AL004500	Installation of deodorization unit	0%	18	07-Nov-17 A	16-Dec-17	Installation of deodorization unit																			
24AL004510	Installation of accessories for deodorization system	0%	12	04-Dec-17	16-Dec-17	Installation of accessories for deodorization system																			
24AL004520	Installation of air duct	0%	30	23-Oct-17 A	29-Dec-17	Installation of air duct																			
24AL004530	Cable tray installation for new deodorization unit	0%	12	14-Nov-17 A	16-Dec-17	Cable tray installation for new deodorization unit																			
24AL004540	Cable laying for new deodorization unit	0%	12	18-Dec-17	02-Jan-18	Cable laying for new deodorization unit																			
24AL004550	Megger test in cables for new deodorization unit	0%	6	03-Jan-18	09-Jan-18	Megger test in cables for new deodorization unit																			
24AL004560	Cable termination for new deodorization unit	0%	6	10-Jan-18	16-Jan-18	Cable termination for new deodorization unit																			
24AL004570	Installation of split type A/C unit (2 set at control room)	0%	30	23-Nov-17	29-Dec-17	Installation of split type A/C unit (2 set at control room)																			
24AL004580	Installation of split type A/C unit (3 set at switch room)	0%	30	11-Dec-17	16-Jan-18	Installation of split type A/C unit (3 set at switch room)																			
24AL004590	Installation of ventilation fan c/w air duct (switch room)	0%	30	11-Dec-17	16-Jan-18	Installation of ventilation fan c/w air duct (switch room)																			
24AL004600	Installation of ventilation fan c/w air duct (deodorizer room)	0%	30	30-Dec-17	02-Feb-18	Installation of ventilation fan c/w air duct (deodorizer room)																			

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	November 2017						December 2017					January 2018				February 2018			
						23	30	06	13	20	27	04	11	18	25	01	08	15	22	29	05	12	19	26
24AL004610	Installation of ventilation fan c/w air duct (effluent pumping station)	0%	18	17-Jan-18	06-Feb-18	Installation of ventilation fan c/w air duct (effluent pumping station)																		
<b>Control and Monitoring Services incl. Instrumentation</b>																								
24AL004620	Installation of local manual control (fine screen no. 1)	100%	2	03-Nov-17 A	04-Nov-17 A	Installation of local manual control (fine screen no. 1)																		
24AL004630	Installation of local manual control (coarse screen no. 1)	100%	2	07-Nov-17 A	08-Nov-17 A	Installation of local manual control (coarse screen no. 1)																		
24AL004640	Installation of local manual control (grit trap no. 1)	100%	2	09-Nov-17 A	10-Nov-17 A	Installation of local manual control (grit trap no. 1)																		
24AL004650	Installation of level sensor c/w transmitter (fine screen no. 1)	100%	5	31-Oct-17 A	04-Nov-17 A	Installation of level sensor c/w transmitter (fine screen no. 1)																		
24AL004660	Installation of local manual control (effluent pumps 1 and 2)	100%	7	23-Oct-17 A	31-Oct-17 A	Installation of local manual control (effluent pumps 1 and 2)																		
24AL004670	Installation of local manual control (drainage pump 1 & 2)	100%	2	30-Oct-17 A	31-Oct-17 A	Installation of local manual control (drainage pump 1 & 2)																		
24AL004680	Installation of control panel for deodorizer	0%	10	06-Dec-17	16-Dec-17	Installation of control panel for deodorizer																		
24AL004690	Installation of level sensor for wet well	0%	12	08-Dec-17	21-Dec-17	Installation of level sensor for wet well																		
24AL004700	Installation of instrumentation for deodorization system	0%	12	04-Dec-17	16-Dec-17	Installation of instrumentation for deodorization system																		
24AL004710	Equipment installation for monitoring and control system	100%	14	23-Oct-17 A	08-Nov-17 A	Equipment installation for monitoring and control system																		
24AL004720	Install cable tray for monitoring and control system	100%	21	13-Jan-17 A	03-Nov-17 A	Install cable tray for monitoring and control system																		
24AL004730	Cable laying for monitoring and control system	100%	12	23-Oct-17 A	06-Nov-17 A	Cable laying for monitoring and control system																		
24AL004740	Megger test in cables of monitoring and control system	0%	7	23-Nov-17	30-Nov-17	Megger test in cables of monitoring and control system																		
24AL004750	Cable termination for monitoring and control system	0%	7	01-Dec-17	08-Dec-17	Cable termination for monitoring and control system																		
24AL004760	DCS panel fabrication	0%	15	23-Nov-17	09-Dec-17	DCS panel fabrication																		
24AL004780	PLC programming and SCADA editing	0%	47	11-Dec-17	05-Feb-18	PLC programming and SCADA editing																		
24AL004790	Install cable tray for DCS outstation and instrumentation	0%	10	29-Nov-17	09-Dec-17	Install cable tray for DCS outstation and instrumentation																		
24AL004800	Cable laying for DCS outstation and instrumentation	0%	8	11-Dec-17	19-Dec-17	Cable laying for DCS outstation and instrumentation																		
24AL004810	Megger test in cables of DCS outstation and instrumentation	0%	4	20-Dec-17	23-Dec-17	Megger test in cables of DCS outstation and instrumentation																		
24AL004820	Cable termination for DCS outstation and instrumentation	0%	4	27-Dec-17	30-Dec-17	Cable termination for DCS outstation and instrumentation																		
24AL004830	Migration of existing DCS system to newly installed DCS system	0%	30	06-Feb-18	12-Mar-18	Migration of existing DCS system to newly installed DCS system																		
24AL004840	DCS interface with contract DC/2009/10	0%	77	11-Dec-17	12-Mar-18	DCS interface with contract DC/2009/10																		
24AL004850	Install cable tray for gas detection system (CH4, H2S & O2 detector)	0%	20	23-Nov-17	15-Dec-17	Install cable tray for gas detection system (CH4, H2S & O2 detector)																		
24AL004860	Cable laying for gas detection system	0%	21	05-Dec-17	30-Dec-17	Cable laying for gas detection system																		
24AL004870	Megger test in cables of gas detection system	0%	5	01-Jan-18	05-Jan-18	Megger test in cables of gas detection system																		
24AL004880	Cable termination for gas detection system	0%	5	06-Jan-18	11-Jan-18	Cable termination for gas detection system																		
24AL004890	Installation of gas detector (CH4, H2S & O2 detector)	0%	5	01-Jan-18	05-Jan-18	Installation of gas detector (CH4, H2S & O2 detector)																		
24AL004900	Install cable tray for weather and H2S monitoring station	0%	21	29-Nov-17	22-Dec-17	Install cable tray for weather and H2S monitoring station																		
24AL004910	Cable laying for weather and H2S monitoring station	0%	18	11-Dec-17	02-Jan-18	Cable laying for weather and H2S monitoring station																		
24AL004920	Megger test in cables of weather and H2S monitoring station	0%	6	03-Jan-18	09-Jan-18	Megger test in cables of weather and H2S monitoring station																		
24AL004930	Cable termination for weather and H2S monitoring station	0%	8	10-Jan-18	18-Jan-18	Cable termination for weather and H2S monitoring station																		
24AL004940	Installation of weather monitoring station	0%	12	19-Jan-18	01-Feb-18	Installation of weather monitoring station																		
24AL004950	Installation of H2S monitoring station	0%	30	29-Dec-17	01-Feb-18	Installation of H2S monitoring station																		
24AL004960	Install cable tray for CCTV system	0%	14	29-Nov-17	14-Dec-17	Install cable tray for CCTV system																		
24AL004970	Cable laying for CCTV system	0%	14	15-Dec-17	02-Jan-18	Cable laying for CCTV system																		
24AL004980	Megger test in cables of CCTV system	0%	7	03-Jan-18	10-Jan-18	Megger test in cables of CCTV system																		
24AL004990	Cable termination for CCTV system	0%	7	11-Jan-18	18-Jan-18	Cable termination for CCTV system																		
24AL005000	Installation of CCTV camera	0%	7	19-Jan-18	26-Jan-18	Installation of CCTV camera																		
<b>Fire Protection / Detection System</b>																								
24AL005010	Installation of automatic fire alarm panel (AFA panel)	0%	7	23-Nov-17	30-Nov-17	Installation of automatic fire alarm panel (AFA panel)																		
24AL005020	Cable tray installation for AFA panel	100%	14	23-Oct-17 A	08-Nov-17 A	Cable tray installation for AFA panel																		
24AL005030	Cable laying for AFA panel	100%	14	09-Nov-17 A	24-Nov-17 A	Cable laying for AFA panel																		
24AL005040	Megger test in cables for AFA panel	0%	7	23-Nov-17	30-Nov-17	Megger test in cables for AFA panel																		
24AL005050	Cable termination for AFA panel	0%	5	01-Dec-17	06-Dec-17	Cable termination for AFA panel																		

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	November 2017					December 2017					January 2018				February 2018					
						23	30	06	13	20	27	04	11	18	25	01	08	15	22	29	05	12	19	26	
24AL005060	Installation of emergency lighting fitting	0%	12	23-Nov-17	06-Dec-17																				
24AL005070	Installation of heat detector	0%	15	07-Dec-17	23-Dec-17																				
24AL005080	Installation of alarm bell	0%	3	27-Dec-17	29-Dec-17																				
24AL005090	Installation of break glass unit	0%	3	30-Dec-17	02-Jan-18																				
24AL005100	Installation of exit signs	0%	3	03-Jan-18	05-Jan-18																				
24AL005110	Installation of fire extinguisher	0%	3	06-Jan-18	09-Jan-18																				
24AL005120	Fire service cable tray for fine screen and grit trap building	100%	12	23-Oct-17 A	06-Nov-17 A																				
24AL005130	Fire service cable tray for deodorizer area	100%	12	23-Oct-17 A	06-Nov-17 A																				
24AL005140	Fire service cable tray for inlet chamber & coarse screen area	100%	15	23-Oct-17 A	09-Nov-17 A																				
24AL005150	Fire service cable tray for effluent pumping station	100%	15	23-Oct-17 A	09-Nov-17 A																				
24AL005160	Fire service cable tray for control room	100%	4	23-Oct-17 A	26-Oct-17 A																				
24AL005170	Fire service cable tray for switch room	100%	4	27-Oct-17 A	01-Nov-17 A																				
24AL005180	Fire service cable tray for HEC transformer room and HEC switch board	100%	8	27-Oct-17 A	06-Nov-17 A																				
24AL005190	Cable laying for fire services equipment	0%	30	10-Nov-17 A	29-Dec-17																				
24AL005200	Megger test in cables for fire services equipment	0%	7	30-Dec-17	06-Jan-18																				
24AL005210	Cable termination for fire services equipment	0%	14	08-Jan-18	23-Jan-18																				
<b>Plumbing Services</b>																									
24AL005220	Installation of FRP water tank (cleansing water)	0%	12	23-Nov-17	06-Dec-17																				
24AL005230	Installation of water booster pump (cleansing water)	0%	12	23-Nov-17	06-Dec-17																				
24AL005240	Installation of hydro pneumatic pressure vessel (cleansing water)	0%	12	07-Dec-17	20-Dec-17																				
24AL005250	Installation of water pipe (dia. 20 to dia. 40) (cleansing water)	0%	12	07-Dec-17	20-Dec-17																				
24AL005260	Installation of water pipe of process water (dia. 20 to dia. 40)	0%	14	21-Dec-17	08-Jan-18																				
<b>Earthing and Lightning System</b>																									
24AL005270	Installation of earthing and lightning protection equipment	0%	21	11-Jan-18	03-Feb-18																				
<b>U/G Utility Works</b>																									
24AL00851A10	Installation of 400 potable water pipe from water meter cabinet to workshop building	100%	30	23-Oct-17 A	27-Nov-17 A																				
24AL00851A20	Installation of 400 plant, cleansing and irrigation pipe from water meter cabinet to deodorization room	0%	30	23-Nov-17	29-Dec-17																				
24AL00851A30	Installation of drainage pipe with size of 100, 150, 225 and 250Ø from new buildings to inlet chamber	0%	45	11-Dec-17	02-Feb-18																				
24AL00851A40	Installation of foul manhole for drainage system	0%	30	30-Dec-17	02-Feb-18																				
24AL00851A50	Installation of sewer and stormwater pipe (150, 225 and 300Ø)	0%	45	30-Dec-17	20-Feb-18																				
24AL00851A60	Installation of sewer and stormwater manholes	0%	30	17-Jan-18	20-Feb-18																				
<b>Preliminary Testing and Commissioning</b>																									
<b>Mechanical Works</b>																									
24AL005280	Water test of penstock	0%	11	02-Dec-17	14-Dec-17																				
24AL005290	Performance test of monorail c/w electric hoist	0%	14	30-Nov-17	15-Dec-17																				
24AL005300	SAT of course screen no. 1	0%	7	07-Dec-17	14-Dec-17																				
24AL005310	SAT of fine screen no. 1	0%	7	07-Dec-17	14-Dec-17																				
24AL005320	SAT of grit trap no. 1	0%	7	07-Dec-17	14-Dec-17																				
24AL005330	SAT of grit classifier no. 1	0%	7	07-Dec-17	14-Dec-17																				
24AL005340	SAT of effluent pump 1 and 2	0%	7	06-Jan-18	13-Jan-18																				
<b>Electrical Works</b>																									
24AL005350	SAT of new MCC switchboard	0%	7	05-Feb-18	12-Feb-18																				
<b>HVAC System (Deodorization / Air Conditioning / Ventilation)</b>																									
24AL005360	SAT of deodorization system	0%	14	18-Dec-17	04-Jan-18																				
<b>Earthing and Lightning System</b>																									
24AL005370	Earthing and lightning test	0%	7	05-Feb-18	12-Feb-18																				

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	November 2017					December 2017					January 2018				February 2018			
						23	30	06	13	20	27	04	11	18	25	01	08	15	22	29	05	12	19
<b>Workshop Building</b>																							
<b>Interface between Civil / ABWF / E&amp;M Works</b>																							
24MALC00300	Completion of Workshop building	0%	0		23-Nov-17																		
<b>Civil Works</b>																							
<b>Relocation and Demolition Works</b>																							
24ALC00900A10	Relocation of Temp. to New Workshop Building	0%	16	07-Dec-17	27-Dec-17																		
24ALC00920	Demolition of Temp Workshop Building	0%	12	28-Dec-17	10-Jan-18																		
<b>Finishing Works (Internal and External)</b>																							
24ALC00910A10	Installation of railings at roof floor	0%	12	23-Nov-17	06-Dec-17																		
24ALC00910A20	Soft landscaping at roof floor	0%	25	07-Dec-17*	06-Jan-18																		
<b>Electrical and Mechanical Works</b>																							
<b>Electrical Works</b>																							
24ALC05400	Installation of power supply MCB distribution board	100%	12	23-Oct-17 A	06-Nov-17 A																		
24ALC05410	Installation of lighting fittings	100%	6	07-Nov-17 A	13-Nov-17 A																		
24ALC05420	Installation of lighting switch, fuse switch, power sockets, etc.	100%	6	14-Nov-17 A	20-Nov-17 A																		
<b>Fire Protection / Detection System</b>																							
24ALC05450	Installation of heat detector	100%	8	23-Oct-17 A	01-Nov-17 A																		
24ALC05460	Installation of fire alarm bell	100%	8	02-Nov-17 A	10-Nov-17 A																		
24ALC05470	Installation of break glass unit	100%	4	11-Nov-17 A	15-Nov-17 A																		
24ALC05480	Installation of exit sign	100%	4	16-Nov-17 A	20-Nov-17 A																		
<b>HVAC System (Deodorization / Air Conditioning / Ventilation)</b>																							
24ALC05430	Installation of split type A/C unit (2 sets at workshop)	100%	30	23-Oct-17 A	27-Nov-17 A																		
24ALC05440	Installation of wall mount exhaust fan at changing room	100%	2	23-Oct-17 A	24-Oct-17 A																		
<b>Plumbing System</b>																							
24ALC05490	Installation of potable water supply for toilet room	100%	14	23-Oct-17 A	08-Nov-17 A																		
24ALC05500	Installation of sanitary ware for toilet room	100%	21	24-Oct-17 A	17-Nov-17 A																		
<b>Modification of Outfall Chamber</b>																							
24ALC00901	Preparation works prior to modification of outfall chamber	0%	6	23-Nov-17	29-Nov-17																		
24ALC00902	Installation of diversion pipe from flume channel to outfall pipe incl. testing	0%	18	30-Nov-17	20-Dec-17																		
24ALC00904	Pipe pile/Sheet piling works around outfall chamber	0%	10	21-Dec-17	03-Jan-18																		
24ALC00905	Demolition and ELS works prior to construction of outfall chamber	0%	10	04-Jan-18	15-Jan-18																		
24ALC00910	Laying blind layer	0%	1	16-Jan-18	16-Jan-18																		
24ALC00911	Construct base slab for remaining flume channel and outfall chamber	0%	8	17-Jan-18	25-Jan-18																		
24ALC00914	Construct wall for remaining flume channel and outfall chamber	0%	15	26-Jan-18	12-Feb-18																		
24ALC00918	Construct top slab for remaining flume channel and outfall chamber	0%	10	13-Feb-18	23-Feb-18																		
<b>Roadworks, Landscaping Works and Modification of Fence</b>																							
<b>Roadworks</b>																							
24ALC00860A10	Roadworks	0%	57	13-Feb-18	19-Apr-18																		
<b>Landscaping Works</b>																							
24ALC00860A20	Tree transplanting from off-site to site area (T001)	0%	30	13-Feb-18*	19-Mar-18																		
24ALC00860A30	Planting of new trees	0%	52	13-Feb-18*	13-Apr-18																		
24ALC00860A40	Landscaping (Grasscrete)	0%	35	13-Feb-18	24-Mar-18																		
<b>Modification of Fence</b>																							
24ALC00930A05	Design and Built of Sea Wall (damaged by Typhoon)	0%	30	03-Oct-17 A	18-Oct-18																		
<b>Completion of Works in Section 7</b>																							
<b>Final Testing and Commissioning</b>																							

Activity ID	Activity Name	% Comp	Original Duration	Early Start	Early Finish	November 2017					December 2017					January 2018				February 2018					
						23	30	06	13	20	27	04	11	18	25	01	08	15	22	29	05	12	19	26	
24ALC4400	Final Testing and Commissioning of Ap Lei Chau PTW	0%	30	13-Feb-18	14-Mar-18																				
<b>EoT Claim</b>																									
24ALC01781	Claim for Additional Extension of Time - under review	0%	656	01-Apr-15 A	14-Mar-18	[Blue bar from Nov 20 to Nov 27]					[Red bar from Dec 04 to Feb 26]														
<b>Submission of Manuals</b>																									
24ALC01810	Preparation / Submission of final O&M manuals	0%	90	04-Jan-16 A	29-Jan-18	[Green bar from Nov 23 to Dec 25]															Preparation / Submission of final O&M manuals				
24ALC01820	As-Built Drawings Submission / Approval for Ap Lei Chau PTW	0%	60	10-Dec-17	07-Feb-18																[Red bar from Dec 18 to Feb 05] As-Built Drawings Submission / Approval for				
<b>Trainings for DSD Staff</b>																									
24ALC01830	Interim Training of DSD staff for control system and pumping system	0%	3	13-Feb-18	15-Feb-18	[Red bar from Feb 12 to Feb 19] Interim Training of DSD sta																			

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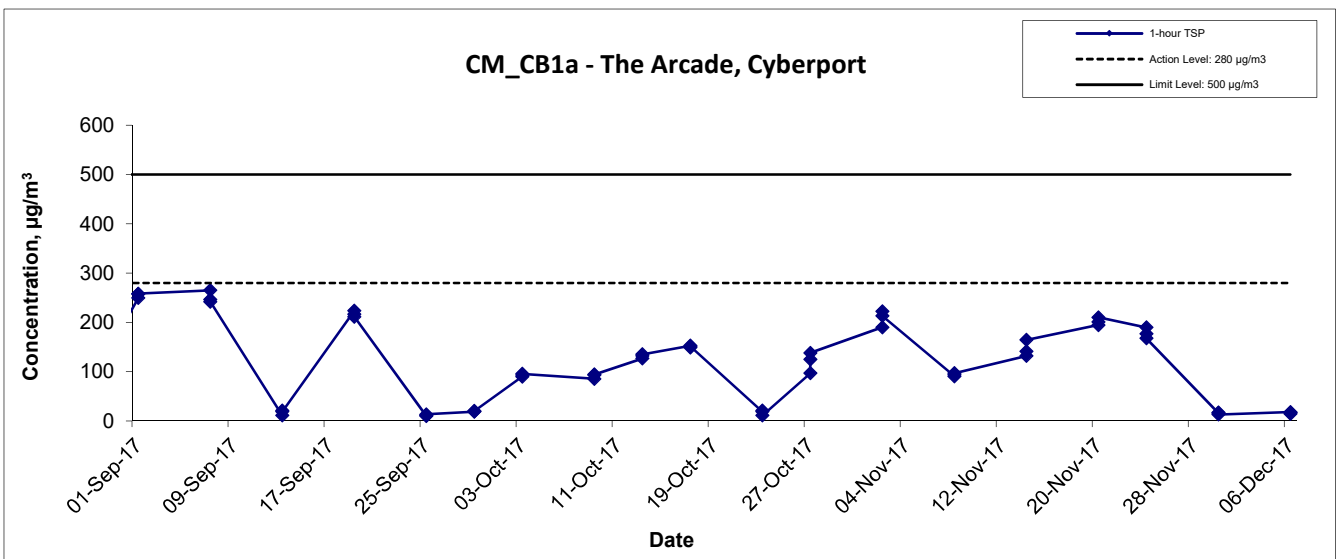
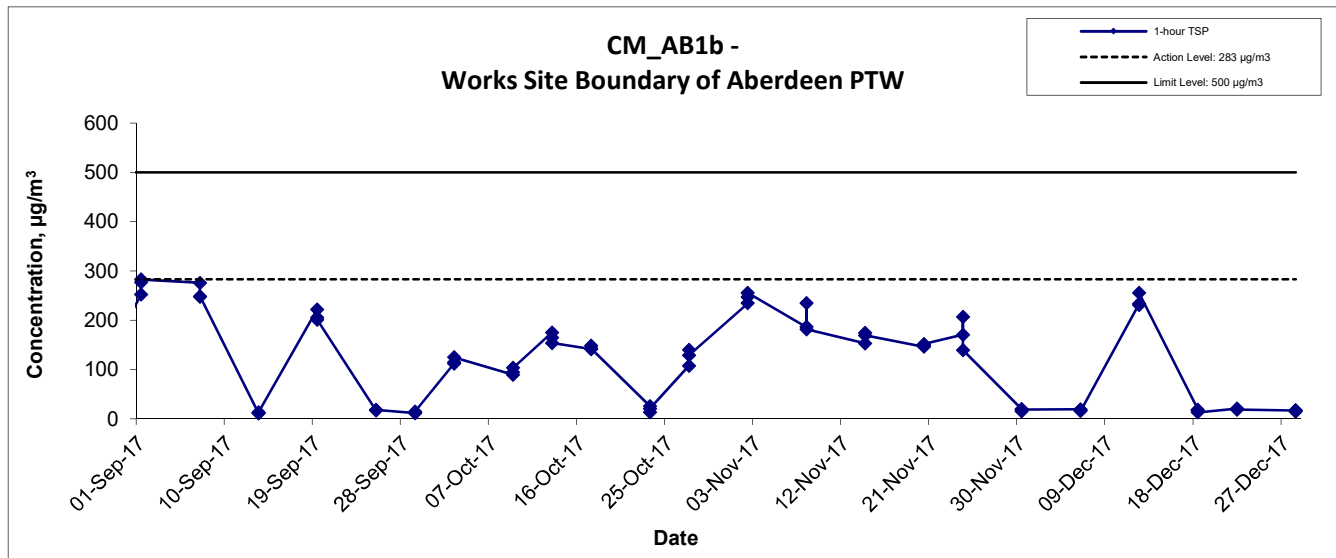
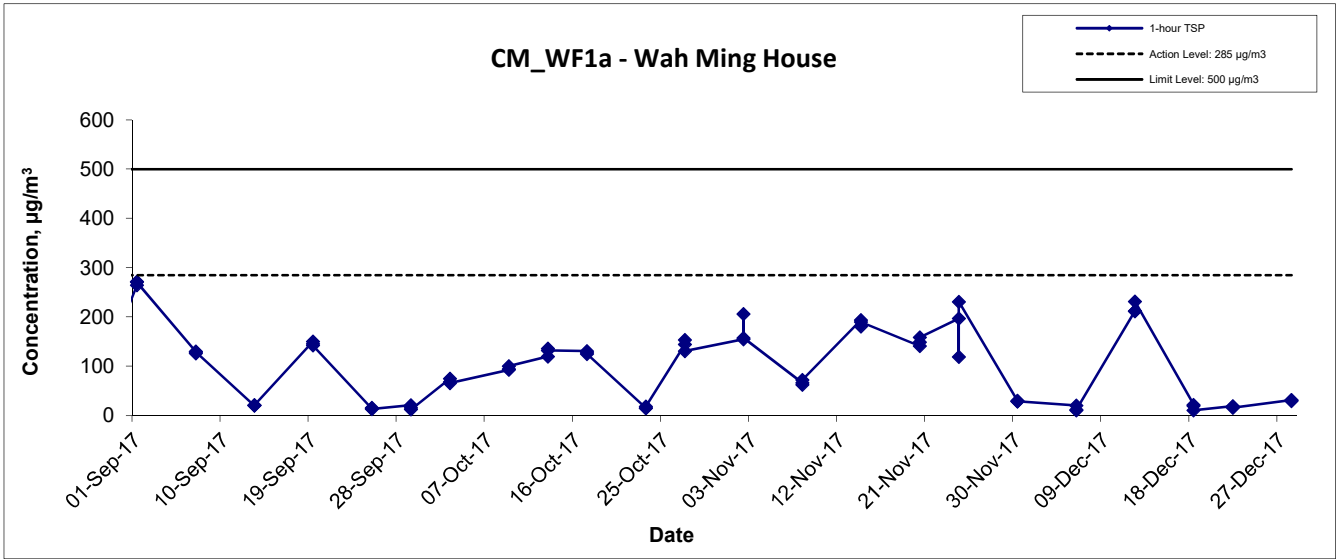
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**APPENDIX E  
GRAPHICAL PRESENTATION OF AIR  
QUALITY MONITORING RESULTS**

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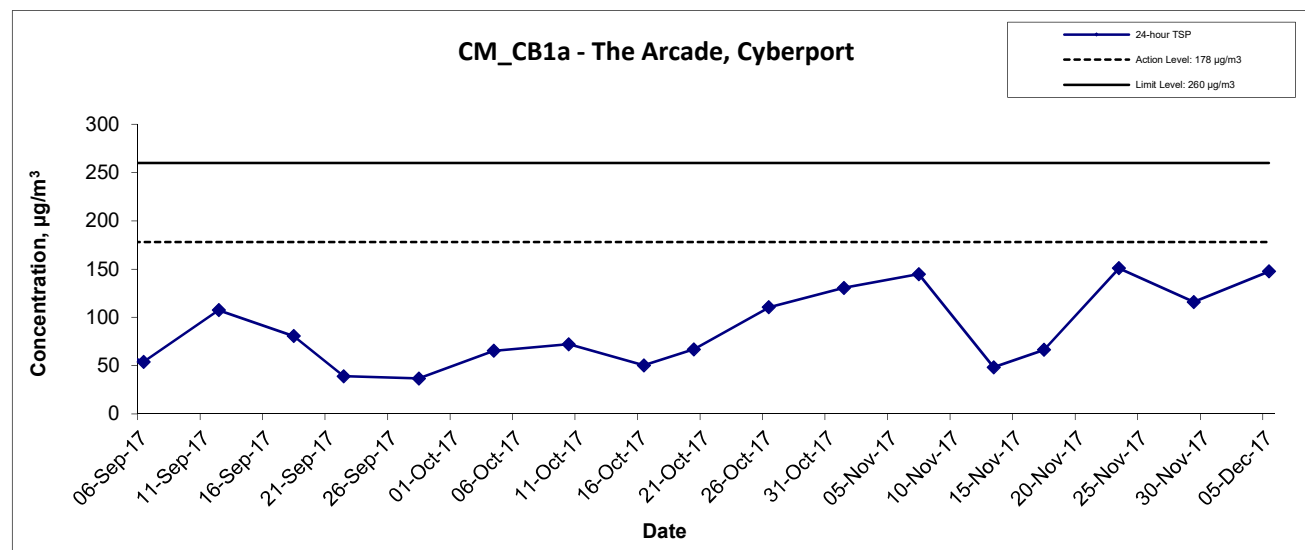
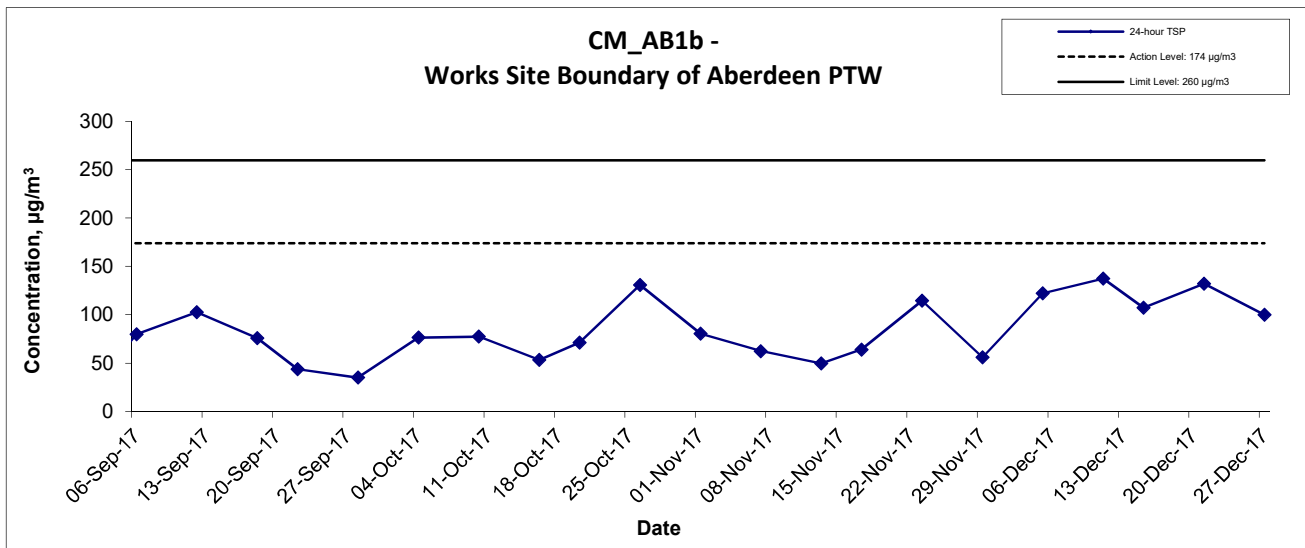
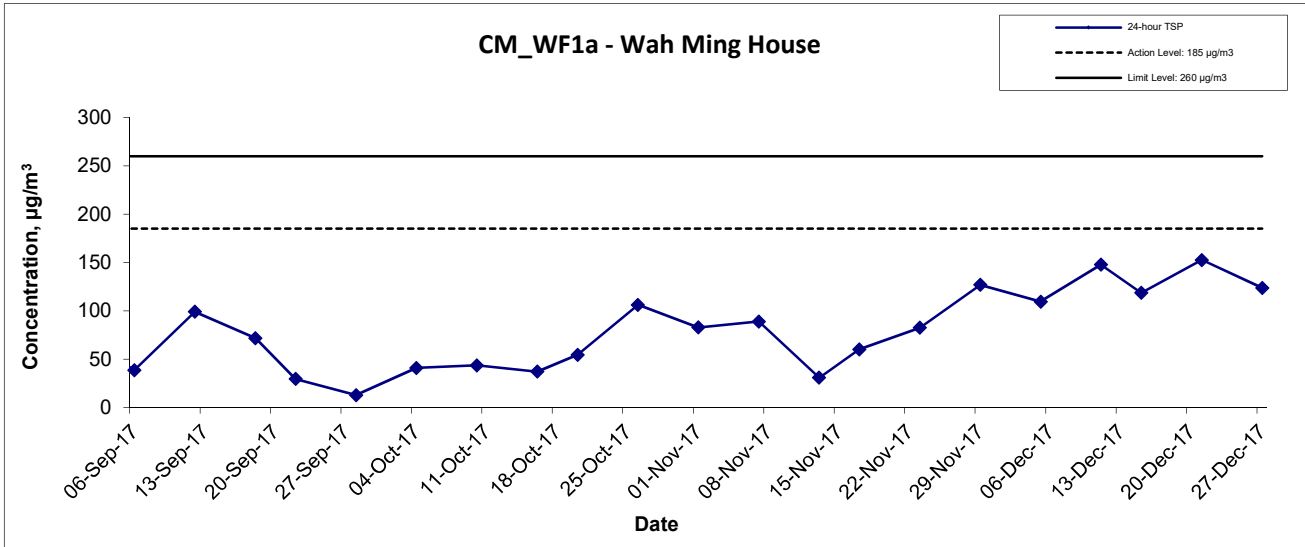
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### 1-hr TSP Concentration Levels



Title Contract No. DC/2009/24 HATS 2A – Upgrading of Preliminary Treatment Works at Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S	Project No. MA11060	
	Date Dec 17	Appendix E	

### 24-hr TSP Concentration Levels



<b>Title</b> 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	<b>Scale</b> N.T.S	<b>Project No.</b> MA11060	
	<b>Date</b> Dec 17	<b>Appendix</b> E	

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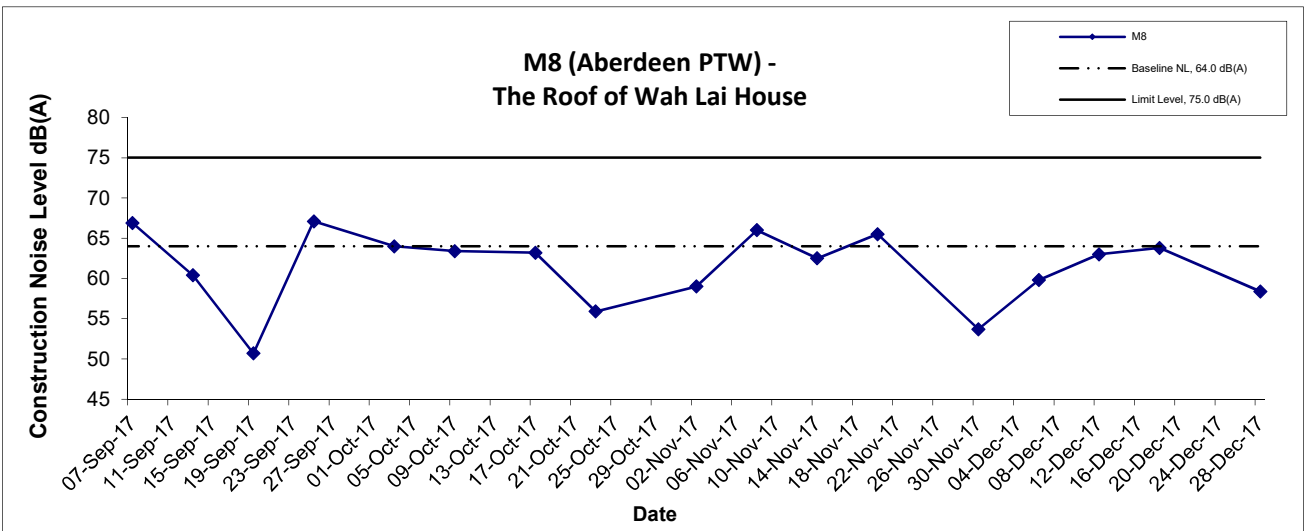
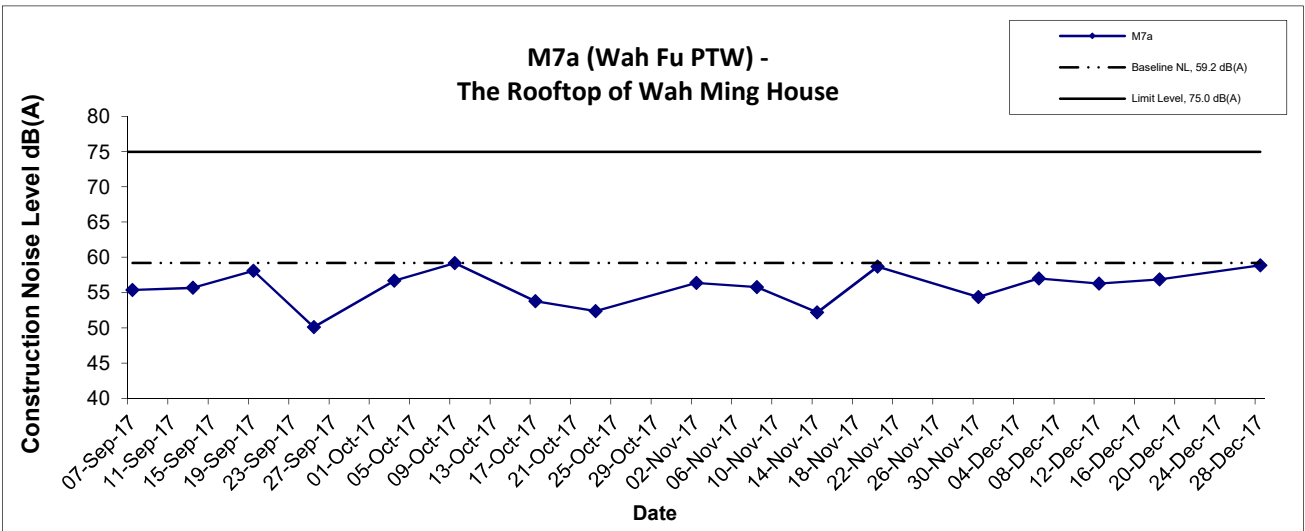
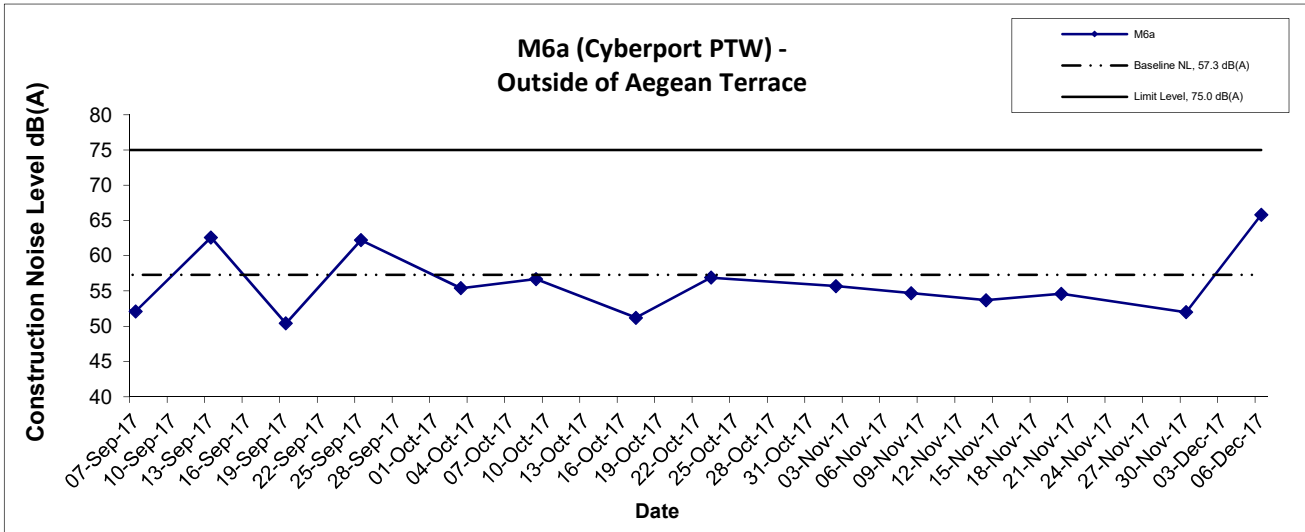
**APPENDIX F  
GRAPHICAL PRESENTATION OF  
NOISE MONITORING RESULTS**

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## Noise Levels

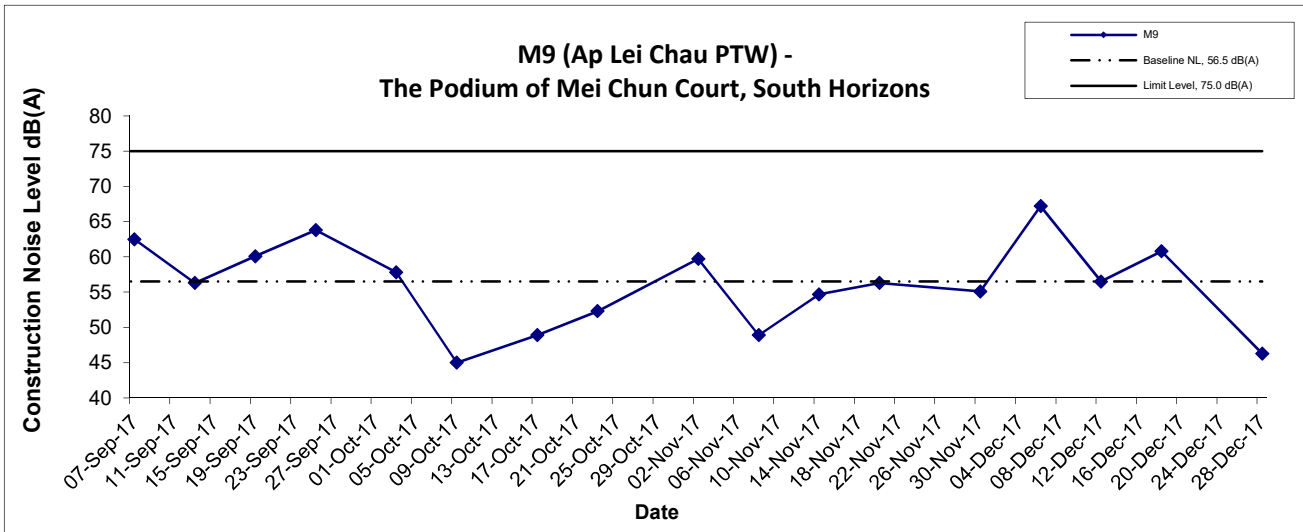
(0700-1900 hrs on Normal Weekdays)



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 Date Dec 17	Project No. MA11060 Appendix F	
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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	CINOTECH
	Date Dec 17	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)**

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

EIA Ref.	Recommended Mitigation Measures	Location of the measure	Implementation Status
<b>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	Expiry
WT000116 33-2012	N/A	31/1/2017	Location: Cyber Port PTW	
WT000116 32-2012	N/A	31/1/2017	Location: Ap Lei Chau	
WT000279 53-2017	N/A	31/3/2022	Location: Aberdeen PTW	Valid
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>				
13434	24/11/2016	23/11/2017	Location: Ap Lei Chau	Valid until 23/11/2017
13435	24/11/2016	23/11/2017	Location: Aberdeen PTW	Valid until 23/11/2017
13433	24/11/2016	23/11/2017	Location: Wah Fu PTW	Valid until 23/11/2017
14077	24/11/2017	23/11/2018	Location: Ap Lei Chau	Valid
14078	24/11/2017	23/11/2018	Location: Aberdeen PTW	Valid
14076	24/11/2017	23/11/2018	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 2017 (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
Year2015	5.361825	0.000000	0.000000	0.000000	5.361825	0.000000	0.000000	0.000000	0.031000	0.050000	0.461870	1.082870
Year 2016	5.172790	0.000000	0.000000	0.060000	5.112790	0.000000	0.000000	0.000000	0.000000	0.000000	0.757580	0.980878
JAN	0.33416	0	0	0	0.33416	0	0	0	0	0	0.06044	0.08373
FEB	0.16203	0	0	0	0.16203	0	0	0	0	0	0.03384	0.0981
MAR	0.23135	0	0	0	0.23135	0	0	0	0	0	0.03388	0.13383
APR	0.15905	0	0	0	0.15905	0	0	0	0	0	0.04766	0.15085
MAY	0.16	0	0	0	0.16	0	0	0	0	0	0.024	0.15397
JUNE	0.33	0	0	0	0.33	0	0	0	0	0	0.057	0.14957
SUB-TOTAL	21.817880	0.000000	0.000000	0.060000	21.757880	0.000000	17.430000	0.070000	0.101000	0.950000	1.700530	9.305424
JULY	0.0955	0	0	0	0.0955	0	0	0	0	0	0.031	0.15771
AUG	0.103	0	0	0	0.103	0	0	0	0	0	0.2254	0.16411
SEPT	0.151	0	0	0	0.151	0	0	0	0	0	0.00422	0.14362
OCT	0.22	0	0	0	0.22	0	0	0	0	0	0.0325	0.18393
NOV	0.225	0	0	0	0.225	0	0	0	0	0	0.0288	0.15494
DEC	0.371	0	0	0	0.371	0	0	0	0	0	0.0375	0.16852
TOTAL	22.983380	0.000000	0.000000	0.060000	22.923380	0.000000	17.430000	0.070000	0.101000	0.950000	2.059950	10.278254

**Forecast of Total Quantities of C&D materials to be Generated from the Contracts \***

Total Quantity Generated	Hard Rock and Broken Concrete (4)	Reused in the Contract	Reused in other Projects	Disposal as Public Fill	Import Fill	Metals	Paper / Cardboard Packaging	Plastics (3)	Chemical Waste	Other, e.g. general refuse	Special Waste
[in '000m <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]
24.714	1.544	1.73	0.06	21.38	0	30	1	1	4	1.65	9.6

- Notes :
- The performance targets are given in PS Clause 6(14).
  - Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material.
  - 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:** October to December 2017

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

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

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

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

**Reporting Period:** October to December 2017

- 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)**