Contract No. DC/2007/24
Harbour Area Treatment Scheme Stage 2A
Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun

Environmental Certification Sheet – 27

Reference ~~Procedure~~/Document~~/Plan~~

Document~~/Plan/Changes/Information to be~~ Certified/ Verified:	Monthly Environmental Monitoring and Audit Report No.19 (EMA/023, Rev B)
Date of Report:	16 August 2011
Date of correspondence to IEC:	16 August 2011
Date received:	16 August 2011

Reference Condition

Clause 4.4 of EP-322/2008/E:

"Three hard copies and one electronic copy of the monthly EM&A Report shall be submitted to the Director within 10 working days after the end of the reporting month. The EM&A Reports shall include a summary of all non-compliance (exceedances) of the environmental quality performance limits (Action and Limit Levels). The submissions shall be verified by the IEC. Additional copies of the submission shall be provided to the Director upon request by the Director."

ET Certification

I hereby certify that the above referenced ~~information~~/document/~~plan~~ complies with the above referenced condition.

Susana Halliday, Environmental Team Leader, (ACL) Halliday Date: 17 August 2011

Our ref KMY/AFK/FY/TK/T261332/22.01/L-0240
T 2828 5757
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Your ref -

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

16 August 2011
By Fax (2833 9162) and Post

Attn: Mr. Danny Tang

Dear Sir,

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

Contract No. DC/2007/24
Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun
Condition 4.4 – Submission of Monthly EM&A Report for July 2011 (no. 19)

I refer to the revised Monthly EM&A Report No. 19 (Rev. B) for July 2011 certified by ETL and received on 16 August 2011 via email. Pursuant to Condition 4.4 of Environmental Permit No. EP-322/2008/E, I hereby verify the captioned Report.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED

Dr. Anne F Kerr
Independent Environmental Checker

c.c.	AECOM	Mr. Simon Mui	By email
	Leighton – LNS JV	Mr. Stephen Tsang	By email
	Atkins	Ms. Susana Halliday	By email

Document Details

Client

Drainage Services Department

Project

Contract No. DC/2007/24
Harbour Area Treatment Scheme Stage 2A
Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun

Document Title

Monthly Environmental Monitoring and Audit Report No. 19
Covering the Period from 1 July 2011 to 31 July 2011

Document No.

EMA/023

Distribution

Copy No.	Issued To	Copy No.	Issued To
01-02	Leighton-LNS JV	10	Metcalf & Eddy-AECOM JV
03	Mott MacDonald Hong Kong Ltd	11	ACL (Project Office)
04-08	EPD	12	ACL (Head Office)
09	DSD		

Submission Ref		Controlled Copy No.
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Atkins Ref.(s)	DC/2007/24/31.20/OG2958/EC/SH/EY	

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B	16 August 2011	Submission to IEC and ER for Further Review	Various	Susana Halliday	Eric Chui
A	9 August 2011	Submission to IEC and ER for Review	Various	Susana Halliday	Eric Chui

Leighton - LNS Joint Venture

ATKINS

Rev. B

EXECUTIVE SUMMARY

This is the nineteenth Monthly Environmental Monitoring and Audit Report prepared by Atkins China Ltd (ACL), for Contract No. DC/2007/24 Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun (hereinafter, the Project), in compliance with the Project EM&A Manual under EP No. EP-322/2008/E. The construction works under the Project was commenced on 23 December 2009. This report summarises the findings and results of the EM&A during the reporting period from 1 July 2011 to 31 July 2011.

Environmental Monitoring and Audit Progress

The monthly EM&A programme has been undertaken in accordance with the Project EM&A Manual. A summary of the monitoring activities carried out during this reporting month is listed below:

Noise and air monitoring at designated monitoring stations was undertaken as below table:

Parameter	ID	Description	Date
Noise Monitoring: $L_{eq(30\ mins)}$ during normal Daytime	M3	Kwan Yick Building Phase III	4, 15, 21 and 27 July 2011
	M5	Chuk Lam Ming Tong	6, 12, 18 and 28 July 2011
	M6a	Aegean Terrace	4, 14, 20 and 26 July 2011
	M7a	Wah Ming House	4, 14, 20 and 26 July 2011
	M8	Wah Lai House	6, 12, 18 and 28 July 2011
Noise Monitoring: $L_{eq(15\ mins)}$ during evening time and daytime of Sundays/ public holidays	M5a	Near the entrance of Chuk Lam Ming Tong	Daytime of public holiday: 3 and 24 July 2011
	M6a	Aegean Terrace	Daytime of public holiday: 17 July 2011
	M8	Wah Lai House	Daytime of public holiday: 10 and 31 July 2011
Noise Monitoring: $L_{eq(15\ mins)}$ during night time	M5a	Near the entrance of Chuk Lam Ming Tong	12 and 28 July 2011
	M6a	Aegean Terrace	6 and 20 July 2011
Noise Monitoring: $L_{eq(15\ mins)}$ during evening time	M3	Kwan Yick Building Phase III	12 July 2011
	M5a	Near the entrance of Chuk Lam Ming Tong	28 July 2011
	M6a	Aegean Terrace	6 and 20 July 2011
Air Quality Monitoring: 1-hour and 24-hour TSP	CM_FM1	Western Wholesale Food Market	1-hour and 24-hour: 5, 11, 15, 21 and 27 July 2011
	CM_CB1a	The Arcade, Cyberport	1-hour: 6, 12, 18, 22 and 28 July 2011

			24-hour: 5, 11, 15, 21 and 27 July 2011
	CM_WF1a	Wah Ming House	1-hour: 4, 8, 14, 20 and 26 July 2011 24-hour: 5, 11, 15, 21 and 27 July 2011
	CM_AB1a	The Hong Kong Ice and Cold Storage, formally known as Dairy Farm Ice and Cold Storage	1-hour: 6, 12, 18, 22 and 28 July 2011 24-hour: 5, 11, 15, 21 and 27 July 2011
Landscape and Visual	n/a	n/a	27 July 2011
Hazard to Life	n/a	n/a	On-going
Cultural Heritage	n/a	n/a	n/a

Site inspections were undertaken jointly with the Contractor and Engineer Representative on 5, 12, 19 and 27 July 2011, with Independent Environmental Checker's participation on 12 July 2011.

Breaches of Action and Limit Levels

During the reporting period of this monthly EM&A Report No. 19, six non-project related Limit Level (LL) exceedances in noise criteria were recorded on 6, 12, 20, 24 and 28 July 2011. Two non-project related LL exceedances of noise were recorded during the restricted hours (night time) monitoring at station M5a (near the entrance of Chuk Lam Ming Tong). One non-project related LL exceedance of noise was recorded during the restricted hours (evening time) monitoring at station M5a (near the entrance of Chuk Lam Ming Tong).One non-project related LL exceedances of noise were recorded during the restricted hours (public holiday) monitoring at station M5a (near the entrance of Chuk Lam Ming Tong). One non-project related LL exceedance of noise wase recorded during the restricted hours (evening time) monitoring at station M6a (Aegean Terrace).And one non-project related LL exceedance of noise wase recorded during the restricted hours (night time) monitoring at station M6a (Aegean Terrace). A summary of exceedances is provided in the table below.

Date of Exceedance	Monitoring Location	Exceedance	Details
6 July 2011	M6a, Aegean Terrace	Limit Level exceedance 53.1dB(A) during night time	Exceedance was considered to be non-project related.
12 July 2011	M5a, near the entrance of Chuk Lam Ming Tong	Limit Level exceedance 62.1dB(A) during night time	Exceedance was considered to be non-project related.
20 July 2011	M6a, Aegean Terrace	Limit Level exceedance 53.0dB(A) during evening time	Exceedance was considered to be non-project related.
24 July 2011	M5a, near the entrance of Chuk Lam Ming Tong	Limit Level exceedance 66.8dB(A) during general public	Exceedance was considered to be non-project related.

Date of Exceedance	Monitoring Location	Exceedance	Details
28 July 2011	M5a, near the entrance of Chuk Lam Ming Tong	Limit Level exceedance 63.2dB(A) during evening time	Exceedance was considered to be non-project related.
28 July 2011	M5a, near the entrance of Chuk Lam Ming Tong	Limit Level exceedance 62.1dB(A) during night time	Exceedance was considered to be non-project related.

Complaint Log

There were no environmental complaints received during this reporting period.

Notifications of Summons and Prosecutions

There were no notifications of summons or prosecutions received during this reporting period.

Environmental Non-compliance

There were no environmental non-compliances recorded during this reporting period.

Reporting Changes

This report has been developed in compliance with the reporting requirements for the subsequent monthly EM&A report as required by the Project EM&A Manual.

Future Key Issues

Aberdeen

1) Blasting for shaft (implement method statement and standard EMP mitigations).
2) Rock Excavation (implement method statement and standard EMP mitigations).
3) Shotcrete and Grouting (implement method statement and standard EMP mitigations).

Wah Fu

1) Remove noise barrier (implement method statement and standard EMP mitigations).
2) Modification of structural ELS (implement method statement and standard EMP mitigations).
3) Installation of blast cover (implement method statement and standard EMP mitigations).
4) Site establishment (implement method statement and standard EMP mitigations).

Cyberport

1) Rock Excavation (implement method statement and standard EMP mitigations).
2) Blasting for Tunnel and Adit (implement method statement and standard EMP mitigations).

Sandy Bay

1) Rock Excavation (implement method statement and standard EMP mitigations).
2) Blasting for Tunnel and Adit (implement method statement and standard EMP mitigations).

Sai Ying Pun

1) Soft Excavation (implement method statement and standard EMP mitigations).
2) Installation of ventilation system (implement method statement and standard EMP mitigations).
3) Shear pin installation (implement method statement and standard EMP mitigations).

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Appendix A Project Organisation and Contact Details
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1 INTRODUCTION

1.1 Basic Project Information

The Harbour Area Treatment Scheme (HATS) Stage 2A Sewage Conveyance System is proposed to collect and convey the pre-treated sewage from eight existing Preliminary Treatment Works (PTW), located along the northern and south-western shoreline of Hong Kong Island, to the Stonecutters Island Sewage Treatment Works (SCISTW) for treatment before final disposal into the western harbour via an existing submarine outfall.

The sewerage tunnels to be constructed under Contract No. DC/2007/24 Harbour Area Treatment Scheme Stage 2A Construction of Sewage Conveyance System from Aberdeen to Sai Yin Pun (hereinafter referred as the Project) run from Aberdeen PTW Production/Drop Shaft towards Sai Ying Pun Junction Shaft. The tunnel has a total length of approximately 7.5km and it has various internal sizes. The transitions are located at the junctions with audits connecting to the drop shafts at Aberdeen, Wah Fu, Cyberport, Sandy Bay and Sai Ying Pun. An overall layout plan of the Project is provided in Figure 1.1.

Atkins China Ltd (ACL) was appointed by Leighton-LNS Joint Venture (the Contractor of this Project, hereinafter referred as the Contractor) as the Environmental Team (ET) of this Project, to undertake a Environmental Monitoring and Audit (EM&A) of this Project in accordance with "HATS Stage 2A Environmental Impact Assessment Study – Investigation, Final EM&A Manual" (Register No. AEIAR-121/2008) under Environmental Permit (EP) No. EP-322/2008/E Part D, Condition 4.2.

1.2 Project Organisation and Contact Details

The key parties included:

- Project Proponent – Drainage Services Department
- Contractor – Leighton-LNS JV
- Environmental Authority – Environmental Protection Department
- The Engineer's Representative (ER) – Metcalf & Eddy-AECOM JV
- Independent Environmental Checker (IEC) - Mott MacDonald Hong Kong Ltd.
- Contractor's Environmental Team (ET) – Atkins China Ltd.

Project organisation and contact details are shown in Appendix A.

1.3 Construction Programme

The Contractor's 3-month construction programme is provided in Appendix B.

1.4 Locations of Monitoring Stations

Details of the monitoring stations are provided in Section 3 and relevant figures are shown in Figures 2.1 to 2.7.

2 ENVIRONMENTAL STATUS

2.1 Work undertaken during the Reporting Period

The major construction activities undertaken during this reporting period are summarised below (see Figures 2.1 to 2.7 for the site locations):

Aberdeen

1) Excavation Lateral Support (implement method statement and standard EMP
2) mitigations).
3) Blasting cover installation (implement method statement and standard EMP mitigations).
4) Grouting (implement method statement and standard EMP mitigations).

Wah Fu

1) Remove noise barrier (implement method statement and standard EMP mitigations).
2) Modification of structural ELS (implement method statement and standard EMP mitigations).
3) Installation of blast cover (implement method statement and standard EMP mitigations).
4) Site establishment (implement method statement and standard EMP mitigations).

Cyberport

1) Rock Excavation (implement method statement and standard EMP mitigations).
2) Shotcrete, Rock Bolt, Rock Dowel (implement method statement and standard EMP mitigations).
3) Blasting for shaft (implement method statement and standard EMP mitigations).

Sandy Bay

1) Rock Excavation (implement method statement and standard EMP mitigations).
2) Blasting for tunnel and adit (implement method statement and standard EMP mitigations).
3) Shotcrete, Rock Bolt, Rock Dowel (Implement method statement and standard EMP mitigations).

Sai Ying Pun

1) Soft excavation (implement mitigations stated in the method statement and standard EMP mitigations).
2) Installation of ventilation system (implement mitigations stated in the method statement and standard EMP mitigations).

2.2 Environmental Permit and License

There were no changes or clarification to the Environmental Permit (EP-322/2008/E) during the reporting period.

Chemical Waste

The Project's registrations as a Chemical Waste Producer are listed in Table 2.1:

Table 2.1 Summary of Registrations as a Chemical Waste Producer

No.	Location	WPN Number	Issue Date
1	Cyberport	5213-171-L2699-01	30 Oct 2009
2	Sandy Bay	5213-171-L2699-05	30 Oct 2009
3	Sai Ying Pun	5111-112-L2702-01	8 Dec 2009
4	Wah Fu	5213-172-L2699-02	30 Oct 2009
5	Aberdeen PTW	5213-173-L2699-04	30 Oct 2009
6	Aberdeen Workshop	5213-173-L2699-03	30 Oct 2009

No disposal of chemical waste was carried out in the reporting period.

Water Discharge Licence

Details of water discharge licences for all the Project locations are listed in Table 2.2:

Table 2.2 Summary of Water Discharge Licences

No.	Location	Licence Number	Issue Date	Validity
1	Cyberport	WT00005534-2009	3 Dec 2009	31 Dec 2014
2	Sandy Bay	WT00005533-2009	3 Dec 2009	31 Dec 2014
3	Sai Ying Pun	WT00005489-2009	1 Dec 2009	30 Nov 2014
4	Wah Fu	WT00005532-2009	3 Dec 2009	31 Dec 2014
5	Aberdeen PTW	WT00005535-2009	3 Dec 2009	31 Dec 2014
6	Aberdeen Workshop	WT00005530-2009	3 Dec 2009	31 Dec 2014

Construction Noise Permit

The statuses of Construction Noise Permits for this Project are shown in Table 2.3:

Table 2.3 Status of Construction Noise Permits

No	Location	Operations	Time	Duration	Remark
1	Cyberport	Rock excavation, drilling, welding, grouting for shaft and tunnel	1900 - 2300 normal day 0700 – 2300 holiday	3 May 2011 ~ 2 Aug 2011	Valid with CNP GW-RS 0394-11
2	Cyberport	Rock excavation, drilling, welding, grouting for shaft and tunnel	2300 -0700 normal day 0700 – 2300 holiday	3 May 2011 ~ 2 Aug 2011	Valid with CNP GW-RS 0395-11
3	Cyberport	Waste water treatment	1900-2300 normal day 0700-2300 holiday	24 May 2011 ~ 11 Nov 2011	Valid with CNP GW-RS 0460-11
4	Sandy Bay	Rock excavation, drilling, welding grouting for shaft and tunnel and water treatment	1900 – 2300 normal day 0700 – 2300 holiday	3 May 2011 ~ 2 Aug 2011	Valid with CNP GW-RS 0379-11
		Rock excavation, drilling, welding grouting for shaft and tunnel	24 hours		
5	SYP	Noise enclosure erection and Soft Excavation	24 hours	09 May 2011 ~ 26 Nov 2011	Valid with CNP GW-RS 0542-11

6	Wah Fu	Welding, Grouting and Blower	1900 – 2300normal day 0700 – 2300 holiday	22 Jul 2011 ~ 21 Jan 2012	Valid with CNP GW-RS 0670-11
7	Aberdeen	Welding and grouting for shaft	1900 – 2300normal day 0700 – 2300 holiday	03 June 11 ~ 02 Dec 2012	Valid with CNP GW-RS 0489-11
8	Aberdeen	Water pump, power generator and AquaSED	2300 to 0700 Anyday	13 May 11~ 15 Nov 2011	Valid with CNP GW-RS0422-11

2.3 Environmental Document Submission

A summary of Environmental Certification Sheet submissions within the reporting period under the Project EP is presented in Table 2.4.

Table 2.4 Summary of Environmental Document Submission

No.	Document Title	Date of Submission	Date of Verification/ Approval
1	Monthly Environmental Monitoring and Audit Report No.18, Covering the Period from 1 June 2011 to 30 June 2011 (EMA/021, Rev C)	20 July 2011	22 July 2011

2.4 Environmental Monitoring Locations

There are five noise monitoring stations and four air quality monitoring stations designated for the Project and the relevant locations and sensitive receivers are shown on Figures 2.1 to 2.4 and Figures 2.5 to 2.7 respectively. Descriptions of these monitoring stations are provided in Table 2.5.

Table 2.5 Noise and Air Quality Monitoring Stations Descriptions

Monitoring ID	Description	Uses/ Location of Measurement	Easting	Northing
Noise Monitoring Stations				
M3 (1)	Rooftop (24/F) of Block A, Kwan Yick Building Phase III (Fung Mat Road Site)	Medium-rise domestic premises – private housing estate	832480	816602
M5	Rooftop (4/F) of Chuk Lam Ming Tong (Sandy Bay PTW)	Hospital and clinics - home for the aged	830779	814609
M5a	Near entrance of Chuk Lam Ming Tong (Sandy Bay PTW)	Hospital and clinics - home for the aged	830779	814609
M6a (2), (3)	2m above ground, outside of Aegean Terrace (Cyberport PTW)	Low-rise domestic premises – private housing	831304	813890

M7a (2)	Rooftop (19/F) of Wah Ming House (Wah Fu PTW)	Medium-rise domestic premises – public housing estate	831940	812497
M8 (4)	Roof (39/F) of Wah Lai House (Aberdeen PTW)	High-rise domestic premises – public housing estate	832555	812299
Air Quality Monitoring Stations				
CM_FM1 (5)	Western Wholesale Food Market (Fung Mat Road Site)	Podium	832341	816776
CM_CB1a (2)	The Arcade, Cyberport (Cyberport PTW)	Ground level at children playground, adjacent to Project site office	831298	813514
CM_WF1a (2)	Wah Ming House (Wah Fu PTW)	Roof	831943	812497
CM_AB1a (2), (6)	The Hong Kong Ice and Cold Storage, formally known as Dairy Farm Ice and Cold Storage (Aberdeen PTW)	1.5m raised platform at car park	832873	812158

Notes:
(1) Both baseline and impact noise monitoring are conducted by ET of Contact DC/2007/23. The baseline noise monitoring data will be used as a reference and impact noise monitoring data is adopted in this Report.
(2) Revision to the original monitoring location in Project EM&A Manual was made and was verified by IEC on 19 November 2009 and subsequently approved by EPD on 27 November 2009.
(3) A correction factor of +3dB(A) is added as free field to façade measurement conversion.
(4) Both baseline and impact noise quality monitoring was conducted by ET of this Project. The impact noise monitoring data will be adopted by ET of Contract DC/2008/09.
(5) Baseline air quality monitoring was conducted by ET of Contact DC/2007/23, whereas impact air quality monitoring was conducted by ET of this Project. The baseline air quality monitoring data will be used as a reference. The impact air quality data will be adopted by ET of Contact DC/2007/23.
(6) Both baseline and impact air quality monitoring are conducted by ET of this Project and are adopted by ET of Contract DC/2008/09.

3 EM&A REQUIREMENTS

3.1 Summary of Impact EM&A Requirements

The EM&A for this Project requires quantitative monitoring on noise and air quality (Total Suspended Particulates (TSP)) on regular and ad-hoc basis, in addition to site inspections. A summary of key impact EM&A requirements for this Project is presented in Table 3.1.

Table 3.1 Summary of Impact EM&A Requirements

Parameter	Description	Frequency
Noise	$L_{eq(30min)}$ between 07:00 – 19:00 hours on normal weekdays, $L_{eq(15min)}$ for other time periods and L_{10} and L_{90} (On-site measurement using sound level meter)	Once a week. One set of measurements between 0700 and 1900 hours on normal weekdays. If construction works are extended to include works during the hours of 1900 – 0700 as well as public holidays and Sundays, additional weekly impact monitoring shall be carried out during respective restricted periods.
Air Quality	24-hour TSP (On-site measurement using High Volume Sampler) 1-hour TSP (Measured by direct reading methods which are capable of producing comparable results as that by the high volume sampling method) (1) (2)	For 24-hour TSP monitoring, the sampling frequency is at least once in every six-days. For 1-hour TSP monitoring, the sampling frequency is at least three times in every six-days. .
Waste	Routine supervision of construction works	As per site inspection schedule.
Landscape and Visual	Survey of full effectuation of mitigation measures	Once per month
Hazard to Life	Vibration and ground monitoring along boundary of HKCG Depot Vibration level associated with blasting for Tunnel P, shafts and other construction works	On-going
Cultural Heritage	Vibration level at identified historical buildings	On-going

Notes: (1) Except at CM_FM1, where HVS is used for the impact monitoring of 1 hour TSP.
(2) Laser Particle Photometer (hand held) was used. Relevant specification was submitted to IEC for information on 19 October 2009 under Baseline Environmental Monitoring Plan (GEN/023).

3.2 Environmental Quality Performance Limits

Environmental Quality Performance Limits (Action and Limit levels) for noise and air quality have been developed for the Project Baseline Monitoring Report and are summarised in Table 3.2 and Table 3.3 respectively.

Table 3.2 Action and Limit Levels for Impact Noise Monitoring

Time Period	Action	Limit
0700-1900 hrs on normal weekdays	When one documented complaint is received	75dB(A)(1)
0700-2300 hrs on holidays and 1900-2300 hrs on all other days		60/65/70dB(A)(2)
2300-0700 of next day		45/50/55dB(A)(2)

Note: (1) Between 0700-1900, construction noise limit for school during normal term time is 70dB(A) and 65dB(A) during examination period.
(2) To be selected based on Area Sensitivity Rating

Table 3.3 Action and Limit Levels for Air Quality Monitoring

Monitoring ID	1-hour TSP Level, µg/m³		24-hour TSP Level, µg/m³	
	Action	Limit	Action	Limit
CM_FM1	332 (1)	500	188 (2)	260
CM_CB1a	280 (1)	500	178 (2)	260
CM_WF1a	285 (1)	500	185 (2)	260
CM_AB1a	283 (1)	500	174 (2)	260

Notes: (1) For Baseline Level ≤ 384 µg/m³, Action Level = (Baseline Level*1.3 + Limit Level)/2;
For Baseline Level > 384 µg/m³, Action Level = Limit Level
(2) For Baseline Level ≤ 200 µg/m³, Action Level = (Baseline Level*1.3 + Limit Level)/2;
For Baseline Level > 200 µg/m³, Action Level = Limit Level

3.3 Event Action Plan

Event and Action Plans for noise, air quality as well as visual and landscape aspects have been developed as part of the Baseline Monitoring Report for the Project and the details are provided in Appendix C.

3.4 Environmental Measures and Implementation Status

The mitigation measures listed in the Project EIA Report, EM&A Manual and Environmental Permit as well as relevant implementation status are provided in Appendix D. Based on the site inspection findings, it appears that the Contractor has implemented the required mitigation measures during construction works to date.

4 MONITORING RESULTS

4.1 Monitoring Methodology and QA/QC Procedure

Noise Monitoring

Noise monitoring methodology and QA/QC procedure was detailed in Section 4.1 of Monthly EM&A Report No. 1 (GEN/030 Rev B). No change in noise monitoring methodology and QA/QC procedure was made.

Air Quality

Air quality monitoring methodology and QA/QC procedure was detailed in Section 4.1 of Monthly EM&A Report No. 1 (GEN/030 Rev B). No change in air quality monitoring methodology and QA/QC procedure was made.

Landscape and Visual

Monthly site audit is undertaken to check the design, implementation and maintenance of landscape and visual mitigation measures at all Project work sites.

4.2 Monitoring Equipment

Noise

The equipment used for continuous noise monitoring is listed in Table 4.1.

Table 4.1 Equipment for Noise Monitoring

Equipment	Model
Integrated Sound Level Meters	B&K 2238 Serial no. 2684502 And B&K 2238 Serial no. 2684503
Calibrator	B&K 4231, Serial no. 2656516 And B&K 4231, Serial no. 2385180

Air Quality

The equipment used for air quality monitoring is listed in Table 4.2.

Table 4.2 Equipment for Air Quality Monitoring

Parameter Measured	Equipment
1-Hour Sampling for CM_CB1a, CM_WF1a and CM_AB1a	Sibata Laser Dust Monitor Model LD-3B was used for monitoring stations CM_CB1a, CM_WF1a and CM_AB1a. This portable instrument is capable of providing: • Real time TSP concentration • Adjustable logging intervals from 6 to 600 seconds • Average concentration over logging interval and maximum and average values for entire logging period

Parameter Measured	Equipment
24-Hour Sampling for CM_CB1a, CM_WF1a, CM_AB1a and CM_FM1; and 1-Hour Sampling for CM_FM1	A High Volume Sampler Model TE-5170, by Tisch Environmental, Inc., was used for monitoring stations CM_CB1a, CM_WF1a and CM_AB1a. This instrument was equipped with: • Mass flow controller with 20 – 60 SCFM adjustable flow probe • Mechanical timer for recording elapsed-time and 24-hour operation A continuous flow recorder for continuous monitoring

4.3 Equipment Calibration

The calibration frequencies of the monitoring equipment are provided in Table 4.3.

Table 4.3 Equipment Calibration Frequencies

Equipment	Calibration Frequency
Integrated SLM and Calibrator	Every year
High Volume Sampler	Every two months
Laser Dust Monitor	Every year

Copies of the calibration certificates for the equipment are presented in Appendix F.

4.4 Impact Monitoring Schedule from 1 July 2011 to 31 July 2011

The noise and air quality monitoring schedule in reporting period is shown in Appendix G. The visual and landscape monitoring was carried out on 27 July 2011.

Regular site inspections were carried out to assess whether the project's environmental protection and pollution control measures are in compliance with the contract specifications. Inspections were carried out on 5, 12, 19 and 27 July 2011.

4.5 Impact Monitoring Results

Noise Monitoring Results

The noise monitoring results at the monitoring stations are provided in Appendix H. Graphical presentation of the noise monitoring data is shown in Appendix I.

Air Quality Results

The air quality monitoring results at the monitoring stations are presented in Appendix J. Graphical presentation of the air quality monitoring data is provided in Appendix K.

4.6 Weather Condition during Reporting Period

The weather conditions during reporting period are provided in Appendix E.

4.7 Waste Management

A summary of waste flow for July 2011 is outlined in Table 4.4. Inert construction and demolition (C&D) waste (i.e. public fill) was disposed of at Chai Wan Public Fill Barging Point/fill bank at Tseung Kwan O Area 137 (for public fill contains slurry only). Other C&D waste such as paper/ cardboard collected by local waste recycling contractor whilst general refuse was disposed at South East New Territories Landfill.

Table 4.4 Monthly Summary Waste Flow Table during Reporting Period

Month	Actual Quantities of Inert C&D Materials Generated Monthly					
	Total Quantity Generated	Broken Concrete (2)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill
	(in '000 m³)					
July 2011	6.644	0	0	3.676	2.968	0
Month	**Actual Quantities of C&D Wastes Generated Monthly**					
	Metals	Paper/ cardboard packaging	Plastics (3)	Chemical Waste	Others, e.g. general refuse	
	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 m³)	
July 2011	0	0.616	0	0	0.180	

Notes:
(1) The waste flow table will also include C&D materials that are specified in the Contract to be imported for use at the Site.
(2) Broken concrete for recycling into aggregates.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
(4) Assumption: 1m³ of Inert C&D Materials weigh 1.9 tonnes and 1m³ of C&D Wastes weigh 1.6 tonnes

4.8 Landscape and Visual

The monthly site audit was undertaken on 27 July 2011 to check the design, implementation and maintenance of landscape and visual mitigation measures, as laid out in the Project EM&A Manual, at work sites in Aberdeen, Wah Fu, Cyberport, Sandy Bay and Sai Ying Pun. The landscape and visual monitoring report is attached in Appendix L.

4.9 Hazard to Life

324 ground settlement markers, 111 structural settlement markers and 72 piezometers were installed for monitoring. No vibration monitoring was carried out at this month.

No structural settlement was found.

4.10 Cultural Heritage

Vibration of historical buildings and structures was not carried out during the reporting period as no tunneling/ blasting works was carried out.

5 ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

5.1 Environmental Exceedance

During the reporting period of this monthly EM&A Report No. 19, six non-project related Limit Level (LL) exceedances in noise criteria were recorded on 6, 12, 20, 24 and 28 July 2011. Two non-project related LL exceedances of noise were recorded during the restricted hours (night time) monitoring at station M5a (near the entrance of Chuk Lam Ming Tong). One non-project related LL exceedance of noise was recorded during the restricted hours (evening time) monitoring at station M5a (near the entrance of Chuk Lam Ming Tong).One non-project related LL exceedances of noise were recorded during the restricted hours (public holiday) monitoring at station M5a (near the entrance of Chuk Lam Ming Tong). One non-project related LL exceedance of noise wase recorded during the restricted hours (evening time) monitoring at station M6a (Aegean Terrace).And one non-project related LL exceedance of noise wase recorded during the restricted hours (night time) monitoring at station M6a (Aegean Terrace). A summary of exceedances is provided in the table below.

Besides, all landscape and visual mitigation measures listed out in the Project EM&A Manual have been implemented except CM2 at Cyberport, CM2 and CM3 at Sandy Bay. Stagnant water was observed at Cyberport site and it might have affected the health condition of the retained tree T048(R).

Retained trees T036(R), T037(R) and T018(R) were observed to be in poor health condition. The Contractor was advised to consult their tree consultant and check whether mitigation measures would be necessary to improve the health of the tree and retained tree T020 (R) was still observed in poor health condition. The contractor was advised to consult their tree consultant and to take necessary mitigation measures to improve the health of the tree. Transplanted trees T004 (T) and T005 (T) were still found to be in very poor health condition or it might be dead since the last seven monthly audits in Sandy Bay site.

According to the Contractor's monitoring data, no exceedance in structural settlement monitoring results was recorded during the reporting period.

5.2 Site Inspections and Audit

A joint site inspection with the IEC and the Contractor was undertaken on 12 July 2011. All the works areas were observed to be generally complied with the environmental mitigation requirements and no particular water quality impacts found.

Records of site inspections observations and corrective actions during the reporting period are provided in Appendix N. Following the environmental inspections, the Contractor has undertaken remedial actions to improve the implementation of mitigation measures.

The Contractor has prepared a Waste Management Plan for the project, although it is not an EP requirement. During the site inspection, the Contractor was seen to have implemented good site practices and mitigation measures as stated in the EM&A Manual.

5.3 Environmental Complaint and Prosecution

No complaints were received in relation to environmental impact during the reporting period. The summary of environmental complaints is shown in Table 5.1.

Table 5.1 Summary of Environmental Complaints

Total No. of Complaints Received	No. of Complaints Received during Reporting Period	No. of Active Complaints	No. of Inactive Closed Complaints
5	0	0	5

No notifications of summons or prosecutions were received in relation to environmental impact during the reporting period (see Table 5.2).

Table 5.2 Summary of Notifications of Summons and Prosecutions

Total No. of Notifications of Summons / Prosecutions Received	No. of Notifications of Summons / Prosecutions Received during Reporting Period	Status of Notifications of Summons / Prosecutions
0	0	N/A

6 FORECAST AND SCHEDULE

6.1 Key Issues for the Coming Months

The key issues with respect to the works in the forthcoming 2 months include:

Aberdeen

1) Rock excavation (implement method statement and standard EMP mitigations).
2) Blasting for shaft (implement method statement and standard EMP mitigations).

Wah Fu

1) Installation of blast cover (implement method statement and standard EMP mitigations).
2) Site establishment (implement method statement and standard EMP mitigations).

Cyberport

1) Rock Excavation (implement method statement and standard EMP mitigations).
2) Shotcrete, Rock Bolt, Rock Dowel (implement method statement and standard EMP mitigations).
3) Blasting in Adit and Tunnel (implement method statement and standard EMP mitigations).

Sandy Bay

1) Rock Excavation (implement method statement and standard EMP mitigations).
1) Blasting for Adit and Tunnel (implement method statement and standard EMP mitigations).
2) Shotcrete, Rock Bolt, Rock Dowel (implement method statement and standard EMP mitigations).

Sai Ying Pun

1) Soft excavation (implement mitigations stated in the method statement and standard EMP mitigations).
2) Installation of ventilation system (implement method statement and standard EMP mitigations).

6.2 Monitoring Schedules for the Next Month

The proposed schedule for noise monitoring from 1 August 2011 to 31 August 2011 is provided in Appendix G.

7 CONCLUSION

This is the Nineteenth Monthly EM&A Report prepared by Atkins China Ltd (ACL) for Contract No. DC/2007/24 Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun. This Report summarises the results and findings of the EM&A during the reporting period from 1 to 31 July 2011.

During the reporting period of this monthly EM&A Report No. 19, six non-project related Limit Level (LL) exceedances in noise criteria were recorded on 6, 12, 20, 24 and 28 July 2011. Two non-project related LL exceedances of noise were recorded during the restricted hours (night time) monitoring at station M5a (near the entrance of Chuk Lam Ming Tong). One non-project related LL exceedance of noise was recorded during the restricted hours (evening time) monitoring at station M5a (near the entrance of Chuk Lam Ming Tong).One non-project related LL exceedances of noise were recorded during the restricted hours (public holiday) monitoring at station M5a (near the entrance of Chuk Lam Ming Tong). One non-project related LL exceedance of noise wase recorded during the restricted hours (evening time) monitoring at station M6a (Aegean Terrace).And one non-project related LL exceedance of noise wase recorded during the restricted hours (night time) monitoring at station M6a (Aegean Terrace).

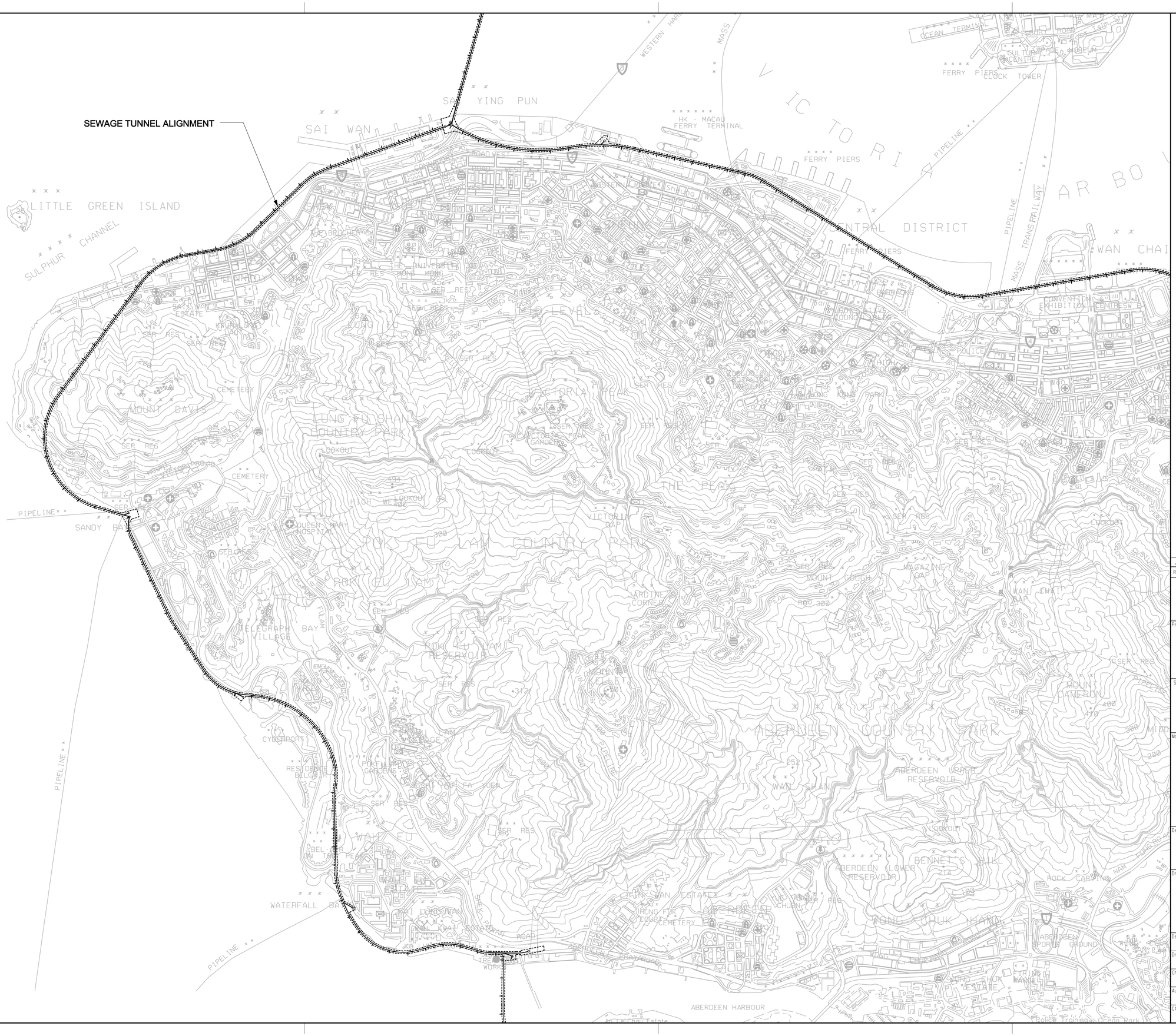
There was no environmental, non-compliance attributable to the Project works during the reporting period. Also, no environmental complaint, prosecution or summons was received during the reporting period. Mitigation Measures stated in the Project EIA have been implemented.

The landscape and visual site audit was undertaken on 27 July 2011 to check the design, implementation and maintenance of L&V mitigation measures at work sites. All landscape and visual mitigation measures listed out in the Project EM&A Manual have been implemented except CM2 at Cyberport, CM2 and CM3 at Sandy.

Stagnant water was observed at Cyberport site and it might have affected the health condition of the retained tree T048(R) Health condition of retained trees. T036(R), T037(R) and T018(R) showed improvement and temporary trench drain was installed to avoid formation of stagnant water in Sandy Bay site and retained tree T020 (R) was still observed in poor health condition. The contractor was advised to consult their tree consultant and to take necessary mitigation measures to improve the health of the tree Transplanted trees T004 (T) and T005 (T) were still found to be in very poor health condition or it might be dead since the last seven monthly audits in Sandy Bay site.

Overall, environmental impacts arising from the Project construction activities have been controlled and properly rectified.

FIGURES



Rev	Description	Date	Dgn	Chk	Auth
A	FIRST ISSUE	03/02	SC	SB	EC

渠務署
DRAINAGE SERVICES DEPARTMENT

HARBOUR AREA TREATMENT SCHEME DIVISION

Project title

CONTRACT NO. DC/2007/24
HARBOUR AREA TREATMENT SCHEME STAGE 2A
CONSTRUCTION OF SEWAGE CONVEYANCE SYSTEM
FROM ABERDEEN TO SAI YING PUN

Supervising Officer

AECOM

Metcalf & Eddy – AECOM Joint Venture

Main Contractor

LEIGHTON 禮頓 | LNS

Leighton - LNS Joint Venture

Designer

ATKINS

Drawing title

OVERALL LAYOUT PLAN

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Checked: SB	
Authorised: EC	Figure No.: 1.1
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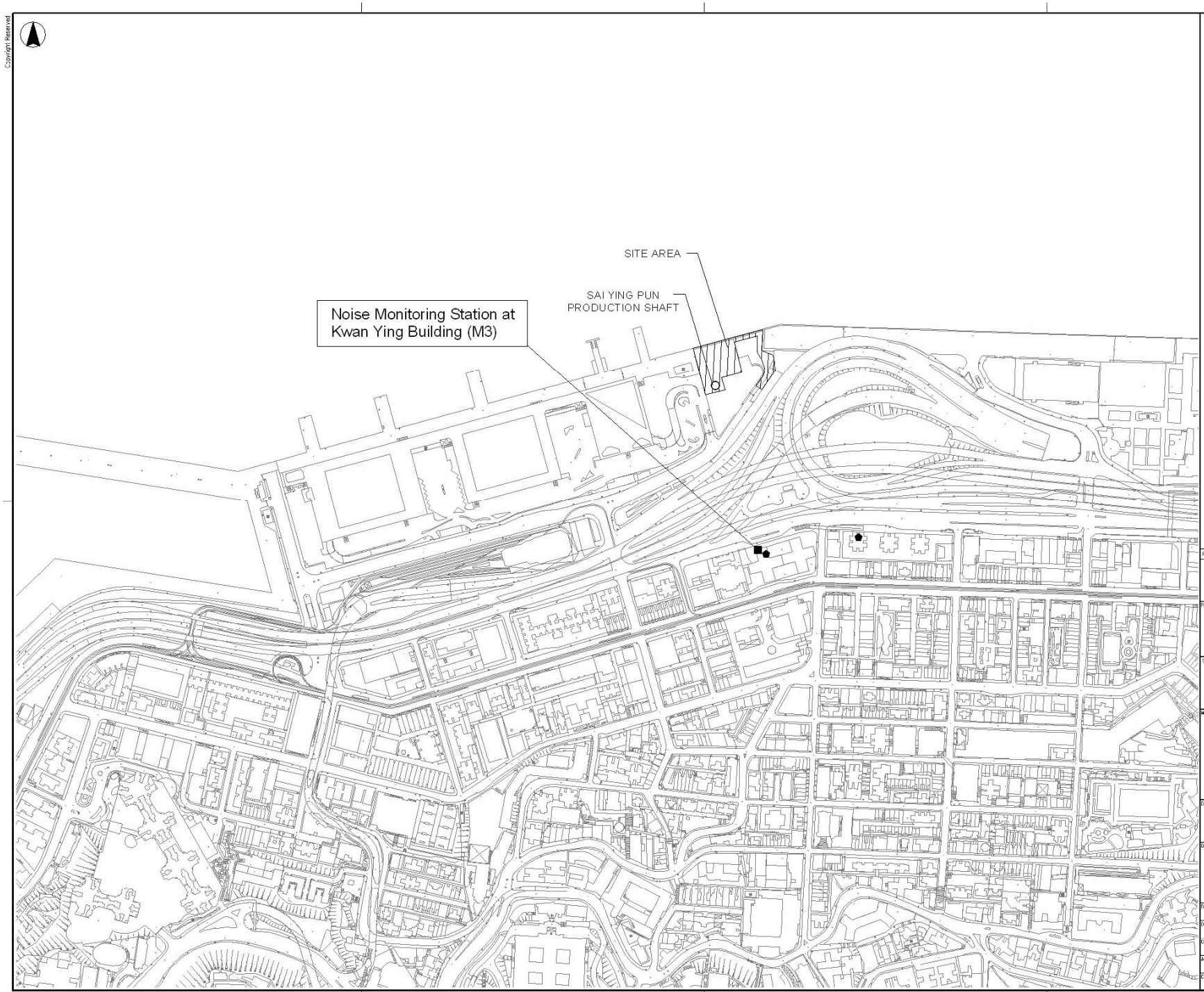

LEGEND
- NOISE MONITORING STATION
- NOISE SENSITIVE RECEIVERS

0 50 100 150 Meters

Rev	Description	Date	Dgn	Chk	Auth

DRAINAGE SERVICES DEPARTMENT
HARBOUR AREA TREATMENT SCHEME DIVISION

Project Title
CONTRACT NO. DC/2007/24
HARBOUR AREA TREATMENT SCHEME STAGE 2A
CONSTRUCTION OF SEWAGE CONVEYANCE SYSTEM
FROM ABERDEEN TO SAI YING PUN

Supervising Officer: AECOM
Metcalf & Eddy – AECOM Joint Venture

Main Contractor: Leighton - LNS Joint Venture

Designer: ATKINS

Drawing Title
CONSTRUCTION NOISE
MONITORING STATION
AT FUNG MAT ROAD SITE

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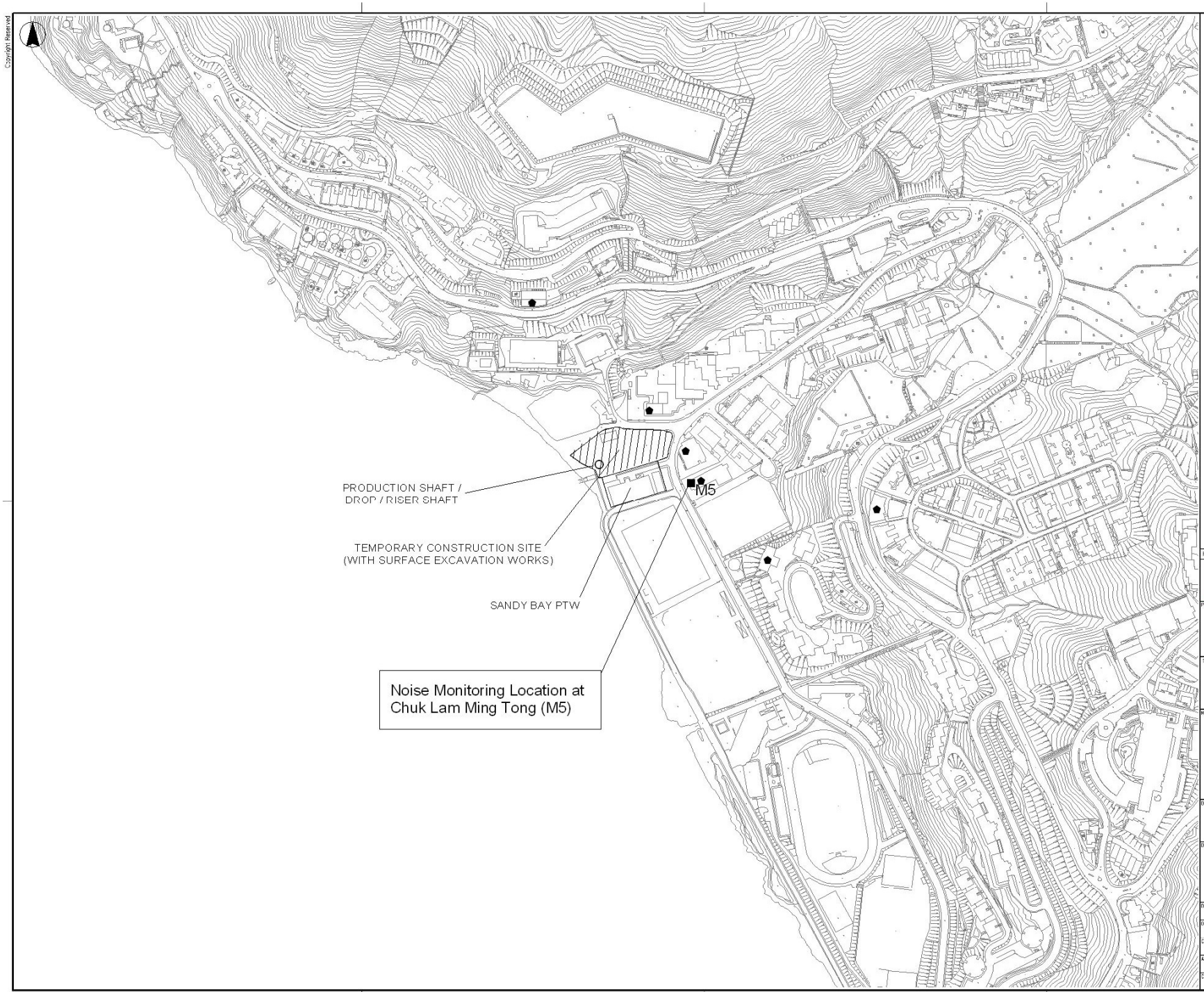
Checked
Authorised | Drawing No. 2.1 | Rev. A
CAD ref.



LEGEND

- NOISE MONITORING STATION
- NOISE SENSITIVE RECEIVERS

0 50 100 150 Meters

Rev	Description	Date	Dgn	Chk	Auth

DRAINAGE SERVICES DEPARTMENT

HARBOUR AREA TREATMENT SCHEME DIVISION

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CONSTRUCTION OF SEWAGE CONVEYANCE SYSTEM
FROM ABERDEEN TO SAI YING PUN

Supervising Officer

AECOM

Metcalf & Eddy – AECOM Joint Venture

Main Contractor

Leighton - LNS Joint Venture

Designer

ATKINS

Drawing Title

CONSTRUCTION NOISE
MONITORING STATION
AT SANDY BAY PTW

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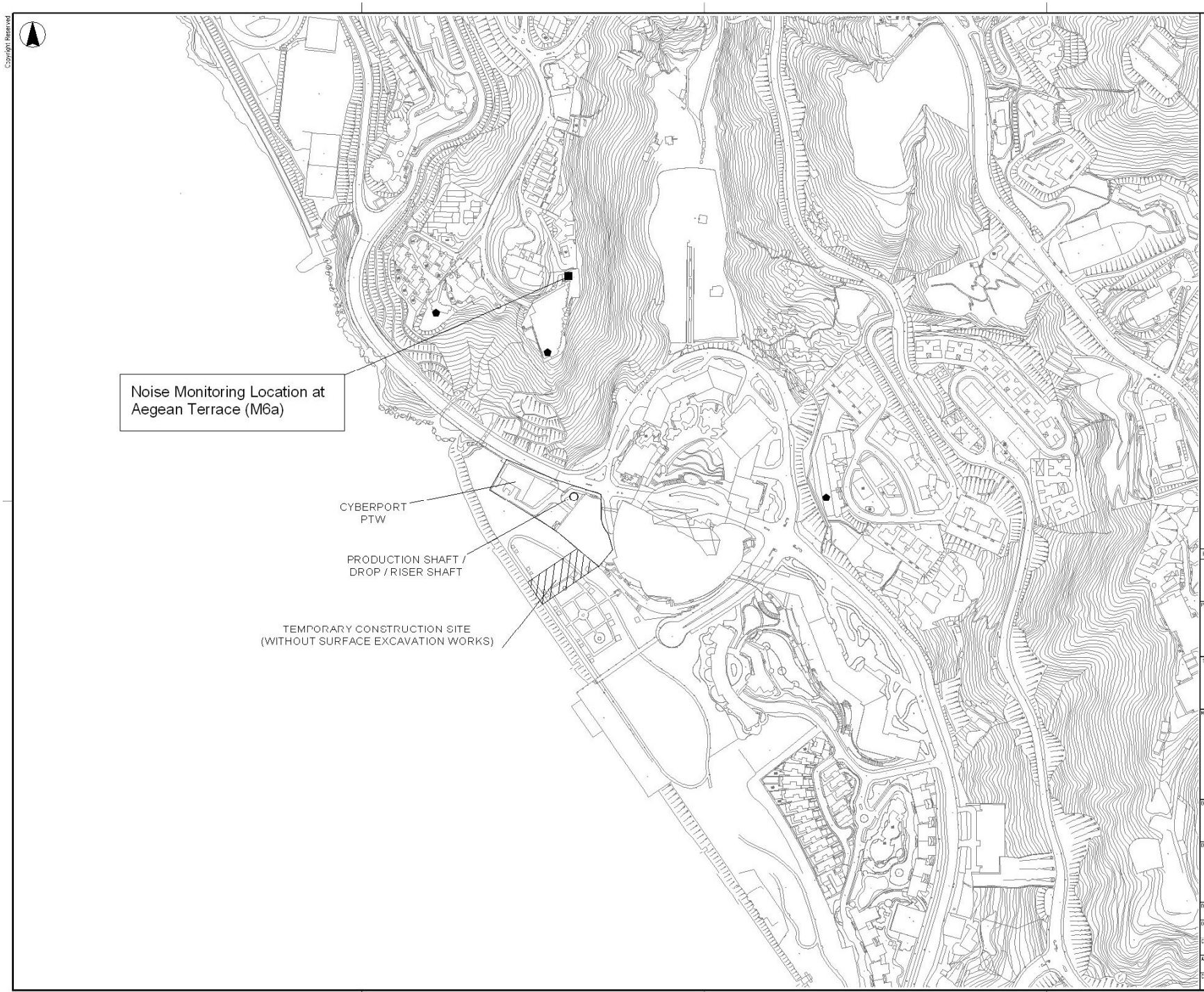

LEGEND

- NOISE MONITORING STATION
- NOISE SENSITIVE RECEIVERS

0 50 100 150 Meters

Rev	Description	Date	Dgn	Chk	Auth

DRAINAGE SERVICES DEPARTMENT

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HARBOUR AREA TREATMENT SCHEME STAGE 2A
CONSTRUCTION OF SEWAGE CONVEYANCE SYSTEM FROM ABERDEEN TO SAI YING PUN

Supervising Officer

AECOM

Metcalf & Eddy – AECOM Joint Venture

Main Contractor

Leighton - LNS Joint Venture

Designer

ATKINS

Drawing title

CONSTRUCTION NOISE MONITORING STATION AT CYBERPORT PTW

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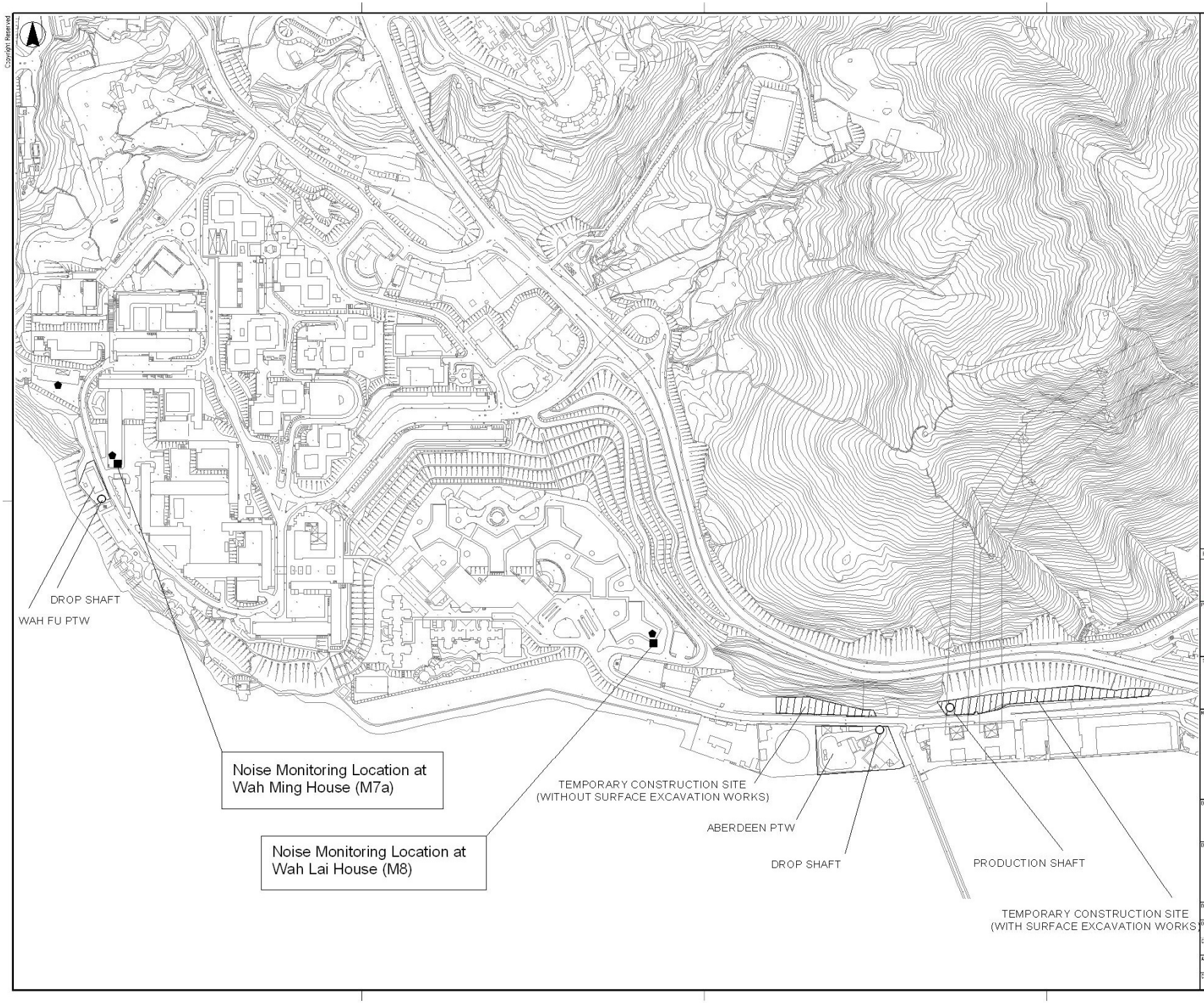

Rev	Description	Date	Dgn	Chk	Auth

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FROM ABERDEEN TO SAI YING PUN

Supervising Officer
AECOM
Metcalf & Eddy – AECOM Joint Venture

Main Contractor
Leighton - LNS Joint Venture

Designer
ATKINS

Drawing title
CONSTRUCTION NOISE MONITORING STATION AT WAH FU AND ABERDEEN PTW

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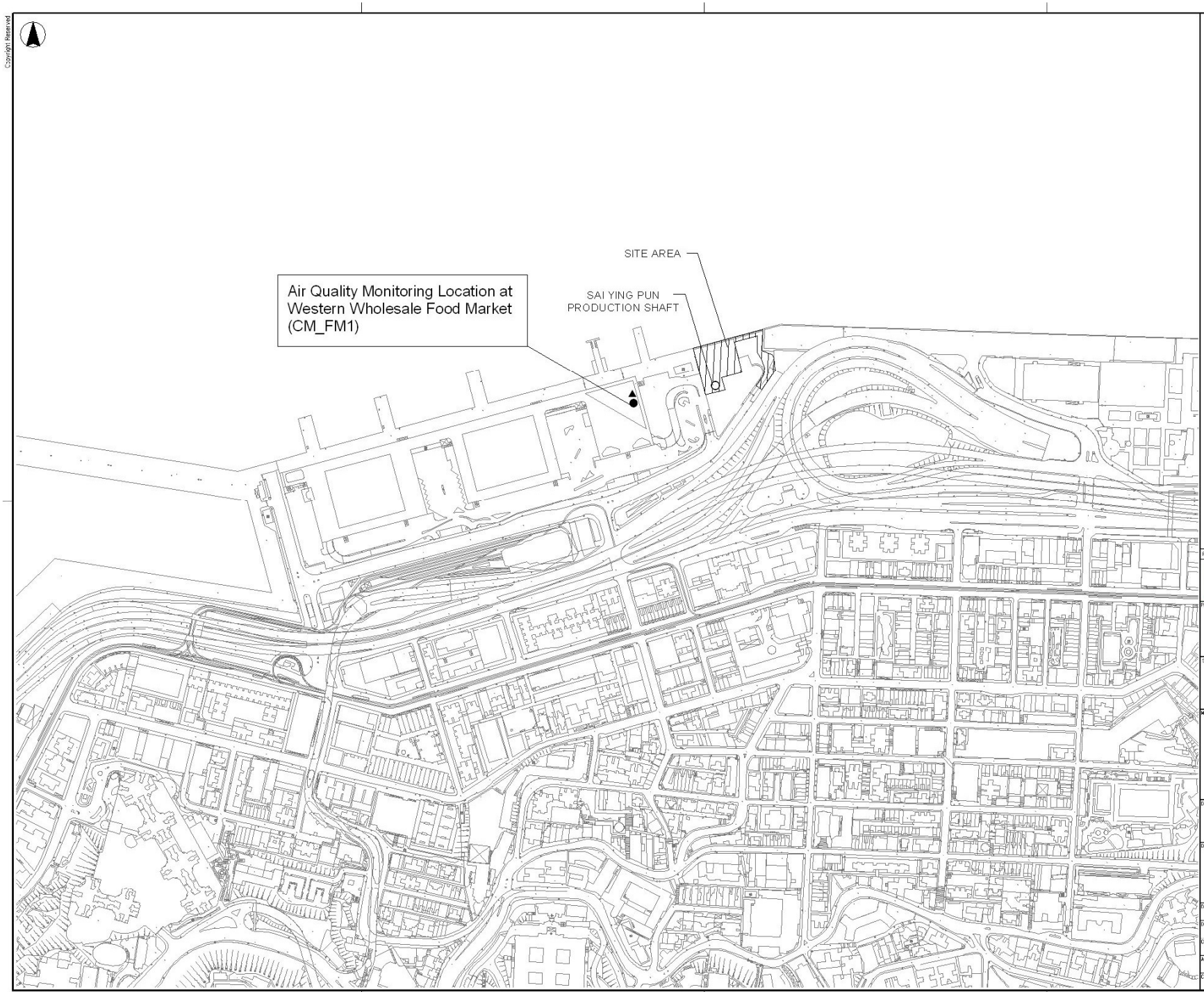

LEGEND
- ▲ AIR SENSITIVE RECEIVERS
- ● DUST MONITORING STATION

0 50 100 150 Meters

Rev	Description	Date	Dgn	Chk	Auth

土木工程拓展署
DRAINAGE SERVICES DEPARTMENT
HARBOUR AREA TREATMENT SCHEME DIVISION

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Drawing Title
CONSTRUCTION DUST
MONITORING STATION
AT FUNG MAT ROAD SITE

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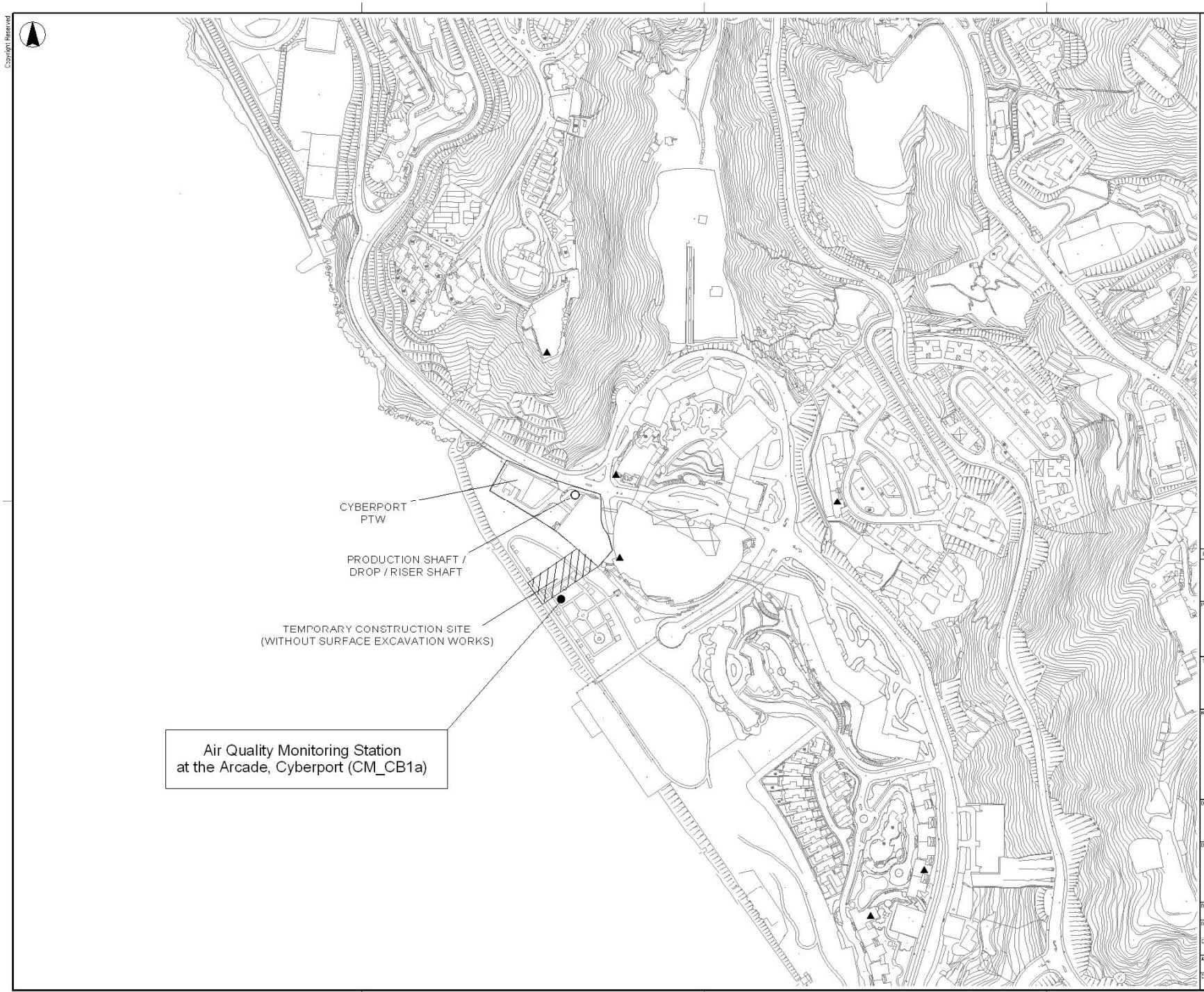

LEGEND
▲ AIR SENSITIVE RECEIVERS
● DUST MONITORING STATION
0 50 100 150 Meters

Rev	Description	Date	Dgn	Chk	Auth

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Drawing title
CONSTRUCTION DUST
MONITORING STATION AT
CYBERPORT PTW

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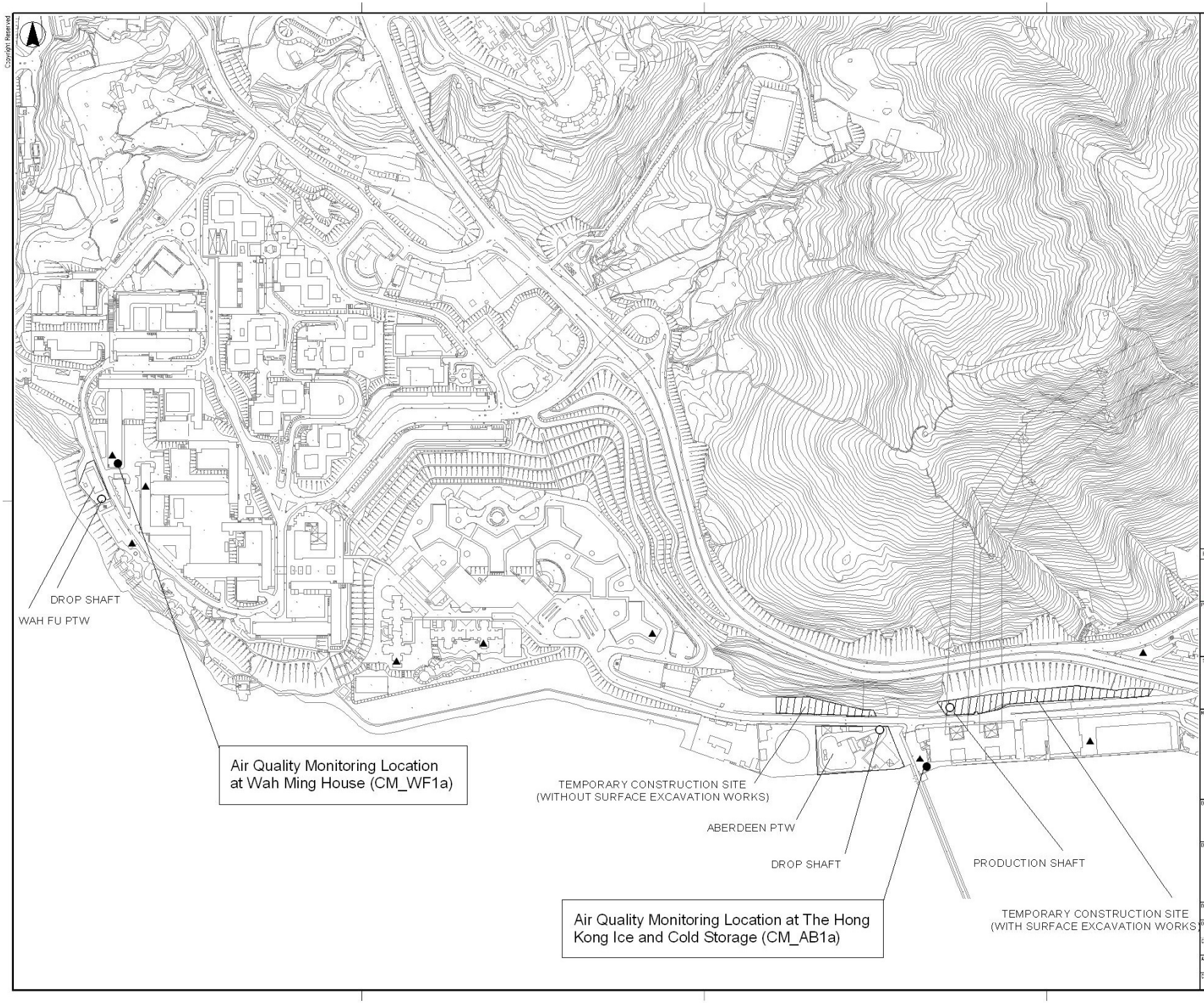

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Designer
ATKINS

Drawing title
CONSTRUCTION DUST MONITORING STATION AT WAH FU AND ABERDEEN PTW

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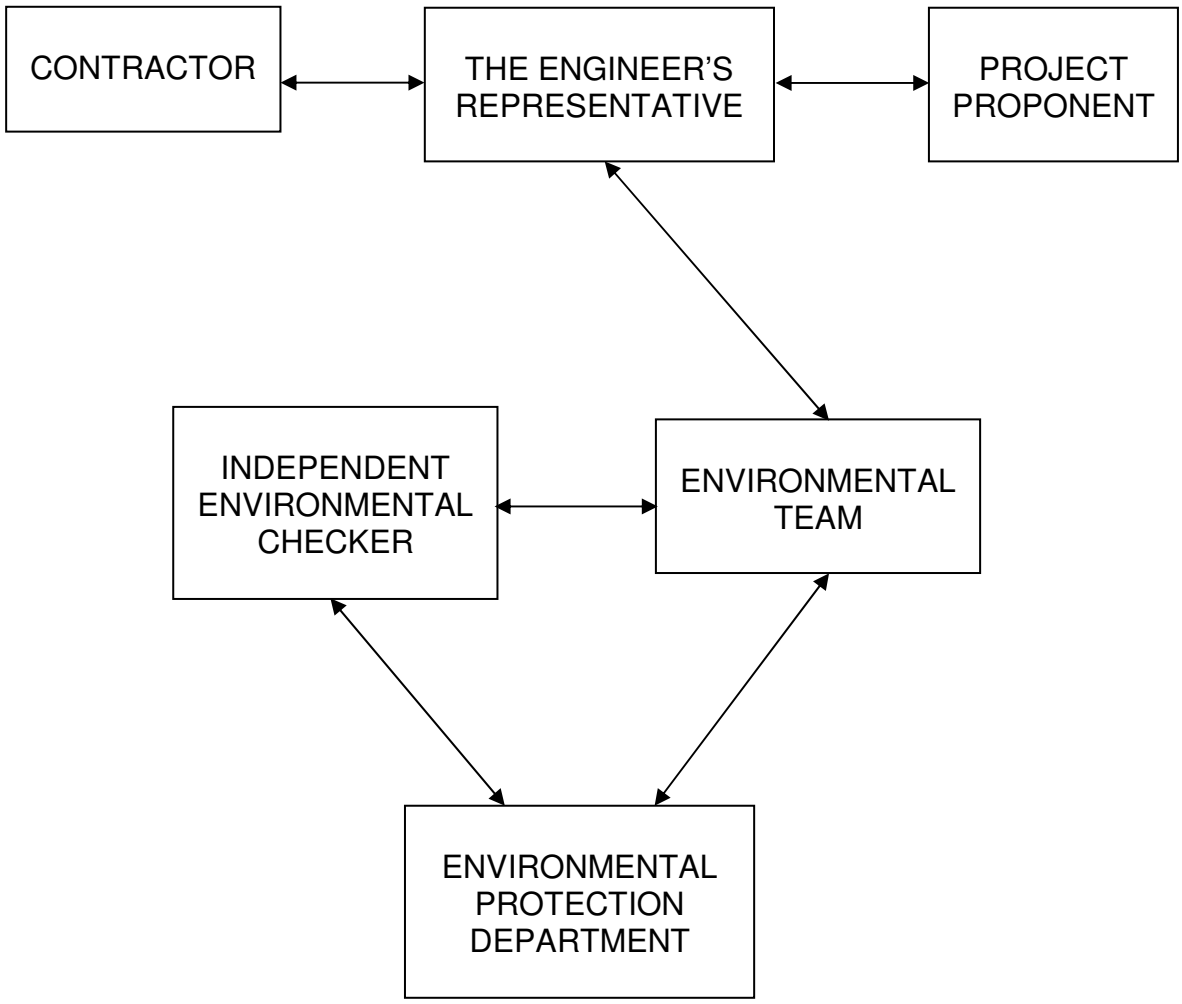
APPENDIX A

PROJECT ORGANISATION AND CONTACT DETAILS

Project Organisation



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↔ Line of communication

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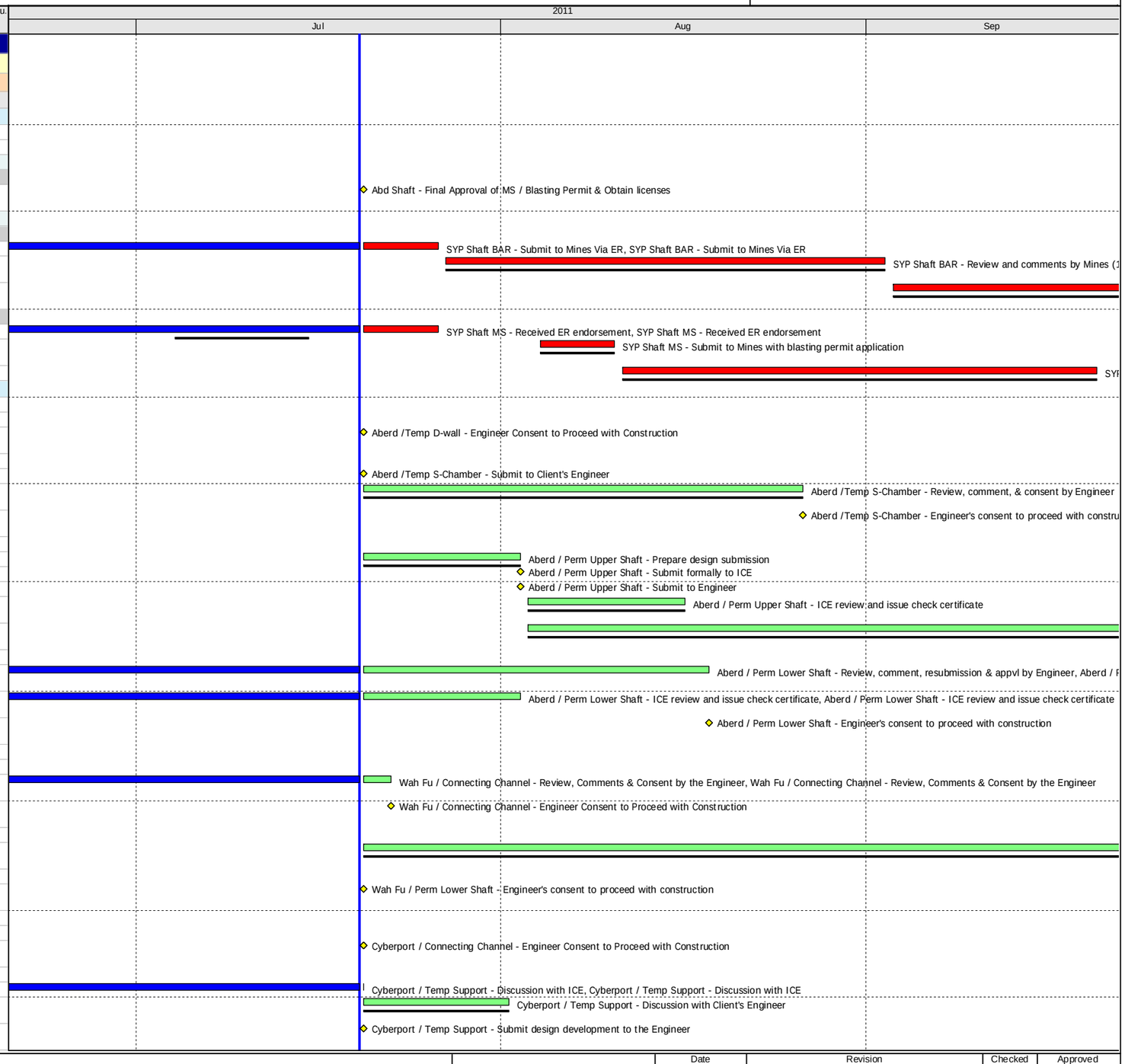
APPENDIX B

THE CONTRACTOR'S 3-MONTH CONSTRUCTION PROGRAMME

Data Date: 20-Jul-11
Print Date: 18-Jul-11 16:07

THREE MONTH ROLLING PROGRAMME (TM24)
STATUS as at 20 July 2011

Activity ID	Activity Name	Orig Dur	Rem Dur	Forecast Start (20-Jun-11)	Forecast Finish (20-Jun-11)	% Compl	Total Float
HATS2A - MONTHLY PROGRESS UPDATE (Jul 2011) - Rev.C2							
CONTRACT NO. DC/2007/24							
DESIGN WORKS							
DESIGN, SUBMISSION and APPROVAL							
PROJECT WIDE							
Blasting Permit Application and Licenses by Mine Department							
Shafts - BAR and Method Statement Application							
Aberdeen							
Method Statement							
0076	Abd Shaft - Final Approval of MS / Blasting Permit & Obtain licenses	0	0		20-Jul-11	0%	-44
Sai Ying Pun							
BAR							
0056	SYP Shaft BAR - Submit to Mines Via ER	21	6	10-May-11 A	26-Jul-11	71%	-124
0057	SYP Shaft BAR - Review and comments by Mines (1st)	28	28	27-Jul-11	02-Sep-11	0%	-103
0058	SYP Shaft BAR - Incorporate comments & re-submit to ER (1st)	28	28	03-Sep-11	08-Oct-11	0%	-124
Method Statement							
0066	SYP Shaft MS - Received ER endorsement	10	5	26-May-11 A	26-Jul-11	50%	-97
0067	SYP Shaft MS - Submit to Mines with blasting permit application	6	6	04-Aug-11	10-Aug-11	0%	-124
0068	SYP Shaft MS - Review & comments by Mines (1st)	28	28	11-Aug-11	20-Sep-11	0%	-103
DROP SHAFT - TEMPORARY and PERMANENT WORKS DESIGN							
ABERDEEN - Drop Shaft and Production Shaft							
Temporary Works - Pipe Pile Walls Shaft Excavation							
9550	Aberd /Temp D-wall - Engineer Consent to Proceed with Construction	0	0		20-Jul-11	0%	56
Temporary Works - Scum Chamber and Connection Channel Excavation							
9656	Aberd /Temp S-Chamber - Submit to Client's Engineer	0	0		20-Jul-11	0%	440
9591	Aberd /Temp S-Chamber - Review, comment, & consent by Engineer	28	28	20-Jul-11	26-Aug-11	0%	440
9658	Aberd /Temp S-Chamber - Engineer's consent to proceed with construction	0	0		26-Aug-11	0%	440
Permanent Works - Upper Shaft, Scum Chamber & Connection Channel							
9667	Aberd / Perm Upper Shaft - Prepare design submission	10	10	20-Jul-11	02-Aug-11	0%	410
9770	Aberd / Perm Upper Shaft - Submit formally to ICE	0	0		02-Aug-11	0%	458
9772	Aberd / Perm Upper Shaft - Submit to Engineer	0	0		02-Aug-11	0%	410
9669	Aberd / Perm Upper Shaft - ICE review and issue check certificate	10	10	03-Aug-11	16-Aug-11	0%	458
9671	Aberd / Perm Upper Shaft - Review, comment, resubmission & appvl by Engineer	90	90	03-Aug-11	31-Oct-11	0%	603
Permanent Works - Lower Shaft							
9679	Aberd / Perm Lower Shaft - Review, comment, resubmission & appvl by Engineer	90	30	10-Sep-10 A	18-Aug-11	67%	631
9677	Aberd / Perm Lower Shaft - ICE review and issue check certificate	10	10	02-Oct-10 A	02-Aug-11	0%	438
9788	Aberd / Perm Lower Shaft - Engineer's consent to proceed with construction	0	0		18-Aug-11	0%	426
WAH FU - Dropt Shaft							
Temporary Works - Connection Channel Excavation							
9561	Wah Fu / Connecting Channel - Review, Comments & Consent by the Engineer	28	3	30-Oct-09 A	22-Jul-11	90%	608
9662	Wah Fu / Connecting Channel - Engineer Consent to Proceed with Construction	0	0		22-Jul-11	0%	413
Permanent Works - Upper Shaft, Scum Chamber and Connection Channel							
9695	Wah Fu / Perm Upper Shaft - Review, comment, resubmission & appvl by Engineer	90	90	20-Jul-11	17-Oct-11	0%	525
Permanent Works - Lower Shaft							
9830	Wah Fu / Perm Lower Shaft - Engineer's consent to proceed with construction	0	0		20-Jul-11	0%	393
CYBER PORT - Droft Shaft							
Temporary Works - Connection Channel Excavation							
9836	Cyberport / Connecting Channel - Engineer Consent to Proceed with Construction	0	0		20-Jul-11	0%	522
Temporary Works - Temporary Support for Rock Excavation							
9842	Cyberport / Temp Support - Discussion with ICE	8	0	19-Nov-09 A	20-Jul-11	95%	284
9844	Cyberport / Temp Support - Discussion with Client's Engineer	9	9	20-Jul-11	01-Aug-11	0%	275
9840	Cyberport / Temp Support - Submit design development to the Engineer	0	0	20-Jul-11		0%	275



Current Milestone
Baseline Milestone
Actual Work
Critical Remaining Work
Remaining Work
Baseline WPOD

Contract No DC/2007/24
HATS - Harbour Area Treatment Scheme (Stage 2A)
Leighton - LNS Joint Venture

LEIGHTON 禮頓
LNS 禮頓 - 利安聯營
Harbour Area Treatment Scheme

Date	Revision	Checked	Approved
20-Dec-10	Three Months Rolling Prog (TM17)	AT	AGA
20-Jan-11	Three Months Rolling Prog (TM18)	AT	AGA
20-Feb-11	Three Months Rolling Prog (TM19)	AT	AGA
20-Mar-11	Three Months Rolling Prog (TM20)	AT	AGA
20-Apr-11	Three Months Rolling Prog (TM21)	AT	AGA
20-May-11	Three Months Rolling Prog (TM22)	AT	AGA
20-Jun-11	Three Months Rolling Prog (TM23)	AT	AGA
21-Jul-11	Three Months Rolling Prog (TM24)	AT	AGA

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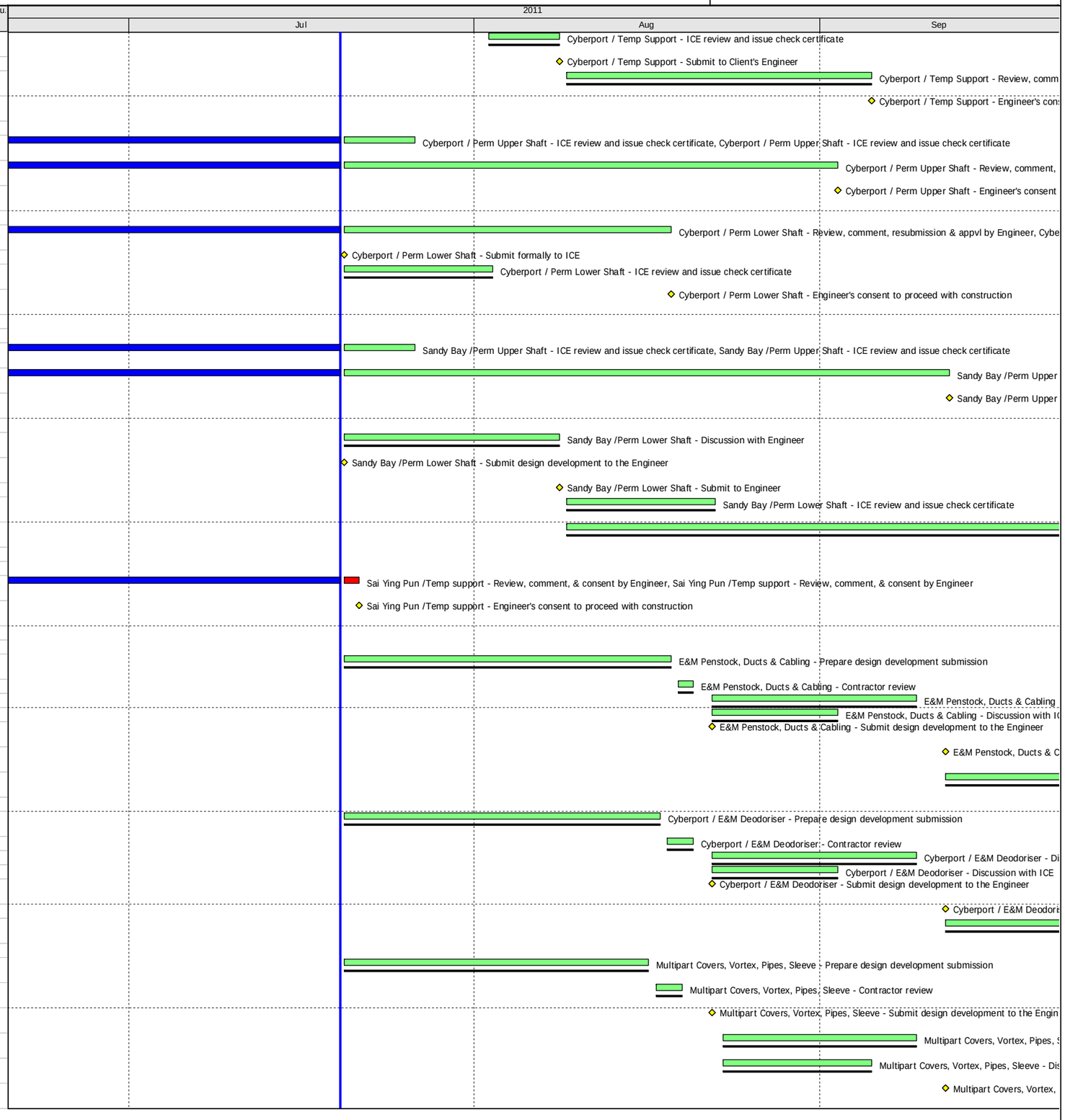
THREE MONTH ROLLING PROGRAMME (TM24)
STATUS as at 20 July 2011

Activity ID	Activity Name	Orig Dur	Rem Dur	Forecast Start (20-Jun-11)	Forecast Finish (20-Jun-11)	% Compl	Total Float	u.
9715	Cyberport / Temp Support - ICE review and issue check certificate	5	5	02-Aug-11	08-Aug-11	0%	275	
9852	Cyberport / Temp Support - Submit to Client's Engineer	0	0		08-Aug-11	0%	275	
9717	Cyberport / Temp Support - Review, comment, & consent by Engineer	28	28	09-Aug-11	05-Sep-11	0%	402	
9854	Cyberport / Temp Support - Engineer's consent to proceed with construction	0	0		05-Sep-11	0%	273	
	Permanent Works - Upper Shaft, Scum Chamber and Connection Channel							
9725	Cyberport / Perm Upper Shaft - ICE review and issue check certificate	10	5	13-Jul-10 A	26-Jul-11	50%	407	
9727	Cyberport / Perm Upper Shaft - Review, comment, resubmission & appvl by Engineer	90	45	13-Jul-10 A	02-Sep-11	50%	560	
9872	Cyberport / Perm Upper Shaft - Engineer's consent to proceed with construction	0	0		02-Sep-11	0%	379	
	Permanent Works - Lower Shaft							
9737	Cyberport / Perm Lower Shaft - Review, comment, resubmission & appvl by Engineer	90	30	10-Sep-10 A	18-Aug-11	67%	497	
9886	Cyberport / Perm Lower Shaft - Submit formally to ICE	0	0		20-Jul-11	0%	349	
9735	Cyberport / Perm Lower Shaft - ICE review and issue check certificate	10	10	20-Jul-11	02-Aug-11	0%	349	
9890	Cyberport / Perm Lower Shaft - Engineer's consent to proceed with construction	0	0		18-Aug-11	0%	337	
	SANDY BAY - Dropt Shaft and Production Shaft							
	Permanent Works - Upper Shaft, Scum Chamber & Connection Channel							
9761	Sandy Bay /Perm Upper Shaft - ICE review and issue check certificate	10	5	13-Jul-10 A	26-Jul-11	50%	469	
9763	Sandy Bay /Perm Upper Shaft - Review, comment, resubmission & appvl by Engineer	90	55	13-Jul-10 A	12-Sep-11	39%	646	
9942	Sandy Bay /Perm Upper Shaft - Engineer's consent to proceed with construction	0	0		12-Sep-11	0%	435	
	Permanent Works - Lower Shaft							
9950	Sandy Bay /Perm Lower Shaft - Discussion with Engineer	14	14	20-Jul-11	08-Aug-11	0%	333	
9946	Sandy Bay /Perm Lower Shaft - Submit design development to the Engineer	0	0	20-Jul-11		0%	333	
9958	Sandy Bay /Perm Lower Shaft - Submit to Engineer	0	0		08-Aug-11	0%	333	
9771	Sandy Bay /Perm Lower Shaft - ICE review and issue check certificate	10	10	09-Aug-11	22-Aug-11	0%	383	
9773	Sandy Bay /Perm Lower Shaft - Review, comment, resubmission & appvl by Engineer	90	90	09-Aug-11	06-Nov-11	0%	488	
	SAI YING PUN - Production Shaft							
	Temporary Works - Temporary Support for Rock Excavation							
9781	Sai Ying Pun /Temp support - Review, comment, & consent by Engineer	28	2	02-Nov-09 A	21-Jul-11	93%	-76	
9974	Sai Ying Pun /Temp support - Engineer's consent to proceed with construction	0	0		21-Jul-11	0%	-51	
	E&M - Electrical and Mechanical Works							
	Permanent Works - E&M Penstock, Ducts, Cabling & Control							
9716	E&M Penstock, Ducts & Cabling - Prepare design development submission	22	22	20-Jul-11	18-Aug-11	0%	91	
9791	E&M Penstock, Ducts & Cabling - Contractor review	2	2	19-Aug-11	20-Aug-11	0%	109	
9996	E&M Penstock, Ducts & Cabling - Discussion with Engineer	15	15	22-Aug-11	09-Sep-11	0%	91	
9994	E&M Penstock, Ducts & Cabling - Discussion with ICE	10	10	22-Aug-11	02-Sep-11	0%	96	
9992	E&M Penstock, Ducts & Cabling - Submit design development to the Engineer	0	0	22-Aug-11		0%	91	
9998	E&M Penstock, Ducts & Cabling - Proceed to detailed design	0	0	12-Sep-11		0%	91	
9793	E&M Penstock, Ducts & Cabling - Prepare draft detailed design submission	10	10	12-Sep-11	26-Sep-11	0%	91	
	Permanent Works - E&M Interim Deodoriser @ Cyberport (By JEC)							
9720	Cyberport / E&M Deodoriser - Prepare design development submission	21	21	20-Jul-11	17-Aug-11	0%	392	
9801	Cyberport / E&M Deodoriser - Contractor review	3	3	18-Aug-11	20-Aug-11	0%	464	
10012	Cyberport / E&M Deodoriser - Discussion with Engineer	15	15	22-Aug-11	09-Sep-11	0%	393	
10010	Cyberport / E&M Deodoriser - Discussion with ICE	10	10	22-Aug-11	02-Sep-11	0%	398	
10008	Cyberport / E&M Deodoriser - Submit design development to the Engineer	0	0	22-Aug-11		0%	393	
10014	Cyberport / E&M Deodoriser - Proceed to detailed design	0	0	12-Sep-11		0%	393	
9803	Cyberport / E&M Deodoriser - Prepare draft detailed design submission	10	10	12-Sep-11	26-Sep-11	0%	393	
	Permanent Works - Misc Multipart Covers, Vortex, Reserve Pipes, Sleeves							
9722	Multipart Covers, Vortex, Pipes, Sleeve - Prepare design development submission	20	20	20-Jul-11	16-Aug-11	0%	382	
9811	Multipart Covers, Vortex, Pipes, Sleeve - Contractor review	3	3	17-Aug-11	19-Aug-11	0%	451	
10024	Multipart Covers, Vortex, Pipes, Sleeve - Submit design development to the Engineer	0	0	22-Aug-11		0%	381	
10028	Multipart Covers, Vortex, Pipes, Sleeve - Discussion with Engineer	14	14	23-Aug-11	09-Sep-11	0%	381	
10026	Multipart Covers, Vortex, Pipes, Sleeve - Discussion with ICE	10	10	23-Aug-11	05-Sep-11	0%	385	
10030	Multipart Covers, Vortex, Pipes, Sleeve - Proceed to detailed design	0	0	12-Sep-11		0%	381	



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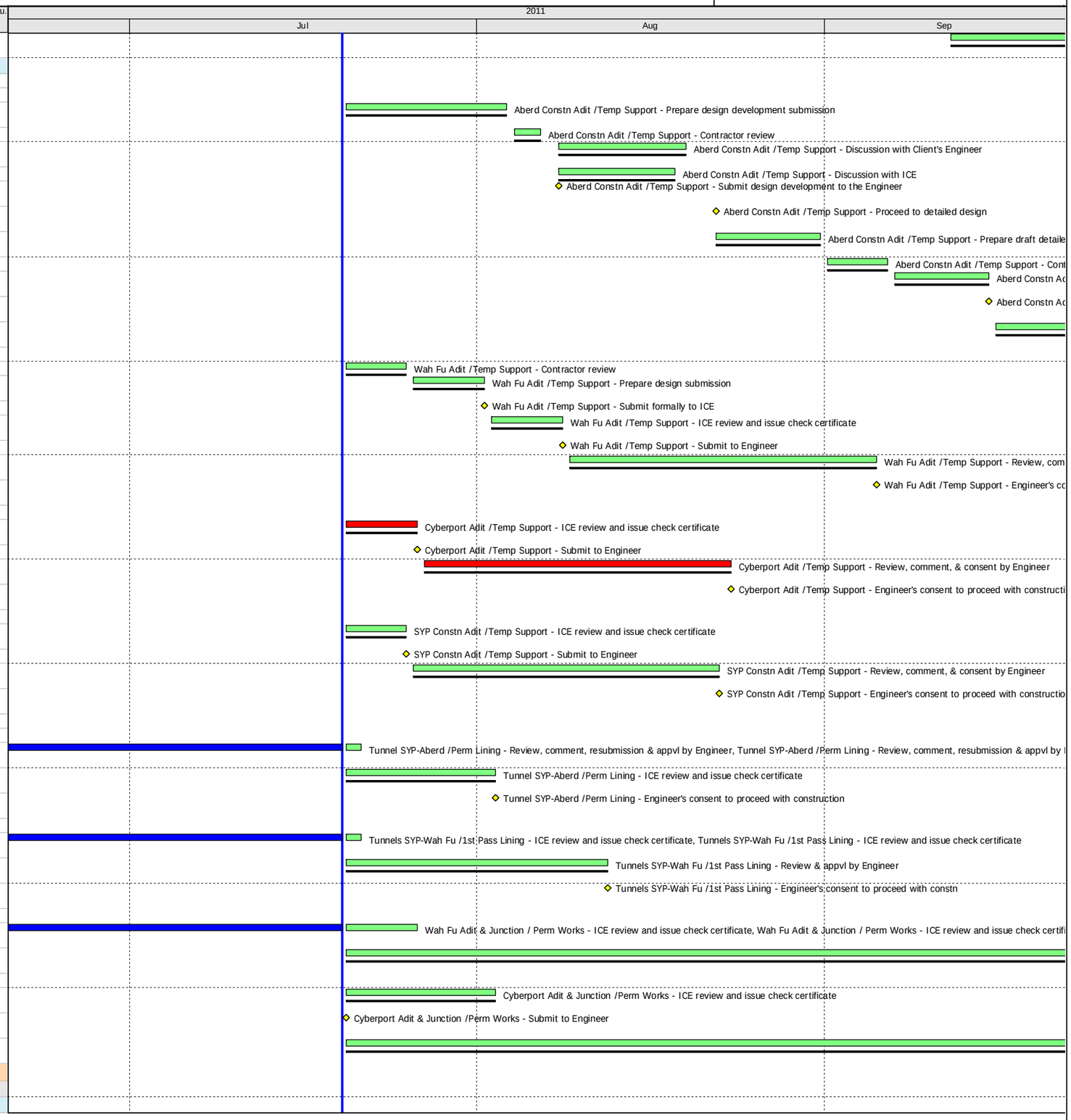
THREE MONTH ROLLING PROGRAMME (TM24)
STATUS as at 20 July 2011

Activity ID	Activity Name	Orig Dur	Rem Dur	Forecast Start (20-Jun-11)	Forecast Finish (20-Jun-11)	% Compl	Total Float
9813	Multipart Covers, Vortex, Pipes, Sleeve - Prepare draft detailed design submission	10	10	12-Sep-11	26-Sep-11	0%	381
MAIN TUNNELS							
Temporary Works - Tunnel M, N, P1 & P2 (Sai Ying Pun to Aberdeen)							
Temporary Support - Aberdeen Construction Adit							
9602	Aberd Constn Adit /Temp Support - Prepare design development submission	11	11	20-Jul-11	03-Aug-11	0%	371
9533	Aberd Constn Adit /Temp Support - Contractor review	3	3	04-Aug-11	06-Aug-11	0%	442
10060	Aberd Constn Adit /Temp Support - Discussion with Client's Engineer	10	10	08-Aug-11	19-Aug-11	0%	371
10058	Aberd Constn Adit /Temp Support - Discussion with ICE	9	9	08-Aug-11	18-Aug-11	0%	372
9604	Aberd Constn Adit /Temp Support - Submit design development to the Engineer	0	0	08-Aug-11		0%	371
10062	Aberd Constn Adit /Temp Support - Proceed to detailed design	0	0	22-Aug-11		0%	371
9821	Aberd Constn Adit /Temp Support - Prepare draft detailed design submission	8	8	22-Aug-11	31-Aug-11	0%	371
10064	Aberd Constn Adit /Temp Support - Contractor review	5	5	01-Sep-11	06-Sep-11	0%	438
9829	Aberd Constn Adit /Temp Support - Prepare design submission	6	6	07-Sep-11	15-Sep-11	0%	371
10066	Aberd Constn Adit /Temp Support - Submit formally to ICE	0	0		15-Sep-11	0%	371
9831	Aberd Constn Adit /Temp Support - ICE review and issue check certificate	5	5	16-Sep-11	22-Sep-11	0%	371
Temporary Works - Wah Fu Adit and Shaft Junction							
10078	Wah Fu Adit /Temp Support - Contractor review	5	5	20-Jul-11	25-Jul-11	0%	185
9837	Wah Fu Adit /Temp Support - Prepare design submission	5	5	26-Jul-11	01-Aug-11	0%	156
10080	Wah Fu Adit /Temp Support - Submit formally to ICE	0	0		01-Aug-11	0%	156
9839	Wah Fu Adit /Temp Support - ICE review and issue check certificate	5	5	02-Aug-11	08-Aug-11	0%	156
10082	Wah Fu Adit /Temp Support - Submit to Engineer	0	0		08-Aug-11	0%	156
9841	Wah Fu Adit /Temp Support - Review, comment, & consent by Engineer	28	28	09-Aug-11	05-Sep-11	0%	228
10084	Wah Fu Adit /Temp Support - Engineer's consent to proceed with construction	0	0		05-Sep-11	0%	153
Temporary Works - Cyberport Adit and Shaft Junction							
9847	Cyberport Adit /Temp Support - ICE review and issue check certificate	5	5	20-Jul-11	26-Jul-11	0%	-58
10096	Cyberport Adit /Temp Support - Submit to Engineer	0	0		26-Jul-11	0%	-58
9849	Cyberport Adit /Temp Support - Review, comment, & consent by Engin...	28	28	27-Jul-11	23-Aug-11	0%	-88
10098	Cyberport Adit /Temp Support - Engineer's consent to proceed with construction	0	0		23-Aug-11	0%	-60
Temporary Support - Sai Ying Pun Construction Adit							
9863	SYP Constn Adit /Temp Support - ICE review and issue check certificate	4	4	20-Jul-11	25-Jul-11	0%	101
10132	SYP Constn Adit /Temp Support - Submit to Engineer	0	0		25-Jul-11	0%	101
9865	SYP Constn Adit /Temp Support - Review, comment, & consent by Engineer	28	28	26-Jul-11	22-Aug-11	0%	143
10134	SYP Constn Adit /Temp Support - Engineer's consent to proceed with construction	0	0		22-Aug-11	0%	98
Permanent Works - Tunnel M, N, P1 & P2 (Sai Ying Pun to Aberdeen)							
Tunnel Permanent Works - Permanent Lining Supports							
9875	Tunnel SYP-Aberd /Perm Lining - Review, comment, resubmission & appvl by Engineer	90	2	02-Jul-10 A	21-Jul-11	98%	393
9873	Tunnel SYP-Aberd /Perm Lining - ICE review and issue check certificate	10	10	20-Jul-11	02-Aug-11	0%	260
10152	Tunnel SYP-Aberd /Perm Lining - Engineer's consent to proceed with construction	0	0		02-Aug-11	0%	260
Tunnel Permanent Works - 1st Pass Lining (Sai Ying Pun to Wah Fu)							
9883	Tunnels SYP-Wah Fu /1st Pass Lining - ICE review and issue check certificate	10	2	13-Apr-11 A	21-Jul-11	80%	185
9885	Tunnels SYP-Wah Fu /1st Pass Lining - Review & appvl by Engineer	24	24	20-Jul-11	12-Aug-11	0%	252
10170	Tunnels SYP-Wah Fu /1st Pass Lining - Engineer's consent to proceed with constn	0	0		12-Aug-11	0%	169
Tunnel Permanent Works - Adit and Shaft Junction @ Wah Fu							
9893	Wah Fu Adit & Junction / Perm Works - ICE review and issue check certificate	10	5	13-Jul-10 A	26-Jul-11	50%	290
9895	Wah Fu Adit & Junction / Perm Works - Review, comment, resubmission & appvl by Engr	90	90	20-Jul-11	17-Oct-11	0%	340
Tunnel Permanent Works - Adit and Shaft Junction @ Cyberport							
9903	Cyberport Adit & Junction /Perm Works - ICE review and issue check certificate	10	10	20-Jul-11	02-Aug-11	0%	260
10204	Cyberport Adit & Junction /Perm Works - Submit to Engineer	0	0		20-Jul-11	0%	206
9905	Cyberport Adit & Junction /Perm Works - Review, comment, resubmission & appvl by Engr	90	90	20-Jul-11	17-Oct-11	0%	305
PROCUREMENT							
Procurement; Manufacturing; Deliveries							
Stainless Steel Resrve Pipes (200 dia)							



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THREE MONTH ROLLING PROGRAMME (TM24)
STATUS as at 20 July 2011

Activity ID	Activity Name	Orig Dur	Rem Dur	Forecast Start (20-Jun-11)	Forecast Finish (20-Jun-11)	% Compl	Total Float
1872	200dia SS Pipes - Stainless Steel Pipes Fabrication & Delivery to site	180	10	13-May-11 A	29-Jul-11	94%	305
Temporary Radio Communication, CCTV Camera & Flood Control System (by FSD)							
1884	Radio Comm, CCTV Camera - Prepare and submit method statement to the Engineer	30	30	21-Jul-11	24-Aug-11	0%	74
1886	Radio Comm, CCTV Camera - Submit Design & Drawings Approval	30	30	25-Aug-11	07-Oct-11	0%	62
1873	Radio Comm, CCTV Camera - Review, comments & consent by the Engineer	30	30	25-Aug-11	07-Oct-11	0%	62
Temporary Water Supply (By FSD)							
1890	Temp Water Supply to Tunnel - Procure Sub-contractor & Award	60	60	20-Jul-11	28-Sep-11	0%	27
Shaft Lining PC Pipes							
1854	PC Drop Pipes - Procure Sub-contractor	60	60	20-Jul-11	28-Sep-11	0%	67
CONSTRUCTION							
ABERDEEN							
Construction Works							
Site Establishment							
Geotechnical Monitoring							
Tunnel P1							
1444	Tunnel P1 - Install Automatic Grd Monitoring Devices (AGMD) & Piezometers	30	30	20-Jul-11	23-Aug-11	0%	-41
1393	Tunnel P1 - Install GSM, UMP and SSM Instruments	18	18	24-Aug-11	14-Sep-11	0%	-41
1437	Tunnel P1 - Install Vibration and seismographs	12	12	15-Sep-11	28-Sep-11	0%	-41
Temporary Ventilation System							
1355	Aberd Ventilation System - Install ventilation ducts for Tunnel P1	90	90	20-Jul-11	04-Nov-11	0%	19
Aberdeen Temporary Works - Production / Dropshaft							
Shaft - Excavation of Rock to Tunnel Level							
1300	Aberd Prod /Drop Shaft - Drill & Blast - Remaining 59m @ 1.25m/day and Shotcrete Liner	48	48	27-Jun-11 A	14-Sep-11	0%	-53
1460	Aberd Prod /Drop Shaft - Shaft Shotcrete Liner	46	46	22-Jul-11	14-Sep-11	0%	-53
1659	Aberd - Erect & Setup FSD Radio Communication / Remote Control Room & Test	30	30	15-Sep-11	21-Oct-11	0%	317
Excavation of Tunnel Adit							
1108	Aberd - (Drill & Blast) Excavation of Tunnel Adit	24	24	15-Sep-11	14-Oct-11	0%	-53
Aberdeen Permanent Works - Production / Dropshaft							
Scum Chamber							
1421	Aberd Scam Chamber - Slurry Wall	20	20	27-Aug-11	20-Sep-11	0%	522
WAH FU							
Construction Works							
Site Establishment							
Temporary Ventilation System							
1389	Wah Fu Ventilation System - Install ventilation ducts for Tunnel P2	90	90	20-Jul-11	04-Nov-11	0%	207
Wah Fu Temporary Works - Dropshaft							
Site Access to Portion WFPTW-i for the Period of 9 Months							
1485	Wah Fu - Unrestricted Construction Access to Portion WFPTW-i	270	36	17-Aug-10 A	24-Aug-11	87%	436
Wah Fu Dropshaft - Upper Shaft Excav in Rock to Lower Shaft (-16m)							
1618	Wah Fu Dropshaft - Upper Shaft in Rock @0.1m/day	27	26	12-Oct-10 A	18-Aug-11	3%	422
Wah Fu Dropshaft - Lower Shaft Drill & Blast (-68m)							
1615	Wah Fu Dropshaft - Install Blast Shield / Mine Inspection / Blast Permit Issued	21	21	20-Jul-11	12-Aug-11	0%	427
CYBERPORT							
Construction Works							
Site Establishment							
Geotechnical Monitoring							
Tunnel N							
1454	Tunnel N - Install Automatic Grd Monitoring Devices (AGMD) & Piezometers	30	10	06-May-10 A	30-Jul-11	67%	-82
1445	Tunnel N - Install GSM, UMP and SSM Instruments	18	18	01-Aug-11	20-Aug-11	0%	-82
1447	Tunnel N - Install Vibration and seismographs	12	12	22-Aug-11	03-Sep-11	0%	-82
SANDY BAY							
IPS Interim Payment Schedule Milestones							
Sandy Bay PTW - Production Shaft, Except Excavation							
MS7.1.6.06	Sandy Bay - Complete 20% lining of total deep of shaft	0	0		20-Jul-11	0%	1266
MS7.1.6.07	Sandy Bay - Complete 40% lining of total deep of shaft	0	0		20-Jul-11	0%	1266
MS7.1.6.08	Sandy Bay - Complete 60% lining of total deep of shaft	0	0		20-Jul-11	0%	1266
MS7.1.6.09	Sandy Bay - Complete 80% lining of total deep of shaft	0	0		20-Jul-11	0%	1266
MS7.1.6.10	Sandy Bay - Complete 100% lining of total deep of shaft	0	0		20-Jul-11	0%	1266
Construction Works							
Site Establishment							
Temporary Ventilation Fan							
1403	Sandy Bay Ventilation Syst - Install ventilation ducts for Tunnel M (L=1987m)	120	120	20-Jul-11	09-Dec-11	0%	-107
Sandy Bay Temporary Works - Production / Dropshaft							
Shaft - Excavation of Rock to Tunnel Level							

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THREE MONTH ROLLING PROGRAMME (TM24)
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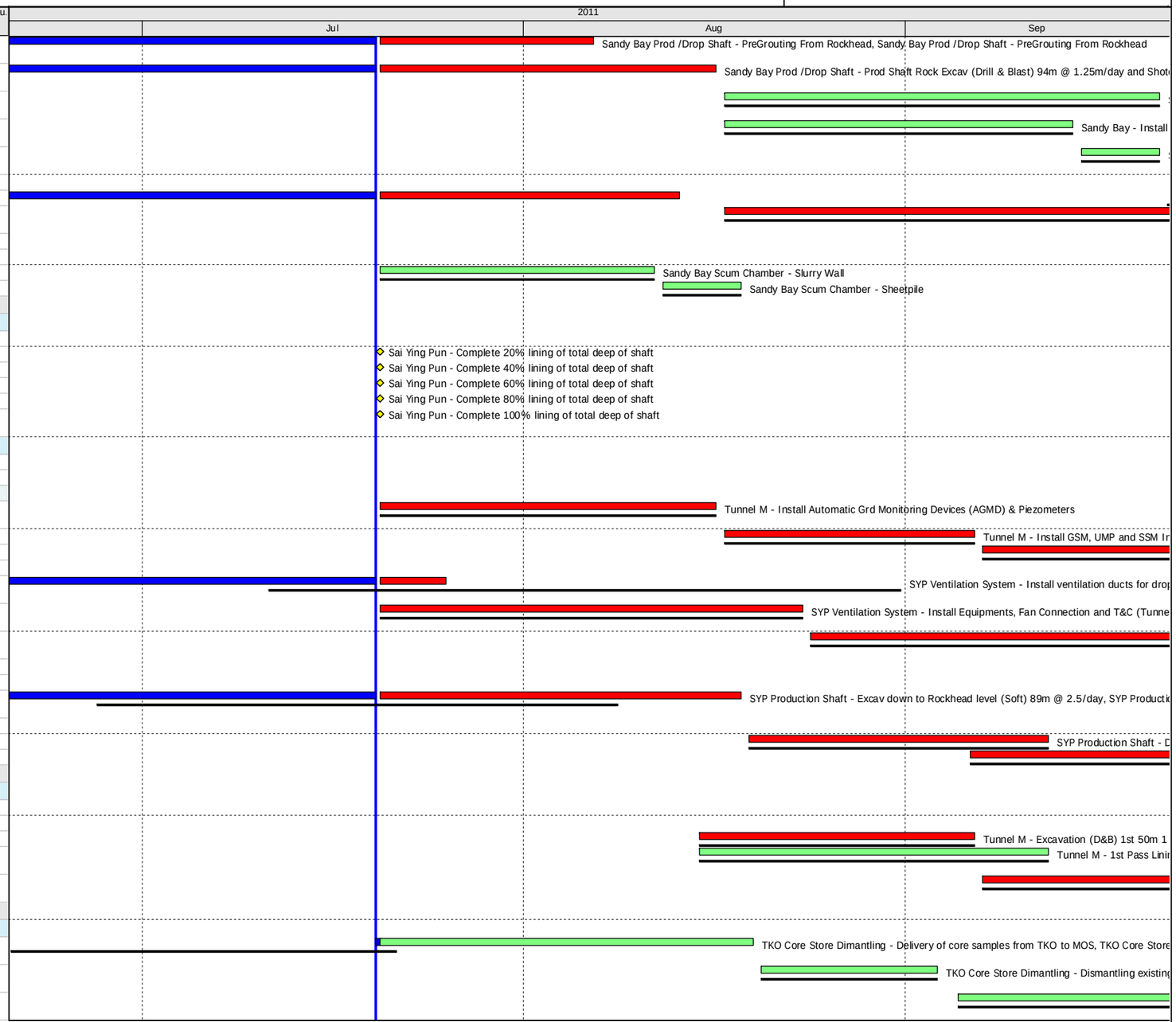
Activity ID	Activity Name	Orig Dur	Rem Dur	Forecast Start (20-Jun-11)	Forecast Finish (20-Jun-11)	% Compl	Total Float
1037	Sandy Bay Prod /Drop Shaft - PreGrouting From Rockhead	60	16	10-Dec-10 A	06-Aug-11	73%	-116
1344	Sandy Bay Prod /Drop Shaft - Prod Shaft Rock Excav (Drill & Blast) 94m @ 1.25m/day and Shotcrete Liner	74	24	20-Dec-10 A	16-Aug-11	68%	-116
1665	Sandy Bay - Erect & Setup FSD Radio Communication / Remote Control Room & Test	30	30	17-Aug-11	21-Sep-11	0%	261
1705	Sandy Bay - Install (129Lm x 100dia) temp water supply & support @ vertical shaft	24	24	17-Aug-11	14-Sep-11	0%	256
1707	Sandy Bay - Setup 20m3 Reservoir reserve tank adj drop shaft, connect & test	6	6	15-Sep-11	21-Sep-11	0%	256
	Excavation of Tunnel Adit						
1110	Sandy Bay - Adit Rock Excavation (Drill & Blast)	24	22	05-May-11 A	13-Aug-11	8%	-92
1112	Sandy Bay - Temporary Inclined Adit Rock Excavation (Drill & Blast) 300m	50	50	17-Aug-11	17-Oct-11	0%	-116
	Sandy Bay Permanent Works - Production / Dropshaft						
	Sandy Bay - Scum Chamber						
1598	Sandy Bay Scum Chamber - Slurry Wall	20	20	20-Jul-11	11-Aug-11	0%	555
1600	Sandy Bay Scum Chamber - Sheetpile	6	6	12-Aug-11	18-Aug-11	0%	555
	SAI YING PUN						
	IPS Interim Payment Schedule Milestones						
	Sai Ying Pun - Production Shaft, Except Excavation						
MS8.1.6.06	Sai Ying Pun - Complete 20% lining of total deep of shaft	0	0		20-Jul-11	0%	1266
MS8.1.6.07	Sai Ying Pun - Complete 40% lining of total deep of shaft	0	0		20-Jul-11	0%	1266
MS8.1.6.08	Sai Ying Pun - Complete 60% lining of total deep of shaft	0	0		20-Jul-11	0%	1266
MS8.1.6.09	Sai Ying Pun - Complete 80% lining of total deep of shaft	0	0		20-Jul-11	0%	1266
MS8.1.6.10	Sai Ying Pun - Complete 100% lining of total deep of shaft	0	0		20-Jul-11	0%	1266
	Construction Works						
	Site Establishment						
	Geotechnical Monitoring						
	Tunnel M						
1468	Tunnel M - Install Automatic Grd Monitoring Devices (AGMD) & Piezometers	24	24	20-Jul-11	16-Aug-11	0%	-49
1453	Tunnel M - Install GSM, UMP and SSM Instruments	18	18	17-Aug-11	06-Sep-11	0%	-49
1455	Tunnel M - Install Vibration and seismographs	18	18	07-Sep-11	28-Sep-11	0%	-49
	Temporary Ventilation Fan						
1411	SYP Ventilation System - Install ventilation ducts for drop shaft	45	5	13-May-11 A	25-Jul-11	89%	-44
1413	SYP Ventilation System - Install Equipments, Fan Connection and T&C (Tunnel)	30	30	20-Jul-11	23-Aug-11	0%	-58
1439	SYP Ventilation System - Install ventilation ducts for Tunnel M (L=1710m)	120	120	24-Aug-11	17-Jan-12	0%	-58
	Sai Ying Pun Temporary Works - Production Shaft						
	Shaft - Soft Excavation						
1252	SYP Production Shaft - Excav down to Rockhead level (Soft) 89m @ 2.5/day	36	26	08-Jun-11 A	18-Aug-11	28%	-86
	Shaft - Excavation of Rock to Tunnel Level						
1045	SYP Production Shaft - Drill & Split Initial 2m @ 0.1m/day	21	21	19-Aug-11	12-Sep-11	0%	-86
1043	SYP Production Shaft - PreGrouting From Rockhead	21	21	06-Sep-11	30-Sep-11	0%	-86
	TUNNEL WORKS						
	Construction Works						
	Tunnel N, M and P2						
	Tunnel M (Drill & Blast) - From Sandy Bay to SYP Breakthrough, L=1987m						
1348	Tunnel M - Excavation (D&B) 1st 50m 1 Blast	20	20	15-Aug-11	06-Sep-11	0%	-92
1349	Tunnel M - 1st Pass Lining (100m), bet Ch M00 to M100m Provisional	25	25	15-Aug-11	12-Sep-11	0%	213
1350	Tunnel M - Excavation (D&B) From Sandy Bay to SYP Breakthrough (1937m)	355	355	07-Sep-11	20-Nov-12	0%	-92
	MA ON SHAN - CORE STORE						
	Dismantling of existing Core Store at TKO						
10272	TKO Core Store Dimantling - Delivery of core samples from TKO to MOS	27	27	20-Jul-11 A	19-Aug-11	0%	647
10274	TKO Core Store Dimantling - Dismantling existing core store in phase A	13	13	20-Aug-11	03-Sep-11	0%	647
10276	TKO Core Store Dimantling - Dismantling existing core store in phase B	17	17	05-Sep-11	24-Sep-11	0%	647



APPENDIX C

EVENT AND ACTION PLAN

Event/ Action Plan for Construction Noise

Event	Action			
	ET	IEC	ER	Contractor
Action Level being exceeded	1. Notify ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Advise the ER on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures.	1. Submit noise mitigation proposals to IEC and ER; 2. Implement noise mitigation proposals.
Limit Level being exceeded	1. Inform IEC, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and ER on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the ER until the exceedance is abated.

Event/ Action Plan for Construction Air Quality

Event	Action			
	ET	IEC	ER	Contractor
ACTION LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and ER; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial to ER within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.
LIMIT LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
2. Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 5. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event and Action Plan for Landscape and Visual Impact - Construction Phase

Action Level	Environmental Team Leader (ETL)	Independent Environmental Checker (IEC)	Engineer's Representative (ER)	Contractor
Non-conformity on one occasion	1. Identify source 2. Inform the IEC and the ER 3. Discuss remedial actions with the IEC, the ER and the Contractor 4. Monitor remedial action until rectification has been completed	1. Check report 2. Check the Contractor's working method 3. Discuss with the ER and the Contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures	1. Notify the Contractor 2. Ensure remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake remedial measures or any necessary replacement
Repeated Non-conformity	1. Identify source 2. Inform the IEC and the ER 3. Increase monitoring (site audit) frequency 4. Discuss remedial actions with the IEC, the ER and the Contractor 5. Monitor remedial actions until rectification has been completed 6. If exceedance stops, cease additional monitoring (site audit)	1. Check report 2. Check the Contractor's working method 3. Discuss with the ER and the Contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures 5. Supervise implementation of remedial measures	1. Notify the Contractor 2. Ensure remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake remedial measures or any necessary replacement

APPENDIX D

MITIGATION MEASURES CHECKLIST

EIA Ref.	Final EM&A Manual Ref.	Environmental Aspect	Mitigation Measures	Timing	Compliance Status: √ = compliant; x = non-compliant; N/A = not applicable	
					Status	Remarks
3.64	2.55	Air Quality Control	• Watering twice per day within the worksites at North Point PTW, Wan Chai East PTW, Fung Mat Road Site, Sandy Bay PTW, Wah Fu PTW, Aberdeen PTW and SCS worksite at Aberdeen; • Watering 4 times per day within worksites at the Central PTW; • Barging points, if any, should be continuous watering throughout the whole unloading process; and • Watering 8 times per day within worksites at the SCS works area at Wan Chai East and North Point, SCISTW and the Disinfection Facilities of SCISTW.	During Construction	√	
3.74	2.54	Air Quality Control	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimize cumulative dust impacts. • Skip hoist for material transport should be totally enclosed by impervious sheeting; • 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;	During Construction	√	
3.76	2.58	Air Quality Control	Good housekeeping for SCISTW and PTWs listed below should be followed to ameliorate any odour impact from the plant and these standard practices should be included in the plant operator manual. • Screens should be cleaned regularly to remove any accumulated organic debris • Grit and screening transfer systems should be flushed regularly with water to remove organic debris and grit • Grit and screened materials should be transferred to closed containers to minimize odour escape • Scum and grease collection wells and troughs should be emptied and flushed regularly to prevent putrefaction of accumulated organics • Skim and remove floating solids and grease from primary clarifiers regularly • Frequent sludge withdrawal from tanks is necessary to prevent the production of gases • Sludge cake should be transferred to closed containers • Sludge containers should be flushed with water regularly	During Operation	N/A	
	2.57	Air Quality Control	Fully covered design og the odour sources of the upgraded PTWs and SCISTW and the installation of deodorization system at the exhaust of ventilation system would adequately control potential odour impact.	During Operation	N/A	
3.77	2.59	Air Quality Control	To avoid excessive extraction of the foul air from the drop shafts of the sedimentation tanks and also from the effluent flume structure of SCISTW to deodorization system, the extraction vent(s) of the deodorization system should be located away from the top openings of the drop shafts.	During Design Stage	N/A	
3.80	2.6	Air Quality Control	Commissioning tests for all deodorization system should be included in the Design and Construction Contract Document.	After completion of construction	N/A	

EIA Ref.	Final EM&A Manual Ref.	Environmental Aspect	Mitigation Measures	Timing	Compliance Status: √ = compliant; x = non-compliant; N/A = not applicable	
					Status	Remarks
4.56-4.61	3.21-3.24	Noise Control	Use of quiet PME, movable barriers and acoustic mats	During Construction	√	
4.67	3.25	Noise Control	Good Site Practice: • 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. • 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.	During Construction	√	
4.63	3.28	Noise Control	Use of acoustic louvers for air supply fans/extraction fans of transfer pumping stations and ventilation fans of deodourization unit at Sandy Bay PTW, Cyberport PTW and Wah Fu PTW	During Operation and Design Stage	N/A	
4.64		Noise Control	The maximum allowable sound power level (SWL) of each new transformer at Sandy Bay PTW shall be limited to 89 dB(A).	During Operation and Design Stage	N/A	
6.349 - 6.375		Water Quality Control	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.	During Construction	√	
6.376		Water Quality Control	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.	During Construction	√	
6.377		Water Quality Control	Accidental Spillage of Chemicals Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	During Construction	√	
6.378		Water Quality Control	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	During Construction	√	

EIA Ref.	Final EM&A Manual Ref.	Environmental Aspect	Mitigation Measures	Timing	Compliance Status: √ = compliant; x = non-compliant; N/A = not applicable	
					Status	Remarks
6.379		Water Quality Control	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: • Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. • Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. • Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.	During Construction	√	
6.380		Water Quality Control	Construction Works in Close Proximity of Storm Drains or Seafront To minimize the potential water quality impacts from the construction works located at or near any watercourse, the practices outlined below should be adopted where applicable. • The use of less or smaller construction plants may be specified to reduce the disturbance to the storm water courses or marine environment. • Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works. • Stockpiling of construction materials and dusty materials should be covered and located away from any water courses. • Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers. • Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.	During Construction	√	
6.381		Water Quality Control	Temporary Sewage Bypass It is recommended that the temporary sewage bypass required for (i) the modification to the existing pumping station at SCISTW and (ii) the interconnection between the existing main pumping station and the new pumping station on Stonecutters Island, if needed, should be scheduled at the same time as far as practicable in order to minimise the temporary discharge duration. It is also recommended that all the modification and interconnection to the existing facilities (including the modification to the existing NWKPS) should be programmed to avoid temporary sewage bypass in wet or bathing season (March to October) to minimize the potential impacts. Relevant government departments including EPD and LCSD should be informed of the planned sewage bypass prior to any discharge. During the sewage bypass period, water quality monitoring should be carried out at the water sensitive receivers to quantify the water quality impacts and to determine when the baseline water quality conditions are restored. Also, a framework of the response procedures has been formulated to minimize the impact of temporary	During Construction	✓	
6.344		Water Quality Control	Dual power supply, standby facilities for the main treatment units and standby equipment parts / accessories should be provided as far as possible at the SCISTW to minimize the chance of emergency discharge.	During Operation and Design Stage	N/A	
6.344		Water Quality Control	The response procedure and monitoring requirements for emergency discharge as stated in EM&A Manual should be followed.	During Operation	N/A	
6.345		Water Quality Control	Standby unit(s) and dual (backup) power supply would be provided at all the Stage 2 PTWs to reduce the risk of equipment breakdown at the PTWs.	During Operation and Design Stage	N/A	

EIA Ref.	Final EM&A Manual Ref.	Environmental Aspect	Mitigation Measures	Timing	Compliance Status: √ = compliant; x = non-compliant; N/A = not applicable	
					Status	Remarks
6.346		Water Quality Control	In case of total power outage of the dechlorination plant, the uninterruptible power supply (UPS) system to be provided would switch the power supply of the sodium bisulphite dosing pump to a backup battery almost instantaneously, allowing continuous dosage of sodium bisulphite for at least half an hour so that sufficient time can be provided for shutting down the chlorination plant to avoid the possibility of discharge of chlorinated effluent.	During Operation and Design Stage	N/A	
6.347		Water Quality Control	The model predicted that if Stage 2B is not implemented for HATS in 2021 as scheduled, the nutrient contents (both P and N) in the marine water would ultimately increase to exceed the baseline Stage 1 level when the HATS flow is reaching its design capacity of 2.45M m3/day. It is recommended that the future review study for Stage 2B should review the validity of the model predictions provided in this EIA and confirm the need of enhanced nutrient removal for HATS after 2021.	During Operation and Design Stage	N/A	
6.348		Water Quality Control	It should be noted that the mixing zone for TIN predicted for Stage 2B was large with an area of about 30 km2 and the area of exceedance would encroach on the nearby water sensitive receivers (e.g. Ma Wan Fish Culture Zone). This is due to the elevated oxidized nitrogen assumed for the proposed nitrification process at Stage 2B as well as the increased HATS effluent flow assumed for Stage 2B. It is recommended that these water quality issues should be further investigated / assessed under the future EIA for Stage 2B. Further mitigation measures / alternative treatment designs should also be considered under the future EIA for Stage 2B to mitigate / minimize the potential TIN exceedances.	Investigation Stage of Stage 2B	N/A	
9.107	7.8	Waste Management	Reusable steel or concrete panel shutters, fencing and hoarding and signboard should be used as a preferred alternative to items made of wood, to minimise 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.	During Construction	√	
9.109	7.10	Waste Management Implication	All waste materials should be segregated into categories covering: • excavated materials suitable for reuse on-site; • excavated materials suitable for public filling facilities; • remaining C&D waste for landfill; • chemical waste; and • general refuse for landfill.	During Construction	√	
9.113	7.15	Waste Management Implication	Recommendations to achieve waste reduction include:- • Sort C&D waste from demolition of existing facilities to recover recyclable portions such as metals; • Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; • Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force; • Any unused chemicals or those with remaining functional capacity shall be recycled; and • Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	During Construction	√	
9.115	7.14	Waste Management Implication	Recommendations for good site practices during construction activities include:- • Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site • Training of site personnel in proper waste management and chemical waste handling procedures • Develop and provide toolbox talk for on-site sorting of C&D materials to enhance worker's awareness in handling, sorting, reuse and recycling of C&D materials. • Provision of sufficient waste disposal points and regular collection of waste • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors	During Construction	√	

EIA Ref.	Final EM&A Manual Ref.	Environmental Aspect	Mitigation Measures	Timing	Compliance Status: √ = compliant; x = non-compliant; N/A = not applicable	
					Status	Remarks
9.125	7.14	Waste Management Implication	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	During Construction	N/A	
9.131	7.26	Waste Management Implication	Adequate number of portable toilets at temporary works areas or the PTWs to ensure that sewage from site staff would be properly collected.	During Construction	√	
9.133	7.22	Waste Management Implication	General refuse should be stored in enclosed bins, skips or compaction units separating from C&D material and disposed of at designated landfill.	During Construction	√	
9.135	7.24	Waste Management Implication	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.	During Construction	√	
9.137	7.28	Waste Management Implication	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.	During Construction	√	
9.142	7.32 ~ 7.33	Waste Management Implication	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.	During Construction	N/A	
9.148	7.36	Waste Management Implication	The sludge tanks should be air-tighten. Rotating brushes or other alternative devises should be installed at the upper frame of the sludge tank washing facilities to provide better cleaning of the surface around the top loading opening of the sludge tanks. Prior to making such provision, the top covers of the sludge transfer tanks should be water cleaned manually after unloading.	During Construction	N/A	
9.150	7.35	Waste Management Implication	Since the air tightness of tankers highly relies on the effectiveness of rubber seals at the loading openings and unloading doors, odour leakage from tankers are commonly resulted from the aging rubber seals. It is recommended to develop a preventive maintenance programme for rubber seals of loading openings and unloading doors of sludge transfer tanks to ensure the tightness of covers and doors. Rubber seals should be regularly replaced within its design life as specified by suppliers.	During Construction	N/A	
10.92		Terrestrial Ecology	All the proposed construction activities would be confined to developed area and wasteland of very low ecological value.	Design stage	√	
10.93		Terrestrial Ecology	To implement effective noise mitigation recommended in Section 4.	During Construction	√	
10.94		Terrestrial Ecology	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, should be implemented.	During Construction	√	
10.95		Terrestrial Ecology	Fences/hoardings should be erected and installed along the boundary of the works areas.	During Construction	√	

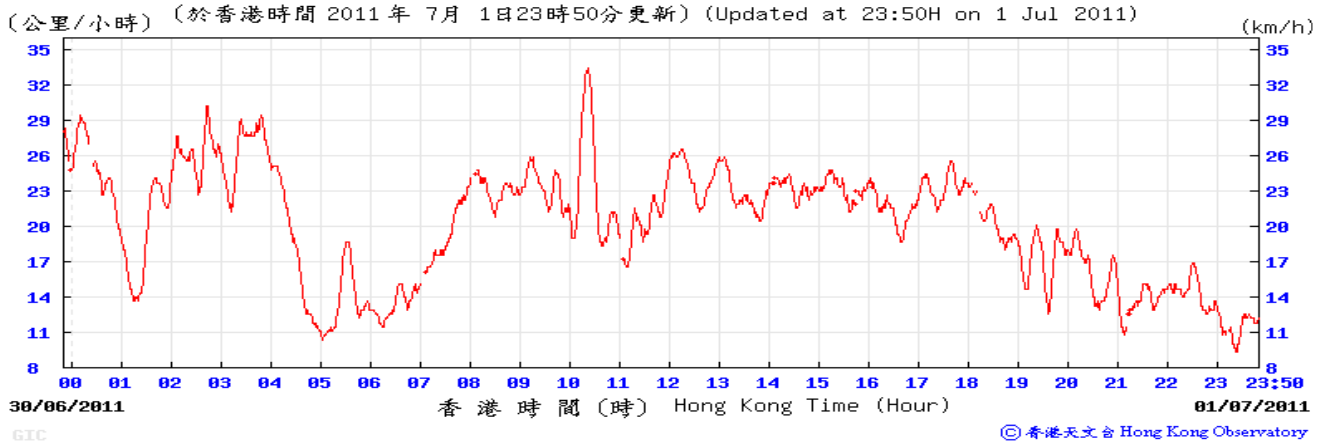
EIA Ref.	Final EM&A Manual Ref.	Environmental Aspect	Mitigation Measures	Timing	Compliance Status: √ = compliant; x = non-compliant; N/A = not applicable	
					Status	Remarks
10.96		Terrestrial Ecology	Standard good site practices as suggested in Section 10 should be implemented.	During Construction	√	
10.97		Terrestrial Ecology	Provision of proper drainage system and runoff control measures such as use of sand/silt traps, oil/grease separators, sedimentation tanks, etc.	During Construction	√	
10.98		Terrestrial Ecology	Provision of compensatory planting of similar native tree species in no less than 1:1 compensatory ratio in terms of quality and quantity.	During Construction	N/A	
11.135		Marine Ecology	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.	During Construction	√	
11.136		Marine Ecology	To avoid/minimize the impact to corals, it is proposed that they are translocated to the eastern end of the existing seawall, which has similar hydrographic parameters and supports healthy growth of the same species and is thus considered as a suitable recipient site (Figure 11.13). Coral translocation should be carried out during the winter season (November- March) in order to avoid disturbance to the transplanted colonies during the spawning period (i.e. July to October).	Pre-construction	N/A	
11.137		Marine Ecology	Dredging works will not be carried out and sheet piles or silt curtains will be used to contain filling material used during demolition/re-construction of the seawall. Water quality modelling predicts that no adverse impact on water quality at the proposed recipient (Figure 11.13) site would occur during construction works. Following this, no construction phase monitoring on translocated coral would be required. However, post-translocation monitoring is suggested to be carried out every 3 months for one year. This would be carried out by a marine ecological specialist that is approved by the Director. Translocation plan for corals will be submitted to the Director for approval prior to the commencement of construction works.	Pre-construction	N/A	
11.139		Marine Ecology	It is recommended that temporary sewage bypass should be programmed to avoid temporary sewage bypass in wet or bathing season (March to October) in order to minimize the potential impacts. Relevant government departments including EPD and LCSD should be informed of the planned sewage bypass prior to any discharge. During the sewage bypass period, water quality monitoring should be carried out at the water sensitive receivers to quantify the water quality impacts and to determine when the baseline water quality conditions are restored. Also, a framework of the response procedures has been formulated to minimize the impact of temporary discharges. Details are provided in the standalone EM&A Manual.	During Construction and Design stage	√	
Table 13.7		Landscape & Visual Impact	• Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical. • 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. • Erection of decorative screen hoarding the surrounding setting.	Pre-construction	N/A	
Table 13.8		Landscape & Visual Impact	• Aesthetic design of the façade of PTW and associated structures to harmonize with the surrounding settings. • Shrub and Climbing Plants to soften proposed structures / Roof Greening. • Buffer Tree and Shrub Planting to screen proposed associated structures. • Reinstated of disturbed area	Pre-construction	N/A	
14A.198 & 14A.203		Hazard to Life	Limiting magnitude of ground settlement associated with shafts & tunnels construction, excavation and seawall demolition to 13mm and subject to requirements from relevant authorities.	During Construction	✓	

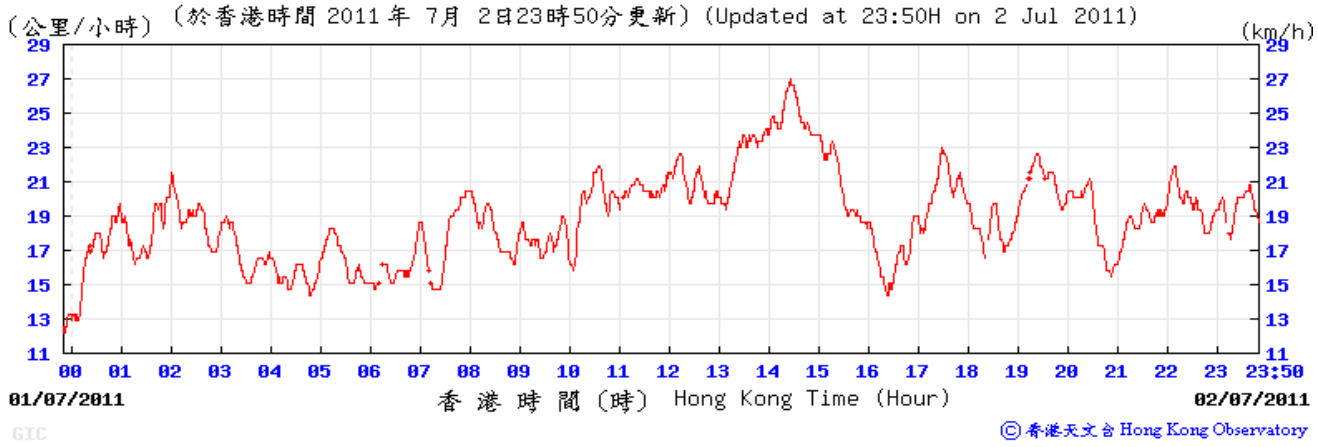
EIA Ref.	Final EM&A Manual Ref.	Environmental Aspect	Mitigation Measures	Timing	Compliance Status: √ = compliant; x = non-compliant; N/A = not applicable	
					Status	Remarks
14A.199 & 14A.204		Hazard to Life	Limiting of the vibration levels associated with the blasting programme for the Tunnel P, shafts and other construction works (including demolition & reconstruction of seawall, excavation for seawater pump house at the Aberdeen PTW) at the PTW sites to a peak particle velocity of 5mm/s and subject to requirements from relevant authorities. Moving array of sensors will be used as the tunnel is advanced.	During Construction	N/A	
14A.201		Hazard to Life	Limiting use of cranes in terms of locations, lifting height, swing angle and setting up safety zone.	During Construction	√	
14A.206		Hazard to Life	Establish emergency plan and procedures	During Construction	√	
14.C78		Hazard to Life	Ensuring Quality of Chemical Supplier • Only appoint chemical suppliers with satisfactory quality system. • Request the chemical supplier to employ an independent checker to audit the quality and safety management system of the supplier • The chemical supplied to SCISTW can only be produced in designated chemical production plants and delivered directly from designated locations. This measure will be included in the chemical supply contract.	During Construction	√	
Tables 15.8 - 15.11		Cultural Heritage	The construction vibration control limit (ppv of 25mm/s) shall be strictly followed.	During Blasting for tunnel, shafts, effluent conveyance system and disinfection facilities in the vicinity of the buildings/ structures	√	
15.7		Cultural Heritage	Monitoring of vibration limits shall be conducted and reported as a requirement of EM&A programme	During Blasting for tunnel, shafts, effluent conveyance system and disinfection facilities in the vicinity of the buildings/ structures	√	

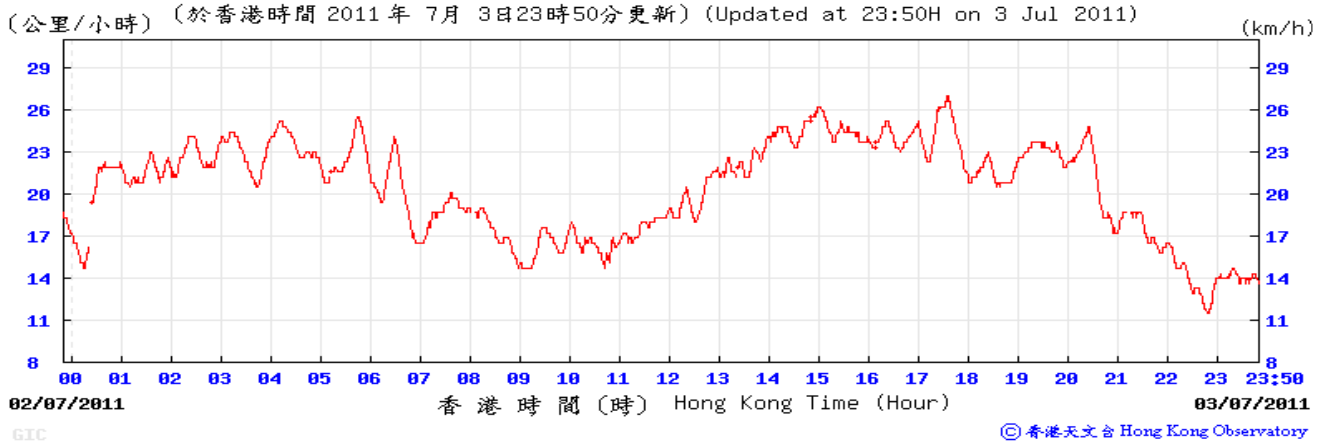
APPENDIX E

WEATHER CONDITION DURING REPORTING PERIOD

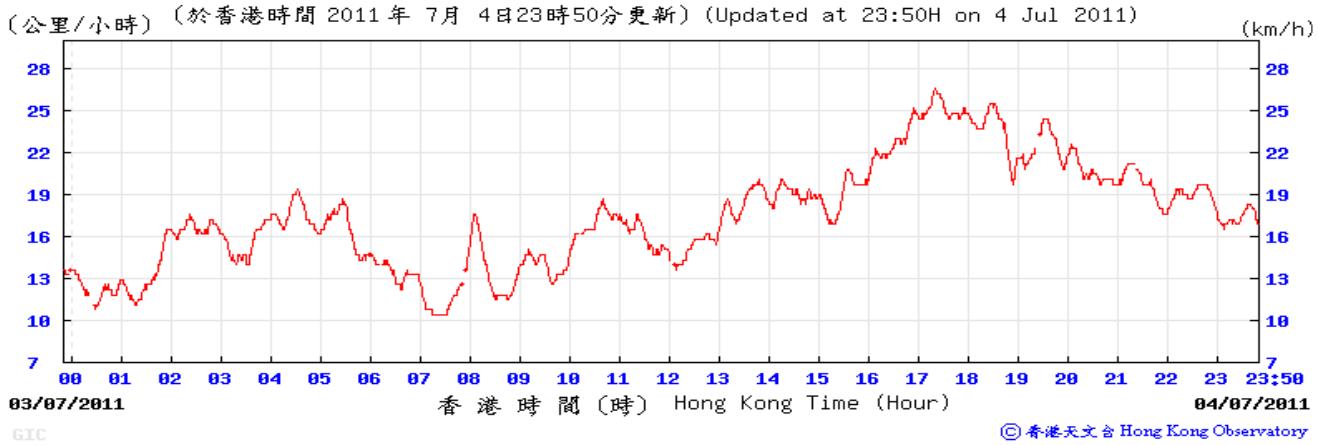
Weather Conditions at Green Island Weather Station during Monitoring Period

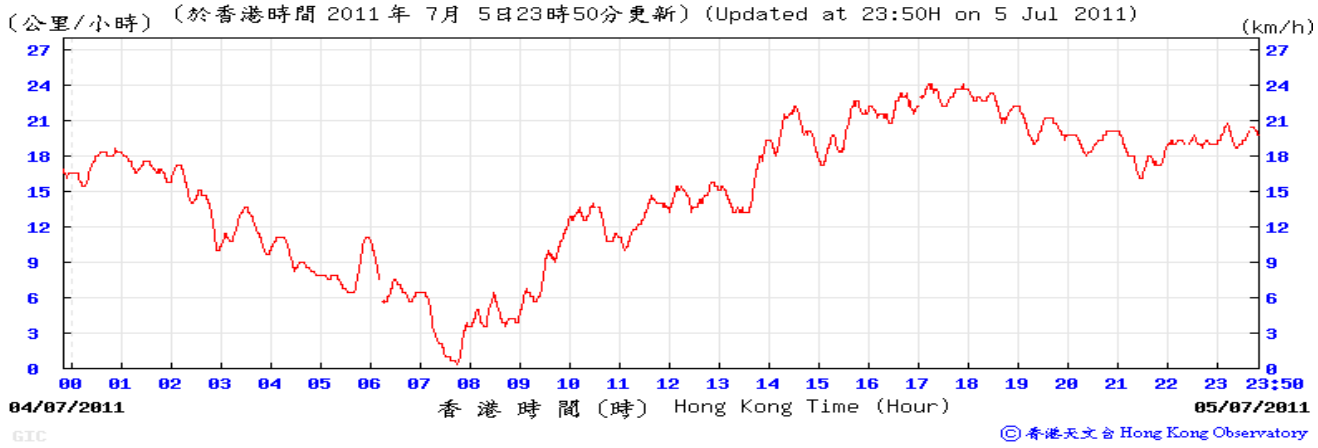


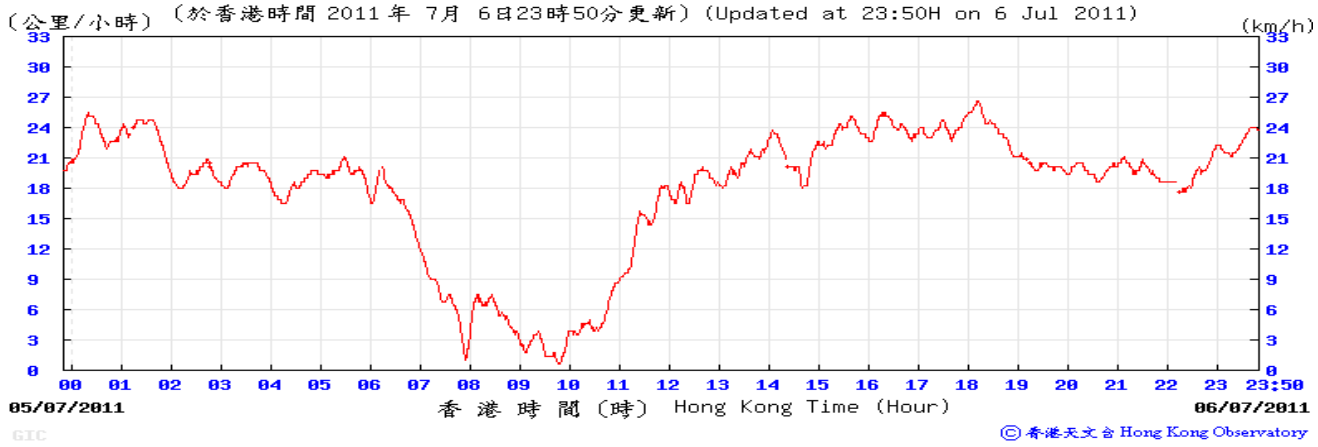




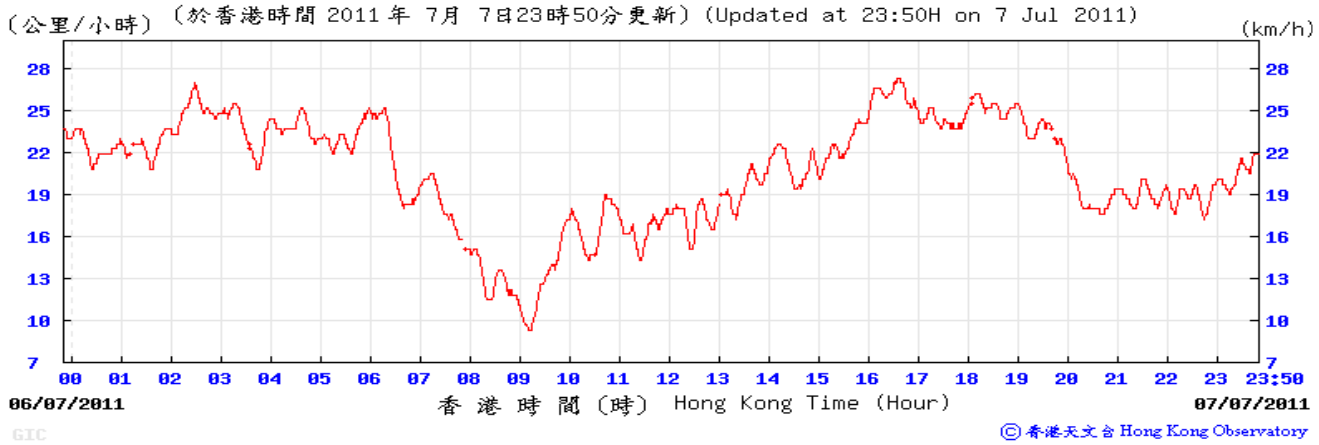
Weather Conditions at Green Island Weather Station during Monitoring Period

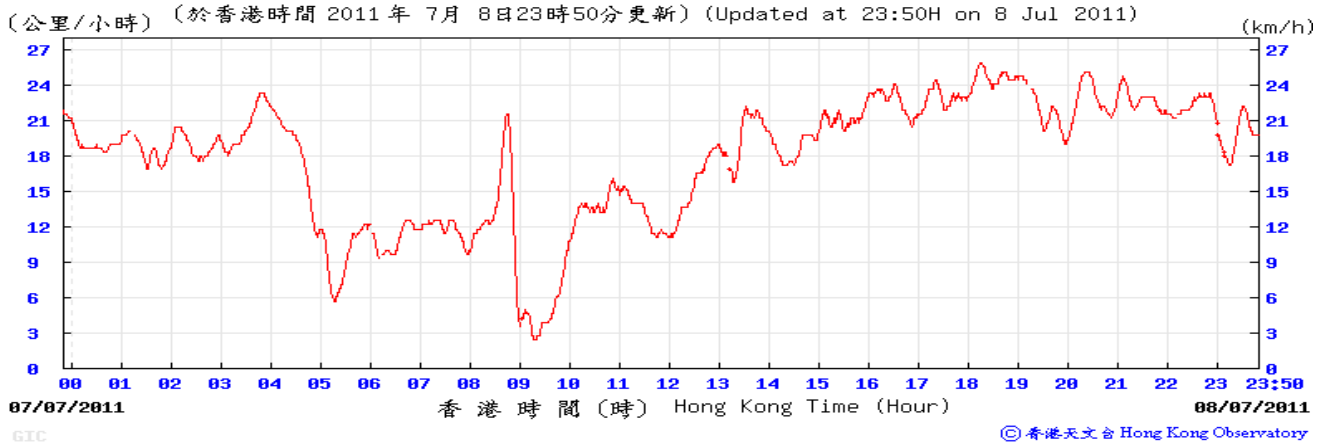


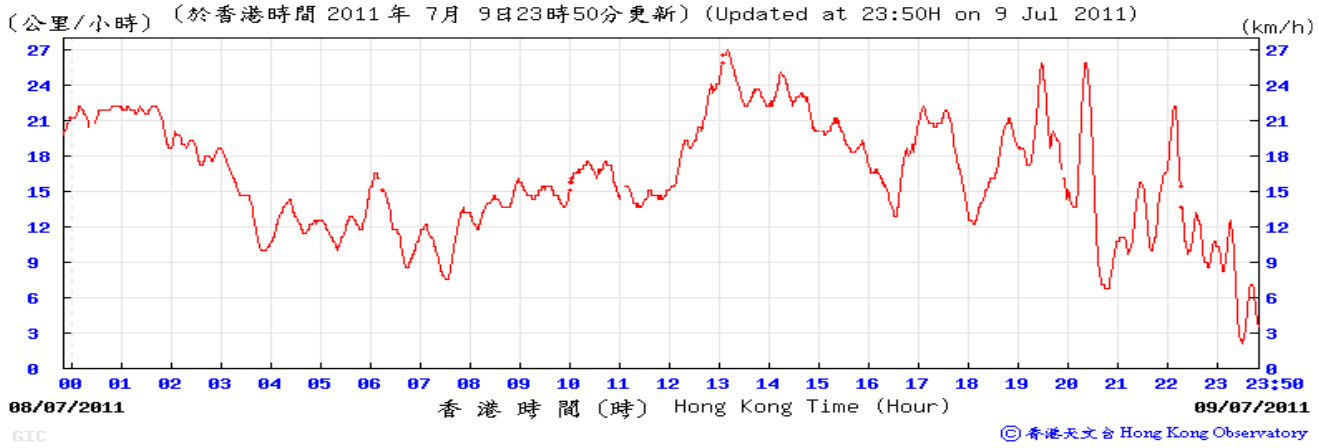




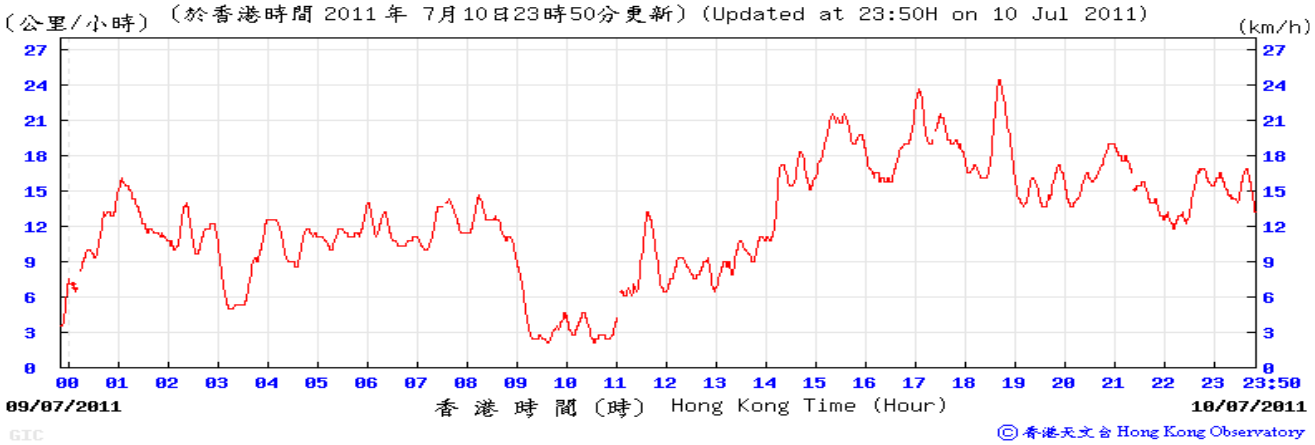
Weather Conditions at Green Island Weather Station during Monitoring Period

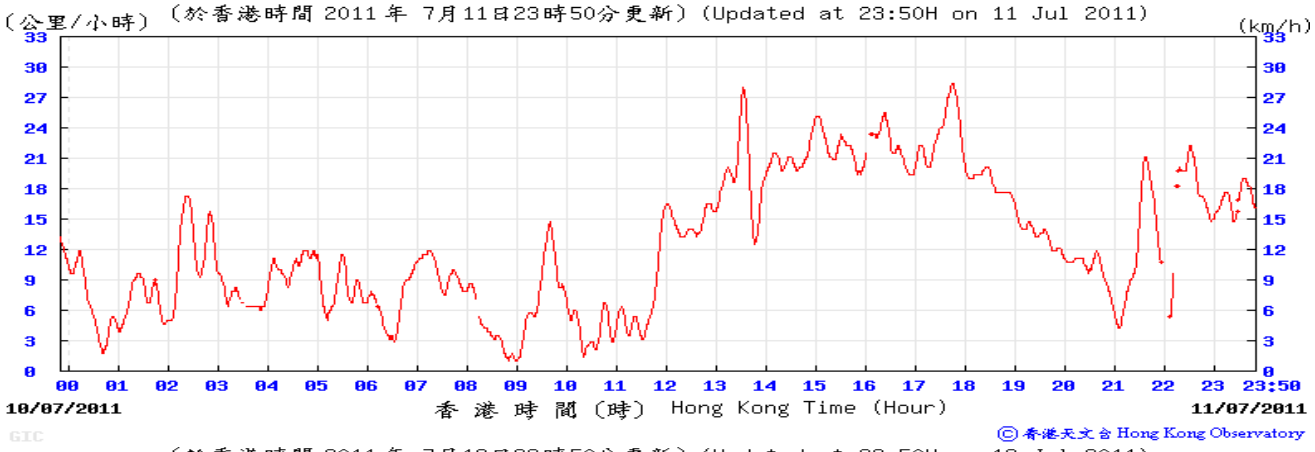


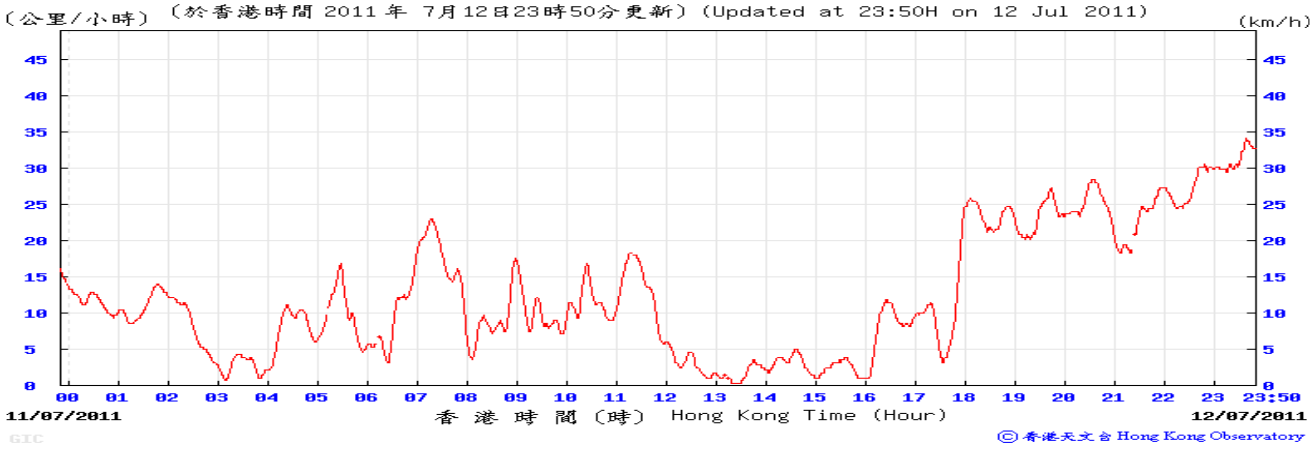




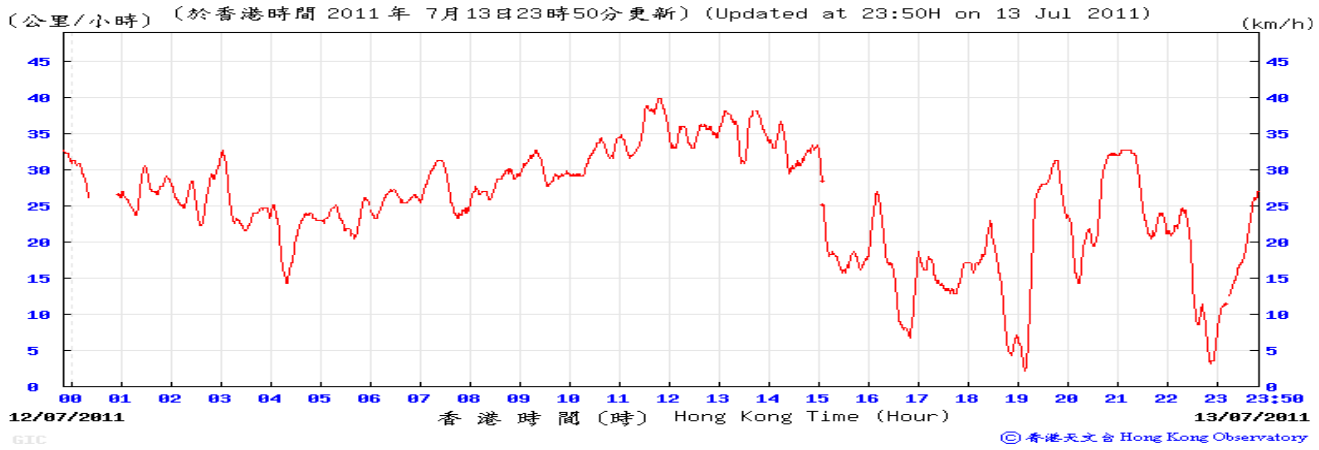
Weather Conditions at Green Island Weather Station during Monitoring Period

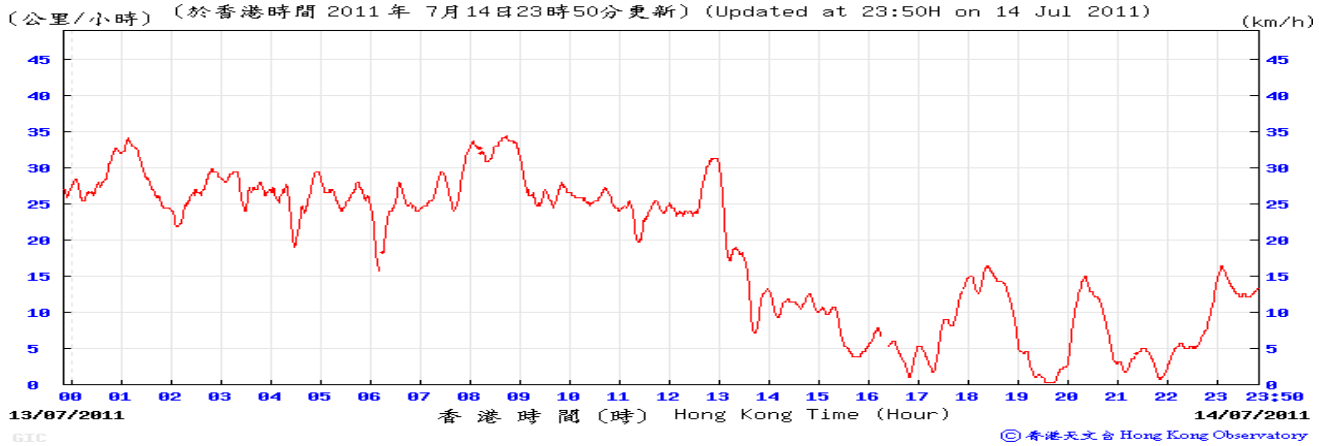


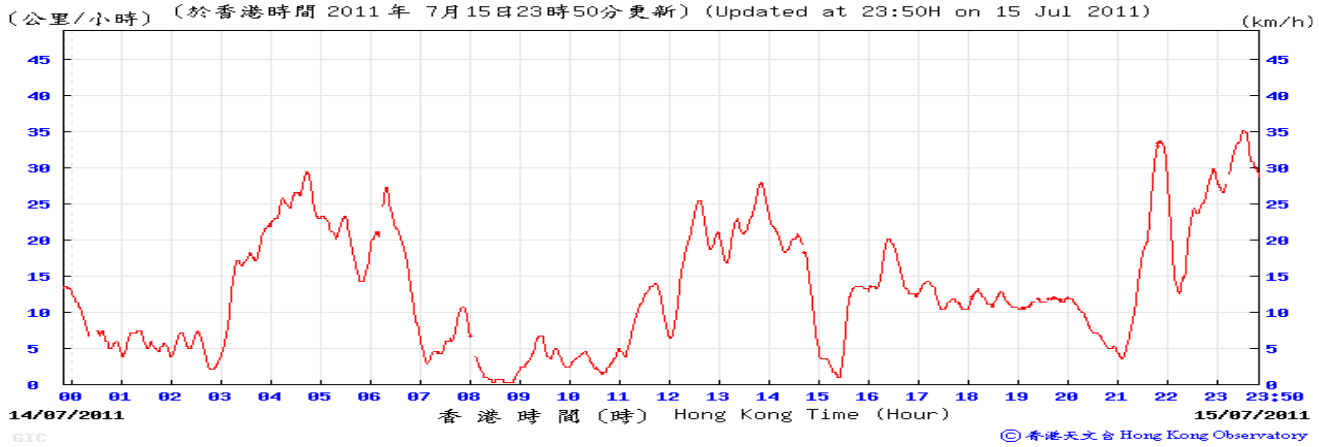




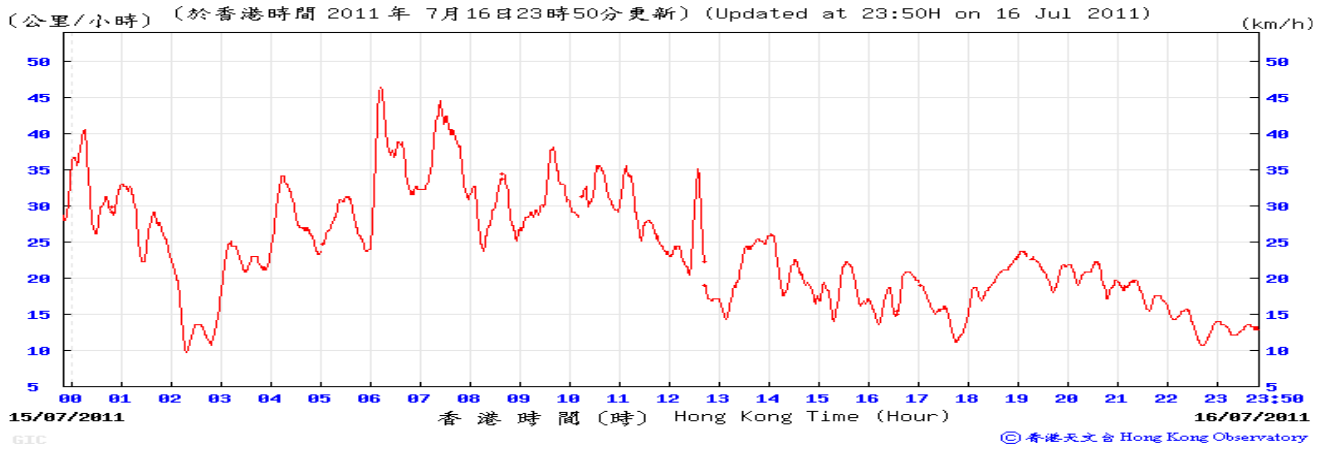
Weather Conditions at Green Island Weather Station during Monitoring Period

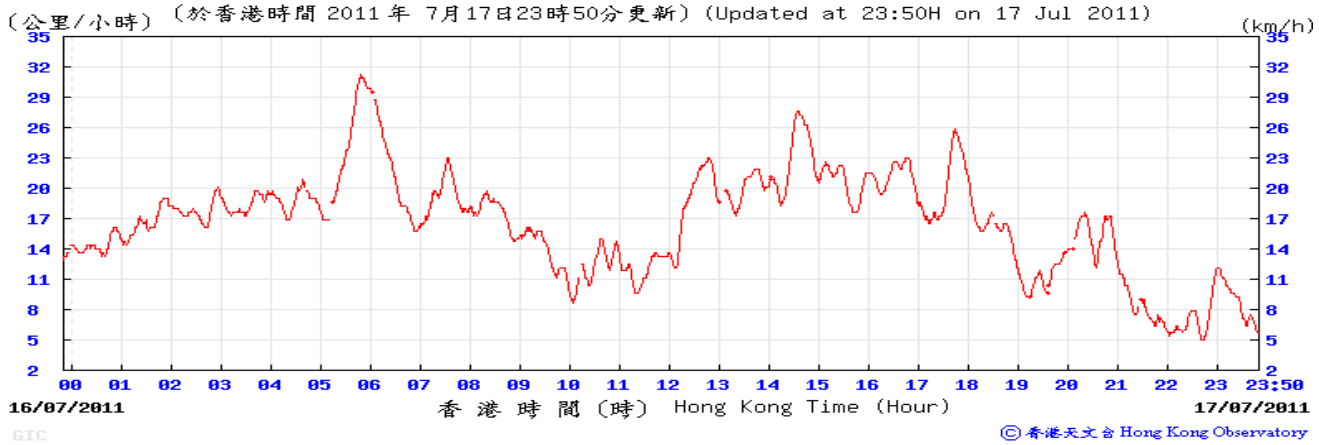


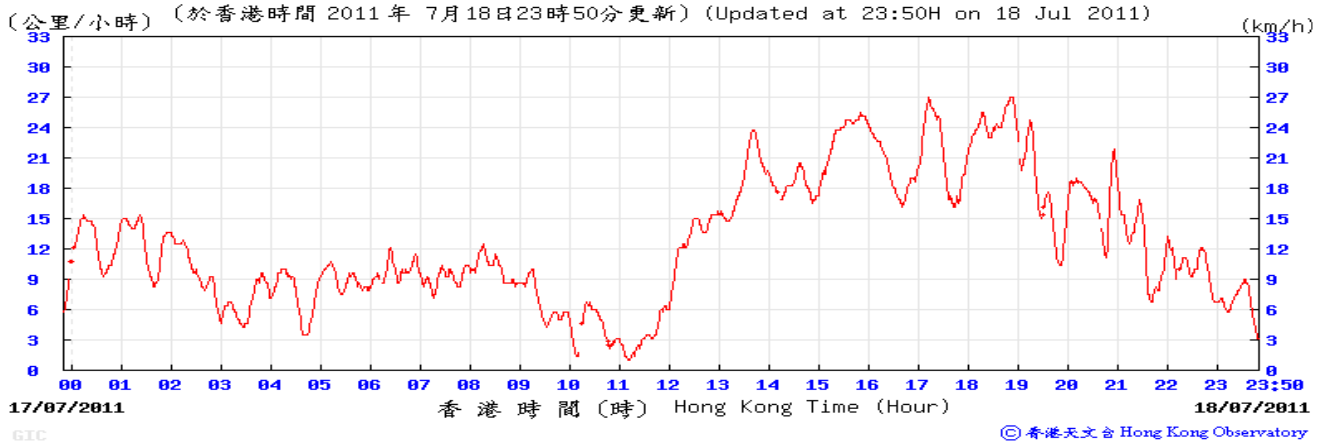




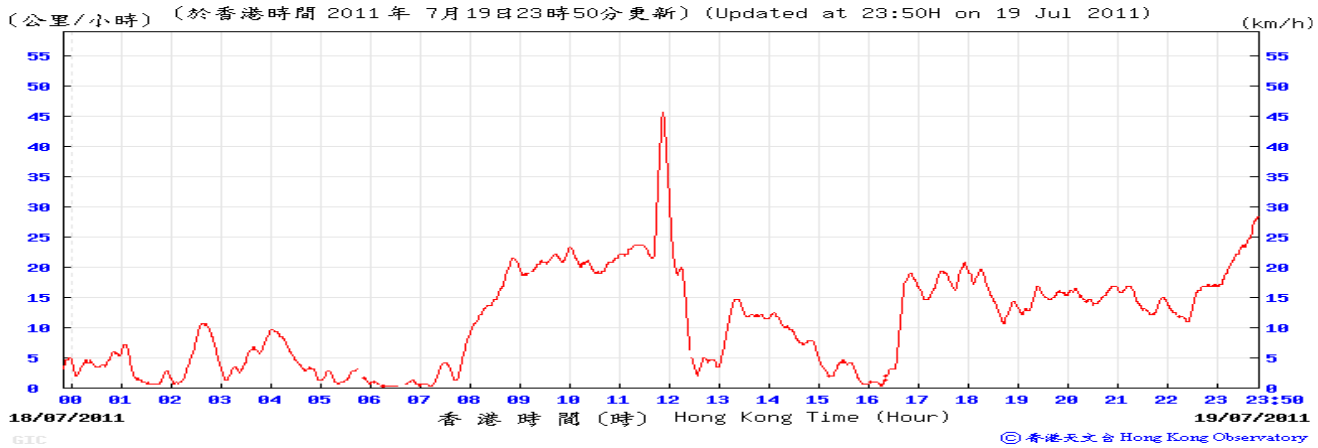
Weather Conditions at Green Island Weather Station during Monitoring Period

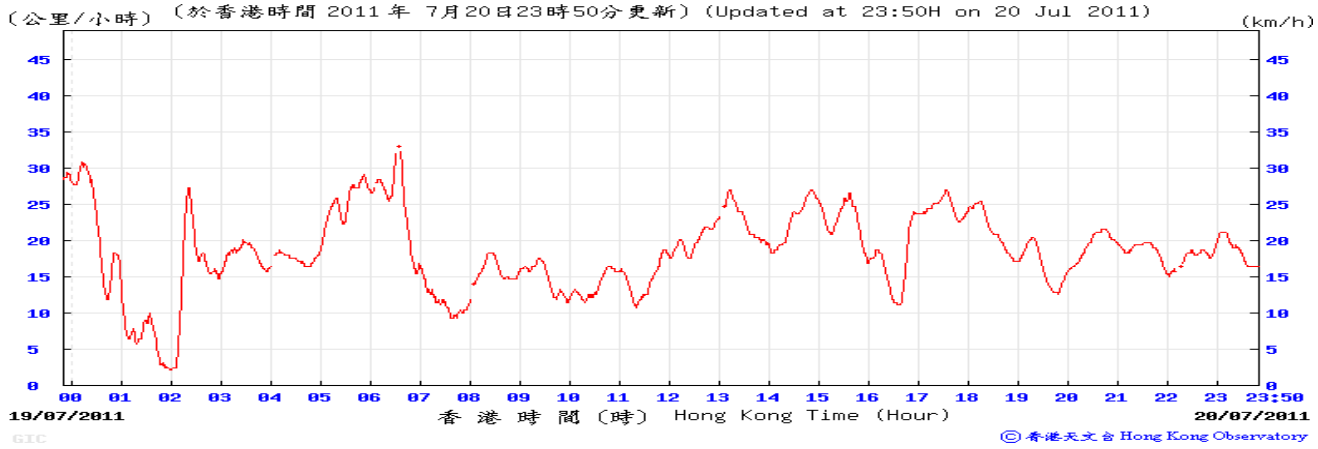


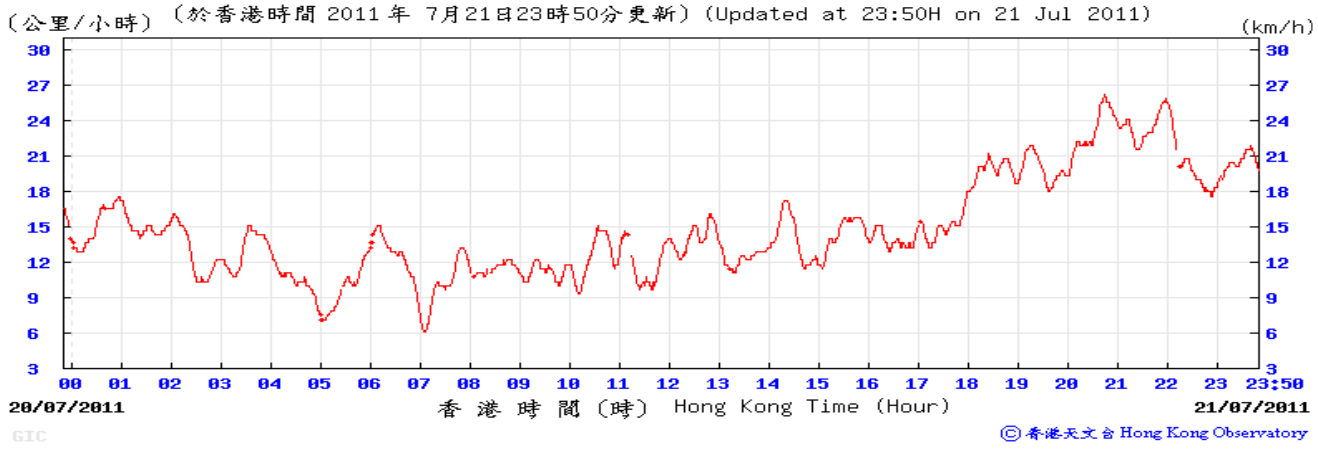




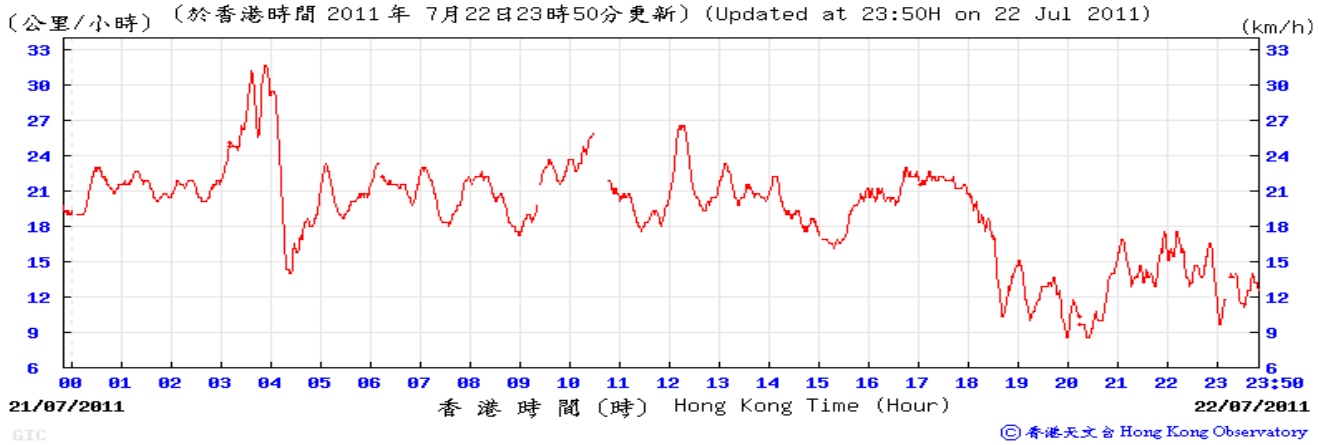
Weather Conditions at Green Island Weather Station during Monitoring Period

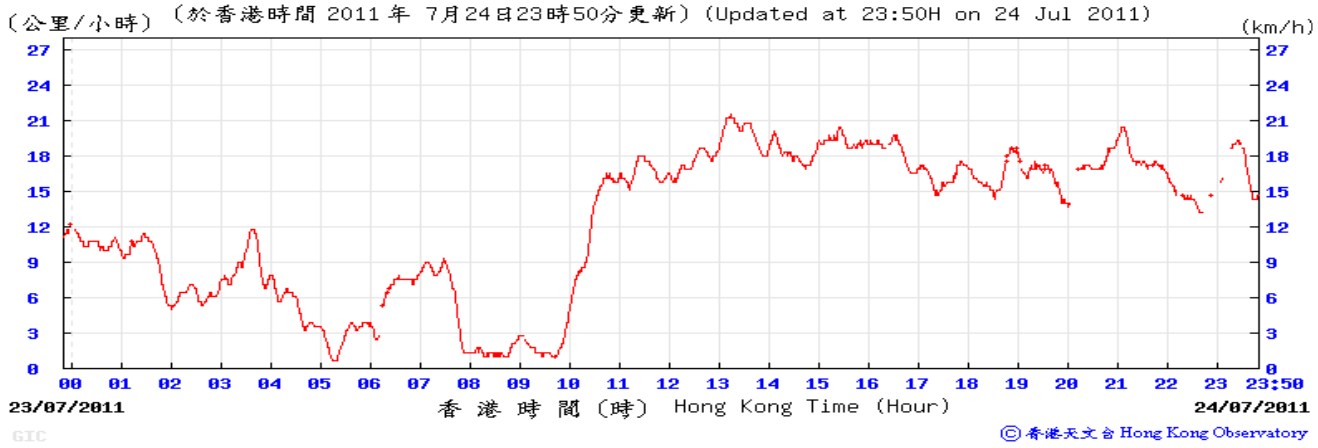




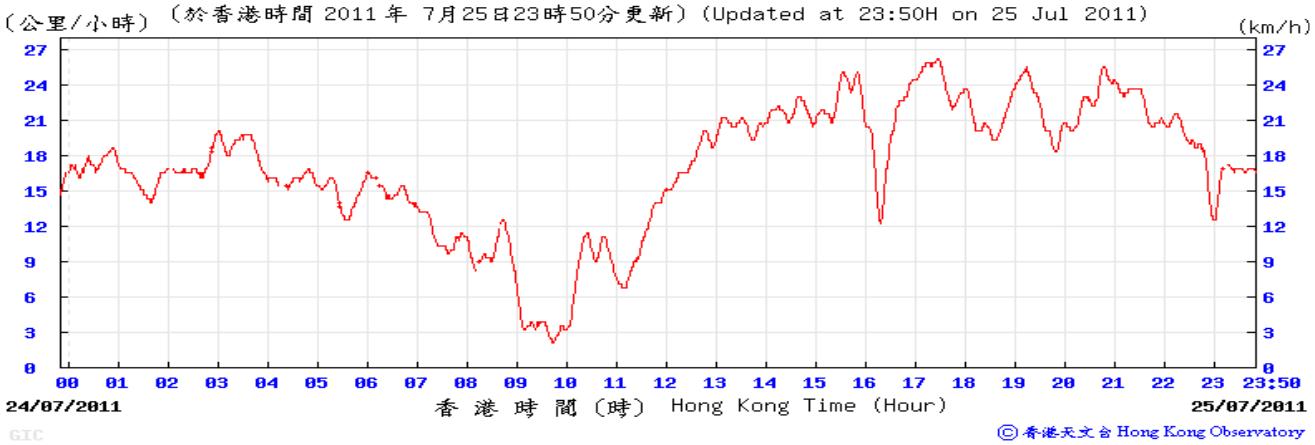


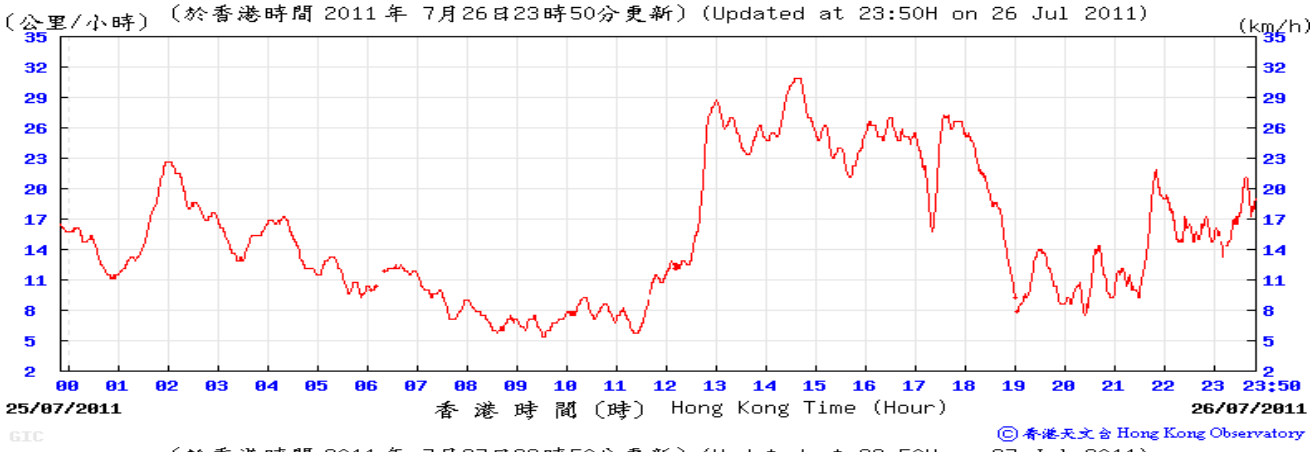
Weather Conditions at Green Island Weather Station during Monitoring Period

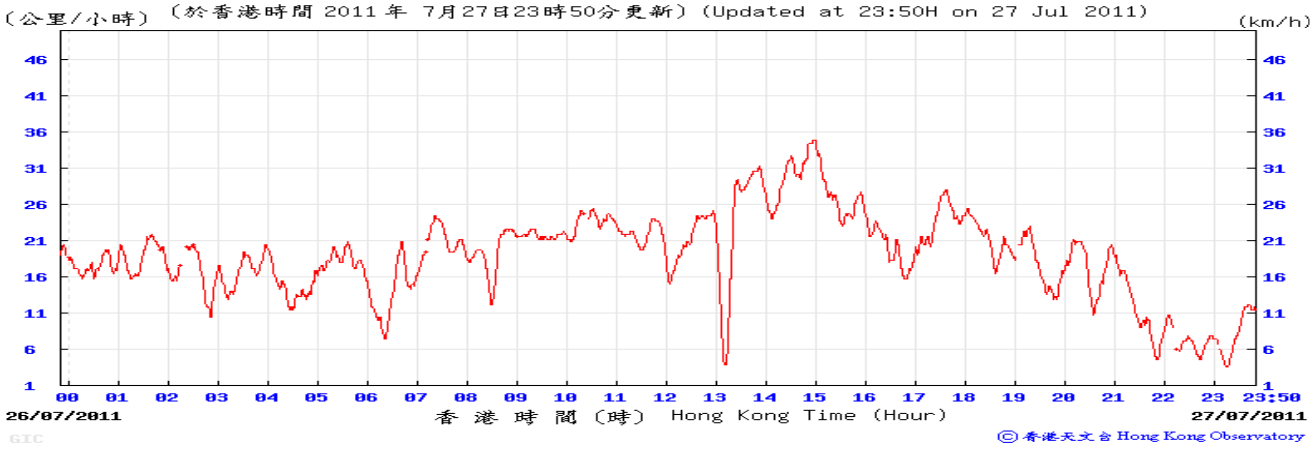




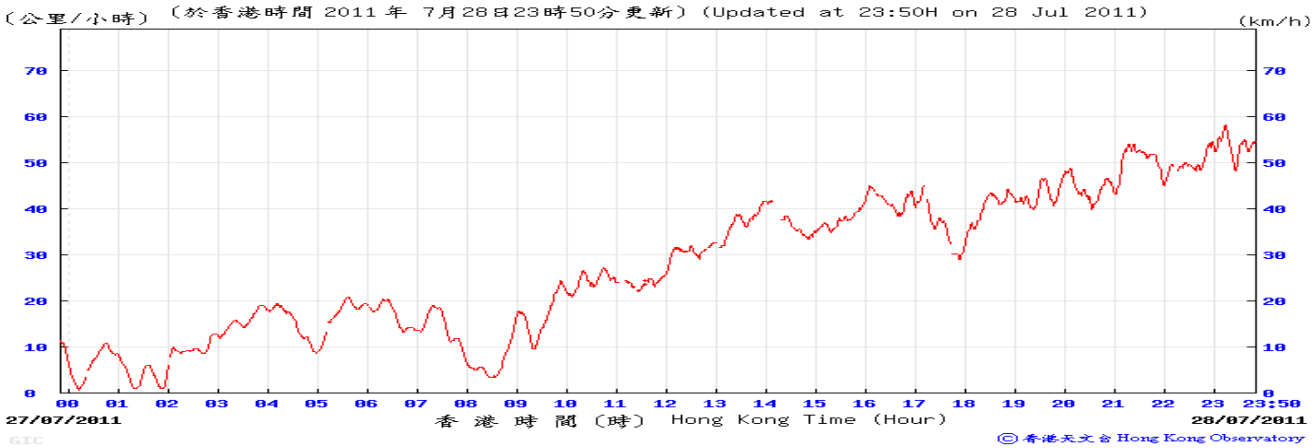
Weather Conditions at Green Island Weather Station during Monitoring Period

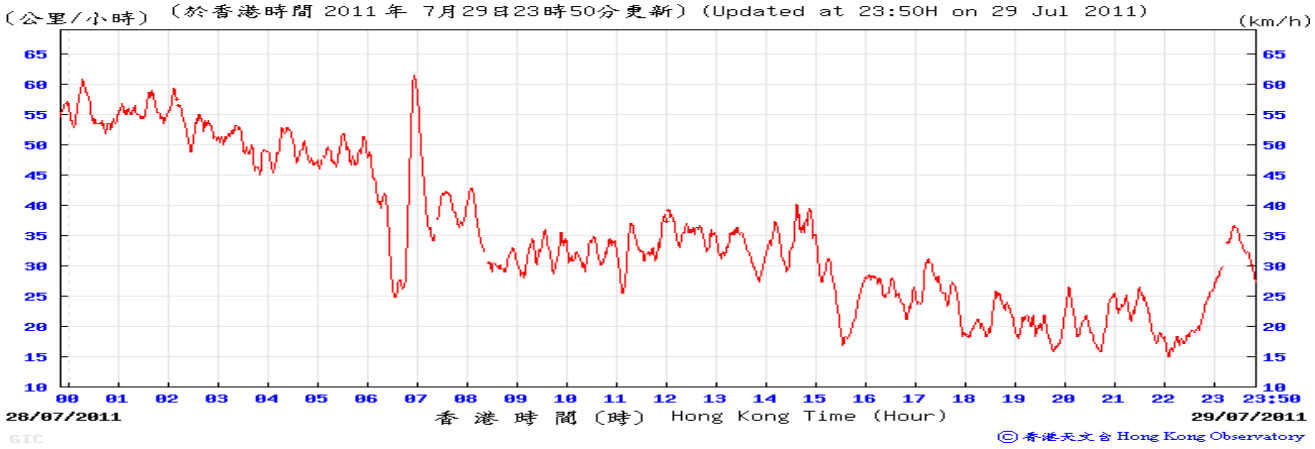


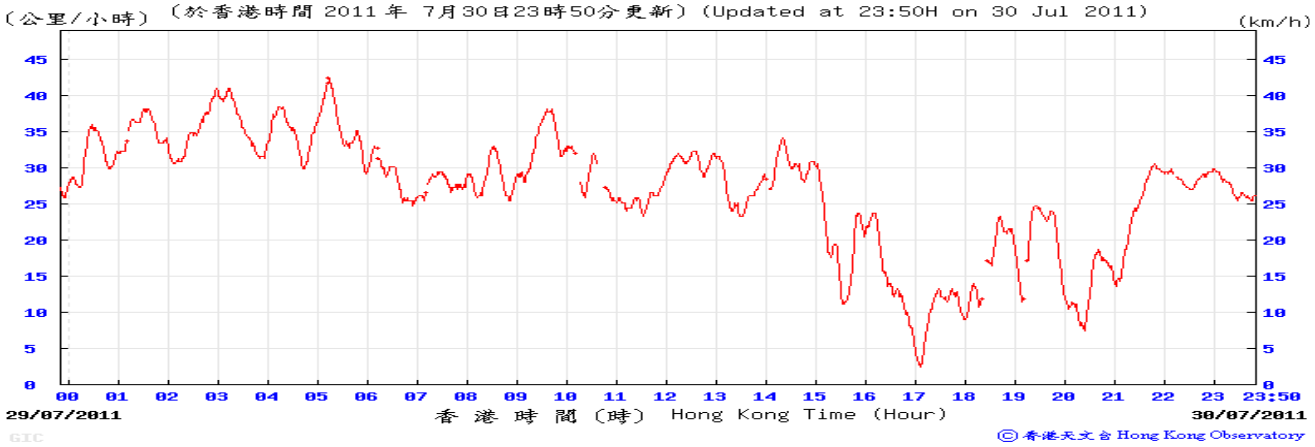




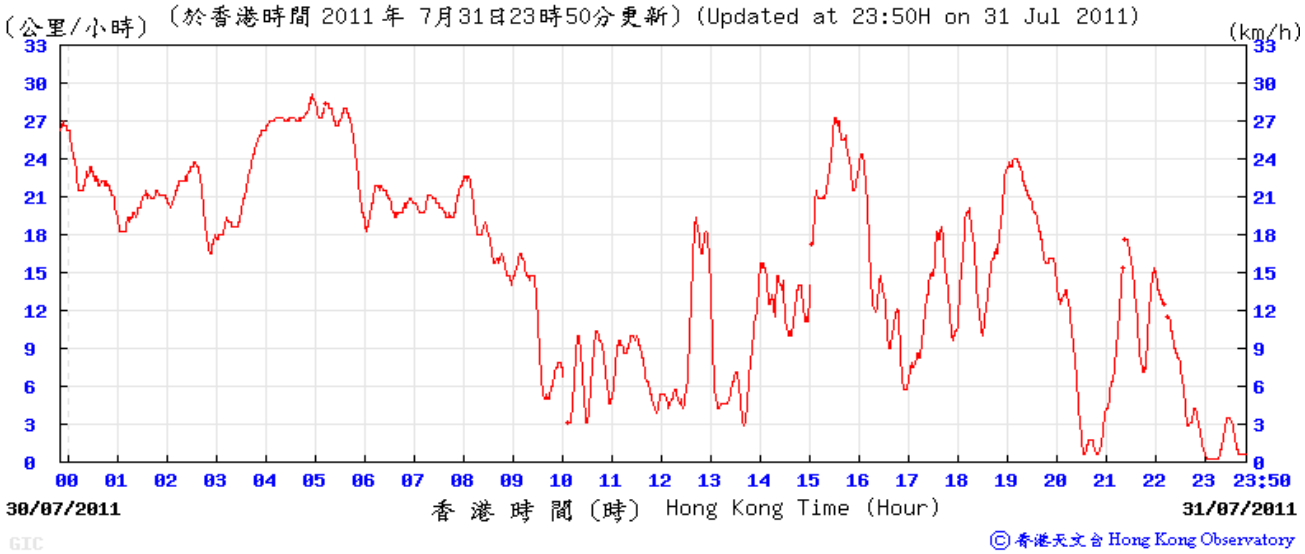
Weather Conditions at Green Island Weather Station during Monitoring Period



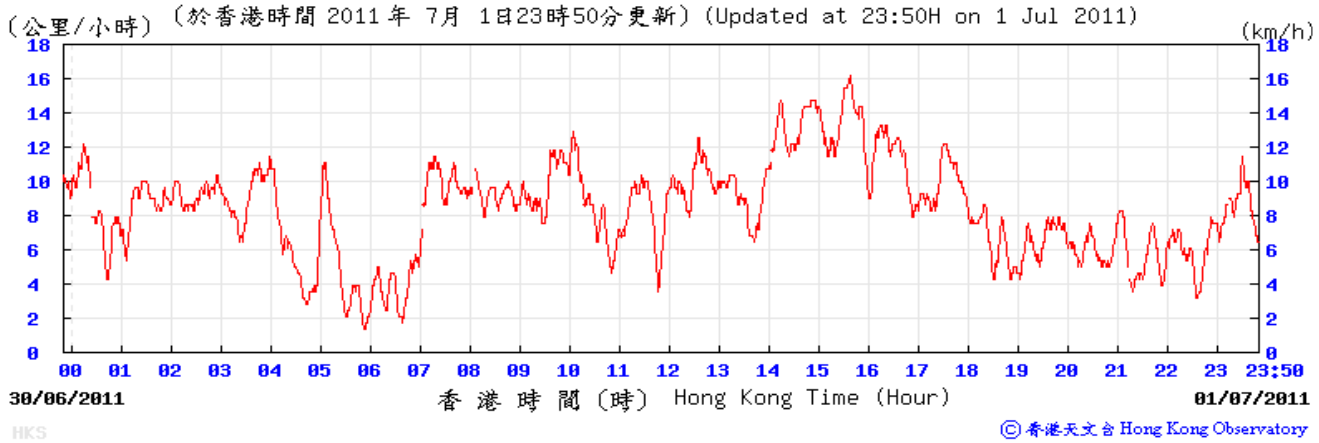


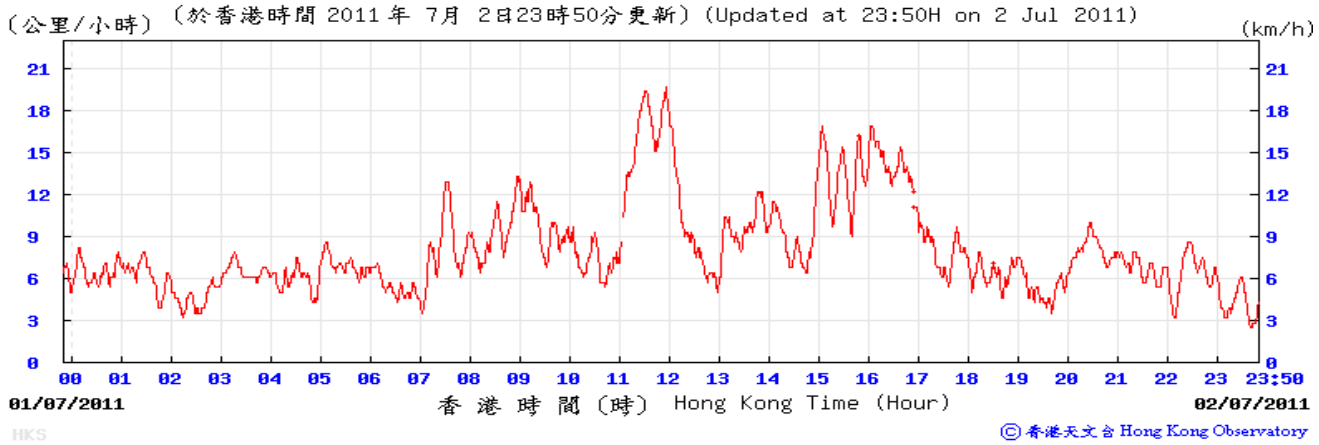


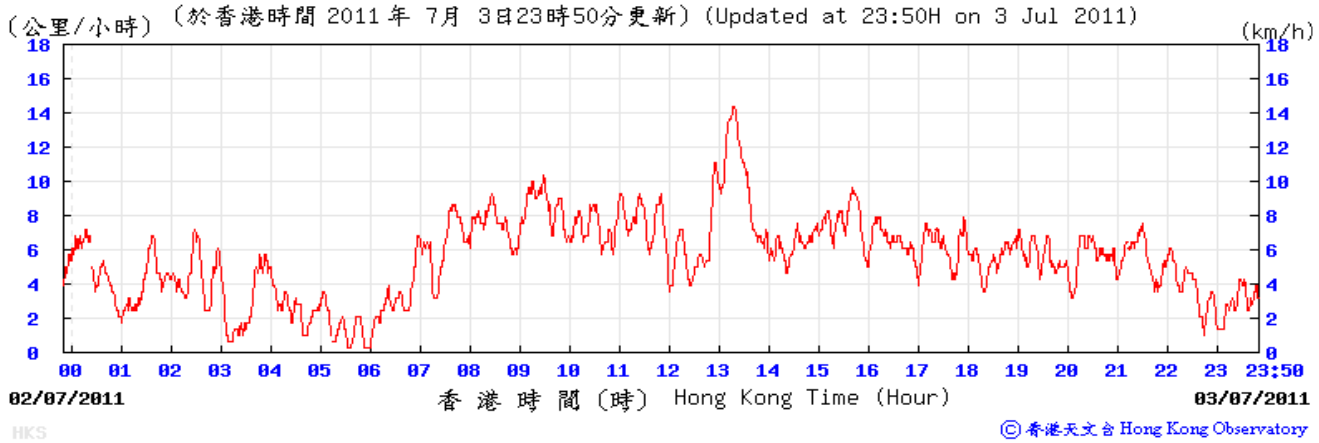
Weather Conditions at Green Island Weather Station during Monitoring Period



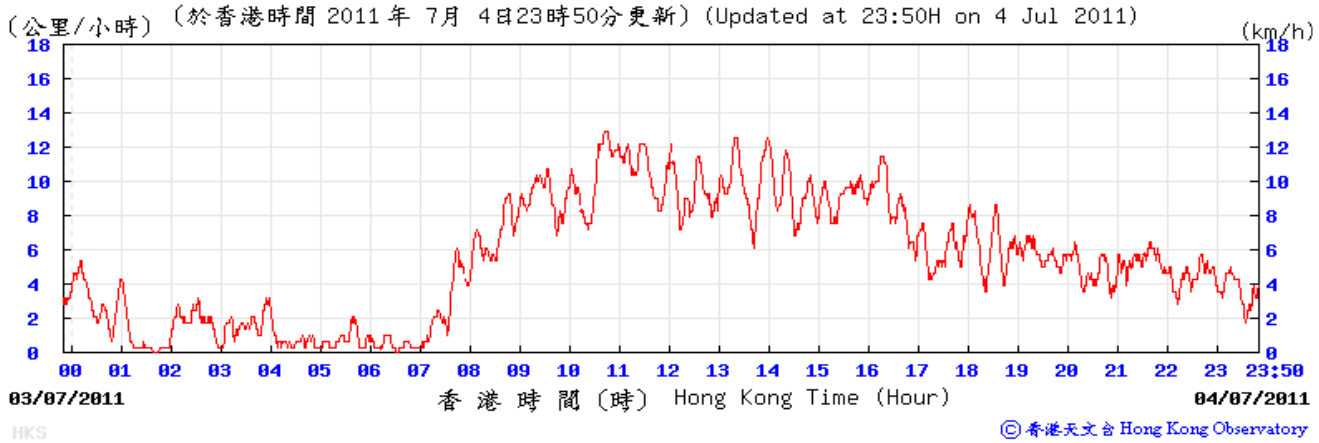
Weather Conditions at Wong Chuk Hang Weather Station during Monitoring Period

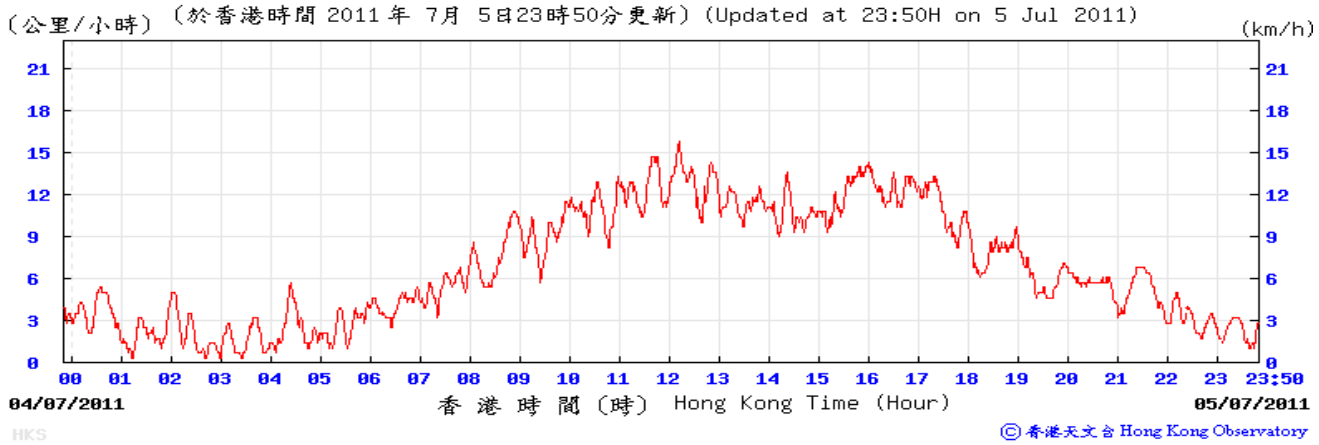


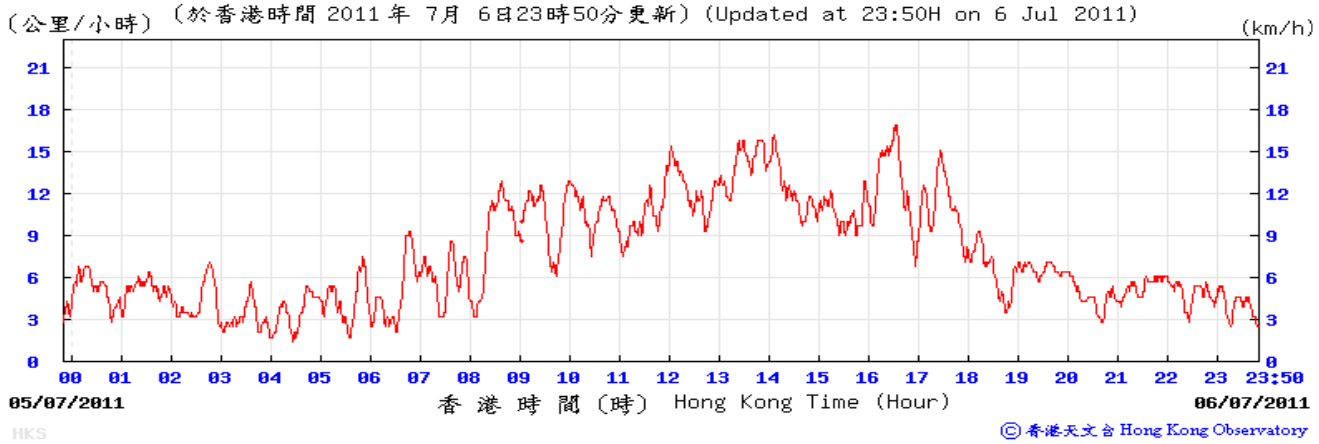




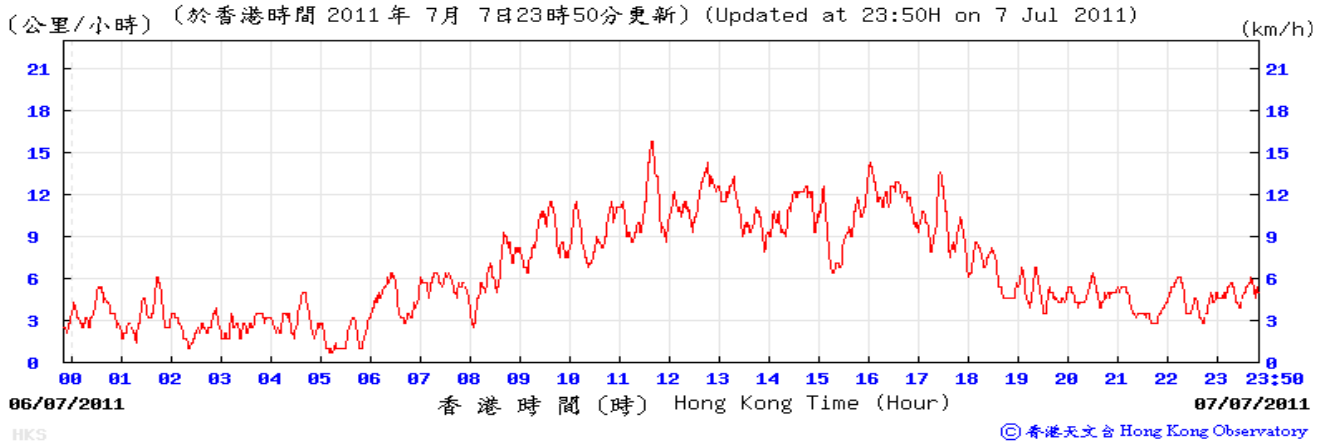
Weather Conditions at Wong Chuk Hang Weather Station during Monitoring Period

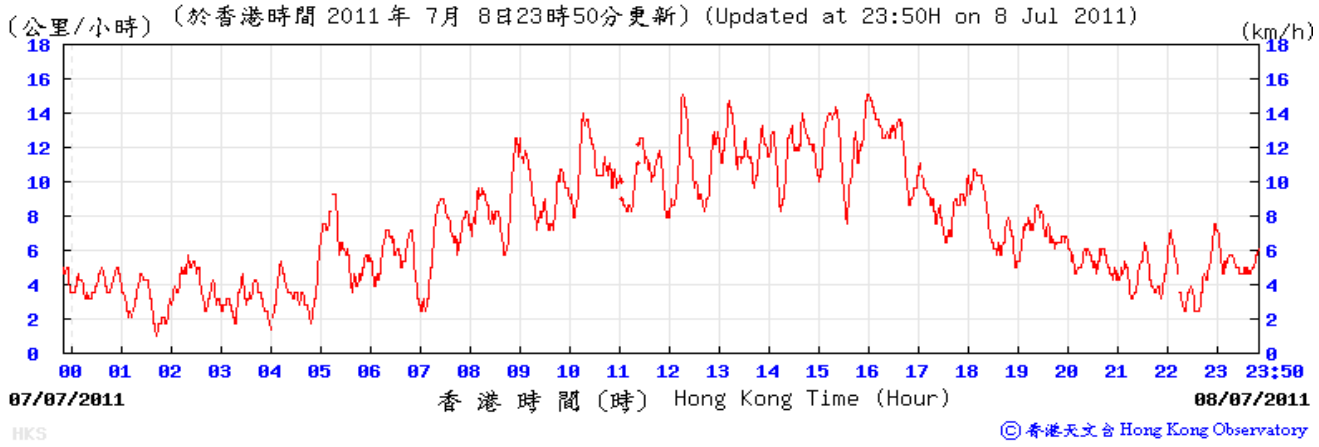


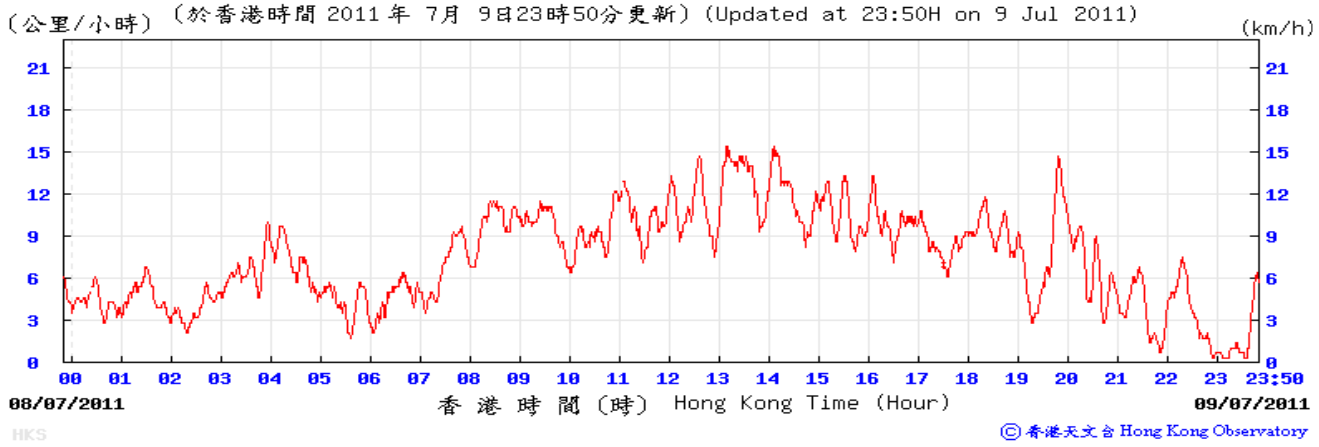




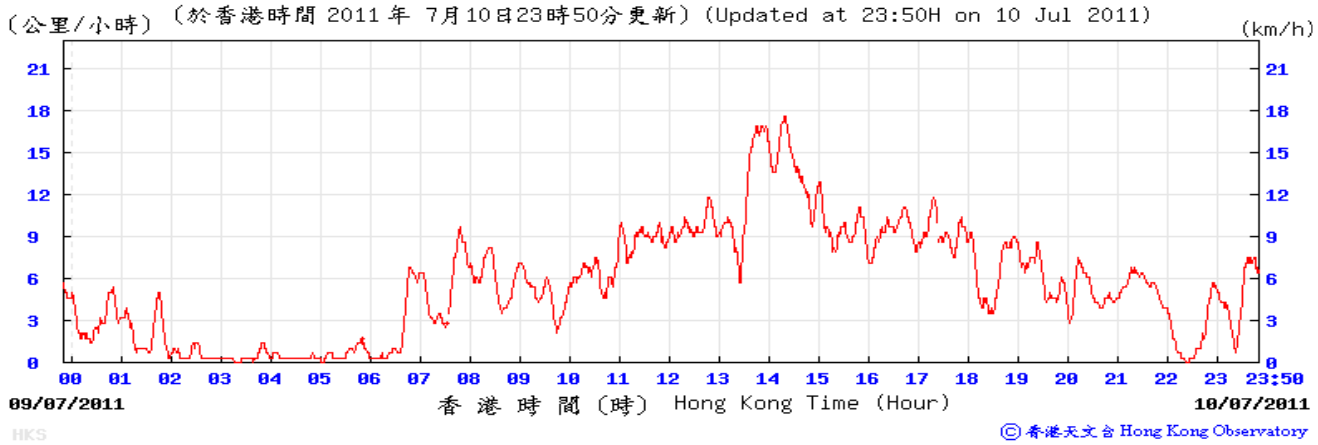
Weather Conditions at Wong Chuk Hang Weather Station during Monitoring Period

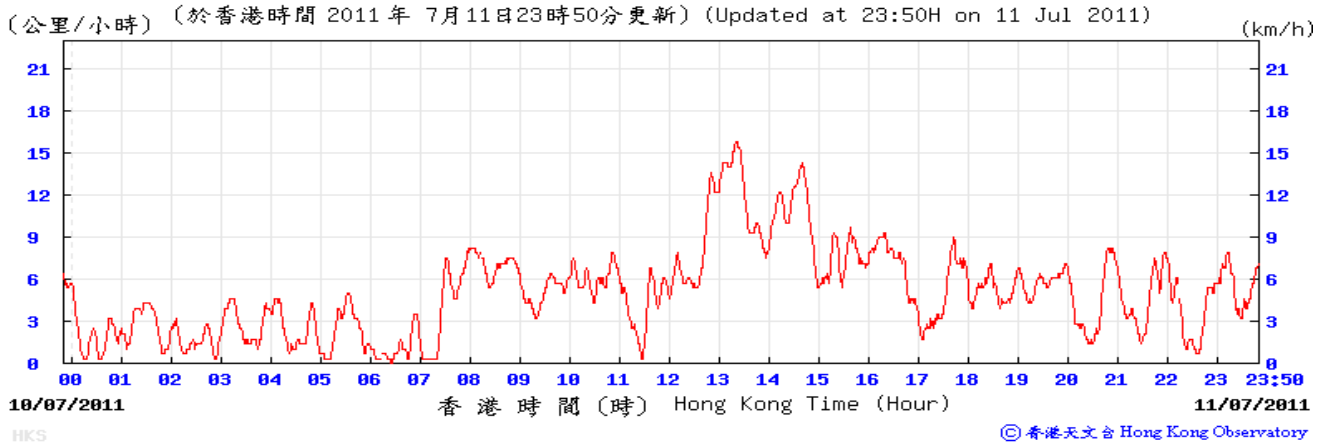


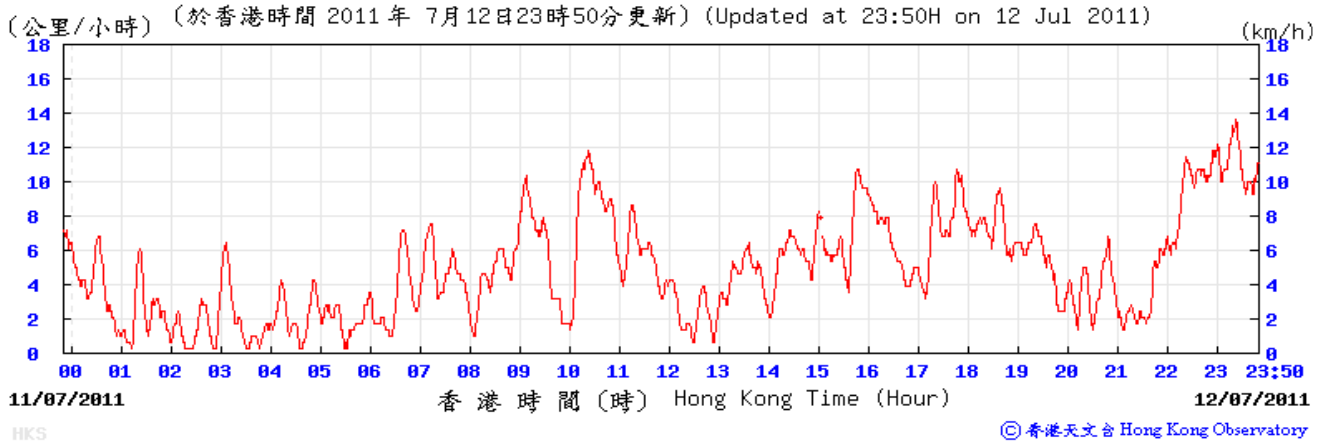




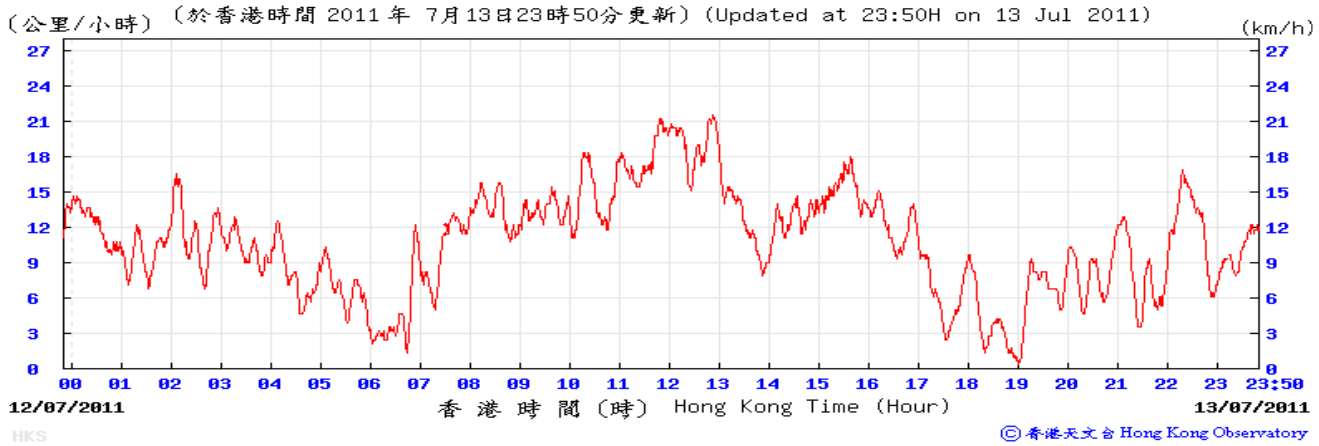
Weather Conditions at Wong Chuk Hang Weather Station during Monitoring Period

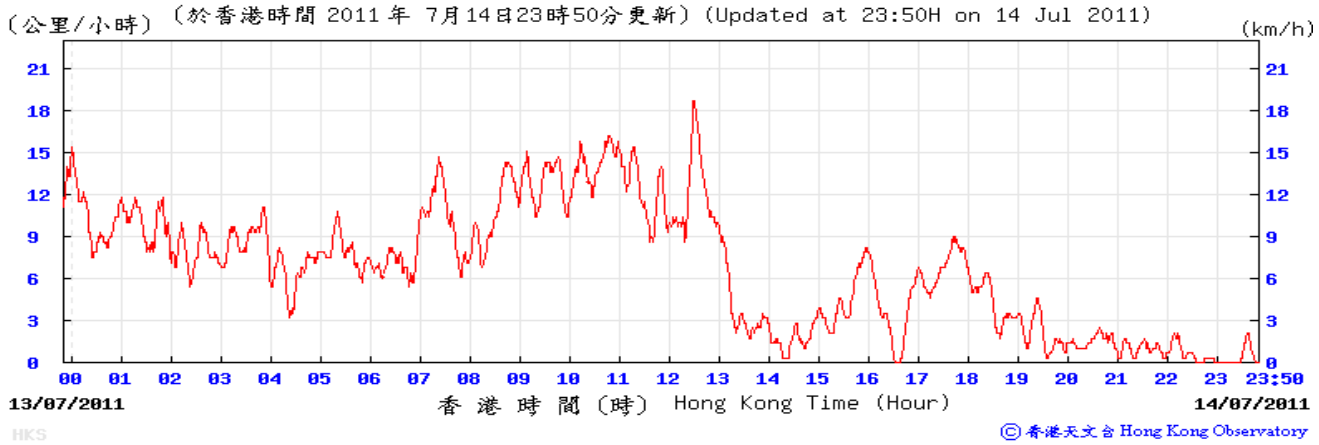


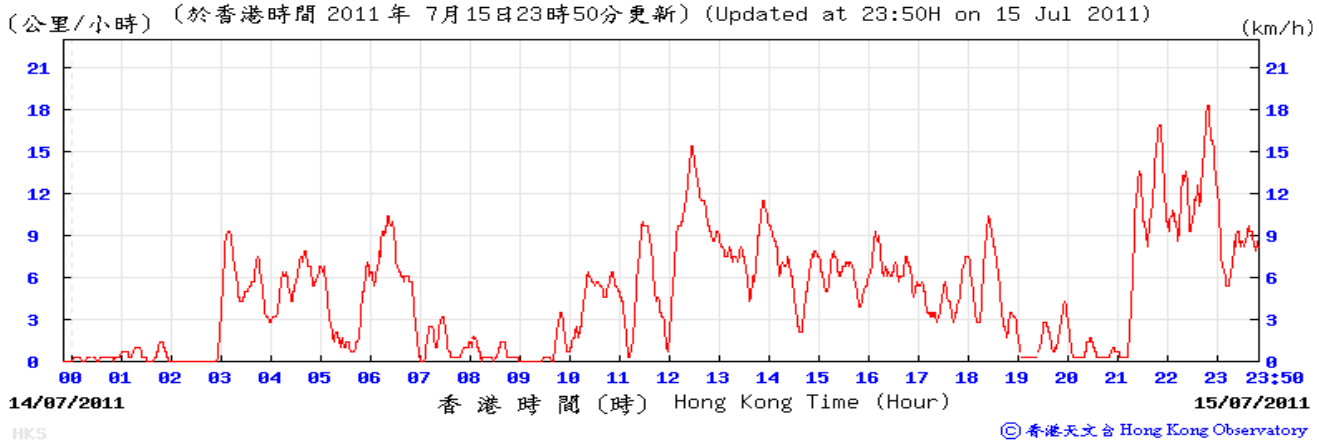




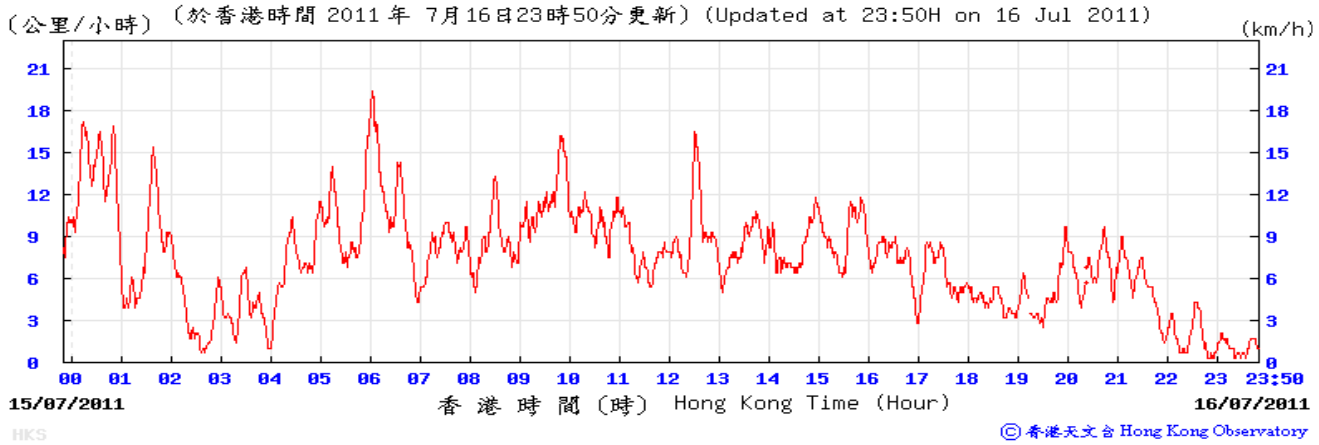
Weather Conditions at Wong Chuk Hang Weather Station during Monitoring Period

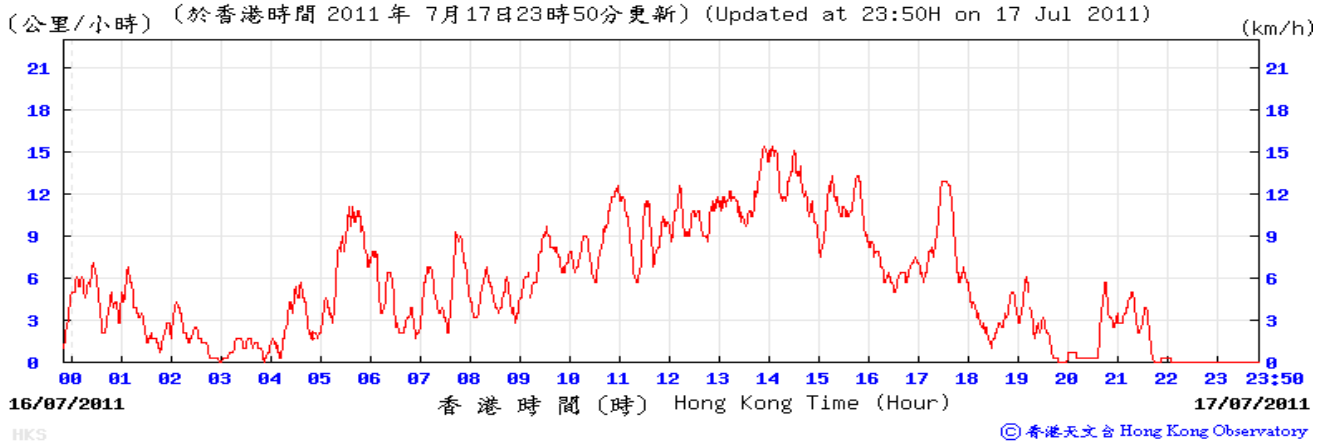


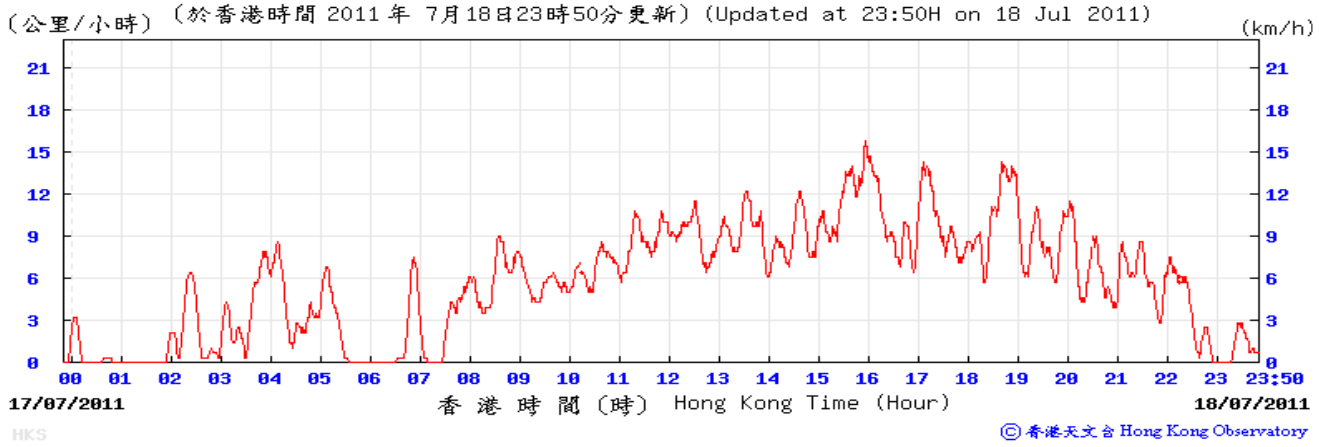




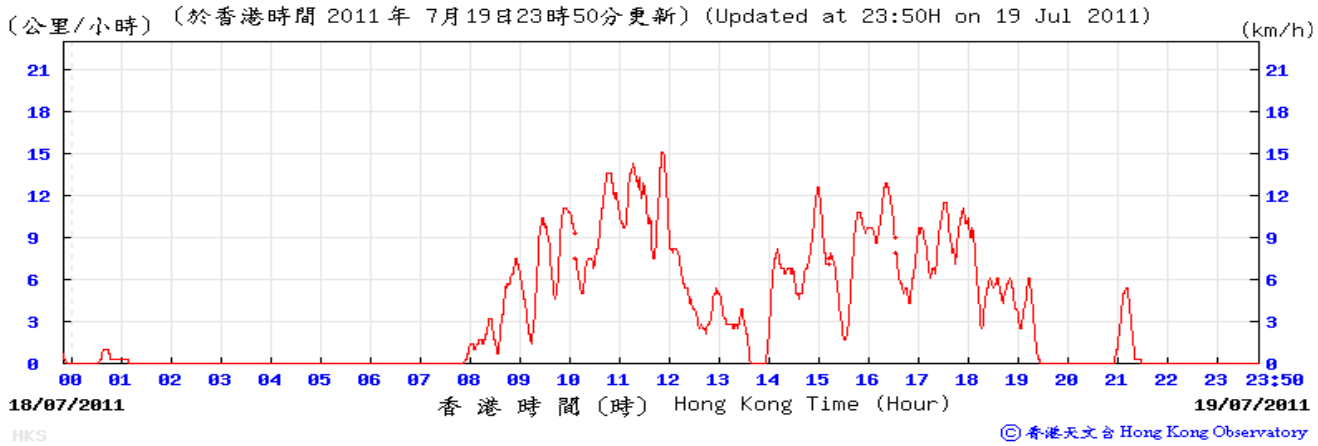
Weather Conditions at Wong Chuk Hang Weather Station during Monitoring Period

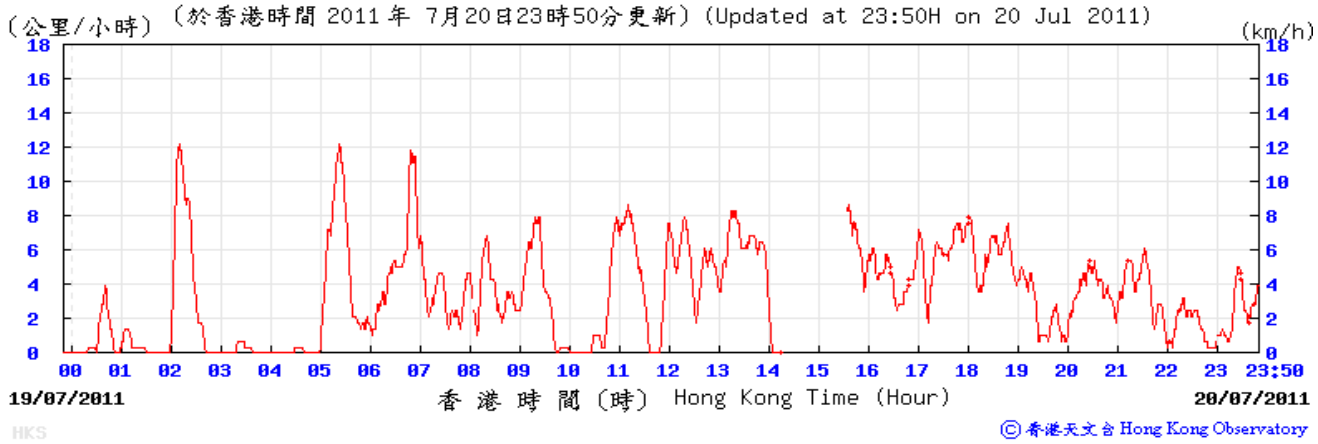


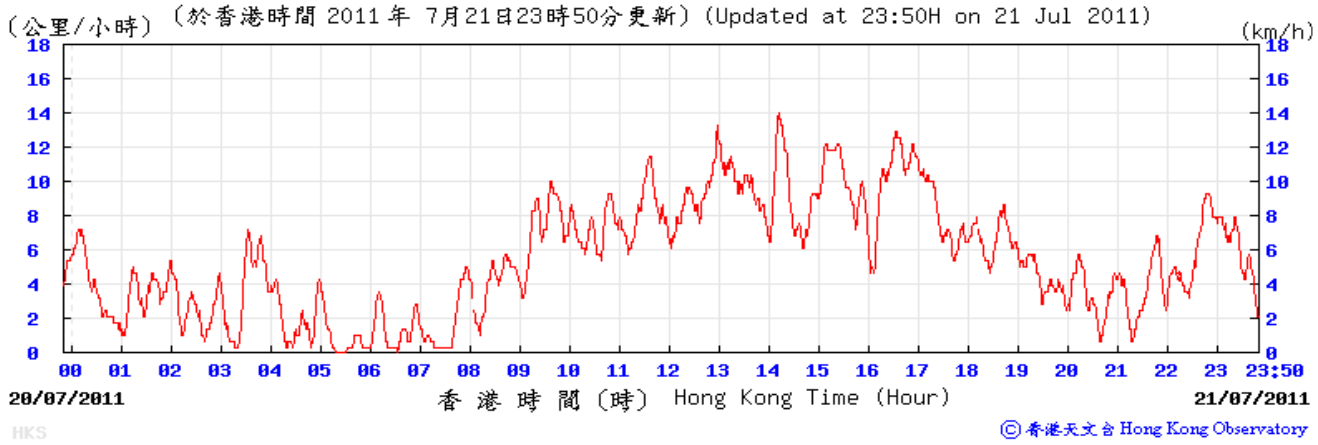




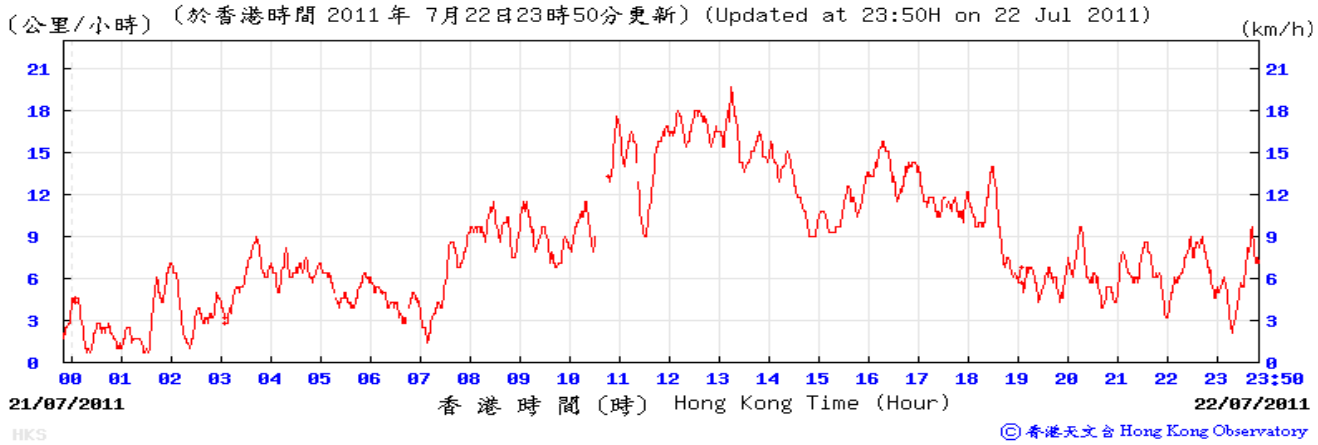
Weather Conditions at Wong Chuk Hang Weather Station during Monitoring Period

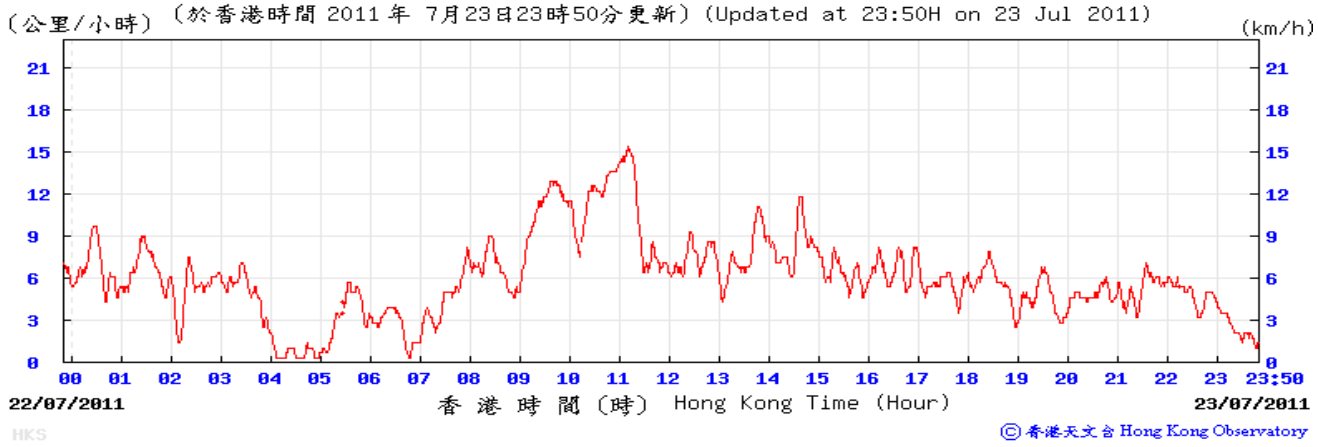


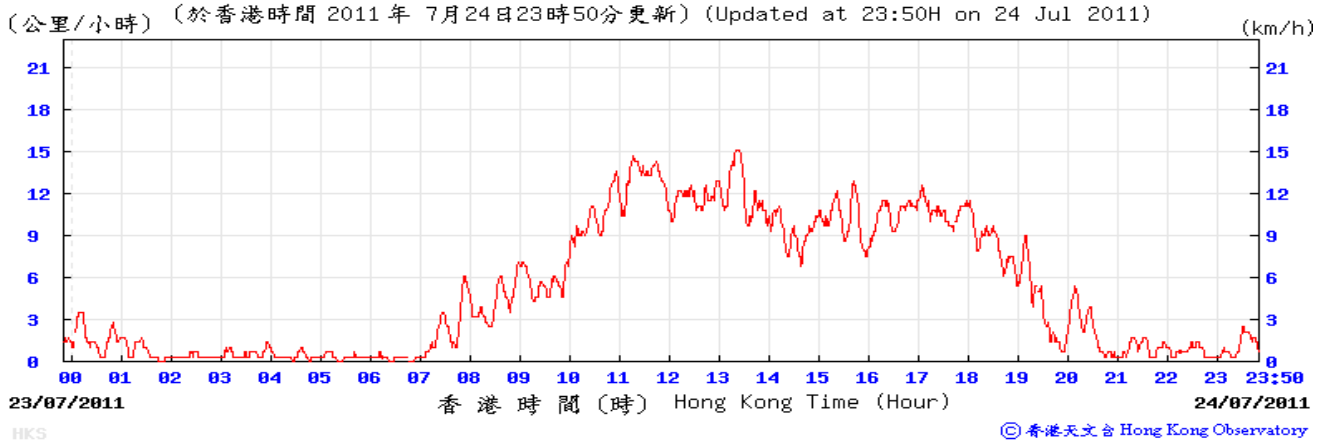




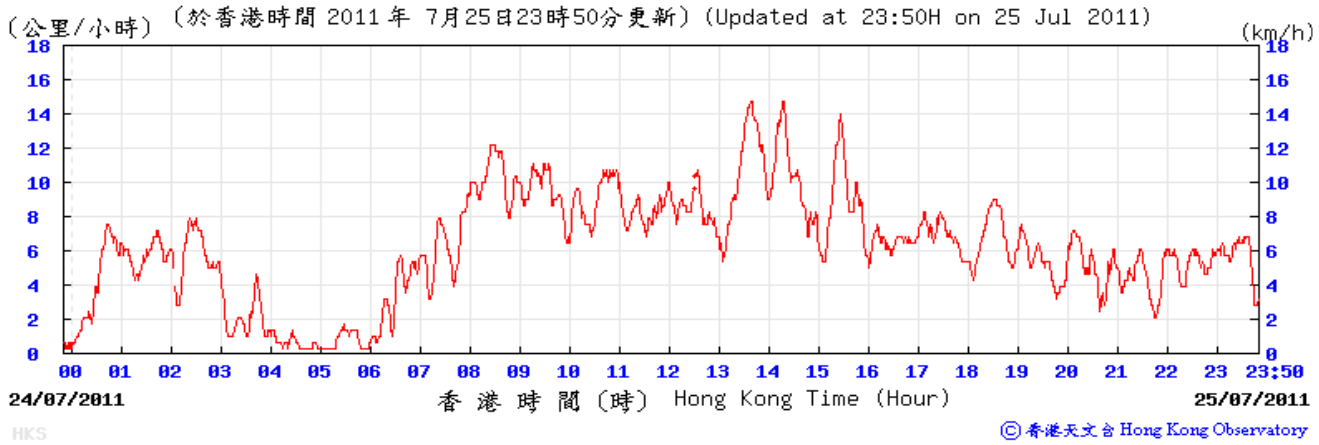
Weather Conditions at Wong Chuk Hang Weather Station during Monitoring Period

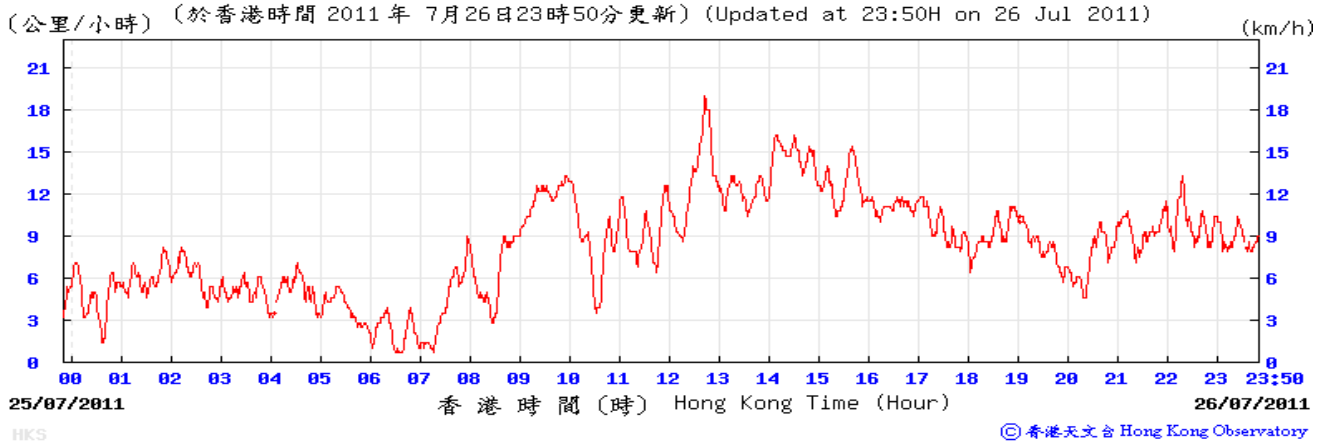


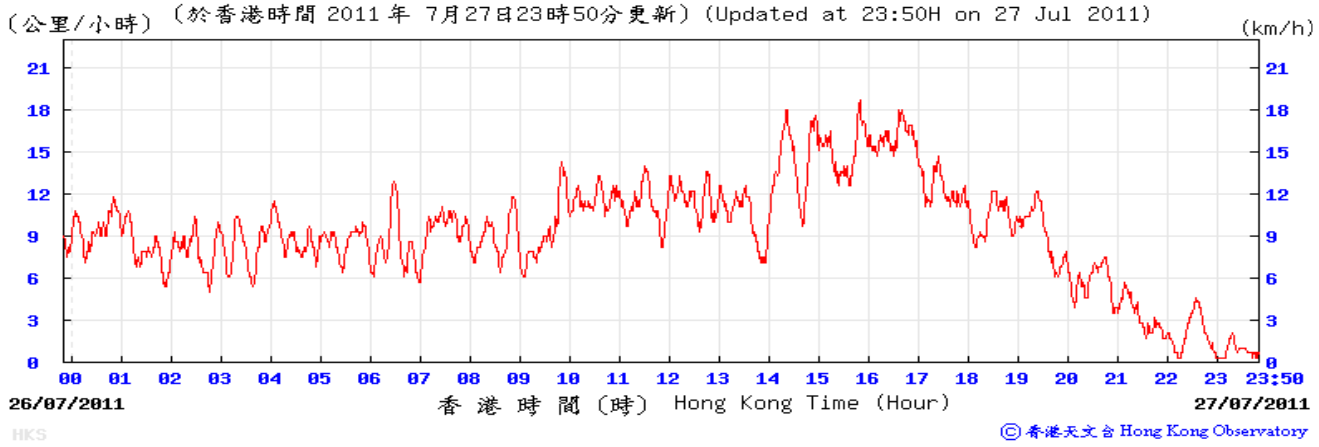




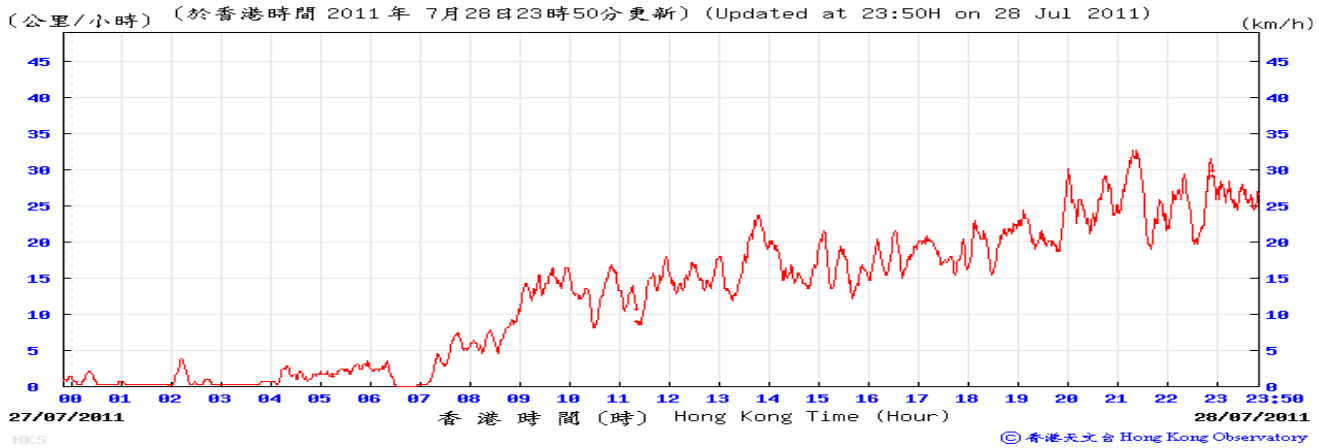
Weather Conditions at Wong Chuk Hang Weather Station during Monitoring Period

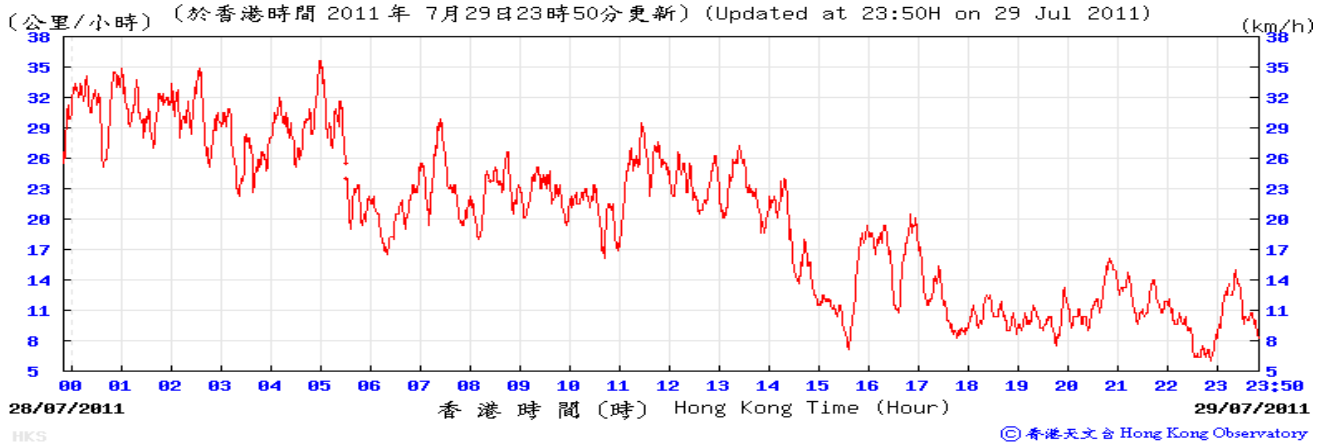


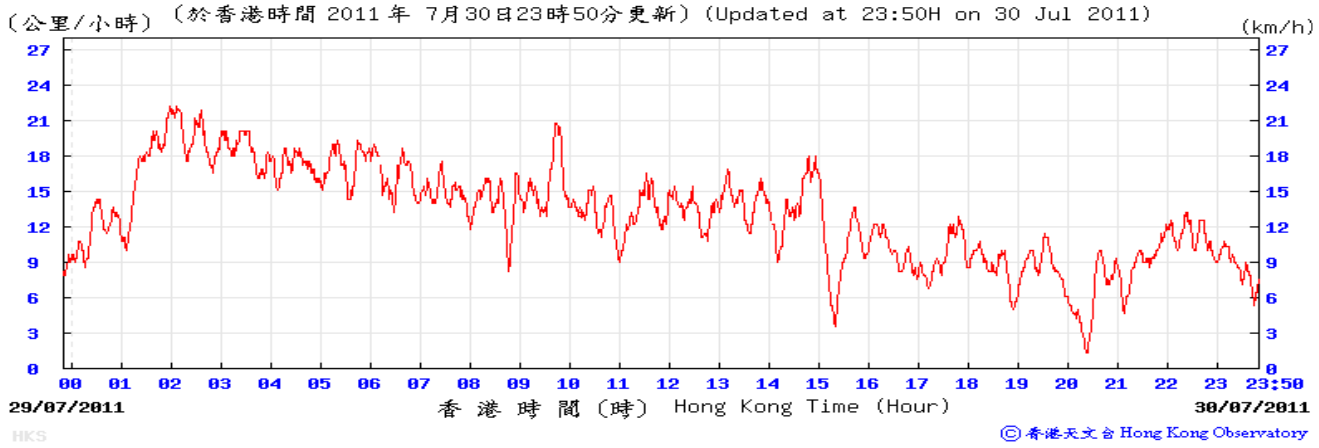




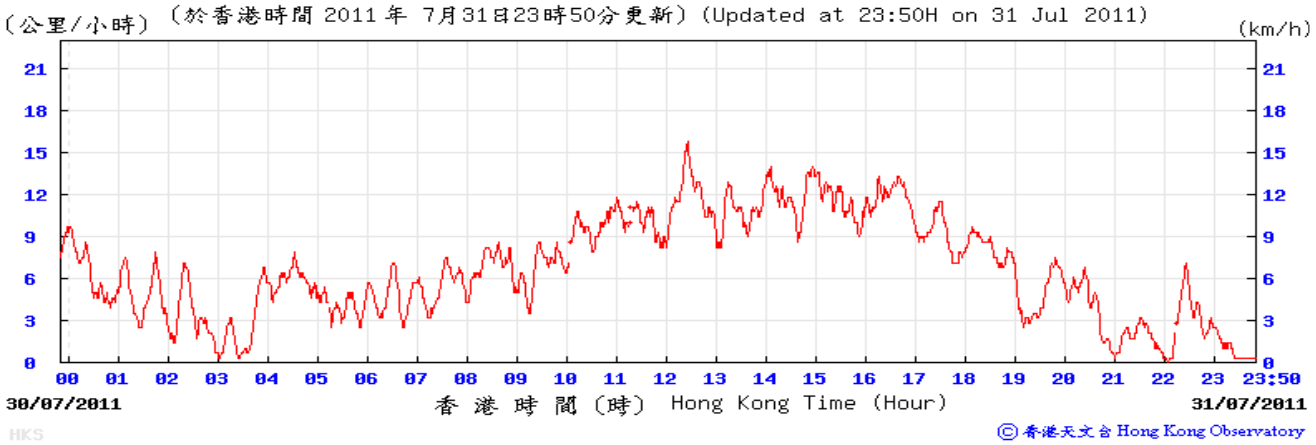
Weather Conditions at Wong Chuk Hang Weather Station during Monitoring Period







Weather Conditions at Wong Chuk Hang Weather Station during Monitoring Period



APPENDIX F

CALIBRATION CERTIFICATES FOR NOISE AND AIR QUALITY MONITORING EQUIPMENT

輝創工程有限公司
Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C105014

Certificate of Calibration

This is to certify that the equipment

Description : Integrating Sound Level Meter

Manufacturer : Bruel & Kjaer

Model No. : 2238

Serial No. : 2684502

has been calibrated for the specific items and ranges.
The results are shown in the Calibration Report No. C105014.

The equipment is supplied by

Co. Name : Atkins China Limited

Address : 5/F., Wharf T&T Centre, Harbour City, Tsim Sha Tsui, Kowloon

Date of Issue : 8 September 2010

Certified by : K C Lee

Calibration and Testing Laboratory of Sun Creation Engineering Limited
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
Tel: 2927 2606 Fax: 2744 8986 E-mail: callab@suncreation.com Website: www.suncreation.com

輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C106345

Certificate of Calibration

This is to certify that the equipment

RECEIVED
16 DEC 2010
BY:

Description : Acoustical Calibrator

Manufacturer : Bruel & Kjaer

Model No. : 4231

Serial No. : 2656516

has been calibrated for the specific items and ranges.
The results are shown in the Calibration Report No. C106345.

The equipment is supplied by

Co. Name : Leighton-LNS Joint Venture

Address : 39/F., Sun Hung Kai Centre, 30 Harbour Road, Wanchai, Hong Kong

Date of Issue : 18 November 2010

Certified by : K C Lee

Calibration and Testing Laboratory of Sun Creation Engineering Limited
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
Tel: 2927 2606 Fax: 2744 8986 E-mail: callab@suncreation.com Website: www.suncreation.com

輝創工程有限公司
Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C105607

Certificate of Calibration

This is to certify that the equipment

Description : Acoustical Calibrator

Manufacturer : Bruel & Kjaer

Model No. : 4231

Serial No. : 2385180

has been calibrated for the specific items and ranges.
The results are shown in the Calibration Report No. C105607.

The equipment is supplied by

Co. Name : Atkins China Limited

Address : 5/F., Wharf T&T Centre, Harbour City, Tsim Sha Tsui, Kowloon

Date of Issue : 12 October 2010

Certified by : K C Lee

Calibration and Testing Laboratory of Sun Creation Engineering Limited
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
Tel: 2927 2606 Fax: 2744 8986 E-mail: callab@suncreation.com Website: www.suncreation.com

輝創工程有限公司
Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C104734

Certificate of Calibration

This is to certify that the equipment

Description : Integrating Sound Level Meter

Manufacturer : Bruel & Kjaer

Model No. : 2238

Serial No. : 2684503

has been calibrated for the specific items and ranges.
The results are shown in the Calibration Report No. C104734.

The equipment is supplied by

Co. Name : Atkins China Limited

Address : 5/F., Wharf T&T Centre, Harbour City, Tsim Sha Tsui, Kowloon

Date of Issue : 31 August 2010

Certified by : K C Lee

The test equipment used for calibration are traceable to the National Standards as specified in this report.

Calibration and Testing Laboratory of Sun Creation Engineering Limited
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
Tel: 2927 2606 Fax: 2744 8986 E-mail: callab@suncreation.com Website: www.suncreation.com

ENVIROTECH SERVICES CO.

High-Volume TSP Sampler
5-Point Calibration Record

Location : Aberdeen
Calibrated by : K.F.Ho
Date : 28/06/2011

Sampler
Model : TE-5170
Serial Number : S/N2099

Calibration Orfice and Standard Calibration Relationship
Serial Number : 1785
Service Date : 25 May 2011
Slope (m) : 2.00506
Intercept (b) : -0.02062
Correlation Coefficient(r) : 0.99999

Standard Condition
Pstd (hpa) : 1013
Tstd (K) : 298.18

Calibration Condition
Pa (hpa) : 1005
Ta(K) : 298

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1	**18 holes**	11.1	3.318	1.665	59	58.8
2	**13 holes**	9.3	3.038	1.525	53	52.8
3	**10 holes**	7.5	2.728	1.371	47	46.8
4	**7 holes**	4.8	2.182	1.099	36	35.9
5	**5 holes**	2.8	1.667	0.842	26	25.9

Sampler Calibration Relationship

Slope(m):39.807 Intercept(b): -7.736 Correlation Coefficient(r): 0.9999

Checked by: Magnum Fan Date: 03/07/2011

ENVIROTECH SERVICES CO.

High-Volume TSP Sampler
5-Point Calibration Record

Location : Cyber Port
Calibrated by : K.F.Ho
Date : 29/06/2011

Sampler
Model : TE-5170
Serial Number : S/N 2098

Calibration Orfice and Standard Calibration Relationship
Serial Number : 1785
Service Date : 25 May 2011
Slope (m) : 2.00506
Intercept (b) : -0.02062
Correlation Coefficient(r) : 0.99999

Standard Condition
Pstd (hpa) : 1013
Tstd (K) : 298.18

Calibration Condition
Pa (hpa) : 1005
Ta(K) : 298

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1	**18 holes**	11.0	3.304	1.658	57	56.8
2	**13 holes**	9.4	3.054	1.533	52	51.8
3	**10 holes**	7.2	2.673	1.343	45	44.8
4	**7 holes**	5.3	2.293	1.154	38	37.8
5	**5 holes**	2.8	1.667	0.842	26	25.9

Sampler Calibration Relationship

Slope(m):37.622 Intercept(b): -5.706 Correlation Coefficient(r): 0.9999

Checked by: Magnum Fan Date: 03/07/2011

ENVIROTECH SERVICES CO.

High-Volume TSP Sampler
5-Point Calibration Record

Location : Wah Fu Estate
Calibrated by : K.F.Ho
Date : 29/06/2010

Sampler
Model : TE-5170
Serial Number : S/N 2100

Calibration Orfice and Standard Calibration Relationship
Serial Number : 1785
Service Date : 25 May 2011
Slope (m) : 2.00506
Intercept (b) : -0.02062
Correlation Coefficient(r) : 0.99999

Standard Condition
Pstd (hpa) : 1013
Tstd (K) : 298.18

Calibration Condition
Pa (hpa) : 1005
Ta(K) : 298

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1	**18 holes**	11.0	3.304	1.658	56	55.8
2	**13 holes**	9.0	2.988	1.501	50	49.8
3	**10 holes**	7.1	2.654	1.334	44	43.8
4	**7 holes**	5.1	2.249	1.132	36	35.9
5	**5 holes**	3.2	1.782	0.899	27	26.9

Sampler Calibration Relationship

Slope(m):38.054 Intercept(b): -7.217 Correlation Coefficient(r): 0.9999

Checked by: Magnum Fan Date: 03/07/2011

High-Volume TSP Sampler

5-Point Calibration Record

Location	**:**	**Sai Ying Pun**
Calibrated by	**:**	**K.T.Ho**
Date	**:**	**16/05/2011**

Sampler

Model	**:**	**TE-5170**
Serial Number	**:**	**S/N 2146**

Calibration Orfice and Standard Calibration Relationship

Serial Number	**:**	**1785**
Service Date	**:**	**10 May 2011**
Slope (m)	**:**	**2.01637**
Intercept (b)	**:**	**-0.02316**
Correlation Coefficient(r)	**:**	**0.99996**

Standard Condition

Pstd (hpa)	**:**	**1013**
Tstd (K)	**:**	**298.18**

Calibration Condition

Pa (hpa)	**:**	**1010**
Ta(K)	**:**	**298**

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1	18 holes	11.4	3.377	1.686	61	61.0
2	13 holes	9.6	3.099	1.548	55	55.0
3	10 holes	7.8	2.793	1.397	49	49.0
4	7 holes	4.7	2.168	1.087	36	36.0
5	5 holes	2.9	1.703	0.856	27	27.0

Sampler Calibration Relationship

Slope(m):40.985 Intercept(b): -8.283 Correlation Coefficient(r): 0.9999

Checked by: Magnum Fan Date: 20/05/2011

High-Volume TSP Sampler

5-Point Calibration Record

Location : Sai Ying Pun
Calibrated by : K.T.Ho
Date : 14/07011

Sampler
Model : TE-5170
Serial Number : S/N 2146

Calibration Orfice and Standard Calibration Relationship
Serial Number : 1785
Service Date : 25 May 2011
Slope (m) : 2.00506
Intercept (b) : -0.020620
Correlation Coefficient(r) : 0.99999

Standard Condition
Pstd (hpa) : 1013
Tstd (K) : 298.18

Calibration Condition
Pa (hpa) : 1002
Ta(K) : 300

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1	18 holes	11.5	3.361	1.687	60	59.5
2	13 holes	9.7	3.087	1.550	55	54.5
3	10 holes	7.9	2.786	1.400	49	48.6
4	7 holes	4.6	2.126	1.071	36	35.7
5	5 holes	2.9	1.688	0.852	28	27.8

Sampler Calibration Relationship

Slope(m):38.316 Intercept(b): -5.065 Correlation Coefficient(r): 0.9999

Checked by: Magnum Fan Date: 16/07/2011

Summary of Calibration Date of Monitoring Equipment

Equipment	Description	ID	Latest Calibration Date	Next Calibration Date
Integrated Sound Level Meters	B&K 2238	2684502	8th September 2010	7th September 2011
Integrated Sound Level Meters	B&K 2238	2684503	31st August 2010	30th August 2011
Calibrator for Sound Level Meters	B&K 4231	2656516	18th November 2010	17th November 2011
Calibrator for Sound Level Meters	B&K 4231	2385180	12th October 2010	11th October 2011
Laser Dust Monitor	LD-3B-001	974350	19th October 2010	18th October 2011
Laser Dust Monitor	LD-3B-002	934393	19th October 2010	18th October 2011
High Volume Sampler	TE-5170	2098 (Cyberport PTW)	29th June 2011	28th August 2011
High Volume Sampler	TE-5170	2099 (Aberdeen PTW)	28th June 2011	27th August 2011
High Volume Sampler	TE-5170	2100 (Wah Fu PTW)	29th June 2011	28th August 2011
High Volume Sampler	TE-5170	2146 (Fung Mat Road Site)	16th May 2011	15th July 2011
			14th July 2011	13th September 2011

EQUIPMENT CALIBRATION RECORD

Type :	Laser Dust Monitor
Manufacturer / Brand :	SIBATA
Model No.:	LD-3B
Equipment No.:	LD-3B-001
Sensitivity Adjustment Scale Setting :	640 CPM

Operator:

Standard Equipment

Equipment :	MFC High Volume Air Sampler
Venue :	Ice Factory (Aberdeen)
Model No.:	TE-5170 Total Suspended Particulated
Serial No.:	2099
Last Calibration Date	11/11/2009

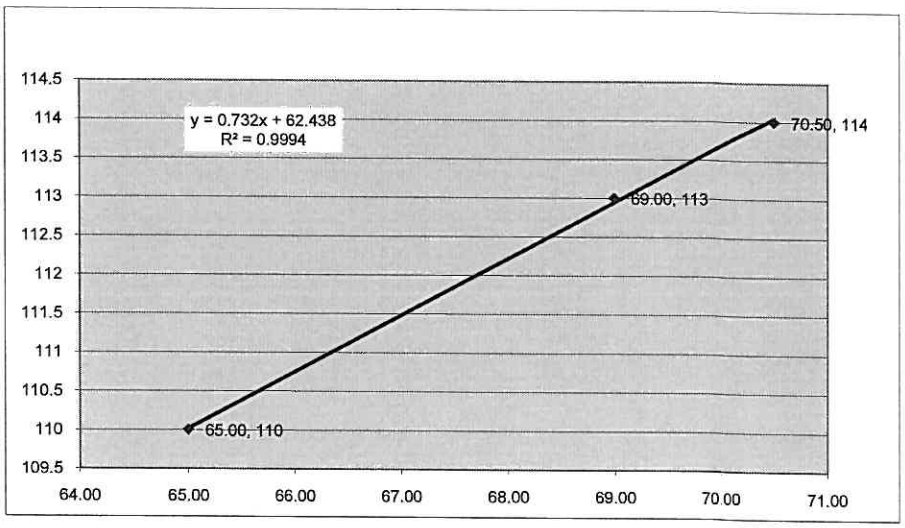
Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration) :	640 CPM
Sensitivity Adjustment Scale Setting (After Calibration) :	640 CPM

Hour	Date (dd-mmm-yy)	Time		Ambient Condition		Concentration (ug/m3) Y-axis	Total Count	Count/Minute X-axis
				Temp (C)	R.H. (%)			
1	19-Oct-10	09:12	10:12	26.1	62%	113	4140	69.00
2	19-Oct-10	10:12	11:12	26.1	62%	114	4230	70.50
3	19-Oct-10	11:12	12:12	26.1	62%	110	3900	65.00

Be Linear Regression of Y or X
Slope (K-factor): 0.732
Correlation coefficient : 0.9994

Remark:



Recorded by: Ruby Law Signature: Date: 21/10/2010

Checked by: Keith Chau Signature: Date: 21/10/2010

EQUIPMENT CALIBRATION RECORD

Type :	Laser Dust Monitor
Manufacturer / Brand :	SIBATA
Model No.:	LD-3B
Equipment No.:	LD-3B-002
Sensitivity Adjustment Scale Setting :	622 CPM

Operator:

Standard Equipment

Equipment :	MFC High Volume Air Sampler
Venue :	Wah Ming House, Wah Fu Estate
Model No.:	TE-5170 Total Suspended Particulated
Serial No.:	2100
Last Calibration Date	11/11/2009

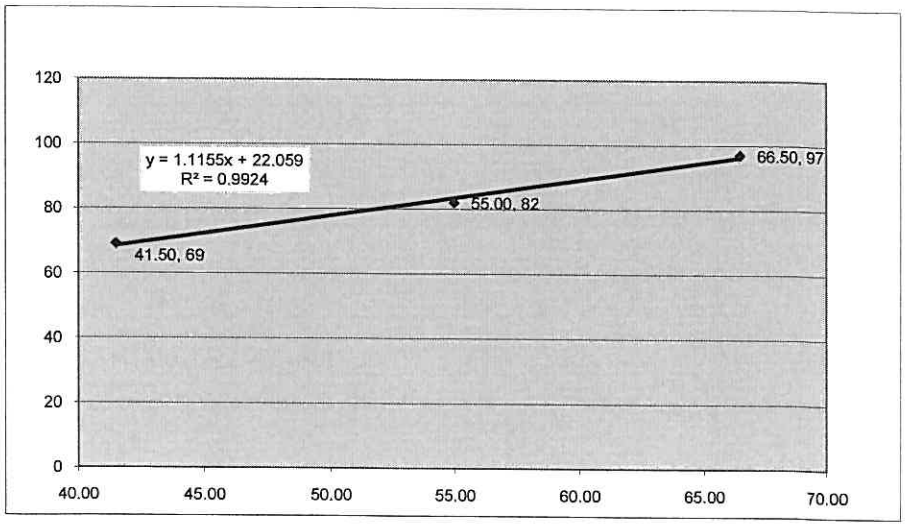
Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration) :	622 CPM
Sensitivity Adjustment Scale Setting (After Calibration) :	622 CPM

Hour	Date (dd-mmm-yy)	Time		Ambient Condition		Concentration (ug/m3) Y-axis	Total Count	Count/Minute X-axis
				Temp (C)	R.H. (%)			
1	19-Oct-10	14:00	15:00	26.1	62%	69	2490	41.50
2	19-Oct-10	15:00	16:00	26.1	62%	82	3300	55.00
3	19-Oct-10	16:00	17:00	26.1	62%	97	3990	66.50

Be Linear Regression of Y or X
Slope (K-factor): 1.1155
Correlation coefficient : 0.9924

Remark: _____



Recorded by: Ruby Law Signature: _____ Date: 21/10/2010

Checked by: Keith Chau Signature: _____ Date: 21/10/2010

APPENDIX G

MONITORING SCHEDULE FOR THE PRESENT AND NEXT REPORTING PERIOD

Monitoring Schedule during the Reporting Period

Parameter	Monitoring Station	Date
Noise	M3, Normal Daytime	04-Jul-11 ; 15-Jul-11 ; 21-Jul-11 and 27-Jul-11
	M3, Holiday Daytime	24-Jul-11
	M3, Evening Time	12-Jul-11
	M3, Night-time	16-Jul-11 and 30-Jul-11
	M5, Normal Daytime	06-Jul-11 ; 12-Jul-11 ; 18-Jul-11 and 28-Jul-11
	M5a, Holiday Daytime	03-Jul-11 and 24-Jul-11
	M5a, Evening Time	28-Jul-11
	M5a, Night-time	12-Jul-11 and 28-Jul-11
	M6a, Normal Daytime	04-Jul-11 ; 14-Jul-11 ; 20-Jul-11 and 26-Jul-11
	M6a, Holiday Daytime	17-Jul-11
	M6a, Evening Time	06-Jul-11 and 20-Jul-11
	M6a, Night-time	06-Jul-11 and 20-Jul-11
	M7a	04-Jul-11 ; 14-Jul-11 ; 20-Jul-11 and 26-Jul-11
	M8	06-Jul-11 ; 12-Jul-11 ; 18-Jul-11 and 28-Jul-11
	M8, Holiday Daytime	10-Jul-11 and 31-Jul-11
Air: 1-hr TSP	CM_FM1	05-Jul-11 ; 11-Jul-11 ; 15-Jul-11 ; 21-Jul-11 and 27-Jul-11
	CM_CB1a	06-Jul-11 ; 12-Jul-11 ; 18-Jul-11 ; 22-Jul-11 and 28-Jul-11
	CM_WF1a	04-Jul-11 ; 08-Jul-11 ; 14-Jul-11 ; 20-Jul-11 and 26-Jul-11
	CM_AB1a	06-Jul-11 ; 12-Jul-11 ; 18-Jul-11 ; 22-Jul-11 and 28-Jul-11
Air: 24-hrs TSP	CM_FM1	05-Jul-11 ; 11-Jul-11 ; 15-Jul-11 ; 21-Jul-11 and 27-Jul-11
	CM_CB1a	05-Jul-11 ; 11-Jul-11 ; 15-Jul-11 ; 21-Jul-11 and 27-Jul-11
	CM_WF1a	05-Jul-11 ; 11-Jul-11 ; 15-Jul-11 ; 21-Jul-11 and 27-Jul-11
	CM_AB1a	05-Jul-11 ; 11-Jul-11 ; 15-Jul-11 ; 21-Jul-11 and 27-Jul-11

Proposed Monitoring Schedule for Coming Reporting Period

Parameter	Monitoring Station	Date
Noise	M3, Normal Daytime	02-Aug-11 ; 08-Aug-11 ; 19-Aug-11 ; 25-Aug-11 and 31-Aug-11
	M3, Evening Time	11-Aug-11
	M5, Normal Daytime	03-Aug-11 ; 09-Aug-11 ; 15-Aug-11 ; 25-Aug-11 and 31-Aug-11
	M5a, Holiday Daytime	14-Aug-11 and 24-Jul-11
	M5a, Evening Time	25-Aug-11
	M5a, Night-time	11-Aug-11 and 25-Aug-11
	M6a, Normal Daytime	01-Aug-11 ; 09-Aug-11 ; 17-Aug-11 ; 23-Aug-11 and 29-Aug-11
	M6a, Holiday Daytime	07-Aug-11 and 28-Aug-11
	M6a, Evening Time	03-Aug-11
	M6a, Night-time	03-Aug-11 ; 17-Aug-11 and 31-Aug-11
	M7a, Normal Daytime	01-Aug-11 ; 11-Aug-11 ; 17-Aug-11 ; 23-Aug-11 and 29-Aug-11
	M8, Normal Daytime	03-Aug-11 ; 09-Aug-11 ; 15-Aug-11 ; 25-Aug-11 and 31-Aug-11
	M8, Holiday Daytime	21-Aug-11
	M8, Evening Time	17-Aug-11
Air: 1-hr TSP	CM_FM1	02-Aug-11 ; 08-Aug-11 ; 12-Aug-11 ; 18-Aug-11 ; 24-Aug-11 and 30-Aug-11
	CM_CB1a	03-Aug-11 ; 09-Aug-11 ; 15-Aug-11 ; 25-Aug-11 and 31-Aug-11
	CM_WF1a	01-Aug-11 ; 11-Aug-11 ; 17-Aug-11 ; 23-Aug-11 and 29-Aug-11
	CM_AB1a	03-Aug-11 ; 09-Aug-11 ; 15-Aug-11 ; 25-Aug-11 and 31-Aug-11
Air: 24-hrs TSP	CM_FM1	02-Aug-11 ; 08-Aug-11 ; 12-Aug-11 ; 18-Aug-11 ; 24-Aug-11 and 30-Aug-11
	CM_CB1a	02-Aug-11 ; 08-Aug-11 ; 12-Aug-11 ; 18-Aug-11 ; 24-Aug-11 and 30-Aug-11
	CM_WF1a	02-Aug-11 ; 08-Aug-11 ; 12-Aug-11 ; 18-Aug-11 ; 24-Aug-11 and 30-Aug-11
	CM_AB1a	02-Aug-11 ; 08-Aug-11 ; 12-Aug-11 ; 18-Aug-11 ; 24-Aug-11 and 30-Aug-11

APPENDIX H

NOISE MONITORING RESULT

Daytime Noise Monitoring Results -- Normal weekday

Station M3, Kwan Yick building(*)

Date	Start Time	End Time	Weather	Noise level (dB(A)), 30 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
04-Jul-11	10:25	10:55	Sunny	68.2	69.6	66.5	Excavation (Near site)	Traffic Noise	N.A	32.0	0.2	RION- NL31 (S/N 00983400)	RION - NC73 (S/N 10997142)
15-Jul-11	14:30	15:00	Cloudy	68.1	69.7	66.6	Excavation (Near site)	Traffic Noise	N.A	28.0	0.2	RION- NL31 (S/N 00983400)	RION - NC73 (S/N 10997142)
21-Jul-11	14:32	15:02	Fine	67.9	69.4	66.3	Excavation (Near site)	Traffic Noise	N.A	31.0	0.2	RION- NL31 (S/N 00983400)	RION - NC73 (S/N 10997142)
27-Jul-11	10:25	10:55	Fine	67.9	69.4	66.3	Excavation (Near site)	Traffic Noise	N.A	30.0	0.3	RION- NL31 (S/N 00983400)	RION - NC73 (S/N 10997142)
			Min.	67.9									
			Max.	68.2									

Remark: (*): The data were provided by Contract No. DC/2007/23. Calibration certificates for the noise meter(s) and calibrator(s) used were included in the corresponding Monthly EM&A Report for this Contract

Station M5, Chuk Lam Ming Tong

Date	Start Time	End Time	Weather	Noise level (dB(A)), 30 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
06-Jul-11	14:12	14:42	Cloudy	55.0	55.0	53.0	Loading materials	Road traffic noise	N.A	28.2	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
12-Jul-11	10:13	10:43	Cloudy	62.0	63.0	59.0	Mud out	Road traffic noise	N.A	27.6	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
18-Jul-11	13:50	14:20	Cloudy	62.0	64.0	58.0	Mud out	Road traffic noise	N.A	27.9	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
28-Jul-11	14:05	14:35	Sunny	63.0	65.0	60.0	Mud out	Road traffic noise	N.A	30.1	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
			Min.	55.0									
			Max.	63.0									

Station M6a, Aegean Terrace

Date	Start Time	End Time	Weather	Noise level (dB(A)), 30 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq *	L10	L90							
04-Jul-11	10:50	11:20	Sunny	61.0	64.0	55.0	No major construction works	Excavation from the construction site near Cyberport PTW	Free-field measurement, +3dB correction.	29.7	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
14-Jul-11	10:38	11:08	Cloudy	61.0	64.0	55.0	Mud out	Excavation from the construction site near Cyberport PTW	Free-field measurement, +3dB correction.	27.1	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
20-Jul-11	10:27	10:57	Cloudy	61.0	64.0	55.0	Mud out	Excavation from the construction site near Cyberport PTW	Free-field measurement, +3dB correction.	27.3	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
26-Jul-11	15:01	15:31	Sunny	61.0	64.0	55.0	Mud out	Excavation from the construction site near Cyberport PTW	Free-field measurement, +3dB correction.	30.1	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
			Min.	61.0									
			Max.	61.0									

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

Station M7a, Wah Ming House

Date	Start Time	End Time	Weather	Noise level (dB(A)), 30 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
04-Jul-11	09:52	10:22	Sunny	59.1	60.8	57.5	No major construction works	N.A	N.A	29.7	<5	B&K 2238 S/N : 2684502	B&K 4231 S/N: 2656516
14-Jul-11	09:37	10:07	Cloudy	59.1	60.4	56.8	No major construction works	N.A	N.A	27.1	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
20-Jul-11	09:17	09:47	Cloudy	66.7	68.6	59.6	Removial of Aqua sed.	N.A	N.A	27.3	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
26-Jul-11	14:01	14:31	Cloudy	64.5	66.5	60.0	Removial of Aqua sed.	Work renovation inside Wah Kei House	N.A	29.8	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
			Min.	59.1									
			Max.	66.7									

Station M8, Wah Lai House

Date	Start Time	End Time	Weather	Noise level (dB(A)), 30 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
06-Jul-11	10:01	10:31	Cloudy	64.7	66.0	62.7	Loading	Road Traffic noise from Shek Pai Wan Road	N.A	29.7	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
12-Jul-11	14:17	14:47	Cloudy	67.4	69.1	64.8	Operation of moblie crane	Road Traffic noise from Shek Pai Wan Road	N.A	27.6	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
18-Jul-11	10:00	10:30	Drizzle	65.4	66.4	63.3	Operation of moblie crane	Road Traffic noise from Shek Pai Wan Road	N.A	27.9	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
28-Jul-11	10:06	10:36	Sunny	65.8	67.1	63.8	Operation of moblie crane	Road Traffic noise from Shek Pai Wan Road	N.A	30.1	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
			Min.	64.7									
			Max.	67.4									

Restricted Hours Noise Monitoring Results -- Daytime on Public Holiday

Station M3, Kwan Yick building

Date	Start Time	End Time	Weather	Noise level (dB(A)), 5 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
24-Jul-11	08:55	09:10	Sunny	64.9	66.0	62.2	No outdoor construction noise	Mainly traffic noise	N.A	29.0	0.2	RION- NL31 (S/N 00983400)	RION - NC73 (S/N 10997142)
			Min.	64.9									
			Max.	64.9									

Station M5a, Chuk Lam Ming Tong

Date	Start Time	End Time	Weather	Noise level (dB(A)), 5 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
03-Jul-11	15:28	15:43	Sunny	59.5	63.0	56.9	No major construction works	Road traffic noise at San Wan Drive and noise from opening	N.A	29.3	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
24-Jul-11	15:15	15:30	Sunny	66.8	68.0	63.7	Loading and maintance	Road traffic noise at San Wan Drive and noise from opening	N.A	29.5	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
			Min.	59.5									
			Max.	66.8									

Station M6a, Aegean Terrace

Date	Start Time	End Time	Weather	Noise level (dB(A)), 5 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
17-Jul-11	10:45	11:00	Cloudy	54.7	55.1	53.1	No major construction works	Cars from residents of Aegean Terence	According to contractor, general construction works was in process accordance to CNP. Free-field measurement, +3dB correction.	27.6	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
			Min.	54.7									
			Max.	54.7									

Station M8, Wah Lai House

Date	Start Time	End Time	Weather	Noise level (dB(A)), 5 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
10-Jul-11	13:40	13:55	Sunny	65.4	62.7	50.6	No major constructin works	Road Traffic noise from Shek Pai Wan Road	N.A	29.8	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
31-Jul-11	11:44	11:59	Sunny	63.8	62.7	50.6	No major constructin works	Road Traffic noise from Shek Pai Wan Road	N.A	29.2	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
			Min.	63.8									
			Max.	65.4									

Restricted Hours Noise Monitoring Results -- Evening time

Station M3, Kwan Yick building

Date	Start Time	End Time	Weather	Noise level (dB(A)), 5 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
12-Jul-11	19:32	19:47	Fine	68.7	70.5	66.3	Mud out	Road traffic noise from Western Harbour Crossing, engine of turbojet, planes and helicopter overhead.	N.A	27.6	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
			Min.	68.7									
			Max.	68.7									

Station M5a, Chuk Lam Ming Tong

Date	Start Time	End Time	Weather	Noise level (dB(A)), 5 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
28-Jul-11	22:45	23:00	Cloudy	63.2	59.1	48.9	Blasting	Road traffic at San Wan Drive	According to contractor, general construction works was in process accordance to CNP.	30.1	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
			Min.	63.2									
			Max.	63.2									

Station M6a, Aegean Terrace

Date	Start Time	End Time	Weather	Noise level (dB(A)), 5 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
06-Jul-11	22:45	23:00	Fine	49.6	50.6	48.5	No major constructin works	Local traffics of Aegean Terence	According to contractor, general construction works was in process accordance to CNP. Free-field measurement, +3dB correction.	29.7	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
20-Jul-11	22:45	23:00	Fine	53.6	53.2	50.8	No major constructin works	Local traffics of Aegean Terence	According to contractor, general construction works was in process accordance to CNP. Free-field	27.3	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
			Min.	49.6									
			Max.	53.6									

Restricted Hours Noise Monitoring Results -- Night time

Station M3, Kwa Yick Building

Date	Start Time	End Time	Weather	Noise level (dB(A)), 15 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
16-Jul-11	06:02	06:17	Cloudy	63.0	64.7	60.8	No outdoor construction noise	Mainly traffic noise	N.A	30.0	0.2	RION- NL31 (S/N 00983400)	RION - NC73 (S/N 10997142)
30-Jul-11	06:01	06:16	Fine	62.2	64.1	59.8	No outdoor construction noise	Mainly traffic noise	N.A	29.0	0.2	RION- NL31 (S/N 00983400)	RION - NC73 (S/N 10997142)
			Min.	**62.2**									
			Max.	**63.0**									

[1] The monitoring data on 16 and 30 July morning are for the restricted hour of previous day (15 and 29 July respectively)

Station M5a, Chuk Lam Ming Tong

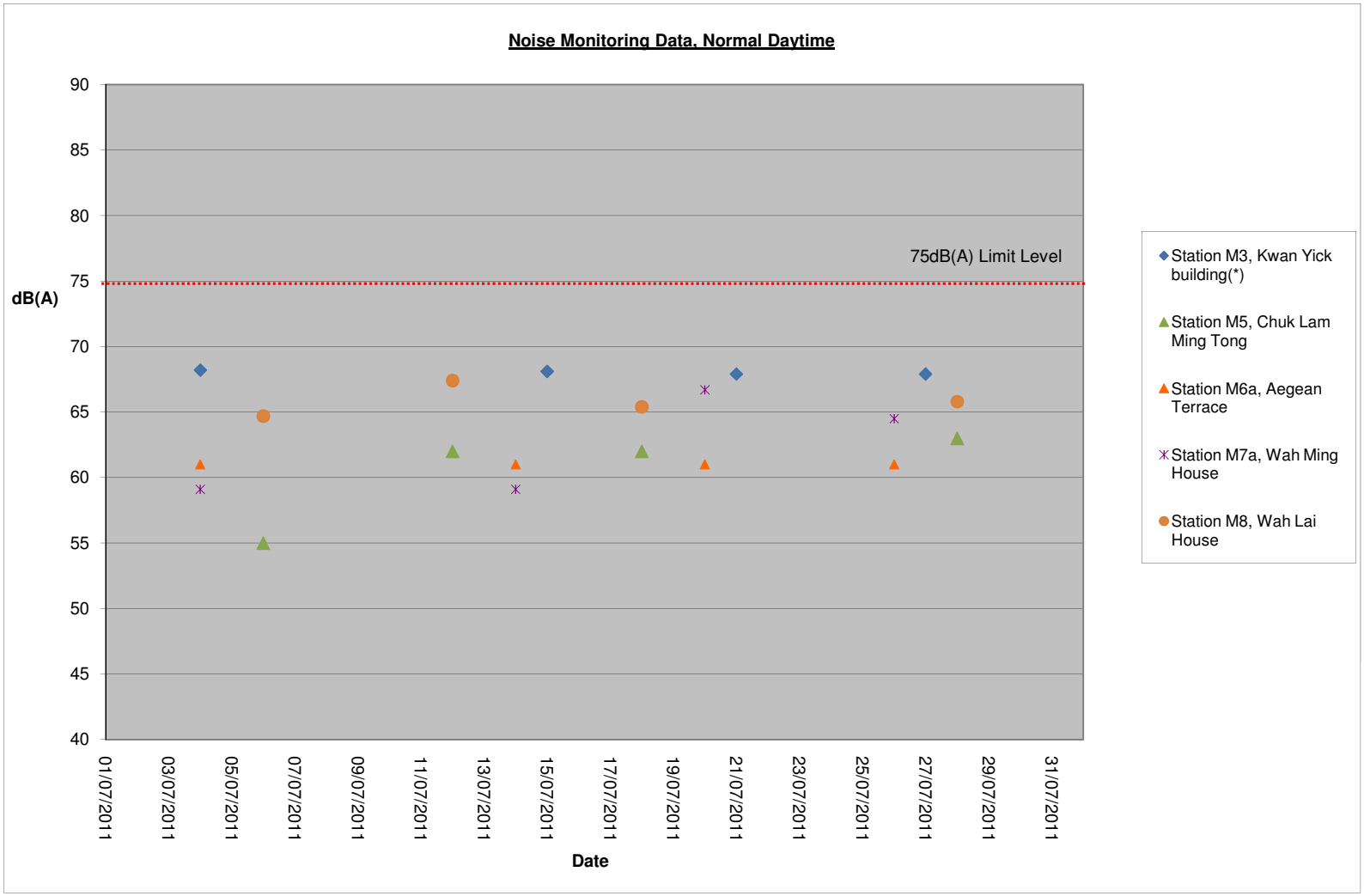
Date	Start Time	End Time	Weather	Noise level (dB(A)), 5 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
12-Jul-11	23:00	23:15	Cloudy	62.1	59.8	51.5	No major construction works	Road traffic	N.A	27.6	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
28-Jul-11	23:00	23:15	Cloudy	63.1	59.8	51.5	Blasting	Road traffic	N.A	30.1	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
			Min.	**62.1**									
			Max.	**63.1**									

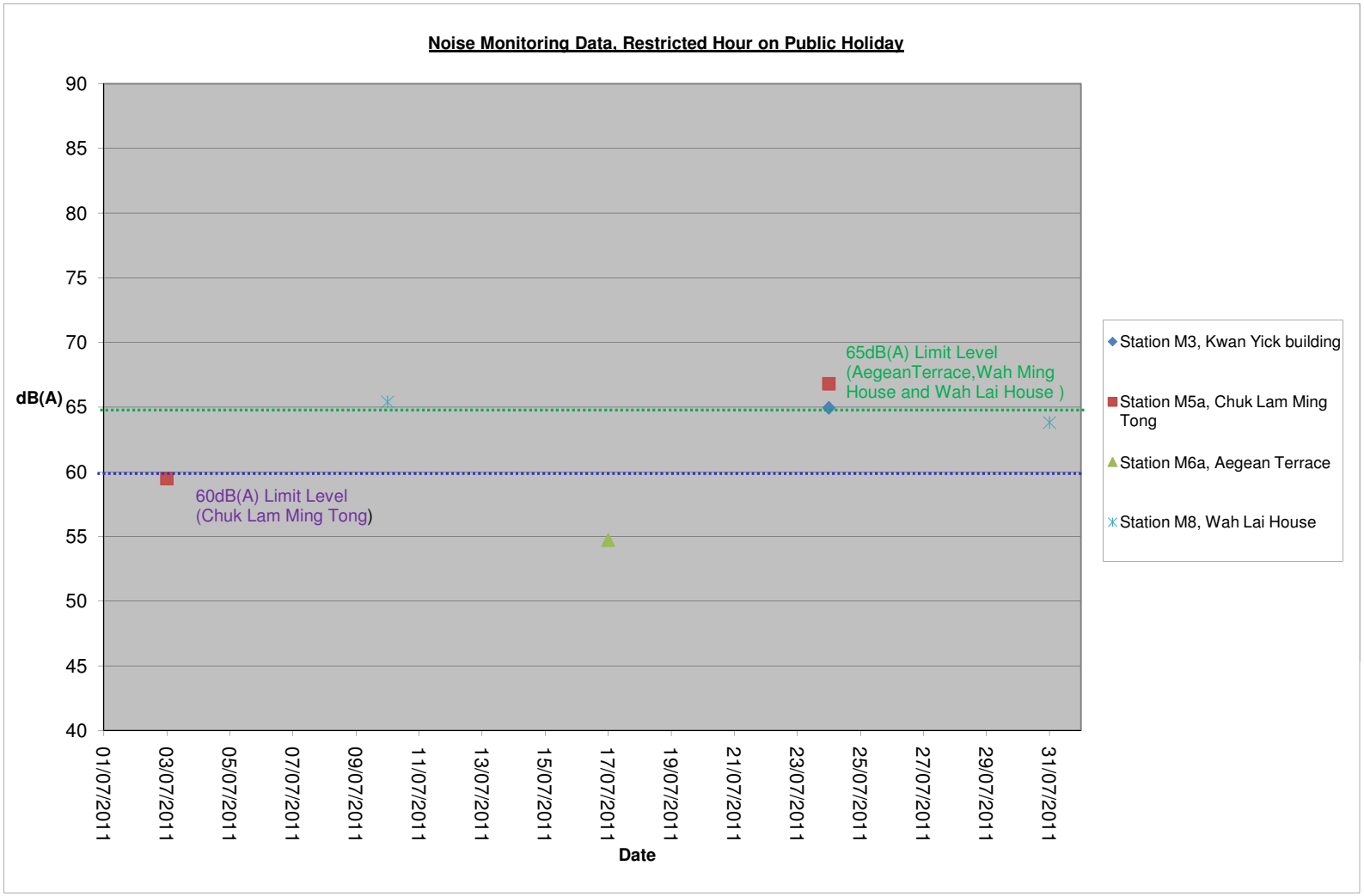
Station M6a, Aegean Terrace

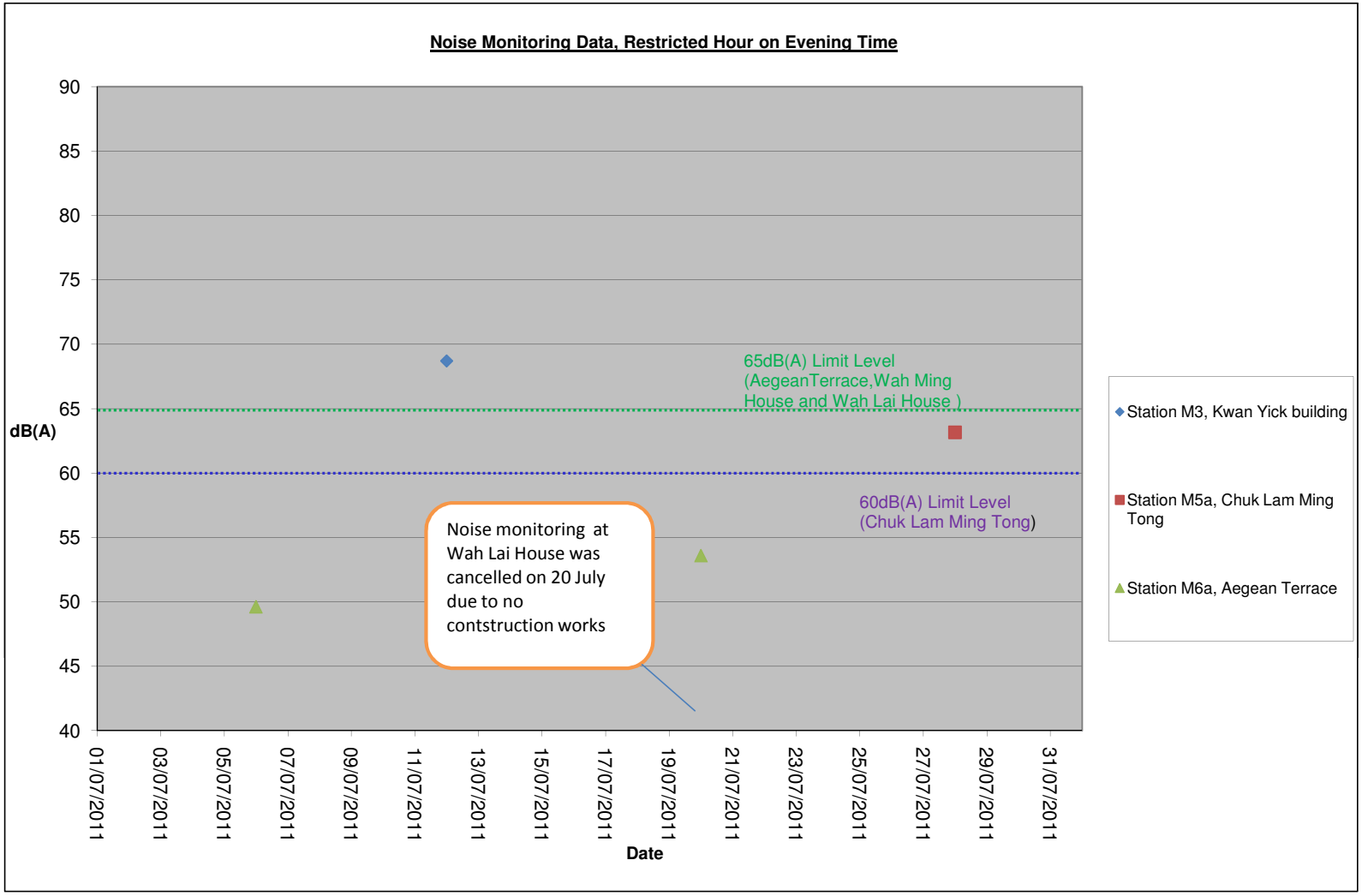
Date	Start Time	End Time	Weather	Noise level (dB(A)), 5 min			Major Construction Noise Source(s)	Other Noise Source(s) Observed	Remarks	Temp. (°C)	Wind Speed (m/s)	Noise Meter Model / ID	Calibrator Model / ID
				Leq	L10	L90							
06-Jul-11	23:00	23:15	Fine	53.1	55.5	49.7	No major constructin works	Local traffics of Aegean Terence	According to contractor, general construction works was in process accordance to CNP. Free-field measurement, +3dB correction.	29.7	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
20-Jul-11	23:00	23:15	Fine	53.0	53.5	50.6	No major constructin works	Local traffics of Aegean Terence	According to contractor, general construction works was in process accordance to CNP. Free-field measurement, +3dB correction.	27.3	<5	B&K 2238 S/N : 2684503	B&K 4231 S/N: 2385180
			Min.	**53.0**									
			Max.	**53.1**									

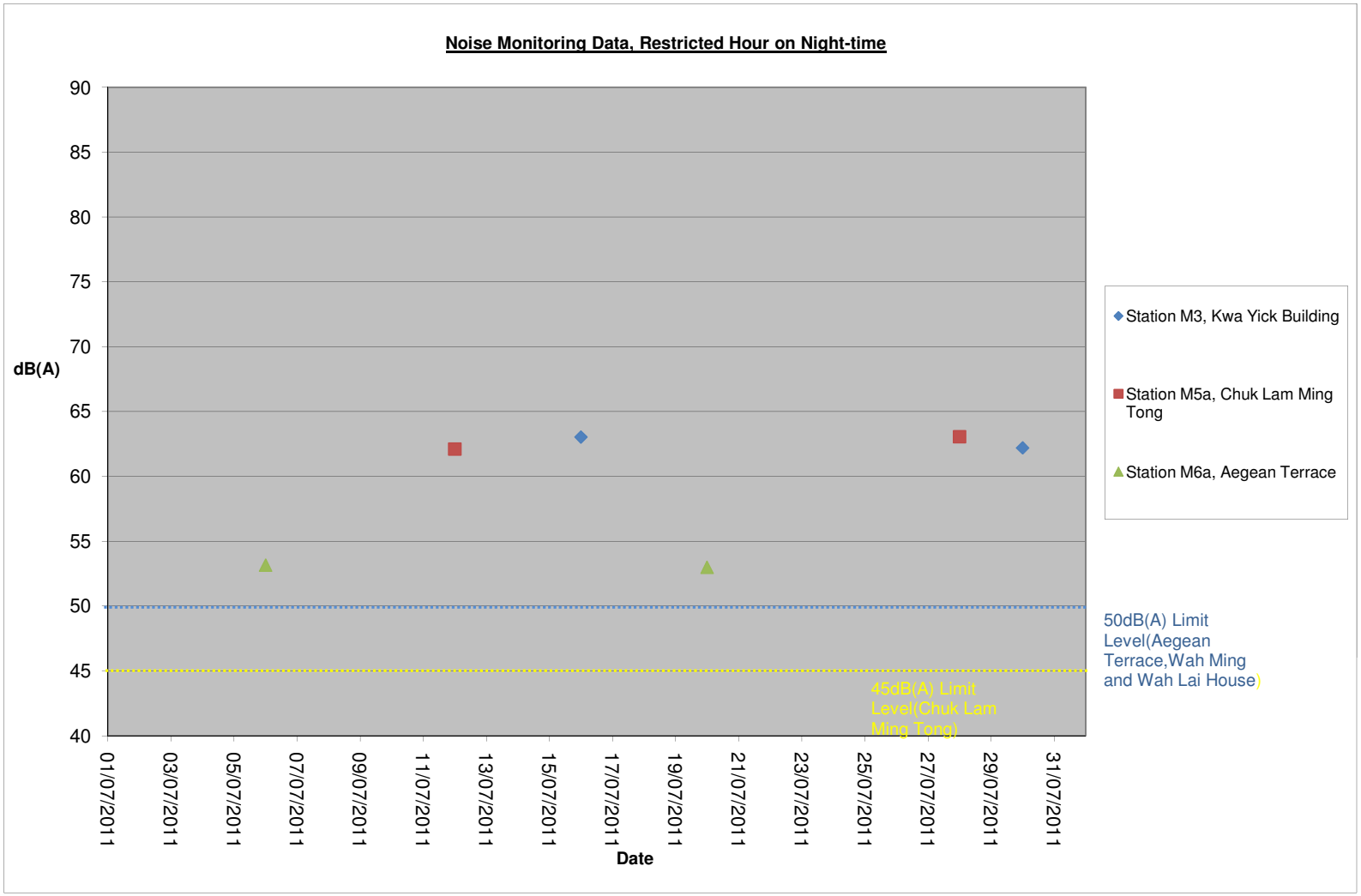
APPENDIX I

GRAPHICAL PRESENTATION OF NOISE MONITORING DATA


Noise Monitoring Data, Normal Daytime
dB(A)
90
85
80
75
70
65
60
55
50
45
40
75dB(A) Limit Level
01/07/2011
03/07/2011
05/07/2011
07/07/2011
09/07/2011
11/07/2011
13/07/2011
15/07/2011
17/07/2011
19/07/2011
21/07/2011
23/07/2011
25/07/2011
27/07/2011
29/07/2011
31/07/2011
Date
Station M3, Kwan Yick building(*)
Station M5, Chuk Lam Ming Tong
Station M6a, Aegean Terrace
Station M7a, Wah Ming House
Station M8, Wah Lai House


Noise Monitoring Data, Restricted Hour on Public Holiday
90
85
80
75
70
65
60
55
50
45
40
dB(A)
65dB(A) Limit Level
(AegeanTerrace,Wah Ming
House and Wah Lai House)
60dB(A) Limit Level
(Chuk Lam Ming Tong)
01/07/2011
03/07/2011
05/07/2011
07/07/2011
09/07/2011
11/07/2011
13/07/2011
15/07/2011
17/07/2011
19/07/2011
21/07/2011
23/07/2011
25/07/2011
27/07/2011
29/07/2011
31/07/2011
Date
Station M3, Kwan Yick building
Station M5a, Chuk Lam Ming Tong
Station M6a, Aegean Terrace
Station M8, Wah Lai House


Noise Monitoring Data, Restricted Hour on Evening Time
dB(A)
90
85
80
75
70
65
60
55
50
45
40
01/07/2011
03/07/2011
05/07/2011
07/07/2011
09/07/2011
11/07/2011
13/07/2011
15/07/2011
17/07/2011
19/07/2011
21/07/2011
23/07/2011
25/07/2011
27/07/2011
29/07/2011
31/07/2011
Date
65dB(A) Limit Level (AegeanTerrace,Wah Ming House and Wah Lai House)
60dB(A) Limit Level (Chuk Lam Ming Tong)
Noise monitoring at Wah Lai House was cancelled on 20 July due to no contstruction works
Station M3, Kwan Yick building
Station M5a, Chuk Lam Ming Tong
Station M6a, Aegean Terrace


Noise Monitoring Data, Restricted Hour on Night-time
dB(A)
90
85
80
75
70
65
60
55
50
45
40
01/07/2011
03/07/2011
05/07/2011
07/07/2011
09/07/2011
11/07/2011
13/07/2011
15/07/2011
17/07/2011
19/07/2011
21/07/2011
23/07/2011
25/07/2011
27/07/2011
29/07/2011
31/07/2011
Date
Station M3, Kwa Yick Building
Station M5a, Chuk Lam Ming Tong
Station M6a, Aegean Terrace
50dB(A) Limit Level(Aegean Terrace,Wah Ming and Wah Lai House)
45dB(A) Limit Level(Chuk Lam Ming Tong)

APPENDIX J

AIR QUALITY MONITORING RESULT

1-hour TSP Monitoring Results

Station CM_FM1, Western Wholesale Food Market

Date	Start Time	Finish Time	Weather	TSP Concentration ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)	Site Conditions / Observations / Remarks	Temperature (°C)	Wind Speed (m/s)	Sampler ID	Filter ID
05/07/2011	13:16	14:16	Sunny	57.8	331.9	500	Loading activities, operation of excavator and mud out	29.7	<5	Western Wholesale Food Market	657
05/07/2011	13:16	14:16	Sunny	57.8	331.9	500	Loading activities, operation of excavator and mud out	29.7	<5	Western Wholesale Food Market	657
05/07/2011	14:22	15:22	Sunny	51.7	331.9	500	Loading activities, operation of excavator and mud out	29.7	<5	Western Wholesale Food Market	658
11/07/2011	08:00	09:00	Cloudy	230.1	331.9	500	Loading activities, operation of excavator and mud out	28.9	<5	Western Wholesale Food Market	662
11/07/2011	13:16	14:16	Cloudy	327.6	331.9	500	Loading activities, operation of excavator and mud out	28.9	<5	Western Wholesale Food Market	664
11/07/2011	14:22	15:22	Cloudy	137.1	331.9	500	Loading activities, operation of excavator and mud out	28.9	<5	Western Wholesale Food Market	665
15/07/2011	08:00	09:00	Cloudy	136.2	331.9	500	Loading activities, operation of excavator and mud out	28.9	<5	Western Wholesale Food Market	667
15/07/2011	09:20	10:20	Cloudy	89.3	331.9	500	Loading activities, operation of excavator and mud out	28.9	<5	Western Wholesale Food Market	671
15/07/2011	10:35	11:35	Fine	82.3	331.9	500	Loading activities, operation of excavator and mud out	28.9	<5	Western Wholesale Food Market	672
21/07/2011	08:00	09:00	Fine	56.1	331.9	500	Loading activities, operation of excavator and mud out	28.9	<5	Western Wholesale Food Market	677
21/07/2011	14:00	15:00	Fine	42.9	331.9	500	Loading activities, operation of excavator and mud out	28.9	<5	Western Wholesale Food Market	678
21/07/2011	15:20	16:20	Fine	34.6	331.9	500	Loading activities, operation of excavator and mud out	28.9	<5	Western Wholesale Food Market	679
27/07/2011	13:00	14:00	Sunny	153.6	331.9	500	Loading activities, operation of excavator and mud out	30.2	<5	Western Wholesale Food Market	684
27/07/2011	14:28	15:28	Sunny	120.6	331.9	500	Loading activities, operation of excavator and mud out	30.2	<5	Western Wholesale Food Market	685
27/07/2011	15:34	16:34	Sunny	109.0	331.9	500	Loading activities, operation of excavator and mud out	30.2	<5	Western Wholesale Food Market	686
			Min.	**34.6**							
			Max.	**327.6**							
			Average	**112**							

Station CM_CB1a, The Arcade, Cyberport

Date	Start Time	Finish Time	Weather	TSP Concentration ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)	Site Conditions / Observations / Remarks	Temperature (°C)	Wind Speed (m/s)	Sampler ID	Filter ID
06/07/2011	13:04	14:04	Cloudy	13.5	279.9	500	Excavation	29.7	<5	LD-3B-001	N/A
06/07/2011	14:04	15:04	Sunny	12.8	279.9	500	Excavation	29.7	<5	LD-3B-001	N/A
06/07/2011	15:04	16:04	Sunny	13.2	279.9	500	Excavation	29.7	<5	LD-3B-001	N/A
12/07/2011	09:11	10:11	Drizzle	96.6	279.9	500	Excavation	27.6	<5	LD-3B-001	N/A
12/07/2011	10:11	11:11	Drizzle	80.2	279.9	500	Excavation	27.6	<5	LD-3B-001	N/A
12/07/2011	11:11	12:11	Drizzle	120.8	279.9	500	Excavation	27.6	<5	LD-3B-001	N/A
18/07/2011	13:00	14:00	Drizzle	175.7	279.9	500	Excavation and drilling	27.9	<5	LD-3B-001	N/A
18/07/2011	14:00	15:00	Drizzle	176.4	279.9	500	Excavation and drilling	27.9	<5	LD-3B-001	N/A
18/07/2011	15:00	16:00	Drizzle	176.8	279.9	500	Excavation and drilling	27.9	<5	LD-3B-001	N/A
22/07/2011	09:12	10:12	Fine	37.0	279.9	500	Loading and mud out	29.5	<5	LD-3B-001	N/A
22/07/2011	10:12	11:12	Fine	31.1	279.9	500	Loading and mud out	29.5	<5	LD-3B-001	N/A
22/07/2011	11:12	12:12	Fine	25.3	279.9	500	Loading and mud out	29.5	<5	LD-3B-001	N/A
28/07/2011	13:00	14:00	Drizzle	24.2	279.9	500	Loading and mud out	30.1	<5	LD-3B-001	N/A
28/07/2011	14:00	15:00	Drizzle	27.5	279.9	500	Loading and mud out	30.1	<5	LD-3B-001	N/A
28/07/2011	15:00	16:00	Drizzle	28.2	279.9	500	Loading and mud out	30.1	<5	LD-3B-001	N/A
			Min.	**12.8**							
			Max.	**176.8**							
			Average	**69**							

Station CM_WF1a, The Wah Ming House

Date	Start Time	Finish Time	Weather	TSP Concentration ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)	Site Conditions / Observations / Remarks	Temperature (°C)	Wind Speed (m/s)	Sampler ID	Filter ID
04/07/2011	09:35	10:35	Sunny	20.6	284.5	500	No major construction works	29.7	<5	LD-3B-002	N/A
04/07/2011	10:35	11:35	Sunny	19.0	284.5	500	No major construction works	29.7	<5	LD-3B-002	N/A
04/07/2011	11:35	12:35	Sunny	22.3	284.5	500	No major construction works	29.7	<5	LD-3B-002	N/A
08/07/2011	09:35	10:35	Sunny	16.2	284.5	500	No major construction works	30.2	<5	LD-3B-002	N/A
08/07/2011	10:35	11:35	Sunny	16.2	284.5	500	No major construction works	30.2	<5	LD-3B-002	N/A
08/07/2011	11:35	12:35	Sunny	15.1	284.5	500	No major construction works	30.2	<5	LD-3B-002	N/A
14/07/2011	09:15	10:15	Fine	21.8	284.5	500	No major construction works	27.1	<5	LD-3B-002	N/A
14/07/2011	10:15	11:15	Fine	19.0	284.5	500	No major construction works	27.1	<5	LD-3B-002	N/A
14/07/2011	11:15	12:15	Fine	21.8	284.5	500	No major construction works	27.1	<5	LD-3B-002	N/A
20/07/2011	09:12	10:12	Cloudy	30.1	284.5	500	Aqua sed. Removal	27.3	<5	LD-3B-002	N/A
20/07/2011	10:12	11:12	Cloudy	27.9	284.5	500	Aqua sed. Removal	27.3	<5	LD-3B-002	N/A
20/07/2011	11:12	12:12	Cloudy	30.1	284.5	500	Aqua sed. Removal	27.3	<5	LD-3B-002	N/A
26/07/2011	13:40	14:40	Fine	17.3	284.5	500	Operation of mobile crane	29.8	<5	LD-3B-002	N/A
26/07/2011	14:40	15:40	Fine	17.8	284.5	500	Operation of mobile crane	29.8	<5	LD-3B-002	N/A
26/07/2011	15:40	16:40	Fine	18.4	284.5	500	Operation of mobile crane	29.8	<5	LD-3B-002	N/A
			Min.	**15.1**							
			Max.	**30.1**							
			Average	**21**							

Station CM_AB1a, The Hong Kong Ice and Cold Storage (Aberdeen)

Date	Start Time	Finish Time	Weather	TSP Concentration ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)	Site Conditions / Observations / Remarks	Temperature (°C)	Wind Speed (m/s)	Sampler ID	Filter ID
06/07/2011	09:09	10:09	Cloudy	13.5	282.5	500	Loading and drilling	29.7	<5	LD-3B-001	N/A
06/07/2011	10:09	11:09	Sunny	11.0	282.5	500	Loading and drilling	29.7	<5	LD-3B-001	N/A
06/07/2011	11:09	12:09	Sunny	11.0	282.5	500	Loading and drilling	29.7	<5	LD-3B-001	N/A
12/07/2011	13:35	14:35	Drizzle	101.0	282.5	500	Loading and Ooperation of excavator	27.6	<5	LD-3B-001	N/A
12/07/2011	14:35	15:35	Drizzle	76.5	282.5	500	Loading and Ooperation of excavator	27.6	<5	LD-3B-001	N/A
12/07/2011	15:35	16:35	Drizzle	72.8	282.5	500	Loading and Ooperation of excavator	27.6	<5	LD-3B-001	N/A
18/07/2011	09:07	10:07	Drizzle	181.2	282.5	500	Loading and Ooperation of excavator	27.9	<5	LD-3B-001	N/A
18/07/2011	10:07	11:07	Drizzle	140.2	282.5	500	Loading and Ooperation of excavator	27.9	<5	LD-3B-001	N/A
18/07/2011	11:07	12:07	Drizzle	112.0	282.5	500	Loading and Ooperation of excavator	27.9	<5	LD-3B-001	N/A
22/07/2011	13:00	14:00	Sunny	22.7	282.5	500	Loading and Ooperation of mobile crane	29.5	<5	LD-3B-001	N/A
22/07/2011	14:00	15:00	Sunny	22.3	282.5	500	Loading and Ooperation of mobile crane	29.5	<5	LD-3B-001	N/A
22/07/2011	15:00	16:00	Sunny	20.9	282.5	500	Loading and Ooperation of mobile crane	29.5	<5	LD-3B-001	N/A
28/07/2011	09:16	10:16	Drizzle	27.8	282.5	500	Loading, ooperation of mobile crane and mud out	30.1	<5	LD-3B-001	N/A
28/07/2011	10:16	11:16	Drizzle	35.9	282.5	500	Loading, ooperation of mobile crane and mud out	30.1	<5	LD-3B-001	N/A
28/07/2011	11:16	12:16	Drizzle	33.7	282.5	500	Loading, ooperation of mobile crane and mud out	30.1	<5	LD-3B-001	N/A
			Min.	**11.0**							
			Max.	**181.2**							
			Average	**59**							

24-hour TSP Monitoring Results

Station CM_FM1, Western Wholesale Food Market

Start		Finish		Weather	Filter Weight (g)		Elapsed Time Reading		Sampling Time	Flow Rate (m^3/min)			TSP Conc. ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)	Observations / Remarks	Sampler ID	Filter ID
Date	Time	Date	Time		Initial	Final	Initial	Final	(hrs)	Initial	Final	Average						
05-Jul-11	15:30	06-Jul-11	15:30	Sunny	2.704	2.7649	2573.81	2597.81	24.00	1.0954	1.0954	1.0954	39	188.5	260	operation of excavator and mud out	Western Wholesale Food Market	659
11-Jul-11	16:45	12-Jul-11	16:45	Cloudy	2.7098	2.836	2600.81	2624.81	24.00	1.1178	1.1178	1.1178	78	188.5	260	operation of excavator and mud out	Western Wholesale Food Market	666
15-Jul-11	11:54	16-Jul-11	11:54	Cloudy	2.695	2.7594	2627.91	2651.91	24.00	1.0125	1.0125	1.0125	44	188.5	260	Loading activities, operation of excavator and mud out	Western Wholesale Food Market	673
21-Jul-11	16:30	22-Jul-11	16:30	Fine	2.7082	2.7695	2654.91	2678.91	27.60	1.0363	1.0363	1.0363	41	188.5	260	Loading activities, operation of excavator and mud out	Western Wholesale Food Market	680
27-Jul-11	16:30	28-Jul-11	16:30	Fine	2.7082	2.7695	2654.91	2678.91	27.60	1.0363	1.0363	1.0363	41	188.5	260	Loading activities, operation of excavator and mud out	Western Wholesale Food Market	680
												Min.	**41**					
												Max.	**78**					
												Average	**49**					

Station CM_CB1a, The Arcade, Cyberport

Start		Finish		Weather	Filter Weight (g)		Elapsed Time Reading		Sampling Time	Flow Rate (m^3/min)			TSP Conc. ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)	Observations / Remarks	Sampler ID	Filter ID
Date	Time	Date	Time		Initial	Final	Initial	Final	(hrs)	Initial	Final	Average						
05-Jul-11	08:00	06-Jul-11	08:00	Sunny	2.7069	2.7378	2847.76	2871.76	24.00	1.1511	1.1511	1.1511	19	178.1	260	Excavation	Arcade	654
11-Jul-11	08:00	12-Jul-11	08:00	Sunny	2.7065	2.8355	2871.76	2895.76	24.00	1.1492	1.1492	1.1492	78	178.1	260	Excavation	Arcade	661
15-Jul-11	08:00	16-Jul-11	08:00	Cloudy	2.7197	2.7768	2895.78	2919.78	24.00	1.1537	1.1537	1.1537	34	178.1	260	Excavation	Arcade	668
21-Jul-11	08:00	22-Jul-11	08:00	Fine	2.691	2.7371	2919.78	2943.78	24.00	1.1251	1.1251	1.1251	28	178.1	260	Excavation	Arcade	675
27-Jul-11	08:00	28-Jul-11	08:00	Sunny	2.6991	2.7439	2941.79	2965.79	24.00	1.2025	1.2025	1.2025	40	178.1	260	Excavation	Arcade	681
												Min.	**28**					
												Max.	**78.0**					
												Average	**39.9**					

Station CM_WF1a, The Wah Ming House

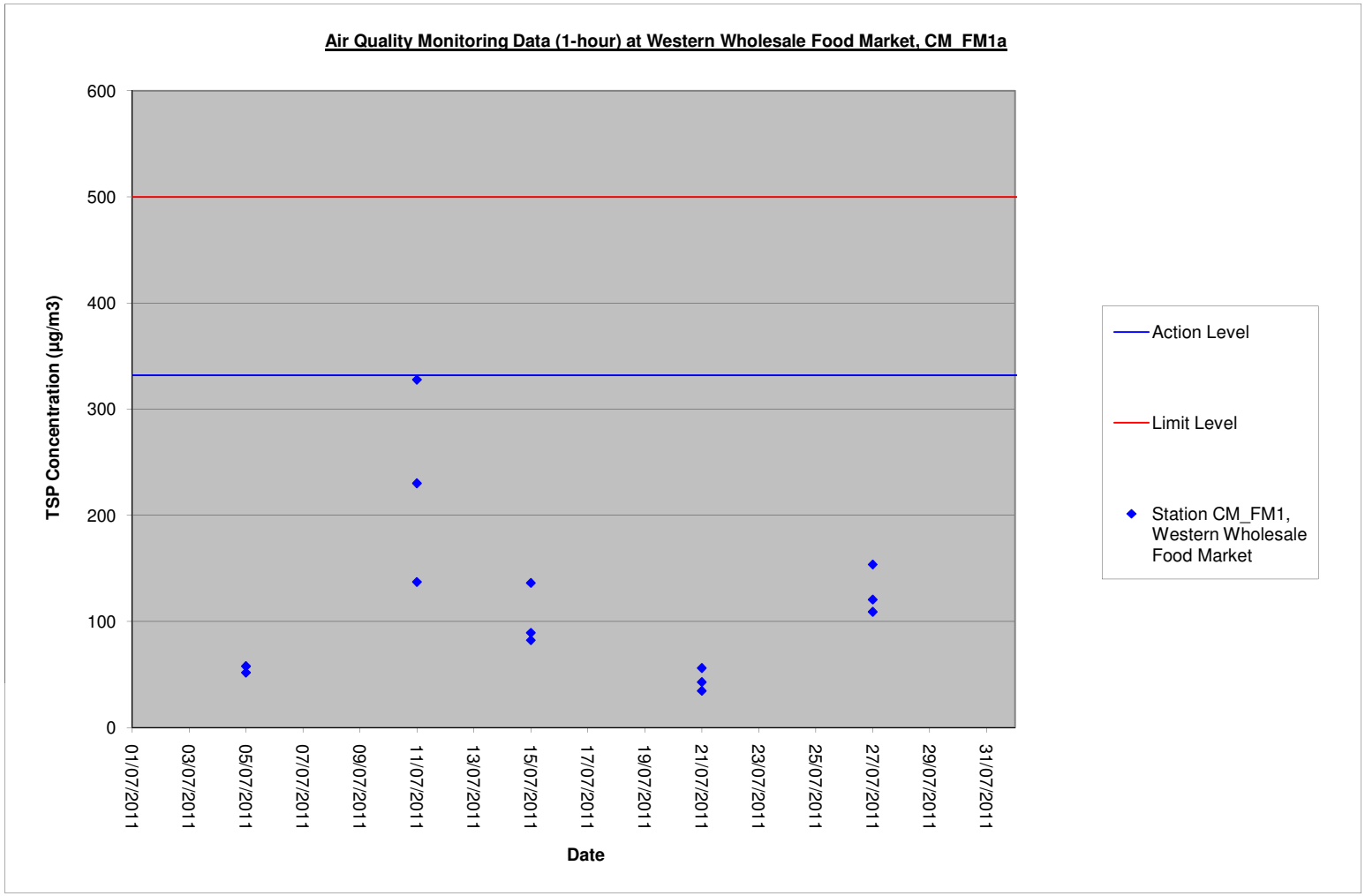
Start		Finish		Weather	Filter Weight (g)		Elapsed Time Reading		Sampling Time	Flow Rate (m^3/min)			TSP Conc. ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)	Observations / Remarks	Sampler ID	Filter ID
Date	Time	Date	Time		Initial	Final	Initial	Final	(hrs)	Initial	Final	Average						
05-Jul-11	08:08	06-Jul-11	08:08	Sunny	2.7069	2.7376	2518.84	2542.84	24.00	1.0217	1.0217	1.0217	21	185.3	260	no works in progress	Wah Fu	655
11-Jul-11	08:08	12-Jul-11	08:08	Cloudy	2.704	2.8031	2542.84	2566.84	24.00	1.0202	1.0202	1.0202	67	185.3	260	no works in progress	Wah Fu	663
15-Jul-11	08:00	16-Jul-11	08:00	Cloudy	2.7126	2.7483	2566.84	2590.84	24.00	1.0239	1.0239	1.0239	24	185.3	260	no works in progress	Wah Fu	670
21-Jul-11	08:08	22-Jul-11	08:08	Fine	2.6874	2.7182	2590.84	2614.84	24.00	1.0220	1.0220	1.0220	21	185.3	260	Operation of mobile crane	Wah Fu	676
27-Jul-11	08:08	28-Jul-11	08:08	Sunny	2.6906	2.7367	2614.84	2638.84	24.00	1.0208	1.0208	1.0208	31	185.3	260	Operation of mobile crane	Wah Fu	683
												Min.	**21**					
												Max.	**67**					
												Average	**33**					

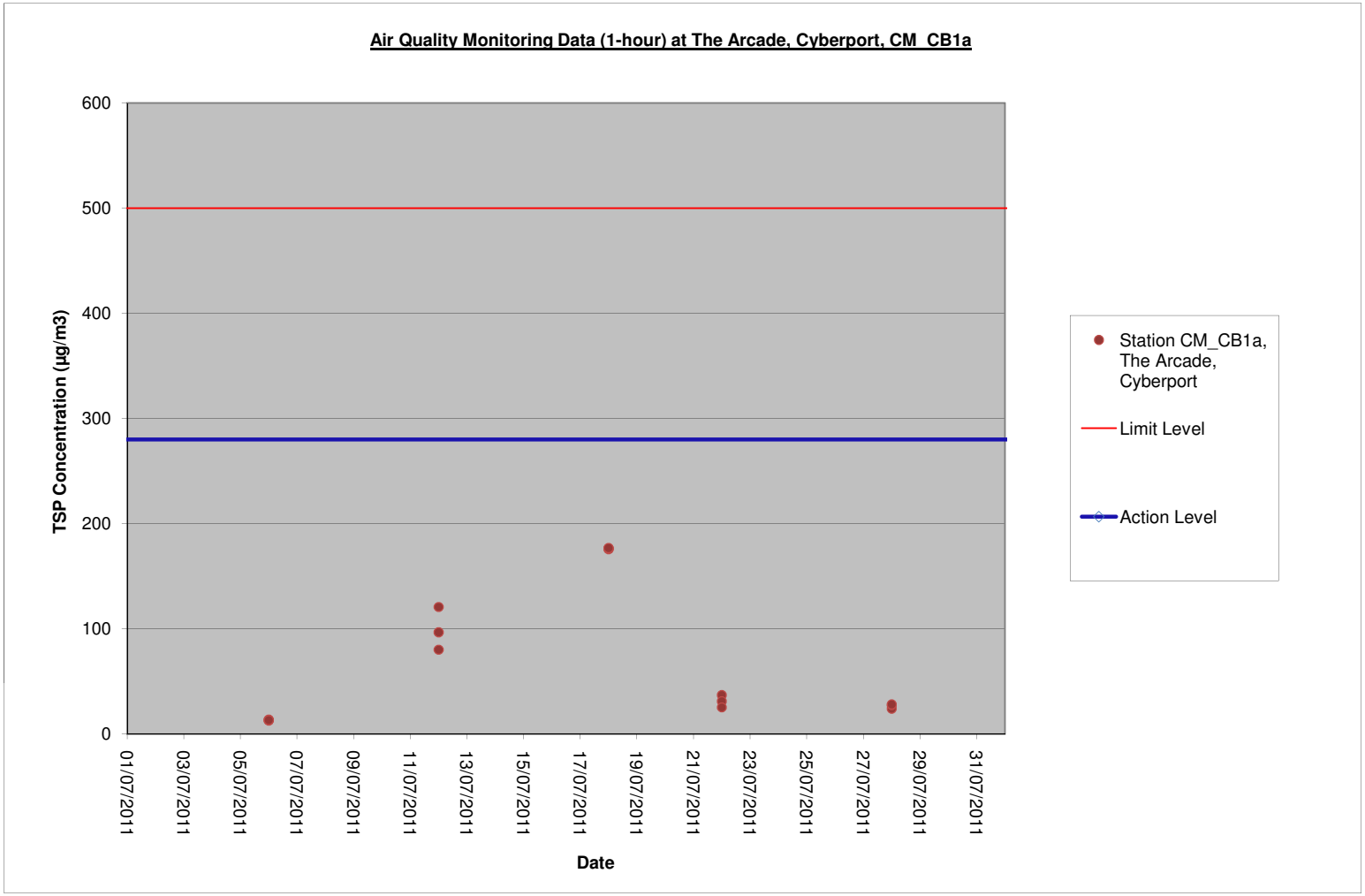
Station CM_AB1a, The Hong Kong Ice and Cold Storage (Aberdeen)

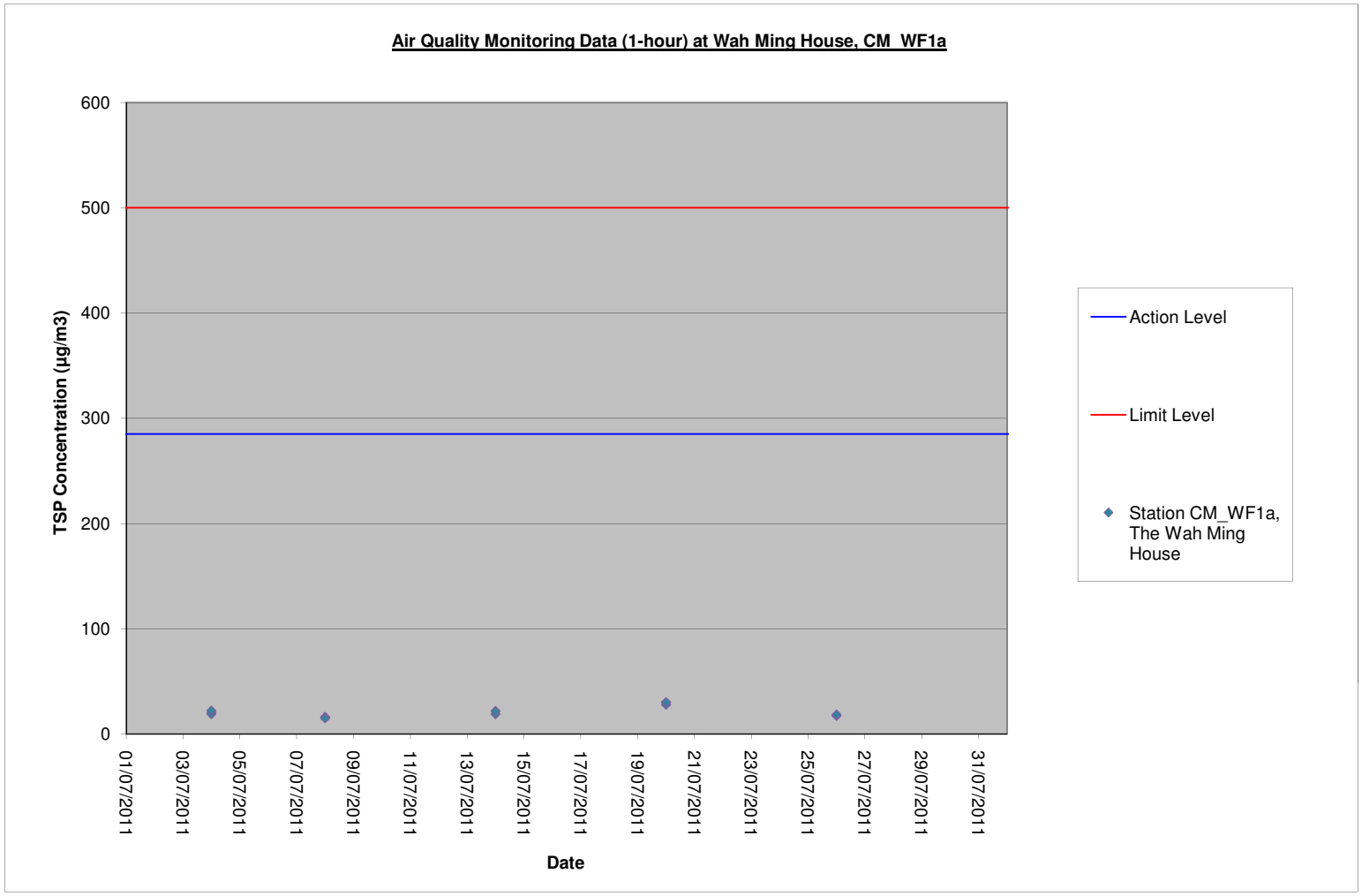
Start		Finish		Weather	Filter Weight (g)		Elapsed Time Reading		Sampling Time	Flow Rate (m^3/min)			TSP Conc. ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)	Observations / Remarks	Sampler ID	Filter ID
Date	Time	Date	Time		Initial	Final	Initial	Final	(hrs)	Initial	Final	Average						
05-Jul-11	08:00	06-Jul-11	08:00	Sunny	2.7838													
11-Jul-11	08:00	12-Jul-11	08:00	Sunny	2.7254	2.8415	2769.57	2793.57	24.00	0.8890	0.8890	0.8890	91	174.2	260	Operation of excavator	Ice Factory	660
15-Jul-11	08:00	16-Jul-11	08:00	Cloudy	2.7131	2.7611	2793.58	2817.58	24.00	0.8921	0.8921	0.8921	37	174.2	260	Operation of excavator	Ice Factory	669
21-Jul-11	08:00	22-Jul-11	08:00	Fine	2.696	2.7399	2817.58	2841.58	24.00	0.8905	0.8905	0.8905	34	174.2	260	Operation of mobile crane	Ice Factory	674
27-Jul-11	08:00	28-Jul-11	08:00	Sunny	2.6895	2.7559	2841.58	2865.58	24.00	0.8896	0.8896	0.8896	52	174.2	260	Operation of mobile crane	Ice Factory	682
												Min.	**34**					
												Max.	**91**					
												Average	**54**					

APPENDIX K

GRAPHICAL PRESENTATION OF AIR QUALITY MONITORING DATA


Air Quality Monitoring Data (1-hour) at Western Wholesale Food Market, CM_FM1a
TSP Concentration (µg/m3)
600
500
400
300
200
100
0
01/07/2011
03/07/2011
05/07/2011
07/07/2011
09/07/2011
11/07/2011
13/07/2011
15/07/2011
17/07/2011
19/07/2011
21/07/2011
23/07/2011
25/07/2011
27/07/2011
29/07/2011
31/07/2011
Date
Action Level
Limit Level
Station CM_FM1, Western Wholesale Food Market


Air Quality Monitoring Data (1-hour) at The Arcade, Cyberport, CM_CB1a
TSP Concentration (µg/m3)
600
500
400
300
200
100
0
01/07/2011
03/07/2011
05/07/2011
07/07/2011
09/07/2011
11/07/2011
13/07/2011
15/07/2011
17/07/2011
19/07/2011
21/07/2011
23/07/2011
25/07/2011
27/07/2011
29/07/2011
31/07/2011
Date
Station CM_CB1a, The Arcade, Cyberport
Limit Level
Action Level


Air Quality Monitoring Data (1-hour) at Wah Ming House, CM_WF1a
TSP Concentration (µg/m3)
600
500
400
300
200
100
0
01/07/2011
03/07/2011
05/07/2011
07/07/2011
09/07/2011
11/07/2011
13/07/2011
15/07/2011
17/07/2011
19/07/2011
21/07/2011
23/07/2011
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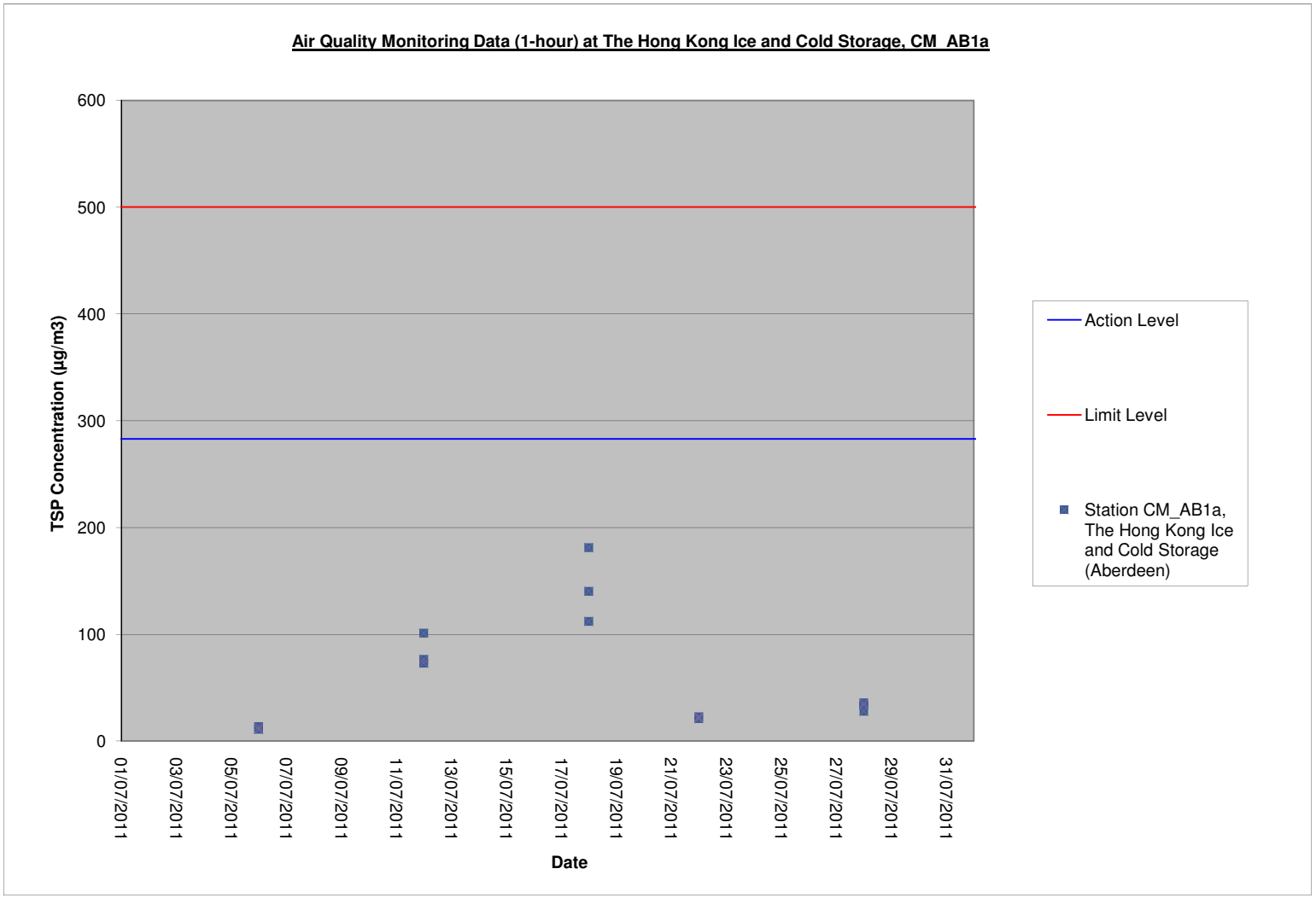
27/07/2011
29/07/2011
31/07/2011
Date
Action Level
Limit Level
Station CM_WF1a, The Wah Ming House


Air Quality Monitoring Data (1-hour) at The Hong Kong Ice and Cold Storage, CM_AB1a
TSP Concentration (µg/m3)
600
500
400
300
200
100
0
01/07/2011
03/07/2011
05/07/2011
07/07/2011
09/07/2011
11/07/2011
13/07/2011
15/07/2011
17/07/2011
19/07/2011
21/07/2011
23/07/2011
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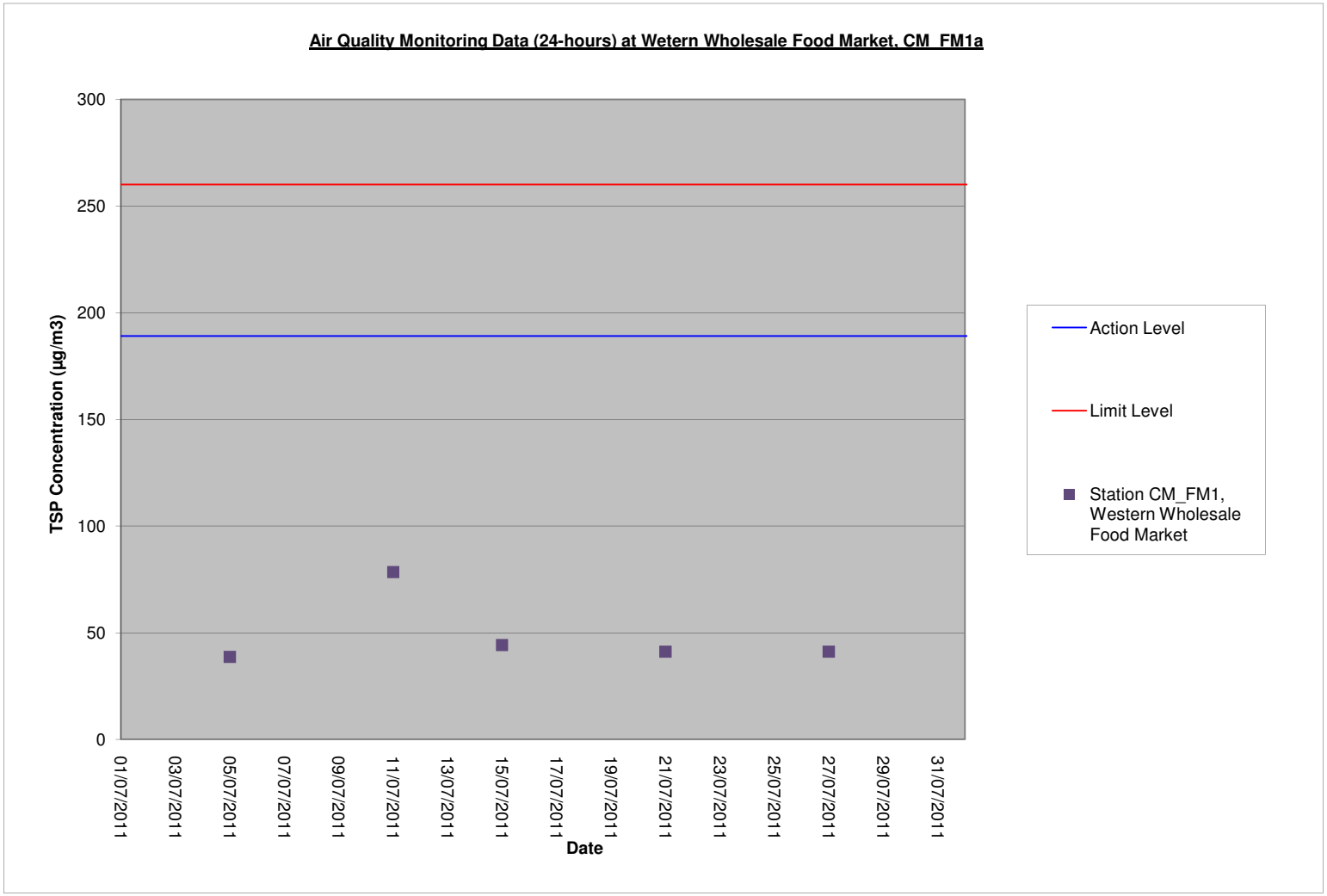
Date
Action Level
Limit Level
Station CM_AB1a, The Hong Kong Ice and Cold Storage (Aberdeen)


Air Quality Monitoring Data (24-hours) at Wetern Wholesale Food Market, CM_FM1a
TSP Concentration (µg/m3)
300
250
200
150
100
50
0
01/07/2011
03/07/2011
05/07/2011
07/07/2011
09/07/2011
11/07/2011
13/07/2011
15/07/2011
17/07/2011
19/07/2011
21/07/2011
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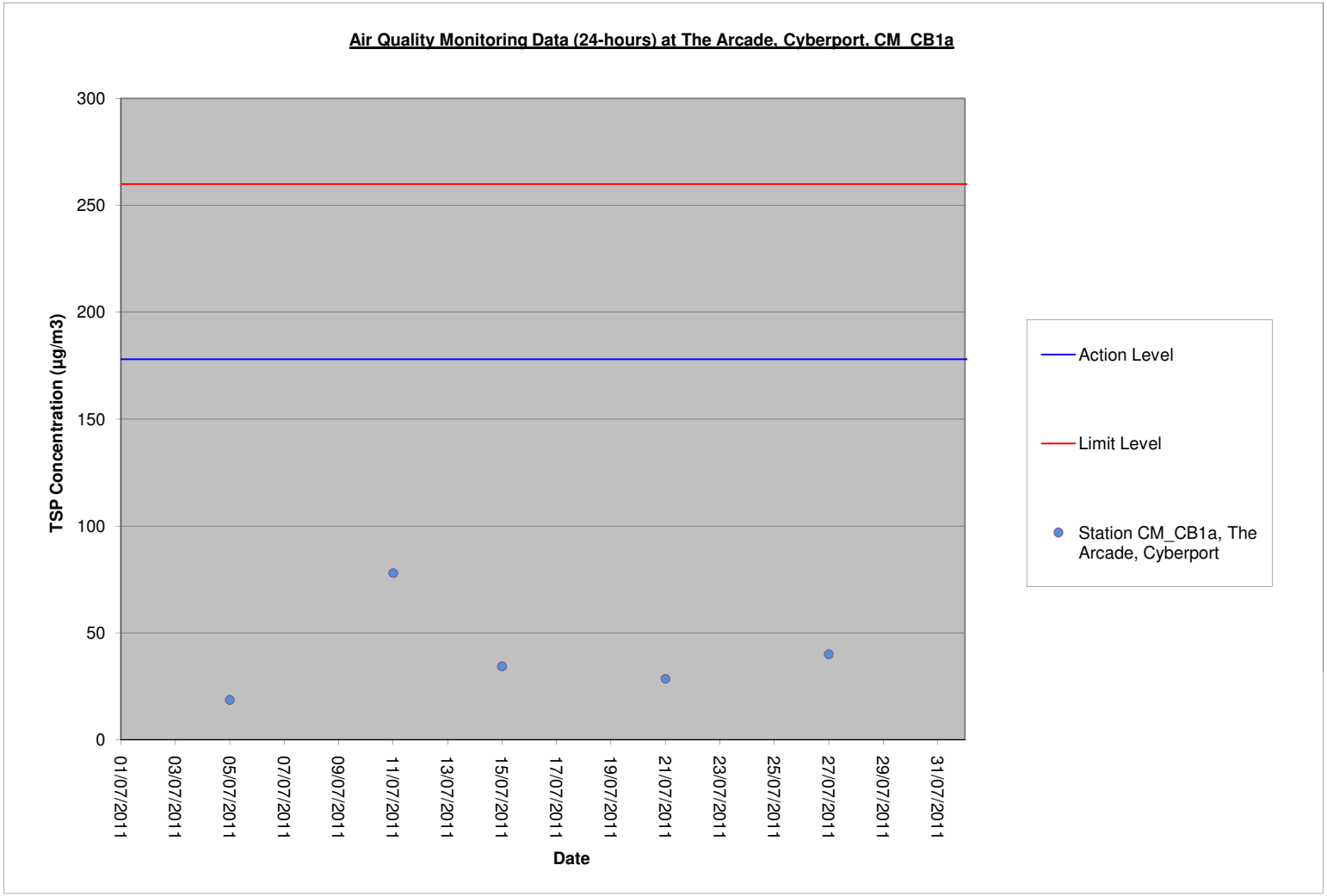
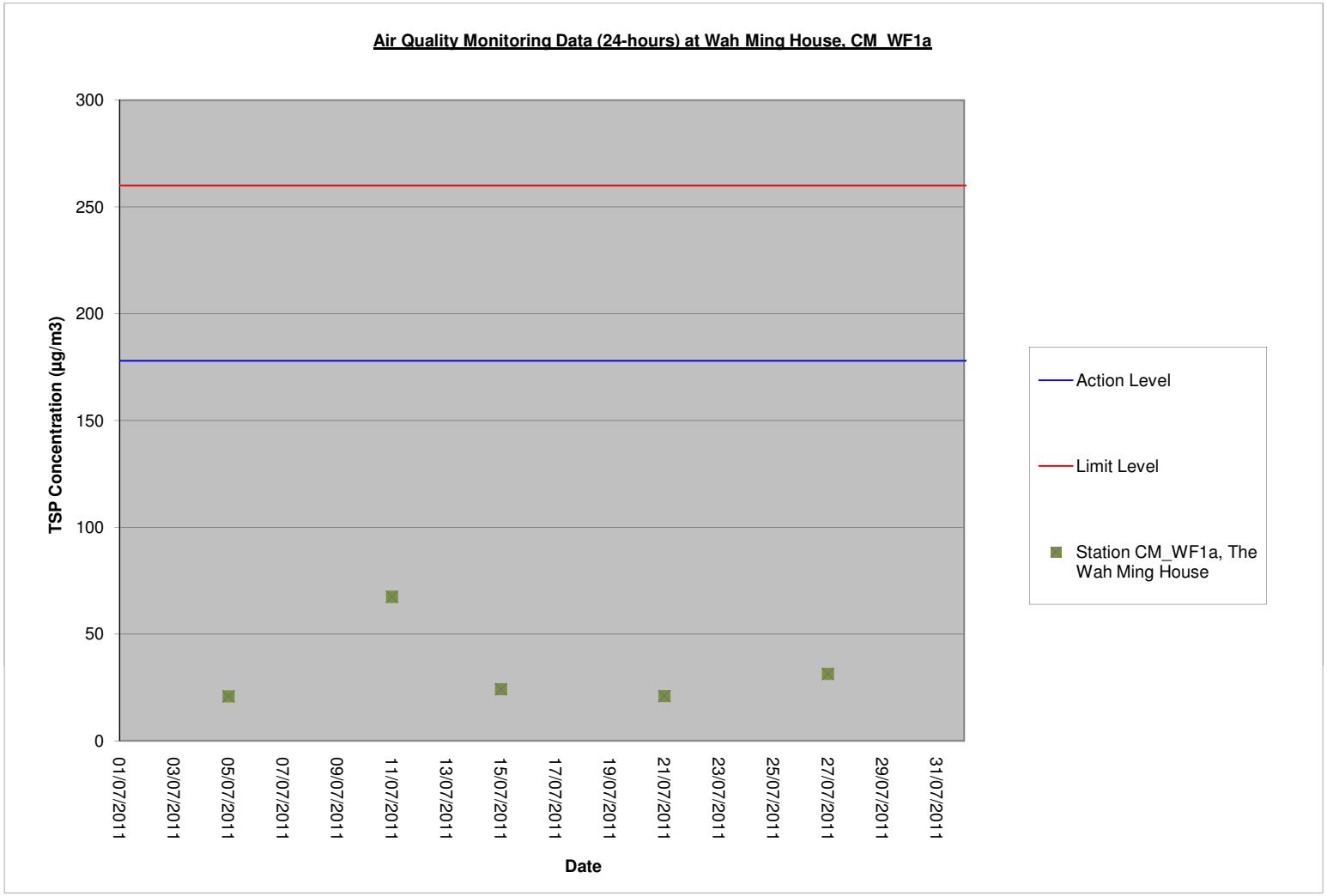
31/07/2011
Date
Action Level
Limit Level
Station CM_FM1, Western Wholesale Food Market


Air Quality Monitoring Data (24-hours) at The Arcade, Cyberport, CM_CB1a
TSP Concentration (µg/m3)
300
250
200
150
100
50
0
01/07/2011
03/07/2011
05/07/2011
07/07/2011
09/07/2011
11/07/2011
13/07/2011
15/07/2011
17/07/2011
19/07/2011
21/07/2011
23/07/2011
25/07/2011
27/07/2011
29/07/2011
31/07/2011
Date
Action Level
Limit Level
Station CM_CB1a, The Arcade, Cyberport


Air Quality Monitoring Data (24-hours) at Wah Ming House, CM_WF1a
TSP Concentration (µg/m3)
300
250
200
150
100
50
0
01/07/2011
03/07/2011
05/07/2011
07/07/2011
09/07/2011
11/07/2011
13/07/2011
15/07/2011
17/07/2011
19/07/2011
21/07/2011
23/07/2011
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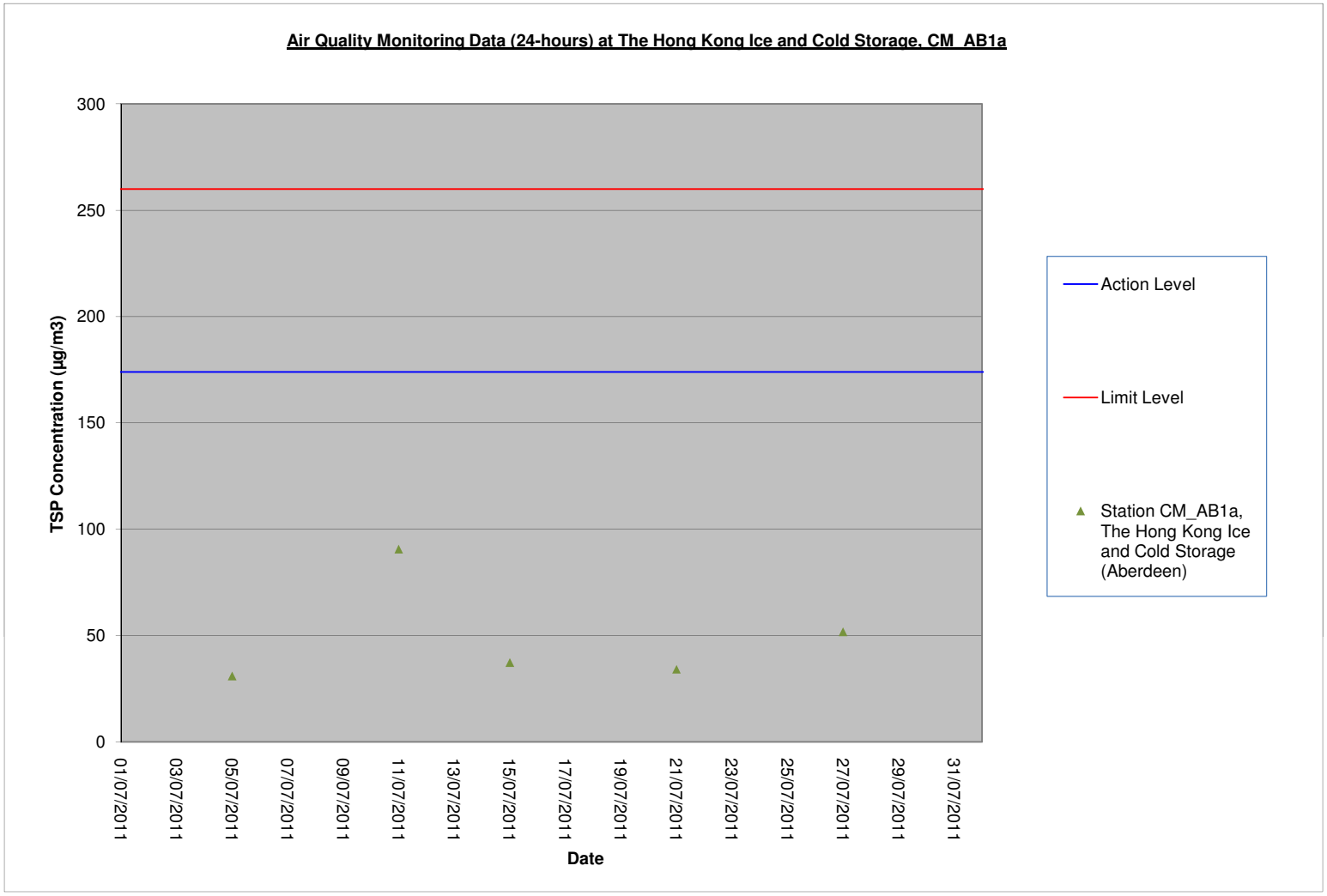
27/07/2011
29/07/2011
31/07/2011
Date
Action Level
Limit Level
Station CM_WF1a, The Wah Ming House


Air Quality Monitoring Data (24-hours) at The Hong Kong Ice and Cold Storage, CM_AB1a
TSP Concentration (µg/m3)
300
250
200
150
100
50
0
01/07/2011
03/07/2011
05/07/2011
07/07/2011
09/07/2011
11/07/2011
13/07/2011
15/07/2011
17/07/2011
19/07/2011
21/07/2011
23/07/2011
25/07/2011
27/07/2011
29/07/2011
31/07/2011
Date
Action Level
Limit Level
Station CM_AB1a, The Hong Kong Ice and Cold Storage (Aberdeen)

APPENDIX L

LANDSCAPE AND VISUAL MONITORING REPORT

REPORT

Leighton – LNS Joint Venture

Contract No. DC/2007/24 Harbour Area Treatment Scheme Stage 2A - Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun: *19th Monthly Landscape & Visual Monitoring Report*

July 2011

Environmental Resources Management
21/F Lincoln House
979 King's Road
Taikoo Place
Island East, Hong Kong
Telephone: (852) 2271 3000
Facsimile: (852) 2723 5660
E-mail: post.hk@erm.com
http://www.erm.com

REPORT

Leighton – LNS Joint Venture

Contract No. DC/2007/24 Harbour Area Treatment Scheme Stage 2A - Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun: *19th Monthly Landscape & Visual Monitoring Report*

July 2011

Reference 0109356

For and on behalf of ERM-Hong Kong, Limited

Approved by: Frank Wan

Signed:

Position: Partner

Certified by:

Registered Landscape Architect,
Christina Ip

Date: 2 August 2011

CONTENTS

1	*IMPACT LANDSCAPE AND VISUAL MONITORING*	*1*
1.1	*INTRODUCTION*	*1*
1.2	*MONITORING PARAMETERS*	*1*
1.3	*SITE AUDIT FINDINGS AND OBSERVATIONS*	*1*
2	*CONCLUSIONS*	*2*
2.1	*FOLLOW-UP ACTIONS TAKEN AFTER PREVIOUS SITE AUDIT*	*2*
2.2	*OBSERVATIONS AND RECOMMENDATIONS*	*2*

ANNEXES

Annex A *Landscape Mitigation Measures (Reference to Approved EIA Report (EIA-148/2008)*

Annex B *Site Inspection Checklist*

1 IMPACT LANDSCAPE AND VISUAL MONITORING

1.1 INTRODUCTION

The construction works of *DC/2007/24 of Harbour Area Treatment Scheme Stage 2A (HATS2A) - Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun* (the Project) commenced on 23 December 2009. This is the nineteenth monthly impact landscape and visual (L&V) monitoring report presenting the monthly L&V site audit findings conducted during the period from 1 July to 31 July 2011.

1.2 MONITORING PARAMETERS

According to the EM&A Manual, the L&V monitoring should include checking of the design and auditing of the implementation and maintenance of L&V mitigation measures to ensure that they are undertaken in accordance with the recommendations of the approved EIA Report (*EIA-148/2008*).

The nineteenth monthly site audit was undertaken on 27 July 2011 to check the design, implementation and maintenance of the L&V mitigation measures at work sites in Aberdeen, Wah Fu, Cyberport, Sandy Bay and Sai Ying Pun.

The proposed L&V mitigation measures during the construction phase recommended in the approved EIA Report (*EIA-148/2008*) are listed in *Table 1.1* and shown in *Annex A*.

Table 1.1 Proposed Landscape Mitigation Measures for Construction Phase

ID No.	Landscape and Visual Mitigation Measures	Sites
CM1	Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Aberdeen, Wah Fu, Cyberport, Sandy Bay and Sai Ying Pun
CM2	Existing trees to be retained on site should be carefully protected during construction.	Aberdeen, Wah Fu, Cyberport, Sandy Bay
CM3	Trees unavoidably affected by the works should be transplanted where practical.	Aberdeen, Cyberport, Sandy Bay
CM4	Compensatory tree planting should be provided to compensate for felled trees.	Aberdeen, Cyberport, Sandy Bay
CM5	Control of night-time lighting.	Aberdeen, Wah Fu, Cyberport, Sandy Bay and Sai Ying Pun
CM6	Erection of decorative screen hoarding compatible with the surrounding setting.	Aberdeen, Wah Fu, Cyberport, Sandy Bay and Sai Ying Pun

1.3 SITE AUDIT FINDINGS AND OBSERVATIONS

The findings and observations of the site audit are recorded and summarised in *Annex B*.

2 CONCLUSIONS

The nineteenth monthly landscape and visual site audit was undertaken on 27 July 2011 to check the design, implementation and maintenance of L&V mitigation measures at work sites in Aberdeen, Wah Fu, Cyberport, Sandy Bay and Sai Ying Pun under the Contract *DC/2007/24 of Harbour Area Treatment Scheme Stage 2A (HATS2A) - Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun*.

2.1 FOLLOW-UP ACTIONS TAKEN AFTER PREVIOUS SITE AUDIT

The retained trees T036(R), T037(R), T018(R) and T020(R) were showing poor health condition in Sandy Bay site. For general tree issues identified from previous site audits (ie, poor health condition of transplanted trees and stored construction materials and debris close to the roots of retained trees), follow up actions would still remain outstanding at the Sand Bay site.

2.2 OBSERVATIONS AND RECOMMENDATIONS

All L&V mitigation measures presented in *Table 1.1* have been implemented in full except for CM2 at Cyberport, CM2 and CM3 at Sandy Bay.

Cyberport Site

Stagnant water was observed at Cyberport site and it might have affected the health condition of the retained tree T048(R), if ignored. The Contractor was advised to double check the source of the stagnant water and to take necessary actions to prevent this near the retained tree.

Sandy Bay Site

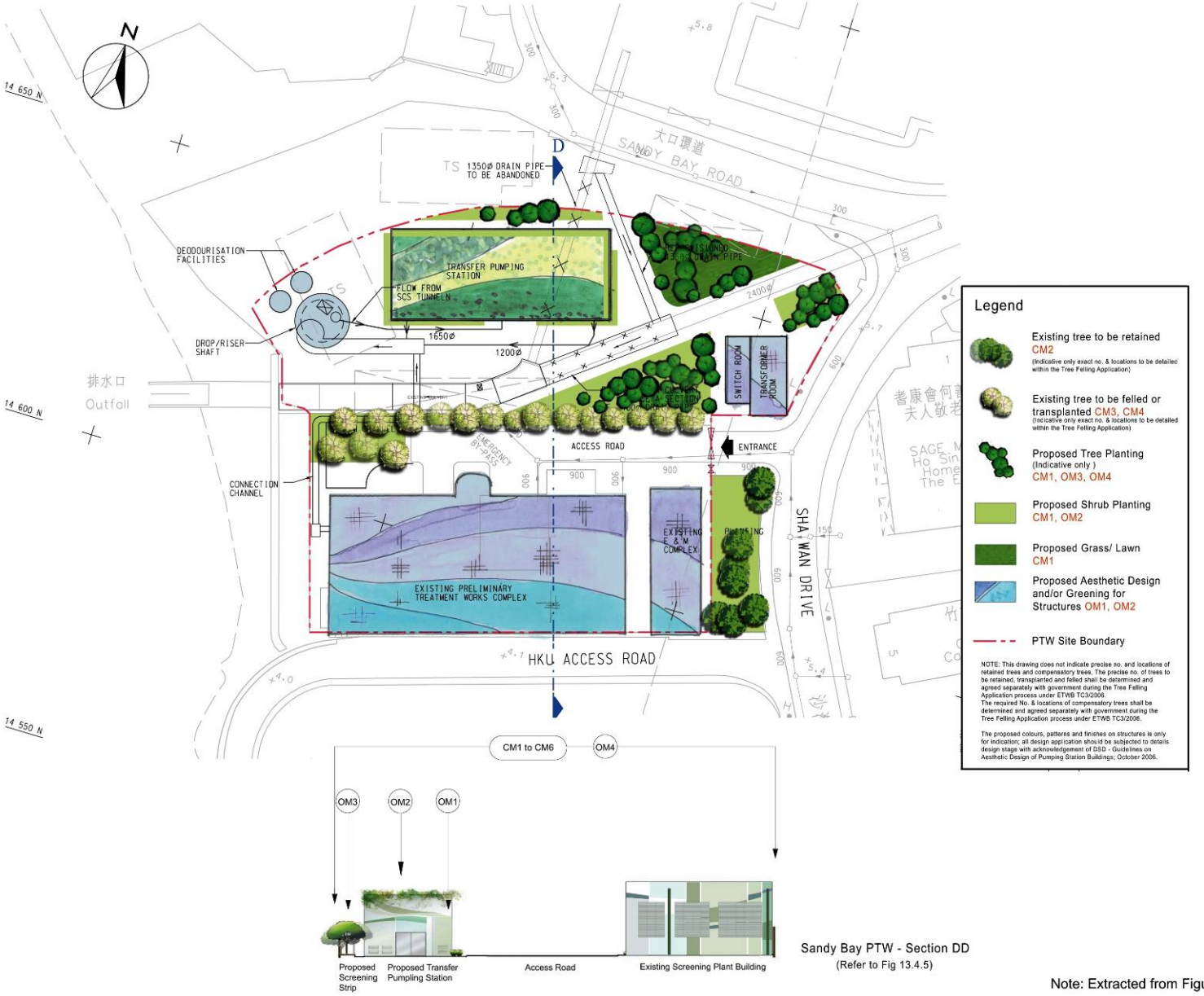
The retained trees T036(R), T037(R) and T018(R) were showing poor health condition. The Contractor was advised to consult their tree consultant to check the overall health conditions of the retained trees and to take necessary mitigation measures to revive their health conditions, this tree were affected of the formation of stagnant water in the previous site audit in May.

Retained tree T020 (R) was still observed in poor health condition. The Contractor was advised to consult their tree consultant and to take necessary mitigation measures to improve the health of the tree.

The transplanted trees T004 (T) and T005 (T) were still found in very poor health condition or it might have been dead since the last seven monthly audits. The Contractor was reminded to take appropriate actions to restore the health condition of the transplanted trees or to replace it if it is confirmed dead.

Annex A

Landscape Mitigation Measures (Reference to Approved EIA Report (EIA-148/2008))



Note: Extracted from Figures 13.4.5 & 13.4.12 of EIA-148/2008.

Figure 1.1

Landscape Mitigation Measure in Sandy Bay

FILE: 0109356-ILV-SB-Fig1.1
DATE: 30 March 2010

Environmental Resources Management

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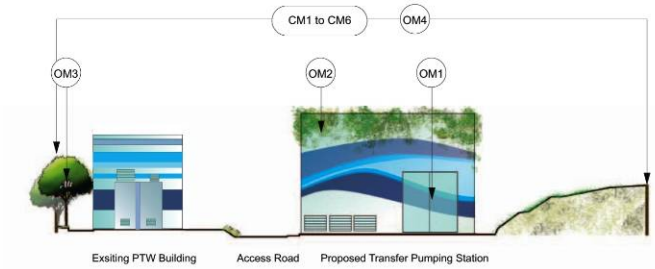


Cyberport PTW - Section EE
(Refer to Fig 13.4.6)

Note: Extracted from Figures 13.4.6 & 13.4.13 of EIA-148/2008.

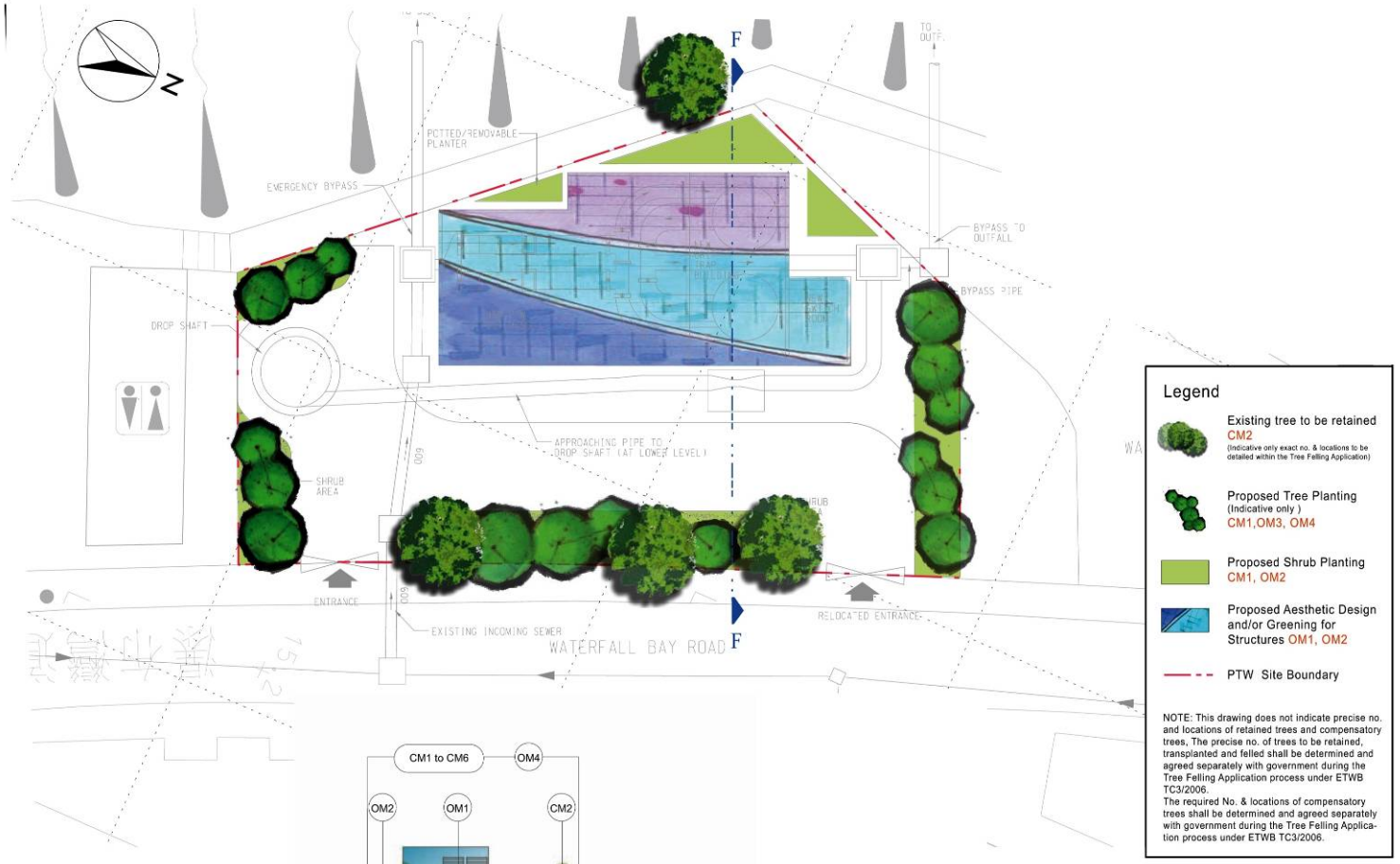
Figure 1.2

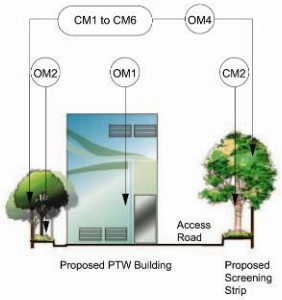
Landscape Mitigation Measure in Cyberport

FILE: 0109356-ILV-CP-Fig1.2.cdr
DATE: 30 March 2010

Environmental Resources Management

ERM





Wah Fu PTW - Section FF
(Refer to Fig 13.4.7)

Note: Extracted from Figures 13.4.7 & 13.4.13 of EIA-148/2008.

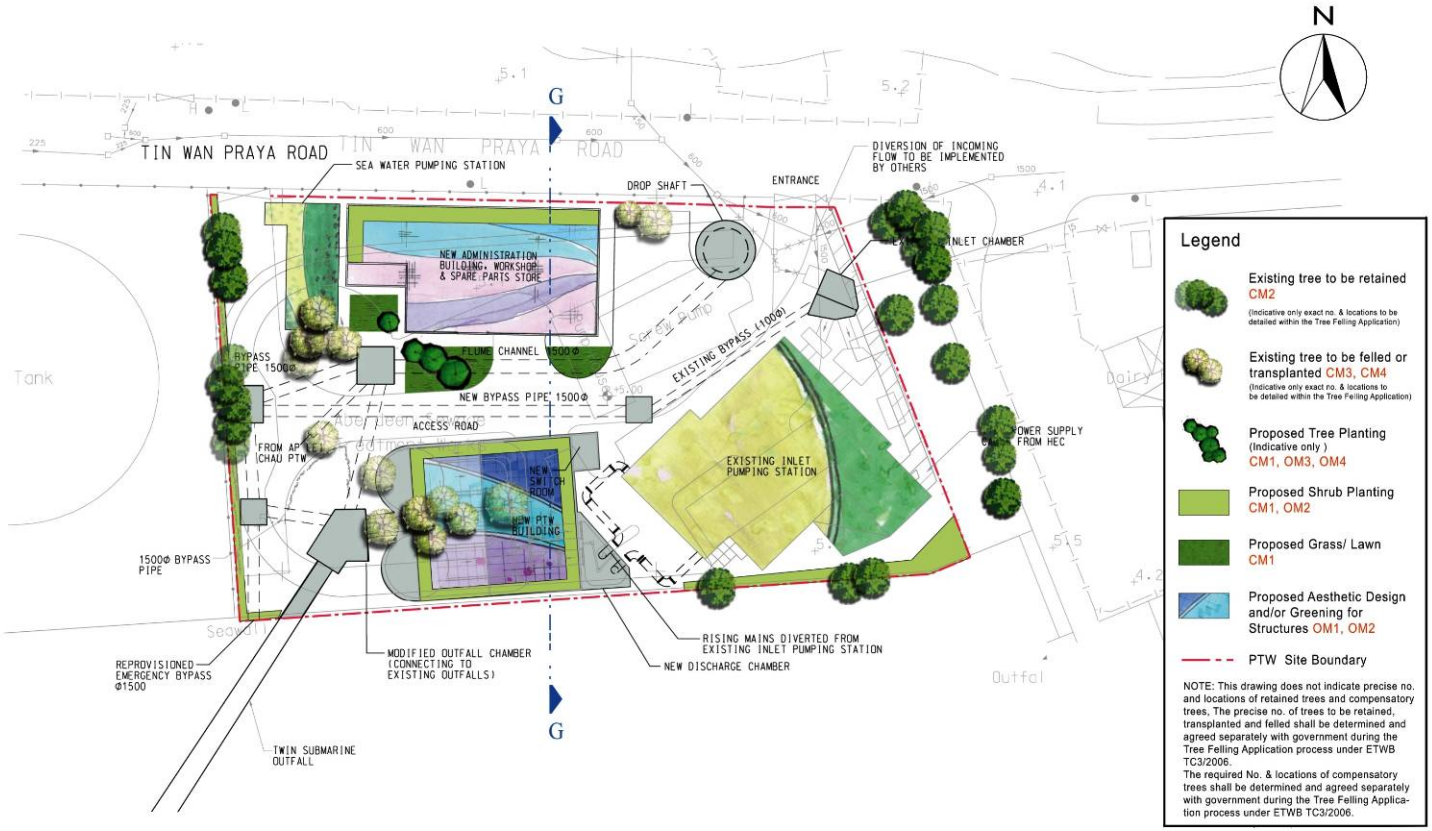
Figure 1.3

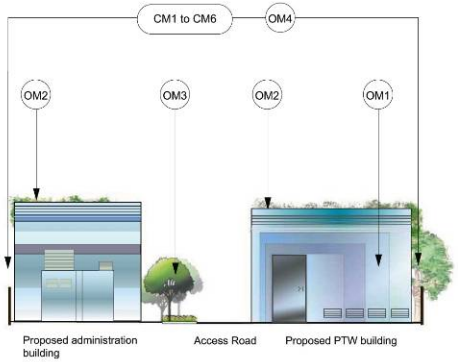
Landscape Mitigation Measure in Wah Fu

FILE: 0109356-ILV-WF-Fig1.3.cdr
DATE: 30 March 2010

Environmental Resources Management

ERM





Aberdeen PTW - Section GG
(Refer to Fig 13.4.8)

Note: Extracted from Figures 13.4.8 & 13.4.14 of EIA-148/2008.

Figure 1.4

Landscape Mitigation Measure in Aberdeen

FILE: 0109356-ILV-A-Fig1.4.cdr
DATE: 30 March 2010

Environmental Resources Management

ERM

Annex B

Site Inspection Checklist

Harbour Area Treatment Scheme (HATS) Stage 2A
Contract No. DC/2007/24
Construction of Sewage Conveyance from Aberdeen to Sai Ying Pun
Landscape & Visual Monitoring Report

Reporting Period : 1 July to 31 July 2011

Site Inspection Date : 27 July 2011

Inspected By : Jon Binalay

Site	CM1 **Topsoil identified stripped and stored for re-use in the construction of soft landscape works, where practical**	CM2 **Existing trees to be retained on site should be carefully protected during construction**	CM3 **Trees unavoidably affected by the works should be transplanted where practical.**	CM4 **Compensatory tree planting should be provided to compensate for felled trees.**	CM5 **Control of night-time lighting.**	CM6 **Erection of decorative screen hoarding compatible with the surrounding setting.**	**Recommendations**
Sai Ying Pun	No major excavation works were conducted. No stockpile of excavated soil was observed.	Not Applicable - No tree was identified at the Sai Ying Pun Area	Not Applicable - No tree was identified at the Sai Ying Pun Area	Not applicable - No tree was identified at the Sai Ying Pun Area	Night-time lighting was used until 2300 hours per day on 1st to 31st of July, except on 1st	Decorative screen hoarding were erected and was compatible to the surrounding setting.	Not required
Sandy Bay	No major excavation works were conducted. No stockpile of excavated soil was observed.	Existing trees have been retained on site, fenced off and protected. T036(R), T037(R) and T018(R) were showing poor health condition (see *Photo 1 and 2*) T020(R) was showing poor health condition. (see *Photo 3*),	No tree was transplanted during this reporting month. T004 (T) and T005(T) were still found to be in very poor health condition and might be dead (see *Photo 4*).	Not applicable - Compensatory tree planting has not been started.	Night-time lighting was used for 24 hours per day on 1st to 31st of July, except on 1st.	Decorative screen hoarding were erected and was compatible to the surrounding setting.	Contractor was advised to consult their tree consultant regarding the health conditions of T036(R), T037(R), T018(R) and T020(R), and take necessary mitigation measures to improve the health of the trees immediately. The Contractor is also advised to consult their tree consultant and take appropriate actions to restore the health

Site	CM1 Topsoil identified stripped and stored for re-use in the construction of soft landscape works, where practical	CM2 Existing trees to be retained on site should be carefully protected during construction	CM3 Trees unavoidably affected by the works should be transplanted where practical.	CM4 Compensatory tree planting should be provided to compensate for felled trees.	CM5 Control of night-time lighting.	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Recommendations
							conditions of the transplanted trees T004(T), and T005(T) immediately or replaced it if found dead immediately.
Cyberport	No major excavation works were conducted. No stockpile of excavated soil was observed.	Existing trees have been retained on site, fenced off and protected properly. Formation of stagnant water was observed around retained tree T048(R) and might affect to its health condition. (See *Photo 5*)	No tree was transplanted during this reporting month.	Not applicable - Compensatory tree planting has not been started.	Night-time lighting was used for 24 hours per day on 1st to 31st of July, except on 1st.	Noise enclosure was erected over the shaft. A yellow color was used for the materials of the noise enclosure, similar to the color of the existing STW façade.	Contractor was advised to check the source of the stagnant water that might affect condition of the retained tree if ignored.
Wah Fu	No major excavation works were conducted. No stockpile of excavated soil was observed.	Not Applicable - No existing trees were identified to be affected within the works area.	Not Applicable - No existing trees were identified to be affected within the works area.	Not applicable - No existing trees were identified to be affected within the works area.	Not applicable - No night-time lighting was used.	Screening was erected and was compatible to the surrounding setting.	Not required
Aberdeen	No major excavation works were conducted. No stockpile of excavated soil was observed.	Existing trees have been retained on site, fenced off and protected properly.	All tree transplantation works have been completed and all transplanted trees are properly supported by tripod.	Not applicable - Compensatory tree planting has not been started.	Night-time lighting was used until 2300 hours on the 1st to 31st of July, except on the 6th, 14th, 15th, 20th, 22nd, 29th and 30th.	Screen hoarding was erected and the grey colour was compatible to the surrounding setting.	Not Required.

Sandy Bay site --- Photo 1
Retained trees T037(R) and T018(R) in poor health conditions.

Sandy Bay site --- Photo 2
Retained trees T036(R) in poor health condition.

Sandy Bay site --- Photo 3
Retained tree T020(R) still in poor health condition. .

Sandy Bay site --- Photo 4
The transplanted Trees T004 (T) and T005 (T) were still observed in poor health condition and might be dead. .

Cyberport site --- Photo 5
Retained tree T048(R) still in poor health condition. .

(Name: Christina Ip,
Registered Landscape Architect)

APPENDIX M

NOTIFICATION OF EXCEEDANCES

Contract No. DC/2007/24
Harbour Area Treatment Scheme Stage 2A
Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun

Notification of Environmental Quality Limit Exceedance Notification No.: 069

Date of Notification: 13th July 2011

Works Inspected: Data collected from night-time (between 23:00-07:00 hrs of next day) noise monitoring on 6th July 2011

Noise Monitoring Location: M6a — Aegean Terrace

Parameter: Noise - $L_{eq(5\ min)}$

Action & Limit Levels			**Measured Noise Level ***			
Time Period	Action Level	Limit Level	Time :	23:00 – 23:15 hrs on 6th July 2011		
23:00–07:00 hrs Normal weekday	1 complaint	50 dB(A)	$L_{eq(5\ min)}$ reading	1st	2nd	3rd
				49.8 dB(A)	53.0 dB(A)	55.1 dB(A)

* Free-field measurement, +3dB correction

Possible Reason for Action or Limit Level Non-compliance:

An exceedance in Limit Level was recorded during night-time noise monitoring at M6a on 6th July 2011.

From the Contractor's record, powered mechanical equipment (PME) used in the Cyberport PTW works site during noise monitoring period included powered mechanical equipments as listed in Construction Noise Permit (CNP) No. GW-RS0395-11.

According to the Project Baseline Environmental Monitoring Report (Doc No. GEN/026), the average 5-min baseline noise level was found to be 50.8 dB(A), which already exceeded the Limit Level of 50 dB(A) set out in the Project EM&A Manual. It is also noted that the night-time BGL at M6a ranged from 41.6 dB(A) to 67.0 dB(A).

Hence, the above exceedance was considered to be non-project related. Based on observations during the noise monitoring period, the major noise source were the local traffics of Aegean Terence.

Actions taken/ to be taken:

As the noise exceedance was not considered to be related to project works, no immediate actions are considered necessary.

Inspected by : Ruby Law Title : Environmental Technician

Date : 13th July 2011

Reviewed and approved by : Susana Halliday Title : Environmental Team Leader

Date : 13th July 2011

Sent to: Engineer's Representative, Contractor, EPD & IEC

Contract No. DC/2007/24
Harbour Area Treatment Scheme Stage 2A
Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun

Notification of Environmental Quality Limit Exceedance Notification No.: 070

Date of Notification: 13th July 2011

Works Inspected: Data collected from night-time (between 23:00-07:00 hrs of next day) noise monitoring on 12th July 2011

Noise Monitoring Location: M5a —near entrance of Chuk Lam Ming Tong

Parameter: Noise - $L_{eq(5\ min)}$

Action & Limit Levels			**Measured Noise Level ***			
Time Period	Action Level	Limit Level	Time :	23:00 – 23:15 hrs on 12th July 2011		
23:00–07:00 hrs Normal weekday	1 complaint	45 dB(A)	$L_{eq(5\ min)}$ reading	1st	2nd	3rd
				62.1 dB(A)	62.2 dB(A)	62.0 dB(A)

* façade measurement

Possible Reason for Action or Limit Level Non-compliance:

An exceedance in Limit Level was recorded during night-time noise monitoring at M6a on 12th July 2011.

From the Contractor's record, powered mechanical equipment (PME) used in the Cyberport PTW works site during noise monitoring period included powered mechanical equipments as listed in Construction Noise Permit (CNP) No. GW-RS0379-11.

A baseline noise level monitoring at this monitoring location (for restricted hours) was conducted on 6th November 2010 from 23:00 to 23:15 hrs. All PMEs listed under the CNP No. GW-RS0133-11 were ensure to shut down during the measurement. The average 5-min baseline noise level was found to be 60.5dB (A), which already exceeded the Limit Level of 45dB (A) set out in the Project EM&A Manual. It is also noted from the Project Baseline Environmental Monitoring Report (Doc No. GEN/026) that the night-time BGL at M5 (roof of Chuk Lam Ming Tong) ranged from 54.4dB(A) to 70.2dB(A).

Hence, the above exceedance was considered to be non-project related. Based on observations during the noise monitoring period, the major noise source was road traffic noise at San Wan Drive and the noise from opening/closing of the gate at the entrance of Chuk Lam Ming Tong.

Actions taken/ to be taken:

As the noise exceedance was not considered to be related to project works, no immediate actions are considered necessary.

Inspected by : Ruby Law Title : Environmental Technician

Date : 13th July 2011

Reviewed and approved by : Susana Halliday Title : Environmental Team Leader

Date : 13th July 2011

Sent to: Engineer's Representative, Contractor, EPD & IEC

Contract No. DC/2007/24
Harbour Area Treatment Scheme Stage 2A
Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun

Notification of Environmental Quality Limit Exceedance Notification No.: 071

Date of Notification: 22nd July 2011

Works Inspected: Data collected from night-time (between 23:00-07:00 hrs of next day) noise monitoring on 20th July 2011

Noise Monitoring Location: M6a — Aegean Terrace

Parameter: Noise - $L_{eq(5\ min)}$

Action & Limit Levels			**Measured Noise Level ***			
Time Period	Action Level	Limit Level	Time :	23:00 – 23:15 hrs on 20th July 2011		
23:00–07:00 hrs Normal weekday	1 complaint	50 dB(A)	$L_{eq(5\ min)}$ reading	1st	2nd	3rd
				52.1 dB(A)	52.0 dB(A)	54.4 dB(A)

* Free-field measurement, +3dB correction

Possible Reason for Action or Limit Level Non-compliance:

An exceedance in Limit Level was recorded during night-time noise monitoring at M6a on 20th July 2011.

From the Contractor's record, powered mechanical equipment (PME) used in the Cyberport PTW works site during noise monitoring period included powered mechanical equipments as listed in Construction Noise Permit (CNP) No. GW-RS0395-11.

According to the Project Baseline Environmental Monitoring Report (Doc No. GEN/026), the average 5-min baseline noise level was found to be 50.8 dB(A), which already exceeded the Limit Level of 50 dB(A) set out in the Project EM&A Manual. It is also noted that the night-time BGL at M6a ranged from 41.6 dB(A) to 67.0 dB(A).

Hence, the above exceedance was considered to be non-project related. Based on observations during the noise monitoring period, the major noise source were the local traffics of Aegean Terence.

Actions taken/ to be taken:

As the noise exceedance was not considered to be related to project works, no immediate actions are considered necessary.

Inspected by : Ruby Law Title : Environmental Technician

Date : 22nd July 2011

Reviewed and approved by : Susana Halliday Title : Environmental Team Leader

Date : 22nd July 2011

Sent to: Engineer's Representative, Contractor, EPD & IEC

Contract No. DC/2007/24
Harbour Area Treatment Scheme Stage 2A
Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun

Notification of Environmental Quality Limit Exceedance Notification No.: 072

Date of Notification: 26th July 2011

Works Inspected: Data collected from daytime and evening time during general holiday (between 07:00-23:00 hrs) noise monitoring on 24th July 2011

Noise Monitoring Location: M5a —near entrance of Chuk Lam Ming Tong

Parameter: Noise - $L_{eq(5\ min)}$

Action & Limit Levels			**Measured Noise Level ***			
Time Period	Action Level	Limit Level	Time :	15:15 – 15:30 hrs on 24th July 2011		
07:00–23:00 hrs	1 complaint	60 dB(A)	$L_{eq(5\ min)}$ reading	1st	2nd	3rd
				67.0 dB(A)	64.4 dB(A)	68.2 dB(A)

* façade measurement

Possible Reason for Action or Limit Level Non-compliance:

An exceedance in Limit Level was recorded during night-time noise monitoring at M6a on 24th July 2011.

From the Contractor's record, powered mechanical equipment (PME) used in the Cyberport PTW works site during noise monitoring period included powered mechanical equipments as listed in Construction Noise Permit (CNP) No. GW-RS0379-11.

A baseline noise level monitoring at this monitoring location (for restricted hours) was conducted on 7th November 2010 from 16:19 to 16:34 hrs. All PMEs listed under the CNP No. GW-RS0133-11 were ensure to shut down during the measurement. The average 5-min baseline noise level was found to be 65.9dB (A), which already exceeded the Limit Level of 60dB (A) set out in the Project EM&A Manual. It is also noted from the Project Baseline Environmental Monitoring Report (Doc No. GEN/026) that the general holiday BGL at M5 (roof of Chuk Lam Ming Tong) ranged from 55.1dB (A) to 75.2dB(A).

Hence, the above exceedance was considered to be non-project related. Based on observations during the noise monitoring period, the major noise source was road traffic noise at San Wan Drive and the noise from opening/closing of the gate at the entrance of Chuk Lam Ming Tong.

Actions taken/ to be taken:

As the noise exceedance was not considered to be related to project works, no immediate actions are considered necessary.

Inspected by : Ruby Law Title : Environmental Technician

Date : 26th July 2011

Reviewed and approved by : Susana Halliday Title : Environmental Team Leader

Date : 26th July 2011

Sent to: Engineer's Representative, Contractor, EPD & IEC

Contract No. DC/2007/24
Harbour Area Treatment Scheme Stage 2A
Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun

Notification of Environmental Quality Limit Exceedance Notification No.: 073

Date of Notification: 1st August 2011

Works Inspected: Data collected from evening-time (between 19:00-23:00 hrs of next day) noise monitoring on 28th July 2011

Noise Monitoring Location: M5a —near entrance of Chuk Lam Ming Tong

Parameter: Noise - $L_{eq(5\ min)}$

Action & Limit Levels			**Measured Noise Level ***			
Time Period	Action Level	Limit Level	Time :	22:45 – 23:00 hrs on 28th July 2011		
19:00–23:00 hrs Normal weekday	1 complaint	60 dB(A)	$L_{eq(5\ min)}$ reading	1st	2nd	3rd
				62.6 dB(A)	63.0 dB(A)	63.8 dB(A)

* façade measurement

Possible Reason for Action or Limit Level Non-compliance:

An exceedance in Limit Level was recorded during night-time noise monitoring at M5a on 28th July 2011.

From the Contractor's record, powered mechanical equipment (PME) used in the Cyberport PTW works site during noise monitoring period included powered mechanical equipments as listed in Construction Noise Permit (CNP) No. GW-RS0379-11.

A baseline noise level monitoring at this monitoring location (for restricted hours) was conducted on 6th November 2010 from 22:39 to 22:54 hrs. All PMEs listed under the CNP No. GW-RS0940-10 were ensure to shut down during the measurement. The average 5-min baseline noise level was found to be 60.6dB (A), which already exceeded the Limit Level of 60dB (A) set out in the Project EM&A Manual. It is also noted from the Project Baseline Environmental Monitoring Report (Doc No. GEN/026) that the night-time BGL at M5 (roof of Chuk Lam Ming Tong) ranged from 56.2dB(A) to 63.6dB(A).

Hence, the above exceedance was considered to be non-project related. Based on observations during the noise monitoring period, the major noise source was road traffic noise at San Wan Drive.

Actions taken/ to be taken:

As the noise exceedance was not considered to be related to project works, no immediate actions are considered necessary.

Inspected by : Ruby Law Title : Environmental Technician

Date : 1st August 2011

Reviewed and approved by : Susana Halliday Title : Environmental Team Leader

Date : 1st August 2011

Sent to: Engineer's Representative, Contractor, EPD & IEC

Contract No. DC/2007/24
Harbour Area Treatment Scheme Stage 2A
Construction of Sewage Conveyance System from Aberdeen to Sai Ying Pun

Notification of Environmental Quality Limit Exceedance Notification No.: 074

Date of Notification: 1st August 2011

Works Inspected: Data collected from night-time (between 23:00-07:00 hrs of next day) noise monitoring on 28th July 2011

Noise Monitoring Location: M5a —near entrance of Chuk Lam Ming Tong

Parameter: Noise - $L_{eq(5\ min)}$

Action & Limit Levels			**Measured Noise Level ***			
Time Period	Action Level	Limit Level	Time :	23:00 – 23:15 hrs on 28th July 2011		
23:00–07:00 hrs Normal weekday	1 complaint	45 dB(A)	$L_{eq(5\ min)}$ reading	1st	2nd	3rd
				61.2 dB(A)	61.3 dB(A)	65.3 dB(A)

* façade measurement

Possible Reason for Action or Limit Level Non-compliance:

An exceedance in Limit Level was recorded during night-time noise monitoring at M5a on 28th July 2011.

From the Contractor's record, powered mechanical equipment (PME) used in the Sandy Bay works site during noise monitoring period included powered mechanical equipments as listed in Construction Noise Permit (CNP) No. GW-RS0379-11.

A baseline noise level monitoring at this monitoring location (for restricted hours) was conducted on 6th November 2010 from 23:00 to 23:15 hrs. All PMEs listed under the CNP No. GW-RS0133-11 were ensure to shut down during the measurement. The average 5-min baseline noise level was found to be 60.5dB (A), which already exceeded the Limit Level of 45dB (A) set out in the Project EM&A Manual. It is also noted from the Project Baseline Environmental Monitoring Report (Doc No. GEN/026) that the night-time BGL at M5 (roof of Chuk Lam Ming Tong) ranged from 54.4dB(A) to 70.2dB(A).

Hence, the above exceedance was considered to be non-project related. Based on observations during the noise monitoring period, the major noise source was road traffic noise at San Wan Drive.

Actions taken/ to be taken:

As the noise exceedance was not considered to be related to project works, no immediate actions are considered necessary.

Inspected by : Ruby Law Title : Environmental Technician

Date : 1st August 2011

Reviewed and approved by : Susana Halliday Title : Environmental Team Leader

Date : 1st August 2011

Sent to: Engineer's Representative, Contractor, EPD & IEC

APPENDIX N

SUMMARY RECORDS OF SITE INSPECTIONS

5 July 2011

Aberdeen PTW

Notes / Issues Recorded On Site:

Air Quality:

1. The smoke emission from excavator was found near the exit. (Photo 1)

General House Keeping

1. Some leaking sand bags were found near site boundary fences. (Photo 2)
2. The rubbishes were found in the pit near vehicles washing facilities. (Photo 3)

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

Previous Environmental Site Inspection Checklist – Report No. 110628

General House Keeping:

Close out photos will be provided next inspection checklist for 2 environmental items were found in inspection on 28th June 2011 since no inspection had been taken in Aberdeen storage area.

Current Environmental Site Inspection Checklist – Report No. 110705

Air Quality:

1. The contractor is suggested to maintain the filter of the excavator to reduce smoke exhaust.

General House Keeping

1. To change the leaking sand bags near site boundary fences.
2. To clear the rubbish in the pit near vehicles washing facilities.

Photo 1: The smoke emission from excavator was found near the exit

Photo 2: Some leaking sand bags were found near site boundary fences

Photo 3: The rubbishes were found in the pit near vehicles washing facilities

Cyberport PTW

Notes / Issues Recorded On Site:

General Housekeeping:

1. The accumulated water was found in the unused container near the sedimentation tank. (Photos 2 and 3)

Site Maintenance:

1. The unlabeled material was found.(Photo 4)

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

Previous Environmental Site Inspection Checklist – Report No. 110628

General Housekeeping:

1. The accumulated water near the entrance of noise enclosure was cleared

Current Environmental Site Inspection Checklist – Report No. 110705

General Housekeeping:

1. The contractor was reminded to clear the accumulated water regularly.
2. To label the material or treat the material properly.

Photo 1 The accumulated water near the entrance of noise enclosure was cleared

Photos 2 and 3 The accumulated water was found in the unused container near the sedimentation tank.

Photo 4 The unlabeled material was found

Fung Mat Road Site

Notes / Issues Recorded On Site: **General Housekeeping:** 1. Some muddy water was found in the work area. (Photo 1) **Water Quality:** 1. The boundary near seaside without protection bund.(Photo 2)
Corrective Actions – Mitigation Measures Implemented or Proposed (if any):
Previous Environmental Site Inspection Checklist – Report No. 110628 **General Housekeeping:** 1. The accumulated water in work area was cleared. **Current Environmental Site Inspection Checklist – Report No. 110705** **General Housekeeping:** 1. The contractor was reminded to clear the accumulated water regularly. **Water Quality:** 1. The sand bags should be provided for temporary bund to avoid sand and stones rush into sea during raining.

Photo 1 Some muddy water was found in the work area

Photo 2 The boundary near seaside without bun.

Sandy Bay

Notes / Issues Recorded On Site:
General Housekeeping:
1. Accumulated water was found in the drip tray near chemical storage. (Photo 1)

Water Quality:
1. Improperly discharge from the drainage was found near the washing container. (Photos 2 and 3)

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

Previous Environmental Site Inspection Checklist – Report No. 110628
General Housekeeping:
1. Accumulated water near the site boundary was cleared.

Current Environmental Site Inspection Checklist – Report No. 110705
General Housekeeping:
1. The contractor was reminded to clear accumulated water in the drip tray near chemical storage.

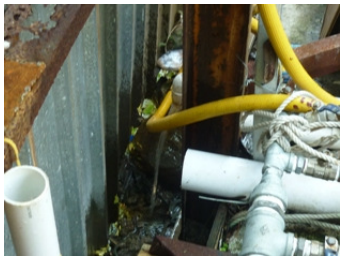
Water Quality:
1. The contractor is recommended to provide proper drainage for waste water discharge.

Notes / Issues Recorded On Site:
General Housekeeping:
1. Accumulated water was found in the drip tray near chemical storage. (Photo 1)

Water Quality:
1. Improperly discharge from the drainage was found near the washing container. (Photos 2 and 3)

Photo 1: Accumulated water was found in the drip tray near chemical storage

Photos 2 and 3 Improperly discharge from drainage was found near the washing container



Wah Fu PTW

Notes / Issues Recorded On Site: Nil.
Corrective Actions – Mitigation Measures Implemented or Proposed (if any): **Previous Environmental Site Inspection Checklist – Report No. 110628** Nil. **Current Environmental Site Inspection Checklist – Report No. 110705** Nil.

12 July 2011

Aberdeen PTW

Notes / Issues Recorded On Site: **Air Quality:** 1. No dark smoke emission from excavator was observed during the site inspection. (Photo 1) **General House Keeping** 1. Leaking sand bags were removed near site boundary fences. (Photo 2) 2. The rubbishes were removed in the pit near vehicles washing facilities. (Photo 3) **General:** 1. The expired environmental permit was found at the site entrance. (Photo 4)
Corrective Actions – Mitigation Measures Implemented or Proposed (if any): **Previous Environmental Site Inspection Checklist – Report No. 110705** **Air Quality:** 1. No dark smoke emission from excavator was observed during the site inspection. (Photo 1) **General House Keeping** 1. Leaking sand bags were removed near site boundary fences. (Photo 2) 2. The rubbishes were removed in the pit near vehicles washing facilities. (Photo 3) **Current Environmental Site Inspection Checklist – Report No. 110712** **General:** 1. The contractor was reminded to remove the expired environmental permit.

Photo 1: No dark smoke emission from excavator was observed during the site inspection.

Photo 2: Leaking sand bags were removed near site boundary fences.

Photo 3: The rubbishes were removed in the pit near vehicles washing facilities.

Photo 4: The expired environmental permit was found at the site entrance.

Cyberport PTW

Notes / Issues Recorded On Site:

General Housekeeping:

1. The accumulated water was found in the container. (Photos 1)

Site Maintenance:

1. The unlabeled container was found in the noise enclosure.(Photo 2)

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

Previous Environmental Site Inspection Checklist – Report No. 110705

Nil.

Current Environmental Site Inspection Checklist – Report No. 110712

General Housekeeping:

1. The contractor was reminded to clear the accumulated water regularly.
2. The contractor was reminded to provide label for the container.

Photo 1 The accumulated water was found in the container.

Photos 2 The unlabeled container was found in the noise enclosure.

Fung Mat Road Site

Notes / Issues Recorded On Site:
General Housekeeping:

1. No muddy water was accumulated during the site inspection.

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

Previous Environmental Site Inspection Checklist – Report No. 110705
General Housekeeping:

1. No muddy water was accumulated during the site inspection.

Current Environmental Site Inspection Checklist – Report No. 110712

Nil.

Sandy Bay

Notes / Issues Recorded On Site:
General Housekeeping:

1. Accumulated water was found in the drip tray near chemical storage.

Water Quality:

1. Improperly discharge from the drainage was stopped and contractor was scheduled to collect the discharge properly. (Photos 1)
2. The discharge water of grouting was accumulated near the noise enclosure. (Photo 2)

Chemical Management:

1. The oil spillage was found on the ground near the chemical storage area. (Photo 3)
2. The fuel drums were found without drip tray.

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

Previous Environmental Site Inspection Checklist – Report No. 110705
General Housekeeping:

2. No accumulated was observed in the drip tray near chemical storage.

Water Quality:

1. Improperly discharge from the drainage was stopped.

Current Environmental Site Inspection Checklist – Report No. 110712.
Water Quality:

1. The contractor was reminded to complete the modify work as soon as possible.
2. The contractor was reminded to prevent the discharge water of grouting accumulated and keep the site clean.

Chemical Management:

1. The contractor was reminded to remove the oil spillage and treat as chemical waste.
2. The contractor was reminded to provide the drip tray for fuel drum.

Notes / Issues Recorded On Site:
General Housekeeping:

1. Accumulated water was found in the drip tray near chemical storage.

Water Quality:

1. Improperly discharge from the drainage was stopped and contractor was scheduled to collect the discharge properly. (Photos 1)
2. The discharge water of grouting was accumulated near the noise enclosure. (Photo 2)

Chemical Management:

1. The oil spillage was found on the ground near the chemical storage area. (Photo 3)
2. The fuel drums were found without drip tray.

Photo 1: Improperly discharge from the drainage was stopped and contractor was scheduled to collect the discharge properly.

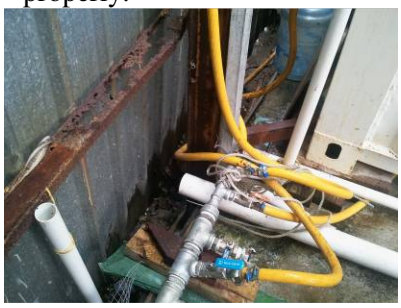
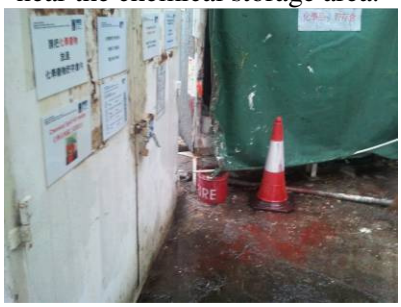


Photo 2: The discharge water of grouting was accumulated near the noise enclosure.

Photo 3: The oil spillage was found on the ground near the chemical storage area.



Wah Fu PTW

Notes / Issues Recorded On Site: **General housekeeping:** The accumulated water was found on the I-bar in the site.(Photo 1)
Corrective Actions – Mitigation Measures Implemented or Proposed (if any): **Previous Environmental Site Inspection Checklist – Report No. 110705** Nil. **Current Environmental Site Inspection Checklist – Report No. 110712** **General housekeeping:** The contractor was reminded to remove the accumulated water regularly.

Photo 1: The accumulated water was found on the I-bar in the site.

19 July 2011

Aberdeen PTW

Notes / Issues Recorded On Site:

Nil.

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

Previous Environmental Site Inspection Checklist – Report No. 110712

General:

1. The expired environmental permit was removed at the site entrance

Current Environmental Site Inspection Checklist – Report No. 110719

Nil.

Photo 1: The expired environmental permit was removed at the site entrance.

Cyberport PTW

Notes / Issues Recorded On Site:

General Housekeeping:

1. The accumulated water was found in the container since last inspection. (12th July 2011) (Photos 1 and 2)

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

Previous Environmental Site Inspection Checklist – Report No. 110712

Site Maintenance:

1. The unlabeled container in the noise enclosure was removed.(Photo 3)

Current Environmental Site Inspection Checklist – Report No. 110719

General Housekeeping:

1. The contractor was reminded to clear the accumulated water regularly and provide cover to container.

Photo 1 The accumulated water was still found in the container since last inspection

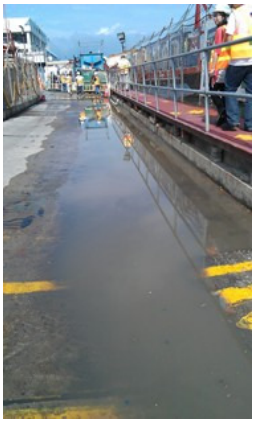
Photo 2 The accumulated water was still found in the container since last inspection

Photo 3 The unlabeled container in the noise enclosure was removed

Fung Mat Road Site

Notes / Issues Recorded On Site: **General Housekeeping:** 1. The accumulated water was found in access .(Photo 1)
Corrective Actions – Mitigation Measures Implemented or Proposed (if any):
Previous Environmental Site Inspection Checklist – Report No. 110712 Nil. **Current Environmental Site Inspection Checklist – Report No. 110719** **General Housekeeping:** 1. The contractor is suggested to clear the accumulated water and spray the larvicide oil regularly.

Photo 1 The accumulated water was found in access road



Sandy Bay

Notes / Issues Recorded On Site:

Chemical Management:

1. The fuel drums were still found without drip tray since last inspection(12th July) (Photo 1)

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

Previous Environmental Site Inspection Checklist – Report No. 110712

Water Quality:

1 . Improperly discharge from the drainage was stopped.(Photo 2)

2. The discharge water of grouting near the noise enclosure was cleared.

Chemical Management:

1. The fuel drums were still found without drip tray since last inspection(12th July) (Photo 1)
2. The oil spillage near chemical storage had been removed.(Photo 3)

Current Environmental Site Inspection Checklist – Report No. 110719

Chemical Management:

1. The contractor was reminded to provide the drip tray for fuel drum as soon as possible.

Photo 1: The fuel drums were still found without drip tray since last inspection(12th July)

Photo 2 Improperly discharge from the drainage was stopped

Photo 3: The oil spillage near chemical storage had been removed.

Wah Fu PTW

No inspection has been undertaken

27 July 2011

Aberdeen PTW

Notes / Issues Recorded On Site: **Air Quality:** 1. Cement bags were found with improperly cover (Photos 1 and 2) **Chemical Management:** 1. Some chemical were found without label near material storage container (Photos 3 and 4)
Corrective Actions – Mitigation Measures Implemented or Proposed (if any): **Previous Environmental Site Inspection Checklist – Report No. 110719** Nil. **Current Environmental Site Inspection Checklist – Report No. 110727** **Air Quality:** 1. The contractor was reminded to cover cement bags properly. **Chemical Management:** 1. The contractor was reminded to label unknown chemical.

Photos 1 and 2: Cement bags were found with improperly cover

Photos 3 and 4 Some chemical were found without label near material storage container

Cyberport PTW

Notes / Issues Recorded On Site:
Site Maintenance:

1. Water leaking from air conditioner and waste water accumulated near the EP notice board. (Photo 1).

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

Previous Environmental Site Inspection Checklist – Report No. 110719
General Housekeeping:

1. The container had been covered by canvas (Photo 2)

Current Environmental Site Inspection Checklist – Report No. 110727
General Housekeeping:

1. The contractor was reminded to clear the accumulated water near the notice board.

Photo 1 Water leaking from air conditioner and waste water accumulated near the EP notice board

Photo 2 The container had been covered by canvas.

Fung Mat Road Site

Notes / Issues Recorded On Site:
Site Management :

1. The boundary near waterfront without sand bags was found.(Photo 1)

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

Previous Environmental Site Inspection Checklist – Report No. 110719
General Housekeeping:

1. The accumulated water was cleared.

Current Environmental Site Inspection Checklist – Report No. 110727
General Housekeeping:

1. The contractor is suggested to provide sand bags for temporary baffles.

Photo 1 The boundary near waterfront without channel was found

Sandy Bay PTW

Notes / Issues Recorded On Site:

Chemical Management:

1. A chemical drum was found without drip tray chemical storage. (Photo 1)
2. Another chemical was placed improperly.(Photo 2)

General Housekeeping:

1. Leaking pipe was hung near container.(Photos 4 and 5)

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

Previous Environmental Site Inspection Checklist – Report No. 110719
Water Quality:

1. A properly drainage was provided for waste water discharge .(Photo 3)

Chemical Management:

1. The drip tray was provided to fuel drum.

Current Environmental Site Inspection Checklist – Report No. 110727
Chemical Management:

1. The contractor was reminded to provide the drip tray for chemical drum.
2. The contractor was recommended place the chemical to chemical storage.

General Housekeeping:

1. The contractor was reminded to fix the pipe and clear the accumulated water.

Photo 1: A chemical drum was found without drip tray chemical storage

Photo 2 Another chemical was placed improperly

Photo 3: A properly drainage was provided for waste water discharge.

Photos 4 and 5 : Leaking pipe was found hang near container

Wah Fu PTW

Notes / Issues Recorded On Site:

General Housekeeping:

1. The accumulated leaves were found near the site boundary.(Photo 1)

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

Previous Environmental Site Inspection Checklist – Report No. 110719

General housekeeping:

1. The accumulated water which found on the I-bar in the site was cleared.(Photo 2)

Current Environmental Site Inspection Checklist – Report No. 110727

General housekeeping:

1. The contractor was reminded to remove the accumulated leaves regularly.

Photo 1 The accumulated leaves were found near the site boundary

Photo 2 The accumulated water which found on the I-bar in the site was cleared

Contract No. DC/2007/24
Harbour Area Treatment Scheme Stage 2A
Construction of Sewage Conveyance System
From Aberdeen to Sai Ying Pun

Comments and Responses

Submission Title: Monthly EM&A Report No. 19 (EMA/023) Rev A

Comments		Designer (Atkins)'s Responses
Independent Environmental Checker **E-mail** **Date : 16th August 2011**		
1	**Page header**	
	Please amend "30 July 2011" to "31 July 2011.	Noted and revised
2	**Executive Summary, 1st table**,	
	Please revise the first monitoring date to 6 Jul 2011 of M6a in column of Noise Monitoring during Normal Daytime.	The actual monitoring date should be 4 Jul 2011. The date in Appendix H had been revised.
3	**Table 4.7, 1st line,**	
	Please amend "June 2011" to "July 2011".	Noted and revised
3	**Appendix G, Monitoring Schedule during the Reporting Period,**	
	Please update all monitoring dates for "Noise, M3, Normal Daytime" and "Noise, M3, Evening Time". Secondly, please clarify the monitoring schedule of night-time noise monitoring at M3 (as presented in Appendix H). Thirdly, please add the date "27 Jul 2011" in the 24-hr TSP monitoring events at CM_FM1 and CM_WF1a.	Noted and revised
4	**Appendix H,**	
	Please clarify that the monitoring time of holiday daytime noise monitoring at M3 (24 Jul 2011) and also indicated it the monitoring schedule in Appendix G.	Noted and revised