

JOB No.: TCS00491/09

DSD CONTRACT No.: DC/2009/08



CONSTRUCTION OF YUEN LONG SOUTH BRANCH
SEWERS AND EXPANSION OF HA TSUEN SEWAGE
PUMPING STATION

3RD QUARTERLY ENVIRONMENTAL MONITORING &
AUDIT SUMMARY REPORT –
(AUGUST 2010 TO OCTOBER 2010)

PREPARED FOR

CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG)
COMPANY LIMITED

Quality Index

Date	Reference No.	Prepared By	Certified By
25 July 2011	TCS00491/09/600/R0226v3	Nicola Hon (Environmental Consultant)	T.W. Tam (Environmental Team Leader)
			

Version	Date	Description
1	19 July 2011	First submission
2	21 July 2011	Amended against IEC's comments on 21 July 2011
3	25 July 2011	Amended against IEC's comments on 25 July 2011

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安誠工程顧問有限公司

香港灣仔
皇后大道東183號
合和中心47樓
電話: (852) 2911 2233
傳真: (852) 2805 5028

Hyder Consulting Limited

Company Number 126012
47th Floor, Hopewell Centre
183 Queen's Road East
Wan Chai, Hong Kong
Tel: (852) 2911 2233
Fax: (852) 2805 5028
hyder.hk@hyderconsulting.com
www.hyderconsulting.com



26 July 2011

By Post

Action-United Environmental Services &
Consulting
Unit A, 20/F, Gold King Industrial Building,
35-41 Tai Lin Pai Road,
Kwai Chung,
New Territories,
Hong Kong.

Your Ref:

Our Ref: EB000586-F/THW11-459

For attention of: Mr. T. W. Tam

Dear Mr. Tam,

Contract No.: DC/2009/08

**Construction of Yuen Long South Branch Sewers and Expansion of Ha Tsuen Sewage
Pumping Station**

Quarterly EM&A Report for Designated Project, August to October 2010 – IEC Verification

With reference to ET's captioned report (ET's ref.: TCS00491/09/600/R0226v3 dated 25 July 2011) received on 25 July 2011, we have no comment and hereby verify the captioned report excluding the Landscape and Visual Impact section of the report.

We request the ET to submit the separate submission of Landscape and Visual Impact section of the report as soon as possible, for the completion of the captioned report.

Should there be any queries, please feel free to contact our William Law on 2911 2511.

Yours sincerely

F.C. TSANG
Independent Environmental Checker
HYDER CONSULTING LIMITED

FCT/WL/my

EXECUTIVE SUMMARY

ES.01. This is the 3rd quarterly EM&A summary report under Environmental Permit No. EP327/2009 (hereinafter “the EP”) for the *Expansion of Ha Tsuen Sewage Pumping Station*, covering the period from **1 August 2010** to **31 October 2010** (hereinafter “Reporting Period”).

ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES

ES.02. Environmental monitoring activities under the EM&A program in the Reporting Period are summarized in the following table.

Aspects	Environmental Monitoring Parameters / Inspection	Occasions
Air Quality	1-hour TSP	96
	24-hour TSP	30
Construction Noise	Leq (30min) Daytime	32
Water Quality	Dissolved Oxygen	39
	Turbidity	39
	Suspended Solids (SS)	39
Inspection / Audit	ET Weekly Environmental Site Inspection	13

BREACHES OF ACTION/LIMIT LEVELS

ES.03. In this reporting period, monitoring results demonstrated no exceedance of environmental quality criteria recorded for 1-hr TSP and 24-hr TSP monitoring. All noise monitoring result was well below limit level but one public noise complaint was received from EPD on 25 September 2011. Also, there were 3 Limit Level exceedances recorded in water quality monitoring. The summaries of exceedances in water quality monitoring is shown below:

Month	Exceedance	DO	Turbidity	SS	Sub-total
August 2010	Action Level	0	0	0	0
	Limit Level	0	0	1	1
September 2010	Action Level	0	0	0	0
	Limit Level	0	0	0	0
October 2010	Action Level	0	0	0	0
	Limit Level	0	0	2	2
Total	Action Level	0	0	0	0
	Limit Level	0	0	3	3

ES.04. Investigation for the noise complaint and the water quality exceedances were completed and it was concluded that both cases were not related to the works under the Project. No corrective action was therefore recommended. The Contractor was reminded to ensure the noise mitigation measures were implementation as stipulated in the EM&A Manual Section 3.8.

ES.05. The results and findings for landscape and visual monitoring, as part of the EM&A programme, will be submitted in a stand-alone submission.

ENVIRONMENTAL COMPLAINT, NOTIFICATIONS OF SUMMONS AND PROSECUTIONS

ES.06. EPD received a public concern regards to the noise impact near Ha Tsuen Sewage Pumping Station between 14:00 and 15:00 on 25 September 2010. It was suspected that the noise was generated from percussive piling of the Project. As informed by the Contractor, there were no driving sheetpiles activities undertaken in the concerning period and installation of sheetpiles of the Project is carried out by vibration driving method. Therefore, it is concluded that the source of noise was not related to the works under the Project.

ES.07. No notifications of summons and successful prosecutions were received during the Reporting Period. No associated mitigation action is needed.

REPORTING CHANGES

ES.08. There are no reporting changes in this reporting period.

FUTURE KEY ISSUES

- ES.09. As dry season is approaching, special attention should be paid to the dust mitigation measures to avoid fugitive dust emissions from loose soil surface or haul road. Nevertheless, mitigation measures implemented for control the surface runoff including wheel wash facilities, covering of the loose soil surface or stockpile with tarpaulin sheet, etc., should be properly maintained to prevent any muddy or sandy runoff from the loose soil surface overflow on the site boundary; and also with construction noise and other environmental issues stipulated in the Environmental Monitoring and Audit Manual.

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1 INTRODUCTION

BACKGROUND

- 1.01 The China State Construction Engineering (Hong Kong) Limited (hereinafter “CSCE”) has been awarded by the Drainage Services Department (DSD) the Contract DC/2009/08 *Construction of Yuen Long South Branch Sewers and Expansion of Ha Tsuen Sewage Pumping Station* (the Project) in October 2009.
- 1.02 The Project involves construction of about 9km of sewers and rising mains with diameter ranging from 200-1500mm in Yuen Long South and Ha Tsuen areas, a sewage pumping station near Shui Tsui San Tsuen Road in Yuen Long South, expansion of existing Ha Tsuen Sewage Pumping Station. The site layout plan is shown in **Appendix A**.
- 1.03 The construction of expansion Ha Tsuen Sewage Pumping Station is under a statutory EIA (Register No. AEIAR-072/2003) study for “*Upgrading and expansion of San Wai Sewage Treatment Works and expansion of Ha Tsuen Pumping Station*” commissioned by the DSD. The Variation Environmental Permit No. EP-327/2009A for upgrading and expansion of Sewage Treatment Works at San Wai (excluded for the Project) and Ha Tsuen Sewage Pumping Station was again obtained by DSD in June 2010 for the relevant works.
- 1.04 According to the Section 25 of the Particular Specification (PS) and the Variation Environmental Permit No. EP-327/2009A, the scope of monitoring includes air quality, construction noise, water quality and environmental site audit. It should be undertaken in accordance with the Environmental Monitoring and Audit Manual as part of EIA report [AEIAR-072/2003] (hereafter “the EM&A Manual”) by an independent Environmental Team (ET).
- 1.05 This is the 3rd Quarterly EM&A Summary Report which undertaken as part of the EM&A programme under Environmental Permit No. EP-327/2009A for the Expansion Ha Tsuen Sewage Pumping Station, covering the period from **1 August to 31 October 2010**.

REPORT STRUCTURE

- 1.06 This Report is structured as follows:

Section 1	Introduction
Section 2	Project Organization and Construction Progress
Section 3	Summary of Impact Environmental Monitoring and Audit Requirements
Section 4	Monitoring Results and Breaches of Environmental Quality Criteria
Section 5	Waste Management
Section 6	Site Inspection
Section 7	Non-compliance, Complaints, Notifications of Summons and Successful Prosecutions
Section 8	Implementation Status of Mitigation Measures
Section 9	Conclusions and Recommendations

2 PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS

PROJECT ORGANIZATION AND MANAGEMENT STRUCTURE

- 2.01 Organization structure and contact details of the Contractor and relevant parties with respect to the on-site environmental management are shown in [Appendix B](#).

WORKS UNDERTAKEN DURING THE REPORTING PERIOD

- 2.02 The master tentative construction program is enclosed in [Appendix C](#). Also, the major construction activities undertaken in this reporting period are listed below:

- | | |
|----------------|--|
| August 2010 | • Installation Pre-bored H-pile |
| September 2010 | • Installation of temporary shoring system |
| | • Excavation |
| October 2010 | • Installation of temporary shoring system |
| | • Excavation |

SUMMARY OF ENVIRONMENTAL SUBMISSIONS

- 2.03 Summary of the relevant permits, licences, and/or notifications on environmental protection for this Project in the Reporting Period is presented in [Table 2-1](#).

Table 2-1 Status of Environmental Licenses and Permits

Item	Description	License/Permit Status
1	Environmental Permit (EP-329/2009/A)	Update on 1 June 2010
2	Air pollution Control (Construction Dust)	In progress
3	Chemical waste Producer Registration Registration No. 5213-511-C3570-01	Issued on 13 Nov 2009
4	Water Pollution Control Ordinance (Discharge License) License No. WT00005671-2009	Issued on 12 Jan 2010 Expiry date: 31 Jan 2015
5	Billing Account for Disposal of Construction Waste (Account Number: 700947)	Issued on 7 October 2009

- 2.04 The baseline monitoring report - *Expansion of Ha Tsuen Sewage Pumping Station* (Ref: TCS00491/09/600/R0023v6) had been verified by IEC and endorsed by EPD.

3 SUMMARY OF IMPACT MONITORING REQUIREMENTS

MONITORING PARAMETERS

- 3.01 According to the *EM&A Manual*, the environmental aspect implemented by ET, including air quality, construction noise and water quality, also the landscape and visual impact to be monitored by a competent landscape architect. The monitoring parameters are summarized in *Table 3-1*.

Table 3-1 Summary of Monitoring Parameters

Environmental Aspect	Parameters
Air Quality	<ul style="list-style-type: none"> 1-hour Total Suspended Particulate (hereinafter '1-hr TSP'); and 24-hour Total Suspended Particulate (hereinafter '24-hr TSP').
Construction Noise	<ul style="list-style-type: none"> A-weighted equivalent continuous sound pressure level (30min) (hereinafter 'Leq(30min)' during the normal working hours; and A-weighted equivalent continuous sound pressure level (5min) (hereinafter 'Leq(5min)' for construction work during the restricted hours.
Water Quality – Local Stream Course	<ul style="list-style-type: none"> In Situ Measurement - Dissolved Oxygen (DO) and Turbidity Laboratory Analysis - Suspended Solids (SS)
Water Quality – Effluent Discharge	<ul style="list-style-type: none"> In Situ Measurement - pH value Laboratory Analysis - SS and Chemical oxygen demand (COD)
Landscape and Visual Resources	<ul style="list-style-type: none"> Vegetation survey undertaken on an "area" basis to identify representative types and species composition; Assessment of landscape character; and Tree survey report. The inspection findings will be submitted separately.

MONITORING LOCATIONS

Air Quality

- 3.02 The designated monitoring location Yeung Chun Pui Care & Attention Home located at Sha Chau Lei Road has been identified, but the premise was granted by CEDD existing project CV/2008/03 for air quality monitoring. Also, the HVS installation at the other one designated air monitoring station Tin Shing Court, the premises is refused by the incorporated owners. The alternative location Ho Tak Sum Primary School as one sensitive receiver mentioned in the EIA Report (Register No. AEIAR-072/2003) is proposed to be the replacement to undertake air quality monitoring during the expansion works of Ha Tsuen Sewage Pumping Station in accordance with the EM&A Manual Clauses 2.2.1.20. Simultaneously, air monitoring at the designated location Yeung Chun Pui Care & Attention Home is proposed to perform. The proposal and recommendation is agreed by IEC and as endorsed by EPD. The monitoring stations are detailed to list in *Table 3-2* and illustrated in *Appendix D*.

Table 3-2 Air Quality Monitoring Station under the Project Proposed in the EM&A Manual

Monitoring Location ID	Identified Address	Remarks
AM1	Ho Tak Sum Primary School	Replace the Designated Monitoring Station Tin Shing Court
AM2	Yeung Chun Pui Care & Attention Home	Designated in the EM&A Manual

Construction Noise

- 3.03 Similarly to the air monitoring, the construction noise monitoring stations undertaken for EM&A programme was agreed by IEC and as endorsed by EPD. The detailed monitoring stations are listed in *Table 3-3* and shown in *Appendix D*.

Table 3-3 Construction Noise Monitoring Station under the Project Proposed in the EM&A Manual

Monitoring Location ID	Identified Address	Remarks
NM1	Ho Tak Sum Primary School	Replace the Designated Monitoring Station Tin Shing Court
NM2	Yeung Chun Pui Care & Attention Home	Designated in the EM&A Manual

Water Quality

- 3.04 One designated location of a local stream course, Tin Shui Wai Nullah, is recommended to carry out water quality monitoring in accordance with the EM&A Manual. The designated sampling location R1 is located at the midpoint between two pedestrian flyovers athwart Tin Shui Wai Nullah, which are 320 meters apart, there is technical difficulty and safety is concerned. So, a new sampling point located at approximately 160m upstream of the R1 (hereinafter as R1b) was therefore proposed for the local stream impact monitoring and has been verified by IEC and no further comments by EPD.
- 3.05 The detailed monitoring station is listed in **Table 3-4** and shown in **Appendix D**.

Table 3-4 Local Stream Water Quality Monitoring Station

Monitoring Location ID	Identified Address	Remarks
R1b	The athwart Tin Shui Wai Nullah pedestrian flyover	About 160 meters upstream from the designated location as stipulated in the EM&A Manual. Also, it is closer to the existing Ha Tsuen Pumping Station

Landscape and Visual

- 3.06 The selected route and area, frequency and requirements of landscape & visual monitoring is proposed by a competent landscape architect.

MONITORING FREQUENCY

- 3.07 The impact monitoring frequency and duration for air quality, construction noise, water quality of local stream course, and landscape & visual are summarized below.

Air Quality Monitoring

Parameters: 1-hour TSP and 24-hour TSP.

Frequency: Once every six days for 24-hour TSP and three times every six days for 1-hour TSP.

Duration: Throughout the construction period.

Noise Monitoring

Parameters: One set of Leq(30min) as 6 consecutive Leq(5min) between 0700-1900 hours on normal weekdays.

Leq (5min), L10 and L90 during the construction undertaken during Restricted Hours (from 19:00 to 07:00 hours of the following day and full day of public holiday and Sunday)

Frequency: Once every six days during 0700-1900 hours on normal weekdays. Restricted Hour monitoring should depend on conditions stipulated in Construction Noise Permit.

Duration: Throughout the construction period.

Water Quality Monitoring of Local Stream Course

Parameters: DO, Turbidity and SS.

Frequency: 3 days per week.

Depth: mid-depth

Duration: Throughout the construction period and the interval between 2 sets of monitoring is not less than 36 hours

Landscape and Visual Monitoring

Parameters: Site inspection with broad scope of audit as listed in the EM&A Manuals

Frequency: Once every 2 weeks

Duration: Throughout the construction period

Site inspection and Audit

Frequency: Once per week.

Duration: Throughout the construction period.

ENVIRONMENTAL QUALITY CRITERIA

- 3.08 The environmental quality criteria i.e. Action and Limit levels (herein after ‘A/L levels’) are listed in Table 3-5, 3-6 and 3-7 below.

Table 3-5 Action and Limit Levels for Air Quality Monitoring

Monitoring Location	Action Level ($\mu\text{g}/\text{m}^3$)		Limit Level ($\mu\text{g}/\text{m}^3$)	
	1-hour	24-hour	1-hour	24-hour
AM1	305	162	> 500	> 260
AM2	310	190	> 500	> 260

Table 3-6 Action and Limit Levels for Construction Noise

Monitoring Location	Action Level	Limit Level in dB(A)
	0700-1900 hrs on normal weekdays	
NM1	When one or more documented complaints are received	70 dB(A) of Leq(30min) during normal hours from 0700 to 1900 hours on normal weekdays, reduced to 65 dB(A) during school examination periods
NM2		70 dB(A) of Leq(30min) during normal hours from 0700 to 1900 hours on normal weekdays

Note: *Reduces to 65 dB(A) during the school examination periods.

Table 3-7 Action and Limit Levels for a Local Stream Water Quality Monitoring (R1b)

Parameter	Action Level	Limit Level
DO (mg/L)	4.6	4 mg/L or 40% saturation at 15°C
Turbidity (NTU)	15.6	16.2
SS (mg/L)	31.5	31.9

ENVIRONMENTAL MITIGATION MEASURES

- 3.09 Environmental Mitigation Implementation Schedule (EMIS) such as the construction dust, noise, wastewater and waste management shall be performed in accordance with the project EM&A Manual Appendix A requirements.

4 MONITORING RESULTS AND BREACHES OF ENVIRONMENTAL QUALITY CRITERIA

AIR QUALITY MONITORING

- 4.01 Monitoring results and breaches A/L levels of air quality during the Reporting Period are tabulated in *Tables 4-1* and *4-2* and the relevant graphical plots are presented in *Appendix E*.

Table 4-1 Summary of Air Quality Monitoring Results, (µg/m³)

Date	24-hour TSP		Date	1-hour TSP					
	AM1	AM2		AM1			AM2		
				1 st hour	2 nd hour	3 rd hour	1 st hour	2 nd hour	3 rd hour
7-Aug-10	7	20	2-Aug-10	43	69	56	45	71	58
12-Aug-10	18	20	7-Aug-10	46	69	58	49	70	59
18-Aug-10	17	19	13-Aug-10	38	59	48	36	59	47
24-Aug-10	20	31	19-Aug-10	27	61	45	31	76	52
30-Aug-10	64	84	25-Aug-10	26	64	39	29	67	42
4-Sep-10	72	60	31-Aug-10	46	98	73	50	108	81
10-Sep-10	29	21	6-Sep-10	39	88	69	42	93	71
16-Sep-10	14	13	11-Sep-10	39	59	48	48	67	55
21-Sep-10	45	30	17-Sep-10	51	76	63	53	79	67
27-Sep-10	25	24	22-Sep-10	45	76	55	48	81	60
2-Oct-10	30	40	28-Sep-10	48	81	66	52	87	70
8-Oct-10	60	49	4-Oct-10	49	75	68	52	86	72
14-Oct-10	37	44	9-Oct-10	59	76	63	61	82	69
20-Oct-10	54	59	15-Oct-10	67	96	74	67	95	76
26-Oct-10	74	138	21-Oct-10	62	91	70	58	89	68
			27-Oct-10	62	85	70	70	94	76
Average (Range)	37.7 (7-74)	43.5 (13-138)	Average (Range)	61.1 (26-98)			65.0 (29-108)		

Table 4-2 Summaries of Breaches of Air Quality A/L Levels

Location	Exceedance	1-Hour TSP	24-Hour TSP	Total
AM1	Action Level	0	0	0
	Limit Level	0	0	0
AM2	Action Level	0	0	0
	Limit Level	0	0	0

- 4.02 During the Reporting Period, no Action/Limit Level exceedance in air quality monitoring was recorded at both Locations AM1 and AM2. All the 1-hr TSP and 24-hr TSP results were well below the corresponding A/L level and no corrective action was therefore required.

CONSTRUCTION NOISE MONITORING

- 4.03 Monitoring results and breaches A/L levels of construction noise during the Reporting Period are tabulated in *Tables 4-3* and *4-4* and the relevant graphical plots are presented in *Appendix E*.

Table 4-3 Summary of Construction Noise Monitoring Results (Leq30, dB(A))

Date	(*) NM1	(*) NM2
2-Aug-10	65.3	67.6
7-Aug-10	64.9	67.9
13-Aug-10	67.1	65.2
19-Aug-10	65.6	69.9
25-Aug-10	65.4	66.3
31-Aug-10	64.9	66.8
6-Sep-10	70.0	69.5
11-Sep-10	66.3	69.9
17-Sep-10	65.3	65.0
22-Sep-10	69.2	65.0

Date	(*) NM1	(*) NM2
28-Sep-10	69.9	63.3
4-Oct-10	63.9	65.8
9-Oct-10	64.0	66.2
15-Oct-10	68.8	66.2
21-Oct-10	69.9	67.2
27-Oct-10	67.4	69.9

Remarks: (*)A façade correction of +3dB(A) has been added according to acoustical principles and EPD guidelines.

Table 4-4 Summaries of Breaches of Construction Noise A/L Levels

Station	Limit Level	Action Level	Received Date
NM1	0	Noise complaint	25 September 2010
NM2	0		

4.04 As shown in **Table 4-3**, all the measured noise values are fluctuated below the Limit level. However, one public concern was stated that noise was suspected to generate from percussive piling between 14:00 and 15:00 at Ha Tsuen Pumping Station on 25 September 2010, which was received by EPD. According to the site information provided by the Contractor, there were no driving sheetpiles activities undertaken in the concerning time period. Also, vibration driving method is used for sheetpiles installation for this Project. Therefore, it was concluded that the source of noise should not be related to the works under the Project.

4.05 As the public concern was not related to work for the Project, no exceedance of Limit level was recorded during the Reporting Period. No corrective action was recommended. Nevertheless, the Contractor was reminded to ensure the implementation of noise mitigation measures as stipulated in the EM&A Manual Section 3.8.

WATER QUALITY MONITORING – LOCAL STREAM COURSE

4.06 In this Reporting Period, a total of 39 events of local stream course monitoring were undertaken. Statistical analyses for the monitoring results are summarized in **Table 4-5** and the relevant graphical plots are presented in **Appendix E**.

Table 4-5 Statistics of the Monitoring Results

Statistics	DO (mg/L)	Turbidity (NTU)	SS (mg/L)
Minimum	9.5	8.7	22.1
Average	3.9	4.2	2.0
Maximum	17.8	26.9	52.0

4.07 Breaches of water quality A/L levels and statistical analysis of compliance for the water quality monitoring results are summarized in **Table 4-6**.

Table 4-5 Summaries of Breaches of the Existing Water Quality A/L Levels

Construction Month	No of sample analysis in each Parameter	Exceedance	DO	Turbidity	SS	Total Exceedances in the Month
Aug 2010	13	Action Level	0	0	0	0
		Limit Level	0	0	1	1
		Sub-Total	0	0	1	1
Sep 2010	13	Action Level	0	0	0	0
		Limit Level	0	0	0	0
		Sub-Total	0	0	0	0
Oct 2010	13	Action Level	0	0	0	0
		Limit Level	0	0	2	2
		Sub-Total	0	0	2	2

Construction Month	No of sample analysis in each Parameter	Exceedance	DO	Turbidity	SS	Total Exceedances in the Month
Total	39	Action Level	0	0	0	0
		Limit Level	0	0	3	3
Percentage of Exceedance in the Quarterly Month			0.0%	0.0%	7.7%	2.6%

- 4.08 As shown in **Tables 4-5**, 3 limit level exceedances of Suspended Solids were recorded in water quality during the Reporting Period. The NOEs and the associated investigation reports were issued upon confirmation of the results and construction information.
- 4.09 For exceedance on 11 August 2010, investigation revealed that pre-bored H-pile installation was carried out under the Project. However, muddy water generated from the pre-bored H pile installation was recycled and reused on site and no discharge was observed.
- 4.10 For exceedance on 23 and 27 October 2010, investigation revealed that only temporary shoring system and excavation of construction activities were carried out under the Project. In addition, all wastewater come from site was transferred to the de-silting system then discharged to public sewer system.
- 4.11 In viewing that Tin Shui Wai Nullah is sensitive by the seasonal change and large fluctuation of values were obtained during the baseline monitoring. It was concluded that water quality exceedances were not due to the Project. No corrective action was therefore recommended.

OTHER MONITORING AND AUDIT

Landscape and Visual

- 4.12 Regular landscape and visual audit shall undertake twice a month by the landscape architect. Due to monitoring and audit works for landscaping and visual as part of the EM&A programme was undertaken by others. Hence, no monitoring and audit is presented in this Quarterly EM&A Summary Report.
- 4.13 During the regular weekly site inspection, it was observed that all the retained and transplanted trees were well protected by site hoarding and fencing erection and relevant Tree Report has been described that all the retained and transplanted trees were in good condition

5 WASTE MANAGEMENT

- 5.01 Waste management was performed by an on-site Environmental Officer or an Environmental Supervisor from time to time. A Billing Account (The account number 700947) under the **Waste Disposal (Charges for Disposal of Construction Waste) Regulation** has already been assigned on 7 October 2009, a discharge license No. WT00005671-2009 under Section 20 of the **Water Pollution Control Ordinance** has been issued. CSCE has also registered as a Chemical Waste Producer with EPD under the Waste Disposal (Chemical Waste) (General) Regulation and the Waste Producer Number assigned is WPN: 5213-511-C3570-01 dated 13 November 2009.

RECORDS OF WASTE QUANTITIES

- 5.02 All types of waste arising from the construction work are classified into the following:
- Construction & Demolition (C&D) Material;
 - Chemical Waste;
 - General Refuse; and
 - Excavated Soil.
- 5.03 Whenever possible, materials were reused on-site as far as practicable. The quantities of waste for disposal in the Reporting Period are summarized in **Tables 5-1** and **5-2**. The Monthly Summary Waste Flow Table provided by the Contractor can be found at the relevant EM&A monthly report.

Table 5-1 Summary of Quantities of Inert C&D Materials

Type of Waste	Quantity				Disposal Location
	Aug 10	Sep 10	Oct 10	Total	
C&D Materials (Inert) (m ³)	0	0	0	0	-
Reused in this Contract (Inert) (m ³)	0	0	0	0	-
Reused in other Projects (Inert) (m ³)	0	0	0	0	-
Disposal as Public Fill (Inert) (m ³)	507	640	1,086	2,233	Tuen Mun Area 38

Table 5-2 Summary of Quantities of C&D Wastes

Type of Waste	Quantity				Disposal Location
	Aug 10	Sep 10	Oct 10	Total	
Recycled Metal (kg)	0	0	0	0	-
Recycled Paper/Cardboard Packing (kg)	0	0	0	0	-
Recycled Plastic (kg)	0	0	0	0	-
Chemical Wastes (kg)	0	0	0	0	--
General Refuses (m ³)	3	99	5	107	NENT Landfill

- 5.04 There was no site effluent or surface runoff discharged in the Reporting Period. The Monthly Summary Waste Flow Table provided by the Contractor can be found from the relevant EM&A monthly report.

6 SITE INSPECTIONS

- 6.01 According to the Environmental Monitoring and Audit Manual, regular environmental site inspections had been carried out by ET joined with the Contractor and ER to confirm the environmental performance. During the Reporting Period, 13 events of the joint site inspection was undertaken to evaluate the site environmental performance. No non-compliance was noted but 11 observations were recorded during the site inspections within the Reporting Period. The summarized the findings are presented in **Table 6-1** and the site inspection checklists can be found in relevant EM&A monthly report.

Table 6-1 Site Reminders/Observations Found in the Reporting Period

Date	Findings / Deficiencies
3 August 2010	<ul style="list-style-type: none"> C&D waste scattered was observed, housekeeping should be improved to maintain the site clean and tidy.
10 August 2010	<ul style="list-style-type: none"> Nil
17 August 2010	<ul style="list-style-type: none"> The general refuse in the channel should be removed and implementation of de-silting tank should be carried out. As a general reminder, the site area should be kept tidy or no runoff to nearby U channel around the station.
24 August 2010	<ul style="list-style-type: none"> Stagnant water was observed on the site, the contractor was reminded to remove and prevent muddy water leakage to surrounding U-channel.
31 August 2010	<ul style="list-style-type: none"> The contractor was reminded to place the chemical container with trip tray and sheltered storage area
7 September 2010	<ul style="list-style-type: none"> The stagnant water accumulated in the channel should be drained away or applied larvidical oil to prevent mosquitoes breeding.
14 September 2010	<ul style="list-style-type: none"> The overgrown weeds along the site access should be removed to minimize mosquito breeding The contractor was reminded to tidy the un-used storage area and remove the surrounding weeds near site exit to improve the house-keeping for the site.
21 September 2010	<ul style="list-style-type: none"> Nil
30 September 2010	<ul style="list-style-type: none"> Stagnant water cumulated inside the I-beam was observed, the contractor was reminded to clean to prevent mosquito breeding.
5 October 2010	<ul style="list-style-type: none"> Nil
12 October 2010	<ul style="list-style-type: none"> Nil
21 October 2010	<ul style="list-style-type: none"> Turbidity water discharge from the sedimentation tank observed, the Contractor should improve the de-silting facility to prevent turbidity water discharged and meet the discharge licence requirement.
26 October 2010	<ul style="list-style-type: none"> C&D waste cumulated at the site area was observed, the contractor was reminded to clean to maintain the site clean and tidy.

- 6.02 In General, it is reminded that good housekeeping practice should be maintained. During wet season, implement water mitigation measures to eliminate any accumulation of stagnant water on site is also stressed. Overall, the environmental performance of the Project was considered satisfactory.

7 NON-COMPLIANCE, COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

NON-COMPLIANCE

- 7.01 Apart from the exceedances of water quality summarized in *Table 4-6*, no non-compliance or deficiency was identified during regular site inspection and environmental audit. No associated remedial actions were recommended.

ENVIRONMENTAL COMPLAINT

- 7.02 In Reporting Period, one verbal public concern regards to noise was received by EPD on 25 September 2010. No documented noise, air quality or water quality was received by the Contractor or ER. To investigation the public concern of noise, conclusion that it was not related the work carry out at Ha Tsuen Pumping Station. Hence, no associated mitigation action advised. The statistical summary table of environmental complaint is presented in *Table 7-1*.

Table 7-1 Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 31 August 2010	0	0	-
1 – 30 September 2010	1	1	Noise (1)
1 – 31 October 2010	0	1	-

NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

- 7.03 No notifications of summons and successful prosecutions were recorded during the Reporting Period. No associated remedial actions were recommended. The statistical summary table of environmental summons and successful prosecution are presented in *Tables 7-2 and 7-3*.

Table 7-2 Statistical Summary of Environmental Summons

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 31 August 2010	0	0	NA
1 – 30 September 2010	0	0	NA
1 – 31 October 2010	0	0	NA

Table 7-3 Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 31 August 2010	0	0	NA
1 – 30 September 2010	0	0	NA
1 – 31 October 2010	0	0	NA

8 IMPLEMENTATION STATUS OF MITIGATION MEASURES

- 8.01 The environmental mitigation measures that recommended in the Environmental Monitoring and Audit Manual covered the issues of dust, noise and waste.
- 8.02 The Contractor had been implementing the required environmental mitigation measures according to the Environmental Monitoring and Audit Manual subject to the site condition. Environmental mitigation measures generally implemented during the Reporting Period are summarized in [Table 8-1](#).

Table 8-1 Environmental Mitigation Measures Implementation in the Reporting Period

Issues	Environmental Mitigation Measures
Water Quality	<ul style="list-style-type: none"> Wastewater were appropriately treated by treatment facilities; Drainage channels were provided to convey run-off into the treatment facilities; Drainage systems were regularly and adequately maintained. De-silting facility was provided to treat the discharged water; also the treated water is reused for spraying the road surface; Exposed stockpiles and exposed soil surfaces were covered with tarpaulin or impervious sheets to minimise dust emission; The stockpiles of materials were placed in the locations away from the drainage channel so as to avoid releasing materials into the channel; Wheel washing facilities should has been provided at site exits to ensure that earth, mud and debris would not be carried out of the works areas by vehicles; Provision of site drainage systems and treatment facilities would be required to minimize the water pollution; A discharge licence was applied from EPD for discharging effluent from the construction site; A licensed waste collector have been applied from EPD; Illegal disposal of chemicals should be strictly prohibited; and Registration as a chemical waste producer have been applied from EPD
Air Quality	<ul style="list-style-type: none"> Regular watering to reduce dust emissions from all exposed site surface, particularly during dry weather; Frequent watering for particularly dusty construction areas and areas close to air sensitive receivers; Cover all excavated or stockpile of dusty material by impervious sheeting or sprayed with water to maintain the entire surface wet; Public roads around the site entrance/exit had been kept clean and free from dust; Tarpaulin covering of any dusty materials on a vehicle leaving the site; Spanker of water spray system is provided at haul road to reduce dust emissions during the vehicles passing through the haul road' The vehicle speed within the site is limited to 5km/hr; Wheel washing facilities have been provided at the site exit
Noise	<ul style="list-style-type: none"> Good site practices to limit noise emissions at the sources; Use of quite plant and working methods according to EP-329/2009; Use of site hoarding with noise barriers to screen noise at ground level of NSRs; Use of shrouds/temporary noise barriers to screen noise from relatively static PMEs according to EP-329/2009 Use of temporary noise barrier with surface density 7kg/m2 to be assumed that the noise reduction is 10 dB(A) for stable plants and 5dB(A) for movable plant in accordance with approved EIA Report Appendix 4A Table 4A3.2; Idle equipment are turned off or throttled down; No construction works shall be undertaken during school examination period in the Ha Tsuen Pumping Station according to EP-329/2009; and Alternative use of plant items within one worksite, where practicable.

Issues	Environmental Mitigation Measures
Waste and Chemical Management	<ul style="list-style-type: none"> Excavated material should be reused on site as far as possible to minimize off-site disposal. Scrap metals or abandoned equipment should be recycled if possible; Waste arising should be kept to a minimum and be handled, transported and disposed of in a suitable manner; The Contractor should adopt a trip ticket system for the disposal of C&D materials to any designed public filling facility and/or landfill; and Chemical waste shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes. 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; To encourage collection of aluminium cans by individual collectors, separate labelled bins should be provided to segregate this waste from other general refuse generated by the workforce; Any unused chemicals or those with remaining functional capacity should be recycled; Prior to disposal of C&D waste, it is recommended that wood, steel and other metals be separated for re-use and/or recycling and inert waste utilised as fill material to minimise the quantity of waste to be disposed of to landfill; Proper storage and site practices to minimise the potential for damage or contamination of construction materials; and Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.
Landscape and Visual	The landscape and visual impacts monitoring results and findings will be presented and submitted in the stand-alone document.
General	<ul style="list-style-type: none"> The site was generally kept tidy and clean.

9 CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

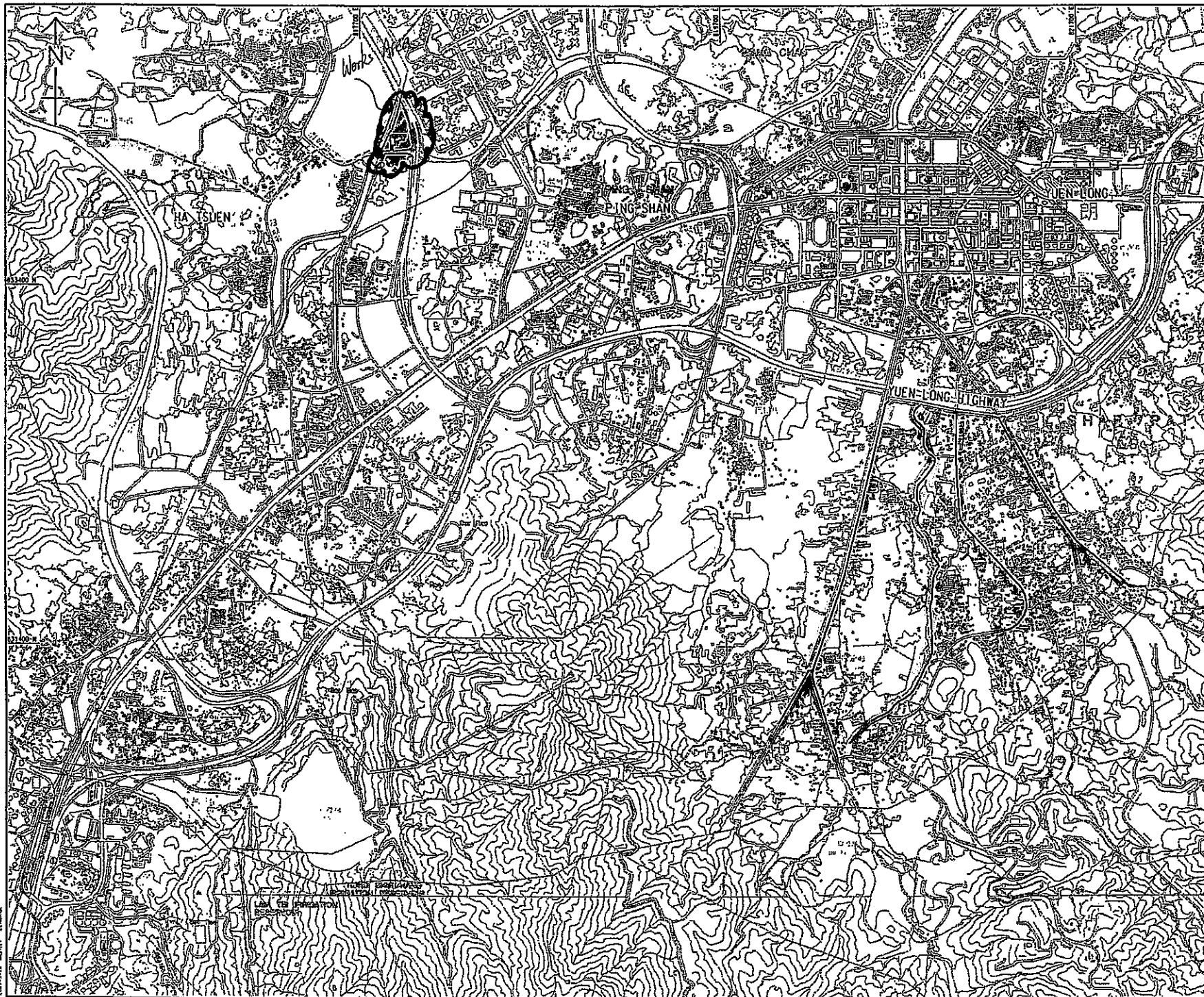
- 9.01 This is the 3rd quarterly EM&A summary report under Environmental Permit No.EP327/2009 for the *Expansion of Ha Tsuen Sewage Pumping Station*, covering the period from **1 August to 31 October 2010**.
- 9.02 In this reporting period, monitoring results demonstrated no exceedance of environmental quality criteria recorded for 1-hr TSP and 24-hr TSP monitoring. All noise monitoring result was well below limit level but one public noise complaint was received from EPD on 25 September 2011. Also, there were 3 Limit Level exceedances recorded in water quality monitoring. Investigation for the noise complaint and the water quality exceedances were completed and it was concluded that both cases were not related to the works under the Project. No corrective action was therefore recommended.
- 9.03 The monitoring and audit works for landscaping and visual was undertaken by others, hence no result is presented in this summary Report. The landscape and visual impacts monitoring findings will be submitted as a stand-alone document separately. During the regular weekly site inspection, it was observed that all the retained and transplanted trees were well protected by site hoarding and fencing erection and relevant Tree Report has been described that all the retained and transplanted trees were in good condition.
- 9.04 A total of 13 occasions of joint site inspection was undertaken to evaluate the site environmental performance. No non-compliance was noted but 11 observations were recorded during the site inspections within the Reporting Period.
- 9.05 No notifications of summons and successful prosecutions were received during the Reporting Period. However, one verbal public concern regards to noise was received by EPD on 25 September 2010. Investigation of noise concern was completed and it was concluded not related the Project.
- 9.06 No adverse environmental impacts were observed during the weekly site inspection and environmental audit of the Reporting Period, indicating the implemented mitigation measures for air quality, construction noise and water quality were effective. Minor deficiencies found in the weekly site inspection were in general rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.
- 9.07 No site inspection was undertaken by EPD, the Agriculture, Fisheries and Conservation Department (AFCD) and Leisure and Cultural Services Department (LCSD) in this Reporting Period.

RECOMMENDATIONS

- 9.08 As dry season is approaching, special attention should be paid to the dust mitigation measures to avoid fugitive dust emissions from loose soil surface or haul road. Nevertheless, mitigation measures implemented for control the surface runoff including wheel wash facilities, covering of the loose soil surface or stockpile with tarpaulin sheet, etc., should be properly maintained to prevent any muddy or sandy runoff from the loose soil surface overflow on the site boundary; and also with construction noise and other environmental issues stipulated in the Environmental Monitoring and Audit Manual.
- 9.09 To control the site performance on waste management, the Contractor shall ensure that all solid and liquid waste management works are fully in compliance with the relevant license/permit requirements, such as the effluent discharge license and the chemical waste producer registration. The Contractor is also reminded to implement the recommended environmental mitigation measures according to the Environmental Monitoring and Audit Manual.

Appendix A

Site Layout Plan



LEGEND:

- SEWERAGE PIPE
- RISING MAIN
- SEWER PUMPING STATION

1	TENDER DRAWING	05/01/01	05-09
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D DRAINAGE SERVICES DEPARTMENT,
THE GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION

YUEN LONG AND KAM TIN SEWERAGE
AND SEWAGE DISPOSAL -
CONSTRUCTION OF YUEN LONG SOUTH
BRANCH SEWERS AND EXPANSION OF
HA TSUEN SEWER PUMPING STATION

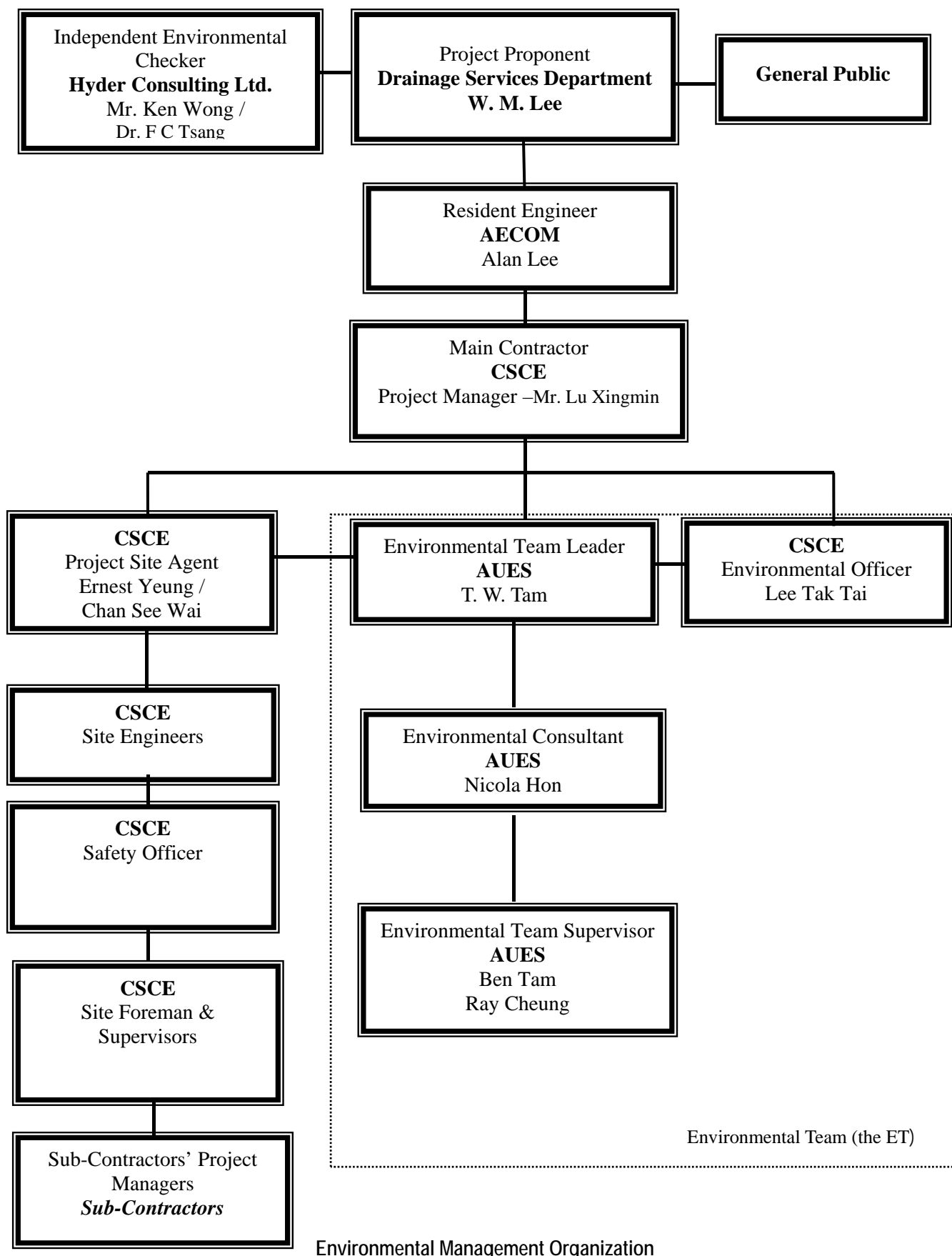
LOCATION PLAN

AECOM

DRGNO.	60022017/C1/1001
SCALE	AS SHOWN
DATE	05/09/08
BY	141765
CHECKED BY	141765
APPROVED BY	141765
COPYRIGHT RESERVED	

Appendix B

On-site environmental management



Contact Details of Key Personnel

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
DSD	Employer	Mr. W. M. Lee	--	2827-8700
AECOM	Engineer's Representative	Mr. Alan Lee	9706 9568	2472 0132
Hyder	Independent Environmental Checker	Mr. Ken Wong / Dr. F C Tsang	2911 2730	2805 5028
CSCE	Project Manager	Mr. Lu Xingmin	2472 0113	2472-0229
CSCE	Site Agent	Mr. Ernest Yeung / Chan See Wai	2472 0113	2472-0229
CSCE	Site Engineer	Mr. Poon Kwong Keung	2472 0113	2472-0229
CSCE	Environmental Officer	Mr. Lee Tak Tai	2472 0113	2472-0229
CSCE	Safety Officer	Mr. Ng Ka Po	2472 0113	2472-0229
AUES	Environmental Team Leader	Mr. T. W. Tam	2959-6059	2959-6079
AUES	Environmental Consultant	Ms. Nicola Hon	2959-6059	2959-6079
AUES	Assistance Environmental Consultant	Mr. Ray Cheung	2959-6059	2959-6079
AUES	Team Supervisor	Mr. Ben Tam	2959-6059	2959-6079

Legend:

DSD (Employer) – Drainage Services Department

AECOM (Engineer) – AECOM

CSCE (Main Contractor) – China State Construction Engineering (Hong Kong) Ltd

Hyder (IEC) – Hyder Consulting Limited






AUES (ET) – Action-United Environmental Services & Consulting

Appendix C

Master construction program

Contract No. DC/2009/08
Construction of Yuen Long South Branch Sewers and Expansion of HTS Pumping Station

[illegible]

Start date	17SEP09	 Early bar
Finish date	02JUL15	 Critical bar
Run date	05FEB10	 Summary bar
Project name	WP11	
Page number	1A	
c Primavera Systems, Inc.		 Start milestone point
		 Finish milestone point

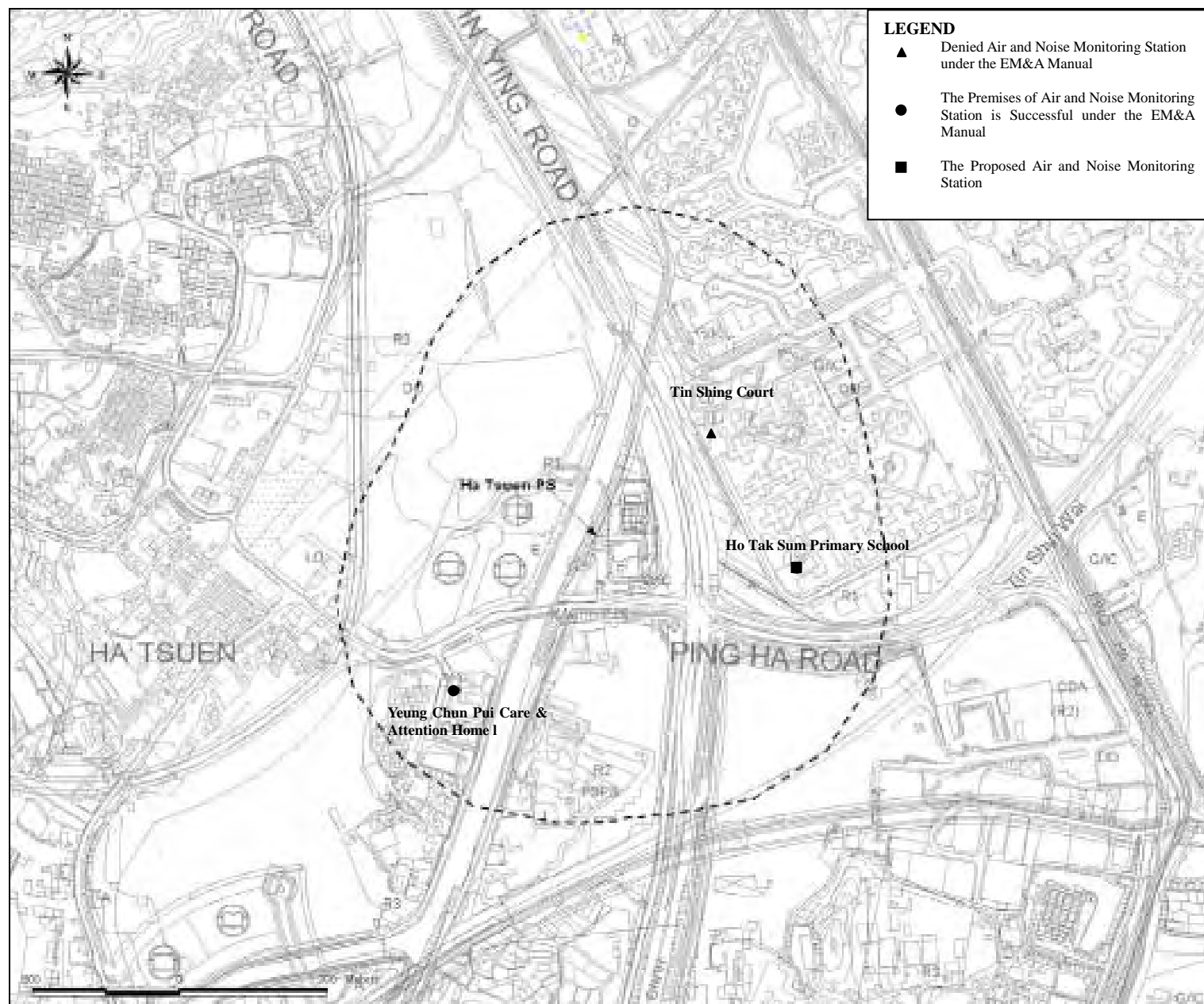
Initial Works Programme - Rev 02 (Ha Tsuen Area)



Appendix D

Monitoring Location of EM&A Programme

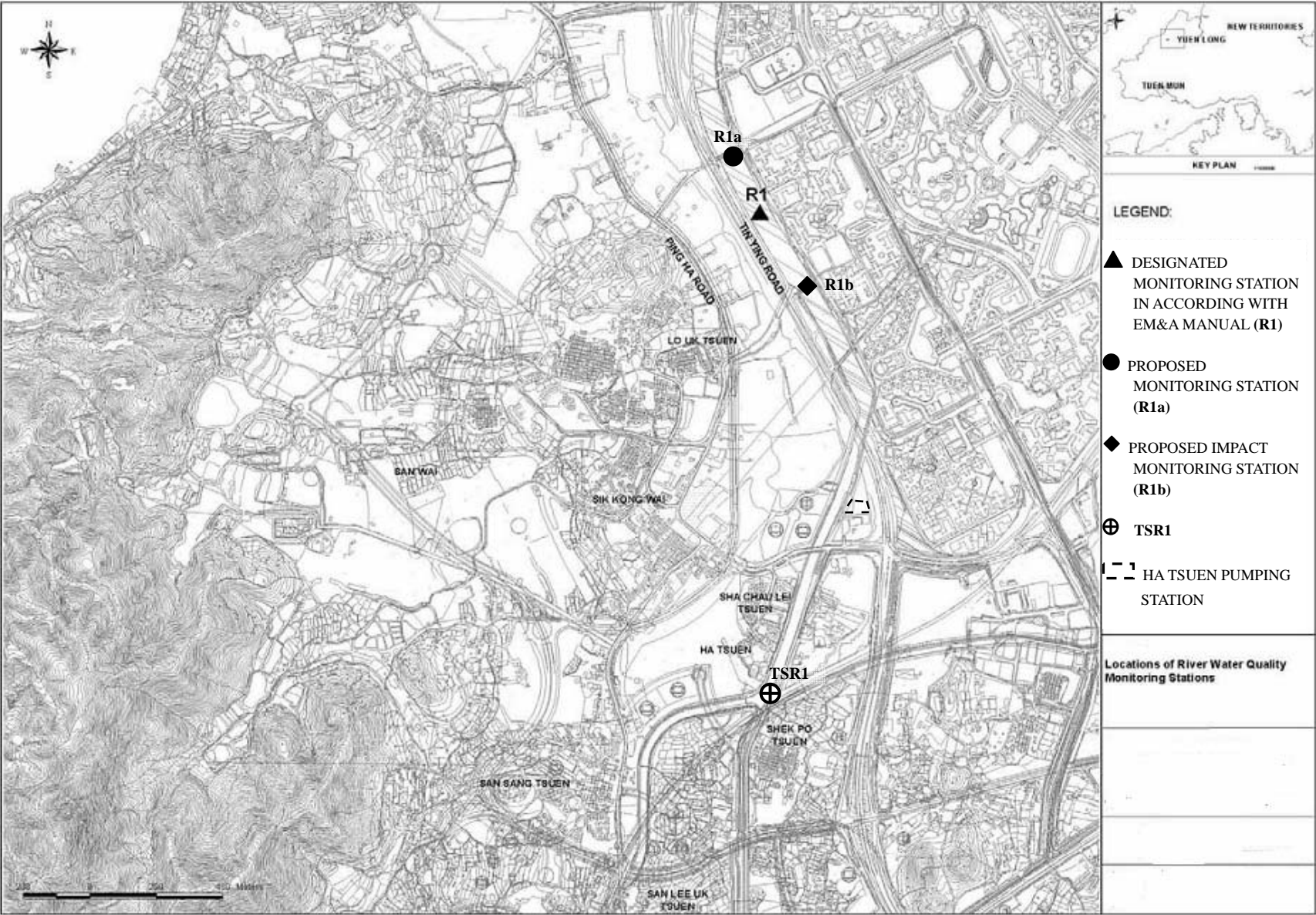
Proposed Air and Noise Monitoring Station



**DSD Contract No. DC/2009/08 – Construction of Yuen Long South Branch Sewers
And Extension of Ha Tsuen Sewage Pumping Station**

Proposed Water Quality Monitoring Location

AUES

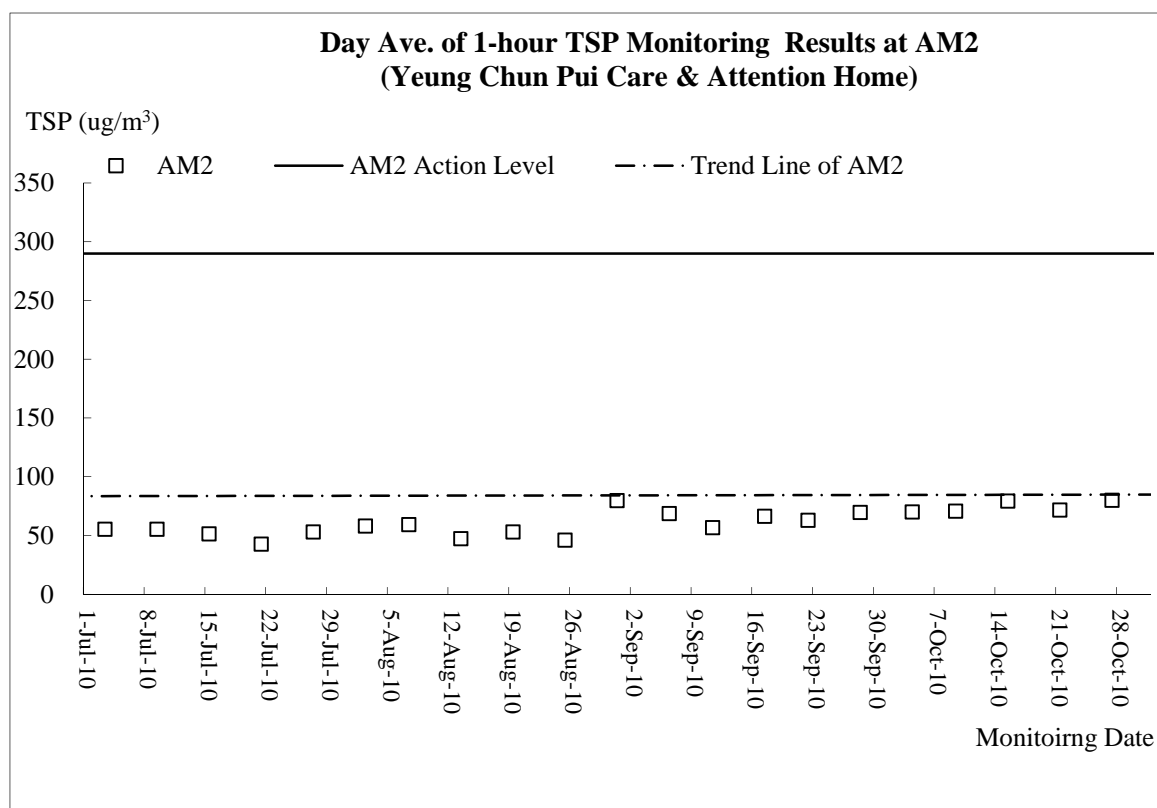
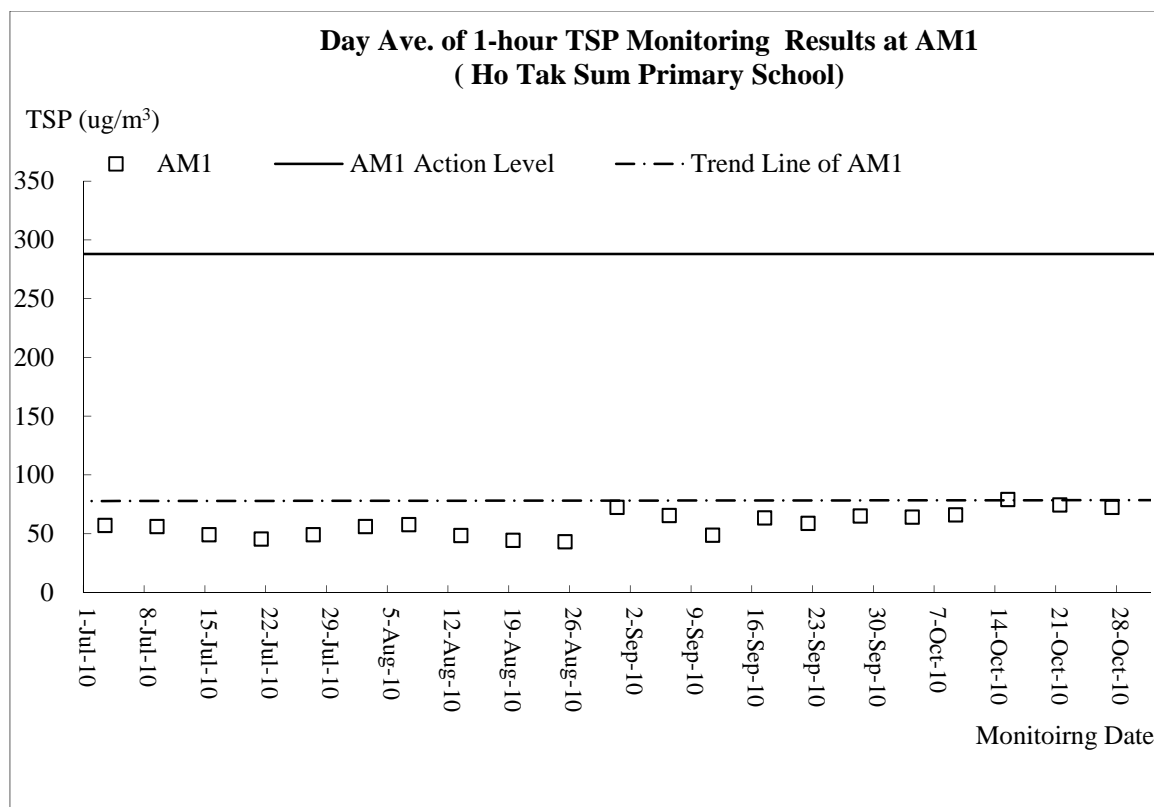


Appendix E

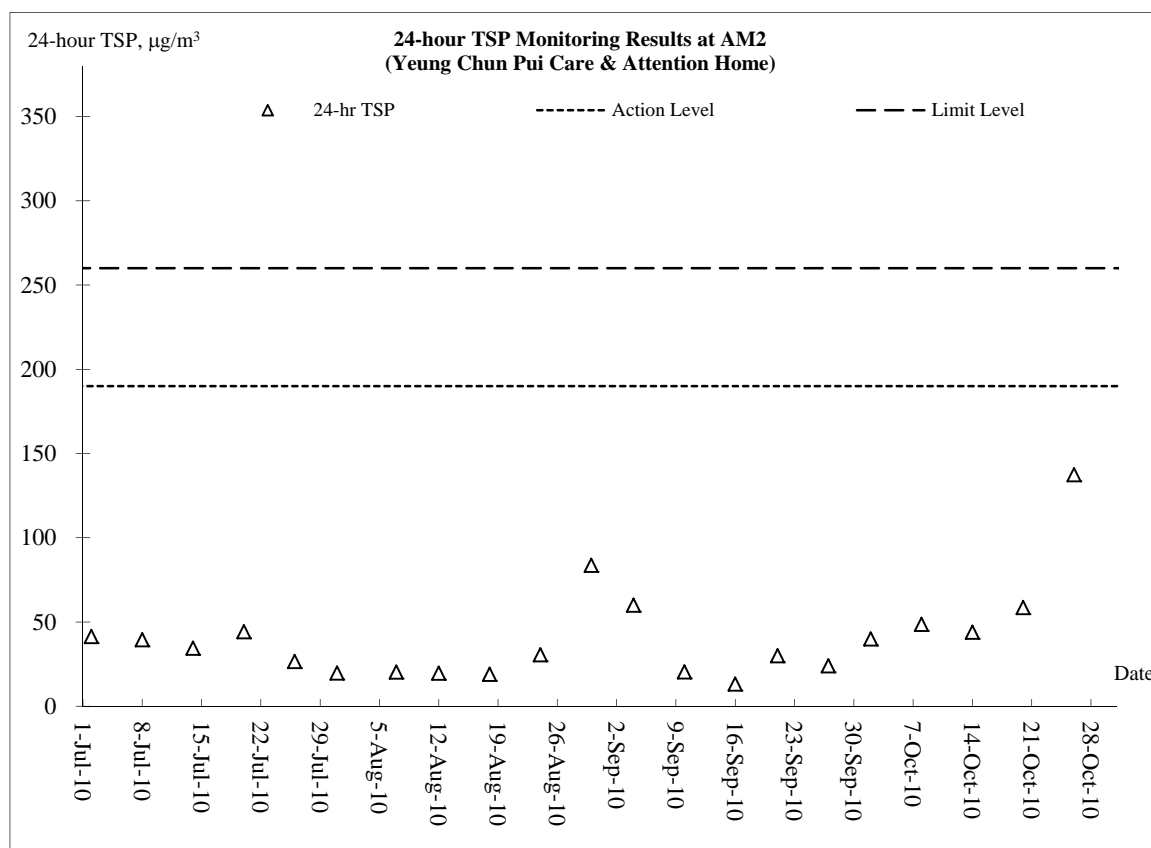
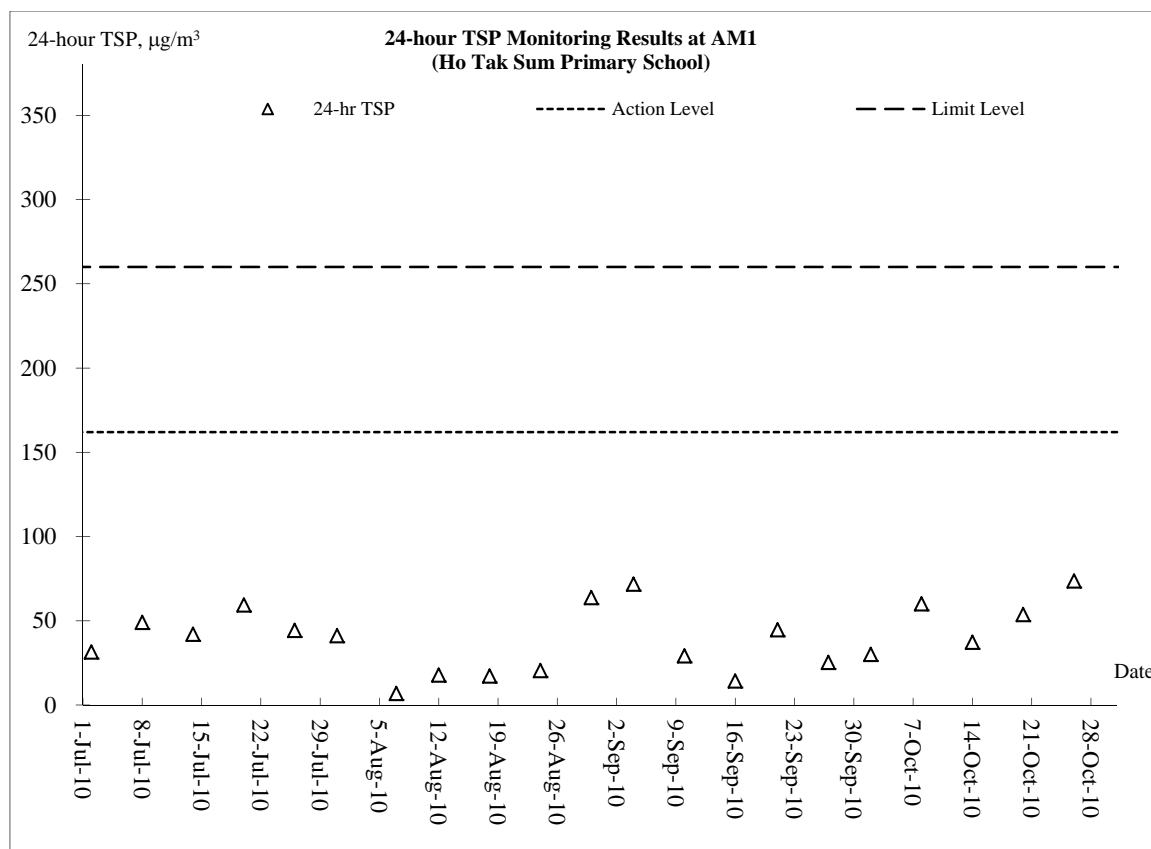
Graphic Plot of

- **Air Quality**
- **Construction Noise**
- **Water Quality**

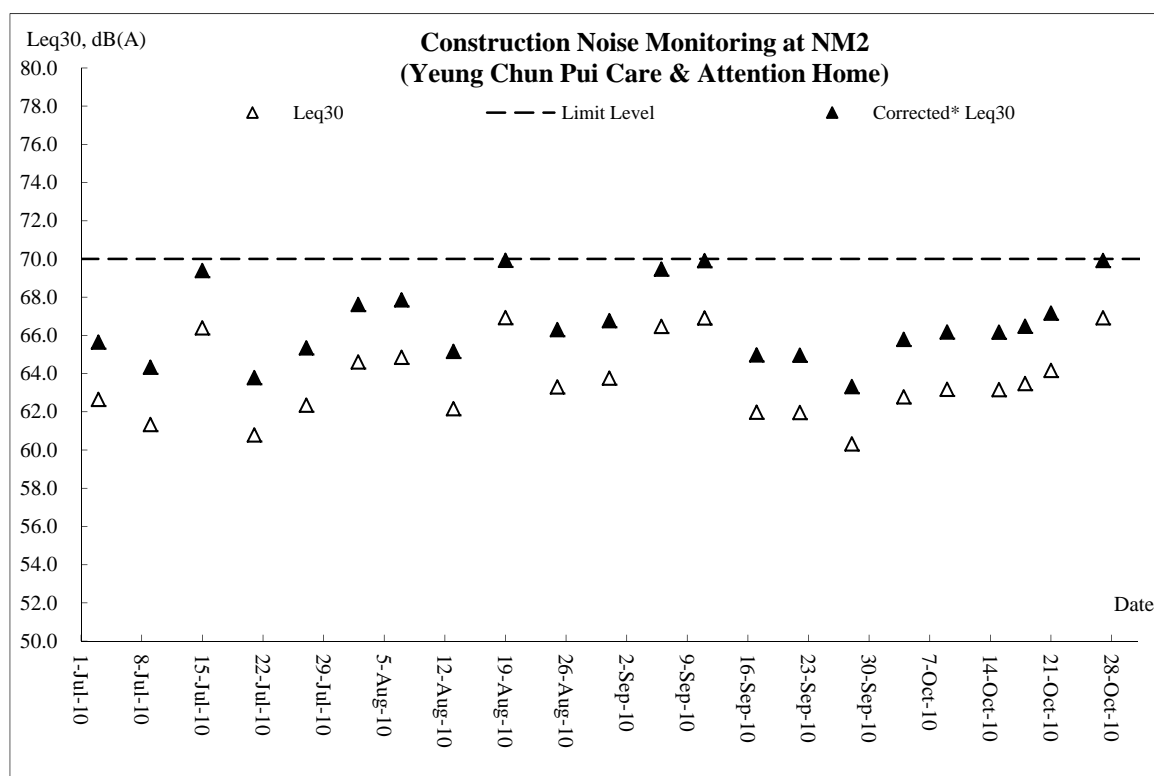
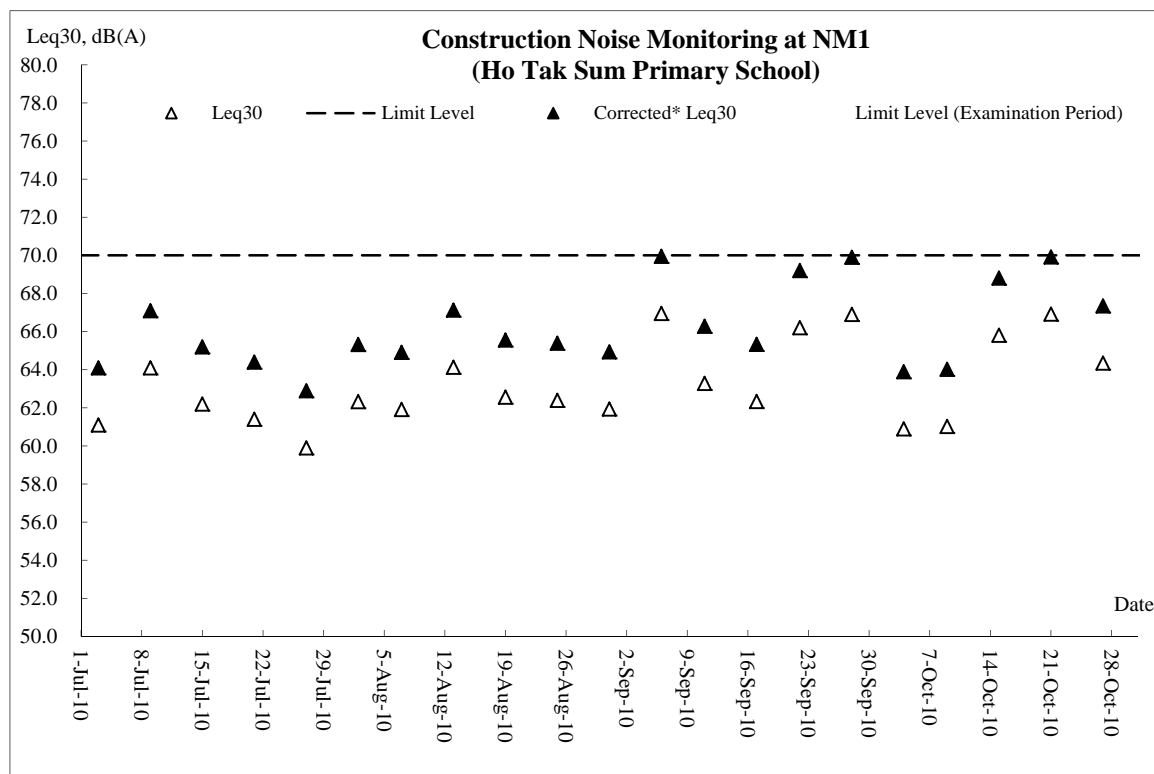
Air Quality – One Hour TSP



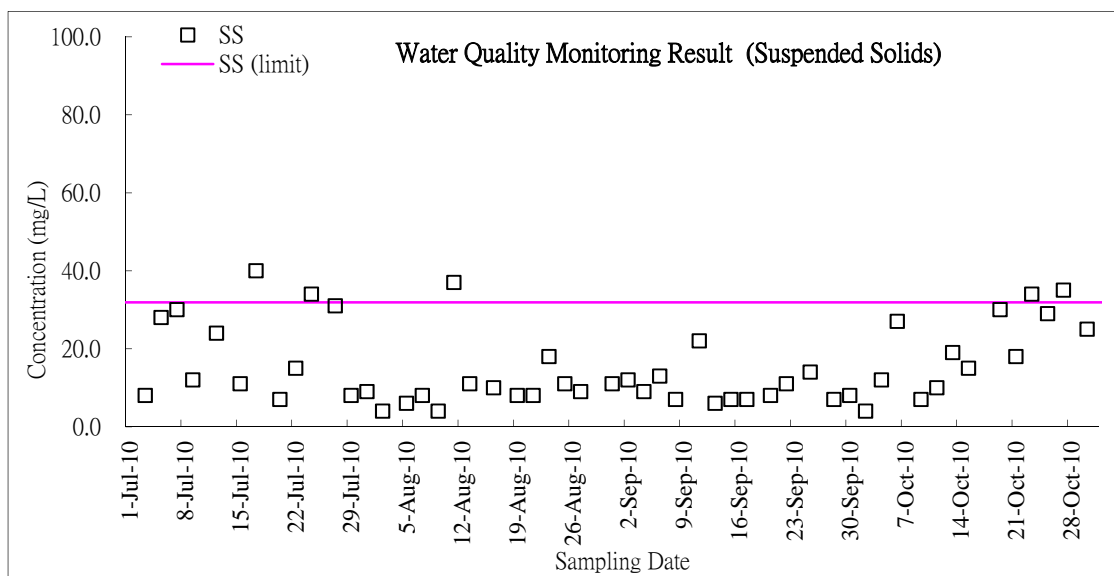
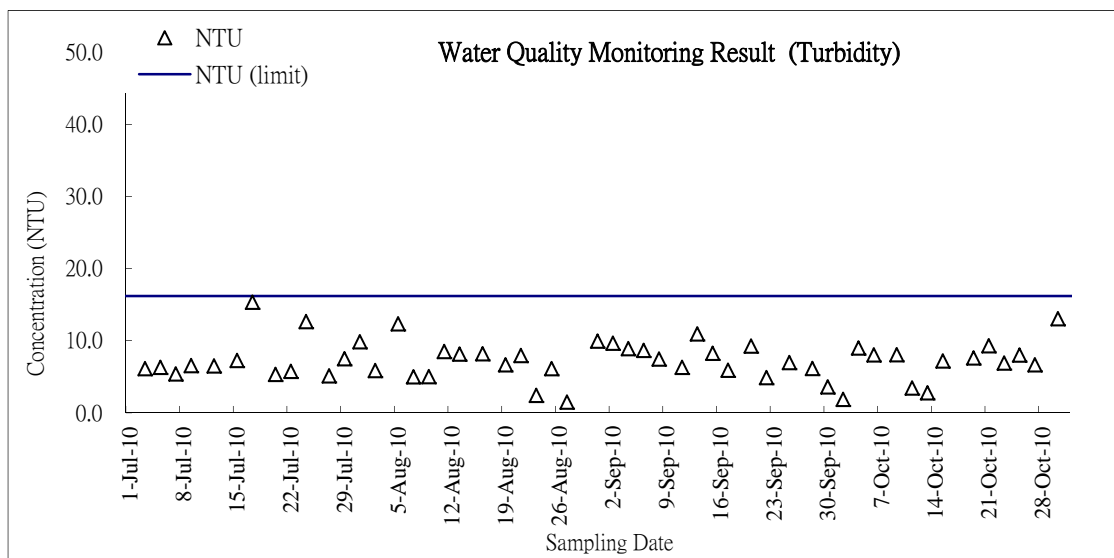
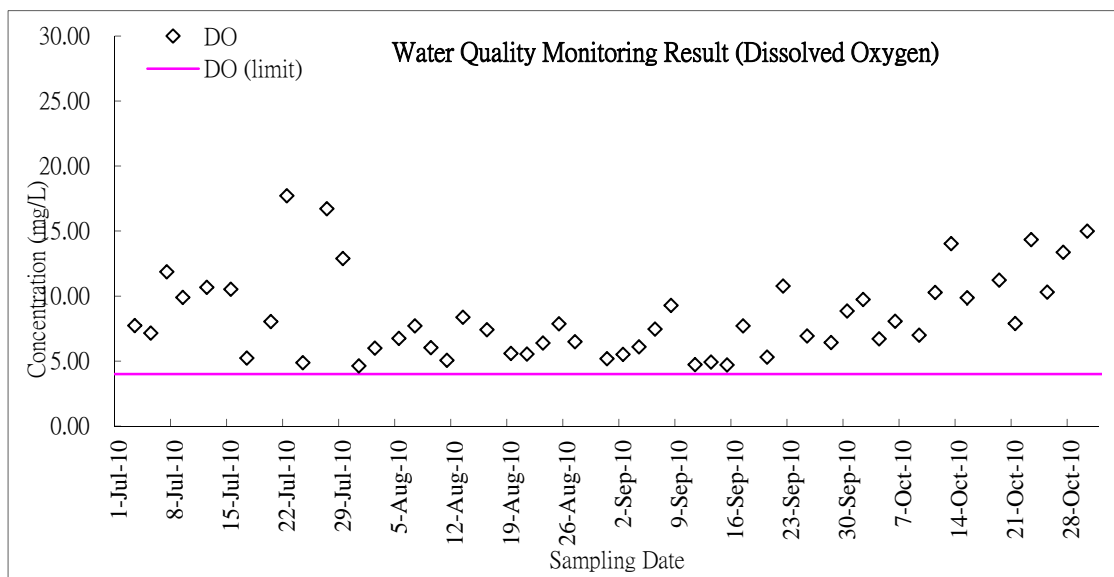
Air Quality – 24-hour TSP



Construction Noise



Water Quality (R1b)



Appendix F

Meteorological information

Meteorological Data Extracted from HKO – August 2010

Date		Weather	Total Rainfall (mm)	Lau Fau Shan Weather Station			
				Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
1-Aug-10	Sun	Fine and very hot. Moderate westerly winds.	Trace	29.3	13.5	83	S/SE
2-Aug-10	Mon	Showers, heavy with squally thunderstorms tonight.	1.1	29.2	16.2	77.5	S/SE
3-Aug-10	Tue	Occasionally fresh over offshore waters.	Trace	29.4	14.5	75	W
4-Aug-10	Wed	Sunny periods and a few showers.	0	29.9	14	73.5	W/SW
5-Aug-10	Thu	Moderate east to northeasterly winds.	14.6	29.3	24.5	76	E
6-Aug-10	Fri	Sunny periods and a few showers.	1.6	28.3	9.7	79.7	E
7-Aug-10	Sat	Isolated squally thunderstorms later.	39.1	29.4	14.2	77	E
8-Aug-10	Sun	Very hot with sunny periods in the afternoon.	18	29.4	17.2	79.5	E
9-Aug-10	Mon	Sunny periods and a few showers.	0.2	30.1	6.7	77	E
10-Aug-10	Tue	It will be hot. Light to moderate southeasterly winds.	Trace	29.4	11	79	S/SE
11-Aug-10	Wed	Showers and a few isolated squally thunderstorms.	22.2	28	15	86	S/SE
12-Aug-10	Thu	Mainly fine and very hot during the day.	3	29.1	13.5	82	SE
13-Aug-10	Fri	Mainly fine apart from isolated showers.	3.8	29.4	16	79.7	W
14-Aug-10	Sat	Mainly cloudy with showers and a few squally thunderstorms.	8.7	29.4	13	82	S/SE
15-Aug-10	Sun	Light to moderate southwesterly winds.	13.5	27.8	15.7	82.5	S/SE
16-Aug-10	Mon	Mainly cloudy with a few showers and isolated squally thunderstorms.	5.1	26.6	23.5	87.5	S/SE
17-Aug-10	Tue	Mainly cloudy with a few showers.	3.2	28	19	79.7	S/SE
18-Aug-10	Wed	Light to moderate easterly winds.	0	28.6	12.7	80	E
19-Aug-10	Thu	A few squally thunderstorms at first.	56.4	29.7	18.7	77.5	E
20-Aug-10	Fri	Mainly cloudy with showers and squally thunderstorms.	22.1	28.4	16.2	71.2	E
21-Aug-10	Sat	Moderate to fresh east to southeasterly winds	Trace	30.2	12.2	72.2	E
22-Aug-10	Sun	Mainly fine and hot apart from isolated showers.	9.1	30.1	15	72.5	E
23-Aug-10	Mon	Mainly fine and hot apart from isolated showers.	23.7	28.3	18.5	74.2	E
24-Aug-10	Tue	Very hot in the afternoon.	42.6	26.6	18	86.7	E
25-Aug-10	Wed	A few squally showers later.	5.2	27.2	11.2	89.5	SE
26-Aug-10	Thu	Very hot with sunny periods in the afternoon.	Trace	27.4	10.7	85.5	S/SE
27-Aug-10	Fri	Light winds.	0	27.7	13	84.7	S/SE
28-Aug-10	Sat	A few showers and isolated squally thunderstorms later.	30.1	27.7	19	83.7	E/SE
29-Aug-10	Sun	Moderate northerly winds.	29	29	10.5	78.5	N
30-Aug-10	Mon	There will also be swells over the sea.	0	29.2	13.5	76.5	N
31-Aug-10	Tue	Hazy with sunny periods.	0	30.8	12.7	72.5	N

Meteorological Data Extracted from HKO – September 2010

Date		Weather	Lau Fau Shan Weather Station				
			Total Rainfall (mm)	Mean Air Temperature (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
1-Sep-10	Wed	Very hot and hazy. Isolated showers later.	0	31	10.5	65.5	N/NW
2-Sep-10	Thu	A few showers.	16.2	28.3	26	77.2	N/NW
3-Sep-10	Fri	Light to moderate southwesterly winds.	47.4	26	19.1	91.2	S/SW
4-Sep-10	Sat	Sunny periods and a few showers.	3.5	25.6	12.5	92.5	E
5-Sep-10	Sun	Hot with sunny periods and haze.	4.9	28.7	13	81.2	E/NE
6-Sep-10	Mon	A few showers and squally thunderstorms later.	0	28.7	13	82	S/SE
7-Sep-10	Tue	Light to moderate southwesterly winds.	Trace	29.1	13.6	82.5	W/SW
8-Sep-10	Wed	A few squally showers and thunderstorms later. I	27.6	30	13.2	83.5	W/SW
9-Sep-10	Thu	Light to moderate northwesterly winds.	22.5	27.3	20.5	85	W
10-Sep-10	Fri	Mainly cloudy with a few showers and squally thunderstorms.	58.8	26.8	19	87	W/SW
11-Sep-10	Sat	Cloudy with rain and a few squally thunderstorms.	51.8	25	16	96	S/SE
12-Sep-10	Sun	solated showers at first.	95.9	26.3	15.7	88.5	S/SE
13-Sep-10	Mon	Light to moderate easterly winds.	0.1	27.3	11.5	83.5	E
14-Sep-10	Tue	Mainly cloudy with showers and a few squally thunderstorms.	1.7	28.5	11.2	82	E
15-Sep-10	Wed	Sunny periods. Isolated showers at first.	1.7	29	11.5	81.5	E/NE
16-Sep-10	Thu	Fine and hot. Light winds.	0	27.6	13.5	83	SE
17-Sep-10	Fri	Fine and hot. Light winds.	0	28	12.5	75.5	W
18-Sep-10	Sat	Hot with sunny periods and haze.	0	29.3	11	80	W/SW
19-Sep-10	Sun	Light to moderate southwesterly winds.	0	29.6	20.7	73.5	W/NW
20-Sep-10	Mon	Overcast with rain, heavy at times and a few squally thunderstorms.	67	27.8	11.5	78.7	W/NW
21-Sep-10	Tue	Moderate to fresh southerly winds	178.8	24.1	25.2	95	SE
22-Sep-10	Wed	Cloudy with rain.	0.8	25.2	1.2	88	SE
23-Sep-10	Thu	Mainly fine apart from isolated showers tomorrow.	Trace	26.5	8	88	E/NE
24-Sep-10	Fri	Moderate east to northeasterly winds.	0	28	10.5	79.5	E/NE
25-Sep-10	Sat	Mainly fine.	Trace	28.2	9.5	79.7	E/NE
26-Sep-10	Sun	Light to moderate easterly winds.	0	28.3	6.5	89	E/NE
27-Sep-10	Mon	Light to moderate easterly winds, freshening tomorrow.	0	26.7	7.5	83.7	E/SE
28-Sep-10	Tue	Sunny periods.	0	28.5	11.7	79	E/SE
29-Sep-10	Wed	Moderate to fresh east to northeasterly winds.	Trace	29	16.5	76	E
30-Sep-10	Thu	Sunny periods this afternoon. Cloudy tonight.	4.4	26.3	15.5	87.2	E/NE

Meteorological Data Extracted from HKO – October 2010

Date		Weather	Total Rainfall (mm)	Lau Fau Shan Weather Station			
				Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
1-Oct-10	Fri	HOLIDAY					
2-Oct-10	Sat	Moderate to fresh northeasterly winds.	0	27.9	12.7	76.5	E
3-Oct-10	Sun	Mainly cloudy. It will be dry in the afternoon.	Trace	27.5	17.5	73.2	NE
4-Oct-10	Mon	There will be swells over the sea.	Trace	23.8	18	63	NE
5-Oct-10	Tue	Cloudy with a few rain patches	2.2	23.9	11	66	E/NE
6-Oct-10	Wed	Moderate easterly winds	0.9	24.8	11.5	79	E/SE
7-Oct-10	Thu	Moderate east to northeasterly winds	Trace	25	12	76.2	E/NE
8-Oct-10	Fri	Cloudy with a few light rain patches.	Trace	26.8	7.9	72	E/NE
9-Oct-10	Sat	The maximum temperature will be around 28 degrees.	1.4	25.2	13.5	83.7	E/NE
10-Oct-10	Sun	Moderate to fresh easterly winds	10.2	25.2	17	85.7	E/SE
11-Oct-10	Mon	Mainly cloudy with a few rain patches.	3.7	28.2	14	79.7	E
12-Oct-10	Tue	Mainly fine. Moderate east to northeasterly winds.	Trace	28.2	8.5	80.5	E
13-Oct-10	Wed	Mainly fine, becoming cloudy tomorrow night.	0	28.4	8.5	78	E/SE
14-Oct-10	Thu	Fine and dry with some haze.	0	29.4	9.5	73.5	E
15-Oct-10	Fri	Moderate east to northeasterly winds.	3.9	25.2	12	85.5	E/NE
16-Oct-10	Sat	Fine and dry.	0.2	25	13.3	75	E/NE
17-Oct-10	Sun	Moderate north to northeasterly winds	Trace	27.1	10.5	72.5	E/NE
18-Oct-10	Mon	Becoming cloudy. It will be dry.	Trace	26.6	14.9	70.5	E
19-Oct-10	Tue	Fresh north to northeasterly winds	0	25.6	18	65.5	N/NE
20-Oct-10	Wed	The Standby Signal, No. 1 is in force.	0	25.9	22	62.5	N/NE
21-Oct-10	Thu	The Strong Wind Signal, No. 3 is in force.	Trace	25	30.4	65.5	N
22-Oct-10	Fri	Cloudy and cooler with a few squally showers.	0.2	22.3	26	72	N
23-Oct-10	Sat	Dry with sunny periods.	0	24.1	21	64	N/NW
24-Oct-10	Sun	Mainly cloudy. A few light rain patches overnight.	0	24.8	10.2	68.5	W
25-Oct-10	Mon	Moderate northerly winds.	0	24.3	15.7	69.5	N/NE
26-Oct-10	Tue	Mainly cloudy and appreciably cooler.	Trace	20.7	19.7	70.5	NE
27-Oct-10	Wed	Mainly fine and dry.	0	18.9	24.5	59.5	NE
28-Oct-10	Thu	Fine and dry.	0	17.4	20.5	51.7	NE
29-Oct-10	Fri	Fine and dry. Fresh north to northeasterly winds.	0	17.8	20.5	49	NE
30-Oct-10	Sat	Moderate east to northeasterly winds	0	18.6	18.8	45.5	NE
31-Oct-10	Sun	It will be fine. Dry during the day.	0	18.6	10.2	54.5	N/NW