


Sun Fook Kong (Civil) Ltd.

Contract No. DC/2002/06

**Construction of Yuen Long Bypass
Floodway**

**Environmental Monitoring and Audit
Monthly Report (Version 1.1)**

October 2006

Certified By	 (Environmental Team Leader)
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REMARKS:

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

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ABBREVIATION AND ACRONYM

AL Levels	Action and Limit Levels
DSD	Drainage Services Department
E / ER	Engineer/Engineer's Representative
EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring and Audit
EMIS	Environmental Mitigation Implementation Schedule
EP	Environmental Permit
FEP	Further Environmental Permit
EPD	Environmental Protection Department
ET	Environmental Team
HVS	High Volume Sampler
IEC	Independent Environmental Checker
RH	Relative Humidity
TSP	Total Suspended Particulates
QA/QC	Quality Assurance / Quality Control
SLM	Sound Level Meter
WMP	Waste Management Plan

EXECUTIVE SUMMARY

A) Introduction

This is the monthly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the project “Construction of Yuen Long Bypass Floodway” (the Project). This report documents the findings of EM&A Works conducted in October 2006 (26th of each month as the cut-off day, i.e. 26th September 2006 to 25th October 2006).

The construction activities undertaken in the reporting month were:

- Construction of footpath and railing;
- Installation of plumbing & irrigation points;
- Paving and road works; and
- Landscape works

B) Environmental Monitoring Works

Environmental monitoring for the Project was performed regularly as stipulated in the Updated EM&A Manual and the results were checked and reviewed. Site audits were conducted once per week. Implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.

B1 Air Quality

1-hour TSP Monitoring

The 1-hour TSP monitoring was conducted as scheduled except monitoring at Station B and at Station C on 29th September 2006. Monitoring at the Station B was not permitted as the school has been closed down after August 2006. No monitoring could be conducted at Station C on 29th September 2006 due to the suspension of electricity on that day. No Action/Limit Level exceedance was recorded in the reporting month.

24-hour TSP Monitoring

The 24-hour TSP monitoring was conducted as scheduled except at Station B. Monitoring at Station B was not permitted as the school has been closed down after August 2006. No Action/Limit Level exceedance was recorded in the reporting month.

Construction Noise

Construction noise monitoring was conducted as scheduled. No Action/Limit Level exceedance was recorded in the reporting month.

Water Quality

Water quality monitoring was conducted as scheduled. No Action/Limit Level exceedance was recorded in the reporting month.

C) Environmental Licensing and Permitting

License/Permits granted to the Project include the Further Environmental Permit (FEP), Variation of Environmental Permit (VEP), Wastewater Discharge License, Chemical Waste Producer Registration and Construction Noise Permit (CNP). The FEP for the Project was attached in the monthly EM&A report for March 2003. The VEP were attached in the monthly EM&A report for May 2003. The Chemical Waste Producer Registration was attached in the monthly EM&A report for January 2004. The Wastewater Discharge License was attached in the monthly EM&A report for June 2004.

D) Complaints and Prosecutions

No environmental prosecution and complaint was received in the reporting month.

E) Future Key Issues

Major construction site activities for the coming month are listed as below:-

- Construction of footpath and railing;
- Installation of plumbing & irrigation points;
- Paving and road works; and
- Landscape works

Construction dust and wastewater discharge during construction work is anticipated to be the future key issue.

1. INTRODUCTION

Background

- 1.1 Serious flooding has occurred in and around Yuen Long Town at least seven times over the last fifteen years. Government studies including the Northwest New Territories (NWNT) Base Strategy Studies, TELADFLOCCOSS I and II and the NWNT Village Flood Protection Study have identified the major causes of flooding and recommended appropriate mitigation measures. The studies identified that the capacity of the Yuen Long Nullah drainage system was inadequate mainly due to rapid urban growth over the last 20 years which has reduced the flood plain storage capacities and increased runoff volumes. In addition Yuen Long Town has a relatively low ground level and the drainage design standards and methods used at the time were less rigorous than present design requirements. The studies recommended the construction of a Bypass Floodway as the most cost-effective option for providing additional drainage capacity to cater for present needs and to provide additional capacity for new development in the area to the south of Yuen Long.
- 1.2 The Yuen Long Bypass Floodway is therefore to be designed to divert part of the flows entering the Yuen Long Drainage system from the south of Yuen Long into the Kam Tin River Floodway, which is at present under construction, to reduce the risk of flooding in Yuen Long Town. The Project site layout is shown in *Figure 1.1*.
- 1.3 The Project works mainly comprise the construction and operation of a drainage channel (YLBF) from the south side of Yuen Long to the Kam Tin River. The Project works was scheduled to commence in March 2003.
- 1.4 According to the EIAO, this Project is a designated project. The Further Environmental Permit (FEP) No. FEP 01-075-2003 was issued on 6 February 2003 and Variation of Environmental Permit (EP-01/075/2003/A) was issued on 19 May 2003 for this project to the Sun Fook Kong (Civil) Limited (hereinafter called the “Contractor”) as Permit Holder. An Updated Environmental Monitoring and Audit Manual (Updated EM&A Manual) was prepared to fulfill requirement stipulated in the Particular Specification Clause 1.106(6).
- 1.5 Cinotech Consultants Limited was commissioned by Sun Fook Kong (Civil) Limited to provide professional services for “Contract No. DC/2002/06 – Environmental Team (ET) for Construction of the Yuen Long Bypass Floodway”. This Environmental Monitoring and Audit Reports were prepared by Cinotech for the Project prior to the commencement of any construction activity for the Yuen Long Bypass Floodway in accordance with the Updated EM&A Manual.

Project Organizations

- 1.6 Different parties with different levels of involvement in the project organization include:
 - Engineer or Engineer’s Representative (E/ER) – Drainage Services Department (DSD)
 - Environmental Team (ET) – Cinotech Consultants Limited
 - Independent Environmental Checker (IEC) – CH2M HILL Hong Kong Limited
 - Contractor – Sun Fook Kong (Civil) Ltd.

- 1.7 The responsibilities of respective parties are detailed in Section 1 of the Updated EM&A Manual and the project organization chart is presented in **Figure 1.2**.
- 1.8 The key contacts of the Project are shown in **Table 1.1**.

Table 1.1 Key Project Contacts

Party	Name	Role	Phone No.	Fax No.
DSD	Mr. Nelson IP	Engineer Representative	2594 7576	2827 8700
ET	Dr. Priscilla Choy	ET Leader	2151 2083	3107 1388
	Mr. Kenneth Lam	Project Manager	2151 2078	3107 1388
	Mr. Ray Yan	Audit Team Leader	2151 2083	3107 1388
	Mr. Henry Leung	Monitoring Team Leader	9779 7340	3107 1388
IEC	Mr. David Yeung	Independent Environmental Checker	2507 2203	2507 2293
Contractor	Mr. Wallace Lee	Project Manager	2448 0683	2448 0260
	Mr. Horace Lee	Assistant Engineer	2448 0683	2448 0260

Construction Programme

- 1.9 The construction activities undertaken in the reporting month were:

- Construction of footpath and rails;
- Installation of plumbing & irrigation points;
- Paving and road works; and
- Landscape works

Summary of EM&A Requirements

- 1.10 The EM&A programme requires construction phase monitoring for air quality, construction noise, water quality and environmental site audits. The Updated EM&A Manual requirements for each parameter are described in following sections, including:
- All monitoring parameters;
 - Action and Limit levels for all environmental parameters;
 - Event / Action Plans;
 - Environmental mitigation measures, as recommended in the project EIA study final report; and
 - Environmental requirements in contract documents.
- 1.11 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 5 of this report.
- 1.12 This report presents the monitoring results, observations, locations, equipments, period, methodology and QA/QC procedures of the required monitoring parameters, namely dust, water quality and noise levels and audit works for the Project in October 2006.

2. AIR QUALITY

Monitoring Requirements

- 2.1 1-hour and 24-hour TSP monitoring was conducted to monitor the air quality. *Appendix A* shows the established Action/Limit Levels for the environmental monitoring works.

Monitoring Locations

- 2.2 Three designated monitoring stations, A, B and C were selected for impact dust monitoring. Table 2.1 describes the air quality monitoring locations. *Figure 2.1* shows the locations of these stations.

Table 2.1 Locations for Air Quality Monitoring Station

Monitoring Stations	Description
A	Village house at No. 60, Kong Tau Tsuen
B	Small Traders New Village Public School Yuen Long
C	豪州嶺 1 號

- 2.3 The monitoring at Station B has been stopped since September 2006. The school principal has informed the monitoring team that the school has been closed down after August 2006.

Monitoring Equipment

- 2.4 Table 2.2 summarizes the equipment used in the impact air monitoring programme. Calibrations of equipments are conducted once per two months. Copies of renewed calibration certificates for the reporting month are attached in *Appendix B*.

Table 2.2 Air Quality Monitoring Equipment

Equipment	Model and Make	Qty.
HVS Sampler	Graseby GMW Model GS2310 High Volume TSP Sampler and associated equipment and shelter in accordance with the USA standard Title 40, code of Federal regulations, Chapter 1 (part 50), Appendix B	3
Calibrator	GMW 25	1

Monitoring Parameters, Frequency and Duration

- 2.5 Table 2.3 summarizes the monitoring parameters and frequencies of impact dust monitoring for the whole construction period. The air quality monitoring schedule for this reporting period is shown in *Appendix C*.

Table 2.3 Impact Dust Monitoring Parameters, Frequencies and Durations

Parameters	Frequency
1-hour TSP	Three times / 6 days
24-hour TSP	Once / 6 days

Monitoring Methodology and QA/QC Procedures

1-hour and 24-hour TSP Monitoring

Instrumentation

- 2.6 High volume samplers (HVS) (Model GMWS-2310 Accu-Vol) completed with appropriate sampling inlets was employed for 24-hour TSP monitoring. The sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50) Appendix B. Moreover, the HVS also met all the requirements in section 2.3 of the EM&A Manual.

Operating/Analytical Procedures

- 2.7 The details of operating/analytical procedures for dust monitoring are described in the previous EM&A Monthly reports.

Maintenance/Calibration

- 2.8 The details of requirements of maintenance/calibration are described in the previous EM&A Monthly reports.

Results and Observations

- 2.9 Dust monitoring was conducted as scheduled in the reporting period. The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in *Appendices D* and *E* respectively.
- 2.10 A wind data monitoring equipment was installed at monitoring station B for logging wind speeds and wind directions. The wind data for the reporting month are summarized in *Appendix G*.
- 2.11 The weather during the monitoring session was mainly sunny or cloudy. Weather conditions on the monitoring days are provided in *Appendices D* and *E*.

1-hour TSP Monitoring

- 2.12 The 1-hour TSP monitoring was conducted as scheduled except monitoring at Station B and monitoring at Station C on 29th September 2006. Monitoring at the Station B was not permitted as the school has been closed down after August 2006. No monitoring of 1-hour TSP could be conducted at Station C on 29th September 2006 due to the suspension of electricity on that day. Monitoring at Station C was resumed regularly after 3rd October 2006. No Action/Limit Level exceedance was recorded in the reporting month.

24-hour TSP Monitoring

- 2.13 The 24-hour TSP monitoring was conducted as scheduled except monitoring at Station B. Monitoring at the Station B was not permitted as the school has been closed down after August 2006. No Action/Limit Level exceedance was recorded in the reporting month.

3. NOISE**Monitoring Requirements**

- 3.1 Noise monitoring was conducted in accordance with the Updated EM&A Manuals. *Appendix A* shows the established Action and Limit Levels for the environmental monitoring works.

Monitoring Locations

- 3.2 Noise monitoring was conducted at three designated monitoring stations, namely N1, N2 and N3, as summarized in Table 3.1. *Figure 3.1* shows the locations of these stations.

Table 3.1 Noise Monitoring Stations

Monitoring Stations	Description
N1	At ground level of Village house at No.49-50, Shung Ching San Tsuen
N2	At ground level of Village house at No.17 Chuk San Tsuen
N3	At ground level of Small Traders New Village Public School besides the Pok Oi Hospital

Monitoring Equipment

- 3.3 Integrating Sound Level Meters were used for noise monitoring. They were Type 1 sound level meters capable of giving a continuous readout of the noise level readings including equivalent continuous sound pressure level (L_{eq}) and percentile sound pressure level (L_x). They comply with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1).
- 3.4 Table 3.2 summarizes the noise monitoring equipment model being used. Calibrations of equipments are conducted annually. Copies of renewed calibration certificates for the reporting month are attached in *Appendix B*.

Table 3.2 Noise Monitoring Equipment

Equipment	Model and Make	Qty.
Integrating Sound Level Meter	B&K Model 2238	4
	Rion NL14	1
Calibrator	B&K 4231	2
Wind Speed Anemometer	Vane Anemometer, Model 451104	1

Monitoring Parameters, Frequency and Duration

- 3.5 Table 3.3 summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in *Appendix C*.

Table 3.3 Noise Monitoring Parameters, Frequency and Duration

Monitoring Stations	Parameter	Period	Frequency	Measurement
N1	L ₁₀ (30 min.)dB(A) L ₉₀ (30 min.)dB(A) L _{eq} (30 min.)dB(A)	0700-1900 on normal weekdays	Once per week	Free field + 3dB correction
N2				Free field + 3dB correction
N3				Facade

Monitoring Methodology and QA/QC Procedures

- 3.6 The details of operating/analytical procedures for noise monitoring are described in the previous EM&A Monthly reports.

Maintenance and Calibration

- 3.7 The details of requirements of maintenance/calibration are described in the previous EM&A Monthly reports.

Results and Observations

- 3.8 Noise monitoring was performed at the designated locations during the daytime period (0700 to 1900) as scheduled in the reporting month. Results and graphical presentations are shown in *Appendix F*.
- 3.9 The weather during the monitoring sessions was mainly sunny. Weather conditions are provided in *Appendix F*.
- 3.10 Construction noise monitoring was conducted as scheduled. No Action/Limit Level exceedance was recorded in the reporting month.

4. WATER QUALITY

Monitoring Requirements

- 4.1 Water quality monitoring was conducted in accordance with the Updated EM&A Manual. Compliance Levels for the environmental monitoring works are shown in *Appendix A*.

Monitoring Equipment

- 4.2 Table 4.1 summarizes the equipment used in the water quality monitoring program. All the monitoring equipments complied with the specifications stipulated in the Updated EM&A Manual. Calibrations of equipments are conducted quarterly. Copies of renewed calibration certificates for the reporting month are attached in *Appendix B*.

Table 4.1 Water Quality Monitoring Equipment

Equipment	Model and Make	Qty.
Multi-parameter Water Quality System	YSI 6820	2
Monitoring Position Equipment	“Magellan” Handheld GPS Model GPS-320	1

Monitoring Parameters, Frequencies and Durations

- 4.3 Table 4.2 summarizes the monitoring parameters, monitoring periods and frequencies of water quality monitoring. The water quality monitoring schedule for this reporting period is shown in *Appendix C*.

Table 4.2 Water Quality Monitoring Parameters and Frequencies

Monitoring Station	Parameters	Frequencies
W1	DO, Turbidity, pH, NH ₄ -N and Temperature	Once per week during mid ebb
W2.1, W2.2 (Before 6/7/04)	pH and Temperature	Once per week (during mid ebb at ultimate discharge)
DP1-DP8 (After 6/7/04)	COD and SS	Once per month (during mid ebb at ultimate discharge)

Monitoring Locations

- 4.4 The Updated EM&A Manual specifies one water quality monitoring location for mixing zone of YLBF and Kam Tin River. Other monitoring locations for site discharges will follow the actual discharge locations for the reporting month. Table 4.3 describes the location of these monitoring stations. According to ET’s facsimile (Ref.: MA2049/Corres/Out/an40706v2), the monitoring locations of W2.1 and W2.2 were relocated on 6 July 2004. The revised monitoring locations were shown in *Figure 4.1*.

Table 4.3 Location for Impact Water Quality Monitoring Stations

Monitoring Station	Coordinate
W1	823000.7E 834889.7N
W2.1, W2.2 (Before 6/7/04) DP1-DP8 (After 6/7/04)	To follow actual discharge location on site. ⁽¹⁾

Note: 1) Monitoring will be conducted according to the monitoring schedule and water sample will be taken for analysis if water discharge from the construction site was observed at these locations.

Monitoring Methodology, Calibration Details and QA/QC Procedures

Operating/Analytical Procedures

- 4.5 The details of operating/analytical procedures for water quality monitoring are described in the previous EM&A Monthly reports.

Maintenance and Calibration

- 4.6 The details of requirements of maintenance/calibration are described in the previous EM&A Monthly reports.

Results and Observations

- 4.7 Water quality monitoring was conducted as scheduled. No Action/Limit Level exceedance was recorded in the reporting month
- 4.8 There was no water discharge from the construction site during the reporting month. Therefore, no water sample was taken at DP1 to DP8.
- 4.9 The monitoring data and graphical presentations of the monitoring results are shown in *Appendix H*.

5. ENVIRONMENTAL AUDIT

Site Audits

- 5.1 According to the EM&A Manual, site audit is to be carried out once a month. In order to facilitate a higher level on environmental management, site audits were increased to weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site.
- 5.2 The site audits for the reporting month were conducted on 29th September and 6th, 12th, 20th October 2006. The summaries of site audit are attached in *Appendix I*.

Review of Environmental Monitoring Procedures

- 5.3 The monitoring works were conducted by the monitoring team regularly. The following information have been recorded during the monitoring:

Air Quality Monitoring

- The monitoring team recorded all observations around the monitoring stations within and outside of the construction site.
- The monitoring team recorded the temperature and weather conditions on the monitoring day.

Noise Monitoring

- The monitoring team recorded all observations around the monitoring stations, which might affect the monitoring result.
- Major noise sources were identified and recorded. Other intrusive noise attributing to the result was trimmed off by pausing the monitoring temporarily.

Water Quality Monitoring

- The monitoring team recorded all observations around the monitoring stations, which might affect the monitoring result.
- The monitoring team recorded the temperature and weather conditions on the monitoring day.

Status of Environmental Licensing and Permitting

5.4 All permits/licenses obtained are summarized in Table 5.1.

Table 5.1 Summary of Environmental Licensing and Permit Status

Permit No.	Valid Period		Section	Status
	From	To		
Further Environmental Permit				
FEP-01/075/2003	6/2/2003	N/A	A drainage channel of width less than 100m. The scope of the project includes construction of i) A main drainage channel from Yuen Long Main Nullah to Kam Tin Channel. The channel will have concrete lined bed with grasscrete sides; ii) An ancillary road system; iii) Association pumping facilities; and iv) Landscaping works.	Valid
Variation of Environmental Permit				
EP-01/075/2003/A	19/5/2003	N/A	Vary Condition 3.6 in Part C of the FEP-01/075/2003 and add Figure 5 to FEP-01/075/2003.	Valid
Chemical Waste Producer				
5118-523-S3090-05	15/1/2004	N/A	License to produce chemical waste types of spent lubricating oil, spent dry battery and waste paint containers.	Valid
Wastewater Discharge License				
1U370/2	24/5/2004	28/2/2008	Effluent arising from construction site	Valid

Status of Waste Management

- 5.5 The amounts of wastes generated by the activities of the project in October 2006 are shown in *Appendix K*.
- 5.6 The solid waste generated from the Project site office was mainly general refuse that was collected by a licensed collector on an as need basis.

Implementation Status of Weekly Site Audit and Mitigation Measures

- 5.7 During the site inspections in the month, the following observations and recommendations were made.

Water Quality

- 5.8 No environmental deficiency was observed during the audit sessions.

Air Quality

- 5.9 No environmental deficiency was observed during the audit sessions.

Noise

- 5.10 No environmental deficiency was observed during the audit sessions.

Chemical and Waste Management

- 5.11 The Contractor was reminded to maintain good site tidiness opposite at Pok Oi Hospital.
- 5.12 The Contractor was reminded to clean up the general refuse for the site opposite at Pok Oi Hospital.

Permit / Licenses

- 5.13 No environmental deficiency was observed during the audit sessions.

Environmental Mitigation Implementation Schedule (EMIS)

- 5.14 According to the Environmental Permit and the Updated EM&A Manuals, the mitigation measures detailed in the documents are required to be implemented. A summary of the EMIS is described in the previous EM&A Monthly reports.

Summary of Exceedances of the Environmental Quality Performance Limit

- 5.15 The summary of exceedances(s) is presented in *Appendix J*.
- 5.16 No exceedance due to the Project was recorded in this reporting month.

Implementation Status of Event Action Plans

- 5.17 The Event Action Plans for air quality, noise and water quality are presented in the Updated EM&A Manual.
- 5.18 The 1-hour TSP monitoring was conducted as scheduled except monitoring scheduled at the g Station B and at Station C on 29th September 2006. Monitoring at the Station B was not allowed to the monitoring team due to the school has ceased operation since August 2006. No monitoring could be conducted at Station C on 29th September 2006 due to the suspension of electricity on that day. No Action/Limit Level exceedance was recorded in the reporting month.
- 5.19 The 24-hour TSP monitoring was conducted as scheduled except monitoring at Station B. Monitoring at Station B was not permitted as the school has been closed down since August 2006. No Action/Limit Level exceedance was recorded in the reporting month.
- 5.20 Construction noise monitoring was conducted as scheduled. No Action/Limit Level exceedance was recorded in the reporting month.
- 5.21 Water quality monitoring was conducted as scheduled. No Action/Limit Level exceedance was recorded in the reporting month.

Summary of Complaints and Prosecutions

- 5.22 No environmental prosecution and complaint was received in the reporting month.

Environmental Meeting

- 5.23 No environmental and safety trainings were conducted by the Contractor and their sub-contractors in the reporting month.

5.24 No monthly environmental meeting was conducted by EPD, DSD, Contractor, IEC and ET in the reporting month.

6. FUTURE KEY ISSUES

Key Issues for the Coming Month

6.1 Key issues to be considered in the coming month include:

- Noise from operation equipment and machinery on-site;
- Regular removal of mud, sand and silt along drainage channel;
- Storage of chemicals/fuel and chemical waste/waste oil on site; and
- Surface runoff from site and wheel washing bay.

Monitoring Schedule for the Next Month

6.2 The environmental monitoring schedule for the next month is shown in *Appendix C*.

7. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

7.1 The Project was commenced on 20th March 2003. Environmental monitoring works were performed in the reporting month and all the monitoring results were checked and reviewed.

1-hr TSP

7.2 The 1-hour TSP monitoring was conducted as scheduled except monitoring at Station B and at Station C on 29th September 2006. Monitoring at Station B was not permitted as the school has been closed down after August 2006. No monitoring could be conducted at Station C on 29th September 2006 due to the suspension of electricity on that day. No Action/Limit Level exceedance was recorded in the reporting month.

24-hr TSP

7.3 The 24-hour TSP monitoring was conducted as scheduled except monitoring at Station B. Monitoring at the Station B was not permitted as the school has been closed down after August 2006. No Action/Limit Level exceedance was recorded in the reporting month.

Construction Noise

7.4 Construction noise monitoring was conducted as scheduled. No Action/Limit Level exceedance was recorded in the reporting month.

Water Quality

7.5 Water quality monitoring was conducted as scheduled. No Action/Limit Level exceedance was recorded in the reporting month.

Complaint and Prosecution

7.6 No environmental prosecution and complaint was received in the reporting month.

Recommendations

7.7 According to the environmental audit performed in this reporting month, the following recommendations were made:

Dust Impact

- To prohibit any open burning on site.
- To regularly maintain the machinery and vehicles on site.
- To implement dust suppression measures on all haul roads, stockpiles and dry surfaces.
- To provide sufficient dust control measures on site especially for present dry season.

Noise Impact

- To inspect the noise sources from inside and outside of the site.
- To space out noisy equipment and position as far away as possible from sensitive receivers.
- To schedule noisy activities in order to minimize noise level expose to nearby sensitive receivers.
- To liaise with schools and Examination Authority for examination times during contract period and liaise with Pok Oi Hospital on timing as well as duration of project. Noise shall be considered as an environmental constraint.

Water Impact

- To identify any wastewater discharges from site.
- To regularly maintain the condition of u-channel and catch pits.
- To avoid stagnant water accumulation on site.
- To prevent surface runoff on the public road from the wheel washing bay or facilities.

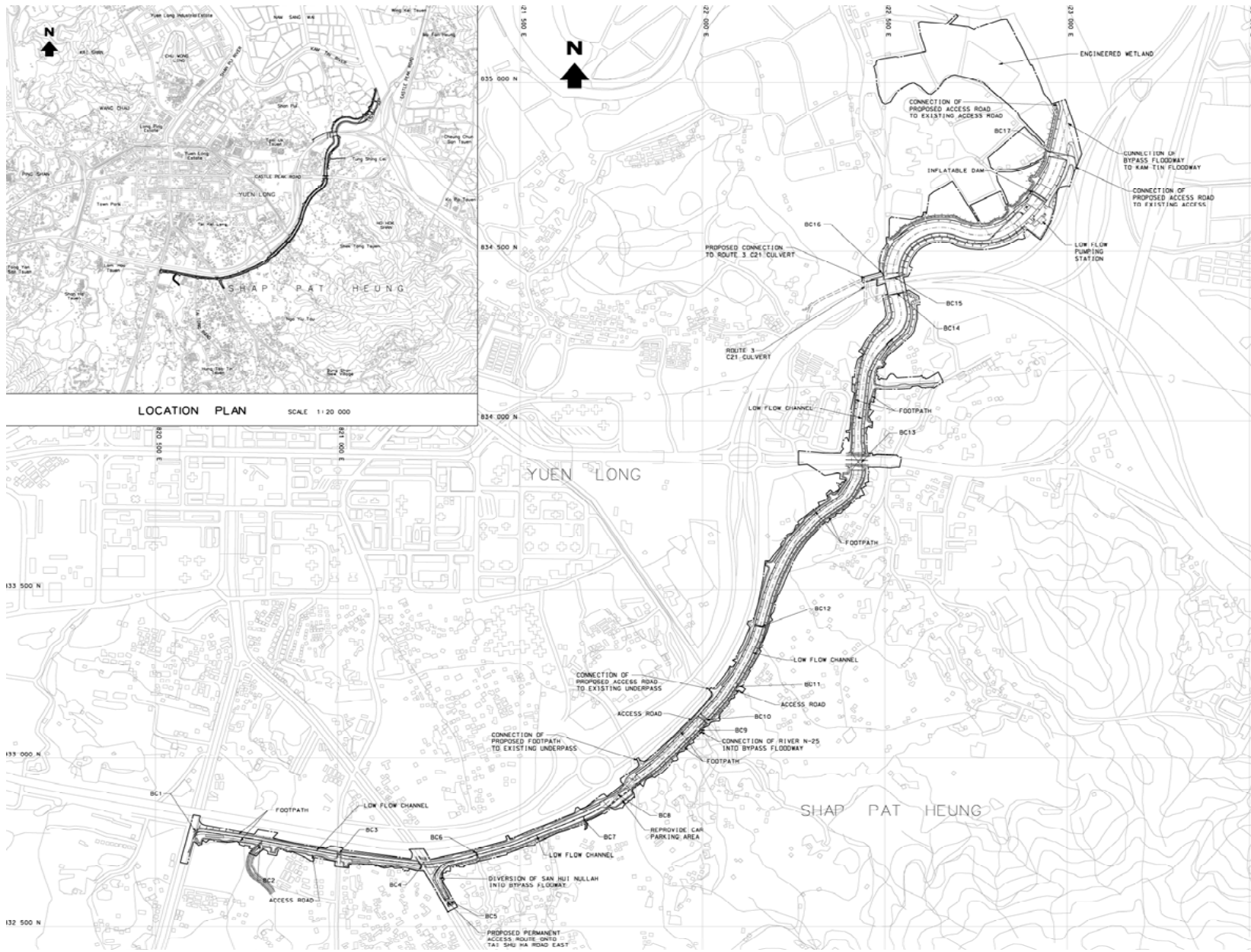
Waste/Chemical Management

- To check for any accumulation of waste materials or rubbish on site.
- To check for any oil/chemical leakage from drip tray or chemical storage areas.
- To avoid any discharge of chemical waste or oil directly from the site.

Permit / Licenses

- To display the EP and applicable CNP conspicuously on the construction sites at all site entrances/exits or at a convenient location for public information at all time.

FIGURES



Title

DSD Contract No. DC/2002/06
Construction of the Yuen Long Bypass Floodway

Site Layout Plan

Scale

N.T.S

Date

2006

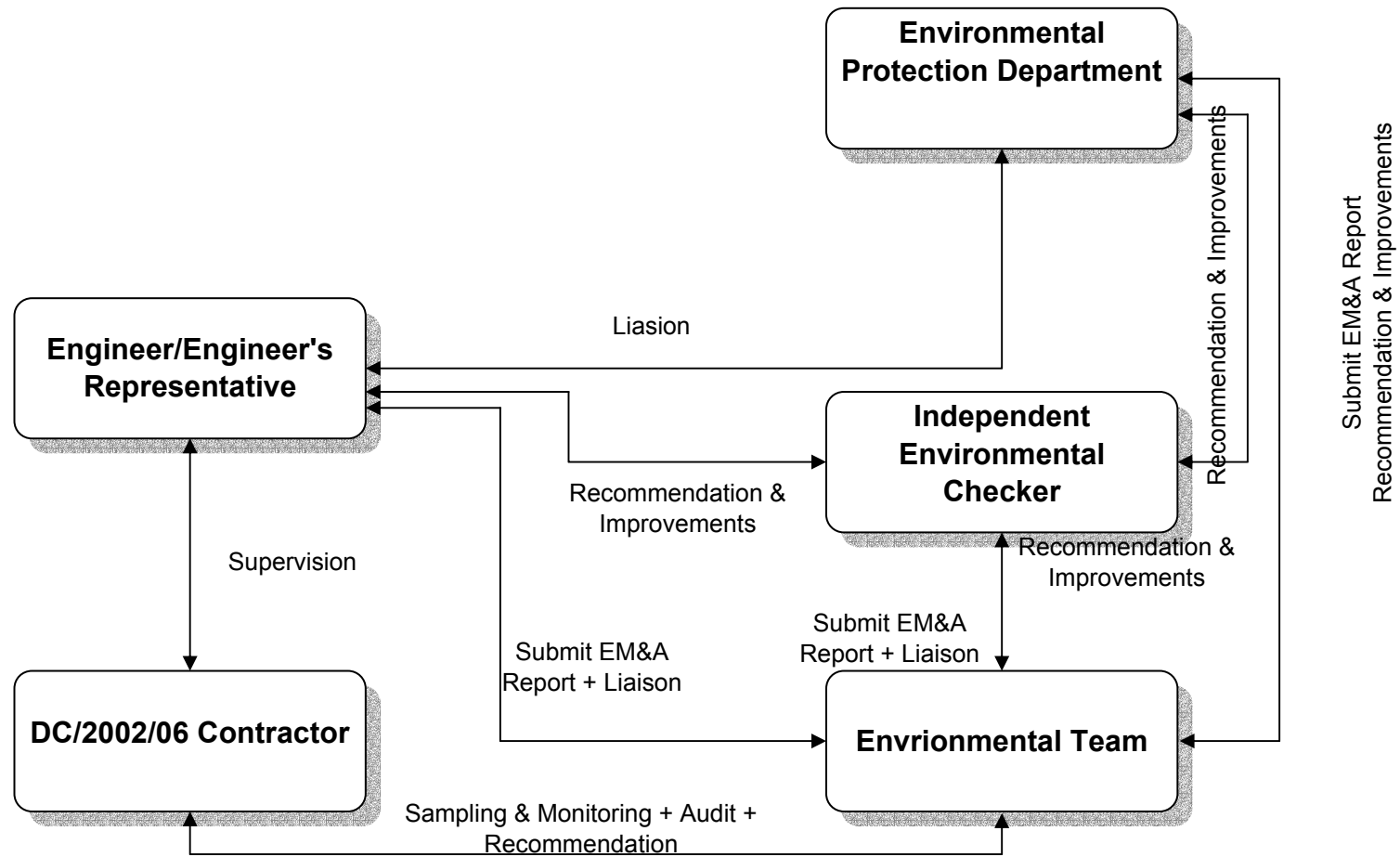
Project

No. MA2049

Figure

1.1

CINOTECH



Title

Construction of Yuen Long Bypass Floodway
 Updated EM&A Manual
 Project Organization Chart

Scale

N.T.S

Propos
No.

MA2049

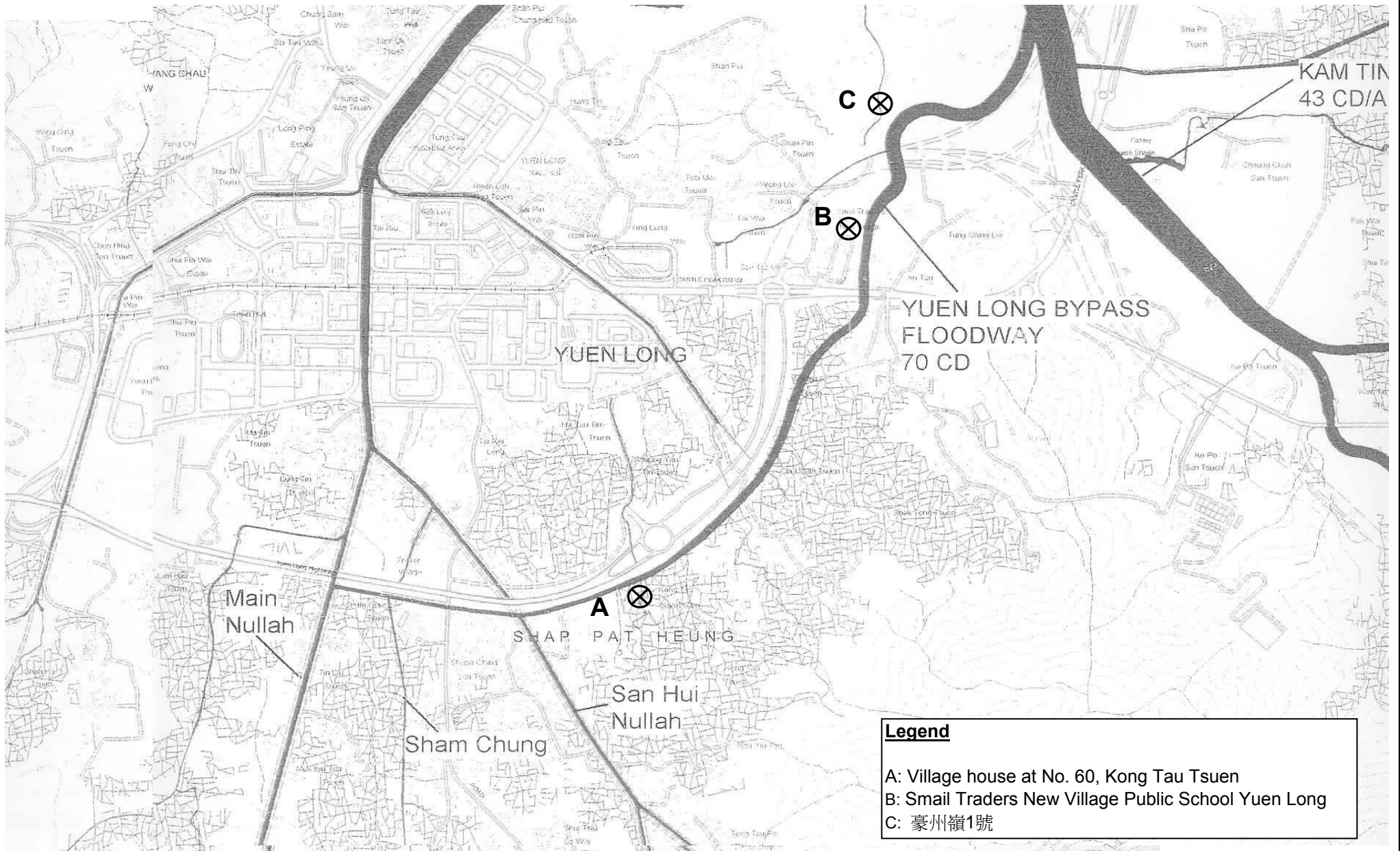
Date

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Figure

1.2

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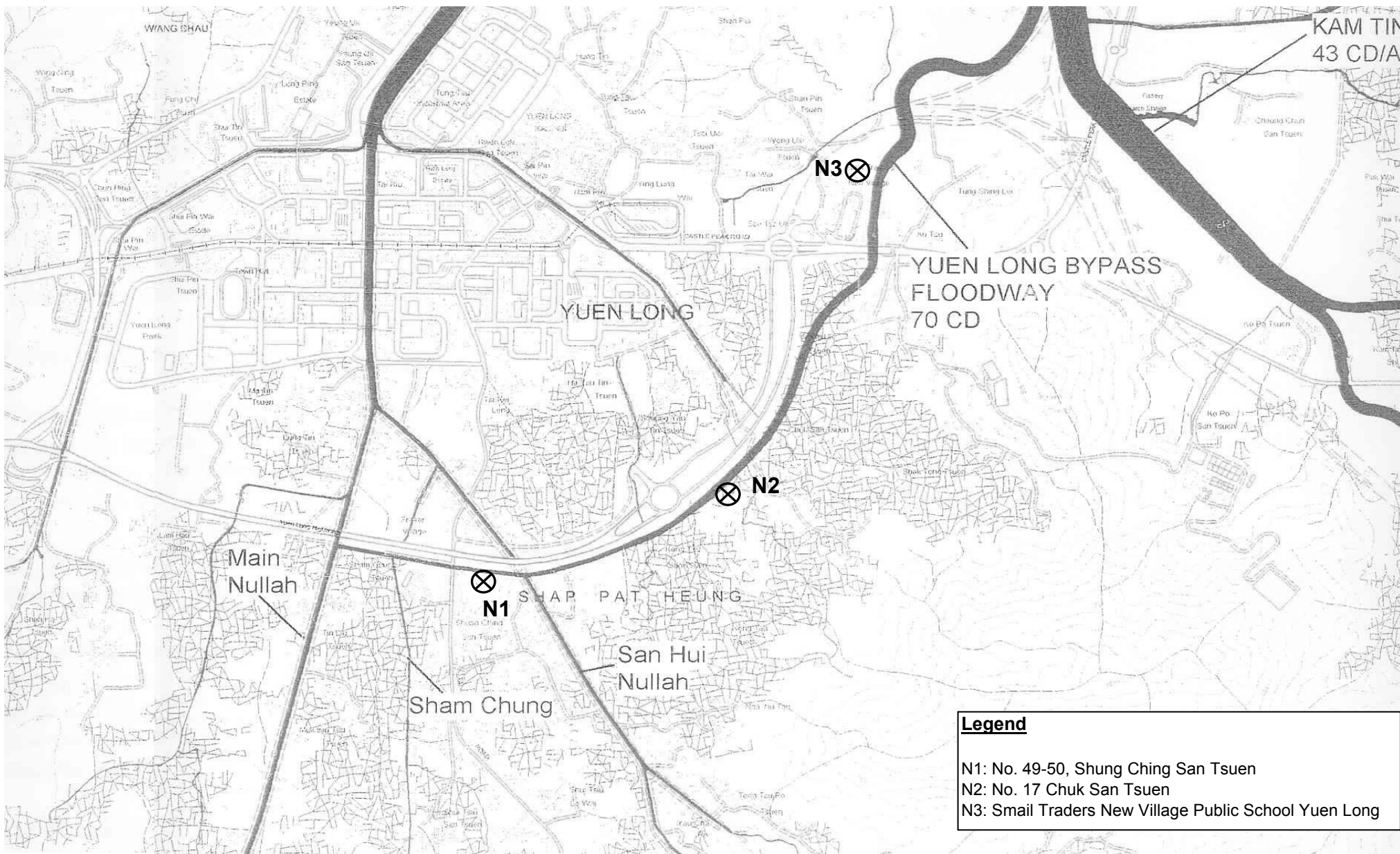
Legend

A: Village house at No. 60, Kong Tau Tsuen
 B: Smail Traders New Village Public School Yuen Long
 C: 豪州嶺1號

Title	DSD Contract No. DC/2002/06 Construction of the Yuen Long Bypass Floodway	
	Impact Air Quality Monitoring Locations	

Scale	N.T.S	Project No.	MA2049
Date	2006	Figure	2.1





Legend

N1: No. 49-50, Shung Ching San Tsuen
 N2: No. 17 Chuk San Tsuen
 N3: Small Traders New Village Public School Yuen Long

Title

DSD Contract No. DC/2002/06
 Construction of the Yuen Long Bypass Floodway

Impact Noise Monitoring Locations

Scale

N.T.S

Date

2006

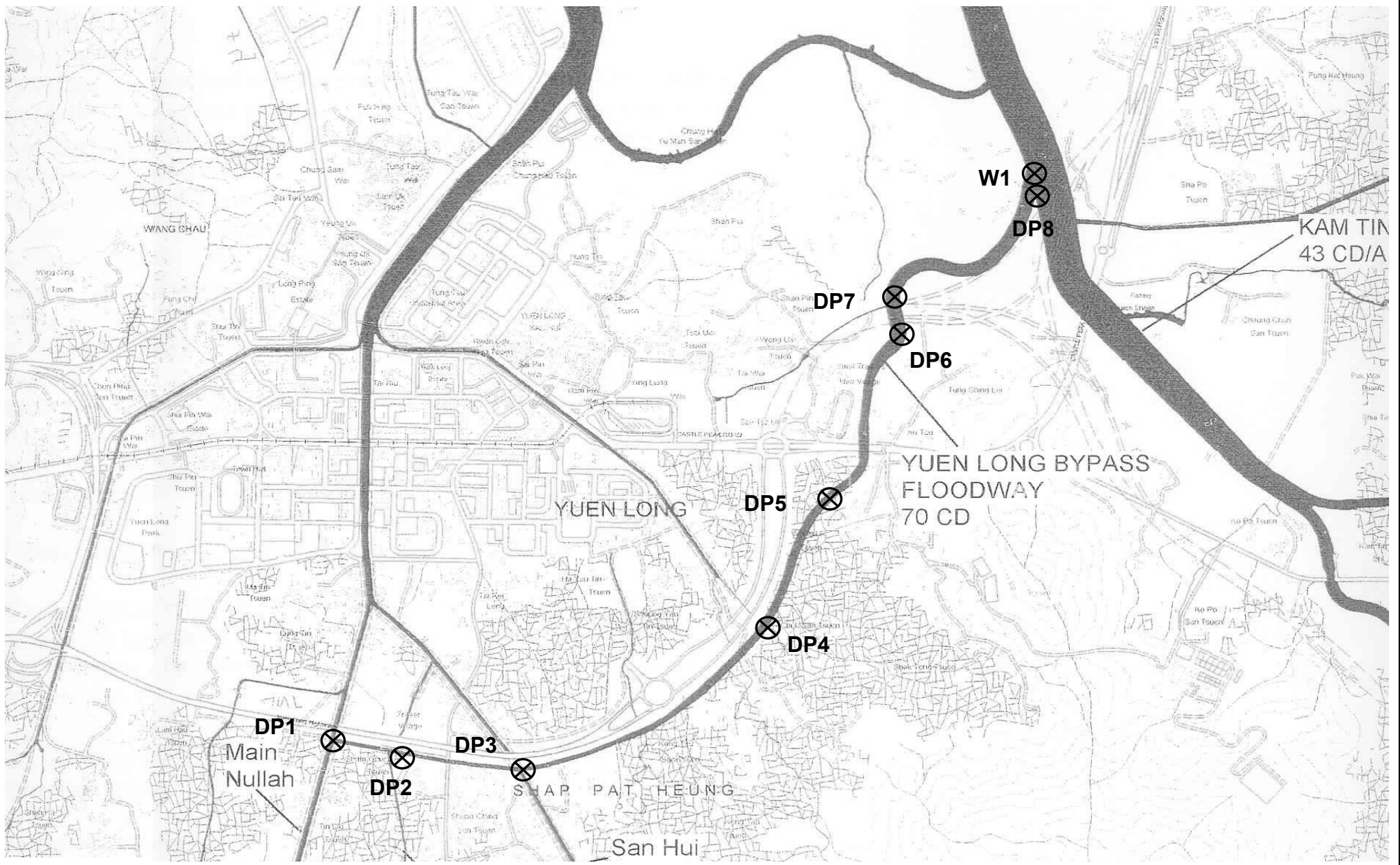
Project No.

MA2049

Figure

3.1





Title	DSD Contract No. DC/2002/06		Project No. MA2049	CINOTECH
	Construction of the Yuen Long Bypass Floodway			
	Impact Water Quality Monitoring Locations			
	Scale	N.T.S	Figure	4.1
	Date	2006		

**APPENDIX A
ACTION AND LIMIT LEVELS
FOR AIR QUALITY AND NOISE AND
COMPLIANCE LEVELS FOR WATER
QUALITY**

Appendix A - Action and Limit Levels

Table A-1 Action and Limit Levels for 1-Hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
A	328	500
B		
C		

Table A-2 Action and Limit Levels for 24-Hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
A	196	260
B		
C		

Table A-3 Action and Limit Level for Construction Noise

Period	Action Level ⁽²⁾	Limit Level		
		N1*	N2*	N3
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A)		70 dB(A)
1900-2300 hrs on holidays & 0700-2300 hrs on all other days		- ⁽¹⁾		
2300-0700 hrs of next day		- ⁽¹⁾		

*Free field noise levels were adjusted with a correction of +3 dB(A)

Notes:

- (1) The noise limits shall be determined by EPD during the application of the construction noise permit (CNP).
- (2) Stated in the "*Environmental Monitoring and Audit Guidelines for Development Projects in Hong Kong*", Appendix D2, Section 2.6, Table 2.1

Remarks: Referring to the fax from DSD (DSD ref.: DP/8/7070CD/DC0206/17) dated of 17th December 2003, the noise action and limit level has been revised. Table A-3 is already the updated action and limit level for construction noise.

Table A-4 Compliance Level for Water Quality

Monitoring Station	Parameters	Limit
W1	Turbidity	N/A
	Dissolved Oxygen	> 4 mg/L
	pH	< 8
	Temperature	30°C
	NH ₄ -N	20 mg/L
W2.1, W2.2, DP1, DP2, DP3, DP4, DP5, DP6, DP7, DP8	pH	6.5 – 8.5
	Temperature	30°C
	Suspended Solids	30 mg/L
	Chemical Oxygen Demand	80 mg/L

Remarks: Referring to the fax from DSD (DSD ref.: DP/8/7070CD/DC0206/17) dated of 17th December 2003, the water quality compliance level has been revised. Table A-4 is already the updated compliance level for water quality.

**APPENDIX B
COPIES OF RENEWED CALIBRATION
CERTIFICATES FOR THE REPORTING
MONTH**

WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center
13-15 Yuen Shun Circuit,
Shatin, Hong Kong.
Tel: (852) 2898 7388
Fax: (852) 2898 7076

TEST REPORT

APPLICANT: Cinotech Consultants Limited
1602-1610 Delta House,
3 On Yiu Street,
Shatin, N.T.

Test Report No.:	C/N/61014/1
Date of Issue:	2006-10-14
Date Received:	2006-10-13
Date Tested:	2006-10-14
Date Completed:	2006-10-14
Next Due Date:	2007-10-13

ATTN: Mr. Henry Leung

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2394976
Microphone No.	: 2407349
Equipment No.	: N-01-05

Test conditions:

Room Temperature	: 21 degree Celsius
Relative Humidity	: 60%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE

Operation Manager

**APPENDIX C
ENVIRONMENTAL MONITORING
SCHEDULES**

Contract No. DC/2002/06
Construction of Yuen Long Bypass Floodway
Air Quality and Noise Monitoring Schedule for September 2006

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27-Aug	28-Aug	29-Aug	30-Aug	31-Aug	1-Sep	2-Sep
	Air Quality: 1-hr TSP at A, B, C			Air Quality: 1-hr TSP at A, B, C Noise Air Quality: 24-hr at A, B, C	Air Quality: 1-hr TSP at A, B, C	
3-Sep	4-Sep	5-Sep	6-Sep	7-Sep	8-Sep	9-Sep
	Air Quality: 1-hr TSP at A, B, C	Air Quality: 1-hr TSP at A, B, C	Air Quality: 24-hr at A, B, C	Air Quality: 1-hr TSP at A, B, C Noise		
10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep
	Air Quality: 1-hr TSP at A, B, C	Air Quality: 24-hr at A, B, C	Air Quality: 1-hr TSP at A, B, C Noise		Air Quality: 1-hr TSP at A, B, C	
17-Sep	18-Sep	19-Sep	20-Sep	21-Sep	22-Sep	23-Sep
	Air Quality: 1-hr TSP at A, B, C Air Quality: 24-hr at A, B, C	Air Quality: 1-hr TSP at A, B, C		Air Quality: 1-hr TSP at A, B, C Noise		Air Quality: 24-hr at A, B, C
24-Sep	25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	30-Sep
	Air Quality: 1-hr TSP at A, B, C	Air Quality: 1-hr TSP at A, B, C			Air Quality: 1-hr TSP at A, B, C Noise Air Quality: 24-hr at A, B, C	

Contract No. DC/2002/06
Construction of Yuen Long Bypass Floodway
Air Quality and Noise Monitoring Schedule for September 2006

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27-Aug	28-Aug	29-Aug	30-Aug	31-Aug	1-Sep	2-Sep
				W1, DP1-8 Mid Ebb 17:30		
3-Sep	4-Sep	5-Sep	6-Sep	7-Sep	8-Sep	9-Sep
		W1, DP1-8 Mid Ebb 11:48				
10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep
	W1, DP1-8 Mid Ebb 15:58					
17-Sep	18-Sep	19-Sep	20-Sep	21-Sep	22-Sep	23-Sep
				W1, DP1-8 Mid Ebb 13:12		
24-Sep	25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	30-Sep
		W1, DP1-8 Mid Ebb 15:35				

**Construction of Yuen Long Bypass Floodway
Water Quality Monitoring Schedule for October 2006**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Oct	2-Oct	3-Oct	4-Oct	5-Oct	6-Oct	7-Oct
		Air Quality: 1-hr TSP at A, C Noise	Air Quality: 1-hr TSP at A, C	Air Quality: 24-hr at A, C	Air Quality: 1-hr TSP at A, C	
8-Oct	9-Oct	10-Oct	11-Oct	12-Oct	13-Oct	14-Oct
	Air Quality: 1-hr TSP at A, C	Air Quality: 1-hr TSP at A, C	Air Quality: 24-hr at A, C	Air Quality: 1-hr TSP at A, C Noise		
15-Oct	16-Oct	17-Oct	18-Oct	19-Oct	20-Oct	21-Oct
	Air Quality: 1-hr TSP at A, C	Air Quality: 24-hr at A, C	Air Quality: 1-hr TSP at A, C Noise	Air Quality: 1-hr TSP at A, C		
22-Oct	23-Oct	24-Oct	25-Oct	26-Oct	27-Oct	28-Oct
	Air Quality: 24-hr at A, C	Air Quality: 1-hr TSP at A, C		Air Quality: 1-hr TSP at A, C Noise	Air Quality: 1-hr TSP at A, C	Air Quality: 24-hr at A, C
29-Oct	30-Oct	31-Oct	1-Nov	2-Nov	3-Nov	4-Nov
		Air Quality: 1-hr TSP at A, C	Air Quality: 1-hr TSP at A, C Noise		Air Quality: 1-hr TSP at A, C Air Quality: 24-hr at A, C	

Contract No. DC/2002/06
Construction of Yuen Long Bypass Floodway
Water Quality Monitoring Schedule for October 2006

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Oct	2-Oct	3-Oct	4-Oct	5-Oct	6-Oct	7-Oct
			W1, DP1-8 Mid Ebb 11:20			
8-Oct	9-Oct	10-Oct	11-Oct	12-Oct	13-Oct	14-Oct
		W1, DP1-8 Mid Ebb 15:35				
15-Oct	16-Oct	17-Oct	18-Oct	19-Oct	20-Oct	21-Oct
				W1, DP1-8 Mid Ebb 12:02		
22-Oct	23-Oct	24-Oct	25-Oct	26-Oct	27-Oct	28-Oct
		W1, DP1-8 Mid Ebb 14:49				
29-Oct	30-Oct	31-Oct	1-Nov	2-Nov	3-Nov	4-Nov
					W1, DP1-8 Mid Ebb 11:42	

**APPENDIX D
1-HOUR TSP MONITORING RESULTS
AND GRAPHICAL PRESENTATIONS**

Appendix D - 1-hour TSP Monitoring Results

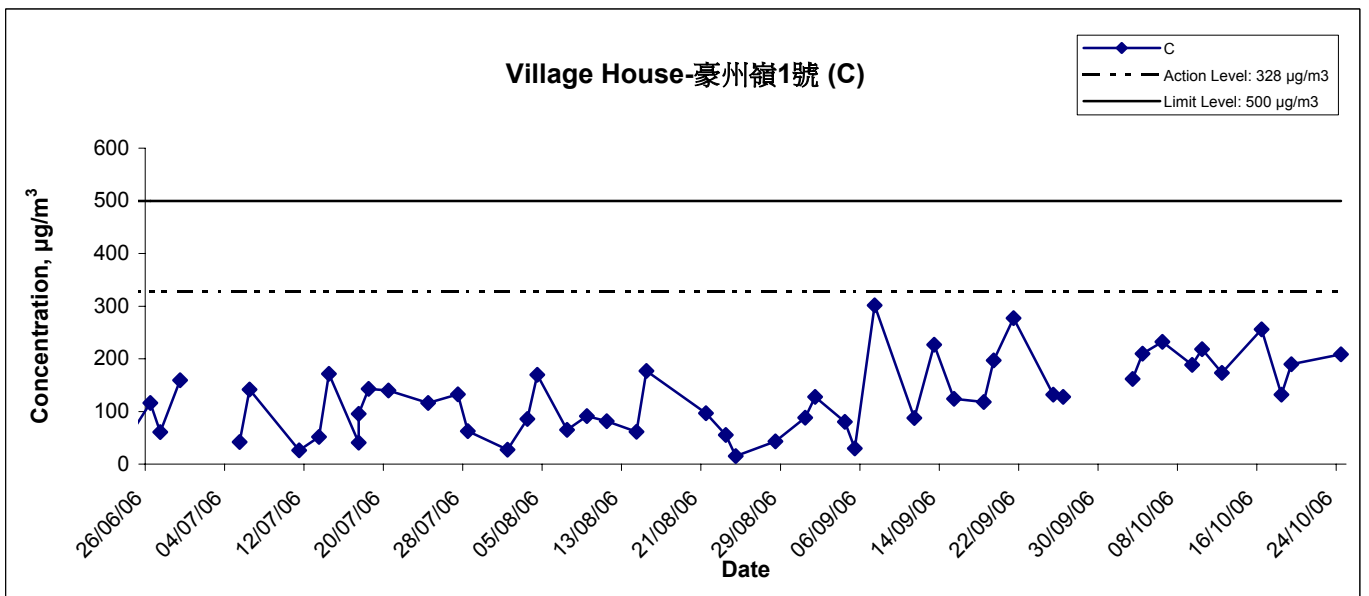
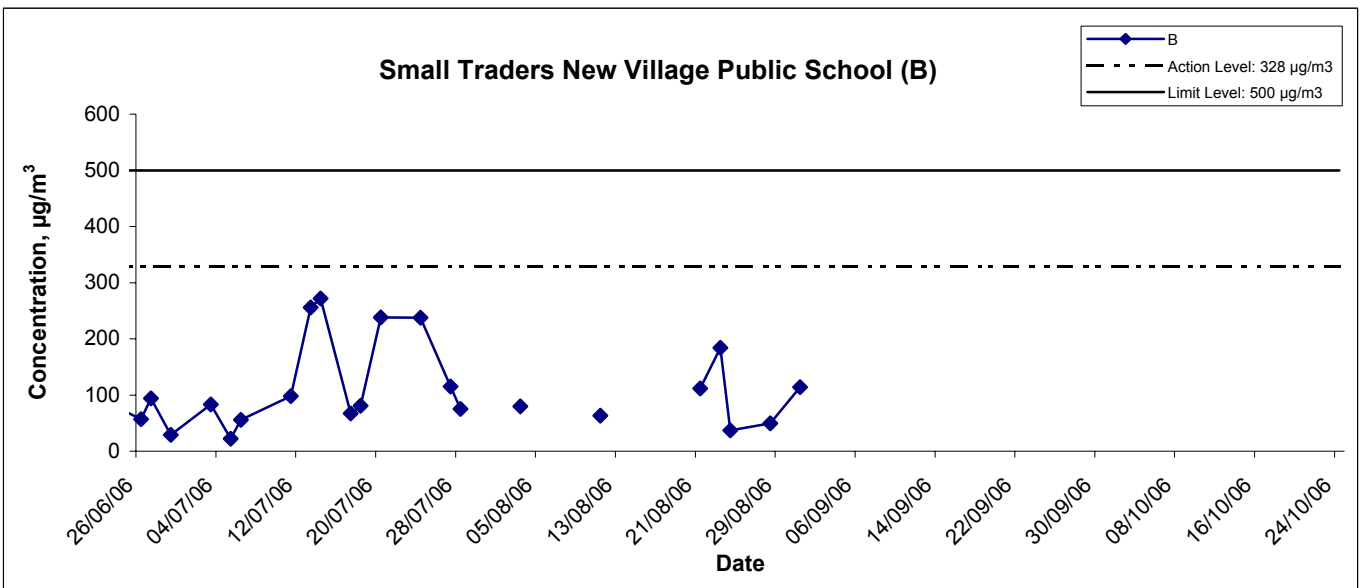
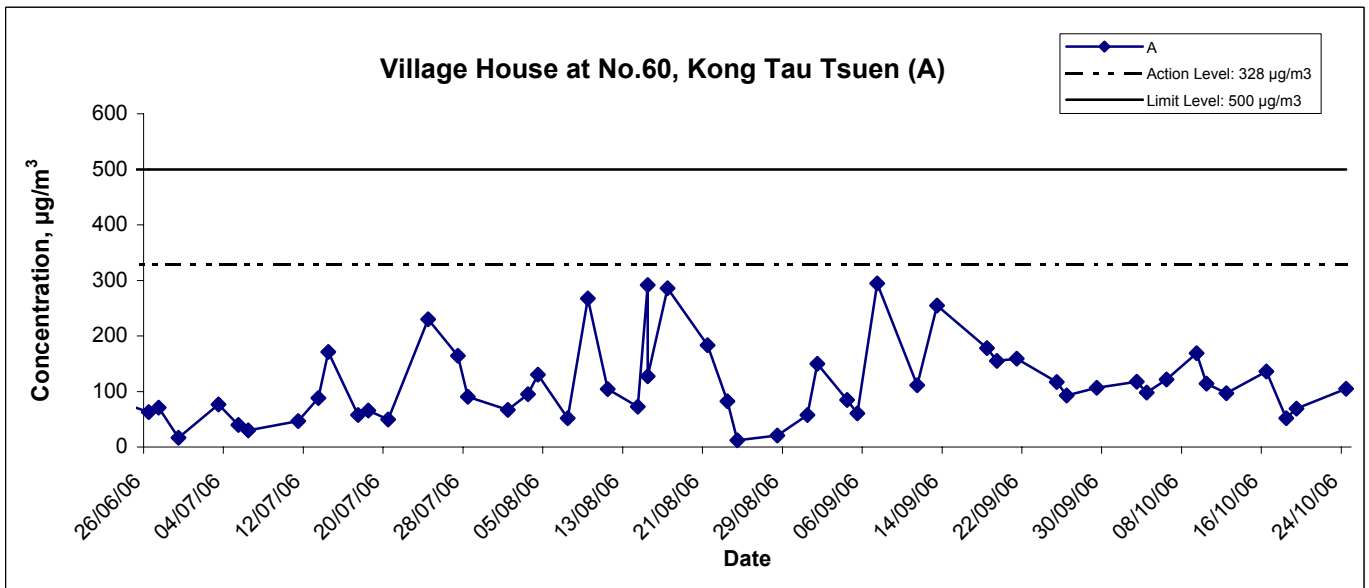
Location A - Village House at No.60, Kong Tau Tsuen

Date	Filter Weight (g)		Flow Rate (m ³ /min.)		Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)	Weather Condition	Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m ³ /min)	Total vol. (m ³)
	Initial	Final	Initial	Final	Initial	Final								
26-Sep-06	2.8644	2.8712	1.22	1.22	14838.8	14839.8	1.0	92.7	Sunshine	299.7	762.5	0.0068	1.22	73.4
29-Sep-06	2.8506	2.8584	1.22	1.22	14839.8	14840.8	1.0	106.5	Sunshine	300.8	760.1	0.0078	1.22	73.2
3-Oct-06	2.8372	2.8458	1.22	1.22	14865.7	14866.7	1.0	117.4	Sunshine	300.6	760.5	0.0086	1.22	73.3
4-Oct-06	2.8002	2.8074	1.22	1.22	14866.7	14867.7	1.0	98.3	Sunshine	300.3	759.9	0.0072	1.22	73.3
6-Oct-06	2.8635	2.8724	1.22	1.22	14891.7	14892.7	1.0	121.3	Sunshine	300.0	760.8	0.0089	1.22	73.4
9-Oct-06	2.8541	2.8665	1.22	1.22	14891.7	14892.7	1.0	168.8	Cloudy	299.8	762.4	0.0124	1.22	73.4
10-Oct-06	2.8559	2.8643	1.23	1.23	14892.7	14893.7	1.0	114.2	Sunshine	299.3	764.0	0.0084	1.23	73.6
12-Oct-06	2.8760	2.8831	1.22	1.22	14917.7	14918.7	1.0	96.7	Sunshine	303.5	763.2	0.0071	1.22	73.4
16-Oct-06	2.8883	2.8983	1.23	1.23	14918.7	14919.7	1.0	136.0	Sunshine	299.5	763.7	0.0100	1.23	73.5
18-Oct-06	2.8819	2.8857	1.22	1.22	14943.7	14944.7	1.0	51.8	Sunshine	300.7	763.5	0.0038	1.22	73.4
19-Oct-06	2.9329	2.9380	1.23	1.23	14944.7	14945.7	1.0	69.4	Sunshine	300.1	764.5	0.0051	1.23	73.5
24-Oct-06	2.8898	2.8975	1.23	1.23	14969.7	14970.7	1.0	104.7	Sunshine	300.1	765.0	0.0077	1.23	73.5
							Min	51.8						
							Max	168.8						
							Average	106.5						

Location C - Village House (豪州嶺1號)

Date	Filter Weight (g)		Flow Rate (m ³ /min.)		Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)	Weather Condition	Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m ³ /min)	Total vol. (m ³)
	Initial	Final	Initial	Final	Initial	Final								
26-Sep-06	2.8756	2.8850	1.23	1.23	5933.0	5934.0	1.0	127.7	Sunshine	299.7	761.0	0.0094	1.23	73.6
29-Sep-06	Suspension													
3-Oct-06	2.8465	2.8584	1.23	1.23	5958.0	5959.0	1.0	162.0	Sunshine	300.6	760.5	0.0119	1.23	73.5
4-Oct-06	2.8200	2.8354	1.23	1.23	5959.0	5960.0	1.0	209.6	Sunshine	300.3	759.9	0.0154	1.23	73.5
6-Oct-06	2.8644	2.8815	1.23	1.23	5984.0	5985.0	1.0	232.4	Sunshine	300.0	760.8	0.0171	1.23	73.6
9-Oct-06	2.8397	2.8536	1.23	1.23	5985.0	5986.0	1.0	188.7	Cloudy	299.8	762.4	0.0139	1.23	73.7
10-Oct-06	2.8311	2.8474	1.25	1.25	5981.1	5982.1	1.0	218.0	Sunshine	299.3	764.0	0.0163	1.25	74.8
12-Oct-06	2.8245	2.8372	1.22	1.22	6006.1	6007.1	1.0	173.4	Sunshine	303.5	763.3	0.0127	1.22	73.3
16-Oct-06	2.8221	2.8410	1.23	1.23	6007.1	6008.1	1.0	256.2	Sunshine	299.5	763.7	0.0189	1.23	73.8
18-Oct-06	2.8896	2.8993	1.23	1.23	6032.1	6033.1	1.0	131.8	Sunshine	300.7	763.5	0.0097	1.23	73.6
19-Oct-06	2.8772	2.8912	1.23	1.23	6033.1	6034.1	1.0	189.8	Sunshine	300.1	764.5	0.0140	1.23	73.8
24-Oct-06	2.8802	2.8956	1.23	1.23	6058.1	6059.1	1.0	208.8	Sunshine	300.1	765.0	0.0154	1.23	73.8
							Min	127.7						
							Max	256.2						
							Average	190.7						

1-hr TSP Levels



Title Contract No. DC/2002/06 Construction of Yuen Long Bypass Floodway Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S	Project No. MA2049	
	Date Oct 06	Appendix D	

APPENDIX E
24-HOUR TSP MONITORING RESULTS
AND GRAPHICAL PRESENTATIONS

Appendix E - 24-hour TSP Monitoring Results

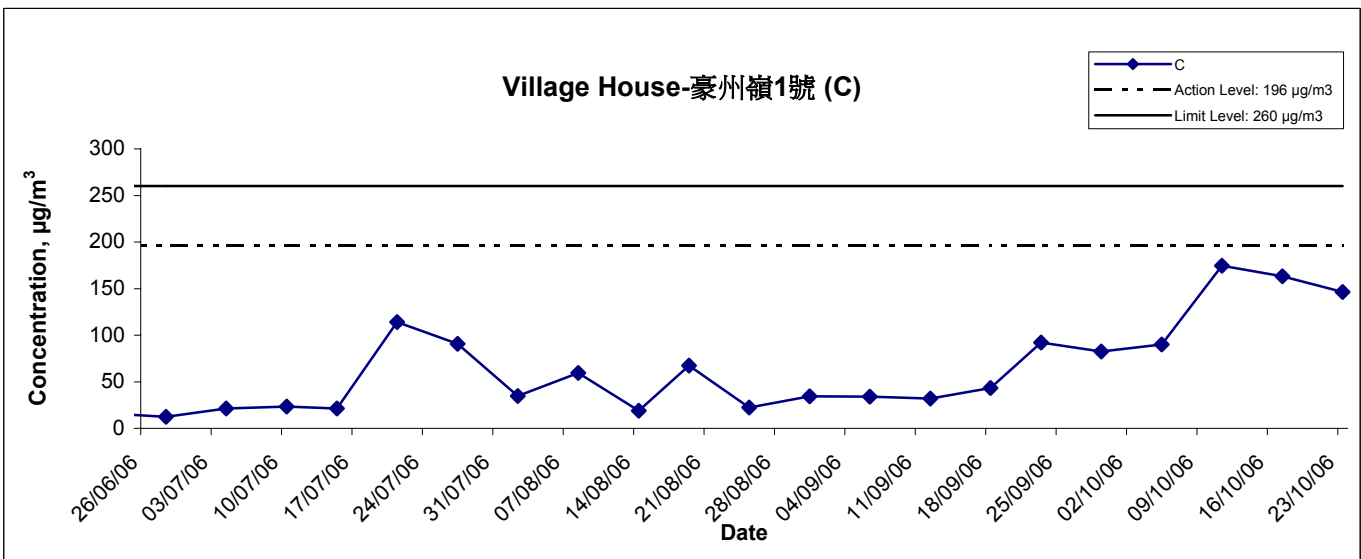
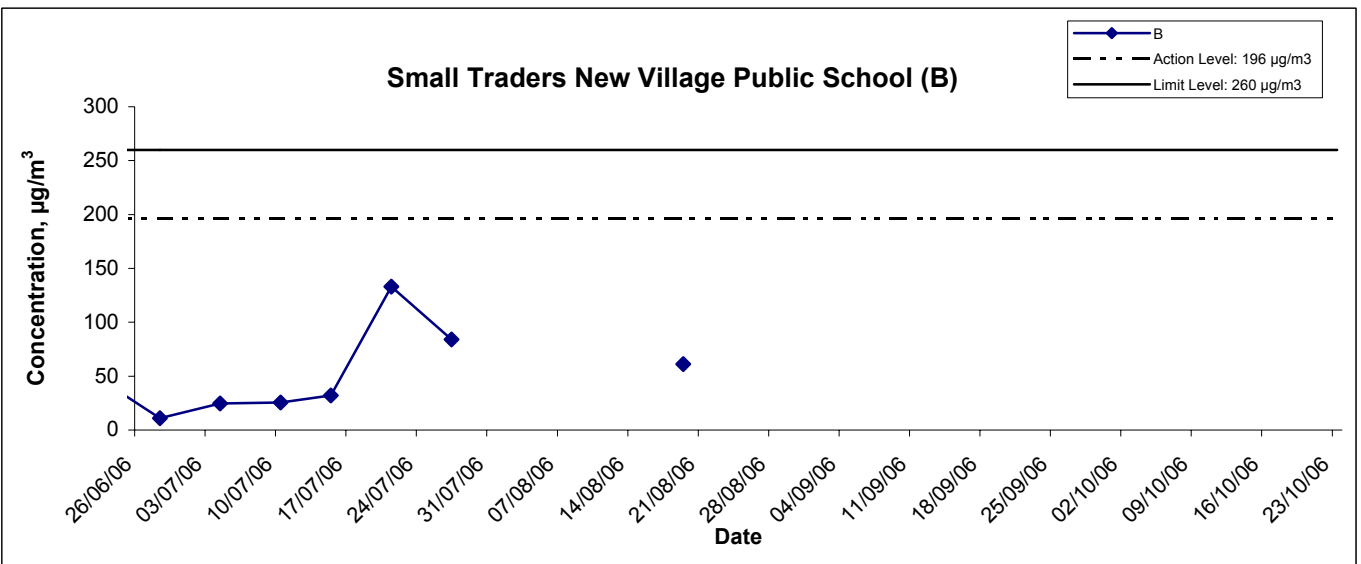
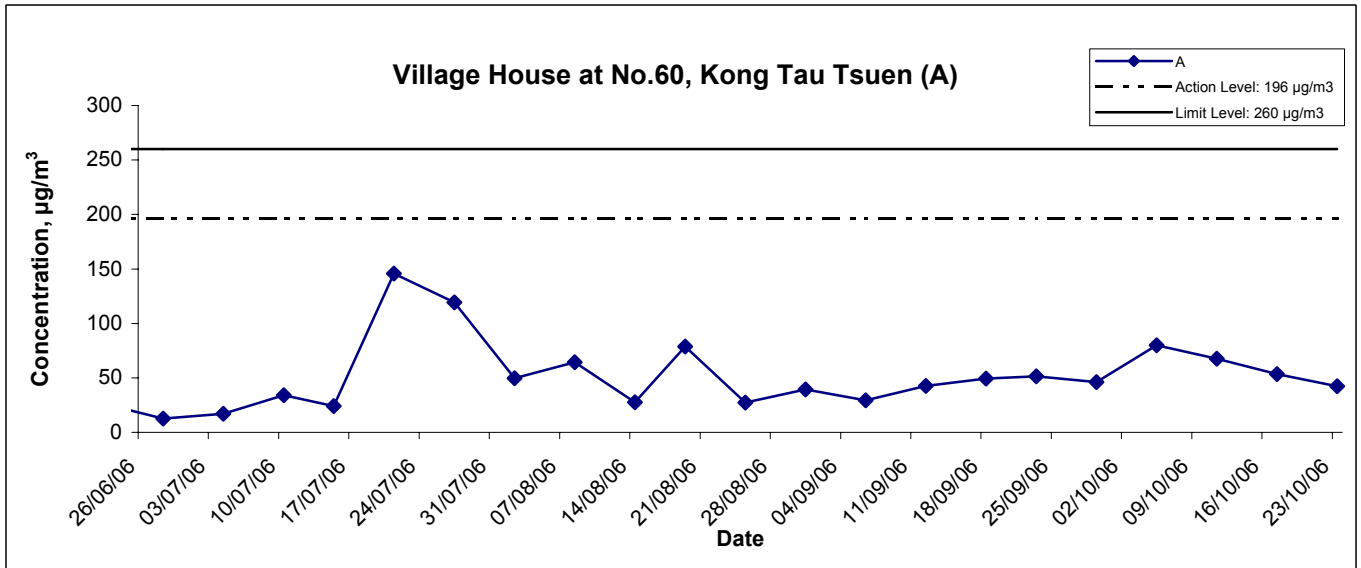
Location A - Village House at No.60, Kong Tau Tsuen

Date	Filter Weight (g)		Flow Rate (m ³ /min.)		Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)	Weather Condition	Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m ³ /min)	Total vol. (m ³)
	Initial	Final	Initial	Final	Initial	Final								
29-Sep-06	2.8567	2.9377	1.22	1.22	14841.7	14865.7	24.0	46.1	Sunshine	301.3	759.8	0.0810	1.22	1755.5
5-Oct-06	2.8333	2.9737	1.22	1.22	14867.7	14891.7	24.0	79.8	Sunshine	299.9	759.9	0.1404	1.22	1758.5
11-Oct-06	2.8725	2.9916	1.22	1.22	14893.7	14917.7	24.0	67.5	Sunshine	300.1	764.2	0.1191	1.22	1763.8
17-Oct-06	2.8753	2.9694	1.23	1.23	14919.7	14943.7	24.0	53.3	Sunshine	299.8	764.0	0.0941	1.23	1764.4
23-Oct-06	2.8949	2.9695	1.22	1.22	14945.7	14969.7	24.0	42.3	Sunshine	1650.1	763.9	0.0746	1.22	1763.5
								Min	42.3					
								Max	79.8					
								Average	57.8					

Location C - Village House (豪州嶺1號)

Date	Filter Weight (g)		Flow Rate (m ³ /min.)		Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)	Weather Condition	Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m ³ /min)	Total vol. (m ³)
	Initial	Final	Initial	Final	Initial	Final								
29-Sep-06	2.8622	3.0076	1.22	1.22	5934.0	5958.0	24.0	82.6	Sunshine	301.3	759.8	0.1454	1.22	1760.6
5-Oct-06	2.8419	3.0008	1.23	1.23	5960.0	5984.0	24.0	90.1	Sunshine	299.9	759.9	0.1589	1.23	1763.8
11-Oct-06	2.8340	3.1429	1.23	1.23	5982.1	6006.1	24.0	174.6	Sunshine	300.1	764.2	0.3089	1.23	1769.5
17-Oct-06	2.8797	3.1688	1.23	1.23	6008.1	6032.1	24.0	163.3	Sunshine	299.8	764.0	0.2891	1.23	1770.2
23-Oct-06	2.8708	3.1295	1.23	1.23	6034.1	6058.1	24.0	146.2	Sunshine	300.1	763.9	0.2587	1.23	1769.1
								Min	82.6					
								Max	174.6					
								Average	131.4					

24-hr TSP Levels



Title Contract No. DC/2002/06 Construction of Yuen Long Bypass Floodway Graphical Presentation of 24-hour TSP Monitoring Results	Scale N.T.S	Project No. MA2049	CINOTECH
	Date Oct 06	Appendix E	

**APPENDIX F
NOISE MONITORING RESULTS AND
GRAPHICAL PRESENTATIONS**

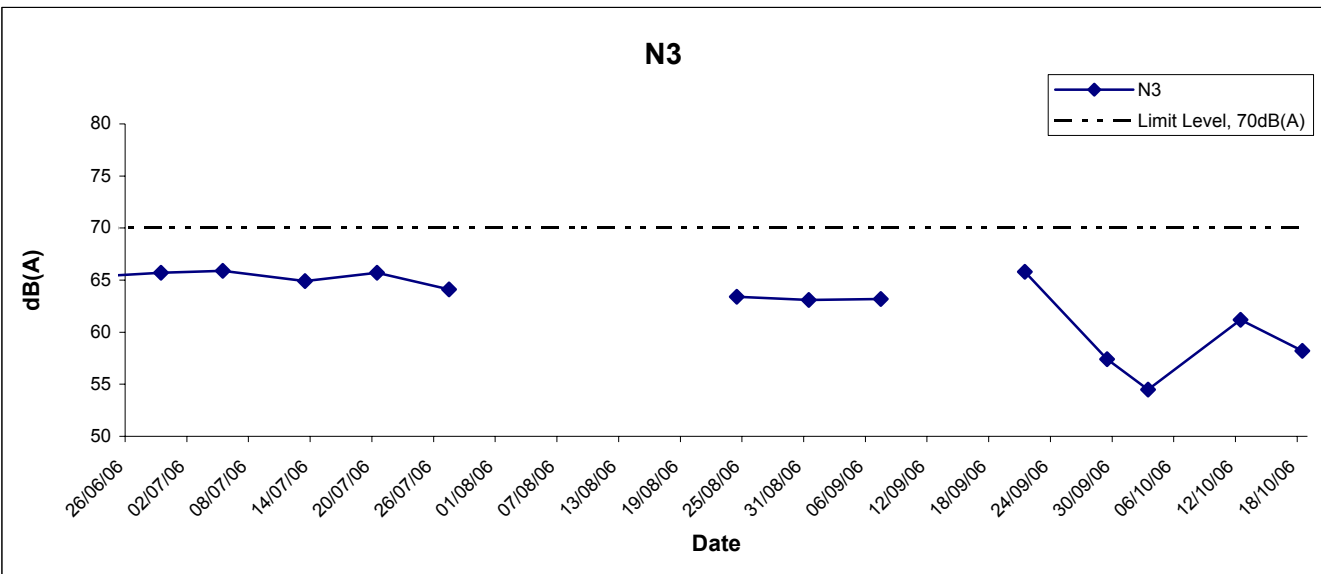
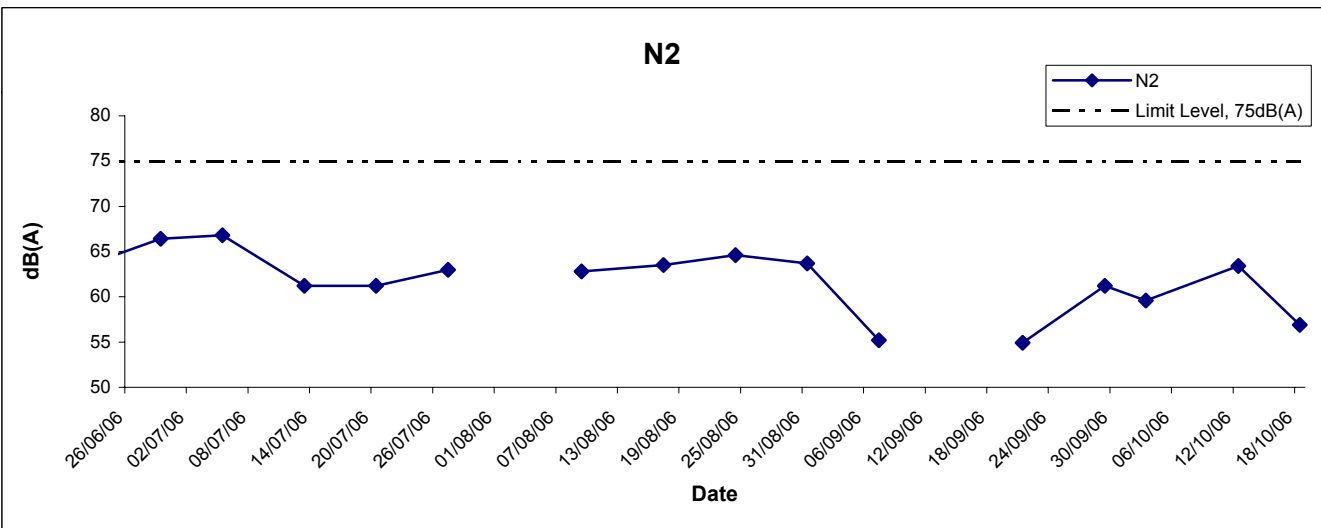
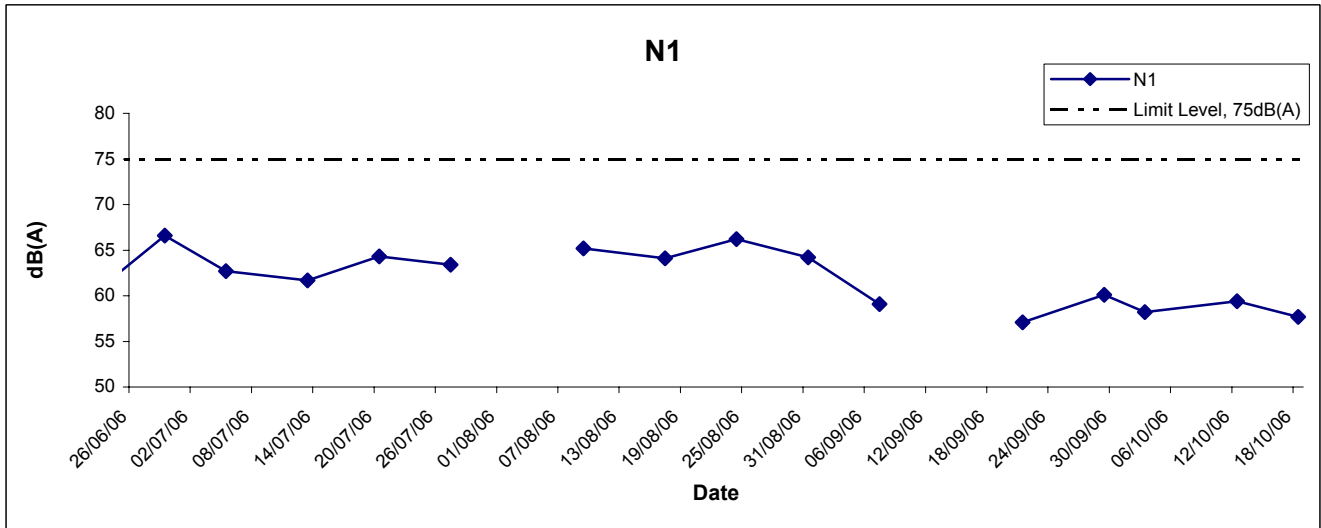
Appendix F - Noise Monitoring Results

Location N1 - Shung Ching San Tsuen					
Date	Time	Weather	dB (A) (30-min)		
			L _{eq}	L ₁₀	L ₉₀
29-Sep-06	15:50	Sunny	60.1	62.0	57.5
3-Oct-06	13:00	Sunny	58.2	60.0	55.5
12-Oct-06	15:30	Sunny	59.4	62.5	56.5
18-Oct-06	10:30	Sunny	57.7	59.5	54.0
		Average	58.5	60.9	55.5
		Minimum	57.7	59.5	54.0
		Maximum	60.1	62.5	57.5

Location N2 - Chuk San Tsuen					
Date	Time	Weather	dB (A) (30-min)		
			L _{eq}	L ₁₀	L ₉₀
29-Sep-06	14:00	Sunny	61.2	63.5	56.5
3-Oct-06	11:15	Sunny	59.6	61.5	56.0
12-Oct-06	13:00	Sunny	63.4	64.0	54.5
18-Oct-06	11:10	Sunny	56.9	58.5	53.0
		Average	60.8	61.9	54.7
		Minimum	56.9	58.5	53.0
		Maximum	63.4	64.0	56.5

Location N3 - Small Traders New Village Public School					
Date	Time	Weather	dB (A) (30-min)		
			L _{eq}	L ₁₀	L ₉₀
29-Sep-06	10:10	Sunny	57.4	58.5	55.5
3-Oct-06	13:48	Sunny	54.5	56.0	52.5
12-Oct-06	11:30	Sunny	61.2	66.5	57.0
18-Oct-06	09:30	Sunny	58.2	59.5	54.5
		Average	58.5	62.1	55.2
		Minimum	54.5	56.0	52.5
		Maximum	61.2	66.5	57.0

Noise Levels



Title Contract No. DC/2002/06 Construction of Yuen Long Bypass Floodway Graphical Presentation of Construction Noise Monitoring Results	Scale	N.T.S	Project No. MA2049	CINOTECH
	Date	Oct 06	Appendix F	

**APPENDIX G
WIND DATA**

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
26-Sep-06	00:00	0.0	WNW
26-Sep-06	01:00	0.0	WNW
26-Sep-06	02:00	0.0	WNW
26-Sep-06	03:00	0.0	WNW
26-Sep-06	04:00	0.0	W
26-Sep-06	05:00	0.0	WNW
26-Sep-06	06:00	0.0	WNW
26-Sep-06	07:00	0.0	WNW
26-Sep-06	08:00	0.0	WNW
26-Sep-06	09:00	0.4	WNW
26-Sep-06	10:00	0.4	W
26-Sep-06	11:00	0.4	W
26-Sep-06	12:00	0.9	W
26-Sep-06	13:00	0.9	W
26-Sep-06	14:00	0.4	W
26-Sep-06	15:00	0.4	W
26-Sep-06	16:00	0.4	WNW
26-Sep-06	17:00	0.0	WNW
26-Sep-06	18:00	0.0	WNW
26-Sep-06	19:00	0.0	WNW
26-Sep-06	20:00	0.0	WNW
26-Sep-06	21:00	0.0	WNW
26-Sep-06	22:00	0.0	WNW
26-Sep-06	23:00	0.4	WNW
27-Sep-06	00:00	0.0	W
27-Sep-06	01:00	0.0	WNW
27-Sep-06	02:00	0.0	W
27-Sep-06	03:00	0.0	W
27-Sep-06	04:00	0.0	W
27-Sep-06	05:00	0.0	W
27-Sep-06	06:00	0.0	WNW
27-Sep-06	07:00	0.0	W
27-Sep-06	08:00	0.0	W
27-Sep-06	09:00	0.0	NW
27-Sep-06	10:00	0.9	WNW
27-Sep-06	11:00	0.4	WNW
27-Sep-06	12:00	1.3	WNW
27-Sep-06	13:00	0.9	W
27-Sep-06	14:00	0.9	WNW
27-Sep-06	15:00	1.3	WNW
27-Sep-06	16:00	0.4	WNW
27-Sep-06	17:00	0.4	WNW
27-Sep-06	18:00	0.0	W
27-Sep-06	19:00	0.0	W
27-Sep-06	20:00	0.0	W
27-Sep-06	21:00	0.0	WSW
27-Sep-06	22:00	0.0	WSW
27-Sep-06	23:00	0.0	SW
28-Sep-06	00:00	0.0	SW
28-Sep-06	01:00	0.0	WSW
28-Sep-06	02:00	0.0	SSW
28-Sep-06	03:00	0.0	WSW
28-Sep-06	04:00	0.0	W
28-Sep-06	05:00	0.0	W

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
28-Sep-06	06:00	0.0	SSW
28-Sep-06	07:00	0.0	W
28-Sep-06	08:00	0.0	W
28-Sep-06	09:00	0.0	WSW
28-Sep-06	10:00	0.9	WNW
28-Sep-06	11:00	1.8	WNW
28-Sep-06	12:00	1.8	WNW
28-Sep-06	13:00	2.2	WNW
28-Sep-06	14:00	2.2	NW
28-Sep-06	15:00	2.2	WNW
28-Sep-06	16:00	1.8	W
28-Sep-06	17:00	1.8	W
28-Sep-06	18:00	0.9	W
28-Sep-06	19:00	1.3	W
28-Sep-06	20:00	1.8	ESE
28-Sep-06	21:00	1.8	S
28-Sep-06	22:00	1.8	---
28-Sep-06	23:00	3.6	N
29-Sep-06	00:00	2.7	N
29-Sep-06	01:00	2.2	N
29-Sep-06	02:00	1.8	N
29-Sep-06	03:00	2.7	N
29-Sep-06	04:00	4.0	---
29-Sep-06	05:00	4.5	---
29-Sep-06	06:00	4.5	---
29-Sep-06	07:00	4.5	---
29-Sep-06	08:00	4.0	---
29-Sep-06	09:00	4.5	W
29-Sep-06	10:00	4.9	W
29-Sep-06	11:00	4.5	NE
29-Sep-06	12:00	4.0	NE
29-Sep-06	13:00	4.0	NE
29-Sep-06	14:00	2.7	NE
29-Sep-06	15:00	2.7	NE
29-Sep-06	16:00	3.1	NE
29-Sep-06	17:00	4.0	NE
29-Sep-06	18:00	4.5	NE
29-Sep-06	19:00	4.5	NE
29-Sep-06	20:00	4.0	NE
29-Sep-06	21:00	3.1	NE
29-Sep-06	22:00	2.7	NE
29-Sep-06	23:00	3.6	NE
30-Sep-06	00:00	4.0	---
30-Sep-06	01:00	3.6	---
30-Sep-06	02:00	4.5	SSW
30-Sep-06	03:00	4.5	---
30-Sep-06	04:00	4.0	---
30-Sep-06	05:00	4.5	---
30-Sep-06	06:00	4.5	---
30-Sep-06	07:00	4.0	---
30-Sep-06	08:00	4.0	SSW
30-Sep-06	09:00	4.5	WNW
30-Sep-06	10:00	4.9	W
30-Sep-06	11:00	6.3	W

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
30-Sep-06	12:00	6.7	WNW
30-Sep-06	13:00	6.7	WNW
30-Sep-06	14:00	7.2	NE
30-Sep-06	15:00	6.3	NE
30-Sep-06	16:00	6.3	NE
30-Sep-06	17:00	6.7	NE
30-Sep-06	18:00	7.2	ENE
30-Sep-06	19:00	8.0	NE
30-Sep-06	20:00	8.5	ESE
30-Sep-06	21:00	8.5	E
30-Sep-06	22:00	9.8	---
30-Sep-06	23:00	9.4	E
1-Oct-06	00:00	0.1	SE
1-Oct-06	01:00	0.1	SE
1-Oct-06	02:00	0.1	SE
1-Oct-06	03:00	0.1	SE
1-Oct-06	04:00	0.1	SE
1-Oct-06	05:00	0.1	---
1-Oct-06	06:00	0.1	---
1-Oct-06	07:00	0.1	---
1-Oct-06	08:00	0.1	---
1-Oct-06	09:00	0.1	ESE
1-Oct-06	10:00	0.7	WNW
1-Oct-06	11:00	0.7	WNW
1-Oct-06	12:00	0.7	WNW
1-Oct-06	13:00	2.0	WNW
1-Oct-06	14:00	4.0	WNW
1-Oct-06	15:00	4.0	NNE
1-Oct-06	16:00	3.3	NNE
1-Oct-06	17:00	2.0	NE
1-Oct-06	18:00	1.4	NE
1-Oct-06	19:00	0.1	NE
1-Oct-06	20:00	0.7	NE
1-Oct-06	21:00	0.1	NE
1-Oct-06	22:00	0.7	NE
1-Oct-06	23:00	0.7	NE
2-Oct-06	00:00	0.7	ENE
2-Oct-06	01:00	0.1	E
2-Oct-06	02:00	0.1	---
2-Oct-06	03:00	0.1	E
2-Oct-06	04:00	0.1	ENE
2-Oct-06	05:00	0.1	ENE
2-Oct-06	06:00	1.4	E
2-Oct-06	07:00	0.1	E
2-Oct-06	08:00	0.1	E
2-Oct-06	09:00	0.1	N
2-Oct-06	10:00	1.4	N
2-Oct-06	11:00	2.0	NE
2-Oct-06	12:00	4.6	NE
2-Oct-06	13:00	4.0	NE
2-Oct-06	14:00	3.3	NE
2-Oct-06	15:00	1.4	NE
2-Oct-06	16:00	1.4	ENE
2-Oct-06	17:00	2.7	SSW

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
2-Oct-06	18:00	1.4	N
2-Oct-06	19:00	1.4	E
2-Oct-06	20:00	0.1	---
2-Oct-06	21:00	0.1	E
2-Oct-06	22:00	0.1	---
2-Oct-06	23:00	0.1	---
3-Oct-06	00:00	0.1	---
3-Oct-06	01:00	0.1	---
3-Oct-06	02:00	0.1	E
3-Oct-06	03:00	0.1	E
3-Oct-06	04:00	0.1	SW
3-Oct-06	05:00	0.1	E
3-Oct-06	06:00	0.1	ENE
3-Oct-06	07:00	0.7	WSW
3-Oct-06	08:00	1.4	WSW
3-Oct-06	09:00	2.0	WSW
3-Oct-06	10:00	2.7	WSW
3-Oct-06	11:00	2.0	SW
3-Oct-06	12:00	2.0	W
3-Oct-06	13:00	2.0	SSW
3-Oct-06	14:00	2.0	S
3-Oct-06	15:00	2.0	S
3-Oct-06	16:00	2.0	WSW
3-Oct-06	17:00	5.3	W
3-Oct-06	18:00	2.0	SSW
3-Oct-06	19:00	3.3	SW
3-Oct-06	20:00	3.3	SW
3-Oct-06	21:00	4.0	SW
3-Oct-06	22:00	4.6	SW
3-Oct-06	23:00	4.0	SW
4-Oct-06	00:00	4.0	SW
4-Oct-06	01:00	4.6	SW
4-Oct-06	02:00	3.3	SW
4-Oct-06	03:00	3.3	SSW
4-Oct-06	04:00	2.7	SSW
4-Oct-06	05:00	1.4	SW
4-Oct-06	06:00	2.0	SW
4-Oct-06	07:00	1.4	SW
4-Oct-06	08:00	3.3	W
4-Oct-06	09:00	4.6	WSW
4-Oct-06	10:00	4.6	WNW
4-Oct-06	11:00	5.3	W
4-Oct-06	12:00	5.3	WNW
4-Oct-06	13:00	3.3	WNW
4-Oct-06	14:00	4.0	WNW
4-Oct-06	15:00	4.0	WNW
4-Oct-06	16:00	3.3	SW
4-Oct-06	17:00	2.7	S
4-Oct-06	18:00	2.0	S
4-Oct-06	19:00	0.7	S
4-Oct-06	20:00	0.7	S
4-Oct-06	21:00	2.7	S
4-Oct-06	22:00	3.3	SSW
4-Oct-06	23:00	2.7	S

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
5-Oct-06	00:00	2.7	SSW
5-Oct-06	01:00	2.7	SSW
5-Oct-06	02:00	3.3	SSW
5-Oct-06	03:00	5.3	WNW
5-Oct-06	04:00	4.0	W
5-Oct-06	05:00	3.3	W
5-Oct-06	06:00	0.7	WNW
5-Oct-06	07:00	1.4	WNW
5-Oct-06	08:00	2.7	WNW
5-Oct-06	09:00	3.3	WNW
5-Oct-06	10:00	6.7	WNW
5-Oct-06	11:00	5.3	WNW
5-Oct-06	12:00	5.9	WNW
5-Oct-06	13:00	5.9	WNW
5-Oct-06	14:00	2.0	W
5-Oct-06	15:00	0.7	N
5-Oct-06	16:00	1.4	NNE
5-Oct-06	17:00	0.1	WNW
5-Oct-06	18:00	0.1	SE
5-Oct-06	19:00	0.1	SE
5-Oct-06	20:00	0.7	ESE
5-Oct-06	21:00	0.1	ESE
5-Oct-06	22:00	0.1	ESE
5-Oct-06	23:00	0.7	W
6-Oct-06	00:00	2.7	SSW
6-Oct-06	01:00	1.4	SSW
6-Oct-06	02:00	0.7	S
6-Oct-06	03:00	0.1	S
6-Oct-06	04:00	2.7	S
6-Oct-06	05:00	2.0	S
6-Oct-06	06:00	4.0	WNW
6-Oct-06	07:00	3.3	SW
6-Oct-06	08:00	3.3	SW
6-Oct-06	09:00	5.9	SW
6-Oct-06	10:00	4.0	SW
6-Oct-06	11:00	3.3	SW
6-Oct-06	12:00	2.7	SW
6-Oct-06	13:00	4.0	WNW
6-Oct-06	14:00	5.9	WNW
6-Oct-06	15:00	5.3	WNW
6-Oct-06	16:00	3.3	WNW
6-Oct-06	17:00	4.6	WNW
6-Oct-06	18:00	4.6	WNW
6-Oct-06	19:00	2.7	WNW
6-Oct-06	20:00	2.7	SSW
6-Oct-06	21:00	2.0	SSW
6-Oct-06	22:00	0.1	SW
6-Oct-06	23:00	1.4	SW
7-Oct-06	00:00	2.0	SW
7-Oct-06	01:00	2.0	SSW
7-Oct-06	02:00	0.7	SSW
7-Oct-06	03:00	2.0	SSW
7-Oct-06	04:00	2.7	SSW
7-Oct-06	05:00	2.7	SSW

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
7-Oct-06	06:00	2.0	WNW
7-Oct-06	07:00	1.4	SSW
7-Oct-06	08:00	2.7	WNW
7-Oct-06	09:00	4.0	WNW
7-Oct-06	10:00	4.0	WNW
7-Oct-06	11:00	3.3	W
7-Oct-06	12:00	6.7	WNW
7-Oct-06	13:00	5.9	WNW
7-Oct-06	14:00	5.3	W
7-Oct-06	15:00	4.0	W
7-Oct-06	16:00	4.6	W
7-Oct-06	17:00	4.6	W
7-Oct-06	18:00	4.6	W
7-Oct-06	19:00	4.6	SW
7-Oct-06	20:00	4.0	SW
7-Oct-06	21:00	4.0	SW
7-Oct-06	22:00	4.6	WSW
7-Oct-06	23:00	5.9	WSW
8-Oct-06	00:00	6.7	WSW
8-Oct-06	01:00	6.7	WSW
8-Oct-06	02:00	5.3	WSW
8-Oct-06	03:00	5.3	SW
8-Oct-06	04:00	2.7	W
8-Oct-06	05:00	4.0	W
8-Oct-06	06:00	4.6	W
8-Oct-06	07:00	4.0	W
8-Oct-06	08:00	4.0	W
8-Oct-06	09:00	4.6	W
8-Oct-06	10:00	5.3	W
8-Oct-06	11:00	8.0	WNW
8-Oct-06	12:00	9.3	WNW
8-Oct-06	13:00	8.0	WNW
8-Oct-06	14:00	7.2	WNW
8-Oct-06	15:00	6.7	W
8-Oct-06	16:00	4.6	SW
8-Oct-06	17:00	4.0	SW
8-Oct-06	18:00	4.6	WSW
8-Oct-06	19:00	5.9	WSW
8-Oct-06	20:00	6.7	WSW
8-Oct-06	21:00	6.7	WSW
8-Oct-06	22:00	5.3	SW
8-Oct-06	23:00	5.9	WSW
9-Oct-06	00:00	5.9	WSW
9-Oct-06	01:00	4.6	WSW
9-Oct-06	02:00	5.3	SW
9-Oct-06	03:00	3.3	SW
9-Oct-06	04:00	4.6	WSW
9-Oct-06	05:00	4.6	WSW
9-Oct-06	06:00	3.3	SW
9-Oct-06	07:00	5.9	SW
9-Oct-06	08:00	5.9	SW
9-Oct-06	09:00	8.0	SW
9-Oct-06	10:00	5.9	SW
9-Oct-06	11:00	5.3	SW

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
9-Oct-06	12:00	4.6	WSW
9-Oct-06	13:00	4.6	WSW
9-Oct-06	14:00	3.3	SSW
9-Oct-06	15:00	4.6	SW
9-Oct-06	16:00	5.3	SW
9-Oct-06	17:00	4.0	SW
9-Oct-06	18:00	3.3	SW
9-Oct-06	19:00	4.6	SW
9-Oct-06	20:00	4.0	SW
9-Oct-06	21:00	5.3	WSW
9-Oct-06	22:00	5.3	WSW
9-Oct-06	23:00	4.6	WSW
10-Oct-06	00:00	5.9	WSW
10-Oct-06	01:00	4.6	SW
10-Oct-06	02:00	5.3	WSW
10-Oct-06	03:00	5.9	SW
10-Oct-06	04:00	4.0	SW
10-Oct-06	05:00	2.7	SSW
10-Oct-06	06:00	3.3	SSW
10-Oct-06	07:00	4.0	SW
10-Oct-06	08:00	4.6	SW
10-Oct-06	09:00	4.0	SW
10-Oct-06	10:00	5.3	WSW
10-Oct-06	11:00	4.0	SW
10-Oct-06	12:00	3.3	W
10-Oct-06	13:00	2.7	SW
10-Oct-06	14:00	4.0	SW
10-Oct-06	15:00	3.3	SW
10-Oct-06	16:00	3.3	SW
10-Oct-06	17:00	4.0	W
10-Oct-06	18:00	3.3	W
10-Oct-06	19:00	3.3	W
10-Oct-06	20:00	3.3	W
10-Oct-06	21:00	3.3	WNW
10-Oct-06	22:00	3.3	WNW
10-Oct-06	23:00	3.3	WNW
11-Oct-06	00:00	4.6	WNW
11-Oct-06	01:00	4.6	WNW
11-Oct-06	02:00	3.3	WNW
11-Oct-06	03:00	4.0	WNW
11-Oct-06	04:00	5.3	WNW
11-Oct-06	05:00	5.3	W
11-Oct-06	06:00	5.3	W
11-Oct-06	07:00	5.9	WNW
11-Oct-06	08:00	5.3	W
11-Oct-06	09:00	5.3	W
11-Oct-06	10:00	3.3	SW
11-Oct-06	11:00	4.0	SW
11-Oct-06	12:00	4.0	W
11-Oct-06	13:00	5.3	W
11-Oct-06	14:00	5.3	W
11-Oct-06	15:00	4.6	W
11-Oct-06	16:00	5.3	W
11-Oct-06	17:00	5.9	WNW

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
11-Oct-06	18:00	3.3	WSW
11-Oct-06	19:00	4.0	W
11-Oct-06	20:00	2.7	WNW
11-Oct-06	21:00	3.3	WNW
11-Oct-06	22:00	2.0	W
11-Oct-06	23:00	4.0	W
12-Oct-06	00:00	4.0	WSW
12-Oct-06	01:00	4.0	WSW
12-Oct-06	02:00	4.0	WSW
12-Oct-06	03:00	4.6	WSW
12-Oct-06	04:00	3.3	WSW
12-Oct-06	05:00	2.7	W
12-Oct-06	06:00	3.3	W
12-Oct-06	07:00	4.0	WNW
12-Oct-06	08:00	3.3	WNW
12-Oct-06	09:00	3.3	W
12-Oct-06	10:00	4.0	WNW
12-Oct-06	11:00	3.3	WNW
12-Oct-06	12:00	3.3	WNW
12-Oct-06	13:00	1.4	WNW
12-Oct-06	14:00	2.7	WNW
12-Oct-06	15:00	2.7	W
12-Oct-06	16:00	2.0	W
12-Oct-06	17:00	1.4	W
12-Oct-06	18:00	0.7	W
12-Oct-06	19:00	0.1	W
12-Oct-06	20:00	0.1	SSW
12-Oct-06	21:00	0.1	S
12-Oct-06	22:00	1.4	SSW
12-Oct-06	23:00	0.7	W
13-Oct-06	00:00	0.1	SSW
13-Oct-06	01:00	0.1	S
13-Oct-06	02:00	0.1	S
13-Oct-06	03:00	0.1	S
13-Oct-06	04:00	0.1	S
13-Oct-06	05:00	0.1	S
13-Oct-06	06:00	0.1	---
13-Oct-06	07:00	0.1	SSE
13-Oct-06	08:00	0.7	WNW
13-Oct-06	09:00	4.0	WNW
13-Oct-06	10:00	3.3	W
13-Oct-06	11:00	4.0	WNW
13-Oct-06	12:00	3.3	W
13-Oct-06	13:00	3.3	WNW
13-Oct-06	14:00	2.0	WNW
13-Oct-06	15:00	1.4	N
13-Oct-06	16:00	1.4	NNE
13-Oct-06	17:00	0.7	NE
13-Oct-06	18:00	0.7	ESE
13-Oct-06	19:00	0.1	E
13-Oct-06	20:00	0.1	---
13-Oct-06	21:00	0.1	E
13-Oct-06	22:00	0.1	E
13-Oct-06	23:00	0.1	E

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
14-Oct-06	00:00	0.1	E
14-Oct-06	01:00	0.1	E
14-Oct-06	02:00	0.1	E
14-Oct-06	03:00	0.1	E
14-Oct-06	04:00	0.1	---
14-Oct-06	05:00	0.1	---
14-Oct-06	06:00	0.1	---
14-Oct-06	07:00	0.1	---
14-Oct-06	08:00	0.1	---
14-Oct-06	09:00	0.1	N
14-Oct-06	10:00	4.6	W
14-Oct-06	11:00	5.3	WNW
14-Oct-06	12:00	3.3	WNW
14-Oct-06	13:00	3.3	WNW
14-Oct-06	14:00	3.3	W
14-Oct-06	15:00	4.6	W
14-Oct-06	16:00	4.6	WNW
14-Oct-06	17:00	4.6	W
14-Oct-06	18:00	3.3	W
14-Oct-06	19:00	2.0	W
14-Oct-06	20:00	0.1	W
14-Oct-06	21:00	0.1	W
14-Oct-06	22:00	0.1	W
14-Oct-06	23:00	0.1	W
15-Oct-06	00:00	0.1	W
15-Oct-06	01:00	0.1	W
15-Oct-06	02:00	0.1	---
15-Oct-06	03:00	0.1	---
15-Oct-06	04:00	0.1	---
15-Oct-06	05:00	0.1	---
15-Oct-06	06:00	0.1	---
15-Oct-06	07:00	0.7	SSW
15-Oct-06	08:00	4.0	WNW
15-Oct-06	09:00	5.3	W
15-Oct-06	10:00	5.9	WNW
15-Oct-06	11:00	5.3	WNW
15-Oct-06	12:00	5.9	WNW
15-Oct-06	13:00	5.3	WNW
15-Oct-06	14:00	3.3	W
15-Oct-06	15:00	2.7	SW
15-Oct-06	16:00	2.0	SW
15-Oct-06	17:00	0.7	SW
15-Oct-06	18:00	0.1	SW
15-Oct-06	19:00	0.1	ENE
15-Oct-06	20:00	0.1	---
15-Oct-06	21:00	0.1	---
15-Oct-06	22:00	0.1	---
15-Oct-06	23:00	0.1	SSW
16-Oct-06	00:00	2.7	SW
16-Oct-06	01:00	2.7	SW
16-Oct-06	02:00	3.3	SSW
16-Oct-06	03:00	2.7	SSW
16-Oct-06	04:00	2.7	SSW
16-Oct-06	05:00	1.4	SSW

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
16-Oct-06	06:00	0.7	SSW
16-Oct-06	07:00	0.1	SSW
16-Oct-06	08:00	0.1	SSW
16-Oct-06	09:00	4.0	WNW
16-Oct-06	10:00	4.0	WNW
16-Oct-06	11:00	4.0	WNW
16-Oct-06	12:00	3.3	W
16-Oct-06	13:00	1.4	W
16-Oct-06	14:00	0.7	WSW
16-Oct-06	15:00	1.4	WSW
16-Oct-06	16:00	2.7	WSW
16-Oct-06	17:00	2.7	WSW
16-Oct-06	18:00	0.7	ENE
16-Oct-06	19:00	0.1	ENE
16-Oct-06	20:00	0.1	ENE
16-Oct-06	21:00	0.1	ENE
16-Oct-06	22:00	0.1	ENE
16-Oct-06	23:00	0.1	ENE
17-Oct-06	00:00	0.1	---
17-Oct-06	01:00	0.1	---
17-Oct-06	02:00	0.1	---
17-Oct-06	03:00	0.1	---
17-Oct-06	04:00	0.1	---
17-Oct-06	05:00	0.1	ENE
17-Oct-06	06:00	0.1	---
17-Oct-06	07:00	0.7	WSW
17-Oct-06	08:00	2.0	SSW
17-Oct-06	09:00	2.0	SW
17-Oct-06	10:00	2.7	SW
17-Oct-06	11:00	2.0	W
17-Oct-06	12:00	4.0	W
17-Oct-06	13:00	3.3	W
17-Oct-06	14:00	2.7	W
17-Oct-06	15:00	2.7	W
17-Oct-06	16:00	3.3	W
17-Oct-06	17:00	2.7	W
17-Oct-06	18:00	2.0	WNW
17-Oct-06	19:00	2.0	WNW
17-Oct-06	20:00	2.0	WNW
17-Oct-06	21:00	2.7	WNW
17-Oct-06	22:00	2.7	WNW
17-Oct-06	23:00	2.0	W
18-Oct-06	00:00	3.3	W
18-Oct-06	01:00	3.3	WNW
18-Oct-06	02:00	2.7	W
18-Oct-06	03:00	2.7	W
18-Oct-06	04:00	3.3	WNW
18-Oct-06	05:00	2.7	WNW
18-Oct-06	06:00	2.7	WNW
18-Oct-06	07:00	2.7	W
18-Oct-06	08:00	3.3	WNW
18-Oct-06	09:00	2.7	WNW
18-Oct-06	10:00	3.3	WNW
18-Oct-06	11:00	4.6	SW

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
18-Oct-06	12:00	5.3	SW
18-Oct-06	13:00	5.3	SW
18-Oct-06	14:00	5.9	SW
18-Oct-06	15:00	4.6	SW
18-Oct-06	16:00	4.6	SW
18-Oct-06	17:00	5.3	WNW
18-Oct-06	18:00	3.3	WNW
18-Oct-06	19:00	3.3	W
18-Oct-06	20:00	3.3	W
18-Oct-06	21:00	3.3	W
18-Oct-06	22:00	4.6	WNW
18-Oct-06	23:00	3.3	WNW
19-Oct-06	00:00	4.0	WNW
19-Oct-06	01:00	5.3	WNW
19-Oct-06	02:00	5.3	WNW
19-Oct-06	03:00	4.6	WNW
19-Oct-06	04:00	4.0	W
19-Oct-06	05:00	4.6	W
19-Oct-06	06:00	4.0	SW
19-Oct-06	07:00	4.0	WSW
19-Oct-06	08:00	4.6	SW
19-Oct-06	09:00	5.3	SW
19-Oct-06	10:00	5.3	WNW
19-Oct-06	11:00	6.7	WNW
19-Oct-06	12:00	5.3	WNW
19-Oct-06	13:00	5.3	WNW
19-Oct-06	14:00	5.3	NW
19-Oct-06	15:00	4.6	WNW
19-Oct-06	16:00	5.9	W
19-Oct-06	17:00	6.7	WNW
19-Oct-06	18:00	2.7	WNW
19-Oct-06	19:00	2.7	W
19-Oct-06	20:00	2.7	WSW
19-Oct-06	21:00	2.0	WNW
19-Oct-06	22:00	4.6	WNW
19-Oct-06	23:00	4.0	WNW
20-Oct-06	00:00	4.6	WNW
20-Oct-06	01:00	5.3	WNW
20-Oct-06	02:00	4.6	WNW
20-Oct-06	03:00	4.6	W
20-Oct-06	04:00	3.3	WSW
20-Oct-06	05:00	3.3	SW
20-Oct-06	06:00	3.3	WSW
20-Oct-06	07:00	0.7	SW
20-Oct-06	08:00	0.7	W
20-Oct-06	09:00	4.0	WSW
20-Oct-06	10:00	5.3	SW
20-Oct-06	11:00	7.2	WNW
20-Oct-06	12:00	5.3	WNW
20-Oct-06	13:00	5.3	W
20-Oct-06	14:00	5.3	W
20-Oct-06	15:00	5.3	W
20-Oct-06	16:00	4.0	W
20-Oct-06	17:00	2.0	WNW

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
20-Oct-06	18:00	1.4	WNW
20-Oct-06	19:00	1.4	W
20-Oct-06	20:00	3.3	W
20-Oct-06	21:00	2.0	WNW
20-Oct-06	22:00	2.7	W
20-Oct-06	23:00	4.6	WNW
21-Oct-06	00:00	4.0	W
21-Oct-06	01:00	4.0	WNW
21-Oct-06	02:00	2.7	W
21-Oct-06	03:00	2.0	WSW
21-Oct-06	04:00	4.0	SW
21-Oct-06	05:00	2.7	SW
21-Oct-06	06:00	0.7	SW
21-Oct-06	07:00	0.1	SW
21-Oct-06	08:00	0.1	SW
21-Oct-06	09:00	4.0	SW
21-Oct-06	10:00	4.6	SW
21-Oct-06	11:00	2.7	SW
21-Oct-06	12:00	4.6	W
21-Oct-06	13:00	4.6	W
21-Oct-06	14:00	5.3	WNW
21-Oct-06	15:00	5.3	WNW
21-Oct-06	16:00	3.3	SW
21-Oct-06	17:00	2.0	SSW
21-Oct-06	18:00	0.1	SW
21-Oct-06	19:00	0.1	WSW
21-Oct-06	20:00	0.1	WSW
21-Oct-06	21:00	0.1	---
21-Oct-06	22:00	0.1	---
21-Oct-06	23:00	0.1	---
22-Oct-06	00:00	0.1	---
22-Oct-06	01:00	0.1	---
22-Oct-06	02:00	0.1	SSW
22-Oct-06	03:00	4.0	SW
22-Oct-06	04:00	3.3	SW
22-Oct-06	05:00	4.0	SW
22-Oct-06	06:00	4.0	SW
22-Oct-06	07:00	4.0	WSW
22-Oct-06	08:00	5.3	WSW
22-Oct-06	09:00	6.7	WSW
22-Oct-06	10:00	6.7	W
22-Oct-06	11:00	9.9	W
22-Oct-06	12:00	6.7	W
22-Oct-06	13:00	5.3	W
22-Oct-06	14:00	5.9	W
22-Oct-06	15:00	4.6	W
22-Oct-06	16:00	5.3	WNW
22-Oct-06	17:00	4.6	WNW
22-Oct-06	18:00	3.3	SSW
22-Oct-06	19:00	4.6	SW
22-Oct-06	20:00	6.7	SW
22-Oct-06	21:00	6.7	W
22-Oct-06	22:00	4.6	WSW
22-Oct-06	23:00	4.0	WSW

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
23-Oct-06	00:00	4.0	W
23-Oct-06	01:00	4.6	WSW
23-Oct-06	02:00	4.6	WNW
23-Oct-06	03:00	4.0	SW
23-Oct-06	04:00	3.3	WSW
23-Oct-06	05:00	3.3	WSW
23-Oct-06	06:00	3.3	SW
23-Oct-06	07:00	3.3	SW
23-Oct-06	08:00	4.0	SW
23-Oct-06	09:00	5.9	WNW
23-Oct-06	10:00	8.0	WNW
23-Oct-06	11:00	8.5	WNW
23-Oct-06	12:00	7.2	WNW
23-Oct-06	13:00	7.2	WNW
23-Oct-06	14:00	5.9	W
23-Oct-06	15:00	5.3	WNW
23-Oct-06	16:00	6.7	WNW
23-Oct-06	17:00	4.6	SW
23-Oct-06	18:00	4.0	SW
23-Oct-06	19:00	4.0	SSW
23-Oct-06	20:00	3.3	SSW
23-Oct-06	21:00	4.0	SSW
23-Oct-06	22:00	2.7	SSW
23-Oct-06	23:00	2.7	SSW
24-Oct-06	00:00	2.7	SSW
24-Oct-06	01:00	2.7	SSW
24-Oct-06	02:00	2.7	SSW
24-Oct-06	03:00	2.0	SW
24-Oct-06	04:00	4.0	SW
24-Oct-06	05:00	3.3	SW
24-Oct-06	06:00	2.7	SW
24-Oct-06	07:00	3.3	SW
24-Oct-06	08:00	3.3	SW
24-Oct-06	09:00	5.3	WNW
24-Oct-06	10:00	6.7	WNW
24-Oct-06	11:00	5.9	WNW
24-Oct-06	12:00	4.6	WNW
24-Oct-06	13:00	3.3	WNW
24-Oct-06	14:00	2.7	WNW
24-Oct-06	15:00	3.3	WNW
24-Oct-06	16:00	2.0	WNW
24-Oct-06	17:00	2.7	W
24-Oct-06	18:00	1.4	W
24-Oct-06	19:00	0.1	W
24-Oct-06	20:00	0.1	W
24-Oct-06	21:00	0.1	---
24-Oct-06	22:00	0.1	---
24-Oct-06	23:00	0.1	---
25-Oct-06	00:00	0.1	---
25-Oct-06	01:00	0.1	---
25-Oct-06	02:00	0.1	ESE
25-Oct-06	03:00	0.1	ESE
25-Oct-06	04:00	0.1	ESE
25-Oct-06	05:00	0.1	ESE

Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
25-Oct-06	06:00	0.7	ESE
25-Oct-06	07:00	3.3	SW
25-Oct-06	08:00	4.0	WSW
25-Oct-06	09:00	3.3	WSW
25-Oct-06	10:00	4.0	WSW
25-Oct-06	11:00	3.3	WSW
25-Oct-06	12:00	3.3	WNW
25-Oct-06	13:00	3.3	W
25-Oct-06	14:00	2.0	SW
25-Oct-06	15:00	3.3	WNW
25-Oct-06	16:00	2.0	W
25-Oct-06	17:00	3.3	WNW
25-Oct-06	18:00	2.0	W
25-Oct-06	19:00	2.0	W
25-Oct-06	20:00	1.4	SSW
25-Oct-06	21:00	0.7	S
25-Oct-06	22:00	0.1	S
25-Oct-06	23:00	0.1	---

**APPENDIX H
WATER MONITORING RESULTS AND
GRAPHICAL PRESENTATIONS**

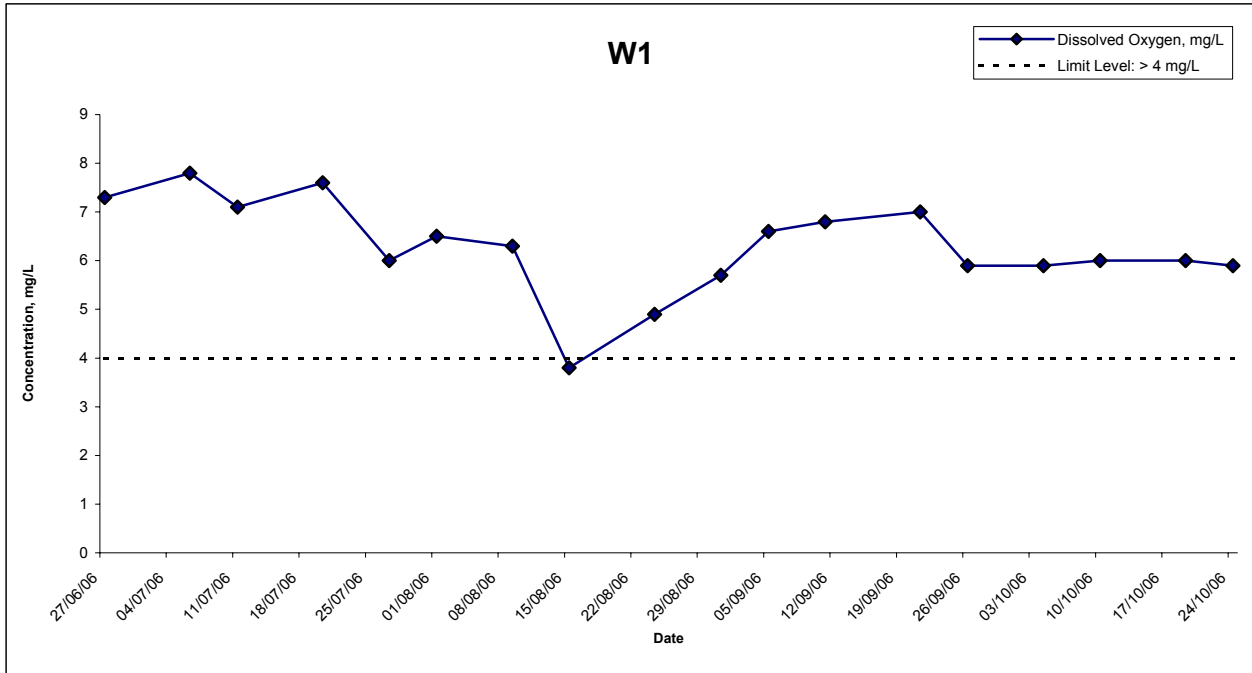
**Appendix H
Water Quality Monitoring Results**

Location W1

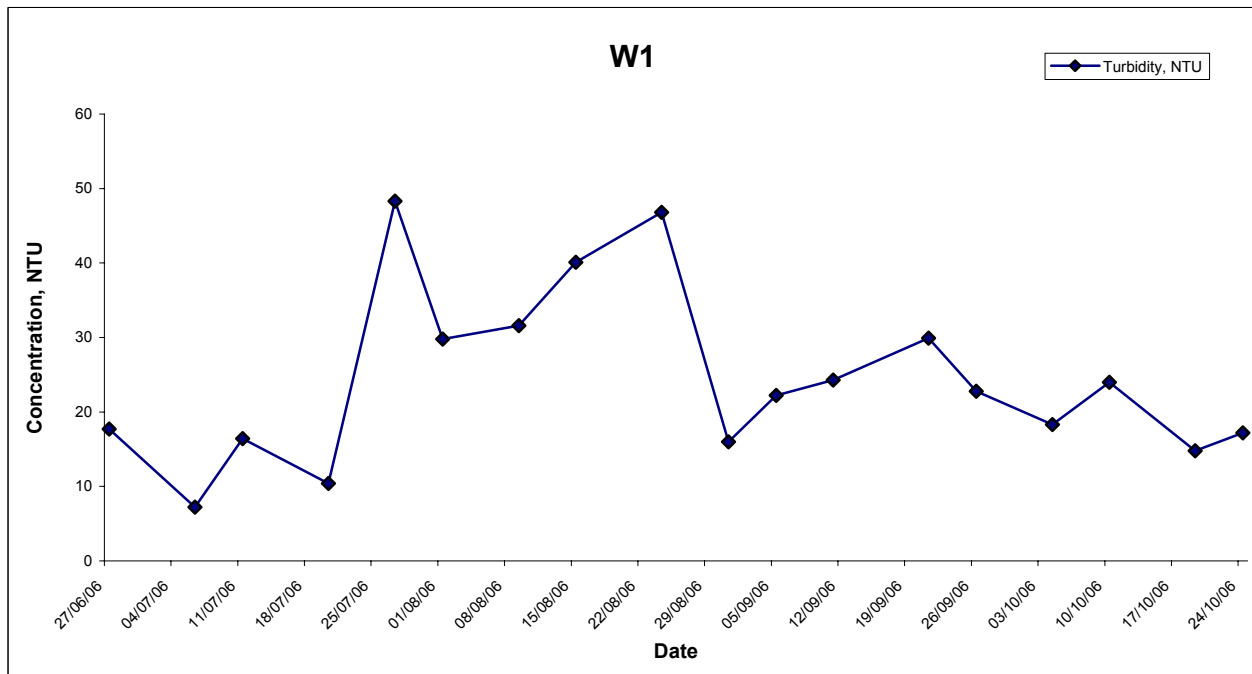
Date	Weather Condition	Sampling Time	Depth (m)		Temperature (°C)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		pH		Ammoniacal-Nitrogen (mg/L)
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value
06/9/26	Sunny	15:00	Middle	0.5	26.4	26.5	96.7	96.8	5.9	5.9	22.7	22.8	7.8	7.8	4.0
					26.5		96.8		5.9		22.9		7.8		
06/10/4	Sunny	10:46	Middle	0.5	27.5	27.5	92.4	92.1	5.8	5.9	18.6	18.3	7.8	7.8	8.0
					27.5		91.8		5.9		18.0		7.8		
06/10/10	Sunny	15:02	Middle	0.5	23.9	24.1	89.7	89.5	6.0	6.0	24.2	24.0	7.9	7.9	7.0
					24.2		89.2		5.9		23.8		7.9		
06/10/19	Sunny	12:04	Middle	0.5	23.1	23.0	89.3	89.6	5.9	6.0	14.7	14.8	7.8	7.9	7.0
					22.9		89.9		6.0		14.9		7.9		
06/10/24	Sunny	15:20	Middle	0.5	22.4	22.3	89.5	90.2	5.9	5.9	17.1	17.2	7.8	7.8	11.0
					22.2		90.8		5.9		17.3		7.8		

No water discharge from DP1 to DP8

Dissolved Oxygen



Turbidity



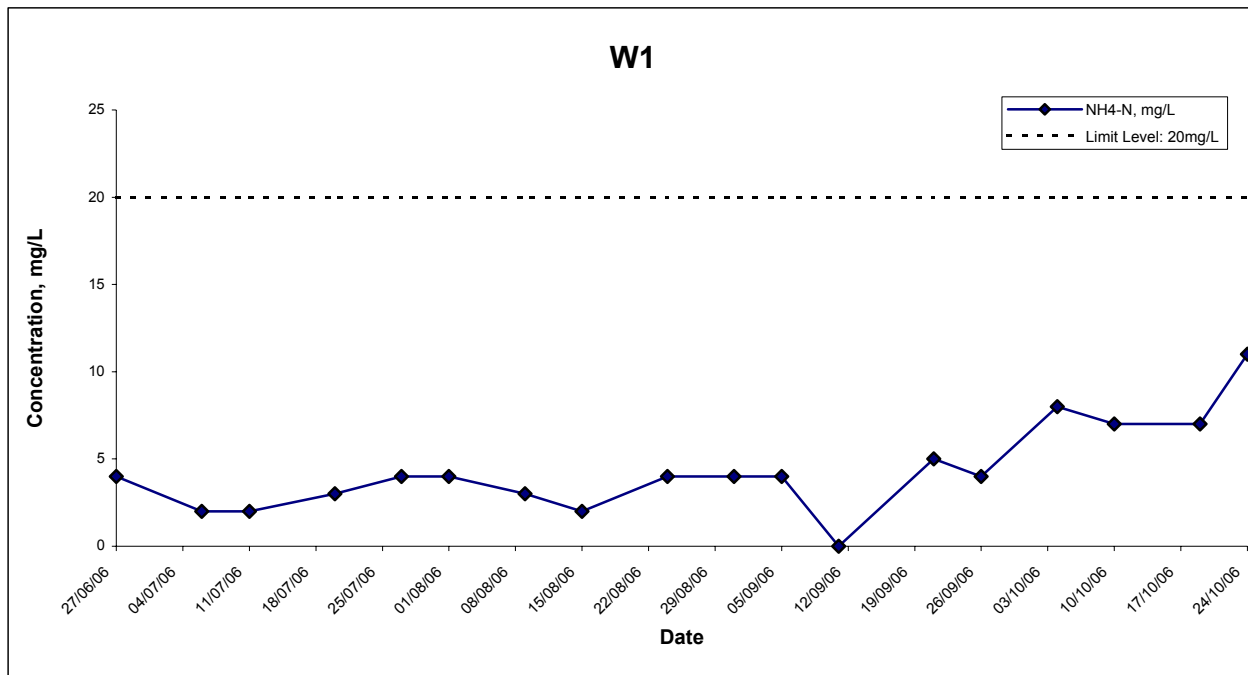
Title
 Contract No. DC/2002/06
 Construction of Yuen Long Bypass Floodway
 Graphical Presentation of Water Quality Monitoring
 Results

Scale
 N.T.S
 Date
 Oct 06

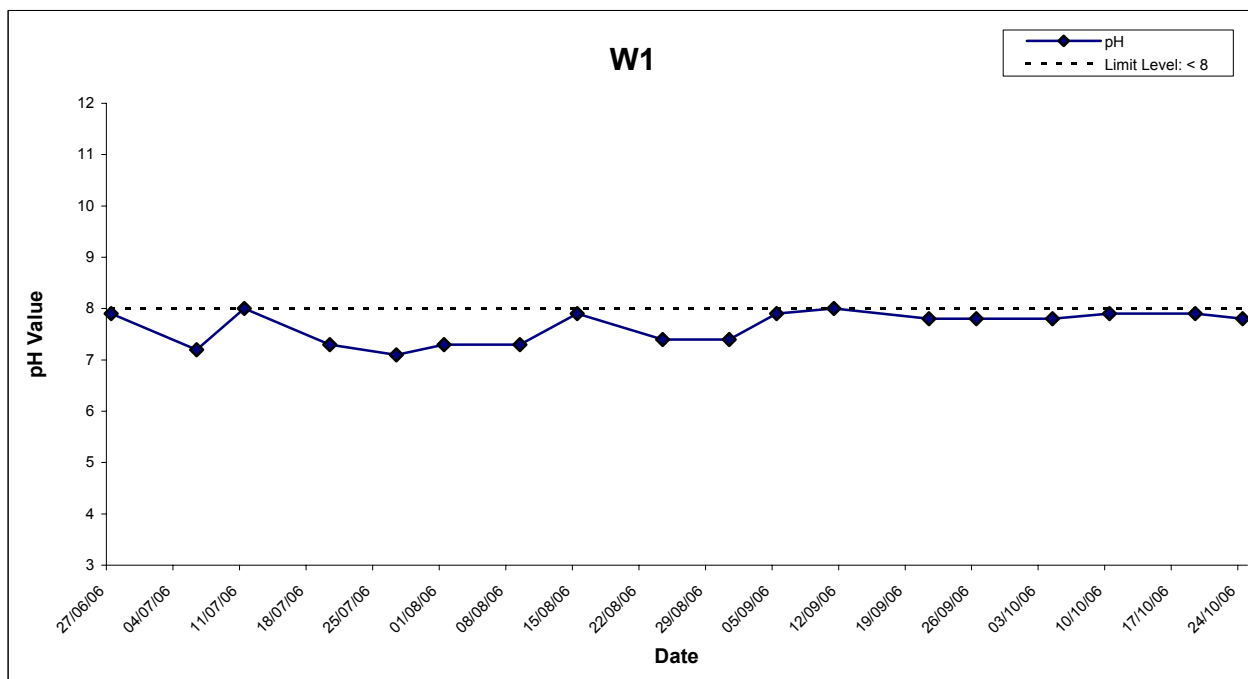
Project
 No. MA2049
 Appendix
 H



Ammoniacal-Nitrogen



pH



Title Contract No. DC/2002/06
 Construction of Yuen Long Bypass Floodway
 Graphical Presentation of Water Quality Monitoring
 Results

Scale
 N.T.S
 Date
 Oct 06

Project
 No. MA2049
 Appendix
 H



**APPENDIX I
SITE AUDIT SUMMARY**

Site Inspection Record Sheet

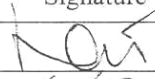

Inspection Information

Checklist Reference Number	60929
Date	29 September 2006
Time	15:00 – 15:45

Observations

Reference No.

<p><i>A. Water Quality</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session. <p><i>B. Air Quality</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session. <p><i>C. Noise</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session. <p><i>D. Waste / Chemical Management</i></p> <ul style="list-style-type: none">The Contractor was reminded to maintain good site tidiness opposite at Pok Oi Hospital. <p><i>E. Permit / Licenses</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session. <p><i>F. Follow Up Action</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session.	1
--	---

	Name	Signature	Date
Recorded by	Jason Lai		29 September 2006
Checked by	Kenneth Lam		29 September 2006

Construction of the Yuen Long Bypass Floodway

Site Inspection Record Sheet


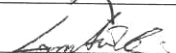
Inspection Information

Checklist Reference Number	61006
Date	6 October 2006
Time	15:00 – 15:45

Observations

Reference No.

<p><i>A. Water Quality</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session. <p><i>B. Air Quality</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session. <p><i>C. Noise</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session. <p><i>D. Waste / Chemical Management</i></p> <ul style="list-style-type: none">The Contractor was reminded to clean up the general refuse for the site opposite at Pok Oi Hospital. <p><i>E. Permit / Licenses</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session. <p><i>F. Follow Up Action</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session.	1
---	---

	Name	Signature	Date
Recorded by	Tommy Ho		6 October 2006
Checked by	Kenneth Lam		6 October 2006

Site Inspection Record Sheet


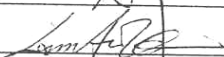
Inspection Information

Checklist Reference Number	61012
Date	12 October 2006
Time	15:00 – 15:45

Observations

Reference No.

<p><i>A. Water Quality</i></p> <ul style="list-style-type: none"> No environmental deficiencies were identified during the audit session. <p><i>B. Air Quality</i></p> <ul style="list-style-type: none"> No environmental deficiencies were identified during the audit session. <p><i>C. Noise</i></p> <ul style="list-style-type: none"> No environmental deficiencies were identified during the audit session. <p><i>D. Waste / Chemical Management</i></p> <ul style="list-style-type: none"> No environmental deficiencies were identified during the audit session. <p><i>E. Permit / Licenses</i></p> <ul style="list-style-type: none"> No environmental deficiencies were identified during the audit session. <p><i>F Follow Up Action</i></p> <ul style="list-style-type: none"> All the environmental deficiencies recorded in the previous audit session were rectified. 	
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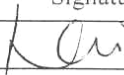

	Name	Signature	Date
Recorded by	Tommy Ho		12 October 2006
Checked by	Kenneth Lam		12 October 2006

Site Inspection Record Sheet

Inspection Information

Checklist Reference Number	61020
Date	20 October 2006
Time	15:00 – 15:45

Observations	Reference No.
<p><i>A. Water Quality</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session. <p><i>B. Air Quality</i></p> <ul style="list-style-type: none">The Contractor was reminded to spray water for the dusty activities, for example excavation, in the dry session. <p><i>C. Noise</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session. <p><i>D. Waste / Chemical Management</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session. <p><i>E. Permit / Licenses</i></p> <ul style="list-style-type: none">No environmental deficiencies were identified during the audit session. <p><i>F. Follow Up Action</i></p> <ul style="list-style-type: none">All the environmental deficiencies recorded in the previous audit session were rectified.	1

	Name	Signature	Date
Recorded by	Jason Lai		22 October 2006
Checked by	Ray Yan		22 October 2006

APPENDIX J
SUMMARY OF EXCEEDANCES

**Construction of Yuen Long Bypass Floodway
Environmental Impact Monitoring
Exceedance Summary**

No exceedance was recorded in the reporting month.

**APPENDIX K
AMONUT OF WASTE GENERATED**

Contract No. DC/2002/06

Construction of the Yuen Long Bypass Floodway

Summary Table of Waste Quantity

Month: October 2006

Waste Type	Quantity of this month	Disposal Site	Amount
<i>Inert Portion of C&D materials (public fill)</i>			
Public fill that can be reused and/or recycled in order to enable it to be	10 m ³	-	399,620m ³
Surplus public fill to be delivered to public filling facilities	203 m ³	Public filling area at Tuen Mun Area 38, or when instructed by the Engineer, the public filling area at Tseung Kwan O Area 137 or any other authorized locations within the Territory of the Hong Kong Special	568,617m ³
<i>Non-inert portion of C&D materials (C&D waste), including general refuse</i>			
Chemical waste	0 m ³	-	0 m ³
C&D waste to be recycled	5 m ³	-	350 m ³
C&D waste to be re-used	0 m ³	-	175 m ³
C&D waste to be returned	0 m ³	-	5 m ³
C&D waste which cannot be reused or recycled and has to be	0 m ³	WENT and NENT Landfills, or any other authorized locations within the Territory of the Hong Kong Special Administrative Region.	15849 m ³

Contract No 合約編號	DDF Serial No 運載記錄票編號	Transaction Ref No 交收備考號碼	Disposal Date 卸置日期	Time In 進入時間	Time Out 離開時間	Vehicle No 車輛登記號碼	GWV 車輛總重	Source of Material 物料來源地	Type of Material 物料類別	Weight In (tonne) 入載重量 (公噸)	Net Vehicle Load (tonne) 物料淨重量 (公噸)	Remarks 備註
DC/2002/06	0000105789		27-Oct-06	15:04:00	15:17:00	KR9386	24	Yuen Long		18.98	4.18	
DC/2002/06	0000105790	060174116	28-Oct-06	09:00:00	09:07:00	HA9920	24	Yuen Long	Broken Concrete	22.25	9.32	
DC/2002/06	0000105791	060174123	28-Oct-06	09:06:00	09:12:00	KN996	24	Yuen Long	Broken Concrete	23.38	10.47	
DC/2002/06	0000105793	060174209	28-Oct-06	10:10:00	10:16:00	HA9920	24	Yuen Long	Broken Concrete	23.48	10.57	
DC/2002/06	0000105794	060174218	28-Oct-06	10:17:00	10:27:00	KN996	24	Yuen Long	Building Debris	24.66	11.71	Continue : "Overloaded"
DC/2002/06	0000105795	060174273	28-Oct-06	11:23:00	11:29:00	HA9920	24	Yuen Long	Broken Concrete	22.43	9.53	
DC/2002/06	0000105796	060174288	28-Oct-06	11:34:00	11:40:00	KN996	24	Yuen Long	Broken Concrete	23.51	10.58	
DC/2002/06	0000105797	060174353	28-Oct-06	13:36:00	13:42:00	JH762	24	Yuen Long	Broken Concrete	23.30	10.10	
DC/2002/06	0000105798	060174358	28-Oct-06	13:39:00	13:44:00	HA9920	24	Yuen Long	Broken Concrete	24.71	11.71	Continue : "Overloaded"
DC/2002/06	0000105799	060174370	28-Oct-06	13:47:00	13:52:00	KN996	24	Yuen Long	Broken Concrete	23.34	10.46	
DC/2002/06	0000105800	060174418	28-Oct-06	14:46:00	14:51:00	JH762	24	Yuen Long	Broken Concrete	22.28	9.18	
DC/2002/06	0000105801	060174430	28-Oct-06	14:52:00	14:58:00	HA9920	24	Yuen Long	Broken Concrete	23.91	10.92	
DC/2002/06	0000105802	060174434	28-Oct-06	14:55:00	15:01:00	KN996	24	Yuen Long	Broken Concrete	24.36	11.51	Continue : "Overloaded"
DC/2002/06	0000105803	060174480	28-Oct-06	15:45:00	15:51:00	JH762	24	Yuen Long	Broken Concrete	23.21	10.12	
DC/2002/06	0000105804	060174486	28-Oct-06	15:53:00	15:59:00	HA9920	24	Yuen Long	Broken Concrete	24.01	11.04	Continue : "Overloaded"
DC/2002/06	0000105805	060174496	28-Oct-06	16:01:00	16:06:00	KN996	24	Yuen Long	Broken Concrete	25.00	12.15	Continue : "Overloaded"
DC/2002/06	0000105806	060174527	28-Oct-06	16:47:00	17:01:00	JH762	24	Yuen Long	Building Debris	24.39	11.31	Continue : "Overloaded"
DC/2002/06	0000105807	060174531	28-Oct-06	16:49:00	16:56:00	HA9920	24	Yuen Long	Broken Concrete	23.37	10.41	
DC/2002/06	0000105808	060174542	28-Oct-06	16:58:00	17:04:00	KN996	24	Yuen Long	Broken Concrete	24.21	11.35	Continue : "Overloaded"
DC/2002/06	0000105809	060174677	31-Oct-06	09:08:00	09:14:00	HA9920	24	Yuen Long	Building Debris	23.89	10.96	
DC/2002/06	0000105810	060174686	31-Oct-06	09:16:00	09:22:00	KN996	24	Yuen Long	Building Debris	24.15	11.20	Continue : "Overloaded"
DC/2002/06	0000105812	060174759	31-Oct-06	10:08:00	10:21:00	HA9920	24	Yuen Long	Mixed rock and soil	23.57	10.65	
DC/2002/06	0000105813	060174767	31-Oct-06	10:12:00	10:25:00	KN996	24	Yuen Long	Mixed rock and soil	24.73	11.78	Continue : "Overloaded"
DC/2002/06	0000105814	060174839	31-Oct-06	11:11:00	11:22:00	HA9920	24	Yuen Long	Building Debris	24.03	11.13	Continue : "Overloaded"
DC/2002/06	0000105815	060174856	31-Oct-06	11:24:00	11:32:00	KN996	24	Yuen Long	Broken Concrete	22.90	9.92	
DC/2002/06	0000105816	060174921	31-Oct-06	13:24:00	13:29:00	KN996	24	Yuen Long	Broken Concrete	23.29	10.37	
DC/2002/06	0000105817	060174996	31-Oct-06	14:25:00	14:31:00	KN996	24	Yuen Long	Broken Concrete	23.19	10.27	
DC/2002/06	0000105818	060175073	31-Oct-06	15:28:00	15:40:00	KN996	24	Yuen Long	Building Debris	24.43	11.51	Continue : "Overloaded"
DC/2002/06	0000105811	060086782	31-Oct-06	10:46:00	10:52:00	JC6013	24	Yuen Long	Mixed Construction Waste >50%	22.74	8.26	

Total: 29 trucks load (Quantity)
Truck load x 13 ton ÷ 1.85 (Mg/m³) = 203.78 m³ (Volume)

**APPENDIX M
COMPLAINT LOGS**

Appendix M - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
30825-1	Fish Pond No. 9	25 Aug 03	<p>EPD received a complaint about the malodour emitted from dead fishes at ponds due to the Project on 23rd August 2003. EPD subsequently referred the complaint to the ET Leader of the Project on 25th August 2003.</p> <p>The complaint was concerning malodour emitted from fish ponds next to Hung Mo Kiu on 23rd August 2003.</p>	<p>The ET contacted the complaint on 25th August 2003 and was told that the malodour was emitted from dead fishes in the ponds. The complaint said that the condition was alleviated as the said fish ponds were refilled with water on that day.</p> <p>Information about the complaint was sent to the Contractor on 25th August 2003. The Contractor was requested to confirm the exact pond location with the complainant and propose mitigation measures for same case in the future.</p> <p>The Contractor confirmed that the malodour was generated from pond No. 9 which is close to the Kam Tin River. The fish pond was refilled with water on 25th August 2003 and the condition was alleviated. The Contractor had made telephone conversation with the complaint and reported that the complainant was satisfied with the improved pond condition.</p> <p>The ET had carried out a site investigation on 26th August 2003 and observed that the said fish pond was filled up with water and no malodour was emitted.</p>	Closed
40112_16	Kong Tau Tsuen	12 Jan 04 16 Jan 04	<p>EPD Ref.: EP3/N06/TW/1118-04</p> <p>On 3rd, 5th, 10th and 15th January 2004, the EPD received a total of four environmental complaints about the dust nuisance produced from the site of the Project at Kong Tau Tsuen. The EPD referred the complaints to the IEC on 10th and 16th January 2004 and the IEC forwarded the complaints to the ET on 12th and 16th January 2004 respectively.</p> <p>The investigation report was submitted to EPD</p>	<p>According to IEC's weekly site audit and ET's monthly site audit in the concerned periods, no air quality violation was observed.</p> <p>Kong Tau Tsuen itself is a designated dust monitoring station. Regular dust monitoring were conducted on 3rd, 5th, 6th, 9th, 12th, 13th, 15th and 16th January 2004. Although 1-hr TSP Action Level exceedances were recorded on 5th and 6th January 2004, the exceedances were due to poor ambient air quality but not the Project.</p>	Closed

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Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			on 27 th January 2004.	The 1-hr TSP Limit Level exceedance on 9 th January 2004 was due to the operation of excavators and dump trucks. However, mitigation measures by (1) Increasing the frequency of watering of the concerned road; and (2) Washing the access road at the end of each day, were taken place and no further exceedance was recorded.	
40113	Tai Shu Ha Road West	13 Jan 04	<p>On 13th January 2004, the EPD received an environmental complaint about the exhaust gas emission from dump trucks parked in the Project at Tai Shu Ha Road West. The EPD referred the complaint to IEC and the IEC forwarded the complaint to the ET on the same day.</p> <p>The investigation report was submitted to EPD on 30th January 2004.</p>	<p>For the 1-hr TSP monitoring on 13th January 2004, no Action/Limit Level exceedance was recorded in all designated monitoring stations of the Project.</p> <p>According to IEC's weekly site audit and ET's monthly site audit in the concerned periods, no air quality violation was observed.</p> <p>According to Contractor's investigation and ET's monthly site audit, Tai Shu Ha Road West itself is a dual lane road with double white line as the separator. No parking area is spaced at the construction site of the Project and in both sides of the road. Therefore, parking of dump trucks is impossible at Tai Shu Ha Road West.</p> <p>There is also no evidence showing that the parked dump truck as complained was from the Project "Widening of Yuen Long Highway" or the captioned Project.</p> <p>The exhaust gas emission might due to road traffic at Tai Sha Ha Road West other than parked dump trucks.</p>	Closed
40116	Nam Sang Wai Road	16 Jan 04	<p>EPD Ref.: EP3/N06/TW/771-04</p> <p>On 12th January 2004, the EPD received an environmental complaint about the dust nuisance and deposit of soil from the Project at</p>	For the 1-hr TSP monitoring on 12 th January 2004, no Action/Limit Level exceedance was recorded at the monitoring station in Nam Sang Wai.	Closed

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Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>Nam Sang Wai Road. The EPD referred the complaint to IEC on 16th January 2004 and the IEC forwarded the complaint to the ET on the same day.</p> <p>The investigation report was submitted to EPD on 30th January 2004.</p>	<p>According to IEC's weekly site audit and ET's monthly site audit in the concerned periods, no air quality violation was observed.</p> <p>Although lack of wheel washing facilities and dust emission were observed by EPD on 19th January 2004, the Contractor has provided temporary concrete paving and additional wheel washing facilities as the mitigation measures. The effectiveness of these mitigation measures have been confirmed as no Action/Limit Level exceedance records at ET's designated dust monitoring on 19th, 20th, 21st and 26th January 2004.</p>	
40205	Kong Tau Tsuen	5 Feb 04	<p>EPD Ref.: EP3/N06/TW/2050-04</p> <p>On 4th February 2004, the EPD received an environmental complaint about the noise nuisance produced from the Project near Kong Tau Tsuen and Sheung Yau Tin Tsuen. The EPD referred the complaint to the IEC on 4th February 2004 and the IEC forwarded the complaint to the ET on 5th February 2004.</p> <p>The complaint was about the noise nuisance produced from loading/unloading activities by the lorries at the construction site. The complainant indicated that such noise problem had happened between 4:00am to 6:00am in the period of 20th January 2004 to 3rd February 2004.</p> <p>The investigation report was submitted to EPD on 13th February 2004.</p>	<p>According to the information provided by the Contractor, there was no construction activity on the site in the duration as mentioned by the complainant. Instead, all of the construction activities were limited in the period of 7:00am to 7:00pm in each working day. Furthermore, the site was closed during Chinese New Year Holidays from 22nd to 25th January 2004. Since there was no construction activity on the site within the period as mentioned by the complainant, the ET and the Contractor has considered the allegation from the complainant was not due to the Project and the complaint was invalid.</p>	Closed
40206	Castle Peak Road	6 Feb 04	<p>EPD Ref.: EP3/N06/TW/2034-04</p> <p>On 4th February 2004, the EPD received an environmental complaint about the muddy</p>	<p>According to the information provided by the Contractor, the construction site of "Pok Oi Hospital Extension" is located adjacent to the</p>	Closed

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Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>effluent produced from the Project near Au Tau at Castle Peak Road. The EPD referred the complaint to the IEC on 5th February 2004 and the IEC forwarded the complaint to the ET on 6th February 2004.</p> <p>The investigation report was submitted to EPD on 17th February 2004.</p>	<p>captioned project. There is no clear indication of the muddy effluent discharge from which construction site.</p> <p>Since there was no clear evidence indicating that the muddy effluent was came from the Project, the ET and the Contractor has concluded that the effluent might not be due to the Project. In order to prevent the discharge of muddy effluent to public roads, the Contractor has employed a full-time labour to clean the site exit at Castle Peak Road during working hours. A close monitoring on the cleanliness is also provided by the Contractor.</p>	
40216	Yau Tin West Road	16 Feb 04	<p>EPD Ref.: EP3/N06/TW/2622-04</p> <p>On 13th February 2004, the EPD received an environmental complaint about the soil deposited with muddy water and dust nuisance from the Project at Yau Tin West Road. The EPD referred the complaint to the IEC on 16th February 2004 and the IEC forwarded the complaint to the ET on the same day.</p> <p>The investigation report was submitted to EPD on 1st March 2004.</p>	<p>According to the site investigation by IEC and ET on 20th February 2004, no environmental deficiency was observed at Yau Tin West Road. The Contractor has revised the routing of haul road and provided a wheel washing facility at Yau Tin West Road in order to improve the situation. Based on the information provided by Mr. Li of EPD on 26th February 2004 at 4:05pm, the complainant has confirmed that the situation has been improved and the Contractor has washed the road regularly.</p>	Closed
40309	Sheung Yau Tin Tsuen	9 Mar 04	<p>EPD Ref.: EP3/N06/TW/4574-04</p> <p>On 8th March 2004, the EPD received an environmental complaint about the dust nuisance due to the operation of dump trucks at Sheung Yau Tin Tsuen. The EPD referred the complaint to the IEC on 9th March 2004 and the IEC forwarded the complaint to the ET Leader on the same day for investigation.</p> <p>The investigation report was submitted to EPD on 17th March 2004.</p>	<p>The Contractor has agreed with the complainant, Mr. Lam, and the following mitigation measures are applied:-</p> <ul style="list-style-type: none"> • Routing of dump trucks is separated from the village access in order to minimize the dust nuisance to villagers; • Frequency of water spraying at both haul road and village access is increased; • Labours are employed to clear the muddy water; and 	Closed

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Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<ul style="list-style-type: none"> Wheel washing facilities are provided at the site entrance. 	
40316	Kong Tau Tsuen	16 Mar 04	<p>EPD Ref.: EP3/N06/TW/5044-04</p> <p>On 15th March 2004, the EPD received an environmental complaint about the dust nuisance at Kong Tau Tsuen produced from the construction site of the Project. The EPD referred the complaints to the IEC on 16th March 2004 and the IEC forwarded the complaints to the ET Leader of the Project on the same day for investigation.</p> <p>The investigation report was submitted to EPD on 25th March 2004.</p>	<p>Based on the information provided by the Contractor, the frequency of water spraying was increased in early morning times.</p> <p>According to ET's site inspection, no violation of air quality was observed at Kong Tau Tsuen.</p> <p>No dust exceedance was recorded during regular monitoring.</p> <p>The ET concluded that the dust nuisance was rectified and no further action is required.</p>	Closed
40326_29	Tai Tong Road	26 Mar 04 29 Mar 04	<p>EPD Ref.: EP3/N06/TW/6015-04; and EP3/N06/TW/6076-04</p> <p>On 25th and 26th March 2004, the EPD received two environmental complaints about the dust nuisance due to insufficient wheel-washing at Tai Tong Road. The EPD referred the complaints to the IEC on 26th and 27th March 2004 respectively and the IEC forwarded the complaints to the ET Leader of the Project on 26th and 29th March 2004 for investigation.</p> <p>The investigation report was submitted to EPD on 31st March 2004</p>	<p>Based on the information provided the Contractor, concreting works were carried out on that period. Some vehicles leaving the site may cause dust nuisance during a short period of time. A full-time labour has been employed for wheel washing works at the site exit and a water truck would be used to clean the road surface if necessary.</p> <p>The Contractor has implemented mitigation measures and no dust nuisance was observed in the ET's latest site investigation.</p>	Closed
40507	Chuk San Tsuen	7 May 04	<p>EPD Ref.: EP3/N06/TW/6649-04</p> <p>On 2 April 2004, the EPD received one environmental complaint about the wastewater discharged near Chuck San Tsuen. The EPD referred the complaint to the IEC on 6th April 2004 and the IEC forwarded the complaint to the ET Leader of the Project on the same day</p>	<p>Based on the information provided by the Contractor, the situation was due to a heavy rainstorm on the complaint date. A large volume of surface runoff flowed from upstream of the construction site, passing through an unpaved area and discharge to Chuk San Tsuen. The situation was rectified on the next day.</p>	Closed

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Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>for investigation. (Remarks: Due to a failure of fax delivery, the ET received the details of the captioned complaint on the monthly progress meeting at 7 May 2004.)</p> <p>The investigation report was submitted to EPD on 12 May 2004.</p>	<p>The Contractor has already provided all possible treatment facilities in order to prevent muddy water discharge. The captioned complaint is concluded as an exceptional incidence due to heavy rainstorm.</p>	
40615	Yeung Uk Tsuen	15 Jun 04	<p>EPD Ref.: EP3/N06/TW/11909-04</p> <p>On 15 June 2004, the EPD received one environmental complaint about the dust nuisance near Yeung Uk Tsuen. The EPD referred the complaint to the IEC and the IEC forwarded the complaints to the ET Leader of the Project on the same day for investigation.</p> <p>The investigation report was submitted to EPD on 24 June 2004.</p>	<p>The Contractor noted that the complaint was about the dust nuisance at a lotus pond near CH22+00(L). The pond owner concerned about disturbance to his lotus due to the backfilling activities.</p> <p>The Contractor has implemented mitigation measures and no dust nuisance was observed in the ET's latest site investigation.</p>	Closed
40707	Tai Shu Ha West Road	7 Jul 04	<p>EPD Ref.: EP3/N06/TW/13356-04</p> <p>On 6 July 2004, the EPD received one environmental complaint about the muddy water from the construction site at Tai Shu Ha Road West. The EPD referred the complaint to the IEC on 7 July 2004 and the IEC forwarded the complaints to the ET Leader of the Project on the same day for investigation.</p> <p>The investigation report was submitted to EPD on 12 July 2004.</p>	<p>According to further discussion with the complainant, he concerned about the muddy water caused by dump trucks came from an access ramp during rainy days. Wetted mud was attached in the wheels of the dump truck and then deposited on the pedestrian road.</p> <p>However, the access ramp and dump truck as mentioned by the complainant is belonging the Project of "Widening of Yuen Long Highway" but not the captioned project. Nevertheless, the Contractor will wash the road every time after rainstorm. Watering will be provided during sunny days in order to prevent dust nuisance.</p>	Closed
40817	Kiu Hing Road	17 Aug 04	<p>EPD Ref.: EP3/N06/RN/15829-04</p> <p>On 9 August 2004, the EPD received one environmental complaint about the dust nuisance from the construction site of the</p>	<p>Having further discussion between ET and EPD, it is confirmed that the concerned area in the captioned complaint is Kiu Hing Road other than Kung Um Road.</p>	Closed

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Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>Project near Kung Um Road. The EPD referred the complaint to the IEC and the IEC forwarded the complaints to the ET Leader of the Project on 17 August 2004 for investigation.</p> <p>The investigation report was submitted on 26 August 2004.</p>	<p>According to ET's investigation, the dump trucks and vehicles causing dust nuisance as mentioned by the complainant were unidentified.</p> <p>During the site audits conducted by ET and IEC, no vehicle leaving the site was observed at Kiu Hing Road and site clearing and road washing was conducted by the Contractor of the captioned project only.</p> <p>It is believed that the Contractor has provided wheel washing and road washing. However, particular incidents might happen due to violation by sub-contractors of the captioned project and other adjoining construction projects.</p>	
40830	Kung Um Road Nullah	30 Aug 04	<p>EPD Ref.: EP3/N06/RN/15829-04</p> <p>On 26 August 2004, the EPD received one environmental complaint about the muddy water found discharging into the nullah, which was suspected to be from the construction site of the Project near Kung Um Road. The EPD referred the complaint to IEC and the IEC forwarded the complaints to the ET Leader of the Project on 30 August 2004 for investigation.</p> <p>The investigation report was submitted on 2 September 2004.</p>	<p>There are four construction sites locating near the nullah. This is no evident showing the muddy water as complained (i.e. on 9 and 10 August 2004) was due to which construction site.</p> <p>The construction site of the captioned project is located at Kung Um Road but not Kiu Hing Road. On 11 August 2004, ET has conducted a site audit and a source of muddy water was found at Kung Um Road only, which was not due to the captioned project.</p>	Closed
41213	Village Entrance of Kong Tau San Tsuen	13 December 04	<p>EPD Ref.: EP3/N06/RN/25885-04</p> <p>On 13 December 2004, the EPD received one environmental complaint about road obstruction during the operation water browser near the village entrance of Kong Tau San Tsuen. The EPD referred the complaint to IEC and the IEC forwarded the complaints to the ET Leader of</p>	<p>According to the Contractor, water browser was spraying water on the road section between subway and the village entrance of Kong Tau San Tsuen in order to suppress the dusty materials on ground to further prevent the fugitive dust emission from ground. During the operation of water browser, water was injected</p>	Closed

Con't

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>the Project on 15 December 2004 for investigation.</p> <p>The investigation report was submitted on 20 December 2004.</p>	<p>from truck to the road surface preventing and obstructing pedestrians/ villagers accessing to the village entrance directly.</p> <p>The environmental complaint is not supported based on the available information from the EPO, the RSS and the Contractor. However, it is recommended that the Contractor should take special cares and attention to the passers-by in particular pedestrians/ villagers during the operation of water browser. The scale and coverage of spraying should be limited to allow sufficient access for the pedestrians and villagers whenever possible.</p>	
41229	Site Area Adjacent to Pok Oi Hospital	29 December 04	<p>DSD ref.: DP/8/7070CD/DC0206/5</p> <p>DSD received a public complaint on 29 December 2004 about the discharge of wheel washing water from construction site near Pok Oi Hospital to the pedestrian access road adjacent to Pok Oi Hospital. DSD subsequently referred the complaint to the IEC of the Project on 31 December 2004 and the IEC forwarded the complaint to the ET Leader of the Project on 20 January 2005 for investigation.</p> <p>The investigation report was submitted on 3 February 2005.</p>	<p>The Contractor has taken action to control and ensure all the vehicles leaving the site have undergone the wheel washing process within the wheel washing facility immediately. The problem has been rectified immediately by the Contractor who has also informed the complainant afterwards.</p> <p>The Contractor was reminded to confirm all the construction water including wheel washing water within site boundary and provide sufficient and adequate treatment before discharge.</p> <p>The Contractor should strictly control all the vehicles leaving the site to complete the wheel washing process within the wheel washing facility in order to prevent the water flowing onto the footway.</p> <p>Sufficient environmental training should also be provided to all vehicle drivers and worker who is responsible for wheel washing.</p> <p>All relevant parties including RE, IEC and ET should monitor such item closely</p>	Closed

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Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50205	The existing channel connecting to box culvert BC11	5 February 2005	<p>DSD's Ref.: DP/8/7070CD/DC0206/88</p> <p>On 5 February 2005, the DSD received an environmental complaint regarding the sediment deposited at the existing channel connecting to box culvert BC11. The DSD referred the complaint to the IEC on 7 February 2005 and the IEC forwarded the complaint to the ET Leader of the Project on 8 February 2005 for investigation.</p> <p>The investigation report was submitted on 16 February 2005.</p>	<p>According to the Contractor, construction works for box culvert BC11 which will connect to the existing live channel has been conducted. In order to avoid the pollution of the water in such channel due to the Project during construction, a sandbag bund, a pump and a plastic conduit were provided to divert the water which beyond the site boundary to Access Ramp AR7. This is an acceptable mitigation measure to prevent the pollution of local water in channel.</p> <p>The sandbag bund along the site boundary was provided to serve as a sump pit to collect the water in the channel. A layer of foam was formed on the surface layer of the accumulated water. Such layer of foam was formed due to the poor quality of water in live channel. It was also believed that such foam was wrongly considered as the sediment (as stated in the complaint) in the water.</p> <p>However, the Contractor was reminded to clean and remove such layer of foam frequently to maintain a good house keeping on site. The Contractor should also spray the anti-mosquito repellent on the accumulated water if necessary.</p>	Closed
51229	Ha Yau Tin Tsuen	23 December 2005	<p>On 21 December 2005, the EPD received one environmental complaint regarding the construction dust at Ha Yau Tin Tsuen. The EPD referred the complaint to the IEC on 21 December 2005 and the IEC forwarded</p>	<p>It is believed that the dust complaint was due to wind erosion by strong wind and low relative humidity. Although minor construction works were taken place near the complaint area, such activities are</p>	Closed

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Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>the complaint to the ET Leader of the Project on the same day for investigation.</p> <p>The investigation report was submitted on 4 January 2006.</p> <p><i>(Remarks: Due to the failure of email systems, the ET Leader received the notice of complaint on 23 December 2005.)</i></p>	<p>unexpected to be a main dust source. Furthermore, the Contractor has already provided measures on the complaint area and no major dust problem was identified during the site audit on 23 December 2005. It is recommended the Contractor should take special precaution on all haul roads, stockpiles and dry surfaces during dry weather especially when strong wind exists.</p>	

**APPENDIX N
EXTRACTED MINUTES FOR
ENVIRONMENTAL MEETING**

No environmental and safety training was conducted by the contractor and its subcontractors in the reporting month.