

東業德勤測試顧問有限公司  
ETS-TESTCONSULT LIMITED

8/F, Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan Street, Fotan, Hong Kong  
Tel : 2695 8318 E-mail : etl@ets-testconsult.com  
Fax : 2695 3944 Web site : www.ets-testconsult.com

**TEST REPORT**

**China Harbour Engineering Co. Ltd.**

**RECONSTRUCTION OF  
SHA TAU KOK PUBLIC PIER**

**(CONTRACT NO.: CV/2004/09)**

**MONTHLY EM&A REPORT**

**(OCTOBER 2006)**

Prepared by:

Louisa Fung  
Environmental Officer

Checked and  
Approved by:

C. L. Lau  
Environmental Team Leader

Issue Date: 21 November 2006

Report No.: ENA 60790



INDEPENDENT ENVIRONMENTAL CHECKER  
CHECK CERTIFICATE

Signed : \_\_\_\_\_  
Independent Checker (Environmental)

Name : Dr. Roger W K Sze  
Roger Sze & Associates Ltd.



## TABLE OF CONTENTS

Page

### EXECUTIVE SUMMARY

<b>1.</b>	<b>INTRODUCTION</b>	<b>1</b>
<b>2.</b>	<b>PROJECT INFORMATION</b>	
	2.1 Background	1
	2.2 Site Description	1
	2.3 Construction Programme	1
	2.4 Project Organization	1
	2.5 Contact Details of Key Personnel	1
<b>3.</b>	<b>CONSTRUCTION PROGRESS IN THIS REPORTING MONTH</b>	<b>2</b>
<b>4.</b>	<b>IMPACT MARINE WATER QUALITY MONITORING</b>	
	4.1 Monitoring Locations	2
	4.2 Monitoring Parameters	2
	4.3 Monitoring Frequency	2
	4.4 Monitoring Methodology and Equipment Used	3
	4.5 In-situ Measurement	3 – 4
	4.6 Water Sampling and Sample Analysis	4
	4.7 Action and Limit Level	4
	4.8 Event and Action Plan	5 – 6
	4.9 Monitoring Duration and Period	6
	4.10 Marine Water Monitoring Results	6
<b>5.</b>	<b>IMPACT NOISE MONITORING</b>	
	5.1 Monitoring Requirements	7
	5.2 Monitoring Equipment	7
	5.3 Monitoring Parameters, Frequency and duration	7
	5.4 Monitoring Locations and Period	7
	5.5 Monitoring Methodology	7
	5.6 Noise Monitoring Results	8
<b>6.</b>	<b>ENVIRONMENTAL NON-CONFORMANCE</b>	
	6.1 Summary of Marine Water Quality Monitoring	8
	6.2 Summary of Environmental Complaints	8
	6.3 Summary of Notification of Summons and Prosecution	8
<b>7.</b>	<b>STATUS OF ENVIRONMENTAL LICENSING AND PERMITTING</b>	<b>8</b>
<b>8.</b>	<b>WASTE MANAGEMENT</b>	<b>8 – 9</b>
<b>9.</b>	<b>SITE INSPECTION</b>	
	9.1 Summary of site inspection findings	9
	9.2 Recommendations on site inspection findings	9
<b>10.</b>	<b>IMPLEMENTATION STATUS</b>	
	10.1 Implementation Status of Environmental Mitigation Measures	9
	10.2 Implementation Status of Event and Action Plan	9
	10.3 Implementation Status of Environmental Complaint Handling	10
<b>11.</b>	<b>CONCLUSION</b>	<b>10</b>
<b>12.</b>	<b>FUTURE KEY ISSUES</b>	
	12.1 Upcoming EM&A program in reporting month	10
	12.2 Upcoming construction works schedule in report month	10 – 11

### APPENDIX

<b>A</b>	Organization Chart
<b>B</b>	Calibration Certificates of Water Quality Monitoring Equipment
<b>C1</b>	Noise Monitoring Results
<b>C2</b>	Graphical Plots of Noise Monitoring Data
<b>D1</b>	Water Quality Monitoring Results
<b>D2</b>	Graphical Plots of Marine Water Monitoring Data
<b>E</b>	QA/QC Results of Laboratory Analysis
<b>F</b>	Site Inspection Record Sheets
<b>G</b>	Construction Programme



## FIGURE

PW-0409-037 Monitoring Locations at Sha Tau Kok

## TABLES

2.1	Contact Details of Key Personnel
3.1	Major Construction Activities in this reporting month
3.2	Implementation of Environmental Mitigation Measures
4.1	Water Quality Monitoring Stations at Sha Tau Kok
4.2	Water Quality Monitoring Parameters
4.3	Monitoring Frequency of Impact Monitoring
4.4	Details of Impact Monitoring Equipment (In-situ measurement)
4.5	Action and Limit Levels for Marine Water Quality
4.6	Event and Action Plan for Water Quality Monitoring
4.7	Schedule for Impact Monitoring at Sha Tau Kok
5.1	Duration, Frequencies and Parameters of Noise Monitoring
5.2	Monitoring Periods for noise monitoring stations
7.1	Summary of Environmental Licensing and Permit Status
8.1	Summary of Quantities of Waste for Disposal in this reporting month
9.1	The summary of site inspection findings
10.1	Statistical Summary of Environmental Complaints
12.1	Upcoming EM&A Schedule in coming month
12.2	Construction Plan in the coming month



## EXECUTIVE SUMMARY

This monthly EM&A report (No.20) has been prepared by the Environmental Team (ET) of ETS-Testconsult Ltd for impact monitoring under "the Contract No. CV/2004/09 Reconstruction of Sha Tau Kok Public Pier (The Project) during the reporting period from 01 to 31 October 2006.

Under the requirements of Section 26 of "the Particular Specification" (the PS), EM&A requirement as set out in the PS is required to be implemented. In accordance with the PS, impact environmental monitoring of water quality and site audit is required for the Project.

### **Construction Progress**

The major construction work in this reporting month included:

- Removal of temporary platform; and
- Demolition of existing pier.

### **Environmental Monitoring Progress**

The summary of the monitoring activities in this monitoring month is listed below:

- *Marine Water Quality Monitoring: 11 Occasions at 4 designated locations;*
- *Site Inspection: 4 Occasions.*

### **Marine Water Quality Monitoring**

Since the demolition works of the Pier was carried out from 18 September 2006, the frequency of marine water quality monitoring increased to three times per week.

There was no exceedance of Action and Limit Level recorded in this reporting month.

### **Noise Monitoring**

The noise level at the construction site was lower than 75dB(A) during the noise monitoring in this reporting month. Hence, the noise impact from the construction activities was low and insignificant to the surroundings.

### **Environmental Complaints**

No complaints were received in this reporting month.

### **Notification of summons and successful prosecutions**

There were no notification of summons and prosecutions with respect to environmental issues in this month.

### **Future Key Issues**

Base on the site inspections and forecast of engineering works in the coming month, key issues to be considered are as follows:

- *Maintain good site practice to avoid the environmental impact to the environment;*
- *Maintain good waste management to minimize environmental impacts at the site;*
- *Follow-up improvements on environmental and waste management issues.*



## 1. INTRODUCTION

China Harbour Engineering Co. Ltd. (CHEC) was awarded the contract, Reconstruction of Sha Tau Kok Public Pier (Contract No.: CV/2004/09). Impact monitoring and impact monitoring will be carried out at Sha Tau Kok Public Pier by Environmental Specialist (ES) of ETS-Testconsult Ltd (ETL). Roger Sze & Associates Ltd. Was appointed by CHEC as Independent Checker (Environmental).

The purpose of this Impact report is to monitor marine water quality during the construction works at the Project and also control or avoid the environmental impacts to the environment nearby.

## 2. PROJECT INFORMATION

### 2.1 Background

The project is planned and designed in-house by Port Works Division, Civil Engineering and Development Department. The construction is executed by China Harbour Engineering Co. Ltd to be appointed through tendering exercise.

### 2.2 Site Description

Figure PW-0409-037 shows the monitoring locations of the site at Sha Tau Kok Public Pier. There is a fish culture zone near Sha Tau Kok Public Pier. The area may be affected by the construction activities nearby.

### 2.3 Construction Programme

The project comprises the reconstruction of the Sha Tau Kok Public Pier and the proposed scope includes:

- Provision of temporary berthing and mooring facilities during construction stages;
- Construction of a reinforced concrete pier head of size about 45.8m by 10.6m and a catwalk about 4.5m wide by 278m long with piles foundation;
- Construction of roof covers;
- Supply and installation/construction of associated marine facilities, and
- Demolition of the existing pier and catwalk;
- Preservation and protection of existing trees.

Details of Construction Programme are shown in Appendix G.

### 2.4 Project Organization

The organization chart with respect to the on-site environmental management and monitoring program are shown in Appendix A.

### 2.5 Contact Details of Key Personnel

The key personnel contact names and telephone numbers, and construction programme are shown in table 2.1.

Table 2.1 Contact Details of Key Personnel

Organization	Project Role	Name of Key Staff	Tel. No.	Fax No.
CEDD	Employer	Mr. N H Shum	2762 5573	2714 2054
Roger Sze & Associates Ltd.	Independent Checker (Environmental)	Ir. Dr. Roger W K Sze	2687 5681	2687 5826
CHEC	Main Contractor	Mr. Moses Hui	9460 0300	2659 7308
ETL	Contractor's Environmental Specialist	Mr C L Lau	2946 7792	2695 3944
Hotline Number (For Public)	CHEC	Mr Mosses Hui	2659 7608	2695 7308



### 3. CONSTRUCTION PROGRESS IN THIS REPORTING MONTH

A summary of the major construction activities undertaken in this reporting month is shown in Table 3.1. The implementation of the corresponding mitigation measures is summarized in Table 3.2.

Table 3.1 Major Construction Activities in this reporting month

Item	Construction Activity	Location
1	Removal of temporary platform	Catwalk
2	Demolition of existing pier	Pier Head

Table 3.2 Implementation status of Environmental Mitigation Measures

General Construction Works	<ul style="list-style-type: none"> <li>• Maintain good site practice to avoid the environmental impact to the environment;</li> <li>• Remove construction waste accumulated inside or outside the site regularly;</li> <li>• Keep good waste management.</li> </ul>
----------------------------	---

### 4. IMPACT MARINE WATER QUALITY MONITORING

#### 4.1 Monitoring Locations

The Impact water quality monitoring and control locations are shown in Table 4.1.

Table 4.1 Impact Water Quality Monitoring Stations

Station	EASTING (m)	NORTHING (m)
C1	840930.0	844080.0
C2	841986.0	844738.0
M1	841415.0	844570.0
M2	841550.0	844370.0

At Sha Tau Kok, C2 was the upstream control station for all monitoring stations at mid-flood and C1 was the upstream control station for all monitoring stations at mid-ebb.

#### 4.2 Monitoring Parameters

Monitoring of the marine water quality parameters listed in Table 4.2 shall be carried out by the ES to ensure that any deteriorating water quality could be readily detected and timely action be taken to rectify the situation.

Table 4.2 Water Quality Monitoring Parameters

In-situ measurement	Laboratory analysis
Dissolved Oxygen (mg/L)	Suspended solids (mg/L) (Depth-average)
Dissolved Oxygen (%)	
Temperature (°C)	
Turbidity (NTU) (Depth-averaged)	
Salinity (ppt)	

#### 4.3 Monitoring Frequency

The frequency of the Impact water quality monitoring is summarized in Table 4.3.

Table 4.3 Monitoring frequency of Impact Monitoring

Parameter	Frequency	Monitoring Depth
Temperature	2 tides/day (Mid-flood and Mid-ebb):  ▪ 3days/week during the piling and demolition works. ▪ 1day/week during the marine works (not involving piling and demolition works).	Surface, middle and bottom
Salinity		
Dissolved Oxygen		
Dissolved Oxygen saturation		
Turbidity		
Suspended solids		



#### 4.4 Monitoring Methodology and Equipment Used

##### Positioning of the monitoring stations

A hand-held digital Global Positioning System (GPS) was used to identify the designated monitoring stations prior to water sampling.

##### Water Depth measurement

A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station.

##### Dissolved Oxygen and temperature measuring equipment

The instrument should be a portable, weatherproof dissolved oxygen-measuring instrument complete with cable, sensor, comprehensive operation manuals, and use a DC power source. It should be capable for measuring:

- a dissolved oxygen level in the range of 0-20 mg/L and 0-200 % saturation; and
- a temperature of 0-45 degree Celsius

It should have a membrane electrode with automatic temperature compensation complete with a cable. Sufficient stocks of spare electrodes and cables should be available for replacement where necessary (e.g. YSI model 95 meter or equivalent.)

Shall salinity compensation not be built-in in the dissolved oxygen equipment, in-situ salinity shall be measured to calibrate the dissolved oxygen equipment prior to each dissolved oxygen measurement.

##### Turbidity Measurement Instrument

The instrument should be a portable, weatherproof turbidity-measuring instrument complete with comprehensive operation manual. The equipment shall use a DC power source. It should have a photoelectric sensor capable of measuring turbidity between

0-1000 NTU and be complete with a cable (e.g. HACH model 2100P or equivalent)

##### Salinity

A portable salinometer capable of measuring salinity in the range 0-40 ppt shall be provided for measuring salinity of the water at each monitoring location. (e.g. YSI model 30 meter or equivalent)

##### Suspended Solids/Water Sampler

A water sampler comprising a transparent PVC cylinder, with a capacity of not less than 2 litres, and can be effectively sealed with latex cups at both ends. The sampler should have a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler is at the selected water depth (e.g. Kahlsico Water Sampler or equivalent).

#### 4.5 In-situ measurement

All in-situ monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme before use. Wet bulb calibration for a DO meter was carried out before measurement at each monitoring location.

In-situ monitoring was carried out at three depths: 1 meter below water surface, at mid-depth and 1 meter above the seabed. If the water depth is less than 6 m, the mid-depth station shall be omitted and if the water depth is below 3 m, only the mid depth station shall be monitored.

At each measurement / sampling depth, two consecutive measurements of dissolved oxygen (DO), dissolved oxygen saturation (DOS), turbidity and salinity were taken. The probes were retrieved out of the water after the first measurement and then re-deployed for the second measurement.

Table 4.4 shows the equipment used for in-situ monitoring of water quality. The calibration certificates are attached in Appendix A.



Table 4.4 Details Impact Monitoring Equipment (In-site measurement)

Parameter	Model	Date of Calibration	Due Date	Equipment No.
Coordinate of Monitoring stations	MLR GPS Navigator, SP24	—	—	EW/005/01*
Dissolved Oxygen (Saturation), Temperature	YSI Dissolved Oxygen Meter, YSI 95	22-08-2006	21-11-2006	EW/003/001
Turbidity	HACH Model 2100P Turbid Meter	28-07-2006	28-10-2006	ET/0505/002
Salinity	YSI Model 30M	28-07-2006	28-10-2006	ET/0527/001
Water Depth	EAGLE Strata 128 Sonar	—	—	EW/002/02*

Remark②\*) indicates the calibration of instrument is not necessary.

#### 4.6 Water Sampling and Sample Analysis

A water sampler comprising a transparent PVC cylinder, with a capacity of not less than 2 litres, was lowered into the water body at the predetermined depth. The opening ends of the sampler were then closed accordingly and water samples were collected.

At each station, marine water samples were collected at three depths: 1 meter below water surface, at mid-depth and 1 meter above the seabed.

The sample container, made by high-density polythene, was rinsed with a portion of the water sample. The water sample was then transferred to the container, labeled with a unique sample ID and sealed with a screw cap. The water samples were stored in a cool box maintained at 4°C. The water samples were then delivered to a local HOKLAS-accredited laboratory (Environmental Laboratory, ETS-Testconsult Ltd, HOKLAS Registration No. 022) on the same day for analysis.

The laboratory testing of suspended solids was started within 24 hours after collection of the water samples. The Suspended Solids determination work was followed APHA 20ed 2540D. The determination limit of suspended solids is 1mg/L. An accurate electronic balance with precision level is readable to 0.1mg.

Environmental Laboratory of ETS-Testconsult Ltd has quality assurance and quality control programs in accordance with HOKLAS requirement. For the QA/QC procedures, one QC sample, one duplicate sample and one sample spike of every batch of 20 samples were analysis. The QA/QC results are summarized in Appendix E.

#### 4.7 Action and Limit Level

The water quality criteria, namely Action and Limit (A/L) levels. A/L Levels determined according to the baseline report are presented in the Table 4.5.

Table 4.5 Action and Limit Levels for Marine Water Quality

Parameter	Action Level	Limit Level
DO (mg/L)	<u>Surface &amp; Middle</u> 5.93 mg/L (5%-ile of Impact data for surface and middle layer)  <u>Bottom</u> 5.85 mg/L (5%-ile of Impact data for bottom layer)	<u>Surface &amp; Middle</u> 5.63 mg/L (1%-ile of Impact data for surface and middle layer) or 4 mg/L except 5 mg/L for FCZ  <u>Bottom</u> 5.50 mg/L (1%-ile of Impact data for bottom layer) or 2 mg/L
SS (mg/L) (Depth-averaged)	31 mg/L (95%-ile of Impact data) and 120% of the upstream control station's SS at the same tide on the same day	39 mg/L (99%-ile of Impact data) and 130% of the upstream control station's SS at the same tide on the same day and specific sensitive receiver water quality requirements (e.g. required suspended solids level for concerned sea water intakes)
Turbidity (NTU) (Depth-averaged)	9.93 NTU (95%-ile of Impact data) or 120% of the upstream control station's turbidity at the same tide on the same day	12.5 NTU (99%-ile of Impact data) or 130% of the upstream control station's turbidity at the same tide on the same day



#### 4.8 Event and Action Plan

Should the monitoring results of the water quality parameters at any designated monitoring stations indicate that the water quality criteria are exceeded, the actions in accordance with the Event and Action Plan that summarized in Table 4.6 should be carried out.

Table 4.6 Event and Action Plan for Water Quality Monitoring

Event	Action by Environmental Team (ET) Leader	Action by Independent Checker (Environmental), IC(E)	Action by Engineer	Action by Contractor
Action Level being exceed for one sampling day	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform IC(E) and Contractor;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working method;</li> <li>5. Discuss mitigation measures with IC(E) and the Contractor;</li> <li>6. Repeat measurement on next day of exceedance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and the Contractor on the mitigation measures;</li> <li>2. Review proposals on mitigation measures submitted by the Contractor and advise the Engineer accordingly;</li> <li>3. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with IC(E) on the proposed mitigation measures;</li> <li>2. Make agreement on the mitigation measures to be implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform Engineer and confirm notification of the non-compliance in writing;</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Discuss with ET, IC(E) and the Engineer and the propose mitigation measures to IC(E) and the Engineer within 3 working days;</li> <li>6. Implement the agreed mitigation measures.</li> </ol>
Action Level being exceeded by more than one consecutive sampling days	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform IC(E) and Contractor;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working method;</li> <li>5. Discuss mitigation measures with IC(E) and the Contractor;</li> <li>6. Ensure mitigation measures are implemented;</li> <li>7. Prepare to increase the monitoring frequency to daily;</li> <li>8. Repeat measurement on next day of exceedance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and the Contractor on the mitigation measures;</li> <li>2. Review proposals on mitigation measures submitted by the Contractor and advise the Engineer accordingly;</li> <li>3. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with IC(E) on the proposed mitigation measures;</li> <li>2. Make agreement on the mitigation measures to be implemented;</li> <li>3. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform Engineer and confirm notification of the non-compliance in writing;</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Discuss with ET, IC(E) and the Engineer and the propose mitigation measures to IC(E) and the Engineer within 3 working days;</li> <li>6. Implement the agreed mitigation measures.</li> </ol>
Limit level being exceeded by on sampling day	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform IC(E) and Contractor;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working method;</li> <li>5. Discuss mitigation measures with IC(E) and the Contractor;</li> <li>6. Ensure mitigation measures are implemented;</li> <li>7. Increase the monitoring frequency to daily until no exceedance of Limit Level</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and the Contractor on the mitigation measures;</li> <li>2. Review proposals on mitigation measures submitted by the Contractor and advise the Engineer accordingly;</li> <li>3. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with IC(E), ET and the Contractor on the mitigation measures;</li> <li>2. Request the Contractor to critically review the working method;</li> <li>3. Make agreement on the mitigation measures to be implemented;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform Engineer and confirm notification of the non-compliance in writing;</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Discuss with ET, IC(E) and the Engineer and the propose mitigation measures to IC(E) and the Engineer within 3 working days;</li> <li>6. Implement the agreed mitigation measures.</li> </ol>

Event	Action by Environmental Team (ET) Leader	Action by Independent Checker (Environmental), IC(E)	Action by Engineer	Action by Contractor
Limit level being exceeded by more than two consecutive sampling days	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform IC(E) and Contractor;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working method;</li> <li>5. Discuss mitigation measures with IC(E) and the Contractor;</li> <li>6. Ensure mitigation measures are implemented;</li> <li>7. Increase the monitoring frequency to daily until no exceedance of Limit Level</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and the Contractor on the mitigation measures;</li> <li>2. Review proposals on mitigation measures submitted by the Contractor and advise the Engineer accordingly;</li> <li>3. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with IC(E), ET and the Contractor on the mitigation measures;</li> <li>2. Request the Contractor to critically review the working method;</li> <li>3. Make agreement on the mitigation measures to be implemented;</li> <li>4. Assess the effectiveness of the implemented mitigation measures;</li> <li>5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit Level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform Engineer and confirm notification of the non-compliance in writing;</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Discuss with ET, IC(E) and the Engineer and the propose mitigation measures to IC(E) and the Engineer within 3 working days;</li> <li>6. Implement the agreed mitigation measures;</li> <li>7. As directed by the Engineer, to slow down or to stop all or part of the marine work or construction activities.</li> </ol>

#### 4.9 Monitoring Duration and Period

In-situ measurement was carried out at both mid-flood and mid-ebb at each location on a sampling day. Since the demolition works of the Pier was carried out from 18 September 2006, the frequency of marine water quality monitoring increased to three times per week. Table 4.7 shows the schedule for Impact water quality monitoring at Sha Tau Kok.

Table 4.7 Schedule for Impact Monitoring at Sha Tau Kok

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4 *	5	6	7
	Public Holiday (PH)		WQM Mid-ebb (09:00-10:00) Mid-flood (16:00-17:00)		WQM Mid-ebb 11:00-12:00) Mid-flood (17:00-18:00)	PH
8	9	10	11 *	12	13	14
	WQM Mid-flood (07:30-08:30) Mid-ebb (13:00-14:00)		WQM Mid-flood (09:00-10:00) Mid-ebb (14:00-15:00)		WQM Mid-ebb (07:00-07:45) Mid-flood (15:00-16:00)	
15	16	17	18 *	19	20	21
	WQM Mid-ebb (08:00-09:00) Mid-flood (15:30-16:30)		WQM Mid-ebb (09:30-10:30) Mid-flood (16:00-17:00)		WQM Mid-ebb (11:00-12:00) Mid-flood (17:00-18:00)	
22	23	24	25 *	26	27	28
	WQM Mid-ebb (12:00-13:00) Mid-flood (17:00-18:00)		WQM Mid-flood (08:00-09:00) Mid-ebb (13:00-14:00)		WQM Mid-flood (09:30-10:30) Mid-ebb (14:00-15:00)	
29	30	31				
	PH					



#### 4.10 Impact Monitoring Results

All monitoring results are provided in Appendix B2. Graphical presentation of the monitoring results for the reporting month are shown in Appendix B3.

There was no exceedance of Action and Limit Level recorded in this reporting month.

### 5. IMPACT NOISE MONITORING

#### 5.1 Monitoring Requirements

Impact noise monitoring was conducted at three monitoring stations. The noise monitoring was carried by CHEC in weekly basis.

#### 5.2 Monitoring Equipment

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 reading including equivalent continuous sound pressure level ( $L_{eq}$ ) and percentile sound pressure level ( $L_x$ ). They comply with International Electro technical Commission Publications 651:1979 (Type1) and 804:1985 (Type1).

#### 5.3 Monitoring Parameters, duration and Frequency

Noise monitoring for the A-weighted levels  $Leq$  dB(A) were recorded. The following guide on the regular monitoring frequency for each monitoring station on a per week basis when noise-generating activities are underway:

- One set of measurement between 0700-1900 hours on normal weekday (6 consecutive  $Leq(5-min)$ );

Duration, frequencies and parameters of noise measurement are presented in Table 5.1.

Table 5.1 Duration, Frequencies and Parameters of Noise Monitoring

Time period	Duration/min	Parameters	Frequency
Day-time: 0700-1900 hrs on normal weekday	30	$Leq$ dB(A)	Once per week

#### 5.4 Monitoring Locations and Period

There were three noise monitoring locations: Point 1, Point 2 and Point 3. The monitoring locations are shown in Figure PW-0409-037.

The noise-monitoring programme of monitoring locations by contractor themselves is summarized in Table 5.2.

Table 5.2 Monitoring Periods for noise monitoring stations

Noise monitoring stations	Monitoring Period		
Point 1	57.2	09:00 – 09:30	14/10/06
	61.4	09:20 – 09:50	21/10/06
	63.9	09:20 – 09:50	28/10/06
Point 2	69.6	09:40 – 10:10	14/10/06
	62.4	10:00 – 10:30	21/10/06
	60.5	10:00 – 10:30	28/10/06
Point 3	65.1	10:20 – 10:50	14/10/06
	55.0	10:40 – 11:10	21/10/06
	63.2	10:40 – 11:10	28/10/06

#### 5.5 Monitoring Procedures

- The Sound Level Meter was set on a tripod at a height of 1.2m above the ground.
- For free field measurement, the meter was positioned away from any nearby reflective surfaces.
- The battery condition was checked to ensure the correct functioning of the meter.
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94 dB at 1000HZ. If the difference in the calibration level before and after measurement was more than 1dB(A), the measurement would be considered invalid and repeat measurement would be required after re-calibration or repair of the equipment.



- Free Field correction to the measurements should be made. Correction factor of +3dB(A) should be made to the free Field measurements.

## 5.6 Results

Noise monitoring were carried out at monitoring stations in this reporting month. All noise data are present in Appendix C1. Graphical presentation of the monitoring results for the reporting month are shown in Appendix C2.

No noise monitoring results at all monitoring stations exceeded 75 dB(A) and hence this concluded that the noise level was satisfactory when the construction works were carried out.

## 6. ENVIRONMENTAL NON-CONFORMANCE

### 6.1 Summary of water quality monitoring

There was no exceedance of Action and Limit Level recorded in this reporting month.

### 6.2 Summary of Environmental Complaints

No complaints were received during the reporting month.

### 6.3 Summary of Notification of Summons and Prosecution

There were no notification of summons respect to environmental issues registered in this month.

## 7. STATUS OF ENVIRONMENTAL LICENSING AND PERMITTING

All permits/licenses valid in this reporting month are summarized in Table 7.1.

Table 7.1 Summary of Environmental Licensing and Permit Status

Description	Permit No.	Valid Period		Section
		From	To	
Chemical Waste Producer	5213-652-C2397-11	05/02/05	04/02/09	Valid Spent lubricating oil, spent mineral oil, waste paint
Construction Noise Permit for the use of powered mechanical equipment for the purpose of carrying out construction work other than percussive piling and / or the carrying out of prescribed construction work	GW-RN00502-05	24/10/05	22/04/06	Invalid <ul style="list-style-type: none"> <li>▪ One crane, mobile (diesel) (CNP048)</li> <li>▪ One water pump, submersible (electric) (CNP283)</li> </ul>
Construction Noise Permit for the use of powered mechanical equipment for the purpose of carrying out construction work other than percussive piling and / or the carrying out of prescribed construction work	GW-RN0289-06	01/06/06	30/11/06	Valid <ul style="list-style-type: none"> <li>▪ One crane, mobile (diesel) (CNP048)</li> </ul>



## 8. WASTE MANAGEMENT

The quantities of waste for disposal in this month are summarized in Table 8.1.

Table 8.1 Summary of Quantities of Waste for Disposal in this reporting month

Type of Waste		Quantity	Disposal Location	Cumulative Quantity
Inert C&D Materials	Total Quantity Generated (1000m <sup>3</sup> )	0.000	—	0.001
		Store	—	0.513
		Out	—	
	Broken Concrete for recycling (1000m <sup>3</sup> )	0.000	N/A	0.073
	Reused in the Contract (1000m <sup>3</sup> )	0.000	N/A	0.001
	Reused in other Projects (1000m <sup>3</sup> )	0.000	N/A	0.065
	Disposal as Public Fill (1000m <sup>3</sup> )	0.000	N/A	0.375
C&D Waste	Metals (1000kg)	0.000	N/A	104.41
	Paper/Cardboard Packaging (1000kg)	0.000	N/A	0.005
	Timber (1000kg)	0.000	N/A	0.051
	Plastics (1000kg)	0.000	N/A	0.000
	Chemical Waste (1000kg)	0.000	N/A	0.004
	Other, e.g. General Refuse (1000kg)	0.072	N/A	0.194

## 9. SITE INSPECTION

Weekly site inspection was carried out by the ET. Four site inspections were undertaken in monitoring period. Details of the site inspection findings are attached in Appendix F.

### 9.1 Summary of site inspection findings

The summary of site inspection findings are shown in Table 9.1.

Table 9.1 The summary of site inspection findings

Inspection Parameter	Finding
Water Quality	Water quality was found satisfactory during the site inspection. No visible foam, oil, litter or other objectionable matter was present on the water within the site.
Air Quality	Air quality was found satisfactory during the site inspection period. No noticeable dust was generated at the site.
Noise Quality	Noise quality was found satisfactory during the site inspection period.

### 9.2 Recommendations on site inspection findings

Based on the site inspection findings, the recommendations are as below:

- Check silt curtain periodically in order to prevent sediment emission during construction activities;
- Maintain silt curtain properly;
- Maintain good site practices to avoid environmental impacts to the environment;
- Maintain good waste management at the site;
- Remove the construction wastes accumulated inside and outside the construction site periodically.

## 10. IMPLEMENTATION STATUS

### 10.1 Implementation Status of Environmental Mitigation Measures

All mitigation measures were applied properly for the construction works.

### 10.2 Implementation Status of Event and Action Plan

There was no exceedance of Action and Limit Level recorded in this reporting month. Hence, no further action was required to be carried out.

### 10.3 Implementation Status of Environmental Complaint Handling



No complaints were received in this reporting month. The details of the complaint-log are presented in Table 10.1.

Table 10.1 Statistical Summary of Environmental Complaint log

Reporting Month	Complaint Statistics			
	Frequency	Cumulative	Aspect	Investigation Results and Follow up Actions
March 05	0	0	---	---
April 05	0	0	---	---
May 05	0	0	---	---
June 05	0	0	---	---
July 05	0	0	---	---
Aug 05	0	0	---	---
Sept 05	0	0	---	---
Oct 05	0	0	---	---
Nov 05	0	0	---	---
Dec 05	0	0	---	---
Jan 06	0	0	---	---
Feb 06	0	0	---	---
Mar 06	0	0	---	---
April 06	0	0	---	---
May 06	0	0	---	---
June 06	0	0	---	---
July 06	0	0	---	---
Aug 06	0	0	---	---
Sept 06	0	0	---	---
Oct 06	0	0	---	---

## 11. CONCLUSION

According to the weekly site inspections carried out by the ES, it was found that air quality and noise were found satisfactory in this monitoring period.

There was no exceedance of Action and Limit Level recorded in this reporting month.

Finally, ES recommended the Contractor to maintain good waste management and good site practice in order to minimize the environmental impacts at the site.

## 12. FUTURE KEY ISSUES

### 12.1 Upcoming EM&A Schedule

Since the demolition works of the Pier was carried out from 18 September 2006, the frequency of marine water quality monitoring will be increased to three times per week. The proposed EM&A program in coming month is presented as following Table 12.1.

Table 12.1 Upcoming EM&A Schedule in coming month

Monitoring Location	November 2006
Marine Water Quality Monitoring	01, 03, 06, 08, 10, 13, 15, 17, 20, 22, 24, 27, 29
Site Inspection	01, 08, 15, 22, 29

### 12.2 Upcoming Construction Works Schedule

The major construction works planned to be carried out in next month is tabulated (Table 12.2):



Table 12.2 Construction Plan in the coming month

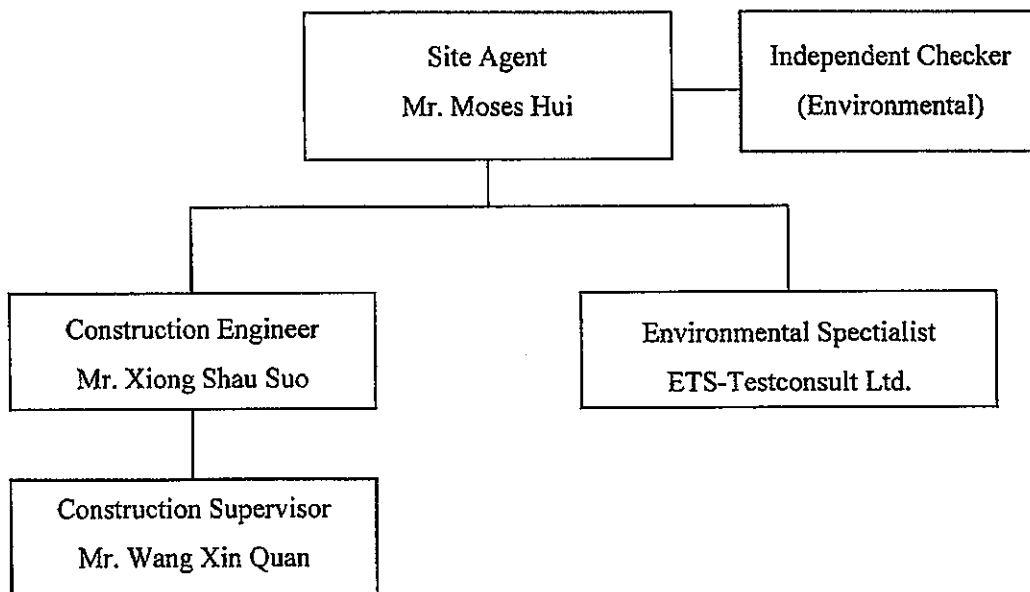
<i>Period</i>	<i>Proposed Construction Activities</i>	<i>Environmental Mitigation Measures</i>
<i>November 2006</i>	<ul style="list-style-type: none"><li><i>• Removal of temporary platform adjacent to Catwalk;</i></li><li><i>• Installation of wall cladding;</i></li><li><i>• Installation of water service.</i></li></ul>	<ul style="list-style-type: none"><li><i>• Schedule the works to minimize noise nuisance;</i></li><li><i>• Remove construction waste accumulated inside or outside the site regularly;</i></li><li><i>• Keep good waste management.</i></li></ul>



## Appendix A

### Organization Chart

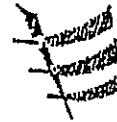
# Management Structure





## **Appendix B**

### **Calibration Certificates for Marine Water Quality Monitoring Equipments**



## Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No. : ET/EW/003/001      Manufacturer : YSI  
 Model No. : 95      Serial No. : 97H 14071 AD  
 Date of Calibration : 22/8/06      Calibration Due Date : 21/11/06

Ref. No. of Reference Thermometer : ET/2403/01  
 Ref. No. of Potassium Dichromate : ET/0520/003/02

### Temperature Verification

	Temperature (°C)
Thermometer reading	20.0
Meter reading	20.0

### Linearity Checking

Purging time, min	DO meter reading, mg/L			Winkler Titration result, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
2	7.64	7.66	7.65	7.58	7.60	7.59	0.79
5	5.54	5.56	5.55	5.46	5.44	5.45	1.82
10	3.14	3.16	3.15	3.27	3.29	3.28	4.04
Linear regression coefficient						0.9988	

### Zero Point Checking

DO meter reading, mg/L	0.00
------------------------	------

### Salinity Checking

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.29	7.31	7.30	7.24	7.26	7.25	0.69
30	6.99	6.97	6.98	6.89	6.87	6.88	1.44

### Acceptance Criteria

- (1) Difference between temperature readings from temperature sensor of DO probe and reference thermometer : < 0.5 °C
- (2) Linear regression coefficient : > 0.99
- (3) Zero checking: 0.0mg/L
- (4) Difference (%) of DO content from the meter reading and by winkler titration : within ± 5%

The equipment complies \* / does not comply \* with the specified requirements and is deemed acceptable \* / unacceptable\* for use;

\* Delete as appropriate

Calibrated by : [Signature]

Approved by : [Signature]



## Internal Calibration Report of Turbidimeter

Equipment Ref. No. : ET/0505/002

Manufacturer : HACH

Model No. : 2100P

Serial No. : 930900003728

Date of Calibration : 28/7/06

Calibration Due : 28/10/06

### Data

(4.95)	(49.0)	(409)
0 - 10 NTU Gelex Vial	10 - 100 NTU Gelex Vial	100 - 1000 NTU Gelex Vial
4.92	48.2	405

The equipment complies \* / does not comply \* with the specified requirements and is deemed acceptable \* / ~~unacceptable~~ \* for use.

\* Delete as appropriate

Calibrated by : PK

Approved by : [Signature]



## Performance Check of Salinity Meter

Equipment Ref. No. : E7/0527/001      Manufacturer : YSI  
Model No. : Model 30      Serial No. : 9961183  
Date of Calibration : 28/7/06      Due Date : 28/10/06

Ref. No. of Salinity Standard used (30ppt)

I196A

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference %
30	29.5	1.7%

Acceptance Criteria

Difference : <10 %

The salinity meter complies \* / ~~does not comply~~ \* with the specified requirements and is deemed acceptable \* / unacceptable \* for use. Measurements are traceable to national standards.

Checked by :       Approved by : 



## **Appendix C1**

### **Noise Monitoring Results**

14 oct 06

Reconstruction of Sha Tau Kok Public Pier  
Contract No. CV/2004/09

Noise Monitoring Record

Date: 14/10/06

Point: 1

Duration: 09:00 - 09:30 (30 mins)

Time	09:00 ~ 09:05	09:05 ~ 09:10	09:10 ~ 09:15	09:15 ~ 09:20	09:20 ~ 09:25	09:25 ~ 09:30	Average
Leq dB(A)	56.9	56.9	57.1	57.4	57.4	57.4	57.2
Remarks:	< 75						

Point: 2

Duration: 09:40 ~ 10:10 (30 mins)

Time	09:40 ~ 09:45	09:45 ~ 09:50	09:50 ~ 09:55	09:55 ~ 10:00	10:00 ~ 10:05	10:05 ~ 10:10	Average
Leq dB(A)	69.5	69.6	70	69.2	69.4	69.4	69.6
Remarks:	< 75						

Point: 3

Duration: 10:20 ~ 10:50 (30 mins)

Time	10:20 ~ 10:25	10:25 ~ 10:30	10:30 ~ 10:35	10:35 ~ 10:40	10:40 ~ 10:45	10:45 ~ 10:50	Average
Leq dB(A)	65.1	65.1	65.1	65.1	65.1	65.1	65.1
Remarks:	< 75						

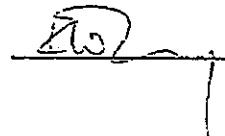
Major Construction Noise Source(s) during measurement

1. Lifting operation
2. Demolition work

Other Noise Source(s) during measurement

Prepared by : K.W.Tang (Safety Officer)

Signature :



Date:

14/10/06



21 Oct 06

Reconstruction of Sha Tau Kok Public Pier  
Contract No. CV/2004/09

Noise Monitoring Record

Date: 21/10/06

Point: 1

Duration: 09:20 ~ 09:50 (30 mins)

Time	09:20 ~ 09:25	09:25 ~ 09:30	09:30 ~ 09:35	09:35 ~ 09:40	09:40 ~ 09:45	09:45 ~ 09:50	Average
Leq dB(A)	61.9	61.1	61.1	61.1	61	61	61.4
Remarks:							< 75

Point: 2

Duration: 10:00 ~ 10:30 (30 mins)

Time	10:00 ~ 10:05	10:05 ~ 10:10	10:10 ~ 10:15	10:15 ~ 10:20	10:20 ~ 10:25	10:25 ~ 10:30	Average
Leq dB(A)	62.4	62.4	62.4	62.4	62.4	62.4	62.4
Remarks:							< 75

Point: 3

Duration: 10:40 ~ 11:10 (30 mins)

Time	10:40 ~ 10:45	10:45 ~ 10:50	10:50 ~ 10:55	10:55 ~ 11:00	11:00 ~ 11:05	11:05 ~ 11:10	Average
Leq dB(A)	55.4	55.4	54.6	54.6	54.6	54.6	55.0
Remarks:							< 75


Major Construction Noise Source(s) during measurement

1. Lifting operation
2. Demolition Work

Other Noise Source(s) during measurement

Prepared by : K.W.Tang (Safety Officer)

Signature :



Date:

21/10/06

Sheet 53

Reconstruction of Sha Tau Kok Public Pier  
Contract No. CV/2004/09

Noise Monitoring Record

Date: 28/10/06

Point: 1

Duration: 09:20 ~ 09:50 (30 mins)

Time	09:20 ~ 09:25	09:25 ~ 09:30	09:30 ~ 09:35	09:35 ~ 09:40	09:40 ~ 09:45	09:45 ~ 09:50	Average
Leq dB(A)	63.9	63.9	63.9	63.9	63.9	63.9	63.9
Remarks:	< 75						

Point: 2

Duration: 10:00 ~ 10:30 (30 mins)

Time	10:00 ~ 10:05	10:05 ~ 10:10	10:10 ~ 10:15	10:15 ~ 10:20	10:20 ~ 10:25	10:25 ~ 10:30	Average
Leq dB(A)	60.5	60.5	60.5	60.5	60.5	60.5	60.5
Remarks:	< 75						

Point: 3

Duration: 10:40 ~ 11:10 (30 mins)

Time	10:40 ~ 10:45	10:45 ~ 10:50	10:50 ~ 10:55	10:55 ~ 11:00	11:00 ~ 11:05	11:05 ~ 11:10	Average
Leq dB(A)	64	62	57.2	56.2	56.2	56.2	63.2
Remarks:	< 75						

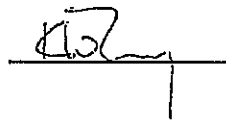
Major Construction Noise Source(s) during measurement

1. Lifting operation
2. Demolition Works

Other Noise Source(s) during measurement

Prepared by : K.W.Tang (Safety Officer)

Signature :



Date:

28/10/06

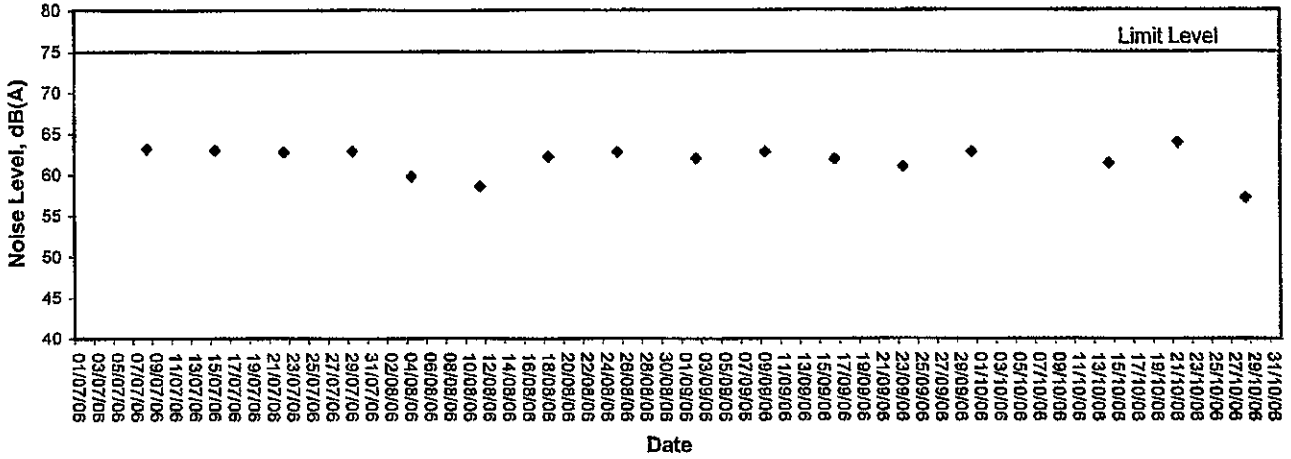


## **Appendix C2**

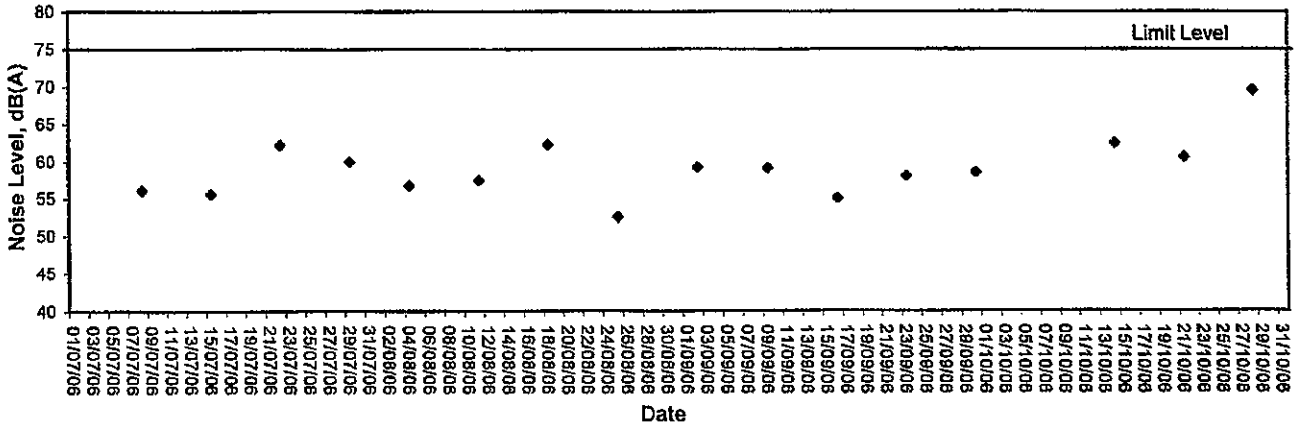
### **Graphical Plots of Noise Monitoring Data**

# Noise Monitoring

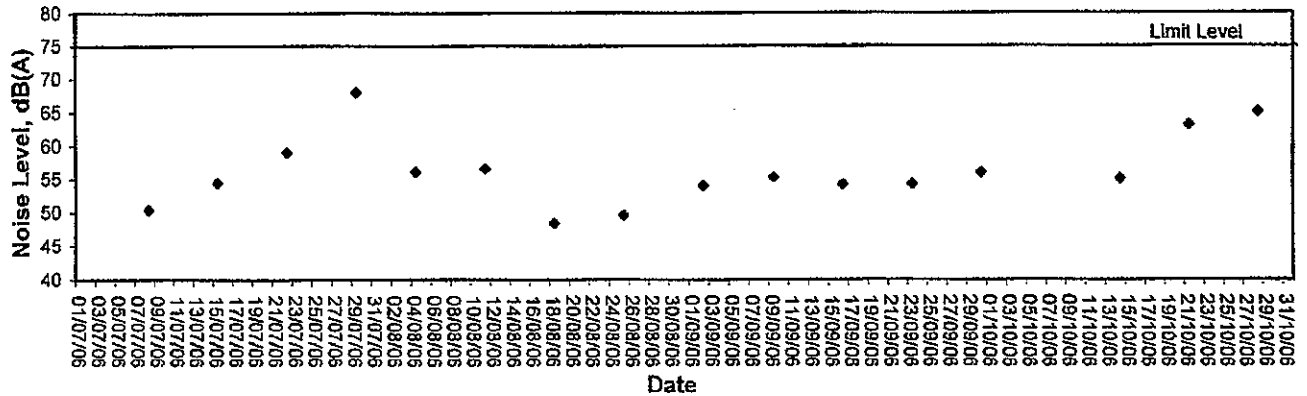
Noise level at Point 1



Noise level at Point 2



Noise level at Point 3





## Appendix D1

### Marine Water Monitoring Results

1. Impact Monitoring Time and Water Depth

Date	Monitoring Time and Water Depth	Monitoring Location													
		C1				M1				M2				C2	
		Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb		
4/10/06	Monitoring Time	16:15 - 16:26	08:50 - 09:11	16:28 - 16:39	09:14 - 09:23	16:41 - 16:51	09:25 - 09:38	16:54 - 17:05	09:42 - 09:54						
	Water Depth (m)	3.2	2.8	3.0	2.8	5.0	4.8	5.6	5.4						
6/10/06	Monitoring Time	17:00 - 17:10	11:00 - 11:10	17:15 - 17:25	11:15 - 11:25	17:30 - 17:40	11:30 - 11:40	17:45 - 17:55	11:45 - 11:55						
	Water Depth (m)	3.2	2.8	2.8	2.6	4.8	4.6	5.2	5.0						
9/10/06	Monitoring Time	07:30 - 07:38	13:00 - 13:08	07:39 - 07:47	13:10 - 13:17	07:49 - 07:58	13:19 - 13:28	08:00 - 08:07	13:30 - 13:37						
	Water Depth (m)	4.0	3.8	4.0	3.8	5.5	5.2	5.8	5.5						
11/10/06	Monitoring Time	09:00 - 09:06	14:00 - 14:06	09:07 - 09:13	14:07 - 14:14	09:14 - 09:20	14:15 - 14:21	09:21 - 09:27	14:22 - 14:30						
	Water Depth (m)	2.9	2.8	3.2	3.1	5.3	5.2	5.4	6.4						
13/10/06	Monitoring Time	15:00 - 15:10	07:00 - 07:10	15:15 - 15:25	07:15 - 07:25	15:30 - 15:40	07:30 - 07:40	15:45 - 15:55	07:45 - 07:55						
	Water Depth (m)	3.2	2.8	2.8	2.4	4.8	4.6	5.4	5.0						
16/10/06	Monitoring Time	15:30 - 15:38	08:05 - 08:14	15:42 - 15:50	08:17 - 08:25	15:55 - 16:02	08:30 - 08:38	16:05 - 16:15	08:42 - 08:52						
	Water Depth (m)	3.8	4.2	3.6	3.8	4.8	5.4	4.6	5.2						
18/10/06	Monitoring Time	16:00 - 16:14	09:30 - 09:42	16:16 - 16:28	09:45 - 09:56	16:30 - 16:42	09:58 - 10:09	16:46 - 16:59	10:12 - 10:23						
	Water Depth (m)	2.8	3.4	2.8	3.0	4.2	4.8	4.8	5.4						
20/10/06	Monitoring Time	17:00 - 17:08	11:05 - 11:14	17:12 - 17:20	11:19 - 11:28	17:23 - 17:29	11:32 - 11:40	17:32 - 17:45	11:45 - 11:55						
	Water Depth (m)	4.0	3.8	3.8	3.6	4.8	5.2	5.2	5.4						
23/10/06	Monitoring Time	17:00 - 17:08	12:00 - 12:08	17:11 - 17:20	12:14 - 12:20	17:23 - 17:30	12:25 - 12:32	17:35 - 17:45	12:35 - 12:45						
	Water Depth (m)	3.6	3.8	3.8	3.6	4.0	4.2	4.2	4.4						
25/10/06	Monitoring Time	08:25 - 08:36	13:00 - 13:11	08:39 - 08:50	13:14 - 13:26	08:52 - 09:02	13:28 - 13:40	09:04 - 09:15	13:43 - 13:56						
	Water Depth (m)	4.0	2.8	3.6	2.6	5.2	4.6	5.8	5.2						
27/10/06	Monitoring Time	09:30 - 09:40	14:05 - 14:14	09:45 - 09:52	14:17 - 14:25	09:56 - 10:03	14:30 - 14:38	10:06 - 10:15	14:42 - 14:50						
	Water Depth (m)	3.8	4.0	3.6	3.8	4.0	3.6	5.2	4.8						

2. Temperature (°C)

Date	Temperature (°C)																								
	C1						M1						M2						C2						
	Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb			
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	
4/10/06	25.9	-	25.2	-	25.2	-	25.3	-	25.8	-	25.8	-	25.8	-	25.1	25.6	-	24.9	25.6	-	25.0	25.4	-	24.8	
6/10/06	29.9	-	28.9	-	29.1	-	28.8	-	-	-	28.7	-	28.7	-	28.2	28.5	-	27.9	28.9	-	28.4	28.3	-	27.8	
9/10/06	27.2	-	27.0	27.5	-	27.2	27.3	-	27.2	27.3	-	26.9	27.4	-	26.6	27.4	-	26.8	27.2	-	26.8	27.5	-	26.9	
11/10/06	-	27.3	-	-	27.2	-	27.2	-	27.2	-	27.0	27.1	-	26.8	27.2	-	26.9	27.1	-	26.7	27.2	-	26.8		
13/10/06	29.1	-	28.5	-	28.7	-	-	29.0	-	-	-	28.4	-	28.9	-	28.2	28.5	-	27.9	28.8	-	28.3	28.4	-	27.8
16/10/06	27.4	-	27.2	27.1	-	27.0	27.3	-	27.2	27.0	-	27.2	27.0	-	27.3	27.2	-	27.0	27.3	-	27.2	27.1	-	26.9	
18/10/06	-	26.2	-	26.4	-	26.8	-	26.1	-	26.2	-	26.2	-	26.3	26.1	-	25.6	26.2	-	25.8	26.1	-	25.7		
20/10/06	28.2	-	28.1	28.1	-	27.9	28.2	-	28.0	28.0	-	28.0	28.0	-	27.8	28.0	-	27.8	28.0	-	27.7	28.1	-	27.7	
23/10/06	28.1	-	28.0	28.2	-	28.1	28.3	-	28.2	28.3	-	28.2	28.3	-	28.2	28.1	-	28.1	28.3	-	28.1	28.2	-	28.1	
25/10/06	25.9	-	25.4	-	26.2	-	25.8	-	25.8	-	25.4	-	26.1	-	25.5	26.3	-	25.9	25.6	-	25.4	26.3	-	26.0	
27/10/06	27.4	-	27.2	27.2	-	27.1	27.3	-	27.3	27.3	-	27.2	27.3	-	27.4	27.2	-	27.0	27.4	-	27.0	27.3	-	27.1	

3. Dissolved Oxygen (DO, mg/L)

Date	Dissolved Oxygen (DO, mg/L)																							
	C1						M1						M2						C2					
	Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb		
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
4/10/06	7.79	-	6.35	-	7.20	-	7.70	-	6.01	-	6.45	-	7.93	-	6.22	8.02	-	6.48	8.09	-	6.54	8.36	-	6.68
6/10/06	7.87	-	7.63	-	7.23	-	-	7.05	-	6.58	-	7.27	-	7.35	6.83	-	6.97	7.42	-	7.30	7.05	-	6.94	
9/10/06	6.56	-	6.35	6.72	-	6.63	6.57	-	6.26	6.60	-	6.49	6.38	-	6.40	6.36	-	6.64	6.32	-	6.50	6.54	-	6.19
11/10/06	-	6.55	-	-	6.77	-	6.38	-	6.63	6.52	-	6.40	6.36	-	6.72	6.72	-	7.04	6.18	-	6.41	6.64	-	6.41
13/10/06	6.42	-	6.55	-	6.77	-	-	6.31	-	6.81	-	6.81	-	6.72	6.93	-	7.04	6.64	-	6.49	7.11	-	7.15	
16/10/06	6.40	-	6.22	6.46	-	6.25	6.42	-	6.20	6.51	-	6.28	6.51	-	6.34	6.63	-	6.54	6.52	-	6.35	6.29	-	6.24
18/10/06	-	6.16	-	6.72	-	6.28	-	6.38	-	6.39	-	5.88	7.38	-	6.40	6.69	-	6.18	7.81	-	7.02	7.05	-	6.48
20/10/06	6.35	-	6.15	6.51	-	6.29	6.32	-	6.07	6.34	-	6.13	6.34	-	6.15	6.25	-	6.09	6.46	-	6.18	6.37	-	6.17
23/10/06	6.58	-	6.38	6.44	-	6.29	6.35	-	6.21	6.53	-	6.37	6.32	-	6.31	6.43	-	6.25	6.44	-	6.28	6.42	-	6.44
25/10/06	6.78	-	6.19	-	6.65	-	6.56	-	6.15	-	6.23	-	6.95	-	6.53	7.11	-	6.40	6.52	-	6.25	7.02	-	6.29
27/10/06	6.46	-	6.18	6.55	-	6.29	6.48	-	6.14	6.38	-	6.13	6.36	-	6.08	6.35	-	6.12	6.45	-	6.05	6.54	-	6.30

4. Dissolved Oxygen Saturation (DOS, %)

Date	Dissolved Oxygen Saturation (DOS, %)																									
	C1						M1						M2						C2							
	Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb				
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M
4/10/06	111.1	-	90.5	-	105.9	-	109.9	-	85.8	-	90.9	-	113.1	-	88.7	112.9	-	91.3	115.5	-	93.2	117.8	-	94.1		
6/10/06	122.6	-	117.4	-	111.6	-	-	108.9	-	100.7	-	111.9	-	112.9	104.2	-	105.4	114.2	-	112.4	107.2	-	105.6			
9/10/06	98.3	-	95.3	101.0	-	99.7	98.7	-	93.9	99.1	-	97.6	95.8	-	98.8	101.3	-	99.7	94.8	-	97.6	98.2	-	93.0		
11/10/06	-	98.7	-	-	102.1	-	96.1	-	99.8	98.2	-	96.1	95.7	-	94.2	101.2	-	97.9	93.0	-	96.6	99.8	-	96.1		
13/10/06	95.6	-	97.5	-	100.8	-	-	93.9	-	100.7	-	100.0	-	97.3	103.2	-	104.8	98.8	-	96.0	105.8	-	106.5			
16/10/06	96.0	-	93.3	96.9	-	93.4	96.3	-	93.0	97.7	-	94.2	97.7	-	95.1	99.5	-	88.1	97.8	-	95.3	95.9	-	93.6		
18/10/06	-	85.3	-	95.6	-	89.3	-	88.4	-	91.0	-	83.6	102.2	-	88.7	95.1	-	88.0	108.1	-	97.2	100.2	-	92.1		
20/10/06	95.3	-	92.3	97.7	-	94.4	94.8	-	91.1	95.1	-	92.0	95.1	-	92.3	93.8	-	91.4	96.9	-	92.7	95.6	-	92.6		
23/10/06	98.7	-	95.7	96.6	-	94.4	95.3	-	93.2	98.0	-	95.6	94.8	-	94.7	96.5	-	93.8	96.6	-	94.2	96.3	-	96.6		
25/10/06	97.9	-	89.5	-	94.1	-	94.8	-	88.8	-	87.9	-	100.2	-	94.2	100.6	-	90.4	94.1	-	90.1	99.2	-	89.0		
27/10/06	95.6	-	91.5	96.9	-	93.1	95.9	-	90.9	92.9	-	90.7	94.1	-	90.0	94.0	-	90.6	95.5	-	89.5	96.8	-	93.2		



### 5. Salinity

Date	Salinity (ppt)																													
	C1						M1						M2						C2											
	Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb								
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B						
4/10/06	29.9	-	31.8	-	30.6	-	30.4	-	31.9	-	31.0	-	30.3	-	31.9	30.7	-	32.0	-	31.9	30.7	-	32.0	30.5	-	32.3	30.8	-	32.2	
6/10/06	31.0	-	31.5	-	31.1	-	31.3	-	-	-	30.9	-	31.0	-	31.0	31.0	-	31.4	-	31.5	31.0	-	31.4	31.2	-	31.5	31.1	-	31.5	
9/10/06	29.9	-	30.3	30.0	-	30.2	29.8	-	30.3	29.8	-	30.2	29.8	-	30.2	29.8	-	30.4	29.8	-	30.5	29.8	-	30.6	29.7	-	30.6	29.8	-	30.4
11/10/06	-	29.7	-	-	29.6	-	29.6	-	30.0	29.6	-	29.8	29.7	-	30.2	29.7	-	30.2	29.7	-	30.2	29.7	-	30.4	29.7	-	30.4	29.7	-	30.1
13/10/06	30.6	-	31.0	-	30.6	-	-	-	30.8	-	30.8	-	30.9	-	30.9	-	31.2	30.7	-	31.2	30.7	-	31.3	30.8	-	31.3	30.8	-	31.2	
16/10/06	29.8	-	29.9	29.8	-	30.4	29.9	-	30.3	29.8	-	30.5	29.9	-	30.3	29.8	-	30.3	29.8	-	30.3	29.8	-	30.4	29.9	-	30.4	29.9	-	30.2
18/10/06	-	30.9	-	-	30.2	-	31.3	-	30.8	-	30.4	-	30.4	-	31.3	30.6	-	31.6	30.6	-	31.6	30.6	-	31.3	30.6	-	31.3	30.5	-	31.6
20/10/06	29.4	-	30.6	29.2	-	30.4	29.3	-	30.4	29.6	-	30.3	29.5	-	30.6	29.4	-	30.5	29.4	-	30.5	29.4	-	30.3	29.3	-	30.3	29.5	-	30.3
23/10/06	29.6	-	30.0	29.7	-	30.1	29.8	-	30.1	29.5	-	29.8	29.6	-	30.2	29.6	-	30.0	29.6	-	30.0	29.6	-	30.3	29.5	-	30.3	29.6	-	30.3
25/10/06	29.3	-	30.8	-	29.7	-	29.6	-	31.0	29.6	-	29.7	-	30.0	-	31.2	29.8	-	30.9	29.8	-	31.1	29.6	-	31.1	29.6	-	30.8		
27/10/06	29.2	-	29.7	29.3	-	29.8	29.3	-	29.6	29.1	-	29.7	29.3	-	29.8	29.3	-	29.9	29.3	-	29.8	29.3	-	30.1	29.4	-	30.1	29.5	-	30.1

### 6. Suspended Solids

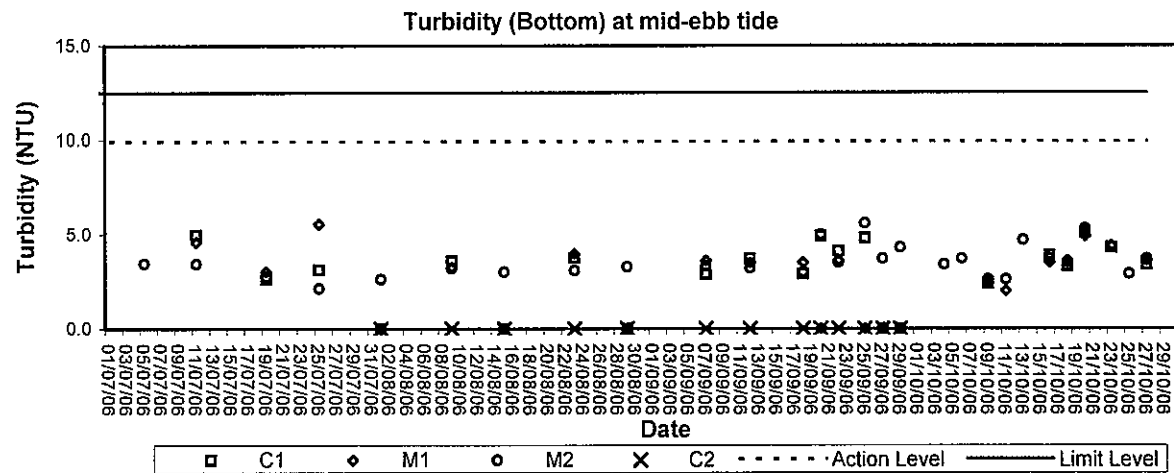
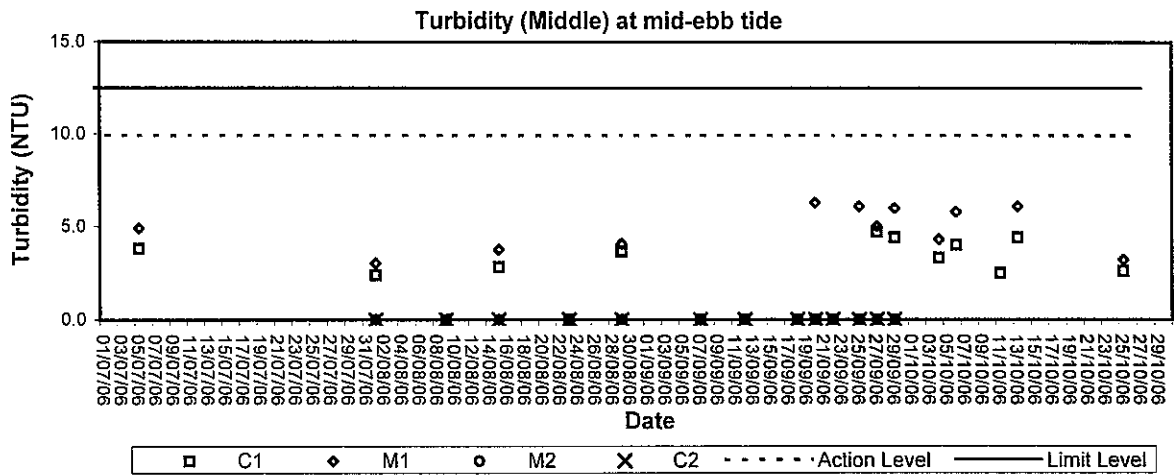
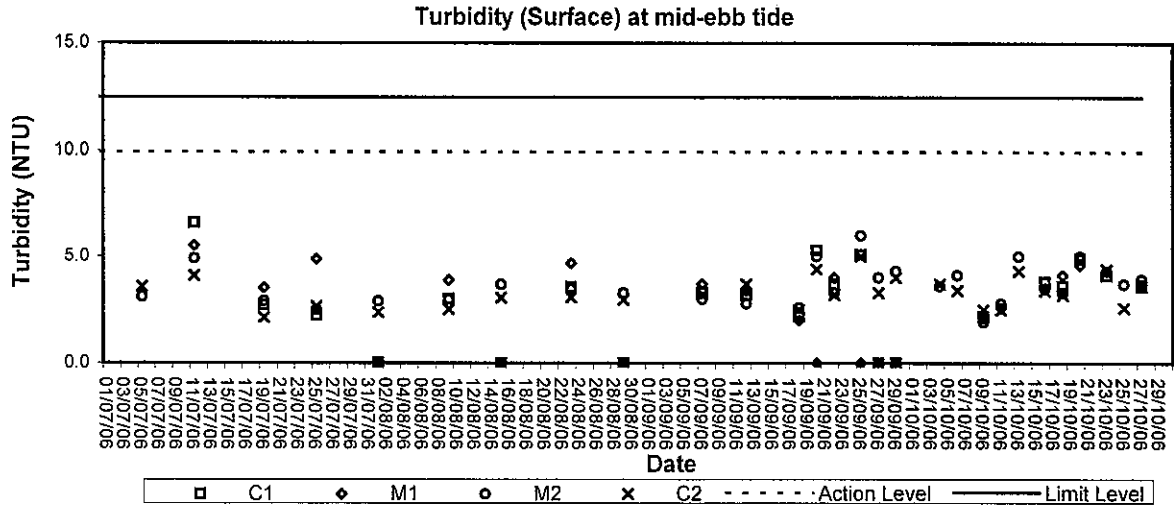
Date	Suspended Solids (mg/L)																												
	C1						M1						M2						C2										
	Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb							
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M
4/10/06	8.5	-	8	8.3	-	6.4	11	-	8.7	9.9	-	8.4	8	6.9	-	8	7.5	6.5	6.5	6.5	6.5	6.4	-	6.3	6.4	6.7	-	6.5	6.6
6/10/06	11	-	8.8	9.9	-	8	-	-	13	-	11	8.9	-	11	8.2	-	6.9	7.6	8	8	-	8.1	8.1	6.5	-	6.3	6.4		
9/10/06	4.3	-	4.6	4.5	4.3	4.5	4.5	4.8	4.7	4	4.5	4	4	4.5	4.5	4.3	2.9	4.5	3.7	4.3	4.3	-	4.5	4.4	4.5	-	4.8	4.7	
11/10/06	-	4.6	-	4.6	-	4.5	4.5	4.3	4.4	4.5	4.5	4.5	4.5	4.9	4.7	4.7	4.5	4.6	4.5	4.5	-	6.2	5.4	4.5	-	5.9	5.2		
13/10/06	8	-	6.8	7.4	-	8.5	9.8	6.5	9.8	12	8	12	8	6.5	7.3	9.9	8.8	9.4	6.5	6.5	-	6.3	6.4	8.4	-	8.5	8.5		
16/10/06	6.8	-	6.8	6.8	6.8	6.7	6.8	6.5	6.5	6.5	6.5	6.5	7	6.5	6.8	6.7	6.5	6.5	6.5	6.5	6.5	-	6.5	6.5	6.5	-	6.5	6.5	
18/10/06	-	6.9	-	6.9	6.5	6.4	6.5	-	8	8.0	8.2	6.5	7	6.5	6.4	6.5	6.3	6.5	6.4	4.7	4.7	-	6.4	5.6	6.3	-	4.8	5.6	
20/10/06	8.5	-	8.8	8.7	8.8	11	9.9	8.5	8.8	8.7	8.5	9	8.9	-	11	10	10	12	0	11	11	-	10	9.4	8.7	-	8.9	8.8	
23/10/06	8.3	-	8.2	8.3	8.3	8.4	8.4	8.5	8.5	8.4	8.5	8	8.5	-	8.5	8.5	8.3	8.4	8.4	8.5	8.5	-	8.5	8.5	8.5	-	8.5	8.5	
25/10/06	6.5	-	6.2	6.4	-	4.5	6.8	6.8	6.3	6.6	6.2	6	6.5	-	6.2	6.4	6.7	4.9	5.8	6	6	-	4.6	5.3	4.5	-	4.8	4.7	
27/10/06	6.5	-	6.5	6.5	6.5	6.5	6.6	6.5	6.6	6.5	6.5	7	6.5	-	6.5	6.5	6.9	6.8	6.9	6.5	6.5	-	6.5	6.5	6.5	-	6.5	6.5	

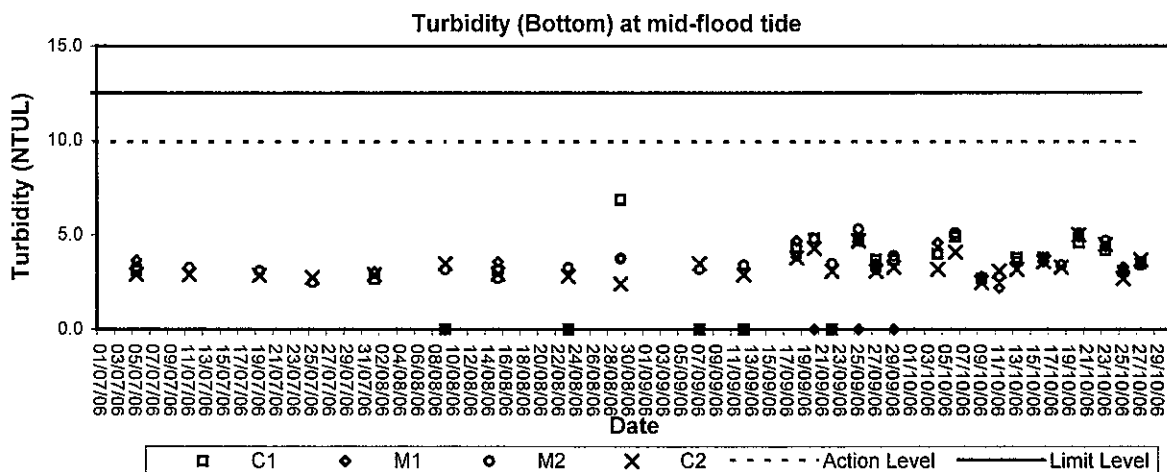
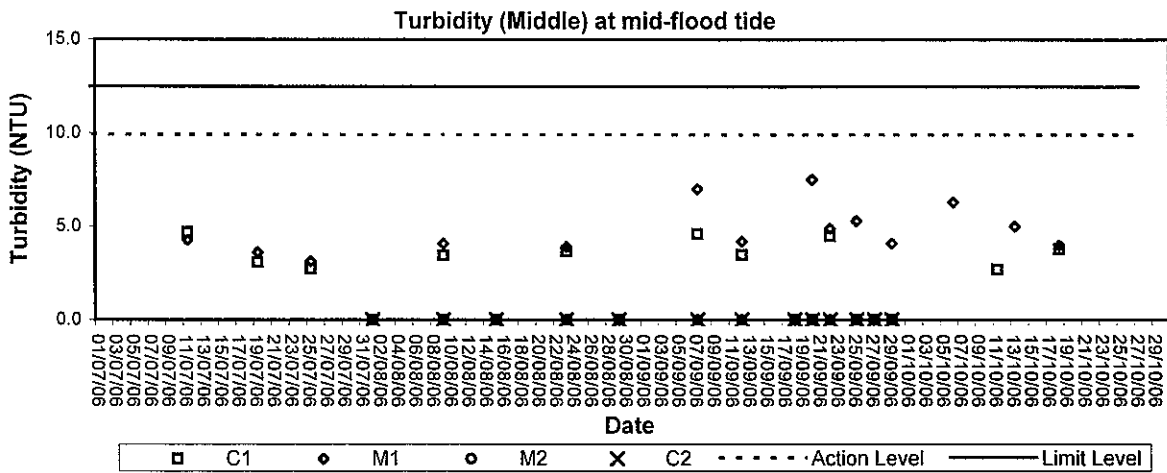
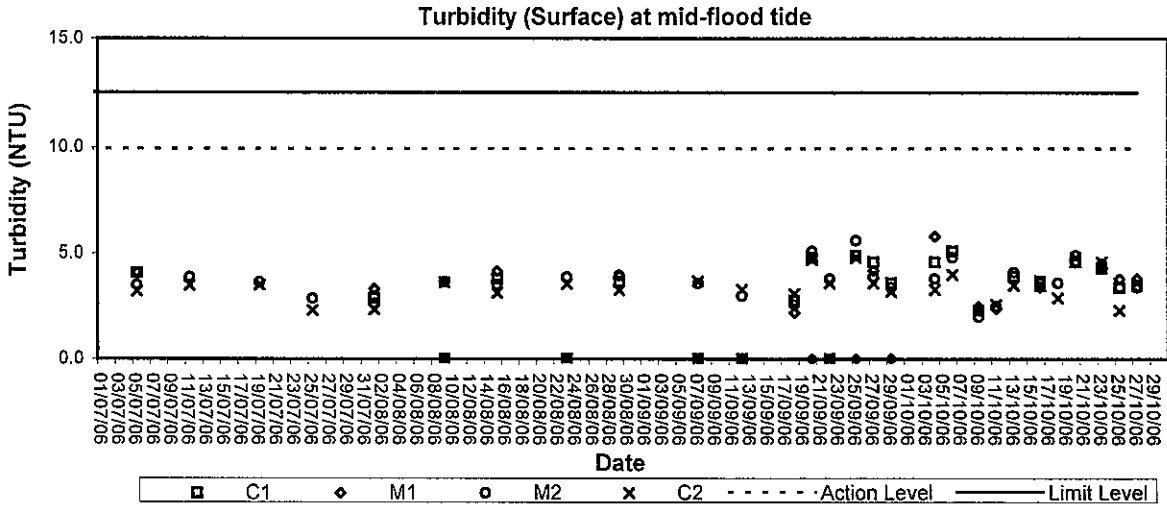
### 7. Turbidity

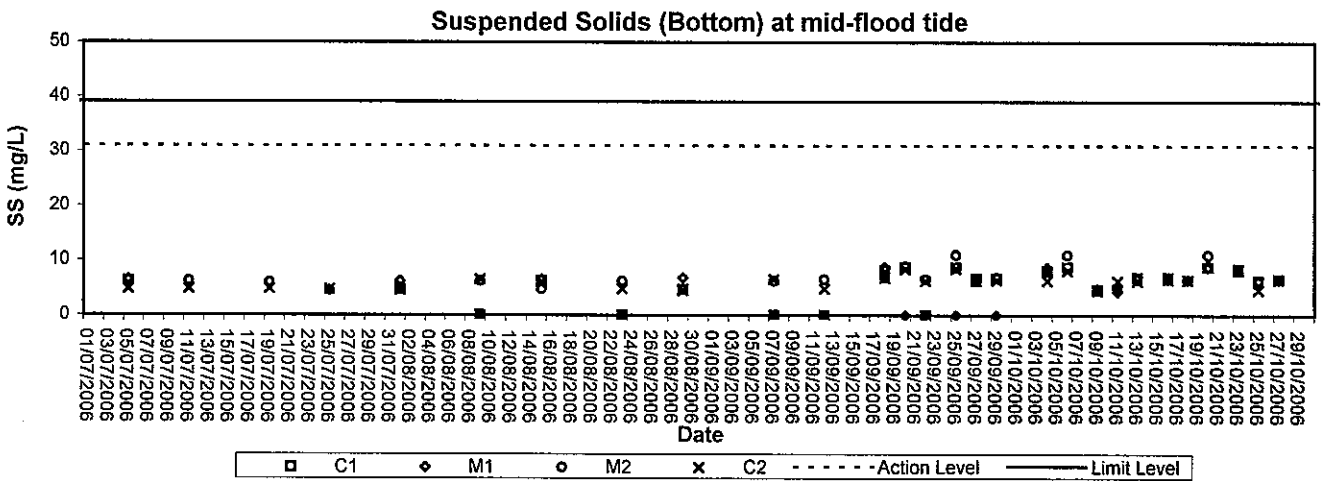
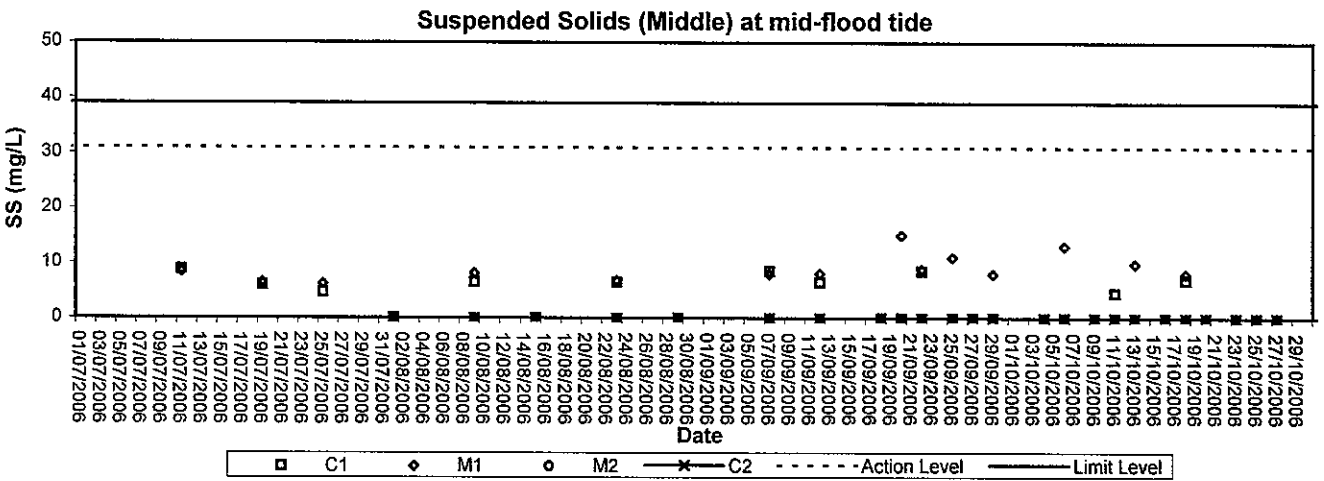
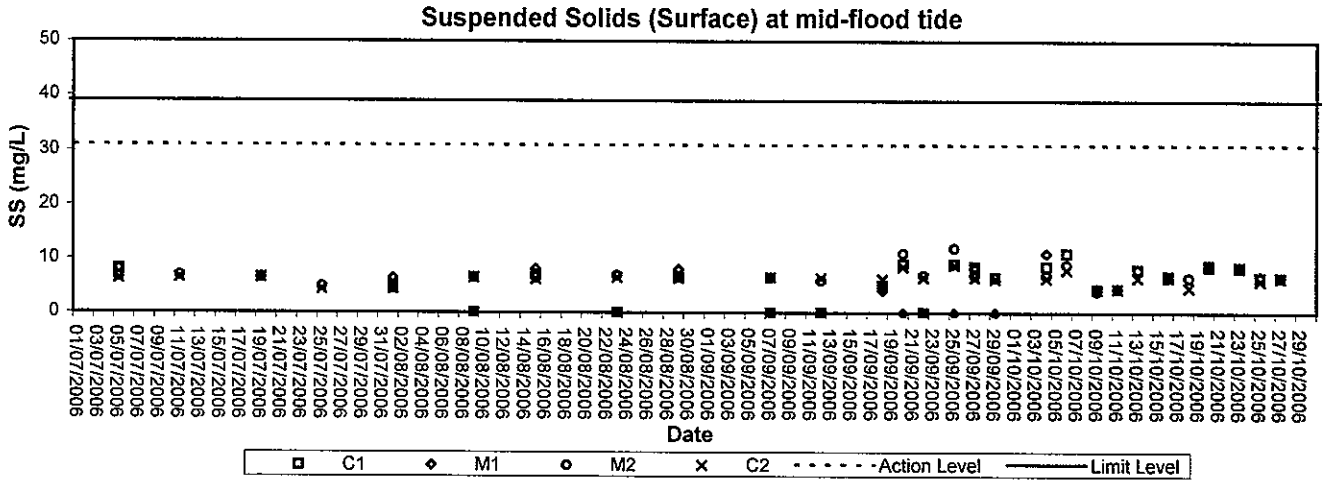
Date	Turbidity (NTU)																							
	C1						M1						M2						C2					
	Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb		
	S	M	Ave	S	M	Ave	S	M	Ave	S	M	Ave	S	M	Ave	S	M	Ave	S	M	Ave	S	M	Ave
4/10/06	4.6	-	4	3.3	0	3.3	4.6	0	5.2	4.3	0	4.3	3.8	-	4	3.9	0	3.9	3.3	-	3.2	3.3	-	3.2
6/10/06	5.1	-	4.9	4.0	0	4.0	6.3	0	6.3	5.8	0	5.8	4.8	-	5.1	4.9	5	4.9	4	-	4.1	4	-	4.0
9/10/06	2.3	-	2.7	2.5	0	2.5	2.8	5	2.6	2.2	0	2.2	2	-	2.6	2.3	0	2.3	2.3	-	2.5	2.3	-	2.4
11/10/06	2.7	0	2.7	2.5	0	2.5	2.2	0	2.3	2.3	0	2.3	2.5	-	2.8	2.6	5	2.6	2.6	-	2.8	2.6	-	2.8
13/10/06	3.9	3.8	5	4.4	0	4.4	5	0	5.0	6.1	0	6.1	4.1	-	3.6	3.8	5	3.8	4.1	-	3.6	3.5	-	3.2
16/10/06	3.7	3.8	5	3.8	5	3.8	3.6	0	3.5	3.5	0	3.5	3.6	-	3.7	3.6	5	3.6	3.6	-	3.5	3.5	-	3.5
18/10/06	3.8	0	3.8	3.3	5	3.3	4	0	4.0	3.8	5	3.8	3.6	-	3.4	3.5	0	3.5	3.6	-	3.3	3.4	-	3.1
20/10/06	4.6	4.6	0	5.0	0	5.0	4.9	5	4.7	4.7	5	4.7	4.9	-	5.1	5.0	0	5.0	4.9	-	4.9	4.8	-	4.9
23/10/06	4.3	4.2	5	4.3	0	4.3	4.4	5	4.3	4.4	5	4.3	4.5	-	4.7	4.6	0	4.6	4.3	-	4.5	4.6	-	4.5
25/10/06	3.4	3.1	5	2.6	0	2.6	3.3	5	3.5	3.2	0	3.2	3.4	-	3.1	3.2	5	3.2	2.3	-	2.7	2.3	-	2.5
27/10/06	3.5	3.5	0	3.4	0	3.4	3.6	0	3.7	3.6	5	3.6	3.4	-	3.4	3.4	0	3.4	3.6	-	3.7	3.6	-	3.6

## Appendix D2

### Graphical Plots of Marine Water Monitoring Data

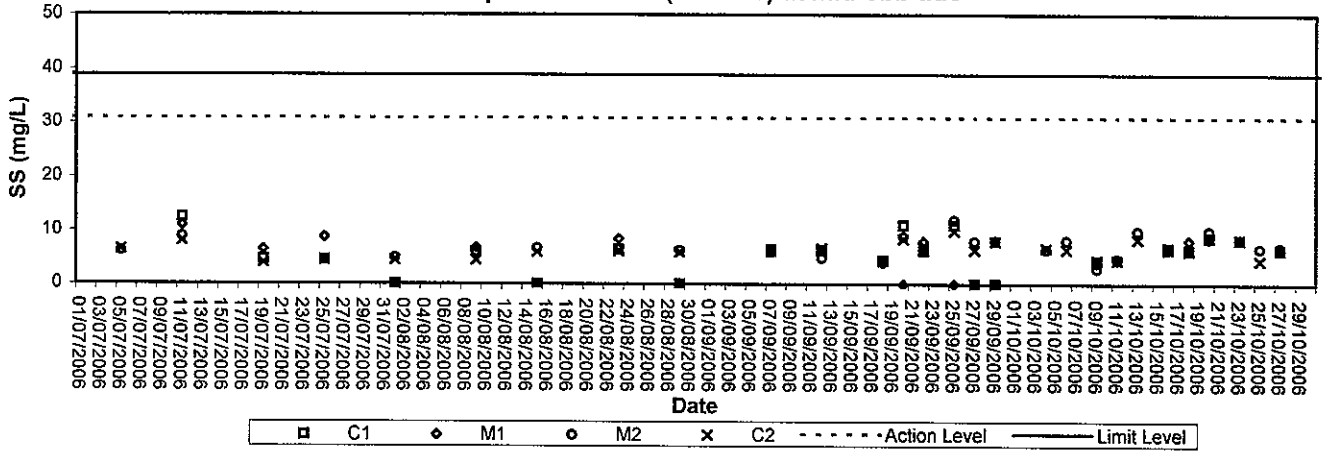




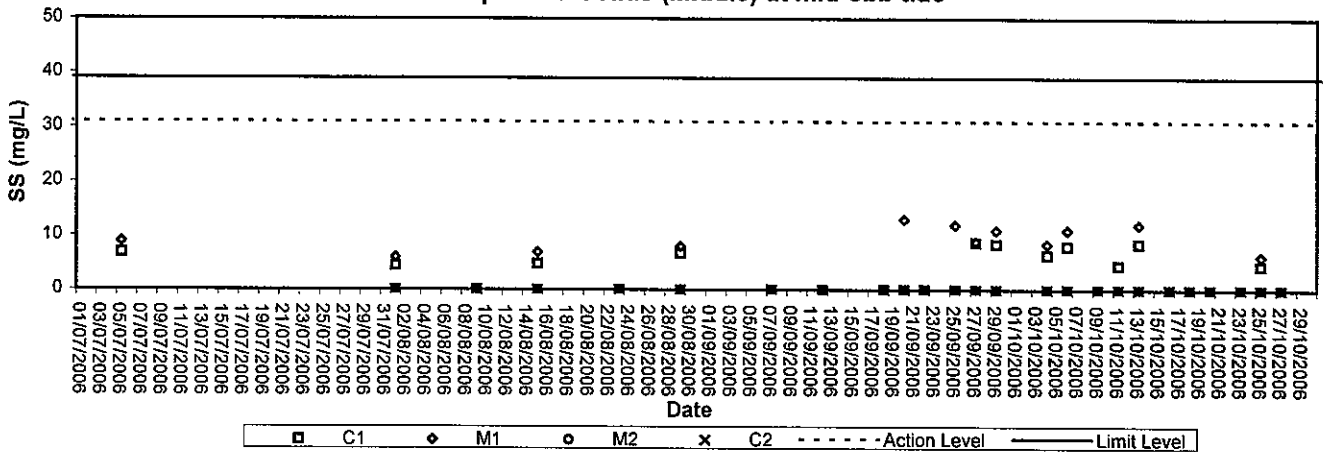




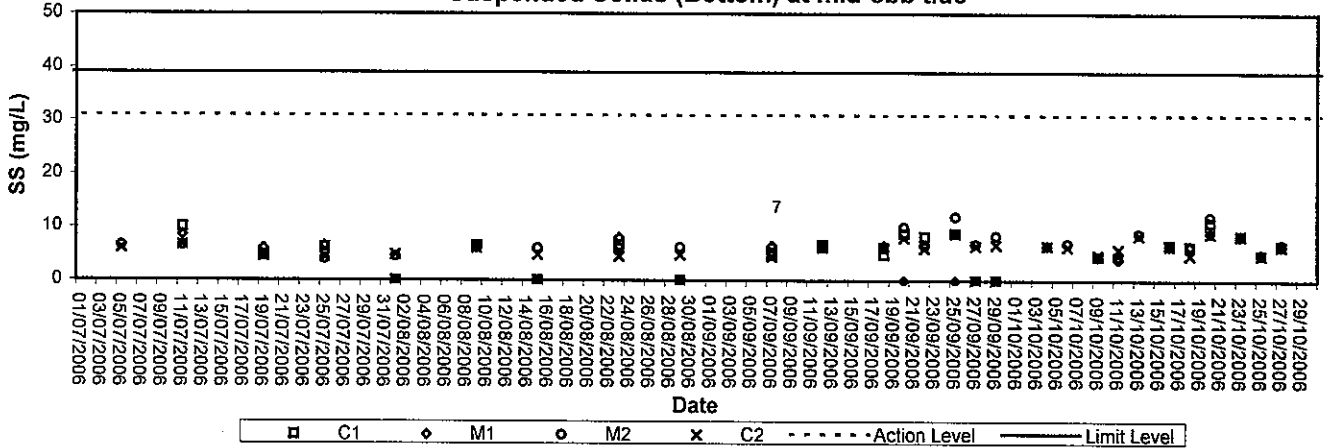
### Suspended Solids (Surface) at mid-ebb tide

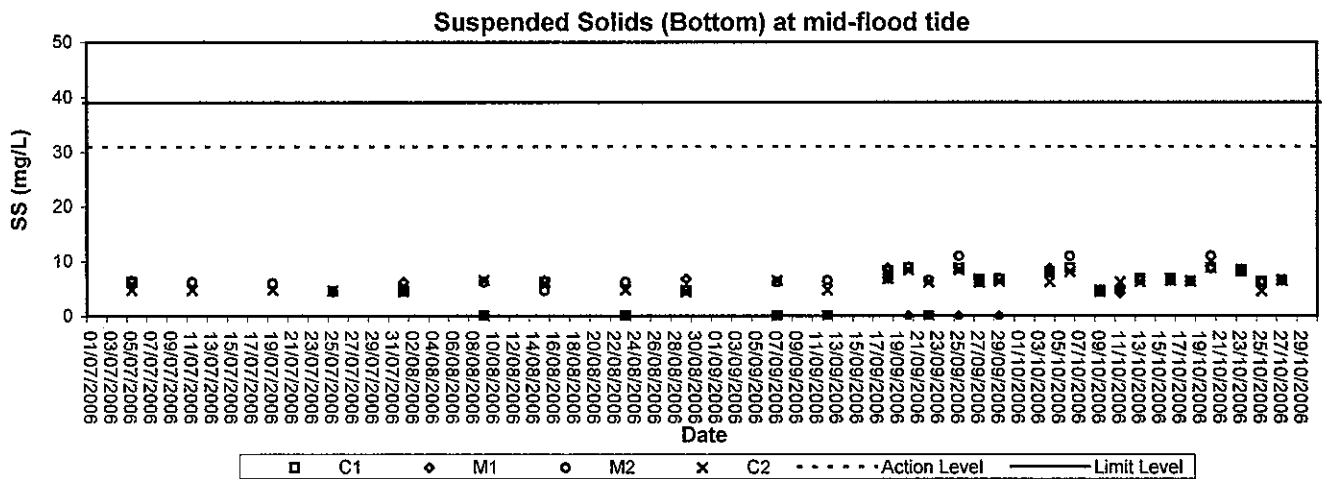
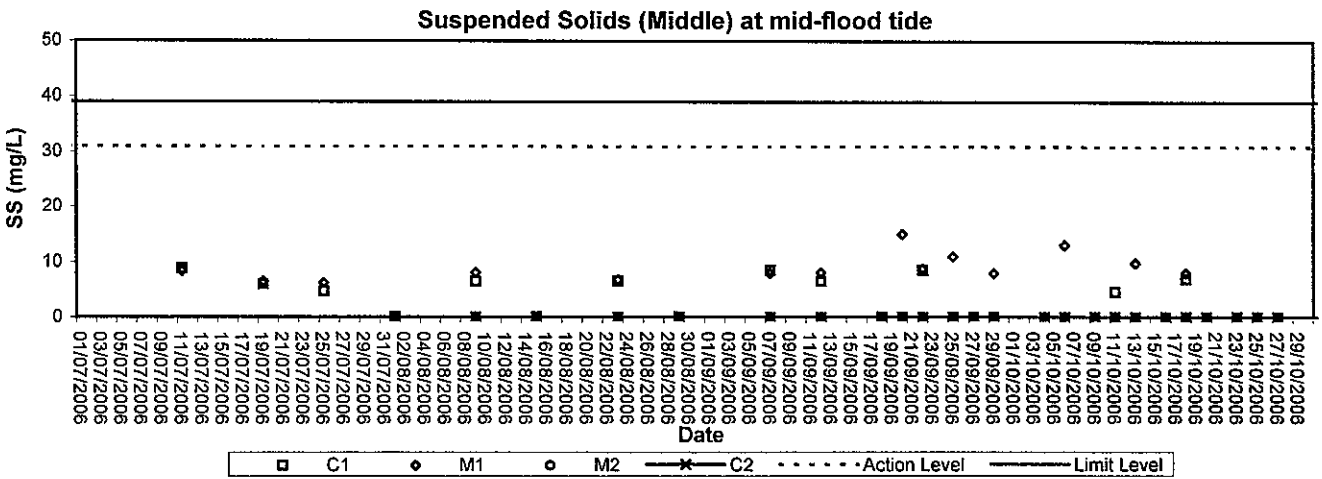
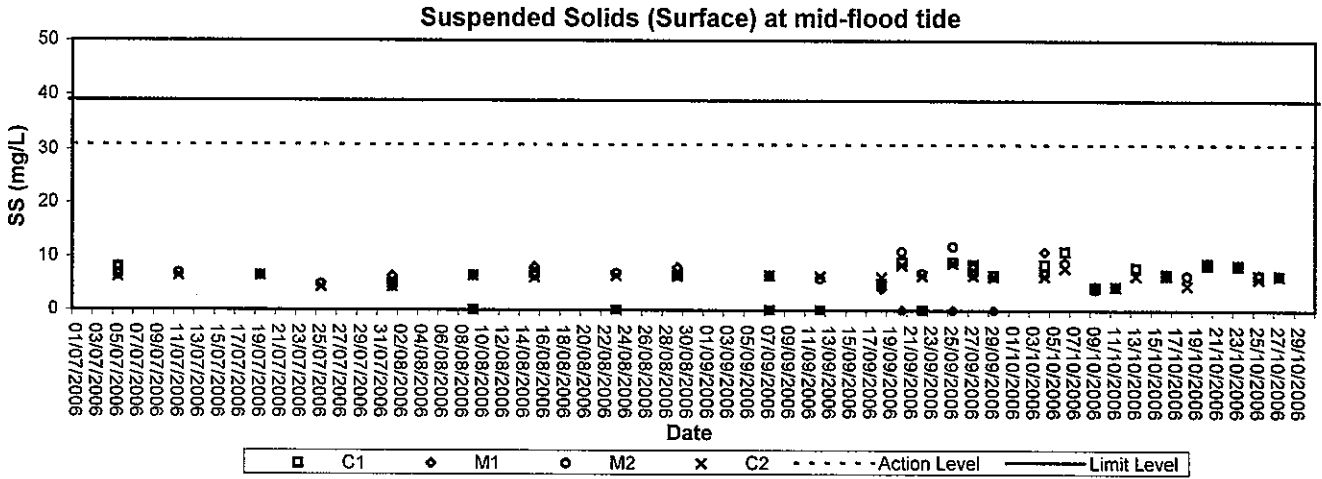


### Suspended Solids (Middle) at mid-ebb tide



### Suspended Solids (Bottom) at mid-ebb tide





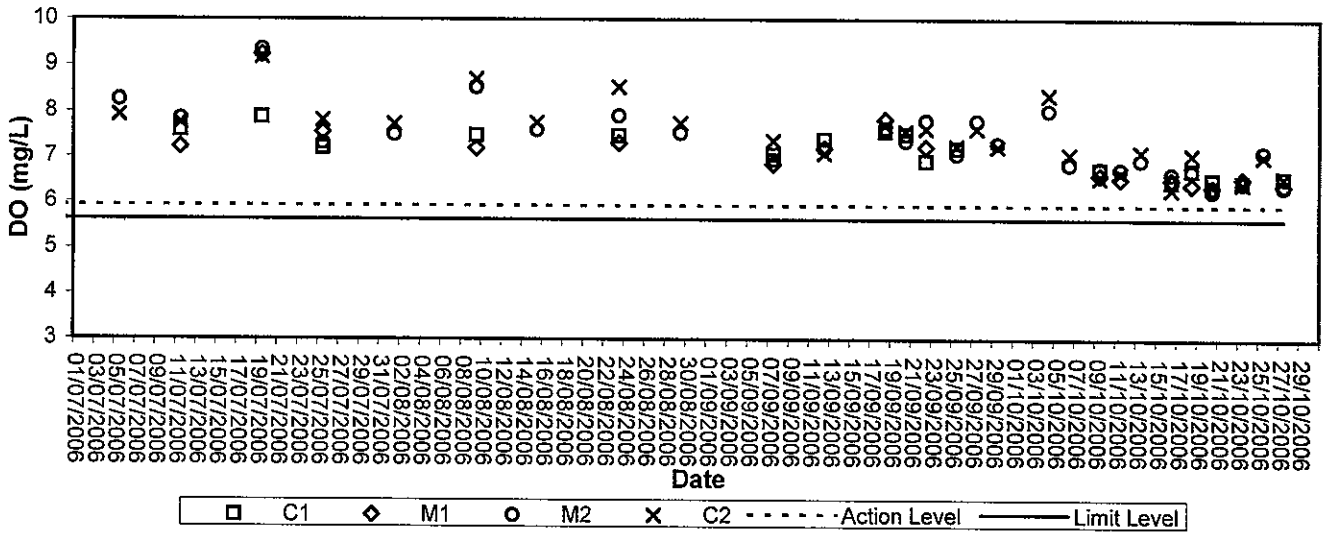




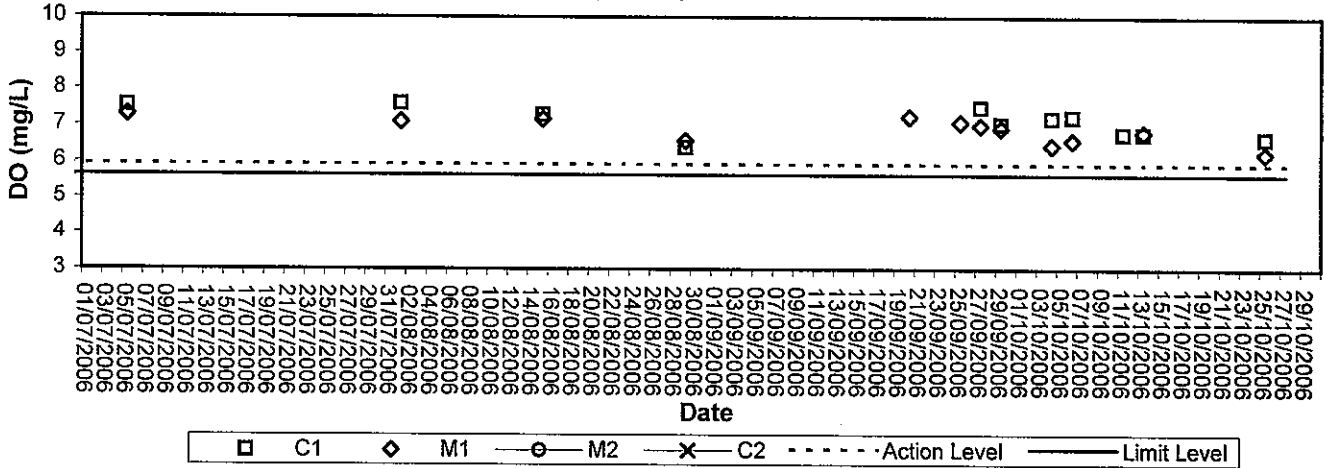




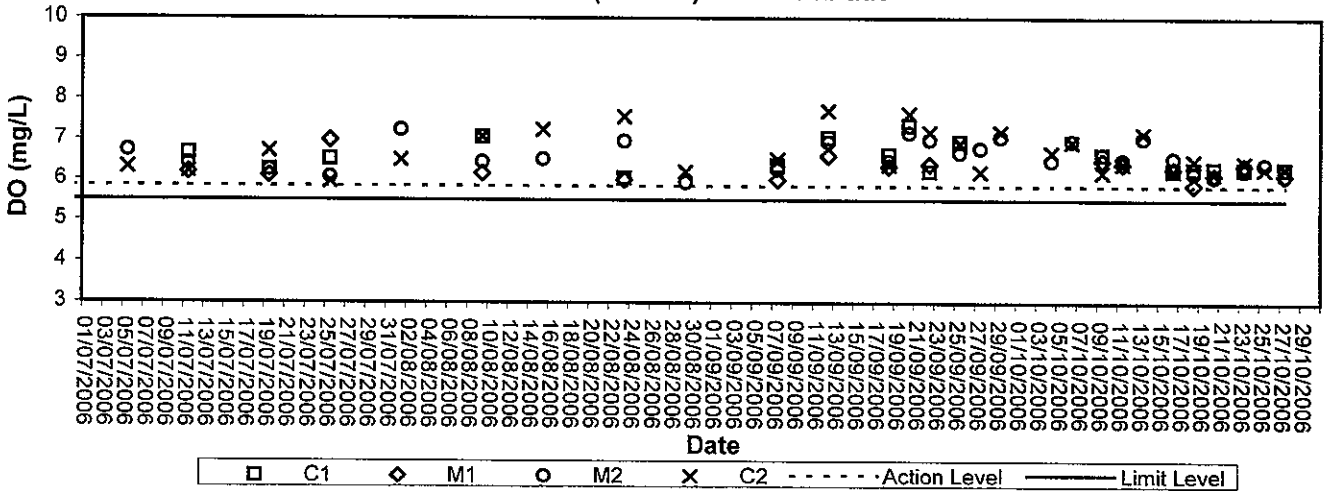
DO content (Surface) at mid-ebb tide



DO content (Middle) at mid-ebb tide



DO content (Bottom) at mid-ebb tide



## **Appendix E**

### **QA/QC Results of Laboratory Analysis**



## QA/QC Results of Laboratory Analysis of Total Suspended Solids

Sampling Date	QC Sample Analysis	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
04/10/2006	101.3	C1F-M	0.0	M2F-S	93.6
	103.1	M2F-B	0.0	M1E-M	107.8
	107.5	M2E-B	0.0	M2E-B	98.0
06/10/2006	108.2	C1F-S	0.0	M2F-S	100
	94.8	M2F-B	0.0	M1E-M	107.7
	92.6	M2E-S	0.0	M2E-B	96.0
09/10/2006	93.3	C1F-S	0.0	M2F-S	98.0
	96.4	M2F-B	0.0	M1E-S	98.0
	93.6	M2E-S	0.0	M2E-B	106
11/10/2006	99.8	C1F-S	0.0	M2F-S	93.8
	99.6	M2F-B	0.0	M1E-S	94.2
	101.4	M2E-S	0.0	M2E-B	108.2
13/10/2006	100.4	C1F-S	0.0	M2F-S	92.3
	96.3	M2F-B	0.0	M1E-M	107.7
	99.4	M2S-D	0.0	M2E-B	96.2
16/10/2006	103.9	C1F-S	0.0	M2F-S	109.6
	100.2	M2F-B	0.0	M1E-S	106
	102.9	M2E-S	0.0	M2E-B	105.8
18/10/2006	104.7	C1F-M	0.0	M2F-S	98.0
	105.1	M2F-B	0.0	M1E-S	97.0
	94.4	M2E-S	0.0	M2E-B	108.2
20/10/2006	98.1	C1F-S	0.0	M2F-S	98.0
	93.9	M2F-B	0.0	M1E-M	100
	92.2	M1E-S	0.0	M2E-B	100

Note: (\*) % Recovery of QC sample should be between 80% to 120%.  
(#) % Error of Sample Duplicate should be between -10% to 10%.  
(@) % Recovery of Sample Spike should be between 80% to 120%.



## QA/QC Results of Laboratory Analysis of Total Suspended Solids

Sampling Date	QC Sample Analysis	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
23/10/2006	99.3	C1F-M	0.0	M2F-S	94.0
	94.0	M2F-B	0.0	M1E-S	104.1
	98.2	M1E-B	0.0	M2E-B	100
25/10/2006	93.1	C1F-S	0.0	M2F-S	93.8
	103	M2F-B	0.0	M1E-M	100
	100.6	M2E-S	0.0	M2E-B	100
27/10/2006	101.3	C1F-S	0.0	M2F-S	92.5
	106.3	M2F-B	0.0	M1E-S	95.9
	104.6	M2E-S	0.0	M2E-B	100

Note: (\*) % Recovery of QC sample should be between 80% to 120%.  
(#) % Error of Sample Duplicate should be between -10% to 10%.  
(@) % Recovery of Sample Spike should be between 80% to 120%.

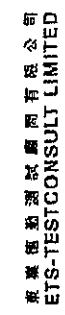


**Appendix F**  
**Site Inspection Record Sheets**

Contract No.: CV/2004/09  
 Reconstruction of Sha Tau Kok Public Pier

**SITE INSPECTION CHECKLIST**

Inspection Date : 28 October 2006  
 Time : 15:15  
 Inspected by : H.T. Chow  
 Name : H.T. Chow  
 Signature : *[Signature]*  
 Witnessed by : *[Signature]*  
 Name : *[Signature]*  
 Signature : *[Signature]*  
 Weather Condition : Sunny / Fine / Overcast / Drizzle / Rain / Storm / Hazy  
 Wind : Calm / Light / Breeze / Strong  
 Temperature : 27°C  
 Humidity : High / Moderate / Low



*[Handwritten initials]*

	Implementation Stages*		Remark
	Yes	No / N/A	
<b>Mitigation Measures on Environmental Management</b>			
<b>Air Quality</b>			
Any material which has the potential to create dust should be treated with water or sprayed with wetting agent.	✓		
Any vehicle with open load carrying area used for moving materials which has the potential to create dust shall have properly fitting side and tail boards. Material having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin.	✓		
Stockpiles of sand, aggregate and construction and demolition material greater than 20m <sup>3</sup> shall be enclosed on three sides, with walls extending above the pile and 2 meters beyond the front of the pile. Water spray should be provided and used both to dampen stored materials and when receiving raw materials.		✓	
The haul road should be either paved or regular watering.	✓		
Unpaved areas should be watered regularly to avoid dust generation.	✓		
The public road around the site entrance should be kept clean and free from dust.	✓		
Wheel washing facilities should be provided at all main entrance of work site.	✓		
The enclosures should be around the main dust-generating activities.	✓		
All plant and equipment should be well maintained e.g. without black smoke emission.	✓		
Vehicle and equipment should be switched off while not in use.	✓		
Open burning should be prohibited.	✓		
<b>Noise</b>			
The constructions works should be scheduled to minimize noise nuisance.	✓		
Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	✓		
Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	✓		
Plant known to emit noise strongly should be orientated so that the noise is directed away from nearby NSRs. No excavator mounted breaker should be used within 125m from any nearby sensitive receivers. Hydraulic concrete crusher should be used if necessary.	✓		
Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	✓		
Noise enclosures, noise barriers, or portable noise barriers used where necessary.	✓		
Air compressors and hand held breakers should have noise labels.	✓		
Compressors and generators should operate with door closed.	✓		
Construction Noise Permits should be available for inspection.	✓		



**SITE INSPECTION CHECKLIST**

Mitigation Measures on Environmental Management	Implementation Stages*		Remark
	Yes	No / N/A	
<b>Water Quality</b>			
<b>Marine Works</b>			
• Silt curtain should be provided during all demolition works and piling works within the site.	✓		
• The works should cause no visible foam, oil, grease, scum litter or other objectionable matter to be present on the water within the site.	✓		
• All barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of materials.	✓		
• Loading of barges should be controlled to prevent splashing of dredging material to the surrounding water and the barges shall not be filled to a level which will cause overflowing of material or polluted water during loading or transportation.	✓		
• Mechanical grabs should be designed and maintained to avoid spillage and should be seal tightly while being lifted.	✓		
• All vessels should be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipelines at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller on the water within the site.	✓		
<b>General Construction Works</b>			
• All drainage facilities should be adequate and well maintained to prevent flooding and overflow.	✓		
• Fuel tanks should be housed within drainable trays and regularly drained of rain water.	✓		
• Permanent / temporary ditches should be provided to facilities run-off discharge into Sediment tank with adequate capacity to settle the sand and silt out.	✓		
• Sediment tanks should be regularly cleaned and maintained in order to control their efficiency.	✓		
<b>Waste Management</b>			
• Most of the C&D materials generated from the construction are sorted immediately in-situ to find out if they can be re-used for this job site or for other job sites.	✓		
• Recyclable materials sorted from the site should be collected by potential recycling contractors under the Contractor's arrangement.	✓		
• Trip ticket system will be implemented to ensure proper waste disposal at public filling and landfills	✓		
• Proper resource planning and calculations before ordering the construction materials to be used will ensure that the wastage of the materials can be minimized	✓		
• General refuse generated on-site is in enclosed bins or compaction units and removed on daily or every second day basis.	✓		
• A reusable waste collector is employed by the Contractor to remove general refuse from the site, separately from the construction and chemical waste.	✓		
• Office wastes are reduced through recycling of paper if volumes are large enough to warrant collection.	✓		
<b>Site Practice</b>			
• The Contractor assigned worker is responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.	✓		
• Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	✓		
• Any unused materials or those with remaining functional capacity should be recycled.	✓		
• All generators, fuel and oil storage are within bundie areas.	✓		
• Oil leakage from machinery, vehicle and plant is prevented.	✓		
• Drainage systems, silt traps and sumps are cleaned and maintained regularly.	✓		



Contract No.: CV/2004/09  
Reconstruction of Sha Tau Kok Public Pier

**SITE INSPECTION CHECKLIST**

EMPB

Inspection Date : 18 October 2006  
 Time : 14:30  
 Inspected by : H.T. Chow  
 Name : H.T. Chow  
 Signature : *[Signature]*  
 Witnessed by : K.W. Tang  
 Name : K.W. Tang  
 Signature : *[Signature]*  
 Weather Condition : Sunny / Fine / Overcast / Drizzle / Rain / Storm / Hazy  
 Wind : Calm / Light / Breeze / Strong  
 Temperature : 27°C  
 Humidity : High / Moderate / Low

**Mitigation Measures on Environmental Management**

	Implementation Stages*		Remark
	Yes	No / N/A	
<b>Air Quality</b>			
Any material which has the potential to create dust should be treated with water or sprayed with wetting agent.	<input checked="" type="checkbox"/>		
Any vehicle with open load carrying area used for moving materials which has the potential to create dust shall have properly fitting side and tail boards. Material having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin.	<input checked="" type="checkbox"/>		
Stockpiles of sand, aggregate and construction and demolition material greater than 20m <sup>3</sup> shall be enclosed on three sides, with walls extending above the pile and 2 meters beyond the front of the pile. Water spray should be provided and used both to dampen stored materials and when receiving raw materials.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
The haul road should be either paved or regular watering.	<input checked="" type="checkbox"/>		
Unpaved areas should be watered regularly to avoid dust generation.	<input checked="" type="checkbox"/>		
The public road around the site entrance should be kept clean and free from dust.	<input checked="" type="checkbox"/>		
Wheel washing facilities should be provided at all main entrance of work site.	<input checked="" type="checkbox"/>		
The enclosures should be around the main dust-generating activities.	<input checked="" type="checkbox"/>		
All plant and equipment should be well maintained e.g. without black smoke emission.	<input checked="" type="checkbox"/>		
Vehicle and equipment should be switched off while not in use.	<input checked="" type="checkbox"/>		
Open burning should be prohibited.	<input checked="" type="checkbox"/>		
<b>Noise</b>			
The constructions works should be scheduled to minimize noise nuisance.	<input checked="" type="checkbox"/>		
Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	<input checked="" type="checkbox"/>		
Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	<input checked="" type="checkbox"/>		
Plant known to emit noise strongly should be orientated so that the noise is directed away from nearby NSFRs. No excavator mounted breaker should be used within 125m from any nearby sensitive receivers. Hydraulic concrete crusher should be used if necessary.	<input checked="" type="checkbox"/>		
Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	<input checked="" type="checkbox"/>		
Noise enclosures, noise barriers, or portable noise barriers used where necessary.	<input checked="" type="checkbox"/>		
Air compressors and hand held breakers should have noise labels.	<input checked="" type="checkbox"/>		
Compressors and generators should operate with door closed.	<input checked="" type="checkbox"/>		
Construction Noise Permits should be available for inspection.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

**SITE INSPECTION CHECKLIST**

	Mitigation Measures on Environmental Management	Implementation Stages*			Remark
		Yes	No	N/A	
<b>Water Quality</b>					
<b>Marine Works</b>					
	Silt curtain should be provided during all demolition works and piling works within the site.	✓			
	The works should cause no visible foam, oil, grease, scum litter or other objectionable matter to be present on the water within the site.	✓			
	All barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of materials.	✓			
	Loading of barges should be controlled to prevent splashing of dredging material to the surrounding water and the barges shall not be filled to a level which will cause overflowing of material or polluted water during loading or transportation.	✓			
	Mechanical grabs should be designed and maintained to avoid spillage and should be seal tightly while being lifted.	✓		✓	
	All vessels should be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipelines at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller on the water within the site.	✓			
<b>General Construction Works</b>					
	All drainage facilities should be adequate and well maintained to prevent flooding and overflow.			✓	
	Fuel tanks should be housed within drainable trays and regularly drained of rain water.	✓			
	Permanent / temporary ditches should be provided to facilities run-off discharge into Sediment tank with adequate capacity to settle the sand and silt out.			✓	
	Sediment tanks should be regularly cleaned and maintained in order to control their efficiency.			✓	
<b>Waste Management</b>					
	Most of the C&D materials generated from the construction are sorted immediately in-situ to find out if they can be re-used for this job site or for other job sites.	✓			
	Recyclable materials sorted from the site should be collected by potential recycling contractors under the Contractor's arrangement.	✓			
	Trip ticket system will be implemented to ensure proper waste disposal at public filling and landfills			✓	
	Proper resource planning and calculations before ordering the construction materials to be used will ensure that the wastage of the materials can be minimized	✓			
	General refuse generated on-site is in enclosed bins or compaction units and removed on daily or every second day basis.	✓			
	A reputable waste collector is employed by the Contractor to remove general refuse from the site, separately from the construction and chemical waste.	✓			
	Office wastes are reduced through recycling of paper if volumes are large enough to warrant collection.	✓			
<b>Site Practice</b>					
	The Contractor assigned worker is responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.	✓			
	Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	✓			
	Any unused materials or those with remaining functional capacity should be recycled.	✓			
	All generators, fuel and oil storage are within bundle areas.	✓			
	Oil leakage from machinery, vehicle and plant is prevented.	✓			
	Drainage systems, silt traps and surps are cleaned and maintained regularly.	✓			



Contract No.: CV/2004/09  
Reconstruction of Sha Tau Kok Public Pier

**SITE INSPECTION CHECKLIST**

Inspection Date : 11.10.2006  
 Time : 09:45  
 Weather Condition : Sunny / Fine / Overcast / Drizzle / Rain / Storm / Hazy  
 Wind : Calm / Light / Breeze / Strong  
 Inspected by : [Signature]  
 Name : [Name]  
 Signature : [Signature]  
 Witnessed by : [Signature]  
 Name : C.V. Wong  
 Signature : [Signature]  
 Temperature : 28°C  
 Humidity : High / Moderate / Low  
 E.W. [Signature]  
 [Signature] COPY

	Implementation Stages*		Remark
	Yes	No / N/A	
<b>Air Quality</b>			
Any material which has the potential to create dust should be treated with water or sprayed with wetting agent.	✓		
Any vehicle with open load carrying area used for moving materials which has the potential to create dust shall have properly fitting side and tail boards. Material having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin.	✓		
Stockpiles of sand, aggregate and construction and demolition material greater than 20m <sup>3</sup> shall be enclosed on three sides, with walls extending above the pile and 2 meters beyond the front of the pile. Water spray should be provided and used both to dampen stored materials and when receiving raw materials.	✓	✓	
The haul road should be either paved or regular watering.	✓		
Unpaved areas should be watered regularly to avoid dust generation.	✓	✓	
The public road around the site entrance should be kept clean and free from dust.	✓		
Wheel washing facilities should be provided at all main entrance of work site.	✓	✓	
The enclosures should be around the main dust-generating activities.	✓		
All plant and equipment should be well maintained e.g. without black smoke emission.	✓		
Vehicle and equipment should be switched off while not in use.	✓		
Open burning should be prohibited.	✓		
<b>Noise</b>			
The constructions works should be scheduled to minimize noise nuisance.	✓		
Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	✓		
Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	✓		
Plant known to emit noise strongly should be orientated so that the noise is directed away from nearby NSFRs. No excavator mounted breaker should be used within 12m from any nearby sensitive receivers. Hydraulic concrete crusher should be used if necessary.	✓		
Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	✓		
Noise enclosures, noise barriers, or portable noise barriers used where necessary.	✓		
Air compressors and hand held breakers should have noise labels.	✓		
Compressor and generators should operate with door closed.	✓		
Construction Noise Permits should be available for inspection.	✓	✓	

**SITE INSPECTION CHECKLIST**

	Implementation Stages*		Remark
	Yes	No / N/A	
<b>Mitigation Measures on Environmental Management</b>			
<b>Water Quality</b>			
<b>Marine Works</b>			
• Silt curtain should be provided during all demolition works and piling works within the site.	✓		
• The works should cause no visible foam, oil, grease, scum litter or other objectionable matter to be present on the water within the site.	✓		
• All barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of materials.	✓		
• Loading of barges should be controlled to prevent splashing of dredging material to the surrounding water and the barges shall not be filled to a level which will cause overflowing of material or polluted water during loading or transportation.	✓		
• Mechanical grabs should be designed and maintained to avoid spillage and should be seal tightly while being lifted.	✓		
• All vessels should be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipelines at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller on the water within the site.	✓		
<b>General Construction Works</b>			
• All drainage facilities should be adequate and well maintained to prevent flooding and overflow.	✓		
• Fuel tanks should be housed within drainable trays and regularly drained of rain water.	✓		
• Permanent / temporary ditches should be provided to facilities run-off discharge into Sediment tank with adequate capacity to settle the sand and silt out.	✓		
• Sediment tanks should be regularly cleaned and maintained in order to control their efficiency.	✓		
<b>Waste Management</b>			
• Most of the C&D materials generated from the construction are sorted immediately in-situ to find out if they can be re-used for this job site or for other job sites.	✓		
• Recyclable materials sorted from the site should be collected by potential recycling contractors under the Contractor's arrangement.	✓		
• Trip ticket system will be implemented to ensure proper waste disposal at public filling and landfills	✓		
• Proper resource planning and calculations before ordering the construction materials to be used will ensure that the wastage of the materials can be minimized	✓		
• General refuse generated on-site is in enclosed bins or compaction units and removed on daily or every second day basis.	✓		
• A reputable waste collector is employed by the Contractor to remove general refuse from the site, separately from the construction and chemical waste.	✓		
• Office wastes are reduced through recycling of paper if volumes are large enough to warrant collection.	✓		
<b>Site Practice</b>			
• The Contractor assigned worker is responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.	✓		
• Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	✓		
• Any unused materials or those with remaining functional capacity should be recycled.	✓		
• All generators, fuel and oil storage are within bundle areas.	✓		
• Oil leakage from machinery, vehicle and plant is prevented.	✓		
• Drainage systems, silt traps and sumps are cleaned and maintained regularly.	✓		





Contract No.: CV/2004/09  
Reconstruction of Shea Tau Kok Public Pier

**SITE INSPECTION CHECKLIST**

*E. W. P. Ip*

Inspection Date : 4 October 2006  
 Time : 14:50  
 Inspected by : H.T. Chow  
 Name : H.T. Chow  
 Signature : *H.T. Chow*  
 Witnessed by : K.W. Tang  
 Name : K.W. Tang  
 Signature : *K.W. Tang*

Weather Condition : Sunny (Fine) Overcast / Drizzle / Rain / Storm / Hazy  
 Wind : Calm (Light) Breeze / Strong  
 Temperature : 29°C  
 Humidity : High (Moderate) Low

	Implementation Stages*			Remark
	Yes	No	N/A	
<b>Air Quality</b>				
Any material which has the potential to create dust should be treated with water or sprayed with wetting agent.	<input checked="" type="checkbox"/>			
Any vehicle with open load carrying area used for moving materials which has the potential to create dust shall have properly fitting side and tail boards. Material having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin.	<input checked="" type="checkbox"/>			
Stockpiles of sand, aggregate and construction and demolition material greater than 20m <sup>3</sup> shall be enclosed on three sides, with walls extending above the pile and 2 meters beyond the front of the pile. Water spray should be provided and used both to dampen stored materials and when receiving raw materials.			<input checked="" type="checkbox"/>	
The haul road should be either paved or regular watering.	<input checked="" type="checkbox"/>			
Unpaved areas should be watered regularly to avoid dust generation.	<input checked="" type="checkbox"/>			
The public road around the site entrance should be kept clean and free from dust.	<input checked="" type="checkbox"/>			
Wheel washing facilities should be provided at all main entrance of work site.	<input checked="" type="checkbox"/>			
The enclosures should be around the main dust-generating activities.	<input checked="" type="checkbox"/>			
All plant and equipment should be well maintained e.g. without black smoke emission.	<input checked="" type="checkbox"/>			
Vehicle and equipment should be switched off while not in use.	<input checked="" type="checkbox"/>			
Open burning should be prohibited.	<input checked="" type="checkbox"/>			
<b>Noise</b>				
The constructions works should be scheduled to minimize noise nuisance.	<input checked="" type="checkbox"/>			
Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	<input checked="" type="checkbox"/>			
Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	<input checked="" type="checkbox"/>			
Plant known to emit noise strongly should be orientated so that the noise is directed away from nearby NSRs. No excavator mounted breaker should be used within 125m from any nearby sensitive receivers. Hydraulic concrete crusher should be used if necessary.	<input checked="" type="checkbox"/>			
Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	<input checked="" type="checkbox"/>			
Noise enclosures, noise barriers, or portable noise barriers used where necessary.	<input checked="" type="checkbox"/>			
Air compressors and hand held breakers should have noise labels.	<input checked="" type="checkbox"/>			
Compressors and generators should operate with door closed.	<input checked="" type="checkbox"/>			
Construction Noise Permits should be available for inspection.	<input checked="" type="checkbox"/>			

**SITE INSPECTION CHECKLIST**

Mitigation Measures on Environmental Management	Implementation Stages*		Remark
	Yes	No / N/A	
<b>Water Quality</b>			
<b>Marine Works</b>			
▪ Silt curtain should be provided during all demolition works and piling works within the site.	✓		
▪ The works should cause no visible foam, oil, grease, scum litter or other objectionable matter to be present on the water within the site.	✓		
▪ All barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of materials.	✓		
▪ Loading of barges should be controlled to prevent splashing of dredging material to the surrounding water and the barges shall not be filled to a level which will cause overflowing of material or polluted water during loading or transportation.	✓		
▪ Mechanical grabs should be designed and maintained to avoid spillage and should be seal tightly while being lifted.	✓		
▪ All vessels should be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipelines at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller on the water within the site.	✓		
<b>General Construction Works</b>			
▪ All drainage facilities should be adequate and well maintained to prevent flooding and overflow.	✓		
▪ Fuel tanks should be housed within drainable trays and regularly drained of rain water.	✓		
▪ Permanent / temporary ditches should be provided to facilities run-off discharge into Sediment tank with adequate capacity to settle the sand and silt out.	✓		
▪ Sediment tanks should be regularly cleaned and maintained in order to control their efficiency.	✓		
<b>Waste Management</b>			
▪ Most of the C&D materials generated from the construction are sorted immediately in-situ to find out if they can be re-used for this job site or for other job sites.	✓		
▪ Recyclable materials sorted from the site should be collected by potential recycling contractors under the Contractor's arrangement.	✓		
▪ Trip ticket system will be implemented to ensure proper waste disposal at public filling and landfills	✓		
▪ Proper resource planning and calculations before ordering the construction materials to be used will ensure that the wastage of the materials can be minimized	✓		
▪ General refuse generated on-site is in enclosed bins or compaction units and removed on daily or every second day basis.	✓		
▪ A reputable waste collector is employed by the Contractor to remove general refuse from the site, separately from the construction and chemical waste.	✓		
▪ Office wastes are reduced through recycling of paper if volumes are large enough to warrant collection.	✓		
<b>Site Practice</b>			
▪ The Contractor assigned worker is responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.	✓		
▪ Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	✓		
▪ Any unused materials or those with remaining functional capacity should be recycled.	✓		
▪ All generators, fuel and oil storage are within bunded areas.	✓		
▪ Oil leakage from machinery, vehicle and plant is prevented.	✓		
▪ Drainage systems, silt traps and sumps are cleaned and maintained regularly.	✓		

**Table for Deficiency and Remedial Action:**

Item	Details of deficiency or observation	Location	Remedial action to be taken (Included persons / party to take action)	Expected Date for Action taken
#1	Follow up action to previous site inspection item ② (22-9-06) and item #2 (27-9-06). The unnecessary content of W1 was removed.	W1	Follow up action was completed. no further action to be taken.	N/A



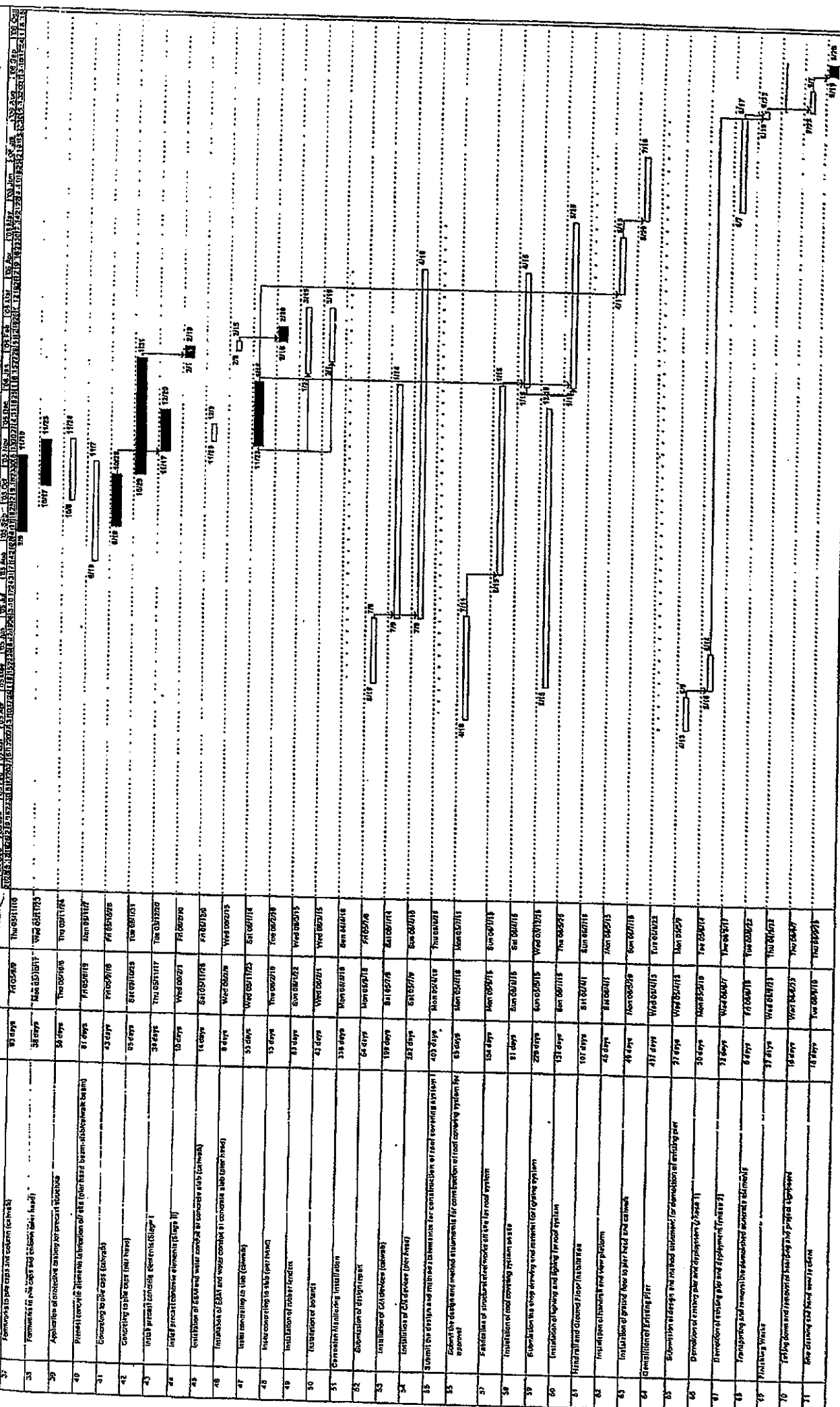
## **Appendix G**

### **Construction Programme**

ID	Task Name	Duration	Start	Finish	Predecessors
1	Site Working Day	8.0 days	Thu 04/12/23	Wed 04/19/23	
2	Preparation Work	4.0 days	Fri 04/21/23	Thu 04/27/23	1
3	Setting up Office for Engineer & Contractor	3.0 days	Thu 04/20/23	Fri 04/21/23	1
4	Submit tender program & tender 21 items	3.0 days	Fri 04/21/23	Mon 04/24/23	2
5	Submit environmental protection plan to the pier	2.0 days	Wed 04/19/23	Thu 04/20/23	1
6	Temporary Work	2.0 days	Mon 04/24/23	Tue 04/25/23	4
7	Setting up temporary cover for existing channel	2.0 days	Mon 04/24/23	Tue 04/25/23	4
8	Temporary Work	2.0 days	Mon 04/24/23	Tue 04/25/23	4
9	Construction of all berth	2.0 days	Mon 04/24/23	Tue 04/25/23	4
10	Design and submission of temporary pier berthing	2.0 days	Tue 04/25/23	Wed 04/26/23	4
11	Construction of temporary pier berthing	2.0 days	Wed 04/26/23	Thu 04/27/23	4
12	Design and submission of temporary working platform and stairs	2.0 days	Mon 04/24/23	Tue 04/25/23	4
13	Construction temporary working platform and stairs	2.0 days	Mon 04/24/23	Tue 04/25/23	4
14	Trailing down and retrieval pier on existing pier head	1.0 days	Fri 04/21/23	Mon 04/24/23	2
15	Site investigation by boring	1.0 days	Thu 04/20/23	Fri 04/21/23	1
16	Setting up tripod equipment	1.0 days	Thu 04/20/23	Fri 04/21/23	1
17	Construction of preliminary pier (canal)	4.0 days	Fri 04/21/23	Mon 04/24/23	2
18	Construction of temporary pier (berthing)	2.0 days	Mon 04/24/23	Tue 04/25/23	4
19	Construction of temporary pier (berthing)	2.0 days	Mon 04/24/23	Tue 04/25/23	4
20	Preparation pier (Berth)	1.0 days	Mon 04/24/23	Tue 04/25/23	4
21	Preparation pier (Berth)	1.0 days	Mon 04/24/23	Tue 04/25/23	4
22	Setting Works	1.0 days	Mon 04/24/23	Tue 04/25/23	4
23	Construction of temporary platform system (Berth) for setting and working pier	1.0 days	Fri 04/21/23	Mon 04/24/23	2
24	Working Pier Canopy (canal)	1.0 days	Fri 04/21/23	Mon 04/24/23	2
25	Working Pier Canopy (Berth)	1.0 days	Fri 04/21/23	Mon 04/24/23	2
26	Installation of pier and piling (canal)	1.0 days	Fri 04/21/23	Mon 04/24/23	2
27	Installation of pier and piling (Berth)	1.0 days	Fri 04/21/23	Mon 04/24/23	2
28	Installation of working platform for canal pier (Berth)	1.0 days	Fri 04/21/23	Mon 04/24/23	2
29	Landing Pier	1.0 days	Fri 04/21/23	Mon 04/24/23	2
30	End working pier (canal)	1.0 days	Fri 04/21/23	Mon 04/24/23	2
31	End working pier (Berth)	1.0 days	Fri 04/21/23	Mon 04/24/23	2
32	End working pier (Berth)	1.0 days	Fri 04/21/23	Mon 04/24/23	2
33	Trailing down and removal of temporary pier (Berth) and piling and landing pier	1.0 days	Fri 04/21/23	Mon 04/24/23	2
34	Final Upstream Allocation	1.0 days	Fri 04/21/23	Mon 04/24/23	2
35	Pier and piling (Berth) for pier 2 (Berth) (canal)	1.0 days	Fri 04/21/23	Mon 04/24/23	2
36	Final Construction of pier (Berth) for pier 2 (Berth) (canal)	1.0 days	Fri 04/21/23	Mon 04/24/23	2

Risk Up Global Path  Risk Up Projects  Risk Up Summary  
 Risk Up Milestone  Risk Up Summary  
 Risk Up Summary

Master Working Program for Reconstruction of the Top 8th Rabbie Pier



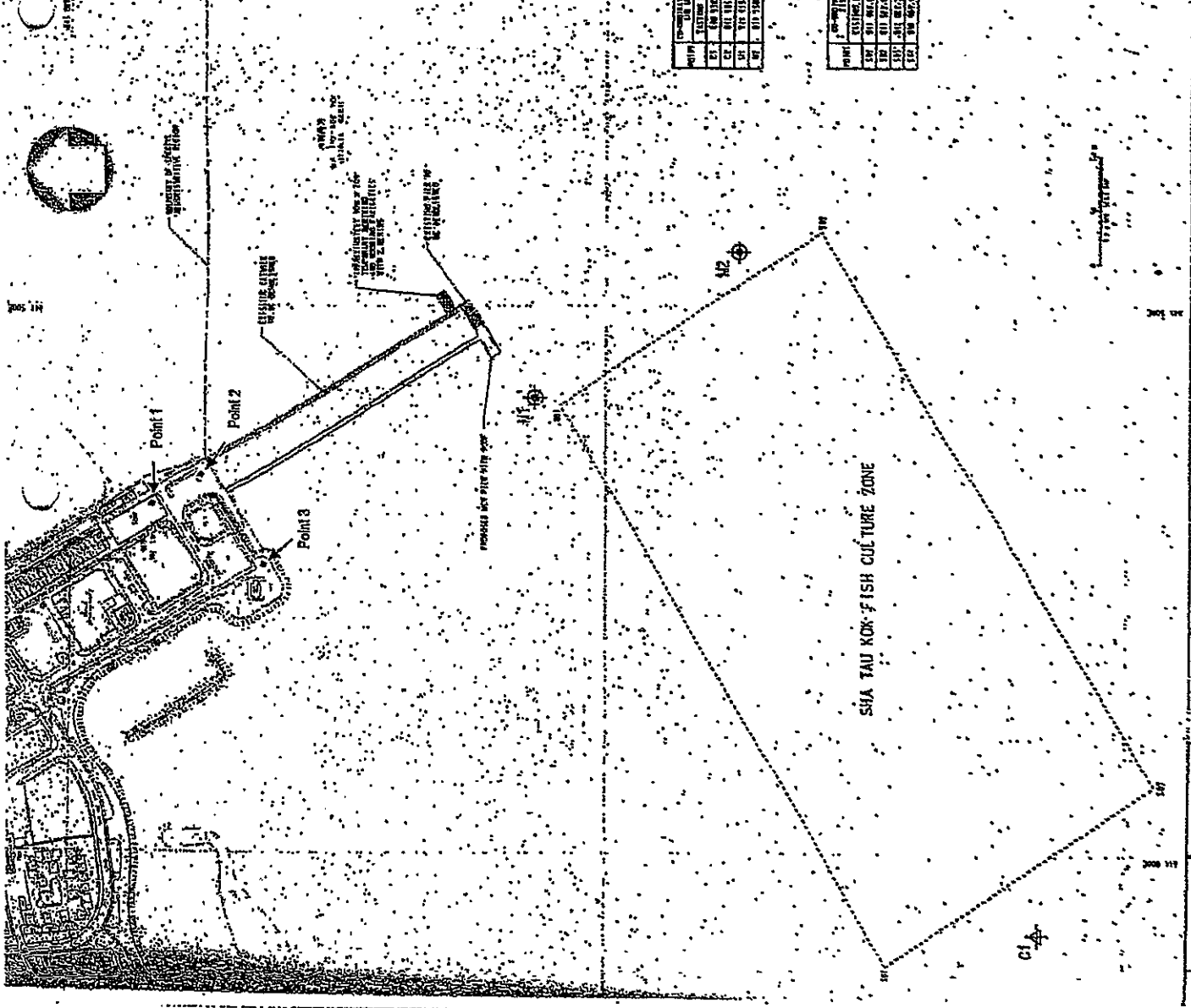
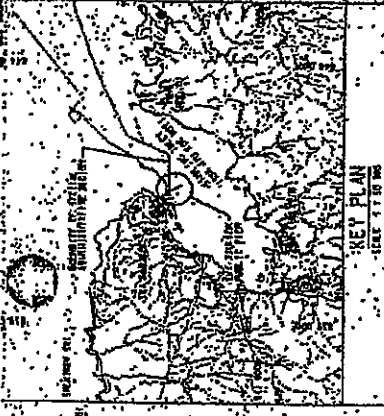
10 10/11/10  
11 10/11/10  
12 10/11/10  
13 10/11/10  
14 10/11/10  
15 10/11/10  
16 10/11/10  
17 10/11/10  
18 10/11/10  
19 10/11/10  
20 10/11/10  
21 10/11/10  
22 10/11/10  
23 10/11/10  
24 10/11/10  
25 10/11/10  
26 10/11/10  
27 10/11/10  
28 10/11/10  
29 10/11/10  
30 10/11/10  
31 10/11/10  
32 10/11/10  
33 10/11/10  
34 10/11/10  
35 10/11/10  
36 10/11/10  
37 10/11/10  
38 10/11/10  
39 10/11/10  
40 10/11/10  
41 10/11/10  
42 10/11/10  
43 10/11/10  
44 10/11/10  
45 10/11/10  
46 10/11/10  
47 10/11/10  
48 10/11/10  
49 10/11/10  
50 10/11/10  
51 10/11/10  
52 10/11/10  
53 10/11/10  
54 10/11/10  
55 10/11/10  
56 10/11/10  
57 10/11/10  
58 10/11/10  
59 10/11/10  
60 10/11/10  
61 10/11/10  
62 10/11/10  
63 10/11/10  
64 10/11/10  
65 10/11/10  
66 10/11/10  
67 10/11/10  
68 10/11/10  
69 10/11/10  
70 10/11/10  
71 10/11/10

10 10/11/10  
 11 10/11/10  
 12 10/11/10  
 13 10/11/10  
 14 10/11/10  
 15 10/11/10  
 16 10/11/10  
 17 10/11/10  
 18 10/11/10  
 19 10/11/10  
 20 10/11/10  
 21 10/11/10  
 22 10/11/10  
 23 10/11/10  
 24 10/11/10  
 25 10/11/10  
 26 10/11/10  
 27 10/11/10  
 28 10/11/10  
 29 10/11/10  
 30 10/11/10  
 31 10/11/10  
 32 10/11/10  
 33 10/11/10  
 34 10/11/10  
 35 10/11/10  
 36 10/11/10  
 37 10/11/10  
 38 10/11/10  
 39 10/11/10  
 40 10/11/10  
 41 10/11/10  
 42 10/11/10  
 43 10/11/10  
 44 10/11/10  
 45 10/11/10  
 46 10/11/10  
 47 10/11/10  
 48 10/11/10  
 49 10/11/10  
 50 10/11/10  
 51 10/11/10  
 52 10/11/10  
 53 10/11/10  
 54 10/11/10  
 55 10/11/10  
 56 10/11/10  
 57 10/11/10  
 58 10/11/10  
 59 10/11/10  
 60 10/11/10  
 61 10/11/10  
 62 10/11/10  
 63 10/11/10  
 64 10/11/10  
 65 10/11/10  
 66 10/11/10  
 67 10/11/10  
 68 10/11/10  
 69 10/11/10  
 70 10/11/10  
 71 10/11/10

Summary  
 Total Up Hours  
 Total Up Days  
 Total Up Weeks  
 Total Up Months  
 Total Up Years

Check By Summary  
 Project Summary

## Figures



POINT	LONGITUDE (Easting)	LATITUDE (Northing)
M1	111 111.0	111 111.0
M2	111 111.0	111 111.0
P1	111 111.0	111 111.0
P2	111 111.0	111 111.0

POINT	LONGITUDE (Easting)	LATITUDE (Northing)
M1	111 111.0	111 111.0
M2	111 111.0	111 111.0
P1	111 111.0	111 111.0
P2	111 111.0	111 111.0

1. The proposed noise level is calculated based on the following assumptions:  
 a. The noise level is calculated based on the noise level of the existing noise source.  
 b. The noise level is calculated based on the noise level of the proposed noise source.  
 c. The noise level is calculated based on the noise level of the surrounding area.

2. The noise level is calculated based on the following assumptions:  
 a. The noise level is calculated based on the noise level of the existing noise source.  
 b. The noise level is calculated based on the noise level of the proposed noise source.  
 c. The noise level is calculated based on the noise level of the surrounding area.

REVISIONS

NO.	DATE	DESCRIPTION
1	11/11/11	ISSUED FOR TENDER
2	11/11/11	ISSUED FOR TENDER
3	11/11/11	ISSUED FOR TENDER

PROJECT NO. 07/2008/AM

DATE: 11/11/11

SCALE: 1:50,000

REVISIONS OF SHA TAU KOK PUBLIC PIER

ENVIRONMENTAL MONITORING

PROJECT NO. PW-0409-037

DATE: 11/11/11

PORT WORKS DIVISION  
CIVIL ENGINEERING SERVICE

CIVIL ENGINEERING DEPARTMENT  
HONG KONG

COPYRIGHT RESERVED