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TEST REPORT

China Harbour Engineering Co. Ltd.

**IMPROVEMENT WORKS
TO TUNG PING CHAU PUBLIC PIER**


(CONTRACT NO.: CV/2004/04)

FINAL REPORT

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INDEPENDENT ENVIRONMENTAL CHECKER

CHECK CERTIFICATE

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Roger Sze & Associates Ltd.



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FIGURE

PW-TPC-006 Improvement Works to Tung Ping Chau Public Pier – Environmental Monitoring

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EXECUTIVE SUMMARY

This Final Report has been prepared by the Environmental Team (ET) of ETS-Testconsult Ltd for "the Contract No. CV/2004/04 Improvement Works to Tung Ping Chau Public Pier (The Project) during the different monitoring periods: 31 October to 26 November 2005 (Baseline Monitoring Period), 28 November 2005 to 28 February 2007 (Impact Monitoring Period) and 02 to 28 March 2007 (Post Monitoring Period).

Environmental Monitoring Progress

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

- *Baseline Marine Water Quality Monitoring: 12 Occasions at 4 designated locations;*
- *Impact Marine Water Quality Monitoring: 109 Occasions at 4 designated locations;*
- *Post Project Marine Water Quality Monitoring: 12 Occasions at 4 designated locations; and*
- *Site Inspection: 63 Occasions.*

Marine Water Quality Monitoring

According to the monitoring results, no exceedances of Action and Limit Levels were recorded for water quality monitoring parameters in this reporting month.

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.

Comparing the monitoring results between baseline and post-project monitoring, it showed that there was no significant change in marine water quality before and after the construction works. Hence it concluded that the ambient environment was returned to same condition before the construction works and no unacceptable environmental impacts arising from the Project had been caused to the surrounding sensitive receivers. The environmental measures had been effective in controlling potential impacts to within acceptable sensitive receivers.



1. INTRODUCTION

China Harbour Engineering Co. Ltd. (CHEC) was awarded the contract, "Improvement Works to Tung Ping Chau Public Pier" (Contact No.: CV/2004/04). Baseline monitoring, impact monitoring and post project monitoring were carried out at Tung Ping Chau Public Pier by Environmental Team (ET) of ETS-Testconsult Ltd (ETL). Roger Sze & Associates Ltd. was appointed by CHEC as Independent Checker (Environmental).

The purpose of this report is to summarize the monitoring results of marine water quality and site audit findings before and after the construction works in order to assess the environmental impacts to the environment nearby from the Project.

2. PROJECT INFORMATION

2.1 Background

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

2.2 Site Description

Figure PW-TPC-006 shows the monitoring locations of the site at Tung Ping Chau Public Pier.

2.3 Construction Programme

The project comprises the reconstruction of the Tung Ping Chau Public Pier and the proposed scope includes:

- Setting up of a temporary site office;
- Demolition of the existing catwalk;
- Construction of a new catwalk of about 33m long and 5.5m wide with two supporting column;
- Widening of the existing rubble causeway from 3m to 5.5m; and
- Construction of a new roof.

The construction programme was carried out from 28 November 2005 to 28 February 2007.

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. Daniel Cheung	6012 2279	2952 9068
ETL	Contractor's Environmental Team (ET)	Mr C L Lau (ET Leader)	2946 7792	2695 3944



3. IMPACT MARINE WATER QUALITY MONITORING

3.1 Monitoring Locations

The Impact water quality monitoring and control locations are shown in Table 3.1.

Table 3.1 Impact Water Quality Monitoring Stations

Station	EASTING (m)	NORTHING (m)
C1	862 465.831	845 178.516
C2	862 771.171	845 012.179
M1	862 628.165	845 052.670
M2	862 663.052	845 031.017

During the impact monitoring, 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.

3.2 Monitoring Parameters

Monitoring of the marine water quality parameters listed in Table 3.2 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 3.2 Water Quality Monitoring Parameters

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

3.3 Monitoring Frequency

The frequency of the water quality monitoring is summarized in Table 3.3.

Table 3.3 Monitoring frequency of Impact Monitoring

Parameter	Frequency	Monitoring Depth
Temperature	<u>Baseline Monitoring:</u> <ul style="list-style-type: none"> ▪ 2 tides/day (Mid-flood and Mid-ebb); ▪ 3days/week (Four consecutive weeks before the start of construction works). <u>Impact Monitoring:</u> <ul style="list-style-type: none"> ▪ 2 tides/day (Mid-flood and Mid-ebb); ▪ 3days/week during the pilling and demolition works; ▪ 1day/week during the marine works (not involving pilling and demolition works). <u>Post Project Monitoring:</u> <ul style="list-style-type: none"> ▪ 2 tides/day (Mid-flood and Mid-ebb); ▪ 3days/week (Four consecutive weeks after the complete of construction works). 	Surface, middle and bottom
Salinity		
Dissolved Oxygen		
Dissolved Oxygen saturation		
Turbidity		
Suspended solids		



3.4 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 3.4.

Table 3.4 Action and Limit Levels for Marine Water Quality

Parameter	Action Level	Limit Level
DO (mg/L)	<p><u>Surface & Middle</u> 5.67 mg/L (5%-ile of baseline data for surface and middle layer)</p> <p><u>Bottom</u> 5.59 mg/L (5%-ile of baseline data for bottom layer)</p>	<p><u>Surface & Middle</u> 5.57 mg/L (1%-ile of baseline data for surface and middle layer) or 4 mg/L except 5 mg/L for FCZ</p> <p><u>Bottom</u> 5.40 mg/L (1%-ile of baseline data for bottom layer) or 2 mg/L</p>
SS (mg/L) (Depth-averaged)	5.5 mg/L (95%-ile of Impact data) and 120% of the upstream control station's SS at the same tide on the same day	6.0 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)	5.50 NTU (95%-ile of Impact data) and 120% of the upstream control station's turbidity at the same tide on the same day	6.59 NTU (99%-ile of Impact data) and 130% of the upstream control station's turbidity at the same tide on the same day

3.5 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 3.5 should be carried out.

Table 3.5 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"> 1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IC(E) and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working method; 5. Discuss mitigation measures with IC(E) and the Contractor; 6. Repeat measurement on next day of exceedance. 	<ol style="list-style-type: none"> 1. Discuss with ET and the Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the Engineer accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with IC(E) on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented. 	<ol style="list-style-type: none"> 1. Inform Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET, IC(E) and the Engineer and the propose mitigation measures to IC(E) and the Engineer within 3 working days; 6. Implement the agreed mitigation measures.
Action Level being exceeded by more than one consecutive sampling days	<ol style="list-style-type: none"> 1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IC(E) and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working method; 5. Discuss mitigation measures with IC(E) and the Contractor; 6. Ensure mitigation measures are implemented; 7. Prepare to increase the monitoring frequency to daily; 8. Repeat measurement on next day of exceedance. 	<ol style="list-style-type: none"> 1. Discuss with ET and the Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the Engineer accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with IC(E) on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Inform Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET, IC(E) and the Engineer and the propose mitigation measures to IC(E) and the Engineer within 3 working days; 6. Implement the agreed mitigation measures.



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

3.6 Monitoring Results: Non-compliance (Exceedances) against Action/Limit Levels

According to the impact marine water quality monitoring results, no exceedances were recorded. Table 3.6 summarizes the exceedances of monitoring parameters during impact monitoring.

Table 3.6 Summary of Marine Water Quality Exceedances during impact monitoring

Parameter	Action Level		Limit Level	
	Flood	Ebb	Flood	Ebb
DO	0	0	0	0
SS	0	0	0	0
Turbidity	0	0	0	0
Total	0	0	0	0

The graphical presentations of the monitoring results are presented in Appendix B - Graphical Plots of Marine Water Monitoring Data. The graphical plots represent the trend of monitoring parameters before, during and after the construction works at Tung Ping Chau.

3.7 Summary of Actions Taken

According to the summary of marine water monitoring results, no exceedances were recorded during the impact monitoring period. Hence, no further mitigation measures were taken.

3.8 Review of Monitoring Methodology adopted

According to the trend of graphical plots of monitoring parameters, it was found that the marine water impact from the construction works at Tung Ping Chau was low and hence shown that the monitoring methodology adopted was effective to control the marine water impact to an acceptable level without affecting the nearby community.

4. Summary of Environmental Complaints

No complaints were received during the construction period.

5. Summary of Notification of Summons and Prosecution

There were no notifications of summons respect to environmental issues registered during the construction period.

6. STATUS OF ENVIRONMENTAL LICENSING AND PERMITTING

All permits/licenses valid during the construction period are summarized in Table 6.1.

Table 6.1 Summary of Environmental Licensing and Permit Status

Description	Permit No.	Valid Period		Section
		From	To	
Environmental Permit	EP-222/2005	07/09/04	—	<ul style="list-style-type: none"> ▪ Setting up of a temporary site office; ▪ Demolition of the existing catwalk; ▪ Construction of a new catwalk of about 33m long and 5.5m wide with two supporting column; ▪ Widening of the existing rubble causeway from 3m to 5.5m; and ▪ Construction of a new roof.

7. SUMMARY OF SITE AUDIT FINDINGS DURING IMPACT MONITORING

Weekly site inspection was carried out by the ET. Sixty-three site inspections were undertaken in impact monitoring period. The summary of site inspection findings are shown in Table 7.1.

Table 7.1 The summary of site inspection findings

Inspection Parameter	Finding
Water Quality	Water quality was found satisfactory during the site inspection period. No visible foam, oil, grease, 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.



8. IMPLEMENTATION STATUS

8.1 Implementation Status of Environmental Mitigation Measures

Most of the necessary mitigation measures were implemented properly during the construction period.

8.2 Implementation Status of Event and Action Plan

There were no exceedances of Action and Limited Level in this reporting month. Hence, no further mitigation measures were required.

8.3 Implementation Status of Environmental Complaint Handling

No complaints had been received during the impact monitoring period. Hence, no further actions were required to handle the environmental complaint

9. REVIEW OF EFFECTIVENESS OF THE EM&A PROGRAMME

According to the trend of graphical plots of monitoring parameters, it was found that the marine water impact from the construction works at Tung Ping Chau was low. Therefore, it reported that the mitigation measures recommended in the EM&A programme were functioned effectively and minimized the impacts to an acceptable level without affecting the nearby community.

10. CONCLUSIONS AND RECOMMENDATIONS

According to the summary of marine water monitoring results, no exceedances were recorded during impact monitoring. Hence, no further mitigation measures were taken.

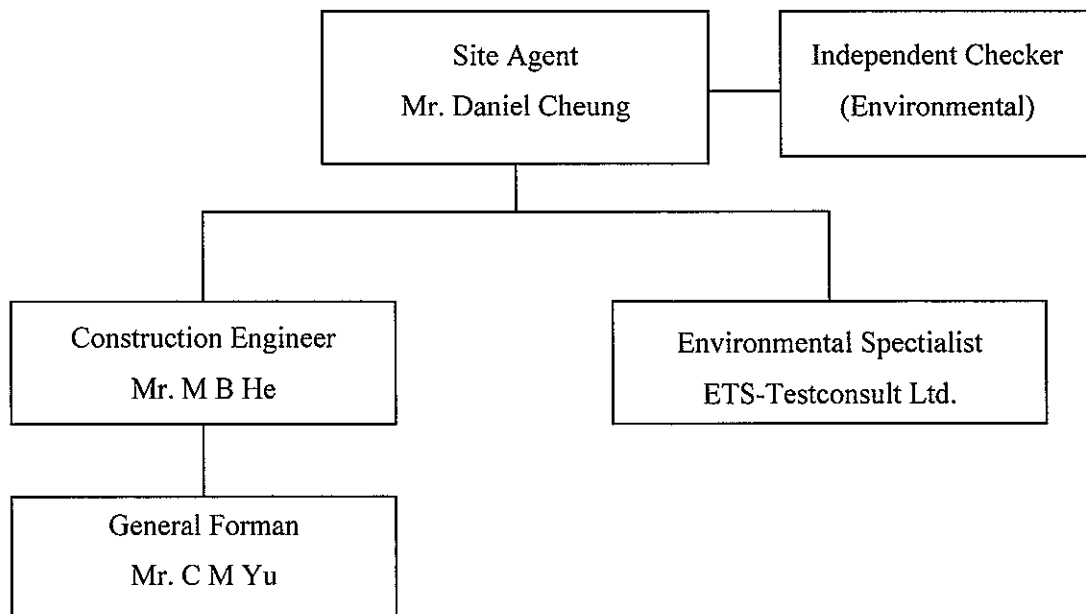
Comparing the monitoring results between baseline and post-project monitoring, it showed that there was no significant change in marine water quality before and after the construction works. Hence it concluded that the ambient environment was returned to same condition before the construction works and no unacceptable environmental impacts arising from the Project had been caused to the surrounding sensitive receivers. The environmental measures had been effective in controlling potential impacts to within acceptable sensitive receivers.



Appendix A

Organization Chart

Management Structure



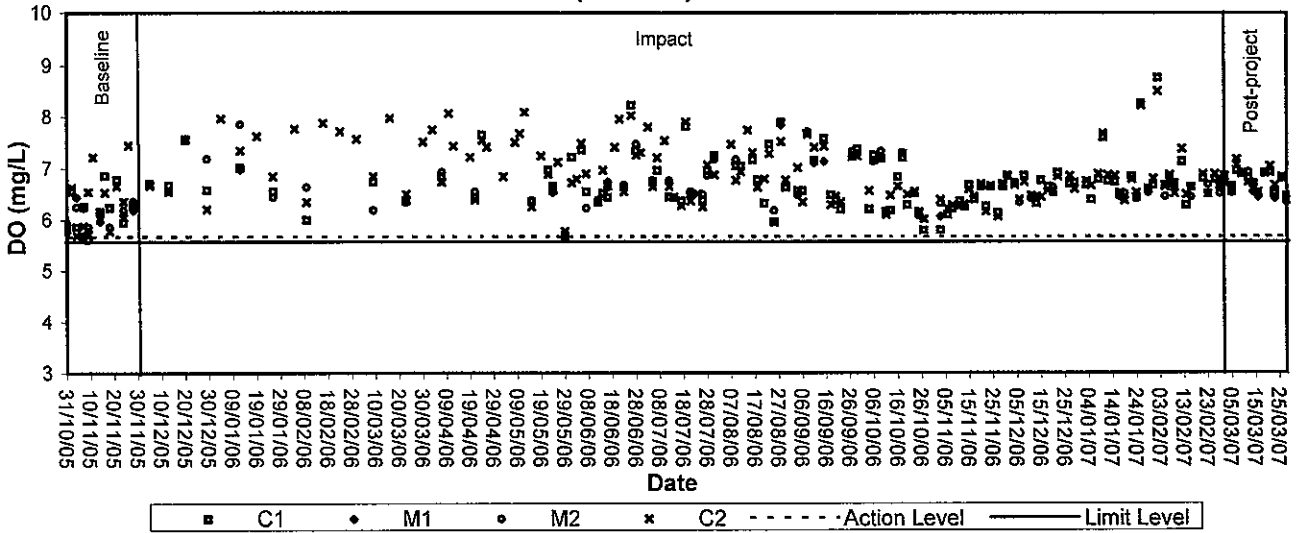


Appendix B

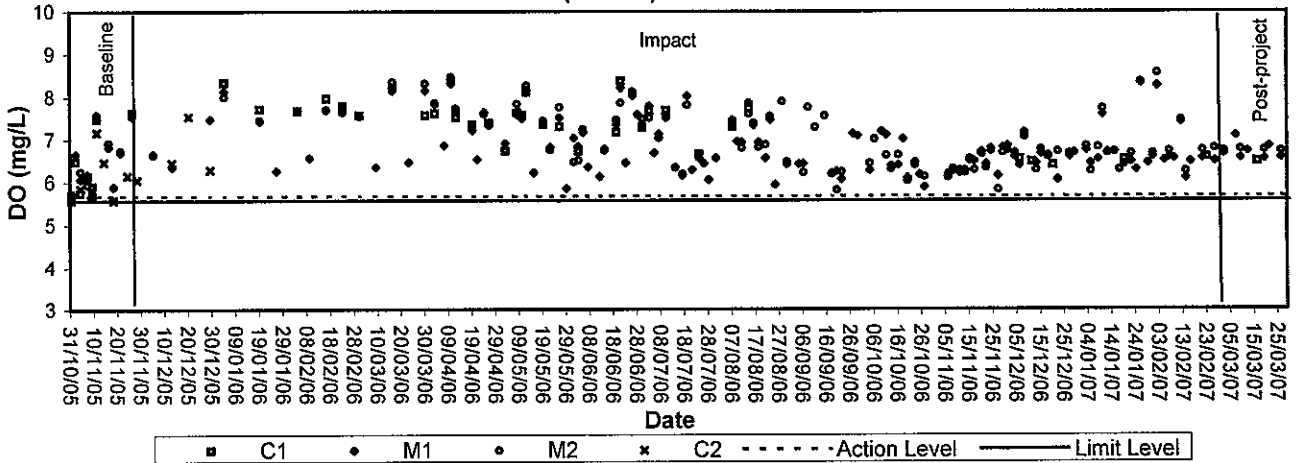
Graphical Plots of Marine Water Monitoring Data



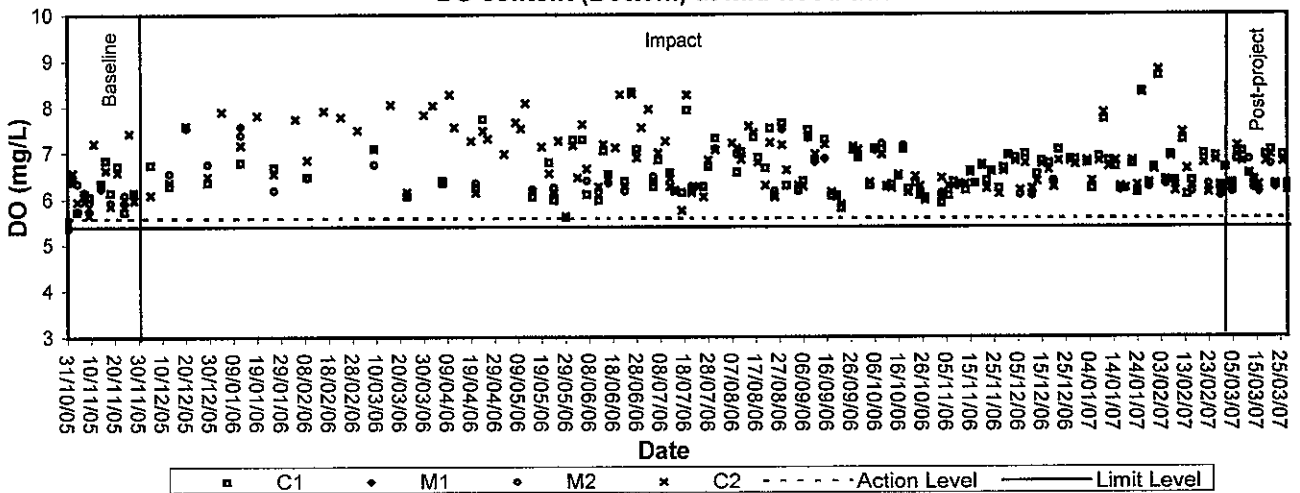
DO content (Surface) at mid-flood tide



DO content (Middle) at mid-flood tide

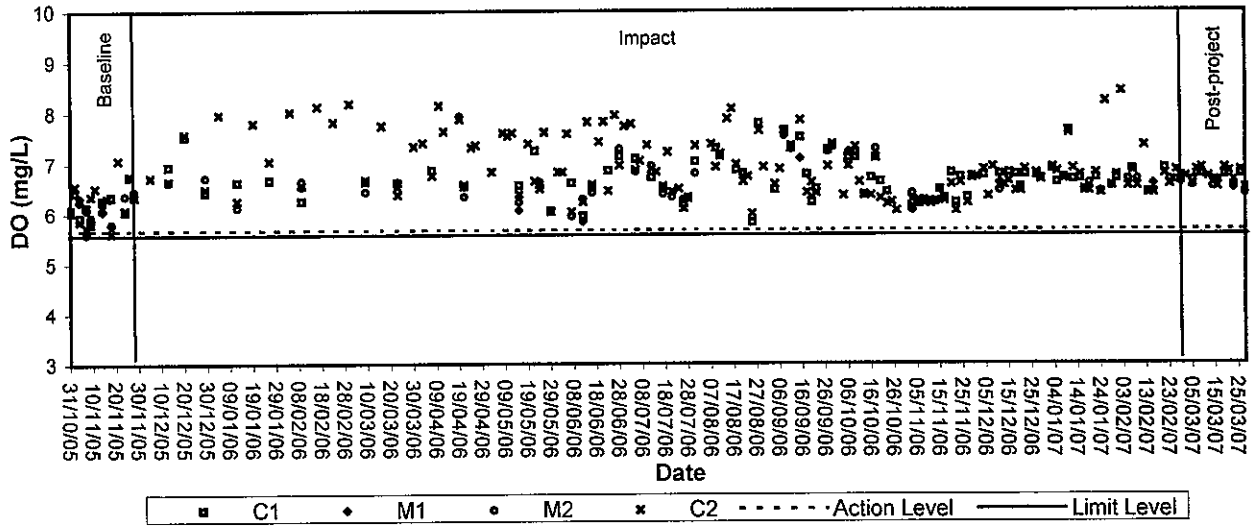


DO content (Bottom) at mid-flood tide

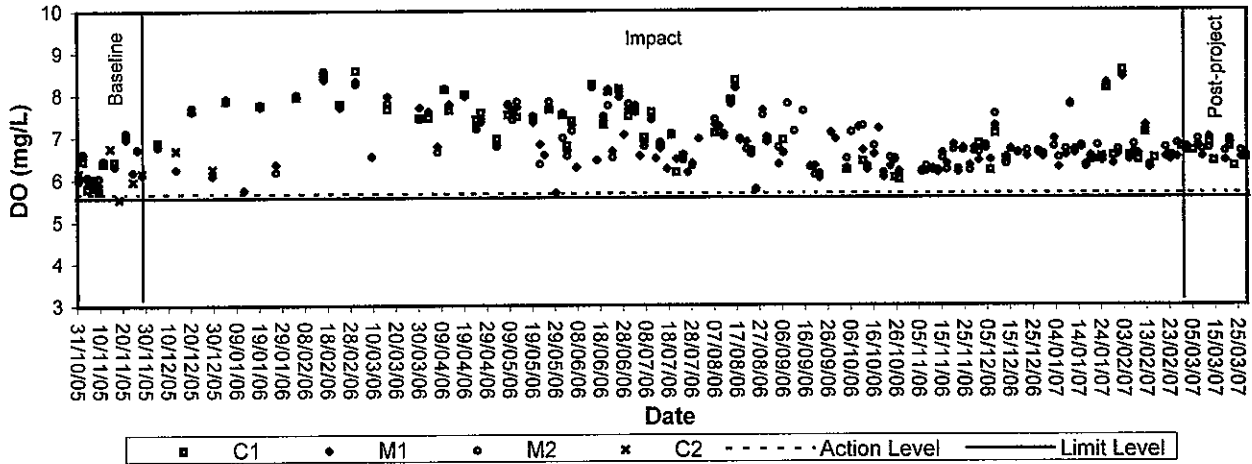




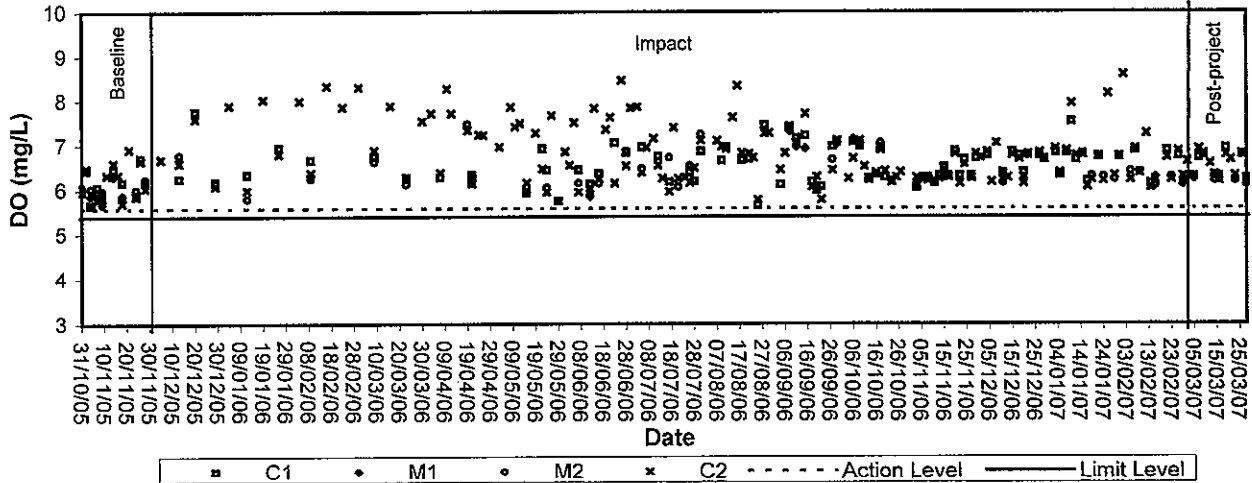
DO content (Surface) at mid-ebb tide



DO content (Middle) at mid-ebb tide

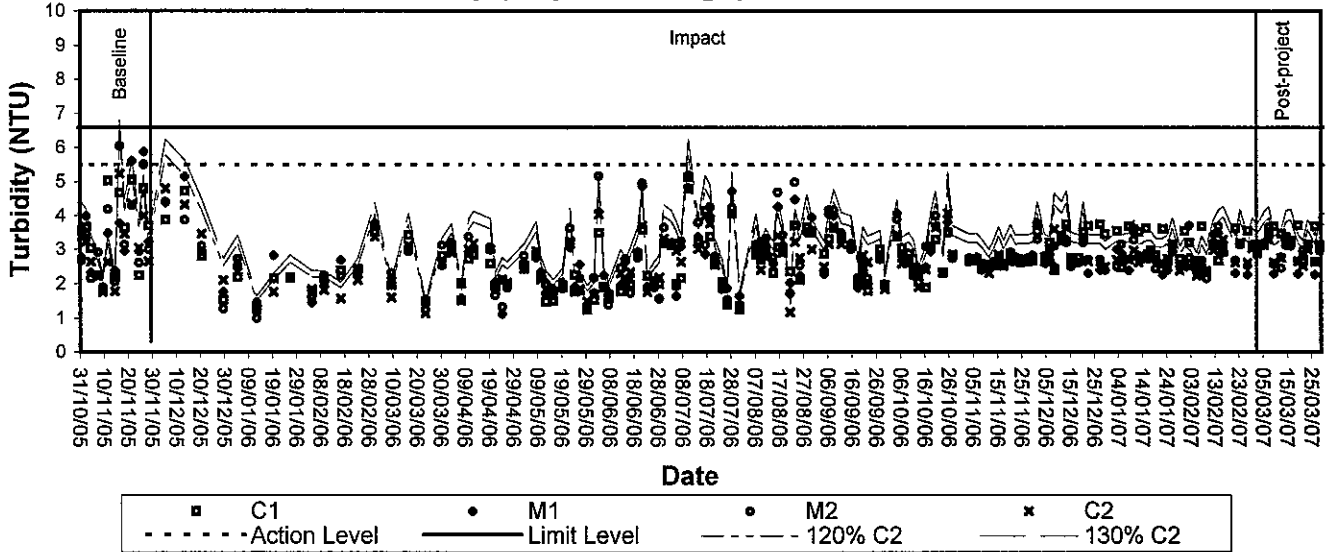


DO content (Bottom) at mid-ebb tide

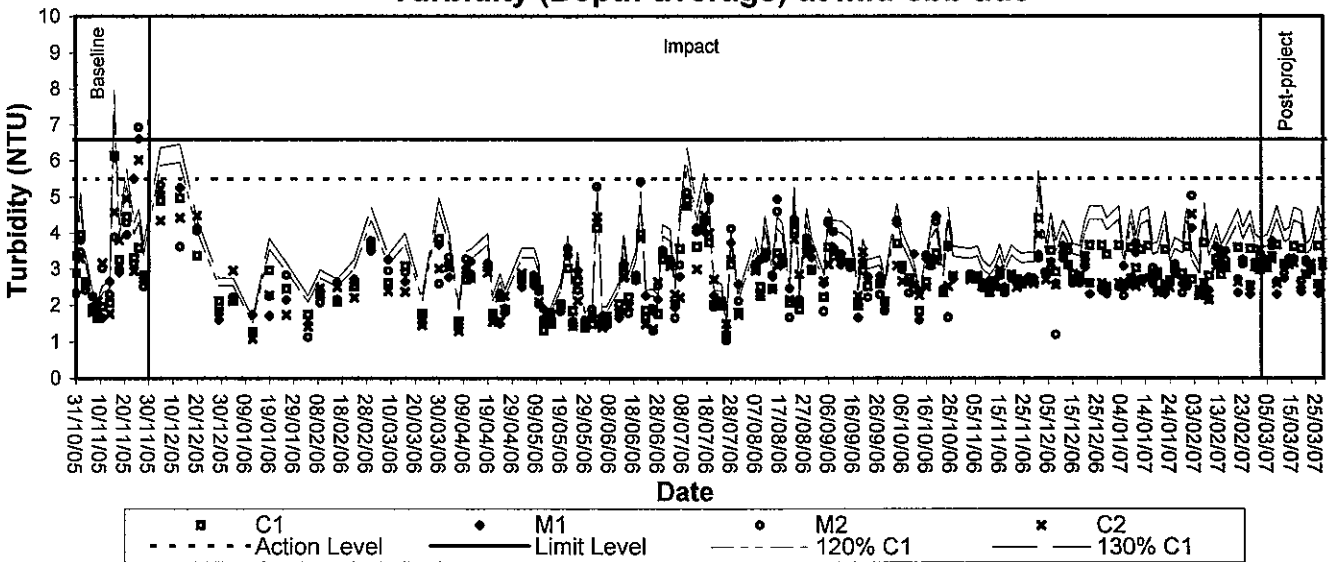




Turbidity (Depth-average) at mid-flood tide

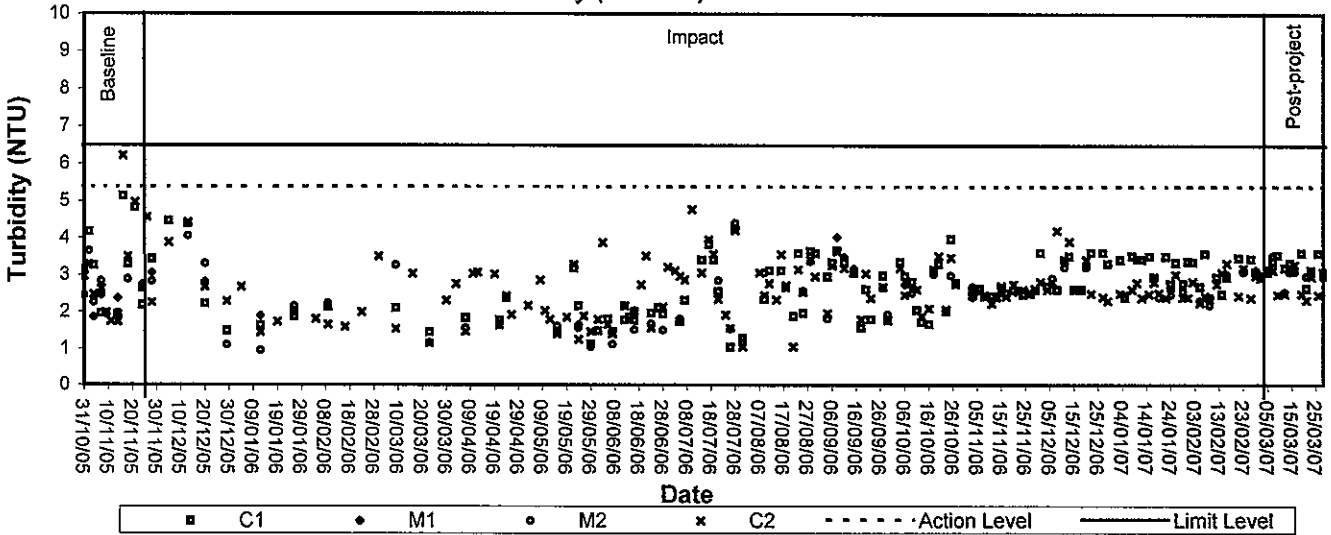


Turbidity (Depth-average) at mid-ebb tide

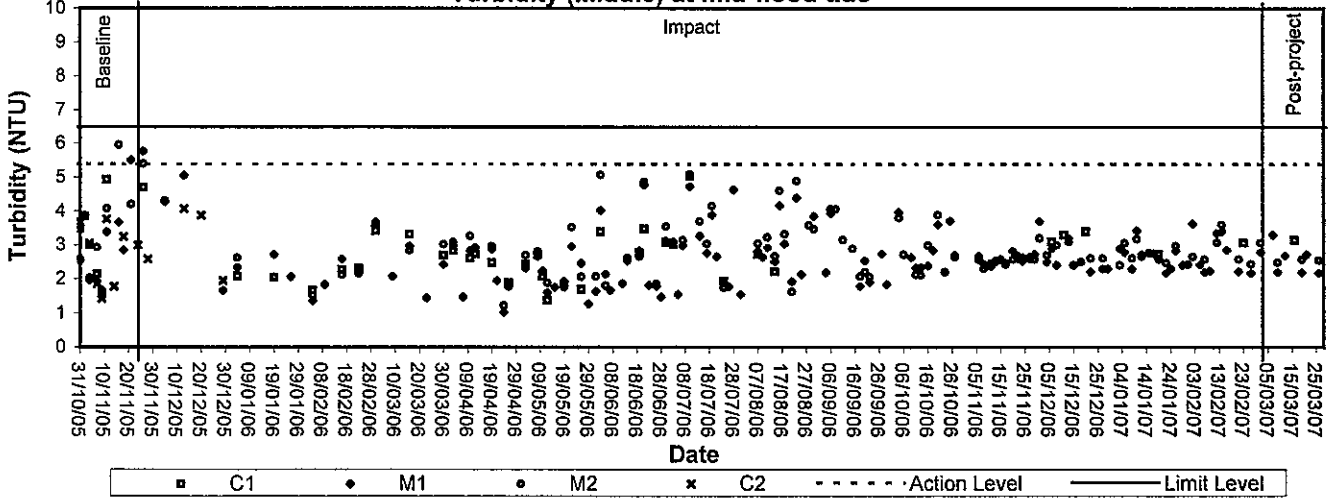




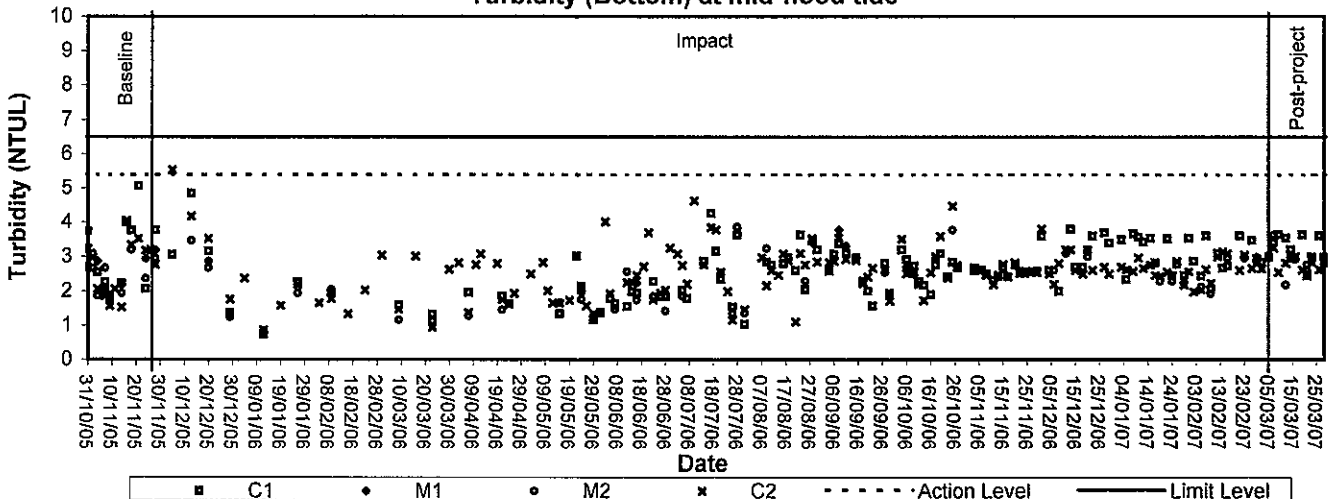
Turbidity (Surface) at mid-flood tide



Turbidity (Middle) at mid-flood tide

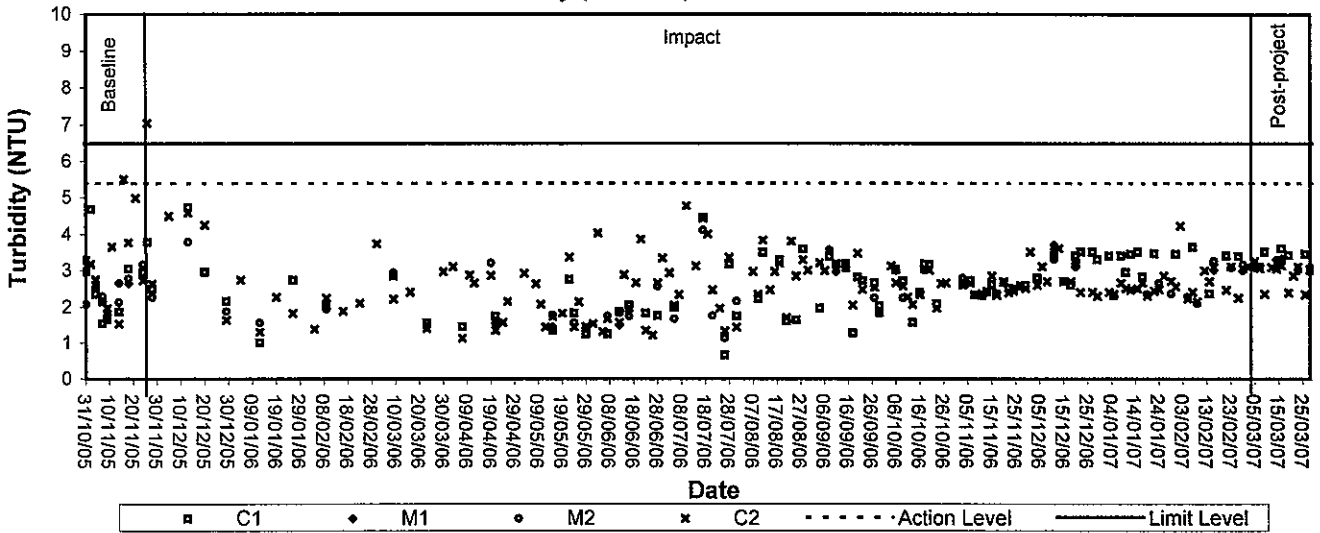


Turbidity (Bottom) at mid-flood tide

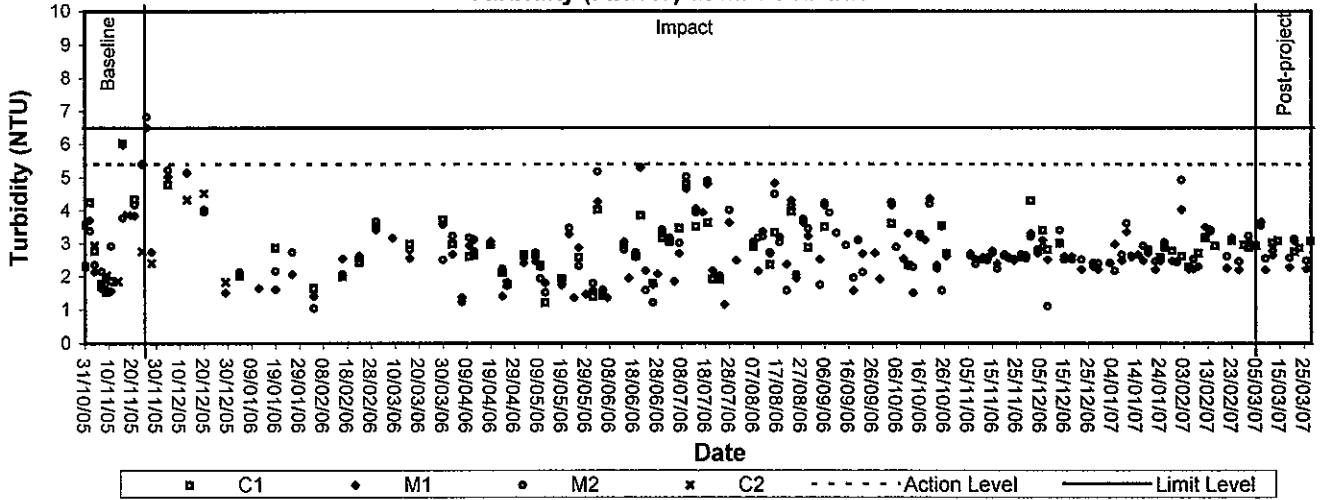




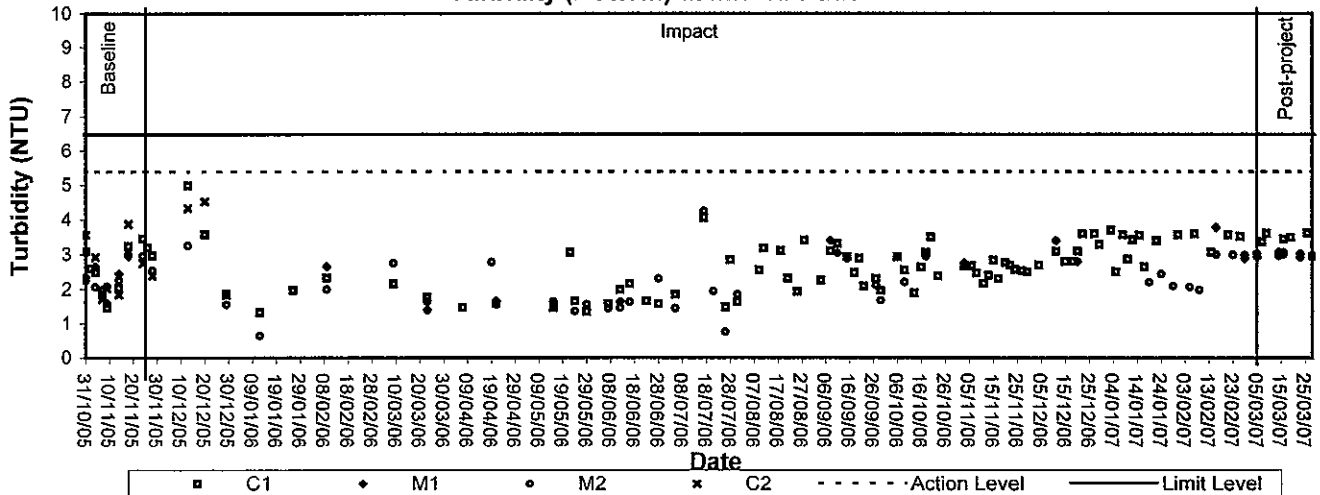
Turbidity (Surface) at mid-ebb tide



Turbidity (Middle) at mid-ebb tide

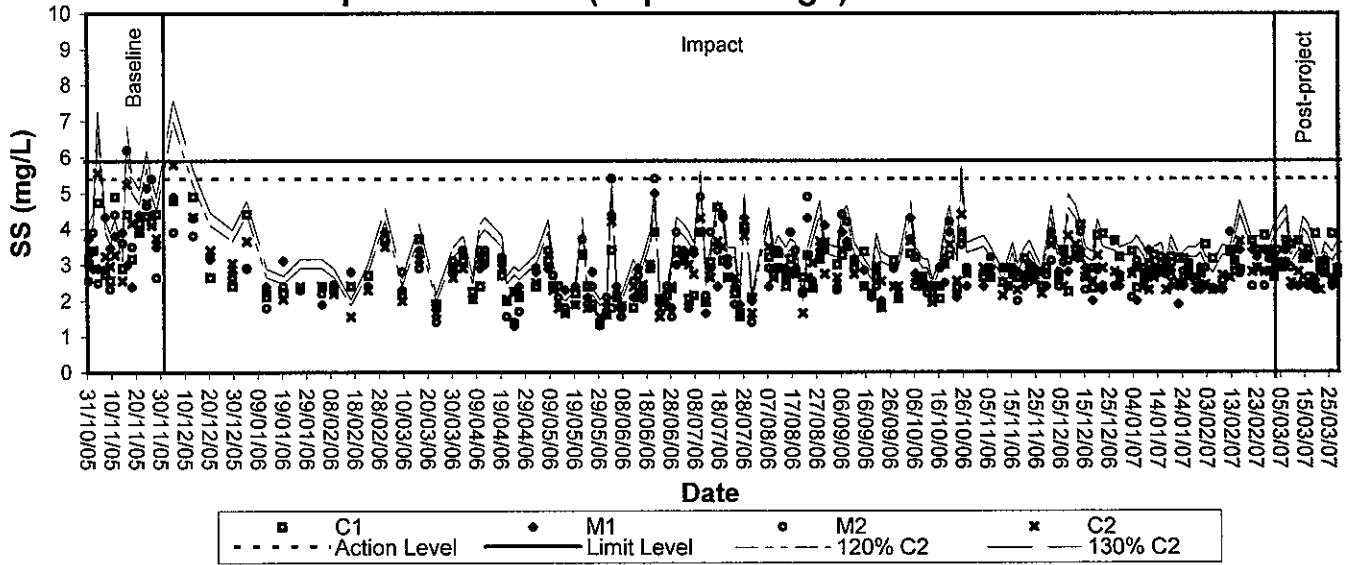


Turbidity (Bottom) at mid-ebb tide

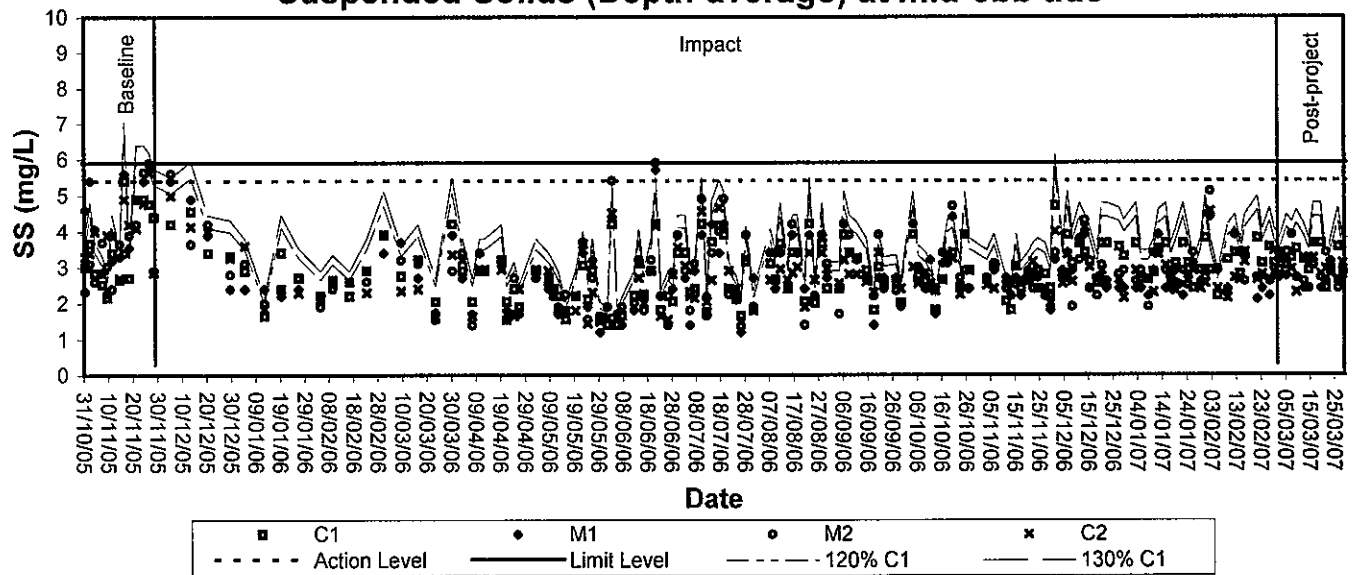




Suspended Solids (Depth-average) at mid-flood tide

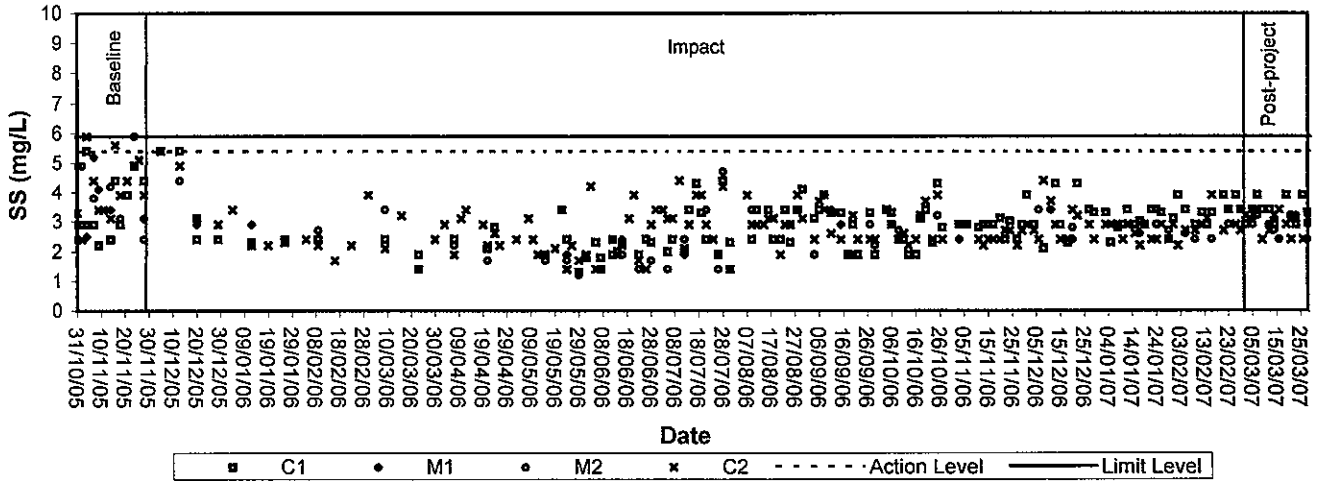


Suspended Solids (Depth-average) at mid-ebb tide

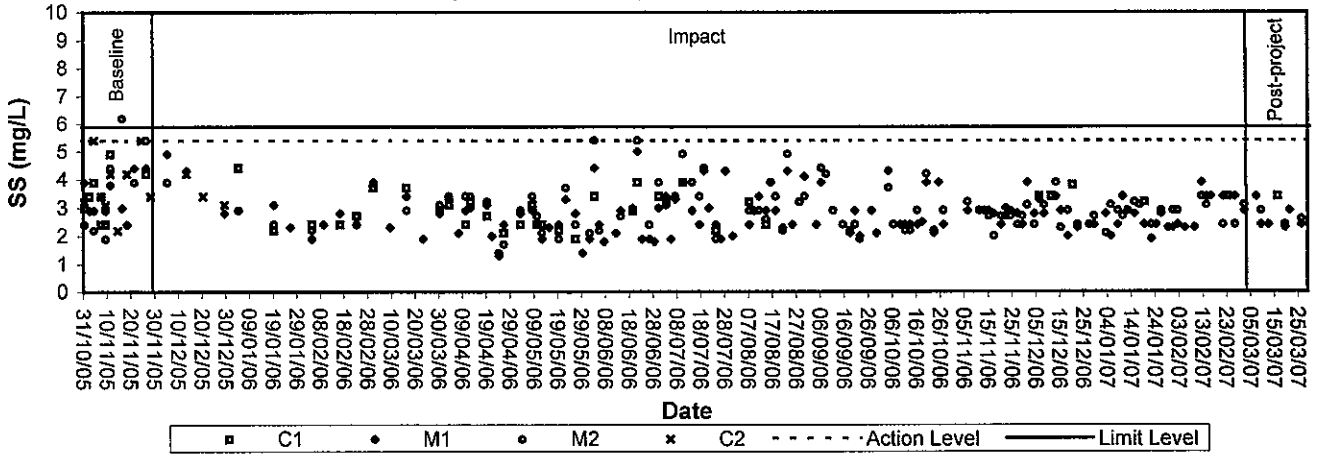




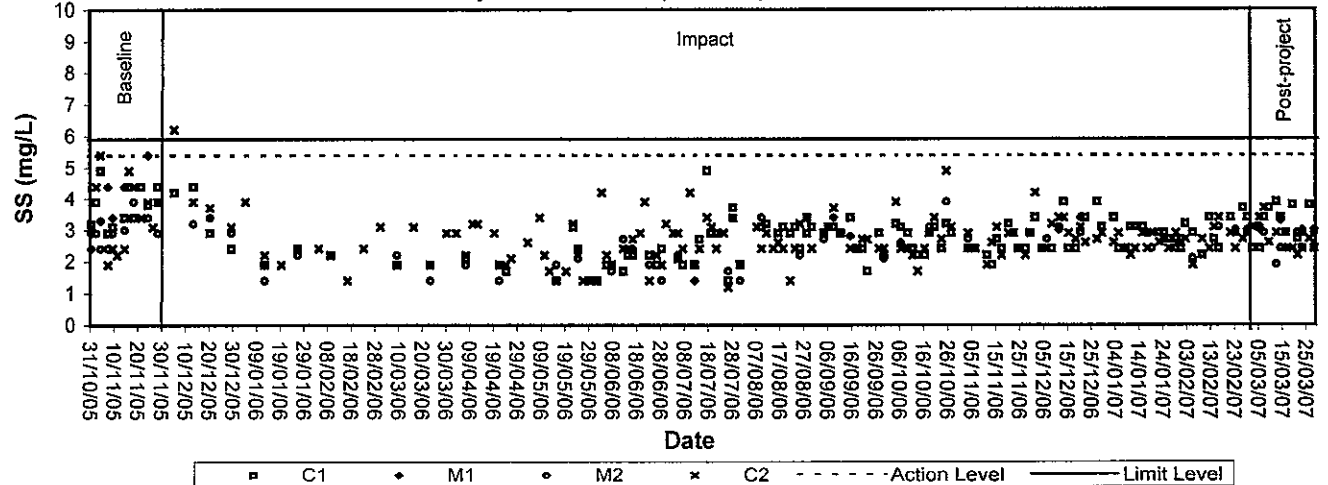
Suspended Solids (Surface) at mid-flood tide



Suspended Solids (Middle) at mid-flood tide

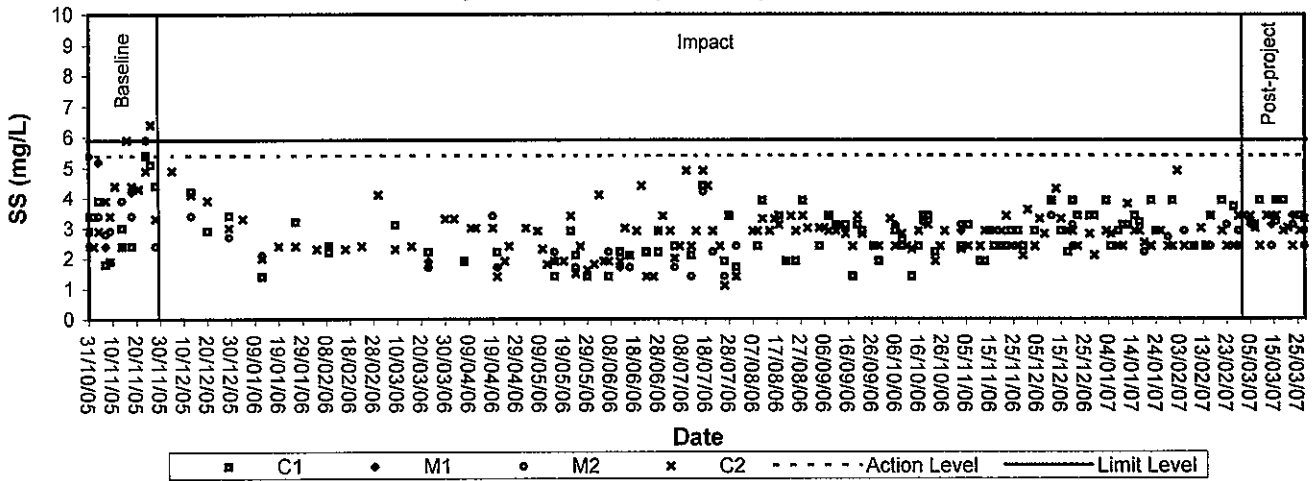


Suspended Solids (Bottom) at mid-flood tide

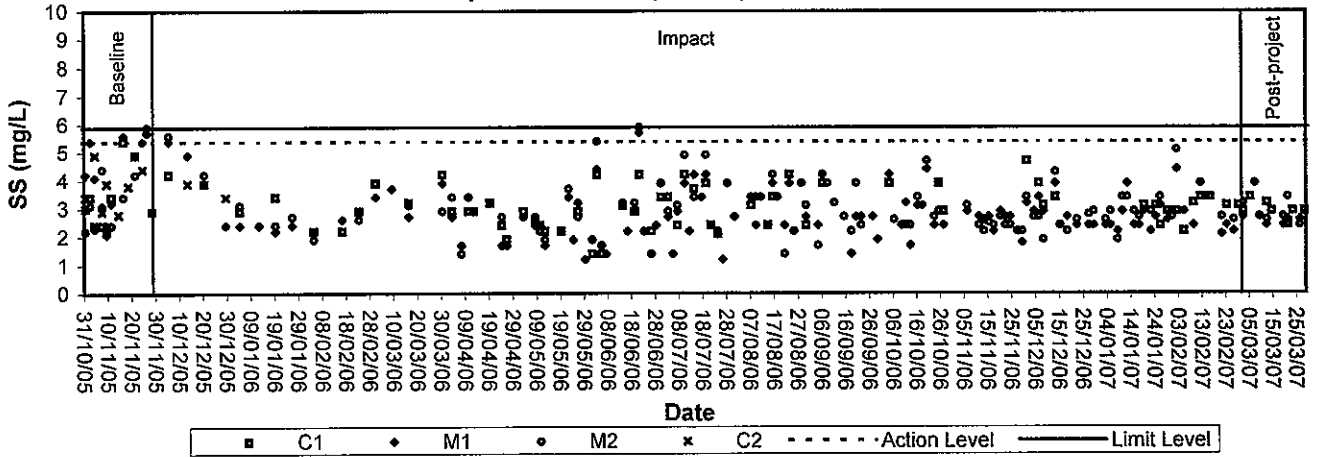




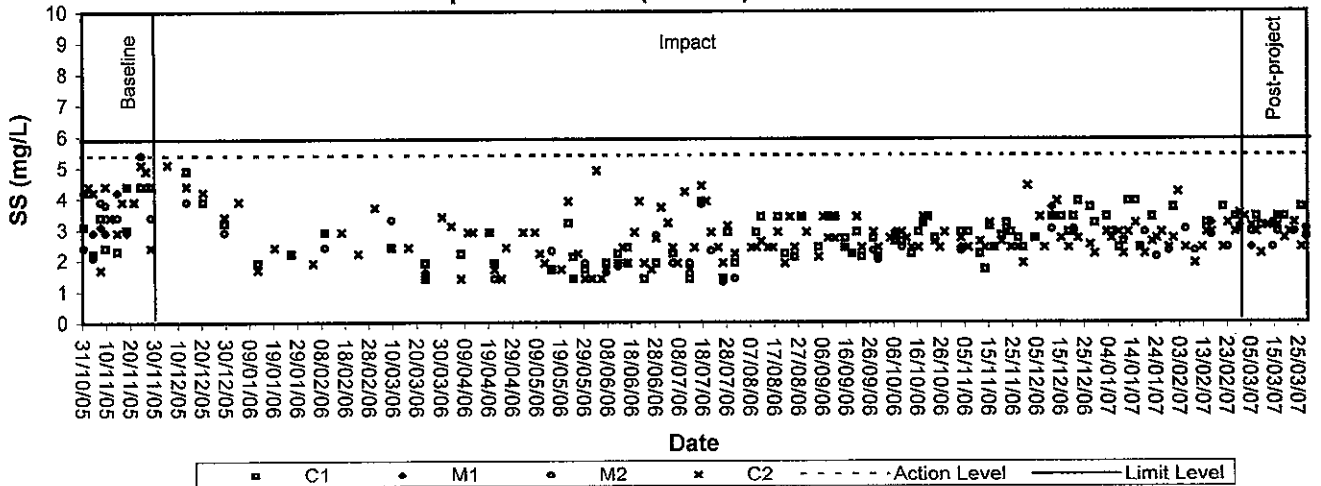
Suspended Solids (Surface) at mid-ebb tide



Suspended Solids (Middle) at mid-ebb tide



Suspended Solids (Bottom) at mid-ebb tide



Appendix C

Calibration Certificates for Post-project Marine Water Quality Monitoring Equipments



Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No. : <u>ET/EW/003/001</u>	Manufacturer : <u>YSI</u>
Model No. : <u>95</u>	Serial No. : <u>97H 04 071 AD</u>
Date of Calibration : <u>18/2/07</u>	Calibration Due Date : <u>17/5/07</u>

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	7.57	7.53	7.52	7.48	7.49	7.49	0.27
5	5.29	5.31	5.30	5.22	5.20	5.21	1.71
10	3.56	3.54	3.55	3.61	3.59	3.60	1.40
Linear regression coefficient							0.9990

Zero Point Checking

DO meter reading, mg/L	0.00
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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	6.70	6.72	6.71	6.80	6.82	6.81	1.48
30	6.25	6.23	6.24	6.38	6.36	6.37	2.06

Acceptance Criteria

- (1) Differenc 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 :

Approved by :



Performance Check of Salinity Meter

Equipment Ref. No. : ~~ET/0527/001~~ ¹⁻²²
ET/EW/001/001 Manufacturer : YSI
Model No. : Model 30 Serial No. : 9991183
Date of Calibration : 27/1/7 Due Date : 26/4/7

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


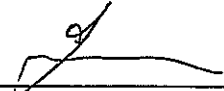
J196A

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference %
30	29.3	2.4%

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 : ¹⁻²²  Approved by : 



Internal Calibration Report of Turbidimeter

Equipment Ref. No. : ET/0505/002 Manufacturer : HACH
Model No. : 200P Serial No. : 930900003728
Date of Calibration : 27/1/07 Calibration Due : 27/14/07

Data

(4.95) 0 - 10 NTU Gelex Vial	(49.0) 10 - 100 NTU Gelex Vial	(409) 100 - 1000 NTU Gelex Vial
4.93	48.8	406

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

* Delete as appropriate

Calibrated by :

Approved by :

Appendix D

Post-project Marine Water Monitoring Results

Post-project Marine Water Monitoring Data at Tung Ping Chau Public Pier

1. 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		
02/03/07	Monitoring Time	16:30 – 16:40	10:45 – 10:55	16:45 – 16:55	11:00 – 11:10	16:57 – 17:07	11:12 – 11:22	17:10 – 17:20	11:25 – 11:35						
	Water Depth (m)	3.2	2.8	2.4	2.2	2.8	2.4	5.2	4.6						
05/03/07	Monitoring Time	18:30 – 18:39	12:30 – 12:40	18:44 – 18:53	12:44 – 12:53	18:57 – 19:06	12:56 – 13:04	19:10 – 19:20	13:07 – 13:15						
	Water Depth (m)	3.2	2.8	3.4	3.2	3.4	3.4	3.6	3.8						
07/03/07	Monitoring Time	18:00 – 18:10	13:30 – 13:40	18:15 – 18:25	13:45 – 13:55	18:27 – 18:37	13:57 – 14:07	18:40 – 18:50	14:10 – 10:20						
	Water Depth (m)	3.4	3.0	2.8	2.6	3.0	2.8	5.4	4.8						
09/03/07	Monitoring Time	08:15 – 08:30	15:00 – 15:15	09:35 – 09:50	15:20 – 15:35	09:55 – 10:10	15:40 – 15:55	10:15 – 10:30	16:00 – 16:15						
	Water Depth (m)	4.3	4.1	3.0	2.8	2.8	2.5	3.6	3.4						
12/03/07	Monitoring Time	16:00 – 16:10	08:30 – 08:40	16:15 – 16:23	08:46 – 08:55	16:27 – 16:38	09:00 – 09:10	16:42 – 16:55	09:18 – 09:30						
	Water Depth (m)	3.2	2.8	2.8	2.5	3.0	2.6	5.2	4.6						
14/03/07	Monitoring Time	08:15 – 08:25	17:30 – 17:40	08:28 – 08:36	17:44 – 17:53	08:40 – 08:50	17:57 – 18:06	08:54 – 09:05	18:10 – 18:20						
	Water Depth (m)	2.0	2.8	3.4	3.4	3.2	3.2	3.6	3.8						
16/03/07	Monitoring Time	14:00 – 14:09	09:30 – 09:38	14:14 – 14:23	09:42 – 09:49	14:28 – 14:37	09:53 – 10:02	14:41 – 14:50	10:05 – 10:15						
	Water Depth (m)	2.8	3.4	3.4	3.2	3.2	3.0	3.0	3.4						
19/03/07	Monitoring Time	17:00 – 17:15	11:30 – 11:45	17:20 – 17:35	11:50 – 12:05	17:40 – 17:55	12:10 – 12:25	18:00 – 18:15	12:30 – 12:45						
	Water Depth (m)	4.2	3.8	3.0	2.7	2.9	2.6	3.4	3.2						
21/03/07	Monitoring Time	08:00 – 08:10	13:00 – 13:10	08:15 – 08:25	13:15 – 13:25	08:27 – 08:37	13:27 – 13:37	08:40 – 08:50	13:40 – 13:50						
	Water Depth (m)	3.2	2.8	2.8	2.6	3.0	2.8	5.2	4.6						
23/03/07	Monitoring Time	08:30 – 08:40	14:30 – 14:40	08:44 – 08:53	14:43 – 14:50	08:57 – 09:07	14:55 – 15:08	09:10 – 09:20	15:11 – 15:20						
	Water Depth (m)	3.2	2.8	3.4	3.2	3.0	3.6	3.6	3.4						
26/03/07	Monitoring Time	08:00 – 08:15	16:30 – 16:45	08:20 – 08:35	16:50 – 17:05	08:40 – 08:55	17:10 – 17:25	09:00 – 09:15	17:30 – 17:45						
	Water Depth (m)	4.3	4.0	3.0	2.8	2.8	2.6	3.5	3.2						
28/03/07	Monitoring Time	08:30 – 08:41	18:30 – 18:41	08:45 – 08:53	18:45 – 18:56	08:57 – 09:07	19:00 – 19:09	09:12 – 09:22	19:13 – 19:23						
	Water Depth (m)	3.4	2.8	3.2	3.6	3.6	3.2	3.4	3.4						

Post-project Marine Water Monitoring Data at Tung Ping Chau Public Pier

2. Weather Condition and Ambient Temperature

Date	Weather																
	C1				M1				M2				C2				
	Flood		Ebb		Flood		Ebb		Flood		Ebb		Flood		Ebb		
Weather	Ambient Temperature (°C)	Weather	Ambient Temperature (°C)	Weather	Ambient Temperature (°C)	Weather	Ambient Temperature (°C)	Weather	Ambient Temperature (°C)	Weather	Ambient Temperature (°C)	Weather	Ambient Temperature (°C)	Weather	Ambient Temperature (°C)	Weather	Ambient Temperature (°C)
02/03/07	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	
05/03/07	Cloudy	20	Cloudy	20	Cloudy	20	Cloudy	21	Cloudy	21	Cloudy	21	Cloudy	20	Cloudy	21	
07/03/07	Cloudy	12	Cloudy	12	Cloudy	12	Cloudy	12	Cloudy	12	Cloudy	12	Cloudy	12	Cloudy	12	
09/03/07	Sunny	18	Sunny	18	Sunny	18	Sunny	19	Sunny	19	Sunny	19	Sunny	18	Sunny	19	
12/03/07	Drizzle	17	Drizzle	17	Drizzle	17	Drizzle	17	Drizzle	17	Drizzle	17	Drizzle	17	Drizzle	17	
14/03/07	Cloudy	20	Cloudy	20	Cloudy	20	Cloudy	20	Cloudy	20	Cloudy	20	Cloudy	20	Cloudy	20	
16/03/07	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	22	Cloudy	22	Cloudy	22	Cloudy	23	Cloudy	22	
19/03/07	Fine	17	Drizzle	15	Fine	17	Drizzle	15	Fine	17	Drizzle	15	Fine	17	Drizzle	15	
21/03/07	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	
23/03/07	Cloudy	18	Cloudy	18	Cloudy	18	Cloudy	18	Cloudy	18	Cloudy	18	Cloudy	18	Cloudy	18	
26/03/07	Sunny	23	Sunny	23	Sunny	23	Sunny	24	Sunny	24	Sunny	24	Sunny	23	Sunny	24	
28/03/07	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	Cloudy	23	

3. Water 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	S	M	B	S	M	B	S	M	S	M	B	S	M	B	S	M	S	M	B	S	M	B	S	M	
02/03/07	19.9	-	19.6	-	19.4	-	19.4	-	19.8	-	19.6	-	19.4	-	19.4	-	19.8	-	19.5	-	19.5	-	19.8	-	19.8	-	19.4	-	19.4	-		
05/03/07	21.8	-	21.7	-	22.3	-	22.3	-	21.6	-	21.6	-	22.1	-	22.0	-	21.7	-	21.6	-	22.2	-	21.8	-	21.8	-	22.0	-	22.0	-		
07/03/07	17.2	-	16.6	17.4	-	16.8	-	17.3	-	17.3	-	17.5	-	17.5	-	17.3	-	16.7	-	17.5	-	17.2	-	17.2	-	16.7	-	16.7	-			
09/03/07	19.8	-	19.7	20.0	-	19.8	-	19.8	-	19.8	-	19.9	-	19.9	-	19.9	-	19.8	-	19.9	-	19.8	-	19.8	-	19.8	-	19.8	-			
12/03/07	16.5	-	16.4	-	16.5	-	16.5	-	16.5	-	16.5	-	16.6	-	16.6	-	16.4	-	16.3	-	16.8	-	16.5	-	16.5	-	16.2	-	16.2	-		
14/03/07	21.1	-	21.0	-	21.1	-	21.2	-	21.2	-	21.2	-	21.1	-	21.2	-	21.3	-	21.2	-	21.1	-	21.0	-	21.2	-	21.1	-	21.1	-		
16/03/07	-	22.4	-	21.1	-	20.0	22.3	-	22.1	21.2	-	21.1	21.0	-	21.1	21.2	-	21.1	21.3	-	21.1	21.3	-	21.0	21.2	-	22.2	21.4	-	21.2		
19/03/07	19.4	-	19.5	19.3	-	19.5	-	19.4	-	19.4	-	19.4	-	19.4	-	19.4	-	19.5	-	19.4	-	19.5	-	19.5	-	19.5	-	19.4	-	19.4	-	
21/03/07	20.6	-	19.9	-	20.9	-	20.9	-	20.4	-	20.4	-	20.8	-	20.4	-	20.4	-	19.9	-	20.9	-	20.5	-	20.5	-	20.4	-	20.4	-		
23/03/07	20.2	-	20.1	-	20.1	-	20.3	-	20.3	-	20.2	-	20.2	-	20.2	-	20.2	-	20.2	-	20.2	-	20.2	-	20.2	-	20.1	-	20.2	-		
26/03/07	21.5	-	21.3	21.7	-	21.3	-	21.4	-	21.4	-	21.6	-	21.6	-	21.4	-	21.4	-	21.6	-	21.5	-	21.5	-	21.4	-	21.5	-	21.5	-	
28/03/07	22.6	-	22.5	-	22.5	-	22.4	-	22.4	-	22.3	22.6	-	22.4	22.5	-	22.4	22.5	-	22.4	22.5	-	22.4	22.6	-	22.4	22.6	-	22.6	-	22.5	-

Post-project Marine Water Monitoring Data at Tung Ping Chau Public Pier

4. 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	
02/03/07	6.86	-	6.67	-	6.67	-	6.67	-	6.67	-	6.75	-	6.73	-	6.66	-	6.73	-	6.67	-	6.73	-	6.67	-	6.63
05/03/07	6.65	-	6.33	-	6.66	-	6.54	-	6.18	6.55	6.24	6.58	6.14	6.66	6.29	6.30	6.57	6.30	6.30	6.57	6.30	6.57	6.30	6.57	6.30
07/03/07	6.97	-	6.85	6.77	-	6.71	-	7.09	-	6.80	-	7.14	-	6.93	-	7.13	6.86	-	6.90	-	6.80	6.90	-	6.80	6.90
09/03/07	6.91	-	7.01	6.77	-	6.77	-	6.56	-	6.52	-	6.77	-	6.68	-	6.80	6.90	-	6.80	6.90	-	6.80	6.90	-	6.80
12/03/07	6.81	-	6.53	-	6.84	-	6.72	-	6.72	-	6.97	-	6.93	-	6.72	-	6.74	-	6.54	6.73	-	6.54	6.73	-	6.58
14/03/07	6.71	-	6.41	-	6.41	-	6.55	-	6.25	6.65	6.32	6.68	6.22	6.52	6.19	6.62	6.60	-	6.37	6.60	-	6.37	6.60	-	6.34
16/03/07	-	6.48	-	6.64	-	6.30	6.44	-	6.14	6.61	6.23	6.50	6.19	6.65	6.29	6.55	-	6.29	6.52	-	6.29	6.52	-	6.21	
19/03/07	6.91	-	6.94	6.76	-	6.92	-	6.54	-	6.43	-	6.74	-	6.64	-	6.91	-	6.80	6.90	-	6.80	6.90	-	6.77	
21/03/07	6.93	-	7.04	-	6.74	-	6.84	-	6.84	-	6.85	-	6.93	-	6.92	-	7.05	-	6.93	6.83	-	6.93	6.83	-	6.67
23/03/07	6.51	-	6.29	-	6.30	-	6.42	-	6.23	6.49	6.25	6.53	6.29	6.54	6.19	6.68	-	6.31	6.66	-	6.31	6.66	-	6.31	
26/03/07	6.82	-	6.93	6.78	-	6.78	-	6.57	-	6.50	-	6.72	-	6.64	-	6.85	-	6.79	6.85	-	6.79	6.85	-	6.79	
28/03/07	6.46	-	6.29	-	6.50	-	6.49	-	6.35	6.46	6.26	6.35	6.19	6.39	6.11	6.41	-	6.18	6.50	-	6.18	6.50	-	6.25	

5. 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
02/03/07	90.4	-	88.0	-	87.9	-	87.9	-	87.9	-	88.0	-	88.7	-	87.7	-	88.8	-	88.0	89.3	-	88.8	-	87.5
05/03/07	91.1	-	86.7	-	91.2	-	89.6	-	84.7	89.7	85.5	90.1	84.1	91.2	86.2	89.9	-	86.3	90.0	-	89.9	-	86.3	
07/03/07	93.3	-	91.0	90.6	-	89.9	-	94.9	-	91.1	-	95.6	-	92.8	-	96.1	-	95.4	91.8	-	96.1	-	91.8	
09/03/07	92.1	-	93.0	90.7	-	90.8	-	87.7	-	87.8	-	90.4	-	89.6	-	90.8	-	90.5	91.5	-	90.8	-	91.0	
12/03/07	87.6	-	84.0	-	88.0	-	86.5	-	86.5	-	89.7	-	89.2	-	86.5	-	86.7	-	84.1	86.6	-	86.7	-	84.7
14/03/07	91.9	-	87.8	-	87.8	-	89.7	-	85.6	91.1	86.6	91.5	85.2	89.3	84.8	90.7	-	87.3	90.4	-	90.7	-	86.9	
16/03/07	-	88.1	-	90.3	-	85.7	87.9	-	83.5	89.9	84.7	88.4	84.2	90.4	85.5	89.1	-	85.5	88.7	-	89.1	-	84.6	
19/03/07	91.7	-	91.9	90.7	-	92.7	-	88.3	-	86.3	-	89.2	-	88.9	-	91.4	-	90.5	91.8	-	91.4	-	90.6	
21/03/07	94.8	-	96.3	-	92.2	-	93.7	-	93.7	-	93.8	-	94.9	-	94.8	-	96.5	-	94.1	93.5	-	96.5	-	91.9
23/03/07	89.2	-	86.2	-	86.3	-	88.0	-	85.4	88.9	85.6	89.5	86.2	89.6	84.8	91.5	-	86.4	91.2	-	91.5	-	86.4	
26/03/07	90.9	-	91.9	90.9	-	90.8	-	87.9	-	87.5	-	89.3	-	88.7	-	90.7	-	90.6	91.0	-	90.7	-	91.0	
28/03/07	89.1	-	86.8	-	89.7	-	89.6	-	87.6	89.1	86.4	87.6	85.4	88.2	84.3	88.5	-	85.3	89.7	-	88.5	-	86.3	



Post-project Marine Water Monitoring Data at Tung Ping Chau Public Pier

6. Salinity

Date	Salinity (ppt)																							
	C1						M1						M2						C2					
	Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb		
	S	M	Ave	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M
02/03/07	33.1	-	33.2	-	33.0	-	33.1	-	33.1	-	33.1	-	33.0	-	33.0	-	33.1	-	33.1	-	33.1	-	33.0	-
05/03/07	32.5	-	33.0	-	32.8	-	32.7	-	33.2	32.5	-	33.2	32.9	-	32.9	-	33.2	32.5	-	32.9	-	32.9	-	33.1
07/03/07	33.0	-	33.2	32.9	-	33.1	-	33.1	-	33.2	-	33.2	-	33.1	-	33.2	-	33.2	-	33.0	-	33.2	-	33.2
09/03/07	32.9	-	33.0	32.7	-	32.9	-	32.9	-	32.9	-	32.9	-	32.8	-	32.9	-	32.9	-	32.9	-	33.0	-	32.9
12/03/07	31.5	-	31.6	-	31.2	-	31.7	-	31.7	-	31.4	-	31.6	-	31.6	-	31.5	-	31.5	-	31.5	-	31.5	-
14/03/07	32.7	-	33.0	-	32.3	-	32.5	-	32.8	32.4	-	32.7	32.3	-	32.7	32.5	-	32.7	32.5	-	32.7	32.5	-	32.7
16/03/07	-	32.3	-	32.2	-	33.2	32.2	-	32.6	32.5	-	32.6	32.2	-	33.0	32.2	-	32.8	32.0	-	33.6	31.9	-	32.6
19/03/07	33.0	-	33.2	33.1	-	33.2	-	33.0	-	33.1	-	33.1	-	33.1	-	33.2	-	33.1	-	33.2	-	33.2	-	33.2
21/03/07	32.4	-	32.8	-	32.5	-	32.4	-	32.4	-	32.6	-	32.6	-	32.6	-	32.8	-	33.0	32.3	-	32.6	-	32.9
23/03/07	31.5	-	32.7	-	32.3	-	31.9	-	32.9	32.0	-	32.9	32.1	-	32.9	32.1	-	33.0	32.3	-	33.1	32.3	-	32.9
26/03/07	32.5	-	32.7	32.4	-	32.6	-	32.5	-	32.5	-	32.5	-	32.5	-	32.5	-	32.5	-	32.5	-	32.5	-	32.5
28/03/07	32.7	-	32.9	-	32.4	-	33.1	32.8	-	33.1	32.8	-	33.0	32.8	-	33.0	32.8	-	33.1	32.8	-	33.1	32.9	-

7. Suspended Solids

Date	Suspended Solids (mg/L)																								
	C1						M1						M2						C2						
	Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb			
	S	M	Ave	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	
02/03/07	3.0	-	2.5	2.8	-	3.0	-	3.0	-	3.0	-	2.8	-	3.2	-	3.2	-	3.2	-	3.3	-	3.3	-	3.3	
05/03/07	3.5	-	2.5	3.0	-	3.5	3.2	-	3.1	3.2	3.2	-	2.5	2.9	3.0	-	3.2	3.1	3.3	-	3.0	3.2	3.5	-	
07/03/07	4.0	-	3.5	3.8	3.2	-	3.5	3.4	-	3.5	3.5	-	4.0	3.3	-	3.0	3.2	-	4.0	4.0	-	4.0	3.5	-	
09/03/07	3.5	-	3.8	3.7	4.0	-	3.2	3.6	-	2.5	2.5	-	2.8	-	3.0	-	3.0	-	3.0	-	2.8	2.5	2.5	-	
12/03/07	3.5	-	4.0	3.8	-	3.3	-	3.3	-	2.5	-	2.5	3.0	-	2.0	2.5	-	2.7	2.5	-	2.7	2.8	-		
14/03/07	3.0	-	3.5	3.3	-	3.0	3.2	-	3.4	3.3	3.2	-	3.3	3.3	2.8	-	2.5	2.7	2.5	-	2.5	3.3	-		
16/03/07	-	3.5	-	3.5	4.0	-	3.5	3.8	2.5	-	3.5	3.8	2.5	-	3.0	2.8	3.3	-	3.0	2.8	3.5	-	3.0	3.5	-
19/03/07	4.0	-	3.9	4.0	4.0	-	3.5	3.8	-	2.4	-	2.5	-	2.5	-	2.5	-	2.8	2.5	-	2.8	3.0	-		
21/03/07	3.2	-	2.8	3.0	-	2.5	-	2.5	-	3.0	-	2.7	3.3	-	3.0	3.2	-	3.5	-	3.5	-	2.3	2.4	3.1	
23/03/07	3.0	-	3.0	3.0	-	3.0	3.3	-	3.1	3.2	3.5	-	3.0	3.3	3.2	-	2.5	2.9	3.2	-	2.5	2.9	2.5		
26/03/07	4.0	-	3.9	4.0	3.5	-	3.8	3.7	-	2.5	-	2.7	-	2.7	-	2.7	-	2.5	-	2.5	-	2.8	2.7	3.0	
28/03/07	3.4	-	2.5	3.0	-	3.0	2.5	-	3.1	2.8	3.0	-	2.8	2.9	3.0	-	3.0	3.0	2.6	-	3.1	2.8	3.4		

Post-project Marine Water Monitoring Data at Tung Ping Chau Public Pier

8. 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				
02/03/07	3.17	-	3.09	3.13	-	3.03	3.22	3.18	3.18	3.22	3.18	3.18	3.18	3.18	3.11	3.26	-	3.13	3.20	3.23	3.20	3.10	3.17	3.17	3.35	-	3.21	3.28
05/03/07	3.46	-	3.51	3.49	3.19	3.47	3.33	-	3.40	3.40	-	3.76	3.61	-	3.73	3.67	-	3.63	3.63	3.22	3.63	3.36	3.29	3.16	3.16	-	3.36	3.26
07/03/07	3.63	-	3.74	3.69	3.60	3.71	3.66	-	2.29	2.29	-	2.29	2.29	-	2.29	2.58	-	2.63	2.63	2.57	2.63	2.65	2.61	2.46	2.46	-	2.72	2.59
09/03/07	3.28	-	3.65	3.47	-	3.12	-	3.12	2.78	-	2.78	2.78	-	2.73	2.63	-	2.87	2.87	2.59	2.87	2.91	2.75	3.18	3.18	-	3.03	3.11	
12/03/07	3.42	-	3.31	3.37	-	3.18	-	3.18	3.26	-	3.15	3.21	3.39	3.19	3.29	3.18	3.07	3.13	3.22	3.14	3.17	3.20	3.15	3.15	-	3.08	3.12	
14/03/07	-	3.25	-	3.25	3.69	-	3.55	3.62	3.19	-	3.05	3.12	3.42	-	3.17	3.30	3.18	3.02	3.10	3.37	3.24	3.10	3.24	3.23	3.23	-	3.09	3.16
16/03/07	3.69	-	3.74	3.72	3.51	-	3.59	3.55	-	2.28	-	2.28	-	2.66	-	2.66	-	2.66	2.59	2.65	2.71	2.65	2.49	2.49	-	2.62	2.56	
19/03/07	2.74	-	2.54	2.64	-	2.84	-	2.82	-	2.82	-	2.82	-	2.87	2.97	-	2.87	2.97	2.42	2.42	3.24	2.63	2.53	2.96	2.96	-	2.72	2.84
21/03/07	3.22	-	3.09	3.16	-	2.95	-	3.15	-	3.04	3.10	3.09	-	3.13	3.11	2.98	3.05	3.13	3.08	3.05	2.93	2.99	3.20	3.20	-	3.09	3.15	
23/03/07	3.68	-	3.71	3.70	3.54	-	3.72	3.63	-	2.26	-	2.26	-	2.32	-	2.65	-	2.65	2.56	2.56	2.72	2.64	2.44	2.44	-	2.70	2.57	
26/03/07	3.17	-	3.08	3.13	-	3.17	-	3.21	-	3.08	3.15	3.21	-	3.10	3.16	2.88	2.96	3.08	3.06	3.15	3.09	3.12	3.11	3.11	-	3.07	3.09	
28/03/07	3.17	-	3.09	3.13	-	3.03	-	3.25	-	3.18	3.22	3.18	-	3.03	3.11	3.07	3.13	3.26	3.13	3.20	3.23	3.17	3.35	3.35	-	3.21	3.28	



Appendix E

QA/QC Results of Laboratory Analysis for

Post-project Marine Water Quality Monitoring



**QA/QC Results of Laboratory Analysis of Total Suspended Solids for
Post-project Marine Water Quality Monitoring**

Sampling Date	QC Sample Analysis	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
02/03/07	99.8	C1F-S	0.0	M1F-M	105.2
	93.6	M2F-M	0.0	C2E-S	106.8
	97.3	C2E-M	0.0	M2E-M	102.5
05/03/07	102.5	C1F-S	0.0	M1F-M	94.7
	99.0	M2F-S	0.0	C2E-S	93.0
	95.7	C2E-B	0.0	M2E-M	94.4
07/03/07	108.0	C1F-S	0.0	M1F-M	98.5
	92.2	M2F-M	0.0	C2E-S	105.7
	103.1	M1E-B	0.0	M2E-M	95.5
09/03/07	95.1	C1F-S	0.0	M1F-M	92.2
	92.6	M2F-S	0.0	C2E-S	94.5
	96.7	C2E-B	0.0	M2E-M	98.1
12/03/07	101.3	C1F-S	0.0	M1F-M	92.6
	102.0	M2F-M	0.0	C2E-S	97.1
	106.5	C2E-B	0.0	M2E-M	98.5
14/03/07	101.6	C1F-S	0.0	M1F-S	98.1
	96.0	M2F-M	0.0	C2E-S	103.3
	99.0	C2E-B	0.0	M2E-B	93.7
16/03/07	99.8	C1F-M	0.0	M1F-M	101.8
	102.7	M1F-B	0.0	C2E-S	103.0
	106.8	C2E-B	0.0	M2E-M	98.3
19/03/07	103.4	C1F-S	0.0	M1F-M	94.9
	97.0	M1F-M	0.0	C2E-S	100.0
	101.3	C2E-B	0.0	M2E-M	95.0
21/03/07	94.6	C1F-S	0.0	M1F-M	103.8
	94.9	M2F-S	0.0	C2E-S	100.0
	105.7	C2E-B	0.0	M2E-M	100.0
23/03/07	99.3	C1F-S	0.0	M1F-S	99.1
	102.3	M1F-B	0.0	C2E-S	100.0
	93.1	C2E-B	0.0	M2E-B	92.3
26/03/07	106.5	C1F-S	0.0	M1F-M	92.6
	94.6	M2F-M	0.0	C2E-S	97.1
	93.7	C2E-B	0.0	M2E-M	96.3
28/03/07	101.7	C1F-S	0.0	M1F-M	96.9
	97.1	M1F-B	0.0	C2E-S	94.5
	102.4	C2E-B	0.0	M2E-M	103.9

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%.



Figures

NOTES:

- ALL DIMENSIONS ARE IN METRES.
- ALL CO-ORDINATES REFER TO HONG KONG GEODETIC DATUM 1980 AND ARE IN METRES.

LEGEND

▲ CONTROL STATION

○ MONITORING STATION

no.	date	description	checked	approved
REVISION				
designed		K Y LAM	initial	date 20.9.05
drawn		C K LI		20.9.05
traced		C K LI		20.9.05
checked		W C LEUNG		20.9.05

contract no. _____

file no. _____

project no. _____

contract _____

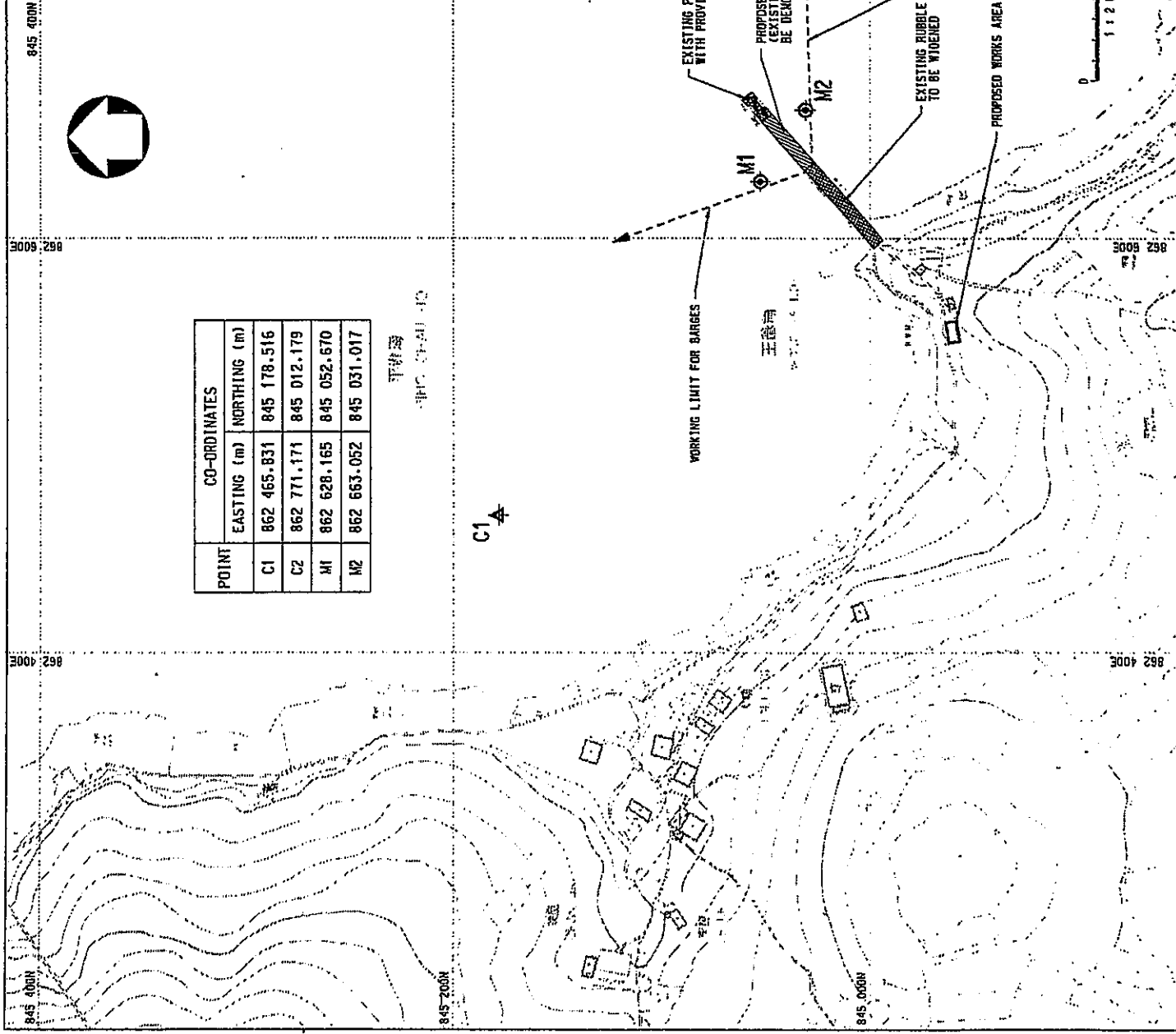
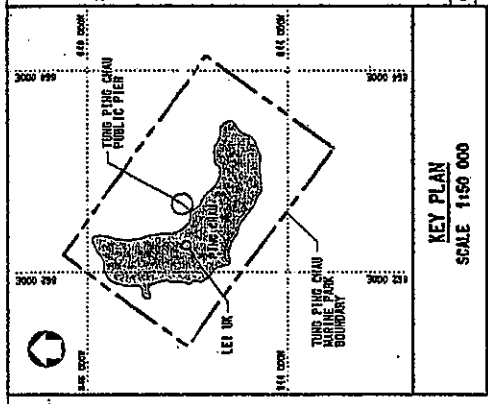
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IMPROVEMENT WORKS TO TUNG PING CHAU PUBLIC PIER - ENVIRONMENTAL MONITORING

drawing no. **PW-TPC-006**

scale
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 AS SHOWN

office
**PORT WORKS DIVISION
 CIVIL ENGINEERING OFFICE**

CEDD
 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
 HONG KONG



POINT	CO-ORDINATES	
	EASTING (m)	NORTHING (m)
C1	862 465.831	845 178.516
C2	862 771.171	845 012.179
M1	862 628.165	845 052.670
M2	862 663.052	845 031.017

平海灣
 TUNG PING CHAU

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