Stanger Asia

# ENVIRONMENTAL MONITORING AND AUDIT REPORT

# FOR

# CONTRACT No. CV/2004/02

# RECONSTRUCTION OF WONG SHEK AND KO LAU WAN PUBLIC PIERS

# MARCH 2005

**Report No.: ET 12498**

Certified by: _____ Date: 11-4-05
Mr. Jeff Tsang
Environmental Specialist

Verified by: _____ Date: 18/4/05
Mr. Joseph Poon
Independent Checker (Environment)

## CONTENTS



**LIST OF FIGURES**

**LIST OF FIGURES**



**TABLES**



**APPENDICES**

## EXECUTIVE SUMMARY

This is the 1st monthly Environmental Monitoring and Audit (EM&A) report for Contract No. CV/2004/02 – Reconstruction of Wong Shek and Ko Lau Wan Public Piers and it covers the environmental monitoring works conducted in March 2005.

### Construction Activities for the Reported Period

Major construction works carried out this month included:

*Wong Shek*

- Ground Investigation
- Erection of temporary cover
- Erection of Project signborad

*Ko Lau Wan*

- Coral survey and translocation
- Erection of temporary cover
- Erection of Project signborad
- Erection of chain link fence

### Water Quality Monitoring

Water quality monitoring in terms of turbidity, dissolved oxygen, suspended solids, temperature, salinity was carried out on four occasions at MW1, MW2, CW1 and CW2 at Wong Shek Pier. No monitoring was carried out for Ko Lau Wan Pier as no work was carried out. There were no exceedances to set Action Levels and Limit Levels for all parameters recorded during the reported period.

### Waste Management

No C&D material, general refuse or chemical waste was transported off site in this reported period.

### Complaints, Notifications of Summons and Successful Prosecutions

No complaints, notifications of summons and successful prosecutions were received this month.

### Site Inspections

Four site inspections were conducted by Environmental Specialist (ES) in this reported period. Due to low level of works in this reported period, no major deficiency was identified.

**Future Key Issues**

The tentative works activities, predicted impacts and areas of environmental concern for the month following this reported period are summarized in the following table.

| Works Activities | Predicted Impacts | Proposed Mitigation Measures |
|---|---|---|
| Ground Investigation | · Water | · The flushing water should be reused as much as possible and the effluent should be treated to acceptable quality before discharge. |
| | · Air | · The rig should be maintain in good condition to avoid emitting excessive black smoke. |
| Installation of silt curtain | · Water | · The seabed should be disturbed in minimum level. |
| Piling work for temporary berth. | · Water | · The silt curtain should be properly installed before carrying out the piling work. |

**Reporting of Changes**

Generally, the baseline monitoring was conducted according to the Particular Specification (PS) Section 26 - Environmental Mitigation Measures and Monitoring Requirements and hence no revision to the EM&A requirements was made.

# 1. INTRODUCTION

## 1.1 Background

Stanger Asia Ltd. has been commissioned by Kin Shing Construction Company Limited to provide an Environmental Specialist (ES) to carry out the environmental monitoring and audit works for the Contract No. CV/2004/02 Reconstruction of Wong Shek and Ko Lau Wan Public Piers. The team is to take a pro-active role in all issues, which may be of environmental concern during the construction period of the Project.

In this report, the water quality monitoring works conducted in March 2005 will be detailed and reviewed. This report has been produced with reference to the Section 26 of the Particular Specification, Project Profile (PP-191/2003) and Environmental Permit (EP-186/2004) produced for this Project.

## 1.2 Report Structure

The purpose of this report is to detail and review the water quality monitoring works undertaken for March 2005. The impact forecast for the next reporting month and the schedules of monitoring works for the following month are also given.

The report follows the format given below:

| | |
|---|---|
| Section 1: | Introduction and background information to the content of this report |
| Section 2: | This section gives the information of the project |
| Section 3: | This section summarizes all the environmental permits and licenses |
| Section 4: | Summary of the EM&A requirements is presented |
| Section 5: | This section details the implemented mitigation measures |
| Section 6: | Details monitoring results |
| Section 7: | Audit the monitoring results |
| Section 8: | The status for solid and liquid waste management for the site is overviewed |
| Section 9: | Complaints, notifications of summons and successful prosecutions are summarized |
| Section 10: | This section gives the predicted impacts of the construction activities |
| Section 11: | This section gives a conclusion in relation to all monitoring activities. |

# 2. PROJECT INFORMATION

## 2.1 Site Description

The construction works, Contract No. CV/2004/02, is to be carried out under the direction of the Civil Engineering Office, Civil Engineering and Development Department. It comprises demolition of the existing piers and construction of reinforced concrete piers with roof covers at Wong Shek and Ko Lau Wan.

The construction of the Project is scheduled to commence in November 2004 for completion in August 2006. The construction period is 630 days for the entire construction.

## 2.2 Project Organization

The Project Proponent and the Engineer is Civil Engineering Office, Civil Engineering and Development Department. The Resident Engineer is Mr. W H Lee.
(Tel: 2760 5737; Fax: 2714 2054; Mobile Phone No: 9630 1235)

The Main Contractor for this project is Kin Shing Construction Company Limited. The Site Agent is Mr. Simon Fok
(Tel: 2729 6779; Fax: 2729 7858; Mobile Phone No: 6010 8730).

The Independent Checker (Environment) is MateriaLab Consultants Limited. The Manager is Mr. Joseph T L Poon.
(Tel: 2452 7140; Fax: 2450 6138; Mobile Phone No: 9450 1968)

The Environmental Specialist proposed for this project is Stanger Asia Limited. The Environmental Specialist is Mr. Jeff L H Tsang.
(Tel: 2682 1203; Fax: 2682 0046; Mobile Phone No: 6077 2267)
The environmental organization chart is attached in Appendix I

## 2.3 Construction Programme

Details of the construction activities carried out in March 2005 are summarized below. The master construction programme is given in Appendix IX.

*Wong Shek*

- Ground Investigation
- Erection of temporary cover
- Erection of Project signborad

*Ko Lau Wan*

- Coral survey and translocation
- Erection of temporary cover
- Erection of Project signborad
- Erection of chain link fence

# 3. ENVIRONMENTAL PERMITS AND LICENSES

The summary of the status of all environmental permits, licenses and notification for this project as of March 2005 is summarized in the following table.

**Table 3.1 Summary of the Environmental Permits and Licenses**

| Description | Licence/ Permit No. | Issued Date | Expiry Date | Status |
|---|---|---|---|---|
| Environmental Permit | EP-186/2004 | 16 Mar 04 | -- | Issued |

## 4. SUMMARY OF EM&A REQUIREMENTS

### 4.1 Monitoring Locations

As advise by the Engineer's Representative to avoid confusion, the Wong Shek Stations M1, M2, C1 and C2 were renamed as MW1, MW2, CW1 and CW2 respectively. The Ko Lau Wan Stations M1, M2, M3, M4, C1 and C2 were renamed as MK1, MK2, MK3, MK4, CK1 and CK2 respectively. For Wong Shek, MW1 and MW2 are the two designated monitoring stations whereas CW1 and CW2 are the two designated control stations. For Ko Lau Wan, MK1 to MK4 are the four designated monitoring stations whereas CK1 and CK2 are the two designated control stations. CW1 and CK2 are the control stations during flood tides whereas CW2 and CK1 are the control stations during ebb tides.

The locations of each station are given Figure 4.1 and Figure 4.2, their coordinates are given in Table 4.1 below.

**Table 4.1 Coordinates of Water Quality Monitoring Locations**

| Station | HK Metric Grid – Easting | HK Metric Grid - Northing |
|---|---|---|
| ***Wong Shek Public Pier*** | | |
| MW1 | 852 789.231 | 832 978.476 |
| MW2 | 852 844.187 | 832 878.676 |
| CW1 | 852 922.540 | 833 067.718 |
| CW2 | 852 992.314 | 832 853.794 |
| ***Ko Lau Wan Public Pier*** | | |
| MK1 | 855 212.850 | 835 496.101 |
| MK2 | 855 158.643 | 835 539.315 |
| MK3 | 855 170.762 | 835 401.962 |
| MK4 | 855 108.767 | 835 402.196 |
| CK1 | 854 822.145 | 835 428.000 |
| CK2 | 854 996.976 | 835 675.135 |

### 4.2 Monitoring Parameters

Water quality shall be monitored in terms of: dissolved oxygen (mg/L and % saturation), salinity (ppt), turbidity (NTU), and suspended solids (mg/L).

The parameters of dissolved oxygen, salinity and turbidity were measured on-site with portable instruments. Other relevant data was also recorded, including monitoring location / position, time, water depth, salinity, temperature, tidal stages, weather conditions and any special phenomena or work underway at the construction site.

The measurement of suspended solids was carried out in the laboratory of Stanger Asia Ltd. within 24 hours of sampling. The laboratory is HOKLAS accredited to determine suspended solids content in accordance with APHA Method No. 2540D, 20$^{th}$ Edition.

### 4.3 Monitoring Frequency

*Impact Monitoring – piling and demolition works*

Monitoring shall be undertaken three days per week, at mid-flood and mid-ebb. The interval between two sets of monitoring shall not be less than 36 hours except where there are exceedances of Action and /or Limit levels, in which case the monitoring frequency shall be increased.

*Impact Monitoring – marine works other than piling and demolition works*

Monitoring shall be undertaken one day per week, at mid-flood and mid-ebb. The interval between two sets of monitoring shall not be less than 36 hours except where there are exceedances of Action and /or Limit levels, in which case the monitoring frequency shall be increased.

## 4.4 Monitoring Equipment

Monitoring of marine water quality shall be carried out employing the following equipment.

*Dissolved Oxygen, Salinity and Temperature Measuring Equipment*

A YSI model 85 Handheld Dissolved Oxygen, Conductivity, Salinity and Temperature System was employed.
The instrument is portable, weatherproof instrument complete with cable, sensor, comprehensive operation manuals and operates from a DC power source. It is capable of measuring:

(a) dissolved oxygen in the range of 0-20mg/L and 0-200% saturation

(b) temperature in the range of -5 - 65$^{o}$C

(c) salinity in the range of 0-80ppt

The instrument has a membrane electrode with automatic temperature and salinity compensation, complete with a cable of sufficient length. Sufficient stocks of spare electrodes and cables are available for replacement where necessary.

*Turbidity Measurement Instrument*

A Hach 2100P turdimeter shall be employed

This instrument measures turbidity on-site by the nephelometric method. The instrument is portable, weatherproof turbidity-measuring instrument complete with comprehensive operation manual. The equipment operates from a DC power source and has a photoelectric sensor capable of measuring turbidity between 0-1000NTU.

*Suspended Solids*

A Kahlisco Water Sampler 135WB203 was employed. This is a “Van Dorn” type of sampler, which has a transparent PVC cylinder (of a capacity not less than 2 litres) and can be effectively sealed with cups at both ends, shall be used for sampling. The sampler has a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler is to the selected water depth.

Water samples for suspended solids measurements shall be collected in high-density polythene bottles, packed in ice (cooled to 4$^{o}$C without being frozen), and delivered to the laboratory as soon as possible after collection.

*Water Depth*

A Hummingbird 100SX digital echo-sounder was employed. This is a portable, battery-operated Echo Sounder to be used for the determination of water depth at each water quality monitoring and control station. This unit can be either be hand-held or affixed to the bottom of the work boat if the same vessel is used throughout the monitoring programme.

*Vessel Positioning Device*

A Trimble NT200D Differential Global Positioning (DGPS) was employed. This is a portable or boat fixed and has an accuracy of ±1m and can be programmed with waypoints to ensure the correct and repeated positioning of a vessel at a given monitoring location.

## 4.5 Monitoring Equipment Calibration Requirements

All on-site monitoring equipment shall be checked, verified and calibrated by Stanger Asia Limited, a HOKLAS accredited laboratory, prior to use on the Works and subsequently thereafter every three months throughout all stages of the water quality monitoring. Responses of the sensors and electrodes shall be checked with certified standard solutions before each use. Wet bulb calibration for a DO meter shall be carried out before measurement.

For on-site calibration of field equipment, the BS 1427: 1993 "Guide to Field and on-site test methods for the analysis of waters" shall be observed.

A set of backup monitoring instruments and equipment shall be made available so that the monitoring can proceed uninterrupted in case of apparatus malfunction or if equipment has been returned to the laboratory for calibration.

## 4.6 Monitoring Methodology

Measurements were be taken under two tidal conditions (mid-flood and mid-ebb) at 3 water depths, namely 1m below the water surface, mid-depth and 1m above the seabed, except where the water depth is less than 6m, the mid-depth sample may be omitted. If the water depth is less than 3m, only the mid-depth will be monitored.

Replicate in-situ measurements and samples were collected from each independent sampling event are required for all parameters to ensure a robust statistical interpretable dataset.

For the measurement of dissolved oxygen the probe shall be removed from the water column between each duplicate measurement. If the difference between each duplicate measurement is greater than a 25% then the two sets of data shall be rejected and the measurements re-taken.

## 4.7 Action and Limit Levels

Water quality criteria, namely Action and Limit levels were based on the results of the baseline monitoring programme. The Action and Limit levels were calculated according to the following table.

**Table 4.2 Action and Limit Levels for Water Quality Monitoring**

| Parameter | Action Level | Limit Level |
|---|---|---|
| Dissolved Oxygen in mg/L (Surface, Middle & Bottom) | Surface & Middle<br>For Wong Shek - 6.96<br><br>For Ko Lau Wan - 6.90<br><br>Bottom<br>For Wong Shek - 6.93<br><br>For Ko Lau Wan - 6.75 | Surface & Middle<br>For Wong Shek - 6.69<br><br>For Ko Lau Wan - 6.79<br><br>Bottom<br>For Wong Shek - 6.71<br><br>For Ko Lau Wan - 5.63 |
| SS in mg/L (depth-averaged) | For Wong Shek - 6.85 or 120% of upstream control station's SS at the same tide of same day, whichever is lower<br><br>For Ko Lau Wan - 6.30 or 120% of upstream control station's SS at the same tide of same day, whichever is lower | For Wong Shek - 8.85 or 130% of upstream control station's SS at the same tide of same day, whichever is lower<br><br>For Ko Lau Wan - 6.87 or 130% of upstream control station's SS at the same tide of same day, whichever is lower |
| Turbidity (Tby) in NTU (depth-averaged) | For Wong Shek - 1.47 or 120% of upstream control station's Tby at the same tide of same day, whichever is lower<br><br>For Ko Lau Wan - 1.25 or 120% of upstream control station's Tby at the same tide of same day, whichever is lower | For Wong Shek - 4.05 or 130% of upstream control station's Tby at the same tide of same day, whichever is lower<br><br>For Ko Lau Wan - 1.60 or 130% of upstream control station's Tby at the same tide of same day, whichever is lower |

*Notes:* *(a)* *"depth-averaged" is calculated by taking the arithmetic means of reading all three depths.*

*(b)* *For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.*

*(c)* *For SS and Tby, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.*

*(d)* *All the figures given in the table are used for reference only and the Engineer may amend the figures whenever it is considered as necessary.*

## 4.8 Event and Action Plans

The Event and Action Plans for air, noise and water are attached in Appendix III of this report.

# 5. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

The contractor implemented various environmental mitigation measures as recommended in the Particular Specification and Environmental Permit. The implementation status is attached in Appendix IV.

# 6. MONITORING RESULTS

## 6.1 Completed Monitoring Works

Table 6.1 gives the completed monitoring works for the reported period.

**Table 6.1 Completed Monitoring Works for March 2005**

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11<br>WQM[1]<br>(Ebb: 13:12)<br>(Flood: 19:11) | 12 |
| 13 | 14 | 15<br>WQM[1]<br>(Ebb: 15:56)<br>(Flood: 09:25) | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23<br>WQM[1]<br>(Ebb: 11:13)<br>(Flood: 16:41) | 24 | 25 | 26 |
| 27 | 28 | 29<br>WQM[3]<br>(Ebb: 14:47)<br>(Flood: 08:26) | 30 | 31 | | |

*Notes:1. WQM - water quality monitoring on mid-flood and mid-ebb tides at Wong Shek (CW1, CW2, MW1 & MW2)*

## 6.2 Water Quality Monitoring

Water quality monitoring in terms of turbidity, dissolved oxygen, suspended solids, temperature, salinity was carried out on four occasions at MW1, MW2, CW1 and CW2 at Wong Shek Pier. No monitoring was carried out for Ko Lau Wan Pier as no work was carried out. Results for water quality monitoring are summarised in the following table. Detailed monitoring results are presented in Appendix V. Graphical presentations of the results are shown in Figure 6.1 – Figure 6.8.

**Table 6.2 Summary of Water Quality Monitoring Data**

| Sample Location | Surface & Middle Averaged DO, mg/L | Bottom Averaged DO, mg/L | Averaged Turbidity, NTU | Averaged Suspended Solids, mg/L |
|---|---|---|---|---|
| Wong Shek - Flood Tide | | | | |
| MW1 | 8.18 | 8.02 | 1.38 | 5.5 |
| MW2 | 8.28 | 8.03 | 1.40 | 6.0 |
| CW1 | 8.21 | 8.14 | 1.67 | 7.0 |
| CW2 | 8.22 | 8.13 | 1.83 | 7.2 |
| Wong Shek- Ebb Tide | | | | |
| MW1 | 8.31 | 8.12 | 1.29 | 6.5 |
| MW2 | 8.35 | 8.11 | 1.34 | 6.5 |
| CW1 | 8.06 | 7.99 | 1.61 | 8.2 |
| CW2 | 8.34 | 8.01 | 1.96 | 8.3 |

## 7. AUDIT REPORT

### 7.1 Water Quality Monitoring

There were no exceedances to Trigger, Action and Target Level for any parameters in this reported period.

### 7.2 Site Inspections

Four site inspections were conducted by Environmental Specialist (ES) in this reported period. Due to low level of works in this reported period, no major deficiency was identified.

## 8. WASTE MANAGEMENT

No C&D material, general refuse or chemical waste was transported off site in this reported period.

## 9. COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

No complaints, notifications of summons and successful prosecutions were received.

Complaint Log is attached in Appendix VI. Cumulative statistics on complaints, notifications of summons and successful prosecutions are attached in Appendix VII.

## 10. FUTURE KEY ISSUES

The following are the scheduled construction activities for the next reported period. Scheduled monitoring activities for the following month is given in Appendix VIII.

**Table 10.1 Works Programme for April 2005**

| Works Activities | Predicted Impacts | Proposed Mitigation Measures |
|---|---|---|
| Ground Investigation | · Water | · The flushing water should be reused as much as possible and the effluent should be treated to acceptable quality before discharge. |
| | · Air | · The rig should be maintain in good condition to avoid emitting excessive black smoke. |
| Installation of silt curtain | · Water | · The seabed should be disturbed in minimum level. |
| Piling work for temporary berth. | · Water | · The silt curtain should be properly installed before carrying out the piling work. |

## 11. CONCLUSION

For water quality monitoring, there were no exceedances to set Action Level and Limit Levels recorded during the reported period.

No complaints, notifications of summons and successful prosecutions were received in this month.

**Figures**

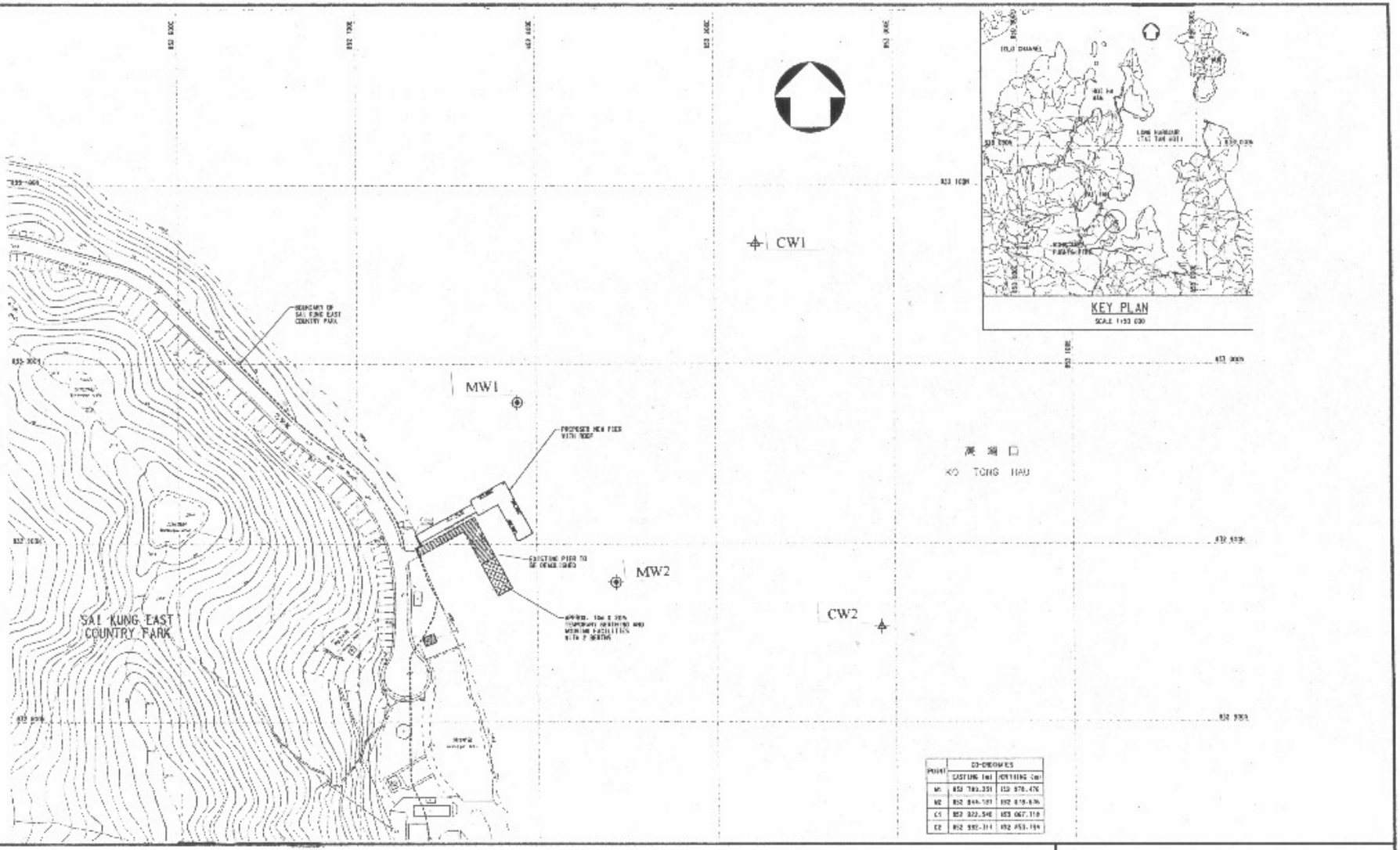



Figure 4.1 - Water Quality Monitoring Stations (Wong Shek)

Stanger Asia

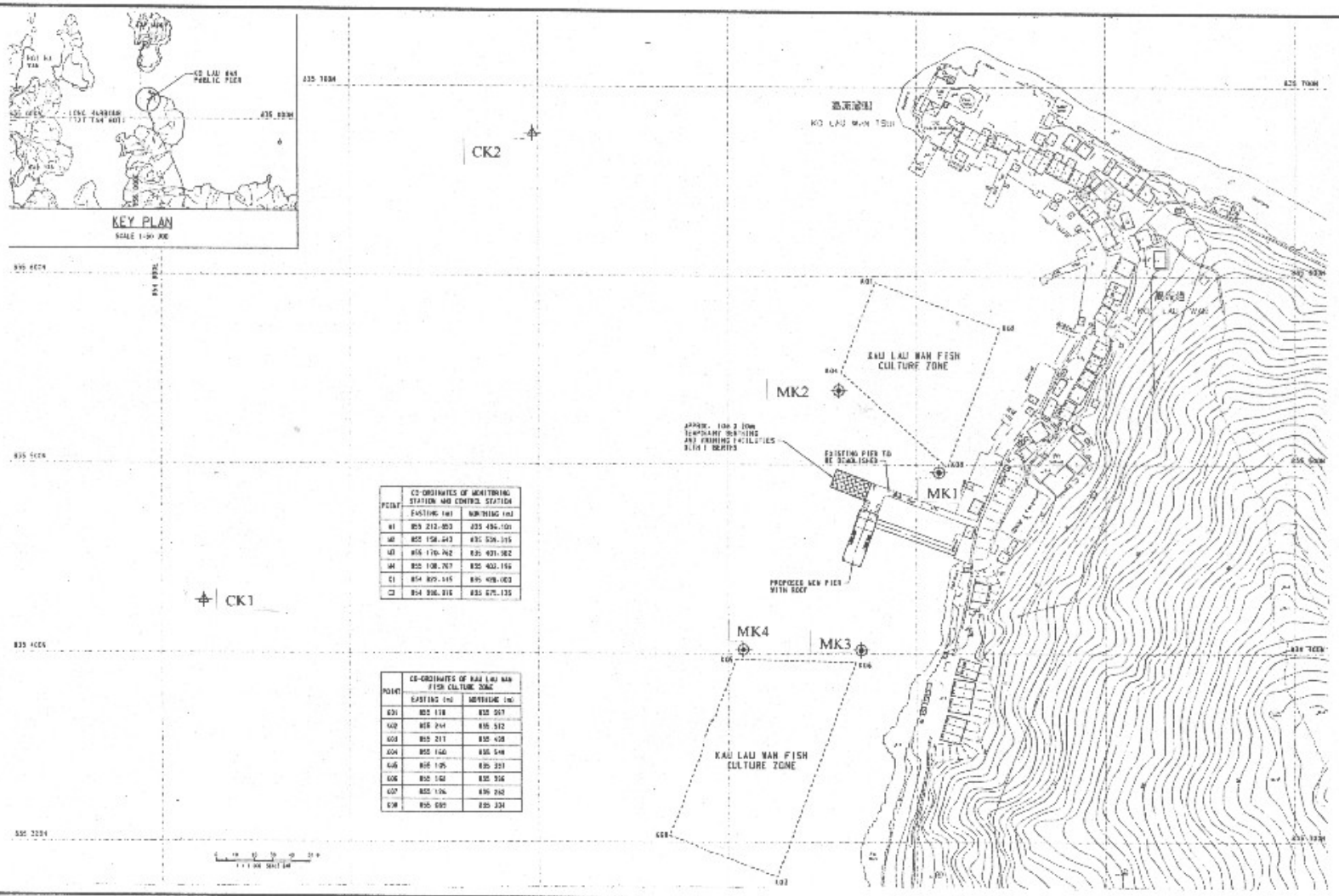



Figure 4.2 - Water Quality Monitoring Stations (Ko Lau Wan)

Stanger Asia

**Figure 6.1 - Surface and Middle Averaged Dissolved Oxygen - Mid-Flood (Wong Shek)**

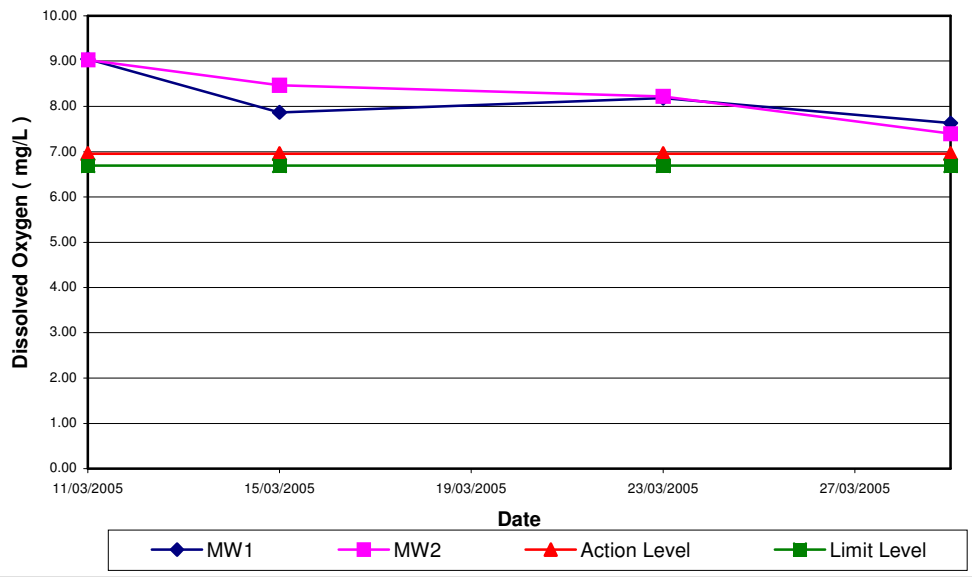



**Figure 6.2 - Bottom Averaged Dissolved Oxygen - Mid-Flood (Wong Shek)**

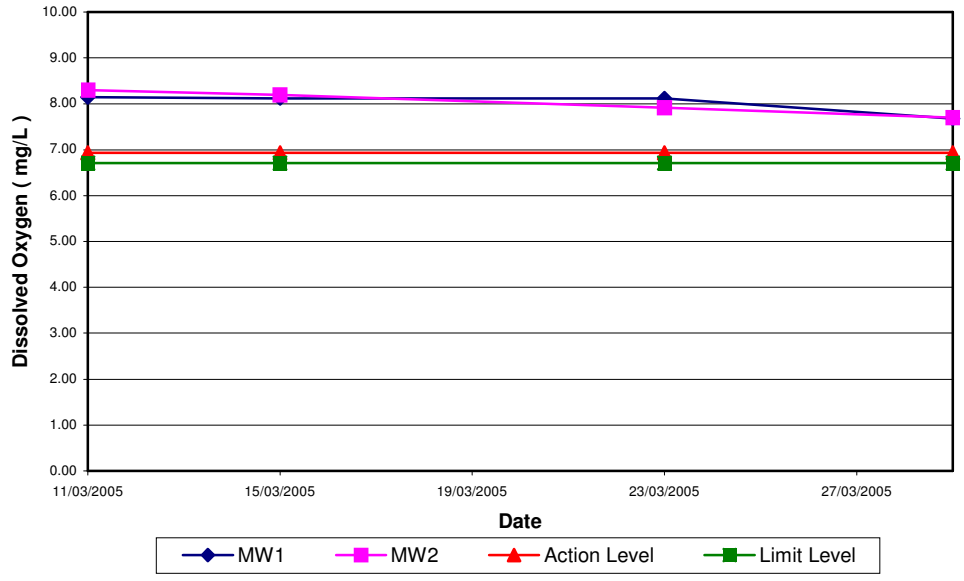


**Figure 6.3 - Depth Averaged Turbidity - Mid-Flood (Wong Shek)**

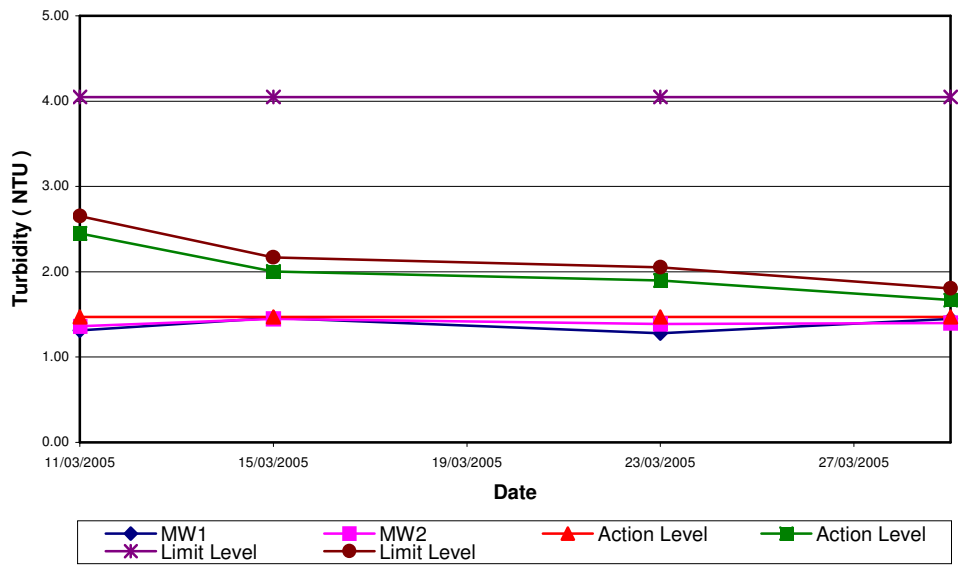



**Figure 6.4 - Depth Averaged Suspended Solids - Mid-Flood (Wong Shek)**

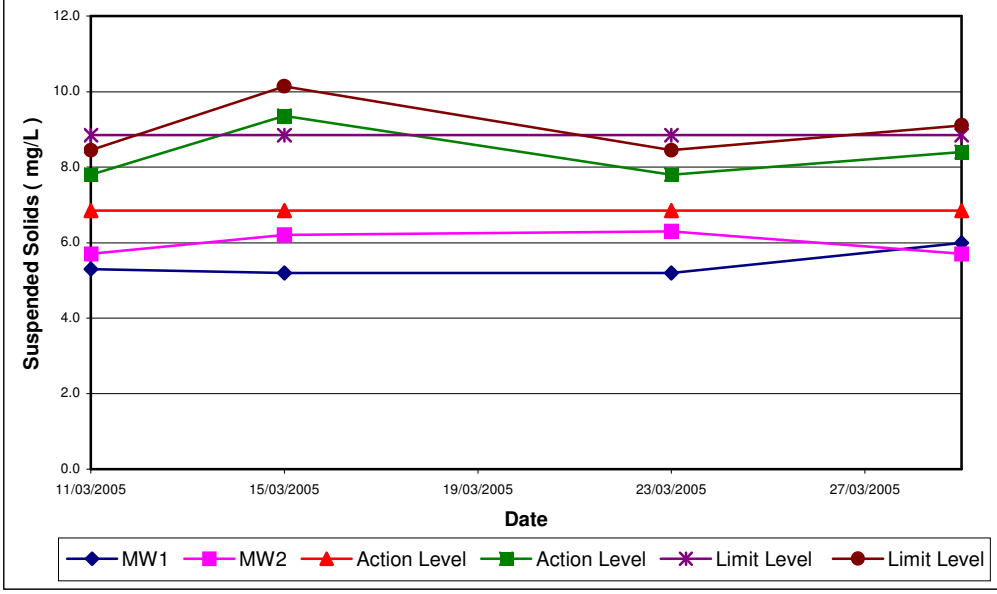


**Figure 6.5 - Surface and Middle Averaged Dissolved Oxygen - Mid-Ebb (Wong Shek)**

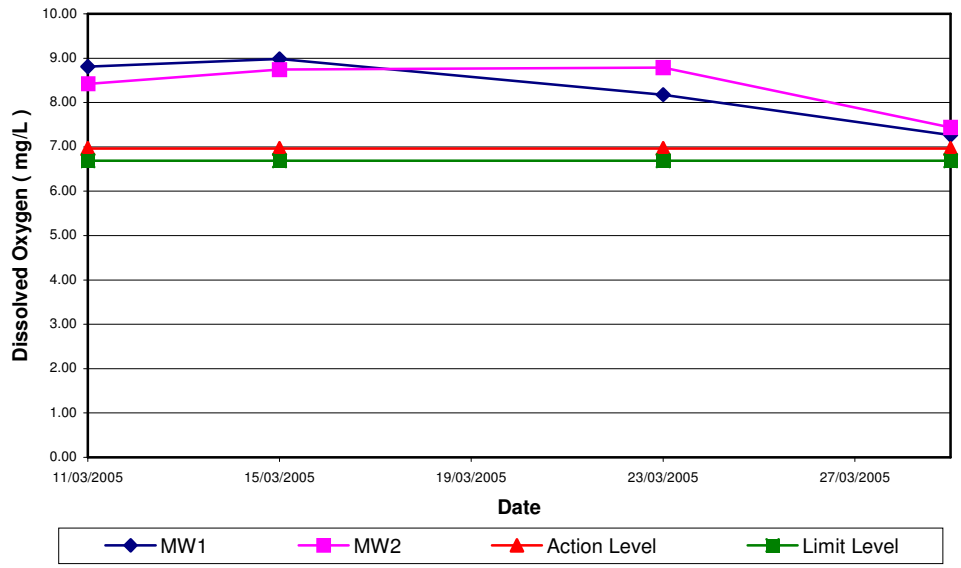



**Figure 6.6 - Bottom Averaged Dissolved Oxygen - Mid-Ebb (Wong Shek)**

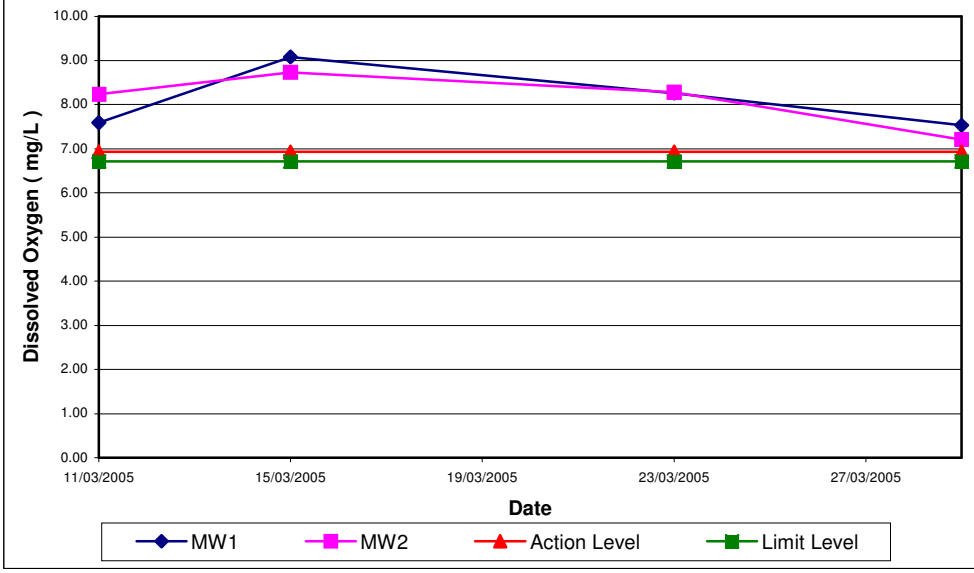


**Figure 6.7 - Depth Averaged Turbidity - Mid-Ebb (Wong Shek)**

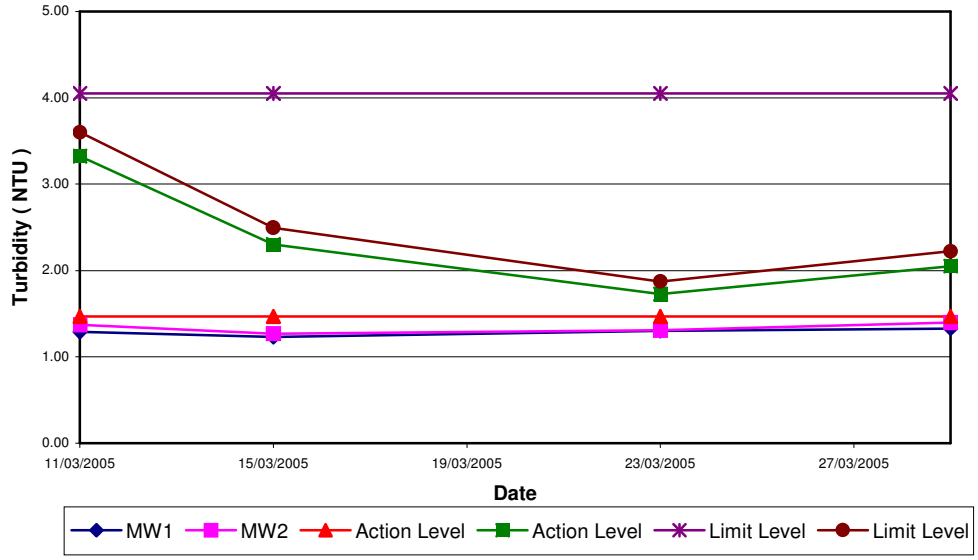
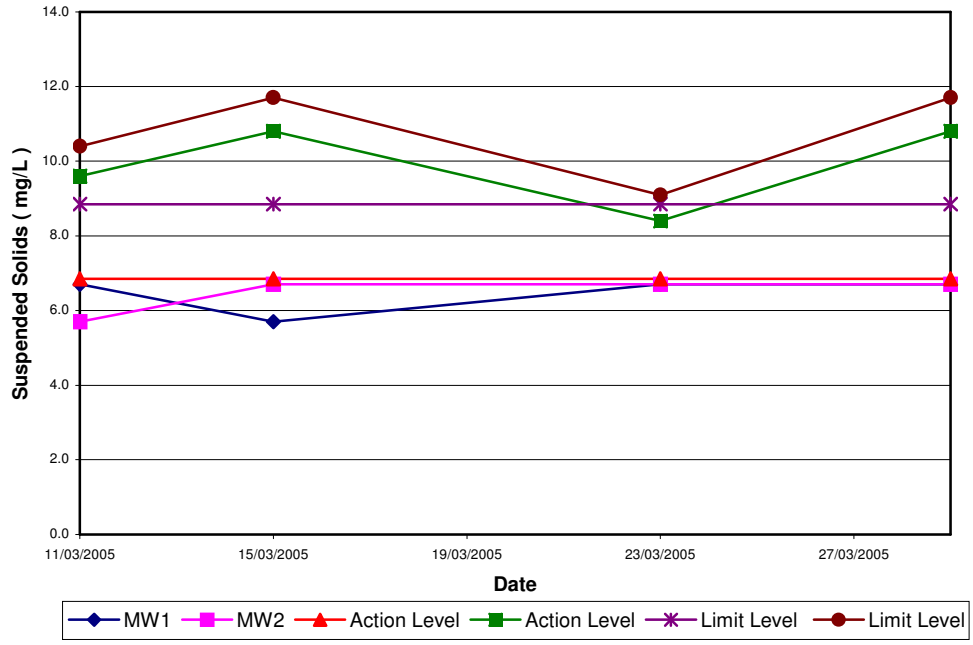


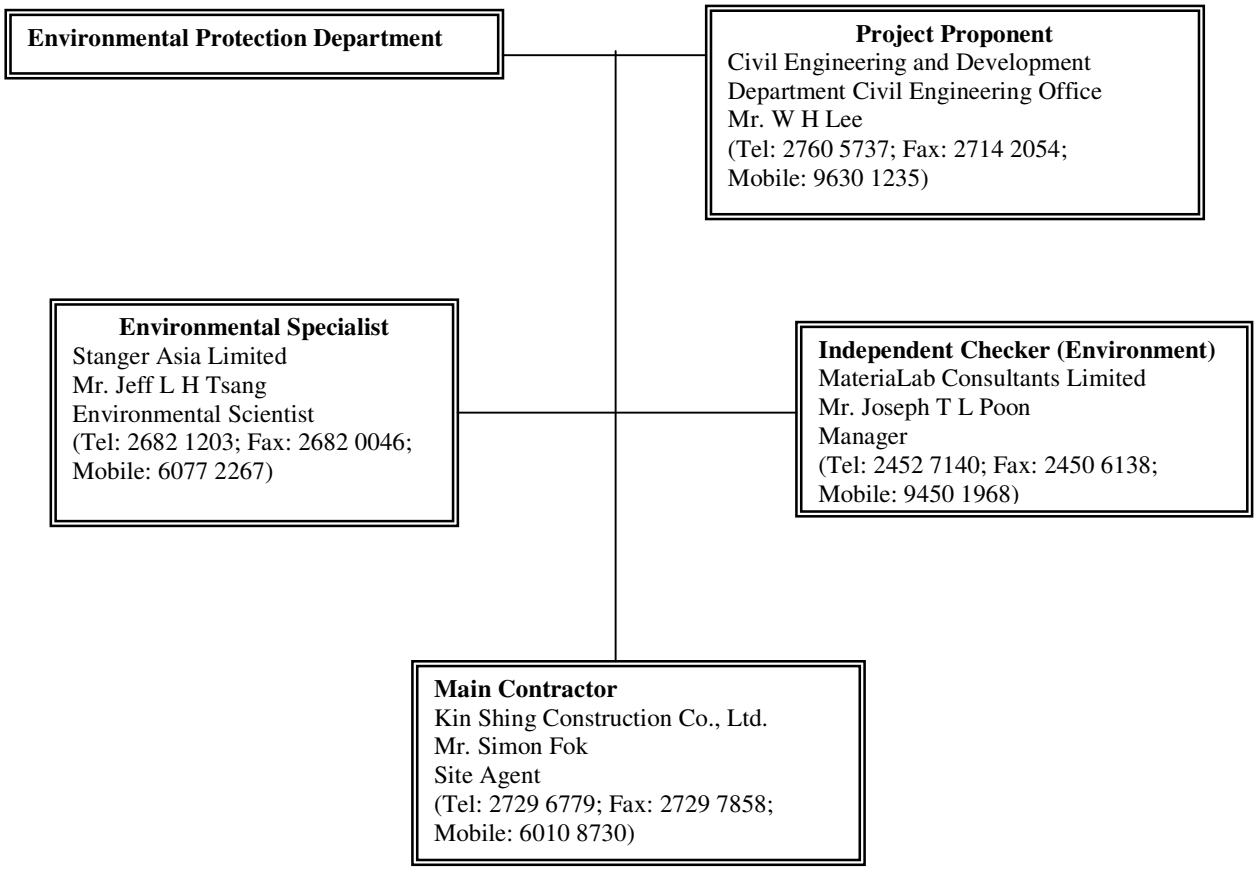

**Figure 6.8 - Depth Averaged Suspended Solids - Mid-Ebb (Wong Shek)**



## Appendix I

## Organisation Chart

**Contract No. CV/2004/02**
**Reconstruction of Wong Shek and Ko Lau Wan Public Piers**
**Environmental Organization Chart**



## Appendix II

## Calibration Certificates of the Monitoring Equipment

Stanger Asia

**SOMP ENV071: CALIBRATION RECORD OF DISSOLVED OXYGEN, SALINITY, CONDUCTIVITY, TEMPERATURE SYSTEM**

Equipment No.: EM 6167

Model No.: YSI 85

Equipment Serial No.: 04L1806

Date of Calibration.: 05-01-2005

Due Date of Next Calibration.: 05-04-2005

Molarity of sodium thiosulphate solution: 0.0250M

Potassium Bi-iodate No.: 480

Stock Calibration Standard Potassium Chloride No. 316

Stock Calibration Check Potassium Chloride No. 648

Reference Thermometer No. RF2358

***Calibration Check for Dissolved Oxygen***

| Standardisation of Sodium Thiosulphate Solution | | | |
|---|---|---|---|
| Standard Solution | Initial burette reading B, mL | Final burette reading C, mL | Vol. of $Na_2S_2O_3$ used A, mL = (C – B) |
| Standard 1 | 0.00 | 20.00 | 20.00 |
| Standard 2 | 0.00 | 20.00 | 20.00 |
| Standard 3 | 0.00 | 20.10 | 20.10 |
| | | Average Value | 20.03 |

| Calibration of the Dissolved Oxygen | | | | | |
|---|---|---|---|---|---|
| Standard Solutions | Initial burette reading B, mL | Final burette reading C, mL | Vol. of $Na_2S_2O_3$ used A, mL = (C – B) | D.O. by titration, mg/L | Meter reading, mg/L |
| A | 0.00 | 2.44 | 2.44 | 2.44 | 2.38 |
| B | 0.00 | 5.45 | 5.45 | 5.46 | 5.40 |
| C | 0.00 | 7.10 | 7.10 | 7.11 | 7.01 |
| D | 0.00 | 8.31 | 8.31 | 8.32 | 8.21 |
| Allowing deviation : ± 10% | | | | | |

***Calibration Check for Salinity***

| Calibration Check of the Salinity | |
|---|---|
| Calibration Check Solutions, ppt | Meter reading, ppt |
| 0.0 | 0.0 |
| 10.0 | 10.4 |
| 20.0 | 20.9 |
| 30.0 | 31.8 |
| 40.0 | 42.5 |
| Allowing deviation : ± 10% | |

Stanger Asia

***Calibration Check for Temperature***

| Calibration Check of the Temperature | |
|---|---|
| Reference Thermometer reading, °C | Meter reading, °C |
| 0.00 | 0.0 |
| 15.10 | 15.1 |
| 24.90 | 25.0 |
| 30.10 | 30.1 |
| Allowing deviation : ± 0.5 °C | |

Tested by : _____ Dennis Tsui

Checked By : _____ Jeff Tsang

Stanger Asia

## SOMP ENV062: CALIBRATION RECORD OF TURBIDIMETER

Date of Calibration: 24/12/2004

Due Date of Next Calibration: 24/03/2005

Equipment No.: EM 2365

Manufacturer: HACH

Model: 2100P

Serial No.: 970500014289

Turbidimeter Calibration standard (HACH): No.1: 20 NTU
No.2: 100 NTU
No.3: 800 NTU

Stock Calibration standard No.: 896

Three-point calibration accepted: Y / N

Stock Calibration checking standards No. QCS 965

| Turbidity value - Checking standards (NTU) | | |
|---|---|---|
| Actual value | Measured value | Accepted*: Y/N |
| 0 | 0 | Y |
| 5 | 5.31 | Y |
| 10 | 10.8 | Y |
| 50 | 52.3 | Y |
| 100 | 103 | Y |
| 400 | 406 | Y |

*Allowing Deviation: +/- 10%

Tested by: _____ Dennis Tsui

Checked by: _____ Jeff Tsang




G/F & 1/F, KTA Centre, 13 On Chuen Street, Fanling, New Territories, HONG KONG. Tel: 852- 2682 1203 Fax: 852- 2682 0046 E-mail address: stanger@stanger.com.hk

Stanger Asia

## SOMP ENV062: CALIBRATION RECORD OF TURBIDIMETER

Date of Calibration: 24/03/2005

Due Date of Next Calibration: 24/06/2005

Equipment No.: EM 2365

Manufacturer: HACH

Model: 2100P

Serial No.: 970500014289

Turbidimeter Calibration standard (HACH): No.1: 20 NTU
No.2: 100 NTU
No.3: 800 NTU

Stock Calibration standard No.: 896

Three-point calibration accepted: Y / N

Stock Calibration checking standards No. QCS 984

| Turbidity value - Checking standards (NTU) | | |
|---|---|---|
| Actual value | Measured value | Accepted*: Y/N |
| 0 | 0 | Y |
| 5 | 5.26 | Y |
| 10 | 10.7 | Y |
| 50 | 51.8 | Y |
| 100 | 101 | Y |
| 400 | 410 | Y |

*Allowing Deviation: +/- 10%

Tested by: _____ Dennis Tsui

Checked by: _____ Arthur Cheng



G/F., & 1/F., KTA Centre, 13 On Chuen Street, Fanling, New Territories, HONG KONG. Tel: 852-2682 1203 Fax: 852-2682 0046 E-mail address: stanger@stanger.com.hk

# Appendix III

# Event and Action Plans

**Event/Action Plan for Water Quality**

| EVENT | ACTION | | | |
|---|---|---|---|---|
| | ES | IC(E) | ER | CONTRACTOR |
| Action level | | | | |
| Action level being exceeded by one sampling day. | 1. Repeat in-situ measurements to confirm findings;<br>2. Identify source(s) of impacts;<br>3. Inform IC(E) and ER;<br>4. Check monitoring data, all plant, equipment and Contractor's working methods;<br>5. Discuss mitigation measures with IC(E), ER and Contractor;<br>6. Repeat measurements on next day of exceedance. | 1. Discuss with ES and Contractor on the mitigation measures;<br>2. Review proposals on mitigation measures submitted by Contractor and advise ER accordingly;<br>3. Assess the effectiveness of implemented mitigation measures. | 1. Discuss with IC(E) on the proposed mitigation measures;<br>2. Make agreement on the mitigation measures to be implemented. | 1. Inform the ER and confirm notification of the non-compliance in writing;<br>2. Rectify unacceptable practice;<br>3. Check all plant and equipment;<br>4. Consider changes of working methods;<br>5. Discuss with ES and IC(E) and propose mitigation measures to IC(E) and ER;<br>6. Implement the agreed mitigation measures. |
| Action level being exceeded by more than one consecutive sampling day. | 1. Repeat in-situ measurements to confirm findings;<br>2. Identify source(s) of impact;<br>3. Inform contractor, IC(E) and ER<br>4. Check monitoring data, all plant, equipment and Contractor's working methods;<br>5. Discuss mitigation measures with IC(E), ER and Contractor;<br>6. Ensure mitigation measures are implemented;<br>7. Prepare to increase the monitoring frequency to daily;<br>8. Repeat measurements on next day of exceedance. | 1. Discuss with ES and Contractor on the proposed mitigation measures;<br>2. Review proposals on mitigation measures submitted by Contractor advise ER accordingly;<br>3. Assess the effectiveness of the implemented mitigation measures. | 1. Discuss with IC(E) on the proposed mitigation measures;<br>2. Make agreement on the mitigation measures to be implemented;<br>3. Assess the effectiveness of the implemented mitigation measures. | 1. Inform the Engineer and confirm notification of the non-compliance in writing;<br>2. Rectify unacceptable practice;<br>3. Check all plant and equipment;<br>4. Consider changes of working methods;<br>5. Discuss with the ES and IC(E) and propose mitigation measures to IC(E) and ER within 3 working days;<br>6. Implement the agreed mitigation measures. |

**Event/Action Plan for Water Quality (Cont'd)**

| EVENT | ACTION | | | |
|---|---|---|---|---|
| | ES | IC(E) | ER | CONTRACTOR |
| Limit level | | | | |
| Limit level being exceeded by one sampling day. | 1. Repeat in-situ measurements to confirm findings;<br>2. Identify source(s) of impact;<br>3. Inform contractor IC(E) and ER;<br>4. Check monitoring data, all plant, equipment and Contractor's working methods;<br>5. Discuss mitigation measures with IC(E), ER and Contractor;<br>6. Ensure mitigation measures are implemented;<br>7. Increase the monitoring frequency to daily until no exceedance of Limit level. | 1. Discuss with ES and Contractor on the mitigation measures;<br>2. Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly;<br>3. Assess the effectiveness of implemented mitigation measures. | 1. Discuss with IC(E), ES and Contractor on the proposed mitigation measures;<br>2. Request Contractor to critically review the working methods;<br>3. Make agreement on the mitigation measures to be implemented;<br>4. Assess the effectiveness of the implemented mitigation measures. | 1. Inform the Engineer and confirm notification of the non-compliance in writing;<br>2. Rectify unacceptable practice;<br>3. Check all plant and equipment;<br>4. Consider changes of working methods;<br>5. Discuss with the ES IC(E) and ER and Propose mitigation measures to IC(E) and ER within 3 working days;<br>6. Implement the agreed mitigation measures. |
| Limit level being exceeded by more than one consecutive sampling day. | 1. Repeat in-situ measurements to confirm findings;<br>2. Identify source(s) of impact;<br>3. Inform contractor, IC(E) and ER;<br>4. Check monitoring data, all plant, equipment and Contractor's working methods;<br>5. Discuss mitigation measures with IC(E), ER and Contractor;<br>6. Ensure mitigation measures are implemented;<br>7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. | 1. Discuss with ES and Contractor on the mitigation measures;<br>2. Review proposals on mitigation measures submitted by the Contractor and advise ER accordingly;<br>3. Assess the effectiveness of implemented mitigation measures. | 1. Discuss with IC(E) ES and Contractor on the proposed mitigation measures;<br>2. Request Contractor to critically review the working methods;<br>3. Make agreement on the mitigation measures to be implemented;<br>4. Assess the effectiveness of the implemented mitigation measures.<br>5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or marine work until no exceedance of Limit level. | 1. Inform the Engineer and confirm notification of the non-compliance in writing;<br>2. Rectify unacceptable practice;<br>3. Check all plant and equipment;<br>4. Consider changes of working methods;<br>5. Discuss with the ES, IC(E) and ER and propose mitigation measures to IC(E) and ER within 3 working days;<br>6. Implement the agreed mitigation measures;<br>7. As directed by the Engineer, slow down or stop all or part of the marine works or construction activities. |

# Appendix IV

# Implementation Status of Mitigation Measures

# IMPLEMENTATION STATUS OF MITIGATION MEASURES

| Area | Mitigation Measures | Implementation Status |
|---|---|---|
| Air Quality | Provide a washpit or a wheel washing and/or vehicle cleaning facility at the exits. | Not applicable in this stage |
| | Provide a hard surfaced road between the wheel washing facilities and any finished road. | Not applicable in this stage |
| | No burning of construction wastes or vegetation shall be allowed on the Site. | Implemented |
| | In the process of material handling, any material which has the potential to create dust shall be treated with water or sprayed with wetting agent. | Not applicable in this stage |
| | Any vehicle with an open load carrying area used for moving materials which has the potential to create dust shall have properly fitting side and tail boards. | Not applicable in this stage |
| | Materials 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. | Not applicable in this stage |
| | Stockpiles of sand, aggregate and construction and demolition material greater than $20m^3$ shall be enclosed on three sides, with walls extending above the pile and 2 meters beyond the front of the pile. | Not applicable in this stage |
| | Water sprays shall be provided and used both to dampen stored materials and when receiving raw materials. | Not applicable in this stage |
| | Clean and water the Site to minimize the fugitive dust emissions. | Implemented |
| | Furnace, boiler or other plant or equipment or use any fuel that might in any circumstances produce smoke or any other air pollution should not be installed. | Implemented |
| Noise | All plant and equipment to be used on Site are properly maintained in good operating condition and noisy construction activities shall be effectively sound-reduced by means of silencers, mufflers, acoustic linings or shields, acoustic sheds or screens or other means to avoid disturbance to any nearby noise sensitive receivers. | Implemented |
| | No excavator mounted breaker shall be used within 125m from any nearby noise sensitive receivers. Use hydraulic concrete crusher whenever applicable. | Implemented |
| | All construction works should stop on Sundays and General Holidays. | Implemented |
| Water Quality | Water in wheel washing facilities shall be changed at frequent intervals and sediments shall be removed regularly. | Not applicable in this stage |
| | The polluted water from the wheel washing facilities would not be discharged into all existing stream courses/drains and nearby waterbodies. | Not applicable in this stage |
| | All existing stream courses and drains within, and adjacent to the Site should be kept free from any debris and any excavated materials arising from the Works | Implemented |
| | Chemicals and concrete agitator washings should not be deposited in watercourses. | Implemented |
| | The effluent shall comply with the standards stated in the "Technical Memorandum on Standards and Effluent discharges into Drainage and Sewerage Systems, Inland and Coastal Waters" for the appropriate Water Control Zone. | Implemented |
| | No spoil or debris of any kind is allowed to be pushed, washed down, fall or be deposited on land or on the seabed adjacent to the Site. | Implemented |

# IMPLEMENTATION STATUS OF MITIGATION MEASURES

| Area | Mitigation Measures | Implementation Status |
|---|---|---|
| | Maintain any existing site drainage system at all times including removal of solids in sand traps, manholes and stream beds. | Implemented |
| | Material from any earthworks should not be washed into the drainage system. | Implemented |
| | Silt curtain shall be provided during all demolition works and piling works with the Site. | Not applicable in this stage |
| | Silt curtain shall be formed from tough, abrasion-resistant permeable membranes suitable for the purpose, supported on floating booms in such a way as to ensure that the passage of turbid water to the surrounding water shall be restricted. | Not applicable in this stage |
| | No dredging and spoil dumping shall be conducted. | Not applicable in this stage |
| Ecology | Marker buoys shall be set up to indicate the location of the "Coral Exclusion Zone". All working vessels shall be restricted to encroach the "Coral Exclusion Zone" | Implemented |
| | No overloading of the working barges during operation and no movement of the working barges, particularly close to the pier and shallow areas, during low tide should be allowed. | Not applicable in this stage |
| | No coral shall be enclosed by the silt curtain. | Not applicable in this stage |
| Waste | All excavated materials should be sorted to recover the inert portions for reuse on site or disposal to designated outlets. | Not applicable in this stage |
| | All metals should be recovered on site for collection by recycling contractors. | Not applicable in this stage |
| | All cardboard and paper packaging should be recovered on site, properly stockpiled in dry condition and covered to prevent cross contamination by other C&D materials. | Not applicable in this stage |
| | All demolition debris from demolition works should be sorted to recover on site broken concrete, reinforcement bars, mechanical and electrical fittings as well as other building services fittings/materials that have established recycling outlets. | Not applicable in this stage |

# Appendix V

# Water Quality Monitoring Data

Project: Contract No. CV/2004/02 Reconstruction of Wong Shek and Ko Lau Wan Public Piers  Client: Kin Shing Construction Co., Ltd.  Job No.: 1618.3

Date of Sampling : 11/03/2005  Weather Condition: Hazy  Ambient Temperature,°C: 23  Tide State: Mid-Flood

| Station | Time | Sea Condition | Overall Depth, m | Sampling Depth,m | Temperature, °C | | Dissolved Oxygen, mg/L | | | Dissolved Oxygen, % | | | Salinity, ppt | | Turbidity, NTU | | | Suspended Solids, mg/L | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | a | b | a | b | Average | a | b | Average | a | b | a | b | Average | | | Depth Average | |
| MW1 S | | | | 1 | 16.8 | 16.8 | 9.09 | 9.27 | 9.05 | 112.9 | 112.8 | 114.3 | 32.6 | 32.6 | 1.55 | 1.40 | | 6 | 7 | | |
| MW1 M | 17:00 | Stable | 8 | 4 | 16.2 | 16.2 | 9.01 | 8.84 | | 115.1 | 116.4 | | 32.7 | 32.7 | 1.39 | 1.33 | 1.31 | 5 | 4 | 5.3 | |
| MW1 B | | | | 7 | 16.1 | 16.1 | 8.07 | 8.22 | 8.15 | 101.0 | 100.1 | 100.6 | 32.6 | 32.7 | 1.16 | 1.05 | | 5 | 5 | | |
| MW2 S | | | | 1 | 16.5 | 16.5 | 8.91 | 8.82 | 9.03 | 110.7 | 100.1 | 105.7 | 32.6 | 32.6 | 1.60 | 1.63 | | 7 | 7 | | |
| MW2 M | 16:40 | Stable | 12 | 6 | 15.9 | 15.9 | 9.06 | 9.31 | | 106.7 | 105.4 | | 32.6 | 32.6 | 1.27 | 1.34 | 1.36 | 6 | 5 | 5.7 | |
| MW2 B | | | | 11 | 15.7 | 15.6 | 8.35 | 8.25 | 8.30 | 106.4 | 106.7 | 106.6 | 32.6 | 32.6 | 1.15 | 1.19 | | 4 | 5 | | |
| CW1 S | | | | 1 | 17.3 | 17.3 | 9.11 | 9.06 | 9.09 | 117.2 | 119.2 | 118.2 | 32.5 | 32.5 | 2.28 | 2.19 | | 6 | 6 | | |
| CW1 M | 17:10 | Stable | 4 | | | | | | | | | | | | | | 2.04 | | | 6.5 | |
| CW1 B | | | | 3 | 16.3 | 16.3 | 8.74 | 8.65 | 8.70 | 116.2 | 113.8 | 115.0 | 32.6 | 32.6 | 1.86 | 1.84 | | 7 | 7 | | |
| CW2 S | | | | 1 | 17.2 | 17.0 | 8.60 | 8.57 | 8.68 | 116.8 | 115.0 | 109.7 | 32.4 | 32.5 | 2.95 | 2.93 | | 8 | 9 | | |
| CW2 M | 16:50 | Stable | 13 | 6.5 | 15.7 | 15.7 | 8.96 | 8.58 | | 102.8 | 104.0 | | 32.6 | 32.6 | 1.88 | 1.99 | 2.64 | 7 | 7 | 7.3 | |
| CW2 B | | | | 12 | 15.4 | 15.4 | 7.84 | 7.89 | 7.87 | 104.4 | 103.2 | 103.8 | 32.6 | 32.6 | 3.02 | 3.05 | | 7 | 6 | | |

Equipment used:
Dissolved Oxygen Meter: EM 6167  Calibration Check: 0mg/L: OK  100%: OK  Sampled By: C Y Cheng
Turbidity Meter: EM 2365  Calibration Check: 5.12, 50.6, 516 NTU  Checked By:
Salinity Meter: EM 6167  Calibration Check: 58.8 mS  Date:
Thermometer: EM 6167

Project: Contract No. CV/2004/02 Reconstruction of Wong Shek and Ko Lau Wan Public Piers  Client: Kin Shing Construction Co., Ltd.  Job No.: 1618.3

Date of Sampling : 11/03/2005  Weather Condition: Hazy  Ambient Temperature,°C: 21  Tide State: Mid-Ebb

| Station | Time | Sea Condition | Overall Depth, m | Sampling Depth,m | Temperature, °C | | Dissolved Oxygen, mg/L | | | Dissolved Oxygen, % | | | Salinity, ppt | | Turbidity, NTU | | | Suspended Solids, mg/L | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | a | b | a | b | Average | a | b | Average | a | b | a | b | Average | | | Depth Average | |
| MW1 S | | | | 1 | 17.0 | 16.9 | 9.13 | 9.12 | | 109.2 | 108.7 | | 32.5 | 32.6 | 1.43 | 1.36 | | 8 | 6 | | |
| MW1 M | 13:35 | Stable | 7 | 3.5 | 15.9 | 15.9 | 8.67 | 8.31 | 8.81 | 107.7 | 112.0 | 109.4 | 32.6 | 32.6 | 1.32 | 1.18 | 1.29 | 6 | 7 | 6.7 | |
| MW1 B | | | | 6 | 15.8 | 15.8 | 7.64 | 7.54 | 7.59 | 104.1 | 100.5 | 102.3 | 32.6 | 32.6 | 1.16 | 1.27 | | 7 | 6 | | |
| MW2 S | | | | 1 | 17.2 | 17.2 | 8.35 | 8.31 | | 109.8 | 107.4 | | 32.6 | 32.6 | 1.56 | 1.39 | | 7 | 4 | | |
| MW2 M | 13:15 | Stable | 10 | 5 | 15.8 | 15.8 | 8.42 | 8.60 | 8.42 | 106.8 | 105.4 | 107.4 | 32.5 | 32.5 | 1.36 | 1.44 | 1.37 | 5 | 6 | 5.7 | |
| MW2 B | | | | 9 | 15.7 | 15.7 | 8.18 | 8.28 | 8.23 | 98.1 | 99.7 | 98.9 | 32.5 | 32.5 | 1.16 | 1.29 | | 5 | 7 | | |
| CW1 S | | | | 1 | 17.4 | 17.4 | 7.99 | 8.13 | | 104.2 | 106.0 | | 32.4 | 32.5 | 1.72 | 1.68 | | 11 | 5 | | |
| CW1 M | 13:45 | Stable | 4 | | | | | | 8.06 | | | 105.1 | | | | | 1.66 | | | 8.8 | |
| CW1 B | | | | 3 | 16.1 | 16.1 | 7.90 | 7.86 | 7.88 | 107.2 | 106.0 | 106.6 | 32.7 | 32.7 | 1.57 | 1.65 | | 10 | 9 | | |
| CW2 S | | | | 1 | 17.1 | 17.1 | 8.67 | 8.55 | | 113.7 | 112.5 | | 32.4 | 32.4 | 2.44 | 2.48 | | 5 | 12 | | |
| CW2 M | 13:25 | Stable | 11 | 5.5 | 16.0 | 16.0 | 8.71 | 8.86 | 8.70 | 117.6 | 115.8 | 114.9 | 32.6 | 32.6 | 3.05 | 3.05 | 2.77 | 7 | 8 | 8.0 | |
| CW2 B | | | | 10 | 15.5 | 15.5 | 7.68 | 7.64 | 7.66 | 98.5 | 96.8 | 97.7 | 32.5 | 32.5 | 2.73 | 2.84 | | 8 | 8 | | |

Equipment used:

Dissolved Oxygen Meter: EM 6167  Calibration Check: 0mg/L: OK  100%: OK

Turbidity Meter: EM 2365  Calibration Check: 5.12, 50.6, 516 NTU

Salinity Meter: EM 6167  Calibration Check: 58.8 mS

Thermometer: EM 6167

Sampled By: C Y Cheng

Checked By:

Date:

Project: Contract No. CV/2004/02 Reconstruction of Wong Shek and Ko Lau Wan Public Piers  Client: Kin Shing Construction Co., Ltd.  Job No.: 1618.3

Date of Sampling : 15/03/2005  Weather Condition: Cloudy  Ambient Temperature,°C: 16  Tide State: Mid-Flood

| Station | Time | Sea Condition | Overall Depth, m | Sampling Depth,m | Temperature, °C | | Dissolved Oxygen, mg/L | | | Dissolved Oxygen, % | | | Salinity, ppt | | Turbidity, NTU | | | Suspended Solids, mg/L | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | a | b | a | b | Average | a | b | Average | a | b | a | b | Average | | | Depth Average | |
| MW1 S | | | | 1 | 14.7 | 14.7 | 7.77 | 7.75 | | 94.0 | 93.4 | | 32.6 | 32.6 | 1.41 | 1.44 | | 4 | 5 | | |
| MW1 M | 09:50 | Stable | 6 | 3 | 14.7 | 14.7 | 8.00 | 7.97 | 7.87 | 98.1 | 97.4 | 95.7 | 32.5 | 32.6 | 1.28 | 1.29 | 1.46 | 5 | 5 | 5.2 | |
| MW1 B | | | | 5 | 14.7 | 14.7 | 8.05 | 8.19 | 8.12 | 95.8 | 95.9 | 95.9 | 32.6 | 32.6 | 1.68 | 1.68 | | 6 | 6 | | |
| MW2 S | | | | 1 | 14.7 | 14.7 | 8.42 | 8.43 | | 102.6 | 101.8 | | 32.6 | 32.6 | 1.35 | 1.37 | | 7 | 7 | | |
| MW2 M | 09:30 | Stable | 8 | 4 | 14.7 | 14.7 | 8.54 | 8.49 | 8.47 | 99.9 | 99.1 | 100.9 | 32.5 | 32.6 | 1.74 | 1.68 | 1.45 | 6 | 7 | 6.2 | |
| MW2 B | | | | 7 | 14.7 | 14.7 | 8.19 | 8.18 | 8.19 | 100.6 | 100.0 | 100.3 | 32.5 | 32.6 | 1.30 | 1.26 | | 5 | 5 | | |
| CW1 S | | | | 1 | 14.7 | 14.7 | 8.31 | 8.26 | | 98.6 | 99.9 | | 32.6 | 32.6 | 1.62 | 1.63 | | 9 | 8 | | |
| CW1 M | 10:00 | Stable | 4 | | | | | | 8.29 | | | 99.3 | | | | | 1.67 | | | 7.8 | |
| CW1 B | | | | 3 | 14.7 | 14.7 | 8.31 | 8.38 | 8.35 | 97.7 | 100.9 | 99.3 | 32.6 | 32.6 | 1.69 | 1.72 | | 7 | 7 | | |
| CW2 S | | | | 1 | 14.8 | 14.8 | 8.11 | 8.13 | | 99.3 | 98.6 | | 32.6 | 32.6 | 1.38 | 1.41 | | 7 | 7 | | |
| CW2 M | 09:40 | Stable | 10 | 5 | 14.8 | 14.8 | 8.17 | 8.17 | 8.15 | 100.4 | 99.5 | 99.5 | 32.6 | 32.6 | 1.44 | 1.45 | 1.58 | 8 | 7 | 7.3 | |
| CW2 B | | | | 9 | 14.8 | 14.8 | 8.42 | 8.52 | 8.47 | 98.2 | 98.3 | 98.3 | 32.6 | 32.6 | 1.91 | 1.90 | | 9 | 6 | | |

Equipment used:
Dissolved Oxygen Meter: EM 6167  Calibration Check: 0mg/L: OK  100%: OK
Turbidity Meter: EM 2365  Calibration Check: 5.12, 51.4, 521 NTU
Salinity Meter: EM 6167  Calibration Check: 58.8 mS
Thermometer: EM 6167

Sampled By: C Y Cheng
Checked By:
Date:

Project: Contract No. CV/2004/02 Reconstruction of Wong Shek and Ko Lau Wan Public Piers  Client: Kin Shing Construction Co., Ltd.  Job No.: 1618.3

Date of Sampling : 15/03/2005  Weather Condition: Cloudy  Ambient Temperature,°C: 16  Tide State: Mid-Ebb

| Station | Time | Sea Condition | Overall Depth, m | Sampling Depth,m | Temperature, °C | | Dissolved Oxygen, mg/L | | | Dissolved Oxygen, % | | | Salinity, ppt | | Turbidity, NTU | | | Suspended Solids, mg/L | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | a | b | a | b | Average | a | b | Average | a | b | a | b | Average | | | Depth Average | |
| MW1 S | | | | 1 | 14.9 | 14.9 | 8.89 | 8.92 | | 107.2 | 107.2 | | 32.7 | 32.6 | 1.08 | 1.10 | | 6 | 4 | | |
| MW1 M | 15:50 | Stable | 6 | 3 | 14.9 | 14.9 | 9.13 | 9.01 | 8.99 | 107.6 | 107.8 | 107.5 | 32.6 | 32.6 | 1.42 | 1.54 | 1.23 | 4 | 6 | 5.7 | |
| MW1 B | | | | 5 | 14.9 | 14.9 | 9.12 | 9.04 | 9.08 | 108.9 | 110.0 | 109.5 | 32.6 | 32.6 | 1.08 | 1.15 | | 7 | 7 | | |
| MW2 S | | | | 1 | 14.9 | 15.0 | 8.80 | 8.76 | | 107.1 | 107.5 | | 32.6 | 32.6 | 1.13 | 1.21 | | 6 | 6 | | |
| MW2 M | 15:30 | Stable | 7 | 3.5 | 14.8 | 14.8 | 8.65 | 8.75 | 8.74 | 104.6 | 105.0 | 106.1 | 32.6 | 32.6 | 1.21 | 1.25 | 1.27 | 7 | 6 | 6.7 | |
| MW2 B | | | | 6 | 14.9 | 14.8 | 8.78 | 8.68 | 8.73 | 106.7 | 107.3 | 107.0 | 32.6 | 32.6 | 1.42 | 1.38 | | 7 | 8 | | |
| CW1 S | | | | 1 | 15.0 | 15.0 | 8.41 | 8.41 | | 103.0 | 102.3 | | 32.6 | 32.6 | 1.87 | 1.79 | | 8 | 9 | | |
| CW1 M | 16:00 | Stable | 4 | | | | | | 8.41 | | | 102.7 | | | | | 1.73 | | | 8.5 | |
| CW1 B | | | | 3 | 15.0 | 15.0 | 8.56 | 8.66 | 8.61 | 107.0 | 108.4 | 107.7 | 32.6 | 32.6 | 1.62 | 1.63 | | 10 | 7 | | |
| CW2 S | | | | 1 | 15.0 | 15.0 | 9.00 | 8.97 | | 110.5 | 109.6 | | 32.6 | 32.6 | 2.22 | 1.27 | | 10 | 9 | | |
| CW2 M | 15:40 | Stable | 9 | 4.5 | 14.8 | 14.8 | 9.08 | 8.98 | 9.01 | 110.6 | 110.3 | 110.3 | 32.6 | 32.6 | 1.78 | 1.72 | 1.92 | 9 | 9 | 9.0 | |
| CW2 B | | | | 8 | 14.8 | 14.8 | 8.87 | 8.79 | 8.83 | 109.2 | 110.0 | 109.6 | 32.7 | 32.6 | 2.29 | 2.26 | | 8 | 9 | | |

Equipment used:
Dissolved Oxygen Meter: EM 6167  Calibration Check: 0mg/L: OK  100%: OK  Sampled By: C Y Cheng
Turbidity Meter: EM 2365  Calibration Check: 5.12, 51.4, 521 NTU  Checked By:
Salinity Meter: EM 6167  Calibration Check: 58.9 mS  Date:
Thermometer: EM 6167

Project: Contract No. CV/2004/02 Reconstruction of Wong Shek and Ko Lau Wan Public Piers  Client: Kin Shing Construction Co., Ltd.  Job No.: 1618.3

Date of Sampling : 23/03/2005  Weather Condition: Cloudy  Ambient Temperature,°C: 21  Tide State: Mid-Flood

| Station | Time | Sea Condition | Overall Depth, m | Sampling Depth,m | Temperature, °C | | Dissolved Oxygen, mg/L | | | Dissolved Oxygen, % | | | Salinity, ppt | | Turbidity, NTU | | | Suspended Solids, mg/L | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | a | b | a | b | Average | a | b | Average | a | b | a | b | Average | | | Depth Average | |
| MW1 S | | Stable | 7 | 1 | 17.1 | 17.1 | 8.19 | 8.22 | 8.18 | 100.7 | 100.8 | 101.9 | 32.6 | 32.6 | 1.32 | 1.31 | 1.28 | 6 | 5 | 5.2 | |
| MW1 M | 16:30 | | | 3.5 | 17.0 | 17.0 | 8.16 | 8.15 | | 103.1 | 103.0 | | 32.6 | 32.6 | 1.29 | 1.27 | | 5 | 5 | | |
| MW1 B | | | | 6 | 16.7 | 16.7 | 8.14 | 8.10 | 8.12 | 102.9 | 102.5 | 102.7 | 32.5 | 32.5 | 1.26 | 1.25 | | 5 | 5 | | |
| MW2 S | | Stable | 10 | 1 | 17.3 | 17.3 | 8.24 | 8.29 | 8.22 | 104.2 | 104.1 | 103.7 | 32.5 | 32.5 | 1.40 | 1.41 | 1.39 | 7 | 7 | 6.3 | |
| MW2 M | 16:00 | | | 5 | 17.1 | 17.1 | 8.19 | 8.17 | | 103.2 | 103.2 | | 32.5 | 32.5 | 1.38 | 1.41 | | 7 | 6 | | |
| MW2 B | | | | 9 | 17.0 | 17.0 | 7.98 | 7.86 | 7.92 | 101.7 | 101.5 | 101.6 | 32.5 | 32.5 | 1.42 | 1.33 | | 6 | 5 | | |
| CW1 S | | Stable | 4 | 1 | 17.0 | 17.0 | 8.14 | 8.13 | 8.14 | 103.0 | 102.9 | 103.0 | 32.6 | 32.6 | 1.48 | 1.50 | 1.58 | 8 | 7 | 6.5 | |
| CW1 M | 16:40 | | | | | | | | | | | | | | | | | | | | |
| CW1 B | | | | 3 | 17.0 | 17.0 | 8.10 | 8.14 | 8.12 | 102.1 | 101.8 | 102.0 | 32.6 | 32.6 | 1.61 | 1.71 | | 6 | 5 | | |
| CW2 S | | Stable | 10 | 1 | 17.0 | 17.0 | 8.22 | 8.29 | 8.18 | 102.3 | 101.9 | 103.0 | 32.5 | 32.5 | 1.55 | 1.59 | 1.47 | 6 | 6 | 6.3 | |
| CW2 M | 16:15 | | | 5 | 16.9 | 16.9 | 8.11 | 8.11 | | 104.2 | 103.4 | | 32.5 | 32.5 | 1.43 | 1.44 | | 7 | 5 | | |
| CW2 B | | | | 9 | 16.4 | 16.4 | 8.31 | 8.30 | 8.31 | 103.4 | 103.5 | 103.5 | 32.6 | 32.6 | 1.33 | 1.47 | | 7 | 7 | | |

Equipment used:
Dissolved Oxygen Meter: EM 6167  Calibration Check: 0mg/L: OK  100%: OK  Sampled By: M L Ma
Turbidity Meter: EM 2365  Calibration Check: 5.37, 48.3, 494 NTU  Checked By:
Salinity Meter: EM 6167  Calibration Check: 58.8 mS  Date:
Thermometer: EM 6167

Project: Contract No. CV/2004/02 Reconstruction of Wong Shek and Ko Lau Wan Public Piers  Client: Kin Shing Construction Co., Ltd.  Job No.: 1618.3

Date of Sampling : 23/03/2005  Weather Condition: Cloudy  Ambient Temperature,°C: 21  Tide State: Mid-Ebb

| Station | Time | Sea Condition | Overall Depth, m | Sampling Depth,m | Temperature, °C | | Dissolved Oxygen, mg/L | | | Dissolved Oxygen, % | | | Salinity, ppt | | Turbidity, NTU | | | Suspended Solids, mg/L | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | a | b | a | b | Average | a | b | Average | a | b | a | b | Average | | | Depth Average | |
| MW1 S | | | | 1 | 16.9 | 16.9 | 8.40 | 8.02 | | 99.8 | 99.7 | | 32.4 | 32.5 | 1.28 | 1.21 | | 6 | 7 | | |
| MW1 M | 11:40 | Stable | 7 | 3.5 | 16.7 | 16.7 | 8.16 | 8.14 | 8.18 | 102.8 | 102.6 | 101.2 | 32.5 | 32.5 | 1.29 | 1.34 | 1.30 | 9 | 7 | 6.7 | |
| MW1 B | | | | 6 | 16.7 | 16.7 | 8.24 | 8.27 | 8.26 | 101.5 | 98.6 | 100.1 | 32.5 | 32.5 | 1.34 | 1.35 | | 5 | 6 | | |
| MW2 S | | | | 1 | 16.6 | 16.6 | 9.45 | 9.40 | | 96.1 | 96.8 | | 32.5 | 32.5 | 1.31 | 1.34 | | 7 | 9 | | |
| MW2 M | 11:15 | Stable | 8 | 4 | 16.6 | 16.6 | 8.16 | 8.15 | 8.79 | 100.8 | 102.0 | 98.9 | 32.5 | 32.5 | 1.23 | 1.28 | 1.31 | 7 | 6 | 6.7 | |
| MW2 B | | | | 7 | 16.5 | 16.5 | 8.27 | 8.28 | 8.28 | 103.4 | 103.6 | 103.5 | 32.5 | 32.5 | 1.38 | 1.34 | | 6 | 5 | | |
| CW1 S | | | | 1 | 16.9 | 16.9 | 8.11 | 8.10 | | 100.4 | 100.8 | | 32.5 | 32.5 | 1.44 | 1.48 | | 8 | 8 | | |
| CW1 M | 11:50 | Stable | 4 | | | | | | 8.11 | | | 100.6 | | | | | 1.55 | | | 6.5 | |
| CW1 B | | | | 3 | 16.6 | 16.6 | 8.19 | 8.20 | 8.20 | 103.5 | 103.2 | 103.4 | 32.5 | 32.5 | 1.65 | 1.62 | | 5 | 5 | | |
| CW2 S | | | | 1 | 16.7 | 16.7 | 8.13 | 8.11 | | 102.6 | 102.4 | | 32.5 | 32.5 | 1.61 | 1.57 | | 8 | 6 | | |
| CW2 M | 11:25 | Stable | 10 | 5 | 16.6 | 16.6 | 8.17 | 8.19 | 8.15 | 101.8 | 101.7 | 102.1 | 32.5 | 32.5 | 1.39 | 1.34 | 1.44 | 8 | 6 | 7.0 | |
| CW2 B | | | | 9 | 16.5 | 16.5 | 8.11 | 8.08 | 8.10 | 103.2 | 102.7 | 103.0 | 32.6 | 32.6 | 1.34 | 1.41 | | 8 | 6 | | |

Equipment used:
Dissolved Oxygen Meter: EM 6167  Calibration Check: 0mg/L: OK  100%: OK  Sampled By: M L Ma
Turbidity Meter: EM 2365  Calibration Check: 5.37, 48.3, 494 NTU  Checked By:
Salinity Meter: EM 6167  Calibration Check: 58.8 mS  Date:
Thermometer: EM 6167

Project: Contract No. CV/2004/02 Reconstruction of Wong Shek and Ko Lau Wan Public Piers  Client: Kin Shing Construction Co., Ltd.  Job No.: 1618.3

Date of Sampling : 29/03/2005  Weather Condition: Sunny  Ambient Temperature,°C: 22  Tide State: Mid-Flood

| Station | Time | Sea Condition | Overall Depth, m | Sampling Depth,m | Temperature, °C | | Dissolved Oxygen, mg/L | | | Dissolved Oxygen, % | | | Salinity, ppt | | Turbidity, NTU | | | Suspended Solids, mg/L | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | a | b | a | b | Average | a | b | Average | a | b | a | b | Average | | | Depth Average | |
| MW1 S | | Stable | 7 | 1 | 19.3 | 19.2 | 7.59 | 7.64 | 7.63 | 99.6 | 98.7 | 98.2 | 32.8 | 32.8 | 1.40 | 1.44 | 1.45 | 4 | 7 | 6.0 | |
| MW1 M | 09:30 | | | 3.5 | 18.4 | 18.5 | 7.62 | 7.65 | | 97.0 | 97.3 | | 32.7 | 32.8 | 1.41 | 1.50 | | 7 | 7 | | |
| MW1 B | | | | 6 | 17.1 | 17.1 | 7.67 | 7.68 | 7.68 | 97.6 | 96.6 | 97.1 | 32.7 | 32.8 | 1.42 | 1.51 | | 6 | 5 | | |
| MW2 S | | Stable | 9 | 1 | 18.5 | 18.5 | 7.32 | 7.35 | 7.40 | 95.3 | 95.1 | 95.5 | 32.7 | 32.7 | 1.37 | 1.32 | 1.40 | 7 | 7 | 5.7 | |
| MW2 M | 09:00 | | | 4.5 | 17.3 | 17.3 | 7.31 | 7.60 | | 95.7 | 96.0 | | 32.7 | 32.7 | 1.39 | 1.44 | | 6 | 4 | | |
| MW2 B | | | | 8 | 16.9 | 16.9 | 7.72 | 7.68 | 7.70 | 97.3 | 97.9 | 97.6 | 32.8 | 32.8 | 1.45 | 1.44 | | 5 | 5 | | |
| CW1 S | | Stable | 4 | 1 | 19.3 | 19.3 | 7.30 | 7.30 | 7.30 | 99.5 | 97.8 | 98.7 | 32.7 | 32.7 | 1.47 | 1.48 | 1.39 | 6 | 8 | 7.0 | |
| CW1 M | 09:15 | | | | | | | | | | | | | | | | | | | | |
| CW1 B | | | | 3 | 18.9 | 18.9 | 7.32 | 7.44 | 7.38 | 98.8 | 99.2 | 99.0 | 32.8 | 32.8 | 1.30 | 1.32 | | 7 | 7 | | |
| CW2 S | | Stable | 11 | 1 | 17.9 | 17.9 | 7.53 | 7.46 | 7.66 | 97.8 | 98.2 | 97.5 | 32.8 | 32.8 | 1.51 | 1.52 | 1.63 | 10 | 9 | 7.7 | |
| CW2 M | 09:45 | | | 5.5 | 17.0 | 17.0 | 7.80 | 7.84 | | 97.1 | 97.0 | | 32.8 | 32.8 | 1.61 | 1.67 | | 8 | 8 | | |
| CW2 B | | | | 10 | 16.8 | 16.8 | 7.88 | 7.83 | 7.86 | 99.1 | 99.8 | 99.5 | 32.9 | 32.9 | 1.74 | 1.75 | | 6 | 5 | | |

Equipment used:
Dissolved Oxygen Meter: EM 6167  Calibration Check: 0mg/L: OK  100%: OK  Sampled By: C Y Cheng
Turbidity Meter: EM 2365  Calibration Check: 5.36, 48.4, 498 NTU  Checked By:
Salinity Meter: EM 6167  Calibration Check: 58.8 mS  Date:
Thermometer: EM 6167

Project: Contract No. CV/2004/02 Reconstruction of Wong Shek and Ko Lau Wan Public Piers  Client: Kin Shing Construction Co., Ltd.  Job No.: 1618.3

Date of Sampling : 29/03/2005  Weather Condition: Sunny  Ambient Temperature,°C: 23  Tide State: Mid-Ebb

| Station | Time | Sea Condition | Overall Depth, m | Sampling Depth,m | Temperature, °C | | Dissolved Oxygen, mg/L | | | Dissolved Oxygen, % | | | Salinity, ppt | | Turbidity, NTU | | | Suspended Solids, mg/L | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | a | b | a | b | Average | a | b | Average | a | b | a | b | Average | | | Depth Average | |
| MW1 S | | | | 1 | 18.3 | 18.3 | 7.22 | 7.23 | | 92.3 | 91.5 | | 32.7 | 32.7 | 1.40 | 1.42 | | 6 | 6 | | |
| MW1 M | 15:15 | Stable | 6 | 3 | 17.5 | 17.5 | 7.17 | 7.45 | 7.27 | 93.8 | 93.4 | 92.8 | 32.7 | 32.7 | 1.28 | 1.30 | 1.33 | 8 | 6 | 6.7 | |
| MW1 B | | | | 5 | 17.1 | 17.1 | 7.55 | 7.51 | 7.53 | 93.8 | 95.8 | 94.8 | 32.8 | 32.8 | 1.27 | 1.32 | | 7 | 7 | | |
| MW2 S | | | | 1 | 18.1 | 18.1 | 7.34 | 7.31 | | 95.1 | 93.9 | | 32.6 | 32.6 | 1.33 | 1.35 | | 7 | 7 | | |
| MW2 M | 14:45 | Stable | 8 | 4 | 17.1 | 17.1 | 7.58 | 7.52 | 7.44 | 93.6 | 95.6 | 94.6 | 32.6 | 32.6 | 1.39 | 1.40 | 1.40 | 6 | 5 | 6.7 | |
| MW2 B | | | | 7 | 16.9 | 16.9 | 7.27 | 7.14 | 7.21 | 94.7 | 95.6 | 95.2 | 32.8 | 32.8 | 1.44 | 1.46 | | 7 | 8 | | |
| CW1 S | | | | 1 | 18.1 | 18.1 | 7.63 | 7.70 | | 100.1 | 100.2 | | 32.7 | 32.7 | 1.47 | 1.47 | | 8 | 10 | | |
| CW1 M | 15:30 | Stable | 4 | | | | | | 7.67 | | | 100.2 | | | | | 1.49 | | | 9.0 | |
| CW1 B | | | | 3 | 17.5 | 17.5 | 7.37 | 7.19 | 7.28 | 99.5 | 99.2 | 99.4 | 32.7 | 32.7 | 1.51 | 1.52 | | 9 | 9 | | |
| CW2 S | | | | 1 | 18.2 | 18.2 | 7.43 | 7.39 | | 95.2 | 96.0 | | 32.6 | 32.6 | 1.62 | 1.64 | | 8 | 10 | | |
| CW2 M | 15:00 | Stable | 11 | 5.5 | 17.2 | 17.2 | 7.48 | 7.71 | 7.50 | 94.9 | 95.0 | 95.3 | 32.7 | 32.7 | 1.71 | 1.74 | 1.71 | 8 | 9 | 9.0 | |
| CW2 B | | | | 10 | 16.8 | 16.8 | 7.49 | 7.39 | 7.44 | 96.6 | 98.2 | 97.4 | 32.8 | 32.8 | 1.74 | 1.79 | | 10 | 9 | | |

Equipment used:
Dissolved Oxygen Meter: EM 6167  Calibration Check: 0mg/L: OK  100%: OK  Sampled By: C Y Cheng
Turbidity Meter: EM 2365  Calibration Check: 5.28, 48.5, 499 NTU  Checked By:
Salinity Meter: EM 6167  Calibration Check: 58.8 mS  Date:
Thermometer: EM 6167

## Quality Assurance Report on laboratory tests

*Determination of suspended solids*

| Date of Analysis | Blank | | Quality Control | | Duplicate Analysis | | Spike Recovery Analysis | |
|---|---|---|---|---|---|---|---|---|
| | Acceptable Range | Analysis Results | Acceptable Range | Analysis Results | Acceptable Range | Analysis Results | Acceptable Range | Analysis Results |
| | g | g | mg/L | mg/L | % | % | % | % |
| 12/03/2005 | -0.0003 to 0.0003 | -0.0001 to 0.0001 | 43 to 55 | 46 to 53 | less than 15 | 8 to 13 | 78 to 114 | 80 to 105 |
| 16/03/2005 | -0.0003 to 0.0003 | -0.0001 to 0.0001 | 43 to 55 | 49 to 50 | less than 15 | 4 to 13 | 78 to 114 | 94 to 107 |
| 24/03/2005 | -0.0003 to 0.0003 | -0.0002 to 0.0001 | 43 to 55 | 48 to 54 | less than 15 | 3 to 9 | 78 to 114 | 89 to 95 |
| 30/03/2005 | -0.0003 to 0.0003 | -0.0001 to 0.0001 | 43 to 55 | 45 to 50 | less than 15 | 9 to 12 | 78 to 114 | 90 to 105 |

*Limit of Detection:1mg/L

**APPENDIX VI**

**COMPLAINT LOG**

| **Contract No. CV/2004/02 Reconstruction of Wong Shek and Ko Lau Wan Public - Complaints Log** | | | | | | |
|---|---|---|---|---|---|---|
| Complaint Log No. | Date of Receipt | Received From and Received By | Nature of Complaint | Date Investigated | Outcome | Date of Reply and to Whom |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

## APPENDIX VII

## Cumulative Statistics on Complaints, Notifications of Summonses and Successful Prosecutions

| **Contract No. CV/2004/02 Reconstruction of Wong Shek and Ko Lau Wan Public Cumulative Statistics on Complaints** | | | |
|---|---|---|---|
| Environmental Parameters | Cumulative No. Brought Forward | No. of Complaints This Month | Cumulative Number to Date |
| Air | - | - | - |
| Noise | - | - | - |
| Water | - | - | - |
| Waste | - | - | - |
| Total | - | - | - |

| **Contract No. CV/2004/02 Reconstruction of Wong Shek and Ko Lau Wan Public Cumulative Statistics on Successful Prosecutions** | | | |
|---|---|---|---|
| Environmental Parameters | Cumulative No. Brought Forward | No. of Successful Prosecutions this month (Offence Date) | Cumulative Number to Date |
| Air | - | - | - |
| Noise | - | - | - |
| Water | - | - | - |
| Waste | - | - | - |
| Total | - | - | - |

| **Contract No. CV/2004/02 Reconstruction of Wong Shek and Ko Lau Wan Public Cumulative Statistics on Notification of Summons** | | | |
|---|---|---|---|
| Environmental Parameters | Cumulative No. Brought Forward | No. of Notification of Summons | Cumulative Number to Date |
| Air | - | - | - |
| Noise | - | - | - |
| Water | - | - | - |
| Waste | - | - | - |
| Total | - | - | - |

## APPENDIX VIII

## Monitoring Schedule for Next Month

# CEDD Contract No. CV/2004/02
# Reconstruction of Wong Shek and Ko Lau Wan Public Piers
# Water Quality Monitoring Schedule
# April 2005

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|---|
| | | | | | **1** | **2** |
| **3** | **4**<br>WQM[3]<br>(Ebb: 09:17)<br>(Flood: 13:46) | **5** | **6**<br>WQM[1]<br>(Ebb: 10:43)<br>(Flood: 16:22) | **7** | **8**<br>WQM[1]<br>(Ebb: 12:10)<br>(Flood: 18:13) | **9** |
| **10** | **11**<br>WQM[1]<br>(Ebb: 14:08)<br>(Flood: 07:47) | **12** | **13**<br>WQM[1]<br>(Ebb: 13:48)<br>(Flood: 06:48) | **14** | **15**<br>WQM[3]<br>(Ebb: 15:37)<br>(Flood: 10:00) | **16** |
| **17** | **18** | **19**<br>WQM[3]<br>(Ebb: 09:24)<br>(Flood: 13:28) | **20** | **21**<br>WQM[1]<br>(Ebb: 10:51)<br>(Flood: 16:27) | **22** | **23**<br>WQM[1]<br>(Ebb: 11:53)<br>(Flood: 18:05) |
| **24** | **25**<br>WQM[1]<br>(Ebb: 13:06)<br>(Flood: 06:44) | **26** | **27**<br>WQM[1]<br>(Ebb: 13:02)<br>(Flood: 06:14) | **28** | **29**<br>WQM[1]<br>(Ebb: 14:37)<br>(Flood: 07:00) | **30** |

1. WQM - water quality monitoring on mid-flood and mid-ebb tides at Wong Shek (C1, C2, M1 & M2)
2. WQM - water quality monitoring on mid-flood and mid-ebb tides at Ko Lau Wan (C1, C2, M1, M2, M3 & M4)
3. WQM - water quality monitoring on mid-flood and mid-ebb tides at Ko Lau Wan (C1, C2, M1, M2, M3 & M4) and Wong Shek (C1, C2, M1 & M2)

# APPENDIX IX

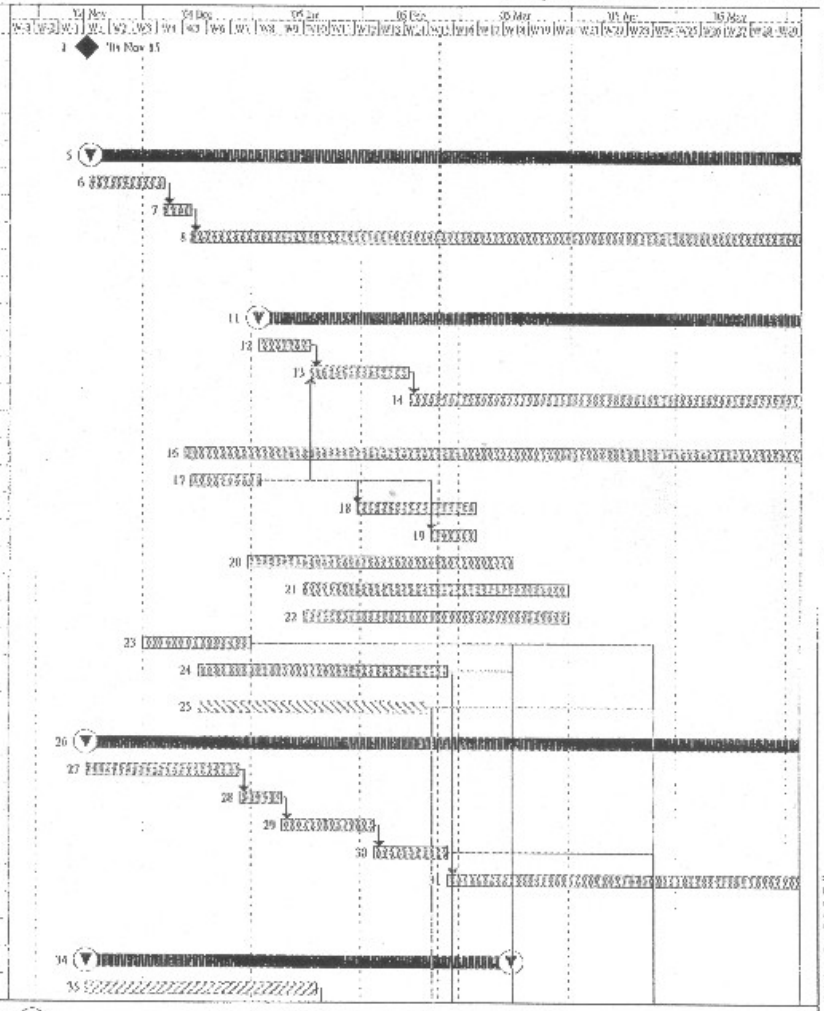
## Master Construction Programme

Contract No.: CV/2004/02
Reconstruction of Wong Shek and
Ko Lau Wan Public Piers

# Master Programme
(Version 2)

Contractor: Kin Shing Construction Co. Ltd.
Commencement Date: 15th Nov 2004
Completion Date: 6th Aug 2006
Programme Date: 21st Feb 2005

| ID | Task Name | Duration | Start | Finish | Predecessors |
|---|---|---|---|---|---|
| 1 | Commencement of the Works | 1 day | Mon 04/11/15 | Mon 04/11/15 | |
| 2 | Completion of Section 1 (Wong Shek Public Pier) | 1 day | Sun 06/8/6 | Sun 06/8/6 | |
| 3 | Completion of Section 2 (Ko Lau Wan Public Pier) | 1 day | Sun 06/8/6 | Sun 06/8/6 | |
| 4 | Preliminary | | | | |
| 5 | Establishment of Engineer's Principal Site Office | 994 days | Tue 04/11/16 | Mon 07/8/6 | |
| 6 | Submission and approval | 21 days | Tue 04/11/16 | Mon 04/12/6 | |
| 7 | Provision | 8 days | Tue 04/12/7 | Tue 04/12/14 | 6 |
| 8 | Servicing during construction period | 600 days | Wed 04/12/15 | Sun 06/8/6 | 7 |
| 9 | Servicing during maintenance period | 364 days | Mon 06/8/7 | Sun 07/8/5 | 8 |
| 10 | Decommissioning | 1 day | Mon 07/8/6 | Mon 07/8/6 | 9 |
| 11 | Secondary Office | 582 days | Mon 05/1/3 | Mon 06/8/7 | |
| 12 | Submission and approval | 15 days | Mon 05/1/3 | Mon 05/1/17 | |
| 13 | Provision | 28 days | Tue 05/1/18 | Mon 05/2/14 | 12,13 |
| 14 | Servicing | 538 days | Tue 05/2/15 | Sun 06/8/6 | 13 |
| 15 | Decommissioning | 1 day | Mon 06/8/7 | Mon 06/8/7 | 14 |
| 16 | Provision of Contractor's accommodation | 602 days | Mon 04/12/13 | Sun 06/8/6 | |
| 17 | Initial survey | 20 days | Wed 04/12/15 | Mon 05/1/3 | |
| 18 | Erection of hoarding and project signboard at Por. A | 34 days | Mon 05/1/31 | Sat 05/3/5 | 17 |
| 19 | Erection of hoarding and project signboard at Por. B | 13 days | Mon 05/2/21 | Sat 05/3/5 | 17 |
| 20 | Application and installation of electrical system | 75 days | Fri 04/12/31 | Tue 05/3/15 | |
| 21 | Application and installation of water supply system | 75 days | Sun 05/1/16 | Thu 05/3/31 | |
| 22 | Application and installation of telephone lines | 75 days | Sun 05/1/16 | Thu 05/3/31 | |
| 23 | Notification of parties in concern | 31 days | Wed 04/12/1 | Fri 04/12/31 | |
| 24 | Application for promulgation of Marine Department Notice for Wong Shek | 71 days | Fri 04/12/17 | Fri 05/2/25 | |
| 25 | Application for promulgation of Marine Department Notice for Ko Lau Wan | 65 days | Fri 04/12/17 | Sat 05/2/19 | |
| 26 | Environmental Monitoring | 658 days | Mon 04/11/15 | Sun 06/9/3 | |
| 27 | Submission and approval of EIS and IC (Env) | 44 days | Mon 04/11/15 | Tue 04/12/28 | |
| 28 | Endorsement of EM&A proposal | 12 days | Wed 04/12/29 | Sun 05/1/9 | 27 |
| 29 | Baseline water quality monitoring | 26 days | Mon 05/1/10 | Fri 05/2/4 | 28 |
| 30 | Preparation and approval of baseline report | 21 days | Sat 05/2/5 | Fri 05/2/25 | 29 |
| 31 | Impact monitoring | 527 days | Sat 05/2/26 | Sun 06/8/6 | 30 |
| 32 | Post-construction monitoring | 28 days | Mon 06/8/7 | Sun 06/9/3 | 31,110,202 |
| 33 | Section 1 (Wong Shek Public Pier) | | | | |
| 34 | Temporary cover to existing pier | 121 days | Mon 04/11/15 | Tue 05/3/15 | |
| 35 | Design and ICE checking | 66 days | Mon 04/11/15 | Wed 05/1/19 | |




Project: CV/2004/02
Master Programme (Version 2)

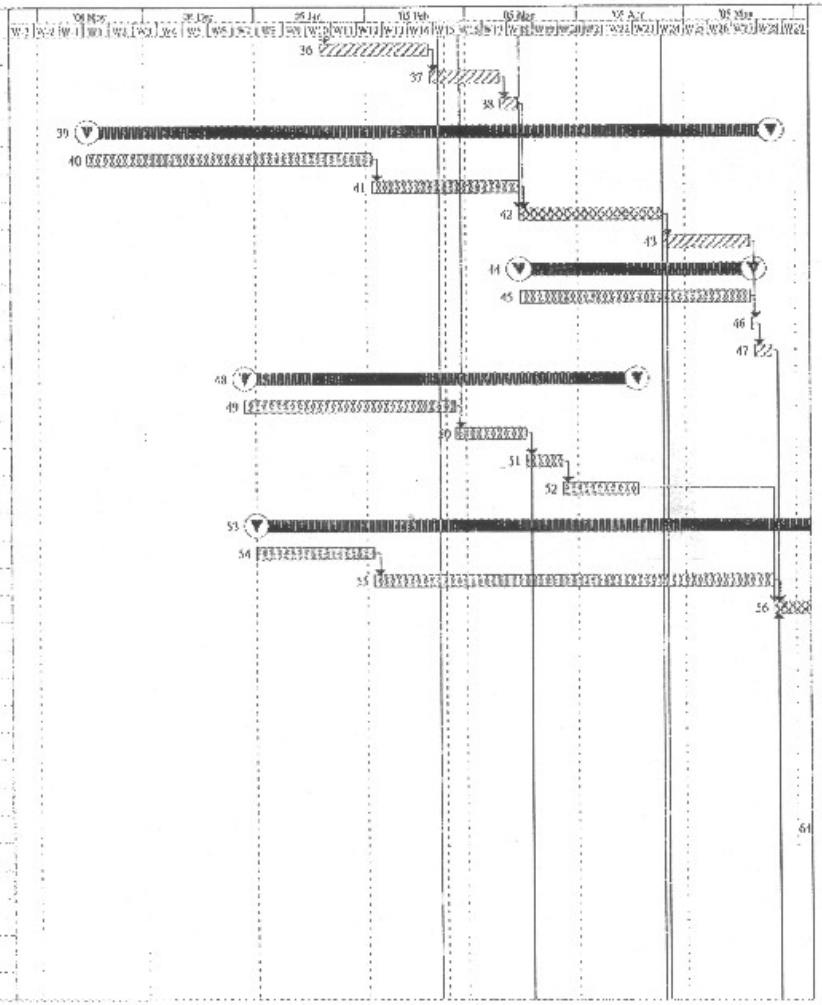
Round Task | Progress | Summary | Critical Task (Sec 1 & 3) | Critical Task (Sec 2)
Split | Commencement Milestone | Completion Milestone | Critical Task (Sec 1) | Maintenance Period

Contract No.: CV/2004/02
Reconstruction of Wong Shek and
Ko Lau Wan Public Piers

# Master Programme
(Version 2)

Contractor: Kin Shing Construction Co. Ltd.
Commencement Date: 15th Nov 2004
Completion Date: 6th Aug 2006
Programme Date: 21st Feb 2005

| ID | Task Name | Duration | Start | Finish | Predecessors |
|---|---|---|---|---|---|
| 34 | Submission for Engineer's comment | 30 days | Thu 05/1/20 | Fri 05/2/18 | 33 |
| 35 | Erection | 20 days | Sat 05/2/19 | Thu 05/3/10 | 34 |
| 36 | Certified by ICE and commissioning | 5 days | Fri 05/3/11 | Tue 05/3/15 | 35 |
| 37 | Provision of temporary berth | 192 days | Mon 04/11/15 | Wed 05/5/25 | |
| 38 | Design and ICE checking of temporary berth | 80 days | Mon 04/11/15 | Wed 05/2/2 | |
| 39 | Submission for Engineer's comment | 41 days | Thu 05/2/3 | Tue 05/3/15 | 40 |
| 40 | Piling | 40 days | Wed 05/3/16 | Sun 05/4/24 | 34,36,23,41,38 |
| 41 | Deck construction and installation of fenders | 25 days | Mon 05/4/25 | Thu 05/5/19 | 42 |
| 42 | Relocation of navigation light by Marine Dept. | 66 days | Wed 05/3/16 | Fri 05/5/20 | |
| 43 | Application to Marine Department | 65 days | Wed 05/3/16 | Thu 05/5/19 | |
| 44 | Relocation works | 1 day | Fri 05/5/20 | Fri 05/5/20 | 43,45 |
| 45 | Certified by ICE, testing and commissioning of berth | 5 days | Sat 05/5/21 | Wed 05/5/25 | 44 |
| 46 | Ground Investigation | 110 days | Wed 04/12/29 | Sun 05/4/17 | |
| 47 | Submission for Engineer's comment | 59 days | Wed 04/12/29 | Fri 05/2/25 | |
| 48 | Ground investigation works on site | 20 days | Sat 05/2/26 | Thu 05/3/17 | 49,34,36 |
| 49 | Preparation and approval of reports | 10 days | Fri 05/3/18 | Sun 05/3/27 | 48 |
| 50 | Submission of reports and determine pile founding levels | 21 days | Mon 05/3/28 | Sun 05/4/17 | 51 |
| 51 | Piling for permanent pier | 282 days | Sat 05/1/1 | Sun 05/10/9 | |
| 52 | Compilation of method statement for piling | 33 days | Sat 05/1/1 | Wed 05/2/2 | |
| 53 | Submission for Engineer's comment | 112 days | Thu 05/2/3 | Wed 05/5/25 | 54 |
| 54 | Vertical preliminary pile and testing | 15 days | Thu 05/5/26 | Thu 05/6/9 | 47,52,55,127 |
| 55 | Vertical main piles using land plant (E1, H1, E2, H2) | 30 days | Tue 05/6/28 | Wed 05/7/27 | |
| 56 | Vertical main piles (A11, B8, B11, C8, C11, D8, D11) | 18 days | Sun 05/6/19 | Wed 05/7/6 | 128 |
| 57 | Temporary platform for raking pile | 21 days | Thu 05/7/7 | Wed 05/7/27 | 13 |
| 58 | Vertical main piles (remaining 14 nos.) | 35 days | Thu 05/7/7 | Wed 05/8/10 | 14 |
| 61 | Raking preliminary piles and testing (B10) | 15 days | Thu 05/7/28 | Thu 05/8/11 | 55,59 |
| 62 | Raking main piles (15 nos) | 44 days | Fri 05/8/12 | Sat 05/9/24 | 61 |
| 63 | Pile test for main piles | 15 days | Sun 05/9/25 | Sun 05/10/9 | 62 |
| 64 | Construction of pile cap and deck | 212 days | Fri 05/6/10 | Sat 06/1/7 | |
| 65 | Submission and approval of precast yard | 61 days | Fri 05/6/10 | Tue 05/8/9 | |
| 66 | Casting of precast units at precast yard | 61 days | Wed 05/8/10 | Sun 05/10/9 | 65 |
| 67 | Design and ICE checking of falsework for pile cap and deck construction | 62 days | Sun 05/7/10 | Fri 05/9/9 | |
| 68 | Submission of calculation and method statement for Engineer's approval | 30 days | Sat 05/9/10 | Sun 05/10/9 | 67 |
| 69 | Erection of falsework for installation of precast units | 20 days | Mon 05/10/10 | Sat 05/10/29 | 66,63 |




Contract No. CV/2004/02
Master Programme Version 21

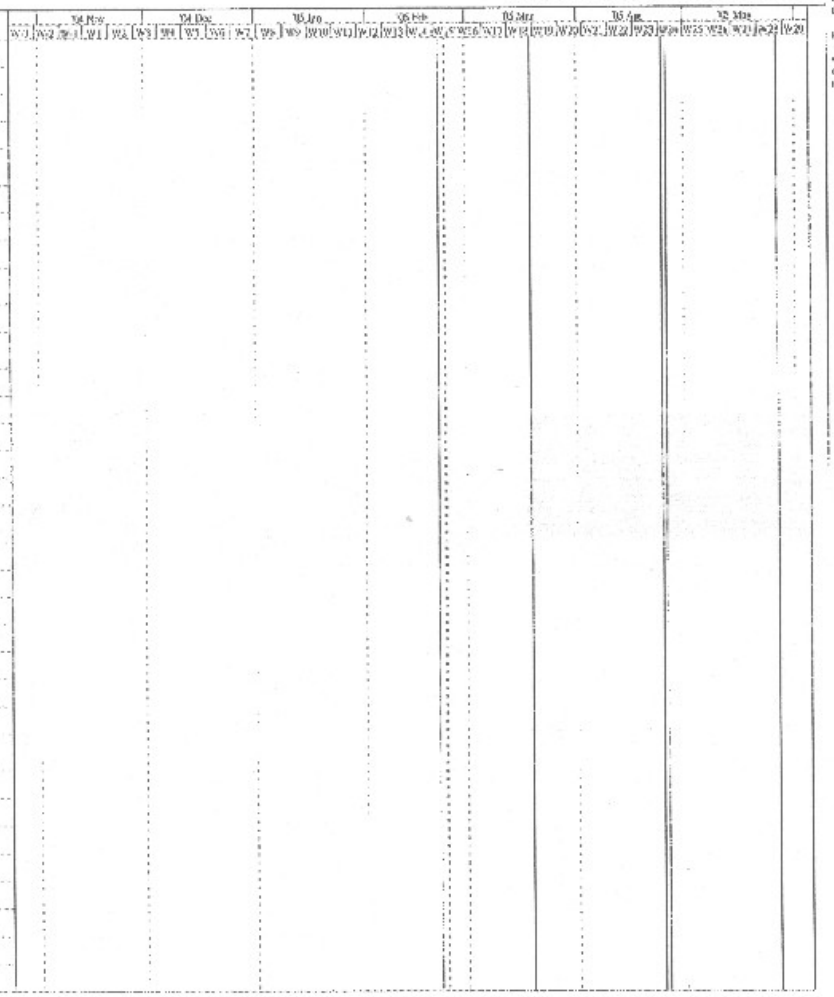
Actual Task | Progress | Summary | Critical Task (Sec 1 & 2) | Critical Task (Sec 2)
Split | Commencement Milestone | Completion Milestone | Critical Task (Sec 1) | Maintenance Period

Contract No.: CV/2004/02
Reconstruction of Wong Shek and
Ko Lau Wan Public Piers

# Master Programme
(Version 2)

Contractor: Kin Shing Construction Co. Ltd.
Commencement Date: 15th Nov 2004
Completion Date: 6th Aug 2006
Programme Date: 21st Feb 2005

| ID | Task Name | Duration | Start | Finish | Predecessors |
|---|---|---|---|---|---|
| 80 | Installation of precast units with in-situ pile caps | 60 days | Mon 05/10/10 | Thu 05/12/8 | 68,68,63 |
| 81 | Casting of in-situ pier deck | 30 days | Fri 05/12/9 | Sat 06/1/7 | 78,78 |
| 82 | Construction of bollards | 30 days | Fri 05/12/9 | Sat 06/1/7 | 78 |
| 83 | Installation of corrosion monitoring system | 91 days | Sun 05/10/9 | Sat 06/1/7 | |
| 84 | Approval of specialist contractor and method statement | 61 days | Sun 05/10/9 | Thu 05/12/8 | |
| 85 | Installation of corrosion monitoring system | 30 days | Fri 05/12/9 | Sat 06/1/7 | 78,74 |
| 86 | Roof cover system | 272 days | Tue 05/8/9 | Sun 06/5/7 | |
| 87 | Approval of specialist contractor | 61 days | Tue 05/8/9 | Sat 05/10/8 | |
| 88 | Submission of workshop drawings for connection details with deck | 61 days | Sun 05/10/9 | Thu 05/12/8 | 77 |
| 89 | Material submissions | 91 days | Sun 05/10/9 | Sat 06/1/7 | 77 |
| 90 | Submission of workshop drawing for remaining roof system | 91 days | Sun 05/10/9 | Sat 06/1/7 | 77 |
| 91 | Construction of steel works | 60 days | Sun 06/1/8 | Wed 06/3/8 | 71,80,79 |
| 92 | Erection of roof covers | 60 days | Thu 06/3/9 | Sun 06/5/7 | 91 |
| 93 | Marrying-in to landside | 121 days | Wed 06/3/8 | Thu 06/7/6 | |
| 94 | Application of Excavation Permit | 90 days | Wed 06/3/8 | Mon 06/6/5 | |
| 95 | Site works | 31 days | Tue 06/6/6 | Thu 06/7/6 | 94,93 |
| 96 | Electrical system, CLP meter box and lighting system | 220 days | Mon 05/10/10 | Wed 06/5/17 | |
| 97 | Approval of specialist contractor | 30 days | Mon 05/10/10 | Tue 05/11/8 | |
| 98 | Liaison with CLP and EMSD | 60 days | Wed 05/11/9 | Sat 06/1/7 | 97 |
| 99 | Installation | 120 days | Sun 06/1/8 | Sun 06/5/7 | 71,98 |
| 100 | Testing | 10 days | Mon 06/5/8 | Wed 06/5/17 | 99 |
| 101 | Construction of floor finish | 121 days | Wed 06/3/8 | Thu 06/7/6 | |
| 102 | Material submissions | 61 days | Wed 06/3/8 | Sun 06/5/7 | |
| 103 | Site works | 60 days | Mon 06/5/8 | Thu 06/7/6 | 82,92 |
| 104 | Construction of hand railing,seating beaches and notice boards | 150 days | Tue 06/2/7 | Thu 06/7/6 | |
| 105 | Material submission | 60 days | Tue 06/2/7 | Fri 06/4/7 | |
| 106 | Construction | 90 days | Sat 06/4/8 | Thu 06/7/6 | 71,99 |
| 107 | Installation of fender system | 190 days | Thu 05/12/29 | Thu 06/7/6 | |
| 108 | Material submission | 31 days | Thu 05/12/29 | Sat 06/1/28 | |
| 109 | Ordering of material | 59 days | Sun 06/1/29 | Tue 06/3/28 | 98 |
| 110 | Site works | 100 days | Wed 06/3/29 | Thu 06/7/6 | 71,99 |
| 111 | Relocation of navigation light by Marine Dept. | 92 days | Fri 06/4/7 | Fri 06/7/7 | |
| 112 | Application to Marine Department | 91 days | Fri 06/4/7 | Thu 06/7/6 | |




Contract No: CV/2004/02
Master Programme Version 2

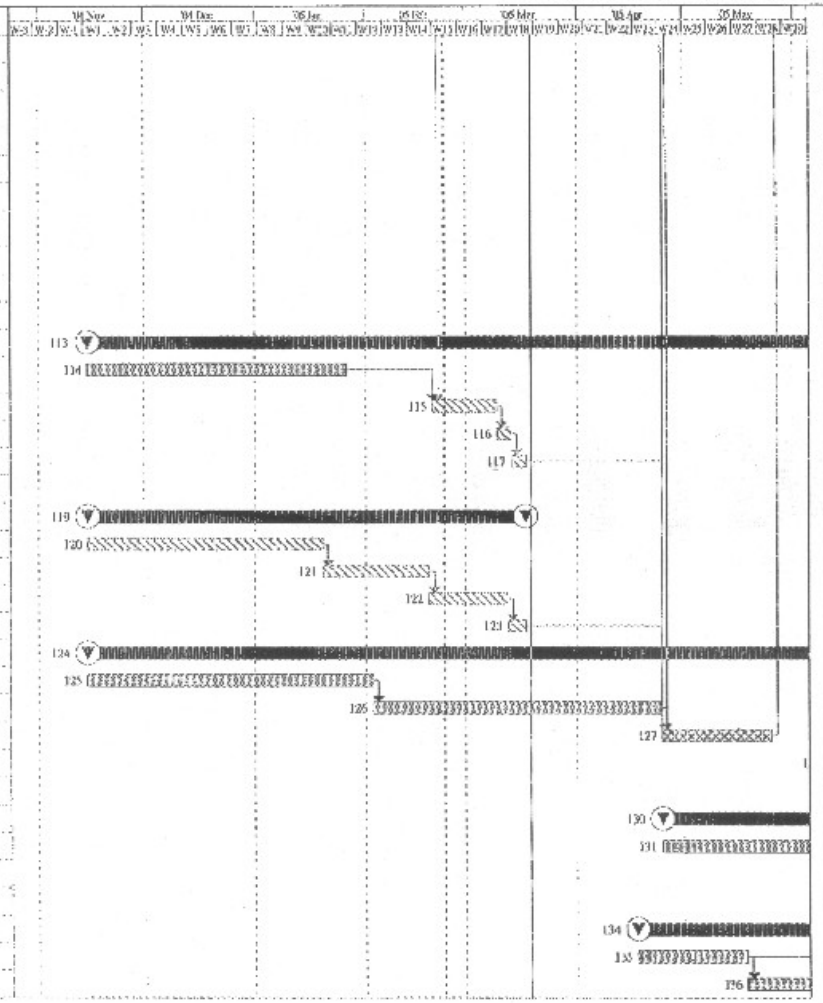
Normal Task | Progress | Summary | Critical Task (Sec 1 & 2) | Critical Task (Sec 3)
Split | Commencement Milestone | Completion Milestone | Critical Task (Sec 1) | Maintenance Period

**Contract No.: CV/2004/02**
**Reconstruction of Wong Shek and Ko Lau Wan Public Piers**

# Master Programme
(Version 2)

**Contractor: Kin Shing Construction Co. Ltd.**
**Commencement Date: 15th Nov 2004**
**Completion Date: 6th Aug 2006**
**Programme Date: 21st Feb 2005**

| | Task Name | Duration | Start | Finish | Predecessors |
|---|---|---|---|---|---|
| 97 | Relocation | 1 day | Fri 06/7/7 | Fri 06/7/7 | 105,93,81,85,109,86 |
| 127 | Commissioning of the pier | 1 day | Sat 06/7/8 | Sat 06/7/8 | 103 |
| 128 | Demolition of the temporary berth and the existing pier | 151 days | Thu 06/3/9 | Sun 06/8/6 | |
| 129 | Survey of existing structures | 31 days | Thu 06/3/9 | Sat 06/4/8 | |
| 130 | Design and ICE checking of demolition plan | 61 days | Sun 06/4/9 | Thu 06/6/8 | 106 |
| 131 | Submission for Engineer's comments | 30 days | Fri 06/6/9 | Sat 06/7/8 | 107 |
| 132 | Obtain consent from Country and Marine Park Authority | 30 days | Fri 06/6/9 | Sat 06/7/8 | 107 |
| 133 | Demolition | 29 days | Sun 06/7/9 | Sun 06/8/6 | 104,109,108 |
| 111 | Maintenance Period for the Works | 365 days | Mon 06/8/7 | Mon 07/8/6 | 110 |
| 112 | Section 2 (Ko Lau Wan Public Pier) | | | | |
| 113 | Coral Survey | 626 days | Mon 04/11/15 | Wed 06/8/2 | |
| 114 | Submission and approval of specialist and method statement | 73 days | Mon 04/11/15 | Wed 05/1/26 | |
| 115 | Initial coral survey and approval by AFCD | 18 days | Sun 05/2/20 | Wed 05/3/9 | 114,25 |
| 116 | Coral translocation | 4 days | Thu 05/3/10 | Sun 05/3/13 | 115 |
| 117 | Post translocation survey | 4 days | Mon 05/3/14 | Thu 05/3/17 | 116 |
| 118 | Post pier construction survey | 15 days | Wed 06/7/19 | Wed 06/8/2 | 397 |
| 119 | Temporary cover to existing pier | 123 days | Mon 04/11/15 | Thu 05/3/17 | |
| 120 | Design and ICE checking | 66 days | Mon 04/11/15 | Wed 05/1/19 | |
| 121 | Submission for Engineer's comment | 30 days | Thu 05/1/20 | Fri 05/2/18 | 120 |
| 122 | Erection | 22 days | Sat 05/2/19 | Sat 05/3/12 | 121 |
| 123 | Certified by ICE and commissioning | 5 days | Sun 05/3/13 | Thu 05/3/17 | 122 |
| 124 | Provision of temporary berth | 247 days | Mon 04/11/15 | Tue 05/7/19 | |
| 125 | Design and ICE checking of temporary berth | 80 days | Mon 04/11/15 | Wed 05/2/2 | |
| 126 | Submission for Engineer's comment | 81 days | Thu 05/2/3 | Sun 05/4/24 | 125 |
| 127 | Piling (phase 1) | 31 days | Mon 05/4/25 | Wed 05/5/25 | 123,126,117,23,30,25,42 |
| 128 | Piling (Phase 2) | 9 days | Fri 05/6/10 | Sat 05/6/18 | 56 |
| 129 | Deck construction and installation of fenders | 25 days | Sun 05/6/19 | Wed 05/7/13 | 128 |
| 130 | Relocation of navigation light by Marine Dept. | 81 days | Mon 05/4/25 | Thu 05/7/14 | |
| 131 | Application to Marine Department | 80 days | Mon 05/4/25 | Wed 05/7/13 | |
| 132 | Relocation works | 1 day | Thu 05/7/14 | Thu 05/7/14 | 129,131 |
| 133 | Certified by ICE, testing and commissioning of berth | 5 days | Fri 05/7/15 | Tue 05/7/19 | 132 |
| 134 | Demolition of part of the existing pier | 115 days | Mon 05/4/18 | Wed 05/8/10 | |
| 135 | Survey of existing structures | 31 days | Mon 05/4/18 | Wed 05/5/18 | |
| 136 | Design and ICE checking of demolition plan | 32 days | Thu 05/5/19 | Sun 05/6/19 | 135 |




Contract No: CV/2004/02
Master Programme (Version 2)

Normal Task | Progress | Summary | Critical Task (Sec 1 & 2) | Critical Task (Sec 2)
Split | Concurrent Milestone | Completion Milestone | Critical Task (Sec 1) | Maintenance Period

Contract No.: CV/2004/02
Reconstruction of Wong Shek and
Ko Lau Wan Public Piers

# Master Programme
(Version 2)

Contractor: Kin Shing Construction Co. Ltd.
Commencement Date: 15th Nov 2004
Completion Date: 6th Aug 2006
Programme Date: 21st Feb 2005

| | Task Name | Duration | Start | Finish | Predecessors |
|---|---|---|---|---|---|
| 135 | Submission for Engineer's comments | 30 days | Mon 05/6/20 | Tue 05/7/19 | 134 |
| 136 | Liaison with local residents | 30 days | Mon 05/6/20 | Tue 05/7/19 | 135 |
| 139 | Demolition | 22 days | Wed 05/7/20 | Wed 05/8/10 | 133,138,137 |
| 140 | Ground investigation | 129 days | Wed 04/12/29 | Fri 05/5/6 | |
| 141 | Submission for Engineer's comment | 68 days | Wed 04/12/29 | Sun 05/3/6 | |
| 142 | Ground investigation works on site | 20 days | Fri 05/3/18 | Wed 05/4/6 | 141,30,117 |
| 143 | Preparation and approval of reports | 10 days | Thu 05/4/7 | Sat 05/4/16 | 142 |
| 144 | Submission of reports to determine pile founding levels | 20 days | Sun 05/4/17 | Fri 05/5/6 | 143 |
| 145 | Piling for permanent pier | 342 days | Sat 05/1/1 | Thu 05/12/8 | |
| 146 | Compilation of method statement for piling | 33 days | Sat 05/1/1 | Wed 05/2/2 | |
| 147 | Submission for Engineer's comment | 189 days | Thu 05/2/3 | Wed 05/8/10 | 146 |
| 148 | Vertical preliminary pile and testing | 15 days | Thu 05/8/11 | Thu 05/8/25 | 147,139,65,144 |
| 149 | Vertical main piles (E1,E4,D1,D4,C1,C4) | 20 days | Fri 05/8/26 | Wed 05/9/14 | 148 |
| 150 | Temporary platform for raking pile | 21 days | Thu 05/9/15 | Wed 05/10/5 | 149 |
| 151 | Vertical main pile (remaining 15 nos) | 45 days | Thu 05/9/15 | Sat 05/10/29 | 149 |
| 152 | Raking preliminary piles and testing | 16 days | Thu 05/10/6 | Fri 05/10/21 | 150,62 |
| 154 | Raking main piles (remaining 9 nos) | 33 days | Sat 05/10/22 | Wed 05/11/23 | 152 |
| 155 | Pile tests for main piles | 15 days | Thu 05/11/24 | Thu 05/12/8 | 151,153 |
| 156 | Construction of pile cap and deck | 201 days | Wed 05/8/10 | Sun 06/2/26 | |
| 157 | Submission and approval of precast yard | 60 days | Wed 05/8/10 | Sat 05/10/8 | |
| 158 | Casting of precast units at precast yard | 60 days | Mon 05/10/10 | Thu 05/12/8 | 156 |
| 159 | Design and ICE checking of falsework for pile cap and deck construction | 60 days | Sat 05/9/10 | Tue 05/11/8 | |
| 160 | Submission of calculation and method statement for Engineer's approval | 30 days | Wed 05/11/9 | Thu 05/12/8 | 158 |
| 161 | Erection of falsework for installation of precast units | 20 days | Fri 05/12/9 | Wed 05/12/28 | 159,154 |
| 162 | Installation of precast units with in-situ pile caps | 55 days | Fri 05/12/9 | Wed 06/2/1 | 157,154 |
| 163 | Casting of in-situ pier deck | 25 days | Thu 06/2/2 | Sun 06/2/26 | 161,154 |
| 164 | Construction of bollards | 25 days | Thu 06/2/2 | Sun 06/2/26 | 161 |
| 165 | Installation of corrosion monitoring system | 85 days | Sun 05/12/4 | Sun 06/2/26 | |
| 166 | Approval of specialist contractor and method statement | 60 days | Sun 05/12/4 | Wed 06/2/1 | |
| 167 | Installation of corrosion monitoring system | 25 days | Thu 06/2/2 | Sun 06/2/26 | 161,165 |
| 168 | Construction of villa | 110 days | Fri 06/2/17 | Tue 06/6/6 | |
| 169 | Concrete structure | 50 days | Mon 06/2/27 | Mon 06/4/17 | 162 |
| 170 | Fitting | 110 days | Fri 06/2/17 | Tue 06/6/6 | |
| 170 | Material submission | 60 days | Fri 06/2/17 | Mon 06/4/17 | |
| 171 | Construction | 50 days | Tue 06/4/18 | Tue 06/6/6 | 168,170 |

Timescale: 15 Nov, 24 Dec, 05 Feb, 26 Mar, 15 Apr, 16 May

Project: CV2004-02
Master Programme Version 2

Inactive Task | Progress | Summary | Critical Task (Sec 1 & 2) | Critical Task (Sec 2)
Split | Commencement Milestone | Completion Milestone | Critical Task (Sec 1) | Maintenance Period

Contract No.: CV/2004/02
Reconstruction of Wong Shek and
Ko Lau Wan Public Piers

# Master Programme
(Version 2)

Contractor: Kin Shing Construction Co. Ltd.
Commencement Date: 15th Nov 2004
Completion Date: 6th Aug 2006
Programme Date: 21st Feb 2005

| ID | Task Name | Duration | Start | Finish | Predecessors |
|---|---|---|---|---|---|
| 127 | Construction of walking cover 1 & 2 | 245 days | Wed 05/10/5 | Tue 06/6/6 | |
| 128 | Approval of specialist contractor | 60 days | Wed 05/10/5 | Sat 05/12/3 | |
| 129 | Submission of workshop drawings for connection details with deck | 60 days | Sun 05/12/4 | Wed 06/2/1 | 173 |
| 130 | Material submissions | 85 days | Sun 05/12/4 | Sun 06/2/26 | 173 |
| 131 | Submission of workshop drawing for remaining roof system | 85 days | Sun 05/12/4 | Sun 06/2/26 | 173 |
| 132 | Construction of steel works | 50 days | Mon 06/2/27 | Mon 06/4/17 | 176,182,175 |
| 133 | Erection of roof covers | 50 days | Tue 06/4/18 | Tue 06/6/6 | 179 |
| 134 | Electrical system, CLP meter box and lighting system | 200 days | Tue 05/11/29 | Fri 06/6/16 | |
| 135 | Approval of specialist contractor | 30 days | Tue 05/11/29 | Wed 05/12/28 | |
| 136 | Liaison with CLP and EMSD | 60 days | Thu 05/12/29 | Sun 06/2/26 | 185 |
| 137 | Installation | 100 days | Mon 06/2/27 | Tue 06/6/6 | 162,181 |
| 138 | Testing | 10 days | Wed 06/6/7 | Fri 06/6/16 | 182 |
| 139 | Construction of floor finish | 130 days | Thu 06/3/9 | Sun 06/7/16 | |
| 140 | Material submissions | 90 days | Thu 06/3/9 | Tue 06/6/6 | |
| 141 | Site works | 40 days | Wed 06/6/7 | Sun 06/7/16 | 123,135,171 |
| 142 | Construction of hand railing, seating benches and notice boards | 150 days | Fri 06/2/17 | Sun 06/7/16 | |
| 143 | Material submission | 60 days | Fri 06/2/17 | Mon 06/4/17 | |
| 144 | Construction | 90 days | Tue 06/4/18 | Sun 06/7/16 | 188 |
| 145 | Installation of fender system | 190 days | Sun 06/1/8 | Sun 06/7/16 | |
| 146 | Material submission | 31 days | Sun 06/1/8 | Tue 06/2/7 | |
| 147 | Ordering of material | 59 days | Wed 06/2/8 | Fri 06/4/7 | 191 |
| 148 | Site works | 100 days | Sat 06/4/8 | Sun 06/7/16 | 192 |
| 149 | Relocation of navigation light by Marine Dept. | 92 days | Mon 06/4/17 | Mon 06/7/17 | |
| 150 | Application to Marine Department | 91 days | Mon 06/4/17 | Sun 06/7/16 | |
| 151 | Relocation | 1 day | Mon 06/7/17 | Mon 06/7/17 | 183,193,195,196,169 |
| 152 | Commissioning of the pier | 1 day | Tue 06/7/18 | Tue 06/7/18 | 196 |
| 153 | Demolition of the temporary berth and the existing pier | 141 days | Sun 06/3/19 | Sun 06/8/6 | |
| 154 | Survey to existing structure | 31 days | Sun 06/3/19 | Tue 06/4/18 | |
| 155 | Design and ICE checking of demolition plan | 61 days | Wed 06/4/19 | Sun 06/6/18 | 199 |
| 156 | Submission for Engineer's comments | 30 days | Mon 06/6/19 | Tue 06/7/18 | 200 |
| 157 | Liaison with local residents | 30 days | Mon 06/6/19 | Tue 06/7/18 | 200 |
| 158 | Demolition | 19 days | Wed 06/7/19 | Sun 06/8/6 | 103,202,201 |
| 159 | Maintenance Period for the Works | 365 days | Mon 06/8/7 | Mon 07/8/6 | 203 |

Y5 Nov | Y6 Dec | Y6 Jan | Y6 Feb | Y6 Mar | Y6 Apr | Y6 May

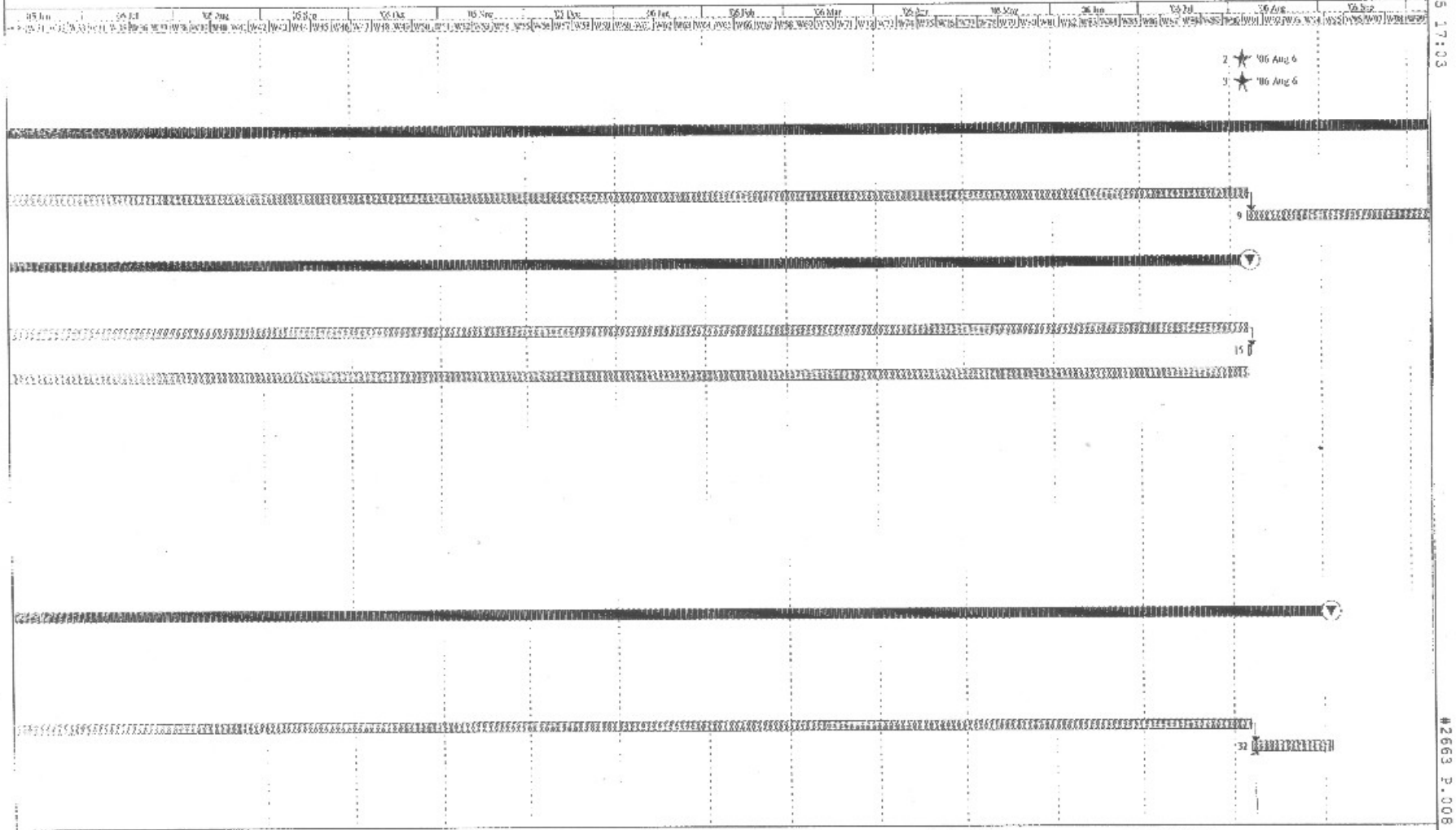
Contract No.: CV/2004/02
Master Programme (Version 2)

Normal Task | Progress | Summary | Critical Task (Sec 1 & 2) | Critical Task (Sec 2)
Split | Commencement Milestone | Completion Milestone | Critical Task (Sec 1) | Maintenance Period

Contract No.: CV/2004/02
Reconstruction of Wong Shek and
Ko Lau Wan Public Piers

# Master Programme
(Version 2)

Contractor: Kin Shing Construction Co. Ltd.
Commencement Date: 15th Nov 2004
Completion Date: 6th Aug 2006
Programme Date: 21st Feb 2005



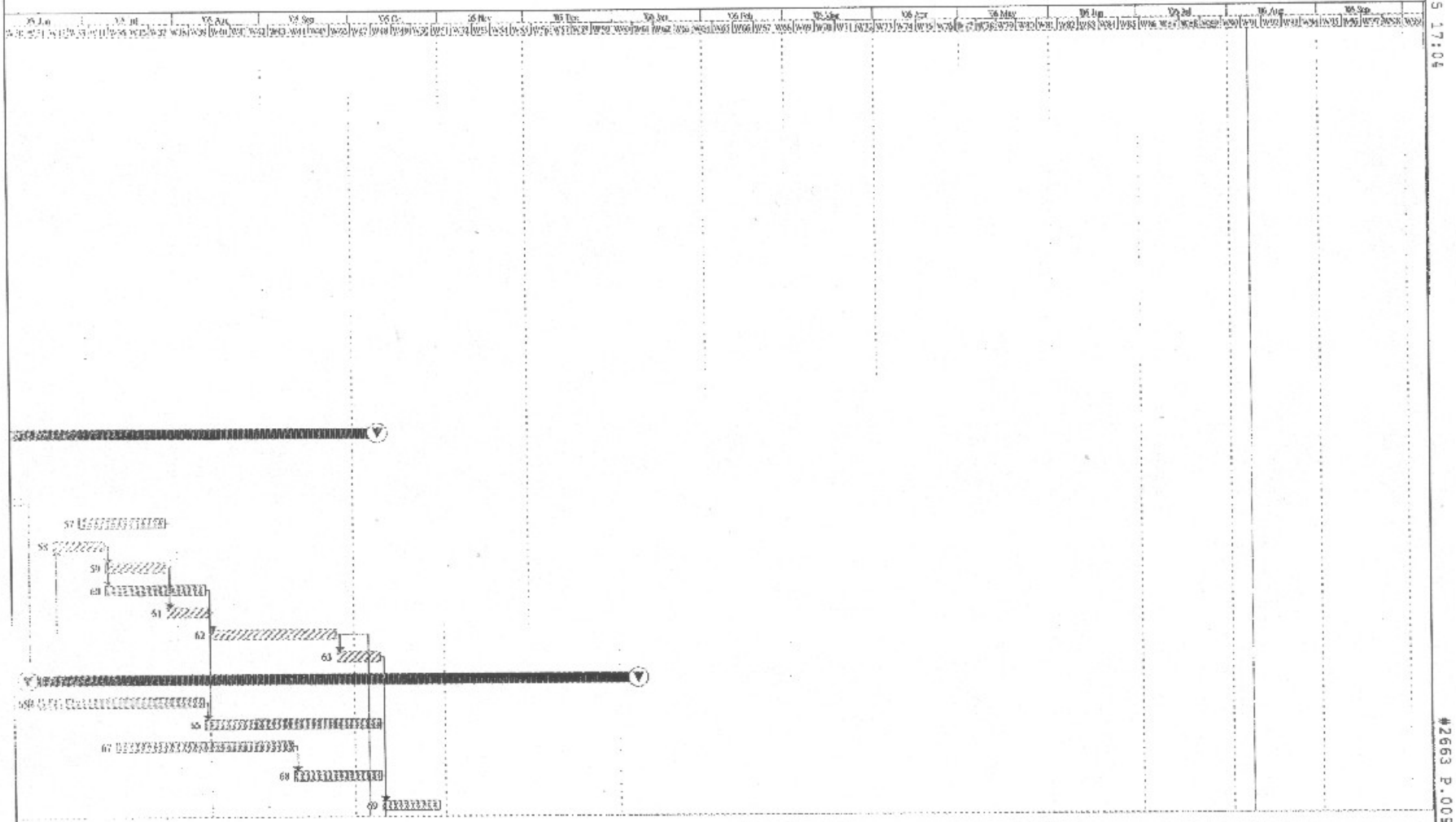

Contract No. CV/2004/02
Master Programme Version 21

Normal Task | Progress | Summary | Critical Task (Sec 1 & 2) | Critical Task (Sec 2)
Split | Commencement Milestone | Completion Milestone | Critical Task (Sec 1) | Maintenance Period

Contract No.: CV/2004/02
Reconstruction of Wong Shek and
Ko Lau Wan Public Piers

# Master Programme
(Version 2)

Contractor: Kin Shing Construction Co. Ltd.
Commencement Date: 15th Nov 2004
Completion Date: 6th Aug 2006
Programme Date: 21st Feb 2005




Contract No: CV/2004/02
Master Programme (Version 2)

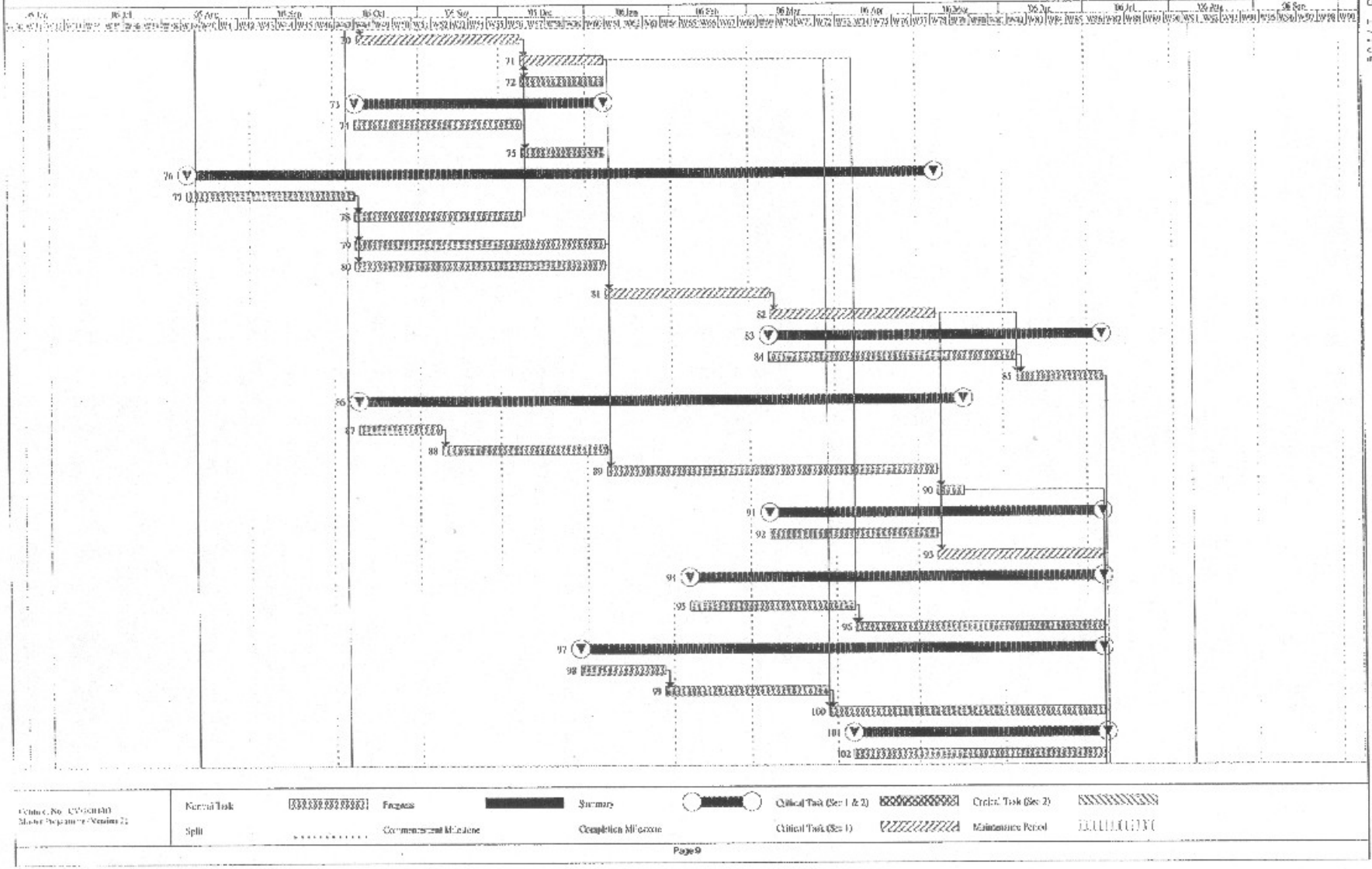
Normal Task
Progress
Summary
Critical Task (Sec 1 & 2)
Critical Task (Sec 2)
Split
Commencement Milestone
Completion Milestone
Critical Task (Sec 1)
Maintenance Period

Page 6

Contract No.: CV/2004/02
Reconstruction of Wong Shek and
Ko Lau Wan Public Piers

# Master Programme
(Version 2)

Contractor: Kin Shing Construction Co. Ltd.
Commencement Date: 15th Nov 2004
Completion Date: 6th Aug 2006
Programme Date: 21st Feb 2005

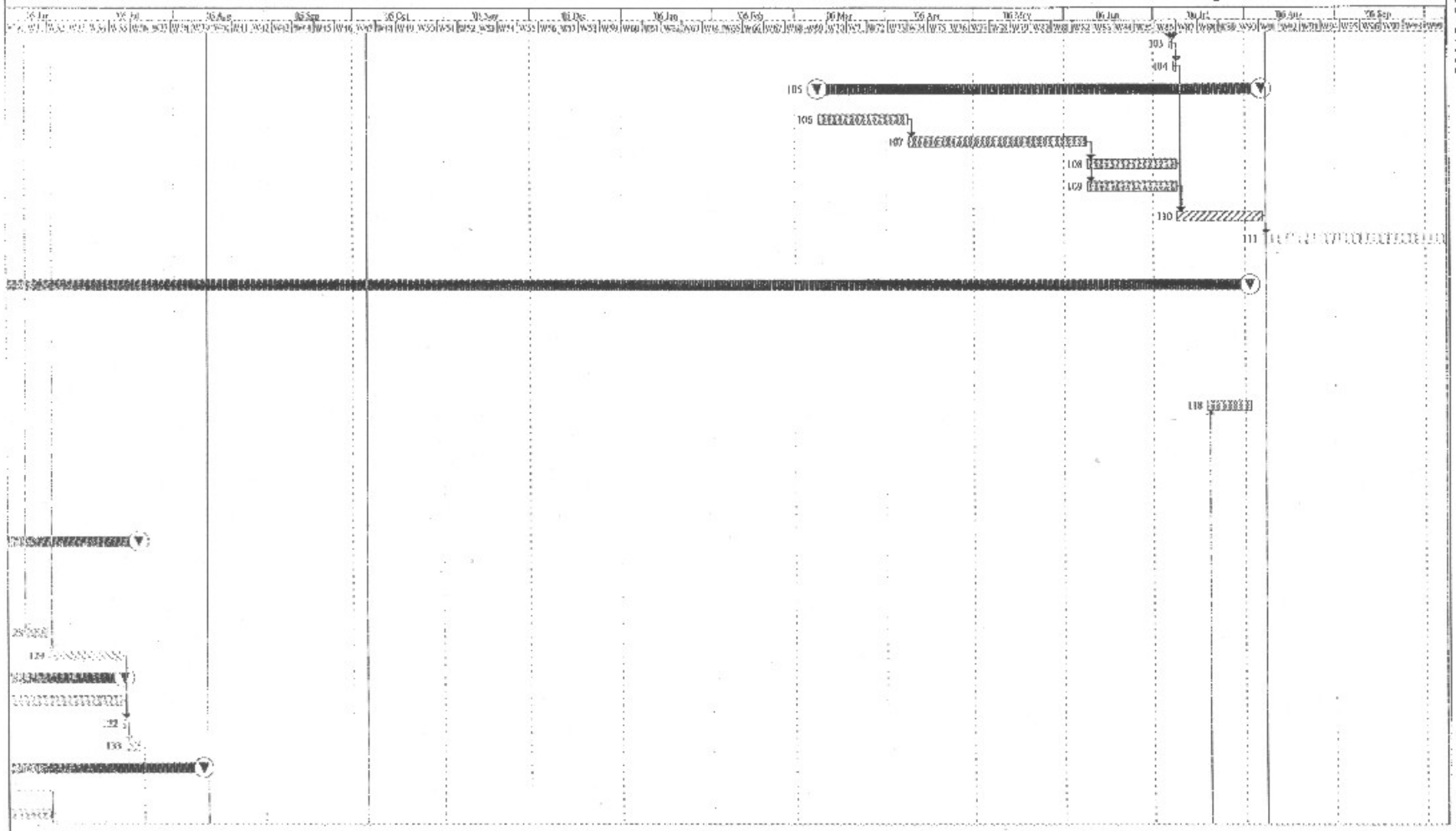



Page 9

Contract No.: CV/2004/02
Reconstruction of Wong Shek and
Ko Lau Wan Public Piers

# Master Programme
(Version 2)

Contractor: Kin Shing Construction Co. Ltd.
Commencement Date: 15th Nov 2004
Completion Date: 6th Aug 2006
Programme Date: 21st Feb 2005

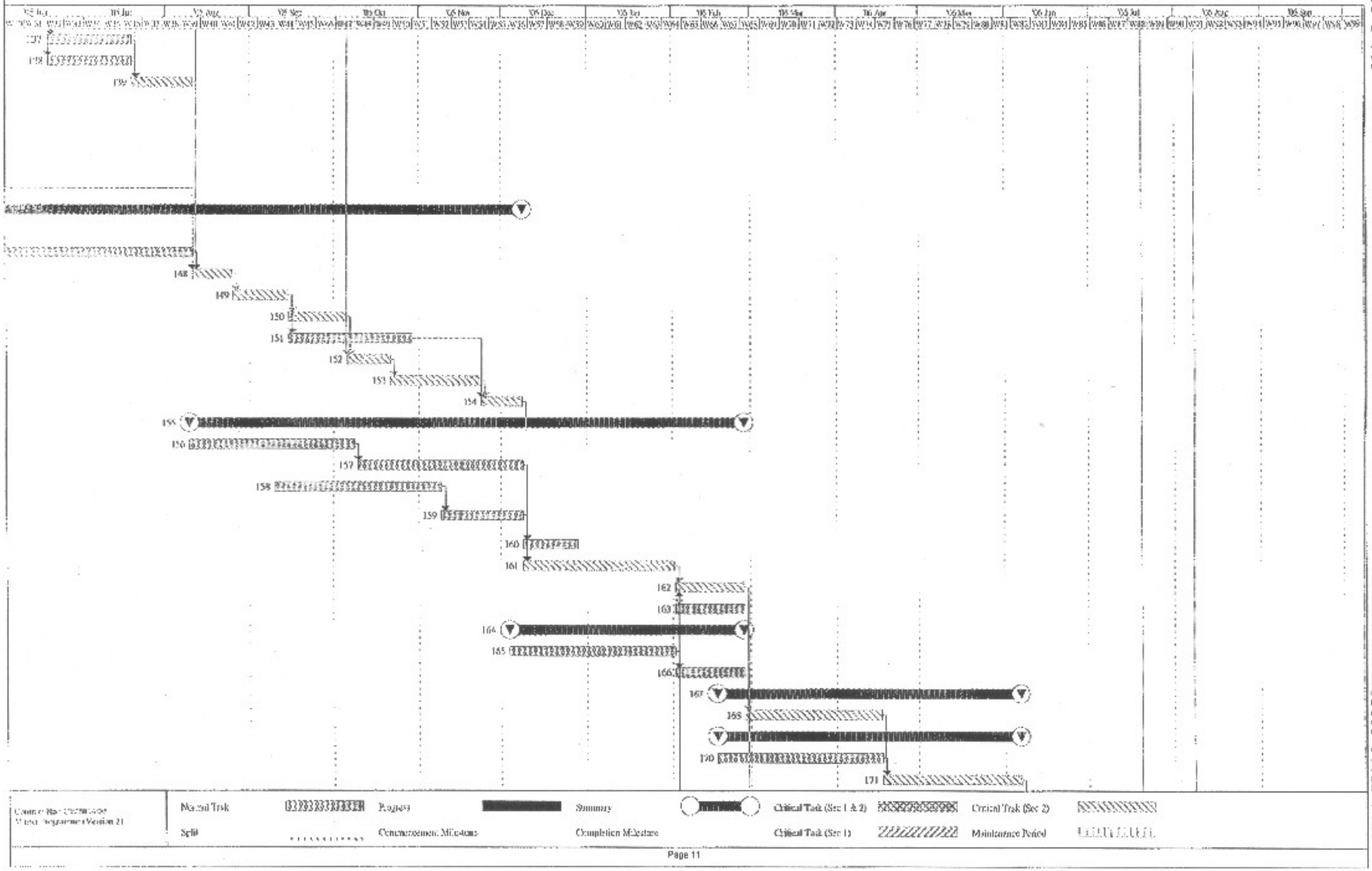



Normal Task | Progress | Summary | Critical Task (Sec 1 & 2) | Critical Task (Sec 2) | Critical Task (Sec 3)
Sp.1 | Commencement Milestone | Completion Milestone | Critical Task (Sec 3) | Maintenance Period

Contract No.: CV/2004/02
Reconstruction of Wong Shek and
Ko Lau Wan Public Piers

# Master Programme
(Version 2)

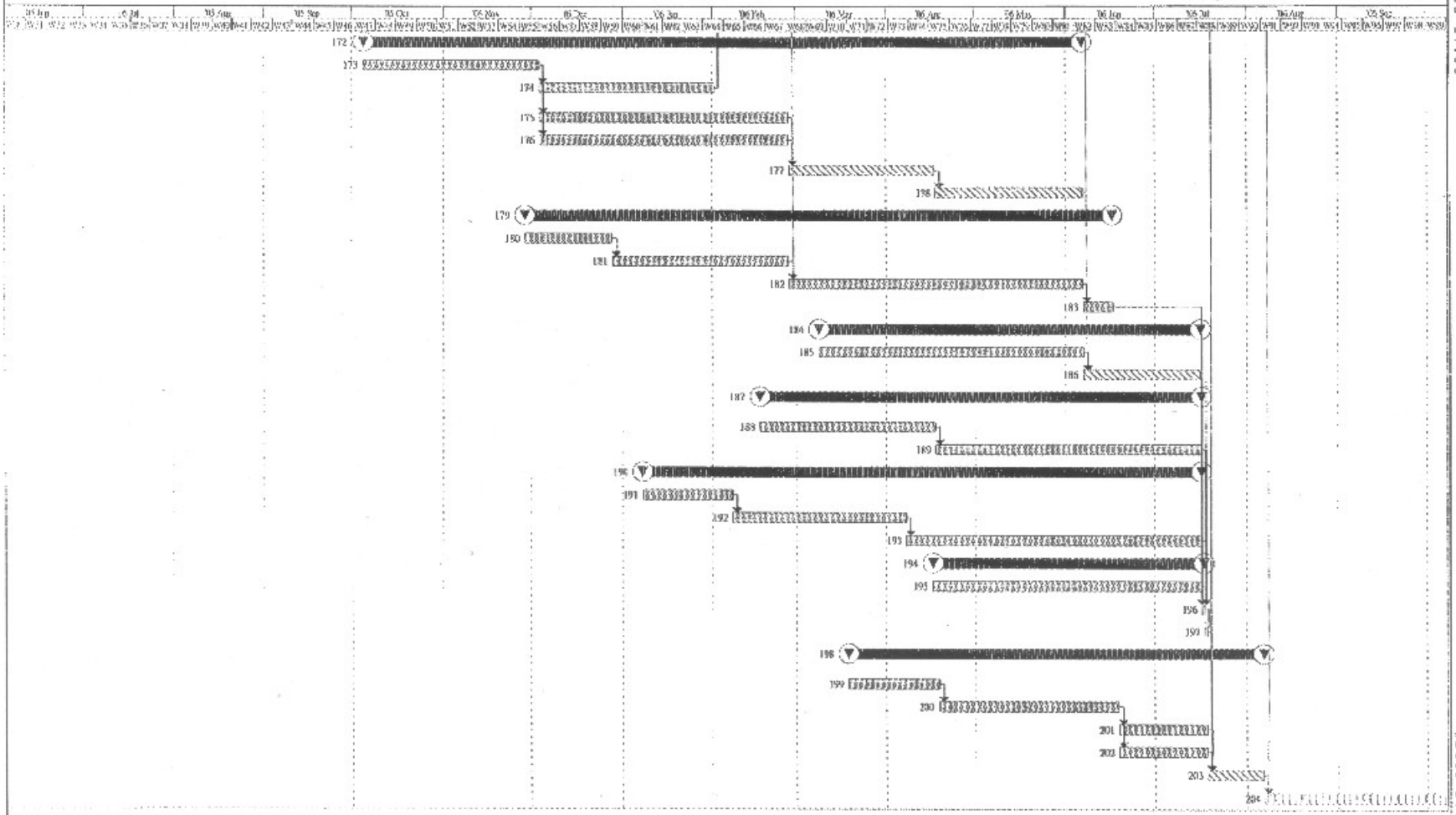
Contractor: Kin Shing Construction Co. Ltd.
Commencement Date: 15th Nov 2004
Completion Date: 6th Aug 2006
Programme Date: 21st Feb 2005



Contract No.: CV/2004/02
Reconstruction of Wong Shek and
Ko Lau Wan Public Piers

# Master Programme
(Version 2)

Contractor: Kin Shing Construction Co. Ltd.
Commencement Date: 15th Nov 2004
Completion Date: 6th Aug 2006
Programme Date: 21st Feb 2005



Normal Task | Progress | Summary | Critical Task (Sec 1 & 2) | Critical Task (Sec 2)
Split | Commencement Milestone | Completion Milestone | Critical Task (Sec 1) | Miscellaneous Period