Maeda Corporation

Castle Peak Road Improvement Between Sham Tseng and Ka Loon Tsuen, Tsuen Wan West Contract No. HY/99/18

Monthly Environmental Monitoring and Audit Report September 2004

Second Issue

Maeda Corporation

West Contract No. HY/99/18 Castle Peak Road Improvement Between Sham Tseng and Ka Loon Tsuen, Tsuen Wan

Environmental Monitoring and Audit

Monthly Environmental Monitoring and Audit Report - September 2004

October 2004

Ove Arup & Partners Hong Kong Ltd Level 5, Festival Walk, 80 Tat Chee Avenue, Kowloon Tong, Kowloon, Hong Kong Tel +852 2528 3031 Fax +852 2268 3950 www.arup.com

Job number 23437

11-0CT-2004 11:58 FROM



11 October 2004

Consulting

TO 22683950

安 誠 工 程 顧 間 有 限 公 司 香 理 理什 皇后六道束183號 合和中心47 據

箍 話: (852)29112233 圖文傳真: (852)28055028 電子郵箱: hyder@hyder.com.hk 網 址: www.hyderconsulting.com P.01/01

Hyder Consulting Limited

47/F Hopewell Centre, 183 Queen's Road East, Wari Chai, Hong Kong

Tel : (852) 2911 2233 Fax : (852) 2805 5028 Emall: hyder@hyder.com.hk Website: www.hyderconsulting.com

Hyder Consulting Limited is incorporated in Hong Kong with limited liability. CCI Number 126012

BY POST & FAX (2268-3950)

Ove Arup & Partners Hong Kong Ltd.
Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloan

Your Ref:	
Our Ref:	910-

910-06/E04-81990

For attention of: Mr. Sam Tsoi

Dear Mr. Tsoi

Contract HY/99/18 West Contract Castle Peak Road Improvement between Sham Tseng and Ka Loon Tsuen, Tsuen Wan Monthly EM&A Report (September 2004)

We refer to the electronic version of the captioned report submitted by your Ms Sherry Tsang via e-mail on 7 October 2004. We do not have comment and endorse the report.

Please do not hesitate to contact the undersigned on 2911-2719 if you wish to discuss any further issues.

Yours sincerely

Coleman Ng Independent Checker (Environmental) HYDER CONSULTING LIMITED

cc MHJV Maeda Attention: Mr. Jeff Yu Attention: Mr. Derek Elliott (Fax: 2417-0134) (Fax: 2491-9678)

CN/LKY/VVS



ARUP

Page 1 of 1

Job title		West Contract	ntract No. HY/99/18		Job number
		Castle Peak R Sham Tseng a	oad Improvement Betweend Ka Loon Tsuen. Tsue	en Wan	23437
Document	title	Environmenta	al Monitoring and Audit		File reference
Document	ref	23437-46			
Revision	Date	Filename	G:\env\project\23437\report	l.doc	
First Issue	06/10/04	Description	Issue to IEC for comments		
			Prepared by	Checked by	Approved by
		Name	Fredrick Leong	Sam Tsoi	Sam Tsoi
		Signature			
Second	14/10/04	Filename	G:\env\project\23437\report	s\Monthly\2004-09\46-Sep-04	-RevA.doc
Issue		Description	Issue to EPD with IEC	's verification	
			Droporod by	Checked by	Ammund hu
		Name	Fredrick Loang	Sam Taoi	Approved by
		hamo	Fredrick Leong	Sam Isol	Sam I Sol
		Signature	AND	Sn~	Sh
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
		I	l		<u>ا</u>

Issue Document Verification with Document \checkmark

©Ove Arup Partnership Ltd F8.5 QA Rev 1/00 1 December 2000

CONTENTS

		Page
EXECU	ITIVE SUMMARY	1
1.	INTRODUCTION	3
11	Project Background	3
1.1	Designated Project	4
1.2	Impact EM&A Requirements	4
1.4	Purpose of the Report	4
2.	ENVIRONMENTAL STATUS	6
2.1	Construction Programme	6
2.2	Construction Activities of the Month	6
3.	SUMMARY OF EM&A REQUIREMENTS	7
3.1	Air Quality Monitoring	7
3.2	Construction Noise Monitoring	8
3.3	Water Quality (Designated Project)	10
3.4	Landscape and Visual Monitoring and Audit	15
3.5	Performance Limits and Event-Action Plans	15
3.6	Site Inspection and Environmental Complaint Handling	25
4.	AIR QUALITY	28
4.1	Monitoring Parameters and Equipment	28
4.2	Methodology	28
4.3	Results and Observations	31
5.	NOISE	34
5.1	Monitoring Equipment	34
5.2	Methodology	34
5.3	Results and Observations	35
6.	WATER QUALITY (DESGINATED PROJECT)	37
6.1	Water Quality Equipment	37
6.2	Methodology	37
6.3	Resumption of Marine Monitoring	39
7.	LANDSCAPE AND VISUAL MONITORING AND AUDIT	40
7.1	Summary of Inspection – 2 September 2004	40
7.2	Summary of Inspection – 16 September 2004	41
7.3	Summary of Inspection – 23 September 2004	42
7.4	Tree Transplanting Survival Rate	43
7.5	Audit Schedule	43
8.	SITE INSPECTION, WASTE DISOSPAL, ENVIRONMENTAL COMPLAINTS,	
~ /		44
8.1	Site Audit Results	44
8.2	Waste Disposal	45
8.3	Complaint Record	46
8.4	Non-compliances	46
8.5	Notification of Summons and Successful Prosecution	46
8.6	Environmental Licenses	47

9. **REFERENCES**

48

TABLES

- Table 3-1 TSP monitoring parameters and frequency
- Table 3-2 Air quality monitoring locations
- Table 3-3
 Construction noise monitoring parameters and frequency
- Table 3-4 Construction noise monitoring locations
- Table 3-5a Water quality monitoring locations (Original)
- Table 3-5b Water quality monitoring locations (New)
- Table 3-6 Action and Limit Level for air quality
- Table 3-7 Event/Action plan for air quality
- Table 3-8 Action and Limit Levels for construction noise
- Table 3-9
 Event/Action plan for construction noise
- Table 3-10 Action and Limit Levels of water quality
- Table 3-11 Event/Action plan for water quality
- Table 3-12 Event/Action plan for landscape and visual impact
- Table 4-1 Equipment list for air quality monitoring
- Table 4-2 Calibration dates of 1-hour TSP monitoring equipment
- Table 5-1 Equipment list for construction noise monitoring
- Table 6-1 Water quality monitoring equipment
- Table 8-1 Summary of environmental concerns identified in the site audits in September 2004
- Table 8-2 Waste disposal quantity in September 2004
- Table 8-3 Cumulative statistics on environmental complaints
- Table 8-5 Summary of valid environmental licenses in September 2004

FIGURES

- Figure 1-1 Site location plan
- Figure 3-1a Monitoring locations
- Figure 3-1b Monitoring locations
- Figure 3-1c Monitoring locations
- Figure 3-1d Monitoring locations
- Figure 3-1d Monitoring locations
- Figure 3-1e Monitoring locations
- Figure 3-2 Flow chart of the complaint response procedure
- Figure 4-1 Graphical presentation of 1-hour TSP levels for September 2004
- Figure 4-2 Graphical presentation of 24-hour TSP levels for September 2004
- Figure 5-1 Graphical presentation of daytime noise levels for September 2004

APPENDICES

APPENDIX A Detailed site layout plans

APPENDIX B Construction programme

APPENDIX C Monitoring schedule for September 2004 and October 2004

APPENDIX D Calibration certificates of 24-hour TSP monitoring equipment

APPENDIX E Calibration certificates of 1-hour TSP monitoring equipment

APPENDIX F Detailed air quality (1-hour TSP) monitoring results

APPENDIX G Detailed air quality (24-hour TSP) monitoring results

APPENDIX H Detailed wind monitoring data for the air quality monitoring period

APPENDIX I Calibration certificates of noise monitoring equipment

APPENDIX J Detailed noise monitoring results

APPENDIX K Details of resumption of Marine Water Monitoring

APPENDIX L Landscape and visual monitoring and audit report

APPENDIX M Complaint log No. 156

APPENDIX N Log record on environmental complaints

ABBREVIATIONS AND ACTONYMS

A/L	Action or Limit Levels
AQO	Air Quality Objectives
Arup	Ove Arup & Partners Hong Kong Limited
ASR	Area Sensitive Rating
BOD	Biochemical Oxygen Demand
B&K	Brüel & Kjær
CFM	Cubic Feet per Minute
CNP	Construction Noise Permit
СТ	Contractor
C&D	Construction & Demolition
DO	Dissolved Oxygen
DGPS	Differential Global Positioning System
EA	Environmental Auditor
EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring and Audit
EP	Environmental Permit
EPD	Environmental Protection Department
ER	Engineer / Engineer's Representative
ET	Environmental Team
HKPSG	Hong Kong Planning Standards and Guidelines
HKSAR	Hong Kong Special Administrative Region
HOKLAS	The Hong Kong Laboratory accreditation Scheme
HVS	High Volume Sampler
IC(E)	Independent Checker (Environment)
IEC	International Electrotechnical Commission Publications
Κ	Degrees Kelvin
MC	Maeda Corporation
MHJV	Mouchel Halcrow Joint Venture
NAMAS	National Measurement accreditation Service
NTU	Nephelometric Turbidity Unit
NSR	Noise Sensitive Receiver
SCFM	Standard Cubic Feet per Minute
SS	Suspended Solids
TSP	Total Suspended Particulates
Tby	Turbidity

EXECUTIVE SUMMARY

This is the thirty second monthly environmental monitoring and audit (EM&A) report presenting the progress of environmental monitoring and audit works for the period between 1 September 2004 and 30 September 2004. Monitoring works included air quality monitoring and noise monitoring. Air quality was recorded in terms of 1-hour Total Suspended Particulates (TSP) and 24-hour TSP. Noise was measured in terms of $L_{eq(30min)}$ with L_{10} and L_{90} measurements as references. Audit works included the weekly environmental audit and the bi-weekly landscape and visual monitoring and audit.

Air Quality

A total of 6 sets of 3 consecutive 1-hour TSP measurements had been taken during the reporting month. The highest 1-hour TSP level was $350.8\mu g/m^3$ recorded at G/F Hong Kong Garden Between Blocks 1 and 2 (WA4) on 7 September 2004 while the lowest 1-hour TSP level was $117.0\mu g/m^3$ recorded at G/F Hong Kong Garden Regent Heights (WA3) on 1 September 2004. There was no exceedance of the Action and Limit (A/L) Levels during the monitoring period.

A total of 5 sets of 24-hours TSP measurement had been taken during the reporting month. The highest 24-hour TSP level was $168.3\mu g/m^3$ recorded at G/F Hong Kong Garden Between Blocks 1 and 2 (WA4) on 7 September 2004 while the lowest 24-hour TSP level was $30.4\mu g/m^3$ recorded at Carpark of Sea Crest Villa Phase 2 Block 6 (WA9) on 18 September 2004. There was no exceedance of the Action and Limit (A/L) Levels during the monitoring period.

<u>Noise</u>

A total of 5 sets of daytime (0700 - 1900 hours) noise monitoring had been taken during the reporting month. The highest noise level was 73dB(A) recorded at Villa Alfavista (WN11) on 14 September 2004 while the lowest noise level was 63dB(A) recorded at Podium of Sea Crest Villa Phase 3 Block 8 (WN13) on 30 September 2004. There was no exceedance of the A/L Levels during the monitoring period.

Marine Water Quality

The sand placement activities at Seawall B were ceased in August 2004. No marine water quality was conducted in September 2004.

Environmental Auditing

A total of 5 environmental site audits had been carried out on a weekly basis in September 2004. The major environmental concerns included the following issues:

- Water quality: provision and cleaning of temporary drainage systems and de-silting facilities; extent of silt curtain; cleaning of mud trails and stagnant water.
- Air quality: watering the dusty activities and covering of exposed slope and stockpile.
- **Construction Noise:** no significant construction noise impact.

• **Handling of waste and chemicals:** segregation, storage and proper disposal of general refuse and construction waste; cleaning up oil leakage/ oil stain; and provision of drip trays for oil/chemical drums.

Landscape and Visual

A total of 3 landscape and visual monitoring and audits had been carried out on a biweekly basis in September 2004. The Registered Landscape Architect had recommended as follows:

- To clear away all scattered litter and garbage as found on site, and keep the site in a tidy condition at all times.
- To re-hydroseed all the patchy surface areas at Slope No.8 for planting work. However, it was advised by the Contractor that the hydroseeding bald patches were conforming to the design issues and beyond the scope of the Contractor's control. Nonetheless, the Contractor had presented alternative method proposals to the Engineer for comments.
- To carry out watering of the site more frequently to prevent dust nuisance.

Waste Disposal

A total of 15 loads of Construction & Demolition (C&D) waste materials and a total of 692 loads of C&D fill materials (Public Fill) had been disposed of at WENT Landfills and at Public Filling Area in Tuen Mun respectively in September 2004. No chemical waste was disposed of in September 2004.

Complaint Records

There was one environmental complaint received in September 2004.

Complaint log no. 156 was received on 18 September 2004 regarding excessive garbage trapped along the adjacent shore of Seawall B west end. It was out of control over the accumulation of floating rubbish drifting toward the shore. However, the contractor would remove them as soon as possible.

Non-compliances

There was no non-compliance for TSP air quality and noise monitoring during the monitoring period in September 2004.

Notification of Summons and Successful Prosecution

There was neither notification of summons nor prosecution received during the reporting month.

Environmental Licenses

There was no new environmental license granted in the reporting month.

1. INTRODUCTION

Ove Arup & Partners Hong Kong Limited (Arup) was appointed by the Contractor -Maeda Corporation (MC) as the Environmental Team (ET) for *Contract No. HY/99/18 Castle Peak Road Improvements between Sham Tseng and Ka Loon Tsuen, Tsuen Wan* (hereafter called the "Project"). Environmental parameters including air quality, construction noise, water quality and landscape & visual issues were selected for impact monitoring for the Project. The major construction period of the Project are anticipated as 36 months from December 2001 to November 2004.

1.1 **Project Background**

The Castle Peak Road improvements works consists of upgrading the existing Castle Peak Road to provide a dual two-lane carriageway of "Rural Road A" classification between Area 2, Tsuen Wan and Ka Loon Tsuen, and all associated utility, junction and pedestrian facilities. The Castle Peak Improvement project is divided into three contracts. This Environmental Monitoring and Audit (EM&A) exercise only concerns the West Contract No. HY/99/18 between Sham Tseng and Ka Loon Tsuen, Tsuen Wan. Figure 1-1 shows the site location plan and the detailed site layout plans are provided in Appendix A.





The scope of the construction work includes:

- Improvement to Castle Peak Road between Area 2 and Ka Loon Tsuen, Tsuen Wan to a dual two-lane carriageway;
- Provision of pedestrian facilities in the form of footpaths, subways, footbridges and Crossings;
- Road junction and signal design and the re-provision of access roads and connections to existing road networks;
- Construction of associated drainage and landscaping works;
- Environmental mitigation measures;
- Design and construction of watermains;
- Construction of entrusted sewerage works; and
- Dredging and reclamation (designated project see also Section 1.2)

1.2 Designated Project

The marine reclamation and the construction of the associated seawall at Tsing Lung Tau and Sham Tseng West within Contract No. HY/99/18 had been classified as designated projects under the Environmental Permits No. EP-093/2001 and EP-094/2001 respectively.

1.3 Impact EM&A Requirements

The impact environmental monitoring and audit included air quality monitoring (both 1-hour and 24-hour TSP), noise, water quality, landscape and visual monitoring, and environmental audit.

1.4 Purpose of the Report

The purpose of the monthly EM&A report is to provide the information on monitoring methodology, monitoring results, environmental permit status, site audit findings, recommendations and conclusions.

This is the thirty second monthly EM&A report prepared by Arup for the submission to Maeda Corporation summarising the monitoring methodology, locations, periods, frequencies, results and any observation from the air quality, noise, marine water quality, and landscape and visual monitoring and audit from 1 September to 30 September 2004.

2. ENVIRONMENTAL STATUS

2.1 Construction Programme

The construction work was commenced in February 2002. An up-to-date construction programme is given in Appendix B.

2.2 Construction Activities of the Month

The major construction activities carried out by the Contractor (CT) in September 2004 included:

- Dragon Garden Accommodation Work;
- Reprovisioning of LCSD & FEHD Facilities;
- Reinstate beach at Seawall B;
- Construction of footbridges FB01, FB02, FB12;
- Construction of noise barriers NM01, NM02, NM03 and NM04;
- Construction of culverts and outfalls;
- Construction of retaining wall RW01 and RW74; and
- Construction of utility and water mains works.

The major sea works at level below +2.5mPD had been completed in July 2003 and sand placement activities at Seawall B completed on 13 August 2004.

3. SUMMARY OF EM&A REQUIREMENTS

Air quality, construction noise, marine water quality and landscape issues are significant environmental impacts identified for the construction period of the project. In accordance with the Project specific EM&A Manual^[1], air quality, noise, water quality, landscape and visual monitoring and audit shall be performed by an ET at all specified monitoring locations during the construction and operational stages. As instructed by the Contractor, the marine monitoring was suspended since 10 October 2003 as the major sea works at level below +2.5mPD had been completed in July 2003. Marine monitoring was resumed in August from 2 August to 27 August 2004 during and after beach reinstatement activity took place in August 2004.

The monitoring schedule for September 2004 and the tentative schedule for October 2004 are attached in Appendix C.

3.1 Air Quality Monitoring

3.1.1 Monitoring Parameters

Air monitoring was measured in terms of the TSP levels for both 24-hour and 1-hour periods.

3.1.2 Monitoring Frequency

24-hour TSP and 1-hour TSP levels were monitored during the course of construction in accordance with the EM&A Manual. The monitoring parameters and frequency are specified in Table 3-1.

Parameters	Monitoring Frequency	Time Period	No. of measurement for each monitoring
24-hour TSP	Once every six days	0000 – 2400	1
1-hour TSP	Three times per every six days	0700 – 1900	1

Table 3-1 TSP monitoring parameters and frequency

3.1.3 Monitoring Locations

A total of eleven locations had been specified for the air quality monitoring and they are given in Table 3-2 and presented in Figures 3-1a to 3-1d.

Air Monitoring Station No.	Location	Location description	
WA1	Bayside Villas	G/F, Bayside Villas (Temporary Suspended)	
₩ <u>₩</u> 2	Grand Bay Villas	G/F, Grand Bay Villas (Temporary Suspended)	
WA3	Hong Kong Garden	G/F, Hong Kong Garden (Regent Heights)	
WA4	Hong Kong Garden	G/F, Hong Kong Garden (Between Blk 1 & 2)	
WA5	Hong Kong Garden	G/F, Hong Kong Garden (Block 4)	
WA6	Tsing Lung Tau Tin Hau Temple	G/F, Tsing Lung Tau Tin Hau Temple	
WA7	Sea Crest Villa	Podium, Sea Crest Villa (Phase 4 Block 12)	
WA8	Sea Crest Villa	Podium, Sea Crest Villa (Phase 3 Block 8)	
WA9	Sea Crest Villa	Car Park (L3), Sea Crest Villa (Phase 2 Block 6)	
WA10	Sea Crest Villa	Podium, Sea Crest Villa (Phase 1 Block 1)	
WA11	Lido Garden	G/F, Carpark, Lido Garden Tower 1	

Table 3-2 Air quality monitoring locations

Note: Bayside Villas (WA1) and Grand Bay Villas (WA2) are no longer the air sensitive receivers as all residents of Bayside Villas and Grand Bay Villas had been evacuated since September 2002. Therefore, the air quality monitoring at Bayside Villas and Grand Bay Villas were temporary suspended since October 2002 after approval from IC(E) and EPD.

3.1.4 Wind Monitoring

Wind monitoring data, which included the wind speed and wind directions are extracted from Hong Kong Observatory – Tsing Yi Wind Monitoring Station.

3.2 Construction Noise Monitoring

3.2.1 Monitoring Parameters

Construction noise monitoring was measured in terms of the A-weighted equivalent continuous sound pressure level (L_{eq}). L_{10} and L_{90} will also be recorded as supplementary reference information for data auditing.

3.2.2 Monitoring Frequency

Construction noise measurements were required to be taken on a weekly basis in accordance with the EM&A Manual. The monitoring time periods, monitoring parameters and frequency are specified in Table 3-3.

Table 3-3 Construction noise monitoring	g parameters and frequency
---	----------------------------

Time Period (when construction activity is found)	Parameters	Monitoring Frequency	No. of Measurements for Each Monitoring
Between 0700-1900 hours on normal weekdays	Leq(30 min)		1
Between 1900-2300 hours on normal weekdays		Once per week	
Between 2300-0700 hours of next day	Leq(5 min)*		3 (consecutive)
Between 0700-1900 hours on holidays			

Remarks: * The L_{eq(5 min)} will only be measured if construction activities are conducted in holidays and between the period of 1900 and 0700 hours during normal weekdays.

3.2.3 Monitoring Locations

A total of sixteen noise monitoring locations had been specified. They are given in Table 3-4 and presented in Figures 3-1a to 3-1d. The measurements were taken at a position 1m from the exterior of building façade and at a position of 1.2m above ground.

Noise Monitoring Station No.	Location	Monitoring Point
WN1	Ka Loon Tsuen	House No.3, Ka Loon Tsuen
WN2	Ka Loon Tsuen	House No.15, Ka Loon Tsuen
WN3	Bayside Villas	Upper G/F, Bayside Villas (Temporary Suspended)
WN4	Bayside Villas	Lower G/F, Bayside Villas (Temporary Suspended)
WN5	Grand Bay Villas	G/F, Grand Bay Villas (Temporary Suspended)
WN6	Hong Kong Garden	G/F, Hong Kong Garden (Regent Heights)
WN7	Hong Kong Garden	G/F, Hong Kong Garden (Between Blk 1 & 2)
WN8	Hong Kong Garden	G/F, Hong Kong Garden (Block 4)
WN9	Tsing Lung Tau Village	House 1,Tsing Lung Tau Village
WN10	Tsing Lung Tau Village	House 60-64, Tsing Lung Tau Village
WN11	Villa Alfavista	G/F, Villa Alfavista

 Table 3-4
 Construction noise monitoring locations

Noise Monitoring Station No.	Location	Monitoring Point
WN12	Sea Crest Villa	Podium, Sea Crest Villa (Phase 4 Block 12)
WN13	Sea Crest Villa	Podium, Sea Crest Villa (Phase 3 Block 8)
WN14	Sea Crest Villa	Car Park (L3), Sea Crest Villa (Phase 2 Block 6)
WN15	Sea Crest Villa	Podium, Sea Crest Villa (Phase 1 Block 1)
WN16	Lido Garden	G/F, Carpark, Lido Garden Tower 1

Note: Bayside Villas (WN3 and WN4) and Grand Bay Villas (WN5) are no longer the noise sensitive receivers as all residents of Bayside Villas and Grand Bay Villas had been evacuated since September 2002. Therefore, the noise monitoring at Bayside Villas and Grand Bay Villas were temporary suspended since October 2002 after approval from IC(E) and EPD.

3.3 Water Quality (Designated Project)

3.3.1 Monitoring Parameters

Water quality monitoring includes Turbidity (Tby) in the unit of NTU, Dissolved Oxygen (DO) in the unit of mg/L and Suspended Solids (SS) in the unit of mg/L. In addition to the water quality parameters, other relevant data, such as monitoring location/position, time, water depth, water temperature, salinity, DO saturation, weather conditions, sea conditions, tidal stage will be recorded including any special phenomena, work underway at the construction site, etc.

3.3.2 Monitoring Frequency

Water quality monitoring during the impact stage was conducted three times per week, during mid-flood and mid-ebb tides and at sixteen designated sampling. The interval between two sets of monitoring will not be less than 36 hours except where exceedances above the Action Level or Limit Level were detected (see also Section 3.5). In these cases, the monitoring frequency will be increased.

3.3.3 Monitoring Locations

A total of sixteen locations, 9 for impact and 7 for control were originally selected for marine water quality monitoring and the locations are given in Table 3-5a and presented in Figure 3-1b to 3-1e.

The new marine water quality monitoring programme, was commenced on 12 February 2003 and suspended on 10 October 2003, as agreed by the IC(E) and EPD. A total of twelve locations, 8 for impact and 4 for control were selected for the new marine water quality monitoring programme and the locations are given in Table 3-5b and presented in Figure 3-1b to Figure 3-1e.

Water Monitoring Station No.		Location	
		Eastings	Northings
Tsing Lung Tau	WW1 (Impact Station)	822260	824491
	WR1 (Control Station)	822278	824459
Tsing Lung Tau	WW2 (Impact Station)	822352	824538
	WR2 (Control Station)	822363	824505
Tsing Lung Tau	WW3 (Impact Station)	822506	824609
	WR3 (Control Station)	822518	824578
Tsing Lung Tau	WW4 (Impact Station)	822820	824640
	WR4 (Control Station)	822800	824603
Angler's Beach: Sham	WW5 (Impact Station)	823697	824937
Iseung	WR5 (Control Station)	823700	824905
Angler's Beach: Sham	WW6 (Impact Station)	823775	824991
Iseung	WW7 (Impact Station)	823797	825042
	WR6/WR7 (Control Station)	823797	824964
Angler's Beach	WW8 (Impact station)	823994	825141
	WR8 (Control Station)	824006	825107
Ma Wan Fish Culture Zone	FCZ1 (Impact Station)	823500	823870

 Table 3-5a
 Water quality monitoring locations (Original)

Water Menitoring S	tation No.	Loca	tion
		Eastings	Northings
Tsing Lung Tau	WW1 (Impact Station)	822306	824405
	WW2 (Impact Station)	822377	824462
	WW3 (Impact Station)	822529	824500
	WW4 (Impact Station)	822775	824560
	WR-E-1234 (Control Station for Mid-Ebb Tide)	822204	824312
	WR-F-1234 (Control Station for Mid-Flood Tide)	822850	824519
Angler's Beach:	WW5 (Impact Station)	823700	824905
Sham Iseung West	WW6/7 (Impact Station)	823797	824964
	WW8 (Impact Station)	823900	825023
	WR-E-5678 (Control Station for Mid-Ebb Tide)	823590	824830
	WR-F-5678 (Control Station for Mid-Flood Tide)	823994	825034
Ma Wan Fish Culture Zone	FCZ1 (Impact Station)	823500	823870

Table 3-5b Water quality monitoring locations (New)

Figure 3-1a Monitoring locations





Figure 3-1b Monitoring locations





G:\ENV\PROJECT\23437\REPORTS\MONTHLY\2004-09\46-SEP-04-REVA.DOC 23437-43





Figure 3-1e Monitoring locations



3.4 Landscape and Visual Monitoring and Audit

3.4.1 Audit Parameters

All landscape and visual mitigation measures undertaken by both the CT and the Landscape Contractor during the construction phase and during the first year of the operational phase shall be audited by a Registered Landscape Architect, to ensure compliance with the intended aims of the mitigation measures.

3.4.2 Audit Frequency

The landscape and visual monitoring and audit shall be undertaken at least once every two weeks throughout the construction period and once every two months during the operational phase.

3.4.3 Audit Location

The landscape and visual monitoring and audit shall be conducted throughout the entire site area.

3.5 **Performance Limits and Event-Action Plans**

The monitoring results shall be checked against appropriate standards and requirements. A two-tier system performance limits have been established in the Project specific EM&A Manual. The "Action Level" and the "Limit Level" (A/L) are established according to the EPD requirements. ET, ER, IC(E), and CT will take corresponding actions in accordance with the Event-Action Plans if the monitoring results exceed the performance limits.

3.5.1 Air Quality

The action and limit levels for air quality have been established during the baseline monitoring and are provided in Table 3-6.

Air Monitoring	1-hour TSP Level in μ g/m ³		24-hour TSP I	_evel in μg/m³
Station No.	Action Level	Limit Level	Action Level	Limit Level
WA1	350		187	
WA2	362		192	
WA3	353		190	
WA4	362	-	187	
WA5	346		185	
WA6	362	500	204	260
WA7	351		187	
WA8	347		188	
WA9	345		182	
WA10	352		183	
WA11	357		195	

Table 3-6 Action and Limit Level for air quality

Table 3-7 details the actions required to be carried out by different parties in case of an exceedance of performance limits being detected.

Table 3-7 Event/Action plan for air quality

Event	Action				
Event	ET Leader	IC(E)	IC(E) ER		
Action Level					
1. Exceedance for one sample	 Identify the source. Inform the IC(E) and the ER. Repeat measurement to confirm finding. Increase monitoring frequency to daily. 	 Check monitoring data submitted by the ET Leader. Check Contractor's working method. 	1. Notify the Contractor.	 Rectify any unacceptable practice. Amend working methods if appropriate. 	
2. Exceedance for two or more consecutive samples	 Identify the source. Inform the IC(E) and the ER. Repeat measurements to confirm findings. Increase monitoring frequency to daily. Discuss with the IC(E) and the Contractor on remedial actions required. If exceedance continues, arrange meeting with the IC(E) and the ER. If exceedance stops, cease additional monitoring. 	 Check monitoring data submitted by the ET Leader. Check the Contractor's working method. Discuss with the ET Leader and the Contractor on possible remedial measures. Advise the ER on the effectiveness of the proposed remedial measures. Supervisor implementation of remedial measures. 	 Confirm receipt of notification of failure in writing. Notify the Contractor. Ensure remedial measures properly implemented. 	 Submit proposals for remedial actions to IC(E) within 3 working days of notification. Implement the agreed proposals. Amend proposal if appropriate. 	
Limit Level					
1. Exceedance for one sample	 Identify the source. Inform the ER and the EPD. Repeat measurement to confirm finding. Increase monitoring frequency to daily. Assess effectiveness of Contractor's remedial actions and keep the IC(E), the EPD and the ER informed of the results. 	 Check monitoring data submitted by the ET Leader. Check the Contractor's working method. Discuss with the ET Leader and the Contractor on possible remedial measures. Advise the ER on the effectiveness of the proposed remedial measures. Supervisor implementation of remedial measures. 	 Confirm receipt of notification of failure in writing. Notify the Contractor. Ensure remedial measures properly implemented. 	 Take immediate action to avoid further exceedance. Submit proposals for remedial actions to IC(E) within 3 working days of notification. Implement the agreed proposals. Amend proposal if appropriate. 	
2. Exceedance for two or more consecutive samples	 Notify the IC(E), the ER, the EPD and the Contractor. Identify the source. Repeat measurements to confirm findings. Increase monitoring frequency to daily. Carry out analysis of the Contractor's working procedures to determine possible mitigation to be implemented. Arrange meeting the IC(E) and the ER to discuss the remedial actions to be taken. Assess effectiveness of the Contractor's remedial actions and keep the IC(E), the EPD and the ER informed of the results. If exceedance stops, cease additional monitoring. 	 Discuss amongst the ER, the ET Leader and the Contractor on the potential remedial actions. Review the Contractor's remedial actions whenever necessary and advise the ER accordingly. Supervise the implementation of remedial measures. 	 Confirm receipt of notification of failure in writing. Notify the Contractor. In consultation with the IC(E), agree with the remedial measures to be implemented. Ensure remedial measures are properly implemented. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated. 	 Take immediate action to avoid further exceedance. Submit proposals for remedial actions to IC(E) within 3 working days of notification. Implement the agreed proposals. Resubmit proposals if problem still not under control. Stop the relevant activity of works as determined by the ER until the exceedance is abated. 	

3.5.2 Construction Noise Impact

The action and limit levels for the construction noise extracted from the Baseline Monitoring Report^[2] are tabulated in Table 3-8.

Table 3-8 Action and Limit Levels for construction noise

Time Period	Action	Limit
0700 – 1900 hours on any day not being a Sunday or public holiday		75dB(A) ⁽¹⁾
19:00 – 23:00 hours on all days and 07:00 – 23:00 on general holidays (including Sundays)	When one documented complaint is received	55(2) / 70(3)
23:00 – 07:00 hours on all days		40 ⁽²⁾ / 55 ⁽³⁾

Remarks: (1) For educational establishments the limit level shall be 70dB(A) and reduced to 65dB(A) during examination periods.

- (2) Refers to the types of Plant regulated under the Technical Memorandum on Noise from Construction Work in Designated Areas (DA-TM).
- (3) Refers to the types of Plant regulated under the Technical Memorandum on Noise Other than Percussive Piling (GW-TM).
- (4) Owing to the high background noise level recorded at WN5, WN9, and WN10, the noise impact monitoring results at these 3 locations will be corrected by its background using the following background correction equation: $L_{eq(30min)=} 10 \log (10^{m/10} 10^{b/10})$ as m= Measured $L_{eq(30min)}$, b=Average Baseline $L_{eq(30min)}$.

Only up to the maximum of 3dB(A) is allowed to be deducted after the background correction.

Table 3-9 details the actions required to be carried out by different parties in the case of an exceedance of performance limits being detected.

Table 3-9	Event/Action	plan for	construction noise
-----------	---------------------	----------	--------------------

Event	Action						
Event	ET Leader		IC(E)		ER		Contractor
Action Level	1. Notify the IC(E) and the Contractor.	1	. Review with analysed results submitted by the ET.	1.	Confirm receipt of notification of failure in writing.	1.	Submit noise mitigation proposals to IC(E).
	2. Carry out investigation.		. Review the proposed remedial	2.	Notify the Contractor.	2.	Implement noise mitigation
	3. Report the results of investigation t IC(E) and the Contractor.	the	measures by the Contractor and advise the ER accordingly.	3.	Require the Contractor to		proposals.
	 Discuss with the Contractor and form remedial measures. 	ilate 3	. Supervise the implement of remedial		the analysed noise problem.		
	5. Increase monitoring frequency to mitigation measures.	neck	incusures.	4.	Ensure remedial measures are properly implemented.		
Limit Level	 Notify the IC(E), the ER, the EPD ar Contractor. 	the 1	Discuss amongst the ER, the ET Leader and the Contractor on the	1.	Confirm receipt of notification of failure in writing.	1.	Take immediate action to avoid further exceedance.
	2. Identify the source.		potential remedial actions.	2.	Notify the Contractor.	2.	Submit proposals for
	3. Repeat measurement to confirm findi	gs. ²	2. Review the Contractor's remedial actions whenever necessary to 3	3.	Require the Contractor to		within 3 working days of
	4. Increase monitoring frequency.		assure their effectiveness and		the analysed noise problem.		notification.
	 Carry out analysis of Contractor's we procedures to determine por mitiantian to be implemented 	king sible 3	. Supervise the implementation of	4.	Ensure remedial measures are properly implemented.	3.	Implement the agreed proposals.
	 6. Inform the IC(E), the ER, and the EP causes & actions taken for exceedances. 	the the	Temediai measures.	5.	If exceedance continues, consider what activity of the work is responsible and instruct	4.	Resubmit proposals if problem still not under control.
	 Assess effectiveness of the contra remedial actions and keep the IC(E EPD and the ER informed of the resu 	tor's the s.			activity of work until the exceedance is abated.	5.	Stop the relevant activity of works as determined by the ER until the exceedance is abated.
	 If exceedance stops, cease addi monitoring 	onal					

3.5.3 Water Quality (Designated Project)

The action and limit levels for the water quality have been established in accordance with the EM&A Manual and approved by EPD on 15 October 2002. EPD and IC(E) had agreed on 10 April 2003 to apply the "Direct Comparison" method for evaluation of the marine water quality exceedance. The A/L levels had been revised in April 2003 and are presented in Table 3-10.

Daramotors			Monitoring Location				
Falanie	1615	WW1 to	WW8	FC	Z1		
		Action Level	Limit Level	Action Level	Limit Level		
Mid-Ebb)						
DO (mg/L)	Surface & Middle	4.9	4.8	4.7	4.6		
(IIIg/L)	Bottom	4.8	4.8	4.0	4.0		
		17.0	23.4	<u>For EPD</u> : 12.9	<u>For EPD</u> : 14.0		
SS (mg/L) (Depth-averaged)				For AFCD: 12.9 and 120% of upstream control station's SS at the same tide of the same day	For AFCD: 14.0 and 130% of upstream control station's SS at the same tide of the same day		
		12.0	13.6	<u>For EPD</u> : 9.1	For EPD: 10.3		
Tby (NTU) (Depth-averaged)				For AFCD: 9.1 and 120% of upstream control station's Tby at the same tide of the same day	For AFCD: 10.3 and 130% of upstream control station's Tby at the same tide of the same day.		
Mid-Flo	od						
DO (mg/l)	Surface & Middle	4.3	4.2	4.5	4.4		
(IIIg/L)	Bottom	4.3	4.1	4.1	4.1		
		25.3	28.7	For EPD: 23.3	For EPD: 25.9		
SS (mg/L) (Depth-averaged)				For AFCD: 23.3 and 120% of upstream control station's SS at the same tide of the same day	For AFCD: 25.9 and 130% of upstream control station's SS at the same tide of the same		
		25.2	31.5	<u>For EPD</u> : 18.7	For EPD: 22.3		
Tby (NTI (Depth-a	U) iveraged)			For AFCD: 18.7 and 120% of upstream control station's Tby at the same tide of the same day	For AFCD: 22.3 and 130% of upstream control station's Tby at the same tide of the same day.		
Nataci	"Donth avor	agod" is calculate	d by taking the	arithmatic means of reading of	all three depths		

Table 3-10 Action and Limit Levels of water quality

Notes: "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.

In order to better differentiate between exceedance caused by the contract works and elevated readings arising from causes unrelated to contract works, all parties had agreed to introduce a term "Reaching of Trigger Value" to represent the scenario where the A/L levels were exceeded by the "Direct Comparison" evaluation method. Upon the detection of "Reaching of Trigger Value", an initial analysis would be carried out to determine whether it was caused by contract works. Exceedance and non-compliance should only be recorded in case where the "Reaching of Trigger Value" was caused by the contract works.

Table 3-11 details the actions required to be carried out by different parties in the case of water quality exceedance of performance limits being detected. The revised Event/Action Plan for water quality has been endorsed by IC(E) in May 2003, and will be finalised subject to agreement with EPD.

Table 3-11 Event/Action plan for water quality

Evont	Action					
Eveni	ET Leader	IC(E)	ER	Contractor		
Trigger Value						
 Trigger Value being surpassed for one sampling day 	 Repeat in-situ measurement to confirm findings. Conduct investigation to identify the source(s) of impact. Check monitoring data, all plant, equipment, mitigation measures and the Contractor's working methods. Inform the IC(E), ER, EPD, HyD, Contractor and AFCD (if required) the investigation results. If exceedance is confirmed as caused by the construction works, take relevant actions as detailed in "Action Level" and "Limit Level" 	 If exceedance is confirmed as caused by the construction works, take relevant actions as detailed in "Action Level" and "Limit Level" 	 If exceedance is confirmed as caused by the construction works, take relevant actions as detailed in "Action Level" and "Limit Level" 	 If exceedance is confirmed as caused by the construction works, take relevant actions as detailed in "Action Level" and "Limit Level" 		
Action Level						
 Action level being exceeded by one sampling day and is caused by the construction works Action level being exceeded by more than one consecutive days and is cause by the construction works 	 Discuss the current mitigation measures with the IC(E) and the Contractor. Pay attention on the monitoring results collected on the subsequent scheduled monitoring date to see if an exceedance, caused by the same or related construction works, is recurring. Discuss mitigation measures with the IC(E) and the Contractor. Ensure the proposed mitigation measures are implemented. Further evaluation of the monitoring results on the next scheduled monitoring day and report to all concerned parties, if the affected monitoring stations are still being affected (or are no longer affected) by the construction works. Prepare to increase the monitoring frequency to daily, if the Limit Level is exceeded as below. 	 Discuss with the ET Leader and the Contractor on the current mitigation measures. Assess the effectiveness of the current mitigation measures and advised the ER accordingly. Discuss with the ET Leader and the Contractor on the proposed mitigation measures. Review proposals on mitigation measures submitted by the Contractor and advised the ER accordingly. Assess the effectiveness of the implemented mitigation measures. 	 Discuss with the IC(E) on the current mitigation measures. Discuss with IC(E), the ET Leader and the Contractor on the proposed mitigation measures. Make agreement on the proposed mitigation measures to be implemented. Assess the effectiveness of the implemented mitigation measures. 	 Inform the ER and confirm notification of the exceedance in writing. Rectify unacceptable practice. Check all plants and equipment. Consider changes of working methods. Discuss with the ET Leader and the IC(E) on the current mitigation measures. Inform the ER and confirm notification of the consecutive exceedance in writing. Rectify unacceptable practice. Check all plants and equipment. Consider changes of working methods. Discuss with the ET Leader and the IC(E) and propose mitigation measures to the IC(E) and the ER within 3 working day. Implement the agreed mitigation measures. 		
Limit Level						
 Limit level being exceeded by one sampling day and is cause by the construction works 	 Discuss mitigation measures with the IC(E), the ER and the Contractor. Ensure the proposed mitigation measures are implemented. Prepare to increase the monitoring frequency to daily if further exceedances of the Limit Level are detected on the next sampling day. 	 Discuss with the ET Leader and the Contractor on the proposed mitigation measures. Review proposals on mitigation measures submitted by the Contractor and advised the ER accordingly. Assess the effectiveness of the implemented mitigation measures. 	 Discuss with IC(E), the ET Leader and the Contractor on the proposed mitigation measures. Request the Contractor to Critically review the working methods. Make agreement on the proposed mitigation measures to be implemented. Assess the effectiveness of the implemented mitigation measures. 	 Inform the ER and confirm notification of the exceedance in writing. Rectify unacceptable practice. Check all plants and equipment. Consider changes of working methods. Discuss with the ET Leader, the IC(E) and the ER, and propose mitigation measures to the IC(E) and the ER within 3 working days. Implement the agreed mitigation measures. 		

Event	Action					
Lvent	ET Leader	IC(E)	ER	Contractor		
 Limit level being exceeded by more than one consecutive days and is cause by the construction works 	 Discuss further mitigation measures with the IC(E), the ER and the Contractor. Ensure the proposed further mitigation measures are implemented. Increase the monitoring frequency to daily until no exceedance of the Limit Level. 	 Discuss with the ET Leader and the Contractor on the proposed further mitigation measures. Review proposals on further mitigation measures submitted by the Contractor and advised the ER accordingly. Assess the effectiveness of the implemented further mitigation measures. 	 Discuss with IC(E), the ET Leader and the Contractor on the proposed further mitigation measures. Request the Contractor to Critically review the working methods. Make agreement on the further mitigation measures to be implemented. Assess the effectiveness of the implemented further mitigation measures. 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. 	 Inform the ER and confirm notification of the consecutive exceedance in writing. Rectify unacceptable practice. Check all plants and equipment. Consider changes of working methods. Discuss with the ET Leader, the IC(E) and the ER, and propose further mitigation measures to the IC(E) and the ER within 3 working days. Implement the agreed further mitigation measures. As directed by the ER, slow down or stop all or part of the construction activities. 		

3.5.4 Landscape and Visual

The Final Tree Survey Report^[3] approved in April 2001 was adopted as the framework of the baseline landscape condition of this road section. In addition, a supplementary tree survey has been carried out in December 2001. The Supplementary Tree Survey Report (Revision A)^[4] completed in March 2002 is also adopted to provide supplementary information of the baseline landscape condition of this road section.

If any non-conformity on landscape and visual issue is observed, the actions in accordance with Event/Action Plan shown in Table 3-12 shall be carried out.

Event	Action				
Event	ET Leader	IC(E)	ER	Contractor	
Non-conformity	1. Identify Source(s).	1. Check report.	1. Notify the	1. Amend	
occasion	 Inform the IC(E) and the ER. 	 Check the Contractor's working method. 	2. Ensure remedial	method.	
	 Discuss mitigation actions with the IC(E), the ER and the Contractor. 	3. Discuss with the ET Leader and the Contractor on possible remedial measures.	measures are properly implemented.	 Rectify damage and undertaken any necessary replacement. 	
	4. Monitor remedial actions until rectification has been	 Advise the ER on effectiveness of proposed remedial measures. 			
	completed.	5. Check implementation of remedial measures.			
Repeated Non-	1. Identify Source(s).	1. Check monitoring report	1. Notify the	1. Amend	
conformity	2. Inform the IC(E) and the ER.	 Check the Contractor's working method 	Contractor. 2. Ensure remedial	working method.	
	 Increase monitoring frequency 	3. Discuss with the ET Leader and the	measures are properly implemented.	2. Rectify damage and undertaken	
	 Discuss mitigation actions with the IC(E) , the ER and the Contractor. Monitor remedial actions until rectification has been completed. 	Contractor on possible remedial measures.		any necessary replacement.	
		4. Advise the ER on effectiveness of proposed			
		remediai measures.			
		of remedial measures.			
	 If exceedance stops, cease additional monitoring 				

Table 3-12 Event/Action plan for landscape and visual impact

3.6 Site Inspection and Environmental Complaint Handling

3.6.1 Site Inspection Frequency and Areas Covered

Regular site inspections shall be carried out on a weekly basis. The areas of inspection cover the different environmental impacts, such as air, noise, water and waste, and their pollution controls and mitigation measures for both within and outside the site area. Site inspection for landscape and visual impact shall be carried out on a bi-weekly basis.

Ad hoc site inspection will be carried out if significant environmental non-compliance is identified. Inspections may also be carried out subsequent to receipt of any environmental complaints, or as part of the investigation work, as specified in the Event-Action Plans.

3.6.2 Site Inspection Procedures

- a) The CT and/or ER will advise the Environmental Auditor (EA) for all information on any environmental related aspects.
- b) The EA will conduct discussion with the CT and/or ER to sort out and forecast any potential environmental impact.
- c) The EA will conduct a site walk with the CT and/or ER, particularly the areas with extensive construction works.
- d) The EA will conduct inspection for the main environmental facilities and measures such as the wheel washing facilities located at the site exits, water spraying truck, temporary noise barrier, and the internal noise-reducing measures of the heavy equipment etc, to ensure that these environmental facilities operate normally and effectively.
- e) The EA will fill up a site inspection checklist during the site inspection for recording of any special observations.
- f) The EA will conduct post-discussion with the CT and/or ER for the establishment of additional/special measures if any non-conformance is found. The completion date for such additional measures will be confirmed during the post-discussion.
- g) The EA will propose a reasonable timeframe together with the CT and/or ER, for the preparation of the proposal for the remediation of environmental noncompliance.

h) The completed site inspection checklist will be signed by the EA, the CT and/or ER, for reference and for taking actions in accordance with the agreed procedures, reporting systems and time frame.

3.6.3 Environmental Complaints

In accordance with the EM&A Manual, environmental complaints will be referred to the ET for initiation of the complaint investigation procedures. The ET will undertake the following procedures upon receipt of the complaints:

- a) The ET will record the details of the complaint and the date of receipt onto the complaint database, and inform ER immediately.
- b) The ET will perform compliant investigation to determine its validity, and to assess whether the source of the problem is due to work activities.
- c) The ER will instruct the CT to identify mitigation measures in consultation with the ET, if the compliant is valid and due to works.
- d) The ET will liaise with the CT on their mitigation measure proposals and implementation, if required.
- e) The ET will conduct review of the CT's response on the identified mitigation measures, and of the updated situation.
- f) The ET will submit interim report to EPD if the complaint is received via EPD. The interim report will clearly state the status of the complaint investigation and the follow-up action within the time frame assigned by EPD.
- g) The ET will undertake additional monitoring and audit to verify the situation if necessary, and ensure that any valid reason for complaint does not recur.
- h) The ET will report on the investigation results and the subsequent actions to the source of complaint for responding to the complainant (If the source of complaint is via EPD, the results will be reported within the time frame assigned by EPD).
- i) The ET will record the details of the complaint, investigation, subsequent actions and results in the monthly EM&A reports.

During the complaint investigation work undertaken by the ET, the CT and ER shall cooperate with the ET on providing all the necessary information and assistance for completion of the investigation. If mitigation measures are identified as necessary after the investigation, the CT shall promptly carry out the required mitigation to the satisfaction of ET. The ER shall ensure that the CT has carried out such identified measures.

A flow chart of the complaint response procedures is shown in Figure 3-2 for reference.



Figure 3-2 Flow chart of the complaint response procedure

4. AIR QUALITY

4.1 Monitoring Parameters and Equipment

Impact air quality monitoring was conducted in terms of both 1-hour and 24-hour TSP using a direct reading meter, MIE Data-RAM Portable Real Time Aerosol Monitor (MIE) and High Volume Sampler (HVS) respectively. Table 4-1 shows the equipment list for air quality monitoring.

Equipment	Manufacturer & Model No.	Measurement Parameter	Qty.
High Volume Sampler	GS-2310105 & TE-5170		11
Fibreglass Filter	G810	24-hour TSP	
HVS Calibration Kit	GMW-2535		1
Photometric Aerosol Monitor	MIE personalDataRAM	1-hour TSP	10
Hand Held Barometer	Cole-Parmer EB833	Pa, Temperature	2

Table 4-1 Equipment list for air quality monitoring

4.2 Methodology

4.2.1 1-hour TSP Monitoring

The procedure for 1-hour TSP monitoring is described as follows:

The MIE monitor was switched on by pressing the ON/OFF button. The NEXT button was pressed to select Run or Ready mode.

The NEXT button was pressed subsequently to check the following settings:

- i. data logging function: on
- ii. log period: 5 minutes
- iii. tag number: storage
- iv. analogue output: 0-4.000mg/m³
- v. calibration factor:1.0
- vi. averaging time: 10s
- vii. battery charge: $\geq 50\%$
- viii. remaining memory: $\geq 10\%$

The monitoring was started by pressing ENTER. The real-time concentration would display "CONC" and the time-averaged concentration would display "TWA".

The monitoring was stopped by pressing EXIT and ENTER buttons.

The date and start time, weather, site condition and the downloaded monitoring results were recorded on specified field record sheet.

4.2.2 24-hour TSP Monitoring

24-hour TSP by using a High Volume Sampler (HVS). The HVS should be in compliance with the following specifications:

- $0.6 1.7 \text{ m}^3/\text{min} (20 60 \text{SCFM});$
- equipped with a timing/control device with +/- 5 minutes accuracy for 24 hours operation;
- installed with elapsed time meter with +/- 2 minutes accuracy for 24 hours operation;
- capable of providing a minimum exposed area of 406 cm²(63in²);
- flow control accuracy: +/-2.5% deviation over 24-hr sampling period;
- equipped with a shelter to protect the filter and sampler;
- incorporated with an electronic mass flow rate controller or other equivalent devices;
- equipped with a flow recorder for continuous monitoring;
- provided with a peaked roof inlet;
- incorporated with a manometer;
- able to hold and seal the filter paper to the sampler housing at horizontal position;
- easy to change the filter; and
- capable of operating continuously for a 24-hour period.

4.2.3 Maintenance and Calibration

The HVS and their accessories were frequently checked and maintained in accordance with the manufacturer's operation & maintenance manual. Maintenance includes the checking of the supporting screen and the gasket, and routine replacement of motor carbon brushes for the blower motor. The power cords and power supply were checked each time before sampling to ensure proper operation.

The HVS are calibrated at 2-month intervals using GMW-2535 Calibration Kit. The calibration kit will be re-calibrated by the manufacturer after one year of use. The calibration certificates of the HVS and the calibration kit are provided in Appendix D. The next calibration will be conducted on or before 11 October 2004 for the HVS and 1 March 2005 for the GMW-2535.

The MIE monitor and its accessories were frequently checked and maintained in accordance with the manufacturer's operation & maintenance manual to ensure proper operation. Maintenance includes the checking of batteries, zero and sensitive adjustment and filter replacement.

The MIE monitor is returned to the manufacturer for calibration bi-annually. The calibration certificates are provided in Appendix E. The next calibration dates for the MIE monitors are given in Table 4-2.

1-hour TPS monitoring equipment	Serial number	Last calibration date	Next calibration date (on or before)
	3809	31-Oct-02	31-Oct-04
	4239	17-Dec-02	17-Dec-04
	4243	31-Oct-02	31-Oct-04
MIE Data-RAM Portable Real Time Aerosol Monitor	4492	12-Jun-03	12-Jun-05
	4496	25-Sep-03	25-Sep-05
	4736	21-Nov-03	21-Nov-05
	4715	21-Nov-03	21-Nov-05
	4615	15-Jan-04	15-Jan-05
	4705	15-Jan-04	15-Jan-05

 Table 4-2
 Calibration dates of 1-hour TSP monitoring equipment

4.3 Results and Observations

4.3.1 Weather conditions and other factors

The weather condition varied from sunny to rainy during the air quality monitoring period in September 2004. Thunderstorm warning signal was hoisted during the 1-hour TSP monitoring on 7 and 20 September 2004 and the 24-hour TSP monitoring on 7 and 18 September 2004.

The construction site had been under normal operation during the air quality monitoring period and no unusual operation or dust from other source was observed.

4.3.2 Summary Results

1-hour TSP

A total of 6 sets of 3 consecutive 1-hour TSP measurements had been taken on 1, 7, 10, 20, 23 and 30 September 2004.

The highest 1-hour TSP level was $350.8\mu g/m^3$ recorded at G/F Hong Kong Garden Between Blocks 1 and 2 (WA4) on 7 September 2004 while the lowest 1-hour TSP level was $117.0\mu g/m^3$ recorded at G/F Hong Kong Garden Regent Heights (WA3) on 1 September 2004.

There was no exceedance of the A/L Levels during the monitoring period.

The detailed monitoring results of 1-hour TSP are given in Appendix F and the 1-hour TSP level at each monitoring location are plotted and presented in Figure 4-1.



Figure 4-1 Graphical presentation of 1-hour TSP levels for September 2004

24-hourTSP

A total of 5 sets of 24-hour TSP measurement had been taken on 1, 7, 13, 18, 24 and 30 September 2004.

The highest 24-hour TSP level was $168.3\mu g/m^3$ recorded at G/F Hong Kong Garden Between Blocks 1 and 2 (WA4) on 7 September 2004 while the lowest 24-hour TSP level was $30.4\mu g/m^3$ recorded at Carpark of Sea Crest Villa Phase 2 Block 6 (WA9) on 18 September 2004.

There was no exceedance of the A/L Levels during the monitoring period.

The detailed monitoring results of 24-hour TSP are given in Appendix G and the 24-hour TSP level at each monitoring location are plotted and presented in Figure 4-2.



Figure 4-2 Graphical presentation of 24-hour TSP levels for September 2004

4.3.3 Wind Monitoring Data

The detailed wind monitoring data for the air quality monitoring period in September 2004 extracted from Hong Kong Observatory – Tsing Yi Wind Monitoring Station is attached in Appendix H.

5. NOISE

5.1 Monitoring Equipment

An integrating sound level meter was used for the noise monitoring. The sound level meter equipment are listed in Table 5-1.

Equipment	Manufacturer & Model No.	Precision Grade	Qty.
Integrating sound level meter	Brüel & Kjær 2231	IEC 651 Tupo 1	2
Integrating sound level meter	Brüel & Kjær 2238		3
Windshield	Brüel & Kjær UA0237	TEC 804 Type T	6
Acoustical calibrator	Brüel & Kjær 4230		2
Acoustical calibrator	Brüel & Kjær 4226	TEC 942 Type T	1
LCD wind speed indicator	Kestrel Vane Anemometer		2

 Table 5-1
 Equipment list for construction noise monitoring

5.2 Methodology

5.2.1 Field Measurement

- The sound level meter and the battery were checked to ensure that they were in proper condition.
- The sound level meter was set on a tripod at 1.2m above ground and at 1m from the exterior of the building façade.
- Before conducting the measurement, the sound level meter was calibrated by an acoustical calibrator.

- The measurement parameter was set to A-weighted sound pressure level. The time weighting was set in fast response and the time period of measurement at 30 minutes.
- The wind speed was checked during noise monitoring to ensure the steady wind speed did not exceed 5m/s, or wind with gusts did not exceed 10m/s.
- Any abnormal conditions that generated intrusive noise during the measurement were recorded on the field record sheet.
- After each measurement, the equivalent continuous sound pressure level (L_{eq}) , L_{10} and L_{90} were recorded on the field record sheet.
- The sound level meter was re-calibrated by the acoustical calibrator to confirm that there was no significant drift of reading.

5.2.2 Equipment Maintenance and Calibration

The sound level meter complies with the standards of IEC 651 (Fast, Slow, Impulse rms detector tests) and IEC 804 (L_{eq} functions). The acoustical calibrator model no. 4230 is in compliance with IEC 942. Both equipment are calibrated annually in-house using Brüel & Kjær (B&K) calibrator model no. 4226.

The National Physical Laboratory in Teddington, London, which is accredited by National Measurement accreditation Service (NAMAS), annually calibrates the B&K calibrator model no. 4226. All in-house calibrations that are undertaken can be traced back to the National Physical Laboratory. The calibration certificates of the noise monitoring equipment are given Appendix I. The next calibration will be conducted on or before 15 July 2005 for the sound level meters and the acoustical calibrators.

5.3 Results and Observations

5.3.1 Weather Conditions and Other Factors

The weather condition varied from sunny to cloudy during the noise monitoring period in September 2004. Thunderstorm warning signal was hoisted during the 1-hour TSP monitoring on 7 and 20 September 2004.

The construction site had been under normal operation during the noise monitoring period and no unusual operation was observed. Traffic noise had been noticed at some noise monitoring locations during the noise monitoring period.

5.3.2 Summary Results

A total of 5 set of noise measurement had been conducted between 0700-1900 hours on 1, 7, 14, 20 and 30 September 2004. The detailed construction noise monitoring results are given in Appendix J.

The highest noise level was 73dB(A) recorded at Villa Alfavista (WN11) on 14 September 2004 while the lowest noise level was 63dB(A) recorded at Podium of Sea Crest Villa Phase 3 Block 8 (WN13) on 30 September 2004.

There was no exceedance of the A/L Levels during the monitoring period.

The noise levels at each monitoring location are plotted and presented in Figure 5-1.



Figure 5-1 Graphical presentation of daytime noise levels for September 2004

6. WATER QUALITY (DESGINATED PROJECT)

6.1 Water Quality Equipment

Monitoring of Turbidity (Tby) in NTU, Dissolved Oxygen (DO) in mg/L and Suspended Solids (SS) in mg/L were carried out by the ET to ensure that any deteriorating water quality could be readily detected and timely action be taken to rectify the situation. The Tby and DO were measured in-situ while the SS was determined in the laboratory. A summary of the water quality monitoring equipment is provided in Table 6-1.

Equipment	Manufacturer & Model No.	Qty
Handheld Salinity, Conductivity & Temperature System	YSI Model 30	1
Dissolved Oxygen Meter	YSI Model 52	1
pH meter	Hanna	1
Turbidimeter	HACH 2100P	1
Nephelometer	Analite Model 156	1

Table 6-1 Water quality monitoring equipment

6.2 Methodology

Dissolved Oxygen and Temperature Measuring Equipment

The equipment to measure DO and temperature complies with the following:

- i. The instrument shall be a portable, weatherproof dissolved oxygen measuring instrument complete with cable and use a DC power source. It shall be capable of measuring:
 - A dissolved oxygen level in the range of 0-20 mg/L and 0-200% saturation; and
 - A temperature of 0-45°C.
- ii. It shall have a membrane electrode with automatic temperature compensation complete with a cable. Sufficient stocks of spare electrodes and cables shall be available for replacement where necessary (e.g. YSI model 59 meter, YSI 5739 probe, YSI 5795A submersible stirrer with reel and cable or an approved similar instrument).

iii. Should salinity compensation not be integrated in the DO equipment, in-situ salinity shall be measured to calibrate the DO equipment prior to each DO measurement.

Turbidity Measurement Instrument

The instrument is a portable, weatherproof turbidity-measuring instrument complete with comprehensive operations manual. The equipment shall use a DC power source. It shall have a photoelectric sensor capable of measuring turbidity between 0-1000 NTU and be completed with a cable (e.g. Hach model 2100P or an approved similar instrument).

Suspended Solids

The following equipment is required to monitor the SS:

- i. A water sampler comprising a transparent PVC cylinder, with a capacity of not less than 2 litres and which can be effectively sealed with latex cups at both ends. The sampler shall have a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler is at the selected water depth (e.g. Kahlsico Water Sampler or an approved similar instrument).
- ii. Water samples for SS measurement of both the marine and freshwater environment shall be collected in high density polythene bottles, packed in ice (cooled at 4° C without being frozen) and delivered to the laboratory as soon as possible after collection.

Water Depth Detector

A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring. This unit can either be handheld or affixed to the bottom of the monitoring boat, if the same vessel is to be used throughout the monitoring programme.

Salinity

A portable salinometer capable of measuring salinity in the range of 0-40 ppt shall be provided for measuring salinity of the water at each monitoring location and setting salinity compensation on the DO Meter.

Location of the Monitoring Site

A hand-held or boat-fixed type Differential Global Positioning System (DGPS) or other equivalent instrument of similar accuracy shall be provided and used during monitoring to ensure the monitoring vessel is at the correct location before taking measurements. For the monitoring locations in the water courses a hand-held DGPS, together with a suitably scaled map shall be used.

6.2.1 Calibration and Accuracy of Instrumentation

All in-situ monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme before use, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring. Responses of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibration for a DO meter shall be carried out before measurement at each monitoring location.

For the 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 followed.

6.3 Marine Monitoring

As reported by the Contractor, major sea works at level below +2.5mPD had been completed in July 2003. The proposal on suspension of marine monitoring was submitted to IC(E), HyD, EPD and AFCD for comments on 25 September 2003. It was confirmed with IC(E) and AFCD that suspension of marine monitoring was acceptable if there is no "active" marine work being carried out. In future, if there is any marine work on or below +2.5mPD, the Contractor shall notify the relevant parties one month in advance and resume the marine monitoring. Subsequently, as instructed by the Contractor/ HyD, the marine monitoring was suspended since during the period from October 2003 to 31 July 2004.

However, as instructed by the Contractor, the planned sand placement activities will be conducted at Seawall B. Marine impact monitoring near Seawall B (i.e. WW1, WW2, WW3, WW4, WR-E-1234, WR-F-1234 and FCZ1) was resumed from 2 August to 27 August 2004. Since sand placement activities at Seawall B were ceased in August 2004, no marine water quality was conducted in September 2004. Details are given in Appendix K.

7. LANDSCAPE AND VISUAL MONITORING AND AUDIT

The landscape and visual monitoring and audits were carried out on 8 and 22 July 2004 by a Registered Landscape Architect.

The audit findings and recommendations are summarised in the following paragraphs.

7.1 Summary of Inspection – 2 September 2004

7.1.1 Matters Arising from Previous Inspections

- The Contractor had cleared away the scattered empty cement bags and construction waste pile found at RW-13 area.
- The Contractor had cleared away the construction waste pile found at Slope 9 area.
- The Contractor had cleared away the garbage and construction waste pile found at Seawall 'C' retaining wall area below.
- Clearance of construction waste piles found at the construction area opposite Seawall 'B' was outstanding. The Contractor was reminded to clear it away as soon as possible.
- Re-hydroseeding of the Slope No. 8 was still outstanding. The Contractor was reminded to re-hydroseed the patches of barren slope surface area as soon as possible.
- Dry surface conditions were observed at many parts of the site, including areas RW-01, BPRW-03, Seawall 'B', RW-13, Slopes 9 & 11, and footbridge FB-03 area The Contractor was reminded to carry out more frequent watering of the site to prevent dust nuisance

7.1.2 Site Clearance and Formation Works

• Site clearance works near Angler's beach in progress.

7.1.3 Tree Felling and Transplanting Works

• No tree transplanting work was carried out during the inspection period.

7.1.4 Recommendations

• The Contractor was reminded to clear away all scattered litter, garbage, etc. as found on site, and keep the site in a tidy condition at all times.

- The Contractor was reminded to re-hydroseed all the patchy surface areas at Slope No. 8 for planting works. However, it was advised by the Contractor that the hydroseeding bald patches were conforming to the design issues and beyond the scope of the Contractor's control. Nonetheless, the Contractor had presented alternative method proposals to the Engineer for comments.
- The Contractor was reminded to carry out more frequent watering of the site during dry periods to prevent dust nuisance.

7.2 Summary of Inspection – 16 September 2004

7.2.1 Matters Arising from Previous Inspections

- Clearance of construction waste piles / garbage at the construction area opposite Seawall 'B' was still found outstanding. The Contractor was again reminded to clear it away as soon as possible.
- Re-hydroseeding of the Slope No. 8 was still outstanding. The Contractor was reminded to re-hydroseed the patches of barren slope surface area.
- Dry surface conditions were observed at many parts of the site. The Contractor was reminded to carry out more frequent watering of the site to prevent dust nuisance.

7.2.2 Site Clearance and Formation Works

- Vegetation cuttings from site clearance were found piled along the footpath of RW-01 area. The Contractor was requested to clear it away as soon as possible.
- Scattered construction waste piles was found at Seawall 'B' area. Also, the waste container bin was found to be full. The Contractor was requested to clear it away as soon as possible.
- Construction waste pile was found at footbridge FB-03 area. The Contractor was requested to clear it away as soon as possible.

7.2.3 Tree Felling and Transplanting Works

• No tree transplanting works was carried out during the inspection period.

7.2.4 Recommendations

- The Contractor was reminded to clear away all scattered litter, garbage, etc. as found on site, and keep the site in a tidy condition at all times.
- The Contractor was reminded to re-hydroseed all the patchy surface areas at Slope No. 8 for planting work. However, it was advised by the Contractor that the hydroseeding bald patches were conforming design issues and beyond the scope of

the Contractor's control. Nonetheless, the Contractor had presented alternative method proposals to the Engineer previously for comments.

• The Contractor was reminded to carry out more frequent watering of the site during dry periods to prevent dust nuisance.

7.3 Summary of Inspection – 23 September 2004

7.3.1 Matters Arising from Previous Inspections

- The Contractor had cleared away the vegetation cuttings from site clearance found piled along the footpath of RW-01 area.
- The Contractor had finally cleared the construction waste piles / garbage at the construction area opposite Seawall 'B'.
- The Contractor had cleared away the scattered construction waste piles found at Seawall 'B' area and also emptied the waste container bin. However, new construction waste and scrap wood piles were found. The Contractor was reminded to clear it away as soon as possible.
- The contractor had cleared away the construction waste pile found at footbridge FB-03 area.
- Re-hydroseeding of the Slope No. 8 was still outstanding. The Contractor was reminded to re-hydroseed the patches of barren slope surface area.
- Dry surface conditions were observed at many parts of the site. The Contractor was reminded to carry out more frequent watering of the site to prevent dust nuisance.

7.3.2 Site Clearance and Formation Works

- Scattered construction waste was found along the retaining wall area below at RW-13. The Contractor was requested to clear it away as soon as possible.
- Untidy site condition was found at retaining wall area below at Seawall 'C' area. The Contractor was requested to tidy up the area as soon as possible.
- Construction waste pile was found at BPRW-70 area. The Contractor was requested to clear it away as soon as possible.

7.3.3 Tree Felling and Transplanting Works

• No tree transplanting works was carried out during the inspection period.

7.3.4 Recommendations

• The Contractor was reminded to clear away all scattered litter, garbage, etc. as found on site, and keep the site in a tidy condition at all times.

- The Contractor was reminded to re-hydroseed all the patchy surface areas at Slope No. 8 for planting work. However, it was advised by the Contractor that the hydroseeding bald patches were conforming design issues and beyond the scope of the Contractor's control. Nonetheless, the Contractor had presented alternative method proposals to the Engineer previously for comments.
- The Contractor was reminded to carry out more frequent watering of the site during dry periods to prevent dust nuisance.

7.4 Tree Transplanting Survival Rate

7.4.1 Tree Transplanting Survival Rate

• The tree transplanting survival rate as reported by the Contractor for the period up to the end of September is 100%.

7.5 Audit Schedule

7.5.1 Audit Schedule for October 2004

• The next audits are schedule to be conducted on 14 and 28 October 2004.

The Landscape and Visual Monitoring & Audit Report for September 2004 prepared by the Registered Landscape Architect is attached in Appendix L.

8. SITE INSPECTION, WASTE DISOSPAL, ENVIRONMENTAL COMPLAINTS, ENVIRONMENTAL LICENSES AND NON-COMPLIANCE RECORDS

8.1 Site Audit Results

Weekly environmental site audits were carried out on 2, 9, 16, 23 and 30 September 2004. The environmental concerns identified in the site audits are summarised in Table 8-1.

Date of Issue Raised	Observation	Advice from EA	CT's Response / Environmental Outcomes	Closing Date	
Water Quality					
19-Aug-04	Access road leading to site entrance W12 was not paved.	To pave the site entrance.	Concrete paving was provided.	16-Sep-04	
26-Aug-04	Wastewater treatment plant was not operating at site entrance of RERW13.	To check whether the plant is functioning.	-	Outstanding	
02-Sep-04	Stagnant water was found in trench of RW012.	To clean up the stagnant water.	The trench was backfilled.	09-Sep-04	
02-Sep-04	Mud trails were found at public road at W27 and W25.	To clean up the mud trails.	No mud trail was found.	09-Sep-04	
09-Sep-04	Design of site entrance W24 and outside Hong Kong Garden were not adequate.	To provide cut-off drain and de-silting pits at the entrances.	-	Outstanding	
09-Sep-04	Stagnant water was found at storage area near Bayside Villa.	To clean up the stagnant water.	The trench was backfilled.	16-Sep-04	
16-Sep-04	Silt curtain at RERW01 was not completely surrounding the coastline.	To surround the silt curtain along the coastline.	Silt curtain were provided along the coastline.	23-Sep-04	
16-Sep-04	Mud trails were found at public road of site entrance W16.	To clean up the mud trails.	No mud trail was found.	23-Sep-04	
23-Sep-04	Mud trails were found at public road of site entrance W9, W24 and W20.	To clean up the mud trails.	No mud trail was found.	30-Sep-04	
23-Sep-04	A site vehicle was found not using wheel washing facility at the site exit.	To utilise wheel washing facility for site vehicle.	The site vehicles used wheel wash at site exits.	07-Oct-04	
30-Sep-04	U-channel of Slope 6 was blocked and stagnant water was accumulated,	To clean up the silt and remove stagnant water.	No silt and stagnant water was observed.	07-Oct-04	

 Table 8-1
 Summary of environmental concerns identified in the site audits in September 2004

Date of Issue Raised	Observation	Advice from EA	CT's Response / Environmental Outcomes	Closing Date
30-Sep-04	Mud trails were found at the site entrance of W5, W33a and W29.	To clean up the mud trails.	No mud trail was found.	07-Oct-04
Air Quality				
02-Sep-04	No water spraying was provided for drilling at RW01.	To spray with water.	No drilling was observed at RW01.	09-Sep-04
16-Sep-04	Stockpile at RW74 was not covered.	To spray water on stockpile or cover with tarpaulin.	Water spraying was provided.	23-Sep-04
30-Sep-04	Slope at RW74 was exposed	To cover the slope with tarpaulin.	The slope was covered.	07-Oct-04
30-Sep-04	Slope at RW01 was exposed	To cover the slope with tarpaulin.	In progress.	Pending re- inspection
Constructior	n Noise			
No significant	construction noise impact.			
Handling of	Wastes and Chemicals			
16-Sep-04	Waste was found accumulated at FB01.	To remove the waste at FB01.	Waste was removed from FB01.	23-Sep-04
16-Sep-04	Rubbish bins at the site were insufficient.	To provide more rubbish bins	More rubbish bins were provided.	07-Oct-04
23-Sep-04	No rubbish bin was provided at Outfall F and W24.	To provide rubbish bins.	Rubbish bins were provided.	30-Sep-04
23-Sep-04	No drip tray was provided for oil drum at Outfall F.	To provide drip tray for oil drum.	Drip tray was provided.	30-Sep-04
30-Sep-04	Waste was found accumulated at Seawall C.	To dispose of the waste.	Waste was disposed of.	07-Oct-04
30-Sep-04	Chemical waste was found accumulated in drip trays of Outfall F.	To clean up the chemical waste.	No chemical waste was found accumulated in drip trays.	07-Oct-04
30-Sep-04	No drip tray was provided for chemical drums at RW74 and RW01.	To provide drip tray for chemical drums.	Drip tray was provided.	07-Oct-04
30-Sep-04	Oil stain was observed on bare ground at Outfall F.	To remove the oil stain.	Oil stain was removed.	07-Oct-04

8.2 Waste Disposal

The Contractor had properly disposed of the waste material in the reporting month, and the disposal quantity in the reporting month is summarised in Table 8-2.

Type of waste or material		Disposal at	No. of loads or quantities	Remarks
C&D waste WENT Landfill 15		15 loads		
C&D material		Public Filling Area in Tuen Mun	692 loads	
Grease trap waste		Interim Grease Trap Waste Treatment Facility at WENT Landfill	0	
Chemical waste	Spent lube oil	Collected by licenced collector	0	

Table 8-2 Waste disposal quantity in September 2004

8.3 **Complaint Record**

There was one environmental complaints received in September 2004.

Complaint log no. 156 was received on 18 September 2004 regarding excessive garbage trapped along the adjacent shore of Seawall B west end. It was out of control over the accumulation of floating rubbish drifting toward the shore. However, the contractor would remove them as soon as possible. Details of complaint are provided at Appendix M.

A log record on the environmental complaints is given in Appendix N and a cumulative statistics on environmental complaints is given in Table 8-3.

able 8-3 Cumulative statistics on environmental complaints				
No. of complaints received in the reporting month	No. of outstanding complaints	Cumulative no. of complaints received since the commencement of project		
1	0	30		

- 6 1 - 0 - 0 -----

8.4 **Non-compliances**

There was no non-compliance for air quality and noise monitoring during the reporting period.

8.5 Notification of Summons and Successful Prosecution

There was neither notification of summons nor prosecution received during the reporting month.

8.6 Environmental Licenses

No new environmental license was granted in the reporting month. A summary of the valid environmental licenses in September 2004 is given in Table 8-4.

Type of Licence	Reference No.	Valid from	Valid to	
Environmental Permits	EP-093/2001	Not applicable	Not applicable	
	EP-094/2001	Not applicable	Not applicable	
Water Discharge Licence	EP742/336/0029 I	09-May-2002	31-May-2007	
Registration of Chemical Waste Producer	5213-336-M2446-04	09-Mar-2002	Not applicable	
	5213-336-G2040-68	10-Sep-2002	Not applicable	
Construction Noise Permit	GW-UW0288-04	01-Jul-04	31-Dec-04	

 Table 8-5
 Summary of valid environmental licenses in September 2004

9. **REFERENCES**

- [1] Mouchel Halcrow Joint Venture. 2001. Castle Peak Road Improvement between Area 2 and Ka Loon Tsuen, Tsuen Wan West Contract No. HY/99/18, Environmental Monitoring & Audit Manual.
- [2] Ove Arup & Partners Hong Kong Limited. July 2002. Contract No. HY/99/18 Castle Peak Road Improvement between Shem Tseng and Ka Lung Tsuen, Tsuen Wan, Environmental Baseline Monitoring Report (Second Issue).
- [3] Mouchel Halcrow Joint Venture. 2001. D&C Consultancy Agreement No. CE 1/96 Castle Peak Road Improvement between Area 2 and Ka Loon Tsuen, Tsuen Wan, Tree Survey Report & Tree Felling Application Revision D.
- [4] Mouchel Halcrow Joint Venture. Contract No. HY/99/18 March 2002.
 D&C Consultancy Agreement No. CE 1/96 Castle Peak Road Improvement between Area 2 and Ka Loon Tsuen, Tsuen Wan, Supplementary Tree Survey Report & Tree Felling Application Revision A.

APPENDIX A Detailed site layout plans

























APPENDIX B Construction programme
	······································	1						<u> </u>	2	004				<u> </u>
Activity	Activity		Orig Early	Early	% Tota	S	EP	L ~		<u> </u>	NOV		<u>DEC</u> 20	.27
ID	Bescription		D Start	Finish	Comp Floa	b <u>6</u> 13	20 27	ť	11 18 25	8	_ <u>1522</u>	<u>.9 10.</u> (
ODD I	revenant hat Sham Teang & Ka	Loon	Teuen								i i	1		
	Internent her ongitt raend of un		19491											·
Importan	t Dates		_	_				İ		1				
Portions H	landover Dates				·	1		1		1				
00-VD0W5	Handover Portion No. W5 to Employer	-	0	02OCT04*	0	p.		•	1					
00-VD0W6	Handover Portion No. W6 to Employer		0	02OCT04*	0	2					-			
	Handover Portion No. W28 to Employer		0	020C104*	0	D.				;				
00-VDW42	Handover Portion No. W42 to Employer		0	02OCT04*	0	0				•		···		
											:			
<u>1. Preiim</u>	nanes	· · ·				•		1 .						,
Planning §	<u>Programming</u>	<u> </u>			1									<u>المبيدة الم</u>
01-0108	Maintain Programming & Submit Progress Reports	-4-1	1.236 24NOV01	A 28JULOS				<u> </u>			<u> </u>			
Waste Mar	nagement	. К` 		·			i		1. A.			· · · · ·		
01-1166	Implement & Monitor WMP	E.	1,171 21DEC01	A 29MAY05	78	or		+						
Maintonan	ce of Traffic Flow				· [1]	· ·				i			-	
			1,171 24NOV01	A 29MAY05	78	0				·,				
		· ·		-	10			ι	1		· · · <u>·</u>			
Environme	ental Monitoring & Audit		1.601 08MAR02	A 28JUL06	58	0,								
01-11702	implement & Maintin Impact Monitor & Audit	l			i	<u> </u>								
Interfacing	and Coordination		11710105001	A 2014 Y05	78	0				,				
01-1173	Coordination/Integration with Interfacing Works		1,171 01DEC01	A 2904105	78									
01-1174	Provide Reasonable Access to Other Contractors		1,171 01DEC01	A 2980AT03	, 6			+ + +	· · ·	Į –			-	
16. Site S	Safety					_ ,	ł	Ì						
C-f-h-Mo	nonement System		,		. · ·	.]			· ·					
Safety Ma	Lealement & Mainlain Sofety Management System		1.151 14DEC01	A 29MAY05	78	0		<u> </u>				<u> </u>		
110-1012	Implement & Maintain Salety Management Oystern							· i						
CPR fro	in Chainage 0+900 to Chainage 1	+870								;				
							1							
<u>i. Preum</u>	inanes				282 J		1	- i .		į.	;	i		
Proposed	Utility Works		010001000	4 1796 004	05				:	:				
01-12026	Proposed CLP on E/B C.way CH1550-1700		6 02A0G04	A DOCEDOA	<u> </u>	~	1 -315	1			1			
01-120256	Proposed CATV on E/B C.way CH1800-1860		BUSAUGO	A 203EF 04	50 2					1	1	ļ		
01-121923	CLP Corss Rd. Ducts at E/B CH1440-1550		6 23AUG04	213004	50 1		"面積間"。中心					1		
01-120255	Additional HKT at E/B CH1770-1870	· +	12 30AUG04	A 04050044	100		1			ļ				
01-1219	NWT Cross Rd. Ducts at E/B CH1440-1510		6 035EP04	A DASERUAA	100	· ·		- :		- (
01-121921	HT Cross Rd. Ducts at E/B CH1440-1550		6 USSEPV4	A DASEPOAA			da			į	I.	ļ		
01-12073	CATV Cross Rd. Ducts at E/B CH1502 & R8	+	6 155EP04	A 233EF04			HE CONTRACTOR OF A CONTRACTOR A CONTRAC	-ù		ļ		i		
01-121935	HKT Cross Rd. Ducts at W/B CH1810		4 255EP04	305EP04						i				
01-12023	Gasmain Connection for E/B CH1550-1700		6.30SEP04	8/00104		12			1			;		
01-12075	CATV Cross Rd. Ducts at W/B CH1502		4 02OCT04	060CT04	U .2				– • •				- · ·	÷
01-12091	Proposed HKT on W/B C.way CH1464-1550		5 07OCT04	12OCT04						:				
01-1209	Proposed CATV on W/B C.way CH1464-1550		5 11OCT04	150CT04	0 -2	леј	<u> </u>	<u> </u>				e	2004	
Slag Date	23NQV01	Farly Bar	3M34		Maeda Co	rporation	Sheet 1 c	ư 13			Date	Ravjaron	Checked	Арритунд
Finish Date	03MAY07	Proviess P	_{lar} Η Υ	//99/18 -	Castle Pea	k Road Imp	rovement		The se		30.4.4.03 revision 01 1756493 revision 02	·		<u> </u>
Data Dale	16SEP04	Critical Act	lvity	3- M	onth Rolli	ng Programi	ne		. iso					<u> </u>
Run Date	28SEP04 10:25													<u> </u>
© Prima	avera Systems, Inc.	- i							MAED	<u>A</u>				

	······································	<u> </u>		1	I	. 1						20	04	,	· · · · · · · · · · · · · · · · · · ·
Activity	Activity	· / ·	Drig Early	Early	%	Total	<u> </u>	EP			OCT				DEC
ID	Secretion	-	Dur Start	Finish	Comp	Float		20	27	_ <u>A</u>	11 18	25	<u>n 8 15</u>	2	<u>10 113 140 14(</u>
Proposed	Utility Works									1					
01-12032	Proposed HT on E/B C.way CH0960-1060		7 12OCT04	19OCT04	0	-167		ļ	1				1	!	
01-120342	CLP Cross Rd. Ducts at E/B CH1005		6 12OCT04	180CT04	0	-166		Į		. i				.	·
01-12093	Proposed HKBN on W/B C,way CH1464-1550		5 14QCT04	1900704	0	-209			-1						
01-1220	CLP along Access Rd R8		6 14OCT04	20OCT04	0	50			ł						
01-12034	Proposed CLP on E/B C, way CH0960-1060		7 20OCT04	280CT04	0	-167		ł	1					· · · ·	
01-12092	Proposed CLP on W/B C way CH1464-1550		5 20OCT04	26OCT04	0	-20'3					-				
01-1205	Proposed Gasmain on E/B C.way CH1350-1550		40 09NOV04	24DEC04	0	-216				· 1					
01-12033	Proposed HKT on W/B C,way CH0960-1075		6 20NOV04	26NOV04	0	-167						·	L		
01-1206	Proposed CATV on W/B C.way CH0960-1075		6 24NOV04	30NOV04	0	-167							1		
01-12062	Proposed HKBN on W/B C,wav CH960-1075		6 01DEC04	07DEC04	0	-167									
01-12063	Proposed CLP on W/B C,way CH0960-1075		6 04DEC04	10DEC04	0	-167								1	
01-120652	CLP Cross Rd. Ducts at W/B CH1110		4 09DEC04	13DEC04	0	-171		ł	i	- I	· ·				
01-12038	Proposed HKT on W/B C,way CH1075-1205		6 14DEC04	20DEC04	0	- 169		———				· · · · ·			<u>_</u>
2 Poadu	orks								i					.	•
S. RUGUW			17 .	1				ł .						i i	
Earthwork	S	· · · ·	14 26.JUL04A	22SEP04	60	-200									
03-3011	Earthworks Along W/B C/W CH1464 to 1354	†-	21 02AUG04A	0900104	15	-171		{							
03-3008	Earthworks Along W/B C/W CH1075 to 1205		11 10SEP04A	22\$EP04	50	-229									
03-30092	Perm, rock fail at bays 40-45 to form access		21 20OCT04	13NOV04	0	-196									
03-3009	Earnworks Along W/B C/W CH1203 to 1330		14 10DEC04	26DEC04	0	-229								·	
03-3010	Earthworks Along W/B C/W CH1350 to 1404												<u> </u>	1	
Drainage V	Norks		30 1044 4 044	06OCT04	80	50								I	
03-3134	Drainage at Access Road R8	- +	17 0241/6044	050CT04	50	-207							1		
03-3123	Drainage along W/B C'way bet CH1464-1550		12 25SEP04	1100704	0	-157					1			1	
03-3128	Drainage along E/8 C'way bet CH1000-1050		26 30SEP04	01NOV04	0	-171		ł	: 4					1	
03-3135	Drainage along W/B C'way bet CH1075-1205		20 2700704	1810/04	0	-209		1						.	
03-31312	Drainage along E/B C'way bet CH1464-1550				<u> </u>			1			!				
Pipe Work	s (Local Supply Watermains)	r-										i			
03-3153	Pipe Works on E/B C'way bet CH1500-1700		21 20APR04A	ZASEPUA		-60					1. TO .			1	
03-3154	Pipe Works at Access Road R8		20 02A0G04A	1300104									· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
Road Wor	ks			·			_			1			1		
03-3217	Formation/sub-base/footpath; E/B CH1550-1700		9 13SEP04A	23SEP04	30	-98	_	1	-						1
03-32172	Road pave to Road Base: E/B CH1550-1700		6 24SEP04	02OCT04		-98		Į.	- 194			7 <u></u>			1
03-32180	Demolish eixst. RW2a & Install Gate, Bay Side Vil		30 28SEP04	04NOV04		58		I		•			:		
03-3106	Divert Traffic to E/B C/way CH1550 -1700		0	020CT04		-98							1		1
03-3113	Lay sub-base, kerbs & edgings; W/B CH1464-1550		9 07OCT04	160CT04	0	-207			1						
03-3213	Lay sub-base, kerbs & edgings; E/B CH0950-1060		15 1 I OCT04	280CT04	0	-187			i	ļ					I
03-31132	Construct rd pave & f/p; W/B CH1464-1550		9 150CT04	26OCT04	0	-209				1					
03-3026	Slew traffic towards North at CH 1350-1500		18 16OCT04	08NOV04	<u>a</u>	-218		1		:					I
03-32132	Construct rd pave & f/p; E/B CH0950-1060		15 19OCT04	05NOV04	0	-167		Į							
03-3218	Lay sub-base, kerbs & edgings; Access Rd R8		12 210CT04	04NOV04	0	50		- · ·				· · · · · • • • • • • • • • • • • • • •		•	1
03-31133	Divert Traffic to W/B C'Way CH1464-1550		0	260CT04		-209		1				Ċ	1		
03-32182	Construct rd pave & f/p; Access Rd R8		12 29OCT04	11NOV04		50		1					•		1
03-32135	Divert Traffic to E/B C'way CH960-1060			105NOV04		-167		1		$1 \sim 1$					
03 31140	Lav kerbs & central barriers: W/B CH960-1075		(19NOV04	0	-167		<u>ا</u>		_ز					<u>. </u>

A State Prevaluate

متنقت حميته

	A	0.1		E			1								2004				,
Activity	Activity		j Early Stort	Еалу	70	Float		_SE	P			0	<u>CT</u>			NO	v		DEC
			Start	FIRISH	Comp	FIUAL	06	_13 	20	_27			18.	25	1 4	13	<u> </u>		<u>₽003 ⊭ע⊮∠/</u>
Road Wo	rks		40001/04	least a start						I					l	र ज्यान			
03-32184	Rd finishes, marking & lighting; Access Rd R8			20100004	1	174			• •						I				
03-31142	Lay sub-base, kerbs & edgings; W/B CH1075-1205	13	14DEC04	3000004		- 17				+	-								i <u> </u>
5. Footb	ridges									ĺ					:				
Footbride	e FB12		1.1										:		:				
05-53302	North Columns and Column head for FB12; 10 Nos.	50	16AUG04A	16OCT04	50	-216		+					∎ .	1					1
05-53103	Demobilize Piling Rig & Pile Test; FB12 (S)	16	30AUG04A	20SEP04	77	-224					,		i I	i					
05-5320	South Pile caps for FB12; 6 Nos.	40	21SEP04	09NOV04	0	-224													
05-5360	Construct Ramp for FB12 (North)	60	18OCT04	29DEC04	0	20							<u> </u>		and the second sec	副臺灣和當於有	<u></u>	nerutuka I j	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
05-53202	South Columns & Column head For FB12; 9 Nos.	50	10NOV04	10JAN05	0	-49						.i .							······································
05-53604	Construct Stairway for FB12 (North)	30	23NOV04	29DEC04	0	20												1991-1997 	
6 Retain	ing Walls																		
Rorad Ril																		. 1	
06-62235	Fill & Trim Slope/Construct U-Chappel: 1 to 30	30	02MAR04A	06OCT04	90	62		-		-G-54	* 7	1		1		•	1		
00-02200		J	1	l <u>-</u>						+	_;			1					
L-Snaped	Walls	207	29.IAN04A	Повостра	91	-211	_	_		┉┥				-					
06-6106	Retaining Wall RW01 (CH1350-1400); 5 Davs	30	30APR04A	24SEP04	90	-167				;				i	i		-		· ·
06-6202	Retaining Wall RW01 (CH1075 1205): 13 hove	133.	08MAY04A	16OCT04	81	-168		-							i i			÷	
06,6102	Retaining Wall RW01 (CH1075-1203); 13 bays	156*	08MAY04A	13NOV04	69	-196		-				_							
06-61021	Excavate/lemp spil pailing for bays 27-40	75	05MAY04A	22SEP04	95	-223	_	-+	,	; ;	1	i.		1			-		
106-61012	Construct base/wall for bays 14-26	80	27MAY04A	02OCT04	75	-171	,,,				∎∣	 							
06-61022	Construct base/wall for bays 27-40	70	03JUL04A	30OCT04	54	-229		-							E j				
06-61064	Construct plinth for bays 41-45	18	16SEP04	080CT04	0	-211							1		1		1		
06-61014	Construct plinth for bays 14-26	24	17SEP04	16OCT04	0	-166		- [1				÷			f F		ł		
06-61031	Excavale/lemp soil nailing for bays 46-52	30	23SEP04	300CT04	0	-229									•		I		· · · · · · · · · · · · · · · · · · ·
06-6105	Retaining Wall RW01 (CH1554-1680); 13 bays	132*	08OCT04	18MAR05	0	-102				.				ner o b avaid ii				I	
06-61051	Excavate/temp soil nailing for bays 53-65	60	06OCT04	17DEC04	a	-102					. •				1				
06-61024	Construct plinth for bays 27-40	30	09OCT04	13NOV04	0	-196				1	:				1			. [· · · · · · · · · · · · · · · · · · ·
06-6103	Retaining Wall RW01 (CH1400-1464); 7 bays	62.	16OCT04	30DEC04 1	0	-229									1			1	
06-61032	Construct base/wall for bays 46-52	50	16OCT04	14DEC04	0	-229								1			¹		
06-61034	Construct plinth for bays 46-52	24	01DEC04	30DEC04	0	-219													
7. Noise	structures									i					i.				
Procurem	ent of Noise Barrier																		
07-7060	Eabrication of Steel Members for Noise Barrier	120	17MAY04A	04DEC04	20	-45		-		-					<u>.</u>				
07-7040	Prenare/Submit Shon Drawings for NM03	21	01JUL04A	26SEP04	50	-26		-		∎								Î	
07-7080	Delivery of Steel Members for Noise Barrier	90	20JUL04A	09DEC04	5	-45		-							1			- 1	
07-7070	Fabrication of Panels for Noise Barrier	100	16SEP04	24DEC04	0	-5				_									
07-7050	ER Review/Approve Shop Drawings for NM03	30	27SEP04	26OCT04	0	-26							1	IN 5 · · · · ·			!	<u> </u>	. <u> </u>
07-7090	Delivery of Panels for Noise Barrier	90	140СТ04	11.JAN05	0	-5							.1.1.1.1.						
Noise Miti	gation No. 01		-							1									·
07-7113	Foundation of NM01 (N); CH1350-1405 (bays 11-14)	96	02.1UN04A	24SEP04	92	-216				: :	:							:	
07-71137	Const. R.C. barriers/collumns: NM01-bays 11-14	12	11SEP04A	245EP04	33	-216		-	وننبعيض	! i	1				ł			I	
07-7121	Foundation of NM01 (S); CH1205-1350 (bays15-23)	55"	29NOV04	03FEB05	0	-198					1								
07-71212	Excavation/formation for bays 15-23 of NM01	18	29NOV04	18DEC04	0	-196													

		0	Carlos	Early	•/_	Total			T		<u>2</u>	004	NOV			DEC		_
Activity	Activity	Dur	Start	Finish	Comp	Float	<u>SE</u> SE	.P 20	27	4		1_8_	15 22	_29		13	20 2	
ID	Description		Juan				<u></u>							i	_			
Noise Mitic	ation No. 01		1105004	11 IAN05	0	-196		ļ										
07-71214	Construct base for bays 15-23 of NM01	24			-				1					. (
8. Culver	s and Outfalls				1	ļ						-		1				
Culvart. Ou	tfall B						_					i]
	Excavate Culvert-Outfall B (South of Exist CPR)	6	03SEP04A	04SEP04A	100					i	1			·]				
08-8202	1.5m conc. nipe/ surround:Outfall B (South)	6	06SEP04A	14SEP04A	100					-	:		· · · ·	÷i				
08-82024	1.5m Cascade at Outfall B outside RW01	12	17SEP04	02OCT04	<u> </u>	-98									_ ·	_	-	-
Culvert Ou	tfall CA				'			ł										
	Excavate Culvert-Outfall CA(South)	6	3 20OCT04	270CT04	0	-191			11	ł				÷				1
08-83022	Construct manhole SMHCA3 at Outfall CA	6	5 28OCT04	03NOV04	0	-191			:									
08-83024	1 2m Concrete & DI pipes with concrete surround	10		15NOV04	0	-180			. 1		1							
08-83024	1.2m Dt pipe/Catchpit/Cascade; Outside RW01	12	2 16NOV04	29NOV04	<u>0</u>	-54				<u> </u>				.				1
Culvart-Or	utfall C				;	, <u> </u>				1	· :							
08 8402	Excavate Culvert-Outfall C (South of Exist CPR)	6	5 16SEP04	22SEP04	0	-170		_						.				1
08-8402	Construct manhole SMHC3 at Outfall C	6	B 23SEP04	30SEP04	0	-170		~	. 1			i I		Ì				
108-84024	1.5m Concrete & DI pipes with concrete surround	10	0 02OCT04	13OCT04		-170		1	ļ									
08-84028	1.5m DI pipe/Step Cahnnel; Outside RW01	10	0 14OCT04	26OCT04		-25	· · · - -							: '				
Culvert-O	Itfall CB							1				i I						
08-81602	Exc. Culvert-Outfall CB (South of RW01)		6 10NOV04	16NOV04		-224			.									
08-816022	Const. Culvert-Outfall CB (South of RW01)	2	1 17NOV04	10DEC04		-224			Ì			1	,	' ļ	l		<u> </u>	
08-81603	Exc. Cutvert-Outfall CB (Middle Portion)	· '	6 10DEC04	16DEC04		-229			' i	,				. }				
08-816032	Const. Culvert-Outfall CB (Middle Portion)	2	1 15DEC04	11JAN05		-226	·				:			1				
Culvert-O	utfall E					J		1	ļ					ן רב			1	0.014
00100100	Exc. Culvert-Outfall E (SMHE1-Inlet)		6 22NOV04	27NOV04	+		•	1	ĺ							7 . Cat	<u>1911 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917</u>	<u> </u>
08-86032	Const, Culvert-Outfall E (SMHE1-Inlet)	3	5 29NOV04	11JAN05		/ ×	·	· [1						
40 Coot	chnical & Slone Works							1		: .	1	İ		i				
]				ļ						
New Slop	NOS. 4, 5 & J	2	24 08.1AN04.4	27SEP04	- 80	5		<u>م محمد مقبور</u>	التنديز -يــه	ប ទ ភភ	STATE OF BRIDE STATE	Í		- ri				
	Excavation & Hilling Vyorks for Slopes 4, 5 & 3	1	18 26SEP04	20OCT04	(n 5		1		<u></u>								
10-102052						-		I	-			1		i				
Existing S	ilope Works	22	8" 17DEC03	A 24SEP04	9	7 -16					1							
10-10210	Remedial Works to Slope No. C to r a Co		30 12JAN044	11SEP04/	10	0			. .	'				· 1				
10-102104	Install rock dowels/surface protection	:	30 18MAY04	A 24SEP04	9	0 -16						1						
10-102108	Construct retaining wan over to boacking	1 2	20 05JUN04/	14SEP04	A 10	0		_1		<u>i</u>				' †				
10-102105	Remove Scanolonia, terms, carder terms											i I						
<u>12. Entru</u>	isted Watermains							1		i .				i				
Entrusted	Water Mains		17 13/44 9/14	A 17SEP04		0 -20		╺╇╸				1		i				
12-12042	Const. Trough for T. watermain CH1464-1550		17 02.JUND4	A 18SEP04		0 -20				_;		I I		:				
12-1204	DN1000FW/Associated Wks (W/B C'way CH1464-1550)		26 17SEP04	1900704		0 -17	-			.								
12-1208	DN1000FW/Associated Wks (W/B C'way CH1075-1205)	-+	29 15NOV04	17DEC04		0 -19	6			<u>.</u>				÷				· —
12-1202	DN1000FW/Associated Wks (W/B C'wav CH1205-1350)									· ·								
13. Rep	ovisioning of LCSD & FEHD Facilities					1.16				Ì.,				ļ				
FEHD Fa	cilities		~~ <u>-</u> -	·	·· ·					S-5-	A CONTRACT OF A	ļ	_		l			
13-1340	Reprovision of Sitting Out Area at Ka Loon Tsuen	<u> </u>)SEP03	A 1160CT04			<u> </u>			<u> </u>								-
E.B					,		4 - 1 1 2											

		Only Farly	E a alu	· · ·	T-4-1			,	2(ρ <u>4</u>	
	Activity	Orig carry	Earry Cinish	Comp	Float	SE	EP			NOV 15 22 20	DEC
	l Description		Fillian		rioat	<u>د ۱۱ م.</u> (- 21	<u>1]1042</u> _	, ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , ⊡ , □ , 	<u> </u>
Stairways		20 1601/0040		100							
13-1313	Construct Stairway ST03	30 1040 3044	Haerona						<u> </u>		,,,i:
14. Lands	scape Works						1	į			
Landsgap	e Softworks							ĺ	· · · · · · · · · · · · · · · · · · ·		
14-14115	L'scape Works in Slope No. 6	40 27OCT04	11DEC04	0	0			ļ			
14-14117	L'scape Works bet CPR CH1705 & 1870	40 13DEC04 3	31JAN05	0	0				· · · · · · · · · · · · · · · · · · ·		
18. Varia	tion Works							•		 	
Relocate	Nator Motors at Mul Yuen & Lung Sing							Ì		· · ·	
VO-37400	Relocate Water Meters at Mui Yuen & Lung Sing	18' 30SEP04 [210CT04	0	-84			, P			
VO-37402	Lav new olneline incl. cross road	6 30SEP04 (07OCT04	0	-64			P			
VO-37404	Water testing and connection	12 080CT04 1	210CT04	0	-64						
Vehicular	Paranets	• _ ·		· · · ·	•						
VO-24930	Additional Vehicular Parapets at CH 1465-1555	30 28JUN04A (06OCT04	30	-209						
VO-24910	Additional Vehicular Parapets at CH 1070-1205	49° 160CT04	13DEC04	0	-171			.			
VO-24911	Formation: Vehicular Parapets at CH 1070-1205	18 16OCT04 (06NOV04	0	-171						
VO-24912	Base; Vehicular Parapets at CH 1070-1205	24 250CT04 7	20NOV04	0	-171			·			·
VO-24913	Wall/Backfil; Vehicular Parapets at CH 1070-1205	35 03NOV04 1	13DEC04	0	+171			1			
CPR from	m Chainage 2+210 to Chainage 3+01	0						1	•		
								·	!		
1. Prelim	inaries							·	1		
<u>Proposed</u>	Utility Works			,							
01-12151	Proposed Gasmain on W/B C,way CH2550-2780	12 31JUL04A	24SEP04	35							
01-12112	Proposed CLP on W/B C,way CH2480-2800	14 255EP04 1	1300104		10-				4		
01-1215	Gasmain on E/B CH2780-2830 Incl. Cross Rd. Ducts	16 255EP04			761			_ G=C			
01-12421	Gasmain at W/B CH 2950-3050	11 305EP04	130CT04		761			Ľ-			
01-12127	Proposed CLP at W/B CH 2800-3010	27.02OCT04	1300104 03NDV04	+							
01-1214	Proposed Gasmain on E/B C,way UH2300-2480	2/050CT04			-51			ł			
01-1212/3	CLP Cross Rd. Ducis at W/B CH2975	2 07OCT04	080CT04		-51				i 🔳		
01-121262	HK1 Cross Rd. Ducis at W/B CH2610	2 16NOV04	17NOV04		- 152					₩	
01-121125	CLR Cross Rd, Ducts at W/B CH2770	2 03DEC04 (04DEC04	0	-152						■
01-121224	CATV = E/B CH2780-2830 incl. Cross Rd. Ducts	10 10DEC04 ;	21DEC04		-51			-			
D	for CA No. 2			ł				1			
Programm	IE TOT SA INU. 3	366° 295EP03A (26SEP04	96	947		State Party of the	泰熙			
	Programme for SA No. 3	12 25NOV03A :	21SEP04	50	847			į			
01-0118	Prepare linar on Review & endorse detailed design by ICE/MH.IV/OS	12 28NOV03A 2	20SEP04	58	947		-12 m 2	1	í	· · · · · · · · · · · · · · · · · · ·	
01-0119	Propage formal copies of SA for execution SA	- 7 22SEP04 :	26SEP04	0	947		ale a	Pares	1		
01-01110	Frecite SA	0	28SEP04	0	947			♦ }	i		
2. She Gi									1		
Demolition	n of Existing Buildings	24 23 ILIND3A	225EP04	<u>100</u>	-48			i i		Ì	
02-2131	Temp, Divert W. Way/Demol. Exist Pavil. & W.Way	24 233014035 12	236704	<u> </u>				1 :			
	1										

		Outo Early Early	•/_	Total						20	04	NOV			DEC	-
Activity	Activity	Dur Start Finish	Comp	Float	<u>SEP</u>			<u>OC</u> 11	18	25	18		22 29	6	13 20	27
ID	Description		oomp							_			i			
3. Roadw	orks			_							1					
Earthwork	s		,			-					ļ		•			
03-3203	Road formation at CPR CH2800 & 3010	30 07JUN04A 06OCT04	30	-45												
03-3202	Road formation at W/B C'way bet CH2480 & 2800	30 18NOV04 22DEC04	0	- 152				:			<u> </u>	· _				
Drainage V	Norks	· · · · · · · · · · · · · · · · · · ·]							İ		·			
03-3222	Drainage Works at CPR CH2800-3010	348- 02AUG03A 04OCT04	96	-51							:		i			
03-32212	Drainage Works at W/B C'way bet CH2650-2750	14 11JUN04A 15SEP04A	100													-
03-32227	Drainage Works at W/B CH2990-3010	20 06SEP04A 04OCT04	30	-51			i —		:							
03-32241	Guilies at E/B CH2300-2450	6 23SEP04 30SEP04	0	-44												i
03-32228	Drainage Works at E/B CH2800-2850	30 05NOV04 09DEC04	0	-51		1		<u></u>	- L	·- · -·		· '6]		
03-32242	Drainage Works at E/B C'way bet CH2450-2480	12 19NOV04 02DEC04		49			l	·								
03-3226	Drainage Works at Access Road R9	50 01DEC04 31JAN05	0	-34												2-1
03-32243	Drainage(F4.1-4.3-4.3.2x) at E/B CH2480-2580	20 03DEC04 28DEC04		40			+	·			<u> </u>					
Pipe Work	s (Local Supply Watermains)			r		٦					2	i.				-
03-3232	Pipe Works at W/B CH2900-3010	21 30JUN04A 22SEP04	80	768		-	, 									·
03-3234	Pipe Works at E/B CH2280-2550; VO375	29 02OCT04 05NOV04		-60						.2.	<u>्रह्लस्ट्रह</u> ्य		I			·]
03-3233	Waler Works at Portion W10	7 290CT04 05NOV04				•	<u>;</u>				1					
Road Wor	ks		1			I			:							
03-31764	Temp. road/diversion at Outfall G; East bound	10 23AUG04A 08SEP04A	100				. The second	a !					1			
03-31448	Reinstate E/B carriageway at CH2210-2300	B 020CT04 080CT04		187	_					1	1					
03-3146	Lay sub-base, kerbs & edgings; W/8 CH2800-3010	10 09OCT04 20OCT04		-51	-	1		1								
03-31462	Construct rd pave & f/p; W/B CH2800-3010	10 16OCT04 28OC104	`	-31						• •			· [
03-31472	Divert Traffic to W/B Perma C'way CH2800 to 3010	0 2800104	·	162	····· ··· ···		+- · · ·						· [
03-3145	Lav sub-base, kerbs & edgings: W/B CH2550-2800	27 06DEC04 UBJAN05		/ -132					1		<u> </u>					
5 Footb	ridaes				, I						1					
Faathrida	a ER01	;						i					·			
05.5150	Construct Ramp for FB01 (South)	60 26JUL04A 08SEP04A	100	기						_					I	
05-51112	Piling Works at North Supports for FB01(12 Nos.	72 03SEP04A 10DEC04) -80			ि <u>।</u> सन्दर्भवार्थ	नि	र र देखें ह							
05-51506	Frect Steelwork & Roofing for FB01 (South)	30 16SEP04 23OCT04		115	5	<u>,</u>			•	-	1		I.			
05-5113	Demobilize Piling Rig & Pile Test; FB01 (N)	18 11DEC04 04JAN05	<u>(</u>	-80	<u></u>		+ ~									
Footbridg	EB02		., . <u> </u>													
05-5250	Construct & Erect Deck of Main Span for FB02	45 30JUN04A 20SEP04		-37		r		I	•				;			
05-52706	Erect Steelwork & Roofing for FB02 (North)	30 14JUL04A 27SEP04	64	0 135	5 F		 इन्द्रक्षक्रक	and I and			1		· ·			
05-52606	Erect Steelwork & Roofing for F802 (South)	30 21SEP04 26OCT04		0 141		ייז <u>ייייייי,</u> רא		1		- <u></u>	1		1			
05-52502	Erect Steelwork & Roofing of Main Span (or FB02	30 265EP04 04NOV04		0 136	5						<u></u>	জ্ঞিত হাজসেইছে -	<u>.</u> 	و، و المرجع]	
05-5280	E&M and Finishing Works for Footbridge FB02	30 05NOV04 09DEC04		0 13	5				- <u>-</u> -	- :						
7 Maica	Structures				I I											
A, NUISE				:												
<u>Noise Mit</u>	Igation No. 02	30 03SEP04A 05OCT04	5	0 4	0.	- Contract					-	<u></u>	i			
07-7222	Erect Steel Members at South Supports for Millor	60" 15NOV04 26JAN05		0 -5	3											
	Evenuation for NM02 (North)	30 15NOV04 18DEC04		U -5	3		1									
07.72212	Coordinate for NM02 (North)	30 29NOV04 05JAN05		a -5	3		İ						İ			
07-72214	Construct wall stem for NM02 (North)	30 15DEC04 21JAN05		0 -5	13		┶╌┍╴	<u></u>			۱ 					
01-12210	Consulation and the more more more than the						_()		<u> </u>						

			C	Elu		7			2004				
Activity	Activity	Orig_]	Eany Etc-t	Eininh	Com	Float	SEP		.95 .4	<u>NOV</u>	22 29 5	UEC	27
1D	Description	ĽĽ	Start	FINISN	Comp	rioat		8	_ <u>⊾a</u> l	<u>6(\</u>	<u></u>		<u>~'</u> .
Noise Miti	gation No. 03	·		r 	r 						1		
07-7311	Foundation of NM03 (South)	55"	09SEP04A	15NOV04	11	-152			-				, i
07-73112	Excavation/formation of NM03 (South)	18	09SEP04A	30SEP04	30	-152							
07-73114	Construct base of NM03 (South)	34	17SEP04	29OCT04	0	-152							
07-73116	Construct wall stem of NM03 (South)	34	30SEP04	10NOV04	0	-152							
07-73118	Column of NM03 (South)	24	180C104	15NOV04	0	-152	·						
07-7322	Erect Steel Members at South Supports for NM03	30	10DEC04	17 JANUS	0	-5			!				
Noise Miti	cation No. 04							·					
07-74072	Erect Panels for NM04(in front of W10)	30	1400704	18NOV04	0	1							
07-74041	Eoundation of NM04 (bays 5 & 12-13)	30	29OCT04	02DEC04	. 0	-51		, i i			:		
07-74082	Frect Frame/Panels for NM04(bays 5 & 12-13)	30	03DEC04	10JAN05	0:	-11		· · ·					-/
101-14002				i i				i					
8. Culver	ts and Outfalls	1			1			1	ļ				
Culvert-O	utfall F	,	<u>.</u>	· · · ·	 		i		i				
08-8720	Excavate for stage 1: Outfall F North	6	16AUG04A	14SEP04A	100								
08-87202	Const. SMHEF2 & 1.8m conc. pipe (stage 1)	18	15SEP04A	0700004	0	36		Harry particular states and a			:		
08-87203	Excavate for stage 2; Outfall F North	30	15SEP04A	230CT04	0	49		· ·					
08-87204	Const. SMHF1 & 1.8m conc. pipe (stage 2)	18	25OCT04	13NOV04	0	49,							
08-87205	Backfill; Outfall F	4	15NOV04	18NOV04	0	49	· · · ·	<u>.</u>			· · · · · · · · · · · · · · · · · · ·		
Culvert-O	utfall GB										· .		
08+8920	Excavate Culvert-Outfall GB (remain.); VO 165	18	29OCT04	16NOV04	0	-34			1				i
08-89202	Const. Culvert-Outfall GB (remaining): VO165	25	02110/04	30NOV04	0	-34		· · · · ·					
	Norks						1				•		
a J. Jeaw a	his and marine works								t		. 1		
Sea Wall	B (710 m Length)	T col		12255004		.03		1	, ,				
09-9124	Granular Fill (CH2500-2800)	20			203 A0	- 109					•		
09-91222	2nd stage Armour to +4 mPD (CH2525-2800)	30	0130M04A	2432704					· · · ·	· · · ·	- ^		
L-Shaped	Walls			,					•		:		
09-91331	Reprovision of PavIllion at Sea Wall B	376*	19JUN03A	22SEP04	96	-109		:	1				
09-9123	Retaining Wall RW-B for Bays 33-56 (CH2500-2800)	348-	24JUL03A	22SEP04	96	-109			i				
09-91238	Plinth for bays 28-56 at CH2500-2800	46	06MAR04A	22SEP04	96	-109			ĺ				
09-91333	Roofing/staircase/flooring & finishings	40	07JUN04A	22SEP04	90,	-109	·		<u> </u>				
10 Geot	echnical & Slope Works												
				11 <u>-</u>	11.4						, 		
Existing S		120-	14JUL04A	04DEC04	45	-53		_					
09-9212		76*	14JUL04A	13OCT04	71	-27	<u>,</u>				:		
09-92121		6	14JUL04A	20SEP04	33	-53					<u> </u>		
	Form access and site clearance	120	14JUL04A	04DEC04	45	-53							
09-92122		8	14JUL04A	04SEP04A	100								
09-921221	Form access and site dearance; D/C 100	12	06SEP04A	18SEP04	75	-28							
109-921214	Excavate/inm slope to future road level; D/C100	6	21SEP04	27SEP04	0	-27			I I				
09-921216	Construct 300 O-channel on the slope, U/C166	8	215EP04	27SEP04	0	-53							
09-921222	Ereci chain link tence & assoc works; v03/9	12	285EP04	130CT04	0	.27							
09-921218	Slope stabilization works; D/C186	18	28SEP04	200CT04	0	-53					!		
09-921223	Irim slope/U-channel to tut. rd level; D/C1&78	6	21DCT04	28OCT04	0	-53							
09-921224	Scattolding for soil nailing & rock dowels	10	29OCT04		0	-53							
3 09-921225	Test nailing; 2 nos.	1 .0		1.2.1.2.1.2.1		<u> </u>		·					

		· []	.	East	ا 1	Total	<u>. </u>			·			20	04					DEC	
Activity	Activity	Orig	Early	Early	Come	Float		SEP		L	0		25	1	<u>NO\</u> }15	22	29	6	13 2	027
ID	Description	Dur	Start		[comp]	<u>prioat)</u>	itii	13 <u>120</u>												
Existing SI	ope Works	,	·		. 					i :				!			.			
09-921226	Install 36 nos. soil nails & 9 nos. rock dowels		10NOV04	27NOV04		-53				į										
09-921227	Remove scaffolding & Protect cut slope surface	6	29NOV04	04DEC04	0	-53				<u> </u>				<u></u>		·	_`	<u> </u>		,
19 Entra	ted Watermains									1							1			1
								1		1				ļ			'			
Entrusted	vvater mains		12JUN04A	04SEP04A	100	╷╴╌┧								ī.						
12-1218	DN1000FW/Associated Wks at W/B GH2025-2750		18AUG04A	30SEP04	80	-60		-		1							1			
12-1217	DN1000FW/ASSOCIATED VKS at E/B CH2300-2450	12	16SEP04	30SEP04	0	187		<u>yata vya</u>	<u></u> 4	ר ו				1			· ·			
12-1232	DNI100 Cross rd & life hydrant at CH LOUU	12	080CT04	210CT04	0	-36	_	<u> </u>		I				Ļ						
12-12172				الديون						1	:	i								
CPR from	n Chainage 3+010 to Chainage 3+7	30								ί I			i i							
1 Prolim	inaries							1			i -									
			· .· ,					1			I				,				,	
Proposed		7	02AUG04A	20SEP04	90	-118	, and the second second second second second second second second second second second second second second se		į					1		I				
101-12456	Proposed CLP on E/B C, way CH3540-3070		05AUG04A	11SEP04A	100	,)			i • T	;			i							
01-1242	CLR Cross Rd, Ducks of W/R, CH3090		02SEP04A	03SEP04A	100	1		ł			1						ļ			
01-124001	ULT Cross Rd. Ducts at W/B CH3035		16SEP04	20SEP04	0) -38			!					1			÷ [
01-12403	Prepaged CLP on W/R bot CH3010-2080		215EP04	25SEP04	C) -38		*			-	:		1		<i>.</i> .	·			
01-1240	Proposed CLP on Wro Det Chao 10-3060	6	21\$EP04	275EP04	0	141				1 I 1							ļ			
101-1255	Proposed CLP on E/B C way CH3460-3540	5	21SEP04	25SEP04	0	-52		1 •			İ	ļ		Į			ļ			
0.10556	CLP Cross Rd. Ducks at F/B CH3480	- 4	275EP04	02OCT04	6	52				┲╼ <u>╴</u>	,	I		ļ						
01-125564 01-125504	CATV Cross Rd. Ducts at E/B CH3525		04OCT04	0700704		-52		l			I	4	1				ļ			
101-125521	HKT Cross Rd. Ducis at E/B CH3470		1 08OCT04	120CT04		0 -52					·				· ···-		· :			<u> </u>
01 125542	Proposed CATV on F/R C way CH3460-3540	5	5 13OCT04	16OCT04		o -52							- 200]			·			
01-12002	Proposed HKBN on F/B C way CH3460-3540		5 19OCT04	25OC T04		0 -52		ł												
01-12553	Proposed HKT on E/B C way CH3460-3540		5 260CT04	30OC T04	(0 -52		ł												
01-12555	Proposed HT on F/B C.way CH3460-3540		501NOV04	05NOV04	(0 -52				+		·				<u> </u>				
U1+12000		المرزوان								1	-									
3. Roadu	yorks							I		1						_				
Earthwork	(s		-	0366806	2.	2 -52		┉┿╍╍╍	-	÷	الستابي		-							
03-3242	Earthworks at W/B C'way CH3400-3530	148			⊥_ <u>~</u>		ļ										1			
Drainage	Works		1	4.055		1		1		1	I			1						
03-3325	Drainage Works on E/B C'way bel CH3460-3540	- 10	6 26JUL04A	11SEP04A	<u>10</u>	<u></u>	[-		- 				+			-			
Pipe Work	(s (Local Supply Watermains)				_		ļ 	ļ			I.									_
03-3334	Pipe Works on E/B C'way bet CH3460-3540		6 01SEP04A	11SEP04A	10	<u>.</u>		·		<u> </u>	· <u>·</u>	•				<u> </u>				
Road Mar	·ks					·	\				-				د د د د د د د				كإنتحاد	
103 3340	Dranon Garden Accommodation	800	12APR02/	1 21DEC04	9	196 U											1			
03 224000	Const. Plinth & Wall Face: Dragon Garden	6	0 10JAN03A	30SEP04	8	0 -35							-	I						
01 224000	Remove Temporary Hoarding & Reinstatement	3	5 28APR04/	A 23OCT04	6	0 -35								1			ļ			
02 2210	Encontrol comparent resoluting or restantishering	2	0 04SEP044	275EP04	5	-124														
03-3318	Formation, sub-base & edoinos: W/B CH3010-3300		2 16SEP04	305EP04	1	0 -126]								-		
03-3314	Construct rd pave & f/p: F/B CH3540-3670	1	2 215EP04	06OCT04		0 -124	1	 '			-			1						
02.331/2	Coostnict rd pave & f/o: W/B CH3010-3300		2 235EP04	080CT04		0 -126	1							Ì						
03-33142 -	Divert Tratfic on E/B Perma C'way CH3540-3670		0	060СТ04		0 124	Į	1	I		- ••	:					;			
103-3316	Divert Traffic on W/B Perma C'way CH3010-3300	6	3	0800704		0 -126	·L		<u> </u>		Ţİ.	I		<u> </u>						

		Color Factor	Lash		Tatal					20	04		
Activity	Activity		Einich	Comp	Float	SEP					4 .0	NOV	DEC
	L Description	D	Finian	leombl	Tioat				<u>11 110</u>		J. 19		
Road Worl	ks	12 12 12 0 0 10 1		<u>ا، - را</u>	52		1		i I			i.	
03-3328	Formation, sub-base & kerbs; E/B CH3460-3540	12 2300104		0	-52			!	· -			· ·	A
03-33282	Construct rd pave & f/p; E/B CH3460-3540	12 300 0104	12110204		-52							► .	
03-33283	Divert Traffic on E/B Perma C'way CH3460-3540	0	12140704		-52	·							
R.E. Wall	REV05	•						•					
Reinforced	Earth Wall W05W	· · · · · · · · · · · · · · · · · · ·			· .								
REV010	Excavation/Temp, soil nail/Cleaning the base	70 I3MAY04A	16OCT04	50	-135				· ·				<u> </u>
REV012	Mass concrete/Install panel & mesh/Backfill	60 06OCT04	17DEC04	O	- 135	i		i —					· · · · · · · · · · · · · · · · · · ·
5. Footbr	idaes												
Footbridge				- 1									
	South Pile cass for EB11: 7 Nos	35 100CT03A	27OCT04	77	-8	- 		· ·					
05 55202	South Columns & column head for EB11: 9 Nos	40 09DEC03A	01DEC04	13			<u> </u>	}					
05-55202	North Columns for EB11: 7 Nos	40 05JUL04A	22SEP04	80	54	475		· ·				, i	
05-5560	Construct Ramp & Column Head for EB11 (North)	60 02OCT04	11DEC04	0	54			Clarge Roll			ane. I sika ili ili		
05-55604	Construct Stainway for EB11 (North)	30 08NOV04	11DEC04	0	54		i		1	•	103151		
05-5550	Construct Ramp for FB11 (South)	60 02DEC04	16FEB05	0	 -8)							
6 Detein			:									1	
D. Ketaliii				-				.					
Reinforced	Earth Wall 14	72/09OCT04	05 JAN05	o	-126	-		j 🗖	,	-			
RE1410	Excavation/ Lemp. soil nai/Cleaning the base	11000101		1		· · · · · · · · · · · · · · · · · · ·							
L-Shaped	Walls	C241 080E 0004	04101/04		.45			i					
06-6590	Construct Partition Wall; adjacent to RW16	821 263EF024	02140707		 n		-		1				
06-6580	Construct Retaining Wall RW15		3055204	30	11	<mark> </mark>			1	-			
06-65801	Excavate for RW15; bays 1-3	40 03550040	2800004	15		754			AND CHARDS	-		:	
106-65802	Base/wall for RW15; bays 1-3	6 16SEP04	24SEP04		-45				i I				
06-659042	Construct Partition Wall; Bay 12 (S)	16 25SEP04	150CT04	0	-45			1_			-		
06-659043	Construct Partition Wall; Bay 11 (upper)	16 16OCT04	04NOV04	- 0	-45	5							
06-659044	Construct Partition Wall; Bay 10 (upper)	10 29OCT04	09NOV04	0	11	-		1		2.41	<u>विन संस्थानित स</u> ्थ		
06-65803	Backlill for RW15; Bays 1-3	40 05NOV04	21DEC04	0	125	5		1					and the property of the second second
06-659045	Dradon Garden Finishing Works	12 10NOV04	23NOV04	D				'	;		1.47		
06-65804	Finan for RW15, bays 1-3	18 13NOV04	03DEC04	6	-52			1					
06-65805	Excavation for RW(15; bays 4-6	40 04DEC04	22.JAN05	0	-52	2						·	
100-05800			P	!!								:	
a. cuiver	is and Outralis					٩ (
Culvert - C	outfall HB	22 4341 (2044	15050044	100									ļ
08-810103	Excavate & Construct Oullet of HB	20 13A0604A	1352704A			·····	·	•					
Culvert-Ou	utfall H	1		T		-		ĺ					
08-81130	Exc. Culvert-Outfall H (Remaining Portion)	12 20NOV04	03DEC04	U	-72	· · · · _	· •						
10. Geote	chnical & Slope Works												
New Slope	No. 11												
10-10757	Reprovsion of B. Fence; V.O. No. 133	45 07FEB04A	30SEP04	70	193	,	<u></u>					· · · · · · · · · · · · · · · · · · ·	
Existina S	lope Works			·									
10-1092	Remedial Works to Slope No, FR41	346° 25JUL03A	22SEP04	88	7				· · ·				

		ł					/ -		2	p4		<u> </u>		<u> </u>
Activity	Activity	· Or	rig Early	Early	1 % Fotal	SEP			.25	<u>.</u> я	<u>NUV</u> _15	22 29		20 27
١D	2 Description	D	ur Start	Finish	Comp Floar	61320_	. <u></u>		<u>62</u>	1 1 ®				
Existing S	ope Works					L'avalation								1
10-10928	Fill behind RW104 & Finishing Work		16 07JAN04A	22SEP04	63 7			·		<u> </u>				
	ted Coweren Morks						i					4		
<u>11, Entru</u>	sted Sewerage works							1						
Entrusted	Sewers/Drains		10 17410-044		100					1				
11-1143	Sewer Works at E/B bet CH3460-3540		10 ITAUGUAA	O-GE/ OF/										
12. Entru	sted Watermains													
Entrusted	Water Mains				· · · · · · · · · · · · · · · · · · ·		· · ·							
12-12302	DN1000FW/Associated Wks(E/B C'way CH2970-3300)		100 25OCT04	24FEB05	0 -126									
13 Repro	visioning of LCSD & FEHD Facilities								1					
Stainuaus			: .						:					l l
Stairways	Construct Slainway ST06		174 01MAR04A	30SEP04	93 193	and the second second second second second second second second second second second second second second second				1				
13-1331	Eleiching & railing: ST06		12 16SEP04	30SEP04	0 193	- <u>2-69-58</u>	<u></u>							
12 1222	Construct Stateway ST07		60 23SEP04	04DEC04	0 7		La	Contraction of the second second second second second second second second second second second second second s						
113-1332								. 1		ł		: -		
<u>18. varia</u>					1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -									
Culvert-O	utfall IA		12 07OCT04*	2000104	0 28		. 1	ما دېنو ورو د ور د د د	a		_	ł		
08-81230	Form Access & Remove Vegetation: VO 195		18 210CT04	11NOV04	0 28		;			<u>, a a a a a a a a a a a a a a a a a a a</u>	233 	i 	1	
08-81231	Exc. incl. Sheet pile/Break Conc. Pipe; L. Pan		18 12NOV04	02DEC04	0 28			1				<u>, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,</u>	l Frank - Statement	a
08-81232	Const. Cascade/M. Stairway/Backhill; L. Part		12 03DEC04	16DEC04	0 28		1	· · · · · · · · · · · · · · · · · · ·				<u>·</u>		
08-81233	Exc. incl. Sheet pile; U. Part of Cascade	l .			L							:		
<u>New L-Sh</u>	aped Ret. Wall Between RERW13 & REV05	<u> </u>	422 005 5504 0		14 -135					.				
VO-37700	Add. L-Shaped Wall between RERW13 & REV05		43 09557044	16SEP04	85 -135		:							
VO-37702	Excavation/Formation for Mass Wall		2 175EB04	2355204	0 -135							;		
VO-37704	Construct Mass Wall		11 2455004	09000104	0 -135			i i i i i i i i i i i i i i i i i i i	1			'		
VO-37706	Construct Base for L-Shaped Wall: 2 bays		121100004	250CT04	0 -135					l		الم المستحد الم		
VO-37708	Construct Wall for L-Shaped Wall; 2 bays		41260CTD4	01NOV04	0 -135						_	· [
VO-37710	Backfill behind L-Shaped Wall		8/02NOV04	10NOV04	0 -103			<u>.</u>						
<u>VO-37712</u>	Construct Plinth for L-Shaped Wall: 2 bavs		010210101		<u> </u>			:		İ		j		1
New Rock	fill Slope in front of RW13	<u>_</u>		- Incorta										
VO-34800	Additional Rockfill Slope in front of RW13		32 1656904	2000104			🗖 i 📗	1						
VO-34802	Formation for additional mass wall		8 165EP04	2432F04	0 49									ļ
VO-34804	Const. additinal mass wall; 3 bays		12 200 0104	2000004	0 -49									ļ
VO-34806	G200 rockfill & capping laver behind mass wall	<u> </u> ·	6 1200104	2000104	- 0 -49					: 				
VO-34808	1m wide Maint, Access	,	4 2100104	2000101	1									l
Vehicular	Parapets				04 -126		n i					1		
VO-24950	Additional Vehicular Parapets at CH 3060-3255		94" 02.JUN044	4 225EP04			n						=	
VO-24953	Wall/Backfil; Vehicular Parapets at CH 3060-3255		40 05JUL04A	A ZZSEPIA		·								
CPR fro	m Chainage 3+730 to Chainage 4	+470								1				
1 Prolin	inaries							:						
	Litility Morks		-		· .					i				
Proposed			45 13MAY04	A 20SEP04	95 -163		1		-			1		
01-1248	Cosmain on the Choose of F/B CH3980-4330		10 08OCT04	19OCT04	0 -15				-					
01-124821	Additional Cosmoin on E/B C way CH4330-4470		NOV04	17DEC04	0 -8	; 		<u> </u>	<u> </u>					
101-12471	Additional Gasmain on the C, way CH4330-4470		<u> </u>					- <u></u>						-

1					<u> </u>				2004			
Activity	Activity	Orio (Early	Early	~	lotai	SEP	L	OCT	NOV		DEC	
ID ID	Description	D Start	Finish	Comp	Float	<u> 6 13 20 27 </u>		1825	<u>_181</u> 54	2ro		<u> </u>
Proposed	Utility Works				-							
01-124842	HKT Cross Rd. Ducts at E/B Slow Lane CH4365	4 04DEC04	08DEC04	0	-85				1	1		
01-1247352	HT Cross Rd. Ducts at E/B Slow Lane CH4361	4 07DEC04	10DEC04	0	-6,5		: <u></u>		4			
01-1247381	CATV Cross Rd, Ducts at Slow Lane E/B CH4374	4 09DEC04	13DEC04	, c	-85							
01-1247384	CLP C. Rd. Ducts at E/B Slow Lane CH4320 & 4430	7 11DEC04	18DEC04	C	-85							
01-1247342	NWT Cross Rd. ducts at Slow Lane E/B CH4450	4 14DEC04	17DEC04	C	-85		<u>i</u> .,_		i 			
							· ·		i	- }		
3, Roadw	orks											
Utility Dive	ersion				1				-			
03-345062	Relocate Traffic Control System at E/B CH4100	30 16JUL04A	03SEP04A	100	1			<u> </u>				
Earthwork	s	· · · ·		· · · · ·				1				
03-340024	Additional M. Wall/Rockfill at Bay 20; VO325	21 18AUG04A	15SEP04A	. 100	<u> </u>			<u> </u>				-
Drainano V	Vorks			/				i	· · ·			
03-3445	Drainage Works at E/B C'way CH4160-4300	60 05JAN04A	04SEP04A	100)			I				
03-34242	Drainage at E/B CH3940 -3980	20 14JUN04A	15SEP04A	100	1			1				
03-34242	Drainage along Access Road R10	16 02AUG04A	04SEP04A	100)					1		
03-3465	Construct drainage/backfill at E/B CH4300-4470	50 25AUG04A	03DEC04	10	-85						·	
03-3403	Orainage Works at W/B C/way CH3850-3950	20 26NOV04	18DEC04	(c	-196			·····				
03-34202	Drainage Works at W/B C way CH3630-3850	44 27NOV04	20JAN05		-142		· · · · · · · · · · · · · · · · · · ·					
02.2420	Drainage Works at W/B C way CH3950-4330	95 27NOV04	24MAR05	(C	0 -169		. 	1	<u> </u>			
03-3421			1 <u>-</u>	"	1	J						
Pipe Work	s (Local Supply Watermains)	201051111.044		70	169							
03-34312	Pipe Works at E/B CH4135-4340	10/0000000	10,00,01	1			<u> -</u>					
Road Worl	k <u>s</u>	····	1				L 					
03-34534	Stage 3 TTA (works at E/B slow lane)	159" 23JUL04A	01FEB05	23	-85		(:		•		
03-3455	Road formation at Access Road R10	24 09AUG04A		70	-12			:				
03-34508	Construct Temp./perm. Road at E/B CH 4060-4330	30 09SEP04A	070CT04	10	-169							
03-345073	Divert Road at E/B CH 4060-4330	0	07OCT04	(-169	-				Ì		
03-34554	Lay sub-base, kerbs & edgings; R10	8 0BNOV04	15NOV04		-12		<u>↓</u>			·····		
03-34556	Construct rd pave: R10	8 17NOV04	25NOV04		-12						1	
03-34558	Rd finishes, marking & lighting; R10	10 26NOV04	07DEC04	0	-12	·	<u> </u>			<u>_</u>		
5 Eaathr	idaas											
							· ·			:		
Footbridge	9 FB03	3231 20SEP03A	23OCT04	9	1 -142							
105-5450	Construct Walkway for PB03 (South)	60 31DEC034	05OCT04		5 -183					- 1		
05-54504	Construct Ramp for F803 (South)	50 12 JAN04A	27SEP04	90	-183					i .		
05-54501	Const. Walkway; FB03(South); bays 1-3	72.25MAR044	23OCT04	4	-142				İ			
105-54505	Const Walkway; FB03(South); bays 16-21	41.0911ND44	30SEP04	6	-124		Ĺ			1		
05-54503	Const_Walkway; FB03(South); bays 13-15	40 14550040	3000704	1. 11	-140				∎¦			
05-54602	Construct/Install Pre-cast Ramp for FB03 (North)		1800104	+	0 .183			L				
05-54506	Construct Stairway for FB03 (South)	10 200EPD4	2350000	+						9 . i		
05-54508	Erect Steelwork & Roofing for FB03 (South)	30 1500 104	0405004	<u> </u>			1		1 19 50 50 50 50 50 10 10	Pile Pile of A		j
05-54606	Erect Steelwork & Roofing for FB03 (North)		Louns Cont		1	· · · · ·	<u>1 : .</u>			— · :- ·		· · ·
8. Culver	ts and Outfalls					ļ į			j	4		
Culvert O	utfall IB								1			
Cuivert-Ot	Culved Outfall IB (South Podice)	60- 02JUL04A	060CT04	8	0 124					i		
∎ U0-0 52U		k				······································						

.

		Oria	Fach	Early	0/	Tota	, 				r. — -			2004	ł	NOW			DEC	
Activity	Activity	Dure	Early Start	Einleb	Comn	Floa	, <u> </u>	<u>SE</u>	P		ا	0	10. 19			NQV _115	22 29	6	132	0 27
ID	Uescription	Uur	JIAIL		Toomb	1. 104	··/	<u>u (</u> 14)	40	. 141 -		U.L			~			-		
Culvert-Qu	tfall IB		-	2055504		14	2			-	I . I		1	1						
08-815203	Cascade/Outlet of Outfall IB		130EFV4A	0600004		-17	4				. 🔳									
08-815204	SMHIB2.1/1050 Conc. Pipe	12 0		10000104	L	L					1							····		
Culvert-Ou	tfall I			<u></u>	1	· •					·		1	l						
08-81322	Excovate Culvert bays 3-4; Outfall I	12	13SEP04A	25SEP04	25	-16 						_								
08-813222	Construct Culvert bays 3-4; Outfall I	24	27SEP04	270CT04	<u>د</u>	· -15	*							<u> </u>						
Culvert-Ou	tfall IC		•	1		r	-			I		:						:		
08-81430	Exc. Culvert-Outfall IC (at Exist CPR)	18	080CT04	2900704		-1t	-											I		
108-814302	Const. Culvert-Outfail IC (at Exist CPR)	24	30OCT04	26NOV04	^ا (ij -1€	оч 		·		 		;	<u> </u>						
9. Seawal	Is and Marine Works) .	ł	i	l						
Seawall C I	(460 m Length)	_							Į		;	!								
09-9242	Granular Filt at FB03, W. way bays 1-12/RWC(1-3)	30	02FEB04A	05NOV04	50	-19	¥6				· _									
109-9241	Granular Fill at FB03 Walkway (bays 13-21)	40	1ISEP04A	26OCT04	15	-14	12							••••••••••••••••••••••••••••••••••••••				_		
09-9260	Granular Fill along Retaining Wall RW-C	60	09DEC04	23FEB05	C	1.15	55		I	<u>-</u>				t				ļ <u></u>		
L-Shaped V	Nalls										! '							1		
09-9250	Construct Retaining Wall RW-C	312	29JAN04A	16FEB05	61	-15	55													,=
09-92505	Protect slope/excavate for RW-C; Bays 1-3	18	08MAY04A	25SEP04	70	-15	36	_		_	} •	:						·		
09-92507	Protect slope/excavate for RW-C; Bays 4-21/25-33	80	25AUG04A	17DEC04	20) -1	55				L									
09-92506	Construct Retaining Wall RW-C; bays 1-3	30	27SEP04	03NOV04) -11	96													
09-92508	Construct Retaining Wall RW-C; bays 4-21/25-33	110	04OCT04	16FEB05) (ı∣ -1:	<u>دد</u>				+									· · · · ·
11. Entru	sted Sewerage Works									T	['	ļ					: ·	ĺ		
Entrusted	Sewers/Drains	·. '	=			<u> </u>			ļ	:	i i	1	1	· .						
11-1124	Sewer Works at E/B C'way bet CH4200-4330	60	01MAR04A	10SEP04A	100)			1							<u> </u>				
42 Entre	etad Watermains		_															i		
<u> </u>			- 7 -																	
Entrusted	Water Mains	96	23.JUL04A	16NOV04	48	1 -8	35				i ania									
12-1225	DN1000FW/Associated Wks E/B bet CH4320-4470	65	23.IUL04A	04NOV04	30		35						-					ĺ		
12-12252	DN1000EX/Approviated E/B Wks bol CH 4320-4470	65	13AUG04A	16NOV04	14	۱ -۱	35	_									·			
12-12204	DN1000EW/Associated Wks W/8 bet CH3850-3950	25	280CT04	25NOV04) -16	96		1		İ					1		[
12-12222	IDN1000FW/Associated Wks W/B bet CH3630-3850	44	29OCT04	16DEC04	L) - 1 -	42		1		<u> </u>							i		
	visioning of LCSD 2 EEHD Excilition						Ţ		1	;	1			1				1 1 1		
13. Repro	Visioning or LCSD & FEHD Facilities					·				i				1				İ		
FEHD Faci	lities		22060034	226EB05	6		12		┢───╸				<u>معاني</u>		· · · ·					
13-1350	Reprovision Pavillion & Pai Lau	18	08DEC04	30DEC04	+~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~) -	12		1	:				ļ						
13-1353	Substructure of Pavilion	10		1			<u> </u>		-1		+ + 			:	_			:		
14. Landa	scape Works								1	:	1			÷						I
Tree Fellin	g and Transplanting	· ·							<u> </u>	_	1	_	1	ł				:		
14-21606	Transplant Trees;South of exist. CPRCH4200-4300	65	09MAY02A	x 140CT04	7	0 -1	64				<u> </u>									
18. Varia	ion Works								1		4			1						
1.Shanod	Walls	•		=		~~	_				<u>i</u>			į					•	
09-925061	Public facilities & temp. hoarding: V.O. 267	30	19AUG04A	30SEP04	6	0 -1	43				┫							+ 	····	
Entructed	Sowere/Drains			-					1					l						
	Additional Sever Works at R10; VO No. 209	\Box	SFEB04A	11SEP04A	\ <u>10</u>	0	-			1	<u> {</u> [])					<u> </u>			

सहाय का कि आपने का कि क्या कि का कि

E.

														21	nn4							
·	Activity	Activity	Orig	Early	Early	%	Total		SE				OCT			NOV				DEC		
	ID	Description	D	Start	Finish	Сотр	Float	6	13	20	27	_ ` 11	<u>.18</u>	25	1 8		22	29	6	_13	20 27	L
and and a	Stairways	<u> </u>	- '												l L		ì					
сп.	13-1336	Const. New Pavilion/ret. wall/stair; VO 211	60*	16SEP04	27NOV04		0 142			_				-				Ξį.				1
ii M	13-13362	Excavate for Pavilion/rel. wall/stair, VO 211	12	18SEP04	30SEP04		0 -142						· _									-
1	13-13364	Const. RW-C1 incl. mass conc. foundation: VO 211	24	020CT04	30OCT04	1	0 -142					Ĩ		· · · · · · · · · · · · · · · · · · ·		:						
1.14	13-13366	Const. New Pavilion/stair: VO 211	24	01NOV04	27NOV04		0 -142	- 								·						
111	Additiona	I Outfall MI; VO 244		1	-1								I				-					
	08-81826	Excavation for 675mm twin pipes at exist. CPR	12	04NOV04	17NOV04		0 -169		1							i						
÷	08-61827	Construct 675mm Iwin pipes at exist. CPR	8	18NOV04	25NOV04		0				1				i .							

APPENDIX C

Monitoring schedule for September 2004 and October 2004

Tentative Environmental Monitoring and Audit Schedule - October 2004

Note 1: L30 denotes L_{eq(30 min)} monitoring

Note 2: **TSP** denotes Total Suspended Particulate monitoring

Note 3: MW denotes Marine Water Quality monitoring

Note 4: L&V denotes Landscape and Visual audit and monitoring

	Oct-2004							
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday		
					1	2		
3	4	5	6 24-hour TSP	7 L30 3 x 1-hour TSP Site Inpsection	8	9		
10 x	11	12 24-hour TSP	13	14 L30 3 x 1-hour TSP Site Inpsection + L&V	15	16 x		
17	18 L30 3 x 1-hour TSP 24-hour TSP	19	20	21 Site Inpsection	22 x	23 24-hour TSP		
24	25	26 L30 3 x 1-hour TSP	27	28 Site Inpsection + L&V	29 24-hour TSP	30		
31								

Environmental Monitoring and Audit Schedule - September 2004

Note 1: L30 denotes L_{eq(30 min)} monitoring

Note 2: **TSP** denotes Total Suspended Particulate monitoring

Note 3: MW denotes Marine Water Quality monitoring

Note 4: **L&V** denotes Landscape and Visual audit and monitoring

	Sep-2004								
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday			
			1 24-hour TSP L30 3 x 1-hour TSP	2 Site Inpsection + L&V	3 3 x 1-hour TSP	4			
5	6	7 24-hour TSP L30 3 x 1-hour TSP	8	9 Site Inpsection	10 3 x 1-hour TSP	11			
12	13 24-hour TSP	14 L30	15	16 Site Inpsection + L&V	17	18 24-hour TSP			
19	20 L30 3 x 1-hour TSP	21	22 x	23 Site Inpsection + L&V	24 24-hour TSP 3 x 1-hour TSP	25			
26	27	28	29	30 L30 + 3 x 1-hour TSP 24-hour TSP Site Inpsection					

APPENDIX D

Calibration certificates of 24-hour TSP monitoring equipment

High Volume Air Sampler Calibration Worksheet

Calibration date Calibration due date	12-Aug-04 11-Oct-04 WA3 - Hong Kond	g Garden	Barometric pressure Tempature (°C)	751.5 mm Hg 28 °C
Sampler location	(Regent Heights)		Tempature (K)	301 K
Sampler model	TE-5170		P _{std}	760 mm Hg
Sampler serial number	0505		T _{std}	298 K
Calibrator model		GMW-2535		
Calibrator serial number		1201		
Slope of the standard curve	, m _s	1.93285		
Intercept of the standard cu	rve, b _s	0.00398		

Resistance Plate No.	Manometer Reading (inch H ₂ O)	Flow Recorder Reading (CFM)	Calculated Q _{std} (m ³ /min)	Continuous Flow Recorder Reading IC (CFM)
5	3.00	29.00	0.88	28.69
7	4.70	35.00	1.11	34.63
10	7.30	44.00	1.38	43.53
13	9.40	50.00	1.57	49.47
18	12.50	57.00	1.81	56.40

Calibration Curve



Linear RegressionSampler slope (m) :30.4673Sampler intercept (b) :1.4236Correlation coefficient (R²) :0.9990

Correlation coefficient is greater than 0.9900 and the calibration result is accepted.

Performed by: Checked by:

Date:

Date:

13-2-04

G:\env\project\23437\env_data\dust\WCP03-0505\0505-Worksheet

Calibration date	09-Sep-04		Barometric pressure	755 mm Hg
Calibration due date	06-Nov-04	a Cardon	Tempature (°C)	24 °C
Sampler location	(Between Blk1 &	Blk2)	Tempature (K)	297 K
Sampler model	TE-5170		P _{std}	760 mm Hg
Sampler serial number	0512		T _{std}	298 K
Calibrator model		GMW-2535		
Calibrator serial number		1201		
Slope of the standard curve	ə, m _s	1.93285		
Intercept of the standard cu	ırve, b _s	0.00398		

Resistance Plate No.	Manometer Reading (inch H ₂ O)	Flow Recorder Reading (CFM)	Calculated Q _{std} (m ³ /min)	Continuous Flow Recorder Reading IC (CFM)
5	2.60	32.00	0.83	31.95
7	4.40	37.00	1.08	36.94
10	7.00	45.00	1.36	44.93
13	9.60	53.00	1.60	52.91
18	12.20	59.00	1.80	58.90



Linear Regression

Correlation coefficient is greater than 0.9900 and the calibration result is accepted.

Performed by: Checked by:

Date: 3 - 9 - 04Date: (0 - 9 - 04)

Calibration date Calibration due date Sampler location Sampler model	09-Sep-04 08-Nov-04 WA5 - Hong Kong (TE-5170	Garden (Blk4)	Barometric pressure Tempature (°C) Tempature (K) P _{std}	755 mm Hg 24 °C 297 K 760 mm Hg
Sampler serial number	0511		T _{std}	298 K
Calibrator model	C	GMW-2535		
Calibrator serial number	1	1201		
Slope of the standard curve	, m _s 1	1.93285		
Intercept of the standard cu	rve, b _s (0.00398		

Resistance Plate No.	Manometer Reading (inch H ₂ O)	Flow Recorder Reading (CFM)	Calculated Q _{std} (m ³ /min)	Continuous Flow Recorder Reading IC (CFM)
5	3.50	28.00	0.96	27.95
7	4.90	35.00	1.14	34.94
10	7.20	42.00	1.38	41.93
13	9.40	48.00	1.58	47.92
18	11.80	53.00	1.77	52.91



 Linear Regression
 30.5630

 Sampler slope (m) :
 -0.6980

 Correlation coefficient (R²) :
 0.9956

Correlation coefficient is greater than 0.9900 and the calibration result is accepted.

Performed by: Checked by:

<u> 7- 9-04</u> <u>10-9-04</u> Date: Date:

High Volume Air Sampler Calibration Worksheet

Calibration date	12-Aug-04		Barometric pressure	751.5 mm Hg
Calibration due date	11-Oct-04		Tempature (°C)	28 °C
Sampler location	WA6 - Tsing Lu	ng Tau Temple	Tempature (K)	301 K
Sampler model	TE-5170		P _{std}	760 mm Hg
Sampler serial number	0529		T _{std}	298 K
Calibrator model		GMW-2535		
Calibrator serial number		1201		
Slope of the standard curve	, m _s	1.93285		
Intercept of the standard cu	rve, b _s	0.00398		

Resistance Plate No.	Manometer Reading (inch H ₂ O)	Flow Recorder Reading (CFM)	Calculated Q _{std} (m ³ /min)	Continuous Flow Recorder Reading IC (CFM)
5	3.00	30.00	0.88	29.68
7	4.70	36.00	1.11	35.62
10	7.10	45.00	1.36	44.52
13	9.30	54.00	1.56	53.43
18	12.20	59.00	1.79	58.38





Linear Regression

Sampler slope (m) :	33.3314
Sampler intercept (b):	-0.3324
Correlation coefficient (R ²) :	0.9905

Correlation coefficient is greater than 0.9900 and the calibration result is accepted.

UN Performed by: Checked by:

Date:

Date:

12. J. 04

G:\env\project\23437\env_data\dust\WCP06-0529\0529-Worksheet

High Volume Air Sampler Calibration Worksheet

Calibration date Calibration due date	12-Aug-04 11-Oct-04		Barometric pressure Tempature (°C)	751.5 mm Hg 28 °C
Sampler location	WA7 - Sea Cres (Phase 4 Blk 12	st Villa)	Tempature (K)	301 K
Sampler model	TE-5170	· · ·	P _{std}	760 mm Hg
Sampler serial number	0517		T _{std}	298 K
Calibrator model		GMW-2538		
Calibrator serial number		1201		
Slope of the standard curv	e, m _s	1.93285		
Intercept of the standard of	urve, b _s	0.00398		

Resistance Plate No.	Manometer Reading (inch H ₂ O)	Flow Recorder Reading (CFM)	Calculated Q _{std} (m ³ /min)	Continuous Flow Recorder Reading IC (CFM)
5	3.10	- 24.00	0.90	23.75
7	4.90	35.00	1.13	34.63
10	8.60	46.00	1.50	45.51
13	10.20	53.00	1.63	52.44
18	12.90	59.00	1.84	58.38





Linear Regression	
Sampler slope (m) :	36.4424
Sampler intercept (b) :	-8.0693
Correlation coefficient (R^2) :	0.9930

Correlation coefficient is greater than 0.9900 and the calibration result is accepted.

Performed by: Checked by:

Date:

Date:

12-8-04

G:\env\project\23437\env_data\dust\WCP07-0517\0517-Worksheet

High Volume Air Sampler Calibration Worksheet

Calibration date Calibration due date	12-Aug-04 11-Oct-04		Barometric pressure Tempature (°C)	751.5 mm Hg 28 °C
Sampler location Sampler model	WA8 - Sea Crest (Phase 3 Block 8 TE-5170	Villa)	Tempature (K) P _{std}	301 K 760 mm Hg
Sampler serial number	0526		T _{std}	298 K
Calibrator model Calibrator serial number Slope of the standard curve Intercept of the standard cu	e, m _s Irve, b _s	GMW-2535 1201 1.93285 0.00398		

Resistance Plate No.	Manometer Reading (inch H₂O)	Flow Recorder Reading (CFM)	Calculated Q _{std} (m ³ /min)	Continuous Flow Recorder Reading IC (CFM)
5	3.30	30.00	0.93	29.68
7	4.70	34.00	1.11	33.64
10	7.80	43.00	1.43	42.55
13	10.00	49.00	1.62	48.48
18	12.90	57.00	1.84	56.40



Linear Regression

 Sampler slope (m) :
 29.3013

 Sampler intercept (b) :
 1.6177

 Correlation coefficient (R²) :
 0.9937

Correlation coefficient is greater than 0.9900 and the calibration result is accepted.

Performed by: Checked by:

Date: Date:

12-8-04 13-8-04

Calibration date	09-Sep-04		Barometric pressure	755 mm Hg
Calibration due date	06-Nov-04		Tempature (°C)	24 °C
Sampler location	WA9 - Sea Crest (Phase 2 Blk 6)	Villa	Tempature (K)	297 K
Sampler model	TE-5170		P _{std}	760 mm Hg
Sampler serial number	0523		T _{std}	298 K
Calibrator model		GMW-2535		
Calibrator serial number		1201		
Slope of the standard curve	e, m _s	1.93285		
Intercept of the standard cu	ırve, b _s	0.00398		

Resistance Plate No.	Manometer Reading (inch H ₂ O)	Flow Recorder Reading (CFM)	Calculated Q _{std} (m ³ /min)	Continuous Flow Recorder Reading IC (CFM)
5	2.80	29.00	0.86	28.95
7	3.40	32.00	0.95	31.95
10	6.50	43.00	1.31	42.93
13	9.00	49.00	1.55	48.92
18	11.30	55.00	1.73	54.91



Linear Regression

 Sampler slope (m) :
 29.3739

 Sampler intercept (b) :
 3.8793

 Correlation coefficient (R²) :
 0.9991

Correlation coefficient is greater than 0.9900 and the calibration result is accepted.

Performed by: Checked by:

9-9-04 10-9-04 Date: Date:

Calibration date	12-Aug-04		Barometric pressure	751.5 mm Hg
Calibration due date	11-Oct-04		Tempature (°C)	28 °C
Sampler location	WA10 - Sea Cre (Phase 1 Blk 1)	st Villa	Tempature (K)	301 K
Sampler model	TE-5170		P _{std}	760 mm Hg
Sampler serial number	0507		T _{std}	298 K
Calibrator model		GMW-2535		
Calibrator serial number		1201		
Slope of the standard curv	e, m _s	1.93285		
Intercept of the standard c	urve, b _s	0.00398		

Resistance Plate No.	Manometer Reading (inch H ₂ O)	Flow Recorder Reading (CFM)	Calculated Q _{std} (m ³ /min)	Continuous Flow Recorder Reading IC (CFM)
5	2.80	25.00	0.85	24.74
7	5.20	34.00	1.17	33.64
10	8.50	45.00	1.49	44.52
13	10.40	48.00	1.65	47.49
18	12.50	54.00	1.81	53.43

Calibration Curve



Linear Regression	
Sampler slope (m) :	29.8817
Sampler intercept (b) :	-0.8709
Correlation coefficient (R^2) :	0.9967

Correlation coefficient is greater than 0.9900 and the calibration result is accepted.

lih Performed by: Checked by:

Date:

Date:

12-8-04

Calibration date	12-Aug-04		Barometric pressure	751.5 mm Hg
Calibration due date	11-Oct-04		Tempature (°C)	28 °C
Sampler location	WA11 - Lido Gard	len Tower 1	Tempature (K)	301 K
Sampler model	TE-5170		P _{std}	760 mm Hg
Sampler serial number	0521		T _{std}	298 K
Calibrator model		GMW-2535		
Calibrator serial number		1201		
Slope of the standard curve	e, m _s	1.93285		
Intercept of the standard cu	rve, b _s	0.00398		

Resistance Plate No.	Manometer Reading (inch H ₂ O)	Flow Recorder Reading (CFM)	Calculated Q _{std} (m ³ /min)	Continuous Flow Recorder Reading IC (CFM)
5	1.80	21.00	0.68	20.78
7	3.40	31.00	0.94	30.67
10	4.30	35.00	1.06	34.63
13	5.00	38.00	1.14	37.60
18	6.00	42.00	1.25	41.56



Linear Regression

Correlation coefficient is greater than 0.9900 and the calibration result is accepted.

111 Performed by: Checked by:

Date:

.04

Date:



TISCH ENVIROMENTAL, INC. 145 SOUTH MIAMI AVE. VILLAGE OF CLEVES, OH 45002 513,467,9000 877,263,7610 TOLL FREE 513,467,9009 FAX

<u>у</u>т

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Ma	ar 02, 2004	l Rootsmeter	S/N 9	833620	Ta (K) -	294
Operator	Tisch	Orifice I.I	D	1201	Pa (mm) -	- 754.38
PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (nm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.3700	3.1	$ \begin{array}{r} 2.00\\ 4.00\\ 5.00\\ 5.50\\ 8.00 \end{array} $
2	NA	NA	1.00	0.9620	6.3	
3	NA	NA	1.00	0.8590	7.8	
4	NA	NA	1.00	0.8200	8.6	
5	NA	NA	1.00	0.6750	12.4	

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
1.0020	0.7313	1.4185		0.9959	0.7269	0.8829
0.9977	1.0371	2.0061		0.9917	1.0308	1.2486
0.9957	1.1592	2.2429		0.9897	1.1521	1.3959
0.9946	1.2129	2.3524		0.9886	1.2056	1.4641
0.9895	1.4659	2.8371		0.9835	1.4570	1.7657
Qstd slop	De (m) =	1.93285		Qa slope	e (m) =	1.21032
intercept	(b) =	0.00398		intercept	(b) =	0.00248
coefficie	ent (r) =	0.99998		coefficie	ent (r) =	0.99998
y axis = SQRT[H2O(Pa/760)(298/Ta)]			[a)] '	y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta) Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa] Qa = Va/Time

For subsequent flow rate calculations:

Qstd = $1/m\{[SQRT(H2O(Pa/760)(298/Ta))] - b\}$ Qa = $1/m\{[SQRT(H2O(Ta/Pa)] - b\}$

APPENDIX E Calibration certificates of 1-hour TSP monitoring equipment



Thermo Andersen

500 Technology Ct., Smyrna, GA 30082 Toll-Free: 1-800-241-6898 Tel: 770-319-9999 Fax: 770-319-0336 <u>www.Thermoandersen.com</u>

PersonalDataRAM Calibration Certificate

Record the serial number	i	
	SA 3809	
Record the calibration ratio:	0.0 +	
Record the average pDR concentration:		
	1132	uɛ/m³
Record the calibration Master average concentration:		
	841	ug/m³
Record the pDR background concentration:		i,-<
	299	u⊈/m³
Temperature		
	77	°F
Humidity		
	31	%
Technician:	Date:	
	10-31-	2002
\sim		

Rev. 5/01

MONITORING INSTRUMENTS BARBAR ENGLACIONENT, INC.

٠



500 Technology Court Smyrna, GA 30082-5211 (770) 319-9999 Fax: (770) 319-0336 www.thermoandersen.com

PERSONAL DATA RAM CALIBRATION CERTIFICATE

<u>Record Serial #4239</u>
Record Calibration Ratio1.014
<u>Record Average PDR Concentration2045</u>
<u>Record Calibration Master average concentration—1830</u>
Record the PDR background concentration192
<i>Temperature79</i>
Humidity25

<u>Technician: J.G.</u> <u>Date: 12-17-02</u>



Thermo Andersen

500 Technology Ct., Smyrna, GA 30082 Toll-Free: 1-800-241-6898 Tel: 770-319-9999 Fax: 770-319-0336 <u>www.Thermoandersen.com</u>

Personal Data RAM Calibration Certificate

Record the serial number	SN	1242	
Record the calibration ratio:		1,005	
Record the average pDR concentration:		1988	
Record the calibration Master average concentration:		1780	ug/m
Record the pDR background concentration:		204	 ug/m ³
Temperature		77	°F
Humidity		36	%
Lechnician:	Date:	10-31-	2002
0			

Rev. 5/0!

MONTORING INSTRUMENTS for the Englishment, INC.

٠

MASTER # 2026

THERMO ELECTRON 27 FORGE PARKWAY FRANKLIN MA 02038 TOLL-FREE: 866-282-0430 TEL: 508-553-6949 FAX: 508-541-8366 WWW.THERMO.COM

PERSONAL DATARAM CALIBRATION CERTIFICATE

SERIAL NUMBER:	4492
CALIBRATION RATIO:	<u>1/002</u>
AVG. PDR-1000 CONCENTRATION:	<u>822 ug/m3</u>
CALIBRATION MASTER AVG. CONCENTRATION:	<u>653 ug/m3</u>
PDR BACKROUND CONCENTRATION:	<u>166 ug/m3</u>
TEMPERATURE:	<u>74</u> F
HUMIDITY:	<u>53%</u>
TECHNICIAN: <u>RAMON</u>	DATE: <u>6/12/03</u>



Thermo Andersen 500 Technology Ct., Smyrna, GA 30082 Toll-Free: 1-800-241-6898 Tel: 770-319-9999 Fax: 770-319-0336 www.Thermoandersen.com

PersonalDataRAM Calibration Certificate

. .

Record the serial number	SN 4496
Record the calibration ratio:	0.998
Record the average pDR concentration:	1249 uz/m3
Record the calibration Master average concentration:	<i>1070</i> µg/m ³
Record the pDR background concentration:	189 µg/m³
Temperature	75. °F
Humidity	45 %
Technician: Raman	Date: 9-25-03

3

.•

S.
PDR-1000 CALIBRATION CERTIFICATE

This calibration is traceable to the National Institute of Standards and Testing

SERIAL NUMBER:	<u>4615</u>
CALIBRATION RATIO:	1 <u>.008</u>
AVG. PDR-1000 CONCENTRATION:	151 <u>ug/m3</u>
CALIBRATION MASTER AVG. CONCENTRATION:	140 <u>ug/m3</u>
DR BACKROUND CONCENTRATION:	<u>123 ug/m3</u>
TEMPERATURE:	<u>69F</u>
HUMIDITY:	<u>18%</u>
TECHNICIAN: Hoche, pelle	DATE: <u>1/15/04</u>

PDR-1000 CALIBRATION CERTIFICATE

This calibration is traceable to the National Institute of Standards and Testing

SERIAL NUMBER:	<u>4705</u>
CALIBRATION RATIO:	<u>.991</u>
AVG. PDR-1000 CONCENTRATION:	176 <u>ug/m3</u>
CALIBRATION MASTER AVG. CONCENTRATION:	174 <u>ug/m3</u>
DR BACKROUND CONCENTRATION:	<u>141 ug/m3</u>
TEMPERATURE:	<u>69F</u>
HUMIDITY:	<u>18%</u>
TECHNICIAN: Machapelle	DATE: <u>1/15/04</u>



Thermo Andersen 500 Technology Ct., Smyrna, GA 30082 Toll-Free:1-800-241-6898 Tel: 770-319-9999 Fax: 770-319-0336 www.Thermoandersen.com

Personal Data RAM Calibration Certificate

Record the serial number		
Record the calibration ratio:	SN 4715	
Record the average pDR concentration:	0.994	
Record the calibration Master average concentration	382	ug/m³
Record the pDR background concentration:	326	µg/m³
Temperature	124	μg/m³
Humidity	72	°F
Technician:	<u>33</u>	%
Ramon	11-21-C	3

Rev. 5/01



Thermo Andersen 500 Technology Ct., Smyrna, GA 30082 Toll-Free:1-800-241-6898 Tel: 770-319-9999 Fax: 770-319-0336 <u>www.Thermoandersen.com</u>

PersonalDataRAM Calibration Certificate

Record the serial number	
Record the calibration ratio:	SN 4736
Record the average pDR concentration:	1.004
Record the calibration Master average concentration	772 μg/m ³
Record the pDR background concentration	65.1 μg/m ³
Temperature	<u>160 μg/m³</u>
Humidity	
Technician:	33 %
Kamor	Date: 11-21-03

Rev. 5/01

APPENDIX F Detailed air quality (1-hour TSP) monitoring results

	Receptor		Time p	eriods	Weather	Site	Temp.	Pressure	1-hour TSP	
Date	No.	Set No.	Start	Finish	condition	condition	(°C)	(mmHg)	Level (ng/m ³)	Remarks
01-Sep-04	WA3	1	9:00	10:00	Fine	Normal Operation	32.0	754.0	168.0	
01-Sep-04	WA3	2	10:00	11:00	Fine	Normal Operation	32.0	754.0	117.0	
01-Sep-04	WA3	3	11:00	12:00	Fine	Normal Operation	32.0	754.0	141.7	
01-Sep-04	WA4	1	13:14	14:14	Fine	Normal Operation	32.0	754.0	170.9	
01-Sep-04	WA4	2	14:14	15:14	Fine	Normal Operation	32.0	754.0	166.9	
01-Sep-04	VVA4	3	15:14	16:14	Fine	Normal Operation	32.0	754.0	165.9	
01-Sep-04	WA5	1	13:12	14:1Z	Fine	Normal Operation	32.0	754.0	146.8	
01-Sep-04	WA5	2	14.12	10.12	Fine	Normal Operation	32.0	754.0	174.4	
01-Sep-04	WA6	1	13:12	14.12	Fine	Normal Operation	32.0	754.0	159.5	
01-Sep-04	WA6	2	14:12	15:12	Fine	Normal Operation	32.0	754.0	153.0	
01-Sep-04	WA6	3	15:12	16:12	Fine	Normal Operation	32.0	754.0	154.7	
01-Sep-04	WA7	1	13:13	14:13	Fine	Normal Operation	32.0	754.0	146.5	
01-Sep-04	WA7	2	14:13	15:13	Fine	Normal Operation	32.0	754.0	153.5	
01-Sep-04	WA7	3	15:13	16:13	Fine	Normal Operation	32.0	754.0	177.0	
01-Sep-04	WA8	1	8:55	9:55	Fine	Normal Operation	32.0	754.0	190.8	
01-Sep-04	WA8	2	9:55	10:55	Fine	Normal Operation	32.0	754.0	159.2	
01-Sep-04	WA8	3	10:55	11:55	Fine	Normal Operation	32.0	754.0	169.1	
01-Sep-04	WA9	1	8:54	9:54	Fine	Normal Operation	32.0	754.0	180.8	
01-Sep-04	WA9	2	9:54	10:54	Fine	Normal Operation	32.0	754.0	142.1	
01-Sep-04	WA9	3	10:54	11:54	Fine	Normal Operation	32.0	754.0	153.1	
01-Sep-04	WA10	1	8:54	9:54	Fine	Normal Operation	32.0	754.0	190.8	
01-Sep-04	WA10	2	9.54	10:54	Fine	Normal Operation	32.0	754.0	107.7	
01-Sep-04	WA10	3	8.54	0.54	Fine	Normal Operation	32.0	754.0	172.2	
01-Sep-04	WA11	2	9.54	9.54 10:54	Fine	Normal Operation	32.0	754.0	120.3	
01-Sep-04	WA11	3	10:54	11:54	Fine	Normal Operation	32.0	754.0	148.8	
07-Sep-04	WA3	1	9:50	10:50	Sunny	Normal Operation	33.0	752.0	288.5	
07-Sep-04	WA3	2	10:50	11:50	Sunny	Normal Operation	33.0	752.0	262.1	
07-Sep-04	WA3	3	13:00	14:00	Sunny	Normal Operation	33.0	752.0	281.1	
07-Sep-04	WA4	1	9:47	10:47	Sunny	Normal Operation	33.0	752.0	350.8	
07-Sep-04	WA4	2	10:47	11:47	Sunny	Normal Operation	33.0	752.0	297.1	
07-Sep-04	WA4	3	13:00	14:00	Sunny	Normal Operation	33.0	752.0	343.3	
07-Sep-04	WA5	1	9:50	10:50	Sunny	Normal Operation	33.0	752.0	328.5	
07-Sep-04	WA5	2	11:00	12:00	Sunny	Normal Operation	33.0	752.0	327.8	
07-Sep-04	WA5	3	13:20	14:20	Sunny	Normal Operation	33.0	752.0	294.1	
07-Sep-04	WA6	1	9:47	10:47	Sunny	Normal Operation	33.0	752.0	296.1	
07-Sep-04	WA6	2	10:47	11:47	Sunny	Normal Operation	33.0	752.0	258.9	
07-Sep-04	WA6	3	13:00	14:00	Sunny	Normal Operation	33.0	752.0	300.1	
07-Sep-04	WA7	1	9:49	10:49	Sunny	Normal Operation	33.0	752.0	282.2	
07-Sep-04	WA7	2	10:49	11:49	Sunny	Normal Operation	33.0	752.0	244.2	
07-Sep-04	WA7 WA8	1	13:00	14.00	Sunny	Normal Operation	33.0	752.0	233.0	
07-Sen-04	WA8	2	14.00	15:00	Sunny	Normal Operation	33.0	752.0	202.0	
07-Sep-04	WA8	3	15:00	16:00	Sunny	Normal Operation	33.0	752.0	248.8	
07-Sep-04	WA9	1	13:00	14:00	Sunny	Normal Operation	33.0	752.0	285.5	
07-Sep-04	WA9	2	14:00	15:00	Sunny	Normal Operation	33.0	752.0	226.6	
07-Sep-04	WA9	3	15:00	16:00	Sunny	Normal Operation	33.0	752.0	234.7	
07-Sep-04	WA10	1	13:00	14:00	Sunny	Normal Operation	33.0	752.0	251.6	
07-Sep-04	WA10	2	14:00	15:00	Sunny	Normal Operation	33.0	752.0	208.7	
07-Sep-04	WA10	3	15:00	16:00	Sunny	Normal Operation	33.0	752.0	210.4	
07-Sep-04	WA11	1	13:00	14:00	Sunny	Normal Operation	33.0	752.0	288.2	
07-Sep-04	WA11	2	14:00	15:00	Sunny	Normal Operation	33.0	752.0	234.9	
07-Sep-04	WA11	3	15:00	16:00	Sunny	Normal Operation	33.0	752.0	240.5	
10-Sep-04	WA3	1	13:04	14:04	Sunny	Normal Operation	33.0	752.0	214.9	
10-Sep-04	WA3	2	14:04	15:04	Sunny	Normal Operation	33.0	752.0	219.7	
10-Sep-04	WA3	3	13:04	10:04	Sunny	Normal Operation	33.U	152.0	207.2	
10-Sep-04	VVA4	1	13:07	14:07	Rainy	Normal Operation	20.0	756.0	220.7	
10-Sen-04	WA4	2	14.07	16:07	Rainy	Normal Operation	26.0	756.0	196.8	
10-Sen-04	WA5	1	13:10	14:10	Rainv	Normal Operation	26.0	756.0	219.5	
10-Sep-04	WA5	2	14:10	15:10	Rainy	Normal Operation	26.0	756.0	188.1	
10-Sep-04	WA5	3	15:10	16:10	Rainy	Normal Operation	26.0	756.0	205.9	
10-Sep-04	WA6	1	13:08	14:08	Rainy	Normal Operation	26.0	756.0	216.6	
10-Sep-04	WA6	2	14:08	15:08	Rainy	Normal Operation	26.0	756.0	176.6	
10-Sep-04	WA6	3	15:08	16:08	Rainy	Normal Operation	26.0	756.0	178.8	
10-Sep-04	WA7	1	13:08	14:08	Rainy	Normal Operation	26.0	756.0	195.5	
10-Sep-04	WA7	2	14:08	15:08	Rainy	Normal Operation	26.0	756.0	161.5	
10-Sep-04	WA7	3	15:08	16:08	Rainy	Normal Operation	26.0	756.0	162.1	
10-Sep-04	WA8	1	8:59	9:59	Rainy	Normal Operation	26.0	756.0	187.3	
10-Sep-04	WA8	2	9:59	10:59	Rainy	Normal Operation	26.0	756.0	179.2	
10-Sep-04	WA8	3	10:59	11:59	Rainy	Normal Operation	26.0	/56.0	178.9	
10-Sep-04	WA9	2	0:50	9.50	Rainy	Normal Operation	20.U	756.0	101.9	
10-Sep-04	WA9	2	9.50	11.50	Rainy	Normal Operation	20.0	756.0	104.0	
10-Sep-04	WA10	3	8.32	0.32	Rainy	Normal Operation	20.0	756.0	164.7	
10-Sen-04	WA10	2	9:32	10:32	Rainy	Normal Operation	26.0	756.0	171 7	
10-Sep-04	WA10	3	10:32	11:32	Rainv	Normal Operation	26.0	756.0	176.5	
10-Sep-04	WA11	1	8:50	9:50	Rainv	Normal Operation	26.0	756.0	185.2	
10-Sep-04	WA11	2	9:50	10:50	Rainy	Normal Operation	26.0	756.0	184.7	
10-Sep-04	WA11	3	10:50	11:50	Rainy	Normal Operation	26.0	756.0	187.1	

Details of 1-Hour TSP Monitoring

	Receptor		Time p	eriods	Weather	Site	Temp.	Pressure	1-hour TSP	
Date	No.	Set No.	Start	Finish	condition	condition	(°C)	(mmHg)	Level (ng/m ³)	Remarks
20-Sep-04	WA3	1	9:00	10:00	Sunny	Normal Operation	29.0	760.0	178.8	
20-Sep-04	WA3	2	10:00	11:00	Sunny	Normal Operation	29.0	760.0	176.5	
20-Sep-04	WA3	3	11:00	12:00	Sunny	Normal Operation	29.0	760.0	181.0	
20-Sep-04	WA4	1	9:00	10:00	Sunny	Normal Operation	29.0	760.0	191.1	
20-Sep-04	WA4	2	10:00	11:00	Sunny	Normal Operation	29.0	760.0	193.9	
20-Sep-04	VVA4	3	11:00	12:00	Sunny	Normal Operation	29.0	760.0	191.5	
20-Sep-04	WA5	2	9:00	10:00	Sunny	Normal Operation	29.0	760.0	156.5	
20-Sep-04	WA5	3	11:00	12.00	Sunny	Normal Operation	29.0	760.0	158.1	
20-Sep-04	WA6	1	8:56	9:56	Sunny	Normal Operation	29.0	760.0	179.9	
20-Sep-04	WA6	2	9:56	10:56	Sunny	Normal Operation	29.0	760.0	181.5	
20-Sep-04	WA6	3	10:56	11:56	Sunny	Normal Operation	29.0	760.0	181.7	
20-Sep-04	WA7	1	9:00	10:00	Sunny	Normal Operation	29.0	760.0	191.9	
20-Sep-04	WA7	2	10:00	11:00	Sunny	Normal Operation	29.0	760.0	189.9	
20-Sep-04	WA7	3	11:00	12:00	Sunny	Normal Operation	29.0	760.0	192.5	
20-Sep-04	WA8	1	13:19	14:19	Sunny	Normal Operation	29.0	760.0	217.6	
20-Sep-04	WA8	2	14:19	15:19	Sunny	Normal Operation	29.0	760.0	208.9	
20-Sep-04	WA0	3	13:19	10:19	Sunny	Normal Operation	29.0	760.0	201.0	
20-Sep-04	WA9	2	14.15	14.15	Sunny	Normal Operation	29.0	760.0	211.7	
20-Sep-04	WA9	3	15:15	16:15	Sunny	Normal Operation	29.0	760.0	191.9	
20-Sep-04	WA10	1	13:19	14:19	Sunny	Normal Operation	29.0	760.0	183.2	
20-Sep-04	WA10	2	14:19	15:19	Sunny	Normal Operation	29.0	760.0	177.4	
20-Sep-04	WA10	3	15:19	16:19	Sunny	Normal Operation	29.0	760.0	169.2	
20-Sep-04	WA11	1	13:19	14:19	Sunny	Normal Operation	29.0	760.0	236.0	
20-Sep-04	WA11	2	14:19	15:19	Sunny	Normal Operation	29.0	760.0	223.0	
20-Sep-04	WA11	3	15:19	16:19	Sunny	Normal Operation	29.0	760.0	206.5	
23-Sep-04	WA3	1	8:42	9:42	Sunny	Normal Operation	28.0	759.0	203.5	
23-Sep-04	WA3	2	9:42	10:42	Sunny	Normal Operation	28.0	759.0	200.3	
23-Sep-04	WA3	3	10:42	11:42	Sunny	Normal Operation	28.0	759.0	206.7	
23-Sep-04	WA4	2	0:42	9:4Z	Sunny	Normal Operation	20.0	759.0	100.4	
23-Sep-04	WA4	3	9.42 10:42	11:42	Sunny	Normal Operation	28.0	759.0	171.5	
23-Sep-04	WA5	1	8:42	9:42	Sunny	Normal Operation	28.0	759.0	208.5	
23-Sep-04	WA5	2	9:42	10:42	Sunny	Normal Operation	28.0	759.0	211.4	
23-Sep-04	WA5	3	10:42	11:42	Sunny	Normal Operation	28.0	759.0	220.0	
23-Sep-04	WA6	1	8:40	9:40	Sunny	Normal Operation	28.0	759.0	191.9	
23-Sep-04	WA6	2	9:40	10:40	Sunny	Normal Operation	28.0	759.0	193.0	
23-Sep-04	WA6	3	10:40	11:40	Sunny	Normal Operation	28.0	759.0	201.2	
23-Sep-04	WA7	1	8:37	9:37	Sunny	Normal Operation	28.0	759.0	191.5	
23-Sep-04	WA7	2	9:37	10:37	Sunny	Normal Operation	28.0	759.0	194.2	
23-Sep-04		3	10:37	11:37	Sunny	Normal Operation	28.0	759.0	202.0	
23-3ep-04	WA8	2	13.10	14.10	Sunny	Normal Operation	28.0	759.0	176.5	
23-Sep-04	WA8	3	15:10	16:10	Sunny	Normal Operation	28.0	759.0	161.0	
23-Sep-04	WA9	1	13:00	14:00	Sunny	Normal Operation	28.0	759.0	231.6	
23-Sep-04	WA9	2	14:00	15:00	Sunny	Normal Operation	28.0	759.0	239.8	
23-Sep-04	WA9	3	15:00	16:00	Sunny	Normal Operation	28.0	759.0	214.1	
23-Sep-04	WA10	1	13:21	14:21	Sunny	Normal Operation	28.0	759.0	240.4	
23-Sep-04	WA10	2	14:21	15:21	Sunny	Normal Operation	28.0	759.0	262.1	
23-Sep-04	WA10	3	15:21	16:21	Sunny	Normal Operation	28.0	759.0	263.4	
23-Sep-04	WA11	1	13:09	14:09	Sunny	Normal Operation	28.0	759.0	210.7	
23-Sep-04	WATT WATT	2	14:09	15:09	Sunny	Normal Operation	20.0	759.0	214.5	
30-Sep-04	WA1	1	8.34	9.34	Fine	Normal Operation	31.0	753.0	214.5	
30-Sep-04	WA3	2	9:34	10:34	Fine	Normal Operation	31.0	761.3	206.9	
30-Sep-04	WA3	3	10:34	11:34	Fine	Normal Operation	31.0	761.3	134.5	
30-Sep-04	WA4	1	8:36	9:36	Fine	Normal Operation	31.0	761.3	232.0	
30-Sep-04	WA4	2	9:36	10:36	Fine	Normal Operation	31.0	761.3	240.8	
30-Sep-04	WA4	3	10:36	11:36	Fine	Normal Operation	31.0	761.3	213.0	
30-Sep-04	WA5	1	11:00	12:00	Fine	Normal Operation	31.0	761.3	150.6	
30-Sep-04	WA5	2	13:00	14:00	Fine	Normal Operation	31.0	761.3	133.2	
30-Sep-04	WA5	3	14:00	15:00	Fine	Normal Operation	31.0	761.3	156.9	
30-Sen-04	WA6	2	11:00	12.00	Fine	Normal Operation	31.0	761.3	311.6	
30-Sep-04	WA6	3	13:00	14:00	Fine	Normal Operation	31.0	761.3	291.1	
30-Sep-04	WA7	1	9:00	10:00	Fine	Normal Operation	31.0	761.3	159.3	
30-Sep-04	WA7	2	10:00	11:00	Fine	Normal Operation	31.0	761.3	168.4	
30-Sep-04	WA7	3	11:00	12:00	Fine	Normal Operation	31.0	761.3	169.6	
30-Sep-04	WA8	1	8:34	9:34	Fine	Normal Operation	31.0	761.3	101.5	
30-Sep-04	WA8	2	9:34	10:34	Fine	Normal Operation	31.0	761.3	206.2	
30-Sep-04	WA8	3	10:34	11:34	Fine	Normal Operation	31.0	761.3	132.3	
30-Sep-04	WA9	1	13:00	14:00	Fine	Normal Operation	31.0	761.3	186.6	
30-Sop-04	WA9	2	14:00	10:00	Fine	Normal Operation	31.0	761.3	193.5	
30-Sep-04	WA9	3 1	13:00	14.00	Fine	Normal Operation	31.0	761.3	202.3	
30-Sen-04	WA10	2	14.00	14.00	Fine	Normal Operation	31.0	761.3	219.9 226.0	
30-Sep-04	WA10	3	15:00	16:00	Fine	Normal Operation	31.0	761.3	237.6	
30-Sep-04	WA11	1	9:00	10:00	Fine	Normal Operation	31.0	761.3	205.4	
30-Sep-04	WA11	2	10:00	11:00	Fine	Normal Operation	31.0	761.3	209.1	
30-Sep-04	WA11	3	11:00	12:00	Fine	Normal Operation	31.0	761.3	212.5	

Details of 1-Hour TSP Monitoring

APPENDIX G Detailed air quality (24-hour TSP) monitoring results

Details of 24-Hour	TSP	Monitoring
--------------------	-----	------------

												1			
	Receptor	Weather	Site	Filter W	eight (g)	TSP	Flow Rat	e (m ³ /min)	Average Flow	Elaps	e Time	Sampling	Total	24-hour TSP	
Date	No.	condition	condition	Initial	Final	weight (g)	Initial	Final	Bate (m ³ /min)	Start	Finish	Time (mins.)	vol. (m ³)	Level (ua/m ³)	Remarks
01-Sep-04	WA3	Sunny	Normal Operation	2.9175	3.0097	0.0922	1.1914	1.1930	1.1922	4053.31	4077.31	1440.00	1716.77	53.7	
01-Sep-04	WA4	Sunny	Normal Operation	2.8990	2.9943	0.0953	1.0358	1.0375	1.0367	4132.19	4156.19	1440.00	1492.78	63.8	
01-Sep-04	WA5	Sunny	Normal Operation	2.9016	3.0767	0.1751	1.7541	1.8106	1.7824	4148.67	4172.67	1440.00	2566.58	68.2	
01-Sep-04	WA6	Sunny	Normal Operation	2.8926	3.0397	0.1471	1.5587	1.6203	1.5895	4003.06	4027.06	1440.00	2288.88	64.3	
01-Sep-04	WA7	Sunny	Normal Operation	2.8933	2.9793	0.0860	1.3110	1.3125	1.3118	4144.04	4168.04	1440.00	1888.92	45.5	
01-Sep-04	WA8	Sunny	Normal Operation	2.8949	2.9689	0.0740	1.0035	1.0048	1.0042	4176.12	4200.13	1440.60	1446.58	51.2	
01-Sep-04	WA9	Sunny	Normal Operation	2.9059	2.9880	0.0821	1.3212	1.2979	1.3096	4238.04	4262.04	1440.00	1885.75	43.5	
01-Sep-04	WA10	Sunny	Normal Operation	2.8855	2.9698	0.0843	1.2251	1.2267	1.2259	4057.79	4081.79	1440.00	1765.30	47.8	
01-Sep-04	WA11	Sunny	Normal Operation	2.8745	3.0060	0.1315	1.2529	1.2544	1.2537	4229.07	4253.07	1440.00	1805.26	72.8	
07-Sep-04	WA3	Rainy	Normal Operation	2.8853	3.1108	0.2255	1.1294	1.1235	1.1265	4077.31	4101.31	1440.00	1622.09	139.0	Thunderstorm Warning Signal was hoisted from 1450 to
07-Sep-04	WA4	Rainy	Normal Operation	2.8632	3.0499	0.1867	0.7728	0.7678	0.7703	4156.19	4180.19	1440.00	1109.23	168.3	1650.
07-Sep-04	WA5	Rainy	Normal Operation	2.8663	3.2260	0.3597	1.7038	1.7504	1.7271	4172.67	4194.67	1320.00	2279.77	157.8	
07-Sep-04	WA6	Rainy	Normal Operation	2.8677	3.0131	0.1454	0.9059	0.9014	0.9037	4101.09	4125.09	1440.00	1301.26	111.7	
07-Sep-04	WA7	Rainy	Normal Operation	2.8511	3.0915	0.2404	1.2867	1.2813	1.2840	4168.54	4192.54	1440.00	1848.96	130.0	
07-Sep-04	WA8	Rainy	Normal Operation	2.9047	3.1002	0.1955	1.0706	1.0654	1.0680	4200.13	4224.13	1440.00	1537.92	127.1	
07-Sep-04	WA9	Rainy	Normal Operation	2.8967	3.0112	0.1145	1.0273	1.0728	1.0501	4262.04	4286.04	1440.00	1512.07	75.7	
07-Sep-04	WA10	Rainy	Normal Operation	2.8869	3.0996	0.2127	1.2283	1.2223	1.2253	4081.79	4105.79	1440.00	1764.43	120.5	
07-Sep-04	WA11	Rainy	Normal Operation	2.8779	3.1334	0.2555	1.2560	1.2503	1.2532	4253.07	4277.07	1440.00	1804.54	141.6	
13-Sep-04	WA3	Sunny	Normal Operation	2.8943	3.1086	0.2143	1.1989	1.1989	1.1989	4101.31	4125.31	1440.00	1726.42	124.1	
13-Sep-04	WA4	Sunny	Normal Operation	2.9141	3.0658	0.1517	0.6594	0.6594	0.6594	4180.19	4204.19	1440.00	949.54	159.8	
13-Sep-04	WA5	Sunny	Normal Operation	2.9146	3.2020	0.2874	1.9181	1.9181	1.9181	4194.67	4218.67	1440.00	2762.06	104.1	
13-Sep-04	WA6	Sunny	Normal Operation	2.9079	3.2819	0.3740	1.5680	1.5680	1.5680	4125.09	4149.09	1440.00	2257.92	165.6	
13-Sep-04	WA7	Sunny	Normal Operation	2.8859	3.0974	0.2115	1.2902	1.2902	1.2902	4192.54	4216.54	1440.00	1857.89	113.8	
13-Sep-04	WA8	Sunny	Normal Operation	2.8936	3.0647	0.1711	1.0740	1.0740	1.0740	4224.13	4248.13	1440.00	1546.56	110.6	
13-Sep-04	WA9	Sunny	Normal Operation	2.8841	3.0480	0.1639	1.2959	1.2959	1.2959	4286.04	4310.04	1440.00	1866.10	87.8	
13-Sep-04	WA10	Sunny	Normal Operation	2.8764	3.0706	0.1942	1.2323	1.2323	1.2323	4105.79	4129.78	1439.40	1773.77	109.5	
13-Sep-04	WA11	Sunny	Normal Operation	2.8831	3.1098	0.2267	1.2598	1.2598	1.2598	4277.07	4301.07	1440.00	1814.11	125.0	
18-Sep-04	WA3	Sunny	Normal Operation	2.6482	2.7275	0.0793	1.1657	1.1616	1.1637	4125.31	4149.30	1439.40	1674.96	47.3	Thunderstorm Warning Signal was hoisted from 0210 to
18-Sep-04	WA4	Sunny	Normal Operation	2.6449	2.7469	0.1020	0.8000	0.7964	0.7982	4204.19	4228.19	1440.00	1149.41	88.7	0610, 1010 to 1145 and 1210 to 1410.
18-Sep-04	WA5	Sunny	Normal Operation	2.6535	2.9316	0.2781	1.3294	1.3250	1.3272	4218.67	4242.67	1440.00	1911.17	145.5	
18-Sep-04	WA6	Sunny	Normal Operation	2.6534	2.7807	0.1273	1.2680	1.3234	1.2957	4149.09	4173.09	1440.00	1865.81	68.2	
18-Sep-04	WA7	Sunny	Normal Operation	2.6291	2.7233	0.0942	1.2624	1.2589	1.2607	4216.54	4240.54	1440.00	1815.34	51.9	
18-Sep-04	WA8	Sunny	Normal Operation	2.6403	2.7010	0.0607	1.0737	1.0702	1.0720	4248.52	4272.52	1440.00	1543.61	39.3	
18-Sep-04	WA9	Sunny	Normal Operation	2.6380	2.6969	0.0589	1.3634	1.3245	1.3440	4310.04	4334.04	1440.00	1935.29	30.4	
18-Sep-04	WA10	Sunny	Normal Operation	2.6649	2.7321	0.0672	1.2319	1.2279	1.2299	4129.78	4153.79	1440.60	1771.79	37.9	
18-Sep-04	WA11	Sunny	Normal Operation	2.6465	2.7322	0.0857	1.2321	1.2283	1.2302	4301.07	4325.07	1440.00	1771.49	48.4	
24-Sep-04	WA3	Sunny	Normal Operation	2.6455	2.7646	0.1191	1.2026	1.2005	1.2016	4149.30	4173.31	1440.60	1730.95	68.8	
24-Sep-04	WA4	Sunny	Normal Operation	2.6340	2.8054	0.1714	0.8035	0.8017	0.8026	4228.19	4252.18	1439.40	1155.26	148.4	
24-Sep-04	WA5	Sunny	Normal Operation	2.6461	2.8290	0.1829	1.3338	1.3316	1.3327	4242.67	4264.67	1320.00	1759.16	104.0	
24-Sep-04	WA6	Sunny	Normal Operation	2.6346	2.9052	0.2706	1.2121	1.2100	1.2111	4197.09	4221.09	1440.00	1743.91	155.2	
24-Sep-04	WA7	Sunny	Normal Operation	2.6284	2.7542	0.1258	1.3209	1.3190	1.3200	4240.54	4264.54	1440.00	1900.73	66.2	
24-Sep-04	WA8	Sunny	Normal Operation	2.6270	2.7512	0.1242	1.4017	1.3994	1.4006	4272.52	4296.52	1440.00	2016.79	61.6	
24-Sep-04	WA9	Sunny	Normal Operation	2.6566	2.7984	0.1418	1.3684	1.3659	1.3672	4334.04	4358.04	1440.00	1968.70	72.0	
24-Sep-04	WA10	Sunny	Normal Operation	2.6485	2.7556	0.1071	1.3700	1.3678	1.3689	4153.79	4177.79	1440.00	1971.22	54.3	
24-Sep-04	WA11	Sunny	Normal Operation	2.6436	2.7773	0.1337	1.2358	1.2339	1.2349	4325.07	4349.07	1440.00	1778.18	75.2	
30-Sep-04	WA3	Sunny	Normal Operation	2.6514	2.7911	0.1397	1.1349	1.2626	1.1988	4173.31	4197.30	1439.40	1725.48	81.0	
30-Sep-04	WA4	Sunny	Normal Operation	2.6644	2.8075	0.1431	0.8017	0.7989	0.8003	4252.18	4276.41	1453.80	1163.48	123.0	
30-Sep-04	WA5	Sunny	Normal Operation	2.6525	2.8940	0.2415	1.3316	1.3281	1.3299	4264.67	4288.67	1440.00	1914.98	126.1	
30-Sep-04	WA6	Sunny	Normal Operation	2.6433	2.9150	0.2717	1.5701	1.5658	1.5680	4221.09	4245.09	1440.00	2257.85	120.3	
30-Sep-04	WA7	Sunny	Normal Operation	2.6406	2.7338	0.0932	0.9349	0.9329	0.9339	4264.54	4288.54	1440.00	1344.82	69.3	
30-Sep-04	WA8	Sunny	Normal Operation	2.6423	2.7706	0.1283	1.5290	1.4280	1.4785	4296.52	4320.52	1440.00	2129.04	60.3	
30-Sep-04	WA9	Sunny	Normal Operation	2.6602	2.7613	0.1011	1.0935	1.2260	1.1598	4358.04	4382.04	1440.00	1670.04	60.5	
30-Sep-04	WA10	Sunny	Normal Operation	2.6503	2.7759	0.1256	1.1000	1.1305	1.1153	4177.79	4201.78	1439.40	1605.29	78.2	
30-Sep-04	WA11	Sunny	Normal Operation	2.6707	2.8198	0.1491	1.2065	1.0943	1.1504	4349.07	4373.07	1440.00	1656.58	90.0	

APPENDIX H

Detailed wind monitoring data for the air quality monitoring period



Wind Monitoring Data - Wind Speed during air quality monitoring in September 2004



香 港 時 閻 (時) Hong Kong Time (Hour)

12 13 14 15 16 17 18

19 20 21 22 23 00

08/09/2004

(C) 香港天文 含 Hong Kong Observatory

0

88

07/09/2004

81

02 03 04 05 06

07

08 09 10 11



















Wind Monitoring Data - Wind Speed during air quality monitoring in September 2004



香 港 時 閻 (時) Hong Kong Time (Hour)

12 13 14 15 16 17 18

19 20 21 22 23 00

08/09/2004

(C) 香港天文 含 Hong Kong Observatory

0

88

07/09/2004

81

02 03 04 05 06

07

08 09 10 11

















APPENDIX I

Calibration certificates of noise monitoring equipment

ARUP

•--

Level 5 Festival Walk 80 Tat Chee Avenue			AAc (Certificate No. 2004002
HONG KONG	Tel: +85	52 2268 3216	Fax:	+852 2268 3950
	CERTIFICATE	OF CONFORN	<i>NITY</i>	
Description of Test Instrument		Type N	<u>o</u>	Serial No
Bruel & Kjaer Acoustic Calibrat	or	4231		2314016
Date of Test: 16 July 2004				
Carried out by: Steven Wong		Approved by:	William Ng	
Signature: Sprace		Signature:	Wih.	Wy
	Ambient Condit	ons During Test		J
	Atmospheric Pressur Air Temperature: Relative Humidity:	e: 11 20 5	(Pa 8°C 58%	
This document is to certify tha specification on the date of the into specification are duly noted described below.	t the above Test Instr test. Any adjustmen I in this document. Tl	rumentation did c ts that were requ ne tests were car	conform to the ired to bring ried out using	ne manufacturer's original the instrumentation back ig the reference calibrator
Description of Reference Calibra	ator	Type No	2	Serial No
Brüel & Kjær Multi Frequency C Brüel & Kjær Coupler	alibrator	4226 UA0915	5	1531372 1531372
Certificate of Calibration Serial N By Brüel & Kjær (UK) Ltd Calibra NAMAS Accredited Calibration L	Io. ation Date: .aboratory No.	12701 20 April 2004 0174		
The reference calibrator, Type 4 such it is used as Arup Acoustic tests on all sound measuring eq	226, has traceable ca s own 'Primary Standa upment owned by Aru	libration back to f rd' and is used or p Acoustics.	National Mea nly for contro	asurement Standards. As olled laboratory calibration
Footnote:	· · · · · · · · · · · · · · · · · · ·			
Arup Acoustics is not a registere only (unless otherwise authorise procedures.	d NAMAS accredited (d) and is part of Arup /	calibration laborat Acoustics develop	tory. This ce oment and co	ertificate is for internal use ommitment to QC and QA
				J

G:\common\Equipment\Calibration\Certificate\2004\2004-Equip-Cal-Cert.doc 16 July 2004

ARUP

		· · · · · · · · · · · · · · · · · · ·	
Level 5 Festival Walk 80 Tat Chee Avenue			AAc Certificate No. 2004001
HONG KONG			Fax: +852 2268 3950
	Tel:	+852 2268 3216	107. 1002 2200 0000
	CERTIFICAT	E OF CONFORMITY	(
Description of Test Instrument		Type No	Serial No
Bruel & Kjaer Acoustic Calibrat	tor	4230	1233887
Date of Test: 16 July 2004			
Carried out by: Steven Wong		Approved by: Will	iam Ng
Signature: Garan		Signature:	i.m. My
	Ambient Cor	nditions During Test	
	Atmospheric Pres	sure: 1KPa	
	Air Temperature: Relative Humidity	28°C 58%	
This document is to certify the specification on the date of the into specification are duly note described below.	at the above Test I test. Any adjustn d in this document.	nstrumentation did confo nents that were required The tests were carried	orm to the manufacturer's original to bring the instrumentation back out using the reference calibrator
Description of Reference Calibr	ator	Type No	Serial No
Brüel & Kjær Multi Frequency C Brüel & Kjær Coupler	alibrator	4226 UA0915	1531372 1531372
Certificate of Calibration Serial I By Brüel & Kjær (UK) Ltd Calibr NAMAS Accredited Calibration	No. ration Date: Laboratory No.	12701 20 April 2004 0174	· · · · · · · · · · · · · · · · · · ·
The reference calibrator, Type 4 such it is used as Arup Acoustic tests on all sound measuring eq	4226, has traceable is own 'Primary Sta juipment owned by	e calibration back to Natic ndard' and is used only fo Arup Acoustics.	onal Measurement Standards. As or controlled laboratory calibration
Footnote:			
Arup Acoustics is not a registere only (unless otherwise authorise procedures.	ed NAMAS accredit ed) and is part of Ar	ed calibration laboratory. up Acoustics developmer	This certificate is for internal use at and commitment to QC and QA
G:\common\Equipment\Calibration\Certi 16 July 2004	ficate\2004\2004-Equip-	Cal-Cert.doc	

Brüel & Kjær 📲

CERTIFICATE OF CALIBRATION

Certificate	No. :	: 2KS040905-3			Page	1	of	2
Calibration	of:							
Description Manufacture	:	Sound Level Meter Brüel & Kjær	,	Microphone				
Type No.	:	2238	,	4188				
Serial No.	:	2320694	,	2274284				
Client :	Ov Lev 80 Ko Ho	e Arup & Partners H vel 5, Festival Walk, Tat Chee Avenue, wloon Tong, Kowloo ng Kong.	ong Ko on,	ong Ltd.				
Calibration	Con	ditions :						

Air Temperature	:	23.2	°C
Air Pressure	:	101.2	kPa
Relative Humidity	:	59	%

Test Specifications :

The Sound Level Meter has been calibrated in accordance with the requirements as specified in IEC 60651 and IEC 60804 type 1, and vendor specific procedures.

The measurements has been performed with the assistance of :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999 The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

Date of Calibration : 10 September, 2004 Calibrated By :

Certificate issued : 10 September, 2004 Approved signatory :

Fox Ng

Jacky Leung

Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission.

Unit 706 7/F., Miramar Tower, 132 Nathan Road, Tsim Sha Tsui, Kowloon, Hong Kong 香港九龍尖沙咀彌敦道132號美麗華大廈7樓706室

CERTIFICATE OF CALIBRATION

Certificate No.: 2KS040905-3

Page 2 of 2

Results :

List of performed (sub) test with test status:

"OK" Means the result of the (sub)test is Inside the tolerances stated in the test specifications.

"-" Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :
Noise	Α	OK
Noise	С	OK
Noise	Lin	OK
Frequency Weighting	Α	OK
Frequency Weighting	С	OK
Frequency Weighting	Lin	OK
Level Range Control	1000 Hz	OK
Linearity Range	SPL 10dB 4000 Hz	OK
Linearity Range	SPL 1dB 1000 Hz	OK
Linearity Range	Leq	OK
Linearity Range	SEL	OK
RMS Detector	CF 3	OK
RMS Detector	CF 5	OK
RMS Detector	CF 10	OK
RMS Detector	Symmetry	OK
Time Weighting	Difference Indication	OK
Time Weighting	Single Burst FAST	OK
Time Weighting	Single Burst SLOW	OK
Time Weighting	Single Burst IMPULSE	OK
Time Weighting	Repetitive Burst	OK
Time Weighting	Peak	OK
Time Averaging		OK
Pulse Range		OK
Overload	SPL	OK
Overload	SEL	OK
Acoustic Response	Α	OK
Acoustic Response	Lin	OK

Calibration Equipment :

Brüel & Kjær's Sound	Level Meter Calib	ration System	B&K 9600 CAI	.2238A, Ver.25.10.1999
Description :	Make & Model :	Serial No. :	Last Cal. Date :	Traceable to:
Digital Multi-meter	Datron 1281	27361	08 Oct, 2003	HKSCL (HOKLAS)
Sine/Noise Generator	B&K 1049	1314978	Test	B&K Conformance
Test Waveform Generator	B&K 5918	1482949	Test	B&K Conformance
Acoustical Calibrator	B&K 4226	1551627	22 Jun, 2004	NPL via B&K (UKAS)

Calibrated By : $\int \infty \sqrt{2}$ Date : 10 September, 2004

Checked By: Jerry Date : 10 September, 2004



CERTIFICATE OF CALIBRATION

Certificate	tificate No.: 2KS040905-4				Page	1	of	2	
Calibration	of	:							
Description Manufacture	:	Sound Level Meter Brüel & Kjær	,	Microp	hone				
Type No.	:	2238	,	4188					
Serial No.	:	2320696	,	227428	36				
Client :	Ov Le 80 Ko Ho	ve Arup & Partners H evel 5, Festival Walk Tat Chee Avenue, owloon Tong, Kowlo ong Kong.	Hong K , pon,	Cong Ltd.					
Calibration	Co	nditions :							

Air Temperature	:	23.2	°C
Air Pressure	:	101.2	kPa
Relative Humidity	:	59	%

Test Specifications :

The Sound Level Meter has been calibrated in accordance with the requirements as specified in IEC 60651 and IEC 60804 type 1, and vendor specific procedures.

The measurements has been performed with the assistance of :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999 The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

 Date of Calibration : 10 September, 2004
 Certificate issued : 10 September, 2004

 Calibrated By :
 Approved signatory :

 Image: Pox Ng
 Image: Pox Ng

 Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission.

Unit 706 7/E, Miramar Tower, 132 Nathan Road, Tsim Sha Tsui, Kowloon, Hong Kong 香港九龍尖沙咀彌敦道132號美麗華大廈7樓706室

CERTIFICATE OF CALIBRATION

Certificate No. :	2KS040905-4
--------------------------	-------------

Page 2 of 2

Results :

List of performed (sub) test with test status:

"OK" Means the result of the (sub)test is Inside the tolerances stated in the test specifications. "-" Means the result of the (sub)test is Outside these tolerances.

Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :
Noise	А	OK
Noise	С	OK
Noise	Lin	OK
Frequency Weighting	Α	OK
Frequency Weighting	С	OK
Frequency Weighting	Lin	OK
Level Range Control	1000 Hz	OK
Linearity Range	SPL 10dB 4000 Hz	OK
Linearity Range	SPL 1dB 1000 Hz	OK
Linearity Range	Leq	OK
Linearity Range	SEL	OK
RMS Detector	CF 3	OK
RMS Detector	CF 5	OK
RMS Detector	CF 10	OK
RMS Detector	Symmetry	OK
Time Weighting	Difference Indication	OK
Time Weighting	Single Burst FAST	OK
Time Weighting	Single Burst SLOW	OK
Time Weighting	Single Burst IMPULSE	OK
Time Weighting	Repetitive Burst	OK
Time Weighting	Peak	ОК
Time Averaging		OK
Pulse Range		OK
Overload	SPL	OK
Overload	SEL	OK
Acoustic Response	Α	OK
Acoustic Response	Lin	OK

Calibration Equipment :

Brüel & Kjær's Sound	Level Meter Calibr	ation System	B&K 9600 CAL	2238A, Ver.25.10.1999
Description :	Make & Model :	Serial No. :	Last Cal. Date :	Traceable to:
Digital Multi-meter	Datron 1281	27361	08 Oct, 2003	HKSCL (HOKLAS)
Sine/Noise Generator	B&K 1049	1314978	Test	B&K Conformance
Test Waveform Generator	B&K 5918	1482949	Test	B&K Conformance
Acoustical Calibrator	B&K 4226	1551627	22 Jun, 2004	NPL via B&K (UKAS)

Calibrated By : $4 e_X$ Ng Date : 10 September, 2004

Checked By : July Date : 10 September, 2004

Brüel & Kjær 📲

CERTIFICATE OF CALIBRATION

Certificate No.: 2KS040905-5				Page	1	of	2		
Calibration	of	:							
Description Manufacture	:	Sound Level Meter Brüel & Kjær	,	Microphone					
Type No.	:	2238	,	4188					
Serial No.	:	2320707	,	2179479					
Client :	O Le 80 Ke He	ve Arup & Partners I evel 5, Festival Walk) Tat Chee Avenue, owloon Tong, Kowlo ong Kong.	Hong Ko ., oon,	ng Ltd.					
Calibration Conditions :									

Air Temperature	:	23.1	°C
Air Pressure	:	101.4	kPa
Relative Humidity	:	58	%

Test Specifications :

The Sound Level Meter has been calibrated in accordance with the requirements as specified in IEC 60651 and IEC 60804 type 1, and vendor specific procedures.

The measurements has been performed with the assistance of :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 CAL2238A, Ver.25.10.1999 The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

Date of Calibration : 09 September, 2004 Calibrated By : Certificate issued : 10 September, 2004 Approved signatory :

Fox Ng

Jacky Leun

Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission.

Unit 706 7/F., Miramar Tower, 132 Nathan Road, Tsim Sha Tsui, Kowloon, Hong Kong 香港九龍尖沙咀彌敦道132號美麗華大廈7樓706室

CERTIFICATE OF CALIBRATION

Certificate No.: 2KS040905-5

Page 2 of 2

Results :

List of performed (sub) test with test status:

"OK" Means the result of the (sub)test is Inside the tolerances stated in the test specifications.

"-" Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :
Noise	А	OK
Noise	С	OK
Noise	Lin	OK
Frequency Weighting	А	OK
Frequency Weighting	С	OK
Frequency Weighting	Lin	OK
Level Range Control	1000 Hz	OK
Linearity Range	SPL 10dB 4000 Hz	OK
Linearity Range	SPL 1dB 1000 Hz	ОК
Linearity Range	Leq	ОК
Linearity Range	SEL	OK
RMS Detector	CF 3	ОК
RMS Detector	CF 5	OK
RMS Detector	CF 10	ОК
RMS Detector	Symmetry	ОК
Time Weighting	Difference Indication	OK
Time Weighting	Single Burst FAST	ОК
Time Weighting	Single Burst SLOW	OK
Time Weighting	Single Burst IMPULSE	OK
Time Weighting	Repetitive Burst	OK
Time Weighting	Peak	OK
Time Averaging		OK
Pulse Range		OK
Overload	SPL	OK
Overload	SEL	OK
Acoustic Response	А	OK
Acoustic Response	Lin	OK

Calibration Equipment :

Canoración Equipment				
Brüel & Kjær's Sound	Level Meter Calibra	ation System	B&K 9600 CAL2	238A, Ver.25.10.1999
Description :	Make & Model :	Serial No. :	Last Cal. Date :	Traceable to:
Digital Multi-meter	Datron 1281	27361	08 Oct, 2003	HKSCL (HOKLAS)
Sine/Noise Generator	B&K 1049	1314978	Test	B&K Conformance
Test Waveform Generator	B&K 5918	1482949	Test	B&K Conformance
Acoustical Calibrator	B&K 4226	1551627	22 Jun, 2004	NPL via B&K (UKAS)

Calibrated By : 1-0× Date : 09 September, 2004

Checked By Herry Date : 10 September, 2004



CERTIFICATE OF CALIBRATION

Certificate No. : 2KS040905-1					Page	1	of	2		
Calibratio	n of	f :								
Description	:	Sound	Level Met	er	,	Microphone				
Manufactur	·e :	Brüel	& Kjær							
Type No.	:	2231	-		,	4188				
Serial No.	:	12946	30		,	2179478				
Client :	Lev 80 Ko Ho	el 5, F Tat Ch wloon ng Ko	Festival nee Aver Tong, K ng.	Walk, iue, lowlooi	n,					
Calibratio	n Co	onditio	ons :							
Air Temper	atur	e :	23.2	°C						
Air Pressur	е	•	101.2	kPa						

Test Specifications :

Relative Humidity :

The Sound Level Meter has been calibrated in accordance with the requirements as specified in IEC 60651 and IEC 60804 type 1, and vendor specific procedures.

The measurements has been performed with the assistance of :

59

%

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 C2231_10, Ver.03.11.1995 The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

Date of Calibration: 10 September, 2004 Calibrated By : Certificate issued: 10 September, 2004 Approved Signatory :

Fox Ng Jacky Leung Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission

Unit 706 7/E, Miramar Tower, 132 Nathan Road, Tsim Sha Tsui, Kowloon, Hong Kong 育 市 市 康 尖 小 旺 爾 敦 道 1 3 2 號 美 麗 華 大 厦 7 樓 7 0 6 室

CERTIFICATE OF CALIBRATION

Certificate No. : 2KS040905-1

Page 2 of 2

Results :

List of performed (sub) test with test status:

"OK" Means the result of the (sub)test is Inside the tolerances stated in the test specifications. "-" Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :		
Noise	А	OK		
Noise	С	OK		
Noise	Lin	OK		
Noise	Lin Lim	ОК		
Frequency Weighting	А	OK		
Frequency Weighting	С	OK		
Frequency Weighting	Lin	OK		
Frequency Weighting	Lin Lim	OK		
Frequency Weighting	Random	OK		
Level Range Control	4000 Hz	ОК		
Linearity Range	SPL 10dB 1000 Hz	ОК		
Linearity Range	SPL 1dB 4000 Hz	OK		
Linearity Range	Leq	OK		
Linearity Range	SEL	OK		
RMS Detector	CF 3	OK		
RMS Detector	CF 5	OK		
RMS Detector	CF 10	OK		
RMS Detector	Symmetry	OK		
Time Weighting	Difference Indication	OK		
Time Weighting	Single Burst FAST	OK		
Time Weighting	Single Burst SLOW	OK		
Time Weighting	Single Burst IMPULSE	OK		
Time Weighting	Repetitive Burst	OK		
Time Weighting	Peak	OK		
Time Averaging	Leq-SEL	OK		
Pulse Range	SEL-Leq	OK		
Overload	SPL	OK		
Overload	SEL	OK		
Internal Reference		OK		
Acoustic Response	A	OK		
Acoustic Response	Lin	OK		

Calibration Equipment :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 C2231 10, Ver.03.11.1995						
Description :	Make & Model :	Serial No. :	Last Cal. Date :	Traceable To		
Digital Multi-meter	Datron 1281	27361	08 Oct 2003	HKSCL(HOKLAS)		
Sine/Noise Generator	B&K 1049	1314978	Test	B&K Conformance		
Test Waveform Generator	B&K 5918	1482949	Test	B&K Conformance		
Acoustical Calibrator	B&K 4226	1551627	22 Jun, 2004	NPL via B&K (UKAS)		

Calibrated By : Nox Ng Date :10 September, 2004

Checked By : Vult Date : 10 September, 2004



CERTIFICATE OF CALIBRATION

Certificate No. : 2KS040905-2			Page 1		of	2			
Calibratio	n o	f:							
Description	:	Sound Level Meter		,	Microphone				
Manufactur	е:	Brüel & Kjær							
Type No.	:	2231		,	4188				
Serial No.	:	1709184		,	2179476				
Client :	Ov Le 80 Ko Ho	e Arup & Partners Ho vel 5, Festival Walk, Tat Chee Avenue, wloon Tong, Kowloo ng Kong.	ng	Kong	; Ltd.				
Calibratio	n C	onditions :					-	_	

Air Temperature	:	23.2	°C
Air Pressure	:	101.2	kPa
Relative Humidity	:	59	%

Test Specifications :

The Sound Level Meter has been calibrated in accordance with the requirements as specified in IEC 60651 and IEC 60804 type 1, and vendor specific procedures.

The measurements has been performed with the assistance of :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 C2231_10, Vcr.03.11.1995 The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

Date of Calibration: 10 September, 2004 Calibrated By : Certificate issued: 10 September, 2004 Approved Signatory :

Fox Ng

Jacky Leune

Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission.

Unit 706 7/E, Miramar Tower, 132 Nathan Road, Tsim Sha Tsui, Kowloon, Hong Kong 香港九龍 实心咀 爾 數 道 1 3 2 號 美 麗 華 大 厦 7 楼 7 0 6 室

CERTIFICATE OF CALIBRATION

Certificate No. : 2KS040905-2

Page 2 of 2

Results :

List of performed (sub) test with test status:

"OK" Means the result of the (sub)test is Inside the tolerances stated in the test specifications. "-" Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :		
Noise	А	OK		
Noise	С	ОК		
Noise	Lin	ОК		
Noise	Lin Lim	OK		
Frequency Weighting	A	OK		
Frequency Weighting	С	OK		
Frequency Weighting	Lin	OK		
Frequency Weighting	Lin Lim	OK		
Frequency Weighting	Random	OK		
Level Range Control	4000 Hz	OK		
Linearity Range	SPL 10dB 1000 Hz	ОК		
Linearity Range	SPL 1dB 4000 Hz	OK		
Linearity Range	Leq	OK		
Linearity Range	SEL	OK		
RMS Detector	CF 3	OK		
RMS Detector	CF 5	OK		
RMS Detector	CF 10	ОК		
RMS Detector	Symmetry	ОК		
Time Weighting	Difference Indication	OK		
Time Weighting	Single Burst FAST	OK		
Time Weighting	Single Burst SLOW	OK		
Time Weighting	Single Burst IMPULSE	ОК		
Time Weighting	Repetitive Burst	OK		
Time Weighting	Peak	OK		
Time Averaging	Leq-SEL	OK		
Pulse Range	SEL-Leq	OK		
Overload	SPL	OK		
Overload	SEL	OK		
Internal Reference		OK		
Acoustic Response	Α	OK		
Acoustic Response	Lin	OK		

Calibration Equipment :

Brüel & Kjær's Sound Level Meter Calibration System B&K 9600 C2231_10, Ver.03.11.1995					
Description :	Make & Model :	Serial No. :	Last Cal. Date :	Traceable To	
Digital Multi-meter	Datron 1281	27361	08 Oct 2003	HKSCL(HOKLAS)	
Sine/Noise Generator	B&K 1049	1314978	Test	B&K Conformance	
Test Waveform Generator	B&K 5918	1482949	Test	B&K Conformance	
Acoustical Calibrator	B&K 4226	1551627	22 Jun, 2004	NPL via B&K (UKAS)	

Calibrated By : No× Ng Date :10 September, 2004

Checked By: Mul Date : 10 September, 2004

APPENDIX J

Detailed noise monitoring results
Details of Noise Impact Monitoring

	NSR	Time p	periods	Weather	Avg. wind	Noi	se Level d	B(A)	Influencing factors/
Date	No.	Start	Finish	condition	speed (m/s)	L _{eq}	L ₁₀	L ₉₀	Site condition
01-Sep-04	WN1	9:15	9:45	Fine	0.8	71.3	73.5	69.0	Normal Operation
01-Sep-04	WN2	9:55	10:25	Fine	0.7	72.2	75.0	70.0	Normal Operation
01-Sep-04	WN6	11:00	11:30	Fine	0.3	66.7	68.5	64.5	Normal Operation
01-Sep-04	WN7	13:00	13:30	Fine	0.4	69.2	71.0	67.0	Normal Operation
01-Sep-04	WN8	13:45	14:15	Fine	0.5	68.3	70.5	66.5	Normal Operation
01-Sep-04	WN9	15:00	15:30	Fine	0.7	68.3	70.5	66.5	Normal Operation
01-Sep-04	WN10	15:30	16:00	Fine	0.8	69.9	72.5	67.0	Normal Operation
01-Sep-04	WN11	14:30	15:00	Fine	1.0	70.1	72.5	68.0	Normal Operation
01-Sep-04	WN12	13:45	14:15	Fine	0.5	66.3	68.5	63.5	Normal Operation
01-Sep-04	WN13	13:00	13:30	Fine	0.8	71.2	73.5	69.0	Normal Operation
01-Sep-04	WN14	10:30	11:00	Fine	1.0	67.5	69.5	65.5	Normal Operation
01-Sep-04	WN15	9:45	10:15	Fine	0.9	68.7	70.5	65.5	Normal Operation
01-Sep-04	WN16	9:00	9:30	Fine	0.2	64.8	67.0	62.5	Normal Operation
07-Sep-04	WN1	16:45	17:15	Sunny	1.0	68.2	73.5	65.0	Normal Operation
07-Sep-04	WN2	17:20	17:50	Sunny	1.7	68.7	73.0	66.5	Normal Operation
07-Sep-04	WN6	15:15	15:45	Sunny	2.1	64.3	66.5	60.0	Normal Operation
07-Sep-04	WN7	16:30	17:00	Sunny	1.3	71.9	76.5	61.5	Normal Operation
07-Sep-04	WN8	15:35	16:05	Sunny	1.6	68.6	71.0	61.5	Normal Operation
07-Sep-04	WN9	14:30	15:00	Sunny	1.4	70.0	73.0	64.0	Normal Operation
07-Sep-04	WN10	15:00	15:30	Sunny	1.6	70.7	73.5	62.0	Normal Operation
07-Sep-04	WN11	14:00	14:30	Sunny	1.4	67.6	70.5	60.0	Normal Operation
07-Sep-04	WN12	13:00	13:30	Sunny	1.7	69.9	74.5	65.5	Normal Operation
07-Sep-04	WN13	11:15	11:45	Sunny	1.0	70.8	76.5	69.0	Normal Operation
07-Sep-04	WN14	10:30	11:00	Sunny	1.6	71.1	75.5	67.0	Normal Operation
07-Sep-04	WN15	13:00	13:30	Sunny	1.2	70.3	72.5	68.0	Normal Operation
07-Sep-04	WN16	11:30	12:00	Sunny	2.2	66.4	69.0	64.0	Normal Operation
14-Sep-04	WN1	16:45	17:15	Sunny	1.2	71.1	73.5	69.0	Normal Operation
14-Sep-04	WN2	17:25	17:55	Sunny	0.9	71.8	74.0	70.0	Normal Operation
14-Sep-04	WN6	10:30	11.00	Sunny	3.2	71.1	76.5	67.0	Normal Operation
14-Sep-04	WN7	11.15	11.45	Sunny	1.8	70.0	75.5	68.5	Normal Operation
14-Sep-04	WN8	13.15	13:45	Sunny	1.5	70.5	75.0	68.5	Normal Operation
14-Sep-04	WN9	14.15	14:45	Sunny	1.5	73.0	79.5	73.0	Normal Operation
14-Sep-04	WN10	15.50	16:20	Sunny	1.8	72.6	77.5	73.0	Normal Operation
14-Sep-04	WN11	15.15	15:45	Sunny	1.0	73.4	78.5	72.0	Normal Operation
14-Sep-04	WN12	14:30	15:00	Sunny	1.0	70.2	74.5	67.0	Normal Operation
14-Sep-04	WN13	13:45	14.15	Sunny	1.0	71.8	77.5	71.0	Normal Operation
14-Sep-04	WN14	13.40	13.30	Sunny	0.8	71.0	75.5	69.5	Normal Operation
14-Sep-04	WN15	11.15	11:45	Sunny	1.1	71.1	74.0	67.5	Normal Operation
14-Sep-04	WN16	10.30	11:10	Sunny	2.0	70.8	77.5	69.0	Normal Operation
22-Sep-04	WN1	9.30	10.00	Sunny	1.5	69.2	75.5	68.5	Normal Operation
22-Sep-04	WN2	10.10	10:00	Sunny	1.0	68.7	73.0	67.5	Normal Operation
22-Sep-04	WN6	11.15	11:45	Sunny	2.5	70.4	76.5	67.0	Normal Operation
22-Sep-04	WN7	13.00	13.30	Sunny	1.9	69.8	77.0	69.5	Normal Operation
22-Sep-04	WN8	13:45	14.15	Sunny	1.3	69.5	76.5	68.5	Normal Operation
22-Sep-04	WNG	14.30	15:00	Sunny	1.6	71.8	78.5	70.0	Normal Operation
22-Sep-04	WN10	15:05	15:35	Sunny	1.0	70.7	77.5	69.5	Normal Operation
22-Sep-04	WN11	15:40	16.00	Sunny	1.0	70.1	77.0	71.5	Normal Operation
22-Sep-04	WN12	13.00	13.30	Sunny	1.4	69.8	76.5	67.0	Normal Operation
22-Sep-04	WN12	10.00	10.00	Suppy	1.4	63.3	66.5	57.5	Normal Operation
22-Sep-04	WN14	10.12	11:05	Sunny	0.8	68.9	70.0	65.0	Normal Operation
22-Sep-04	WN14	10.35	10.30	Sunny	0.8	67.0	69.0	63.5	Normal Operation
22-Sep-04	WN16	12:45	14.15	Sunny	1.2	70.0	76.0	69.5	Normal Operation
22-Sep-04	WINTO	10.40	14.15	Fino	2.2	70.0	70.0	70.5	Normal Operation
30-Sep-04	WND	10.00	11.30	Fine	0.0	72.4	74.5	70.5	Normal Operation
30-Sep-04		10.45	10:45	Fine	0.7	66.7	75.0	71.0 65.0	Normal Operation
30-Sep-04		13:15	13:45	Fine	1.3	00.7	08.D	0.00	Normal Operation
30-Sep-04		14:00	14:30	Fine	0.9	69.3	/1.5	0.00	Normal Operation
30-Sep-04		14:40	10:10	Fine	1.0	70.2	70.0	0.00	Normal Operation
30-Sep-04	VVIN9	10:00	10:00	Fine	0.8	70.3	73.0	0.00	Normal Operation
30-Sep-04		10:00	15:30	Fine	0.4	70.3	73.0	63.0	Normal Operation
30-Sep-04		16:30	17:00	Fine	0.6	/2.1	/5.5	63.5	Normal Operation
30-Sep-04	WN12	9:45	10:15	⊢ine	1.0	65.4	67.0	62.0	Normal Operation
30-Sep-04	WN13	10:25	10:55	Fine	0.9	63.1	65.5	59.5	Normal Operation
30-Sep-04	WN14	11:00	11:30	Fine	0.8	68.3	69.5	66.5	Normal Operation
30-Sep-04	WN15	13:00	13:30	Fine	0.6	65.3	67.5	61.0	Normal Operation
30-Sep-04	WN16	11:30	12:00	Fine	0.2	65.5	68.5	59.0	Normal Operation

Note: Average baseline noise level for WN5, WN9, and WN10 were 75.4dB(A), 74.7dB(A), and 75.5dB(A) respectively. * Round off measured noise levels were used for comparison against the limit levels.

APPENDIX K

Details of of Marine Water Monitoring



Our ref.: HY/99/18/M45/100/20/18282

Your ref.:

Date: 28 August 2004

Mouchel Halcrow JV **CRE** Site Office Tsuen Wan, N.T. Hong Kong

Attn: Mr. Jeff Yu

Dear Sir,

Received 3 0 AUG 2004 FI Inits Action Info. Coov

Castle Peak Road Improvement Between Sham Tseng & Ka Loon Tsuen, Tsuen Wan Contract No. HY/99/18 Marine Water Quality Impact Monitoring during August 2004

We refer to the marine water quality impact monitoring work conducted during the month of August 2004 for the beach reinstatement activity. In light of the frequency of test results reaching the trigger level and the near-completion of the monitoring period, we submit herewith an account of the month's marine monitoring and sand placing activities for your information.

Please note that the marine water quality monitoring work has been conducted throughout the month of August 2004 on Mondays, Wednesdays, and Fridays. The monitoring period represent a time window (starting on the 2^{nd} and ending on the 27^{h}) within which the sand placing works has been scheduled. The samples taken on the 2nd and the 4th are representative of the background conditions before the sand placing works began.

The sand placing works (i.e. deliveries) took place on the 5th, 6th, 7th, and 13th only. Amongst these four days of marine work, sand placing and marine water impact monitoring coincided on the 6th and the 13th. It has been noted that on the 13th, representatives from the ER's office and the Contractor's office were on site watching the sand placing and no significant impact was observed nor flagged-up. Photographs and an account of the day's activities has been forwarded to the ET for assessment and to EPD for their information. We are awaiting the ET to report the Month's events in the upcoming EM&A Report.

The sand delivery works ended as of the 13th of this Month and, unless instructed otherwise, we do not expect to have any further deliveries. At the end of this scheduled monitoring period (the last day being the 27th), the marine water quality monitoring works will be suspended again until further notice. Should the sand placing and monitoring need to be started again, advance notice of time and extent will be given to all parties concerned.

Page 1 of 2

Maeda Corporation Rooms 1601-1605 New East Ocean Centre, 9 Science Museum Road, T.S.T., East, Kowloon, Hong Kong. Telephone: 2369 9267 Facsimile: 2724 4046

> Site Office - 21 Castle Peak Road Tsing Lung Tau Telephone: 2491 7100 Facsimile: 2491 9678 E-mail address: hy9918@maeda.com.hk





ISO 14001:19

APPENDIX L

Landscape and visual monitoring and audit report

Contract No. HY/99/18 **Castle Peak Road Improvements between** Sham Tseng and Ka Loon Tsuen

Landscape & Visual Audit and Monitoring

Monthly Inspection Report No. 31

(September 2004)

Prepared by

URBIS LIMITED

Prepared by :	Tran Tuán Huy	23 rd September 2004
Approved by :	Alexander Duggto	23 rd September 2004

1.0 INTRODUCTION

This is a Landscape and Visual Audit conducted to fulfill the requirements of the EIA during the Construction and Operational Phases of the project, and is based on the procedures and requirements as set out in the Castle Peak Road Improvements between Area 2 and Ka Loon Tsuen, Tsuen Wan - Environmental Monitoring and Audit Manual – West Contract.

Under the EIA, the proposed mitigation measures include both the planting works and treatment to structures. As stated in 6.4.2 of the EM & A, all measures undertaken by both the Contractor and the Landscape Contractor during the construction phase and the first 12 months of the operational phase shall be audited on a bi-weekly and bi-monthly basis respectively to ensure compliance with the intended aims of the mitigation measures.

2.0 SCOPE OF AUDIT

The broad scope of the audit on mitigation measures is as detailed below:

2.1 Planting Proposals

- Regular inspection of the agreed works areas to ensure no unnecessary intrusion by the Contractor outside the limit of the works;
- Regular review of the progress of engineering works to identify the earliest practical opportunity for the landscape works;
- Monitoring of tree transplanting and planting operations;
- Monitoring of works around the area of existing trees to be retained and protected;
- Monitoring of protection works for existing trees;
- Ensure planting works are carried out in accordance with the Specification and within the right planting season;
- Monitoring of the maintenance operations during the Establishment Period to ensure all plants are well watered and nutrients applied.

2.2 Standard Treatment to Structures

• Monitoring and review to ensure the proposed architectural treatments to retaining walls, viaducts, bridges, and noise barriers are implemented in accordance with the approved design, and where appropriate, to soften the hard edges to structures with planting works.

3.0 INSPECTIONS

3.1 Summary of Inspection – 2nd September 2004

- 3.1.1 <u>Matters Arising from Previous Inspections</u>
 - The Contractor had cleared away the scattered empty cement bags and construction waste pile found at RW-13 area.
 - The Contractor had cleared away the construction waste pile found at Slope 9 area.
 - The Contractor had cleared away the garbage and construction waste pile found at Seawall 'C' retaining wall area below.
 - Clearance of construction waste piles found at the construction area opposite Seawall 'B' was outstanding. The Contractor was reminded to clear it away as soon as possible.
 - Re-hydroseeding of the Slope No. 8 was still outstanding. The Contractor was reminded to re-hydroseed the patches of barren slope surface area as soon as possible.
 - Dry surface conditions were observed at many parts of the site, including areas RW-01, BPRW-03, Seawall 'B', RW-13, Slopes 9 & 11, and footbridge FB-03 area The Contractor was reminded to carry out more frequent watering of the site to prevent dust nuisance.
- 3.1.2 Site Clearance and Formation Works
 - Site clearance works near Angler's beach in progress.
- 3.1.3 <u>Tree Felling and Transplanting Works</u>
 - No tree transplanting work was carried out during the inspection period.

3.1.4 <u>Recommendations</u>

- The Contractor was reminded to clear away all scattered litter, garbage, etc. as found on site, and keep the site in a tidy condition at all times.
- The Contractor was reminded to re-hydroseed all the patchy surface areas at Slope No. 8 for planting works.
- The Contractor was reminded to carry out more frequent watering of the site during dry periods to prevent dust nuisance.

3.2 Summary of Inspection – 16th September 2004

3.2.1 <u>Matters Arising from Previous Inspections</u>

- Clearance of construction waste piles / garbage at the construction area opposite Seawall 'B' was still found outstanding. The Contractor was again reminded to clear it away as soon as possible.
- Re-hydroseeding of the Slope No. 8 was still outstanding. The Contractor was reminded to re-hydroseed the patches of barren slope surface area.
- Dry surface conditions were observed at many parts of the site. The Contractor was reminded to carry out more frequent watering of the site to prevent dust nuisance.

3.2.2 Site Clearance and Formation Works

- Vegetation cuttings from site clearance were found piled along the footpath of RW-01 area. The Contractor was requested to clear it away as soon as possible.
- Scattered construction waste piles was found at Seawall 'B' area. Also, the waste container bin was found to be full. The Contractor was requested to clear it away as soon as possible.
- Construction waste pile was found at footbridge FB-03 area. The Contractor was requested to clear it away as soon as possible.

3.2.3 <u>Tree Felling and Transplanting Works</u>

• No tree transplanting works was carried out during the inspection period.

3.2.4 Recommendations

- The Contractor was reminded to clear away all scattered litter, garbage, etc. as found on site, and keep the site in a tidy condition at all times.
- The Contractor was reminded to re-hydroseed all the patchy surface areas at Slope No. 8 for planting work.
- The Contractor was reminded to carry out more frequent watering of the site during dry periods to prevent dust nuisance.

3.3 Summary of Inspection – 23rd September 2004

3.3.1 Matters Arising from Previous Inspections

- The Contractor had cleared away the vegetation cuttings from site clearance found piled along the footpath of RW-01 area.
- The Contractor had finally cleared the construction waste piles / garbage at the construction area opposite Seawall 'B'.
- The Contractor had cleared away the scattered construction waste piles found at Seawall 'B' area and also emptied the waste container bin. However, new construction waste and scrap wood piles were found. The Contractor was reminded to clear it away as soon as possible.
- The contractor had cleared away the construction waste pile found at footbridge FB-03 area.
- Re-hydroseeding of the Slope No. 8 was still outstanding. The Contractor was reminded to re-hydroseed the patches of barren slope surface area.
- Dry surface conditions were observed at many parts of the site. The Contractor was reminded to carry out more frequent watering of the site to prevent dust nuisance.

3.3.2 Site Clearance and Formation Works

- Scattered construction waste was found along the retaining wall area below at RW-13. The Contractor was requested to clear it away as soon as possible.
- Untidy site condition was found at retaining wall area below at Seawall 'C' area. The Contractor was requested to tidy up the area as soon as possible.
- Construction waste pile was found at BPRW-70 area. The Contractor was requested to clear it away as soon as possible.

3.3.3 <u>Tree Felling and Transplanting Works</u>

• No tree transplanting work was carried out during the inspection period.

3.3.4 <u>Recommendations</u>

- The Contractor was reminded to clear away all scattered litter, garbage, etc. as found on site, and keep the site in a tidy condition at all times.
- The Contractor was reminded to re-hydroseed all the patchy surface areas at Slope No. 8 for planting work.
- The Contractor was reminded to carry out more frequent watering of the site during dry periods to prevent dust nuisance.

4.0 TREE TRANSPLANTING SURVIVAL RATE

4.1 Tree Transplanting Survival Rate

The tree transplanting survival rate as reported by the Contractor for the period up to the end of September is 100%.

5.0 AUDIT SCHEULE

5.1 Audit Schedule for October 2004

The next audits are schedule to be conducted on 14th, and 28th October 2004.

APPENDIX M

Complaint log No. 156

	Enquir	<i>ъ</i> у / Со	mplaint	Follow	Up F	orm		
Contract: HY/99	/18 - Castle Peak	Road betw	een Sham Ts	eng and Ka L	oon Tsue	n, Tsue	n Wan	
Call Details		Turne	I	Compleint			Environme	ental
Log No Received by	156	Type	1	Complaint		Timo	Complaint	DM
Call Details	Peter ip	Dale		o-Sep-2004		Time	04.33	PIVI
Neme	Mr. Obv	Orrenier	t a a				Private 🗌 🔿	rganization
	6102 3368	Fax	allon		E-mail			rganzation
Address Hon	g Kong Garden							
Details of Enqui	iry / Complaint							
Description								
Mr. Chu express beach appear big	es his dissatisfaction g. (3) Lack of access	n on (1) The s s leading to th	newly formed bo ne beach. (4) Ex	each is too smal cessive garbag	. (2) Gaps e trapped a	between along the	armour rock adjacent sho	s at the ore.
Mr. Chu express beach appear big Details of Action	es his dissatisfaction g. (3) Lack of access n Taken	n on (1) The s leading to tl	newly formed bo ne beach. (4) Ex	each is too smal ccessive garbag	. (2) Gaps e trapped a	between along the	armour rock adjacent sho	s at the pre.
Mr. Chu express beach appear big Details of Action Report to RE	es his dissatisfaction g. (3) Lack of access n <i>Taken</i> Sidney Ng	n on (1) The s leading to tl Date	newly formed bo ne beach. (4) Ex 20-Sep-2004	each is too smal cessive garbag	. (2) Gaps e trapped a me 11:	between along the	armour rock adjacent sho Report By	s at the ore. Simon L
Mr. Chu express beach appear big Details of Action Report to RE Action by	es his dissatisfaction g. (3) Lack of access n Taken Sidney Ng Peter Ip	n on (1) The s leading to th Date Date	newly formed bo he beach. (4) Ex 20-Sep-2004 18-Sep-2004	each is too smal ccessive garbag Report Ti Action Tin	. (2) Gaps e trapped a me 11: me 04:	between along the 10 AM 35 PM	armour rock adjacent sho	s at the ore. Simon L
Mr. Chu express beach appear big Details of Action Report to RE Action by Details Explain to Mr. Chu (I) The extent of th (ii) Gaps between (iii) An access will (iv) Whilst it is outy possible in the cou	es his dissatisfaction g. (3) Lack of access n Taken Sidney Ng Peter Ip that e beach has been laid rocks will help to dissip be provided later. vith our control over the rse of the Works.	n on (1) The s leading to th Date Date down in the re bate wave ener e accumulation	newly formed bo ne beach. (4) Ex 20-Sep-2004 18-Sep-2004 elevant Contract D rgy. n of floating rubbis	each is too smal cessive garbag Report Ti A Action Tiu rawings.	. (2) Gaps e trapped a me 11: me 04: we shall arra	between along the 10 AM 35 PM	armour rock adjacent sho Report By val thereof as	s at the pre. Simon L
Mr. Chu express beach appear big Details of Action Report to RE Action by Details Explain to Mr. Chu (I) The extent of th (ii) Gaps between (iii) An access will (iv) Whilst it is outv possible in the cou	es his dissatisfaction g. (3) Lack of access n Taken Sidney Ng Peter Ip that e beach has been laid rocks will help to dissip be provided later. vith our control over the rse of the Works.	n on (1) The s leading to th Date Date down in the re pate wave ener e accumulation	newly formed bo ne beach. (4) Ex 20-Sep-2004 18-Sep-2004 elevant Contract D rgy. n of floating rubbis up date	each is too smal cessive garbag A Report Ti A Action Tiu rawings. h drifting ashore, w -	. (2) Gaps e trapped a me 11: me 04: we shall arra	between along the 10 AM 35 PM ange remo	armour rock adjacent sho	s at the ore. Simon L far as
Mr. Chu express beach appear big Details of Action Report to RE Action by Details Explain to Mr. Chu (I) The extent of th (ii) Gaps between (iii) An access will (iv) Whilst it is outw possible in the cou Follow up by Follow up	es his dissatisfaction g. (3) Lack of access n Taken Sidney Ng Peter Ip that e beach has been laid rocks will help to dissip be provided later. vith our control over the rse of the Works.	n on (1) The s leading to th Date Date down in the re bate wave ener e accumulation Follow	20-Sep-2004 20-Sep-2004 18-Sep-2004 elevant Contract D rgy. n of floating rubbis	each is too smal cessive garbag A Report Ti A Action Tiu rawings. h drifting ashore, w -	. (2) Gaps e trapped a me 11: me 04: we shall arra	between along the 10 AM 35 PM ange remo	armour rock adjacent sho Report By	s at the ore. Simon L far as
Mr. Chu express beach appear big Details of Action Report to RE Action by Details Explain to Mr. Chu (I) The extent of th (ii) Gaps between (iii) An access will (iv) Whilst it is outv possible in the cou Follow up by Follow up -	es his dissatisfaction g. (3) Lack of access in Taken Sidney Ng Peter Ip that e beach has been laid rocks will help to dissip be provided later. vith our control over the rse of the Works.	n on (1) The s leading to th Date Date down in the re pate wave ener e accumulation Follow	20-Sep-2004 20-Sep-2004 18-Sep-2004 elevant Contract D gy. n of floating rubbis	each is too smal cessive garbag A Report Ti A Action Tin rawings. h drifting ashore, w -	. (2) Gaps e trapped a me 11: me 04: we shall arra	between along the 10 AM 35 PM ange remo	armour rock adjacent sho	s at the ore. Simon L far as
Mr. Chu express beach appear big Details of Action Report to RE Action by Details Explain to Mr. Chu (I) The extent of th (ii) Gaps between (iii) An access will (iv) Whilst it is outv possible in the cou Follow up by Follow up - Remarks -	es his dissatisfaction g. (3) Lack of access n Taken Sidney Ng Peter Ip that e beach has been laid rocks will help to dissip be provided later. vith our control over the rse of the Works.	n on (1) The s leading to th Date Date down in the repate wave ener e accumulation Follow	20-Sep-2004 18-Sep-2004 18-Sep-2004 elevant Contract D rgy. n of floating rubbis up date	each is too smal cessive garbag	. (2) Gaps e trapped a me 11: me 04: we shall arra	between along the 10 AM 35 PM ange remo up time	armour rock adjacent sho Report By	s at the ore. Simon L far as

APPENDIX N

Log record on environmental complaints

No.	Date of Complaint Received	Description	Propopsed Actions	Completion Date	Remarks
029	12-Aug-02	Complaint from Mr. Au regarding muddy water washing out from Kowloon Bound Lane from the construction site	Enlarge concrete paving at site entrance; further improvement to the existing temporary drainage system to minimise wash-off of waste water to the adjacent road; and make sure temporary water supply points are properly turned off during lunch break or other times when they are not in use.	16-Aug-02	
036	31-Aug-02	Complaint from Mrs. Chung regarding the generation of fugitive dust from the construction site in front of Tsing Lung Tau Village	Frequent watering of the related works area with the aid of water browser	31-Aug-02	
054	07-Dec-02	Complaint from Mr. Lo regarding the stagnant water ponding in front of the construction site at Sham Tseng	Explained to the complainant that the water ponding was a wheel washing bay	07-Dec-02	
067	03-Mar-03	Complaint from Hong Kong Garden Management Office regarding the noise from vehicular movement over the temporary road cover at Castle Peak Road provided by the Contractor	The Contractor has added extra welding to improve the rigidity of the temporary steel deck. The work was completed dring the off-peak hours in the period between 12-Mar-03 to 17-Mar-03.	17-Mar-03	The Contractor has taken noise readings and found that the noise level was within the baseline levels.
068	11-Mar-03	Complaint from Mr. Leung at Hong Kong Garden regarding the noise from evening road traffic, travelling over the steel decking plate on the adjacnt temporary road diversion.	The Contractor has added extra welding to improve the rigidity of the temporary steel deck. The work was completed dring the off-peak hours in the period between 12-Mar-03 to 17-Mar-03.	17-Mar-03	The Contractor has taken noise readings and found that the noise level was within the baseline levels.
070	06-Mar-03	Complaint from EPD regarding the reclamation works at Seawall B opposite to Hong Kong Garden on Sunday	The Contractor has previously informed the subcontractor of the statutory requirements as noise, dust emission, water discharge, and waste management. The Contractor agreed to keep vigilant in monitoring and survellance of the site and continue to remind the subcontractors of the statutory requirements	10-Mar-03	The Contractor has formally closed all site area for the Chinese New Year. Entrances of all site area were barricaded before the Contractor's staff vacnated the sites on 30 January 2003.
070	06-Mar-03	Complaint from EPD regarding dust emission from the reclamation works at Seawall B opposite to Hong Kong Garden.	The Contractor has previously informed the subcontractor of the statutory requirements as noise, dust emission, water discharge, and waste management. The Contractor agreed to keep vigilant in monitoring and surveillance of the site and continue to remind the subcontractors of the statutory requirements.	10-Mar-03	The Contractor has investigated and confirmed that the marine works towards the eastern end of Seawall B was wet and the concreting works at the west end of the Seawall B were not dusty and no dust was emitted. Ground surface was also covered with crushed rock. The Contractor was also further reminded to spray water before and during unloading and moving of rock boulders and onto the haul road.
070	24-Mar-03	Complaint from EPD regarding daytime construction noise at Seawall B opposite to Hong Kong Garden.	The Contractor agreed to continuously monitor and review the operation in the vicinity opposite to Lung tang Court, in order to minimize the noise impact caused to the public. In addition the Contractor will respond to the complaints received on the 24- hours Contract Complaint Hotline 2496 2555 in the first instant.	31-Mar-03	No exceedance was recorded at the noise monitoring station WN6, WN7 and WN8 from January 2003 to March 2003. It was suspected that the noise was due to traffic noise together with operational noise of plant equipment at Seawall B. The Contractor was also reminded if reorganzation of working arrangement is necessary, mitigation proposal should be submitted to IC(E) for review. Additional noise monitoring shall also be conducted at the noise monitoring station WN8 once the mitigation proposal is implemented.

No.	Date of Complaint Received	Description	Propopsed Actions	Completion Date	Remarks
076	15-Apr-03	Complaint from Mr. Wong of TL 60 Management Limited regarding the noise nuisance generated from the vehicle movement over the temporary steel decking in front of Hong Kong Garden at Castle Peak Road provided by the Contractor.	The Contractor has replaced the isolated decking plate by 17 April 2003 and agreed to frequently inspect the condition of the steel decking. Further improvement works were completed on 25 April 2003.	25-Apr-03	
078	15-Apr-03	Complaint from Mr. Chau of Hong Kong Garden regarding the noise nuisance generated from vehicle movement over the temporary steel plate in front of the premises.	The Contractor has explained to Mr. Chau that the improvement works were completed on 25 April 2003 and agreed to carry out daily inspection to check the condition of the steel plate.	29-Apr-03	The complainant agreed that the noise nuisance has abated.
080	05-May-03	Complaint from Mr. Tsao / Mr. Chan of Mui Yuen, opposite to Bayside Villas regarding water leakage from the rocky slope behind his house and the damage of water pipes by cleaning works.	The water pipe was repaired on 9 May 2003. The Contractor has explained that the rocky slope was ouside the site boundary.	09-May-03	
082	07-May-03	Complaint from Ms. Chan regarding water ponding on existing footpath along Castle Peak Road near the Contractor's site office.	The Contractor has formed holes at existing upstand wall to drain off water trapped in the adjacent footpath and to patch up local depression at the affected footway with plain concrete.	19-May-03	
084	21-May-03	Complaint from Ms. Lam of Sea Crest Villa Phase I regarding construction noise from the slope works outside Sea Crest Villa Phase I.	The Contractor has observed low-noise emission construction equipment were being used at the time of inspection and proposed to speed up the works to limit the duration of daytime construction noise impact. The Contractor has provided additional information in their letter ref. HY/99/18/M45/300/40/10229 dated 25 June 2003. Additional noise monitoring had been taken by the Contractor on 22 May 2003 at WN15 obtaining the result of 66.6dB(A), which was below the limit level of 75dB(A). After reviewing the findings and investigation details, the Contractor confirmed that no further remedial actions was required.	25-Jun-03	The Contractor was requested to submit mitigation proposal to IC(E) for review and to implement the mitigation proposal. Additioinal noise monitoring is required to be conducted at the noise monitoring station WN15 once the mitigation proposal is implemented. The IC(E) had no comment on the Contractor's findings. Since no mitigation measures were implemented, additional noise monitoring was not conducted.
086	23-May-03	Complaint from Mr. So regarding stagnant water in the drainage and wheel washing bay near the entrance of Sea Crest Villa Phase IV and the damage of road surface near L1 main gate and CLP electricity supply room.	Explained to the complainant that the stagnant water inside the wheel washing bay was for cleaning of vehicle. The leakage found the temporary water pipe was repaired. The water and silt trapped in the U-channel near the main entrance of the estate was removed and the kerb on west side of the run-in to Gate L1 was reinstated.	29-May-03	The Contractor will properly maintain the wheel washing facility, regularly inspect and clean the drainage channel and the gully pots near the main entrance of the estate. The damaged paving slab and cable pit near the power supply room will be restored to original condition after completion of the adjacent substructure works around mid August 2003.
088	03-Jun-03	Complaint from EPD regarding construction dust from Seawall B.	The Contractor proposed to place the concerned area under higher priority and endeavor to water the concerned haul road more frequently during dry days.	06-Jun-03	No rock breaking activity has been observed in site audits since 5 June 2003. The haul road at Seawall B was observed wetted in the site audits. The Contractor was reminded to provide water spraying if there is rock breaking activity in this vicinity.

No.	Date of Complaint Received	Description	Propopsed Actions	Completion Date	Remarks
088	03-Jun-03	Complaint from EPD regarding construction noise from Seawall B.	The Contractor reported that there may be occasional crashing noise for the piling works when rock level is reached. The Contractor has been providing mitigation measures, such as barrier and restriction of the rate of concerned works. The Contractor will also endeavor to expedite the works to reduce the duration of perceived daytime impact. The Contractor proposed to perform additional ad hoc inspections on Mondays, Wednesday and Fridays at the concerned area to confirm continual implementation of measures and to conduct additional noise monitoring where appropriate.	06-Jun-03	No rock breaking activity has been observed in site audits since 5 June 2003. Contractor has been reminded to submit mitigation proposal to IC(E) for review and to implement the mitigation proposal if provision of additional mitigation measures is required. The Contractor was also advised to provide portable noise barrier if there is rock breaking activity. Additional noise monitoring is also required to be conducted at the noise monitoring station WN8 once the mitigation proposal is implemented. The IC(E) had no comment on the Contractor's findings. Since no mitigation measures were implemented, additional noise monitoring was not conducted.
091	16-Jun-03	Complaint from Ms. Chan of Sea Crest Villa Phase 1 regarding noise from drilling works carried out at BPRW70 outside Sea Crest Villa Phase 1 before 07:00.	Upon investigation, the Contractor confirmed that there has been no construction work being conducted before 07:00. Nevertheless, the Contractor has scheduled the concerned work to be commenced at 08:00 as on 17 July 2003.	17-Jun-03	
092	16-Jun-03	Complaint from Mrs. Chung of Lido Garden regarding noise from drilling works carried out at BPRW70 opposite to Lido Garden before 07:00.	Upon investigation, the Contractor confirmed that there has been no construction work being conducted before 07:00. Nevertheless, the Contractor has scheduled the concerned work to be commenced at 08:00 as on 17 July 2003.	17-Jun-03	
097	27-Jun-03	Complaint from Mr Fok of Kai Shing Management Services regarding noise nuisance and the ponding of stagnant water arising from the construction activities outside Sea Crest Villa Phase III.	Upon investigation, the condition of water pumps installed separately at east end of the slope close to SCV Phase III and Pai Min Kok Stream Course has been checked. Noise generated from the ongoing construction works in these areas has been monitored. The rock breaking with jackhammer at PMK had been completed on 26 June 2003.	04-Jul-03	After further enquiry into the nature of the complaint, its appears that the complaint refers to the extended duration of construction works in the concerned area (i.e. inconvenienve caused due to lengthy works program). The Contrato's Mr Peter Ip has explained the nature of the works to the Management Office. There have been no further complaints from SCV Phase III since the briefing.
103	31-Jul-03	Complaint from Hong Kong Management Office regarding the noise generated by vehicles running over the steel decking plate on the Castle Peak Road close to Hong Kong Garden.	The existing steel decking plate had been repaired during off peak hours and regular inspection on the condition of steel plate and adjacent road surface was agreed to be conducted.	05-Aug-03	There had been no further complaints after the repair.
105	13-Aug-03	Complaint from Mr Chow of Sham Tseng regarding fell of all old trees along section of Castle Peak Road near Ma Wan Pier.	After investigation on the matter, it had been confirmed that the felling and the transplanting of group of trees along the Castle Peak Road near Ma Wan Pier had been carried out in compliance with approved plans and schedules. No follow up is required.	16-Aug-03	
108	11-Sep-03	Complaint from Mr Edith Lee of Sea Creat Villa Phase I complained that it was very dusty at her house and she found that there was no water spraying at the construction site of the slope near Ma Wan Pier.	After investigation on the matter, water browser was arranged for spraying through the haul road. Rock breaking location would be sprayed directly connected from water supply point. To follow up the case, water browser would be arranged every 2 to 3 hours depends on drying up condition. A worker would be arranged for spraying water through out the rock breaking process.	11-Sep-03	

No.	Date of Complaint Beceived	Description	Propopsed Actions	Completion Date	Remarks
112	10-Oct-03	Complaint from Mr Cheung of FEHD that egarding the general refuse being accumulating on the pedestrian walkway between Sea Crest Villa Phase III and Phase II and the drainage channel at Pai Min Kok Village.	Investigation was conducted immediately on 11 October 2003. It was observed that the pedestrian walkway and Outfall I had been tidied up except at the corner of Sea Crest Villa Phase III where a broken umbrella and some broken traffic light was lying on the ground. Immediate action was taken to remove the broken umbrella and signal lights. The site area would be maintained regularly. It was noted that wooden formwork and construction materials might possibly been mistaken to be rubbish.	13-Oct-03	
114	25-Nov-03	Complaint log no. 114 was received on 25 November 2003 regarding the muddy water found on the beach opposite to Sea Crest Villa Phase III.	An inspection for the concerned site area at the interface between the beach and the construction site revealed that there was no evidence of active construction works adjacent to the beach or the presence of muddy water. There was also no evidence of muddy water discharge from Outfall I. The work programme for the following days leading up to the complaint was inspection and found that the bored piling activity had been completed and removed since 15 November 2003. The contractor would regularly monitor the area for muddy water. If potential discharge sources were identified, the Contractor would take action to rectify the situation.	26-Nov-03	
115	30-Nov-03	Complaint from Miss Chan of Sham Tseng Latrine was received on 30 November 2003 regarding the pond of foul water at the footway in front of Sham Tseng Latrine.	An inspection for the concerned site area was carried out. The water ponding was confirmed to be overflow from the terminal manhole, which was a part of public latrine system. The maintenance of the public latrine and the associated systems were the responsibility of FEHD. The Contractor had contacted FEHD to follow up the issue.	01-Dec-03	
116	06-Dec-03	Complaint from Mr Paul Wong of Hong Kong Garden Management Office was received on 6 December 2003 regarding construction noise during early hours of 8:00am.	Inspection of concern area and no abnormal construction activities was found. The Contractor had explained to the Complainer that no statutory permit was required for construction work other than percussive piling at 8:00am and the nature of works conducted at the area was well within permitted limits. ET was reminded the Contractor to implement noise mitigation proposal in accordance with EM&A Manual.	08-Dec-03	Noise generated from the ongoing construction works in these areas was monitored and no exceedance was found. As the Contractor had responded to the complainant and no further complaint was recorded, the Contractor proposed that no further remedial/ preventative measures were necessary.
123	20-Feb-04	Complaint from Mr Ho of TL60 Management Ltd was received on 20 February 2004 regardingnoise arising from the temporary steel plates on road pavement near Blocks 1 & 2 of Hong Kong Garden	Condition of the decking plat was checked on 23 February 2004 and was repaired on 24 February 2004 during off peak hours.	24-Feb-04	Regular inspection will be conducted and adjacent works was be expedited to allow early road diversion for permanent removal of the steel plates.
139	09-Jul-04	Complaint from EPD was received on 9 July 2004 regarding noise arising from prescribed construction works or works using power mechanical equipment at night near Seawall-B area opposite to Hong Kong Garden	After investigation on the matter, there was no evidence of carrying out the prescribed constuction works or using power mechanical equipment between 1900 and 2300 on 3 July 2004.	23-Jul-04	
140	10-Jul-04	Complaint from Highway Department was received on 10 July 2004 regarding noise arising from rock breaking near Sea Crest Villa Phase 3	After investigation on the matter, there was no evidence of rock breaking activities undertaken in the vicinity of Sea Crest Villa Phase 3.	23-Jul-04	

No.	Date of Complaint Received	Description	Propopsed Actions	Completion Date	Remarks
149	11-Aug-04	Complaint from EPD regarding the sandy wake of a marine vessel carrying sand to the beach reinstatement area of Seawall B	After investigation on the matter, the following action was proposed. The vessel and water depth should be thoroughly checked prior to sand placing. If shadow water need to be approached, another shallower vessel should be used. The land co-ordinator should cease the sand placing operation if muddy plumes were noticeable.		
154	25-Aug-04	Complaint from Ms Tang regarding littering on the slope close to the Sea Crest Villa Phase 2.	After investigation on the matter, there was no evidence that the problem was caused by any construction activities.	27-Aug-04	
156	18-Sep-04	Complaint from Mr Chu regarding excessive garbage trapped along the adjacent shore of Seawall B west end.	It was out of control over the accumulation of floating rubbish drifting toward the shore. However, the contractor would remove them as soon as possible.	20-Sep-04	