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TEST REPORT

LEADER - WAI KEE (C&T) JOINT VENTURE

**REMAINING ENGINEERING
INFRASTRUCTURE WORKS FOR
PAK SHEK KOK DEVELOPMENT
PACKAGE 2A**

(CONTRACT NO.: TP 37/03)

MONTHLY EM&A REPORT

(JUNE 2006)

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EXECUTIVE SUMMARY

This monthly EM&A report (No.14) has been prepared to document the impact monitoring works conducted for the Contract of the Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 2A (Contract No: TP 37/03) during the reporting period from 01 to 30 June 2006.

Construction Progress

The major construction works in this reporting month were as below:

- *Drainage works (Excavation, pipe lying and breaking) at Section 1 & 2;*
- *Construction of column and wall at Voided Abutment, column at Pier, RE Wall and Retaining wall No.1;*
- *Construction of MLS Subway pump house, East ramp and barrel;*
- *Construction of foundation slab for Toilet No.2;*
- *Installation of precast concrete planter units and concreting of insitu concrete planter at Section 7 and 8 (promenade) of the Works;*
- *Road works at Section 5 (Road L4) of the works;*
- *Installation additional valves for watermains at the cycle track at Section 6 of the Works;*
- *Installation of lighting footing and duct, finishing the landscape structure at the proposed Landscape Node P1;*
- *Construction of mass concrete coping at the proposed LandscapeNode P1;*
- *Installation of precast units at the proposed landscape node P2 & P3;*
- *Construction of bus bays at Section 10 of the Works;*
- *Setting back of existing stockpile mound adjacent to the proposed cycle track at Housing Site 4; and*
- *Filling of soil mix at planter.*

Environmental Monitoring Progress

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

- *Noise Monitoring (Day-time): 4 Occasion at 4 designated locations*
- *24-hour TSP Monitoring: 5 Occasions at 3 designated locations*
- *1-hour TSP Monitoring: 13 Occasions at 3 designated locations*
- *Weekly-site inspection: 5 Occasions*

Noise Monitoring

No exceedances of Action and Limit levels for noise monitoring were recorded in the reporting month.

Air Monitoring

No exceedances of Action and Limit levels were recorded for 24-hr and 1-hr TSP monitoring in the reporting month.

Wastewater Monitoring

During this reporting month, no wastewater quality monitoring was carried out in this reporting month since the Discharge Licence required carrying out wastewater monitoring at effluent discharge point quarterly and the current wastewater monitoring was carried out at Ma Liu Shui Discharge Point near Subway on 11 April 2006. The next wastewater monitoring should be at July 2006.

Site Inspection

Environmental site inspections conducted in this reporting month are presented as follows:

<u>Concerned Parties</u>	<u>Dates of Audit / Inspection</u>
<i>Weekly site inspection (ET)</i>	<i>02, 06, 15, 21, 29</i>
<i>Monthly site inspection (IEC/LWKJV/RE)</i>	<i>21</i>



The observations were raised during this reporting month. The site inspection findings are presented as follows:

Item	Aspects	Findings	Action(s) taken by LWKJV	ET Verification
1	Air	Follow up action to the finding of previous month, no black smoke was found to be emitted from the excavators at SA3 during weekly site inspection on 02/06/06.	Since the finding was improved, no further action was taken by LWKJV.	Since the finding was improved, no further verification was required to be taken by ET.
2	Air	Stockpiles at SA3 were found covered improperly during the weekly site inspections on 06/06/06, 15/06/06 and 31/06/06.	LWKJV replied to cover the stockpiles with tarpaulin sheets to avoid dust generation.	Since the stockpiles were found to have covered during the subsequent weekly site inspection (29/06/06), no further verification was required to be taken by ET.
3	Water	Mud and sand were found to be accumulated in U-channel at SA1 during weekly site inspections on 02/06/06 and 06/06/06.	LWKJV replied to clean up the mud and sand accumulated immediately.	Since mud and sand were found cleaned up during the subsequent inspection on 15/06/06, no further verification was required to be taken by ET.
4	Water	Silt curtain was found to be partly damaged during weekly site inspections on 06/06/06, 15/06/06, 21/06/06 and 29/06/06.	LWKJV replied to repair the damaged part of silt curtain.	Since the finding was noted during the last inspection of this reporting month, it will be verified during the first weekly site inspection of the coming month.
5	Water	Wastewater was found directly discharged from Workshop during weekly site inspection on 06/06/06.	LWKJV replied to provide oil-interceptor to treat the wastewater before discharged.	Oil-interceptor was found to provide for treating the wastewater before discharge during weekly site inspection on 15/06/06. Hence, no further verification was required to be taken by ET.
6	Water	Stagnant water mainly rainy water was found to be accumulated in the drainage channel at Voided Abutment and Node 1 during weekly site inspection on 29/06/06.	LWKJV replied to pump out the stagnant water immediately.	Since the finding was found improved during the subsequent inspection on 06/06/06, no further verification was required to be taken by ET.
7	Chemical	Chemicals such as clear varnish and paint were found stored in buckets without caps and placed on the bare ground without drip tray at Voided Abutment and Node 1 during weekly site inspection on 21/06/06.	LWKJV replied to remove the chemicals to an appropriate chemical storage area.	The chemicals were found to have removed and hence no further verification was required to be taken by ET.
8	Chemical	During the weekly site inspection on 21/06/06, it was found that an appropriate area should be provided for storage of chemical in Workshop.	LWKJV replied to design an appropriate chemical storage area for the chemicals in Workshop.	Since the finding was noted during the last inspection of this reporting month, it will be verified during the first weekly site inspection of the coming month.
9	Chemical	Follow up action to the finding of previous month, plastic sheets were found to be provided for placing on the ground before repairing / maintenance works during weekly site inspection (02/06/06).	Since the finding was improved, no further action was taken by LWKJV.	Since the finding was improved, no further verification was required to be taken by ET.
10	Site Practice	Environmental Permit (EP) at site office was found damaged during the weekly site inspection on 21/06/06.	LWKJV replied to replace the damaged EP by a new copy immediately.	Since the finding was improved during the subsequent weekly site inspection on 29/06/06, no further verification was required to be taken by ET.

Waste Management

According to weekly site inspection, ET found that the Contractor followed the recommended procedures stipulated in the Waste Management Plan (WMP) on handling and disposal of wastes. 2000m³ inert C&D materials, 100kg metals, 720kg paper/cardboard packaging, 2000kg chemical waste and 19120kg general refuse were generated in this reporting month. All inert C&D materials were reused in the Contract and other wastes were handling under the instruction and procedure stated in the WMP in this reporting month.

Environmental Complaints

No environmental complaints were received in this monitoring month.

Notification of summons and successful prosecutions

No notification of summons and prosecutions with respect to environmental issues were registered in this reporting month.



Future Key Issues

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

- Noise and air quality impact due to construction works;
- Maintain wheel washing facilities properly;
- Cleanup the access road regularly;
- Watering, hydro-seeding or covering all stockpiles with tarpaulin to avoid wind and water erosion;
- Diverting the silty runoff to sedimentation trap or sedimentation tanks;
- Use and maintenance of silt curtain properly during marine works;
- Maintain good site practice and waste management to minimize environmental impacts at the site;
- Follow-up improvements on waste management issues.



1.0 INTRODUCTION

Leader – Wai Kee (C&T) Joint Venture (LWKJV) appointed Environmental Team (ET) of ETS-Testconsult Limited (ETL) to undertake the Environmental Monitoring and Audit (EM&A) for Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 2A (Contract No.: TP 37/03).

In accordance with the Section 10 of Environmental Permit to Construct and Operate a Designate Project (EP-108/2001/AEP-108/2001), EM&A programme as set out in the EM&A Manual is required to be implemented. In accordance with the EM&A manual, environmental monitoring of air quality and noise is required for the Project. The EM&A requirement for each parameter are described in details in subsequent sections, including:

- All monitoring parameters;
- Action and Limit levels for all environmental parameters;
- Event-Action Plans;
- Environmental mitigation measures, as recommended in the project EIA study report;
- Environmental requirements in contract documents.

This monthly EM&A report summarizes the impact monitoring results and audit findings of the EM&A program during the reporting period from 01 to 30 June 2006.

2.0 PROJECT INFORMATION

2.1 Background

Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 2A (Contract No.: TP 37/03) was planned and designed by the Civil Engineering and Development Department (CEDD).

As the main Contractor of the captioned project: contracted by, LWKJV will follow the environmental monitoring recommendation stated at the EM&A Manual that was prepared with reference to the EIA Study for Feasibility Study on the Pak Shek Kok Development Area (PSKDA) Environmental Monitoring and Audit Manual under Agreement No. CE 90/96.

2.2 Site Description

Generally, the construction site is located at Pak Shek Kok development area. Surrounding the construction site, there are two air sensitive receivers: HKIB Staff Accommodation and Cheung Shue Tan Village and three noise sensitive receivers: HKIB Staff Accommodation, CUHK Residence No.10 and Cheung Shue Tan Village.

Figure 1 and 2 show the noise and air monitoring locations of this project.

2.3 Construction Programme

Details of construction programme are shown in Appendix F.

2.4 Project Organization and Management Structure

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

2.5 Contact Details of Key Personnel

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



Table 2.1 Contact Details of Key Personnel

Organization	Project Role	Name of Key Staff	Tel. No.	Fax No.
CEDD	Mr. M. S. Lam	Employer	2158 5630	2693 2918
Hyder	Mr. Herman Fong	Engineer	2603 6638	2603 7883
LWJV	Mr. T. T. Wong	Project Manager	2442 1123	2442 9733
Hyder	Ir. Coleman Ng	Independent Environmental Checker	2911 2233	2805 5028
ETL	Mr. C.L. Lau	Environmental Team Leader	2946 7791	2695 3944

3.0 CONSTRUCTION PROGRESS IN THIS REPORTING MONTH

The site area of this project is shown in Appendix G.

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

Table 3.1 Major Construction Activities in this reporting month

Major Construction Activity	Location
Drainage works (Excavation, pipe laying and breaking)	Section 1 & 2
Construction of column and wall	Voided Abutment, column at Pier, RE Wall and Retaining wall No.1
Construction of MLS Subway pump house, East ramp and barrel	SA3
Construction of foundation slab for Toilet No.2	Toilet No.2 at Public Plaza
Installation of precast concrete planter units and concreting of insitu concrete planter	Section 7 & 8 (Promenade)
Road works	Section 5 (Road L4)
Installation additional valves for watermains	Cycle track at Section 6
Installation of lighting footing and duct, finishing the landscape structure	Proposed Landscape Node P1
Construction of mass concrete coping	Proposed Landscape Node P1
Installation of precast units	Proposed landscape node P2 & P3
Construction of bus bays	Section 10 of the Works
Setting back of existing stockpile mound adjacent to the proposed cycle track	Housing Site 4
Filling of soil mix at planter	Node 1

Table 3.2 Implementation of Environmental Mitigation Measures

General construction works	<ul style="list-style-type: none"> • Effective water sprays used on the site at potential dust emission sources such as haul roads and unpaved areas; • The heights from which fill materials are dropped should be controlled to a practical height to minimize the fugitive dust arising from unloading; • Minimize of exposed soil areas to reduce the potential for increased siltation and contamination of run-off; • Water, hydro-seed or cover the open stockpile and exposed loose soil areas by using clean tarpaulin sheets; • Provide proper and efficient drainage facilities (e.g. wheel washing facilities) and sedimentation system to ensure that site runoff should be treated before discharged to drains; • Remove the sand/rubbish accumulated in the drain/channel regularly; • Use and maintenance of silt curtain properly during marine works; • Provide good site practice (e.g. selection of quieter plant and working methods and reduction in number of plant operating in critical areas close to NSRs) to limit noise emissions at source; • Remove the construction waste accumulated inside or outside the site regularly.
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4.0 AIR QUALITY MONITORING

4.1 Monitoring Requirement

1-hour and 24-hour TSP monitoring were required to be conducted to monitor the air quality, at designated monitoring locations:

- HKIB Staff Accommodation (on ground floor near the entrance facing south-east);
- Cheung Shue Tan Village (near the outer building, temple) for 1-hr TSP monitoring;
- Cheung Shue Tan Village (in front of Man Kee Store) for 24-hr TSP monitoring;
- Near Wen Chih Tang at the CUHK.

4.2 Monitoring Equipment

Continuous 24-hour TSP air quality monitoring was performed using a GMWS2310 High Volume Air Sampler (HVS) located at each of the designated monitoring station. One portable dust meter was used to carry out the 1-hour TSP monitoring. Table 4.1 summarizes the equipment used in the air quality monitoring programme. A copy of the calibration certificates for the HVS and portable dust meter are attached in Appendix B1.

Table 4.1 Air Quality Monitoring Equipment

Equipment	Model and Make
HVS	Greasby GMWS2310
Calibrator	Tisch TE-5025A
1-hour TSP Dust Meter	TSI Model 8520 Dust Trak™ Aerosol Monitor

4.3 Monitoring Parameters, Frequency and Duration

Table 4.2 summarizes the monitoring parameters, monitoring duration and frequencies of air quality monitoring.

Table 4.2 Monitoring parameters, duration, frequencies of impact air quality monitoring

Parameter	Duration	Frequency
24-hr TSP	24 hr (0000-2400)	Once every six days
1-hr TSP	1 hr (0700-1900)	Three times every six days

4.4 Monitoring Locations and Schedule

Table 4.3 tabulates the air quality monitoring locations of this project.

Table 4.3 Air quality monitoring locations

Monitoring stations	Locations
AM1	HKIB Staff Accommodation (on ground floor near the entrance facing south-east) for 1-hr TSP monitoring
AM3	Cheung Shue Tan Village (near the outer building, temple) for 1-hr TSP monitoring
AM3A	Cheung Shue Tan (in front of Man Kee Store) for 24-hr TSP monitoring
AM5	Near Wen Chih Tang at the CUHK

The air quality monitoring schedule for 24-hr and 1-hr TSP monitoring at designated monitoring locations is summarized in table 4.4.



Table 4.4 Monitoring Schedule for the air quality monitoring stations

Air quality monitoring stations	Location	Monitoring Period						
		24-hr TSP				1-hr TSP		
		Start		Finish		Date	Start	Finish
Date	Time	Date	Time	Date	Start	Finish		
AM1	HKIB Staff Accommodation					01/06/06	09:50	10:50
						03/06/06	10:20	11:20
						06/06/06	09:15	10:15
						08/06/06	08:46	09:46
						10/06/06	08:30	09:30
						13/06/06	09:03	10:03
				---		15/06/06	09:30	10:30
						17/06/06	08:20	09:20
						20/06/06	09:30	10:30
						22/06/06	08:20	09:20
						24/06/06	08:30	09:30
						27/06/06	18:00	19:00
						29/06/06	09:30	10:30
AM3	Cheung Shue Tan Village (Near the outer building, temple)					01/06/06	13:15	14:15
						03/06/06	13:00	14:00
						06/06/06	13:00	14:00
						08/06/06	18:00	19:00
						10/06/06	13:00	14:00
						13/06/06	10:21	11:21
				---		15/06/06	13:00	14:00
						17/06/06	14:00	15:00
						20/06/06	11:00	12:00
						22/06/06	13:45	14:45
						24/06/06	13:00	14:00
						27/06/06	11:00	12:00
						29/06/06	10:50	11:50
AM5	Near Wen Chih Tang at the CUHK					01/06/06	11:00	12:00
						03/06/06	14:15	15:15
						06/06/06	14:15	15:15
						08/06/06	14:50	15:50
						10/06/06	14:20	15:20
						13/06/06	14:02	15:02
				---		15/06/06	16:45	17:45
						17/06/06	15:20	16:20
						20/06/06	17:00	18:00
						22/06/06	18:00	19:00
						24/06/06	14:20	15:20
						27/06/06	09:30	10:30
						29/06/06	13:30	14:30
AM1	HKIB Staff Accommodation	05/06/06	10:20	06/06/06	09:53			
		10/06/06	08:32	11/06/06	08:24			
		16/06/06	08:01	17/06/06	07:28			
		22/06/06	08:30	23/06/06	08:04			
		28/06/06	10:44	29/06/06	10:31			
AM3A	Cheung Shue Tan (in front of Man Kee Store)	05/06/06	09:55	06/06/06	10:33			
		10/06/06	13:10	11/06/06	13:47			
		16/06/06	08:20	17/06/06	09:13			
		22/06/06	13:53	23/06/06	13:53			
		28/06/06	11:02	29/06/06	11:27			
AM5	Near Wen Chih Tang at the CUHK	05/06/06	10:10	06/06/06	10:49			
		10/06/06	14:22	11/06/06	14:22			
		16/06/06	08:38	17/06/06	09:29			
		22/06/06	18:11	23/06/06	18:19			
		28/06/06	10:51	29/06/06	11:05			



4.5 Monitoring Methodology

4.5.1 24-hour TSP Monitoring

Instrumentation

High volume sampler, as HVS, (Greasby GMWS2310) complete with appropriate sampling inlets are employed for 24-hour TSP. The sampler is composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complies with that required by USEPA standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).

Installation

The installation of HVS refers to the requirement stated in EM&A Manual.

Operation/Analytical Procedures

Operating/analytical procedures for the operation of HVS are as below:

Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 0.6m³/min and 1.7m³/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.

- For TSP sampling, fiberglass filters (GA-55) were used.
- The power supply was checked to ensure the sampler worked properly.
- On sampling, the sampler was operated 5 minutes to establish thermal equilibrium before placing any filter media at designated air monitoring station.
- The filter holding frame was then removed by loosening the four nuts and carefully a weighted and conditioned filter was centered with the stamped number upwards, on a supporting screen.
- The filter was aligned on the screen so that the gasket formed an air-tight seal on the outer edges of the filter. Then the filter holder frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.
- The programmable timer will be set for a sampling period of 24 hours. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number.).
- After sampling, the filter was transferred from the filter holder of the HVS to a sealed plastic bag and sent to the laboratory for weighting. The elapsed time was also recorded.
- Before weighting, all filters were equilibrated in a desiccator for 24 hour with the temperature of 25°C ± 3°C and the relative humidity (RH) <50% ±5%.

Maintenance & Calibration

- The HVS and their accessories should be maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply.
- HVS should be calibrated at bi-monthly intervals.

4.5.2 1-hour TSP Monitoring

Measuring Procedures

The measuring procedures of the 1-hr dust meter are in accordance with the Manufacturer's instruction Manual as follows:

- Set POWER to ON, check the battery indicator to ensure whether the power supply is enough to conduct the TSP monitoring;
- Calibrate the dust meter by zero check;
- Set the TIME CONSTANT of the dust meter;
- Press SAMPLE to start the TSP monitoring;



- Record the maximum, minimum and average reading directly from the dust meter by press STATISTICS when monitoring complete.

Maintenance & Calibration

- 1-hr dust meter should be checked at 3-month intervals and calibrated at 1-year intervals throughout all stages of impact air quality monitoring.

4.5.3 Wind Data Monitoring

Wind data (wind speed and wind direction) were directly extracted from Sha Tin Station (located at Sha Tin Race Course) of Hong Kong Observatory. All wind data during this reporting month are shown in Appendix D.

4.6 Action and Limit Levels

Action and Limit levels for 24-hr TSP and 1-hr TSP derived as illustrated in Table 4.5.

Table 4.5 Action and Limit Levels for 24-hr TSP and 1-hr TSP

Monitoring Location	24-hr TSP ($\mu\text{g}/\text{m}^3$)		1-hr TSP ($\mu\text{g}/\text{m}^3$)	
	Action Level	Limit Level	Action Level	Limit Level
AM1	164 *	260 *	325 *	500 *
AM3	---	---	306 **	500 **
AM3A	183 **	260 **	---	---
AM5	174	260	329	500

* = Reference to the information contained in the Baseline Monitoring Report submitted under the "Advance Engineering Infrastructure Works for Pak Shek Kok Development – Southern Access Road and Sewage Pumping Station No.3.

** = Reference to the information contained in the Baseline Monitoring Report submitted under the "Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 1 – Contract No. TP 35/02.

4.7 Event-Action Plans

Please refer to Appendix E for details.

4.8 Results

4.8.1 24-hour TSP Monitoring

All monitoring data of 24-hour TSP monitoring is provided in Appendix B2. Graphical presentation of 24-hour TSP monitoring results for the reporting month is shown in Appendix B3.

No exceedances of Action and Limit Level of 24-hour TSP monitoring results were recorded during the reporting month.

4.8.2 1-hour TSP Monitoring

1-hour TSP monitoring was carried out at monitoring stations, AM1 and AM3 in the reporting month. All monitoring data of 1-hour TSP monitoring is provided in Appendix B2. Graphical presentation of 1-hour TSP monitoring results for the reporting month is shown in Appendix B3.

No exceedances of Action and Limit Level of 1-hour TSP monitoring results were recorded during the reporting month.



5.0 Noise Monitoring

5.1 Monitoring Requirements

As the requirement in EM&A Manual, noise monitoring was conducted at designated monitoring locations:

- HKIB Staff Accommodation (on ground floor near the entrance facing south-east);
- Cheung Shue Tan Village (near the outer building, temple);
- CUHK Residence No.10;
- Near Wen Chih Tang at the CUHK.

5.2 Monitoring Equipment

Integrating Sound Level Meters were used for noise monitoring. They were Type 1 sound level meters capable of giving a continuous readout of the noise level reading including equivalent continuous sound pressure level (L_{eq}) and percentile sound pressure level (L_x). They comply with International Electro technical Commission Publications 651:1979 (Type1) and 804:1985 (Type1), and speed in m/s was used to monitor the wind speed.

Table 5.1 summarized noise monitoring equipment model being used. A copy of the calibration certificates for noise meters and calibrator are attached in Appendix C1.

Table 5.1 Noise Monitoring Equipment

Equipment	Model
Integrating Sound Level Meter	Rion NL-31 Sound Level Meter
Calibrator	Rion NL-73 Sound Level Calibrator
Portable Wind Speed Indicator	TSI Model 8340-M Air Velocity Meter

5.3 Monitoring Parameters, duration and Frequency

Noise monitoring for the A-weighted levels L_{eq} , L_{10} and L_{90} were recorded. The following guide on the regular monitoring frequency for each monitoring station on a per week basis when noise generating activities are underway:

- One set of measurements between 0700-1900 hours on normal weekdays (6 consecutive $L_{eq(5-min)}$);
- One set of measurements between 1900-2300 hours (3 consecutive $L_{eq(5-min)}$)*;
- One set of measurements between 2300-0700 hours of next day (3 consecutive $L_{eq(5-min)}$)*;
- One set of measurements between 0700-1900 hours on holidays (3 consecutive $L_{eq(5-min)}$)*.

(*): Noise monitoring to be conducted only when there is construction work.

Duration, frequencies and parameters of noise measurement are presented in Table 5.2.

Table 5.2 Duration, Frequencies and Parameters of Noise Monitoring

Time period	Duration/min	Parameters	Frequency
Day-time: 0700-1900 hrs on normal weekday	30	L_{eq} , L_{10} , L_{90}	Once per week
Evening-time: 1900-2300 hrs	15	L_{eq} , L_{10} , L_{90}	Once per week
Night-time: 2300-0700 hrs of next day	15	L_{eq} , L_{10} , L_{90}	Once per week
Holiday: 0700-1900 hrs	15	L_{eq} , L_{10} , L_{90}	Once per week

5.4 Monitoring Locations and Period

In this reporting month, there were four noise monitoring locations: HKIB Staff Accommodation, Cheung Shue Tan Village, CUHK Residence No.10 and Near Wen Chih Tang at the CUHK. The location of the monitoring stations are described in Table 5.3 and depicted in Figure 1.



Table 5.3 Noise Monitoring Locations

Noise Monitoring station	Location
NM1	HKIB Staff Accommodation (on ground floor near the entrance facing south-east)
NM2	CUHK Residence No.10
NM3	Cheung Shue Tan Village (near the outer building, a temple)
NM8	Near Wen Chih Tang at the CUHK

The noise-monitoring programme of monitoring locations (Day-time, Evening-time, Holiday and Night-time) is summarized in Table 5.4.

Table 5.4 Monitoring Periods for noise monitoring stations

Monitoring stations	Monitoring Period							
	Day-time		Evening-time		Holiday		Night-time	
NM1	06/06/06	09:20	---	---	---	---	---	---
	13/06/06	09:10	---	---	---	---	---	---
	20/06/06	09:32	---	---	---	---	---	---
	27/06/06	18:10	---	---	---	---	---	---
NM2	06/06/06	15:22	---	---	---	---	---	---
	13/06/06	15:30	---	---	---	---	---	---
	20/06/06	18:10	---	---	---	---	---	---
	27/06/06	10:18	---	---	---	---	---	---
NM3	06/06/06	13:10	---	---	---	---	---	---
	13/06/06	10:30	---	---	---	---	---	---
	20/06/06	11:02	---	---	---	---	---	---
	27/06/06	11:10	---	---	---	---	---	---
NM8	06/06/06	14:20	---	---	---	---	---	---
	13/06/06	14:10	---	---	---	---	---	---
	20/06/06	17:02	---	---	---	---	---	---
	27/06/06	09:35	---	---	---	---	---	---

5.5 Monitoring Procedures and Calibration Details

Operation/Analysis Procedures

- The Sound Level Meter was set on a tripod at a height of 1.2m above the ground.
- For free field measurement, the meter was positioned away from any nearby reflective surfaces.
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - Frequency weighting: A
 - Time weighting : Fast
 - Time measurement : 5 mins
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94 dB at 1000HZ. If the difference in the calibration level before and after measurement was more than 1dB(A), the measurement would be considered invalid and repeat measurement would be required after re-calibration or repair of the equipment.
- The wind speed was frequently checked with a portable wind meter.
- During the monitoring period, the Leq, L10 and L90 were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- Free Field correction to the measurements should be made. Correction factor of +3dB(A) should be made to the free Field measurements.
- Noise monitoring would be cancelled in the presence of fog, rain, wind with a steady speed exceeding 5m/s, or wind gusts exceeding 10m/s.



Maintenance and Calibration

- The microphone head of the sound level meter and calibrator is cleaned with soft cloth at quarterly intervals.
- The meter is sent to be supplier or HOKLAS laboratory to check and calibrated at yearly intervals.

5.6 Action and Limit Levels

The Action and Limit levels for noise levels derived as illustrated in Table 5.5.

Table 5.5 Action and Limit Levels for noise monitoring

Time Period	Time Period	Action	Limit
Normal hours	0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A) *
Holiday	0700-1900 hrs on holidays		70 dB(A) **
Evening-time	1900-2300 hrs on all other days		
Night-time	2300-0700 hrs of next day		55 dB(A) **

* = Reduce to 70 dB(A) for schools and 65 dB(A) during school examination periods.

** = Area Sensitivity Rating (ASR) C is selected from the "Technical Memorandum on Noise from Construction Work Other Than Percussive Piling".

5.7 Event-Action Plans

Please refer to the Appendix E for details.

5.8 Results

Only Day-time noise monitoring were carried out at monitoring stations in this reporting month. No Evening-time, Night-time and Holiday noise monitoring were required since no construction works were processed during the night-time period. All noise levels are provided in Appendix C2. Graphical presentation of the monitoring results for the reporting month is shown in Appendix C3.

No Day-time noise monitoring results at all monitoring stations exceeded the Action Level since no documented complaints on noise issue were received in this reporting month. Besides, no exceedances in Limit Level were recorded according to the results from Day-time noise monitoring.

6.0 WASTEWATER MONITORING

Effluent Discharge License of this Project is valid from 06 December 2004 (Discharge Licence No.: 3246-Part A and Part B).

During this reporting month, no wastewater quality monitoring was carried out in this reporting month since the Discharge Licence required carrying out wastewater monitoring at effluent discharge point quarterly and the current wastewater monitoring was carried out at Ma Liu Shui Discharge Point near Subway on 11 April 2006. The next wastewater monitoring should be at July 2006.

7.0 ENVIRONMENTAL NON-CONFORMANCE

7.1 Summary of environmental monitoring

No exceedances of Action and Limit Level of 24-hour and 1-hour TSP monitoring results were recorded during the reporting month.



No day-time noise level measured at all monitoring stations exceeded the Action and Limit Level in the reporting month. No evening-time, night-time and holiday noise monitoring were required since no construction works were processed during these periods.

During this reporting month, no wastewater quality monitoring was carried out in this reporting month since the Discharge Licence required carrying out wastewater monitoring at effluent discharge point quarterly and the current wastewater monitoring was carried out at Ma Liu Shui Discharge Point near Subway on 11 April 2006. The next wastewater monitoring should be at July 2006.

7.2 Summary of Environmental Complaints

No environmental complaints were received in this monitoring month.

7.3 Summary of Notification of Summons and Prosecution

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

8.0 SITE INSPECTION

Weekly site inspections were carried out by the ET in this reporting month (02, 06, 15, 21 and 29 June 2006). Monthly joint site inspection at 21 June 2006 was carried out by Engineer's Representative, IEC and LWKJV. The implementation status of the mitigation measures on site inspections in this reporting month is presented in Appendix H.

8.1 Summary of the site inspection findings and Action(s) taken by LWKJV and ET

Summaries of the site inspection findings in this reporting month are shown in Table 8.1.

Table 8.1 The summary of the site inspection findings and Action(s) taken by LWKJV and ET

Item	Aspects	Findings	Action(s) taken by LWKJV	ET Verification
1	Air	Follow up action to the finding of previous month, no black smoke was found to be emitted from the excavators at SA3 during weekly site inspection on 02/06/06.	Since the finding was improved, no further action was taken by LWKJV.	Since the finding was improved, no further verification was required to be taken by ET.
2	Air	Stockpiles at SA3 were found covered improperly during the weekly site inspections on 06/06/06, 15/06/06 and 31/06/06.	LWKJV replied to cover the stockpiles with tarpaulin sheets to avoid dust generation.	Since the stockpiles were found to have covered during the subsequent weekly site inspection (29/06/06), no further verification was required to be taken by ET.
3	Water	Mud and sand were found to be accumulated in U-channel at SA1 during weekly site inspections on 02/06/06 and 06/06/06.	LWKJV replied to clean up the mud and sand accumulated immediately.	Since mud and sand were found cleaned up during the subsequent inspection on 15/06/06, no further verification was required to be taken by ET.
4	Water	Silt curtain was found to be partly damaged during weekly site inspections on 06/06/06, 15/06/06, 21/06/06 and 29/06/06.	LWKJV replied to repair the damaged part of silt curtain.	Since the finding was noted during the last inspection of this reporting month, it will be verified during the first weekly site inspection of the coming month.
5	Water	Wastewater was found directly discharged from Workshop during weekly site inspection on 06/06/06.	LWKJV replied to provide oil-interceptor to treat the wastewater before discharged.	Oil-interceptor was found to provide for treating the wastewater before discharge during weekly site inspection on 15/06/06. Hence, no further verification was required to be taken by ET.
6	Water	Stagnant water mainly rainy water was found to be accumulated in the drainage channel at Voided Abutment and Node 1 during weekly site inspection on 29/06/06.	LWKJV replied to pump out the stagnant water immediately.	Since the finding was found improved during the subsequent inspection on 06/06/06, no further verification was required to be taken by ET.



Item	Aspects	Findings	Action(s) taken by LWKJV	ET Verification
7	Chemical	Chemicals such as clear varnish and paint were found stored in buckets without caps and placed on the bare ground without drip tray at Voided Abutment and Node 1 during weekly site inspection on 21/06/06.	LWKJV replied to remove the chemicals to an appropriate chemical storage area.	The chemicals were found to have removed and hence no further verification was required to be taken by ET.
8	Chemical	During the weekly site inspection on 21/06/06, it was found that an appropriate area should be provided for storage of chemical in Workshop.	LWKJV replied to design an appropriate chemical storage area for the chemicals in Workshop.	Since the finding was noted during the last inspection of this reporting month, it will be verified during the first weekly site inspection of the coming month.
9	Chemical	Follow up action to the finding of previous month, plastic sheets were found to be provided for placing on the ground before repairing / maintenance works during weekly site inspection (02/06/06).	Since the finding was improved, no further action was taken by LWKJV.	Since the finding was improved, no further verification was required to be taken by ET.
10	Site Practice	Environmental Permit (EP) at site office was found damaged during the weekly site inspection on 21/06/06.	LWKJV replied to replace the damaged EP by a new copy immediately.	Since the finding was improved during the subsequent weekly site inspection on 29/06/06, no further verification was required to be taken by ET.

8.2 Status of Environmental Licensing and Permitting

All permits/licenses valid in this reporting month are summarized in Table 8.2.

Table 8.2 Summary of environmental licensing and permit status

Description	Permit No.	Valid Period		Section
		From	To	
Construction Noise Permit for the use of Powered Mechanical Equipment for the Purpose of carrying out Construction Work other than Percussive Piling and/or the carrying out of prescribed Construction Work	GW-RN0587-05	12/12/05	11/06/06	<p><u>Group A</u> One Derrick Barge (CNP061) One Excavator, tracked (CNP081) One Tug Boat (CNP221) One Generator, standard (CNP101) Four Dump truck, 5.5 tonne < gross vehicle weight < 38 tonne</p> <p><u>Group B</u> One Derrick Barge (CNP061) One Tug boat (CNP221) One Generator, standard (CNP101)</p>
Construction Noise Permit for the use of Powered Mechanical Equipment for the Purpose of carrying out Construction Work other than Percussive Piling and/or the carrying out of prescribed Construction Work	GW-RN0566-05	14/12/05	13/06/06	<p><u>Group A</u> One Tug Boat (CNP221)</p> <p><u>Group B</u> Three Derrick Barge (CNP061)</p>
Construction Noise Permit for the Construction Works of the Project at Pak Shek Kok Development Package 2A, Tai Po	GW-RN0006-06	26/01/06	25/07/06	<p><u>Group A</u> Two Poker, vibratory, hand-held (CNP170) Two Concrete lorry mixer (CNP044) One Excavator, tracked (CNP081)</p> <p><u>Group B</u> One Dump Truck (CNP067) One Excavator, tracked (CNP081)</p> <p><u>Group C</u> One Asphalt Paver (CNP004) One Roller, Vibratory (CNP186) One Road Roller (CNP185) One Dump Truck (CNP067)</p> <p><u>Group D</u> One Dump Truck (CNP067) One Excavator, tracked (CNP081) One Crane, mobile (diesel) (CNP048) One Lorry with crane</p>



Description	Permit No.	Valid Period		Section
		From	To	
Construction Noise Permit for the use of Powered Mechanical Equipment for the Purpose of carrying out Construction Work other than Percussive Piling and/or the carrying out of prescribed Construction Work	GW-RN0240-06	30/05/06	29/12/06	<p><u>Group A</u> Two Poker, vibrator, hand-held (CNP170) Two Concrete pump, lorry mounted (CNP047) Two Concrete lorry mixer (CNP044)</p> <p><u>Group B</u> One Dump Truck (CNP067) One Excavator, tracked (CNP081) One Roller, vibratory</p> <p><u>Group C</u> One Asphalt Paver (CNP004) One Roller, Vibratory (CNP186) One Road Roller (CNP185) One Dump Truck (CNP067)</p> <p><u>Group D</u> One Dump Truck (CNP067) One Excavator, tracked (CNP081) One Crane, mobile (diesel) (CNP048) One Lorry with crane</p>
Construction Noise Permit for Reclamation area of Science Park Phase 2 & 3, Pak Shek Kok, N.T.	GW-RN0305-06	17/06/06	16/12/06	<p><u>Group A</u> Two Derrick Barge (CNP061) One Tug Boat (CNP221) One Generator, standard (CNP101)</p> <p><u>Group B</u> Two Excavator, tracked (CNP081) Two Dump truck (CNP067) One Generator, standard (CNP101)</p>
Construction Noise Permit for the use of Powered Mechanical Equipment for the Purpose of carrying out Construction Work other than Percussive Piling and/or the carrying out of prescribed Construction Work	GW-RN0307-06	21/06/06	20/12/06	<p><u>Group A</u> One Derrick Barge (CNP061) Four Dump truck, 5.5 tonne < gross vehicle weight < 38 tonne One Excavator, tracked (CNP081) One Generator, standard (CNP101)</p> <p><u>Group B</u> One Derrick Barge (CNP061) One Tug Boat (CNP221) One Generator, standard (CNP101)</p>
Construction Noise Permit for Ma Liu Shui Bridge at Sui Cheung Street adjacent to Ma Liu Shui	GW-RN0347-06	26/06/06	08/07/06	<p>One Crane, mobile (diesel) (CNP048) Two Lorry with crane Two welding set</p>
Wastewater Discharge License	3246 – Part A	06/12/04	05/12/09	Discharge of trade Effluent, surface run-off and all other wastewater arising from the construction site and sedimentation tank to Coastal water or communal drain for the carriage of surface drainage water.
Wastewater Discharge License	3246 – Part B	06/12/04	05/12/09	Discharge of trade Effluent, surface run-off and all other wastewater arising from the construction site and on-site aerobic waste water treatment system to soak-away pit.
Chemical Waste Producer	5113-729-LL1113-01	24/09/04	---	Spent lubricating oil, spent battery parts containing heavy metals

8.3 Recommendations on site inspection findings in Site Inspections of this month

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

- All stockpiles should be covered with clean tarpaulin sheets, spraying with water or hydro-seeding to avoid wind and water erosion;
- The heights from which fill materials are dropped should be controlled to a practical height to minimize the fugitive dust arising from unloading;
- Minimize of exposed soil areas to reduce the potential for increased siltation and contamination of run-off;
- Checking and maintaining all the site machines to prevent dust emission;
- Providing briefing to the concerned site staff on remedial actions, such as handling method of chemicals and chemical waste;
- Use and maintenance of silt curtain properly during marine works;



- Provide good site practice (e.g. selection of quieter plant and working methods and reduction in number of plant operating in critical areas close to NSRs) to limit noise emissions at source;
- Maintain good waste management at the site.

9.0 WASTE MANAGEMENT

9.1 Waste Management Audit

Waste management audit was carried out by the ET on a weekly basis. The implementation status of the mitigation measures on waste management in this reporting month is presented in Appendix H.

9.2 Records of Waste Quantities

All type of wastes arising from the construction work are classified into the following:

- General refuses;
- Chemical waste;
- Construction & demolition (C&D) material.

The quantities of waste for disposal in this month are summarized in Table 9.1.

Table 9.1 Summary of Quantities of Waste for Disposal in this reporting month

Type of Waste		Quantity	Disposal Location	Cumulative Quantity
Inert C&D Materials	Total Quantity Generated (m ³)	2000	Reused in the Contract	Inert C&D Materials
	Broken Concrete (m ³)	0	N/A	
	Reused in the Contract (m ³)	2000	N/A	
	Reused in other Projects (m ³)	0	N/A	
	Disposal as Public Fill (m ³)	0	N/A	
C&D Waste	Metals (1000kg)	0.100	N/A	C&D Waste
	Paper/Cardboard Packaging (1000kg)	0.720	N/A	
	Plastics (1000kg)	0.000	N/A	
	Chemical Waste (1000kg)	2.000	N/A	
	Other, e.g. General Refuse (1000kg)	19.12	SENT	

10.0 IMPLEMENTATION STATUS

10.1 Implementation Status of Environmental Mitigation Measures

LWKJV has been implementing the required environmental mitigation measures according to the Mitigation Protection Measures stated in Implementation Schedule of the EM&A Manual. The implementation status of the environmental mitigation measures in this reporting month is presented in Appendix H.

Air Quality

The Contractor was reminded to water or cover all the stockpiles by using clean tarpaulin sheets. The Contractor was also reminded to cleanup the access road regularly to avoid dust emission and provide effective wheel washing facilities.

Noise

All mitigation measures stated in Appendix H were implemented properly in this reporting month.

Water Quality

The Contractor was reminded to provide more effort to implement mitigation measures, such as diverting site runoff to suitable treatment processes before discharge, sedimentation system and drainage facilities.



Waste Management

LWKJV has been implementing most mitigation measures on waste management.

10.2 Implementation Status of Event and Action Plan

There were no exceedances in air quality and noise monitoring parameters recorded in this monitoring month. No further mitigation measures were required.

10.3 Implementation Status of Environmental Complaint Handling

No complaints had been received during this monitoring month.

11.0 CONCLUSION

Impact monitoring of air quality and noise were carried out at designated locations in accordance with the EM&A Manual in this reporting month.

According to the summary of air and noise monitoring results, no exceedances of Action and Limit Level of 24-hour and 1-hour TSP monitoring results were recorded during the reporting month. Besides, No Day-time noise level measured at all monitoring stations exceeded the Action and Limit Level in the reporting month. No Evening-time, Night-time and Holiday noise monitoring were required since no construction works were processed during these periods.

During this reporting month, no wastewater quality monitoring was carried out in this reporting month since the Discharge Licence required carrying out wastewater monitoring at effluent discharge point quarterly and the current wastewater monitoring was carried out at Ma Liu Shui Discharge Point near Subway on 11 April 2006. The next wastewater monitoring should be at July 2006.

According to the ET weekly site inspection and IEC monthly site audit carried out this month, it indicated that site practices of the LWKJV were generally undertaken in an environmentally acceptable manner and the overall site environmental performance was satisfactory.

12.0 FUTURE KEY ISSUES

12.1 Upcoming EM&A Schedule in coming two months

The Proposed EM&A program in coming two months are presented as following table:

Table 12.1 Upcoming EM&A Schedule in coming two months

Type of Monitoring	July 2006	August 2006
Noise Monitoring (Day-time)	04, 11, 18, 25	01, 08, 15, 22, 29
1-hour TSP	04, 06, 08, 11, 13, 15, 18, 20, 22, 25, 27, 29	01, 03, 05, 08, 10, 12, 15, 17, 19, 22, 24, 26, 29, 31
24-hour TSP	04, 10, 15, 21, 27	02, 08, 14, 19, 25, 31
Site Inspection	06, 13, 20, 27	03, 10, 17, 24, 31

12.2 Upcoming construction works schedule in the coming months

The major construction works planned to be carried out in next two months and their possible impact is tabulated (Table 12.2) for reference.



Table 12.2 Construction Plan in the coming months

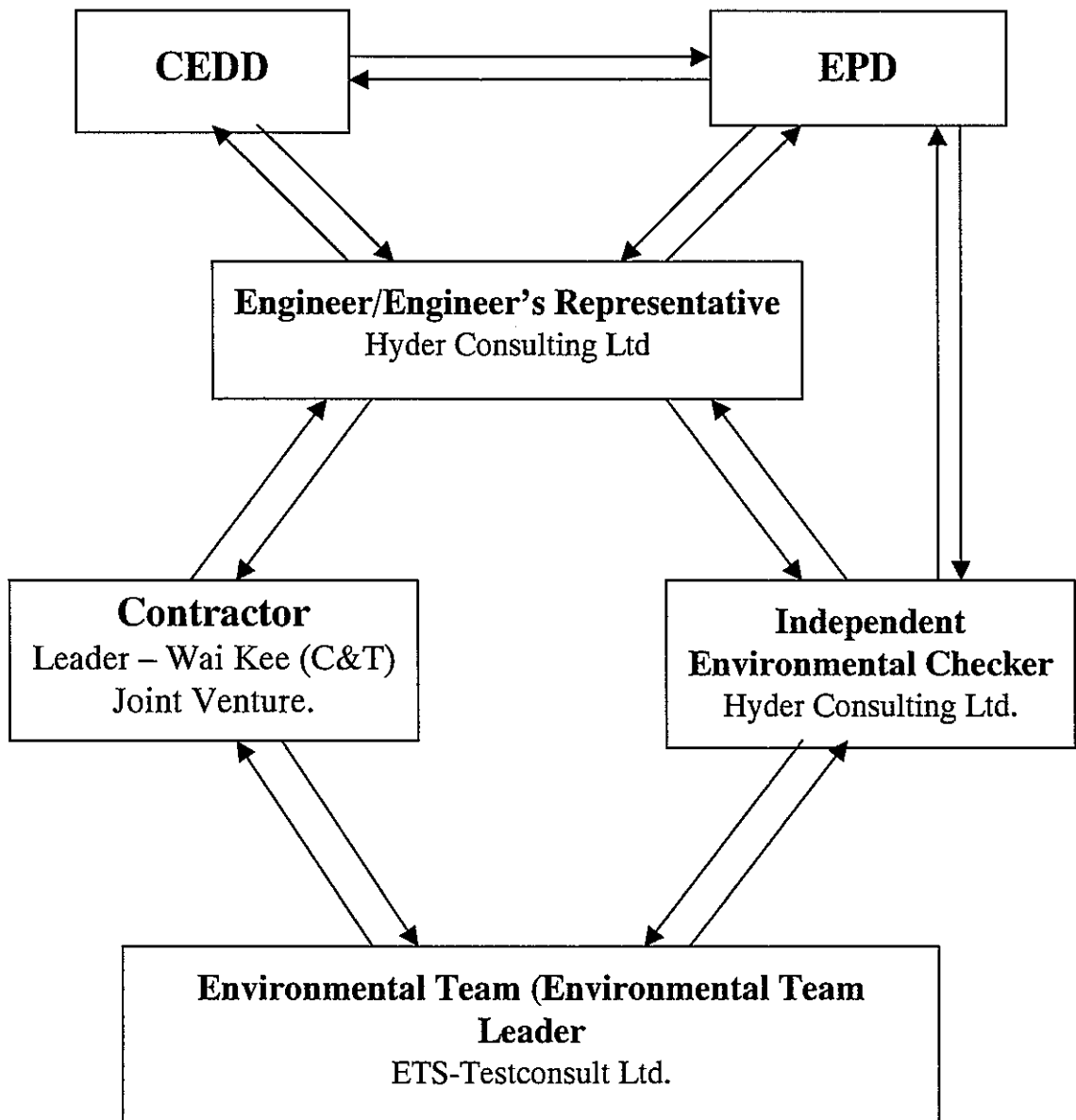
Month	Works Planned to be Carried Out
Between July and August 2006	<ul style="list-style-type: none">▪ Drainage Works (excavation, pipe laying and breaking) at Section 1 and 2 (Ma Liu Shui), 7 and 8 (Promenade) of the Works;▪ Steel fixing and concreting of beam and wall at Voided Abutment, and RE wall at North Abutment for the Alternative Design of the proposed Ma Liu Shui Bridge;▪ Construction of Retaining Wall No.1;▪ Setting back of surcharge mound at Hosing Site 4 as per V.O/146;▪ Construction of pedestrian ramps and barrel of the proposed Ma Liu Shui Subway (Alternative Design);▪ Construction of wall and columns for Toilet No.2;▪ Roadworks, installation of traffic and directional signs, de-silting and CCTV inspection of the completed drainage pipes at the proposed Road L4 at Section 5 of the Works;▪ Installation of public light footing and duct along the proposed Promenade, construction of hard landscape structures, and CCTV inspection of the completed drainage pipes;▪ Hard landscaping works at Section 7 of the Works;▪ Construction of mass concrete coping at the proposed Landscape Node P1;▪ Construction of in-situ Outfall 2 and 3 at the proposed Landscape Node P2 and P3;▪ Installation of precast concrete planter and parapet wall units along the proposed Promenade at Section 8 of the Works;▪ Construction of concrete backing and shelter foundation at the proposed Public Landing Steps; and▪ Filling of soil mix at planter wall.



Appendix A

Organization Chart and Lines of Communication

Lines of Communication





Appendix B1

Calibration Certificates for Air Quality Monitoring Equipments



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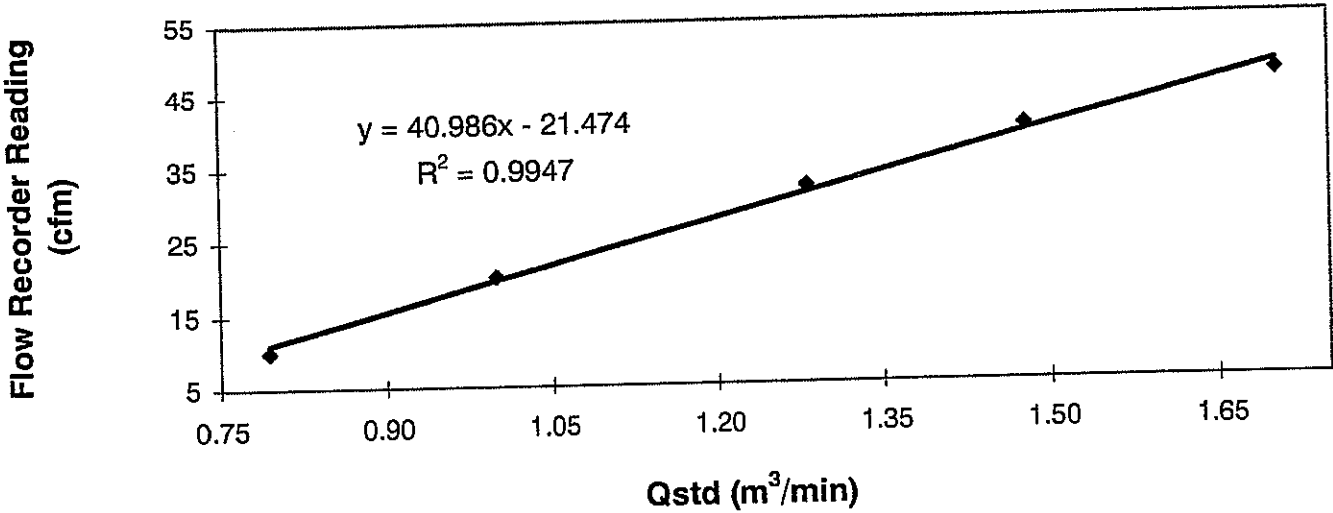
TEST REPORT

Calibration Report
of
High Volume Air Sampler

Manufacturer : Greasby GMW Date of Calibration : 13 May 2006
Serial No. : 7179 (ET / EA / 003 / 16) Calibration Due Date : 12 July 2006
Method : Based on Operations Manual for Graseby Model GS2310 series using calibration kit TE-5025A

Results	Flow recorder reading (cfm)	47	40	32	20	10
	Qstd (Actual flow rate, m ³ /min)	1.70	1.48	1.28	1.00	0.79
Pressure :		759.81 mm Hg		Temp. :		302 K

Sampler 7179 Calibration Curve
Site: Pak Shek Kok (AM3A)
Date of Calibration: 12 May 2006



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5 point calibration

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

Calibrated by :
Felix Tin
(Technician)

Approved by :
H. T. Chow
(Asst. Environmental Officer)



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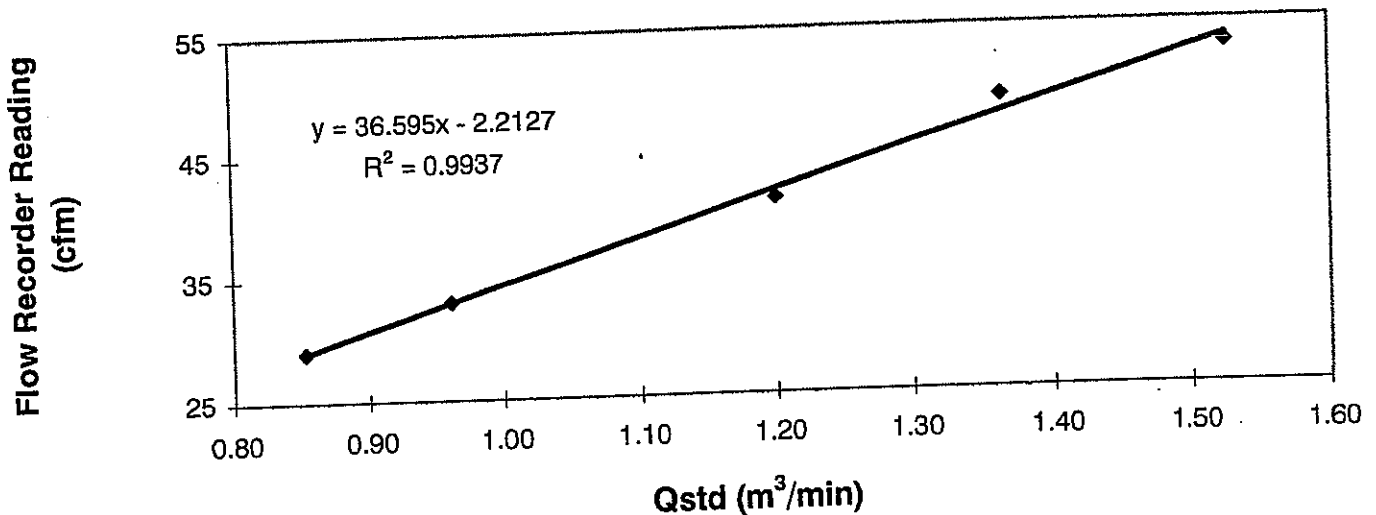
TEST REPORT

Calibration Report
of
High Volume Air Sampler

Manufacturer : Greasby GMW Date of Calibration : 13 May 2006
Serial No. : 1172 (ET / EA / 003 / 11) Calibration Due Date : 12 July 2006
Method : Based on Operations Manual for Graseby Model GS2310 series using calibration kit TE-5025A


Results	Flow recorder reading (cfm)	53	49	41	33	29
	Qstd (Actual flow rate, m ³ /min)	1.53	1.36	1.20	0.96	0.85
	Pressure : 758.31 mm Hg	Temp. : 302 K				

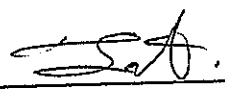
Sampler 1172 Calibration Curve
Site: Pak Shek Kok (AM5)
Date of Calibration: 13 May 2006



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5 point calibration

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

Calibrated by : 
Felix Tin
(Technician)

Approved by : 
H. T. Chow
(Asst. Environmental Officer)



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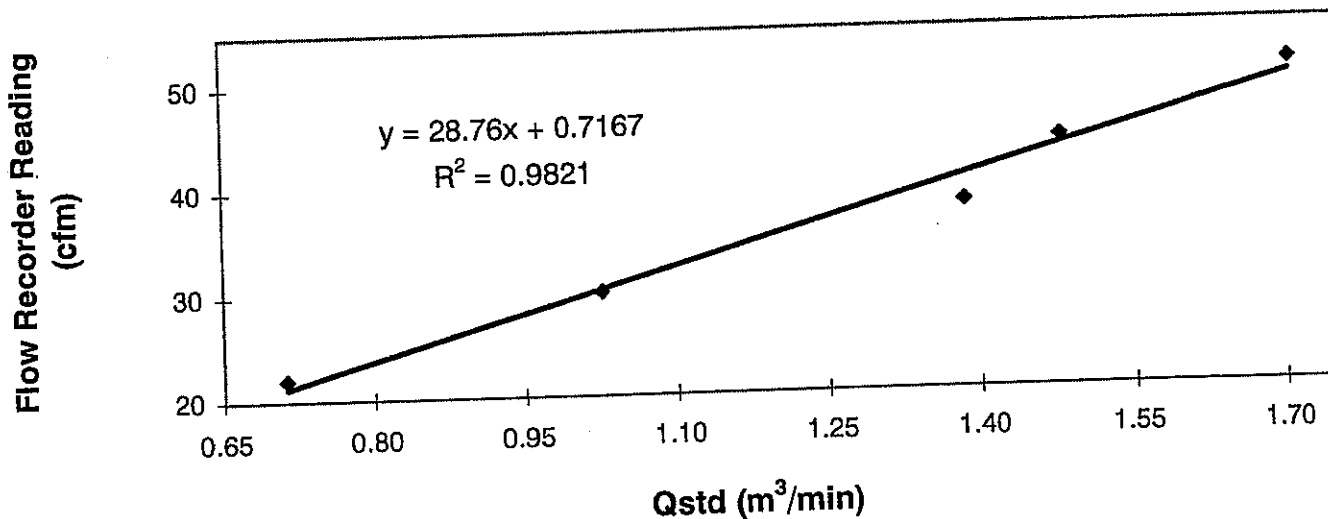
TEST REPORT

Calibration Report
of
High Volume Air Sampler

Manufacturer : Greasby GMW Date of Calibration : 13 May 2006
Serial No. : 1178 (ET / EA / 003 / 01) Calibration Due Date : 12 July 2006
Method : Based on Operations Manual for Graseby Model GS2310 series using calibration kit TE-5025A

Results	Flow recorder reading (cfm)	51	44	38	30	22
	Qstd (Actual flow rate, m ³ /min)	1.70	1.48	1.39	1.03	0.71
	Pressure : 762.06 mm Hg	Temp. : 302 K				

Sampler 1178 Calibration Curve
Site: Pak Shek Kok (AM1) (24hr.)
Date of Calibration: 13 May 2006



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5 point calibration

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

Calibrated by : Felix Tin
Felix Tin
(Technician)

Approved by : H. T. Chow
H. T. Chow
(Asst. Environmental Officer)



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TEST REPORT

Internal Calibration Report

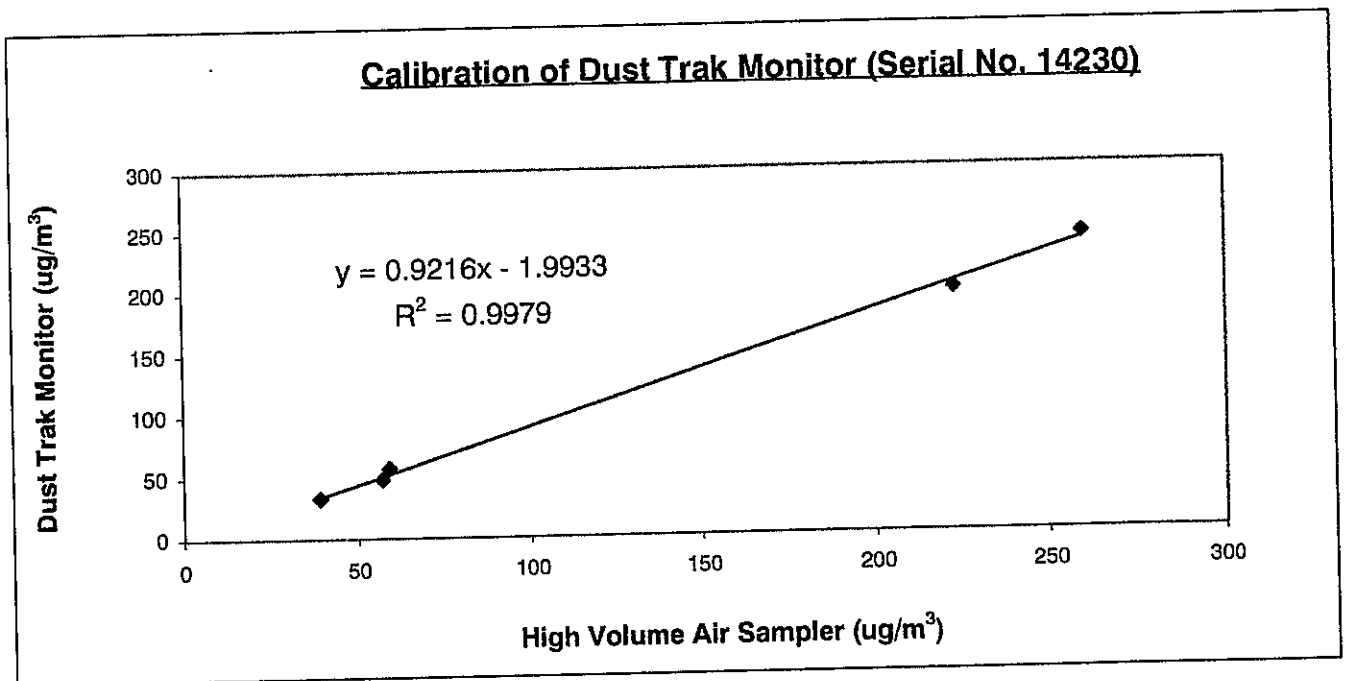
of

Dust Trak Monitor

Manufacturer : TSI - 8520 Dust Trak **Date of Calibration** : 21 January 2006
Serial No. : 14230 (ET / EA / 001 / 04) **Calibration Due Date** : 20 July 2006
Method : Place the Dust Trak Monitor and High Volume Air Samper together at same environment condition for parallel measurement with five point calibration

Results :

Dust Trak Monitor (ug/m ³)	39	57	59	223	260
High Volume Air Sampler (ug/m ³)	33	48	57	198	242
High Volume Air Sampler Serial No.: 1178			Calibration Date: 16 / 01 / 2006		



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a five point calibration

The Dust Trak Monitor complies * / ~~does not comply~~ * with the internal calibration procedures and is deemed acceptable * / unacceptable * for use.

Calibrated by : Mak Kei Wai
Mak Kei Wai
(Technician)

Approved by : H. T. Chow
H. T. Chow
(Asst. Environmental Officer)



Appendix B2

Air Quality Monitoring Results

Summary of 24-hr TSP Monitoring Results

Monitoring Station : AM1
Location : HKIB Staff Accommodation

Start Date	Time	Finish		Elapse Time		Sampling Time (hrs)	Flow Rate (m ³ /min.)		Average (m ³ /min.)	Filter Weight (g)		Conc. (µg/m ³)	Weather Condition
		Date	Time	Initial	Final		Initial	Final		Initial	Final		
05/06/06	10:20	06/06/06	09:53	10127.77	10151.32	23.55	1.59	1.59	1.59	2.9098	2.9751	29	Rainy
10/06/06	08:32	11/06/06	08:24	10151.32	10175.19	23.87	1.59	1.59	1.59	2.9053	2.9965	40	Rainy
16/06/06	08:01	17/06/06	07:28	10175.19	10198.64	23.45	1.47	1.47	1.47	2.8574	2.9127	27	Sunny
22/06/06	08:30	23/06/06	08:04	10198.62	10222.20	23.56	1.27	1.27	1.27	2.8560	2.9083	29	Cloudy
28/06/06	10:44	29/06/06	10:31	10222.20	10245.99	23.79	1.27	1.27	1.27	2.8837	2.9204	20	Cloudy

Monitoring Station : AM3A
Location : Cheung Shue Tan (in front of Man Kee Store)

Start Date	Time	Finish		Elapse Time		Sampling Time (hrs)	Flow Rate (m ³ /min.)		Average (m ³ /min.)	Filter Weight (g)		Conc. (µg/m ³)	Weather Condition
		Date	Time	Initial	Final		Initial	Final		Initial	Final		
05/06/06	09:55	06/06/06	10:33	15489.45	15514.08	24.63	1.28	1.28	1.28	2.9044	2.9238	10	Rainy
10/06/06	13:10	11/06/06	13:47	15514.08	15538.70	24.62	1.28	1.28	1.28	2.9293	2.9642	18	Rainy
16/06/06	08:20	17/06/06	09:13	15538.70	15563.58	24.88	1.28	1.28	1.28	2.8535	2.9136	31	Sunny
22/06/06	13:53	23/06/06	13:53	15563.58	15587.58	24.00	1.18	1.18	1.18	2.8647	2.8958	18	Cloudy
28/06/06	11:02	29/06/06	11:27	15587.58	15611.99	24.41	1.18	1.18	1.18	2.8806	2.9072	15	Cloudy

Monitoring Station : AM5
Location : Near Wen Chin Tung at the CUHK

Start Date	Time	Finish		Elapse Time		Sampling Time (hrs)	Flow Rate (m ³ /min.)		Average (m ³ /min.)	Filter Weight (g)		Conc. (µg/m ³)	Weather Condition
		Date	Time	Initial	Final		Initial	Final		Initial	Final		
05/06/06	10:10	06/06/06	10:49	5516.36	5541.01	24.65	1.20	1.20	1.20	2.8962	2.9556	33	Rainy
10/06/06	14:22	11/06/06	14:22	5541.01	5565.01	24.00	1.20	1.20	1.20	2.9196	2.9883	40	Rainy
16/06/06	08:38	17/06/06	09:29	5565.01	5589.86	24.85	1.04	1.04	1.04	2.8342	2.8995	42	Sunny
22/06/06	18:11	23/06/06	18:19	5589.86	5613.99	24.13	1.04	1.04	1.04	2.8676	2.9007	22	Cloudy
28/06/06	10:51	29/06/06	11:05	5613.99	5638.22	24.23	1.04	1.04	1.04	2.9151	2.9423	18	Cloudy

Summary of 1-hr TSP Monitoring Results

Monitoring Station : AM1 (HKIB Staff Accommodation)

Date	Monitoring Period		1-hr TSP ($\mu\text{g}/\text{m}^3$)			Weather
	Start	Finish	Minimum	Maximum	Average	
01/06/06	09:50	10:50	52	296	115	Cloudy
03/06/06	10:20	11:20	68	352	129	Cloudy
06/06/06	09:15	10:15	75	425	137	Cloudy
08/06/06	08:46	09:46	89	337	165	Cloudy
10/06/06	08:30	09:30	97	362	207	Rainy
13/06/06	09:03	10:03	103	391	149	Cloudy
15/06/06	09:30	10:30	97	384	137	Rainy
17/06/06	08:20	09:20	99	431	153	Sunny
20/06/06	09:30	10:30	92	395	157	Cloudy
22/06/06	08:20	09:20	92	381	144	Cloudy
24/06/06	08:30	09:30	104	402	201	Sunny
27/06/06	18:00	19:00	79	337	144	Cloudy
29/06/06	09:30	10:30	98	397	191	Rainy

Monitoring Station : AM3 – Cheung Shue Tan Village (near the outer building, a temple)

Date	Monitoring Period		1-hr TSP ($\mu\text{g}/\text{m}^3$)			Weather
	Start	Finish	Minimum	Maximum	Average	
01/06/06	13:15	14:15	40	258	97	Cloudy
03/06/06	13:00	14:00	58	296	100	Cloudy
06/06/06	13:00	14:00	63	405	127	Cloudy
08/06/06	18:00	19:00	50	280	88	Cloudy
10/06/06	13:00	14:00	62	307	148	Rainy
13/06/06	10:21	11:21	81	330	115	Cloudy
15/06/06	13:00	14:00	68	326	99	Rainy
17/06/06	14:00	15:00	67	311	106	Sunny
20/06/06	11:00	12:00	72	337	132	Cloudy
22/06/06	13:45	14:45	82	386	101	Cloudy
24/06/06	13:00	14:00	62	354	136	Sunny
27/06/06	11:00	12:00	80	369	123	Cloudy
29/06/06	10:50	11:50	68	320	113	Rainy

Summary of 1-hr TSP Monitoring Results

Monitoring Station : AM5 – Near Wen Chih Tang at the CUHK

Date	Monitoring Period		1-hr TSP ($\mu\text{g}/\text{m}^3$)			Weather
	Start	Finish	Minimum	Maximum	Average	
01/06/06	11:00	12:00	47	305	106	Cloudy
03/06/06	14:15	15:15	62	306	117	Cloudy
06/06/06	14:15	15:15	47	369	102	Cloudy
08/06/06	14:50	15:50	63	291	130	Cloudy
10/06/06	14:20	15:20	74	328	167	Cloudy
13/06/06	14:02	15:02	89	375	133	Cloudy
15/06/06	16:45	17:45	73	360	104	Rainy
17/06/06	15:20	16:20	85	396	131	Sunny
20/06/06	17:00	18:00	80	360	137	Cloudy
22/06/06	18:00	19:00	89	315	129	Cloudy
24/06/06	14:20	15:20	80	379	176	Sunny
27/06/06	09:30	10:30	72	352	161	Cloudy
29/06/06	13:30	14:30	79	357	130	Rainy

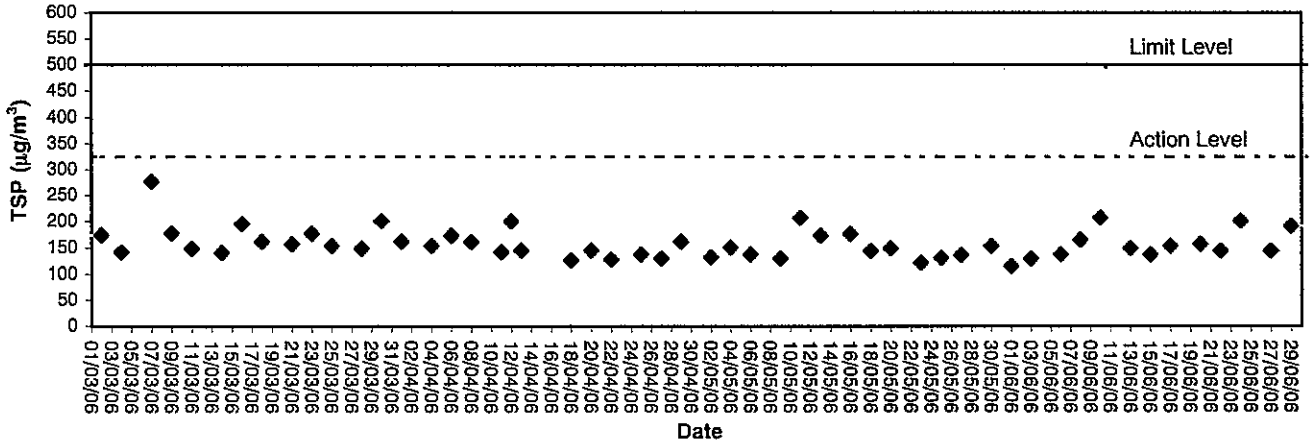


Appendix B3

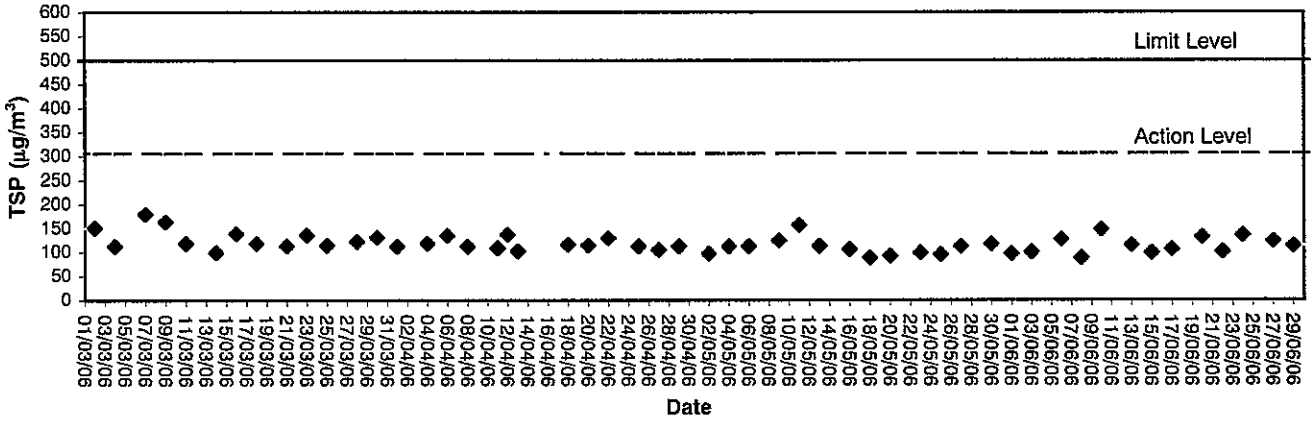
Graphical Plots of Air Quality Monitoring Data



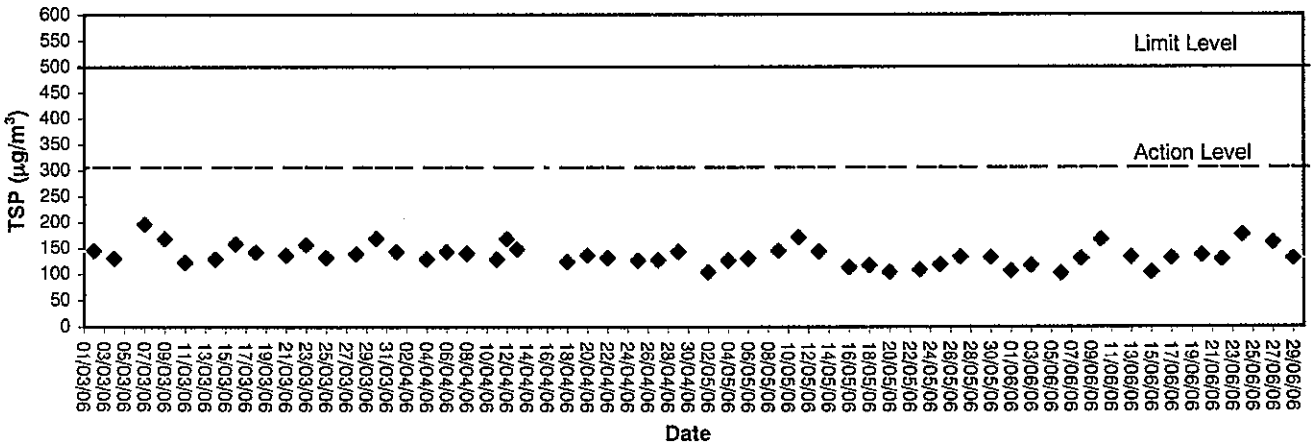
1-hour TSP level at AM1, HKIB Staff Accommodation



1-hour TSP level at AM3, Cheung Shue Tan Village (near the outer building, a temple)

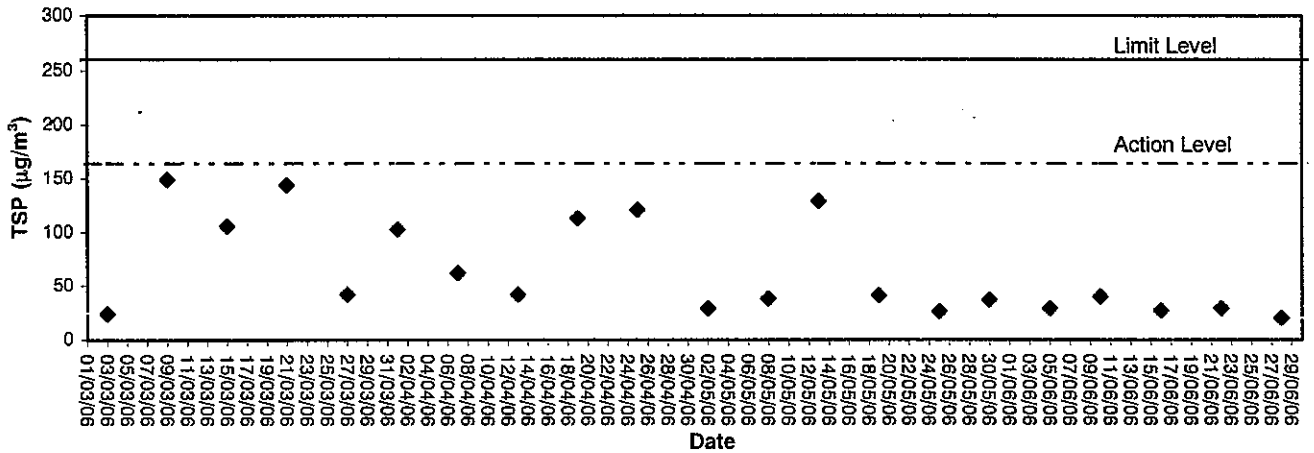


1-hour TSP level at AM5 Wen Chih Tang at the CUHK

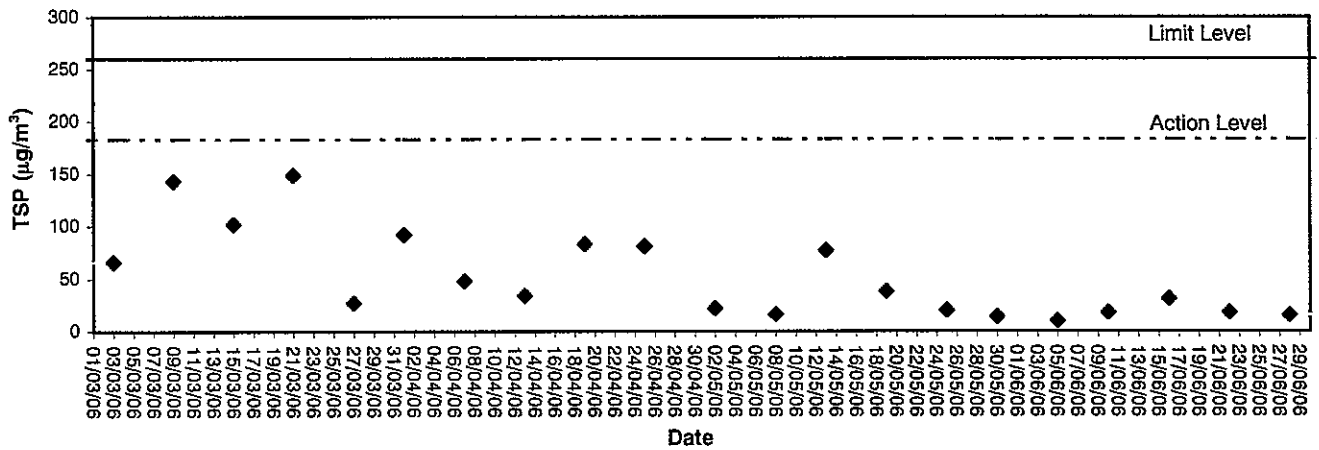




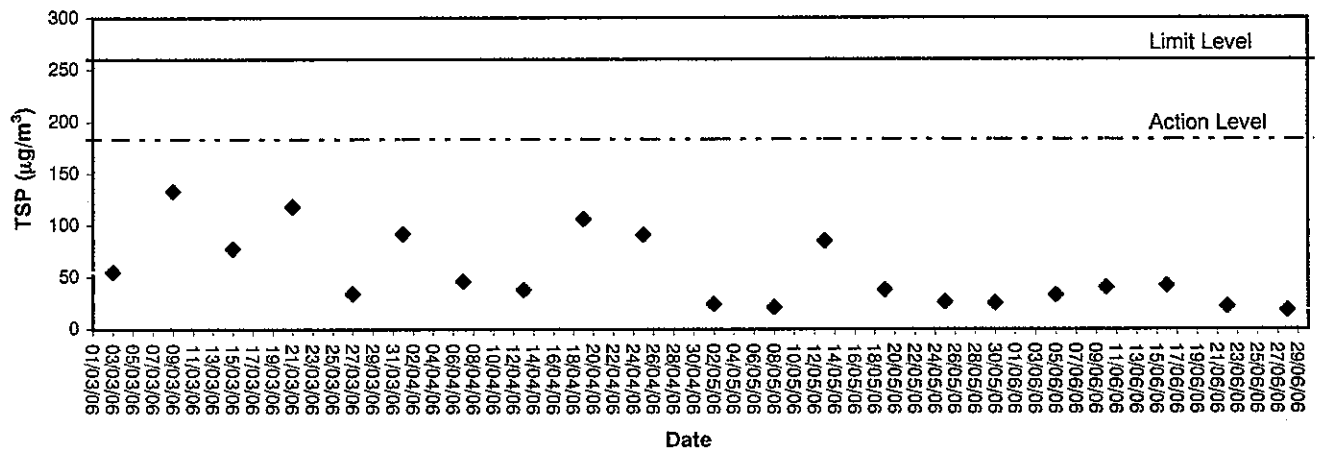
24-hour TSP level at AM1 (HKIB Staff Accommodation)



24-hour TSP level at AM3A (Cheung Shue Tan in front of Man Kee Store)



24-hour TSP level at AM5 (Wen Chih Tang at the CUHK)





Appendix C1

Calibration Certificates for Noise Monitoring Equipments



Calibration Certificate

Certificate No. **61398**

Page **1** of **3** Pages

Customer : ETS-Testconsult Limited

Address : 8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan St., Fotan, Hong Kong.

Order No. : Q60555

Date of receipt : 29-Mar-06

Item Tested

Description : Precision Integrating Sound Level Meter

Manufacturer : Rion

Model : NL-31

Serial No. : 00110024

Test Conditions

Date of Test : 4-Apr-06

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Calibration procedure : Z01.

Test Results

All results were within the IEC 651 Type 1 and IEC 804 Type 1 specification.

The results are shown in the attached page(s).


Test equipment used:

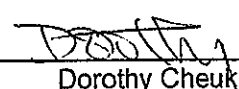
<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceable to</u>
S017	Function Generator	C051022	21-Mar-07	HKGSCS
S024	Calibrator	S41431	22-May-06	PRC-NIM

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).

The test results apply to the above Unit-Under-Test only

Calibrated by : 
P.F. Wong

Approved by : 
Dorothy Cheuk

Date: 4-Apr-06

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.
Tel: 2425 0801 Fax: 2425 8646



Calibration Certificate

Certificate No. 61398

Page 2 of 3 Pages

Results :

1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Response		
20 – 100	L _A	Fast	94.0	93.8
		Slow		93.8
	L _C	Fast		93.8
		L _p		Fast
30 – 120	L _A	Fast	94.0	93.8
		Slow		93.7
	L _C	Fast		93.8
	L _p	Fast		93.8
30 – 120	L _A	Fast	113.9	113.8
		Slow		113.7
	L _C	Fast		113.8
	L _p	Fast		113.8

IEC 651 Type 1 Spec. : ± 0.7 dB

Uncertainty : ± 0.2 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB

Uncertainty : ± 0.01 dB



Calibration Certificate

Certificate No. 61398

Page 3 of 3 Pages

3. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	- 39.5	- 39.4 dB, ± 1.5 dB
63 Hz	- 26.2	- 26.2 dB, ± 1.5 dB
125 Hz	- 16.2	- 16.1 dB, ± 1 dB
250 Hz	- 8.8	- 8.6 dB, ± 1 dB
500 Hz	- 3.3	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+ 1.2	+ 1.2 dB, ± 1 dB
4 kHz	+ 1.1	+ 1.0 dB, ± 1 dB
8 kHz	- 1.2	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	- 6.7	- 6.6 dB, + 3 dB ~ ∞

Uncertainty : ± 0.1 dB

4. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	--
1/10	40.0	39.8	± 0.5 dB
1/10 ²	40.0	40.0	
1/10 ³	40.0	40.0	± 1.0 dB
1/10 ⁴	40.0	40.0	

Uncertainty : ± 0.1 dB

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 1 000 hPa.

----- END -----



Calibration Certificate

Certificate No. **61399**

Page 1 of 2 Pages

Customer : ETS-Testconsult Limited

Address : 8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan St., Fotan, Hong Kong.

Order No. : Q60555

Date of receipt : 29-Mar-06

Item Tested

Description : Sound Level Calibrator

Manufacturer : Rion

Model : NC-73

Serial No. : 10644871

Test Conditions

Date of Test : 4-Apr-06

Ambient Temperature : (23 ± 3)°C

Supply Voltage : --

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Calibration procedure : F21, Z02.

Test Results

All results were within the manufacturer's specification.

The results are shown in the attached page(s).

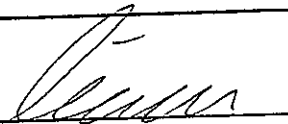
Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceable to</u>
S014	Spectrum Analyzer	53024	7-Jul-06	PRC-NIM
S024	Calibrator	S41431	22-May-06	PRC-NIM
S041	Universal Counter	53972	26-Aug-06	HKGSCCL

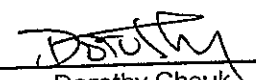
The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).
The test results apply to the above Unit-Under-Test only

Calibrated by :


P.F. Wong

Approved by :


Dorothy Cheuk

Date: 4-Apr-06

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

The copyright of this certificate is owned by Hong Kong Calibration Ltd.. It may not be reproduced except in full.



Calibration Certificate

Certificate No. 61399

Page 2 of 2 Pages

Results :

1. Level Accuracy (at 1 kHz)

UUT Nominal Value	Measured Value		Mfr's Spec.
	Before Adjust.	After Adjust.	
94 dB	94.7	94.2	± 1 dB

Uncertainty : ± 0.2 dB

2. Frequency Accuracy

UUT Nominal Value	Measured Value	Mfr's Spec.
1 kHz	0.984 kHz	± 2 %

Uncertainty : ± 0.1 %

3. Level Stability : 0.0 dB

Uncertainty : ± 0.01 dB

4. Total Harmonic Distortion : < 0.3 %

Mfr's Spec. : < 3 %

Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. The above measured values are the mean of 3 measurement.

4. Atmospheric Pressure : 1 000 hPa

----- END -----



Appendix C2

Noise Monitoring Results



Day-time Noise Monitoring

Monitoring Location: NM1 (HKIB Staff Accommodation)

Date	Start Sampling Time (hh:mm)	Noise Level dB (A)			Wind Speed (m/s)	Weather Condition
		L _{eq(30min)}	L10	L90		
06/06/06	09:20	62.6	65.2	59.6	0.5	Cloudy
13/06/06	09:10	61.6	64.6	58.4	1.4	Cloudy
20/06/06	09:32	59.2	61.6	56.8	0.9	Cloudy
27/06/06	18:10	59.4	60.8	53.0	1.3	Cloudy

Monitoring Location: NM2 (CUHK Residence No.10)

Date	Start Sampling Time (hh:mm)	Noise Level dB (A)			Wind Speed (m/s)	Weather Condition
		L _{eq(30min)}	L10	L90		
06/06/06	15:22	57.9	60.0	55.5	0.7	Cloudy
13/06/06	15:30	53.8	56.4	50.9	1.0	Cloudy
20/06/06	18:10	57.0	59.2	56.2	1.0	Cloudy
27/06/06	10:18	57.0	58.3	52.4	1.5	Cloudy

Mon Monitoring Location: NM3 (Cheung Shue Tan Village)

Date	Start Sampling Time (hh:mm)	Noise Level dB (A)			Wind Speed (m/s)	Weather Condition
		L _{eq(30min)}	L10	L90		
06/06/06	13:10	54.0	56.6	50.4	1.2	Cloudy
13/06/06	10:30	52.7	55.7	50.2	1.0	Cloudy
20/06/06	11:02	54.1	56.1	49.9	1.3	Cloudy
27/06/06	11:10	57.4	59.3	52.8	0.9	Cloudy

Monitoring Location: NM8 (Near Wen Chih Tang at the CUHK)

Date	Start Sampling Time (hh:mm)	Noise Level dB (A)			Wind Speed (m/s)	Weather Condition
		L _{eq(30min)}	L10	L90		
06/06/06	14:20	62.5	63.7	57.7	1.0	Cloudy
13/06/06	14:10	61.1	64.0	58.3	1.5	Cloudy
20/06/06	17:02	57.9	59.7	56.3	1.2	Cloudy
27/06/06	09:35	61.7	63.1	56.7	1.5	Cloudy

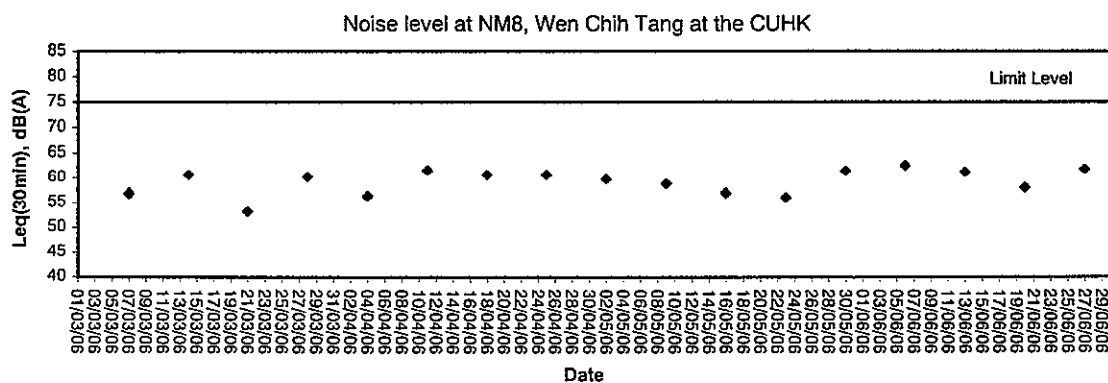
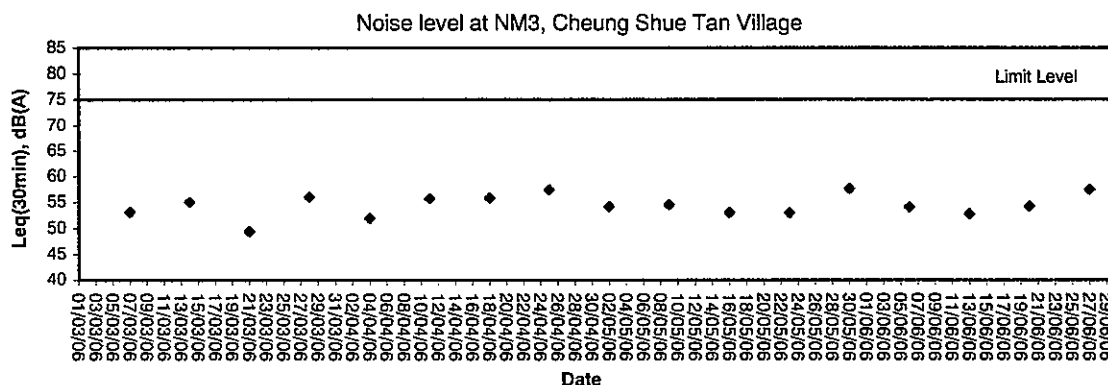
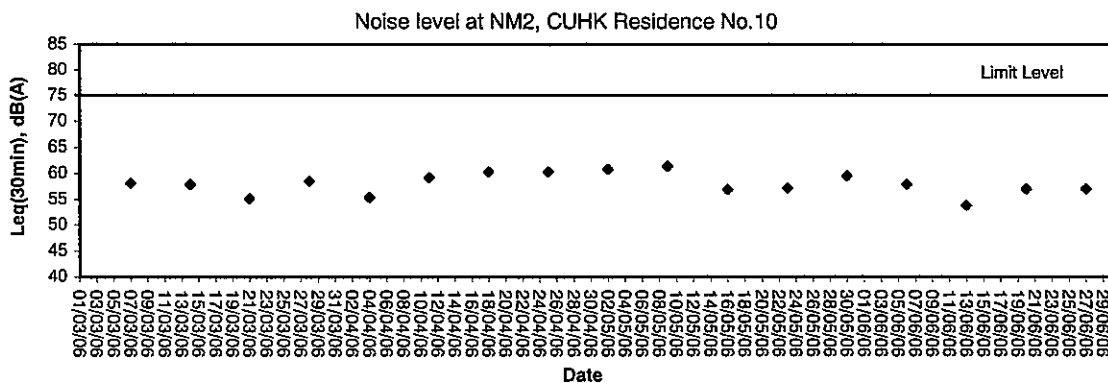
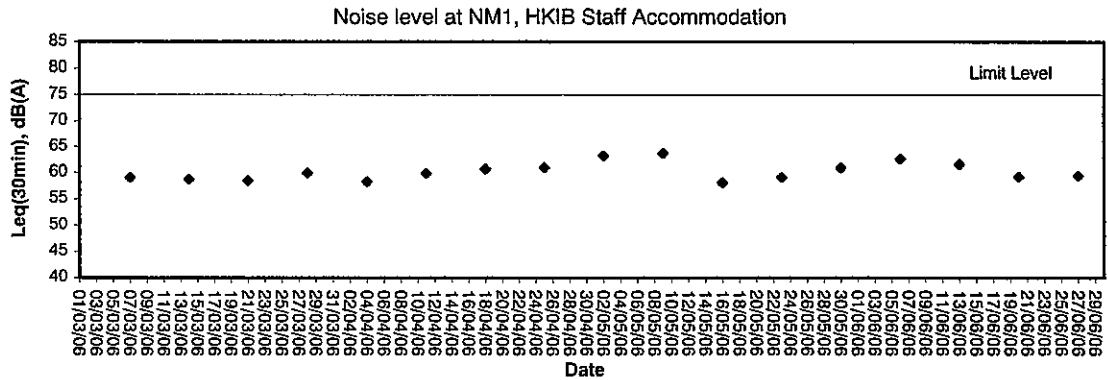


Appendix C3

Graphical Plots of Noise Monitoring Data



Noise Monitoring (Day-time)





Appendix D

Weather Condition



Weather Condition

Date	Rainfall (mm)	Max. Temp (°C)	Min. Temp. (°C)	Relative Humidity (%)	Wind Direction	Wind Speed (m/s)
01/06/06	33.2	27.8	25.5	88	SE	<5
02/06/06	80.2	27.6	24.4	93	SES	<5
03/06/06	0.6	28.3	26.9	86	SES	<5
04/06/06	1.5	29.4	27.2	82	SES	<5
05/06/06	Trace	29.3	27.9	81	SE	<5
06/06/06	0.8	30.7	27.6	81	SE	<5
07/06/06	0.4	29.9	28.1	81	SE	<5
08/06/06	12.4	29.4	27.3	84	SEE	<5
09/06/06	136.7	28.2	24.0	92	SEE	<5
10/06/06	26.4	25.4	22.6	91	NE	<5
11/06/06	9.5	26.6	21.9	89	W	<5
12/06/06	9.4	26.2	23.1	92	NW	<5
13/06/06	65.2	30.5	24.5	89	SES	<5
14/06/06	0.4	30.1	26.8	82	SE	<5
15/06/06	0.2	29.4	27.9	84	SE	<5
16/06/06	0.1	30.8	27.8	82	SES	<5
17/06/06	Trace	31.7	27.5	79	SES	<5
18/06/06	Trace	30.9	27.5	83	SES	<5
19/06/06	0.6	28.5	26.3	86	NWW	<5
20/06/06	Trace	31.6	26.6	85	NWW	<5
21/06/06	10.0	31.4	25.5	87	SWW	<5
22/06/06	10.4	28.7	26.5	90	SWW	<5
23/06/06	1.0	32.9	26.2	78	SES	<5
24/06/06	-	32.7	28.0	74	SE	<5
25/06/06	-	32.8	28.2	77	SES	<5
26/06/06	-	32.5	27.8	78	SWW	<5
27/06/06	0.1	31.9	27.9	84	SWW	<5
28/06/06	51.0	29.3	25.3	92	SWW	<5
29/06/06	16.6	30.7	26.1	87	SW	<5
30/06/06	2.5	31.1	26.6	87	SWW	<5

Remark: Data of wind speed and wind direction were extracted from Hong Kong Observatory (Shatin Station).



Appendix E

Event-Action Plans

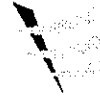
Event / Action Plan for Air Quality

EVENT	ACTION			CNTRACTOR
	ET Leader	IC(E)	ER	
<p>Action Level</p> <p>1. Exceedance of one sample</p> <p>2. Exceedance for two more consecutive samples</p>	<p>1. Identify source</p> <p>2. Inform IC(E) and ER</p> <p>3. Repeat measurement to confirm finding</p> <p>4. Increase monitoring frequency to daily</p> <p>1. Identify source</p> <p>2. Inform IC(E) and ER</p> <p>3. Repeat measurement to confirm findings</p> <p>4. Increase monitoring frequency to daily</p> <p>5. Discuss with IC(E) and Contractor on remedial actions required</p> <p>6. If exceedance continuous, arrange meeting with IC(E) and ER</p> <p>7. If exceedance stops, cease additional monitoring</p>	<p>1. Check monitoring data submitted by ET</p> <p>2. Check Contractor's working method.</p> <p>1. Checking monitoring data submitted by ET</p> <p>2. Check Contractor's working method</p> <p>3. Discuss with ET and Contractor on possible remedial measures</p> <p>4. Advise the ER on the effectiveness of the proposed remedial measures</p> <p>5. Supervisor implementation of remedial measures</p>	<p>1. Notify Contractor</p> <p>1. Confirm receipt of notification of failure in writing</p> <p>2. Notify Contractor</p> <p>3. Ensure remedial measures properly implemented</p>	<p>1. Rectify any unacceptable practice</p> <p>2. Amend working methods if possible</p> <p>1. Submit proposals for remedial action to IC(E) within 3 working days of notification</p> <p>2. Implement the agreed proposals</p> <p>3. Amend proposal if possible</p>
<p>Limit Level</p> <p>1. Exceedance of one sample</p> <p>2. Exceedance for two or more consecutive samples</p>	<p>1. Identify source</p> <p>2. Inform ER and EPD</p> <p>3. Repeat measurement to confirm finding</p> <p>4. Increase monitoring frequency to daily</p> <p>5. Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results</p> <p>1. Notify IC(E), ER, Contractor and EPD</p> <p>2. Identify source</p> <p>3. Repeat measurement to confirm findings</p> <p>4. Increase monitoring frequency to daily</p> <p>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented</p> <p>6. Arrange meeting with IC(E) and ER to discuss the remedial actions to be taken</p> <p>7. Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER to discuss the remedial action to taken</p> <p>8. If exceedance stops, cease additional monitoring</p>	<p>1. Check monitoring data submitted by ET</p> <p>2. Check Contractor's working method.</p> <p>3. Discuss with ET and Contractor on possible remedial measures</p> <p>4. Advise the ER on the effectiveness of the proposal remedial measures</p> <p>5. Supervisor implementation of remedial measures</p> <p>1. Check monitoring data submitted by ET</p> <p>2. Check Contractor's working method.</p> <p>3. Discuss with ET and Contractor on possible remedial measures</p> <p>4. Advise the ER on the effectiveness of the proposal remedial measures</p> <p>5. Supervisor implementation of remedial measures</p>	<p>1. Confirm receipt of notification of failure in writing</p> <p>2. Notify Contractor</p> <p>3. Ensure remedial measures properly implemented</p> <p>1. Confirm receipt of notification of failure in writing</p> <p>2. Notify Contractor</p> <p>3. In consultation with the IC(E), agreed with the Contractor on the remedial measures to be implemented</p> <p>4. Ensure remedial measures properly implemented</p> <p>5. If exceedance continues, consider what portion of this work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</p>	<p>1. Take immediate action to avoid further exceedance</p> <p>2. Submit proposal for remedial actions to IC(E) within 3 working days of notification</p> <p>3. Implement the agreed proposals</p> <p>4. Amend proposal if appropriate</p> <p>1. Take immediate action to avoid further exceedance</p> <p>2. Submit proposals for remedial actions to IC(E) within 3 working days of notification</p> <p>3. Implement the agreed proposals</p> <p>4. Resubmit proposals if possible still not under control</p> <p>5. Stop the relevant portion of works as determined by the ER until the exceedance if abated.</p>



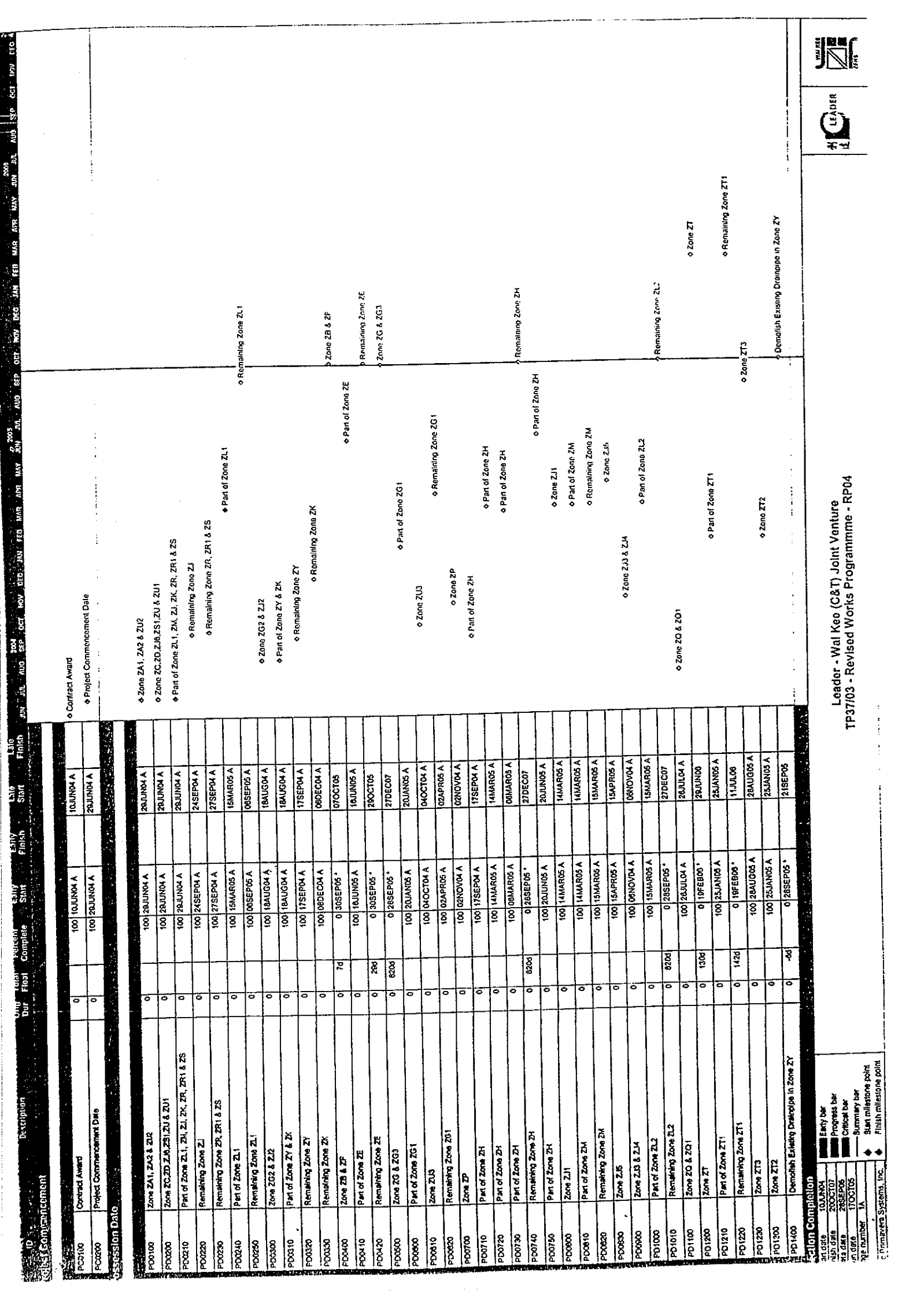
Event / Action Plan for Construction Noise

EVENT	ACTION				CNOTRACTOR
	ET Leader	IC(E)	ER		
Action Level	<ol style="list-style-type: none"> 1. Notify IC(E) and Contractor 2. Carry out investigation 3. Report the results of investigation to the IC(E) and Contractor 4. Discuss with the Contractor and formulate remedial measures 5. Increase monitoring frequency to check mitigation effectiveness 	<ol style="list-style-type: none"> 1. Review the analyzed results submitted by the ET 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly 3. Supervise the implementation of remedial measures 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Require Contractor to propose remedial measures for the analyzed noise problem 4. Ensure remedial measures are properly implemented 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposal to IC(E) 2. Implement noise mitigation proposals 	
Limit Level	<ol style="list-style-type: none"> 1. Notify IC(E), ER, and Contractor 2. Identify source 3. Repeat measurement to confirm findings 4. Increase monitoring frequency 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented 6. Inform IC(E), ER and EPD the causes & action taken for the exceedances 7. Assess effectiveness of Contractor's remedial action and keep IC(E), EPD and ER informed to the results 8. If exceedance stops, cease additional monitoring 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET and Contractor on the potential remedial actions 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly 3. Supervise the implementation of remedial measures 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Require Contractor to propose remedial measures for the analysed noise problem 4. Ensure remedial measures are properly implemented 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IC(E) within 3 working days of notification 3. Implement the agreed proposals 4. Resubmit proposals if problem still not under control 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated 	



Appendix F

Construction Programme



2003 2004 2005 2006 2007 2008
 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Contract Award
 Project Commencement Date

Zone ZA1, ZA2 & ZU2
 Zone ZC, ZD, ZL, ZS1, ZU & ZU1
 Part of Zone ZL1, ZM, ZN, ZY, ZR1 & ZS
 Remaining Zone ZJ
 Remaining Zone ZR, ZR1 & ZS
 Part of Zone ZL1
 Zone ZG2 & ZJ2
 Part of Zone ZY & ZK
 Remaining Zone ZY
 Remaining Zone ZK
 Part of Zone ZE
 Zone ZB & ZF
 Remaining Zone ZE
 Zone ZG & ZG1
 Remaining Zone ZH
 Remaining Zone ZH
 Part of Zone ZH
 Zone ZL1
 Part of Zone ZM
 Remaining Zone ZM
 Zone ZJ4
 Part of Zone ZL2
 Zone ZI
 Part of Zone ZH
 Part of Zone ZH
 Zone ZL1
 Part of Zone ZM
 Remaining Zone ZM
 Zone ZJ4
 Part of Zone ZL2
 Zone ZO & ZO1
 Part of Zone ZT1
 Zone ZT
 Remaining Zone ZT1
 Zone ZT2
 Demolish Existing Drainslope in Zone ZY
 Zone ZL3
 Zone ZT3

ID	Description	Our Dur	Client Dur	Percent Complete	Early Start	Early Finish
PC2100	Contract Award	0	100	100	10JUN04 A	10JUN04 A
PC2200	Project Commencement Date	0	100	100	20JUN04 A	20JUN04 A

Session Data

ID	Description	Our Dur	Client Dur	Percent Complete	Early Start	Early Finish
PO0100	Zone ZA1, ZA2 & ZU2	0	100	100	20JUN04 A	20JUN04 A
PO0200	Zone ZC, ZD, ZL, ZS1, ZU & ZU1	0	100	100	20JUN04 A	20JUN04 A
PO0310	Part of Zone ZL1, ZM, ZN, ZY, ZR1 & ZS	0	100	100	20JUN04 A	20JUN04 A
PO0320	Remaining Zone ZJ	0	100	100	24SEP04 A	24SEP04 A
PO0330	Remaining Zone ZR, ZR1 & ZS	0	100	100	27SEP04 A	27SEP04 A
PO0340	Part of Zone ZL1	0	100	100	15MAR05 A	15MAR05 A
PO0350	Remaining Zone ZL1	0	100	100	06SEP05 A	06SEP05 A
PO0360	Zone ZG2 & ZJ2	0	100	100	18AUG04 A	18AUG04 A
PO0370	Part of Zone ZY & ZK	0	100	100	18AUG04 A	18AUG04 A
PO0380	Remaining Zone ZY	0	100	100	17SEP04 A	17SEP04 A
PO0390	Remaining Zone ZK	0	100	100	06DEC04 A	06DEC04 A
PO0400	Zone ZB & ZF	0	7d	0	30SEP05 *	07OCT05
PO0410	Part of Zone ZE	0	100	100	16JUN05 A	16JUN05 A
PO0420	Remaining Zone ZE	0	28d	0	30SEP05 *	28OCT05
PO0600	Zone ZG & ZG1	0	82d	0	28SEP05 *	27DEC07
PO0600	Part of Zone ZG1	0	100	100	20JUN05 A	20JUN05 A
PO0610	Zone ZL3	0	100	100	04OCT04 A	04OCT04 A
PO0620	Remaining Zone ZG1	0	100	100	02APR05 A	02APR05 A
PO0700	Zone ZP	0	100	100	02NOV04 A	02NOV04 A
PO0710	Part of Zone ZH	0	100	100	17SEP04 A	17SEP04 A
PO0720	Part of Zone ZH	0	100	100	14MAR05 A	14MAR05 A
PO0730	Part of Zone ZH	0	100	100	08MAR05 A	08MAR05 A
PO0740	Remaining Zone ZH	0	82d	0	28SEP05 *	27DEC07
PO0750	Part of Zone ZH	0	100	100	20JUN05 A	20JUN05 A
PO0800	Zone ZJ1	0	100	100	14MAR05 A	14MAR05 A
PO0810	Part of Zone ZM	0	100	100	14MAR05 A	14MAR05 A
PO0820	Remaining Zone ZM	0	100	100	15MAR05 A	15MAR05 A
PO0830	Zone ZJ4	0	100	100	15APR05 A	15APR05 A
PO0840	Zone ZJ3 & ZJ4	0	100	100	08NOV04 A	08NOV04 A
PO1000	Part of Zone ZL2	0	100	100	15MAR05 A	15MAR05 A
PO1010	Remaining Zone ZL2	0	82d	0	28SEP05 *	27DEC07
PO1100	Zone ZO & ZO1	0	100	100	28JUL04 A	28JUL04 A
PO1200	Zone ZT	0	130d	0	19FEB06 *	20JUN08
PO1210	Part of Zone ZT1	0	100	100	25JAN05 A	25JAN05 A
PO1220	Remaining Zone ZT1	0	142d	0	19FEB06 *	11JUL06
PO1230	Zone ZT3	0	100	100	28AUG05 A	28AUG05 A
PO1300	Zone ZT2	0	0	100	25JAN05 A	25JAN05 A
PD1400	Demolish Existing Drainslope in Zone ZY	0	0	0	28SEP05 *	28SEP05 *

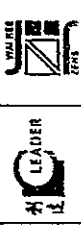
Session Data

an date 20050101
 up date 20051001
 sta date 28SEP05
 in date 17OCT05
 job number 1A

Legend

- Empty bar
- Progress bar
- Critical bar
- Summary bar
- Milestone point
- Finish milestone point

Company Information
 Leader - Wal Keo (C&T) Joint Venture
 TP37/03 - Revised Works Programme - RP04
 Primavera Systems, Inc.



Section 1	15JUL06*
Section 2	28DEC06*
Section 3	28DEC06*
Section 4	28DEC06*
Section 5	24OCT05*
Section 6	24JUL05*
Section 7	21FEB06*
Section 8	08NOV06*
Section 9	28DEC06*
Section 10	28DEC06*
Section 11	18FEB06*
Section 12	06NOV06*
Section 13	20DEC07*

Section 1	15JUL06*
Section 2	28DEC06*
Section 3	28DEC06*
Section 4	28DEC06*
Section 5	24OCT05*
Section 6	24JUL05*
Section 7	21FEB06*
Section 8	08NOV06*
Section 9	28DEC06*
Section 10	28DEC06*
Section 11	18FEB06*
Section 12	06NOV06*
Section 13	20DEC07*

Section 1	15JUL06*
Section 2	28DEC06*
Section 3	28DEC06*
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Section 7	21FEB06*
Section 8	08NOV06*
Section 9	28DEC06*
Section 10	28DEC06*
Section 11	18FEB06*
Section 12	06NOV06*
Section 13	20DEC07*

Section 1	15JUL06*
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Section 3	28DEC06*
Section 4	28DEC06*
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Section 6	24JUL05*
Section 7	21FEB06*
Section 8	08NOV06*
Section 9	28DEC06*
Section 10	28DEC06*
Section 11	18FEB06*
Section 12	06NOV06*
Section 13	20DEC07*

Section 1	15JUL06*
Section 2	28DEC06*
Section 3	28DEC06*
Section 4	28DEC06*
Section 5	24OCT05*
Section 6	24JUL05*
Section 7	21FEB06*
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Section 10	28DEC06*
Section 11	18FEB06*
Section 12	06NOV06*
Section 13	20DEC07*

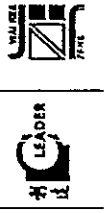
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Section 3	28DEC06*
Section 4	28DEC06*
Section 5	24OCT05*
Section 6	24JUL05*
Section 7	21FEB06*
Section 8	08NOV06*
Section 9	28DEC06*
Section 10	28DEC06*
Section 11	18FEB06*
Section 12	06NOV06*
Section 13	20DEC07*

Drafted Safety Plan
 Safety Plan
 Sub-Contractor Management Plan (SCMP)
 Draft Waste Management Plan (WMP)
 Waste Management Plan
 Engineer Approval of WMP
 Layout Plan & Location of Site Office
 Engineer Approval of Site Layout Plan
 Project Signboard Location & Details
 Engineer Approval of Project Signboard Details
 EMLA and EMIS with Baseline Monitoring Record
 Engineer & EPD Consent of EMLA and EMIS
 Initial Works Programme
 Engineer Approval of Initial Works Programme
 Detailed Works Programme
 First Three Month Rolling Programme
 Particulars of Environmental Team Leader
 EPD & Engineer Approval of ET Leader
 Overall TTA Scheme & Traffic Management Design
 Comments on Overall TTA Scheme & TMD
 Revised Overall TTA Scheme & TMD
 Particulars of DI Pipes & Fittings
 Engineer Approval of DI Pipes & Fittings

ID	Start	Finish	Complete	Start	Finish	Complete	Start	Finish
CD0100			0	410	06JUN06			15JUL06*
CD0200			0	1d	25DEC06			28DEC06*
CD0300			0	24d	02DEC06			28DEC06*
CD0400			0	38d	17NOV06			28DEC06*
CD0500			0	-196d	10MAY06			24OCT05*
CD0600			0	-196d	20DEC06			24JUL05*
CD0700			0	-112d	13JUN06			21FEB06*
CD0800			0	30d	09OCT06			08NOV06*
CD0900			0	66d	23OCT06			28DEC06*
CD1000			0	132d	19AUG06			28DEC06*
CD1100			0	-159d	27JUL06			18FEB06*
CD1200			0	20d	17OCT06			06NOV06*
CD1300			0	102d	16SEP06			28DEC06*
CD1400			0	-152d	21JUL07			18FEB07*
CD1500			0	25d	12OCT07			06NOV07*
CD1600			0	87d	20OCT07			20DEC07*

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SUG50100			10	100	10JUN04 A	24JUN04 A	10JUN04 A	24JUN04 A
SUG50200			12	100	28JUN04 A	14JUL04 A	28JUN04 A	14JUL04 A
SUG50300			24	100	10JUN04 A	12JUL04 A	10JUN04 A	12JUL04 A
SUG50400			18	100	10JUN04 A	06JUL04 A	10JUN04 A	06JUL04 A
SUG50500			18	100	28JUN04 A	02AUG04 A	28JUN04 A	02AUG04 A
SUG50600			18	100	09AUG04 A	08SEP04 A	09AUG04 A	08SEP04 A
SUG50700			14	100	10JUN04 A	06JUL04 A	10JUN04 A	06JUL04 A
SUG50800			8	100	07JUL04 A	20AUG04 A	07JUL04 A	20AUG04 A
SUG50900			16	100	28JUN04 A	12JUL04 A	28JUN04 A	12JUL04 A
SUG51000			6	100	13JUL04 A	19AUG04 A	13JUL04 A	19AUG04 A
SUG51100			12	100	28JUN04 A	12JUL04 A	28JUN04 A	12JUL04 A
SUG51200			60	100	13JUL04 A	08SEP04 A	13JUL04 A	08SEP04 A
SUG51600			7	100	10JUN04 A	15JUN04 A	10JUN04 A	15JUN04 A
SUG51800			12	100	15JUN04 A	28JAN05 A	15JUN04 A	28JAN05 A
SUG51900			50	100	27JAN05 A	18MAR05 A	27JAN05 A	18MAR05 A
SUG52000			12	100	10JUN04 A	15JUN04 A	10JUN04 A	15JUN04 A
SUG52100			6	100	25JUN04 A	24JUN04 A	25JUN04 A	24JUN04 A
SUG52200			24	100	10JUN04 A	28JUL04 A	10JUN04 A	28JUL04 A
SUG52500			16	100	28JUL04 A	30SEP04 A	28JUL04 A	30SEP04 A
SUG52400			24	100	30SEP04 A	30SEP04 A	30SEP04 A	30SEP04 A

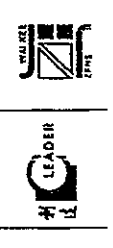
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SUM040100			54	100	10JUN04 A	28JUL04 A	10JUN04 A	28JUL04 A
SUM040200			24	100	30JUL04 A	04FEB05 A	30JUL04 A	04FEB05 A



Leader - Wal Kee (C&T) Joint Venture
TP37/03 - Revised Works Programme - RP04

Entry bar
 Progress bar
 Critical bar
 Summary bar
 Start milestone point
 Finish milestone point

ID	Description	WIP Dur	100% Complete	Early Start	Early Finish	Late Start	Late Finish	2000	2001	2002	2003
SUA0000	Particulars of Concrete Design Mix	16	100	10JUN04	24JUN04	10JUN04	24JUN04				
SUA0000	Engineer Approval of Concrete Design Mix	23	100	25JUN04	08NOV04	25JUN04	08NOV04				
SUA0050	Particulars of Precast Concrete Pipe	12	100	10JUN04	24JUN04	10JUN04	24JUN04				
SUA0050	Engineer Approval of Precast Concrete Pipe	12	100	25JUN04	08NOV04	25JUN04	08NOV04				
SUA00700	Glazed Skylight Roof Cover System Details	50	100	08SEP04	08NOV04	08SEP04	08NOV04				
SUA00800	Engineer Approval of Roof Cover System	72	56d	08NOV04	08NOV04	08NOV04	08NOV04				
SUA00900	Sample Panels	50	100	08SEP04	08NOV04	08SEP04	08NOV04				
SUA01000	Engineer Approval of Sample Panels	72	56d	08NOV04	08NOV04	08NOV04	08NOV04				
Method Statement Submissions											
SUHE010	Treatment Work Before Discharge of Effluent	24	100	10JUN04	24JUN04	10JUN04	24JUN04				
SUHE020	Engineer Approval of Treatment Work	18	100	25JUN04	27NOV04	25JUN04	27NOV04				
SUHE030	Drainage Works	16	100	17JUL04	06AUG04	17JUL04	06AUG04				
SUHE040	Engineer Approval of Drainage Works	12	100	07AUG04	31AUG04	07AUG04	31AUG04				
SUHE050	Tree Transplant	24	100	02JUL04	30JUL04	02JUL04	30JUL04				
SUHE060	Engineer Approval of Tree Transplant	18	100	31JUL04	19AUG04	31JUL04	19AUG04				
SUHE0700	Pre-drilling	18	100	10JUL04	30JUL04	10JUL04	30JUL04				
SUHE0800	Engineer Approval of Pre-drilling	12	100	31JUL04	25AUG04	31JUL04	25AUG04				
SUHE0900	MLS Bridge Piling Works	18	100	18AUG04	20SEP04	18AUG04	20SEP04				
SUHE1000	Engineer Approval of MLS Bridge Piling Works	12	100	21SEP04	28FEB05	21SEP04	28FEB05				
SUHE1100	MLS Bridge Construction	48	100	18NOV04	25NOV04	18NOV04	25NOV04				
SUHE1200	Engineer Approval of MLS Bridge Construction	12	100	28NOV04	04AUG05	28NOV04	04AUG05				
SUHE1300	Construction of Public Toilet No.2	18	33d	02JUL05	07JUL05	02JUL05	07JUL05				
SUHE1400	Engineer Approval of Public Toilet No.2	12	33d	08JUL05	28SEP05	08JUL05	11NOV05				
SUHE1500	Construction of Ma Liu Shui Subway	48	100	30JUN05	18JUL05	30JUN05	18JUL05				
SUHE1600	Engineer Approval of MLS Subway	12	100	08JUL05	28SEP05	08JUL05	28SEP05				
SUHE1700	Retaining Wall No. 1	24	100	21JUL05	01AUG05	21JUL05	01AUG05				
SUHE1800	Engineer Approval for Retaining Wall No. 1	12	86d	02AUG05	24SEP05	02AUG05	11JAN06				
SUHE1900	Construction of Public Landing Step	60	100	10JUN04	12JUL04	10JUN04	12JUL04				
SUHE2000	Engineer Approval of Public Landing Step	12	100	13JUL04	30JUL04	13JUL04	30JUL04				
SUHE2100	Construction of Landscape Node P1, P2 & P3	60	100	05AUG04	19AUG04	05AUG04	19AUG04				
SUHE2200	Engineer Approval of Construction for P1-3	12	100	20AUG04	24AUG04	20AUG04	24AUG04				
Alternative Design Submission											
SUA10000	Submit & Approve Preliminary Design	36	100	18AUG04	28SEP04	18AUG04	28SEP04				
SUA10000	Submit Preliminary Design to ACABAS	3	100	30SEP04	04OCT04	30SEP04	04OCT04				
SUA10000	ACABAS Approval	1	100	19OCT04	19OCT04	19OCT04	19OCT04				
SUA10000	Detail Design	50	100	20OCT04	20JAN05	20OCT04	20JAN05				
SUA10000	Check by ICE	28	100	23DEC04	28JUN05	23DEC04	28JUN05				
SUA10000	Submit Detail Design to the Engineer	0	100	23DEC04	23DEC04	23DEC04	23DEC04				
SUA10000	Engineer Approval of Details Design	28	100	23DEC04	28JUN05	23DEC04	28JUN05				
SUA10000	Comment / Agreement from HyD Structure	23	100	31DEC04	18JUL05	31DEC04	18JUL05				
SUA10000	Comment / Agreement from HyD Maintenance	11	100	31DEC04	25JAN05	31DEC04	25JAN05				
SUA10000	Comment / Agreement from GEO	17	100	31DEC04	18JUL05	31DEC04	18JUL05				
SUA10000	Comment / Agreement from DLO, OSD, TD	11	100	31DEC04	31DEC04	31DEC04	31DEC04				
SUA10000	Engineer Approval of A.D. Founding Level	12	100	21APR05	28APR05	21APR05	28APR05				



Leader - Wai Keo (C&T) Joint Venture
TP3703 - Revised Works Programme - R-P04

10 JUN04	Early bar
20 OCT07	Progress bar
28 SEP05	Critical bar
17 OCT05	Summary bar
5	Start milestone point
5	Finish milestone point

ID	Description	Start	Finish	Start	Finish	Start	Finish
SUA-SAB1000	CEDO Approval of A.D.	28	100	31DEC04 A	28JUL05 A	31DEC04 A	28JUL05 A
SUA-SSU0100	Submit & Approve Preliminary Design	36	100	18AUG04 A	28SEP04 A	18AUG04 A	28SEP04 A
SUA-SSU0200	Submit Preliminary Design to ACABAS	3	100	30SEP04 A	04OCT04 A	30SEP04 A	04OCT04 A
SUA-SSU0300	ACABAS Approval	1	100	19OCT04 A	19OCT04 A	19OCT04 A	19OCT04 A
SUA-SSU0400	Aesthetic Review	59	100	20OCT04 A	12JAN05 A	20OCT04 A	12JAN05 A
SUA-SSU0500	ACABAS Submission (Landscape)	0	100	23MAY05 A	23MAY05 A	23MAY05 A	23MAY05 A
SUA-SSU0600	Detail Design	101	100	18MAY05 A	28MAY05 A	18MAY05 A	28MAY05 A
SUA-SSU0700	Submit Detail Design to the Engineer	0	100	27MAY05 A	27MAY05 A	27MAY05 A	27MAY05 A
SUA-SSU0800	Engineer Approval	24	100	28MAY05 A	28JUL05 A	28MAY05 A	28JUL05 A
SUA-SSU0900	CEDO Approval of A.D.	30	100	28JUL05 A	28JUL05 A	28JUL05 A	28JUL05 A

Eliminates

ID	Description	Start	Finish	Start	Finish
PRCS0100	Mobilization	12	100	28JUN04 A	10JUL04 A
PRCS0200	Erect Contractor Site Office	28	100	31JUL04 A	31JUL04 A

Preliminary Works

ID	Description	Start	Finish	Start	Finish
PRPR0300	Arrange ULG Meeting	60	100	28JUN04 A	18JUL04 A
PRPR0400	Arrange TM/LG Meeting	48	100	28JUN04 A	28JUL04 A
PRPR0500	Tree Survey	6	100	08AUG04 A	08AUG04 A
PRPR0600	Engineer Approval of Tree Survey	12	100	07AUG04 A	07AUG04 A
PRPR0900	Tree Transplant	24	100	31AUG04 A	31AUG04 A
PRPR1000	Tree Felling	12	100	30AUG04 A	30AUG04 A
PRPR1100	Procure Third Party Insurance	12	100	10JUN04 A	28JUN04 A
PRPR1900	Erect Project Sign Board	18	100	20AUG04 A	12MAY05 A
PRPR1400	1st Site Safety/Environmental Committee Meeting	24	100	28JUN04 A	28JUL04 A
PRPR1600	1st SSE/MC Meeting	24	100	27JUL04 A	27JUL04 A
PRPR1700	Propose Location of Temporary Landing Facilities	24	100	28JUL04 A	28JUL04 A
PRPR1800	Propose Location of Temporary Landing Location	12	100	17AUG04 A	17AUG04 A
PRPR1900	Engineer Approval of the Temp Landing Location	15	100	18AUG04 A	18AUG04 A
PRPR1910	Provide Temp Landing Facilities	1	100	08SEP04 A	08SEP04 A
PRPR1900	Engineer Revises Dredging Plan to EPD	18	100	10JUN04 A	08JUL04 A
PRPR2000	Approval of Dumping Permit	42	100	06JUL04 A	15MAR05 A
PRPR2100	Propose Accurate Position Control at Disposal	6	100	25AUG04 A	25OCT04 A
PRPR2200	Engineer Approval of Proposal	12	100	28OCT04 A	28DEC04 A
PRPR2300	Provide Water Quality Monitoring Equipment	21	100	10JUN04 A	11OCT04 A
PRPR2400	Initial Sounding Plan	12	100	13SEP04 A	13SEP04 A
PRPR2500	Ordering of Precast Concrete Pipes	700	100	10JUL04 A	10JUL04 A
PRPR2600	Ordering of DI Pipes and Fittings	1	100	05FEB05 A	05FEB05 A
PRPR2700	Concrete Trial Mix	6	100	13JUL04 A	13JUL04 A
PRPR2800	Manufacture & Delivery of Sewall Blocks	220	70	19DEC04 A	19DEC05 A

Section 5

ID	Description	Start	Finish	Start	Finish
MSS50100	Complete Laying of Utilities	0	-1500	0	06JAN05

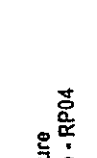
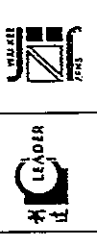
Section 7

ID	Description	Start	Finish	Start	Finish
151.04.0	Early bar	10JUN04	20OCT07	10JUN04	20OCT07
151.04.1	Progress bar	18JUN04	28SEP05	18JUN04	28SEP05
151.04.2	Critical bar	17OCT05	17OCT05	17OCT05	17OCT05
151.04.3	Summary bar	28JAN05	28JAN05	28JAN05	28JAN05
151.04.4	Start milestone point	28JAN05	28JAN05	28JAN05	28JAN05
151.04.5	Finish milestone point	31JUL05	31JUL05	31JUL05	31JUL05

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ID	Description	Orig Dgr	Total Dgr	Percent Complete	Early Start		Early Finish		Lag	Lag Start	Lag Finish	Milestone
					Start	Finish	Start	Finish				
MSS70100	Complete Connection for ASD's Works	0	-173d	0	20JAN06	29DEC04 A	05NOV05 *				31JUL05 *	o Complete Connection for ASD's Contractor
MSS70200	Commence Toilet & Pavilion by ASD's Contractor	0	100	29DEC04 A								o Complete Toilet & Pavilion by ASD's Contractor
MSS70300	Complete Toilet & Pavilion by ASD's Contractor	0	3d	0	05NOV05							o Complete Toilet & Pavilion by ASD's Contractor
Section 8												
MSS90100	Complete Connection of Utilities	0	-21d	0	11MAY06	20APR06 *						o Complete Connection of Utilities
MSS90200	Commence ASD's Works	0	-89d	0	20SEP05 *	22JUL05						Commence ASD's Works
MSS90300	Complete ASD's Works	0	-87d	0	27SEP06	22JUL06 *						o Complete ASD's Works
Installation Order Instruction												
VO0010	Issue VO/047A (Section 5)	0	100	22MAR05 A		22MAR05 A						o Issue VO/047A (Section 5)
VO0020	Issue VO/061 (Section 5)	0	100	12APR05 A		12APR05 A						o Issue VO/061 (Section 7)
VO0030	Issue VO/068 (Section 7)	0	100	03JUN05 A		03JUN05 A						o Issue VO/068A (Section 7 & 11)
VO0040	Issue VO/065A (Section 7 & 12)	0	100	07JUN05 A		07JUN05 A						o Issue VO/065 (Section 8 & 12)
VO0050	Issue VO/068 (Section 7 & 8)	0	100	07JUN05 A		07JUN05 A						o Issue VO/067 (Section 7)
VO0060	Issue VO/067 (Section 7)	0	100	23JUN05 A		23JUN05 A						o Issue VO/067 (Section 7 & 8)
VO0070	Issue VO/067 (Section 7 & 8)	0	100	27JUN05 A		27JUN05 A						o Issue VO/053B (Section 2)
VO0080	Issue VO/065B (Section 2)	0	100	05JUL05 A		05JUL05 A						o Issue VO/057 (Section 7)
VO0090	Issue VO/070 (Section 7)	0	100	11JUL05 A		11JUL05 A						o Issue VO/053B (Section 2)
VO0100	Issue VO/090E (Section 7)	0	100	21JUL05 A		21JUL05 A						o Issue VO/070 (Section 7)
VO0110	Issue VO/058A (Section 7)	0	100	26JUL05 A		26JUL05 A						o Issue VO/030E (Section 7)
VO0120	Issue VO/063A (Section 7)	0	100	28JUL05 A		28JUL05 A						o Issue VO/058A (Section 7)
VO0130	Issue VO/066 (Section 7 & 8)	0	100	28JUL05 A		28JUL05 A						o Issue VO/053A (Section 7)
VO0140	Issue VO/093 (Section 7)	0	100	29AUG05 A		29AUG05 A						o Issue VO/066 (Section 7 & 8)
VO0150	Issue VO/094 (Section 5)	0	100	30AUG05 A		30AUG05 A						o Issue VO/093 (Section 7)
VO0160	Issue VO/093 - Supplement Ref. 2508 (Section 7)	0	100	05SEP05 A		05SEP05 A						o Issue VO/094 (Section 5)
VO0170	Issue VO/099 (Section 6)	0	100	19SEP05 A		19SEP05 A						o Issue VO/093 - Supplement Ref. 2508 (Section 7)
Section 9												
A1AM0A0100	Remove Ext. Surge Mound	22	34d	0	21OCT06	17NOV06	02DEC06	29DEC06				o Issue VO/099 (Section 6)
Drainage Works												
A1AM0W0100	Decide Exact Location of Manholes & Catchpits	1	56d	0	30SEP06	30SEP06	06DEC06	09DEC06				Remove Ext. Surge Mound
A1AM0W0200	S996 - Existing Box Culvert	43	58d	0	12OCT06	30NOV06	16DEC06	10FEB06				Decide Exact Location of Manholes & Catchpits
A1AM0W0300	S979 - Existing Box Culvert	43	58d	0	01DEC06	21JAN06	11FEB06	01APR06				S996 - Existing Box Culvert
A1AM0W0400	S970 - Existing Box Culvert	36	34d	0	29DEC06	19FEB06	09FEB06	21MAR06				S979 - Existing Box Culvert
A1AM0W0500	S978 - Existing Box Culvert	33	34d	0	18NOV06	28DEC06	30DEC06	06FEB06				S970 - Existing Box Culvert
A1AM0W0600	300UC at Planting Area (South Section)	30	72d	0	18MAR06	22APR06	14JUN06	19JUL06				S978 - Existing Box Culvert
A1AM0W0700	300UC at Planting Area (North Section)	24	87d	0	31MAR06	28APR06	21JUN06	19JUL06				300UC at Planting Area (South Section)
A1AM0W0800	375UC at Paving Area (South Section)	27	58d	0	20FEB06	22MAR06	20APR06	01JUN06				300UC at Planting Area (North Section)
A1AM0W0900	375UC at Landing Steps Area	45	82d	0	23JAN06	17MAR06	09APR06	01JUN06				375UC at Paving Area (South Section)
A1AM0W1000	375UC at Paving Area (North Section)	24	34d	0	07MAR06	03APR06	17APR06	15MAY06				375UC at Landing Steps Area
Utilities												
A1AM0U0100	Watermain - WPP4 to M8 (South Section)	15	87d	0	18MAR06	05APR06	03JUL06	19JUL06				375UC at Paving Area (North Section)
A1AM0U0200	Watermain - WPP1-3 to M7 (North Section)	15	76d	0	31MAR06	18APR06	03JUL06	19JUL06				Watermain - WPP4 to M8 (South Section)
A1AM0U0300	Install Public Lighting Post	8	94d	0	18MAR06	27MAR06	11JUL06	19JUL06				Watermain - WPP1-3 to M7 (North Section)



Leader - Wal Kee (C&T) Joint Venture
TP37/03 - Revised Works Programme - RP04

31 JUL 06	10 JUL 06	Early bar
31 AUG 06	20 OCT 07	Proposed bar
13 FEB 06	26 SEP 06	Critical bar
01 FEB 06	17 OCT 06	Summary bar
pg number: 64		

◆ Start milestone point
◆ Finish milestone point

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ID	Description	Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish
A1AMPR0100	Construct Dwarf Wall (South Section)	020FEB06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06
A1AMPR0200	Construct Dwarf Wall (North Section)	07MAR06	30MAR06	30MAR06	30MAR06	30MAR06	30MAR06	30MAR06	30MAR06	30MAR06	30MAR06
A1AMPR0300	Construct Edging Beam (South Section)	023JAN06	18FEB06	18FEB06	18FEB06	18FEB06	18FEB06	18FEB06	18FEB06	18FEB06	18FEB06
A1AMPR0400	Construct Edging Beam (North Section)	01FEB06	08MAR06	08MAR06	08MAR06	08MAR06	08MAR06	08MAR06	08MAR06	08MAR06	08MAR06
A1AMPR0500	Lighting Drawpit & Cable Duct (South Section)	020FEB06	07MAR06	07MAR06	07MAR06	07MAR06	07MAR06	07MAR06	07MAR06	07MAR06	07MAR06
A1AMPR0600	Lighting Drawpit & Cable Duct (North Section)	07MAR06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06
A1AMPR0700	Paving Block (South Section)	023MAR06	10MAY06	10MAY06	10MAY06	10MAY06	10MAY06	10MAY06	10MAY06	10MAY06	10MAY06
A1AMPR0800	Paving Block (North Section)	05APR06	08JUN06	08JUN06	08JUN06	08JUN06	08JUN06	08JUN06	08JUN06	08JUN06	08JUN06
A1CTRA0100	Remove Ext Surcharge Mound	030SEP05	23OCT05	23OCT05	23OCT05	23OCT05	23OCT05	23OCT05	23OCT05	23OCT05	23OCT05
A1CTRA0200	Decide Exact Location of Manholes & Catchpits	030SEP05	30SEP05	30SEP05	30SEP05	30SEP05	30SEP05	30SEP05	30SEP05	30SEP05	30SEP05
A1CTRA0300	S988 - Existing Box Culvert	12OCT05	29NOV05	29NOV05	29NOV05	29NOV05	29NOV05	29NOV05	29NOV05	29NOV05	29NOV05
A1CTRA0400	S981 - Existing Box Culvert	24OCT05	10DEC05	10DEC05	10DEC05	10DEC05	10DEC05	10DEC05	10DEC05	10DEC05	10DEC05
A1CTRA0500	S980 - Existing Box Culvert	18DEC05	08FEB06	08FEB06	08FEB06	08FEB06	08FEB06	08FEB06	08FEB06	08FEB06	08FEB06
A1CTRA0600	S997 - S998	30NOV05	20DEC05	20DEC05	20DEC05	20DEC05	20DEC05	20DEC05	20DEC05	20DEC05	20DEC05
A1CTUT0000	CLP - 11kV Cable (South Section)	12JAN06	24FEB06	24FEB06	24FEB06	24FEB06	24FEB06	24FEB06	24FEB06	24FEB06	24FEB06
A1CTUT0100	CLP - 11kV Cable (North Section)	07FEB06	10MAR06	10MAR06	10MAR06	10MAR06	10MAR06	10MAR06	10MAR06	10MAR06	10MAR06
A1CTUT0200	CATV - 2 ways Cable TV Duct (South Section)	25FEB06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06	17MAR06
A1CTUT0300	CATV - 2 ways Cable TV Duct (North Section)	04MAR06	24MAR06	24MAR06	24MAR06	24MAR06	24MAR06	24MAR06	24MAR06	24MAR06	24MAR06
A1CTUT0400	CATV - Cable Connection	25MAR06	25APR06	25APR06	25APR06	25APR06	25APR06	25APR06	25APR06	25APR06	25APR06
A1CTUT0500	Watermain - 250 & 300 Dia (South Section)	12DEC05	23JAN06	23JAN06	23JAN06	23JAN06	23JAN06	23JAN06	23JAN06	23JAN06	23JAN06
A1CTUT0600	Watermain - 250 Dia (North Section)	24JAN06	17FEB06	17FEB06	17FEB06	17FEB06	17FEB06	17FEB06	17FEB06	17FEB06	17FEB06
A1CTUT0700	Watermain - Testing and Connection of 300 Dia	24JAN06	13FEB06	13FEB06	13FEB06	13FEB06	13FEB06	13FEB06	13FEB06	13FEB06	13FEB06
A1CTUT0800	Watermain - Testing and Connection of 250 Dia	18FEB06	08MAR06	08MAR06	08MAR06	08MAR06	08MAR06	08MAR06	08MAR06	08MAR06	08MAR06
A1CTUT0900	Install Public Lighting Post	02MAY06	10MAY06	10MAY06	10MAY06	10MAY06	10MAY06	10MAY06	10MAY06	10MAY06	10MAY06
A1CTPR0100	Construct Dwarf Wall (South Section)	18MAR06	08APR06	08APR06	08APR06	08APR06	08APR06	08APR06	08APR06	08APR06	08APR06
A1CTPR0200	Construct Dwarf Wall (North Section)	25MAR06	15APR06	15APR06	15APR06	15APR06	15APR06	15APR06	15APR06	15APR06	15APR06
A1CTPR0300	Lay Kerb (South Section)	18MAR06	08APR06	08APR06	08APR06	08APR06	08APR06	08APR06	08APR06	08APR06	08APR06
A1CTPR0400	Lay Kerb (North Section)	23MAR06	07APR06	07APR06	07APR06	07APR06	07APR06	07APR06	07APR06	07APR06	07APR06
A1CTPR0500	Lighting Drawpit & Cable Duct (South Section)	01APR06	22APR06	22APR06	22APR06	22APR06	22APR06	22APR06	22APR06	22APR06	22APR06
A1CTPR0600	Lighting Drawpit & Cable Duct (North Section)	10APR06	15APR06	15APR06	15APR06	15APR06	15APR06	15APR06	15APR06	15APR06	15APR06
A1CTPR0700	Trim Formation & Lay Subbase (South Section)	17APR06	25APR06	25APR06	25APR06	25APR06	25APR06	25APR06	25APR06	25APR06	25APR06
A1CTPR0800	Trim Formation & Lay Subbase (North Section)	14APR06	05MAY06	05MAY06	05MAY06	05MAY06	05MAY06	05MAY06	05MAY06	05MAY06	05MAY06
A1CTPR0900	Lay Cycle Track Pavement (South Section)	02MAY06	22MAY06	22MAY06	22MAY06	22MAY06	22MAY06	22MAY06	22MAY06	22MAY06	22MAY06
A1CTPR1000	Lay Cycle Track Pavement (North Section)	08MAY06	28MAY06	28MAY06	28MAY06	28MAY06	28MAY06	28MAY06	28MAY06	28MAY06	28MAY06
A1CTRM0100	Apply Road Marking	25MAY06	27MAY06	27MAY06	27MAY06	27MAY06	27MAY06	27MAY06	27MAY06	27MAY06	27MAY06
A1CTRM0200	Erect Signage	02MAY06	08MAY06	08MAY06	08MAY06	08MAY06	08MAY06	08MAY06	08MAY06	08MAY06	08MAY06
A1CTRM0300	Install Railings, Fencing & etc	02MAY06	08MAY06	08MAY06	08MAY06	08MAY06	08MAY06	08MAY06	08MAY06	08MAY06	08MAY06

Construct Dwarf Wall (South Section)
 Construct Dwarf Wall (North Section)
 Construct Edging Beam (South Section)
 Construct Edging Beam (North Section)
 Lighting Drawpit & Cable Duct (South Section)
 Lighting Drawpit & Cable Duct (North Section)
 Paving Block (South Section)
 Paving Block (North Section)

Remove Ext Surcharge Mound
 Decide Exact Location of Manholes & Catchpits
 S988 - Existing Box Culvert
 S981 - Existing Box Culvert
 S980 - Existing Box Culvert
 S997 - S998
 CLP - 11kV Cable (South Section)
 CLP - 11kV Cable (North Section)
 CATV - 2 ways Cable TV Duct (South Secti-n)
 CATV - 2 ways Cable TV Duct (North Section)
 CATV - Cable Connection
 Watermain - 250 & 300 Dia (South Section)
 Watermain - 250 Dia (North Section)
 Watermain - Testing and Connection of 300 Dia
 Watermain - Testing and Connection of 250 Dia
 Install Public Lighting Post

Construct Dwarf Wall (South Section)
 Construct Dwarf Wall (North Section)
 Lay Kerb (South Section)
 Lay Kerb (North Section)
 Lighting Drawpit & Cable Duct (South Section)
 Lighting Drawpit & Cable Duct (North Section)
 Trim Formation & Lay Subbase (South Section)
 Trim Formation & Lay Subbase (North Section)
 Lay Cycle Track Pavement (South Section)
 Lay Cycle Track Pavement (North Section)
 Apply Road Marking
 Erect Signage
 Install Railings, Fencing & etc

Apply Road Marking
 Erect Signage
 Install Railings, Fencing & etc

CLP - 11kV Cable (South Section)
 CLP - 11kV Cable (North Section)
 CATV - 2 ways Cable TV Duct (South Secti-n)
 CATV - 2 ways Cable TV Duct (North Section)
 CATV - Cable Connection
 Watermain - 250 & 300 Dia (South Section)
 Watermain - 250 Dia (North Section)
 Watermain - Testing and Connection of 300 Dia
 Watermain - Testing and Connection of 250 Dia
 Install Public Lighting Post

Construct Dwarf Wall (South Section)
 Construct Dwarf Wall (North Section)
 Lay Kerb (South Section)
 Lay Kerb (North Section)
 Lighting Drawpit & Cable Duct (South Section)
 Lighting Drawpit & Cable Duct (North Section)
 Trim Formation & Lay Subbase (South Section)
 Trim Formation & Lay Subbase (North Section)
 Lay Cycle Track Pavement (South Section)
 Lay Cycle Track Pavement (North Section)
 Apply Road Marking
 Erect Signage
 Install Railings, Fencing & etc

Construct Dwarf Wall (South Section)
 Construct Dwarf Wall (North Section)
 Lay Kerb (South Section)
 Lay Kerb (North Section)
 Lighting Drawpit & Cable Duct (South Section)
 Lighting Drawpit & Cable Duct (North Section)
 Trim Formation & Lay Subbase (South Section)
 Trim Formation & Lay Subbase (North Section)
 Lay Cycle Track Pavement (South Section)
 Lay Cycle Track Pavement (North Section)
 Apply Road Marking
 Erect Signage
 Install Railings, Fencing & etc

Apply Road Marking
 Erect Signage
 Install Railings, Fencing & etc

Apply Road Marking
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Apply Road Marking
 Erect Signage
 Install Railings, Fencing & etc

Apply Road Marking
 Erect Signage
 Install Railings, Fencing & etc

ID	Description	Start	Finish	Days	Priority	Completion	Notes
A2TTMS0100	TTA No. 01 - Sul Cheung St. (S/B Slow Lane)	01/03/2006	13/02/2006	18d	1	100	07MAR06 07MAR06
A2TTMS0200	TTA No. 02 - Sul Cheung St. (S/B Fast Lane)	01/24/2006	24/04/2006	18d	1	100	17MAY06 17MAY06
A2TTMS0300	TTA No. 03 - Existing Ma Liu Shui Bridge	01/27/2006	27/05/2006	40d	1	100	22JUL06 22JUL06
A2TTMS0400	TTA No. 04 - Cycle Track	01/28/2006	28/05/2006	5d	1	100	05JUN06 05JUN06
A2TTMS0500	TTA No. 05 - Sul Cheung St. Roundabout	01/27/2006	27/05/2006	101d	1	100	25SEP06 25SEP06
A2TTMS0600	TTA No. 06 - Sul Cheung St. Roundabout	01/22/2006	22/06/2006	101d	1	100	20OCT06 20OCT06
A2TTMS0700	TTA No. 07 - Sul Cheung St. Roundabout	01/13/2006	13/07/2006	5d	1	100	10NOV06 10NOV06
A2TTMS0800	TTA No. 08 - Sul Cheung St. & EML5B	01/21/2006	21/08/2006	16d	1	100	20AUG06 20AUG06
A2TTMS0900	TTA No. 09 - Road 01 & Sul Cheung St. R/A	01/02/2006	02/02/2006	16d	1	100	04DEC06 04DEC06
A2TTMS1000	Implement Permanent Traffic Scheme	01/25/2006	25/02/2006	16d	1	100	28DEC06 28DEC06
Proposed Ma Liu Shui Bridge							
Utility Diversion at Sul Cheung Street							
A2NBUD0100	Trial Pits	100	18AUG04 A	06SEP04 A	18AUG04 A	06SEP04 A	08SEP04 A
A2NBUD0200	Liaison with CLP & WSD for Diversion Works	100	23AUG04 A	17SEP04 A	23AUG04 A	17SEP04 A	17SEP04 A
A2NBUD0300	Submit TTA for Approval	100	16SEP04 A	23SEP04 A	16SEP04 A	23SEP04 A	23SEP04 A
A2NBUD0400	Implement TTA	100	03NOV04 A	03NOV04 A	03NOV04 A	03NOV04 A	03NOV04 A
A2NBUD0500	CLP 11KV Cables Diversion	100	10JAN05 A	10JAN05 A	10JAN05 A	10JAN05 A	10JAN05 A
A2NBUD0610	CLP 132KV Cable Ducts Diversion	100	26DEC04 A	08JAN05 A	26DEC04 A	08JAN05 A	08JAN05 A
A2NBUD0600	Watermain Diversion & Advance Notice to WSD	100	09NOV04 A	11JAN05 A	09NOV04 A	11JAN05 A	11JAN05 A
A2NBUD0610	Watermain Connection by WSD	100	22JAN05 A	22JAN05 A	22JAN05 A	22JAN05 A	22JAN05 A
A2NBUD0700	Diversion of Est. Drainage at VA (VO053B)	0	06DEC05	06JAN06	23DEC05	21JAN06	21JAN06
Existing Structures Survey							
A2NBES0100	Existing Bridge & Road Survey	100	07JUL04 A	20JUL04 A	07JUL04 A	20JUL04 A	20JUL04 A
A2NBES0200	Submit Monitoring Proposal	100	16AUG04 A	23AUG04 A	16AUG04 A	23AUG04 A	23AUG04 A
A2NBES0300	Engineer Approval of Monitoring Proposal	100	24AUG04 A	30AUG04 A	24AUG04 A	30AUG04 A	30AUG04 A
Prestressing Works							
A2NBPR0100	Submit the Coordinates of Culvert	100	26AUG04 A	28AUG04 A	26AUG04 A	28AUG04 A	28AUG04 A
A2NBPR0200	Prestressing (Voided Abutment)	48	100	25SEP04 A	11NOV04 A	25SEP04 A	11NOV04 A
A2NBPR0400	Prestressing (Pier)	30	100	25SEP04 A	23OCT04 A	25SEP04 A	23OCT04 A
A2NBPR0500	Prestressing (North Abutment)	24	100	27AUG04 A	24SEP04 A	27AUG04 A	24SEP04 A
A2NBPR0700	Submit Proposed Founding Level (Voided Abut.)	12	100	01APR05 A	20APR05 A	01APR05 A	20APR05 A
A2NBPR0800	Engineer Approval Founding Level (Voided Abut.)	12	100	21APR05 A	21APR05 A	21APR05 A	21APR05 A
A2NBPR1100	Submit Proposed Founding Level (Pier)	6	100	01APR05 A	20APR05 A	01APR05 A	20APR05 A
A2NBPR1200	Engineer Approval Founding Level (Pier)	12	100	21APR05 A	20APR05 A	21APR05 A	20APR05 A
A2NBPR1300	Submit Proposed Founding Level (N-Abutment)	6	100	01APR05 A	20APR05 A	01APR05 A	20APR05 A
A2NBPR1400	Engineer Approval Founding Level (N-Abutment)	12	100	21APR05 A	20APR05 A	21APR05 A	20APR05 A
A2NBPR1500	Prestressing at North Abutment & Up Ramp	108	87	27JUN05 A	15OCT05	27JUN05 A	08DEC05
Piling Works							
A2NBPW0100	Mobilization of Piling Plants	6	100	06AUG05 A	22AUG05 A	06AUG05 A	22AUG05 A
A2NBPW0200	Construct Pile AV1-AV17	66	10	23AUG05 A	07DEC05	23AUG05 A	08DEC05
A2NBPW1300	Construct Pier Pile P1-P12	36	24d	0	28SEP05	18NOV05	28OCT05
A2NBPW1500	Construct N-Abutment Pile AN1-AN6	24	24d	0	11NOV05	06DEC05	07JAN06
A2NBPW1610	Load Test at Voided Abutment & Pier (Optional)	24	1d	0	06DEC05	06JAN06	09DEC05
A2NBPW1600	Load Test at North Abutment (Optional)	24	24d	0	09DEC05	07JAN06	07FEB06
Ground Beams							
A2NBVA0100	Construct Ground Beams (Stage 1)	12	13d	0	07JAN06	20JAN06	07FEB06
A2NBVA0200	Construct Ground Beams (Stage 2)	12	13d	0	21JAN06	06FEB06	21FEB06
Milestones							
10/01/04	Entry bid						
20/03/07	Progress bar						
28/SEP/05	Critical bar						
17/OCT/05	Summary bar						
7/1	Start milestone point						
	Finish milestone point						

ITTA No. 02 - Sul Cheung St. (S/B Fast Lane)
 ITTA No. 03 - Existing Ma Liu Shui Bridge
 ITTA No. 04 - Cycle Track
 ITTA No. 05 - Sul Cheung St. Roundabout
 ITTA No. 06 - Sul Cheung St. Roundabout
 ITTA No. 07 - Sul Cheung St. Roundabout
 ITTA No. 08 - Sul Cheung St. Roundabout
 ITTA No. 09 - Sul Cheung St. R/A
 ITTA No. 10 - Implement Permanent Traffic Scheme

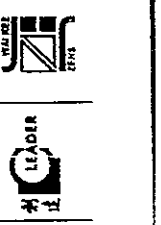
Diversion of Est. Drainage at VA (VO053B)
 Existing Bridge & Road Survey
 Submit Monitoring Proposal
 Engineer Approval of Monitoring Proposal
 Submit the Coordinates of Culvert
 Prestressing (Voided Abutment)
 Prestressing (Pier)
 Prestressing (North Abutment)
 Submit Proposed Founding Level (Voided Abut.)
 Engineer Approval Founding Level (Voided Abut.)
 Submit Proposed Founding Level (Pier)
 Engineer Approval of Founding Level (Pier)
 Submit Proposed Founding Level (N-Abutment)
 Engineer Approval of Founding Level (N-Abutment)
 Prestressing at North Abutment & Up Ramp
 Mobilization of Piling Plants
 Construct Pile AV1-AV17
 Construct Pier Pile P1-P12
 Construct N-Abutment Pile AN1-AN6
 Load Test at Voided Abutment & Pier (Optional)
 Load Test at North Abutment (Optional)
 Construct Ground Beams (Stage 1)
 Construct Ground Beams (Stage 2)

Trial Pits
 Liaison with CLP & WSD for Diversion Works
 Submit TTA for Approval
 Implement TTA
 CLP 11KV Cables Diversion
 CLP 132KV Cable Ducts Diversion
 Watermain Diversion & Advance Notice to WSD
 Watermain Connection by WSD
 Diversion of Est. Drainage at VA (VO053B)
 Existing Bridge & Road Survey
 Submit Monitoring Proposal
 Engineer Approval of Monitoring Proposal
 Submit the Coordinates of Culvert
 Prestressing (Voided Abutment)
 Prestressing (Pier)
 Prestressing (North Abutment)
 Submit Proposed Founding Level (Voided Abut.)
 Engineer Approval Founding Level (Voided Abut.)
 Submit Proposed Founding Level (Pier)
 Engineer Approval of Founding Level (Pier)
 Submit Proposed Founding Level (N-Abutment)
 Engineer Approval of Founding Level (N-Abutment)
 Prestressing at North Abutment & Up Ramp
 Mobilization of Piling Plants
 Construct Pile AV1-AV17
 Construct Pier Pile P1-P12
 Construct N-Abutment Pile AN1-AN6
 Load Test at Voided Abutment & Pier (Optional)
 Load Test at North Abutment (Optional)
 Construct Ground Beams (Stage 1)
 Construct Ground Beams (Stage 2)

ITTA No. 01 - Sul Cheung St. (S/B Slow Lane)
 ITTA No. 02 - Sul Cheung St. (S/B Fast Lane)
 ITTA No. 03 - Existing Ma Liu Shui Bridge
 ITTA No. 04 - Cycle Track
 ITTA No. 05 - Sul Cheung St. Roundabout
 ITTA No. 06 - Sul Cheung St. Roundabout
 ITTA No. 07 - Sul Cheung St. Roundabout
 ITTA No. 08 - Sul Cheung St. Roundabout
 ITTA No. 09 - Sul Cheung St. R/A
 ITTA No. 10 - Implement Permanent Traffic Scheme

Diversion of Est. Drainage at VA (VO053B)
 Existing Bridge & Road Survey
 Submit Monitoring Proposal
 Engineer Approval of Monitoring Proposal
 Submit the Coordinates of Culvert
 Prestressing (Voided Abutment)
 Prestressing (Pier)
 Prestressing (North Abutment)
 Submit Proposed Founding Level (Voided Abut.)
 Engineer Approval Founding Level (Voided Abut.)
 Submit Proposed Founding Level (Pier)
 Engineer Approval of Founding Level (Pier)
 Submit Proposed Founding Level (N-Abutment)
 Engineer Approval of Founding Level (N-Abutment)
 Prestressing at North Abutment & Up Ramp
 Mobilization of Piling Plants
 Construct Pile AV1-AV17
 Construct Pier Pile P1-P12
 Construct N-Abutment Pile AN1-AN6
 Load Test at Voided Abutment & Pier (Optional)
 Load Test at North Abutment (Optional)
 Construct Ground Beams (Stage 1)
 Construct Ground Beams (Stage 2)

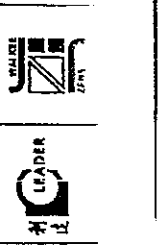
Trial Pits
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 Implement TTA
 CLP 11KV Cables Diversion
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 Engineer Approval Founding Level (Voided Abut.)
 Submit Proposed Founding Level (Pier)
 Engineer Approval of Founding Level (Pier)
 Submit Proposed Founding Level (N-Abutment)
 Engineer Approval of Founding Level (N-Abutment)
 Prestressing at North Abutment & Up Ramp
 Mobilization of Piling Plants
 Construct Pile AV1-AV17
 Construct Pier Pile P1-P12
 Construct N-Abutment Pile AN1-AN6
 Load Test at Voided Abutment & Pier (Optional)
 Load Test at North Abutment (Optional)
 Construct Ground Beams (Stage 1)
 Construct Ground Beams (Stage 2)



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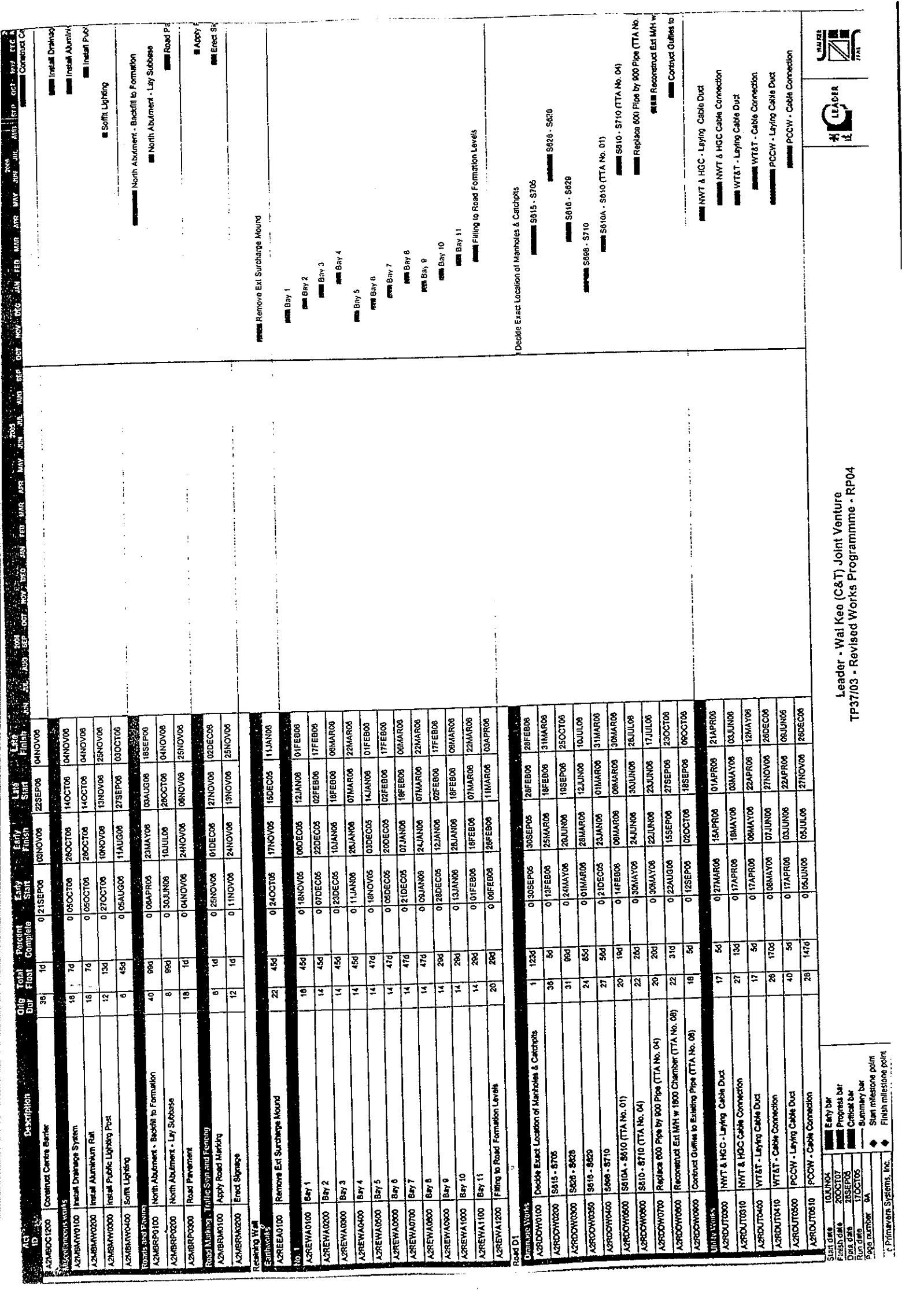
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AZMBVA000	Construct Ground Beams (Stage 3)	12	1d	0	07JAN06	20JAN06	05JAN06	21JAN06			
AZMBVA000	Construct Ground Beams (Stage 4)	12	1d	0	21JAN06	09FEB06	23JAN06	07FEB06			
AZMBVA000	Construct Ground Beams (Stage 5)	12	21d	0	07FEB06	20FEB06	03MAR06	18MAR06			
AZMBVA000	Construct Wall (Stage 1)	16	13d	0	07FEB06	27FEB06	22FEB06	14MAR06			
AZMBVA000	Construct Wall (Stage 2)	16	13d	0	28FEB06	20MAR06	15MAR06	05APR06			
AZMBVA000	Construct Wall (Stage 3)	16	1d	0	07FEB06	24FEB06	08FEB06	25FEB06			
AZMBVA000	Construct Wall (Stage 4)	16	1d	0	25FEB06	15MAR06	27FEB06	10MAR06			
AZMBVA000	Construct Wall (Stage 5)	16	1d	0	16MAR06	05APR06	17MAR06	05APR06			
AZMBVA100	Construct Slab	38	87d	0	05APR06	17MAY06	24JUN06	05AUG06			
AZMBFA0100	Construct Pile Cap	12	40d	0	07JAN06	20JAN06	25FEB06	10MAR06			
AZMBFA0200	Construct Columns	21	40d	0	21JAN06	16FEB06	11MAR06	05APR06			
AZMBNA0100	Construct RE Wall to Formation of Abutment	18	24d	0	08JAN06	28JAN06	08FEB06	28FEB06			
AZMBNA0200	Construct RE Wall to Formation of RC Wall Type A	36	33d	0	01FEB06	14MAR06	11MAR06	22APR06			
AZMBNA0300	Fix RE Wall to Face of Abutment & RC Wall	36	27d	0	13APR06	28MAY06	16MAY06	27JUN06			
AZMBNA1100	Construct Pile Cap	19	24d	0	01FEB06	21FEB06	01MAR06	21MAR06			
AZMBNA1200	Construct Abutment Walls	24	24d	0	22FEB06	21MAR06	23MAR06	19APR06			
AZMBNA1300	Construct RC Wall Type A	36	27d	0	22MAR06	04MAY06	24APR06	06JUN06			
AZMBNA1400	Construct RC Wall Type B	36	33d	0	01FEB06	14MAR06	11MAR06	22APR06			
AZMBNA1600	Construct RC Wall Type C	18	33d	0	10MAR06	05APR06	24APR06	18MAY06			
AZMBDA0100	Erect Scaffolding	18	1d	0	05APR06	25APR06	06APR06	28APR06			
AZMBDA0200	Erect Formwork (Bottom Slab)	12	1d	0	26APR06	10MAY06	27APR06	11MAY06			
AZMBDA0300	Steel Fixing	6	13d	0	11MAY06	19MAY06	26MAY06	05JUN06			
AZMBDA0400	Erect Formwork (Riser)	6	13d	0	20MAY06	29MAY06	06JUN06	14JUN06			
AZMBDA0500	Concreting	1	13d	0	30MAY06	30MAY06	15JUN06	15JUN06			
AZMBDA0600	Erect Formwork (Diaphragm & Top Slab)	10	13d	0	01JUN06	12JUN06	16JUN06	27JUN06			
AZMBDA0700	Steel Fixing	6	13d	0	13JUN06	21JUN06	28JUN06	07JUL06			
AZMBDA0800	Concreting	1	13d	0	22JUN06	22JUN06	08JUL06	08JUL06			
AZMBDA0900	Install, Stress Tendons & Grouting	24	1d	0	08JUL06	04AUG06	10JUL06	05AUG06			
AZMBDA1000	Remove Formwork & Scaffolding	6	45d	0	12AUG06	21AUG06	04OCT06	13OCT06			
AZMBDA1100	Construct Parapet	70	1d	0	05AUG06	29OCT06	07AUG06	27OCT06			
AZMBDA1200	Construct Centre Barrier	36	1d	0	21SEP06	03NOV06	22SEP06	04NOV06			
AZMBDC0100	Erect Scaffolding	18	24d	0	22MAR06	12APR06	20APR06	11MAY06			
AZMBDC0200	Erect Formwork (Bottom Slab)	12	1d	0	11MAY06	24MAY06	12MAY06	25MAY06			
AZMBDC0300	Steel Fixing	6	1d	0	25MAY06	03JUN06	28MAY06	05JUN06			
AZMBDC0400	Erect Formwork (Riser)	6	1d	0	05JUN06	13JUN06	08JUN06	14JUN06			
AZMBDC0500	Concreting	1	1d	0	14JUN06	14JUN06	15JUN06	15JUN06			
AZMBDC0600	Erect Formwork (Diaphragm & Top Slab)	10	1d	0	15JUN06	26JUN06	16JUN06	27JUN06			
AZMBDC0700	Steel Fixing	6	1d	0	27JUN06	08JUL06	26JUN06	07JUL06			
AZMBDC0800	Concreting	1	1d	0	07JUL06	07JUL06	08JUL06	08JUL06			
AZMBDC0900	Install, Stress Tendons & Grouting	24	1d	0	08JUL06	04AUG06	10JUL06	05AUG06			
AZMBDC1000	Remove Formwork & Scaffolding	6	39d	0	18AUG06	28AUG06	04OCT06	13OCT06			
AZMBDC1100	Construct Parapet	70	1d	0	05AUG06	29OCT06	07AUG06	27OCT06			

- Construct Ground Beams (Stage 4)
- Construct Ground Beams (Stage 5)
- Construct Wall (Stage 1)
- Construct Wall (Stage 2)
- Construct Wall (Stage 3)
- Construct Wall (Stage 4)
- Construct Wall (Stage 5)
- Construct Slab
- Construct Pile Cap
- Construct Columns
- Construct RE Wall to Formation of Abutment
- Construct RE Wall to Formation of RC Wall Type A
- Fix RE Wall to Face of Abutment & RC Wall
- Construct Pile Cap
- Construct Abutment Walls
- Construct RC Wall Type A
- Construct RC Wall Type B
- Construct RC Wall Type C
- Erect Scaffolding
- Erect Formwork (Bottom Slab)
- Steel Fixing
- Erect Formwork (Riser)
- Concreting
- Erect Formwork (Diaphragm & Top Slab)
- Steel Fixing
- Concreting
- Install, Stress Tendons & Grouting
- Remove Formwork & Scaffolding
- Construct Parapet
- Construct Centre Barrier
- Erect Scaffolding
- Erect Formwork (Bottom Slab)
- Steel Fixing
- Erect Formwork (Riser)
- Concreting
- Erect Formwork (Diaphragm & Top Slab)
- Steel Fixing
- Concreting
- Install, Stress Tendons & Grouting
- Remove Formwork & Scaffolding
- Construct Parapet



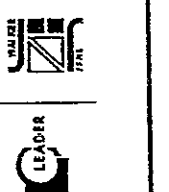
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Start date	10JUN06	Early bar
Finish date	20OCT07	Progress bar
Start date	28SEP05	Critical bar
Finish date	17OCT05	Summary bar
Page number	8A	Start milestone point
		Finish milestone point



2005 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC 2006 2007 2008 2009
 Start Finish Early Start Early Finish Percent Complete Days Total Days First

AG ID	Description	Start	Finish	Early Start	Early Finish	Percent Complete	Days Total	Days First
AG20050100	Concrete Centre Barrier	22SEP05	04NOV05	22SEP05	04NOV05	100	45	1
AG20050200	Install Drainage System	14OCT06	04NOV06	14OCT06	04NOV06	100	22	76
AG20050300	Install Aluminium Rail	14OCT06	04NOV06	14OCT06	04NOV06	100	22	76
AG20050400	Install Public Lighting Post	13NOV06	25NOV06	13NOV06	25NOV06	100	13	130
AG20050500	Soft Lighting	27SEP06	03OCT06	27SEP06	03OCT06	100	6	450
AG20060100	North Abutment - Backfill to Formation	03AUG06	18SEP06	03AUG06	18SEP06	100	46	960
AG20060200	North Abutment - Lay Subbase	20OCT06	04NOV06	20OCT06	04NOV06	100	15	960
AG20060300	Road Pavement	06NOV06	26NOV06	06NOV06	26NOV06	100	21	10
AG20060400	Apply Road Marking	27NOV06	02DEC06	27NOV06	02DEC06	100	5	10
AG20060500	Erect Signage	13NOV06	26NOV06	13NOV06	26NOV06	100	14	10
AG20060600	Remove Ext Surchage Mound	19DEC05	11JAN06	19DEC05	11JAN06	100	23	450
AG20060700	Bay 1	12JAN06	01FEB06	12JAN06	01FEB06	100	10	450
AG20060800	Bay 2	02FEB06	17FEB06	02FEB06	17FEB06	100	14	450
AG20060900	Bay 3	08MAR06	22MAR06	08MAR06	22MAR06	100	14	450
AG20061000	Bay 4	07MAR06	22MAR06	07MAR06	22MAR06	100	14	450
AG20061100	Bay 5	01FEB06	17FEB06	01FEB06	17FEB06	100	14	470
AG20061200	Bay 6	02FEB06	17FEB06	02FEB06	17FEB06	100	14	470
AG20061300	Bay 7	08MAR06	22MAR06	08MAR06	22MAR06	100	14	470
AG20061400	Bay 8	07MAR06	22MAR06	07MAR06	22MAR06	100	14	470
AG20061500	Bay 9	02FEB06	17FEB06	02FEB06	17FEB06	100	14	280
AG20061600	Bay 10	18FEB06	08MAR06	18FEB06	08MAR06	100	14	280
AG20061700	Bay 11	07MAR06	22MAR06	07MAR06	22MAR06	100	14	280
AG20061800	Filling to Road Formation Levels	11MAR06	03APR06	11MAR06	03APR06	100	20	280
AG20070100	Dedite Exact Location of Manholes & Catchpits	28FEB06	28FEB06	28FEB06	28FEB06	100	1	1230
AG20070200	S615 - S705	25MAR06	31MAR06	25MAR06	31MAR06	100	36	50
AG20070300	S828 - S828	20JUN06	25OCT06	20JUN06	25OCT06	100	31	990
AG20070400	S610 - S620	12JUN06	10JUL06	12JUN06	10JUL06	100	24	650
AG20070500	S698 - S710	01MAR06	31MAR06	01MAR06	31MAR06	100	27	560
AG20070600	S610A - S610 (TTA No. 01)	06MAR06	30MAR06	06MAR06	30MAR06	100	20	160
AG20070700	S610 - S710 (TTA No. 04)	30JUN06	26JUL06	30JUN06	26JUL06	100	22	260
AG20070800	Replace 600 Pipe by 900 Pipe (TTA No. 04)	23JUN06	17JUL06	23JUN06	17JUL06	100	20	200
AG20070900	Reconstruct Ext IWH w/ 1800 Chamber (TTA No. 08)	27SEP06	23OCT06	27SEP06	23OCT06	100	22	310
AG20071000	Construct Gullies to Existing Pipe (TTA No. 04)	16SEP06	06OCT06	16SEP06	06OCT06	100	18	50
AG20071100	NWT & HGC - Laying Cable Duct	15APR06	21APR06	15APR06	21APR06	100	17	50
AG20071200	NWT & HGC Cable Connection	03MAY06	03JUN06	03MAY06	03JUN06	100	27	130
AG20071300	WT&T - Laying Cable Duct	22APR06	12MAY06	22APR06	12MAY06	100	17	50
AG20071400	WT&T - Cable Connection	27NOV06	26DEC06	27NOV06	26DEC06	100	28	1700
AG20071500	PCCW - Laying Cable Duct	22APR06	05JUN06	22APR06	05JUN06	100	40	50
AG20071600	PCCW - Cable Connection	27NOV06	26DEC06	27NOV06	26DEC06	100	28	1470



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Start date
 Finish date
 Days left
 Run days
 Page number
 EA
 Legend:
 - Early bar
 - Progress bar
 - Critical bar
 - Summary bar
 - Start milestone point
 - Finish milestone point

ID	Description	Estimate	Start	Finish	Early Start	Early Finish	Percent Complete	Cost	Start	Finish	Early Start	Early Finish
A2RSO1000	8665 - 8635	21	01APR06	05MAY06	01MAR06	21APR06	17MAY06	22APR06	05MAY06	21APR06	01MAR06	21APR06
Utility Works												
A2RSUT0200	NWT & HGC - Laying Cable Duct	16	01MAR06	21APR06	01MAR06	21APR06	28APR06	06APR06	21APR06	01MAR06	01MAR06	28APR06
A2RSUT0210	NWT & HGC - Cable Connection	27	01APR06	18MAY06	18MAY06	03JUN06	11JUL06	03JUN06	03JUN06	18MAY06	18MAY06	11JUL06
A2RSUT0200	WT&T - Laying Cable Duct	18	01MAR06	27APR06	27APR06	18MAY06	11JUL06	27APR06	18MAY06	27APR06	18MAY06	11JUL06
A2RSUT0210	WT&T - Cable Connection	20	02MAY06	04MAY06	04MAY06	27APR06	09JUN06	27APR06	04MAY06	04MAY06	27APR06	09JUN06
A2RSJT0400	PCCW - Laying Cable Duct	36	02MAY06	05JUL06	05JUL06	10JUN06	11JUL06	10JUN06	10JUN06	05JUL06	10JUN06	11JUL06
A2RSJT0410	PCCW - Cable Connection	26	02MAY06	05JUL06	05JUL06	10JUN06	22AUG06	10JUN06	10JUN06	05JUL06	10JUN06	22AUG06
A2RSJT0500	Install Public Lighting Post	9	02JUL06	28JUL06	28JUL06	14AUG06	22AUG06	14AUG06	14AUG06	28JUL06	14AUG06	22AUG06
Public Lighting, Duct and Kerb												
A2RSR0100	Construct Diver Wall	34	05MAY06	15JUN06	15JUN06	19MAY06	27JUN06	19MAY06	15JUN06	05MAY06	15JUN06	27JUN06
A2RSR0200	Lay Kerb	9	11JUL06	20JUL06	20JUL06	22JUL06	01AUG06	20JUL06	20JUL06	11JUL06	20JUL06	01AUG06
A2RSR0300	Lighting Drawpit & Cable Duct	20	16JUN06	10JUL06	10JUL06	28JUN06	21JUL06	10JUL06	10JUL06	16JUN06	10JUL06	21JUL06
Construction												
A2RSR04100	Trim Formation & Lay Subbase	18	16JUN06	07JUL06	07JUL06	12JUL06	01AUG06	12JUL06	07JUL06	16JUN06	07JUL06	01AUG06
A2RSR0200	Road Pavement	18	16JUN06	10AUG06	10AUG06	02AUG06	22AUG06	10AUG06	10AUG06	16JUN06	10AUG06	22AUG06
A2RSR0300	Concrete Footpath between CT and RW no. 1	24	06JUL06	02AUG06	02AUG06	12JUL06	08AUG06	02AUG06	02AUG06	06JUL06	02AUG06	08AUG06
Road Marking, Traffic Signage and Lighting												
A2RSR04100	Apply Road Marking	3	17AUG06	18AUG06	18AUG06	28AUG06	25AUG06	18AUG06	18AUG06	17AUG06	18AUG06	25AUG06
A2RSR04200	Erect Signage	12	03AUG06	18AUG06	18AUG06	09AUG06	22AUG06	03AUG06	03AUG06	03AUG06	18AUG06	22AUG06
A2RSR04300	Install Railing, Fencing & etc	12	03AUG06	18AUG06	18AUG06	09AUG06	22AUG06	03AUG06	03AUG06	03AUG06	18AUG06	22AUG06
Existing Self Changing Street												
Miscellaneous Works												
A2SCDH0100	Decide Exact Location of Manholes & Catchpits	1	30SEP05	30SEP05	13MAY06	13MAY06	13MAY06	13MAY06	13MAY06	30SEP05	13MAY06	13MAY06
A2SCDH0200	\$664 - \$647 (TTA No. 04)	42	01MAY06	27JUN06	27JUN06	15MAY06	04JUL06	27JUN06	27JUN06	01MAY06	15MAY06	04JUL06
A2SCDH0300	Construct Gullies (TTA No. 08)	4	22AUG06	25AUG06	25AUG06	03OCT06	08OCT06	25AUG06	25AUG06	22AUG06	25AUG06	03OCT06
Utility Works												
A2SCUT0500	Watermain - Replace 57MM (TTA No. 04)	24	01JUN06	12JUL06	12JUL06	20JUN06	18JUL06	12JUL06	12JUL06	01JUN06	12JUL06	18JUL06
A2SCUT0700	Watermain - Lay 150MM Crossing (TTA No. 04)	18	01JUN06	12JUL06	12JUL06	27JUN06	18JUL06	12JUL06	12JUL06	01JUN06	12JUL06	18JUL06
A2SCUT0800	Watermain - Lay 150MM Crossing (TTA No. 08)	24	02AUG06	23SEP06	23SEP06	09OCT06	08NOV06	23SEP06	23SEP06	02AUG06	23SEP06	09OCT06
A2SCUT0900	Install Public Lighting Post (TTA No. 04)	8	01AUG06	09AUG06	09AUG06	17AUG06	25AUG06	09AUG06	09AUG06	01AUG06	09AUG06	25AUG06
A2SCUT1000	Install Public Lighting Post (TTA No. 08)	8	03OCT06	17OCT06	17OCT06	21NOV06	28NOV06	17OCT06	17OCT06	03OCT06	17OCT06	28NOV06
Public Lighting, Erection and Kerb												
A2SCRP0100	Lay Kerb (TTA No. 04)	8	22JUL06	31JUL06	31JUL06	28JUL06	05AUG06	31JUL06	31JUL06	22JUL06	31JUL06	05AUG06
A2SCRP0200	Lay Kerb (TTA No. 08)	6	30SEP06	06OCT06	06OCT06	14NOV06	20NOV06	06OCT06	06OCT06	30SEP06	06OCT06	20NOV06
A2SCRP0300	Lighting Drawpit & Cable Duct (TTA No. 04)	6	13JUL06	21JUL06	21JUL06	19JUL06	27JUL06	21JUL06	21JUL06	13JUL06	21JUL06	27JUL06
A2SCRP0400	Lighting Drawpit & Cable Duct (TTA No. 08)	6	23SEP06	28SEP06	28SEP06	07NOV06	13NOV06	28SEP06	28SEP06	23SEP06	28SEP06	13NOV06
Structures and Earthing												
A2SCRP0100	Trim Formation & Lay Subbase (TTA No. 04)	12	22JUL06	09AUG06	09AUG06	28JUL06	10AUG06	09AUG06	09AUG06	22JUL06	09AUG06	28JUL06
A2SCRP0200	Road Pavement (TTA No. 04)	12	05AUG06	18AUG06	18AUG06	11AUG06	24AUG06	18AUG06	18AUG06	05AUG06	18AUG06	24AUG06
A2SCRP0300	Road Pavement (TTA No. 08)	8	09OCT06	17OCT06	17OCT06	21NOV06	28NOV06	17OCT06	17OCT06	09OCT06	17OCT06	28NOV06
A2SCRP0400	Remove Existing Traffic Island (TTA No. 02)	6	25APR06	02MAY06	02MAY06	18MAY06	24MAY06	02MAY06	02MAY06	25APR06	02MAY06	24MAY06
A2SCRP0500	Road Pavement (TTA No. 02)	6	03MAY06	11MAY06	11MAY06	25MAY06	03JUN06	11MAY06	11MAY06	03MAY06	11MAY06	03JUN06
Road Marking, Traffic Signage and Earthing												
A2SCRM0050	Apply Road Marking (TTA No. 04)	1	18AUG06	19AUG06	19AUG06	25AUG06	25AUG06	19AUG06	19AUG06	18AUG06	19AUG06	25AUG06
A2SCRM0100	Apply Road Marking (TTA No. 08)	3	18OCT06	20OCT06	20OCT06	30NOV06	02DEC06	20OCT06	20OCT06	18OCT06	20OCT06	02DEC06
A2SCRM0200	Erect Signage	12	18AUG06	01SEP06	01SEP06	18NOV06	28NOV06	01SEP06	01SEP06	18AUG06	01SEP06	28NOV06
A2SCRM0300	Install Railing, Fencing & etc	12	18AUG06	01SEP06	01SEP06	18NOV06	28NOV06	01SEP06	01SEP06	18AUG06	01SEP06	28NOV06

Docfile: Exact Location of Manholes & Catchpits

- ████████████████████ \$664 - \$647 (TTA No. 04)
- ████████████████████ Construct Gullies (TTA No. 08)
- ████████████████████ Watermain - Replace 57MM (TTA No. 04)
- ████████████████████ Watermain - Lay 150MM Crossing (TTA No. 04)
- ████████████████████ Watermain - Lay 150MM Crossing (TTA No. 08)
- ████████████████████ Watermain - Lay FWM
- ████████████████████ Install Public Lighting Post (TTA No. 04)
- ████████████████████ Install Public Lighting Post (TTA No. 08)
- ████████████████████ Lay Kerb (TTA No. 04)
- ████████████████████ Lay Kerb (TTA No. 08)
- ████████████████████ Lighting Drawpit & Cable Duct (TTA No. 04)
- ████████████████████ Lighting Drawpit & Cable Duct (TTA No. 08)
- ████████████████████ Trim Formation & Lay Subbase
- ████████████████████ Road Pavement (TTA No. 04)
- ████████████████████ Road Pavement (TTA No. 08)
- ████████████████████ Remove Existing Traffic Island (TTA No. 02)
- ████████████████████ Road Pavement (TTA No. 02)
- ████████████████████ Apply Road Marking (TTA No. 04)
- ████████████████████ Apply Road Marking (TTA No. 08)
- ████████████████████ Erect Signage
- ████████████████████ Install Railing, Fencing & etc

Start date	Finish date	Early Start	Early Finish	Summary bar	Critical bar	Start milestone point	Finish milestone point
10JUN04	20OCT07						
20OCT07	28SEP05						
28SEP05	17OCT05						
17OCT05	T/A						

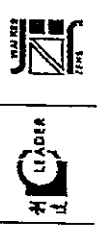
Legend:

- █ Early bar
- █ Progress bar
- █ Critical bar
- █ Summary bar
- ◆ Start milestone point
- ◆ Finish milestone point

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Leader - Wai Kee (C&T) Joint Venture
TP37/03 - Revised Works Programme - RP04

AN ID	Description	CRIP Dur	Total Dur	Percent Complete	Early Start	Early Finish	LMA Start	LMA Finish
Existing St. Charles Street Roundabout								
AZSRPP0100	Laying Lighting Cross Road Duct (TTA No. 05)	4	101d	0	06JUN06	12JUN06	05OCT06	10OCT06
AZSRPP0200	Laying Lighting Cross Road Duct (TTA No. 06)	4	101d	0	28JUN06	28JUN06	24OCT06	27OCT06
Roberts and Parkway								
AZSRPP0300	Demolish Existing Island (TTA No. 05)	6	101d	0	29MAY06	07JUN06	28SEP06	04OCT06
AZSRPP0400	Construct Proposed Island (TTA No. 05)	6	101d	0	13JUN06	21JUN06	11OCT06	19OCT06
AZSRPP0500	Demolish Existing Kerb (TTA No. 06)	2	101d	0	23JUN06	24JUN06	21OCT06	23OCT06
AZSRPP0600	Lay Kerb (TTA No. 06)	6	101d	0	30JUN06	10JUL06	28OCT06	07NOV06
AZSRPP0700	Demolish Existing Roundabout (TTA No. 07)	6	101d	0	14JUL06	22JUL06	11NOV06	20NOV06
AZSRPP0800	Reconstruct Roundabout (TTA No. 07)	6	101d	0	24JUL06	01AUG06	21NOV06	28NOV06
AZSRPP0900	Reinstate Road Pavement (TTA No. 06)	2	101d	0	11JUL06	12JUL06	08NOV06	09NOV06
AZSRPP1000	Resurfacing Wearing Course	6	101d	0	02AUG06	10AUG06	30NOV06	10DEC06
AZSRPP1100	Construct Proposed Island (TTA No. 09)	12	76	0	04DEC06	18DEC06	12DEC06	23DEC06
Road Markings, Traffic Signs and Fencing								
AZSRRA0100	Apply Road Marking	2	101d	0	28AUG06	28AUG06	23DEC06	25DEC06
AZSRRA0200	Erect Signage	12	101d	0	11AUG06	24AUG06	09DEC06	22DEC06
AZSRRA0300	Install Railing, Fencing & etc	12	101d	0	11AUG06	24AUG06	09DEC06	22DEC06
Existing Ma Lu Street Bridge								
Utility Works								
AZEBUT0100	Install Public Lighting Post	6	61d	0	03OCT06	12OCT06	16DEC06	23DEC06
Public Lighting and Roadwork								
AZEBR0100	Lay Kerb (TTA No. 05)	6	46d	0	13JUN06	21JUN06	07AUG06	15AUG06
AZEBR0200	Cable Duct Laying on Island (TTA No. 05)	6	75d	0	28AUG06	01SEP06	24NOV06	30NOV06
AZEBR0300	Cable Duct Laying on Reserve (TTA No. 08)	6	57d	0	05SEP06	11SEP06	19NOV06	18NOV06
Proposed Island								
AZEBR0400	Demolish Existing Parapet (TTA No. 03)	12	114d	0	29MAY06	12JUN06	12OCT06	25OCT06
AZEBR0500	Demolish Island & Paved Area (TTA No. 03)	12	46d	0	29MAY06	12JUN06	24JUL06	05AUG06
AZEBR0600	Road Pavement (TTA No. 03)	6	46d	0	22JUN06	30JUN06	16AUG06	24AUG06
AZEBR0700	Construct Roundabout on V-Abutment (TTA No. 03)	6	114d	0	13JUN06	21JUN06	20OCT06	04NOV06
AZEBR0800	Remove Pavement on Proposed Island (TTA No. 06)	4	75d	0	22AUG06	29AUG06	28NOV06	23NOV06
AZEBR0900	Construct Traffic Island (TTA No. 06)	6	75d	0	02SEP06	11SEP06	01DEC06	09DEC06
AZEBR1000	Construct Remaining Roundabout (TTA No. 06)	12	61d	0	22AUG06	04SEP06	27NOV06	09DEC06
AZEBR1100	Demolish Existing Central Reserve (TTA No. 06)	12	57d	0	22AUG06	04SEP06	28OCT06	11NOV06
AZEBR1200	Construct New Central Reserve (TTA No. 06)	16	57d	0	12SEP06	02OCT06	20NOV06	09DEC06
Road Markings, Traffic Signs and Fencing								
AZEBR1300	Apply Road Marking (TTA No. 03)	1	46d	0	03JUL06	03JUL06	25AUG06	25AUG06
AZEBR1400	Apply Road Marking (TTA No. 06)	1	57d	0	18OCT06	18OCT06	25DEC06	25DEC06
AZEBR1500	Erect Signage	12	57d	0	03OCT06	17OCT06	11DEC06	23DEC06
AZEBR1600	Install Railing, Fencing & etc	12	57d	0	03OCT06	17OCT06	11DEC06	23DEC06
Car Park and Access Road								
Drainage Works								
AZCPDW1200	5662 - Existing Culvert	21	89d	0	06MAY06	30MAY06	19AUG06	12SEP06
AZCPDW1300	CP632 - 5684	10	89d	0	01JUN06	19JUN06	13SEP06	30SEP06
Utility Works								
AZCPUT0500	Install Public Lighting Post	6	106d	0	14AUG06	22AUG06	18DEC06	20DEC06
Public Lighting and Roadwork								
AZCPPK0100	Construct Driver's Wall	23	86d	0	20JUN06	17JUL06	02OCT06	28OCT06
AZCPPK0200	Lay Kerb	6	86d	0	04AUG06	12AUG06	17NOV06	23NOV06





Item No.	Quantity	Unit	Start Date	Finish Date	Notes
A2CPR0000	10	118d	01JUL06	28JUL06	Public Lighting Controller
A2CPR00100	15	88d	01JUL06	03AUG06	Lighting Ductwork & Cable Duct
Road and Driveway					
A2CPR0100	8	96d	01AUG06	22AUG06	Trim Formation & Lay Subso
A2CPR0200	8	96d	02AUG06	31AUG06	Road Pavement
A2CPR0300	18	88d	01AUG06	02SEP06	Construct Footpath
Road Marking, Traffic Signaling and Fencing					
A2CPR0400	2	88d	01SEP06	19SEP06	Apply Road Marking
A2CPR0500	6	88d	04SEP06	06SEP06	Erect Signage
A2CPR06000	6	88d	04SEP06	06SEP06	Install Railing, Fencing & etc
Drainage Works					
A2AMP0100	18	119d	01JUL06	07AUG06	Construct U-Channels
Utility Works					
A2AMJT0100	16	61d	06SEP06	26SEP06	Water Point WP1-3 to Water Meter No.1
A2AMJT0200	17	195d	02JUN06	16JUL06	Water Point WP2-3 to Water Meter No.2
A2AMJT0300	28	107d	02JUL06	21AUG06	Water Point WP3-4 to Water Meter No.3
A2AMJT0400	12	61d	03SEP06	14OCT06	Water Point WP5-3 to Water Meter No.5
Section 3					
MALM Sub-Subway					
Earthworks					
A3MSSE0100	18	5d	03SEP05	22OCT05	Remove Surcharga Mound
Pump House Construction					
A3MSPH0100	8	5d	07NOV05	18NOV05	Construct Base Slab
A3MSPH0200	8	5d	16NOV05	24NOV05	Construct Wall upto Barrel Base Slab
A3MSPH0300	12	5d	09DEC05	22DEC05	Construct Wall up to Top Slab
A3MSPH0400	12	9d	06JAN06	21JAN06	Construct Top Slab
A3MSPH0500	6	5d	02JAN06	07JAN06	Install Hoisting Beam
Subway Tunnel Construction					
A3MSSE0100	24	5d	02OCT05	18NOV05	Excavation
A3MSSE0200	6	30d	02NOV05	30NOV05	Construct Subway #1 Base Slab
A3MSSE0300	6	17d	07NOV05	24NOV05	Construct Subway #2 Base Slab
A3MSSE0400	6	10d	07NOV05	18NOV05	Construct Subway #3 Base Slab
A3MSSE0500	12	5d	08DEC05	20DEC05	Construct Subway #4 Base Slab
A3MSSE06000	16	10d	02DEC05	18JAN06	Construct Subway #1 Wall + Top Slab
A3MSSE07000	16	10d	06DEC05	23DEC05	Construct Subway #2 Wall + Top Slab
A3MSSE08000	16	10d	07NOV05	05DEC05	Construct Subway #3 Wall + Top Slab
A3MSSE09000	16	5d	06JAN06	23JAN06	Construct Subway #4 Wall + Top Slab
A3MSSE1000	16	5d	11FEB06	28JAN06	Backfilling
Subway East Entry Construction					
A3MSSE0100	24	5d	01OCT05	28NOV05	Excavation (East Ramp)
A3MSSE0200	6	11d	12DEC05	17DEC05	Construct E1 Ramp Base Slab
A3MSSE0300	6	11d	06DEC05	10DEC05	Construct E2 Ramp Base Slab
A3MSSE0400	6	9d	02NOV05	03DEC05	Construct E3 Ramp Base Slab
A3MSSE0500	6	9d	18NOV05	28NOV05	Construct E4 Ramp Base Slab
A3MSSE06000	6	11d	02DEC05	10DEC05	Construct E5 Ramp Base Slab
A3MSSE07000	6	9d	03NOV05	01DEC05	Construct E6 Ramp Base Slab
A3MSSE1000	12	5d	08NOV05	22NOV05	Construct E7 Ramp Base Slab

2008 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
 Public Lighting Controller
 Lighting Ductwork & Cable Duct
 Trim Formation & Lay Subso
 Road Pavement
 Construct Footpath
 Apply Road Marking
 Erect Signage
 Install Railing, Fencing & etc
 Construct U-Channels
 Water Point WP1-3 to Water Meter No.1
 Water Point WP2-3 to Water Meter No.2
 Water Point WP3-4 to Water Meter No.3
 Water Point WP5-3 to Water Meter No.5
 Remove Surcharga Mound
 Construct Base Slab
 Construct Wall upto Barrel Base Slab
 Construct Wall up to Top Slab
 Construct Top Slab
 Install Hoisting Beam
 Excavation
 Construct Subway #1 Base Slab
 Construct Subway #2 Base Slab
 Construct Subway #3 Base Slab
 Construct Subway #4 Base Slab
 Construct Subway #1 Wall + Top Slab
 Construct Subway #2 Wall + Top Slab
 Construct Subway #3 Wall + Top Slab
 Construct Subway #4 Wall + Top Slab
 Backfilling
 Excavation (East Ramp)
 Construct E1 Ramp Base Slab
 Construct E2 Ramp Base Slab
 Construct E3 Ramp Base Slab
 Construct E4 Ramp Base Slab
 Construct E5 Ramp Base Slab
 Construct E6 Ramp Base Slab
 Construct E7 Ramp Base Slab

1st date: 10JUN04
 2nd date: 20OCT07
 3rd date: 28SEP05
 4th date: 17OCT05
 5th number: 13A

Legend:
 ■ Early bar
 ■ Progress bar
 ■ Critical bar
 ■ Summary bar
 ◆ Start milestone point
 ◆ Finish milestone point

Leader - Wal Kee (C&T) Joint Venture
TP37/03 - Revised Works Programme - RP04

ACT ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Last Start	Last Finish
A3MSSE1100	Construct E0 Ramp Base Slab	8	13d	0	23NOV05	01DEC05	06DEC05	16DEC05
A3MSSE1300	Construct E9 Ramp Base Slab	8	15d	0	02DEC05	10DEC05	20DEC05	30DEC05
A3MSSE1400	Construct E1 Ramp Walls	6	9d	0	21DEC05	26DEC05	03JAN06	06JAN06
A3MSSE1500	Construct E2 Ramp Walls	6	9d	0	14DEC05	20DEC05	27DEC05	02JAN06
A3MSSE1600	Construct E3 Ramp Walls	6	9d	0	07DEC05	13DEC05	17DEC05	23DEC05
A3MSSE1700	Construct E4 Ramp Walls	6	9d	0	28NOV05	06DEC05	09DEC05	16DEC05
A3MSSE2000	Construct E5 Ramp Walls	10	5d	0	19DEC05	31DEC05	24DEC05	06JAN06
A3MSSE2100	Construct E6 Ramp Walls	10	5d	0	07DEC05	17DEC05	13DEC05	23DEC05
A3MSSE2200	Construct E7 Ramp Walls	12	5d	0	23NOV05	06DEC05	29NOV05	12DEC05
A3MSSE2300	Construct E8 Ramp Walls	10	9d	0	07DEC05	17DEC05	17DEC05	30DEC05
A3MSSE2500	Construct E9 Ramp Walls	8	9d	0	19DEC05	24DEC05	31DEC05	06JAN06
A3MSSE2600	Backfilling	20	5d	0	16DEC05	10JAN06	22DEC05	16JAN06
A3MSSE2700	Install Roof Steel Posts	18	82d	0	11JAN06	02FEB06	27MAR06	17APR06
A3MSSE2800	Construct Roof Slab E6	12	82d	0	03FEB06	18FEB06	18APR06	02MAY06
A3MSSE2900	Construct Roof Slab E5	12	82d	0	17FEB06	02MAR06	03MAY06	18MAY06
A3MSSE3000	Construct Roof Slab E4, E7	12	82d	0	03MAR06	18MAR06	17MAY06	30MAY06
A3MSSE3100	Construct Roof Slab E5, E8	12	82d	0	17MAR06	30MAR06	04JUN06	14JUN06
A3MSSE3200	Construct Roof Slab E2	12	82d	0	31MAR06	14APR06	16JUN06	28JUN06
A3MSSE3300	Construct Roof Slab E1, E9	12	82d	0	15APR06	28APR06	29JUN06	13JUL06

ACT ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Last Start	Last Finish
A3MSHW0100	Excavation (Western Ramp)	41	20d	0	28NOV05	16JAN06	21DEC05	10FEB06
A3MSHW0200	Construct W1 Ramp Base Slab	8	43d	0	17JAN06	25JAN06	10MAR06	18MAR06
A3MSHW0300	Construct W2 Ramp Base Slab	8	42d	0	06JAN06	14JAN06	27FEB06	07MAR06
A3MSHW0400	Construct W3 Ramp Base Slab	10	20d	0	23DEC05	06JAN06	18JAN06	28JAN06
A3MSHW0500	Construct W4 Ramp Base Slab	12	20d	0	06DEC05	22DEC05	04JAN06	17JAN06
A3MSHW0600	Construct W5 Ramp Base Slab	10	20d	0	23DEC05	06JAN06	18JAN06	28JAN06
A3MSHW0700	Construct W6 Ramp Base Slab	6	52d	0	06JAN06	14JAN06	10MAR06	18MAR06
A3MSHW0800	Construct W1 Ramp Walls	10	20d	0	24FEB06	07MAR06	20MAR06	30MAR06
A3MSHW0900	Construct W2 Ramp Walls	10	20d	0	13FEB06	27FEB06	08MAR06	18MAR06
A3MSHW1000	Construct W3 Ramp Walls	10	20d	0	01FEB06	11FEB06	24FEB06	07MAR06
A3MSHW1100	Construct W4 Ramp Walls	20	20d	0	06JAN06	28JAN06	01FEB06	23FEB06
A3MSHW1200	Construct W5 Ramp Walls	20	20d	0	01FEB06	23FEB06	24FEB06	18MAR06
A3MSHW1300	Construct W6 Ramp Walls	20	20d	0	24FEB06	07MAR06	20MAR06	30MAR06
A3MSHW1400	Backfilling	20	20d	0	08MAR06	31MAR06	31MAR06	24APR06
A3MSHW1500	Install Roof Posts	16	20d	0	31MAR06	21APR06	25APR06	18MAY06
A3MSHW1600	Construct Roof Slab W3	12	20d	0	22APR06	09MAY06	17MAY06	30MAY06
A3MSHW1700	Construct Roof Slab W4	12	20d	0	08MAY06	20MAY06	01JUN06	14JUN06
A3MSHW1800	Construct Roof Slab W2, W5	12	20d	0	22MAY06	06JUN06	15JUN06	28JUN06
A3MSHW1900	Construct Roof Slab W1, W6	12	20d	0	06JUN06	18JUN06	28JUN06	13JUL06

ACT ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Last Start	Last Finish
A3MSHW2000	Pumping and Drainage System	30	158d	0	06MAR06	12APR06	25SEP06	31OCT06
A3MSHW2100	Pumping System Installation	20	20d	0	20JUN06	13JUL06	14JUL06	08AUG06
A3MSHW2200	Drainage System Installation	24	44d	0	06OCT06	09NOV06	29NOV06	29DEC06
A3MSHW2300	Miscellaneous Metal Works	24	20d	0	14JUL06	10AUG06	07AUG06	02SEP06

ACT ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Last Start	Last Finish
A3MSHW2400	Finishing Works at Barril	24	20d	0	14JUL06	10AUG06	07AUG06	02SEP06

Legend:
 ■ Early bar
 ■ Progress bar
 ■ Critical bar
 ■ Summary bar
 ◆ Start milestone point
 ◆ Finish milestone point

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ID	Description	Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish
		01	02	03	04	05	06	07	08	09	10	11	12
A3ASFFW020	Finishing Works at East Ramp	24	200	01AUG08	07SEP08	05OCT08	31OCT08						
A3ASFFW030	Finishing Works at West Ramp	24	200	01AUG08	07SEP08	05OCT08	31OCT08						
A3ASSEM000	Electrical Installation at Barrel & Pump House	24	680	01AUG08	07SEP08	05OCT08	28NOV08						
A3ASSEM020	Electrical Installation at East Ramp	24	440	01AUG08	07SEP08	05OCT08	28NOV08						
A3ASSEM030	Electrical Installation at West Ramp	24	200	01AUG08	07SEP08	05OCT08	28NOV08						
A3ASSTC010	Pumping System & Electrical Installation	24	200	01NOV08	02DEC08	28NOV08	28DEC08						
Decision Works													
A3LUDW0100	Decide Location of Manholes & Catchpits	1	1720	01SEP08	30SEP08	27APR09	27APR09						
A3LUDW0200	F302 - F306	28	230	01JUN08	05JUL08	03JUL08	01AUG08						
A3LUDW0300	Final PR for F308 - F308A (Deleted)	10		28JAN08 A	28JAN08 A	28JAN08 A	28JAN08 A						
A3LUDW0400	F308 - F308A	11	3180	01SEP08	14OCT08	19OCT08	01NOV08						
A3LUDW0500	F308 - F308A (TTA No. 08)	11	810	02AUG08	02SEP08	27NOV08	06DEC08						
A3LUDW0600	F308A - Existing Sewer Manhole	21	3180	01OCT08	08NOV08	02NOV08	25NOV08						
A3LUDW0700	S712 - S822	21	230	01MAR08	23APR08	23MAY08	23MAY08						
A3LUDW0800	S817 - S818	11	230	02APR08	09MAY08	24MAY08	06JUN08						
A3LUDW0900	S818 - S824	21	230	01MAY08	03JUN08	07JUN08	30JUN08						
A3LUDW1000	S818 - S822 (TTA No. 04)	26	480	01JUL08	04AUG08	29AUG08	27SEP08						
A3LUDW1100	S713 - S834	21	230	01JUL08	29JUL08	02AUG08	25AUG08						
Utility Works													
A3LUDW1200	CLP - Laying LV Cable	5	230	02SEP08	07SEP08	29SEP08	04OCT08						
A3LUDW1300	CLP - Construct Pillar Box	5	1470	01MAR08	09APR08	23SEP08	28SEP08						
A3LUDW1400	Install Public Lighting Post	8	870	05SEP08	19SEP08	18DEC08	20DEC08						
Public Lighten, Dirt and Kerb													
A3LUPR0100	Construct Dwarf Wall	50	230	01JUL08	01SEP08	02AUG08	28SEP08						
A3LUPR0200	Construct Dwarf Wall (TTA No. 04)	6	480	05AUG08	11AUG08	28SEP08	04OCT08						
A3LUPR0300	Lay Kerb (TTA No. 04)	12	230	28SEP08	18OCT08	27OCT08	10NOV08						
A3LUPR0400	Lay Kerb (TTA No. 06)	8	880	02AUG08	28AUG08	02DEC08	28DEC08						
A3LUPR0500	Lighting Drape & Cable Duct (TTA No. 04)	18	230	08SEP08	28SEP08	05OCT08	28OCT08						
A3LUPR0600	Lighting Drape & Cable Duct (TTA No. 06)	6	870	02AUG08	04SEP08	11DEC08	10DEC08						
Roads and Pavement													
A3LUPR0700	Thin Formation & Lay Subbase (TTA No. 08)	8	430	01AUG08	23OCT08	05DEC08	19DEC08						
A3LUPR0800	Road Pavement (TTA No. 08)	8	430	02AUG08	02NOV08	14DEC08	22DEC08						
A3LUPR0900	Construct Footpath (TTA No. 04)	24	230	01AUG08	11NOV08	11NOV08	08DEC08						
A3LUPR1000	Construct Footpath (TTA No. 06)	8	230	01NOV08	18NOV08	09DEC08	18DEC08						
Road Marking, Traffic Sign and Finishing													
A3LUPR1100	Apply Road Marking	2	230	02NOV08	28NOV08	23DEC08	25DEC08						
A3LUPR1200	Erect Signs	6	230	02NOV08	25NOV08	18DEC08	22DEC08						
A3LUPR1300	Install Railings, Fencing & etc	8	230	02NOV08	25NOV08	18DEC08	22DEC08						
Amenity Area													
A3LUPR1400	Construct U-Chamber	36	510	02SEP08	14OCT08	15NOV08	26DEC08						
Water Points													
A3LUPR1500	Water Point WP4-2 to Water Meter No.3	10	510	09SEP08	27SEP08	10NOV08	28NOV08						
A3LUPR1600	Water Point WP5-2 to Water Meter No.6	10	510	09SEP08	10OCT08	28NOV08	06DEC08						
A3LUPR1700	Water Point WP5-2 to Water Meter No.8	14	510	01OCT08	28OCT08	11DEC08	28DEC08						

2008 2009
 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
 2008 2009
 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
 2008 2009
 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Decide Location of Manholes & Catchpits
 F302 - F306
 F308 - F308A
 S712 - S822
 S817 - S818
 S818 - S824
 S878 - S823 (TTA No. 04)
 S713 - S834
 CLP - Laying LV Cable
 CLP - Construct Pillar Box
 Install Public Lighting Post
 Construct Dwarf Wall
 Construct Dwarf Wall (TTA No. 04)
 Lay Kerb (TTA No. 04)
 Lay Kerb (TTA No. 06)
 Lighting Drape & Cable
 Lighting Drape & Cable
 Thin Formation
 Road Pavement
 Construct F
 Construct
 Apply R
 Erect Sign
 Install R
 Construct U-Chamber
 Water Point WP4-2
 Water Point WP5
 Water Point W

1 Trial PR for F308 - F308A (Deleted)

CLP - Laying LV Cable
 CLP - Construct Pillar Box
 Install Public Lighting Post
 Construct Dwarf Wall
 Construct Dwarf Wall (TTA No. 04)
 Lay Kerb (TTA No. 04)
 Lay Kerb (TTA No. 06)
 Lighting Drape & Cable
 Lighting Drape & Cable
 Thin Formation
 Road Pavement
 Construct F
 Construct
 Apply R
 Erect Sign
 Install R
 Construct U-Chamber
 Water Point WP4-2
 Water Point WP5
 Water Point W

CLP - Laying LV Cable
 CLP - Construct Pillar Box
 Install Public Lighting Post
 Construct Dwarf Wall
 Construct Dwarf Wall (TTA No. 04)
 Lay Kerb (TTA No. 04)
 Lay Kerb (TTA No. 06)
 Lighting Drape & Cable
 Lighting Drape & Cable
 Thin Formation
 Road Pavement
 Construct F
 Construct
 Apply R
 Erect Sign
 Install R
 Construct U-Chamber
 Water Point WP4-2
 Water Point WP5
 Water Point W

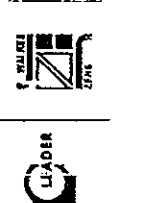
CLP - Laying LV Cable
 CLP - Construct Pillar Box
 Install Public Lighting Post
 Construct Dwarf Wall
 Construct Dwarf Wall (TTA No. 04)
 Lay Kerb (TTA No. 04)
 Lay Kerb (TTA No. 06)
 Lighting Drape & Cable
 Lighting Drape & Cable
 Thin Formation
 Road Pavement
 Construct F
 Construct
 Apply R
 Erect Sign
 Install R
 Construct U-Chamber
 Water Point WP4-2
 Water Point WP5
 Water Point W

CLP - Laying LV Cable
 CLP - Construct Pillar Box
 Install Public Lighting Post
 Construct Dwarf Wall
 Construct Dwarf Wall (TTA No. 04)
 Lay Kerb (TTA No. 04)
 Lay Kerb (TTA No. 06)
 Lighting Drape & Cable
 Lighting Drape & Cable
 Thin Formation
 Road Pavement
 Construct F
 Construct
 Apply R
 Erect Sign
 Install R
 Construct U-Chamber
 Water Point WP4-2
 Water Point WP5
 Water Point W

CLP - Laying LV Cable
 CLP - Construct Pillar Box
 Install Public Lighting Post
 Construct Dwarf Wall
 Construct Dwarf Wall (TTA No. 04)
 Lay Kerb (TTA No. 04)
 Lay Kerb (TTA No. 06)
 Lighting Drape & Cable
 Lighting Drape & Cable
 Thin Formation
 Road Pavement
 Construct F
 Construct
 Apply R
 Erect Sign
 Install R
 Construct U-Chamber
 Water Point WP4-2
 Water Point WP5
 Water Point W

CLP - Laying LV Cable
 CLP - Construct Pillar Box
 Install Public Lighting Post
 Construct Dwarf Wall
 Construct Dwarf Wall (TTA No. 04)
 Lay Kerb (TTA No. 04)
 Lay Kerb (TTA No. 06)
 Lighting Drape & Cable
 Lighting Drape & Cable
 Thin Formation
 Road Pavement
 Construct F
 Construct
 Apply R
 Erect Sign
 Install R
 Construct U-Chamber
 Water Point WP4-2
 Water Point WP5
 Water Point W

CLP - Laying LV Cable
 CLP - Construct Pillar Box
 Install Public Lighting Post
 Construct Dwarf Wall
 Construct Dwarf Wall (TTA No. 04)
 Lay Kerb (TTA No. 04)
 Lay Kerb (TTA No. 06)
 Lighting Drape & Cable
 Lighting Drape & Cable
 Thin Formation
 Road Pavement
 Construct F
 Construct
 Apply R
 Erect Sign
 Install R
 Construct U-Chamber
 Water Point WP4-2
 Water Point WP5
 Water Point W



Leader - Wai Kee (C&T) Joint Venture
 TP37/03 - Revised Works Programme - RP04

Start date 10/1/08
 Finish date 20/02/09
 Critical bar
 Summary bar
 Start milestone point
 Finish milestone point
 c-Primavera Systems, Inc.

AI ID	Description	Orig. Dur.	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
AIPTFC0100	Excavation to Formation Level	6	36d	0	28SEP05	06OCT05	12NOV05	18NOV05
AIPTFC0200	Subsoil Inspection by Structural Engineer	1	36d	0	07OCT05	07OCT05	18NOV05	18NOV05
AIPTFC0300	Blinding	1	36d	0	08OCT05	08OCT05	21NOV05	21NOV05
AIPTFC0400	Steel Fixing for Footing	6	36d	0	10OCT05	17OCT05	22NOV05	28NOV05
AIPTFC0500	Formwork	4	36d	0	18OCT05	21OCT05	28NOV05	02DEC05
AIPTFC0600	Concreting	1	36d	0	22OCT05	22OCT05	03DEC05	03DEC05
AIPTFC0700	Steel Fixing for Walls & Columns	3	36d	0	24OCT05	28OCT05	05DEC05	07DEC05
AIPTFC0800	Formwork	4	36d	0	27OCT05	31OCT05	08DEC05	12DEC05
AIPTFC0900	Concreting	1	36d	0	01NOV05	01NOV05	13DEC05	13DEC05
AIPTFC1000	Remove Formwork	6	36d	0	02NOV05	08NOV05	14DEC05	20DEC05
AIPTFC1100	Backfilling	12	36d	0	08NOV05	22NOV05	21DEC05	03JAN06
Ground Floor Slab Construction								
AIPTGF0100	Erect Propping & Formwork	6	36d	0	23NOV05	28NOV05	08JAN06	12JAN06
AIPTGF0200	Ground Slab Steel Fixing	3	36d	0	30NOV05	02DEC05	13JAN06	16JAN06
AIPTGF0300	Formwork	2	36d	0	03DEC05	05DEC05	17JAN06	18JAN06
AIPTGF0400	Concreting	1	36d	0	09DEC05	09DEC05	18JAN06	18JAN06
AIPTGF0500	Erect Scaffolding	3	36d	0	07DEC05	09DEC05	20JAN06	23JAN06
AIPTGF0600	Walls & Columns Formwork	3	36d	0	10DEC05	13DEC05	24JAN06	26JAN06
AIPTGF0700	Steel Fixing for Walls & Columns	3	36d	0	14DEC05	16DEC05	27JAN06	01FEB06
AIPTGF0800	Formwork	3	36d	0	17DEC05	20DEC05	04FEB06	04FEB06
AIPTGF0900	Concreting	1	36d	0	21DEC05	21DEC05	08FEB06	08FEB06
AIPTGF1000	Remove Formwork & Propping	12	36d	0	02JAN06	14JAN06	15FEB06	28FEB06
Upper Mezzanine Floor Slab Construction								
AIPTMF0100	Erect Propping & Formwork	6	36d	0	16JAN06	21JAN06	01MAR06	07MAR06
AIPTMF0200	Mezzanine Slab Steel Fixing	3	36d	0	23JAN06	23JAN06	08MAR06	10MAR06
AIPTMF0300	Formwork	2	36d	0	28JAN06	21JAN06	11MAR06	13MAR06
AIPTMF0400	Concreting	1	36d	0	28JAN06	28JAN06	14MAR06	14MAR06
AIPTMF0500	Walls & Columns Formwork	3	36d	0	01FEB06	09FEB06	15MAR06	11MAR06
AIPTMF0600	Steel Fixing for Walls & Columns	3	36d	0	04FEB06	07FEB06	18MAR06	21MAR06
AIPTMF0700	Formwork	3	36d	0	08FEB06	10FEB06	22MAR06	24MAR06
AIPTMF0800	Concreting	1	36d	0	11FEB06	11FEB06	25MAR06	28MAR06
AIPTMF0900	Remove Formwork & Propping	12	36d	0	21FEB06	08MAR06	05APR06	18APR06
Upper Mezzanine Floor Slab Construction								
AIPTUF0100	Erect Propping & Formwork	6	36d	0	07MAR06	13MAR06	19APR06	25APR06
AIPTUF0200	Upper Mezzanine Slab Steel Fixing	3	36d	0	14MAR06	18MAR06	26APR06	28APR06
AIPTUF0300	Formwork	2	36d	0	17MAR06	18MAR06	29APR06	02MAY06
AIPTUF0400	Concreting	1	36d	0	20MAR06	20MAR06	03MAY06	03MAY06
AIPTUF0500	Remove Formwork & Propping	12	36d	0	28MAR06	12APR06	12MAY06	25MAY06
Structural Steelwork								
AIPTSS0100	Prepare & Submit Shop Drawings	30	33d	90	01SEP05 A	30SEP05	01SEP05 A	10NOV05
AIPTSS0200	Engineer Approval of Shop Drawings	12	33d	0	03OCT05	17OCT05	11NOV05	28NOV05
AIPTSS0300	Procurement of Structural Steel	120	33d	0	18OCT05	10MAR06	25NOV05	18APR06
AIPTSS0400	Delivery of Structural Steel Materials	12	33d	0	11MAR06	24MAR06	26APR06	04MAY06
AIPTSS0500	Inspection & Testing	10	33d	0	25MAR06	18APR06	05MAY06	25MAY06

WAI KEE LEADER

Prepare & Submit Shop Drawings
 Engineer Approval of Shop Drawings
 Procurement of Structural Steel
 Delivery of Structural Steel Materials
 Inspection & Testing

Excavation to Formation Level
 Subsoil Inspection by Structural Engineer
 Blinding
 Steel Fixing for Footing
 Formwork
 Concreting
 Steel Fixing for Walls & Columns
 Formwork
 Concreting
 Remove Formwork
 Backfilling
 Erect Propping & Formwork
 Ground Slab Steel Fixing
 Formwork
 Concreting
 Erect Scaffolding
 Walls & Columns Formwork
 Steel Fixing for Walls & Columns
 Formwork
 Concreting
 Remove Formwork & Propping
 Erect Propping & Formwork
 Mezzanine Slab Steel Fixing
 Formwork
 Concreting
 Walls & Columns Formwork
 Steel Fixing for Walls & Columns
 Formwork
 Concreting
 Remove Formwork & Propping
 Erect Propping & Formwork
 Upper Mezzanine Slab Steel Fixing
 Formwork
 Concreting
 Walls & Columns Formwork
 Steel Fixing for Walls & Columns
 Formwork
 Concreting
 Remove Formwork & Propping
 Erect Propping & Formwork
 Upper Mezzanine Slab Steel Fixing
 Formwork
 Concreting
 Remove Formwork & Propping
 Erect Propping & Formwork
 Upper Mezzanine Slab Steel Fixing
 Formwork
 Concreting
 Remove Formwork & Propping

18JAN04
 20OCT07
 28SEP05
 17OCT05
 18A
 18A

Early bar
 Progress bar
 Critical bar
 Summary bar
 Start milestone point
 Finish milestone point

Leader - Wai Kee (C&T) Joint Venture
 TP37103 - Revised Works Programme - RP04

Prepared by: [Name]
 Checked by: [Name]
 Approved by: [Name]

ID	Description	Start	Complete	Start	Finish	Start	Finish	Start	Finish
AFTSS0001	Fabrication & Painting of Steelworks	48	33d	17APR06	19JUN06	20MAY06	22JUL06		
AFTSS0010	Delivery of Prefabricated Steelworks	12	33d	14JUN06	27JUN06	24JUL06	05AUG06		
AFTSS0060	Erection of Steelworks	30	33d	28JUN06	08AUG06	07AUG06	16SEP06		
AFTSS0080	Touch Up Painting	12	33d	10AUG06	23AUG06	18SEP06	30SEP06		
Accessories, Buildings Works and Finishes									
AFTAB0100	Solid Concrete Block Work Wall	36	36d	13APR06	28MAY06	20MAY06	06JUL06		
AFTAB0200	Internal Wall Tile	24	36d	28MAY06	23JUN06	10JUL06	05AUG06		
AFTAB0300	External Wall Tile	24	33d	21SEP06	19OCT06	01NOV06	29NOV06		
AFTAB0400	Toilet Accessories Installation	24	36d	24JUN06	22JUL06	07AUG06	02SEP06		
AFTAB0500	Floor Tile	24	36d	24JUL06	19AUG06	04SEP06	30SEP06		
AFTAB0600	Roof Cladding	24	33d	24AUG06	20SEP06	09OCT06	31OCT06		
AFTAB0700	Metal Works & Ironmongery Installation	24	33d	20OCT06	17NOV06	29NOV06	26DEC06		
Plumbing Works									
AFTPL0100	Plumbing Works	24	36d	21AUG06	16SEP06	09OCT06	31OCT06		
E&M Works									
AFTEL0100	Electrical & Mechanical Installations	48	36d	16SEP06	14NOV06	01NOV06	26DEC06		

ID	Description	Start	Complete	Start	Finish	Start	Finish	Start	Finish
Drainage Works									
ASRLDW0100	Decide Exact Location of Manholes & Catchpits	1		20JUL06 A	26JUL06 A	26JUL06 A	26JUL06 A		
ASRLDW0160	Hand Over 2x2500 Pipe Upstream for Connection	0		20APR05 A		20APR05 A			
ASRLDW1100	S413 - S407 (2x2500)	84		10SEP04 A	19JUL05 A	10SEP04 A	19JUL05 A		
ASRLDW1200	F424 to F427 (In Zone ZC)	31		10SEP04 A	12JAN05 A	10SEP04 A	12JAN05 A		
ASRLDW1300	Outlet - S413 (2x2500)	33		20NOV04 A	28MAY05 A	20NOV04 A	28MAY05 A		
ASRLDW2100	S407 - S407A (2x2500)	30		02JAN05 A	19JUL05 A	02JAN05 A	19JUL05 A		
ASRLDW2200	Connection Point to F431 to F428 (In Zone ZC)	30		10DEC04 A	19JUL05 A	10DEC04 A	19JUL05 A		
ASRLDW2300	SL4-019a - S413 & gullies	18		19JAN05 A	28APR05 A	19JAN05 A	28APR05 A		
ASRLDW2400	SL4-020a - S412a	12		01MAY05 A	17MAR05 A	01MAY05 A	17MAR05 A		
ASRLDW2500	CP#10 - S412a	12		21FEB05 A	14APR05 A	21FEB05 A	14APR05 A		
ASRLDW2600	SL4-023a - S412a	12		01MAY05 A	09APR05 A	01MAY05 A	09APR05 A		
ASRLDW3100	S408 - S407 (1800)	12		06MAY05 A	03MAY05 A	06MAY05 A	03MAY05 A		
ASRLDW3200	Petro Interceptor - S407A & S412	18		06MAY05 A	15JUL05 A	06MAY05 A	15JUL05 A		
ASRLDW3500	Connection Point - SL4-020a - S413	16		01JAN05 A	19MAR05 A	01JAN05 A	19MAR05 A		
ASRLDW3400	S407A - Upstream	20		06MAY05 A	19JUL05 A	06MAY05 A	19JUL05 A		
ASRLDW3500	SL4-023a - SL4-023a & gullies	18		07MAY05 A	17MAY05 A	07MAY05 A	17MAY05 A		
ASRLDW4100	Connection Point to F435	16		18DEC04 A	06APR05 A	18DEC04 A	06APR05 A		
ASRLDW4200	SL4-023a - SL4-020a & gullies	16		06MAY05 A	28APR05 A	06MAY05 A	28APR05 A		
ASRLDW4300	F427 - F428	15		10SEP04 A	08SEP05 A	10SEP04 A	08SEP05 A		
ASRLDW4400	F414a - F414	6	-34d	11APR05 A	28SEP05	11APR05 A	18AUG05		
ASRLDW4500	Connection Point - S404 - S408	16	-99d	06MAY05 A	30SEP05	06MAY05 A	03JUN05		
ASRLDW4600	CP#4 & CP#5 - SL4-008a	10		02JUL05 A	24AUG05 A	02JUL05 A	24AUG05 A		
ASRLDW5100	F424 - F422	12		06JUL05 A	28JUL05 A	06JUL05 A	28JUL05 A		
ASRLDW5110	F422 - F421	6		06APR05 A	28JUL05 A	06APR05 A	28JUL05 A		
ASRLDW5200	SL4-001b - S407 & gullies	36	-99d	27JUL05 A	17OCT05	27JUL05 A	18JUN05		
ASRLDW5300	CP#7 & CP#8 - S408	10	-99d	14JUN05 A	10OCT05	14JUN05 A	13JUN05		
ASRLDW5400	S408 - SL4-008a	10	-99d	23AUG05 A	05OCT05	23AUG05 A	13JUN05		

Legend

- 10JUN04 - Early bar
- 20OCT07 - Progress bar
- 28SEP05 - Critical bar
- 17OCT05 - Summary bar
- 17A - Start milestone point
- 17A - Finish milestone point

Section 5
Road LA

Leader - Wai Kee (C&T) Joint Venture
TP37/03 - Revised Works Programme - RP04

2 Primavera Systems, Inc.

ACT ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	L10 Start	L10 Finish	2004	2005
ASRLRP0200	Construct Dwarf Wall (North)	12	-1284	0	18JAN06	03FEB06	18AUG05	28AUG05		
ASRLRP0300	Lay Kerb (South)	10	-1330	0	18NOV05	28NOV05	06JUN05	21JUN05		
ASRLRP0400	Lay Kerb (North)	22	-1840	0	07JAN06	07FEB06	23JUN05	19JUL05		
ASRLRP0500	Lay Kerb (Parking Area)	20	-550	0	12OCT05	08NOV05	28AUG05	21SEP05		
ASRLRP0600	Drainpit & Duct (South)	22	-716	0	18NOV05	10DEC05	22AUG05	15SEP05		
ASRLRP0700	Drainpit & Duct (North)	22	-1256	0	21JAN06	17FEB06	22AUG05	15SEP05		
ASRLRP0800	Drainpit & Duct (CT)	26	-326	0	18OCT05	18NOV05	07SEP05	08OCT05		
Roads and Paving										
ASRLRP0100	Road Pavement, Cycle Track & Footpath	86	-1644	0	04FEB06	22APR06	20JUL05	08OCT05		
ASRLRP0200	Construct Temporary Cycle Track (Phase 1)	6	0	100	18APR05 A	20APR05 A	18APR05 A	20APR05 A		
ASRLRP0300	Complete Outstanding Drainage & Road Pavement	6	-588	0	24DEC05	02JAN06	18OCT05	24OCT05		
ASRLRP0400	Removal of Temporary Cycle Track	3	-588	0	24DEC05	23DEC05	14OCT05	17OCT05		
ASRLRP0500	Possess Additional Works Area	0	0	100	21APR05 A	21APR05 A	21APR05 A	21APR05 A		
ASRLRP0600	Construct Temporary Cycle Track (Phase 2)	10	0	100	22APR05 A	11MAY06 A	22APR05 A	11MAY06 A		
ES&M Works										
ASRLM0100	Erect Light Post & E&M Works	30	-1284	0	18FEB05	24MAR05	16SEP05	24OCT05		
Signage, Traffic Signs, Signals										
ASRLM0100	Erect Signage	12	-664	0	04FEB06	17FEB06	10OCT05	24OCT05		
ASRLM0200	Apply Road Marking	14	-1840	0	24APR06	10MAY06	07OCT05	24OCT05		
ASRLM0300	Construct Fencing	30	-1140	0	04FEB06	10MAR06	16SEP05	24OCT05		

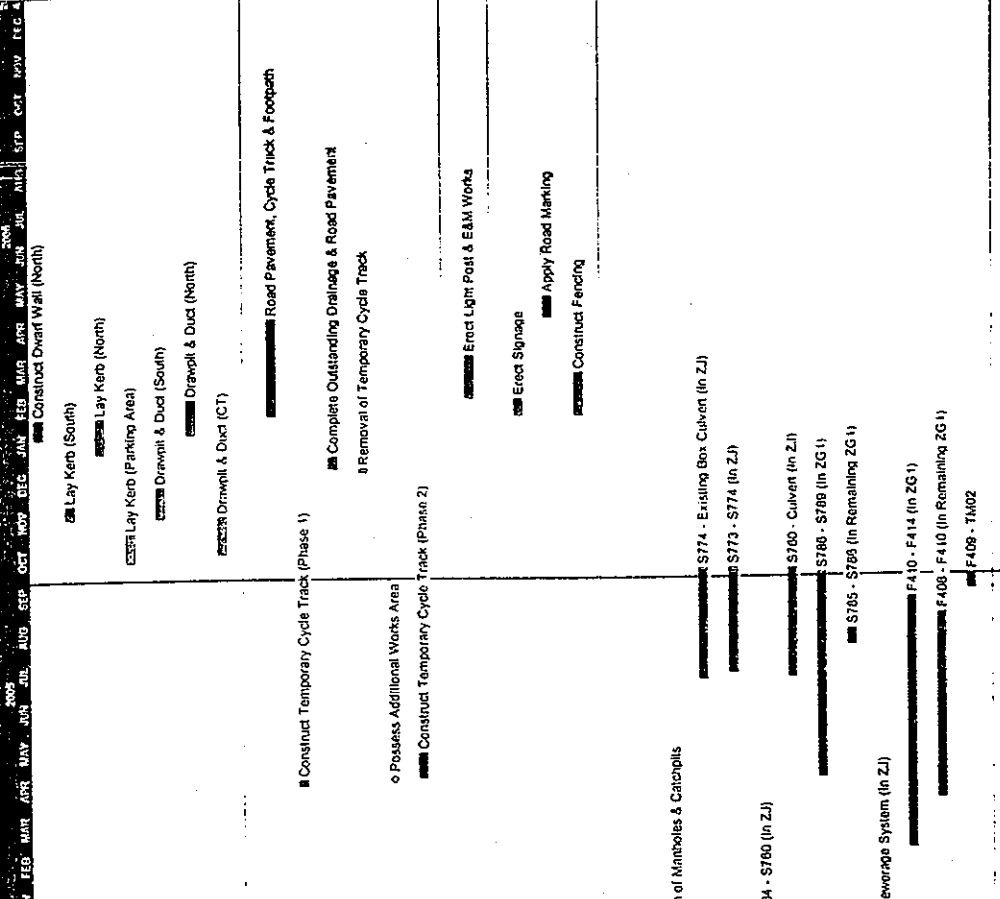
Section 6

Cycle Track

ACT ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	L10 Start	L10 Finish	2004	2005
ASCTD0100	Decide Exact Location of Manholes & Catchpits	1	0	100	27SEP04 A	27SEP04 A	27SEP04 A	27SEP04 A		
ASCTD0200	S774 - Existing Box Culvert (In ZJ)	23	-1206	90	08JUL05 A	04OCT05	08JUL05 A	11MAY05		
ASCTD0300	S773 - S774 (In ZJ)	15	-1200	80	13JUL05 A	04OCT05	13JUL05 A	11MAY05		
ASCTD0400	S784 - S785 (In ZJ)	34	-1164	100	28SEP04 A	23DEC04 A	26SEP04 A	23DEC04 A		
ASCTD0500	S760 - Culvert (In ZJ)	18	-1164	90	08JUL05 A	03OCT05	08JUL05 A	11MAY05		
ASCTD0600	S786 - S788 (In ZG 1)	25	-1212	90	20APR05 A	20SEP05	20APR05 A	08MAY05		
ASCTD0700	S786 - S788 (In Remaining ZG 1)	24	0	100	09AUG05 A	15AUG05 A	09AUG05 A	15AUG05 A		
ASCTD0800	Sewerage System (In ZJ)	42	0	100	10NOV04 A	30DEC04 A	10NOV04 A	30DEC04 A		
ASCTD0900	F410 - F414 (In ZG 1)	24	0	100	21FEB05 A	06SEP05 A	21FEB05 A	06SEP05 A		
ASCTD1000	F408 - F410 (In Remaining ZG 1)	24	0	100	02APR05 A	27AUG05 A	02APR05 A	27AUG05 A		
ASCTD1100	F409 - TM02	18	0	100	16SEP05 A	27SEP05 A	16SEP05 A	27SEP05 A		

Utility Works

ACT ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	L10 Start	L10 Finish	2004	2005
ASUTU0000	D.I. Pipes & Filings Delivery On Site	33	-1316	85	28JUN05 A	14OCT05	28JUN05 A	27APR05		
ASUTU0100	Watermain - Lay Fresh & Salt Main (In ZJ, South)	22	-1316	80	15AUG05 A	03OCT05	15AUG05 A	28APR05		
ASUTU0200	Watermain - Lay Fresh & Salt Main (In ZJ, North)	22	-1316	0	14OCT05	29OCT05	27APR05	24MAY05		
ASUTU0300	Watermain - Lay Fresh & Salt Main (In ZG 1)	14	-1316	0	31OCT05	19NOV05	23MAY05	06JUN05		
ASUTU0400	CLP - Lay 132kV Cable (In ZJ, South)	34	0	100	17DEC04 A	12JAN05 A	17DEC04 A	12JAN05 A		
ASUTU0500	CLP - Lay 132kV Cable (In ZJ, North)	21	-1206	0	06OCT05	29OCT05	12MAY05	06JUN05		
ASUTU0600	CLP - Lay 132kV Cable (In ZG 1)	22	-1216	0	30SEP05	27OCT05	07MAY05	02JUN05		
ASUTU0700	CLP - Lay 132kV Cable (In Remaining ZG 1)	22	0	100	10SEP05 A	13SEP05 A	10SEP05 A	13SEP05 A		
ASUTU0800	CLP - Lay 11kV Cable (In ZJ, South)	17	0	100	28FEB05 A	14MAR05 A	28FEB05 A	14MAR05 A		
ASUTU0900	CLP - Lay 11kV Cable (In ZJ, North)	12	-1206	0	28OCT05	08NOV05	02JUN05	16JUN05		
ASUTU1000	CLP - Lay 11kV Cable (In ZG 1)	12	-1216	0	21OCT05	08NOV05	27MAY05	08JUN05		
ASUTU1100	CLP - 11kV Cable (In Remaining ZG 1)	12	-1036	0	16SEP05	13OCT05	27MAY05	08JUN05		



Start date
Finish date
Date date
Run date
Page Number

Legend:
 ■ Early bar
 ■ Progress bar
 ■ Critical bar
 ■ Summary bar
 ◆ Start inflection point
 ◆ Finish inflection point

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ACT/UT/OT/DO	Description	Qty	Total Div	Percent Complete	Early Start	Early Finish	Laid Start	Laid Finish
ACTUT0720	CLP - 11KV Cable Connection (in ZG1)	12	-123d	0	04NOV05	17NOV05	10JUN05	24JUN05
ACTUT0700	CLP - Lay LV Cable (in ZJ, South)	17		100	28FEB05 A	14MAR05 A	14MAR05 A	14MAR05 A
ACTUT0610	CLP - Lay LV Cable (in ZJ, North)	11	-120d	0	26OCT05	07NOV05	02JUN05	15JUN05
ACTUT1000	CLP - Lay LV Cable (in ZG1)	11	-120d	0	21OCT05	02NOV05	29MAY05	09JUN05
ACTUT1010	CLP - Lay LV Cable (in Remaining ZG1)	11	-102d	0	28SEP05	12OCT05	28MAY05	09JUN05
ACTUT1020	CLP - LV Cable Connection (in ZG1)	12	-120d	0	03NOV05	16NOV05	10JUN05	24JUN05
ACTUT1400	HKCG - Lay 250 Gas Main (in ZJ) (Deleted)	35		100	06JUN05 A	06JUN05 A	06JUN05 A	06JUN05 A
ACTUT1800	HKCG - Lay 250 Gas Main (in ZG1) (Deleted)	14		100	06JUN05 A	06JUN05 A	06JUN05 A	06JUN05 A
ACTTR0100	Public Lighting, Direct Suspend Kites	15	-111d	0	01OCT05	21OCT05	23MAY05	06JUN05
ACTTR0110	Lay Kerb (in ZJ, North)	10	-120d	0	08NOV05	18NOV05	16JUN05	27JUN05
ACTTR0200	Lay Kerb (in ZJ, South)	12	-131d	0	18NOV05	28NOV05	10JUN05	24JUN05
ACTTR0300	Lighting Ducts and Drawpoints	24	-131d	0	18NOV05	13DEC05	10JUN05	09JUL05
ACTTR0400	Lighting Posts	12	-131d	0	14DEC05	20DEC05	11JUL05	23JUL05
ACTTR0100	Lay Cycle Track Pavement (in ZJ, South)	28	-106d	0	22OCT05	20NOV05	18JUN05	18JUL05
ACTTR0110	Lay Cycle Track Pavement (in ZJ, North)	16	-120d	0	18NOV05	09DEC05	24JUN05	18JUL05
ACTTR0200	Lay Cycle Track Pavement (in ZG1)	15	-123d	0	28NOV05	19DEC05	20JUN05	18JUL05
ACTTR0300	Apply Road Marking	4	-123d	0	14DEC05	17DEC05	20JUL05	23JUL05
ACTTR0400	Erect Signage	12	-116d	0	29NOV05	09DEC05	11JUL05	23JUL05
ACTTR0500	Construct Fences	21	-119d	0	19NOV05	19DEC05	20JUN05	23JUL05
ACTTR0600	Construct Planter Wall (in ZJ, South)	48	-111d	0	12OCT05	03DEC05	30MAY05	23JUL05
ACTTR0700	Construct Planter Wall (in ZJ, North)	16	-116d	0	19NOV05	06DEC05	04JUL05	23JUL05
ACTTR0800	Construct Planter Wall (in ZG1)	16	-125d	0	30NOV05	20DEC05	04JUL05	23JUL05

ACT/UT/OT/DO	Description	Qty	Total Div	Percent Complete	Early Start	Early Finish	Laid Start	Laid Finish
ACTTR0900	Apply & Issue XP for TTA Nos. 10 - 12	1		100	09SEP04 A	21FEB05 A	09SEP04 A	21FEB05 A
ACTTR1000	Implement TTA No. 10	1		100	24FEB05 A	24FEB05 A	24FEB05 A	24FEB05 A
ACTTR1100	Implement TTA No. 11	1		100	11MAY05 A	11MAY05 A	11MAY05 A	11MAY05 A
ACTTR1200	Implement TTA No. 12	1		100	21MAR05 A	21MAR05 A	21MAR05 A	21MAR05 A
ACTTR1300	Apply & Issue XP for TTA Nos. 48 - 51	71	-144d	86	07JUL05 A	25SEP05	07JUL05 A	07APR05
ACTTR1400	Implement TTA No. 48 (VO/030E, 063A & 073)	1	-144d	0	07OCT05	07OCT05	16APR05	16APR05
ACTTR1500	Implement TTA No. 49 (VO/030E, 063A & 073)	1	-144d	0	31OCT05	31OCT05	09MAY05	09MAY05
ACTTR1600	Implement TTA No. 50 (VO/030E, 063A & 073)	1	-144d	0	29NOV05	29NOV05	06JUN05	06JUN05
ACTTR1700	Implement TTA No. 51 (VO/030E)	1	-144d	0	21DEC05	21DEC05	02JUL05	02JUL05
ACTCHS0100	Drilling (Two Drillholes)	16		100	24SEP04 A	30SEP04 A	24SEP04 A	30SEP04 A
ACTCHS0200	Taking Up of Existing Armour to +2.5	3		100	25OCT04 A	27OCT04 A	25OCT04 A	27OCT04 A
ACTCHS0300	Taking Up of Existing Underlayer to +2.5	2		100	30OCT04 A	01NOV04 A	30OCT04 A	01NOV04 A
ACTCHS0400	Taking Up of Existing Rubble to +2.5	14		100	03NOV04 A	19NOV04 A	03NOV04 A	19NOV04 A
ACTCHS0500	Demolish Existing Outfall Units	5		100	21NOV04 A	21NOV04 A	21NOV04 A	23NOV04 A
ACTCHS0600	Taking Up Existing 3200 Dia. Concrete Pipe	8	-156d	0	07NOV05	14NOV05	02JUN05	08JUN05
ACTCHS0700	Taking Up of Existing Armour, Below +2.5	5	-156d	0	02NOV05	08NOV05	28MAY05	01JUN05

Section 7
 Temporary Traffic Management Schemes

Apply & Issue XP for TTA Nos. 10 - 12
 Implement TTA No. 10
 Implement TTA No. 11
 Implement TTA No. 12

Apply & Issue XP for TTA Nos. 48 - 51
 Implement TTA No. 48 (VO/030E, 063A & 073)
 Implement TTA No. 49 (VO/030E, 063A & 073)
 Implement TTA No. 50 (VO/030E, 063A & 073)
 Implement TTA No. 51 (VO/030E)

Drilling (Two Drillholes)
 Taking Up of Existing Armour to +2.5
 Taking Up of Existing Underlayer to +2.5
 Taking Up of Existing Rubble to +2.5
 Demolish Existing Outfall Units

Taking Up Existing 3200 Dia. Concrete Pipe
 Taking Up of Existing Armour, Below +2.5

Leader - Wal Koo (C&T) Joint Venture
 TP37703 - Revised Works Programme - RP04

Start Date: 10/10/04
 Finish Date: 30/07/07
 Data Date: 28/09/05
 Run Date: 11/02/05
 Page Number: 2/3

Legend:
 Empty bar
 Progress bar
 Critical bar
 Summary bar
 Start milestone point
 Finish milestone point

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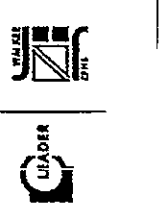
ATL ID	Description	Unit	Cost	Est. Start	Est. Finish	Early Start	Early Finish	Actual Start	Actual Finish	Lead Time
ATLCHS0440	Taking Up of Existing Underlayer, Below +2.5	2	-1522	0	07NOV05	08NOV05	06JUN05			06JUN05
ATLCHS0500	Taking Up of Existing Rubble, Below +2.5	18	-1580	0	15NOV05	02DEC05	10JUN05			27JUN05
ATLCHS0530	Placing Leveling Stone	23	-1586	0	03DEC05	25DEC05	28JUN05			20JUL05
ATLCHS0600	Block Wall Construction	31	-1580	0	20DEC05	25JAN06	21JUL05			20AUG05
ATLCHS0700	Backfill Rubble Behind	10	-1580	0	20JAN06	08FEB06	21AUG05			30AUG05
ATLCHS0800	Reinstate 3200 Dia. Concrete Pipe	14	-1636	0	06FEB06	22FEB06	31AUG05			19SEP05
ATLCHS0900	Fabrication of Box Culvert Outfalls	70	-1044	0	11DEC05	22FEB06	29AUG05			08NOV05
ATLCHS1000	Install Box Culvert Outfalls	12	-1044	0	23FEB06	09MAR06	07NOV05			18NOV05
ATLCHS1100	Install Remaining Blocks for Both Side Outfall	4	-1044	0	07MAR06	10MAR06	18NOV05			22NOV05
ATLCHS1200	Reinstate Armour & Underlayer	10	-1044	0	11MAR06	20MAR06	23NOV05			02DEC05
Waterfront Promenade										
Pump House Construction										
ATWPPH0100	Construct Irrigation Pump House	48	-136	0	22NOV05	18JAN06	07NOV05			05JAN06
Drainage Works										
ATWPDW0100	Decide Exact Location of Manholes & Catchpits	1		100	28JUL04	28JUL04	28JUL04			28JUL04
ATWPDW0200	S706 - S714	50	-993	80	13OCT04	04OCT05	13OCT04			07JUN05
ATWPDW0300	S701 - S708	46		100	13OCT04	14DEC04	13OCT04			14DEC04
ATWPDW0400	S714 - Existing Box Culvert	30	-1234	0	03FEB06	09MAR06	06SEP05			12OCT05
ATWPDW0500	F901 - F902 (TTA No. 10) Partially Aborted	18		100	25FEB05	24JUN05	25FEB05			24JUN05
ATWPDW0600	F902 - F903 (TTA No. 11) Aborted	34		100	10MAY05	24JUN05	10MAY05			24JUN05
ATWPDW0700	F903 - F904 (TTA No. 12)	16		100	06APR05	08MAY05	06APR05			08MAY05
ATWPDW0720	F901 - F902 (TTA No. 48) (VO/030E)	6	-1444	0	08OCT05	15OCT05	14APR05			22APR05
ATWPDW0740	F901 - F902 (TTA No. 49) (VO/030E)	12	-1444	0	01NOV05	14NOV05	10MAY05			21MAY05
ATWPDW0760	F901 - F902 (TTA No. 50) (VO/030E)	18	-1444	0	30NOV05	20DEC05	09JUN05			30JUN05
ATWPDW0780	F902 - F903 (TTA No. 51) (VO/030E)	24	-1444	0	22DEC05	20JAN06	04JUL05			30JUL05
ATWPDW0800	F904 - Existing Manhole	28		100	04APR05	18JUN05	04APR05			18JUN05
ATWPDW0900	S770 - S773 - S771 (VO/073)	25	-136	0	28SEP05	28OCT05	12SEP05			13OCT05
ATWPDW0920	S773 - Exl. Manhole (TTA No. 48) (VO/073)	18	-1444	0	06OCT05	28OCT05	18APR05			07MAY05
ATWPDW0940	S773 - Exl. Manhole (TTA No. 49) (VO/073)	18	-1385	0	01NOV05	21NOV05	18MAY05			07JUN05
ATWPDW0960	S773 - Exl. Manhole (TTA No. 50) (VO/073)	24	-1256	0	30NOV05	28DEC05	04JUL05			30JUL05
ATWPDW1000	CP 102 - CP 104 (In ZU)	20	-130	0	28OCT05	21NOV05	14OCT05			08NOV05
ATWPDW1050	Exl. MH - MH-36 - F901 (VO/058A)	20	-780	0	09DEC05	03JAN06	06SEP05			28SEP05
ATWPDW1100	S716 - Existing Box Culvert	22	-1320	0	23FEB06	20MAR06	14SEP05			12OCT05
ATWPDW1200	225 Dia. Perforated Drain (In ZS 8, End - 200m)	26	-820	0	03NOV05	02DEC05	27JUL05			25AUG05
ATWPDW1230	225 Dia. Perforated Drain (In ZS 200m - 400m)	26	-990	0	22NOV05	21DEC05	27JUL05			25AUG05
ATWPDW1260	225 Dia. Perforated Drain (In ZS 400m - N. End)	12	-1320	0	14APR06	27APR06	05NOV05			18NOV05
ATWPDW1300	225HR & Catchpit with 2000.L along Parapet Wall	50	-830	0	04MAR05	03MAY06	11NOV05			10JAN06
ATWPDW1500	225UC (In ZU)	24	-476	0	23NOV05	22DEC05	28SEP05			28OCT05
ATWPDW1600	300UC (In ZU)	25	-476	0	23DEC05	23JAN06	26OCT05			26NOV05
ATWPDW1700	225Dia. Perforated Drain (In ZU)	21	-464	0	22NOV05	16DEC05	27SEP05			22OCT05
ATWPDW1900	300 CUC (In ZU)	18	-954	0	29OCT05	18NOV05	09DEC05			31DEC05
ATWPDW1900	225 Dia. Perforated Drain (In ZU)	18	-764	0	04JAN06	24JAN06	30SEP05			22OCT05
Utility Works										
ATWPU0090	D.I. Pipes & Fittings Delivery On Site	30	-664	45	27APR05	18OCT05	27APR05			30JUL05
ATWPU0091	Order Additional Valve & Bend (VO/093)	76	-1200	22	06SEP05	07DEC05	06SEP05			10JUL05
ATWPU0700	Watermain (Ley Salt Main (TTA No. 10) Aborted)	10		100	15APR05	24JUN05	16APR05			24JUN05

Taking Up of Existing Underlayer, Below +2.5
 Taking Up of Existing Rubble, Below +2.5
 Placing Leveling Stone
 Block Wall Construction
 Backfill Rubble Behind
 Reinstate 3200 Dia. Concrete Pipe
 Fabrication of Box Culvert Outfalls
 Install Box Culvert Outfalls
 Install Remaining Blocks for Both Side Outfall
 Reinstate Armour & Underlayer

Construct Irrigation Pump House
 S701 - S708
 S709 - S714
 S714 - Existing Box Culvert
 F901 - F902 (TTA No. 10) Partially Aborted
 F902 - F903 (TTA No. 11) Aborted
 F903 - F904 (TTA No. 12)
 F901 - F902 (TTA No. 48) (VO/030E)
 F901 - F902 (TTA No. 49) (VO/030E)
 F901 - F902 (TTA No. 50) (VO/030E)
 F902 - F903 (TTA No. 51) (VO/030E)
 F904 - Existing Manhole
 S770 - S773 - S771 (VO/073)
 S773 - Exl. Manhole (TTA No. 48) (VO/073)
 S773 - Exl. Manhole (TTA No. 49) (VO/073)
 S773 - Exl. Manhole (TTA No. 50) (VO/073)
 CP 102 - CP 104 (In ZU)
 Exl. MH - MH-36 - F901 (VO/058A)
 S716 - Existing Box Culvert
 225 Dia. Perforated Drain (In ZS 8, End - 200m)
 225 Dia. Perforated Drain (In ZS 200m - 400m)
 225 Dia. Perforated Drain (In ZS 400m - N. End)
 225HR & Catchpit with 2000.L along Parapet Wall
 225UC (In ZU)
 300UC (In ZU)
 225Dia. Perforated Drain (In ZU)
 300 CUC (In ZU)
 225 Dia. Perforated Drain (In ZU)

D.I. Pipes & Fittings Delivery On Site
 Order Additional Valve & Bend (VO/093)
 Watermain - Ley Salt Main (TTA No. 10) Aborted

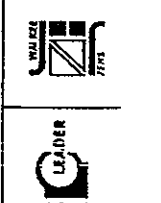
Legend:
 ■ Early bar
 ■ Progress bar
 ■ Critical bar
 ■ Summary bar
 ◆ Start milestone point
 ◆ Finish milestone point



Leader - Wal Kee (C&T) Joint Venture
 TP37/03 - Revised Works Programme - RP04

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ID	Description	Start	Finish	Start	Finish	Start	Finish	Start	Finish
ATWPU0200	Watermain - Lay Salt Main (TTA No. 11) Aborted	10MAY05 A	24JUN05 A	10MAY05 A	24JUN05 A	10MAY05 A	24JUN05 A	10MAY05 A	24JUN05 A
ATWPU0300	Watermain - SW Main (TTA No. 48) (VO0683A)	23APR05	29OCT05	23APR05	29OCT05	23APR05	29OCT05	23APR05	29OCT05
ATWPU0350	Watermain - SW Main (TTA No. 49) (VO0683A)	23MAY05	28NOV05	23MAY05	28NOV05	23MAY05	28NOV05	23MAY05	28NOV05
ATWPU0400	Watermain - SW Main (TTA No. 50) (VO0683A)	24JUL05	29DEC05	24JUL05	29DEC05	24JUL05	29DEC05	24JUL05	29DEC05
ATWPU0500	CLP - Lay LV Cable	12	-503	90	08AUG05 A	28SEP05	08AUG05 A	30JUL05	06NOV05
ATWPU0600	PCCW - Lay Cable (Landscape Node P3)	55	-603	0	22NOV05	26JAN06	31AUG05	21JAN06	02JAN06
ATWPU0700	PCCW - Lay Cable (Landscape Node P3)	12	-780	0	14APR06	27APR06	06JAN06	21JAN06	30JUL05
ATWPU0800	Watermain (in ZU)	18	-830	0	31OCT05	19NOV05	11JUL05	27JUN05	25JUL05
ATWPU0900	Issue Allocation Warrant to WSD (VO0688)	24	-780	0	28SEP05	27OCT05	24NOV05	23JUL05	22AUG05
ATWPU1000	Relocation of Fire Hydrant in ZU by WSD (VO0688)	24	-780	0	28OCT05	24NOV05	23JUL05	22AUG05	22AUG05
ATWPU1100	HKCG - 315MP Diversion at SP Road (Additional)	15		100	11JUL05 A	27JUL05 A	11JUL05 A	27JUL05 A	27JUL05 A
ATWPU1200	HKCG - 315MP Diversion at SP Road (Additional)	54		100	08AUG05 A	18AUG05 A	08AUG05 A	18AUG05 A	18AUG05 A
ATWPP0100	Public Lighting (in ZU)	60	-420	0	09DEC05	21FEB06	21OCT05	31DEC05	31DEC05
ATWPP0200	Public Lighting (in ZS)	60	-660	0	18FEB06	24APR06	31OCT05	10JAN06	10JAN06
ATWPP0300	Lay Paving Block (in ZU)	30	-420	0	22FEB06	28MAR06	02JAN06	07FEB06	07FEB06
ATWPP0400	Lay Paving Block (in ZS)	60	-660	0	28MAR06	08JUN06	05DEC05	16FEB06	16FEB06
ATWPP0500	Finishing Works (in ZU)	30	-174	0	07FEB06	19MAR06	16JAN06	21FEB06	21FEB06
ATWPP0600	Finishing Works (in ZS)	55	-690	0	27FEB06	09MAY06	18DEC05	21FEB06	21FEB06
ATWPEM0500	Irrigation System (in ZU)	30	-780	0	06APR06	13MAY06	04JAN06	09FEB06	09FEB06
ATWPEM0600	Irrigation System (in ZS)	52	-920	0	22APR06	30MAY06	02JAN06	09FEB06	09FEB06
ATWPEM0700	E&M Works	30	-780	0	10APR06	18MAY06	04JAN06	08FEB06	08FEB06
ATWFT00100	Testing & Commissioning	30	-920	0	08MAY06	12JUN06	18JAN06	21FEB06	21FEB06
ATWFRM0000	Erect Signage	30	-990	0	04MAY06	08JUN06	18JAN06	21FEB06	21FEB06
ATWFRM0400	Apply Road Marking	12	-930	0	30MAY06	13JUN06	09FEB06	21FEB06	21FEB06
ATWPHL0100	Planter Wall (in ZS, South End - 100m)	20	-820	0	10OCT05	02NOV05	04JUL05	28JUL05	28JUL05
ATWPHL0200	Planter Wall (in ZS, 100 - 200m)	20	-820	55	18APR05 A	08OCT05	18APR05 A	02JUL05	02JUL05
ATWPHL0300	Planter Wall (in ZS, 200 - 300m)	20	-860	0	29OCT05	21NOV05	04JUL05	28JUL05	28JUL05
ATWPHL0400	Planter Wall (in ZS, 300 - 400m)	20	-860	0	05OCT05	28OCT05	08JUN05	02JUL05	02JUL05
ATWPHL0500	Planter Wall (in ZS, 400 - North End)	20	-1320	0	21MAR05	13APR05	13OCT05	04NOV05	04NOV05
ATWPHL0600	Fill Rock to Parapet Wall Formation (VO0688)	56	-780	50	21MAY05 A	08DEC05	21MAY05 A	05SEP05	05SEP05
ATWPHL0700	Parapet Wall (in ZU)	30	-930	70	16JUN05 A	08OCT05	16JUN05 A	18JUN05	18JUN05
ATWPHL0800	Parapet Wall along Seawall (500m)	120	-930	0	10OCT05	03MAR06	20JUN05	19NOV05	19NOV05
ATWPHL0900	Parapet Wall along Landscape Node P3 (100m)	24	-860	0	21MAR06	18APR06	03DEC05	02JAN06	02JAN06
ATWPHL1000	Construct Curve Treils (in ZU)	60	-170	0	09DEC05	08FEB06	18NOV05	18NOV05	18NOV05
ATWPHL1100	Construct Pergola (in ZS)	47	-170	0	21JAN06	25FEB06	07NOV05	03DEC05	03DEC05
ATWPHL1200	Water Point WP28-4 to 28-5 (in ZU)	24	-860	0	03MAR06	07APR06	28NOV05	03JAN06	03JAN06
ATWPHL1300	Water Point WP27-2 to 27-4 (in ZS)	15	-860	0	22DEC05	10JAN06	28AUG05	12SEP05	12SEP05
ATWPHL1400	Water Point WP28-1 to 28-2 (in ZS)	15	-730	0	11JAN06	27JAN06	15OCT05	01NOV05	01NOV05
ATWPHL1500	Water Point WP25-2 to 25-4 (in ZS)	16	-1320	0	28APR06	19MAY06	19NOV05	06DEC05	06DEC05



Leader - Wal Keo (C&T) Joint Venture
 TP37103 - Revised Works Programme - RP04

Start date: 10JUN04
 Finish date: 29OCT07
 Data date: 28SEP05
 Run date: 17OCT05
 Page number: 22A

Early bar
 Progress bar
 Critical bar
 Summary bar
 Start milestone point
 Finish milestone point

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ID	Description	Start	Finish	Start	Finish	Start	Finish	Start	Finish
ABLANS0100	Drilling (Two Drilloles)	10	100	23SEP04 A	04OCT04 A	23SEP04 A	04OCT04 A	23SEP04 A	04OCT04 A
ABLANS0200	Taking Up of Existing Armour to +2.5	3	100	28OCT04 A	30OCT04 A	28OCT04 A	30OCT04 A	28OCT04 A	30OCT04 A
ABLANS0220	Taking Up of Existing Underlayer to +2.5	4	100	01NOV04 A	02NOV04 A	01NOV04 A	02NOV04 A	01NOV04 A	02NOV04 A
ABLANS0240	Taking Up of Existing Rubble to +2.5	38	100	03NOV04 A	08MAR05 A	03NOV04 A	08MAR05 A	03NOV04 A	08MAR05 A
ABLANS0300	Demolish Existing Outfall Units	5	100	13NOV04 A	18NOV04 A	13NOV04 A	18NOV04 A	13NOV04 A	18NOV04 A
ABLANS0310	DSD Approval of Removal of 5 Cells Culvert	1	100	20NOV04 A	09MAR05 A	20NOV04 A	09MAR05 A	20NOV04 A	09MAR05 A
ABLANS0400	Taking Up Existing 5 Cells Box Culvert Units	12	100	10MAR05 A	23MAR05 A	10MAR05 A	23MAR05 A	10MAR05 A	23MAR05 A
ABLANS0420	Taking Up of Existing Armour Below +2.6	6	100	13DEC04 A	22JAN05 A	13DEC04 A	22JAN05 A	13DEC04 A	22JAN05 A
ABLANS0440	Taking Up of Existing Underlayer Below +2.5	3	100	17DEC04 A	09APR05 A	17DEC04 A	09APR05 A	17DEC04 A	09APR05 A
ABLANS0500	Taking Up of Existing Rubble Below +2.5	23	100	14JAN05 A	22APR05 A	14JAN05 A	22APR05 A	14JAN05 A	22APR05 A
ABLANS0640	Placing Leveling Stone	25	100	23APR05 A	18MAY05 A	23APR05 A	18MAY05 A	23APR05 A	18MAY05 A
ABLANS0900	Block Wall Construction	51	100	18MAY05 A	12JUN05 A	18MAY05 A	12JUN05 A	18MAY05 A	12JUN05 A
ABLANS0700	Backfill Rubble Behind	14	-1460	15JUN05 A	02OCT05	15JUN05 A	02OCT05	15JUN05 A	02OCT05
ABLANS0800	Reinstate 5 Cells Box Culvert Units	18	-1460	02JUL05 A	07OCT05	02JUL05 A	07OCT05	02JUL05 A	07OCT05
ABLANS0900	Fabrication of 5 Cells Outfall Units	70	230	20JUL05 A	22NOV05	20JUL05 A	22NOV05	20JUL05 A	22NOV05
ABLANS1000	Install 5 Cells Outfall Units	12	230	02NOV05	04DEC05	02NOV05	04DEC05	02NOV05	04DEC05
ABLANS1100	Install Remaining Blocks for Both Side Outfall	4	230	05DEC05	08DEC05	05DEC05	08DEC05	05DEC05	08DEC05
ABLANS1200	Reinstate Armour & Underlayer	10	230	09DEC05	18DEC05	09DEC05	18DEC05	09DEC05	18DEC05
ABLANS1300	Drilling (Two Drilloles)	18	100	27SEP04 A	18OCT04 A	27SEP04 A	18OCT04 A	27SEP04 A	18OCT04 A
ABLANS1320	Taking Up of Existing Armour to +2.5	3	100	08NOV04 A	08NOV04 A	08NOV04 A	08NOV04 A	08NOV04 A	08NOV04 A
ABLANS1340	Taking Up of Existing Underlayer to +2.5	2	100	12NOV04 A	13NOV04 A	12NOV04 A	13NOV04 A	12NOV04 A	13NOV04 A
ABLANS1360	Taking Up of Existing Rubble to +2.5	20	100	14NOV04 A	11JAN05 A	14NOV04 A	11JAN05 A	14NOV04 A	11JAN05 A
ABLANS1380	Demolish Existing Outfall Units	5	100	17NOV04 A	20NOV04 A	17NOV04 A	20NOV04 A	17NOV04 A	20NOV04 A
ABLANS1400	Taking Up Existing 2500 Dia. Concrete Pipe	10	100	12APR05 A	23JUN05 A	12APR05 A	23JUN05 A	12APR05 A	23JUN05 A
ABLANS1420	Taking Up of Existing Armour Below +2.5	4	100	09DEC04 A	09DEC04 A	09DEC04 A	09DEC04 A	09DEC04 A	09DEC04 A
ABLANS1440	Taking Up of Existing Underlayer Below +2.5	3	100	16DEC04 A	11JAN05 A	16DEC04 A	11JAN05 A	16DEC04 A	11JAN05 A
ABLANS1460	Taking Up of Existing Rubble Below +2.5	20	100	30DEC04 A	25AUG05 A	30DEC04 A	25AUG05 A	30DEC04 A	25AUG05 A
ABLANS1500	Placing Leveling Stone	40	100	01SEP05 A	20SEP05 A	01SEP05 A	20SEP05 A	01SEP05 A	20SEP05 A
ABLANS1600	Block Wall Construction (Stage 1)	30	-580	06OCT05	21SEP05 A	06OCT05	21SEP05 A	06OCT05	21SEP05 A
ABLANS1610	Block Wall Construction (Stage 2)	30	240	01NOV05	14NOV05	01NOV05	14NOV05	01NOV05	14NOV05
ABLANS1620	Backfill Rubble Behind (Stage 1)	7	-580	01OCT05	16OCT05	01OCT05	16OCT05	01OCT05	16OCT05
ABLANS1630	Backfill Rubble Behind (Stage 2)	7	240	02NOV05	28NOV05	02NOV05	28NOV05	02NOV05	28NOV05
ABLANS1640	Reinstate 2500 Dia. Pipe Culvert	14	300	02NOV05	12DEC05	02NOV05	12DEC05	02NOV05	12DEC05
ABLANS1650	Fabrication of Box Culvert Outfall	70	300	04OCT05	12DEC05	04OCT05	12DEC05	04OCT05	12DEC05
ABLANS1660	Install Box Culvert Outfall	12	300	03DEC05	24DEC05	03DEC05	24DEC05	03DEC05	24DEC05
ABLANS1670	Install Remaining Blocks for Both Side Outfall	4	320	02DEC05	28DEC05	02DEC05	28DEC05	02DEC05	28DEC05
ABLANS1680	Reinstate Armour & Underlayer	10	320	09DEC05	07JAN06	09DEC05	07JAN06	09DEC05	07JAN06
ABLANS1690	Division of Ext. Cycle Track (Phase 2)	1	100	28MAY05 A	28MAY05 A	28MAY05 A	28MAY05 A	28MAY05 A	28MAY05 A
ABLANS1700	Removal of Ext. Cycle Track Pavement (Phase 2)	4	100	30MAY05 A	11JUN05 A	30MAY05 A	11JUN05 A	30MAY05 A	11JUN05 A
ABLANS1710	Take Up / Divert Ext. Utility Services (Phase 2)	12	100	30MAY05 A	08JUN05 A	30MAY05 A	08JUN05 A	30MAY05 A	08JUN05 A

Legend:
 ■ Early bar
 ■ Progress bar
 ■ Critical bar
 ■ Summary bar
 ◆ Start milestone point
 ◆ Finish milestone point

10JUN04
 20OCT07
 28SEP05
 17OCT05
 23A
 2 Primavera Systems, Inc.

LEADER
 Leader - Wal Kee (C&T) Joint Venture
 TP37/03 - Revised Works Programme - RP04

ASL/NS ID	Description	Old Dur	Total Dur	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
ASL/NS1500	Reinstate Ext. Utility Services	24	-47d	0	27OCT05	28NOV05	30AUG05	27SEP05
ASL/NS1600	Reinstate Ext. Cycle Track	12	-56d	0	07DEC05	20DEC05	26SEP05	15OCT05
ASL/NS1700	Resume Ext. Cycle Track	1	-56d	0	21DEC05	21DEC05	14OCT05	14OCT05
Swallow Adjacent to Landing Stop								
Timeline Works								
ASALMA0100	Taking Up of Armour to +2.5(South Section)	2		100	10NOV04 A	11NOV04 A	10NOV04 A	11NOV04 A
ASALMA0110	Taking Up of Underlayer to +2.5 (South Section)	2		100	15NOV04 A	18NOV04 A	15NOV04 A	18NOV04 A
ASALMA0200	Taking Up of Rubble to +2.5 (South Section)	8		100	01DEC04 A	17JAN05 A	01DEC04 A	17JAN05 A
ASALMA0210	Taking Up of Armour Below +2.5 (South Section)	3		100	27NOV04 A	01DEC04 A	27NOV04 A	01DEC04 A
ASALMA0220	Taking Up Underlayer Below +2.5 (South Section)	3		100	09DEC04 A	12DEC04 A	09DEC04 A	12DEC04 A
ASALMA0230	Taking Up of Rubble Below +2.5 (South Section)	12		100	13DEC04 A	11JUL05 A	13DEC04 A	11JUL05 A
ASALMA0240	Placing Leveling Stone (South Section)	10		100	12JUL05 A	30JUL05 A	12JUL05 A	30JUL05 A
ASALMA0400	Block Wall Construction (South Section)	25		100	02AUG05 A	17AUG05 A	02AUG05 A	17AUG05 A
ASALMA0500	Backfill the Rubble Behind (South Section)	6	-46d	80	18AUG05 A	28SEP05	18AUG05 A	19AUG05
ASALMA0600	Backfill G200 Rockfill Behind (South Section)	5	-46d	0	28SEP05	03OCT05	14AUG05	18AUG05
ASALMA0810	Diversion of Ext. Cycle Track (Phase 1)	1		100	28MAY05 A	28MAY05 A	28MAY05 A	28MAY05 A
ASALMA0820	Removal of Ext. Cycle Track Pavement (Phase 1)	2		100	30MAY05 A	30MAY05 A	30MAY05 A	11JUN05 A
ASALMA0830	Take Up / Divert Ext. Utility Services (Phase 1)	18		100	30MAY05 A	06JUN05 A	30MAY05 A	06JUN05 A
ASALMA0700	Taking Up of Armour to +2.5 (North Section)	2		100	06NOV04 A	10NOV04 A	06NOV04 A	10NOV04 A
ASALMA0710	Taking Up of Underlayer to +2.5 (North Section)	2		100	16NOV04 A	16NOV04 A	16NOV04 A	16NOV04 A
ASALMA0800	Taking Up of Rubble to +2.5 (North Section)	8		100	17NOV04 A	17NOV04 A	17NOV04 A	17NOV04 A
ASALMA0820	Taking Up of Underlayer Below +2.5 (North Section)	3		100	21NOV04 A	23NOV04 A	21NOV04 A	23NOV04 A
ASALMA0840	Taking Up of Rubble Below +2.5 (North Section)	30		100	01DEC04 A	04DEC04 A	01DEC04 A	04DEC04 A
ASALMA0910	Placing Leveling Stone (North Section)	10		100	18FEB05 A	18FEB05 A	18FEB05 A	16FEB05 A
ASALMA1000	Block Wall Construction (North Section)	25		100	20FEB05 A	13MAY05 A	20FEB05 A	13MAY05 A
ASALMA1100	Backfill the Rubble Behind (North Section)	8		100	01MAR05 A	24MAY05 A	01MAR05 A	24MAY05 A
ASALMA1200	Backfill G200 Rockfill Behind (North Section)	5	-65d	0	15MAR05 A	25JUN05 A	15MAR05 A	25JUN05 A
ASALMA1300	Reinstatement of Armour & Underlayer	14	116d	0	26SEP05	02OCT05	27JUN05	01JUL05
Worked Promenade								
Drainage Works								
ARWPDW0100	Decide Exact Location of Manholes & Catchpits	1		100	27SEP04 A	27SEP04 A	27SEP04 A	27SEP04 A
ARWPDW0200	S745 - S739	55		100	21OCT04 A	09MAY05 A	21OCT04 A	09MAY05 A
ARWPDW0300	S717 - S728	78		100	22DEC04 A	25AUG05 A	22DEC04 A	25AUG05 A
ARWPDW0400	S729 - S730	14	28d	0	09JAN06	21JAN06	10FEB06	26FEB06
ARWPDW0500	S730 - S732	50	27d	0	23NOV05	21JAN06	24DEC05	24FEB06
ARWPDW0550	F421 - TM05	18	-47d	5	23JUL05 A	04NOV05	23JUL05 A	07SEP05
ARWPDW0600	F414 - F421 (in ZK)	12	-38d	0	26SEP05	13OCT05	19AUG05	29AUG05
ARWPDW0700	S745 - Existing Box Culvert	27	25d	80	08JUL05 A	09DEC05	08JUL05 A	10JAN06
ARWPDW0710	S747 - Existing Box Culvert	23		100	06NOV04 A	19DEC04 A	06NOV04 A	18DEC04 A
ARWPDW0800	225HR & Catchpit/2000.I. along Parapet Wall (ZR)	16	18d	30	07JUL05 A	17DEC05	07JUL05 A	10JAN06
ARWPDW0900	225HR & Catchpit/2000.I. along Parapet Wall (ZK)	48	28d	0	10MAR06	06MAY06	11APR06	07JUN06
ARWPDW1000	225HR & Catchpit/2000.I. along Parapet Wall (ZJ)	24	25d	0	30MAY06	27JUN06	29JUN06	27JUL06
ARWPDW1100	225HR & Catchpit/2000.I. along Parapet Wall (ZJ)	12	25d	0	16MAY06	28MAY06	15JUN06	28JUN06
ARWPDW1200	225HR & Catchpit/2000.I. along Parapet Wall (ZJ)	6	25d	0	06MAY06	16MAY06	06JUN06	14JUN06

Taking Up of Armour to +2.5(South Section)
 Taking Up of Underlayer to +2.5 (South Section)
 Taking Up of Rubble to +2.5 (South Section)
 Taking Up of Armour Below +2.5 (South Section)
 Taking Up Underlayer Below +2.5 (South Section)
 Placing Leveling Stone (South Section)
 Block Wall Construction (South Section)
 Backfill the Rubble Behind (South Section)
 Backfill G200 Rockfill Behind (South Section)
 Diversion of Ext. Cycle Track (Phase 1)
 Removal of Ext. Cycle Track Pavement (Phase 1)
 Take Up / Divert Ext. Utility Services (Phase 1)
 Taking Up of Armour to +2.5 (North Section)
 Taking Up of Underlayer to +2.5 (North Section)
 Taking Up of Rubble to +2.5 (North Section)
 Taking Up of Armour Below +2.5 (North Section)
 Taking Up Underlayer Below +2.5 (North Section)
 Placing Leveling Stone (North Section)
 Block Wall Construction (North Section)
 Backfill the Rubble Behind (North Section)
 Backfill G200 Rockfill Behind (North Section)
 Reinstatement of Armour & Underlayer
 Decide Exact Location of Manholes & Catchpits
 S745 - S739
 S717 - S728
 S729 - S730
 S730 - S732
 F421 - TM05
 F414 - F421 (in ZK)
 S745 - Existing Box Culvert
 S745 - S747
 Existing Box Culvert
 Existing Box Culvert
 225HR & Catchpit/2000.I. along Parapet Wall (ZR)
 225HR & Catchpit/2000.I. along Parapet Wall (ZK)
 225HR & Catchpit/2000.I. along Parapet Wall (ZJ)

LEADER
 WALTER PNE
 Leader - Wai Koo (C&T) Joint Venture
 TP37/03 - Revised Works Programme - RP04
 Start date: 10JUN04
 Finish date: 20OCT07
 Date issue: 28SEP05
 Run date: 17OCT05
 Page number: 2/4
 Legend:
 ■ Early bar
 ■ Progress bar
 ■ Critical bar
 ■ Summary bar
 ◆ Start milestone point
 ◆ Finish milestone point
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Code	Description	Qtd	Total	Percent	Early	Start	Finish
		Flow	Flow	Complete	Start		
ASWPDW1000	225 Perforated Drain (in ZR)	18	184	0	08MAR06	30MAR06	21APR06
ASWPDW2000	225 Perforated Drain (in ZK)	18	286	0	14MAR06	03APR06	08MAY06
ASWPDW2100	225 Perforated Drain (in ZJ6)	6	376	0	09FEB06	18FEB06	03APR06
ASWPDW2200	225 Perforated Drain (in ZJ5)	5	466	0	03FEB06	08FEB06	03APR06
ASWPDW2300	225 Perforated Drain (ZJ - Node P1 South)	24	186	0	09FEB06	07MAR06	28MAR06
ASWPDW2350	225 Perforated Drain (ZJ, ZM, ZL1)	18	186	0	23DEC05	14JAN06	04FEB06
ASWPDW2400	Remove Existing 3200 Drainpipe	30		100	28APR05 A	08JUN05 A	08JUN05 A
Utility Works							
ASWPUT0000	D.I. Pipes & Fittings Delivery On Site	30	264	0	01OCT05	30OCT05	04OCT06
ASWPUT0100	Watermain - Lay Salt Main	18	564	0	18NOV05	08DEC05	27SEP05
ASWPUT0700	PCCW - Lay Cable (in ZR)	48	174	0	27JAN06	28MAR06	07JAN06
ASWPUT0800	PCCW - Lay Cable (in ZQ)	22	174	0	15APR06	11MAY06	20APR06
ASWPUT0900	PCCW - Lay Cable (in ZJ6)	10	174	0	03APR06	14APR06	24MAR06
ASWPUT1000	PCCW - Lay Cable (in ZJ5)	6	174	0	27MAR06	01APR06	13MAR06
ASWPUT1100	PCCW - Lay Cable (in ZJ, ZM, ZL1)	44	324	0	23DEC05	16FEB06	25MAR06
ASWPUT1200	HKCG - 32GRP Riser	3	264	0	05JAN06	11JAN06	19FEB06
ASWPUT1300	HKCG - 90 GRP Riser	5	286	0	12JAN06	17JAN06	21FEB06
ASWPUT1400	HKCG - 63 GRP Riser	3	286	0	18JAN06	20JAN06	24FEB06
Public Lighting, Duct and Cables							
ASWPPR0000	Public Lighting Ducts & Drains Along Promenades	60	606	0	14MAR06	24MAY06	04SEP06
ASWPPR0400	Install Public Lighting	24	606	0	25MAY06	22JUN06	02OCT06
Finishing Works							
ASWPRP0100	Lay Paving Block (in ZR)	48	256	0	06JUL06	02SEP06	02OCT06
ASWPRP0200	Lay Paving Block (in ZK)	24	256	0	18JUN06	14JUL06	12AUG06
ASWPRP0300	Lay Paving Block (in ZJ6)	12	276	0	30MAY06	13JUN06	15JUL06
ASWPRP0400	Lay Paving Block (in ZJ5)	12	276	0	18MAY06	28MAY06	30JUN06
ASWPRP0500	Lay Paving Block (in ZJ, ZM, ZL1)	80	326	0	03FEB06	09MAY06	10JUN06
Finishing Works							
ASWPPW0100	Finishing Works	60	606	0	06JUN06	18AUG06	08NOV06
E & M Works							
ASWPEM0000	Irrigation System	50	1176	0	22APR06	21JUN06	06SEP06
ASWPEM1000	E & M Works	30	866	0	23JUN06	28JUL06	03OCT06
Apply Road Marking							
ASWPRM0100	Apply Road Marking	30	256	0	04SEP06	06OCT06	08NOV06
ASWPRM0200	Erect Signage	21	256	0	14SEP06	09OCT06	08NOV06
Parapet Wall Formation							
ASWPHL0100	Parapet Wall (in ZR)	63	0	20	22AUG05 A	08MAR06	22AUG05 A
ASWPHL0200	Parapet Wall (in ZK)	28	286	0	09FEB06	13MAR06	15APR06
ASWPHL0300	Parapet Wall (in ZJ6)	13	286	0	23JAN06	08FEB06	13MAR06
ASWPHL0400	Parapet Wall (in ZJ5)	6	276	0	23JAN06	02FEB06	08MAR06
ASWPHL0500	Parapet Wall (ZJ - Landscape Node 1 South)	40	186	0	19DEC05	07FEB06	28FEB06
ASWPHL0600	Parapet Wall (ZM, ZL1, ZJ)	90	166	20	02JUL05 A	22DEC05	02JUL05 A
ASWPHL0700	Parapet Wall along Seawall (in ZR)	60	256	20	10AUG05 A	24NOV05	10AUG05 A
ASWPHL0800	Parapet Wall along Seawall (in ZK)	47	256	0	03MAR06	27APR06	01APR06
ASWPHL0900	Parapet Wall along Seawall (in ZJ6)	22	256	0	23MAY06	17JUN06	18JUL06
ASWPHL1000	Parapet Wall along Seawall (in ZJ5)	12	256	0	09MAY06	22MAY06	21JUN06
ASWPHL1100	Parapet Wall along Seawall (in ZJ6)	6	256	0	28APR06	08MAY06	07JUN06

Remove Existing 3200 Drainpipe

D.I. Pipes & Fittings Delivery On Site

Watermain - Lay Salt Main

PCCW - Lay Cable (in ZR)

PCCW - Lay Cable (in ZJ6)

PCCW - Lay Cable (in ZJ5)

PCCW - Lay Cable (in ZJ, ZM, ZL1)

HKCG - 32GRP Riser

HKCG - 90 GRP Riser

HKCG - 63 GRP Riser

Public Lighting Ducts & Drains Along Promenades

Install Public Lighting

Lay Paving Block (in ZR)

Lay Paving Block (in ZK)

Lay Paving Block (in ZJ6)

Lay Paving Block (in ZJ5)

Lay Paving Block (in ZJ, ZM, ZL1)

Finishing Works

Irrigation System

E & M Works

Apply Road Marking

Erect Signage

Parapet Wall (in ZR)

Parapet Wall (in ZK)

Parapet Wall (in ZJ6)

Parapet Wall (in ZJ5)

Parapet Wall (ZJ - Landscape Node 1 South)

Parapet Wall (ZM, ZL1, ZJ)

Parapet Wall along Seawall (in ZR)

Parapet Wall along Seawall (in ZK)

Parapet Wall along Seawall (in ZJ6)

Parapet Wall along Seawall (in ZJ5)

Parapet Wall along Seawall (in ZJ)

Parapet Wall Formation (VO068)

Parapet Wall along Seawall (in ZR)

Parapet Wall along Seawall (in ZK)

Parapet Wall along Seawall (in ZJ6)

Parapet Wall along Seawall (in ZJ5)

Parapet Wall along Seawall (in ZJ)

Start date 10JUN04

Finish date 20OCT07

2 days delay 28SEP06

5 days delay 17OCT06

Page number 25A

Legend:
 ■ Early bar
 ■ Progress bar
 ■ Critical bar
 ■ Summary bar
 ◆ Start milestone point

AR ID	Description	Orig Bur	Total Bur	Percent Complete	Early Start	Early Finish	Start	Finish	ASD's Contractor Work
ARWPHL1100	Parapet Wall along Seawall (in ZJ ZA, ZL1)	80	250	0	25NOV05	02MAR06	24DEC05	31MAR06	
ARWPHL1200	Construct Pilecaps (3 nos.)	72	850	0	14MAR06	06JUN06	05JUN06	26AUG06	Construct Pilecaps (3 nos.)
ARWPHL1300	Water Point WP2L4 to 2L-1	15	210	0	31MAR06	18APR06	29APR06	13MAY06	Water Point WP2L4 to 2L-1
ARWPHL1400	Water Point WP2L3 to 2L-1	19	195	0	31MAR06	21APR06	22APR06	13MAY06	Water Point WP2L3 to 2L-1
ARWPHL1500	Water Point WP2L3 to 2L-1	12	280	0	05APR06	18APR06	09MAY06	22MAY06	Water Point WP2L3 to 2L-1
ARWPHL1600	Water Point WP20-6 to 20-1	21	370	0	20FEB06	15MAR06	05APR06	28APR06	Water Point WP20-6 to 20-1
ARWPHL1700	Water Point WP18-4 to 18-1	15	180	0	06MAR06	21MAR06	06MAR06	15APR06	Water Point WP18-4 to 18-1
ARWPHL1800	Water Point WP18-3 to 18-2	12	210	0	06MAR06	01APR06	01APR06	15APR06	Water Point WP18-3 to 18-2
ARWPHL1900	Water Point WP17-5 to 17-1	18	160	0	16JAN06	07FEB06	09FEB06	25FEB06	Water Point WP17-5 to 17-1
ARWPHL2000	Water Point WP16-3 to 16-1	12	220	0	16JAN06	26JAN06	19FEB06	25FEB06	Water Point WP16-3 to 16-1
ARWPHL2200	ASD's Contractor Works	303	570	0	26SEP05	27SEP06	22JUL05	22JUL06	ASD's Contractor Work

Section 9

Pilecap Laying Shop

Ultimate Works

AR ID	Description	Orig Bur	Total Bur	Percent Complete	Early Start	Early Finish	Start	Finish	ASD's Contractor Work
ARLSMA0100	Propose Monitoring Plan for DSD's Submarine Pipe	30		100	01SEP04 A	06SEP04 A	01SEP04 A	06SEP04 A	
ARLSMA0200	Engineer & DSD Approval of Monitoring Plan	38		100	07SEP04 A	01MAR05 A	07SEP04 A	01MAR05 A	
ARLSMA0300	Setup Monitoring for DSD's Submarine Pipeline	30		100	14MAR05 A	14MAR05 A	14MAR05 A	14MAR05 A	
ARLSMA0400	Drilling & CPPT	30		100	11SEP04 A	11OCT04 A	11SEP04 A	11OCT04 A	
ARLSMA0500	Taking Up of Existing Armour to +2.5	2		100	08NOV04 A	08NOV04 A	08NOV04 A	08NOV04 A	
ARLSMA0610	Taking Up of Existing Underlayer to +2.5	3		100	11NOV04 A	13NOV04 A	11NOV04 A	13NOV04 A	
ARLSMA0600	Taking Up of Existing Rubble to +2.5	3		100	17NOV04 A	19NOV04 A	17NOV04 A	19NOV04 A	
ARLSMA0610	Taking Up of Existing Armour Below +2.5	3		100	24NOV04 A	27NOV04 A	24NOV04 A	27NOV04 A	
ARLSMA0620	Taking Up of Existing Rubble Below +2.5	3		100	05DEC04 A	08DEC04 A	05DEC04 A	08DEC04 A	
ARLSMA0630	Taking Up of Existing Rubble Below +2.5	5		100	13DEC04 A	16DEC04 A	13DEC04 A	16DEC04 A	
ARLSMA0640	Taking Up of rubble at Seawall Foundation	13		100	18FEB05 A	11MAR05 A	18FEB05 A	11MAR05 A	
ARLSMA0700	Dredging of Marine Mud	20		100	18MAR05 A	24MAR05 A	18MAR05 A	24MAR05 A	
ARLSMA0800	Placing of Rubble Foundation	15		100	28MAR05 A	19APR05 A	28MAR05 A	19APR05 A	
ARLSMA0850	Placing Levelling Stone	23		100	20APR05 A	26SEP05	20APR05 A	26SEP05	
ARLSMA0860	Block Wall Construction 2 Layers from Bottom (N)	5		100	04MAY05 A	31MAY05 A	04MAY05 A	31MAY05 A	
ARLSMA0900	Block Wall Construction 2 Layers from Bottom (S)	5		100	17JUL05 A	24AUG05 A	17JUL05 A	24AUG05 A	
ARLSMA0910	Block Wall Construction to Top Level	50		100	20APR05 A	28AUG05 A	20APR05 A	28AUG05 A	
ARLSMA0920	Placing of Beammstones	3		100	29AUG05 A	11SEP05 A	29AUG05 A	11SEP05 A	
ARLSMA1000	Backfill the Rubble Behind	14	2010	60	12SEP05 A	29SEP05	12SEP05 A	22APR06	
ARLSMA1100	Backfill the G200 Rockfill Behind	4	2010	0	03SEP05	03OCT05	23APR06	28APR06	

Final Works

AR ID	Description	Orig Bur	Total Bur	Percent Complete	Early Start	Early Finish	Start	Finish	ASD's Contractor Work
ARLSLW10100	Submit Shop Drawings & Calculation of Roof Cover	30		100	15AUG05 A	18SEP05 A	15AUG05 A	18SEP05 A	
ARLSLW10200	Engineer Approval of Shop Drawings & Calculation	30	560	90	16SEP05 A	10OCT05	16SEP05 A	15DEC05	
ARLSLW10400	Procurement of Pyramid Skylight	120	880	0	12OCT05	04MAR06	23JAN06	16JUN06	
ARLSLW10500	Procurement of Structural Steel	120	560	0	12OCT05	04MAR06	16DEC05	11MAY06	
ARLSLW10600	Delivery of Pyramid Skylight	30	860	0	08MAR06	10APR06	17JUN06	22JUL06	
ARLSLW10700	Delivery of Structural Steel	30	860	0	08MAR06	10APR06	12MAY06	16JUN06	
ARLSLW10800	Inspection & Testing	30	560	0	11APR06	19MAY06	17JUN06	22JUL06	
ARLSLW10900	Fabrication & Painting of Steel Works	48	560	0	17MAY06	13JUL06	24JUL06	16SEP06	
ARLSLW11000	Concrete Coping with 10 tonne Bolland & Handrail	30	1700	0	04OCT05	06NOV05	27APR06	02JUN06	
ARLSLW11100	Construct Shelter Footing	24	1080	0	23JAN06	21FEB06	03JUN06	30JUN06	
ARLSLW11200	Construct Shelter Column	30	1440	0	22FEB06	28MAR06	14AUG06	18SEP06	

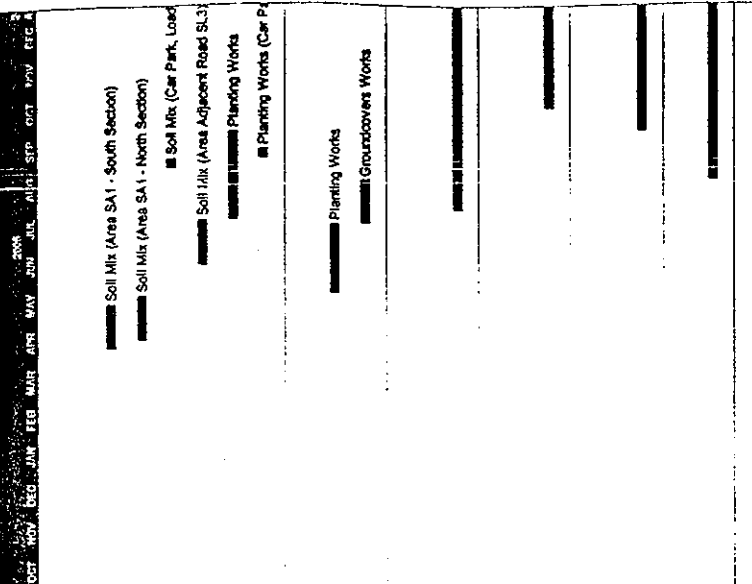
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Finish date	20OCT07
Start date	28SEP05
Finish date	17OCT05
Page number	28A
Legend	<ul style="list-style-type: none"> Early bar Program bar Critical bar Summary bar Start milestone point Finish milestone point



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ID	Description	Early Start	Early Finish	Start	Complete	Stop	Finish	End
Section 13								
Area SA1, SA2, SA3, SA4 & SA5								
Landscape Softworks								
BSA0SL0100	Soil Mix (Area SA1 - South Section)	30	1134	0	10APR06	19MAY06	23AUG06	26SEP06
BSA0SL0200	Soil Mix (Area SA1 - North Section)	30	1074	0	17APR06	22MAY06	23AUG06	26SEP06
BSA0SL0300	Soil Mix (Car Park, Loading & Unloading Area)	6	514	0	02SEP06	08SEP06	08NOV06	08NOV06
BSA0SL0400	Soil Mix (Area Adjacent Road SL3)	30	574	0	16JUL06	21JUL06	23AUG06	26SEP06
BSA0SL0500	Planting Works	60	574	0	22JUL06	26SEP06	27SEP06	07DEC06
BSA0SL0600	Planting Works (Car Park, Loading/Unloading Area)	6	854	0	09SEP06	15SEP06	20DEC06	20DEC06
Area SA6, SA9, SA16, SA18, SA17 & SA18								
Landscape Softworks								
BSA0SL0700	Planting Works	45	1074	0	24MAY06	17JUL06	26SEP06	21NOV06
BSA0SL0800	Groundcover Works	30	1074	0	18JUL06	21AUG06	22NOV06	26DEC06
Section 14								
Area SA4, SA11B & SA14								
Establishment Works								
BSA0EW0100	Establishment Works	300	-1274	0	28JUL06	21JUL07	25FEB07	17FEB07
Section 15								
Area SA7, SA10, BA11A, BA12 & BA13								
Establishment Works								
BSA0EW0100	Establishment Works	300	204	0	18OCT06	19OCT07	11NOV06	08NOV07
Section 16								
Area SA1, SA2, SA3, SA4 & SA5								
Establishment Works								
BSA0EW0200	Establishment Works	320	574	0	30SEP06	20OCT07	06DEC06	26DEC07
Area SA6, SA9, SA16, SA18, BA17 & BA18								
Establishment Works								
BSA0EW0100	Establishment Works	300	1114	0	22AUG06	15AUG07	02JAN07	26DEC07

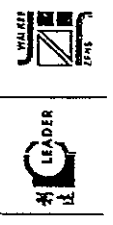


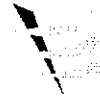
■ Soil Mix (Area SA1 - South Section)
 ■ Soil Mix (Area SA1 - North Section)
 ■ Soil Mix (Car Park, Load
 ■ Soil Mix (Area Adjacent Road SL3)
 ■ Planting Works
 ■ Planting Works (Car Park, Loading/Unloading Area)
 ■ Planting Works
 ■ Groundcover Works

Start date: 10JUN04
 Finish date: 20OCT07
 Start date: 26SEP06
 Finish date: 17OCT06
 Page number: 2/4
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■ Early bar
 ■ Progress bar
 ■ Critical bar
 ■ Summary bar
 ◆ Start milestone point
 ◆ Finish milestone point

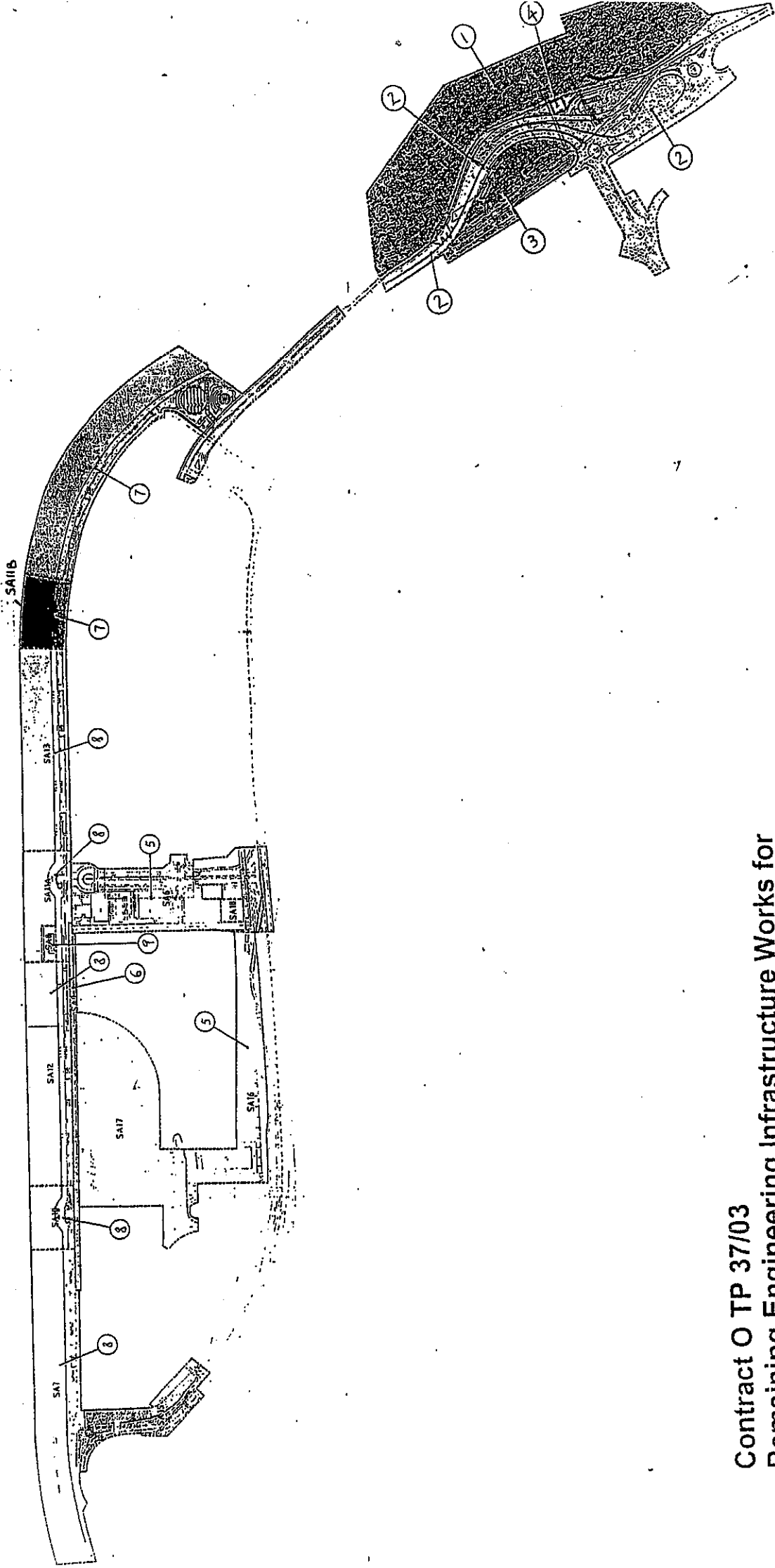
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Appendix G

Construction Site Area



Contract O TP 37/03
 Remaining Engineering Infrastructure Works for
 Pak Shek Kok Development Package 2A

Location and Key Plan



Appendix H

**The Implementation Status
of
Mitigation Measures and Follow-up Actions during Weekly
Site Inspections**

Contract No.: TP 37/03 Remaining Engineering Infrastructure Works for
 Pak Shek Kok Development Package 2A

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

Inspection Date : 2 June 2006 Inspected by Name : (RSS) Jimmy Ma (LWKJM) *John* K L Lam (ET) H.T. Chow
 Time : 14:50 Signature : *he*
 Weather : Sunny / Fine / Overcast / Drizzle / Rain / Storm / Hazy Temperature : 25°C
 Condition : Calm / Light / Breeze / Strong Humidity : High / Moderate / Low
 Wind :

	Implementation Stages*			Remark
	Yes	No	N/A	
Air Quality				
▪ The heights from which fill materials are dropped should be controlled to a practical height to minimize the fugitive dust arising from unloading.	✓			
▪ During transportation by truck, material should be loaded to a level lower than the side and tail boards, and should be dampened or covered before transport.	✓			
▪ All stockpile of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition.	✓			
▪ The haul road should be either paved or regular watering.	✓			
▪ Unpaved areas should be watered regularly to avoid dust generation.	✓			
▪ The public road around the site entrance should be kept clean and free from dust.	✓			
▪ Vehicle speed should be limited to 20 km/hr.	✓			
▪ Wheel washing facilities should be provided at all main entrance of work site.	✓			
▪ The enclosures should be around the main dust-generating activities.	✓			
▪ Dusty materials should be sprayed prior to loading.	✓			
▪ All plant and equipment should be well maintained e.g. without black smoke emission.	✓			
▪ Vehicle and equipment should be switched off while not in use.	✓			
▪ Open burning should be prohibited.	✓			
Noise				
▪ The constructions works should be scheduled to minimize noise nuisance.	✓			
▪ Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	✓			
▪ Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	✓			
▪ Plant known to emit noise strongly in on direction, should, where possible, be orientated so that the noise is directed away from nearby NSRs.	✓			
▪ Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	✓			
▪ Noise enclosures, noise barriers, or portable noise barriers used where necessary.	✓			
▪ Air compressors and hand held breakers should have noise labels.	✓			
▪ Compressors and generators should operate with door closed.	✓			
▪ Construction Noise Permits should be available for inspection.	✓			



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*			Remark
	Yes	No	N/A	
Mitigation Measures on Waste Management				
Water Quality				
General Construction Activities				
Temporary ditches shall be provided to facilitate runoff discharge into appropriate watercourses, via a sediment trap / sedimentation tanks, prior to discharge.		✓		②
Permanent drainage channels shall incorporate sediment basins / traps, and baffles.		✓		①
All traps shall incorporate oil and grease removal facilities.				
Sediment traps / sedimentation tanks shall be regular cleaned and maintained regularly.	✓			
All drainage facilities should be adequate for controlled release of storm flows.	✓			
Minimizing of exposed soil areas to reduce the potential for increased siltation and contamination of runoff.	✓			
Open stockpiles of more than 50m ³ should be covered.	✓			
Temporary stockpiles of excavated materials should be covered during rainstorms.	✓			
Manholes should be covered and sealed.	✓			
All chemical stores shall be contained (bunded) such that spills are not allowed to gain access to water bodies.	✓			
Vehicles and plant should be cleaned of earth, mud and debris before leaving the site.	✓			
Vehicle washing facilities should be provided at every site exit.	✓			
Vehicle washing facilities should be adequate to settle out the sand and silt.	✓			
Washing area and road exiting from washing facility should be paved.	✓			
Access road should have sufficient back fall toward washing facility.	✓			
Dredging Activities				
Dredging of designated contaminated marine mud shall only be undertaken by a suitable grab dredger using a close grab.				
Mechanical grabs shall be designed and maintained to avoid spillage and shall be seal tightly while being lifted.			✓	
All vessels shall be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipelines at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller on the water within the site.			✓	
The works shall cause no visible foam, oil, grease, scum litter or other objectionable matter to be present on the water within the site.			✓	
All barges shall be fitted with tight fitting seals to their bottom openings to prevent leakage of materials.			✓	
Excess material shall be cleaned from the decks and exposed fittings of the barges before the vessels are moved.			✓	
Loading of barges shall be controlled to prevent splashing of dredging material to the surrounding water and the barges shall not be filled to a level which will cause overflowing of material or polluted water during loading or transportation.			✓	
Adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action.			✓	



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*		Remark
	Yes	No / N/A	
Mitigation Measures on Waste Management			
Filling Activities			
<ul style="list-style-type: none"> ▪ Use of silt screen around the filling face to reduce the losses to the surrounding. ▪ All vessels shall be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipeline at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash or pipelines damaged. ▪ The works shall cause no visible foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site. ▪ All barges shall be fitted with tight fitting seals to their bottom openings to prevent leakage of material. ▪ Loading of barges shall be controlled to prevent splashing of dredged material to the surrounding water and barges shall not be filled to a level which will cause overflowing of material or polluted water during transportation. 	✓	✓	
Waste Management			
Marine Dredged Sediment			
<ul style="list-style-type: none"> • Relevant licence / permits for disposal of marine dredged sediment are available for inspection. • Bottom opening of barges is fitted with tight fitting seals to prevent leakage of material. Excess material is cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved. • Monitoring of the barging loading is conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels are equipped with automatic self-monitoring devices as specified by the EPD. • Transport of dredged marine sediments to the disposal site is by split barge of not less than 750m³ capacity, well maintained and capable of rapid opening and discharge at the disposal site. • Inspection of the barge loading to ensure that loss of material does not take place during transportation. 	✓	✓	
Construction and Demolition (C&D) Waste			
<ul style="list-style-type: none"> • Most of the C&D materials generated from the construction are sorted immediately in-situ to find out if they can be re-used for this job site or for other job sites. • Sufficient spaces are identified and provided during the construction stage for the collection, temporary storage and on-site sorting of C&D materials. • Proper protective measures, such as fences and tarpaulin, are provided, in order to protect the temporary stockpiled materials for later reuse / recycle. • Avoiding cross contamination to reusable and / or recyclable materials collected (e.g. covering the reusable materials) • In order to reduce the impacts to the public, except for those sorted inert C&D materials to be reused on site, all other sorted non-inert materials (e.g. general refuse and waste formworks) shall be removed off site as soon as practicable in order to optimise the use of the on-site storage space. If the non-inert materials need to be stored on site for a short period, the materials shall be centralized and stored at specific areas far away from the sensitive receivers. • All Public Fill arising from the demolition works shall be limited to a size not more than 250mm and free of reinforcement bars, timber, etc. before re-using it. • Recyclable materials sorted from the site should be collected by potential recycling contractors under the Contractor's arrangement. • Trip ticket system will be implemented to ensure proper waste disposal at public filling and landfills • Appropriate measures should be employed to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. • Proper resource planning and calculations before ordering the construction materials to be used will ensure that the wastage of the materials can be minimized 	✓	✓	



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
<ul style="list-style-type: none"> Proper storage will minimize the damage and thus the wastage of the materials 	✓			
<ul style="list-style-type: none"> Training of site personnel in proper waste management procedures. The workers shall be constantly educated for the awareness of the proper handling of waste and to reduce the amount of waste while Site Agent shall be constantly met to discuss the effectiveness of the implementation of the waste management plan. Information to promote the waste management and the reduction concept shall be posted at the site to raise alertness of the personnel concerned. 	✓			
<ul style="list-style-type: none"> Chemical Waste 				
<ul style="list-style-type: none"> It is required to register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes. 	✓			
<ul style="list-style-type: none"> After use, chemical wastes (e.g. cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. 	✓			
<ul style="list-style-type: none"> Chemical wastes should be stored and collected by an approved operator for disposal at the Chemical Waste Treatment Facility or other licensed facility in accordance with the Chemical Waste (General) Regulation. 	✓			
<ul style="list-style-type: none"> Containers used for the storage of chemical wastes 				
<ul style="list-style-type: none"> Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed 	✓			
<ul style="list-style-type: none"> Have a capacity of less than 450L unless the specification have been approved by the EPD 	✓			
<ul style="list-style-type: none"> Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Chemical Waste (General) Regulations and Codes of Practice 	✓			
<ul style="list-style-type: none"> Labelling 				
<ul style="list-style-type: none"> Every container of chemical waste would bear an appropriate label, which would contain the particulars details. 	✓			
<ul style="list-style-type: none"> The waste produced would ensure that the information contained on the label is accurate and sufficient so as to enable proper and safe handling, storage and transport of the chemical waste 	✓			
<ul style="list-style-type: none"> Storage Area 				
<ul style="list-style-type: none"> Be clearly labeled and used solely for the storage of chemical waste 	✓			
<ul style="list-style-type: none"> Be enclosed on at least 3 sides 	✓			
<ul style="list-style-type: none"> Have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20% of the total volume of waste stored in that area, whichever is the greatest 	✓			
<ul style="list-style-type: none"> Have adequate ventilation 	✓			
<ul style="list-style-type: none"> Be covered to prevent rainfall entering 	✓			
<ul style="list-style-type: none"> Be arranged so that incompatible materials are adequately separated 	✓			
<ul style="list-style-type: none"> Be clean and maintain regularly 	✓			
<ul style="list-style-type: none"> Disposal 				
<ul style="list-style-type: none"> Be via a licensed waste collector 	✓			
<ul style="list-style-type: none"> To a licensed disposal facility, such as Chemical Waste Treatment Centre 	✓			
<ul style="list-style-type: none"> Be a reuser of the waste, under approval from the EPD 	✓			



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*			Remark
	Yes	No	N/A	
Mitigation Measures on Waste Management				
• Spillage				
• Establish source of spill or discharge and determine nature of material, where possible halt discharge	✓			
• Commencing at the source of the spill, establish all current and potential impacted areas	✓			
• Commence containment of spill using bunds made from available materials and ground water cut-off trenches where necessary	✓			
• After spill is contained remove material (including contaminated soil where necessary) using pumps and/or absorbent materials	✓			
• Dispose of materials as chemical wastes	✓			
• General Refuse				
• General refuse generated on-site is in enclosed bins or compaction units separate from construction and chemical waste				
• A reputable waste collector is employed by the Contractor to remove general refuse from the site, separately from the construction and chemical waste.	✓			
• General refuse generated is removed on daily or every second day basis to minimise odour, pest and litter impacts	✓			
• Aluminium cans are recovered from the waste stream by individual collectors if they are segregated or easily accessible, so separate, labelled bins for their deposit should be provided if feasible.	✓			
• Office wastes are reduced through recycling of paper if volumes are large enough to warrant collection.	✓			
• Site Practice				
• Good site practices should be adopted to clean the rubbish and litter on the construction sites so as to prevent the rubbish and litter from dropping into the nearby environment. Construction sites should be cleaned on a regular basis.	✓			
• The Contractor assigned worker is responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.	✓			
• Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	✓			
• The Environmental Permit should be displaced conspicuously on site	✓			
• Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	✓			
• Any unused chemicals or those with remaining functional capacity should be recycled.	✓			
• A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods.	✓			
• Suitable collection sites around site offices will be required. For environmental hygiene reasons and to minimize odor, refuse should not be stored for a period exceeding 48 hours, however, removal every 24 hours is preferable.	✓			
• Minimize windblown litter and dust during transportation by either covering trucks or transporting wastes in enclosed container.	✓			
• All generators, fuel and oil storage are within bundle areas.	✓			
• Oil leakage from machinery, vehicle and plant is prevented.	✓			
• Chemical storage area, drainage systems, silt traps, sumps and oil interceptors are cleaned and maintained regularly.	✓			

Contract No.: TP 37/03 Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 2A

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

Inspection Date : 6 June 2006 Inspected by Name : (RSS) Jimmy Ma (LWIKM) (ET) H. T. Chow
 Time : 10:30 Signature : *he*
 Weather Condition : Sunny / Fine / Overcast / Drizzle / Rain / Storm / Hazy
 Wind : Calm / Light / Breeze / Strong Temperature : 28°C Humidity : High / Moderate / Low

	Implementation Stages*			Remark
	Yes	No	N/A	
Air Quality				
• The heights from which fill materials are dropped should be controlled to a practical height to minimize the fugitive dust arising from unloading.	<input checked="" type="checkbox"/>			
• During transportation by truck, material should be loaded to a level lower than the side and tail boards, and should be dampened or covered before transport.	<input checked="" type="checkbox"/>			
• All stockpile of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition.	<input checked="" type="checkbox"/>			(3)
• The haul road should be either paved or regular watering.	<input checked="" type="checkbox"/>			
• Unpaved areas should be watered regularly to avoid dust generation.	<input checked="" type="checkbox"/>			
• The public road around the site entrance should be kept clean and free from dust.	<input checked="" type="checkbox"/>			
• Vehicle speed should be limited to 20 km/hr.	<input checked="" type="checkbox"/>			
• Wheel washing facilities should be provided at all main entrance of work site.	<input checked="" type="checkbox"/>			
• The enclosures should be around the main dust-generating activities.	<input checked="" type="checkbox"/>			
• Dusty materials should be sprayed prior to loading.	<input checked="" type="checkbox"/>			
• All plant and equipment should be well maintained e.g. without black smoke emission.	<input checked="" type="checkbox"/>			
• Vehicle and equipment should be switched off while not in use.	<input checked="" type="checkbox"/>			
• Open burning should be prohibited.	<input checked="" type="checkbox"/>			
Noise				
• The constructions works should be scheduled to minimize noise nuisance.	<input checked="" type="checkbox"/>			
• Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	<input checked="" type="checkbox"/>			
• Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	<input checked="" type="checkbox"/>			
• Plant known to emit noise strongly in one direction, should, where possible, be orientated so that the noise is directed away from NSRs.	<input checked="" type="checkbox"/>			
• Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	<input checked="" type="checkbox"/>			
• Noise enclosures, noise barriers, or portable noise barriers used where necessary.	<input checked="" type="checkbox"/>			
• Air compressors and hand held breakers should have noise labels.	<input checked="" type="checkbox"/>			
• Compressors and generators should operate with door closed.	<input checked="" type="checkbox"/>			
• Construction Noise Permits should be available for inspection.	<input checked="" type="checkbox"/>			



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*		Remark
	Yes	No / N/A	
Mitigation Measures on Waste Management			
Water Quality			
General Construction Activities			
Temporary ditches shall be provided to facilitate runoff discharge into appropriate watercourses, via a sediment trap / sedimentation tanks, prior to discharge.	✓		②
Permanent drainage channels shall incorporate sediment basins / traps, and baffles.	✓		#1
All traps shall incorporate oil and grease removal facilities.	✓		②
Sediment traps / sedimentation tanks shall be regular cleaned and maintained regularly.	✓		
All drainage facilities should be adequate for controlled release of storm flows.	✓		
Minimizing of exposed soil areas to reduce the potential for increased siltation and contamination of runoff.	✓		
Open stockpiles of more than 50m ³ should be covered.	✓		③
Temporary stockpiles of excavated materials should be covered during rainstorms.	✓		③
Manholes should be covered and sealed.	✓		
All chemical stores shall be contained (bunded) such that spills are not allowed to gain access to water bodies.	✓		
Vehicles and plant should be cleaned of earth, mud and debris before leaving the site.	✓		
Vehicle washing facilities should be provided at every site exit.	✓		
Vehicle washing facilities should be adequate to settle out the sand and silt.	✓		
Washing area and road exiting from washing facility should be paved.	✓		
Access road should have sufficient back fall toward washing facility.	✓		
Dredging Activities			
Dredging of designated contaminated marine mud shall only be undertaken by a suitable grab dredger using a close grab.	✓		
Mechanical grabs shall be designed and maintained to avoid spillage and shall be seal tightly while being lifted.	✓		
All vessels shall be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipelines at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller on the water within the site.	✓		
The works shall cause no visible foam, oil, grease, scum litter or other objectionable matter to be present on the water within the site.	✓		
All barges shall be fitted with tight fitting seals to their bottom openings to prevent leakage of materials.	✓		
Excess material shall be cleaned from the decks and exposed fittings of the barges before the vessels are moved.	✓		
Loading of barges shall be controlled to prevent splashing of dredging material to the surrounding water and the barges shall not be filled to a level which will cause overflowing of material or polluted water during loading or transportation.	✓		
Adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action.	✓		



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*			Remark
	Yes	No	N/A	
Mitigation Measures on Waste Management				
Filling Activities				
Use of silt screen around the filling face to reduce the losses to the surrounding.		✓		
All vessels shall be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipeline at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash or pipelines damaged.			✓	
The works shall cause no visible foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site.			✓	
All barges shall be fitted with tight fitting seals to their bottom openings to prevent leakage of material.			✓	
Loading of barges shall be controlled to prevent splashing of dredged material to the surrounding water and barges shall not be filled to a level which will cause overflowing of material or polluted water during loading transportation.			✓	
Waste Management				
Marine Dredged Sediment				
Relevant licence / permits for disposal of marine dredged sediment are available for inspection.			✓	
Bottom opening of barges is fitted with tight fitting seals to prevent leakage of material. Excess material is cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved.			✓	
Monitoring of the barging loading is conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels are equipped with automatic self-monitoring devices as specified by the EPD.			✓	
Transport of dredged marine sediments to the disposal site is by split barge of not less than 750m ³ capacity, well maintained and capable of rapid opening and discharge at the disposal site.			✓	
Inspection of the barge loading to ensure that loss of material does not take place during transportation.			✓	
Construction and Demolition (C&D) Waste				
Most of the C&D materials generated from the construction are sorted immediately in-situ to find out if they can be re-used for this job site or for other job sites.			✓	
Sufficient spaces are identified and provided during the construction stage for the collection, temporary storage and on-site sorting of C&D materials.			✓	
Proper protective measures, such as fences and tarpaulin, are provided, in order to protective the temporary stockpiled materials for later reuse / recycle.			✓	
Avoiding cross contamination to reusable and / or recyclable materials collected (e.g. covering the reusable materials)			✓	
In order to reduce the impacts to the public, except for those sorted inert C&D materials to be reused on site, all other sorted non-inert materials (e.g. general refuse and waste formworks) shall be removed off site as soon as practicable in order to optimise the use of the on-site storage space. If the non-inert materials need to be stored on site for a short period, the materials shall be centralized and stored at specific areas far away the sensitive receivers.			✓	
All Public Fill arising from the demolition works shall be limited to a size not more than 250mm and free of reinforcement bars, timber, etc. before re-using it.			✓	
Recyclable materials sorted from the site should be collected by potential recycling contractors under the Contractor's arrangement.			✓	
Trip ticket system will be implemented to ensure proper waste disposal at public filling and landfills			✓	
Appropriate measures should be employed to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers.			✓	
Proper resource planning and calculations before ordering the construction materials to be used will ensure that the wastage of the materials can be minimized			✓	

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*			Remark
	Yes	No	N/A	
Mitigation Measures on Waste Management				
• Proper storage will minimize the damage and thus the wastage of the materials	✓			
• Training of site personnel in proper waste management procedures. The workers shall be constantly educated for the awareness of the proper handling of waste and to reduce the amount of waste while Site Agent shall be constantly met to discuss the effectiveness of the implementation of the waste management plan. Information to promote the waste management and the reduction concept shall be posted at the site to raise alertness of the personnel concerned.	✓			
• Chemical Waste				
• It is required to register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	✓			
• After use, chemical wastes (e.g. cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.	✓			
• Chemical wastes should be stored and collected by an approved operator for disposal at the Chemical Waste Treatment Facility or other licensed facility in accordance with the Chemical Waste (General) Regulation.	✓			
• Containers used for the storage of chemical wastes				
• Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed	✓			
• Have a capacity of less than 450L unless the specification have been approved by the EPD	✓			
• Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Chemical Waste (General) Regulations and Codes of Practice	✓			
• Labelling				
• Every container of chemical waste would bear an appropriate label, which would contain the particulars details.	✓			
• The waste produced would ensure that the information contained on the label is accurate and sufficient so as to enable proper and safe handling, storage and transport of the chemical waste	✓			
• Storage Area				
• Be clearly labeled and used solely for the storage of chemical waste	✓			
• Be enclosed on at least 3 sides	✓			
• Have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20% of the total volume of waste stored in that area, whichever is the greatest	✓			
• Have adequate ventilation	✓			
• Be covered to prevent rainfall entering	✓			
• Be arranged so that incompatible materials are adequately separated	✓			
• Be clean and maintain regularly	✓			
• Disposal				
• Be via a licensed waste collector	✓			
• To a licensed disposal facility, such as Chemical Waste Treatment Centre	✓			
• Be a reuser of the waste, under approval from the EPD	✓			



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*			Remark
	Yes	No	N/A	
Mitigation Measures on Waste Management				
• Spillage	✓			
• Establish source of spill or discharge and determine nature of material, where possible halt discharge	✓			
• Commencing at the source of the spill, establish all current and potential impacted areas	✓			
• Commence containment of spill using bunds made from available materials and ground water cut-off trenches where necessary	✓			
• After spill is contained remove material (including contaminated soil where necessary) using pumps and/or absorbent materials	✓			
• Dispose of materials as chemical wastes	✓			
• General Refuse	✓			
• General refuse generated on-site is in enclosed bins or compaction units separate from construction and chemical waste	✓			
• A reputable waste collector is employed by the Contractor to remove general refuse from the site, separately from the construction and chemical waste.	✓			
• General refuse generated is removed on daily or every second day basis to minimise odour, pest and litter impacts	✓			
• Aluminium cans are recovered from the waste stream by individual collectors if they are segregated or easily accessible, so separate, labelled bins for their deposit should be provided if feasible.	✓			
• Office wastes are reduced through recycling of paper if volumes are large enough to warrant collection.	✓			
• Site Practice	✓			
• Good site practices should be adopted to clean the rubbish and litter on the construction sites so as to prevent the rubbish and litter from dropping into the nearby environment. Construction sites should be cleaned on a regular basis.	✓			
• The Contractor assigned worker is responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.	✓			
• Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	✓			
• The Environmental Permit should be displayed conspicuously on site	✓			
• Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	✓			
• Any unused chemicals or those with remaining functional capacity should be recycled.	✓			
• A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods.	✓			
• Suitable collection sites around site offices will be required. For environmental hygiene reasons and to minimize odor, refuse should not be stored for a period exceeding 48 hours, however, removal every 24 hours is preferable.	✓			
• Minimize windblown litter and dust during transportation by either covering trucks or transporting wastes in enclosed container.	✓			
• All generators, fuel and oil storage are within bundle areas.	✓			
• Oil leakage from machinery, vehicle and plant is prevented.	✓			
• Chemical storage area, drainage systems, silt traps, sumps and oil interceptors are cleaned and maintained regularly.	✓			

Contract No.: TP 37/03 Remaining Engineering Infrastructure Works for
Pak Shek Kok Development Package 2A

Table for follow-up Action:

Item	Details of defective works or observations	Location	Further action to be taken (Included persons / party to take action)	Expected Date for Action taken
#1	Follow up action to the previous site inspection item ① on 2-6-2006, mud and sand were still accumulated on the u-channel.	SA-1	The Contractor should clean up the mud and sand regularly.	15-6-06
#2	Temporary water courses ^{got} were not provided for run off discharge.	Node 2	Follow up action was completed, no further action to be taken.	N/A
①	Silt curtain at "Node 2" was found partly damaged.	Node 2	The Contractor was reminded to repair the curtain immediately.	15-6-06
②	Waste water direct discharge from ^{got} from Workshop was observed.	Workshop	The Contractor should provide any treatment facilities before discharge.	15-6-06
③	Stockpiles at SA-3 was found without covered.	SA-3	The Contractor was reminded to cover the all stockpiles by tarpaulin sheets.	15-6-06

Signature:	RSS	LWKJV	ET
Name:	JIMMY MA	Henry	H.T. Chow
Date:	6/6/2006	6/6/06	6-6-2006

Contract No.: TP 37/03 Remaining Engineering Infrastructure Works for
 Pak Shek Kok Development Package 2A

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

Inspection Date : 13 June 2006 Inspected by Name : (RSS) JIMMY MA (LWK/M) (ET) N. T. Chow
 Time : 10:00 Signature : *ke* *ke*

Weather Condition Wind : Sunny / Fine / Overcast / Drizzle / Rain / Storm / Hazy
 Temperature : 30°C
 Humidity : (High) / Moderate / Low

	Implementation Stages*		Remark
	Yes	No / N/A	
Mitigation Measures on Waste Management			
Air Quality			
▪ The heights from which fill materials are dropped should be controlled to a practical height to minimize the fugitive dust arising from unloading.	✓		
▪ During transportation by truck, material should be loaded to a level lower than the side and tail boards, and should be dampened or covered before transport.	✓		
▪ All stockpiles of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition.	✓		# 4
▪ The haul road should be either paved or regular watering.	✓		
▪ Unpaved areas should be watered regularly to avoid dust generation.	✓		
▪ The public road around the site entrance should be kept clean and free from dust.	✓		
▪ Vehicle speed should be limited to 20 km/hr.	✓		
▪ Wheel washing facilities should be provided at all main entrance of work site.	✓		
▪ The enclosures should be around the main dust-generating activities.	✓		
▪ Dusty materials should be sprayed prior to loading.	✓		
▪ All plant and equipment should be well maintained e.g. without black smoke emission.	✓		
▪ Vehicle and equipment should be switched off while not in use.	✓		
▪ Open burning should be prohibited.	✓		
Noise			
▪ The constructions works should be scheduled to minimize noise nuisance.	✓		
▪ Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	✓		
▪ Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	✓		
▪ Plant known to emit noise strongly in on direction, should, where possible, be orientated so that the noise is directed away from nearby NSRs.	✓		
▪ Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	✓		
▪ Noise enclosures, noise barriers, or portable noise barriers used where necessary.	✓		
▪ Air compressors and hand held breakers should have noise labels.	✓		
▪ Compressors and generators should operate with door closed.	✓		
▪ Construction Noise Permits should be available for inspection.	✓		



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*		Remark
	Yes	No	
Mitigation Measures on Waste Management			
Water Quality			
General Construction Activities			
▪ Temporary ditches shall be provided to facilitate runoff discharge into appropriate watercourses, via a sediment trap / sedimentation tanks, prior to discharge.	✓		
▪ Permanent drainage channels shall incorporate sediment basins / traps, and baffles.	✓		
▪ All traps shall incorporate oil and grease removal facilities.	✓		
▪ Sediment traps / sedimentation tanks shall be regular cleaned and maintained regularly.	✓		
▪ All drainage facilities should be adequate for controlled release of storm flows.	✓		
▪ Minimizing of exposed soil areas to reduce the potential for increased siltation and contamination of runoff.	✓		
▪ Open stockpiles of more than 50m ³ should be covered.	✓		
▪ Temporary stockpiles of excavated materials should be covered during rainstorms.	✓		
▪ Manholes should be covered and sealed.	✓		
▪ All chemical stores shall be contained (bunded) such that spills are not allowed to gain access to water bodies.	✓		
▪ Vehicles and plant should be cleaned of earth, mud and debris before leaving the site.	✓		
▪ Vehicle washing facilities should be provided at every site exit.	✓		
▪ Vehicle washing facilities should be adequate to settle out the sand and silt.	✓		
▪ Washing area and road exiting from washing facility should be paved.	✓		
▪ Access road should have sufficient back fall toward washing facility.	✓		
Dredging Activities			
▪ Dredging of designated contaminated marine mud shall only be undertaken by a suitable grab dredger using a close grab.	✓		
▪ Mechanical grabs shall be designed and maintained to avoid spillage and shall be seal tightly while being lifted.	✓		
▪ All vessels shall be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipelines at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller on the water within the site.	✓		
▪ The works shall cause no visible foam, oil, grease, scum litter or other objectionable matter to be present on the water within the site.	✓		
▪ All barges shall be fitted with tight fitting seals to their bottom openings to prevent leakage of materials.	✓		
▪ Excess material shall be cleaned from the decks and exposed fittings of the barges before the vessels are moved.	✓		
▪ Loading of barges shall be controlled to prevent splashing of dredging material to the surrounding water and the barges shall not be filled to a level which will cause overflowing of material or polluted water during loading or transportation.	✓		
▪ Adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action.	✓		



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*		Remark
	Yes	No / N/A	
Mitigation Measures on Waste Management			
Filling Activities			
• Use of silt screen around the filling face to reduce the losses to the surrounding.	<input checked="" type="checkbox"/>		
• All vessels shall be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipeline at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash or pipelines damaged.	<input checked="" type="checkbox"/>		42
• The works shall cause no visible foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site.	<input checked="" type="checkbox"/>		
• All barges shall be fitted with tight fitting seals to their bottom openings to prevent leakage of material.	<input checked="" type="checkbox"/>		
• Loading of barges shall be controlled to prevent splashing of dredged material to the surrounding water and barges shall not be filled to a level which will cause overflowing of material or polluted water during loading transportation.	<input checked="" type="checkbox"/>		
Waste Management			
Marine Dredged Sediment			
• Relevant licence / permits for disposal of marine dredged sediment are available for inspection.	<input checked="" type="checkbox"/>		
• Bottom opening of barges is fitted with tight fitting seals to prevent leakage of material. Excess material is cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved.	<input checked="" type="checkbox"/>		
• Monitoring of the barging loading is conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels are equipped with automatic self-monitoring devices as specified by the EPD.	<input checked="" type="checkbox"/>		
• Transport of dredged marine sediments to the disposal site is by split barge of not less than 750m ³ capacity, well maintained and capable of rapid opening and discharge at the disposal site.	<input checked="" type="checkbox"/>		
• Inspection of the barge loading to ensure that loss of material does not take place during transportation.	<input checked="" type="checkbox"/>		
Construction and Demolition (C&D) Waste			
• Most of the C&D materials generated from the construction are sorted immediately in-situ to find out if they can be re-used for this job site or for other job sites.	<input checked="" type="checkbox"/>		
• Sufficient spaces are identified and provided during the construction stage for the collection, temporary storage and on-site sorting of C&D materials.	<input checked="" type="checkbox"/>		
• Proper protective measures, such as fences and tarpaulin, are provided, in order to protect the temporary stockpiled materials for later reuse / recycle.	<input checked="" type="checkbox"/>		
• Avoiding cross contamination to reusable and / or recyclable materials collected (e.g. covering the reusable materials)	<input checked="" type="checkbox"/>		
• In order to reduce the impacts to the public, except for those sorted inert C&D materials to be reused on site, all other sorted non-inert materials (e.g. general refuse and waste formworks) shall be removed off site as soon as practicable in order to optimise the use of the on-site storage space. If the non-inert materials need to be stored on site for a short period, the materials shall be centralized and stored at specific areas far away the sensitive receivers.	<input checked="" type="checkbox"/>		
• All Public Fill arising from the demolition works shall be limited to a size not more than 250mm and free of reinforcement bars, timber, etc. before re-using it.	<input checked="" type="checkbox"/>		
• Recyclable materials sorted from the site should be collected by potential recycling contractors under the Contractor's arrangement.	<input checked="" type="checkbox"/>		
• Trip ticket system will be implemented to ensure proper waste disposal at public filling and landfills	<input checked="" type="checkbox"/>		
• Appropriate measures should be employed to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers.	<input checked="" type="checkbox"/>		
• Proper resource planning and calculations before ordering the construction materials to be used will ensure that the wastage of the materials can be minimized	<input checked="" type="checkbox"/>		

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
• Proper storage will minimize the damage and thus the wastage of the materials	<input checked="" type="checkbox"/>			
• Training of site personnel in proper waste management procedures. The workers shall be constantly educated for the awareness of the proper handling of waste and to reduce the amount of waste while Site Agent shall be constantly met to discuss the effectiveness of the implementation of the waste management plan. Information to promote the waste management and the reduction concept shall be posted at the site to raise alertness of the personnel concerned.	<input checked="" type="checkbox"/>			
• Chemical Waste				
• It is required to register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	<input checked="" type="checkbox"/>			
• After use, chemical wastes (e.g. cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.	<input checked="" type="checkbox"/>			
• Chemical wastes should be stored and collected by an approved operator for disposal at the Chemical Waste Treatment Facility or other licensed facility in accordance with the Chemical Waste (General) Regulation.	<input checked="" type="checkbox"/>			
• Containers used for the storage of chemical wastes				
• Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed		<input checked="" type="checkbox"/>		①
• Have a capacity of less than 450L unless the specification have been approved by the EPD	<input checked="" type="checkbox"/>			
• Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Chemical Waste (General) Regulations and Codes of Practice	<input checked="" type="checkbox"/>			
• Labelling	<input checked="" type="checkbox"/>			
• Every container of chemical waste would bear an appropriate label, which would contain the particulars details.	<input checked="" type="checkbox"/>			
• The waste produced would ensure that the information contained on the label is accurate and sufficient so as to enable proper and safe handling, storage and transport of the chemical waste	<input checked="" type="checkbox"/>			
• Storage Area				
• Be clearly labeled and used solely for the storage of chemical waste	<input checked="" type="checkbox"/>			
• Be enclosed on at least 3 sides	<input checked="" type="checkbox"/>			
• Have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20% of the total volume of waste stored in that area, whichever is the greatest	<input checked="" type="checkbox"/>			
• Have adequate ventilation	<input checked="" type="checkbox"/>			
• Be covered to prevent rainfall entering	<input checked="" type="checkbox"/>			
• Be arranged so that incompatible materials are adequately separated	<input checked="" type="checkbox"/>			
• Be clean and maintain regularly	<input checked="" type="checkbox"/>			①
• Disposal				
• Be via a licensed waste collector	<input checked="" type="checkbox"/>			
• To a licensed disposal facility, such as Chemical Waste Treatment Centre	<input checked="" type="checkbox"/>			
• Be a reuser of the waste, under approval from the EPD	<input checked="" type="checkbox"/>			



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*			Remark
	Yes	No	N/A	
Mitigation Measures on Waste Management				
• Spillage				
• Establish source of spill or discharge and determine nature of material, where possible halt discharge				
• Commencing at the source of the spill, establish all current and potential impacted areas				
• Commence containment of spill using bunds made from available materials and ground water cut-off trenches where necessary				
• After spill is contained remove material (including contaminated soil where necessary) using pumps and/or absorbent materials				
• Dispose of materials as chemical wastes				
• General Refuse				
• General refuse generated on-site is in enclosed bins or compaction units separate from construction and chemical waste				
• A reputable waste collector is employed by the Contractor to remove general refuse from the site, separately from the construction and chemical waste.				
• General refuse generated is removed on daily or every second day basis to minimise odour, pest and litter impacts				
• Aluminium cans are recovered from the waste stream by individual collectors if they are segregated or easily accessible, so separate, labelled bins for their deposit should be provided if feasible.				
• Office wastes are reduced through recycling of paper if volumes are large enough to warrant collection.				
• Site Practice				
• Good site practices should be adopted to clean the rubbish and litter on the construction sites so as to prevent the rubbish and litter from dropping into the nearby environment. Construction sites should be cleaned on a regular basis.				
• The Contractor assigned worker is responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.				
• Proper storage and site practices to minimise the potential for damage or contamination of construction materials.				
• The Environmental Permit should be displayed conspicuously on site				
• Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.				
• Any unused chemicals or those with remaining functional capacity should be recycled.				
• A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods.				
• Suitable collection sites around site offices will be required. For environmental hygiene reasons and to minimize odor, refuse should not be stored for a period exceeding 48 hours, however, removal every 24 hours is preferable.				
• Minimize windblown litter and dust during transportation by either covering trucks or transporting wastes in enclosed container.				
• All generators, fuel and oil storage are within bundle areas.				
• Oil leakage from machinery, vehicle and plant is prevented.				
• Chemical storage area, drainage systems, silt traps, surmps and oil interceptors are cleaned and maintained regularly.				

Contract No.: TP 37/03 Remaining Engineering Infrastructure Works for Pak Shek Kok Development Package 2A


Table for follow-up Action:

Item	Details of defective works or observations	Location	Further action to be taken (Included persons / party to take action)	Expected Date for Action taken
#1	Follow up action to the previous site inspection item ② on 6-6-2006, mud and sand in the u-channel were cleaned up	SA-1	Follow up action was completed, no further action to be taken.	N/A
#2	Follow up action to the previous site inspection item ① on 6-6-2006, silt curtain at Node 2 was still found partly damaged.	Node 2	The Contractor was reminded to repair the curtain immediately.	22-6-2006
#3	Follow up action to the previous site inspection item ① on 6-6-2006, oil intercepter was not provided at Work Shop for waste water discharge.	Work Shop	Follow up action was completed, no further action to be taken.	N/A
#4	Follow up action to the previous site inspection item ③ on 6-6-2006, stockpiles at SA-3 was still found without covered.	SA-3	The Contractor was reminded to cover the all stockpiles by tarpaulin sheets.	22-6-2006
#New	① Dirty water was accumulated in the chemical waste storage, Sub. storage.	Work shop	The Contractor should regularly drain of rain water to prevent mosquito breeding.	22-6-2006

Signature:	RSS	LWKJUV	ET
Name:	JIMMY MA	Signature	H. T. Chow
Date:	15/6/2006	15/6/06	15-6-2006

Contract No.: TP 37/03 Remaining Engineering Infrastructure Works for
 Pak Shek Kok Development Package 2A

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

Inspection Date : 21/06/06
 Time : 14:30
 Inspected by : (RSS) JIMMY MA (LWKJM) (ET) Linda Lam
 Signature :  (20th June)

Weather Condition : Sunny / Fine / Overcast / Drizzle / Rain / Storm / Hazy
 Wind : ~~Calm~~ Light / Breeze / Strong
 Temperature : 32°C
 Humidity : High / Moderate / Low

	Implementation Stages*			Remark
	Yes	No	N/A	
Mitigation Measures on Waste Management				
Air Quality				
▪ The heights from which fill materials are dropped should be controlled to a practical height to minimize the fugitive dust arising from unloading.	/			
▪ During transportation by truck, material should be loaded to a level lower than the side and tail boards, and should be dampened or covered before transport.	/			
▪ All stockpile of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition.	/			# 2
▪ The haul road should be either paved or regular watering.	/			
▪ Unpaved areas should be watered regularly to avoid dust generation.	/			
▪ The public road around the site entrance should be kept clean and free from dust.	/			
▪ Vehicle speed should be limited to 20 km/hr.	/			
▪ Wheel washing facilities should be provided at all main entrance of work site.	/			
▪ The enclosures should be around the main dust-generating activities.	/			
▪ Dusty materials should be sprayed prior to loading.	/			
▪ All plant and equipment should be well maintained e.g. without black smoke emission.	/			
▪ Vehicle and equipment should be switched off while not in use.	/			
▪ Open burning should be prohibited.	/			
Noise				
▪ The constructions works should be scheduled to minimize noise nuisance.	/			
▪ Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	/			
▪ Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	/			
▪ Plant known to emit noise strongly in on direction, should, where possible, be orientated so that the noise is directed away from nearby NSRs.	/			
▪ Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	/			
▪ Noise enclosures, noise barriers, or portable noise barriers used where necessary.	/			
▪ Air compressors and hand held breakers should have noise labels.	/			
▪ Compressors and generators should operate with door closed.	/			
▪ Construction Noise Permits should be available for inspection.	/			

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*			Remark
	Yes	No	N/A	
Mitigation Measures on Waste Management				
Water Quality				
General Construction Activities				
▪ Temporary ditches shall be provided to facilitate runoff discharge into appropriate watercourses, via a sediment trap / sedimentation tanks, prior to discharge.	/			
▪ Permanent drainage channels shall incorporate sediment basins / traps, and baffles.	/			
▪ All traps shall incorporate oil and grease removal facilities.	/			
▪ Sediment traps / sedimentation tanks shall be regular cleaned and maintained regularly.	/			
▪ All drainage facilities should be adequate for controlled release of storm flows.	/			(2), (4)
▪ Minimizing of exposed soil areas to reduce the potential for increased siltation and contamination of runoff.	/			
▪ Open stockpiles of more than 50m ² should be covered.	/			# 2
▪ Temporary stockpiles of excavated materials should be covered during rainstorms.	/			# 2
▪ Manholes should be covered and sealed.				
▪ All chemical stores shall be contained (bunded) such that spills are not allowed to gain access to water bodies.	/			(2), (3)
▪ Vehicles and plant should be cleaned of earth, mud and debris before leaving the site.	/			
▪ Vehicle washing facilities should be provided at every site exit.	/			
▪ Vehicle washing facilities should be adequate to settle out the sand and silt.	/			
▪ Washing area and road exiting from washing facility should be paved.	/			
▪ Access road should have sufficient back fall toward washing facility.	/			
Dredging Activities				
▪ Dredging of designated contaminated marine mud shall only be undertaken by a suitable grab dredger using a close grab.				
▪ Mechanical grabs shall be designed and maintained to avoid spillage and shall be seal tightly while being lifted.				
▪ All vessels shall be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipelines at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller on the water within the site.				
▪ The works shall cause no visible foam, oil, grease, scum litter or other objectionable matter to be present on the water within the site.				
▪ All barges shall be fitted with tight fitting seals to their bottom openings to prevent leakage of materials.				
▪ Excess material shall be cleaned from the decks and exposed fittings of the barges before the vessels are moved.				
▪ Loading of barges shall be controlled to prevent splashing of dredging material to the surrounding water and the barges shall not be filled to a level which will cause overflowing of material or polluted water during loading or transportation.				
▪ Adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action.				

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*		Remark
	Yes	No	
Mitigation Measures on Waste Management			
Filling Activities			
Use of silt screen around the filling face to reduce the losses to the surrounding.			
All vessels shall be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipeline at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash or pipelines damaged.			# (
The works shall cause no visible foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site.			
All barges shall be fitted with tight fitting seals to their bottom openings to prevent leakage of material.			
Loading of barges shall be controlled to prevent splashing of dredged material to the surrounding water and barges shall not be filled to a level which will cause overflowing of material or polluted water during transportation.			
Waste Management			
Marine Dredged Sediment			
Relevant licence / permits for disposal of marine dredged sediment are available for inspection.			
Bottom opening of barges is fitted with tight fitting seals to prevent leakage of material. Excess material is cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved.			
Monitoring of the barging loading is conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels are equipped with automatic self-monitoring devices as specified by the EPD.			
Transport of dredged marine sediments to the disposal site is by split barge of not less than 750m ³ capacity, well maintained and capable of rapid opening and discharge at the disposal site.			
Inspection of the barge loading to ensure that loss of material does not take place during transportation.			
Construction and Demolition (C&D) Waste			
Most of the C&D materials generated from the construction are sorted immediately in-situ to find out if they can be re-used for this job site or for other job sites.			
Sufficient spaces are identified and provided during the construction stage for the collection, temporary storage and on-site sorting of C&D materials.			
Proper protective measures, such as fences and tarpaulin, are provided, in order to protect the temporary stockpiled materials for later reuse / recycle.			#2
Avoiding cross contamination to reusable and / or recyclable materials collected (e.g. covering the reusable materials)			
In order to reduce the impacts to the public, except for those sorted inert C&D materials to be reused on site, all other sorted non-inert materials (e.g. general refuse and waste formworks) shall be removed off site as soon as practicable in order to optimise the use of the on-site storage space. If the non-inert materials need to be stored on site for a short period, the materials shall be centralized and stored at specific areas far away the sensitive receivers.			
All Public Fill arising from the demolition works shall be limited to a size not more than 250mm and free of reinforcement bars, timber, etc. before re-using it.			
Recyclable materials sorted from the site should be collected by potential recycling contractors under the Contractor's arrangement.			
Trip ticket system will be implemented to ensure proper waste disposal at public filling and landfills			
Appropriate measures should be employed to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers.			
Proper resource planning and calculations before ordering the construction materials to be used will ensure that the wastage of the materials can be minimized			



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
<ul style="list-style-type: none"> Proper storage will minimize the damage and thus the wastage of the materials 	/			
<ul style="list-style-type: none"> Training of site personnel in proper waste management procedures. The workers shall be constantly educated for the awareness of the proper handling of waste and to reduce the amount of waste while Site Agent shall be constantly met to discuss the effectiveness of the implementation of the waste management plan. Information to promote the waste management and the reduction concept shall be posted at the site to raise alertness of the personnel concerned. 	/			
<ul style="list-style-type: none"> Chemical Waste 				
<ul style="list-style-type: none"> It is required to register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes. 	/			
<ul style="list-style-type: none"> After use, chemical wastes (e.g. cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. 		/		(3)
<ul style="list-style-type: none"> Chemical wastes should be stored and collected by an approved operator for disposal at the Chemical Waste Treatment Facility or other licensed facility in accordance with the Chemical Waste (General) Regulation. 	/			
<ul style="list-style-type: none"> Containers used for the storage of chemical wastes 				
<ul style="list-style-type: none"> Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed 		/		(3)
<ul style="list-style-type: none"> Have a capacity of less than 450L unless the specification have been approved by the EPD 	/			
<ul style="list-style-type: none"> Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Chemical Waste (General) Regulations and Codes of Practice 		/		(3)
<ul style="list-style-type: none"> Labelling 				
<ul style="list-style-type: none"> Every container of chemical waste would bear an appropriate label, which would contain the particulars details. 		/		(3)
<ul style="list-style-type: none"> The waste produced would ensure that the information contained on the label is accurate and sufficient so as to enable proper and safe handling, storage and transport of the chemical waste 		/		(3)
<ul style="list-style-type: none"> Storage Area 				
<ul style="list-style-type: none"> Be clearly labeled and used solely for the storage of chemical waste 	/			
<ul style="list-style-type: none"> Be enclosed on at least 3 sides 	/			
<ul style="list-style-type: none"> Have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20% of the total volume of waste stored in that area, whichever is the greatest 	/			
<ul style="list-style-type: none"> Have adequate ventilation 	/			
<ul style="list-style-type: none"> Be covered to prevent rainfall entering 	/			
<ul style="list-style-type: none"> Be arranged so that incompatible materials are adequately separated 	/			
<ul style="list-style-type: none"> Be clean and maintain regularly 	/			
<ul style="list-style-type: none"> Disposal 				
<ul style="list-style-type: none"> Be via a licensed waste collector 	/			
<ul style="list-style-type: none"> To a licensed disposal facility, such as Chemical Waste Treatment Centre 	/			
<ul style="list-style-type: none"> Be a reuser of the waste, under approval from the EPD 	/			



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*		Remark
	Yes	No N/A	
Mitigation Measures on Waste Management			
• Spillage	/		
• Establish source of spill or discharge and determine nature of material, where possible halt discharge	/		
• Commencing at the source of the spill, establish all current and potential impacted areas	/		
• Commence containment of spill using bunds made from available materials and ground water cut-off trenches where necessary	/		
• After spill is contained remove material (including contaminated soil where necessary) using pumps and/or absorbent materials	/		
• Dispose of materials as chemical wastes	/		
• General Refuse	/		
• General refuse generated on-site is in enclosed bins or compaction units separate from construction and chemical waste	/		
• A reputable waste collector is employed by the Contractor to remove general refuse from the site, separately from the construction and chemical waste.	/		
• General refuse generated is removed on daily or every second day basis to minimise odour, pest and litter impacts	/		
• Aluminium cans are recovered from the waste stream by individual collectors if they are segregated or easily accessible, so separate, labelled bins for their deposit should be provided if feasible.	/		
• Office wastes are reduced through recycling of paper if volumes are large enough to warrant collection.	/		
• Site Practice	/		
• Good site practices should be adopted to clean the rubbish and litter on the construction sites so as to prevent the rubbish and litter from dropping into the nearby environment. Construction sites should be cleaned on a regular basis.	/		
• The Contractor assigned worker is responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.	/		
• Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	/		
• The Environmental Permit should be displaced conspicuously on site	/		(6)
• Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	/		
• Any unused chemicals or those with remaining functional capacity should be recycled.	/		
• A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods.	/		
• Suitable collection sites around site offices will be required. For environmental hygiene reasons and to minimize odor, refuse should not be stored for a period exceeding 48 hours, however, removal every 24 hours is preferable.	/		
• Minimize windblown litter and dust during transportation by either covering trucks or transporting wastes in enclosed container.	/		
• All generators, fuel and oil storage are within bundle areas.	/		
• Oil leakage from machinery, vehicle and plant is prevented.	/		
• Chemical storage area, drainage systems, silt traps, sumps and oil interceptors are cleaned and maintained regularly.	/		(5)

Table for follow-up Action:

Item	Details of defective works or observations	Location	Further action to be taken (Included persons / party to take action)	Expected Date for Action taken
# 1	Follow up action to the previous site inspections item ① on 6/6/16 and #2 on 15/6/16, silt curtain at Node 2 was still found damaged.	Node 2	The damaged part of silt curtain should be repaired immediately.	28/6/16
# 2	Follow up action to the previous site inspections item ⑤, ⑥, ⑦, ⑧ and item #4 on 15/6/16, stockpiles at SA 3 was still found only partly covered.	SA 3	All stockpiles of filling materials should be covered properly.	28/6/16
# 3	Follow up action to the previous site inspection item ①, ④/6/16 no water was found in the chemical waste storage area.	Workshop	No further action should be taken since the finding was improved.	N/A
①	Chemical (clear varnish) was found placed on the bare ground without drip tray.	Voided Abutment 8 Node 1	All chemical containers should have appropriate drip tray.	28/6/16
②	Stagnant water was found to be accumulated in the drainage channel at Voided Abutment.	Voided Abutment	Stagnant water ^{node} should be drained out or using pesticide.	28/6/16
③	A bucket of oil was found placed on the bare ground near planter without label, cover and drip tray.	Node 1 Planter at Node 1	label, cover and drip tray should be provided for the chemical container.	28/6/16
④	Mud and debris was found to be accumulated in the channel at Node 1 & Workshop area.	Node 1 & Workshop	Mud and debris should be removed immediately to avoid the blockage of channel. The channel should be cleaned up.	28/6/16
⑤	Chemical containers should be stored properly in an appropriate chemical storage area.	Work shop	An appropriate chemical storage area should be provided.	28/6/16
⑥	EP was found damaged.	Site office (leader)	New copy of EP should be provided.	28/6/16

Previous Findings:

New Item:

Signature:	RSS	LWKJW	ET
Name:	Jimmy MA	Arden Lam	Arden Lam
Date:	21/6/2016	21/6/2016	21/6/16

Contract No.: TP 37/03 Remaining Engineering Infrastructure Works for
Pak Shek Kok Development Package 2A

SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

Inspection Date : 29 June 2006 Inspected by Name : (RSS) Eric Leung (LWKJV) (ET) H.T. Chow
 Time : 10:00 Signature : *Eric Leung* *H.T. Chow*

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

	Implementation Stages*		Remark
	Yes	No / N/A	
Mitigation Measures on Waste Management			
Air Quality			
▪ The heights from which fill materials are dropped should be controlled to a practical height to minimize the fugitive dust arising from unloading.	<input checked="" type="checkbox"/>		
▪ During transportation by truck, material should be loaded to a level lower than the side and tail boards, and should be dampened or covered before transport.	<input checked="" type="checkbox"/>		
▪ All stockpile of aggregate or spoil should be enclosed or covered and water applied in dry or windy condition.	<input checked="" type="checkbox"/>		
▪ The haul road should be either paved or regular watering.	<input checked="" type="checkbox"/>		
▪ Unpaved areas should be watered regularly to avoid dust generation.	<input checked="" type="checkbox"/>		
▪ The public road around the site entrance should be kept clean and free from dust.	<input checked="" type="checkbox"/>		
▪ Vehicle speed should be limited to 20 km/hr.	<input checked="" type="checkbox"/>		
▪ Wheel washing facilities should be provided at all main entrance of work site.	<input checked="" type="checkbox"/>		
▪ The enclosures should be around the main dust-generating activities.	<input checked="" type="checkbox"/>		
▪ Dusty materials should be sprayed prior to loading.	<input checked="" type="checkbox"/>		
▪ All plant and equipment should be well maintained e.g. without black smoke emission.	<input checked="" type="checkbox"/>		
▪ Vehicle and equipment should be switched off while not in use.	<input checked="" type="checkbox"/>		
▪ Open burning should be prohibited.	<input checked="" type="checkbox"/>		
Noise			
▪ The constructions works should be scheduled to minimize noise nuisance.	<input checked="" type="checkbox"/>		
▪ Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	<input checked="" type="checkbox"/>		
▪ Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	<input checked="" type="checkbox"/>		
▪ Plant known to emit noise strongly in on direction, should, where possible, be orientated so that the noise is directed away from nearby NSRs.	<input checked="" type="checkbox"/>		
▪ Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	<input checked="" type="checkbox"/>		
▪ Noise enclosures, noise barriers, or portable noise barriers used where necessary.	<input checked="" type="checkbox"/>		
▪ Air compressors and hand held breakers should have noise labels.	<input checked="" type="checkbox"/>		
▪ Compressors and generators should operate with door closed.	<input checked="" type="checkbox"/>		
▪ Construction Noise Permits should be available for inspection.	<input checked="" type="checkbox"/>		



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*			Remark
	Yes	No	N/A	
Mitigation Measures on Waste Management				
Water Quality				
General Construction Activities				
▪ Temporary ditches shall be provided to facilitate runoff discharge into appropriate watercourses, via a sediment trap / sedimentation tanks, prior to discharge.	✓			①, #4
▪ Permanent drainage channels shall incorporate sediment basins / traps, and baffles.	✓			
▪ All traps shall incorporate oil and grease removal facilities.	✓			
▪ Sediment traps / sedimentation tanks shall be regular cleaned and maintained regularly.	✓			
▪ All drainage facilities should be adequate for controlled release of storm flows.	✓			①
▪ Minimizing of exposed soil areas to reduce the potential for increased siltation and contamination of runoff.	✓			
▪ Open stockpiles of more than 50m ³ should be covered.	✓			
▪ Temporary stockpiles of excavated materials should be covered during rainstorms.	✓			
▪ Manholes should be covered and sealed.	✓			
▪ All chemical stores shall be contained (bunded) such that spills are not allowed to gain access to water bodies.	✓			
▪ Vehicles and plant should be cleaned of earth, mud and debris before leaving the site.	✓			
▪ Vehicle washing facilities should be provided at every site exit.	✓			
▪ Vehicle washing facilities should be adequate to settle out the sand and silt.	✓			
▪ Washing area and road exiting from washing facility should be paved.	✓			
▪ Access road should have sufficient back fall toward washing facility.	✓			
Dredging Activities				
▪ Dredging of designated contaminated marine mud shall only be undertaken by a suitable grab dredger using a close grab.				
▪ Mechanical grabs shall be designed and maintained to avoid spillage and shall be seal tightly while being lifted.				✓
▪ All vessels shall be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipelines at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller on the water within the site.				✓
▪ The works shall cause no visible foam, oil, grease, scum litter or other objectionable matter to be present on the water within the site.				✓
▪ All barges shall be fitted with tight fitting seals to their bottom openings to prevent leakage of materials.				✓
▪ Excess material shall be cleaned from the decks and exposed fittings of the barges before the vessels are moved.				✓
▪ Loading of barges shall be controlled to prevent splashing of dredging material to the surrounding water and the barges shall not be filled to a level which will cause overflowing of material or polluted water during loading or transportation.				✓
▪ Adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action.				✓



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*		Remark
	Yes	No / N/A	
Mitigation Measures on Waste Management			
Filling Activities			
• Use of silt screen around the filling face to reduce the losses to the surrounding.	✓		# 1
• All vessels shall be sized such that adequate clearance is maintained between vessel and the sea bed and under water pipeline at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash or pipelines damaged.		✓	
• The works shall cause no visible foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site.	✓		
• All barges shall be fitted with tight fitting seals to their bottom openings to prevent leakage of material.		✓	
• Loading of barges shall be controlled to prevent splashing of dredged material to the surrounding water and barges shall not be filled to a level which will cause overflowing of material or polluted water during loading transportation.		✓	
Waste Management			
Marine Dredged Sediment			
• Relevant licence / permits for disposal of marine dredged sediment are available for inspection.		✓	
• Bottom opening of barges is fitted with tight fitting seals to prevent leakage of material. Excess material is cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved.		✓	
• Monitoring of the barging loading is conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels are equipped with automatic self-monitoring devices as specified by the EPD.		✓	
• Transport of dredged marine sediments to the disposal site is by split barge of not less than 750m ³ capacity, well maintained and capable of rapid opening and discharge at the disposal site.		✓	
• Inspection of the barge loading to ensure that loss of material does not take place during transportation.		✓	
Construction and Demolition (C&D) Waste			
• Most of the C&D materials generated from the construction are sorted immediately in-situ to find out if they can be re-used for this job site or for other job sites.	✓		
• Sufficient spaces are identified and provided during the construction stage for the collection, temporary storage and on-site sorting of C&D materials.	✓		
• Proper protective measures, such as fences and tarpaulin, are provided, in order to protect the temporary stockpiled materials for later reuse / recycle.	✓		
• Avoiding cross contamination to reusable and / or recyclable materials collected (e.g. covering the reusable materials)	✓		
• In order to reduce the impacts to the public, except for those sorted inert C&D materials to be reused on site, all other sorted non-inert materials (e.g. general refuse and waste formworks) shall be removed off site as soon as practicable in order to optimise the use of the on-site storage space. If the non-inert materials need to be stored on site for a short period, the materials shall be centralized and stored at specific areas far away from the sensitive receivers.	✓		
• All Public Fill arising from the demolition works shall be limited to a size not more than 250mm and free of reinforcement bars, timber, etc. before re-using it.	✓		
• Recyclable materials sorted from the site should be collected by potential recycling contractors under the Contractor's arrangement.	✓		
• Trip ticket system will be implemented to ensure proper waste disposal at public filling and landfills			
• Appropriate measures should be employed to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers.	✓		
• Proper resource planning and calculations before ordering the construction materials to be used will ensure that the wastage of the materials can be minimized	✓		



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
• Proper storage will minimize the damage and thus the wastage of the materials	✓			
• Training of site personnel in proper waste management procedures. The workers shall be constantly educated for the awareness of the proper handling of waste and to reduce the amount of waste while Site Agent shall be constantly met to discuss the effectiveness of the implementation of the waste management plan. Information to promote the waste management and the reduction concept shall be posted at the site to raise alertness of the personnel concerned.	✓			
• Chemical Waste				
• It is required to register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	✓			
• After use, chemical wastes (e.g. cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.	✓			
• Chemical wastes should be stored and collected by an approved operator for disposal at the Chemical Waste Treatment Facility or other licensed facility in accordance with the Chemical Waste (General) Regulation.	✓			
• Containers used for the storage of chemical wastes				
• Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed	✓			
• Have a capacity of less than 450L unless the specification have been approved by the EPD	✓			
• Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Chemical Waste (General) Regulations and Codes of Practice	✓			
• Labelling				
• Every container of chemical waste would bear an appropriate label, which would contain the particulars details.	✓			
• The waste produced would ensure that the information contained on the label is accurate and sufficient so as to enable proper and safe handling, storage and transport of the chemical waste	✓			
• Storage Area				
• Be clearly labeled and used solely for the storage of chemical waste	✓			
• Be enclosed on at least 3 sides	✓			
• Have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20% of the total volume of waste stored in that area, whichever is the greatest	✓			# 7
• Have adequate ventilation	✓			
• Be covered to prevent rainfall entering	✓			# 7
• Be arranged so that incompatible materials are adequately separated	✓			
• Be clean and maintain regularly	✓			# 7
• Disposal				
• Be via a licensed waste collector	✓			
• To a licensed disposal facility, such as Chemical Waste Treatment Centre	✓			
• Be a reuser of the waste, under approval from the EPD	✓			



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

	Implementation Stages*		Remark
	Yes	No N/A	
Mitigation Measures on Waste Management			
• Spillage			
• Establish source of spill or discharge and determine nature of material, where possible halt discharge			
• Commencing at the source of the spill, establish all current and potential impacted areas		✓	
• Commence containment of spill using bunds made from available materials and ground water cut-off trenches where necessary		✓	
• After spill is contained remove material (including contaminated soil where necessary) using pumps and/or absorbent materials		✓	
• Dispose of materials as chemical wastes		✓	
• General Refuse			
• General refuse generated on-site is in enclosed bins or compaction units separate from construction and chemical waste			
• A reputable waste collector is employed by the Contractor to remove general refuse from the site, separately from the construction and chemical waste.	✓		
• General refuse generated is removed on daily or every second day basis to minimize odour, pest and litter impacts	✓		
• Aluminium cans are recovered from the waste stream by individual collectors if they are segregated or easily accessible, so separate, labelled bins for their deposit should be provided if feasible.	✓		
• Office wastes are reduced through recycling of paper if volumes are large enough to warrant collection.	✓		
• Site Practice			
• Good site practices should be adopted to clean the rubbish and litter on the construction sites so as to prevent the rubbish and litter from dropping into the nearby environment. Construction sites should be cleaned on a regular basis.			
• The Contractor assigned worker is responsible for good site practices, arrangements for collection and effective disposal of all wastes generated at the site.	✓		
• Proper storage and site practices to minimize the potential for damage or contamination of construction materials.	✓		
• The Environmental Permit should be displayed conspicuously on site	✓		
• Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste.	✓		
• Any unused chemicals or those with remaining functional capacity should be recycled.	✓		
• A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods.	✓		
• Suitable collection sites around site offices will be required. For environmental hygiene reasons and to minimize odor, refuse should not be stored for a period exceeding 48 hours, however, removal every 24 hours is preferable.	✓		
• Minimize windblown litter and dust during transportation by either covering trucks or transporting wastes in enclosed container.	✓		
• All generators, fuel and oil storage are within bundle areas.	✓		
• Oil leakage from machinery, vehicle and plant is prevented.	✓		
• Chemical storage area, drainage systems, silt traps, sumps and oil interceptors are cleaned and maintained regularly.	✓		
			# 7

Table for follow-up Action:

Item	Details of defective works or observations	Location	Further action to be taken (Included persons / party to take action)	Expected Date for Action taken
# 1	Follow up action to previous site inspections item ① on 6-6-06, #2 (15-6-06) and #11 (21-6-06) silt curtain at Node 2 was still found damaged.	Node 2	The Contractor should be repair the damaged part of silt curtain immediately.	6-7-2006
# 2	Follow up action to the previous site inspections item ③ on 6-6-06, item 4 on 16-6-06 and item #2 on 21-6-06, stockpile of filling material at SA 3 was covered.	SA 3	Follow up action was completed, no further action to be taken.	N/A
# 3	Follow up action to the previous site inspections item ④ on 21-6-06, all chemical containers were removed.	Voided Abutment & Node 1	-	-
# 4	Follow up action to the previous site inspection item ⑤ on 21-6-06, stagnant water was still found to be accumulated in the drainage channel of Voided Abutment.	Voided Abutment	Stagnant water should be drained out or using pesticide avoid mosquito breeding.	6-7-2006
# 5	Follow up action to the previous site inspection item ⑥ on 21-6-06, a bucket of oil was repaired to appropriate storage area.	Planter at Node 1	Follow up action was completed, no further action to be taken.	N/A
# 6	Follow up action to the previous site inspection item ⑦ on 21-6-06, mud and debris in the channel were cleaned up.	Node 1 & Workshop	-	-
# 7	Follow up action to the previous site inspection item ⑧ on 21-6-06, an appropriate chemical area still not provided for chemical containers.	Workshop	The Contractor should be provided an appropriate chemical storage area,	6-7-2006
# 8	Follow up action to the previous site inspection item ⑨ on 21-6-06, the new Environmental Permit was displayed on site office.	Site Office	Follow up action was completed, no further action to be taken.	N/A
New item ①	Rain water was found to be accumulated at Node 1.	Node 1	The Contractor was reminded to provide temporary ditches to be drained out.	6-7-2006
Signature:	RSS	LWKJW	ET	
Name:	Eric		Sat	
Date:	Eric Henry		H. T. Chow	
	29-06-2006	29/6/06	29-6-2006	

Appendix I
IEC and RE Comments on Monthly EM&A Report
—
May 2006

IEC and RE Comments on Monthly Environmental Monitoring and Audit Report – May 2006

Item No.	Document Reference	Comment	ET Response
---	---	No RE and IEC comments were noticed.	No responses were required since no comments were noticed.



Appendix J

Wastewater Monitoring

—

Test Reports of Wastewater Samples from Discharge Points



ENVIRO LABS LIMITED

環境化驗有限公司

TEST REPORT

JOB NO. : A-60505
DATE OF ISSUE : 4 May 2006
PAGE : 1 of 1

1. Client

Leader – Wai Kee (C&T) Joint Venture
Unit 1001-1005, 10/F., Grand Central Plaza, Tower 1, 138 Shatin Rural Committee Road, Sha Tin, N.T., HK
Attn.: Mr. Ben Yip

2. Sample Identification

Sample Description : One batch of water samples said to be wastewater
Sampling : Conducted by Enviro Labs Ltd.
Sampling Point : Outlet of sedimentation tank at
Construction Site of Remaining Engineering Infrastructure Works for Pak Shek Kok
Development Package 2A, Pak Shek Kok, N.T. (Contract No. TP 37/03)
Preservation : Delivered and stored under refrigerated condition
Sampling Date : 11 Apr 2006
Received Date : 11 Apr 2006

3. Test Method

Parameter	Reference Method	Testing Period
(i) Total Suspended Solids (TSS) Dried at 103-105°C	APHA ¹ 17e 2540 D	11 Apr 4 May 2006

1. APHA Standard Methods for the Examination of Water and Wastewater

4. Test Result*

Sample Label	Test Parameter	Sample No.	Test Result	Discharge Limit **	Unit
Discharge Point near Subway	Total Suspended Solids	60505-2	27	≤30	mg/L

* Test results relate only to the items received.

** Information provided by the client. (It is not a test result, information for reference only).

--- END OF REPORT ---



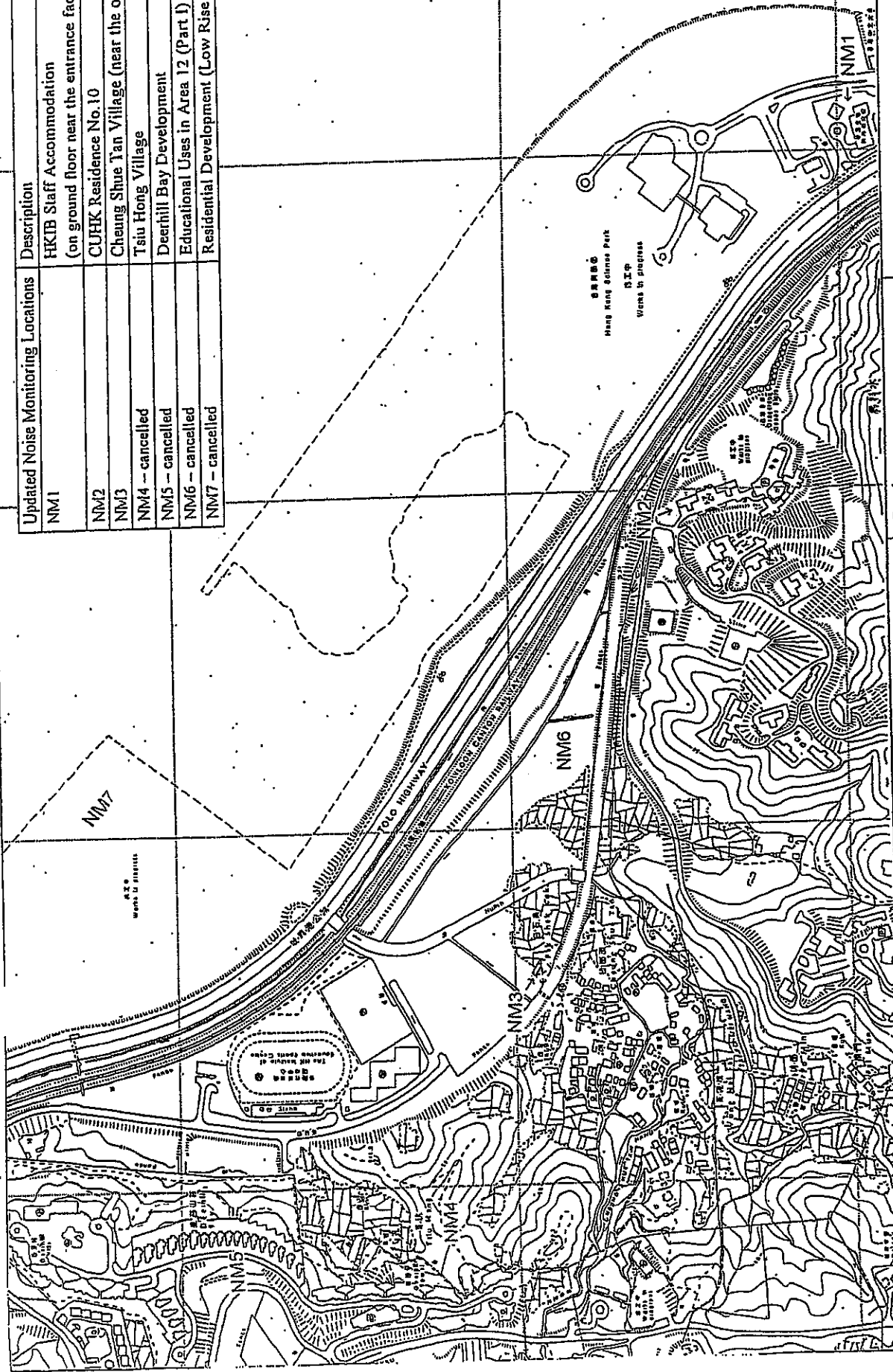
APPROVED SIGNATORY :

Kenneth Lam
(Laboratory Manager)



Figures

Updated Noise Monitoring Locations	Description
NM1	HKIB Staff Accommodation (on ground floor near the entrance facing south-east)
NM2	CUHK Residence No. 10
NM3	Cheung Shue Yan Village (near the outer building, temple)
NM4 - cancelled	Tsui Hong Village
NM5 - cancelled	Deerhill Bay Development
NM6 - cancelled	Educational Uses in Area 12 (Part 1)
NM7 - cancelled	Residential Development (Low Rise Building) - R.1



Scale : ---

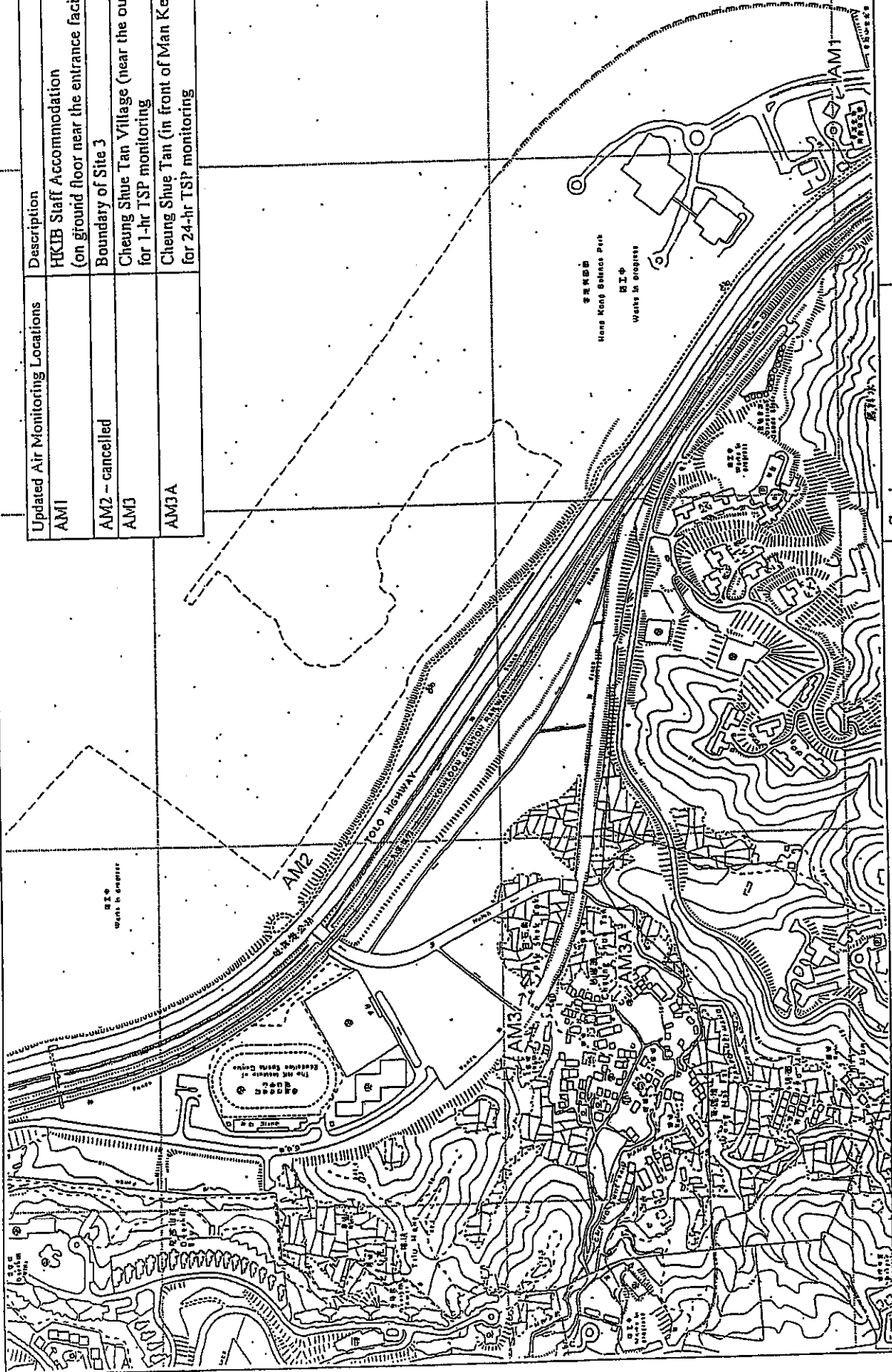
Revised Date: June 2004

Remaining Engineering Infrastructure Works for
 Pak Shek Kok Development Package 2A
 Contract No. TP 37/03
 Figure 1 Location of Noise Monitoring Stations



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Updated Air Monitoring Locations	Description
AM1	HKIB Staff Accommodation (on ground floor near the entrance facing south-east)
AM2 - cancelled	Boundary of Site 3
AM3	Cheung Shue Tan Village (near the outer building, temple) for 1-hr TSP monitoring
AM3A	Cheung Shue Tan (in front of Man Kee Store) for 24-hr TSP monitoring



Scale : ---

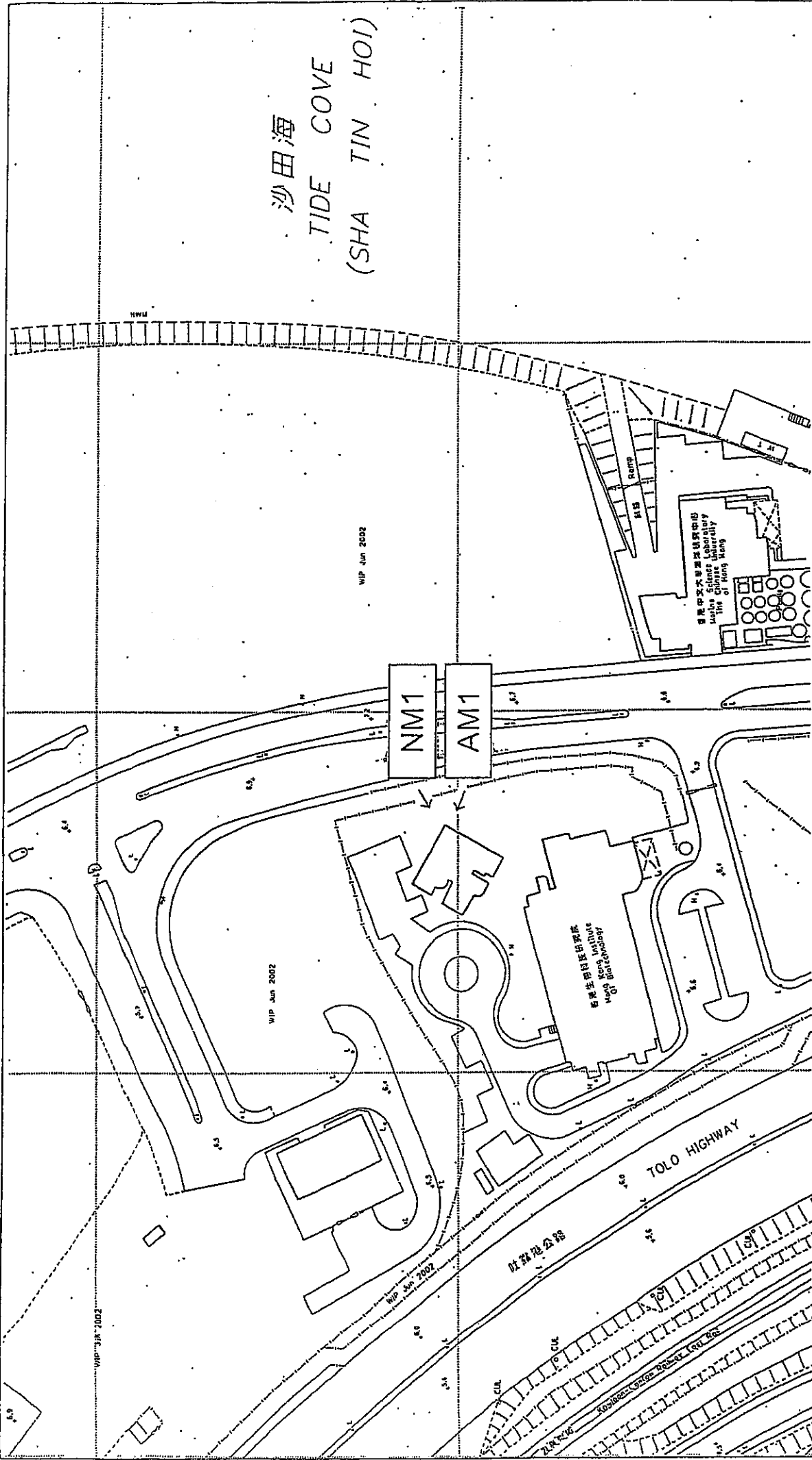
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Remaining Engineering Infrastructure Works for
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 Contract No. TP 37/03
 Figure 2 Location of Air Monitoring Stations



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沙田海
TIDE COVE
(SHA TIN HOI)

Remaining Engineering Infrastructure Works for
Pak Shek Kok Development Package 2A
Contract No. TP 37/03
Figure 3 Location of Air and Noise Monitoring Stations
at HKIB Staff Accommodation

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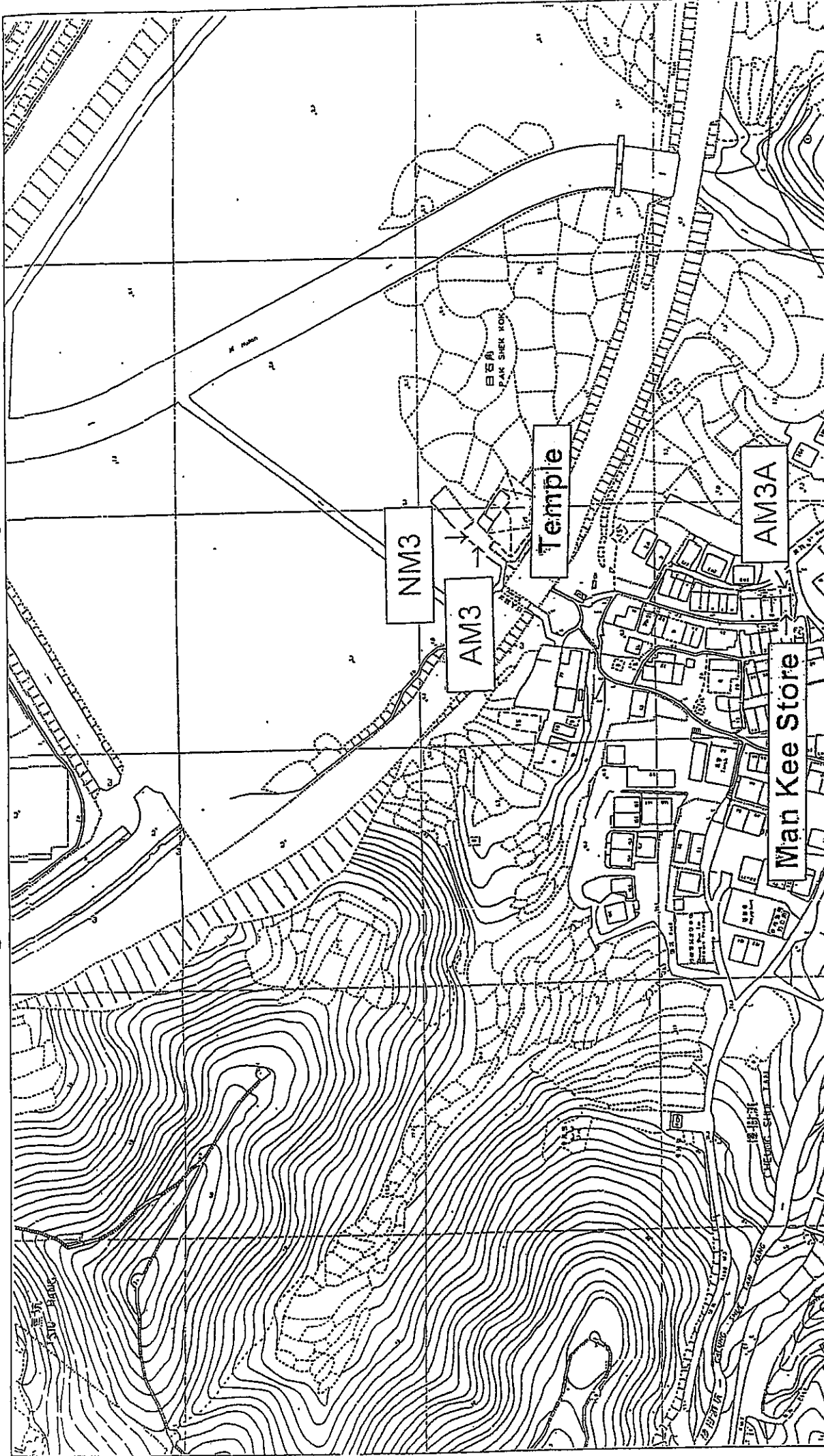
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Remaining Engineering Infrastructure Works for
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Contract No. TP 37/03
Figure 4 Location of Noise Monitoring Station at CUHK Residence No.10



Remaining Engineering Infrastructure Works for
 Pak Shek Kok Development Package 2 A
 Contract No. TP 37/03
 Figure 5 Location of Air and Noise Monitoring Stations
 at Cheung Shue Tan Village

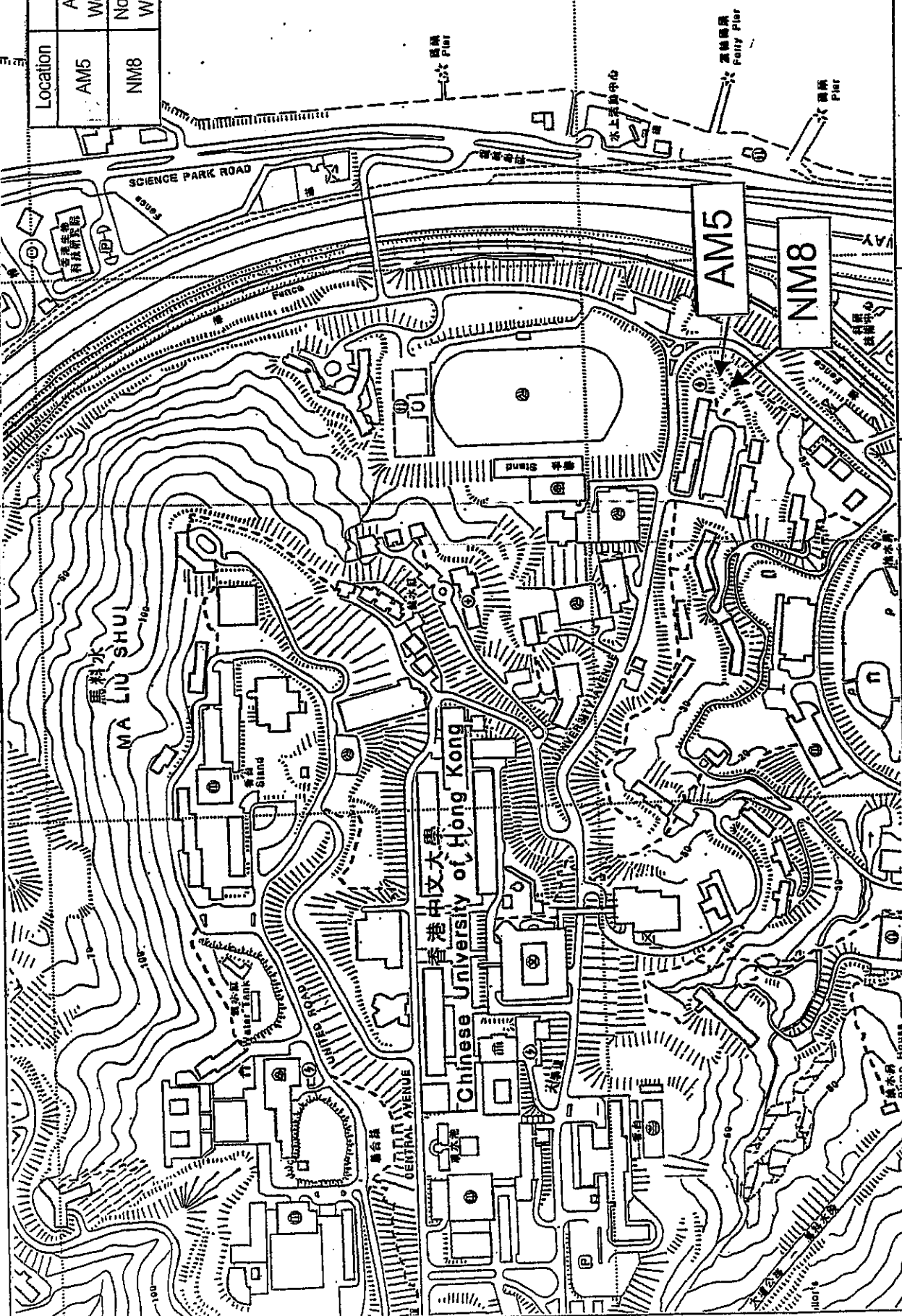
Scale : ---

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 June 2004



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Location	Description
AM5	Air Monitoring Station near Wen Chin Tong at the CUHK
NM8	Noise Monitoring Station near Wen Chin Tong at the CUHK



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 Package 2A Contract No. TP 37/03

Figure 7 Additional Locations of Air and Noise Monitoring Stations at the Chinese University of Hong Kong

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