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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
(FEBRUARY 2006)

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EXECUTIVE SUMMARY

This monthly EM&A report (No.10) 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 28 February 2006.

Construction Progress

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

- Drainage works (Excavation, pipe lying and breaking) at Section 2 (Ma Liu Shui), 5 (Road L4), 6 (the proposed cycle track), 7 and 8 (Promenade) of the Works
- Installation of precast concrete planter units at Section 7 & 8 (Promenade) of the Works
- Installation of watermain at Section 5 (Road L4) of the Works
- Road works at Section 5 (Road L4) and 6 (the proposed cycle track) of the Works
- Construction of granite stone facing with concrete backing at the proposed return wall of the Public Landing Steps
- Piling works at the Pier of the proposed Ma Liu Shui Bridge (Alternative Design)
- Existing Box Culvert reinstatement and installation of the precast units for the proposed Outfall 1 at Landscape Node P1
- Preparation of base for reinstatement of existing twin pipe culvert at proposed Landscape Node P2
- Placing leveling stone and seawall block at the proposed Landscape Node P3
- Construction of Kerb planter wall and feature wall at the proposed Public Plaza at Section 7 of the Works

Environmental Monitoring Progress

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

- Noise Monitoring (Day-time): 5 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: 4 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

According to the schedule of wastewater monitoring, wastewater sampling should be taken in February 2006. However, the sedimentation system was not operated in February 2006 since no wastewater was produced and discharged from the site. Therefore, no wastewater monitoring was required to be carried out in February 2006. The wastewater monitoring will be postponed until the wastewater is produced and discharged from the site.

Site Inspection

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

<u>Concerned Parties</u>	<u>Dates of Audit / Inspection</u>
Weekly site inspection (ET)	04, 09, 16, 23
Monthly site inspection (IEC/LWKJV/RE)	23



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 observation of the previous month, the stockpile of filling materials at Public Plaza was found covered by clean tarpaulin sheets during weekly site inspection (04/02/06).	No action should be taken by LWKJV since the observation was improved.	No further verification should be taken by ET since the observation was improved.
2	Air	Stockpiles of filling materials at Works Area SA1 at Ma Liu Shui were found without cover during weekly site inspection (23/02/06)	LWKJV replied to provide water spraying to the stockpiles and cover them during the nighttime and holidays.	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.
3	Air	Silt / sand track was observed on the public road near the site entrance at Works Area SA1 at Ma Liu Shui during weekly site inspection (23/02/06)	LWKJV replied to provide more manpower to clean up the public road and maintain the public road in order to avoid dust generation.	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.
4	Water	Follow up action to the observation of the previous month, the damaged Silt curtain at Node 2 and Node 3 were found repaired during weekly site inspections (09/02/06).	No action should be taken by LWKJV since the observation was improved.	No further verification should be taken by ET since the observation was improved.

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. 6040m³ inert C&D materials, 50kg paper/cardboard packaging, 5kg plastics and 6740kg general refuse were generated. 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 28 February 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 2 (Ma Liu Shui), 5 (Road L4), 6 (the proposed cycle track), 7 and 8 (Promenade) of the Works
Installation of precast concrete planter units	Section 7 & 8 (Promenade) of the Works
Installation of watermain	Section 5 (Road L4) of the Works
Road Works	Section 5 (Road L4) and 6 (the proposed cycle track) of the Works
Construction of granite stone facing with concrete backing	Proposed return wall of the Public Landing Steps
Piling works	Pier of the proposed Ma Liu Shui Bridge (Alternative Design)
Existing Box Culvert reinstatement and installation of the precast units for the proposed Outfall 1	Landscape Node P1
Preparation of base for reinstatement of existing twin pipe culvert	Proposed Landscape Node P2
Placing leveling stone and seawalk block	Proposed Landscape Node P3
Construction of Kerb planter wall and feature wall	Proposed Public Plaza at Section 7 of the Works

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			
AM1	HKIB Staff Accommodation					02/02/06	16:30	17:30
						03/02/06	13:03	14:03
						04/02/06	08:15	09:15
						07/02/06	08:30	09:30
						09/02/06	08:30	09:30
						11/02/06	08:30	09:30
						14/02/06	15:05	16:05
						16/02/06	10:30	11:30
						18/02/06	17:30	18:30
						21/02/06	09:30	10:30
						23/02/06	13:05	14:05
						25/02/06	08:30	09:30
						28/02/06	14:50	15:50
		AM3	Cheung Shue Tan Village (Near the outer building, temple)					02/02/06
						03/02/06	16:04	17:04
						04/02/06	13:15	14:15
						07/02/06	13:28	14:28
						09/02/06	13:30	14:30
						11/02/06	13:00	14:00
						14/02/06	17:59	18:59
						16/02/06	16:45	17:45
						18/02/06	13:00	14:00
						21/02/06	15:30	16:30
						23/02/06	16:00	17:00
						25/02/06	16:30	17:30
						28/02/06	09:00	10:00
AM5	Near Wen Chih Tang at the CUHK							02/02/06
						03/02/06	14:25	15:25
						04/02/06	14:30	15:30
						07/02/06	15:30	16:30
						09/02/06	14:45	15:45
						11/02/06	14:15	15:15
						14/02/06	16:22	17:22
						16/02/06	17:55	18:55
						18/02/06	14:18	15:18
						21/02/06	14:00	15:00
						23/02/06	14:30	15:30
						25/02/06	17:45	18:45
						28/02/06	10:20	11:20
		AM1	HKIB Staff Accommodation	02/02/06	16:35	03/02/06	16:09	
08/02/06	09:45			09/02/06	10:08			
14/02/06	15:08			15/02/06	14:46		---	
20/02/06	09:50			21/02/06	10:03			
25/02/06	09:58			26/02/06	10:17			
AM3A	Cheung Shue Tan (in front of Man Kee Store)	02/02/06	11:05	03/02/06	10:54			
		08/02/06	09:19	09/02/06	09:47			
		14/02/06	17:55	15/02/06	17:53		---	
		20/02/06	09:21	21/02/06	09:46			
AM5	Near Wen Chih Tang at the CUHK	02/02/06	13:05	03/02/06	12:53			
		08/02/06	09:32	09/02/06	09:54			
		14/02/06	16:35	15/02/06	15:46		---	
		20/02/06	09:37	21/02/06	09:50			
		25/02/06	09:33	26/02/06	10:11			



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	04/02/06	16:40	---	---	---	---	---	---
	07/02/06	08:32	---	---	---	---	---	---
	14/02/06	15:30	---	---	---	---	---	---
	21/02/06	09:35	---	---	---	---	---	---
	28/02/06	14:55	---	---	---	---	---	---
NM2	04/02/06	14:00	---	---	---	---	---	---
	07/02/06	11:30	---	---	---	---	---	---
	14/02/06	17:08	---	---	---	---	---	---
	21/02/06	13:05	---	---	---	---	---	---
	28/02/06	16:10	---	---	---	---	---	---
NM3	04/02/06	11:10	---	---	---	---	---	---
	07/02/06	13:30	---	---	---	---	---	---
	14/02/06	18:10	---	---	---	---	---	---
	21/02/06	15:35	---	---	---	---	---	---
	28/02/06	09:13	---	---	---	---	---	---
NM8	04/02/06	13:10	---	---	---	---	---	---
	07/02/06	15:32	---	---	---	---	---	---
	14/02/06	16:28	---	---	---	---	---	---
	21/02/06	14:05	---	---	---	---	---	---
	28/02/06	10:26	---	---	---	---	---	---

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).

According to the schedule of wastewater monitoring, wastewater sampling should be taken in February 2006. However, the sedimentation system was not operated in February 2006 since no wastewater was produced and discharged from the site. Therefore, no wastewater monitoring was required to be carried out in February 2006. The wastewater monitoring will be postponed until the wastewater is produced and discharged from the site.

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.



According to the schedule of wastewater monitoring, wastewater sampling should be taken in February 2006. However, the sedimentation system was not operated in February 2006 since no wastewater was produced and discharged from the site. Therefore, no wastewater monitoring was required to be carried out in February 2006. The wastewater monitoring will be postponed until the wastewater is produced and discharged from the site.

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 (04, 09, 16 and 23 February 2006). Monthly joint site inspection at 23 February 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 observation of the previous month, the stockpile of filling materials at Public Plaza was found covered by clean tarpaulin sheets during weekly site inspection (04/02/06).	No action should be taken by LWKJV since the observation was improved.	No further verification should be taken by ET since the observation was improved.
2	Air	Stockpiles of filling materials at Works Area SA1 at Ma Liu Shui were found without cover during weekly site inspection (23/02/06)	LWKJV replied to provide water spraying to the stockpiles and cover them during the nighttime and holidays.	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.
3	Air	Silt / sand track was observed on the public road near the site entrance at Works Area SA1 at Ma Liu Shui during weekly site inspection (23/02/06)	LWKJV replied to provide more manpower to clean up the public road and maintain the public road in order to avoid dust generation.	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.
4	Water	Follow up action to the observation of the previous month, the damaged Silt curtain at Node 2 and Node 3 were found repaired during weekly site inspections (09/02/06).	No action should be taken by LWKJV since the observation was improved.	No further verification should be taken by ET since the observation was improved.

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-RN0565-05	30/11/05	29/05/06	<p><u>Group A</u> One Poker, vibrator, hand-held (CNP170) One Concrete pump, lorry mounted (CNP047) One Concrete lorry mixer (CNP044)</p> <p><u>Group B</u> One Dump Truck (CNP067) One Excavator, tracked (CNP081)</p> <p><u>Group C</u> One Grout Pump One Grout Mixer</p> <p><u>Group D</u> Two Air compressor, with noise emission label & Sound Power Level \leq 102dB(A) One Piling rig</p> <p><u>Group E</u> One Crane, mobile (diesel) (CNP048)</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-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-RN0265-05	11/07/05	10/01/06	<p><u>Group A</u> One Poker, vibrator, hand-held (CNP170) One 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)</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	
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.

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)	6040	Reused in the Contract	99785
	Broken Concrete (m ³)	40	N/A	785
	Reused in the Contract (m ³)	6000	N/A	99000
	Reused in other Projects (m ³)	0	N/A	0
	Disposal as Public Fill (m ³)	0	N/A	0
C&D Waste	Metals (1000kg)	0.000	N/A	37.390
	Paper/Cardboard Packaging (1000kg)	0.050	N/A	0.166
	Plastics (1000kg)	0.005	N/A	0.028
	Chemical Waste (1000kg)	0.000	N/A	1.000
	Other, e.g. General Refuse (1000kg)	6.740	SENT	99.530



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.

According to the schedule of wastewater monitoring, wastewater sampling should be taken in February 2006. However, the sedimentation system was not operated in February 2006 since no wastewater was produced and discharged from the site. Therefore, no wastewater monitoring was required to be carried out in February 2006. The wastewater monitoring will be postponed until the wastewater is produced and discharged from the site.

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	March 2006	April 2006
Noise Monitoring (Day-time)	07, 14, 21, 28	04, 11, 18, 25
1-hour TSP	02, 04, 07, 09, 11, 14, 16, 18, 21, 23, 25, 28, 30	01, 04, 06, 08, 11, 12, 13, 18, 20, 22, 25, 27, 29
24-hour TSP	03, 09, 15, 21, 27	01, 07, 13, 19, 25
Site Inspection	02, 09, 16, 23, 30	06, 13, 20, 27

12.2 Upcoming construction works schedule in the coming month

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 month

Month	Works Planned to be Carried Out
Between March and April 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; ▪ Pile testing and excavation of Voided Abutment of the proposed Ma Liu Shui Bridge (Alternative Design), excavation of Subway and removal of preloading mound of the North Abutment Wall; ▪ Installation of precast concrete planter and parapet wall units along the proposed Promenade; ▪ Utility works at Section 5 of the Works; ▪ Construction of concrete backing at the proposed PLS; ▪ Construction of bus-bay at Section 10 of the Works; ▪ Construction of in-situ Outfall 2 and 3 at the proposed Landscape Node P2; ▪ Construction of parapet wall, kerb planter wall and feature wall at the Public Plaza at Section 7 of the Works; ▪ Roadworks at Section 5 & 6 of the Works.

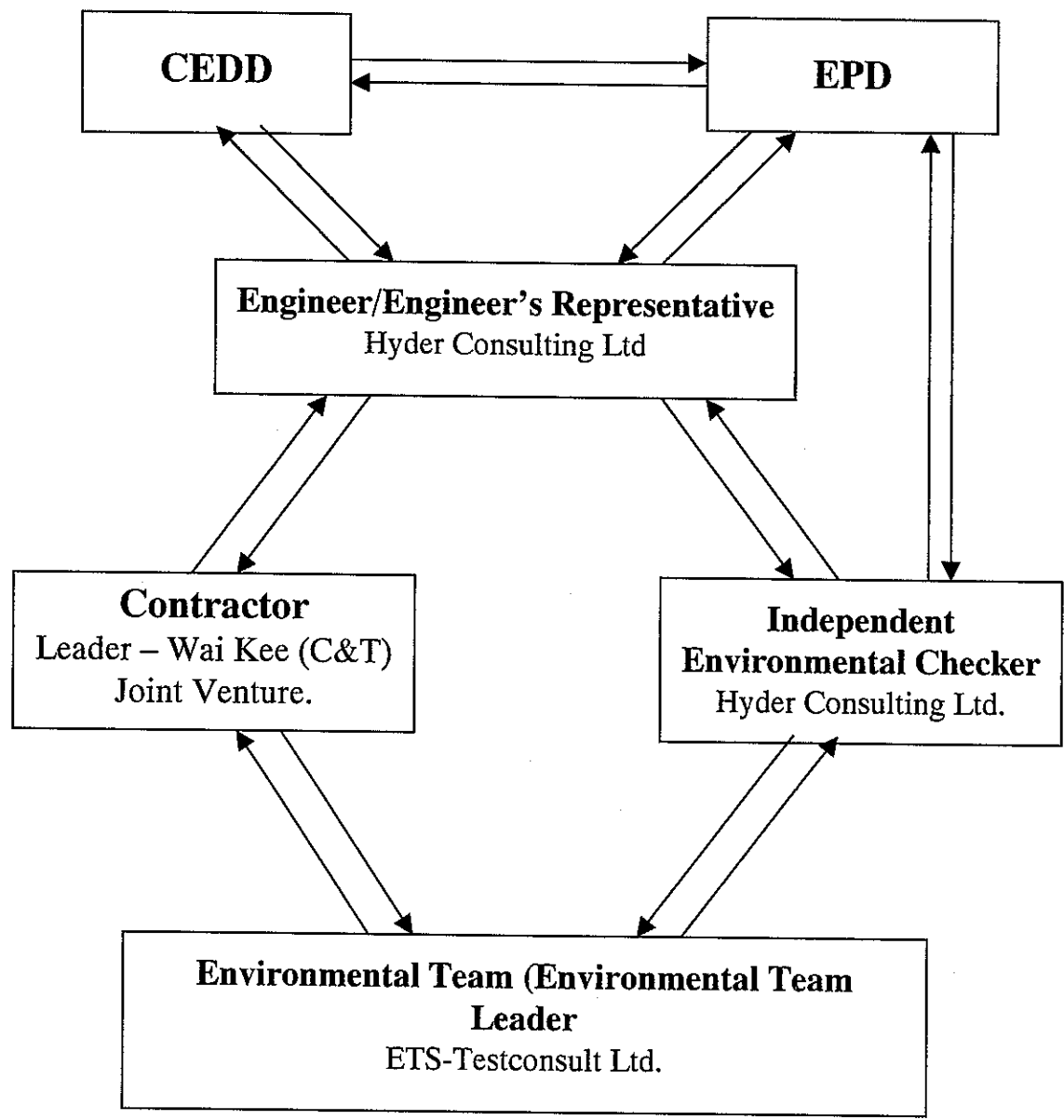


Appendix A

Organization Chart and Lines of Communication



Lines of Communication





Appendix B1

Calibration Certificates for Air Quality Monitoring Equipments



東業德勤測試顧問有限公司

ETS-TESTCONSULT LIMITED

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

Tel : 2695 8318

E-mail : etl@ets-testconsult.com

Fax : 2695 3944

Web site : www.ets-testconsult.com

TEST REPORT

Calibration Report

of

High Volume Air Sampler

Manufacturer : Greasby GMW Date of Calibration : 16 January 2006

Serial No. : 7179 (ET / EA / 003 / 16) Calibration Due Date : 15 March 2006

Method : Based on Operations Manual for Graseby Model GS2310 series using calibration kit TE-5025A

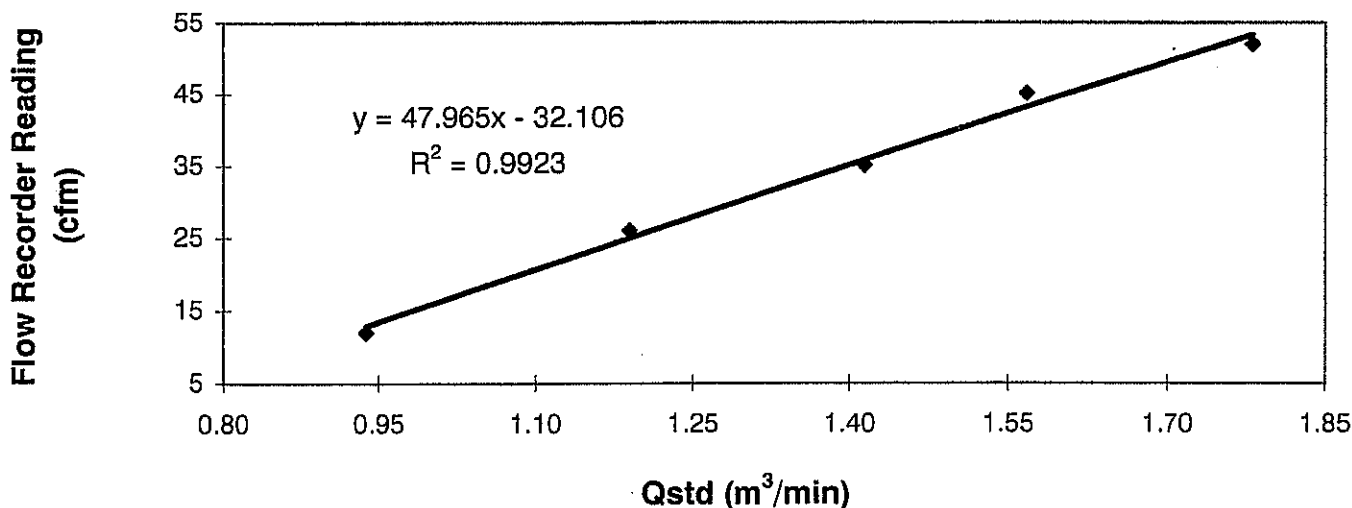
Results

Flow recorder reading (cfm)	52	45	35	26	12
Qstd (Actual flow rate, m ³ /min)	1.78	1.57	1.41	1.19	0.94
Pressure :	761.46 mm Hg			Temp. :	293 K

Sampler 7179 Calibration Curve

Site: Pak Shek Kok (AM3A)

Date of Calibration: 16 January 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 :

H. T. Chow
(Asst. Environmental Officer)

Approved by :

Linda Law
(Environmental Officer)



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TEST REPORT

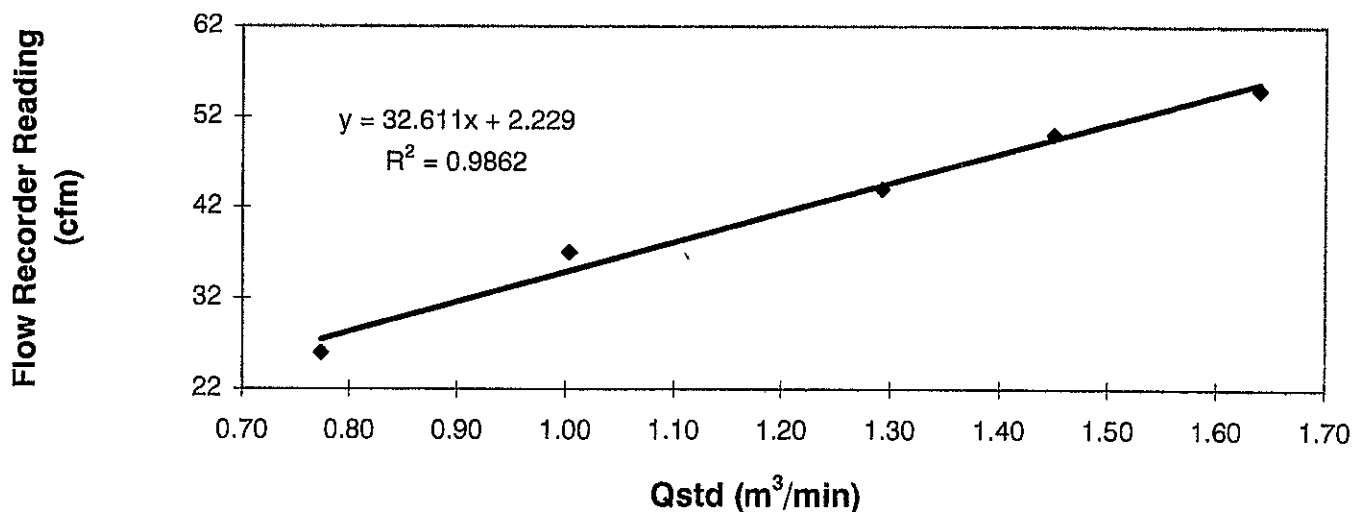
Calibration Report
of
High Volume Air Sampler

Manufacturer : Greasby GMW **Date of Calibration** : 16 January 2006
Serial No. : 1172 (ET / EA / 003 / 11) **Calibration Due Date** : 15 March 2006
Method : Based on Operations Manual for Graseby Model GS2310 series using calibration kit TE-5025A

Results

Flow recorder reading (cfm)	55	50	44	37	26
Qstd (Actual flow rate, m ³ /min)	1.64	1.45	1.29	1.00	0.77
Pressure :	761.46 mm Hg			Temp. :	293 K

Sampler 1172 Calibration Curve
Site: Pak Shek Kok (AM5)
Date of Calibration: 16 January 2006

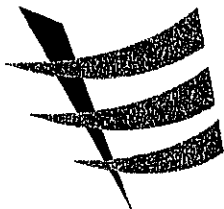


Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5 point calibration

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

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

Approved by :
Linda Law
(Environmental Officer)



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TEST REPORT

**Calibration Report
of
High Volume Air Sampler**

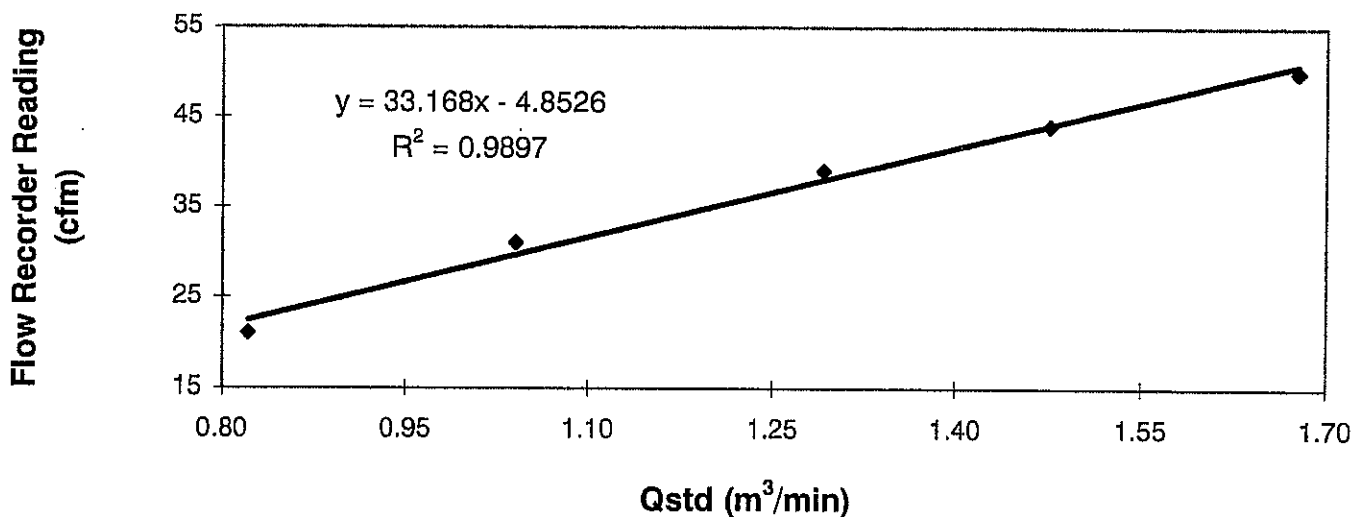
Manufacturer : Greasby GMW Date of Calibration : 16 January 2006

Serial No. : 1178 (ET / EA / 003 / 01) Calibration Due Date : 15 March 2006

Method : Based on Operations Manual for Graseby Model GS2310 series using calibration kit TE-5025A

Results	Flow recorder reading (cfm)	50	44	39	31	21
	Qstd (Actual flow rate, m ³ /min)	1.68	1.48	1.29	1.04	0.82
	Pressure : 761.46 mm Hg	Temp. : 293 K				

**Sampler 1178 Calibration Curve
Site: Pak Shek Kok (AM1) (24hr.)
Date of Calibration: 16 January 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 : H. T. Chow
H. T. Chow
(Asst. Environmental Officer)

Approved by : Linda Law
Linda Law
(Environmental Officer)



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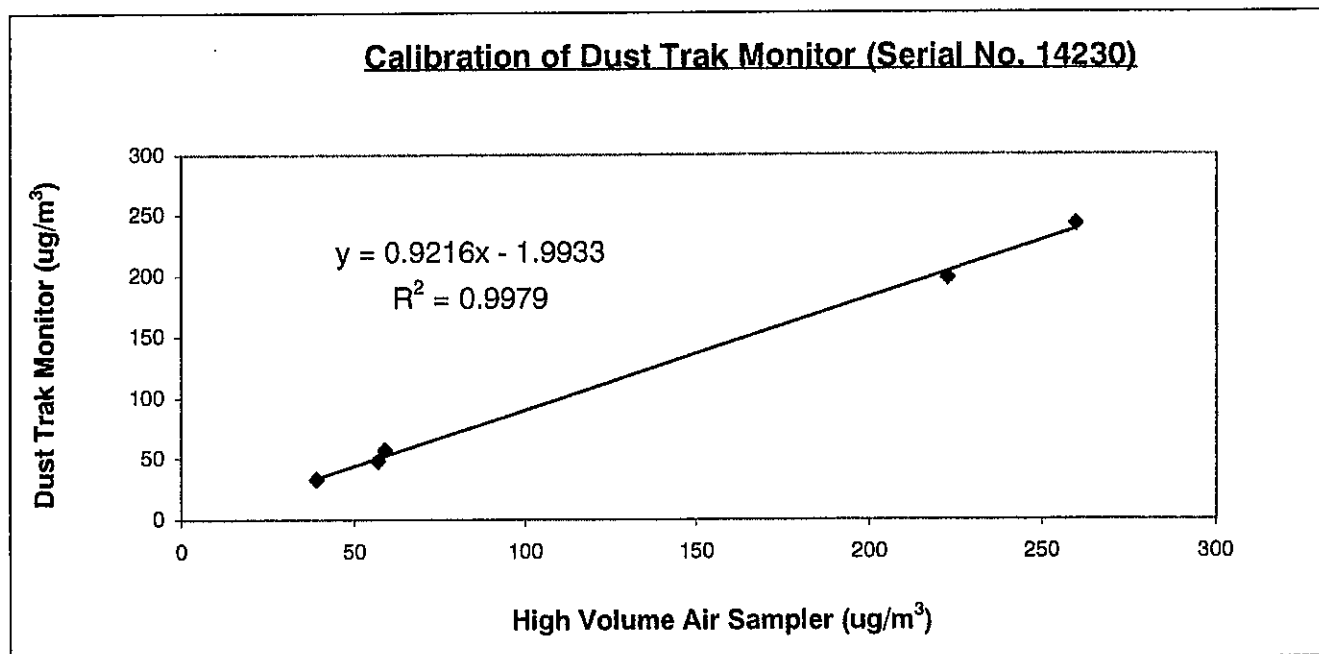
TEST REPORT

**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 Serail 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		
02/02/06	16:35	03/02/06	16:09	9623.47	9647.03	23.56	1.20	1.20	1.20	2.8205	2.9286	64	Sunny
08/02/06	09:45	09/02/06	10:08	9647.03	9671.41	24.38	1.14	1.14	1.14	2.8539	3.0320	107	Sunny
14/02/06	15:08	15/02/06	14:46	9671.41	9695.17	23.76	1.05	1.05	1.05	2.8516	2.9973	97	Rainy
20/02/06	09:50	21/02/06	10:03	9695.17	9719.39	24.22	1.08	1.08	1.08	2.8262	2.9252	63	Sunny
25/02/06	09:58	26/02/06	10:17	9719.39	9743.71	24.32	1.11	1.11	1.11	2.8269	3.0000	119	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		
02/02/06	11:05	03/02/06	10:54	14978.31	15002.13	23.82	1.40	1.40	1.40	2.8140	2.9292	58	Sunny
08/02/06	09:19	09/02/06	09:47	15002.13	15026.60	24.47	1.36	1.36	1.36	2.8705	3.0943	112	Sunny
14/02/06	17:55	15/02/06	17:53	15026.60	15050.57	23.97	1.50	1.50	1.50	2.8218	2.9704	69	Rainy
20/02/06	09:21	21/02/06	09:46	15050.57	15074.99	24.42	1.34	1.34	1.34	2.8537	3.0089	79	Sunny
25/02/06	09:45	26/02/06	10:28	15074.99	15099.71	24.72	1.44	1.44	1.44	2.8389	3.0695	107	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		
02/02/06	13:05	03/02/06	12:53	5009.34	5033.14	23.80	0.94	0.94	0.94	2.8245	2.8919	50	Sunny
08/02/06	09:32	09/02/06	09:54	5033.14	5057.51	24.37	0.94	0.94	0.94	2.8551	2.9729	86	Sunny
14/02/06	16:35	15/02/06	15:46	5057.51	5080.75	23.24	0.97	0.97	0.97	2.8261	2.9453	88	Rainy
20/02/06	09:37	21/02/06	09:50	5080.75	5104.97	24.22	0.94	0.94	0.94	2.8526	2.9296	56	Sunny
25/02/06	09:33	26/02/06	10:11	5104.97	5129.61	24.64	0.97	0.97	0.97	2.8489	2.9969	103	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	
02/02/06	16:30	17:30	73	364	157	Sunny
03/02/06	13:03	14:03	81	352	150	Sunny
04/02/06	08:15	09:15	65	496	195	Cloudy
07/02/06	08:30	09:30	78	410	186	Sunny
09/02/06	08:30	09:30	66	553	203	Cloudy
11/02/06	08:30	09:30	89	402	202	Sunny
14/02/06	15:05	16:05	87	399	112	Cloudy
16/02/06	10:30	11:30	72	594	186	Sunny
18/02/06	17:30	18:30	99	377	175	Cloudy
21/02/06	09:30	10:30	136	376	269	Sunny
23/02/06	13:05	14:05	108	372	215	Cloudy
25/02/06	08:30	09:30	53	672	186	Cloudy
28/02/06	14:50	15:50	79	298	129	Cloudy

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	
02/02/06	11:00	12:00	58	332	116	Sunny
03/02/06	16:04	17:04	64	314	116	Sunny
04/02/06	13:15	14:15	54	375	136	Cloudy
07/02/06	13:28	14:28	62	343	118	Sunny
09/02/06	13:30	14:30	50	411	139	Cloudy
11/02/06	13:00	14:00	63	343	158	Sunny
14/02/06	17:59	18:59	77	310	100	Cloudy
16/02/06	16:45	17:45	60	388	142	Sunny
18/02/06	13:00	14:00	80	306	117	Cloudy
21/02/06	15:30	16:30	98	318	171	Sunny
23/02/06	16:00	17:00	98	346	230	Cloudy
25/02/06	16:30	17:30	40	564	140	Cloudy
28/02/06	09:00	10:00	69	231	106	Cloudy

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	
02/02/06	13:00	14:00	72	353	135	Sunny
03/02/06	14:25	15:25	69	338	122	Sunny
04/02/06	14:30	15:30	59	422	167	Cloudy
07/02/06	15:30	16:30	80	371	154	Sunny
09/02/06	14:45	15:45	57	453	157	Cloudy
11/02/06	14:15	15:15	78	375	174	Sunny
14/02/06	16:22	17:22	61	277	85	Cloudy
16/02/06	17:55	18:55	67	421	160	Sunny
18/02/06	14:18	15:18	87	360	144	Cloudy
21/02/06	14:00	15:00	108	350	195	Sunny
23/02/06	14:30	15:30	112	350	221	Cloudy
25/02/06	17:45	18:45	46	590	168	Cloudy
28/02/06	10:20	11:20	72	268	119	Cloudy

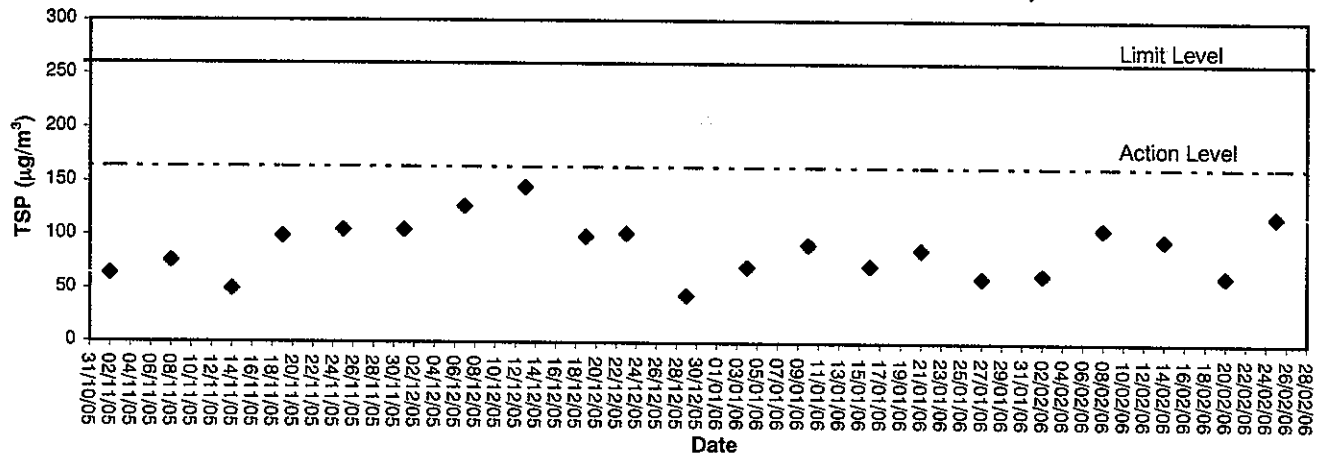


Appendix B3

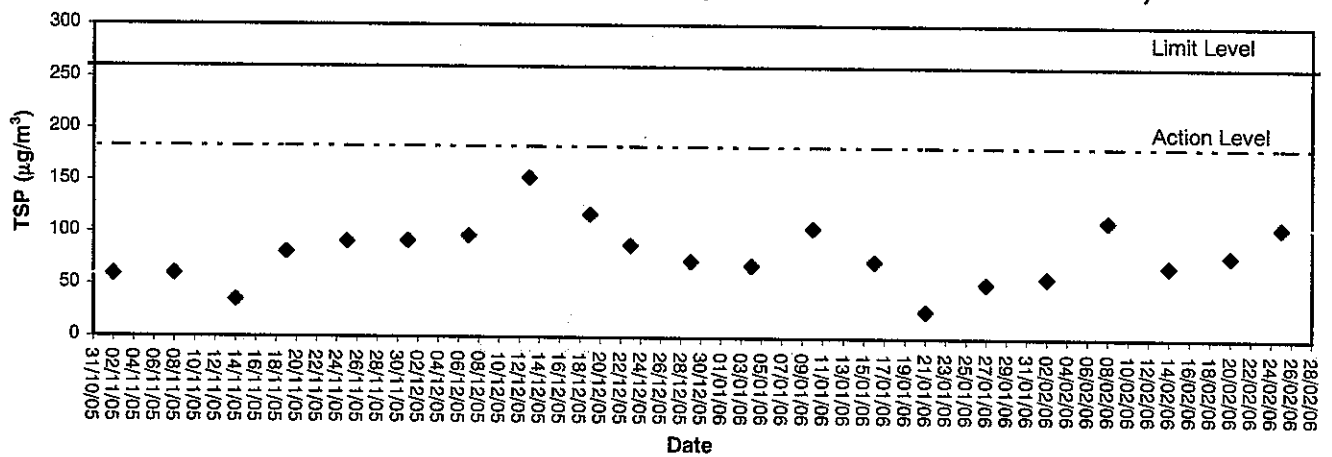
Graphical Plots of Air Quality Monitoring Data



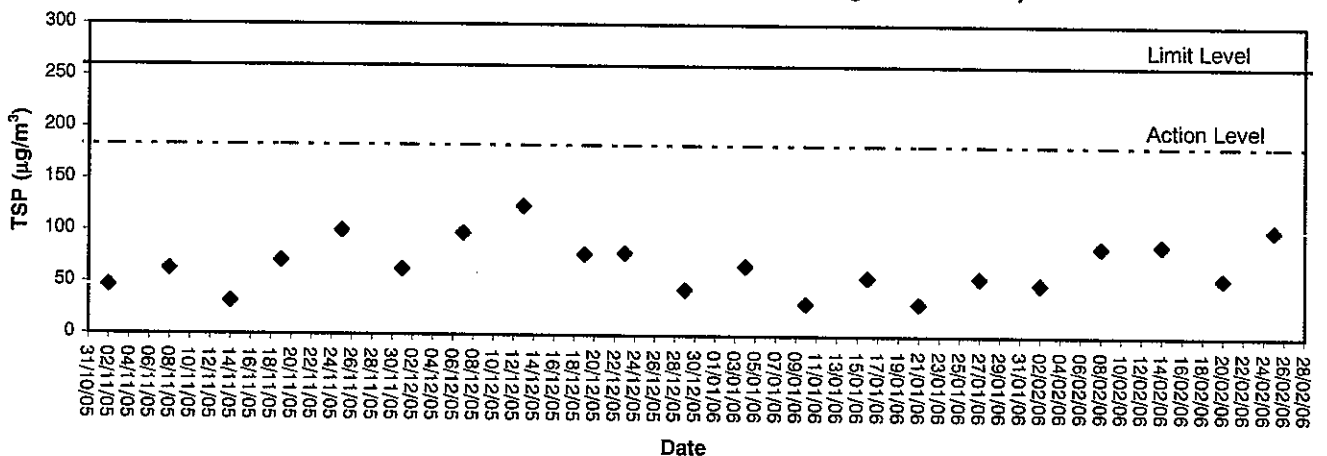
24-hour TSP level at AM1 (HKIB Staff Accommodation)



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

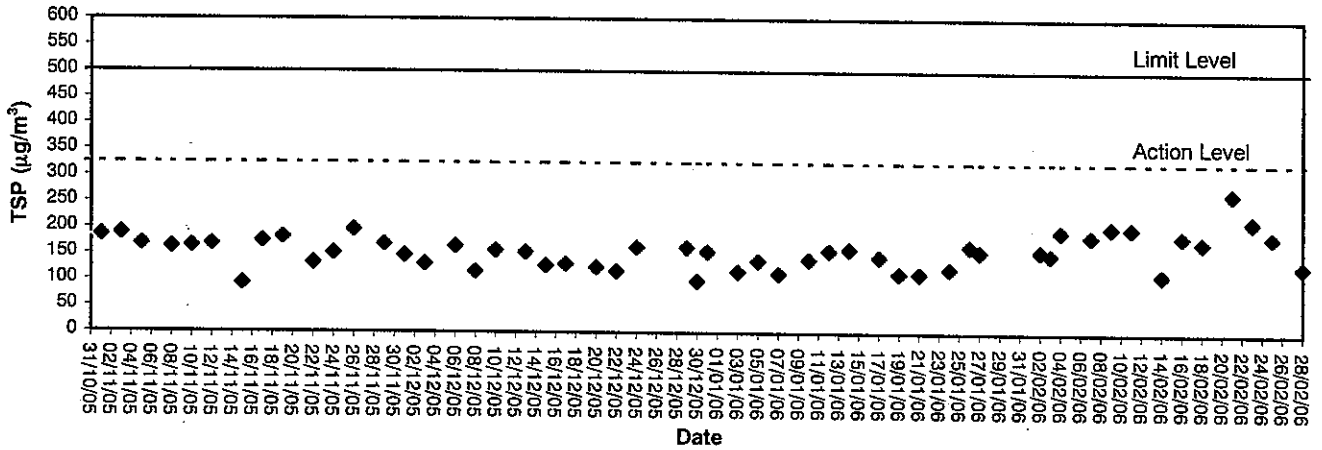


24-hour TSP level at AM5 (Wen Chih Tang at the CUHK)

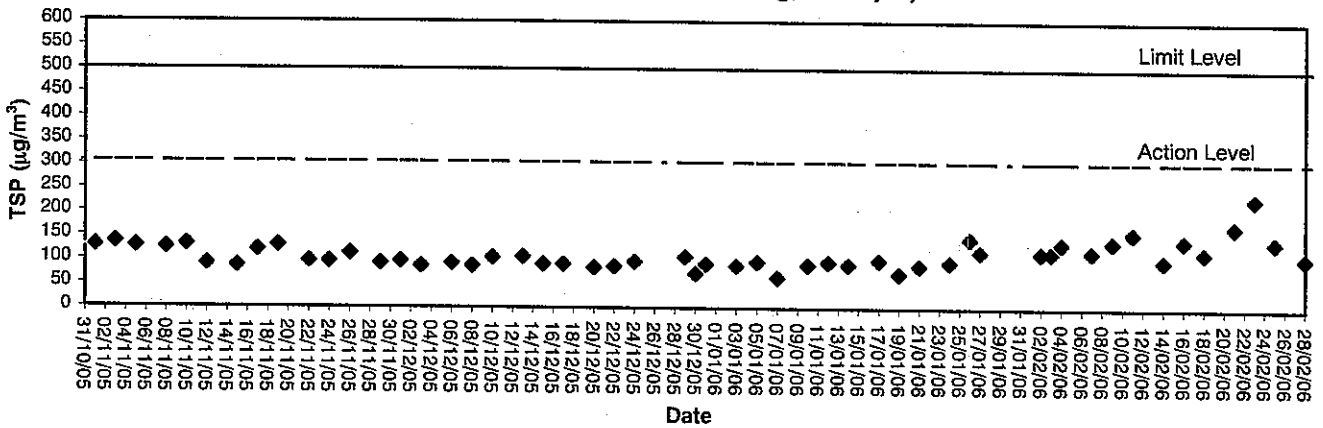




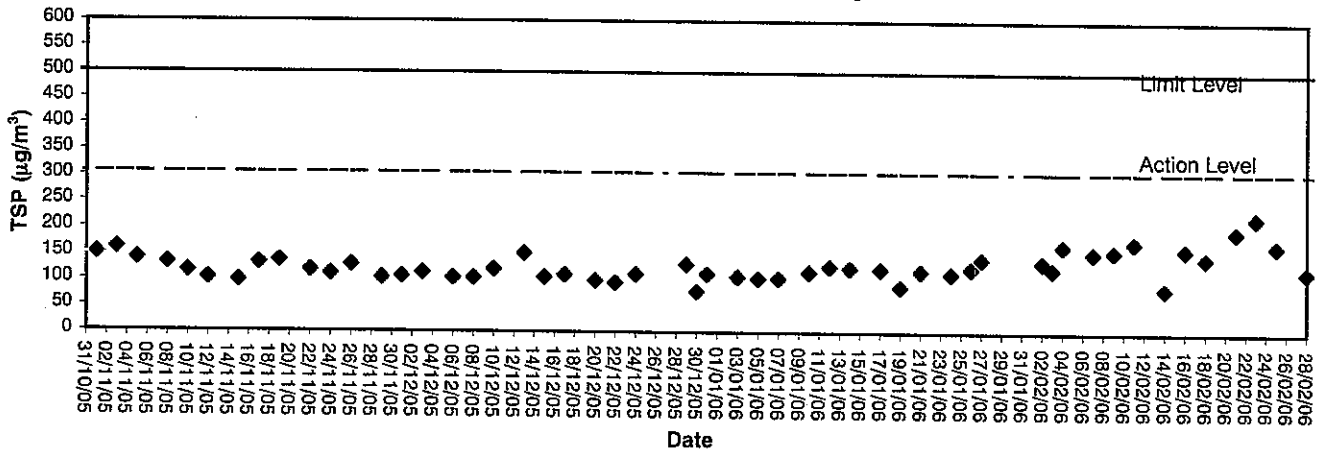
1-hour TSP level at AM1, HKIB Staff Accommodation



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





Appendix C1

Calibration Certificates for Noise Monitoring Equipments



Calibration Certificate

Certificate No. **51472**

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. : Q50535

Date of receipt : 7-Apr-05

Item Tested

Description : Precision Integrating Sound Level Meter

Manufacturer : Rion

Model : NL-31

Serial No. : 00531142

Test Conditions

Date of Test : 20-Apr-05

Ambient Temperature : $(22.5 \pm 2.5)^{\circ}\text{C}$

Supply Voltage : --

Relative Humidity : $(50 \pm 20) \%$

Test Specifications

Calibration check according to customer's requirement.

Calibration procedure : Z01.

Test Results

All results were within the manufacturer's, IEC 651 Type 1, IEC 804 Type 1 specification.
The results are shown in the attached page(s).


Test equipment used:

<u>Equipment No.</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceable to</u>
S017	C051022	21-Mar-06	PRC-NIM
S024	S41431	22-May-05	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 : 

Approved by : 
Alan Chu - Manager

Date: 20-Apr-05



Calibration Certificate

Certificate No. 51472

Page 2 of 3 Pages

Results :

1. SPL Accuracy

UUT Setting			UUT Reading (dB)	Correction (dB)
Level Range (dB)	Weight	Response		
20 - 100	L _A	Fast	94.0	+ 0.1
		Slow		+ 0.1
	L _C	Fast		0.0
	L _p	Fast		0.0
30 - 120	L _A	Fast	94.0	+ 0.1
		Slow		+ 0.1
	L _C	Fast		+ 0.1
	L _p	Fast		+ 0.1
30 - 120	L _A	Fast	114.0	+ 0.1
		Slow		+ 0.1
	L _C	Fast		0.0
	L _p	Fast		0.0

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. 51472

Page 3 of 3 Pages

3. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	- 39.6	- 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	- 8.7	- 8.6 dB, ± 1 dB
500 Hz	- 3.2	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+ 1.3	+ 1.2 dB, ± 1 dB
5 kHz	+ 1.1	+ 1.0 dB, ± 1 dB
8 kHz	- 1.1	- 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	UUT Reading (dB)	Correction (dB)	IEC 804 Type 1 Spec.
continuous	40.0	--	--
1/10	39.9	+ 0.1	± 0.5 dB
1/10 ²	39.9	+ 0.1	
1/10 ³	39.9	+ 0.1	± 1.0 dB
1/10 ⁴	39.8	+ 0.2	

Uncertainty : ± 0.1 dB

- Remark :
1. UUT : Unit-Under-Test
 2. True Value = UUT Reading + Correction.
 3. The uncertainty claimed is for a confidence probability of not less than 95%.
 4. Atmospheric Pressure : 1 000 hPa.

----- END -----



Calibration Certificate

Certificate No. 51473

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. : Q50535

Date of receipt : 7-Apr-05

Item Tested

Description : Sound Level Calibrator (Equip No.: ET/0527/004)

Manufacturer : Rion

Model : NC-73

Serial No. : 10196943

Test Conditions

Date of Test : 20-Apr-05

Supply Voltage : --

Ambient Temperature : (22.5 ± 2.5)°C

Relative Humidity : (50 ± 20) %

Test Specifications

Calibration check according to customer's requirement.

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>Cert. No.</u>	<u>Due Date</u>	<u>Traceable to</u>
S014	43147	7-Jul-05	PRC-NIM
S024	S41431	22-May-05	PRC-NIM
S041	43734	12-Aug-05	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 : 

Approved by : 
Alan Chu - Manager

Date: 20-Apr-05



Calibration Certificate

Certificate No. 51473

Page 2 of 2 Pages

Results :

1. Level Accuracy (at 1 kHz)

UUT Nominal Value	Measured Value	Mfr's Spec.
94 dB	94.1 dB	± 1 dB

Uncertainty : ± 0.2 dB

2. Frequency Accuracy

UUT Nominal Value	Measured Value	Mfr's Spec.
1 kHz	0.991 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. Atmospheric Pressure : 1 000 hPa

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

----- 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		
04/02/06	16:40	59.7	61.2	57.4	1.1	Sunny
07/02/06	08:32	59.1	60.7	56.3	0.9	Sunny
14/02/06	15:30	60.3	61.8	56.5	1.5	Cloudy
21/02/06	09:35	58.4	60.1	57.2	0.3	Sunny
28/02/06	14:55	59.6	60.9	55.1	1.2	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		
04/02/06	14:00	56.3	57.7	53.5	1.1	Sunny
07/02/06	11:30	57.2	59.3	53.8	0.8	Sunny
14/02/06	17:08	58.1	59.6	55.7	1.7	Cloudy
21/02/06	13:05	57.3	58.7	56.3	0.6	Sunny
28/02/06	16:10	56.6	58.0	51.1	1.1	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		
04/02/06	11:10	57.0	58.6	54.8	1.0	Sunny
07/02/06	13:30	52.8	54.9	49.2	0.6	Sunny
14/02/06	18:10	57.0	58.6	54.9	1.1	Cloudy
21/02/06	15:35	60.1	61.5	59.0	1.0	Sunny
28/02/06	09:13	55.8	57.0	50.3	0.9	Drizzle

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		
04/02/06	13:10	56.9	58.5	54.3	1.4	Sunny
07/02/06	15:32	56.5	58.7	53.2	0.9	Sunny
14/02/06	16:28	60.6	61.8	55.6	1.2	Cloudy
21/02/06	14:05	61.3	62.3	60.3	1.0	Sunny
28/02/06	10:26	60.8	62.1	56.2	1.3	Drizzle

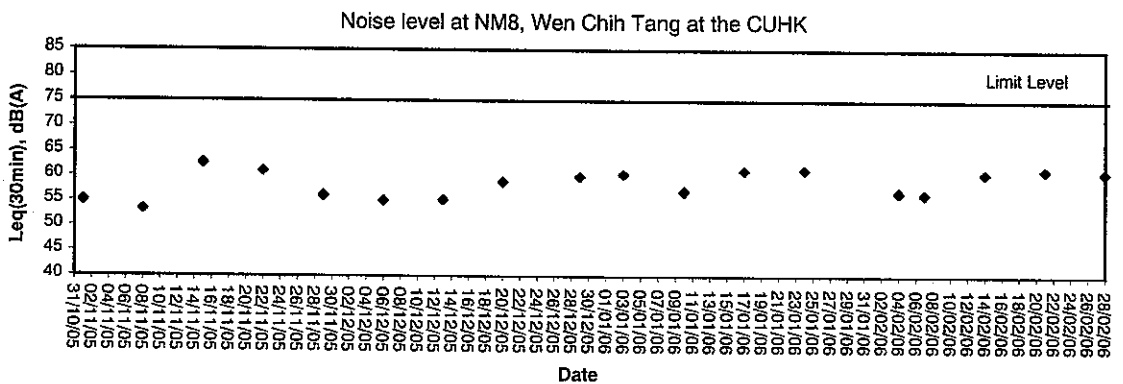
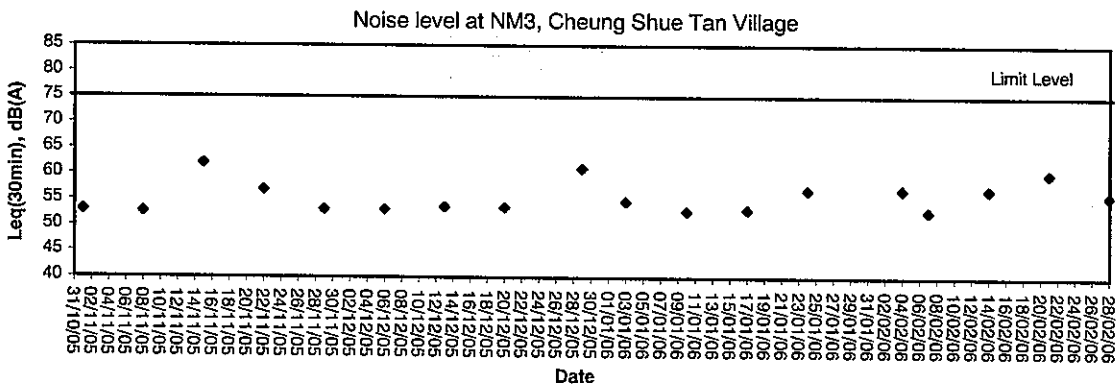
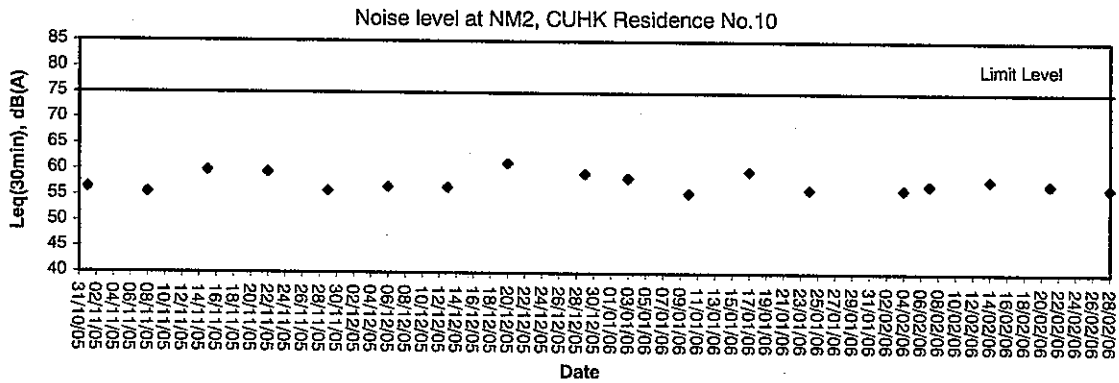
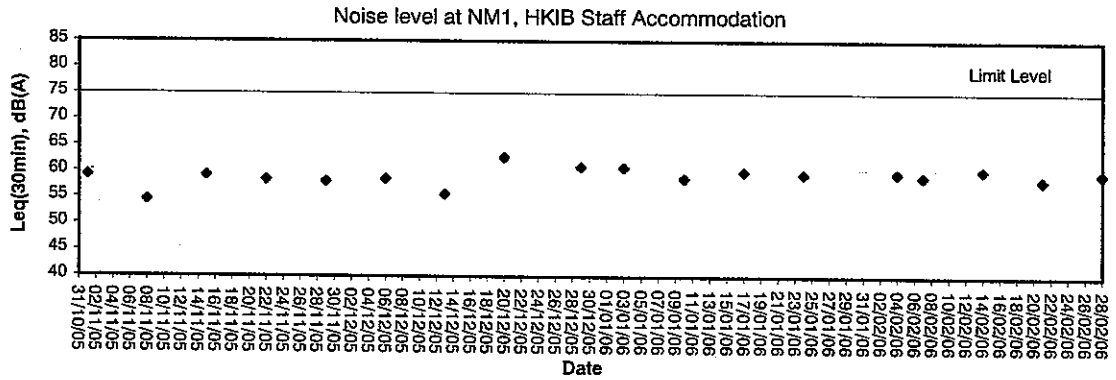


Appendix C3

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)
01/02/06	-	20.8	17.9	86	NE	<5
02/02/06	-	19.4	16.4	78	NE	<5
03/02/06	-	20.7	16.6	79	E	<5
04/02/06	Trace	16.6	14.7	82	E	<5
05/02/06	-	17.4	14.0	75	E	<5
06/02/06	-	21.7	15.3	78	E	<5
07/02/06	-	22.3	16.8	76	NE	<5
08/02/06	-	19.6	15.4	69	E	<5
09/02/06	-	17.1	14.5	75	E	<5
10/02/06	-	19.8	13.9	78	NE	<5
11/02/06	-	21.3	15.6	78	N	<5
12/02/06	-	19.8	16.9	73	E	<5
13/02/06	-	18.7	15.8	71	E	<5
14/02/06	4.7	20.4	17.6	88	NE	<5
15/02/06	-	24.4	18.5	90	NE	<5
16/02/06	-	25.3	19.6	87	NE	<5
17/02/06	Trace	20.2	15.8	84	E	<5
18/02/06	Trace	15.8	13.1	84	N	<5
19/02/06	0.5	18.5	12.3	84	N	<5
20/02/06	-	20.3	15.3	81	NE	<5
21/02/06	-	23.2	16.8	81	NE	<5
22/02/06	-	25.0	18.8	77	NE	<5
23/02/06	Trace	20.6	17.2	82	E	<5
24/02/06	Trace	17.8	16.8	87	E	<5
25/02/06	0.3	19.8	16.1	84	E	<5
26/02/06	0.3	22.5	16.6	82	N	<5
27/02/06	11.9	16.6	14.1	89	E	<5
28/02/06	20.0	16.6	9.7	94	N	<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	
Action Level				
1. Exceedance of one sample	1. Identify source 2. Inform IC(E) and ER 3. Repeat measurement to confirm finding 4. Increase monitoring frequency to daily	1. Check monitoring data submitted by ET 2. Check Contractor's working method.	1. Notify Contractor	1. Rectify any unacceptable practice 2. Amend working methods if possible
2. Exceedance for two more consecutive samples	1. Identify source 2. Inform IC(E) and ER 3. Repeat measurement to confirm findings 4. Increase monitoring frequency to daily 5. Discuss with IC(E) and Contractor on remedial actions required 6. If exceedance continuous, arrange meeting with IC(E) and ER 7. If exceedance stops, cease additional monitoring	1. Checking monitoring data submitted by ET 2. Check Contractor's working method 3. Discuss with ET and Contractor on possible remedial measures 4. Advise the ER on the effectiveness of the proposed remedial measures 5. Supervisor implementation of remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Ensure remedial measures properly implemented	1. Submit proposals for remedial action to IC(E) within 3 working days of notification 2. Implement the agreed proposals 3. Amend proposal if possible
Limit Level				
1. Exceedance of one sample	1. Identify source 2. Inform ER and EPD 3. Repeat measurement to confirm finding 4. Increase monitoring frequency to daily 5. Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results	1. Check monitoring data submitted by ET 2. Check Contractor's working method. 3. Discuss with ET and Contractor on possible remedial measures 4. Advise the ER on the effectiveness of the proposal remedial measures 5. Supervisor implementation of remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Ensure remedial measures properly implemented	1. Take immediate action to avoid further exceedance 2. Submit proposal for remedial actions to IC(E) within 3 working days of notification 3. Implement the agreed proposals 4. Amend proposal if appropriate
2. Exceedance for two or more consecutive samples	1. Notify IC(E), ER, Contractor and EPD 2. Identify source 3. Repeat measurement to confirm findings 4. Increase monitoring frequency to daily 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented 6. Arrange meeting with IC(E) and ER to discuss the remedial actions to be taken 7. Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER to discuss the remedial action to be taken 8. If exceedance stops, cease additional monitoring	1. Discuss amongst ER, ET, and Contractor on 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	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. In consultation with the IC(E), agreed with the Contractor on the remedial measures to be implemented 4. Ensure remedial measures properly implemented 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.	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 possible still not under control 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.



Event / Action Plan for Construction Noise

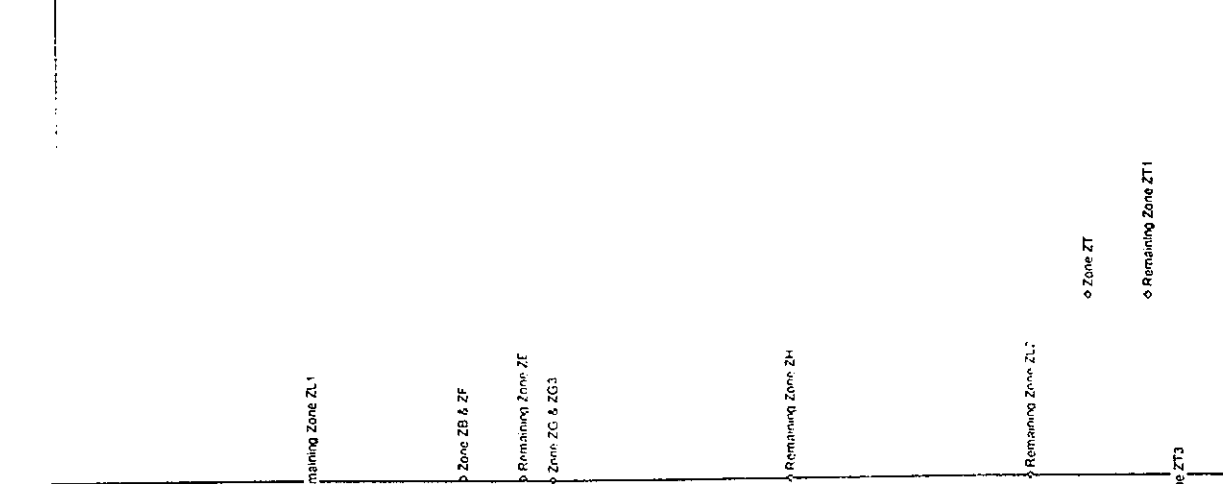
EVENT	ET Leader	ACTION		CNTRACTOR
		IC(E)	ER	
Action Level	<ol style="list-style-type: none"> 1. Notify IC(E) and Contractor 2. Carry out investigation 3. Report the results of investigation to the IC(E) and Contractor 4. Discuss with the Contractor and formulate remedial measures 5. Increase monitoring 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

ID	Description	Start	Finish	Start	Finish	Start	Finish
PC0100	Contract Award	100	10JUN04 A	100	10JUN04 A		
PC0200	Project Commencement Date	0	20JUN04 A	100	20JUN04 A		
Session Data							
PD0100	Zone ZA1, ZA2 & ZU2	0	20JUN04 A	100	20JUN04 A		
PD0200	Zone ZC, ZD, ZE, ZF, ZG, ZH & ZU1	0	20JUN04 A	100	20JUN04 A		
PD0210	Part of Zone ZL1, ZM, ZN, ZK, ZR, ZS	0	20JUN04 A	100	20JUN04 A		
PD0220	Remaining Zone ZJ	0	24SEP04 A	100	24SEP04 A		
PD0230	Remaining Zone ZR, ZR1 & ZS	0	27SEP04 A	100	27SEP04 A		
PD0240	Part of Zone ZL1	0	15MAR05 A	100	15MAR05 A		
PD0250	Remaining Zone ZL1	0	08SEP05 A	100	08SEP05 A		
PD0300	Zone ZG2 & ZJ2	0	18AUG04 A	100	18AUG04 A		
PD0310	Part of Zone ZY & ZK	0	18AUG04 A	100	18AUG04 A		
PD0320	Remaining Zone ZY	0	17SEP04 A	100	17SEP04 A		
PD0330	Remaining Zone ZK	0	08DEC04 A	100	08DEC04 A		
PD0400	Zone ZB & ZF	0	70	0	30SEP05 *		
PD0410	Part of Zone ZE	0	100	100	18JUN05 A		
PD0420	Remaining Zone ZE	0	294	0	30SEP05 *		
PD0500	Zone ZG & ZG3	0	8200	0	28SEP05 *		
PD0600	Part of Zone ZG1	0		100	20JAN05 A		
PD0610	Zone ZJ3	0		100	04OCT04 A		
PD0620	Remaining Zone ZG1	0		100	02APR05 A		
PD0700	Zone ZP	0		100	02NOV04 A		
PD0710	Part of Zone ZH	0		100	17SEP04 A		
PD0720	Part of Zone ZH	0		100	14MAR05 A		
PD0730	Part of Zone ZH	0		100	08MAR05 A		
PD0740	Remaining Zone ZH	0	920d	0	28SEP05 *		
PD0750	Part of Zone ZH	0		100	20JUN05 A		
PD0800	Zone ZJ1	0		100	14MAR05 A		
PD0810	Part of Zone ZM	0		100	14MAR05 A		
PD0820	Remaining Zone ZM	0		100	15MAR05 A		
PD0830	Zone ZJ5	0		100	15APR05 A		
PD0840	Zone ZJ3 & ZJ4	0		100	08NOV04 A		
PD1000	Part of Zone ZL2	0		100	15MAR05 A		
PD1010	Remaining Zone ZL2	0	920d	0	28SEP05 *		
PD1100	Zone ZQ & ZQ1	0		100	20JUL04 A		
PD1200	Zone ZT	0	100d	0	19FEB05 *		
PD1210	Part of Zone ZT1	0		100	25JAN05 A		
PD1220	Remaining Zone ZT1	0	142d	0	19FEB05 *		
PD1230	Zone ZT3	0		100	28AUG05 A		
PD1300	Zone ZT2	0		100	25JAN05 A		
PD1400	Demolish Existing Drains in Zone ZY	0	-6d	0	28SEP05 *		



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

ID	Description	Start	Finish	Complete	Start	Finish
CD0100	Section 1	18JUL06 *	06JUN06	0	41d	0
CD0200	Section 2	20DEC06 *	20DEC06	0	1d	0
CD0300	Section 3	28DEC06 *	02DEC06	0	24d	0
CD0400	Section 4	28DEC06 *	17NOV06	0	39d	0
CD0500	Section 5	28DEC06 *	10MAY06	0	-185d	0
CD0600	Section 6	24JUL06 *	28DEC05	0	-158d	0
CD0700	Section 7	21FEB06 *	13JUN06	0	-112d	0
CD0800	Section 8	08NOV06 *	09OCT06	0	30d	0
CD0900	Section 9	28DEC06 *	23OCT06	0	66d	0
CD1000	Section 10	28DEC06 *	18AUG06	0	132d	0
CD1100	Section 11	18FEB06 *	27JUL06	0	-158d	0
CD1200	Section 12	06NOV06 *	17OCT06	0	20d	0
CD1300	Section 13	28DEC06 *	15SEP06	0	102d	0
CD1400	Section 14	18FEB07 *	21JUL07	0	-152d	0
CD1500	Section 15	06NOV07 *	12OCT07	0	25d	0
CD1600	Section 16	20DEC07 *	20OCT07	0	87d	0

Submissions	General Submissions	Start	Finish	Complete	Start	Finish
SUGS0100	Drafted Safety Plan	10JUN04 A	24JUN04 A	100	10JUN04 A	24JUN04 A
SUGS0200	Safety Plan	14JUL04 A	14JUL04 A	100	26JUN04 A	14JUL04 A
SUGS0300	Sub-Contractor Management Plan (SCMP)	12JUL04 A	12JUL04 A	100	10JUN04 A	12JUL04 A
SUGS0400	Drain Waste Management Plan (WMP)	05JUL04 A	05JUL04 A	100	10JUN04 A	05JUL04 A
SUGS0500	Waste Management Plan	02AUG04 A	02AUG04 A	100	28JUN04 A	02AUG04 A
SUGS0600	Engineer Approval of WMP	08SEP04 A	08SEP04 A	100	03AUG04 A	08SEP04 A
SUGS0700	Layout Plan & Location of Site Office	08JUL04 A	08JUL04 A	100	10JUN04 A	08JUL04 A
SUGS0800	Engineer Approval of Site Layout Plan	20AUG04 A	20AUG04 A	100	07JUL04 A	20AUG04 A
SUGS0900	Project Signboard Location & Details	12JUL04 A	12JUL04 A	100	28JUN04 A	12JUL04 A
SUGS1000	Engineer Approval of Project Signboard Details	19AUG04 A	19AUG04 A	100	13JUL04 A	19AUG04 A
SUGS1100	EM&A and EMIS with Baseline Monitoring Record	12JUL04 A	12JUL04 A	100	28JUN04 A	12JUL04 A
SUGS1200	Engineer & EPD Consent of EM&A and EMIS	08SEP04 A	08SEP04 A	100	13JUL04 A	08SEP04 A
SUGS1600	Initial Works Programme	15JUN04 A	15JUN04 A	100	10JUN04 A	15JUN04 A
SUGS1800	Engineer Approval of Initial Works Programme	26JAN05 A	26JAN05 A	100	16JUN04 A	26JAN05 A
SUGS1700	Detailed Works Programme	15JUN04 A	15JUN04 A	100	10JUN04 A	15JUN04 A
SUGS1900	Executive Summary Programme	02MARCH05 A	02MARCH05 A	100	02MARCH05 A	18MARCH05 A
SUGS2000	Particulars of Environmental Team Leader	24JUN04 A	24JUN04 A	100	10JUN04 A	24JUN04 A
SUGS2100	EPD & Engineer Approval of ET Leader	12JUL04 A	12JUL04 A	100	25JUN04 A	12JUL04 A
SUGS2200	Overall TTA Scheme & Traffic Management Design	28JUL04 A	28JUL04 A	100	10JUN04 A	28JUL04 A
SUGS2300	Comments on Overall TTA Scheme & TMD	30SEP04 A	30SEP04 A	100	20JUL04 A	30SEP04 A
SUGS2400	Revised Overall TTA Scheme & TMD	30SEP04 A	30SEP04 A	100	30SEP04 A	30SEP04 A
SUMA0100	Particulars of DI Pipes & Fittings	28JUL04 A	28JUL04 A	100	10JUN04 A	28JUL04 A
SUMA0200	Engineer Approval of DI Pipes & Fittings	04FEB08 A	04FEB08 A	100	30JUL04 A	04FEB08 A

Legend

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

Material Submission

SUMA0100 Particulars of DI Pipes & Fittings
 SUMA0200 Engineer Approval of DI Pipes & Fittings

General Submissions

SUGS0100 Drafted Safety Plan
 SUGS0200 Safety Plan
 SUGS0300 Sub-Contractor Management Plan (SCMP)
 SUGS0400 Drain Waste Management Plan (WMP)
 SUGS0500 Waste Management Plan
 SUGS0600 Engineer Approval of WMP
 SUGS0700 Layout Plan & Location of Site Office
 SUGS0800 Engineer Approval of Site Layout Plan
 SUGS0900 Project Signboard Location & Details
 SUGS1000 Engineer Approval of Project Signboard Details
 SUGS1100 EM&A and EMIS with Baseline Monitoring Record
 SUGS1200 Engineer & EPD Consent of EM&A and EMIS
 SUGS1600 Initial Works Programme
 SUGS1800 Engineer Approval of Initial Works Programme
 SUGS1700 Detailed Works Programme
 SUGS1900 Executive Summary Programme
 SUGS2000 Particulars of Environmental Team Leader
 SUGS2100 EPD & Engineer Approval of ET Leader
 SUGS2200 Overall TTA Scheme & Traffic Management Design
 SUGS2300 Comments on Overall TTA Scheme & TMD
 SUGS2400 Revised Overall TTA Scheme & TMD

Material Submissions

SUMA0100 Particulars of DI Pipes & Fittings
 SUMA0200 Engineer Approval of DI Pipes & Fittings

Project Summary

Initial Works Programme
 First Three Month Rolling Programme
 Executive Summary 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

Engineer Approval of Initial Works Programme

Detailed Works Programme
 Executive Summary 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

Engineer Approval of DI Pipes & Fittings

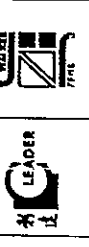
Particulars of DI Pipes & Fittings
 Engineer Approval of DI Pipes & Fittings

Project Milestones

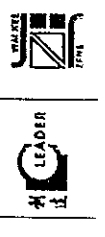
18JUL06 *
 20DEC06 *
 02DEC06 *
 28DEC06 *
 17NOV06
 10MAY06
 24OCT05 *
 24JUL06 *
 21FEB06 *
 08NOV06 *
 28DEC06 *
 28DEC06 *
 18AUG06
 27JUL06
 17OCT06
 06NOV06 *
 28DEC06 *
 15SEP06
 21JUL07
 12OCT07
 06NOV07 *
 20DEC07 *

Sections

Section 1
 Section 5
 Section 6
 Section 7
 Section 8
 Section 9
 Section 10
 Section 11
 Section 12
 Section 13



ID	Task	Start	End	Progress %	Description
SUMA0000	Particulars of Concrete Design Mix	100	10JUN04	100	10JUN04 A
SMA0400	Engineer Approval of Concrete Design Mix	100	25JUN04	100	25JUN04 A
SUMA0000	Particulars of Precast Concrete Pipe	100	10JUN04	100	10JUN04 A
SMA0400	Engineer Approval of Precast Concrete Pipe	100	25JUN04	100	25JUN04 A
SMA0700	Glazed Skylight Roof Cover System Details	100	08SEP04	100	08SEP04 A
SMA0800	Engineer Approval of Roof Cover System	72	50	80	08NOV04 A
SMA0900	Sample Panels	100	08SEP04	100	08SEP04 A
SMA1000	Engineer Approval of Sample Panels	72	50	80	08NOV04 A
Method Statement Submissions					
SME0100	Treatment Work Before Discharge of Effluent	100	10JUN04	100	10JUN04 A
SME0200	Engineer Approval of Treatment Work	100	25JUN04	100	25JUN04 A
SME0300	Drainage Works	100	17JUL04	100	17JUL04 A
SME0400	Engineer Approval of Drainage Works	100	07AUG04	100	07AUG04 A
SME0500	Tree Transplant	100	02JUL04	100	02JUL04 A
SME0600	Engineer Approval of Tree Transplant	100	31JUL04	100	31JUL04 A
SME0700	Pre-drilling	100	10JUL04	100	10JUL04 A
SME0800	Engineer Approval of Pre-drilling	100	31JUL04	100	31JUL04 A
SME0900	MLS Bridge Piling Works	100	18AUG04	100	18AUG04 A
SME1000	Engineer Approval of MLS Bridge Piling Works	12	21SEP04	20	20SEP04 A
SME1100	MLS Bridge Construction	100	19NOV04	100	19NOV04 A
SME1200	Engineer Approval of MLS Bridge Construction	12	26NOV04	20	26NOV04 A
SME1300	Construction of Public Toilet No.2	100	02JUL05	100	02JUL05 A
SME1400	Engineer Approval of Public Toilet No.2	12	30	60	06JUL05 A
SME1500	Construction of Ma Liu Shui Subway	100	30JUN05	100	30JUN05 A
SME1600	Engineer Approval of Ma Liu Shui Subway	12	06JUL05	20	06JUL05 A
SME1700	Retaining Wall No. 1	100	21JUL05	100	21JUL05 A
SME1800	Engineer Approval for Retaining Wall No. 1	12	80	80	02AUG05 A
SME1900	Construction of Public Landing Step	100	10JUN04	100	10JUN04 A
SME2000	Engineer Approval of Public Landing Step	12	13JUL04	100	13JUL04 A
SME2100	Construction of Landscape Nodes P1, P2 & P3	60	100	100	05AUG04 A
SME2200	Engineer Approval of Construction for P1-3	12	100	100	20AUG04 A
Alternative Design Submissions					
SUA-SMB0100	Submit & Approve Preliminary Design	36	18AUG04	28	28SEP04 A
SUA-SMB0200	Submit Preliminary Design to ACABAS	3	30SEP04	100	30SEP04 A
SUA-SMB0300	ACABAS Approval	1	19OCT04	100	19OCT04 A
SUA-SMB0400	Detail Design	50	100	100	20OCT04 A
SUA-SMB0500	Check by ICE	29	100	100	22DEC04 A
SUA-SMB0600	Submit Detail Design to the Engineer	0	100	100	22DEC04 A
SUA-SMB0700	Engineer Approval of Details Design	29	100	100	23DEC04 A
SUA-SMB0800	Comment / Agreement from Hyo Structure	23	100	100	31DEC04 A
SUA-SMB0900	Comment / Agreement from Hyo Maintenance	11	100	100	31DEC04 A
SUA-SMB1000	Comment / Agreement from GEO	17	100	100	31DEC04 A
SUA-SMB1100	Comment / Agreement from DLO, DSD, TD	11	100	100	31DEC04 A
SUA-SMB1200	Engineer Approval of A.O. Founding Level	12	100	100	20APR05 A



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

1 day Early bar
 5 days Progress bar
 4 days Critical bar
 5 days Summary bar
 Start milestone point
 Finish milestone point

ID	Description	Dur	Start	Finish	Status	Milestones	
						Start	Finish
SUASMB1300	CEDO Approval of A.D.	29	100 31DEC04 A	26JUL05 A	31DEC04 A	26JUL05 A	
ACABAS Site Utility							
SUASSU0100	Submit & Approve Preliminary Design	38	100 18AUG04 A	28SEP04 A	18AUG04 A	28SEP04 A	
SUASSU0200	Submit Preliminary Design to ACABAS	3	100 10SEP04 A	04OCT04 A	30SEP04 A	04OCT04 A	
SUASSU0300	ACABAS Approval	1	100 18OCT04 A	19OCT04 A	19OCT04 A	19OCT04 A	
SUASSU0400	Aesthetic Review	59	100 20OCT04 A	12JAN05 A	20OCT04 A	12JAN05 A	
SUASSU0500	ACABAS Submission (Landscape)	0	100	28MAY05 A	28MAY05 A	28MAY05 A	
SUASSU0600	Detail Design	101	100 18MAY05 A	28MAY05 A	18MAY05 A	28MAY05 A	
SUASSU0700	Submit Detail Design to the Engineer	0	100	27MAY05 A	27MAY05 A	27MAY05 A	
SUASSU0800	Engineer Approval	24	100 28MAY05 A	28JUL05 A	28MAY05 A	28JUL05 A	
SUASSU0900	CEDO Approval of A.D.	30	100 28JUL05 A	28JUL05 A	28JUL05 A	28JUL05 A	
Utilities							
Contractor's Site Accommodation							
PRCS0100	Mobilization	12	100 28JUN04 A	10JUL04 A	28JUN04 A	10JUL04 A	
PRCS0200	Erect Contractor Site Office	28	100 12JUL04 A	31JUL04 A	12JUL04 A	31JUL04 A	
Preliminary Works							
PRPR0300	Arrange ULG Meeting	90	100 28JUN04 A	18JUL04 A	28JUN04 A	18JUL04 A	
PRPR0400	Arrange TM/LG Meeting	48	100 28JUN04 A	23JUL04 A	28JUN04 A	23JUL04 A	
PRPR0500	Tree Survey	6	100 28JUN04 A	08AUG04 A	28JUN04 A	08AUG04 A	
PRPR0600	Engineer Approval of Tree Survey	12	100 07AUG04 A	30AUG04 A	07AUG04 A	30AUG04 A	
PRPR0700	Tree Transplant	24	100 31AUG04 A	31AUG04 A	31AUG04 A	31AUG04 A	
PRPR1000	Tree Felling	12	100 30AUG04 A	30AUG04 A	30AUG04 A	30AUG04 A	
PRPR1100	Procure Third Party Insurance	12	100 10JUN04 A	28JUN04 A	10JUN04 A	28JUN04 A	
PRPR1300	Erect Project Sign Board	18	100 20AUG04 A	12MAY05 A	20AUG04 A	12MAY05 A	
PRPR1400	1st Site Safety & Environmental Committee Meeting	24	100 28JUN04 A	28JUN04 A	28JUN04 A	28JUN04 A	
PRPR1500	1st SSEMC Meeting	24	100 28JUN04 A	27JUL04 A	28JUN04 A	27JUL04 A	
PRPR1600	Propose Location of Temporary Landing Facilities	24	100 10JUN04 A	28JUL04 A	10JUN04 A	28JUL04 A	
PRPR1700	Engineer Approval of the Temp Landing Location	12	100 27JUL04 A	17AUG04 A	27JUL04 A	17AUG04 A	
PRPR1800	Provide Temp Landing Facilities	15	100 18AUG04 A	18AUG04 A	18AUG04 A	18AUG04 A	
PRPR1810	Engineer Review Dredging Plan to EPD	1	100 08SEP04 A	09FEB05 A	08SEP04 A	09FEB05 A	
PRPR1900	Apply Dumping Permit	18	100 10JUN04 A	08JUL04 A	10JUN04 A	08JUL04 A	
PRPR2000	Approval of Dumping Permit	42	100 08JUL04 A	19MAR05 A	08JUL04 A	19MAR05 A	
PRPR2100	Propose Accurate Position Control at Disposal	6	100 25AUG04 A	25OCT04 A	25AUG04 A	25OCT04 A	
PRPR2200	Engineer Approval of Proposal	12	100 28OCT04 A	28DEC04 A	28OCT04 A	28DEC04 A	
PRPR2300	Provide Water Quality Monitoring Equipment	21	100 10JUN04 A	11OCT04 A	10JUN04 A	11OCT04 A	
PRPR2400	Initial Sounding Plan	13	100 13SEP04 A	18SEP04 A	13SEP04 A	18SEP04 A	
PRPR2500	Ordering of Precast Concrete Pipes	700	100 10JUL04 A	10JUL04 A	10JUL04 A	10JUL04 A	
PRPR2600	Ordering DI Pipes and Fittings	1	100 05FEB05 A	05FEB05 A	05FEB05 A	05FEB05 A	
PRPR2700	Concrete Trial Mix	6	100 13JUL04 A	22JUL04 A	13JUL04 A	22JUL04 A	
PRPR2800	Manufacture & Delivery of Seawall Blocks	220	-87d	13DEC04 A	13DEC04 A	13DEC04 A	
Utilities							
MSSS0100	Complete Laying of Utilities	0	-159d	16JAN06	16JAN06	31JUL05 *	
Section 5							
Section 7							
Legend							
10JUN04		Start	10JUN04		Finish		
20OCT07		Start	20OCT07		Finish		
28SEP05		Start	28SEP05		Finish		
17OCT05		Start	17OCT05		Finish		
4A		Start	4A		Finish		
		Start			Finish		
		Start			Finish		



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

10JUN04
 20OCT07
 28SEP05
 17OCT05
 4A
 - Primavera Systems, Inc.
 Start milestone point
 Finish milestone point

Item ID	Description	Orig Dur	Total Dur	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
NSS70100	Complete Connection for ASD's Works	0	-173d	0	20JAN06	20DEC04 A	20DEC04 A	31JUL05 *
NSS70200	Commence Toilet & Pavilion by ASD's Contractor	0	0	100	20DEC04 A	02NOV05	02NOV05	05NOV05 *
NSS70300	Complete Toilet & Pavilion by ASD's Contractor	0	3d	0				

Section B

NSS80100	Complete Connection of Utilities	0	-21d	0	11MAY06	20APR06 *	20APR06 *	
NSS80200	Commence ASD's Works	0	-88d	0	28SEP05 *	22JUL05	22JUL05	
NSS80300	Complete ASD's Works	0	-87d	0	27SEP06	22JUL06 *	22JUL06 *	

Initiation Order / Instruction

VO0010	Issue VO/047A (Section 5)	0	100	22MAR05 A	22MAR05 A			
VO0020	Issue VO/051 (Section 5)	0	100	12APR05 A	12APR05 A			
VO0030	Issue VO/068 (Section 7)	0	100	03JUN05 A	03JUN05 A			
VO0040	Issue VO/068A (Section 7 & 11)	0	100	07JUN05 A	07JUN05 A			
VO0050	Issue VO/065 (Section 8 & 12)	0	100	07JUN05 A	07JUN05 A			
VO0060	Issue VO/073 (Section 7)	0	100	23JUN05 A	23JUN05 A			
VO0070	Issue VO/057 (Section 7 & 8)	0	100	27JUN05 A	27JUN05 A			
VO0080	Issue VO/053B (Section 2)	0	100	27JUN05 A	27JUN05 A			
VO0090	Issue VO/070 (Section 7)	0	100	05JUL05 A	05JUL05 A			
VO0100	Issue VO/006E (Section 7)	0	100	11JUL05 A	11JUL05 A			
VO0110	Issue VO/068A (Section 7)	0	100	21JUL05 A	21JUL05 A			
VO0120	Issue VO/068A (Section 7)	0	100	28JUL05 A	28JUL05 A			
VO0130	Issue VO/068 (Section 7 & 8)	0	100	28JUL05 A	28JUL05 A			
VO0140	Issue VO/063 (Section 7)	0	100	28AUG05 A	28AUG05 A			
VO0150	Issue VO/064 (Section 5)	0	100	30AUG05 A	30AUG05 A			
VO0160	Issue VO/093 - Supplement Ref. 2508 (Section 7)	0	100	05SEP05 A	05SEP05 A			
VO0170	Issue VO/098 (Section 8)	0	100	13SEP05 A	13SEP05 A			

Section 4

Amenity Area

A1AM0100	Remove Ext. Surchurne Round	22	34d	0	24OCT05	17NOV05	02DEC05	29DEC05
A1AM0100	Remove Ext. Surchurne Round	1	58d	0	30SEP05	30SEP05	09DEC05	09DEC05
A1AM0100	Check Exact Location of Manholes & Catchpits	43	58d	0	12OCT05	30NOV05	10DEC05	10FEB06
A1AM0100	S979 - Existing Box Culvert	43	58d	0	01DEC05	21JAN06	11FEB06	01APR06
A1AM0100	S979 - Existing Box Culvert	38	34d	0	29DEC05	13FEB06	09FEB06	24MAR06
A1AM0100	S979 - Existing Box Culvert	33	34d	0	18NOV05	28DEC05	30DEC05	08FEB06
A1AM0100	300UC at Planting Area (South Section)	30	72d	0	18MAR06	22APR06	14JUN06	18JUL06
A1AM0100	300UC at Planting Area (North Section)	24	87d	0	31MAR06	28APR06	21JUN06	18JUL06
A1AM0100	375UC at Paving Area (South Section)	27	85d	0	20FEB06	22MAR06	26APR06	01JUN06
A1AM0100	375UC at Landing Steps Area	45	82d	0	23JAN06	17MAR06	08APR06	01JUN06
A1AM0100	375UC at Paving Area (North Section)	24	34d	0	07MAR06	05APR06	17APR06	15MAY06
A1AM0100	Watermain - WP9-4 to M8 (South Section)	15	87d	0	18MAR06	08APR06	03JUL06	18JUL06
A1AM0100	Watermain - WP7-3 to M7 (North Section)	15	76d	0	31MAR06	18APR06	03JUL06	18JUL06
A1AM0100	Install Public Lighting Post	8	84d	0	16MAR06	27MAR06	11JUL06	19JUL06

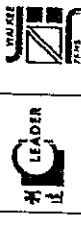
Public Lighting: Duct and Lamp

10JUN04	10JUN04	10JUN04	10JUN04
20OCT07	20OCT07	20OCT07	20OCT07
28SEP05	28SEP05	28SEP05	28SEP05
17OCT05	17OCT05	17OCT05	17OCT05
5A	5A	5A	5A

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

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

ID	Description	Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish
A1AMPK0100	Construct Dwarf Wall (South Section)	23	72d	0	20FEB06	17MAR06	17MAY06	13JUN06			
A1AMPK0200	Construct Dwarf Wall (North Section)	21	87d	0	07MAR06	30MAR06	26MAY06	20JUN06			
A1AMPK0300	Construct Edging Beam (South Section)	22	58d	0	23JAN06	18FEB06	03APR06	28APR06			
A1AMPK0400	Construct Edging Beam (North Section)	18	34d	0	14FEB06	08MAR06	23MAR06	15APR06			
A1AMPK0500	Lighting Drawpit & Cable Duct (South Section)	10	75d	0	20FEB06	02MAR06	20MAY06	01JUN06			
A1AMPK0600	Lighting Drawpit & Cable Duct (North Section)	10	48d	0	07MAR06	17MAR06	04MAY06	15MAY06			
Roads and Pavement											
A1AMPK0700	Paving Block (South Section)	40	58d	0	23MAR06	18MAY06	02JUN06	18JUL06			
A1AMPK0800	Paving Block (North Section)	54	34d	0	05APR06	08JUN06	16MAY06	19JUL06			
Cycle Track											
A1CTRA0100	Remove Ext. Surcharge Mound	18	7d	0	30SEP05	22OCT05	10OCT06	31OCT05			
Drainage Works											
A1CTDW0100	Decide Exact Location of Manholes & Catchpits	1	17d	0	30SEP05	30SEP05	22OCT05	22OCT05			
A1CTDW0200	S888 - Existing Box Culvert	42	32d	0	13OCT05	28NOV05	18NOV05	07JAN06			
A1CTDW0300	S881 - Existing Box Culvert	42	7d	0	24OCT05	10DEC05	01NOV05	19DEC05			
A1CTDW0400	S890 - Existing Box Culvert	41	5d	0	16DEC05	08FEB06	22DEC05	11FEB06			
A1CTDW0500	S897 - S898	18	32d	0	30NOV05	20DEC05	09JAN06	29JAN06			
Utility Works											
A1CTUT0300	CLP - 11kV Cable (South Section)	36	7d	0	12JAN06	24FEB06	20JAN06	04MAR06			
A1CTUT0400	CLP - 11kV Cable (North Section)	28	5d	0	07FEB06	10MAR06	13FEB06	10MAR06			
A1CTUT0500	CATV - 2 ways Cable TV Duct (South Section)	18	7d	0	25FEB06	17MAR06	08MAR06	25MAR06			
A1CTUT1000	CATV - 2 ways Cable TV Duct (North Section)	18	5d	0	04MAR06	24MAR06	10MAR06	30MAR06			
A1CTUT1010	CATV - Cable Connection	28	11d	0	25MAR06	25APR06	08APR06	09MAY06			
A1CTUT1100	Watermain - 250 & 300 Dia (South Section)	35	7d	0	12DEC05	23JAN06	20DEC05	07FEB06			
A1CTUT1200	Watermain - 250 Dia (North Section)	20	5d	0	12JAN06	17FEB06	01FEB06	23FEB06			
A1CTUT1300	Watermain - Testing and Connection of 300 Dia	18	58d	0	24JAN06	19FEB06	08APR06	24APR06			
A1CTUT1400	Watermain - Testing and Connection of 250 Dia	18	35d	0	18FEB06	08MAR06	31MAR06	19APR06			
A1CTUT1500	Install Public Lighting Post	8	58d	0	02MAY06	10MAY06	11JUL06	19JUL06			
Public Lighting, Duct and Road											
A1CTPR0100	Construct Dwarf Wall (South Section)	18	7d	0	18MAR06	08APR06	27MAR06	17APR06			
A1CTPR0200	Construct Dwarf Wall (North Section)	18	5d	0	25MAR06	15APR06	31MAR06	21APR06			
A1CTPR0300	Lay Kerb (South Section)	14	17d	0	10MAR06	03APR06	06APR06	24APR06			
A1CTPR0400	Lay Kerb (North Section)	11	10d	0	25MAR06	07APR06	07APR06	19APR06			
A1CTPR0500	Lighting Drawpit & Cable Duct (South Section)	18	7d	0	01APR06	22APR06	11APR06	02MAY06			
A1CTPR0600	Lighting Drawpit & Cable Duct (North Section)	18	5d	0	10APR06	28APR06	15APR06	08MAY06			
Roads and Pavement											
A1CTRP0100	Trim Formation & Lay Subbase (South Section)	12	7d	0	17APR06	28APR06	25APR06	08MAY06			
A1CTRP0200	Trim Formation & Lay Subbase (North Section)	18	5d	0	14APR06	05MAY06	20APR06	11MAY06			
A1CTRP0300	Lay Cycle Track Pavement (South Section)	18	7d	0	02MAY06	22MAY06	10MAY06	30MAY06			
A1CTRP0400	Lay Cycle Track Pavement (North Section)	18	5d	0	08MAY06	28MAY06	12MAY06	02JUN06			
Road Marking, Traffic Signs and Fencing											
A1CTRM0100	Apply Road Marking	3	5d	0	23MAY06	27MAY06	01JUN06	03JUN06			
A1CTRM0200	Erect Signage	4	6d	0	02MAY06	05MAY06	16JUL06	19JUL06			
A1CTRM0300	Install Railings, Fencing & etc	8	6d	0	02MAY06	09MAY06	13JUL06	19JUL06			
Section 2											
Temporary Traffic Management Scheme											
TTM Implementation											
Start date	10JUN04	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar
Finish date	20OCT07	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar
Start date	28SEP05	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar
Finish date	17OCT05	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar
Page number	8A	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar
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ID	Activity	Dir	Start	Finish	Complete	Early Start	Early Finish
AZTTAS0103	ITTA No. 01 - Sul Chung St. (S/B Slow Lane)	1	18/02/00	07/MAR/00	0	18/02/00	07/MAR/00
AZTTAS0200	ITTA No. 02 - Sul Chung St. (S/B Fast Lane)	1	24/APR/00	17/MAY/00	0	24/APR/00	17/MAY/00
AZTTAS0300	ITTA No. 03 - Existing Ma Liu Shui Bridge	1	27/MAY/00	22/JUL/00	0	27/MAY/00	22/JUL/00
AZTTMS0400	ITTA No. 04 - Cycle Track	1	20/MAY/00	05/JUN/00	0	20/MAY/00	05/JUN/00
AZTTMS0500	ITTA No. 05 - Sul Chung St. Roundabout	1	27/MAY/00	25/SEP/00	0	27/MAY/00	25/SEP/00
AZTTMS0600	ITTA No. 06 - Sul Chung St. Roundabout	1	22/JUN/00	20/OCT/00	0	22/JUN/00	20/OCT/00
AZTTMS0700	ITTA No. 07 - Sul Chung St. Roundabout	1	13/JUL/00	10/NOV/00	0	13/JUL/00	10/NOV/00
AZTTMS0800	ITTA No. 08 - Sul Chung St. & Elm St	1	21/AUG/00	20/AUG/00	0	21/AUG/00	20/AUG/00
AZTTMS0900	ITTA No. 09 - Road D1 & Sul Chung St. R/A	1	02/DEC/00	04/DEC/00	0	02/DEC/00	04/DEC/00
AZTTMS1000	Implement Permanent Traffic Scheme	1	02/DEC/00	20/DEC/00	0	02/DEC/00	20/DEC/00
Proposed Ma Liu Shui Bridge							
01000 Diversion at Sul Chung Street							
AZMBUD0100	Trial Pile	12	100 18/AUG/04	06/SEP/04	100 18/AUG/04	06/SEP/04	06/SEP/04
AZMBUD0200	Liaison with CLP & WSD for Diversion Works	30	100 23/AUG/04	17/SEP/04	100 23/AUG/04	17/SEP/04	17/SEP/04
AZMBUD0300	Submit TTA for Approval	24	100 16/SEP/04	23/SEP/04	100 16/SEP/04	23/SEP/04	23/SEP/04
AZMBUD0400	Implement TTA	1	100 03/NOV/04	03/NOV/04	100 03/NOV/04	03/NOV/04	03/NOV/04
AZMBUD0500	CLP 11kV Cables Diversion	21	100 10/JAN/05	10/JAN/05	100 10/JAN/05	10/JAN/05	10/JAN/05
AZMBUD0610	CLP 132kV Cable Ducts Diversion	11	100 26/DEC/04	26/DEC/04	100 26/DEC/04	26/DEC/04	26/DEC/04
AZMBUD0600	Watermain Diversion & Advance Notice to WSD	30	100 09/NOV/04	11/JAN/05	100 09/NOV/04	11/JAN/05	11/JAN/05
AZMBUD0610	Watermain Connection by WSD	18	100 22/JAN/05	22/JAN/05	100 22/JAN/05	22/JAN/05	22/JAN/05
AZMBUD0700	Diversion of Ext. Drainage at VA (VO0033B)	24	100 06/DEC/05	06/JAN/06	100 06/DEC/05	21/JAN/06	21/JAN/06
Existing Structure Survey							
AZMBE0100	Existing Bridge & Road Survey	12	100 07/JUL/04	20/JUL/04	100 07/JUL/04	20/JUL/04	20/JUL/04
AZMBE0200	Submit Monitoring Proposal	12	100 16/AUG/04	16/AUG/04	100 16/AUG/04	23/AUG/04	23/AUG/04
AZMBE0300	Engineer Approval of Monitoring Proposal	12	100 24/AUG/04	30/AUG/04	100 24/AUG/04	30/AUG/04	30/AUG/04
Predrilling Works							
AZMBPR0100	Submit the Coordinates of Culvert	1	100 28/AUG/04	28/AUG/04	100 28/AUG/04	28/AUG/04	28/AUG/04
AZMBPR0200	Predrilling (Voided Abutment)	48	100 25/SEP/04	11/NOV/04	100 25/SEP/04	11/NOV/04	11/NOV/04
AZMBPR0400	Predrilling (Pier)	30	100 25/SEP/04	23/OCT/04	100 25/SEP/04	23/OCT/04	23/OCT/04
AZMBPR0500	Predrilling (North Abutment)	24	100 27/AUG/04	24/SEP/04	100 27/AUG/04	24/SEP/04	24/SEP/04
AZMBPR0700	Submit Proposed Founding Level (Voided Abut.)	12	100 01/APR/05	20/APR/05	100 01/APR/05	20/APR/05	20/APR/05
AZMBPR0800	Engineer Approve Founding Level (Voided Abut.)	12	100 21/APR/05	20/APR/05	100 21/APR/05	20/APR/05	20/APR/05
AZMBPR1100	Submit Proposed Founding Level (Pier)	6	100 01/APR/05	20/APR/05	100 01/APR/05	20/APR/05	20/APR/05
AZMBPR1200	Engineer Approval of Founding Level (Pier)	12	100 21/APR/05	20/APR/05	100 21/APR/05	20/APR/05	20/APR/05
AZMBPR1300	Submit Proposed Founding Level (N-Abutment)	6	100 01/APR/05	20/APR/05	100 01/APR/05	20/APR/05	20/APR/05
AZMBPR1400	Engineer Approval of Founding Level (N-Abutment)	12	100 21/APR/05	20/APR/05	100 21/APR/05	20/APR/05	20/APR/05
AZMBPR1500	Preloading at North Abutment & Up Ramp	100	67 22/JUN/05	15/OCT/05	67 22/JUN/05	15/OCT/05	15/OCT/05
Piling Works							
AZMBPW0100	Mobilization of Piling Plants	6	100 06/AUG/05	22/AUG/05	100 06/AUG/05	22/AUG/05	22/AUG/05
AZMBPW0200	Construct Pile AV1-AV17	69	12 23/AUG/05	07/DEC/05	12 23/AUG/05	08/DEC/05	08/DEC/05
AZMBPW1300	Construct Pier Pile P1-P12	36	24/0	28/SEP/05	10/NOV/05	28/OCT/05	06/DEC/05
AZMBPW1500	Construct N-Abutment Pile AN1-AN6	24	24/0	01/NOV/05	09/DEC/05	09/DEC/05	07/JAN/06
AZMBPW1510	Load Test at Voided Abutment & Pier (Optional)	24	1/0	06/DEC/05	06/JAN/06	06/DEC/05	07/JAN/06
AZMBPW1800	Load Test at North Abutment (Optional)	24	24/0	09/DEC/05	07/JAN/06	09/DEC/05	07/FEB/06
Ground Beams							
AZMBGA0100	Construct Ground Beams (Stage 1)	12	13/0	07/JAN/06	20/JAN/06	23/JAN/06	07/FEB/06
AZMBGA0200	Construct Ground Beams (Stage 2)	12	13/0	01/JAN/06	06/FEB/06	08/FEB/06	21/FEB/06

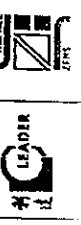
Legend:

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

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

ID #	Description	Unit	Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish
A2MBVA0000	Construct Ground Beams (Stage 1)	12	1d	07JAN06	20JAN06	09JAN06	21JAN06					
A2MBVA0001	Construct Ground Beams (Stage 2)	12	1d	07JAN06	08FEB06	23JAN06	07FEB06					
A2MBVA0002	Construct Ground Beams (Stage 3)	12	21d	07FEB06	20FEB06	03MAR06	10MAR06					
A2MBVA0003	Construct Wall (Stage 1)	18	13d	07FEB06	27FEB06	23FEB06	14MAR06					
A2MBVA0004	Construct Wall (Stage 2)	18	13d	07FEB06	20MAR06	15MAR06	05APR06					
A2MBVA0005	Construct Wall (Stage 3)	18	1d	07FEB06	24FEB06	08FEB06	25FEB06					
A2MBVA0006	Construct Wall (Stage 4)	18	1d	07FEB06	15MAR06	27FEB06	10MAR06					
A2MBVA1000	Construct Wall (Stage 5)	18	1d	07FEB06	03APR06	17MAR06	05APR06					
A2MBVA1100	Construct Slab	38	87d	05APR06	17MAY06	24JUN06	18AUG06					
Part												
A2MBPA0100	Construct Pile Cap	12	40d	07JAN06	20JAN06	25FEB06	10MAR06					
A2MBPA0200	Construct Columns	21	40d	07JAN06	18FEB06	11MAR06	05APR06					
North Abutment												
A2MBNA0100	Construct RE Wall to Formation of Abutment	18	24d	05JAN06	28JAN06	08FEB06	28FEB06					
A2MBNA0200	Construct RE Wall to Formation of RC Wall Type A	38	33d	01FEB06	14MAR06	11MAR06	22APR06					
A2MBNA0300	Fix RE Wall to Face of Abutment & RC Wall	38	27d	01FEB06	25MAY06	19MAY06	27JUN06					
A2MBNA1100	Construct Pile Cap	18	24d	01FEB06	21FEB06	01MAR06	21MAR06					
A2MBNA1200	Construct Abutment Walls	24	24d	02FEB06	21MAR06	22MAR06	19APR06					
A2MBNA1300	Construct RC Wall Type A	38	27d	02MAR06	04MAY06	24APR06	08JUN06					
A2MBNA1400	Construct RC Wall Type B	38	33d	01FEB06	14MAR06	11MAR06	22APR06					
A2MBNA1500	Construct RC Wall Type C	18	33d	01MAR06	05APR06	24APR06	15MAY06					
Bridge Deck - Vented Abutment to Pier												
A2MBDA0100	Erect Scaffolding	18	1d	05APR06	25APR06	05APR06	26APR06					
A2MBDA0200	Erect Formwork (Bottom Slab)	12	1d	02APR06	10MAY06	27APR06	11MAY06					
A2MBDA0300	Steel Fixing	8	13d	01MAY06	19MAY06	29MAY06	05JUN06					
A2MBDA0400	Erect Formwork (Kicker)	8	13d	02MAY06	20MAY06	06JUN06	14JUN06					
A2MBDA0500	Concreting	1	13d	03MAY06	30MAY06	15JUN06	15JUN06					
A2MBDA0600	Erect Formwork (Diaphragm & Top Slab)	10	13d	01JUN06	12JUN06	16JUN06	27JUN06					
A2MBDA0700	Steel Fixing	8	13d	15JUN06	21JUN06	28JUN06	07JUL06					
A2MBDA0800	Concreting	1	13d	02JUN06	22JUN06	08JUL06	08JUL06					
A2MBDA0900	Install, Stress Tendons & Grouting	24	1d	08JUL06	04AUG06	16JUL06	05AUG06					
A2MBDA1000	Remove Formwork & Scaffolding	8	45d	02AUG06	21AUG06	04OCT06	13OCT06					
A2MBDA1100	Construct Parapet	70	1d	05AUG06	28OCT06	07AUG06	27OCT06					
A2MBDA1200	Construct Centre Barrier	38	1d	02SEP06	03NOV06	22SEP06	04NOV06					
Bridge Deck - Pier to South Abutment												
A2MBDC0100	Erect Scaffolding	18	24d	02MAR06	12APR06	20APR06	11MAY06					
A2MBDC0200	Erect Formwork (Bottom Slab)	12	1d	01MAY06	24MAY06	12MAY06	25MAY06					
A2MBDC0300	Steel Fixing	8	1d	02MAY06	03JUN06	29MAY06	05JUN06					
A2MBDC0400	Erect Formwork (Kicker)	8	1d	05JUN06	13JUN06	08JUN06	14JUN06					
A2MBDC0500	Concreting	1	1d	14JUN06	14JUN06	15JUN06	15JUN06					
A2MBDC0600	Erect Formwork (Diaphragm & Top Slab)	10	1d	15JUN06	26JUN06	16JUN06	27JUN06					
A2MBDC0700	Steel Fixing	8	1d	02JUL06	08JUL06	28JUN06	07JUL06					
A2MBDC0800	Concreting	1	1d	07JUL06	07JUL06	08JUL06	08JUL06					
A2MBDC0900	Install, Stress Tendons & Grouting	24	1d	08JUL06	04AUG06	10JUL06	05AUG06					
A2MBDC1000	Remove Formwork & Scaffolding	8	38d	18AUG06	28AUG06	04OCT06	19OCT06					
A2MBDC1100	Construct Parapet	70	1d	05AUG06	28OCT06	07AUG06	27OCT06					

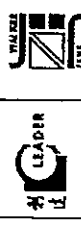
Leader - Wai Kee (C&T) Joint Venture
TP37/03 - Revised Works Programme - RP04



Start date	10JUN06	Entry bar
Finish date	20OCT07	Progress bar
Start date	23SEP06	Critical bar
Finish date	17OCT06	Summary bar
Page number	BA	Start milestone point
		Finish milestone point

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ID	Description	Orig Dur		Total		Percent		Early Start	Early Finish	L10 Start	L10 Finish	L10
		Est	Act	Est	Act	Complete	Shift					
AZNR001200	Construct Centre Barrier	30	10	0	21SEP06	0	21SEP06	01NOV06	23SEP06	04NOV06	04NOV06	04NOV06
Miscellaneous Items												
AZNR00100	Install Drainage System	16	7d	0	05OCT06	0	05OCT06	29OCT06	14OCT06	04NOV06	04NOV06	04NOV06
AZNR00200	Install Aluminium Rail	18	7d	0	05OCT06	0	05OCT06	29OCT06	14OCT06	04NOV06	04NOV06	04NOV06
AZNR00300	Install Public Lighting Post	12	13d	0	27OCT06	0	27OCT06	19NOV06	13NOV06	25NOV06	25NOV06	25NOV06
AZNR00400	Soft Lighting	6	45d	0	05AUG06	0	05AUG06	27SEP06	27SEP06	03OCT06	03OCT06	03OCT06
North Abutment (Paving)												
AZNR00500	North Abutment - Backfill to Formation	40	90d	0	00APR06	0	00APR06	29MAY06	09AUG06	18SEP06	18SEP06	18SEP06
AZNR00600	North Abutment - Lay Subbase	8	89d	0	30JUN06	0	30JUN06	16JUL06	26OCT06	04NOV06	04NOV06	04NOV06
AZNR00700	Road Pavement	18	1d	0	04NOV06	0	04NOV06	24NOV06	08NOV06	25NOV06	25NOV06	25NOV06
Road Mainline (Traffic Signs and Furniture)												
AZNR00800	Apply Road Marking	6	1d	0	25NOV06	0	25NOV06	01DEC06	27NOV06	02DEC06	02DEC06	02DEC06
AZNR00900	Erect Signage	12	1d	0	11NOV06	0	11NOV06	24NOV06	13NOV06	25NOV06	25NOV06	25NOV06
Estimates												
AZREEA0100	Remove Ext Surcharge Mound	22	45d	0	24OCT05	0	24OCT05	17NOV05	15DEC05	11JAN06	11JAN06	11JAN06
Road 01												
AZREVA0100	Bay 1	16	45d	0	18NOV05	0	18NOV05	06DEC05	12JAN06	01FEB06	01FEB06	01FEB06
AZREVA0200	Bay 2	14	45d	0	07DEC05	0	07DEC05	22DEC05	02FEB06	17FEB06	17FEB06	17FEB06
AZREVA0300	Bay 3	14	45d	0	23DEC05	0	23DEC05	10JAN06	18FEB06	08MAR06	08MAR06	08MAR06
AZREVA0400	Bay 4	14	45d	0	11JAN06	0	11JAN06	29JAN06	07MAR06	22MAR06	22MAR06	22MAR06
AZREVA0500	Bay 5	14	47d	0	18NOV05	0	18NOV05	03DEC05	14JAN06	01FEB06	01FEB06	01FEB06
AZREVA0600	Bay 6	14	47d	0	08DEC05	0	08DEC05	20DEC05	02FEB06	17FEB06	17FEB06	17FEB06
AZREVA0700	Bay 7	14	47d	0	21DEC05	0	21DEC05	07JAN06	18FEB06	08MAR06	08MAR06	08MAR06
AZREVA0800	Bay 8	14	47d	0	09JAN06	0	09JAN06	24JAN06	07MAR06	22MAR06	22MAR06	22MAR06
AZREVA0900	Bay 9	14	26d	0	28DEC05	0	28DEC05	12JAN06	02FEB06	17FEB06	17FEB06	17FEB06
AZREVA1000	Bay 10	14	26d	0	13JAN06	0	13JAN06	26JAN06	18FEB06	08MAR06	08MAR06	08MAR06
AZREVA1100	Bay 11	14	26d	0	01FEB06	0	01FEB06	19FEB06	07MAR06	22MAR06	22MAR06	22MAR06
AZREVA1200	Filling to Road Formation Levels	20	26d	0	06FEB06	0	06FEB06	28FEB06	11MAR06	03APR06	03APR06	03APR06
Drainage Works												
AZRDOW0100	Dockle Erect Location of Manholes & Catchpits	1	123d	0	30SEP05	0	30SEP05	30SEP05	28FEB06	28FEB06	28FEB06	28FEB06
AZRDOW0200	S615 - S705	36	5d	0	13FEB06	0	13FEB06	25MAR06	18FEB06	31MAR06	31MAR06	31MAR06
AZRDOW0300	S628 - S628	31	66d	0	24MAY06	0	24MAY06	28JUN06	19SEP06	25OCT06	25OCT06	25OCT06
AZRDOW0360	S616 - S629	24	85d	0	01MAR06	0	01MAR06	28MAR06	12JUN06	10JUL06	10JUL06	10JUL06
AZRDOW0400	S668 - S710	27	56d	0	21DEC05	0	21DEC05	23JAN06	01MAR06	31MAR06	31MAR06	31MAR06
AZRDOW0500	S610A - S610 (TTA No. 01)	20	19d	0	14FEB06	0	14FEB06	08MAR06	08MAR06	30MAR06	30MAR06	30MAR06
AZRDOW0600	S610 - S710 (TTA No. 04)	22	26d	0	30MAY06	0	30MAY06	24JUN06	30JUN06	28JUL06	28JUL06	28JUL06
AZRDOW0700	Replace 600 Pipe by 900 Pipe (TTA No. 04)	20	20d	0	30MAY06	0	30MAY06	22JUN06	23JUN06	17JUL06	17JUL06	17JUL06
AZRDOW0800	Reconstruct Ext IWH w 1800 Chamber (TTA No. 06)	22	31d	0	22AUG06	0	22AUG06	15SEP06	27SEP06	23OCT06	23OCT06	23OCT06
AZRDOW0900	Construct Gutters to Existing Pipe (TTA No. 06)	18	5d	0	12SEP06	0	12SEP06	02OCT06	18SEP06	06OCT06	06OCT06	06OCT06
Utility Works												
AZRDUT0000	NWT & HGC - Laying Cable Duct	17	5d	0	27MAR06	0	27MAR06	15APR06	01APR06	21APR06	21APR06	21APR06
AZRDUT0310	NWT & HGC Cable Connection	27	13d	0	17APR06	0	17APR06	18MAY06	03JUN06	03JUN06	03JUN06	03JUN06
AZRDUT0400	WT&T - Laying Cable Duct	17	5d	0	17APR06	0	17APR06	08MAY06	22APR06	12MAY06	12MAY06	12MAY06
AZRDUT0410	WT&T - Cable Connection	20	170d	0	08MAY06	0	08MAY06	07JUN06	27NOV06	26DEC06	26DEC06	26DEC06
AZRDUT0500	PCCW - Laying Cable Duct	40	5d	0	17APR06	0	17APR06	03JUN06	22APR06	08JUN06	08JUN06	08JUN06
AZRDUT0510	PCCW - Cable Connection	26	147d	0	05JUN06	0	05JUN06	03JUL06	27NOV06	28DEC06	28DEC06	28DEC06



ID	Description	Qty	Unit	Start	Finish	Start	Finish	Start	Finish
A2RDUT0000	Watermain - Laying FW Main Crossing	12	50	027MAR06	10APR06	01APR06	15APR06	15APR06	15APR06
A2RDUT0700	Watermain - Laying FW Main Crossing (TTA No. 04)	8	200	023JUN06	05JUL06	16JUL06	28JUL06	28JUL06	28JUL06
A2RDUT0800	Watermain - Replace Fresh Main (TTA No. 01)	18	180	028MAR06	29MAR06	31MAR06	21APR06	21APR06	21APR06
A2RDUT0900	Watermain - Replace Fresh Main (TTA No. 08)	10	50	022AUG06	11SEP06	28AUG06	10SEP06	10SEP06	10SEP06
A2RDUT1000	Install Public Lighting Post (TTA No. 04)	6	260	018JUL06	28JUL06	17AUG06	25AUG06	25AUG06	25AUG06
A2RDUT1100	Install Public Lighting Post (TTA No. 08)	6	280	018OCT06	26OCT06	22NOV06	30NOV06	30NOV06	30NOV06
Public Lighting Post and Kerb									
A2RDPK0100	Lay Kerb	14	280	026JUN06	12JUL06	27JUL06	11AUG06	11AUG06	11AUG06
A2RDPK0200	Lay Kerb (TTA No. 04)	6	200	011JUL06	17JUL06	03AUG06	09AUG06	09AUG06	09AUG06
A2RDPK0300	Lay Kerb (TTA No. 08)	6	50	011OCT06	17OCT06	17OCT06	23OCT06	23OCT06	23OCT06
A2RDPK0400	Construct Central Divider	24	300	005JUN06	03JUL06	11JUL06	07AUG06	07AUG06	07AUG06
A2RDPK0600	Construct Central Divider (TTA No. 09)	12	10	004DEC06	16DEC06	05DEC06	18DEC06	18DEC06	18DEC06
A2RDPK0800	Construct CPB	24	300	005JUN06	03JUL06	11JUL06	07AUG06	07AUG06	07AUG06
A2RDPK0700	Lighting Drawpit & Cable Duct	18	200	005JUN06	24JUN06	06JUL06	28JUL06	28JUL06	28JUL06
A2RDPK0900	Lighting Drawpit & Cable Duct (TTA No. 04)	6	200	004JUL06	10JUL06	27JUL06	02AUG06	02AUG06	02AUG06
A2RDPK0900	Lighting Drawpit & Cable Duct (TTA No. 08)	6	50	003OCT06	10OCT06	10OCT06	16OCT06	16OCT06	16OCT06
Road & Subbase									
A2RDPR0100	Trim Formation & Lay Subbase	20	260	026JUN06	18JUL06	27JUL06	18AUG06	18AUG06	18AUG06
A2RDPR0200	Trim Formation & Lay Subbase (TTA No. 01)	10	180	020MAR06	11APR06	22APR06	04MAY06	04MAY06	04MAY06
A2RDPR0300	Trim Formation & Lay Subbase (TTA No. 02)	6	850	025APR06	02MAY06	17AUG06	23AUG06	23AUG06	23AUG06
A2RDPR0400	Trim Formation & Lay Subbase (TTA No. 04)	6	200	013JUL06	18JUL06	05AUG06	11AUG06	11AUG06	11AUG06
A2RDPR0500	Trim Formation & Lay Subbase (TTA No. 08)	12	50	018OCT06	01NOV06	24OCT06	07NOV06	07NOV06	07NOV06
A2RDPR0700	Road Pavement - W/C	6	200	020JUL06	26JUL06	19AUG06	25AUG06	25AUG06	25AUG06
A2RDPR0800	Road Pavement - W/C (TTA No. 01)	10	180	012APR06	22APR06	05MAY06	16MAY06	16MAY06	16MAY06
A2RDPR0900	Road Pavement - B/C (TTA No. 02)	2	950	010MAY06	04MAY06	24AUG06	25AUG06	25AUG06	25AUG06
A2RDPR1000	Road Pavement - W/C (TTA No. 04)	12	200	020JUL06	02AUG06	12AUG06	25AUG06	25AUG06	25AUG06
A2RDPR1100	Road Pavement - W/C (TTA No. 08)	22	50	002NOV06	27NOV06	08NOV06	02DEC06	02DEC06	02DEC06
A2RDPR1200	Road Pavement - W/C (TTA No. 09)	8	14	018DEC06	23DEC06	18DEC06	25DEC06	25DEC06	25DEC06
A2RDPR1300	Construct Footpath between Q7 & D1	36	870	003AUG06	13SEP06	15NOV06	20DEC06	20DEC06	20DEC06
Road Marking, Traffic Signal Fixing									
A2RDRA0100	Apply Road Marking (TTA No. 04)	4	200	028JUL06	02AUG06	22AUG06	25AUG06	25AUG06	25AUG06
A2RDRA0200	Apply Road Marking (TTA No. 08)	2	50	025NOV06	27NOV06	01DEC06	02DEC06	02DEC06	02DEC06
A2RDRA0400	Erect Signage	8	240	020JUL06	28JUL06	17AUG06	25AUG06	25AUG06	25AUG06
A2RDRA0500	Erect Signage (TTA No. 08)	6	180	002NOV06	08NOV06	24NOV06	30NOV06	30NOV06	30NOV06
A2RDRA0900	Install Railing, Fencing & etc	6	240	020JUL06	28JUL06	17AUG06	25AUG06	25AUG06	25AUG06
A2RDRA0700	Install Railing, Fencing & etc (TTA No. 08)	6	180	002NOV06	08NOV06	24NOV06	30NOV06	30NOV06	30NOV06
Drainage Works									
A2RSDW0050	Remove Ext Surcharge Mound	22	100	024OCT05	17NOV05	04NOV05	28NOV05	28NOV05	28NOV05
A2RSDW0100	Excavate to +4.5 mPD	12	100	018NOV05	01DEC05	30NOV05	10DEC05	10DEC05	10DEC05
A2RSDW0200	Fill to Road Formation	24	100	002DEC05	31DEC05	14DEC05	12JAN06	12JAN06	12JAN06
Drainage Works									
A2RSDW06100	Decide Exact Location of Manholes & Catchpits	1	850	030SEP05	30SEP05	12JAN06	12JAN06	12JAN06	12JAN06
A2RSDW0200	S&T - Existing Box Culvert	29	100	002JAN06	08FEB06	13JAN06	17FEB06	17FEB06	17FEB06
A2RSDW0300	S&T3 - Existing Box Culvert	29	100	014FEB06	18MAR06	23FEB06	30MAR06	30MAR06	30MAR06
A2RSDW0400	F301 - F302	18	100	012MAR06	10APR06	31MAR06	21APR06	21APR06	21APR06
A2RSDW0500	S&T3 - S&T3	30	280	001MAR06	12APR06	05APR06	17MAY06	17MAY06	17MAY06

ID	Description	Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish
A2RSDW0000	Utility Works	01MAY06	17MAY06	01MAY06	17MAY06	01MAY06	17MAY06	01MAY06	17MAY06	01MAY06	17MAY06
A2RSUT0200	NWT & HGC - Laying Cable Duct	01MAY06	20APR06	01MAY06	20APR06	01MAY06	20APR06	01MAY06	20APR06	01MAY06	20APR06
A2RSUT0210	NWT & HGC - Cable Connection	01MAY06	06JUN06	01MAY06	06JUN06	01MAY06	06JUN06	01MAY06	06JUN06	01MAY06	06JUN06
A2RSUT0220	WT&T - Laying Cable Duct	01MAY06	27APR06	01MAY06	27APR06	01MAY06	27APR06	01MAY06	27APR06	01MAY06	27APR06
A2RSUT0230	WT&T - Cable Connection	01MAY06	11JUL06	01MAY06	11JUL06	01MAY06	11JUL06	01MAY06	11JUL06	01MAY06	11JUL06
A2RSUT0400	PCOW - Laying Cable Duct	01MAY06	27APR06	01MAY06	27APR06	01MAY06	27APR06	01MAY06	27APR06	01MAY06	27APR06
A2RSUT0410	PCOW - Cable Connection	01MAY06	11JUL06	01MAY06	11JUL06	01MAY06	11JUL06	01MAY06	11JUL06	01MAY06	11JUL06
A2RSUT0600	Install Public Lighting Post	01MAY06	22AUG06	01MAY06	22AUG06	01MAY06	22AUG06	01MAY06	22AUG06	01MAY06	22AUG06
A2RSRP0100	Construct Dwarf Wall	01MAY06	18MAY06	01MAY06	18MAY06	01MAY06	18MAY06	01MAY06	18MAY06	01MAY06	18MAY06
A2RSRP0200	Lay Kerb	01MAY06	22JUL06	01MAY06	22JUL06	01MAY06	22JUL06	01MAY06	22JUL06	01MAY06	22JUL06
A2RSRP0300	Lighting Drawpit & Cable Duct	01MAY06	28JUN06	01MAY06	28JUN06	01MAY06	28JUN06	01MAY06	28JUN06	01MAY06	28JUN06
A2RSRP0400	Trim Formation & Lay Subbase	01MAY06	12JUL06	01MAY06	12JUL06	01MAY06	12JUL06	01MAY06	12JUL06	01MAY06	12JUL06
A2RSRP0500	Road Pavement	01MAY06	02AUG06	01MAY06	02AUG06	01MAY06	02AUG06	01MAY06	02AUG06	01MAY06	02AUG06
A2RSRP0600	Construct Footpath between CT and RW No. 1	01MAY06	12JUL06	01MAY06	12JUL06	01MAY06	12JUL06	01MAY06	12JUL06	01MAY06	12JUL06
A2RSRM0100	Apply Road Marking	01MAY06	25AUG06	01MAY06	25AUG06	01MAY06	25AUG06	01MAY06	25AUG06	01MAY06	25AUG06
A2RSRM0200	Erect Signage	01MAY06	09AUG06	01MAY06	09AUG06	01MAY06	09AUG06	01MAY06	09AUG06	01MAY06	09AUG06
A2RSRM0300	Install Railing, Fencing & etc	01MAY06	09AUG06	01MAY06	09AUG06	01MAY06	09AUG06	01MAY06	09AUG06	01MAY06	09AUG06
A2SDCW0000	Describe Exact Location of Manholes & Catchpits	01MAY06	13MAY06	01MAY06	13MAY06	01MAY06	13MAY06	01MAY06	13MAY06	01MAY06	13MAY06
A2SDCW0100	S&S4 - S&S7 (TTA No. 04)	01MAY06	04JUL06	01MAY06	04JUL06	01MAY06	04JUL06	01MAY06	04JUL06	01MAY06	04JUL06
A2SDCW0200	Construct Gullies (TTA No. 06)	01MAY06	09OCT06	01MAY06	09OCT06	01MAY06	09OCT06	01MAY06	09OCT06	01MAY06	09OCT06
A2SCUT0000	Watermain - Replace SWM (TTA No. 04)	01MAY06	20JUN06	01MAY06	20JUN06	01MAY06	20JUN06	01MAY06	20JUN06	01MAY06	20JUN06
A2SCUT0100	Watermain - Lay FWM Crossing (TTA No. 04)	01MAY06	27JUN06	01MAY06	27JUN06	01MAY06	27JUN06	01MAY06	27JUN06	01MAY06	27JUN06
A2SCUT0200	Watermain - Lay FWM Crossing (TTA No. 06)	01MAY06	06NOV06	01MAY06	06NOV06	01MAY06	06NOV06	01MAY06	06NOV06	01MAY06	06NOV06
A2SCUT0300	Install Public Lighting Post (TTA No. 04)	01MAY06	17AUG06	01MAY06	17AUG06	01MAY06	17AUG06	01MAY06	17AUG06	01MAY06	17AUG06
A2SCUT0400	Install Public Lighting Post (TTA No. 06)	01MAY06	21NOV06	01MAY06	21NOV06	01MAY06	21NOV06	01MAY06	21NOV06	01MAY06	21NOV06
A2SCRP0100	Lay Kerb (TTA No. 04)	01MAY06	28JUL06	01MAY06	28JUL06	01MAY06	28JUL06	01MAY06	28JUL06	01MAY06	28JUL06
A2SCRP0200	Lay Kerb (TTA No. 06)	01MAY06	08OCT06	01MAY06	08OCT06	01MAY06	08OCT06	01MAY06	08OCT06	01MAY06	08OCT06
A2SCRP0300	Lighting Drawpit & Cable Duct (TTA No. 04)	01MAY06	21JUL06	01MAY06	21JUL06	01MAY06	21JUL06	01MAY06	21JUL06	01MAY06	21JUL06
A2SCRP0400	Lighting Drawpit & Cable Duct (TTA No. 06)	01MAY06	29SEP06	01MAY06	29SEP06	01MAY06	29SEP06	01MAY06	29SEP06	01MAY06	29SEP06
A2SCRP0500	Trim Formation & Lay Subbase (TTA No. 04)	01MAY06	04AUG06	01MAY06	04AUG06	01MAY06	04AUG06	01MAY06	04AUG06	01MAY06	04AUG06
A2SCRP0600	Road Pavement (TTA No. 04)	01MAY06	11AUG06	01MAY06	11AUG06	01MAY06	11AUG06	01MAY06	11AUG06	01MAY06	11AUG06
A2SCRP0700	Road Pavement (TTA No. 06)	01MAY06	21NOV06	01MAY06	21NOV06	01MAY06	21NOV06	01MAY06	21NOV06	01MAY06	21NOV06
A2SCRP0800	Remove Existing Traffic Island (TTA No. 02)	01MAY06	18MAY06	01MAY06	18MAY06	01MAY06	18MAY06	01MAY06	18MAY06	01MAY06	18MAY06
A2SCRP0900	Road Pavement (TTA No. 02)	01MAY06	03JUN06	01MAY06	03JUN06	01MAY06	03JUN06	01MAY06	03JUN06	01MAY06	03JUN06
A2SCRM0000	Apply Road Marking (TTA No. 04)	01MAY06	25AUG06	01MAY06	25AUG06	01MAY06	25AUG06	01MAY06	25AUG06	01MAY06	25AUG06
A2SCRM0100	Apply Road Marking (TTA No. 06)	01MAY06	30NOV06	01MAY06	30NOV06	01MAY06	30NOV06	01MAY06	30NOV06	01MAY06	30NOV06
A2SCRM0200	Erect Signage	01MAY06	16NOV06	01MAY06	16NOV06	01MAY06	16NOV06	01MAY06	16NOV06	01MAY06	16NOV06
A2SCRM0300	Install Railing, Fencing & etc	01MAY06	16NOV06	01MAY06	16NOV06	01MAY06	16NOV06	01MAY06	16NOV06	01MAY06	16NOV06

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

Start date: 10JUN04
 Finish date: 20OCT07
 Data date: 26SEP05
 Run date: 17OCT05
 Page number: 11A

C. Primavera Systems, Inc.



AG ID	Change Description	Qty Dur	Total Dur	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	
Existing Site Channel Street Roundabout									
Road Lighting, Duct and Kerb									
AZSRP0100	Laying Lighting Cross Road Duct (TTA No. 06)	4	10td	0	06JUN06	12JUN06	06OCT06	10OCT06	
AZSRP0200	Laying Lighting Cross Road Duct (TTA No. 06)	4	10td	0	26JUN06	28JUN06	24OCT06	27OCT06	
Road and Pavement									
AZSRP0100	Demolish Existing Island (TTA No. 06)	8	10td	0	29MAY06	07JUN06	28SEP06	04OCT06	
AZSRP0200	Construct Proposed Island (TTA No. 06)	8	10td	0	13JUN06	21JUN06	11OCT06	19OCT06	
AZSRP0300	Demolish Existing Kerb (TTA No. 06)	2	10td	0	23JUN06	24JUN06	21OCT06	23OCT06	
AZSRP0400	Lay Kerb (TTA No. 06)	8	10td	0	30JUN06	10JUL06	28OCT06	07NOV06	
AZSRP0500	Demolish Existing Roundabout (TTA No. 07)	8	10td	0	14JUL06	22JUL06	11NOV06	20NOV06	
AZSRP0600	Reconstruct Roundabout (TTA No. 07)	8	10td	0	24JUL06	01AUG06	21NOV06	29NOV06	
AZSRP0700	Reinstall Road Pavement (TTA No. 06)	2	10td	0	11JUL06	12JUL06	08NOV06	09NOV06	
AZSRP0800	Resurfacing Wearing Course	8	10td	0	02AUG06	10AUG06	30NOV06	08DEC06	
AZSRP0900	Construct Proposed Island (TTA No. 09)	12	7td	0	04DEC06	10DEC06	12DEC06	23DEC06	
Road Lighting, Traffic Signs and Erection									
AZSRM0100	Apply Road Marking	2	10td	0	25AUG06	26AUG06	23DEC06	23DEC06	
AZSRM0200	Erect Signage	12	10td	0	11AUG06	24AUG06	09DEC06	22DEC06	
AZSRM0300	Install Railing, Fencing & etc	12	10td	0	11AUG06	24AUG06	09DEC06	22DEC06	
Existing Ma Lu Shu Bridge									
Utility Works									
AZEBU0100	Install Public Lighting Post	8	6td	0	03OCT06	12OCT06	16DEC06	23DEC06	
Public Lighting, Duct and Kerb									
AZEBK0100	Lay Kerb (TTA No. 03)	8	4td	0	13JUN06	21JUN06	07AUG06	15AUG06	
AZEBK0200	Cable Duct Laying on Island (TTA No. 06)	6	75d	0	20AUG06	01SEP06	24NOV06	30NOV06	
AZEBK0300	Cable Duct Laying on Reserve (TTA No. 06)	6	57d	0	05SEP06	11SEP06	13NOV06	18NOV06	
Road and Pavement									
AZEBRP0100	Demolish Existing Parapet (TTA No. 03)	12	114d	0	29MAY06	12JUN06	12OCT06	25OCT06	
AZEBRP0200	Demolish Island & Paved Area (TTA No. 03)	12	48d	0	28MAY06	12JUN06	24JUL06	05AUG06	
AZEBRP0300	Road Pavement (TTA No. 03)	6	48d	0	22JUN06	30JUN06	16AUG06	24AUG06	
AZEBRP0400	Construct Roundabout on V-Abutment (TTA No. 03)	8	114d	0	19JUN06	21JUN06	28OCT06	04NOV06	
AZEBRP0500	Remove Pavement at Proposed Island (TTA No. 06)	4	75d	0	22AUG06	25AUG06	28NOV06	23NOV06	
AZEBRP0600	Construct Traffic Island (TTA No. 06)	6	75d	0	02SEP06	11SEP06	01DEC06	09DEC06	
AZEBRP0700	Construct Remaining Roundabout (TTA No. 06)	12	81d	0	22AUG06	04SEP06	27NOV06	09DEC06	
AZEBRP0800	Demolish Existing Central Reserve (TTA No. 06)	12	57d	0	22AUG06	04SEP06	28OCT06	11NOV06	
AZEBRP0900	Construct New Central Reserve (TTA No. 06)	18	57d	0	12SEP06	02OCT06	20NOV06	09DEC06	
Road (Island) Traffic Signs and Erection									
AZEBRM0100	Apply Road Marking (TTA No. 03)	1	48d	0	03JUL06	03JUL06	25AUG06	25AUG06	
AZEBRM0200	Apply Road Marking (TTA No. 06)	1	57d	0	18OCT06	18OCT06	25DEC06	25DEC06	
AZEBRM0300	Erect Signage	12	57d	0	03OCT06	17OCT06	11DEC06	23DEC06	
AZEBRM0400	Install Railing, Fencing & etc	12	57d	0	03OCT06	17OCT06	11DEC06	23DEC06	
Car Park and Access Road									
Drainage Works									
AZCPDW1200	S682 - Existing Culvert	21	88d	0	06MAY06	30MAY06	19AUG06	12SEP06	
AZCPDW1300	CP632 - S684	18	88d	0	07JUN06	16JUN06	13SEP06	30SEP06	
Utility Works									
AZCPUTD800	Install Public Lighting Post	8	106d	0	14AUG06	22AUG06	18DEC06	20DEC06	
Public Lighting, Duct and Kerb									
AZCPR0100	Construct Dwarf Wall	23	88d	0	20JUN06	17JUL06	09OCT06	28OCT06	
AZCPR0200	Lay Kerb	6	88d	0	04AUG06	12AUG06	17NOV06	23NOV06	
Signage									
Sign Gable	10JUN04								
Finish Gable	20OCT07								
Sign Gable	28SEP06								
Sign Gable	17OCT06								
Sign Number	12A								

Legend:

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

AC ID Description Dur. Total Dur. Float Percent Complete Early Start Early Finish Late Start Late Finish

AC ID	Description	Dur.	Total Dur.	Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	
A3CPFR0030	Public Lighting Controller	10	110d	0	18JUL06	28JUL06	06DEC06	06DEC06	16DEC06	
A3CPFR0040	Lighting Drawnail & Cable Duct	15	60d	0	18JUL06	08AUG06	31OCT06	10NOV06	16DEC06	
Roads and Pathing										
A3CPRM0100	Trim Formation & Lay Subso	6	90d	0	14AUG06	22AUG06	06DEC06	14DEC06	14DEC06	
A3CPRM0200	Road Pavement	6	90d	0	23AUG06	31AUG06	15DEC06	23DEC06	23DEC06	
A3CPRM0300	Construct Footpath	18	88d	0	14AUG06	02SEP06	27NOV06	10DEC06	10DEC06	
Road Marking, Traffic Signs and Fencing										
A3CPRM0400	Apply Road Marking	2	88d	0	11SEP06	12SEP06	25DEC06	26DEC06	26DEC06	
A3CPRM0500	Erect Signage	6	88d	0	04SEP06	06SEP06	16DEC06	23DEC06	23DEC06	
A3CPRM0600	Install Railings, Fencing & etc	6	88d	0	04SEP06	08SEP06	18DEC06	23DEC06	23DEC06	
Amenity Areas										
A3AMND0010	Construct U-Channels	18	110d	0	18JUL06	07AUG06	06DEC06	26DEC06	26DEC06	
Utility Works										
A3AMUT0100	Water Point WP1-3 to Water Meter No.1	18	61d	0	09SEP06	28SEP06	22NOV06	12DEC06	12DEC06	
A3AMUT0200	Water Point WP2-3 to Water Meter No.2	17	130d	0	28JUN06	18JUL06	07DEC06	26DEC06	26DEC06	
A3AMUT0300	Water Point WP3-5 to Water Meter No.3	20	107d	0	22JUL06	21AUG06	27NOV06	26DEC06	26DEC06	
A3AMUT0400	Water Point WP3-5 to Water Meter No.5	12	61d	0	30SEP06	14OCT06	13DEC06	26DEC06	26DEC06	
SECTION 3										
H411 Sub Station										
Earthworks										
A3MSEA0100	Remove Surcharge Mound	18	5d	0	30SEP06	22OCT06	07OCT06	28OCT06	28OCT06	
A3MSPH0100	Construct Base Slab	8	5d	0	07NOV06	13NOV06	12NOV06	21NOV06	21NOV06	
A3MSPH0200	Construct Wall upto Barrel Base Slab	8	5d	0	19NOV06	24NOV06	22NOV06	30NOV06	30NOV06	
A3MSPH0300	Construct Wall up to Top Slab	12	5d	0	09DEC06	22DEC06	15DEC06	30DEC06	30DEC06	
A3MSPH0400	Construct Top Slab	12	9d	0	08JAN06	21JAN06	19JAN06	03FEB06	03FEB06	
A3MSPH0500	Install Hoisting Beam	6	5d	0	02JAN06	07JAN06	07JAN06	13JAN06	13JAN06	
Subway Earth Retention Construction										
A3MSSE0100	Excavation	24	5d	0	24OCT06	19NOV06	29OCT06	28NOV06	28NOV06	
A3MSSE0200	Construct Subway #1 Base Slab	9	30d	0	21NOV06	30NOV06	28DEC06	06JAN06	06JAN06	
A3MSSE0300	Construct Subway #2 Base Slab	9	17d	0	17NOV06	26NOV06	07DEC06	16DEC06	16DEC06	
A3MSSE0400	Construct Subway #3 Base Slab	0	10d	0	07NOV06	16NOV06	18NOV06	28NOV06	28NOV06	
A3MSSE0500	Construct Subway #4 Base Slab	12	5d	0	07NOV06	08DEC06	01DEC06	14DEC06	14DEC06	
A3MSSE0600	Construct Subway #1 Wall + Top Slab	16	10d	0	24DEC06	13JAN06	10JAN06	25JAN06	25JAN06	
A3MSSE0700	Construct Subway #2 Wall + Top Slab	16	10d	0	08DEC06	23DEC06	17DEC06	06JAN06	06JAN06	
A3MSSE0800	Construct Subway #3 Wall + Top Slab	16	10d	0	17NOV06	05DEC06	28NOV06	19DEC06	19DEC06	
A3MSSE0900	Construct Subway #4 Wall + Top Slab	16	5d	0	08JAN06	26JAN06	14JAN06	03FEB06	03FEB06	
A3MSSE1000	Backfilling	18	5d	0	20JAN06	11FEB06	28JAN06	17FEB06	17FEB06	
Subway Earth Retention Construction										
A3MSSE0100	Excavation (East Ramp)	24	5d	0	31OCT06	26NOV06	16NOV06	02DEC06	02DEC06	
A3MSSE0200	Construct E1 Ramp Base Slab	0	11d	0	12DEC06	17DEC06	24DEC06	02JAN06	02JAN06	
A3MSSE0300	Construct E2 Ramp Base Slab	0	11d	0	08DEC06	10DEC06	17DEC06	23DEC06	23DEC06	
A3MSSE0400	Construct E3 Ramp Base Slab	6	9d	0	28NOV06	03DEC06	08DEC06	14DEC06	14DEC06	
A3MSSE0500	Construct E4 Ramp Base Slab	6	8d	0	18NOV06	28NOV06	28NOV06	07DEC06	07DEC06	
A3MSSE0600	Construct E5 Ramp Base Slab	6	11d	0	02DEC06	10DEC06	15DEC06	23DEC06	23DEC06	
A3MSSE0700	Construct E6 Ramp Base Slab	6	9d	0	23NOV06	01DEC06	03DEC06	12DEC06	12DEC06	
A3MSSE1000	Construct E7 Ramp Base Slab	12	5d	0	06NOV06	22NOV06	15NOV06	28NOV06	28NOV06	

Remove Surcharge Mound

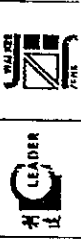
- Construct Base Slab
- Construct Wall upto Barrel Base Slab
- Construct Wall up to Top Slab
- Construct Top Slab
- Install Hoisting Beam

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

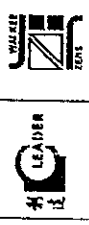


Leader - Wal Kee (C&T) Joint Venture
TP37103 - Revised Works Programme - RP04

start date	10JUN04	Early bar
finish date	20OCT07	Progress bar
start date	28SEP05	Critical bar
finish date	17OCT05	Summary bar
job number	13A	Start milestone point

ACT ID	Description	Orig Dur	Total Flost	Percent Complete	Entry Start	Entry Finish	Life Start	Life Finish
A3MSSE1100	Construct E9 Ramp Base Slab	8	136	0	23NOV05	01DEC05	09DEC05	16DEC05
A3MSSE1200	Construct E9 Ramp Base Slab	8	156	0	02DEC05	10DEC05	20DEC05	30DEC05
A3MSSE1400	Construct E1 Ramp Walls	8	9d	0	21DEC05	29DEC05	06JAN06	14JAN06
A3MSSE1500	Construct E2 Ramp Walls	8	9d	0	14DEC05	20DEC05	24DEC05	02JAN06
A3MSSE1600	Construct E3 Ramp Walls	8	9d	0	07DEC05	13DEC05	17DEC05	23DEC05
A3MSSE1700	Construct E4 Ramp Walls	8	9d	0	28NOV05	06DEC05	08DEC05	16DEC05
A3MSSE2000	Construct E5 Ramp Walls	10	5d	0	18DEC05	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	28NOV05	12DEC05
A3MSSE2300	Construct E8 Ramp Walls	10	9d	0	07DEC05	17DEC05	17DEC05	30DEC05
A3MSSE2500	Construct E9 Ramp Walls	8	9d	0	16DEC05	24DEC05	31DEC05	06JAN06
A3MSSE2600	Backfilling	20	5d	0	16DEC05	10JAN06	22DEC05	16JAN06
A3MSSE2700	Install Roof Steel Posts	18	62d	0	11JAN06	02FEB06	27MAR06	17APR06
A3MSSE2800	Construct Roof Slab E6	12	62d	0	03FEB06	16FEB06	16APR06	02MAY06
A3MSSE2900	Construct Roof Slab E5	12	62d	0	17FEB06	02MAR06	03MAY06	18MAY06
A3MSSE3000	Construct Roof Slab E4, E7	12	62d	0	03MAR06	16MAR06	17MAY06	30MAY06
A3MSSE3100	Construct Roof Slab E3, E8	12	62d	0	17MAR06	30MAR06	01JUN06	14JUN06
A3MSSE3200	Construct Roof Slab E2	12	62d	0	31MAR06	14APR06	15JUN06	28JUN06
A3MSSE3300	Construct Roof Slab E1, E9	12	62d	0	15APR06	28APR06	29JUN06	13JUL06
Subway Tunnel Range Construction								
A3MSW0100	Excavation (Western Ramp)	41	20d	0	28NOV05	16JAN06	21DEC05	10FEB06
A3MSW0200	Construct W1 Ramp Base Slab	8	43d	0	17JAN06	25JAN06	10MAR06	18MAR06
A3MSW0300	Construct W2 Ramp Base Slab	8	42d	0	06JAN06	14JAN06	27FEB06	07MAR06
A3MSW0400	Construct W3 Ramp Base Slab	10	20d	0	23DEC05	05JAN06	18JAN06	28JAN06
A3MSW0500	Construct W4 Ramp Base Slab	12	20d	0	06DEC05	22DEC05	04JAN06	17JAN06
A3MSW0600	Construct W5 Ramp Base Slab	10	20d	0	23DEC05	05JAN06	18JAN06	28JAN06
A3MSW0700	Construct W6 Ramp Base Slab	8	52d	0	06JAN06	14JAN06	10MAR06	18MAR06
A3MSW0800	Construct W1 Ramp Walls	10	20d	0	24FEB06	07MAR06	20MAR06	30MAR06
A3MSW0900	Construct W2 Ramp Walls	10	20d	0	13FEB06	23FEB06	06MAR06	16MAR06
A3MSW1000	Construct W3 Ramp Walls	10	20d	0	01FEB06	11FEB06	24FEB06	07MAR06
A3MSW1100	Construct W4 Ramp Walls	20	20d	0	06JAN06	28JAN06	01FEB06	23FEB06
A3MSW1200	Construct W5 Ramp Walls	20	20d	0	01FEB06	23FEB06	24FEB06	18MAR06
A3MSW1300	Construct W6 Ramp Walls	10	20d	0	24FEB06	07MAR06	20MAR06	30MAR06
A3MSW1400	Backfilling	20	20d	0	06MAR06	30MAR06	31MAR06	24APR06
A3MSW1500	Install Roof Posts	18	20d	0	31MAR06	21APR06	25APR06	16MAY06
A3MSW1600	Construct Roof Slab W3	12	20d	0	22APR06	06MAY06	17MAY06	30MAY06
A3MSW1700	Construct Roof Slab W4	12	20d	0	08MAY06	28MAY06	01JUN06	14JUN06
A3MSW1800	Construct Roof Slab W2, W5	12	20d	0	22MAY06	08JUN06	15JUN06	28JUN06
A3MSW1900	Construct Roof Slab W1, W6	12	20d	0	08JUN06	18JUN06	29JUN06	13JUL06
Pumping and Drainage System								
A3MSPO0100	Pumping System Installation	30	166d	0	08MAR06	12APR06	25SEP06	31OCT06
A3MSPO0200	Drainage System Installation	20	20d	0	20JUN06	13JUL06	14JUL06	05AUG06
Miscellaneous Works								
A3MSHW0100	Miscellaneous Works	24	44d	0	09OCT06	04NOV06	28NOV06	26DEC06
Finishing Works								
A3MSFW0100	Finishing Works at Barnet	24	20d	0	14JUL06	10AUG06	07AUG06	02SEP06

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



ACT ID	10JUN04
Orig Dur	200CT07
Total Flost	28SEP06
Percent Complete	17OCT06
Entry Start	14AUG06
Entry Finish	14AUG06
Life Start	14AUG06
Life Finish	14AUG06

- Early bar
- Progress bar
- Critical bar
- Summary bar
- ◆ Start milestones point
- ◆ Finish milestones point

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ID	Description	Orig. Total Dur.	Total Percent Complete	Early Start	Early Finish	Late Start	Late Finish	
A3MSF10000	Finishing Works at East Ramp	24	20%	01/11/06	07/26/06	04/26/06	30/09/06	
A3MSF10000	Finishing Works at West Ramp	24	20%	01/08/06	08/02/06	02/02/06	31/03/06	
E&M Works								
A3MSEM1000	Electrical Installation at Bariat & Pump House	24	66%	01/11/06	07/26/06	01/11/06	28/11/06	
A3MSEM1000	Electrical Installation at East Ramp	24	44%	01/08/06	08/02/06	01/11/06	28/11/06	
A3MSEM1000	Electrical Installation at West Ramp	24	20%	01/08/06	08/02/06	01/11/06	28/11/06	
Testing and Commissioning								
A3MST01000	Pumping System & Electrical Installation Loading and Unloading Area	24	20%	01/06/06	02/26/06	26/11/06	20/12/06	
Drainage Works								
A3LUDW1000	Decide Location of Manholes & Catchpits	1	172%	01/30/05	30/09/05	27/04/06	27/04/06	
A3LUDW1000	F302 - F308	26	23%	05/06/06	05/07/06	03/07/06	01/08/06	
A3LUDW1000	Trial Pit for F309 - F308A (Deleted)	10	100%	28/01/05	28/01/05	28/01/05	28/01/05	
A3LUDW1000	F309 - F308A	11	318%	01/30/05	14/02/06	18/02/06	01/11/06	
A3LUDW1000	F309 - F308A (TTA No. 06)	11	81%	01/22/06	02/26/06	27/11/06	09/12/06	
A3LUDW1000	F308A - Existing Sewer Manhole	21	318%	01/15/06	08/11/06	02/11/06	25/11/06	
A3LUDW1000	S712 - S922	21	23%	01/31/06	25/04/06	28/04/06	23/05/06	
A3LUDW1000	S817 - S818	11	23%	01/20/06	08/04/06	24/04/06	08/05/06	
A3LUDW1000	S876 - S824	21	23%	01/10/06	08/06/06	07/06/06	30/06/06	
A3LUDW1000	S876 - S823 (TTA no. 04)	20	46%	01/08/06	08/06/06	28/06/06	27/07/06	
A3LUDW1000	S713 - S834	21	23%	01/08/06	28/07/06	02/08/06	25/08/06	
Utility Works								
A3LUDT1000	CLP - Laying LV Cable	5	23%	01/02/06	07/26/06	28/09/06	04/10/06	
A3LUDT1000	CLP - Construct Pillar Box	5	147%	01/31/06	09/04/06	23/09/06	28/09/06	
A3LUDT1000	Install Public Lighting Post	8	87%	01/05/06	19/09/06	18/10/06	20/10/06	
Public Lighting, Drain and Road								
A3LURP1000	Construct Dwarf Wall	50	23%	01/08/06	01/26/06	02/08/06	28/09/06	
A3LURP1000	Construct Dwarf Wall (TTA No. 04)	0	46%	01/05/06	11/08/06	28/09/06	04/10/06	
A3LURP1000	Lay Kerb (TTA No. 04)	12	23%	01/28/06	19/02/06	27/02/06	10/03/06	
A3LURP1000	Lay Kerb (TTA No. 06)	6	86%	01/28/06	02/03/06	02/03/06	08/03/06	
A3LURP1000	Lighting Drawpit & Cable Duct (TTA No. 04)	18	23%	01/08/06	28/09/06	06/10/06	28/10/06	
A3LURP1000	Lighting Drawpit & Cable Duct (TTA No. 06)	6	87%	01/28/06	04/09/06	11/09/06	16/09/06	
Roads and Drains								
A3LURP1000	Trim Formation & Lay Subbase (TTA No. 06)	8	43%	01/14/06	23/02/06	05/03/06	13/03/06	
A3LURP1000	Road Pavement (TTA No. 06)	6	43%	01/21/06	02/11/06	14/11/06	22/11/06	
A3LURP1000	Construct Footpath (TTA No. 04)	24	23%	01/14/06	11/11/06	11/11/06	08/12/06	
A3LURP1000	Construct Footpath (TTA No. 06)	0	23%	01/13/06	18/11/06	09/12/06	15/12/06	
Road Marking, Traffic Signs and Fencing								
A3LURM1000	Apply Road Marking	2	23%	01/27/06	28/11/06	23/12/06	25/12/06	
A3LURM1000	Erect Signage	6	23%	01/20/06	28/11/06	16/12/06	23/12/06	
A3LURM1000	Install Fencing, Fencing & etc	6	23%	01/20/06	28/11/06	16/12/06	23/12/06	
Amenity Area								
Drainage Works								
A3AMUW1000	Construct U-Channel	36	61%	01/02/06	14/02/06	16/11/06	20/12/06	
Utility Works								
A3AMUT1000	Water Point WP4-2 to Water Meter No.3	16	61%	01/09/06	27/09/06	10/11/06	28/11/06	
A3AMUT1000	Water Point WP5-2 to Water Meter No.5	10	61%	01/28/06	10/10/06	26/11/06	09/12/06	
A3AMUT1000	Water Point WP6-2 to Water Meter No.8	14	61%	01/11/06	28/02/06	11/03/06	28/03/06	

Decide Location of Manholes & Catchpits

F302 - F308

Trial Pit for F309 - F308A (Deleted)

F309 - F308A

F309A - Existing Sewer Manhole

S712 - S922

S817 - S818

S876 - S824

S876 - 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 Drawpit & Cable Duct (TTA No. 04)

Lighting Drawpit & Cable Duct (TTA No. 06)

Trim Formation

Road Pavement

Construct Footpath (TTA No. 04)

Construct Footpath (TTA No. 06)

Apply Road Marking

Erect Signage

Install Fencing, Fencing & etc

Construct U-Channel

Water Point WP4-2 to Water Meter No.3

Water Point WP5-2 to Water Meter No.5

Water Point WP6-2 to Water Meter No.8

Legend

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

WALZEL
LEADER
2785



Leader - Wal Kee (C&T) Joint Venture
TP3703 - Revised Works Programme - RP04

ACT ID	Section 4	Public Total No. 2	10.000	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
Foundations Construction										
A4PTFC0100	Excavation to Formation Level	0	360	0	20SEP05	06OCT05	12NOV05	18NOV05		
A4PTFC0200	Subsoil Inspection by Structural Engineer	1	360	0	07OCT05	07OCT05	18NOV05	18NOV05		
A4PTFC0300	Blinding	1	360	0	09OCT05	09OCT05	21NOV05	21NOV05		
A4PTFC0400	Steel Fixing for Footing	6	360	0	10OCT05	17OCT05	22NOV05	28NOV05		
A4PTFC0500	Formwork	4	360	0	18OCT05	21OCT05	28NOV05	02DEC05		
A4PTFC0600	Concreting	1	360	0	22OCT05	22OCT05	03DEC05	03DEC05		
A4PTFC0700	Steel Fixing for Walls & Columns	3	360	0	24OCT05	28OCT05	05DEC05	07DEC05		
A4PTFC0800	Formwork	4	360	0	27OCT05	31OCT05	08DEC05	12DEC05		
A4PTFC0900	Concreting	1	360	0	01NOV05	01NOV05	13DEC05	13DEC05		
A4PTFC1000	Remove Formwork	6	360	0	02NOV05	08NOV05	14DEC05	20DEC05		
A4PTFC1100	Backfilling	12	360	0	08NOV05	22NOV05	21DEC05	05JAN06		
Ground Floor Slab Construction										
A4PTFG0100	Erect Propping & Formwork	6	360	0	20NOV05	28NOV05	06JAN06	12JAN06		
A4PTFG0200	Ground Slab Steel Fixing	3	360	0	30NOV05	02DEC05	13JAN06	16JAN06		
A4PTFG0300	Formwork	2	360	0	03DEC05	05DEC05	17JAN06	18JAN06		
A4PTFG0400	Concreting	1	360	0	06DEC05	06DEC05	18JAN06	19JAN06		
A4PTFG0500	Erect Scaffolding	3	360	0	07DEC05	09DEC05	20JAN06	23JAN06		
A4PTFG0600	Walls & Columns Formwork	3	360	0	10DEC05	13DEC05	24JAN06	26JAN06		
A4PTFG0700	Steel Fixing for Walls & Columns	3	360	0	14DEC05	16DEC05	27JAN06	01FEB06		
A4PTFG0800	Formwork	3	360	0	17DEC05	20DEC05	02FEB06	04FEB06		
A4PTFG0900	Concreting	1	360	0	21DEC05	21DEC05	08FEB06	08FEB06		
A4PTFG1000	Remove Formwork & Propping	12	360	0	02JAN06	14JAN06	15FEB06	28FEB06		
Mezzanine Floor Slab Construction										
A4PTMF0100	Erect Propping & Formwork	6	360	0	16JAN06	21JAN06	01MAR06	07MAR06		
A4PTMF0200	Mezzanine Slab Steel Fixing	3	360	0	23JAN06	25JAN06	08MAR06	10MAR06		
A4PTMF0300	Formwork	2	360	0	26JAN06	27JAN06	11MAR06	13MAR06		
A4PTMF0400	Concreting	1	360	0	28JAN06	28JAN06	14MAR06	14MAR06		
A4PTMF0500	Walls & Columns Formwork	3	360	0	01FEB06	03FEB06	15MAR06	17MAR06		
A4PTMF0600	Steel Fixing for Walls & Columns	3	360	0	04FEB06	07FEB06	18MAR06	21MAR06		
A4PTMF0700	Formwork	3	360	0	08FEB06	10FEB06	22MAR06	24MAR06		
A4PTMF0800	Concreting	1	360	0	11FEB06	11FEB06	23MAR06	23MAR06		
A4PTMF0900	Remove Formwork & Propping	12	360	0	21FEB06	04MAR06	05APR06	18APR06		
Upper Mezzanine Floor Slab Construction										
A4PTUF0100	Erect Propping & Formwork	6	360	0	07MAR06	13MAR06	18APR06	25APR06		
A4PTUF0200	Upper Mezzanine Slab Steel Fixing	3	360	0	14MAR06	18MAR06	28APR06	28APR06		
A4PTUF0300	Formwork	2	360	0	17MAR06	18MAR06	29APR06	02MAY06		
A4PTUF0400	Concreting	1	360	0	20MAR06	20MAR06	03MAY06	03MAY06		
A4PTUF0500	Remove Formwork & Propping	12	360	0	29MAR06	12APR06	12MAY06	25MAY06		
Structural Steelwork										
A4PTSS0100	Prepare & Submit Shop Drawings	30	360	90	01SEP05 A	20SEP05	01SEP05 A	10NOV05		
A4PTSS0200	Engineer Approval of Shop Drawings	12	360	0	03OCT05	17OCT05	11NOV05	24NOV05		
A4PTSS0300	Procurement of Structural Steel	120	360	0	18OCT05	10MAR06	25NOV05	10APR06		
A4PTSS0400	Delivery of Structural Steel Materials	12	360	0	11MAR06	24MAR06	20APR06	04MAY06		
A4PTSS0500	Inspection & Testing	16	360	0	25MAR06	15APR06	05MAY06	25MAY06		

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

10 JUN04
 20 OCT07
 25 SEP05
 17 OCT05
 104

C Firmaveca Systems, Inc.

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

■ Excavation to Formation Level
 I Subsoil Inspection by Structural Engineer
 I Blinding
 ■ Steel Fixing for Footing
 ■ Formwork
 I Concreting
 ■ Steel Fixing for Walls & Columns
 ■ Formwork
 I Concreting
 ■ Remove Formwork
 ■ Backfilling

■ Erect Propping & Formwork
 I Ground Slab Steel Fixing
 I Formwork
 I Concreting
 ■ Erect Scaffolding
 ■ Walls & Columns Formwork
 ■ Steel Fixing for Walls & Columns
 ■ Formwork
 I Concreting
 ■ Remove Formwork & Propping

■ Erect Propping & Formwork
 I Mezzanine Slab Steel Fixing
 I Formwork
 I Concreting
 ■ Walls & Columns Formwork
 ■ Steel Fixing for Walls & Columns
 ■ Formwork
 I Concreting
 ■ Remove Formwork & Propping

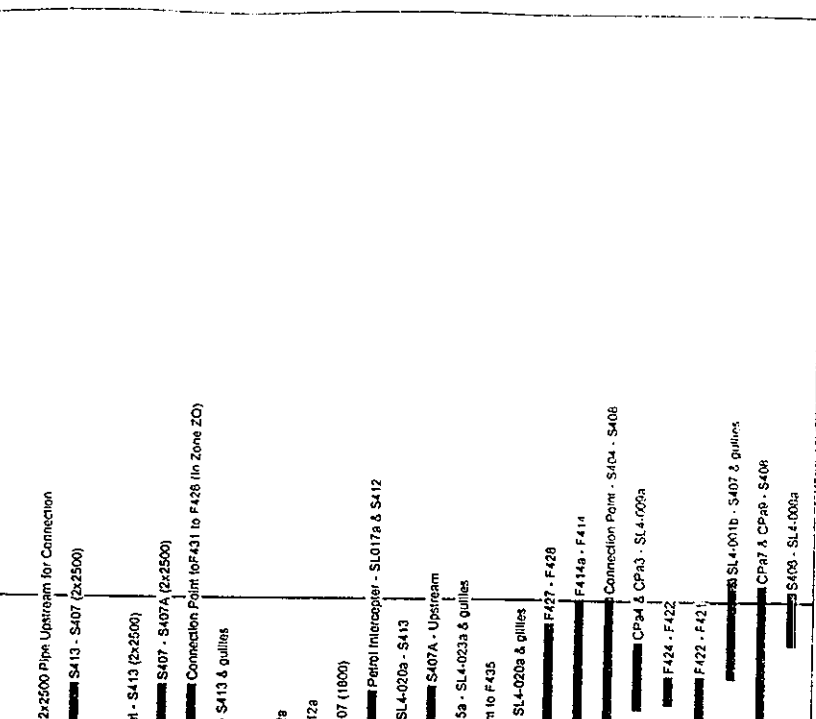
■ Erect Propping & Formwork
 I Upper Mezzanine Slab Steel Fixing
 I Formwork
 I Concreting
 ■ Remove Formwork & Propping

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

ID	Description	Start	Finish	Start	Finish	Start	Finish	Start	Finish
A1PTSS0000	Fabrication & Painting of Steelworks	17APR06	28MAY06	13JUN06	28MAY06	28MAY06	22JUL06		
A1PTSS0100	Delivery of Prefabricated Steelworks	14JUN06	24JUL06	21JUN06	24JUL06	05AUG06			
A1PTSS0200	Erection of Steelworks	28JUN06	07AUG06	09AUG06	07AUG06	16SEP06			
A1PTSS0300	Touch Up Painting	10AUG06	30SEP06	23AUG06	30SEP06				
Architectural Building Works and Finishes									
A1PTAB0100	Solid Concrete Block Work Wall	13APR06	26MAY06	26MAY06	26MAY06	06JUL06			
A1PTAB0200	Internal Wall Tile	28MAY06	10JUL06	23JUN06	10JUL06	05AUG06			
A1PTAB0300	External Wall Tile	21SEP06	19OCT06	19OCT06	01NOV06	28NOV06			
A1PTAB0400	Toilet Accessories Installation	24JUN06	07AUG06	22JUL06	07AUG06	02SEP06			
A1PTAB0500	Floor Tile	24JUL06	04SEP06	18AUG06	04SEP06	30SEP06			
A1PTAB0600	Roof Cladding	24AUG06	20SEP06	20SEP06	02OCT06	31OCT06			
A1PTAB0700	Metal Works & Ironmongery Installation	20OCT06	28NOV06	17NOV06	28NOV06	28DEC06			
Plumbing Works									
A1PTPL0100	Plumbing Works	21AUG06	16SEP06	02OCT06	16SEP06	02OCT06	31OCT06		
E & M Works									
A1PTEM0100	Electrical & Mechanical Installations	19SEP06	14NOV06	01NOV06	14NOV06	28DEC06			

Section 5 Road 14

ID	Description	Start	Finish	Start	Finish	Start	Finish	Start	Finish
Drainage Works									
A5RLDW0100	Check Exact Location of Manholes & Catchpits	28JUL04 A	28JUL04 A	28JUL04 A	28JUL04 A	28JUL04 A	28JUL04 A		
A5RLDW0150	Hand Over 2x2500 Pipe Upstream for Connection	20APR05 A	20APR05 A						
A5RLDW1100	S413 - S407 (2x2500)	10SEP04 A	18JUL05 A	18JUL05 A	10SEP04 A	18JUL05 A			
A5RLDW1200	F414 to F427 (in Zone ZC)	10SEP04 A	12JAN05 A	10SEP04 A	12JAN05 A	12JAN05 A			
A5RLDW1300	Outlet - S413 (2x2500)	22NOV04 A	25MAY05 A	22NOV04 A	25MAY05 A	25MAY05 A			
A5RLDW2100	S407 - S407A (2x2500)	03JAN05 A	18JUL05 A	03JAN05 A	18JUL05 A	18JUL05 A			
A5RLDW2200	Connection Point M/F431 to F428 (in Zone ZC)	100 10DEC04 A	18JUL05 A	18JUL05 A	10DEC04 A	18JUL05 A			
A5RLDW2300	SL4-019a - S413 & gullies	18JAN05 A	28APR05 A	18JAN05 A	28APR05 A	28APR05 A			
A5RLDW2400	SL4-022a - S412a	01MAR05 A	17MAR05 A	01MAR05 A	17MAR05 A	17MAR05 A			
A5RLDW2500	CP410 - S412a	100 21FEB05 A	14APR05 A	21FEB05 A	14APR05 A	14APR05 A			
A5RLDW2600	SL4-023a - S412a	01MAR05 A	09APR05 A	01MAR05 A	09APR05 A	09APR05 A			
A5RLDW3100	S408 - S407 (1800)	100 05MAR05 A	03MAY05 A	05MAR05 A	03MAY05 A	03MAY05 A			
A5RLDW3200	Perfor Interceptor - SL017a & S412	15JUL05 A	15JUL05 A	05MAR05 A	15JUL05 A	15JUL05 A			
A5RLDW3300	Connection Point - SL4-020a - S413	100 31JAN05 A	19MAR05 A	31JAN05 A	19MAR05 A	19MAR05 A			
A5RLDW3400	S407A - Upstream	100 05MAY05 A	18JUL05 A	05MAY05 A	18JUL05 A	18JUL05 A			
A5RLDW3500	SL4-025a - SL4-023a & gullies	100 07MAR05 A	17MAY05 A	07MAR05 A	17MAY05 A	17MAY05 A			
A5RLDW4100	Connection Point to F435	100 16DEC04 A	08APR05 A	16DEC04 A	08APR05 A	08APR05 A			
A5RLDW4200	SL4-022a - SL4-020a & gullies	100 06MAR05 A	28APR05 A	06MAR05 A	28APR05 A	28APR05 A			
A5RLDW4300	F427 - F428	100 10SEP04 A	08SEP05 A	10SEP04 A	08SEP05 A	08SEP05 A			
A5RLDW4400	F414a - F414	0 346		11APR05 A	26SEP05	11APR05 A	18AUG05		
A5RLDW4500	Connection Point - S404 - S408	18 06d		06MAR05 A	30SEP05	06MAR05 A	03JUN05		
A5RLDW4600	CP44 & CP43 - SL4-008a	10		100 02JUL05 A	24AUG05 A	02JUL05 A	24AUG05 A		
A5RLDW5100	F421 - F422	12		100 06JUL05 A	28JUL05 A	06JUL05 A	28JUL05 A		
A5RLDW5110	F422 - F421	8		100 08APR05 A	28JUL05 A	08APR05 A	28JUL05 A		
A5RLDW5200	SL4-001b - S407 & gullies	35 09d		80 27JUL05 A	17OCT05	27JUL05 A	18JUN05		
A5RLDW5300	CP47 & CP46 - S408	10 09d		60 14JUN05 A	10OCT05	14JUN05 A	13JUN05		
A5RLDW5400	S408 - SL4-008a	10 08d		40 23AUG05 A	05OCT05	23AUG05 A	13JUN05		



(Indicate Exact Location of Manholes & Catchpits)

Hand Over 2x2500 Pipe Upstream for Connection

F424 to F427 (in Zone ZC)

S413 - S407 (2x2500)

Outlet - S413 (2x2500)

S407 - S407A (2x2500)

Connection Point M/F431 to F428 (in Zone ZC)

SL4-019a - S413 & gullies

SL4-022a - S412a

CP410 - S412a

SL4-023a - S412a

S408 - S407 (1800)

Perfor Interceptor - SL017a & S412

Connection Point - SL4-020a - S413

S407A - Upstream

SL4-025a - SL4-023a & gullies

Connection Point to F435

SL4-022a - SL4-020a & gullies

F427 - F428

F414a - F414

Connection Point - S404 - S408

CP44 & CP43 - SL4-008a


F421 - F422

F422 - F421


SL4-001b - S407 & gullies

CP47 & CP46 - S408

S408 - SL4-008a



LEADER



WAI KEE

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

ID	Description	Start	Finish	Start	Finish	Start	Finish
10JUN04	Entry bar	20OCT07					
28SEP05	Progress bar						
17AUG06	Critical bar						
17AUG06	Summary bar						
17AUG06	Start milestone point						
17AUG06	Finish milestone point						

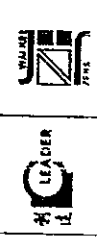
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Job ID	Description	Dir.	Est.	Var.	Comp.	Start	Finish	Start	Finish
ASRLDW5500	F428 - Downstream	15		100	18JUL05 A	27AUG05 A	19JUL05 A	27AUG05 A	27AUG05 A
ASRLDW5500	Connection Point - S410 - S407 (1800)	18		100	08APR05 A	28MAY05 A	08APR05 A	28MAY05 A	28MAY05 A
ASRLDW6100	SL4-010a - S408 & gullies	18	-118d	0	28SEP05	20OCT05	09MAY05	30MAY05	30MAY05
ASRLDW6200	SL4-011a - S410 & gullies	18	-82d	40	31AUG05 A	10OCT05	31AUG05 A	27JUL05	27JUL05
ASRLDW6300	CP311 - SL4-011b	10	-21d	0	12OCT05	22OCT05	14SEP05	28SEP05	28SEP05
ASRLDW6400	CP311 - SL4-015a	10		100	14SEP05 A	21SEP05 A	14SEP05 A	21SEP05 A	21SEP05 A
ASRLDW6500	SL4-007c - S408 & gullies	18	-86d	0	12OCT05	01NOV05	14JUN05	05JUL05	05JUL05
ASRLDW6600	SL4-017a - SL4-020a & gullies	18		100	21JUL05 A	15AUG05 A	21JUL05 A	15AUG05 A	15AUG05 A
ASRLDW6700	SL4-015b - SL4-015a & gullies	10	-10c	0	14SEP05 A	26SEP05 A	14SEP05 A	26SEP05 A	26SEP05 A
ASRLDW7100	UC - CP31 & CP42	22	-27d	0	28SEP05	10OCT05	19MAY05	30MAY05	30MAY05
ASRLDW7200	UC - CP33	10	-35d	0	28SEP05	25OCT05	28AUG05	21SEP05	21SEP05
ASRLDW7300	UC - CP34	10	-35d	0	28SEP05	10OCT05	17AUG05	27AUG05	27AUG05
ASRLDW7400	UC - CP35, CP36, CP37 & CP38	25	-14d	0	12OCT05	09NOV05	17AUG05	27AUG05	27AUG05
ASRLDW7500	UC - CP39	10	-10	0	12OCT05	22OCT05	23SEP05	24OCT05	24OCT05
ASRLDW7600	UC - CP41	10	-21c	0	24OCT05	03NOV05	27SEP05	08OCT05	08OCT05
ASRLDW7700	Additional Sub-soil Drain (South) (VO047A)	12	-132d	0	02NOV05	15NOV05	29MAY05	08JUN05	08JUN05
ASRLDW7800	Additional UC at Footpath (South) (VO047A)	19	-131d	0	08FEB06	28FEB06	31AUG05	21SEP05	21SEP05
ASRLDW7900	Additional UC at Cycle Track (North) (VO051)	18	-82d	0	20DEC05	11JAN06	31AUG05	21SEP05	21SEP05
ASRLDW8000	Demolish Existing 325, 825 & 1050 Drainpipe	30	-4d	10	10SEP05 A	31OCT05	10SEP05 A	24OCT05	24OCT05
ASRLUT0000	D.I. Pipes & Fittings Delivery On Site	33	-164d	0	28SEP05	07NOV05	10MAR05	21APR05	21APR05
ASRLUT0001	Order Additional Vertical Bends (VO064)	76	-128d	28	03SEP05 A	01DEC05	03SEP05 A	28JUN05	28JUN05
ASRLUT0100	Watermain - Lay Fresh Main (in Zone ZC)	30	-164d	10	08AUG05 A	01NOV05	08AUG05 A	15APR05	15APR05
ASRLUT0200	Watermain - Lay Salt Main (in Zone ZC)	30	-164d	10	08AUG05 A	02DEC05	08AUG05 A	18MAY05	18MAY05
ASRLUT0210	Watermain - Lay Fresh & Salt Main (VO064)	10	-128d	0	02DEC05	12JUL05	30JUN05	12JUL05	12JUL05
ASRLUT0300	Watermain - Lay Fresh Main (in Zone ZP)	19	-164d	0	03DEC05	23DEC05	20MAY05	08JUN05	08JUN05
ASRLUT0400	Watermain - Lay Salt Main (in Zone ZP)	10	-164d	0	24DEC05	06JAN06	10JUN05	22JUN05	22JUN05
ASRLUT0500	CLP - Lay 11kV Cable (South)	48	-64d	50	08MAY05 A	27OCT05	08MAY05 A	10AUG05	10AUG05
ASRLUT0600	CLP - Lay 11kV Cable (North)	38	-118d	60	08SEP05 A	24NOV05	09SEP05 A	03JUL05	03JUL05
ASRLUT0700	HGC - Lay Cable (South)	18	-64d	50	24MAR05 A	03NOV05	24MAR05 A	17AUG05	17AUG05
ASRLUT0800	HGC - Lay Cable (North)	18	-118d	50	16JUL05 A	06DEC05	16JUL05 A	20JUL05	20JUL05
ASRLUT0910	NWT - Lay Cross Road Duct (South)	12	-31d	50	24MAR05 A	31OCT05	24MAR05 A	17AUG05	17AUG05
ASRLUT0920	NWT - Lay Cross Road Duct (North)	6	-71d	0	09DEC05	18DEC05	14SEP05	21SEP05	21SEP05
ASRLUT0900	CATV - Lay Cable (South)	18	-64d	50	24MAR05 A	03NOV05	24MAR05 A	17AUG05	17AUG05
ASRLUT1100	HKCG - Lay 110 Main (Roundabout - Interchange)	18	-118d	50	12JUL05 A	03NOV05	12JUL05 A	14JUN05	14JUN05
ASRLUT1210	HKCG - Gas Governor Kiosk	38	-142d	0	02MAR05	10APR05	08SEP05	24OCT05	24OCT05
ASRLUT1400	PCCW - Lay Cable (South)	42	-64d	50	11APR05 A	28NOV05	11APR05 A	10SEP05	10SEP05
ASRLUT1500	PCCW - Lay Cable (North)	38	-118d	50	20JUL05 A	18DEC05	20JUL05 A	30JUL05	30JUL05
ASRLUT1600	Water Point - WP12-2 to M11	12	-132d	0	01MAR05	14MAR05	21SEP05	05OCT05	05OCT05
ASRLUT1700	Water Point - WP13-2 to M13	6	-132d	0	11MAR05	17MAR05	03OCT05	06OCT05	06OCT05
ASRLUT1800	Water Point - WP14-1 to WP13	12	-132d	0	15MAR05	28MAR05	06OCT05	20OCT05	20OCT05
ASRLUT1900	Water Point - WP15-1 to M15	6	-132d	0	25MAR05	31MAR05	16OCT05	24OCT05	24OCT05
ASRLPR0100	Construct Dwarf Wall (South)	58	-132d	0	28NOV05	07FEB06	22JUN05	29AUG05	29AUG05

Start date: 10AUG04
 Finish date: 20OCT07
 Job date: 28SEP05
 Job number: 15A

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

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ACT ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	
ASRLPK0000	Construct Dwarf Wall (North)	12	-128d	0	18JAN05	05FEB05	18AUG05	28AUG05	
ASRLPK0000	Lay Kerb (South)	10	-132d	0	16NOV05	26NOV05	06JUN05	21JUN05	
ASRLPK0000	Lay Kerb (North)	22	-184d	0	07JAN05	03FEB05	23JUN05	19JUL05	
ASRLPK0000	Lay Kerb (Parking Area)	20	-35d	0	12OCT05	03NOV05	26AUG05	21SEP05	
ASRLPK0000	Drainpit & Duct (South)	22	-71d	0	16NOV05	10DEC05	22AUG05	15SEP05	
ASRLPK0000	Drainpit & Duct (North)	22	-128d	0	21JAN05	17FEB05	22AUG05	15SEP05	
ASRLPK0000	Drainpit & Duct (CT)	20	-32d	0	18OCT05	16NOV05	07SEP05	06OCT05	
Roads and Footpath									
ASRLRP0100	Road Pavement, Cycle Track & Footpath	66	-164d	0	04FEB05	22APR05	20JUL05	06OCT05	
ASRLRP0200	Construct Temporary Cycle Track (Phase 1)	6	-58d	100	16APR05 A	20APR05 A	16APR05 A	20APR05 A	
ASRLRP0300	Complete Outstanding Drainage & Road Pavement	6	-58d	0	24DEC05	02JAN06	18OCT05	24OCT05	
ASRLRP0400	Removal of Temporary Cycle Track	3	-56d	0	21DEC05	23DEC05	14OCT05	17OCT05	
ASRLRP0500	Possess Additional Works Area	0		100	21APR05 A	21APR05 A	21APR05 A	21APR05 A	
ASRLRP0600	Construct Temporary Cycle Track (Phase 2)	10		100	22APR05 A	11MAY05 A	22APR05 A	11MAY05 A	
E & M Works									
ASRLRM0100	Erect Light Post & E&M Works	30	-120d	0	16FEB05	24MAR05	16SEP05	24OCT05	
Road Marking & Traffic Signs and Fencing									
ASRLRM0100	Erect Signage	12	-96d	0	04FEB05	17FEB05	10OCT05	24OCT05	
ASRLRM0200	Apply Road Marking	14	-184d	0	24APR05	10MAY05	07OCT05	24OCT05	
ASRLRM0300	Construct Fencing	30	-114d	0	04FEB05	10MAR05	18SEP05	24OCT05	
Station 6									
Cycle Track									
Drainage Works									
ASCTDW0100	Obtain Exact Location of Manholes & Catchpits	1		100	27SEP04 A	27SEP04 A	27SEP04 A	27SEP04 A	
ASCTDW0200	S774 - Existing Box Culvert (In ZJ)	23	-120d	90	08JUL05 A	04OCT05	08JUL05 A	11MAY05	
ASCTDW0300	S773 - S774 (In ZJ)	15	-120d	80	13JUL05 A	04OCT05	13JUL05 A	11MAY05	
ASCTDW0400	S784 - S780 (In ZJ)	34		100	28SEP04 A	23DEC04 A	28SEP04 A	23DEC04 A	
ASCTDW0500	S790 - Culvert (In ZJ)	16	-118d	90	08JUL05 A	03OCT05	08JUL05 A	11MAY05	
ASCTDW0600	S785 - S786 (In ZG1)	25	-121d	90	20APR05 A	28SEP05	20APR05 A	08MAY05	
ASCTDW0700	S785 - S786 (In Remaining ZG1)	24		100	03AUG05 A	15AUG05 A	03AUG05 A	15AUG05 A	
ASCTDW0800	Sewerage System (In ZJ)	42		100	10NOV04 A	30DEC04 A	10NOV04 A	30DEC04 A	
ASCTDW0900	F410 - F414 (In ZG1)	24		100	21FEB05 A	08SEP05 A	21FEB05 A	08SEP05 A	
ASCTDW1000	F409 - F410 (In Remaining ZG1)	24		100	02APR05 A	27AUG05 A	02APR05 A	27AUG05 A	
ASCTDW1100	F409 - F402	16		100	15SEP05 A	27SEP05 A	15SEP05 A	27SEP05 A	
Utility Works									
ASCTUT0000	D.I. Pipes & Fillings Delivery On Site	33	-131d	85	26JUN05 A	04OCT05	26JUN05 A	02APR05	
ASCTUT0100	Watermain - Lay Fresh & Salt Main (In ZJ, South)	22	-131d	80	15AUG05 A	03OCT05	15AUG05 A	28APR05	
ASCTUT0200	Watermain - Lay Fresh & Salt Main (In ZJ, North)	22	-131d	0	04OCT05	29OCT05	27APR05	24MAY05	
ASCTUT0300	Watermain - Lay Fresh & Salt Main (In ZG1)	14	-131d	0	31OCT05	15NOV05	25MAY05	08JUN05	
ASCTUT0400	CLP - Lay 132kV Cable (In ZJ, South)	34		100	17DEC04 A	12JAN05 A	17DEC04 A	12JAN05 A	
ASCTUT0500	CLP - Lay 132kV Cable (In ZJ, North)	21	-120d	0	05OCT05	29OCT05	12MAY05	06JUN05	
ASCTUT0600	CLP - Lay 132kV Cable (In ZG1)	22	-121d	0	03SEP05	27OCT05	07MAY05	02JUN05	
ASCTUT0700	CLP - Lay 132kV Cable (In Remaining ZG1)	22		100	10SEP05 A	13SEP05 A	10SEP05 A	13SEP05 A	
ASCTUT0800	CLP - Lay 11kV Cable (In ZJ, South)	17		100	28FEB05 A	14MAR05 A	28FEB05 A	14MAR05 A	
ASCTUT0900	CLP - Lay 11kV Cable (In ZJ, North)	12	-120d	0	28OCT05	08NOV05	02JUN05	08JUN05	
ASCTUT1000	CLP - Lay 11kV Cable (In ZG1)	12	-121d	0	21OCT05	09NOV05	27MAY05	08JUN05	
ASCTUT1100	CLP - Lay 11kV Cable (In Remaining ZG1)	12	-103d	0	28SEP05	13OCT05	27MAY05	08JUN05	

Legend

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

Start data 10JUN05
Finish data 28SEP05
Data date 28SEP05
Run data 17OCT05
Page number 19A

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

ACT ID#	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	
AGCTU0720	CLP - 11KV Cable Connection (in ZG1)	12	-1216	0	04NOV05	17NOV05	10JUN06	24JUN06	
AGCTU0700	CLP - Lay LV Cable (in ZJ, South)	17	-1200	100	28FEB05 A	14MAR05 A	28FEB05 A	14MAR05 A	
AGCTU0710	CLP - Lay LV Cable (in ZJ, North)	11	-1200	0	29OCT05	07NOV05	02JUN06	15JUN06	
AGCTU1000	CLP - Lay LV Cable (in ZG1)	11	-1200	0	21OCT05	02NOV05	28MAY05	08JUN05	
AGCTU1010	CLP - Lay LV Cable (in Remaining ZG1)	11	-1020	0	28SEP05	12OCT05	28MAY05	08JUN05	
AGCTU1020	CLP - LV Cable Connection (in ZG1)	12	-1200	0	03NOV05	16NOV05	10JUN06	24JUN06	
AGCTU1400	HKCG - Lay 250 Gas Main (in ZJ) (Deleted)	35		100	06JAN05 A	06JAN05 A	06JAN05 A	06JAN05 A	
AGCTU1600	HKCG - Lay 250 Gas Main (in ZG1) (Deleted)	14		100	06JAN05 A	06JAN05 A	06JAN05 A	06JAN05 A	
Public Lighting, Drains and Kerb									
AGCTPR0100	Lay Kerb (in ZJ, South)	16	-1116	0	04OCT05	21OCT05	23MAY05	08JUN05	
AGCTPR0110	Lay Kerb (in ZJ, North)	10	-1200	0	03NOV05	16NOV05	16JUN05	27JUN05	
AGCTPR0200	Lay Kerb (in ZG1)	12	-1316	0	18NOV05	28NOV05	10JUN06	24JUN06	
AGCTPR0300	Lighting Ducts and Drawings	24	-1316	0	18NOV05	10DEC05	10JUN06	08JUL06	
AGCTPR0400	Lighting Posts	12	-1316	0	14DEC05	20DEC05	11JUL06	23JUL06	
Roads and Drains									
AGCTRP0100	Lay Cycle Track Pavement (in ZJ, South)	28	-1068	0	22OCT05	28NOV05	16JUN06	18JUL06	
AGCTRP0110	Lay Cycle Track Pavement (in ZJ, North)	18	-1200	0	19NOV05	09DEC05	24JUN06	19JUL06	
AGCTRP0200	Lay Cycle Track Pavement (in ZG1)	16	-1236	0	29NOV05	13DEC05	02JUL06	18JUL06	
Road Marking, Traffic Signs and Erection									
AGCTRM0100	Apply Road Marking	4	-1236	0	14DEC05	17DEC05	20JUL06	23JUL06	
AGCTRM0200	Erect Signage	12	-1160	0	20NOV05	09DEC05	11JUL06	23JUL06	
AGCTRM0300	Construct Fence	21	-1160	0	19NOV05	13DEC05	24JUN06	23JUL06	
Sanitary and Handovers									
AGCTHL0100	Construct Planter Wall (in ZJ, South)	48	-1116	0	12OCT05	08DEC05	30MAY06	23JUL06	
AGCTHL0110	Construct Planter Wall (in ZJ, North)	18	-1160	0	19NOV05	09DEC05	04JUL06	23JUL06	
AGCTHL0200	Construct Planter Wall (in ZG1)	18	-1250	0	30NOV05	20DEC05	04JUL06	23JUL06	
Section 7									
Temporary Traffic Management Schemes									
TTA Implementation									
ATTTMS0060	Apply & Issue XP for TTA Nos. 10 - 12	1		100	06SEP04 A	21FEB05 A	06SEP04 A	21FEB05 A	
ATTTMS0100	Implement TTA No. 10	1		100	24FEB05 A	24FEB05 A	24FEB05 A	24FEB05 A	
ATTTMS0200	Implement TTA No. 11	1		100	11MAY05 A	11MAY05 A	11MAY05 A	11MAY05 A	
ATTTMS0300	Implement TTA No. 12	1		100	21MAR05 A	21MAR05 A	21MAR05 A	21MAR05 A	
ATTTMS0400	Apply & Issue XP for TTA Nos. 48 - 51	71	-1440	98	07JUL05 A	28SEP05	07JUL05 A	07APR05	
ATTTMS0500	Implement TTA No. 48 (VO/030E, 063A & 073)	1	-1440	0	07OCT05	07OCT05	15APR05	15APR05	
ATTTMS0600	Implement TTA No. 49 (VO/030E, 063A & 073)	1	-1440	0	31OCT05	31OCT05	09MAY05	09MAY05	
ATTTMS0700	Implement TTA No. 50 (VO/030E, 063A & 073)	1	-1440	0	28NOV05	28NOV05	08JUN05	08JUN05	
ATTTMS0800	Implement TTA No. 51 (VO/030E)	1	-1440	0	21DEC05	21DEC05	02JUL06	02JUL06	
Landscaping and Signage									
ATLONS0100	Drilling (Two Drillholes)	16		100	23SEP04 A	30SEP04 A	23SEP04 A	30SEP04 A	
ATLONS0200	Taking Up of Existing Amour to +2.5	3		100	25OCT04 A	27OCT04 A	25OCT04 A	27OCT04 A	
ATLONS0220	Taking Up of Existing Underlayer to +2.5	2		100	30OCT04 A	01NOV04 A	30OCT04 A	01NOV04 A	
ATLONS0240	Taking Up of Existing Rubble to +2.5	14		100	03NOV04 A	13NOV04 A	03NOV04 A	13NOV04 A	
ATLONS0300	Demolish Existing Curtil Units	6		100	21NOV04 A	28NOV04 A	21NOV04 A	28NOV04 A	
ATLONS0400	Taking Up Existing 3200 Dia. Concrete Pipe	8	-1500	0	07NOV05	14NOV05	02JUN06	08JUN06	
ATLONS0420	Taking Up of Existing Amour, Below +2.5	5	-1500	0	02NOV05	09NOV05	28MAY05	01JUN05	

Start date: 10JUN04
 Finish date: 20OCT07
 Data date: 28SEP05
 Run date: 17OCT05
 Page number: 20A

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

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

ID	Description	Orig Dur	Total Float	Percent Complete	Entry Start	Entry Finish	Exit Start	Exit Finish
ATLNS040	Taking Up of Existing Underlayer, Below +2.5	2	-1520	0	07NOV05	06NOV05	06JUN05	06JUN05
ATLNS050	Taking Up of Existing Rubble, Below +2.5	18	-1580	0	15NOV05	02DEC05	10JUN05	27JUN05
ATLNS060	Placing Leveling Stone	23	-1590	0	03DEC05	29DEC05	28JUN05	20JUL05
ATLNS070	Block Wall Construction	31	-1590	0	20DEC05	25JAN06	21JUL05	20AUG05
ATLNS080	Backfill Rubble Behind	10	-1580	0	26JAN06	08FEB06	21AUG05	30AUG05
ATLNS090	Reinstate 3200 Dia. Concrete Pipe	14	-1580	0	08FEB06	22FEB06	31AUG05	13SEP05
ATLNS100	Fabrication of Box Culvert Outfalls	70	-1040	0	11DEC05	22FEB06	29AUG05	08NOV05
ATLNS1100	Install Box Culvert Outfalls	12	-1040	0	23FEB06	09MAR06	07NOV05	18NOV05
ATLNS1200	Install Remaining Blocks for Both Sides Outfall	4	-1040	0	07MAR06	10MAR06	18NOV05	22NOV05
ATLNS1300	Reinstate Armour & Underlayer	10	-1040	0	11MAR06	20MAR06	23NOV05	02DEC05

Waterwork Promenade

Pump House Construction
 ATWPH0100 Construct Impingement Pump House

Drainage Works

ID	Description	Orig Dur	Total Float	Percent Complete	Entry Start	Entry Finish	Exit Start	Exit Finish
ATWPDW0100	Decide Exact Location of Manholes & Catchpits	1		100	28JUL04	26JUL04	28JUL04	28JUL04
ATWPDW0200	S708 - S714	50	-880	90	13OCT04	04OCT05	13OCT04	07JUN05
ATWPDW0300	S701 - S708	46		100	13OCT04	14DEC04	13OCT04	14DEC04
ATWPDW0400	S714 - Existing Box Culvert	30	-1235	0	03FEB06	08MAR06	05SEP05	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	10MAY05	10MAY05	24JUN05
ATWPDW0700	F903 - F904 (TTA No. 12)	16		100	06APR05	09MAY05	06APR05	08MAY05
ATWPDW0720	F901 - F902 (TTA No. 48) (VO0305)	6	-1440	0	09OCT05	15OCT05	16APR05	22APR05
ATWPDW0740	F901 - F902 (TTA No. 49) (VO0305)	12	-1440	0	01NOV05	14NOV05	10MAY05	24MAY05
ATWPDW0760	F901 - F902 (TTA No. 50) (VO0305)	18	-1440	0	30NOV05	20DEC05	06JUN05	30JUN05
ATWPDW0780	F902 - F903 (TTA No. 51) (VO0305)	24	-1440	0	22DEC05	20JAN06	04JUL05	30JUL05
ATWPDW0800	F904 - Existing Manhole	28		100	04APR05	18JUN05	04APR05	18JUN05
ATWPDW0900	S710 - S773 - S771 (VO073)	25	-130	0	28SEP05	29OCT05	12SEP05	13OCT05
ATWPDW0920	S773 - Ext. Manhole (TTA No. 48) (VO073)	18	-1440	0	06OCT05	29OCT05	16APR05	07MAY05
ATWPDW0940	S773 - Ext. Manhole (TTA No. 49) (VO073)	18	-1380	0	01NOV05	21NOV05	18MAY05	07JUN05
ATWPDW0960	S773 - Ext. Manhole (TTA No. 50) (VO073)	24	-1250	0	30NOV05	28DEC05	04JUL05	30JUL05
ATWPDW1000	CP102 - CP104 (In ZU)	20	-130	0	29OCT05	21NOV05	14OCT05	05NOV05
ATWPDW1050	Ext. MH - MH-36 - F901 (VO058A)	20	-780	0	09DEC05	03JAN06	08SEP05	29SEP05
ATWPDW1100	S716 - Existing Box Culvert	22	-1320	0	23FEB06	20MAR06	14SEP05	12OCT05
ATWPDW1200	225 Dia. Perforated Drain (In ZS S. End - 200m)	26	-820	0	03NOV05	02DEC05	27JUL05	25AUG05
ATWPDW1230	225 Dia. Perforated Drain (In ZS 200m - 400m)	26	-880	0	23NOV05	21DEC05	27JUL05	25AUG05
ATWPDW1260	225 Dia. Perforated Drain (In ZS 400m - N. End)	12	-1320	0	14APR06	27APR06	05NOV05	18NOV05
ATWPDW1300	225HR & Catchpit with 2000L along Parapet Wall	50	-930	0	04MAR06	03MAY06	11NOV05	10JAN06
ATWPDW1500	Z89JC (In ZU)	24	-470	0	25NOV05	22DEC05	28SEP05	28OCT05
ATWPDW1600	300JC (In ZU)	25	-470	0	23DEC05	23JAN06	29OCT05	28NOV05
ATWPDW1700	Z250a, Perforated Drain (In ZU)	21	-460	0	22NOV05	18DEC05	27SEP05	22OCT05
ATWPDW1800	300 CUC (In ZU3)	18	-350	0	29OCT05	18NOV05	09DEC05	31DEC05
ATWPDW1900	225 Dia. Perforated Drain (In ZU3)	18	-780	0	04JAN06	24JAN06	30SEP05	22OCT05

Utility Works

ID	Description	Orig Dur	Total Float	Percent Complete	Entry Start	Entry Finish	Exit Start	Exit Finish
ATWPU0000	D.I. Pipes & Fittings Delivery On Site	30	-660	45	27APR05	18OCT05	27APR05	30JUL05
ATWPU0001	Order Additional Valve & Bend (VO093)	76	-1200	22	08SEP05	07DEC05	08SEP05	16JUL05
ATWPU0100	Watermain - Lay Salt Main (TTA No. 10) Aborted	10		100	15APR05	24JUN05	15APR05	24JUN05

Start date 10JAN04
 Finish date 20OCT07
 Data date 28SEP05
 Run date 11OCT05
 POC number 21A

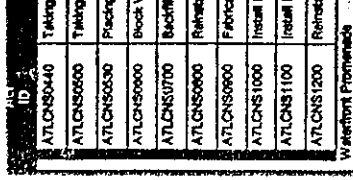
Legend:
 ■ Early bar
 ■ Progress bar
 ■ Critical bar
 ■ Summary bar
 ◆ Start milestone point
 ◆ Finish milestone point

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1 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 Sides Outfall
 ■ Reinstate Armour & Underlayer

Construct Impingement Pump House
 ■ Decide Exact Location of Manholes & Catchpits
 ■ S708 - S714
 ■ S701 - S708
 ■ 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) (VO0305)
 ■ F901 - F902 (TTA No. 49) (VO0305)
 ■ F901 - F902 (TTA No. 50) (VO0305)
 ■ F902 - F903 (TTA No. 51) (VO0305)
 ■ F904 - Existing Manhole
 ■ S770 - S773 - S771 (VO073)
 ■ S773 - Ext. Manhole (TTA No. 48) (VO073)
 ■ S773 - Ext. Manhole (TTA No. 49) (VO073)
 ■ S773 - Ext. Manhole (TTA No. 50) (VO073)
 ■ CP102 - CP104 (In ZU)
 ■ Ext. MH - MH-36 - F901 (VO058A)
 ■ S716 - Existing Box Culvert
 ■ 225 Dia. Perforated Drain (In ZS S. End - 200m)
 ■ 225 Dia. Perforated Drain (In ZS 200m - 400m)
 ■ 225 Dia. Perforated Drain (In ZS 400m - N. End)
 ■ 225HR & Catchpit with 2000L along Parapet Wall
 ■ 225UC (In ZU)
 ■ 300JC (In ZU)
 ■ Z250a, Perforated Drain (In ZU)
 ■ 300 CUC (In ZU3)
 ■ 225 Dia. Perforated Drain (In ZU3)

D.I. Pipes & Fittings Delivery On Site
 ■ Order Additional Valve & Bend (VO093)
 ■ Watermain - Lay Salt Main (TTA No. 10) Aborted



Item No.	Description	Start Date	Finish Date	Duration	Notes
1	Drilling (Two Drills)	29/09/04	01/10/04	3	
2	Taking Up of Existing Armour to +2.5	01/10/04	03/10/04	3	
3	Taking Up of Existing Underlayer to +2.5	03/10/04	05/10/04	3	
4	Taking Up of Existing Rubble to +2.5	05/10/04	07/10/04	3	
5	Demolish Existing Outfall Units	07/10/04	09/10/04	3	
6	DSD Approval of Removal of 5 Cells Culvert	09/10/04	11/10/04	3	
7	Taking Up Existing 5 Cells Box Culvert Units	11/10/04	13/10/04	3	
8	Taking Up of Existing Armour Below +2.5	13/10/04	15/10/04	3	
9	Taking Up of Existing Underlayer Below +2.5	15/10/04	17/10/04	3	
10	Taking Up of Existing Rubble Below +2.5	17/10/04	19/10/04	3	
11	Placing Leveling Stone	19/10/04	21/10/04	3	
12	Block Wall Construction	21/10/04	23/10/04	3	
13	Backfill Rubble Behind	23/10/04	25/10/04	3	
14	Reinstating 5 Cells Box Culvert Units	25/10/04	27/10/04	3	
15	Fabrication of 5 Cells Outfall Units	27/10/04	29/10/04	3	
16	Install 5 Cells Outfall Units	29/10/04	31/10/04	3	
17	Install Remaining Blocks for Both Side Outfall	31/10/04	03/11/04	3	
18	Reinstating Armour & Underlayer	03/11/04	05/11/04	3	
19	Drilling (Two Drills)	05/11/04	07/11/04	3	
20	Taking Up of Existing Armour to +2.5	07/11/04	09/11/04	3	
21	Taking Up of Existing Underlayer to +2.5	09/11/04	11/11/04	3	
22	Taking Up of Existing Rubble to +2.5	11/11/04	13/11/04	3	
23	Demolish Existing Outfall Units	13/11/04	15/11/04	3	
24	Taking Up Existing 2500 Dia. Concrete Pipe	15/11/04	17/11/04	3	
25	Taking Up of Existing Armour Below +2.5	17/11/04	19/11/04	3	
26	Taking Up of Existing Underlayer Below +2.5	19/11/04	21/11/04	3	
27	Taking Up of Existing Rubble Below +2.5	21/11/04	23/11/04	3	
28	Placing Leveling Stone	23/11/04	25/11/04	3	
29	Block Wall Construction (Stage 1)	25/11/04	27/11/04	3	
30	Block Wall Construction (Stage 2)	27/11/04	29/11/04	3	
31	Backfill Rubble Behind (Stage 1)	29/11/04	01/12/04	3	
32	Backfill Rubble Behind (Stage 2)	01/12/04	03/12/04	3	
33	Reinstating 2500 Dia. Pipe Culvert	03/12/04	05/12/04	3	
34	Fabrication of Box Culvert Outfall	05/12/04	07/12/04	3	
35	Install Box Culvert Outfall	07/12/04	09/12/04	3	
36	Install Remaining Blocks for Both Side Outfall	09/12/04	11/12/04	3	
37	Reinstating Armour & Underlayer	11/12/04	13/12/04	3	
38	Diversion of Ext. Cycle Track (Phase 2)	13/12/04	15/12/04	3	
39	Removal of Ext. Cycle Track Pavement (Phase 2)	15/12/04	17/12/04	3	
40	Take Up / Divert Ext. Utility Services (Phase 2)	17/12/04	19/12/04	3	

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

Scale: 1:100
Author: [Name]
Check: [Name]
Drawn: [Name]
Date: 29/09/04
Project: [Project]
Location: [Location]
Client: [Client]
Designer: [Designer]
Engineer: [Engineer]
Surveyor: [Surveyor]
Architect: [Architect]
Planner: [Planner]
Cost: [Cost]
Risk: [Risk]
Quality: [Quality]
Safety: [Safety]
Environment: [Environment]
Sustainability: [Sustainability]

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

AN ID	Description	Orig Dur	Total Dur	Percent Complete	Early Start	Early Finish	Leads Start	Leads Finish
ABLRS1500	Reinstate Ext. Utility Services	24	-476	0	27OCT05	23NOV05	30AUG05	27SEP05
ABLRS1600	Reinstate Ext. Cycle Track	12	-580	0	07DEC05	20DEC05	28SEP05	13OCT05
ABLRS1700	Reinstate Ext. Cycle Track	1	-593	0	21DEC05	21DEC05	14OCT05	14OCT05

Reinstate Adjacent to Landing Step

AN ID	Description	Orig Dur	Total Dur	Percent Complete	Early Start	Early Finish	Leads Start	Leads Finish
ABALMA0100	Taking Up of Armour to +2.5(South Section)	2		100	10NOV04 A	11NOV04 A	10NOV04 A	11NOV04 A
ABALMA0110	Taking Up of Underlayer to +2.5 (South Section)	2		100	15NOV04 A	16NOV04 A	15NOV04 A	16NOV04 A
ABALMA0200	Taking Up of Rubble to +2.5 (South Section)	8		100	01DEC04 A	17JAN05 A	01DEC04 A	17JAN05 A
ABALMA0210	Taking Up of Armour Below +2.5 (South Section)	3		100	27NOV04 A	01DEC04 A	27NOV04 A	01DEC04 A
ABALMA0220	Taking Up Underlayer Below +2.5 (South Section)	3		100	08DEC04 A	12DEC04 A	08DEC04 A	12DEC04 A
ABALMA0230	Taking Up of Rubble Below +2.5 (South Section)	12		100	13DEC04 A	11JUL05 A	13DEC04 A	11JUL05 A
ABALMA0240	Placing Leveling Stone (South Section)	10		100	12JUL05 A	30JUL05 A	12JUL05 A	30JUL05 A
ABALMA0400	Block Wall Construction (South Section)	25		100	02AUG05 A	17AUG05 A	02AUG05 A	17AUG05 A
ABALMA0500	Backfill the Rubble Behind (South Section)	6	-455	80	18AUG05 A	28SEP05	18AUG05 A	13AUG05
ABALMA0500	Backfill G200 Rockfill Behind (South Section)	5	-460	0	28SEP05	03OCT05	14AUG05	18AUG05
ABALMA0310	Diversion of Ext. Cycle Track (Phase 1)	1		100	28MAY05 A	28MAY05 A	28MAY05 A	28MAY05 A
ABALMA0320	Removal of Ext. Cycle Track Pavement (Phase 1)	2		100	30MAY05 A	11JUN05 A	30MAY05 A	11JUN05 A
ABALMA0330	Take Up / Divert Ext. Utility Services (Phase 1)	16		100	30MAY05 A	08JUN05 A	30MAY05 A	08JUN05 A
ABALMA0700	Taking Up of Armour to +2.5 (North Section)	2		100	08NOV04 A	10NOV04 A	08NOV04 A	10NOV04 A
ABALMA0710	Taking Up of Underlayer to +2.5 (North Section)	2		100	15NOV04 A	16NOV04 A	15NOV04 A	16NOV04 A
ABALMA0800	Taking Up of Rubble to +2.5 (North Section)	8		100	17NOV04 A	17NOV04 A	17NOV04 A	17NOV04 A
ABALMA0820	Taking Up of Armour Below +2.5 (North Section)	3		100	23NOV04 A	23NOV04 A	23NOV04 A	23NOV04 A
ABALMA0830	Taking Up Underlayer Below +2.5 (North Section)	2		100	01DEC04 A	04DEC04 A	01DEC04 A	04DEC04 A
ABALMA0940	Taking Up of Rubble Below +2.5 (North Section)	30		100	16DEC04 A	18FEB05 A	16DEC04 A	18FEB05
ABALMA1000	Placing Leveling Stone (North Section)	10		100	20FEB05 A	13MAY05 A	20FEB05 A	13MAY05 A
ABALMA1100	Block Wall Construction (North Section)	25		100	01MAR05 A	24MAY05 A	01MAR05 A	24MAY05 A
ABALMA1100	Backfill the Rubble Behind (North Section)	6		100	15MAY05 A	25JUN05 A	15MAY05 A	25JUN05 A
ABALMA1200	Backfill G200 Rockfill Behind (North Section)	5	-930	0	24SEP05	02OCT05	27JUN05	01JUL05
ABALMA1300	Reinstatement of Armour & Underlayer	14	1166	0	03OCT05	10OCT05	23JAN05	12FEB04

Reinstatement of Armour & Underlayer

AN ID	Description	Orig Dur	Total Dur	Percent Complete	Early Start	Early Finish	Leads Start	Leads Finish
ABWPPW0100	Decide Exact Location of Manholes & Catchpits	1		100	27SEP04 A	27SEP04 A	27SEP04 A	27SEP04 A
ABWPPW0200	S745 - S739	55		100	21OCT04 A	09MAY05 A	21OCT04 A	08MAY05 A
ABWPPW0300	S717 - S729	78		100	22DEC04 A	25AUG05 A	22DEC04 A	25AUG05 A
ABWPPW0400	S729 - S730	14	289	0	06JAN05	21JAN05	10FEB05	25FEB05
ABWPPW0500	S739 - S732	50	276	0	23NOV05	21JAN05	24DEC05	24FEB05
ABWPPW0550	F421 - TM05	18	-476	5	23JUL05 A	04NOV05	23JUL05 A	07SEP05
ABWPPW0590	F414 - F421 (In Zk)	12	-386	0	28SEP05	13OCT05	18AUG05	29AUG05
ABWPPW1000	S745 - Existing Box Culvert	27	250	80	08JUL05 A	08DEC05	08JUL05 A	10JAN05
ABWPPW0700	S745 - S747	73		100	06NOV04 A	16DEC04 A	06NOV04 A	16DEC04 A
ABWPPW0710	S747 - Existing Box Culvert	18	180	30	07JUL05 A	17DEC05	07JUL05 A	10JAN05
ABWPPW0800	225HR & Catchpit/2000.I, along Parapet Wall (Z3)	48	266	0	10MAR05	08MAY05	11APR05	07JUN05
ABWPPW0900	225HR & Catchpit/2000.I, along Parapet Wall (Z4)	24	256	0	30MAY05	27JUN05	28JUN05	27JUL05
ABWPPW1000	225HR & Catchpit/2000.I, along Parapet Wall (Z16)	12	256	0	18MAY05	29MAY05	15JUN05	28JUN05
ABWPPW1100	225HR & Catchpit/2000.I, along Parapet Wall (Z15)	6	256	0	09MAY05	15MAY05	08JUN05	14JUN05
ABWPPW1200	225HR & Catchpit/2000.I, Parapet Wall (J.M.L1)	80	206	0	02DEC05	09MAR05	04JAN05	10APR05

225HR & Catchpit/2000.I, Parapet Wall (J.M.L1)

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

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 LEADER
 WALKER
 PARTNERSHIP

ID	Description	Old Dur.	Total Dur.	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
ASWPDW1900	225 Perforated Drain (in ZK)	16	16d	0	08MAR06	30MAR06	21APR06	21APR06
ASWPDW2000	225 Perforated Drain (in ZK)	16	26d	0	14MAR06	02APR06	08MAY06	08MAY06
ASWPDW2100	225 Perforated Drain (in ZJ6)	6	37d	0	09FEB06	18FEB06	03APR06	03APR06
ASWPDW2200	225 Perforated Drain (in ZJ5)	5	46d	0	03FEB06	06FEB06	28MAR06	03APR06
ASWPDW2300	225 Perforated Drain (ZJ - Node P1 South)	24	18d	0	08FEB06	07MAR06	01MAR06	28MAR06
ASWPDW2350	225 Perforated Drain (ZJ, ZM, ZL1)	18	16d	0	23DEC05	14JAN06	13JAN06	01FEB06
ASWPDW2400	Remove Existing 3200 Drainpipe	30		100	28APR05 A	08JUN05 A	08JUN05 A	08JUN05 A
Utility Works								
ASWPUT0900	D.I. Pipes & Fittings Delivery On Site	30	26d	0	01OCT05	30OCT05	06SEP05	04OCT05
ASWPUT1000	Watermain - Lay Soft Main	16	59d	0	18NOV05	06DEC05	06SEP05	27SEP05
ASWPUT1050	PCCW - Lay Cable (in ZR)	48	17d	0	27JAN06	25MAR06	07JAN06	06MAR06
ASWPUT1060	PCCW - Lay Cable (in ZK)	22	17d	0	15APR06	11MAY06	25MAR06	20APR06
ASWPUT1070	PCCW - Lay Cable (in ZJ6)	10	17d	0	03APR06	14APR06	14MAR06	24MAR06
ASWPUT1080	PCCW - Lay Cable (in ZJ5)	6	17d	0	27MAR06	01APR06	07MAR06	13MAR06
ASWPUT1100	PCCW - Lay Cable (in ZJ, ZM, ZL1)	44	32d	0	23DEC05	18FEB06	03FEB06	25MAR06
ASWPUT1200	HKCG - 32GRP Riser	3	26d	0	06JAN06	11JAN06	13FEB06	15FEB06
ASWPUT1300	HKCG - 90 GRP Riser	5	28d	0	12JAN06	17JAN06	18FEB06	21FEB06
ASWPUT1400	HKCG - 83 GRP Riser	3	28d	0	18JAN06	20JAN06	22FEB06	24FEB06
Public Lighting Ducts and Drawings								
ASWPPH0300	Public Lighting Ducts & Drawings Along Promenade	60	66d	0	14MAR06	24MAY06	26JUN06	04SEP06
ASWPPH0400	Install Public Lighting	24	60d	0	25MAY06	22JUN06	06SEP06	02OCT06
Roads and Pavement								
ASWPPR0100	Lay Paving Block (in ZR)	49	25d	0	06JUL06	02SEP06	07AUG06	02OCT06
ASWPPR0200	Lay Paving Block (in ZK)	24	25d	0	16JUN06	14JUL06	17JUL06	12AUG06
ASWPPR0300	Lay Paving Block (in ZJ6)	12	27d	0	30MAY06	13JUN06	03JUL06	15JUL06
ASWPPR0400	Lay Paving Block (in ZJ5)	12	27d	0	16MAY06	28MAY06	17JUN06	30JUN06
ASWPPR0500	Lay Paving Block (in ZJ, ZM, ZL1)	60	32d	0	03FEB06	08MAY06	13MAR06	16JUN06
Finishing Works								
ASWFFW0100	Finishing Works	60	66d	0	08JUN06	18AUG06	29AUG06	08NOV06
SEALING								
ASWPEM0000	Irrigation System	50	117d	0	22APR06	21JUN06	09SEP06	08NOV06
ASWPEM1000	E & M Works	30	66d	0	23JUN06	28JUL06	05OCT06	08NOV06
Road Markings, Traffic Signs and Lampposts								
ASWPRM0100	Apply Road Marking	30	25d	0	04SEP06	09OCT06	09OCT06	08NOV06
ASWPRM0200	Erect Signage	21	25d	0	14SEP06	09OCT06	14OCT06	08NOV06
Landscaping/Plantings								
ASWPHL0100	Planter Wall (in ZR)	63	0	20	22AUG05 A	08MAR06	22AUG05 A	08MAR06
ASWPHL0200	Planter Wall (in ZK)	28	28d	0	09FEB06	13MAR06	14MAR06	15APR06
ASWPHL0300	Planter Wall (in ZJ6)	13	28d	0	23JAN06	08FEB06	27FEB06	13MAR06
ASWPHL0400	Planter Wall (in ZJ5)	6	27d	0	23JAN06	02FEB06	25FEB06	08MAR06
ASWPHL0500	Planter Wall (ZJ - Landscape Node 1 South)	40	18d	0	19DEC05	07FEB06	11JAN06	28FEB06
ASWPHL0600	Planter Wall (ZM, ZL1, ZJ)	90	16d	20	02JUL05 A	22DEC05	02JUL05 A	12JAN06
ASWPHL0650	Fill Rock to Parapet Wall Formation (VO7086)	60	25d	20	10AUG05 A	24NOV05	10AUG05 A	20DEC05
ASWPHL0700	Parapet Wall along Seawall (in ZR)	47	26d	0	03MAR06	27APR06	01APR06	27MAY06
ASWPHL0800	Parapet Wall along Seawall (in ZK)	22	25d	0	23MAY06	17JUN06	22JUN06	18JUL06
ASWPHL0900	Parapet Wall along Seawall (in ZJ6)	12	25d	0	08MAY06	22MAY06	08JUN06	21JUN06
ASWPHL1000	Parapet Wall along Seawall (in ZJ5)	6	25d	0	28APR06	08MAY06	28MAY06	07JUN06

2004 2005 2006 2007 2008 2009

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

2004 2005 2006 2007 2008 2009

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

2004 2005 2006 2007 2008 2009

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

2004 2005 2006 2007 2008 2009

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

Remove Existing 3200 Drainpipe

D.I. Pipes & Fittings Delivery On Site

Watermain - Lay Soft Main

PCCW - Lay Cable (in ZK)

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 - 83 GRP Riser

Public Lighting Ducts & Drawings Along Promenade

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

Planter Wall (in ZR)

Planter Wall (in ZK)

Planter Wall (in ZJ6)

Planter Wall (in ZJ5)

Planter Wall (ZJ - Landscape Node 1 South)

Planter Wall (ZM, ZL1, ZJ)

Fill Rock to Parapet Wall Formation (VO7086)

Parapet Wall along Seawall (in ZR)

Parapet Wall along Seawall (in ZK)

Parapet Wall along Seawall (in ZJ6)

Parapet Wall along Seawall (in ZJ5)

LEADER

SHAKE

Start date 10JUN04

Finish date 20OCT07

Data date 28SEP06

Run date 17OCT06

Page number 25A

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

WBS No.	WBS Description	Orig. Est.		Parent Complete	Est. Start	Est. Finish	WBS Start	WBS End	2024											
		Dur.	Floors						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ASWPH-1100	Parapet Wall along Seawall (in ZJ ZM, ZL1)	80	25d		02NOV05	02MAR06	24DEC05	31MAR06												
ASWPH-1200	Construct Peripole (3 nos.)	72	66d		014MAR06	06JUN06	28AUG06													
ASWPH-1300	Water Point WP2-4 to 2-1	15	21d		01MAR06	16APR06	20APR06	10MAY06												
ASWPH-1400	Water Point WP2-3 to 2-1	18	18d		01MAR06	21APR06	22APR06	13MAY06												
ASWPH-1500	Water Point WP2-3 to 2-1-1	12	28d		05APR06	18APR06	09MAY06	22MAY06												
ASWPH-1600	Water Point WP20-6 to 20-1	21	37d		02FEB06	13MAR06	05APR06	28APR06												
ASWPH-1700	Water Point WP 18-4 to 18-1	15	18d		06MAR06	24MAR06	29MAR06	15APR06												
ASWPH-1800	Water Point WP 16-3 to 16-2	12	21d		09MAR06	21MAR06	01APR06	15APR06												
ASWPH-1900	Water Point WP 17-5 to 17-1	18	16d		16JAN06	07FEB06	08FEB06	25FEB06												
ASWPH-2000	Water Point WP 16-3 to 16-1	12	22d		16JAN06	28JAN06	13FEB06	25FEB06												
ASWPH-2200	ASD's Contractor Works	303	-57d		02SEP05	27SEP06	22JUL05	22JUL06												

Section 9

Poole Landing Stage

Non-MA Works

WBS No.	Description	Orig. Est. Dur.	Orig. Est. Floors	Parent Complete	Est. Start	Est. Finish	WBS Start	WBS End
AS-SMA0100	Propose Monitoring Plan for DSD's Submarine Pipe	30			06SEP04	01SEP04	01SEP04	06SEP04
AS-SMA0200	Engineer & DSD Approval of Monitoring Plan	36			07SEP04	01MAR05	07SEP04	01MAR05
AS-SMA0300	Setup Monitoring for DSD's Submarine Pipeline	30			14MAR05	14MAR05	14MAR05	14MAR05
AS-SMA0400	Drilling & CPPT	30			11OCT04	11SEP04	11SEP04	11OCT04
AS-SMA0500	Taking Up of Existing Armour to +2.5	2			08NOV04	08NOV04	08NOV04	08NOV04
AS-SMA0600	Taking Up of Existing Underlayer to +2.5	3			11NOV04	11NOV04	11NOV04	11NOV04
AS-SMA0700	Taking Up of Existing Rubble to +2.5	3			17NOV04	17NOV04	17NOV04	17NOV04
AS-SMA0800	Taking Up of Existing Armour Below +2.5	3			24NOV04	24NOV04	24NOV04	27NOV04
AS-SMA0900	Taking Up of Underlayer Below +2.5	3			05DEC04	05DEC04	05DEC04	08DEC04
AS-SMA1000	Taking Up of Existing Rubble Below +2.5	5			13DEC04	13DEC04	13DEC04	16DEC04
AS-SMA1100	Taking Up of rubble at Seawall Foundation	13			18FEB05	11MAR05	16FEB05	11MAR05
AS-SMA1200	Dredging of Marine Mud	20			16MAR05	24MAR05	16MAR05	24MAR05
AS-SMA1300	Placing of Rubble Foundation	15			18APR05	18APR05	18APR05	19APR05
AS-SMA1400	Placing Leveling Stone	23			26SEP05	26SEP05	26SEP05	26SEP05
AS-SMA1500	Block Wall Construction 2 Layers from Bottom (N)	5			04MAY05	31MAY05	04MAY05	31MAY05
AS-SMA1600	Block Wall Construction 2 Layers from Bottom (S)	5			17JUL05	24AUG05	17JUL05	24AUG05
AS-SMA1700	Block Wall Construction to Top Level	50			28APR05	28AUG05	28APR05	28AUG05
AS-SMA1800	Placing of Bormstones	3			11SEP05	28AUG05	11SEP05	11SEP05
AS-SMA1900	Backfill the Rubble Behind	14	20d	0	12SEP05	28SEP05	12SEP05	22APR06
AS-SMA1100	Backfill the G200 Rockfill Behind	4	20d	0	30SEP05	03OCT05	23APR06	28APR06

Work Items

WBS No.	Description	Orig. Est. Dur.	Orig. Est. Floors	Parent Complete	Est. Start	Est. Finish	WBS Start	WBS End
AS-SLW0100	Submit Shop Drawings & Calculation of Roof Cover	30			15AUG05	15SEP05	15AUG05	15SEP05
AS-SLW0200	Engineer Approval of Shop Drawings & Calculation	30	56d	90	18SEP05	10OCT05	18SEP05	15DEC05
AS-SLW0300	Procurement of Pyramid Skylight	120	88d	0	12OCT05	04MAR06	23JAN06	16JUN06
AS-SLW0400	Procurement of Structural Steel	120	56d	0	12OCT05	04MAR06	10DEC05	11MAY06
AS-SLW0500	Delivery of Pyramid Skylight	30	86d	0	03MAR06	10APR06	17JUN06	22JUL06
AS-SLW0600	Delivery of Structural Steel	30	56d	0	06MAR06	10APR06	12MAY06	16JUN06
AS-SLW0700	Inspection & Testing	30	56d	0	11APR06	18MAY06	17JUN06	22JUL06
AS-SLW0800	Fabrication & Painting of Steel Works	40	56d	0	17MAY06	13JUL06	24JUL06	16SEP06
AS-SLW1000	Concrete Coping with 10 tonne Bolland & Handrail	30	170d	0	04OCT05	08NOV05	27APR06	02JUN06
AS-SLW1100	Construct Shelter Footing	24	108d	0	23JAN06	21FEB06	03JUN06	30JUN06
AS-SLW1200	Construct Shelter Column	30	144d	0	22FEB06	28MAR06	14AUG06	16SEP06

WBS No.	Description	Orig. Est. Dur.	Orig. Est. Floors	Parent Complete	Est. Start	Est. Finish	WBS Start	WBS End
AS-SLW1300	Submit Shop Drawings & Calculation of Roof Cover	30			15AUG05	15SEP05	15AUG05	15SEP05
AS-SLW1400	Engineer Approval of Shop Drawings & Calculation	30	56d	90	18SEP05	10OCT05	18SEP05	15DEC05
AS-SLW1500	Procurement of Pyramid Skylight	120	88d	0	12OCT05	04MAR06	23JAN06	16JUN06
AS-SLW1600	Procurement of Structural Steel	120	56d	0	12OCT05	04MAR06	10DEC05	11MAY06
AS-SLW1700	Delivery of Pyramid Skylight	30	86d	0	03MAR06	10APR06	17JUN06	22JUL06
AS-SLW1800	Delivery of Structural Steel	30	56d	0	06MAR06	10APR06	12MAY06	16JUN06
AS-SLW1900	Inspection & Testing	30	56d	0	11APR06	18MAY06	17JUN06	22JUL06
AS-SLW2000	Fabrication & Painting of Steel Works	40	56d	0	17MAY06	13JUL06	24JUL06	16SEP06
AS-SLW2100	Concrete Coping with 10 tonne Bolland & Handrail	30	170d	0	04OCT05	08NOV05	27APR06	02JUN06
AS-SLW2200	Construct Shelter Footing	24	108d	0	23JAN06	21FEB06	03JUN06	30JUN06
AS-SLW2300	Construct Shelter Column	30	144d	0	22FEB06	28MAR06	14AUG06	16SEP06

ASD's Contractor Works

- Propose Monitoring Plan for DSD's Submarine Pipe
- Engineer & DSD Approval of Monitoring Plan
- Setup Monitoring for DSD's Submarine Pipeline
- Drilling & CPPT
- Taking Up of Existing Armour to +2.5
- Taking Up of Existing Underlayer to +2.5
- Taking Up of Existing Rubble to +2.5
- Taking Up of Existing Armour Below +2.5
- Taking Up of Underlayer Below +2.5
- Taking Up of Existing Rubble Below +2.5
- Taking Up of rubble at Seawall Foundation
- Dredging of Marine Mud
- Placing of Rubble Foundation
- Placing Leveling Stone
- Block Wall Construction 2 Layers from Bottom (N)
- Block Wall Construction 2 Layers from Bottom (S)
- Block Wall Construction to Top Level
- Placing of Bormstones
- Backfill the Rubble Behind
- Backfill the G200 Rockfill Behind

Work Items

- Submit Shop Drawings & Calculation of Roof Cover
- Engineer Approval of Shop Drawings & Calculation
- Procurement of Pyramid Skylight
- Procurement of Structural Steel
- Delivery of Pyramid Skylight
- Delivery of Structural Steel
- Inspection & Testing
- Fabrication & Painting of Steel Works
- Concrete Coping with 10 tonne Bolland & Handrail
- Construct Shelter Footing
- Construct Shelter Column

Legend:

- Start date: 10JUL04
- Finish date: 20OCT07
- Dura date: 24APR05
- Run date: 17OCT05
- Programme: 2BA

Legend:

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

ASD's Contractor Works

ASD's Contractor Works

WALTEE

LEADER

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	Late Start	Late Finish
AKSLW1500	Construct Shelter Roof	24	56d	0	14JUL06	10AUG06	16SEP06	16OCT06
AKSLW1400	Public Lighting	8	56d	0	11AUG06	19AUG06	17OCT06	25OCT06
AKSLW1500	Rubber, Step & Land Step	18	56d	0	21AUG06	06SEP06	28OCT06	16NOV06
AKSLW1000	Surface Mounted Seats	18	56d	0	11SEP06	30SEP06	17NOV06	07DEC06
AKSLW1100	Construct In-lake Concrete Paving	18	56d	0	02OCT06	23OCT06	09DEC06	28DEC06

Section 10
Remainder Works
Miscellaneous Works

BORWYW0100	EI to Demolish HY/98/02 CRE Office	1	107d	0	03MAR06	03MAR06	11JUL06	11JUL06
BORWYW0200	Demolish HY/98/02 CRE Office (P1)	30	107d	0	28APR06	28APR06	02AUG06	06SEP06
BORWYW0300	EI to Demolish HY/98/02 Contractor's Office	1		100	22NOV04	22NOV04	22NOV04	22NOV04
BORWYW0400	Demolish HY/98/02 Contractor's Office (P1)	30		100	21MAY05	27MAY05	21MAY05	27MAY05
BORWYW0500	EI to Remove Run-in & Reinstale FP/CT	1	129d	0	02MAY06	02MAY06	02OCT06	02OCT06
BORWYW0600	Remove Run-in & Reinstale FP/CT (P1)	18	111d	0	15JUN06	08JUL06	25OCT06	15NOV06
BORWYW0700	EI to Demolish Existing Paving	1	107d	0	02MAY06	02MAY06	06SEP06	06SEP06
BORWYW0800	Demolish Existing Paving (P1)	18	107d	0	21MAY06	14JUN06	20SEP06	19OCT06
BORWYW0900	EI to Fencing Around LO Site	1	111d	0	07JUL06	07JUL06	16NOV06	16NOV06
BORWYW1000	Fencing Around LO Site (P1)	18	111d	0	28JUL06	18AUG06	06DEC06	28DEC06

Section 11
Area SA5, SA11B & SA14

Item/Activity	Start	End	Duration	Early Start	Early Finish	Late Start	Late Finish
B1AASL0100	Soil Mix (Section 5)	24	-132d	06FEB06	07MAR06	30AUG05	27SEP05
B1AASL0200	Soil Mix (In ZS, South End - 100m)	10	-87d	03DEC05	14DEC05	13SEP05	24SEP05
B1AASL0300	Soil Mix (In ZS, 100 - 200m)	10	-98d	01JAN06	11JAN06	13SEP05	24SEP05
B1AASL0400	Soil Mix (In ZS, 200 - 300m)	10	-85d	01JAN06	21JAN06	02NOV05	12NOV05
B1AASL0500	Soil Mix (In ZS, 300 - 400m)	10	-73d	01JAN06	10FEB06	02NOV05	12NOV05
B1AASL0600	Soil Mix (In ZS, 400 - North End)	10	-132d	017MAY06	27MAY06	07DEC05	17DEC05
B1AASL0700	Soil Mix (In ZU, 300m)	30	-78d	025JAN06	02MAR06	24OCT05	28NOV05
B1AASL0800	Planting Works	90	-132d	06MAR06	21JUN06	20SEP05	12JAN06
B1AASL0900	Groundcovers Works	50	-132d	02MAY06	27JUL06	19DEC05	10FEB06
B1AASL1000	Root Barrier (ZS, 100m - 200m) (VO/055A)	12	-79d	03DEC05	10DEC05	30AUG05	15SEP05
B1AASL1100	Root Barrier (ZS, 200m - 300m) (VO/055A)	12	-65d	02DEC05	08JAN06	19OCT05	01NOV05
B1AASL1200	Root Barrier (ZS, 300m - 400m) (VO/055A)	12	-65d	02DEC05	08JAN06	19OCT05	01NOV05
B1AASL1300	Root Barrier (ZS, 400m - N. End) (VO/055A)	2	-119d	028APR06	28APR06	05DEC05	09DEC05

Section 12
Area SA7, SA15, SA11A, SA12 & SA13

B2AASL0100	Soil Mix (In ZR, 385m)	47	16d	022APR06	17JUN06	15MAY06	10JUL06
B2AASL0200	Soil Mix (In ZK, 180m)	24	28d	018APR06	17MAY06	29MAY06	22JUN06
B2AASL0300	Soil Mix (In ZJ, 85m)	12	37d	021MAR06	07APR06	09MAY06	22MAY06
B2AASL0400	Soil Mix (In ZJ, 50m)	7	37d	018MAR06	28APR06	29APR06	09MAY06
B2AASL0500	Soil Mix (ZJ - Landscape Node 1 South, 260m)	30	18d	025MAR06	28APR06	17APR06	22MAY06
B2AASL0600	Soil Mix (ZM, ZL1, ZJ)	71	16d	006FEB06	03MAY06	27FEB06	22MAY06
B2AASL0700	Planting Works	90	16d	04MAY06	18AUG06	29MAY06	06SEP06
B2AASL0800	Groundcovers Works	50	16d	019AUG06	17OCT06	07SEP06	09NOV06
B2AASL0900	Root Barrier (In ZR) (VO/065)	12	22d	01JAN06	28JAN06	19FEB06	25FEB06
B2AASL1000	Root Barrier (In ZR) (VO/065)	2	34d	031MAR06	01APR06	12MAY06	13MAY06

Start date: 10JUN06
 Finish date: 20OCT07
 Orig date: 28SEP05
 Rev 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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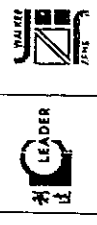
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									JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Section 13																				
Area SA1, SA2, SA3, SA4 & SA5																				
Landscaping/Soilworks																				
BAACSL0100	Soil Mix (Area SA1 - South Section)	30	113d	0	10APR06	19MAY06	23AUG06	28SEP06												
BAACSL0200	Soil Mix (Area SA1 - North Section)	30	107d	0	17APR06	22MAY06	23AUG06	26SEP06												
BAACSL0300	Soil Mix (Car Park, Loading & Unloading Area)	6	51d	0	02SEP06	08SEP06	03NOV06	06NOV06												
BAACSL0400	Soil Mix (Area Adjacent Road SL3)	30	37d	0	16JUN06	21JUL06	23AUG06	26SEP06												
BAACSL0500	Planting Works	80	57d	0	22JUL06	26SEP06	27SEP06	07DEC06												
BAACSL0600	Planting Works (Car Park, Loading/Unloading Area)	6	85d	0	09SEP06	15SEP06	20DEC06	28DEC06												
Area SA6, SA7, SA10, SA16, SA17 & SA18																				
Landscaping/Soilworks																				
BAADSL0100	Planting Works	45	107d	0	24MAY06	17JUL06	28SEP06	21NOV06												
BAADSL0200	Groundcovers Works	30	107d	0	18JUL06	21AUG06	22NOV06	28DEC06												
Section 14																				
Area SA8, SA10 & SA15																				
Establishment Works																				
BAAEW0100	Establishment Works	300	-127d	0	28JUL06	21JUL07	28FEB06	17FEB07												
Section 15																				
Area SA7, SA10, SA11A, SA12 & SA13																				
Establishment Works																				
BAAEW0100	Establishment Works	300	20d	0	18OCT06	12OCT07	11NOV06	06NOV07												
Section 16																				
Area SA1, SA2, SA3, SA4 & SA5																				
Establishment Works																				
BAAEW0200	Establishment Works	320	57d	0	30SEP06	20OCT07	08DEC06	26DEC07												
Area SA6, SA9, SA15, SA16, SA17 & SA18																				
Establishment Works																				
BAAEW0100	Establishment Works	300	111d	0	22AUG06	15AUG07	02JAN07	28DEC07												

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 Finish date: 20OCT07
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 Run date: 17OCT06
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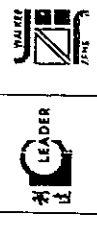
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 ■ Progress bar
 ■ Critical bar
 ■ Summary bar
 ◆ Start milestone point
 ◆ Finish milestone point

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 TP37/03 - Revised Works Programme - RP04

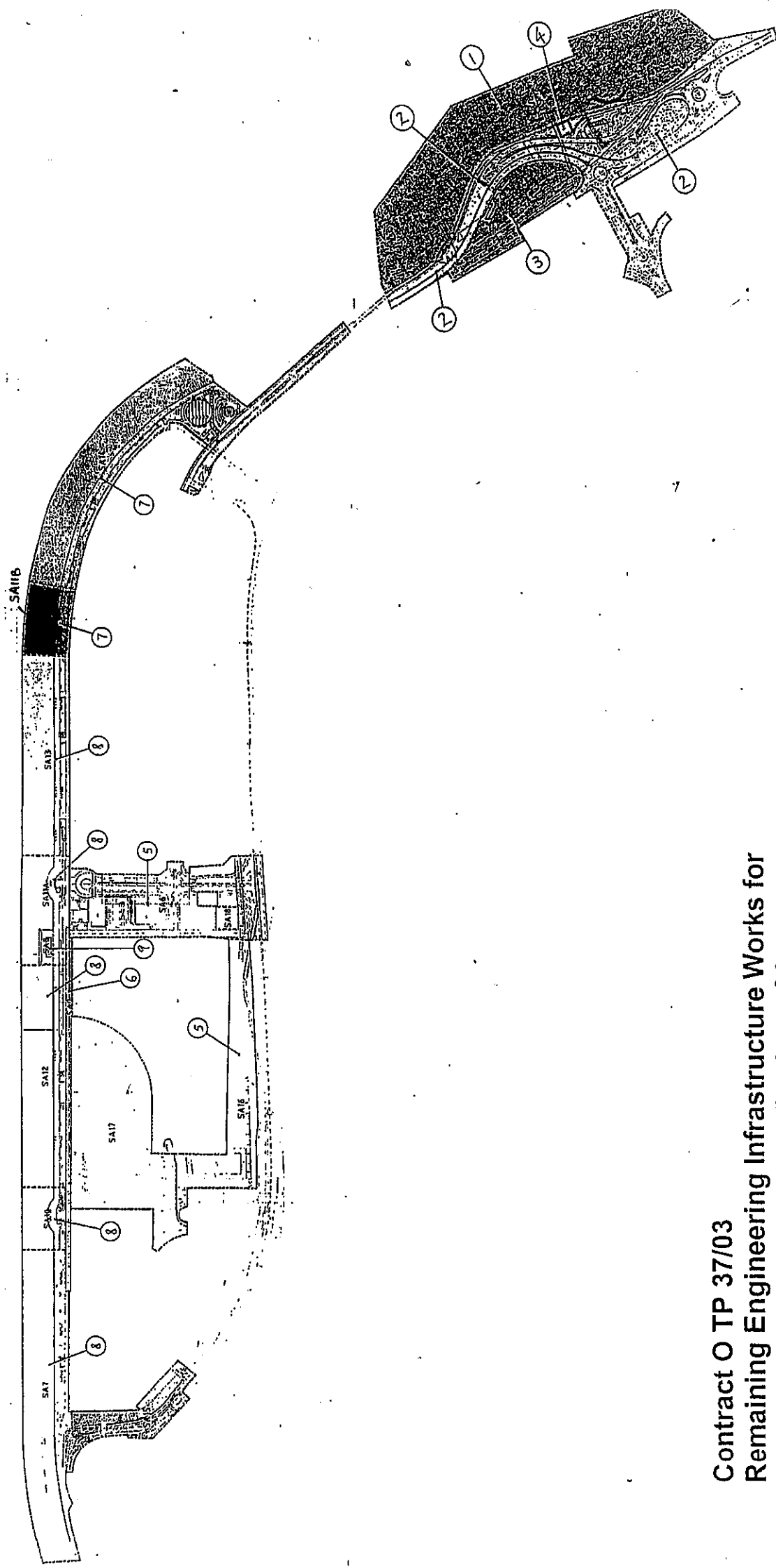


ID #	Description	Orig. Dir.	Total	Percent	Start	Finish	L10	L10	2003											
									JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Section 13																				
Area SA1, SA2, SA3, SA4 & SA5																				
Landscaping/Soilworks																				
BAACSL0100	Soil Mix (Area SA1 - South Section)	30	113d	0	10APR06	19MAY06	23AUG06	28SEP06												
BAACSL0200	Soil Mix (Area SA1 - North Section)	30	107d	0	17APR06	22MAY06	23AUG06	26SEP06												
BAACSL0300	Soil Mix (Car Park, Loading & Unloading Area)	6	51d	0	02SEP06	08SEP06	03NOV06	06NOV06												
BAACSL0400	Soil Mix (Area Adjacent Road SL3)	30	37d	0	16JUN06	21JUL06	23AUG06	26SEP06												
BAACSL0500	Planting Works	80	57d	0	22JUL06	26SEP06	27SEP06	07DEC06												
BAACSL0600	Planting Works (Car Park, Loading/Unloading Area)	6	85d	0	09SEP06	15SEP06	20DEC06	28DEC06												
Area SA6, SA7, SA10, SA11A, SA12 & SA13																				
Landscaping/Soilworks																				
BAADSL0100	Planting Works	45	107d	0	24MAY06	17JUL06	28SEP06	21NOV06												
BAADSL0200	Groundcovers Works	30	107d	0	18JUL06	21AUG06	22NOV06	28DEC06												
Section 14																				
Area SA8, SA10 & SA15																				
Establishment Works																				
BAAEW0100	Establishment Works	300	-127d	0	28JUL06	21JUL07	28FEB06	17FEB07												
Section 15																				
Area SA7, SA10, SA11A, SA12 & SA13																				
Establishment Works																				
BAAEW0100	Establishment Works	300	20d	0	18OCT06	12OCT07	11NOV06	06NOV07												
Section 16																				
Area SA1, SA2, SA3, SA4 & SA5																				
Establishment Works																				
BAAEW0200	Establishment Works	320	57d	0	30SEP06	20OCT07	08DEC06	26DEC07												
Area SA6, SA9, SA15, SA16, SA17 & SA18																				
Establishment Works																				
BAAEW0100	Establishment Works	300	111d	0	22AUG06	15AUG07	02JAN07	28DEC07												





Appendix G
Construction Site Area



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

Location and Key Pan



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 : 4 February 2006 Inspected by Name : (RSS) Sunny Yung (LWKM) *Barthe* (ET) H.T. Chow
 Time : 09:30 Signature : *[Signature]*

Weather Condition : Sunny / Fine / Overcast / Drizzle / Rain / Storm / Hazy
 Wind : Calm / Light / Breeze / Strong
 Temperature : 15°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.	<input checked="" type="checkbox"/>			
▪ During transportation by truck, material should be loaded to a level lower than the site 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"/>			#2
▪ 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 NSRPs.	<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

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
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.	✓			# 2
▪ 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

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
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 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

	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

	Mitigation Measures on Waste Management	Implementation Stages*			Remark
		Yes	No	N/A	
		• 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.					

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 to previous site inspections item #1 (19-1-06), item #2 (7-1-06) and item #4 (12-1-06), #1 (26-1-06), silt curtain at Node 2 and Node 3 was still found damaged.	Node 2 & Node 3	The Contractor should repair the damaged curtain and keep/enclose the marine working area.	9-2-2006
#2	Follow up to previous site inspection item ① in 26-1-06, stock pile at SA 1 of Ma Tin Shui was found covered, but stockpile of filling material at Public Place was still found without covers.	Public place & SA1 at Ma Tin Shui	The Contractor was reminded to cover all stockpiles to avoid dust generation especially during dry seasons.	9-2-2006

Signature:	RSS Sunny Yeung	LWKJV AK	ET SAB
Name:	Sunny Yeung		H. T. Chow
Date:	4. 21. 2006	4/2/06	4 - 2 - 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 : 9 February 2006 Inspected by Name : (RSS) Eric Leung (LWKJV) (ET) H. T. Chow
 Time : 09:30 Signature : *[Signature]*
 Weather Condition Wind : Sunny / Fine / Overcast / Drizzle / Rain / Storm / Hazy
 Humidity : Calm / Light / Breeze / Strong Temperature : 19°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"/>		# 2
▪ 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.	✓			
▪ 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.	✓			# 2
▪ 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 loading transportation. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	# 2



SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

Mitigation Measures on Waste Management	Implementation Stages*		Remark	
	Yes	No		N/A
		<input checked="" type="checkbox"/>		
• 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"/>			
• 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"/>			
• 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

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
• 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


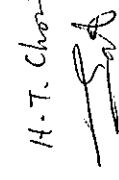
Table for follow-up Action:

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 to previous site inspection item # (19-1-06) item #3 (7-1-06), item #4 (12-1-06), #1 (26-1-06) and item #1 (4-2-2006), the silt curtain was repaired. 206-1-06	Node 2 & Node 3	Follow up action was completed, no further action to be taken.	N/A
#2	Follow up to previous site inspection item DA and item #2 (4-2-2006), stockpile of filling material at Public Plaza was still found without covers.	Public plaza	The Contractor was reminded to cover the stockpile to avoid dust generation especially during dry seasons.	16-2-2006

Signature:	RSS	LWKJV	ET
Name:	Eric Leung	Eric Leung	H-T. Chow
Date:	09-02-2006	9 Feb 06	9-2-2006

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 : 16 February 2006
 Time : 13:55
 Weather Condition : Sunny / Fine / Overcast / Drizzle / Rain / Storm / Hazy
 Wind : Calm / Light / Breeze / Strong
 Inspected by : (RSS) Jimmy Ma (LWKJM)
 Name : (ET) H.T. Chow
 Signature :  

Temperature : 24 °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"/>		
▪ 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

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
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.	✓			#1
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.	✓		
▪ 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.	✓		#1
• 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.	✓			

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 inspection item ① (26-1-2006) item #2 (4-2-2006) and item #2 (9-2-2006), stockpile of filling material at Public Plaza only partly was covered.	Public Plaza	The Contractor should cover all stockpiles to avoid dust generation especially during dry season.	23-2-2006

Signature:	RSS	LWKJV	ET
Name:	he	Jimmy Ma	M. T. Chow
Date:	16/2/06	16-2-06	16-2-2006

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 : 23 Feb 06
 Time : 15:30
 Weather Condition : Sunny (Fine) / Overcast / Drizzle / Rain / Storm / Hazy
 Wind : Calm / Light / Breeze / Strong
 Inspected by : Sunny Yeung (LWKW) (ET) Linda Lam
 Name : (RSS) Signature : Linda Lam
 Temperature : 21
 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.	/		Φ
▪ 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.	/		②
▪ 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.
▪				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 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			Remark
	Implementation Stages*			
	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 	/			


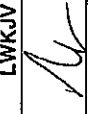


SITE INSPECTION CHECKLIST ON THE IMPLEMENTATION OF ENVIRONMENTAL MITIGATION MEASURES

Mitigation Measures on Waste Management	Implementation Stages*			Remark
	Yes	No	N/A	
• 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.	/			

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 inspection item #1 (26/1/06), item #2 (4/2/06), item #2 (9/2/06) and item #1 (16/2/06), stockpile of filling material at Public Plaza was covered by using tarpaulin sheet.	Public Plaza	Since the observation was improved, no further action should be required.	N/A
①	Stockpiles of sand and fill materials at Ma Liu Shui (SA1) were found not covered.	Ma Liu Shui (SA1)	Tarpaulin sheets should be used to cover the stockpiles to prevent generation of dust.	02/02/06
②	Silt/sand track was observed at the public road around the site entrance of Ma Liu Shui (SA1).	Ma Liu Shui (SA1)	The Contractor should keep clean and maintain the public road free of dust.	02/03/06

Signature:	RSS	LWKJV	ET
			Linda Lam
Name:	SUNNY YEUNG	Linda Lam	Linda Lam
Date:	23.2.2006	23/2/06	23/2/06



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

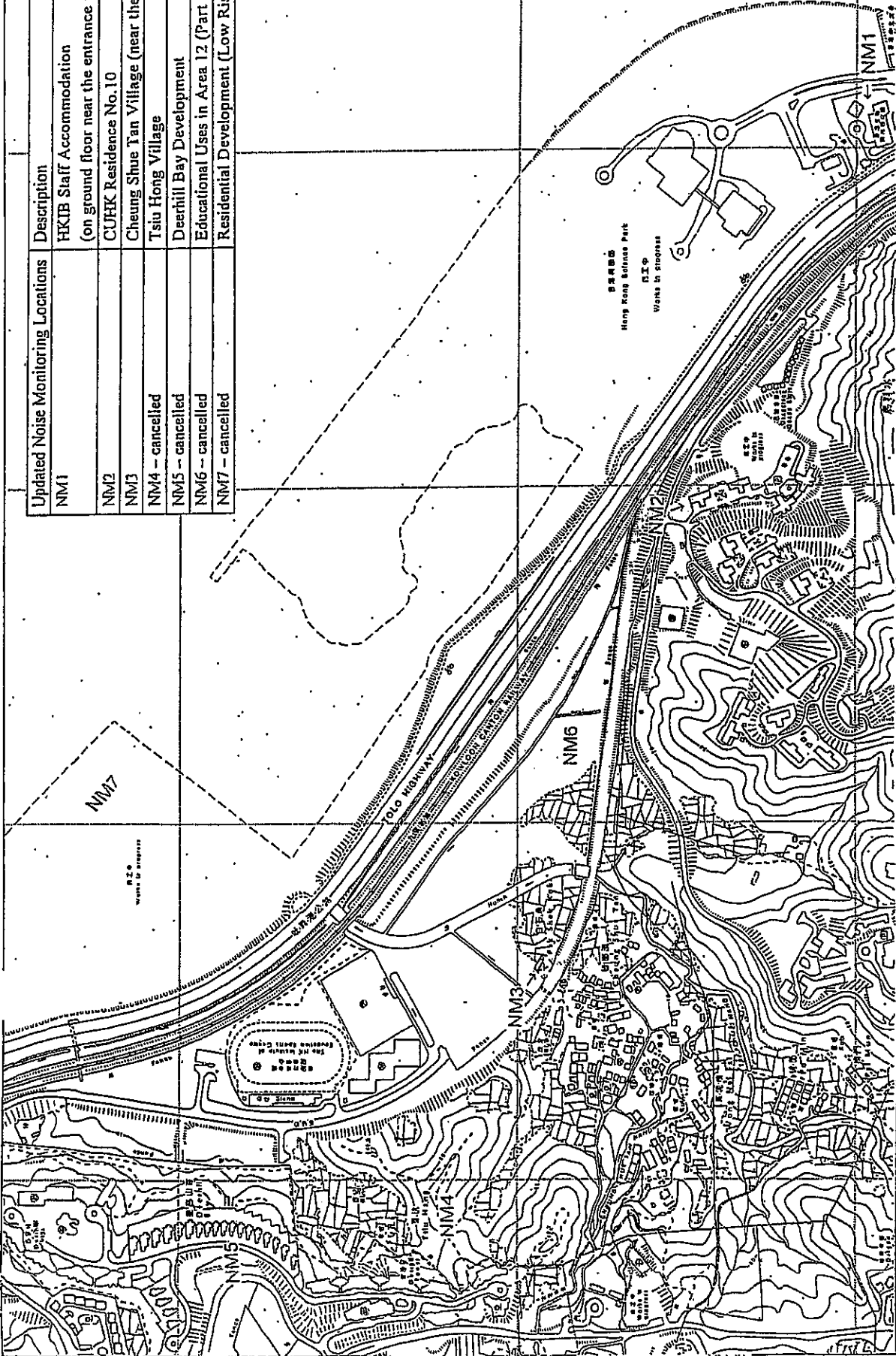
IEC and RE Comments on Monthly Environmental Monitoring and Audit Report – January 2006

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



Figures

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



Scale : ---

Revised Date: ...

June 2004

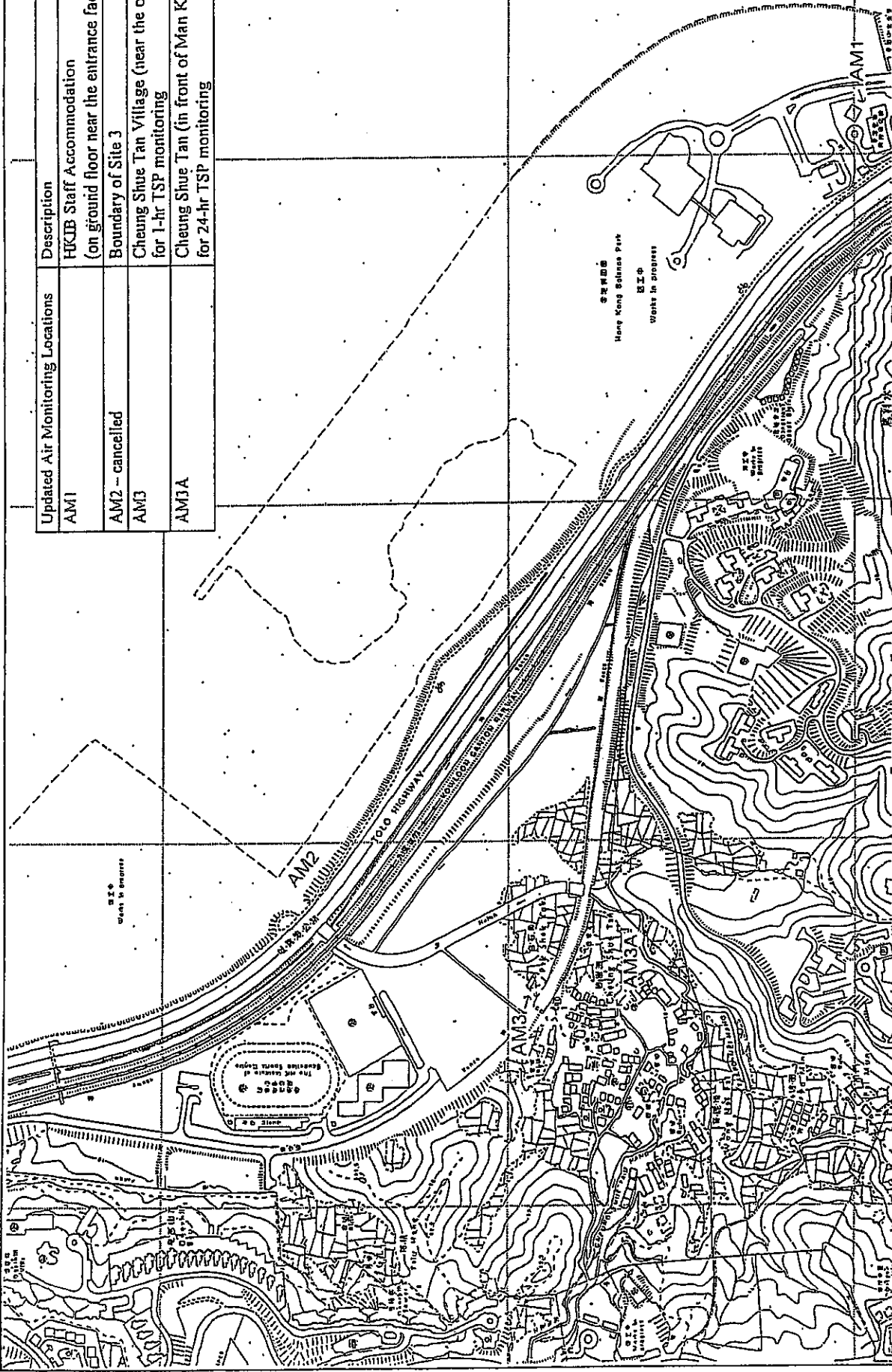
Remaining Engineering Infrastructure Works for
Pak Shek Kok Development Package 2 A
Contract No. TP 37/03

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

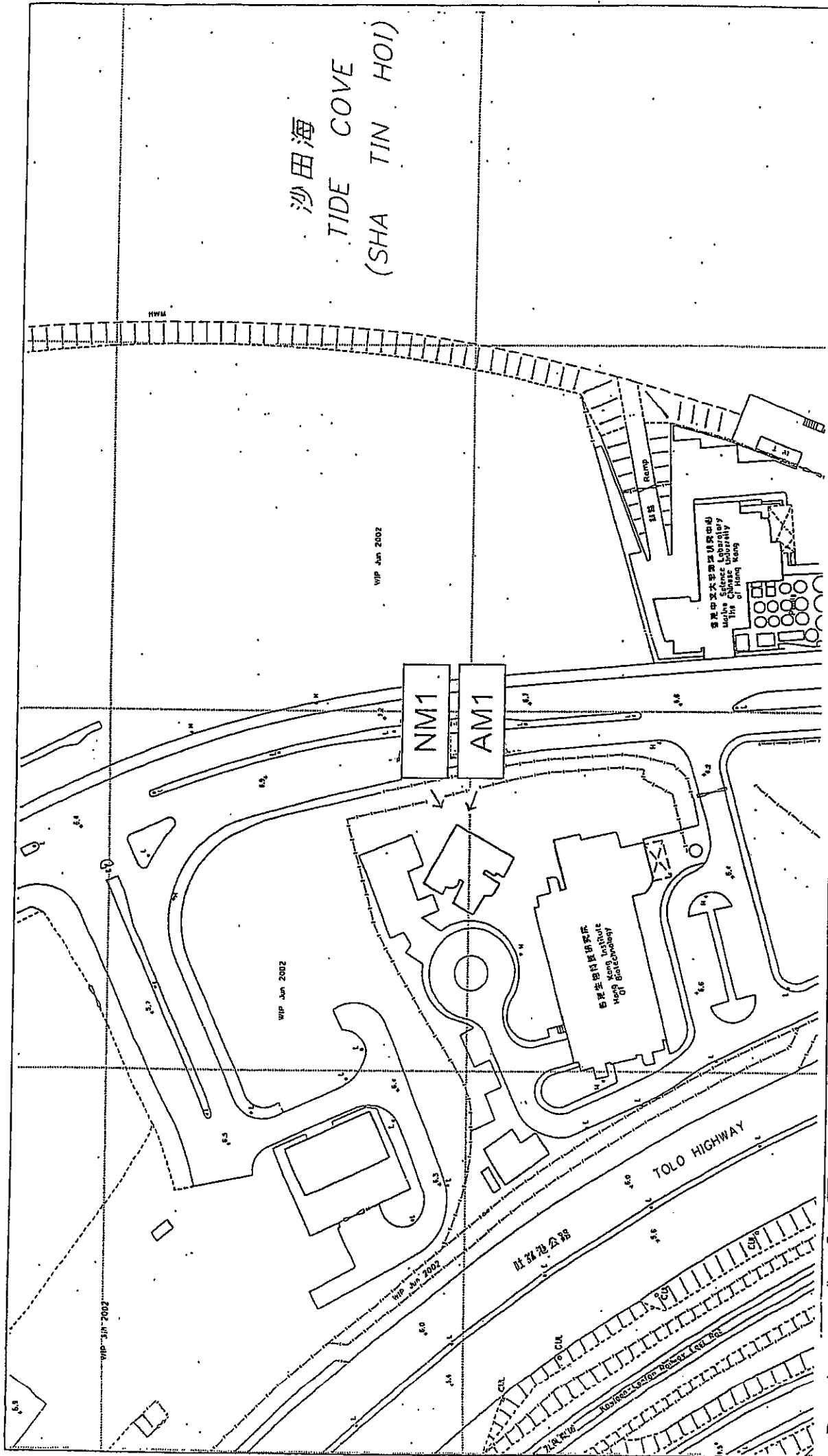


Scale : ---

Revised Date:
June 2004



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



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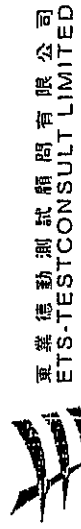
Remaining Engineering Infrastructure Works for
Pak Shek Kok Development Package 2A
Contract No. TP 37/03
Figure 3 Location of Air and Noise Monitoring Stations
at HKIB Staff Accommodation



Scale : ----

Revised Date:

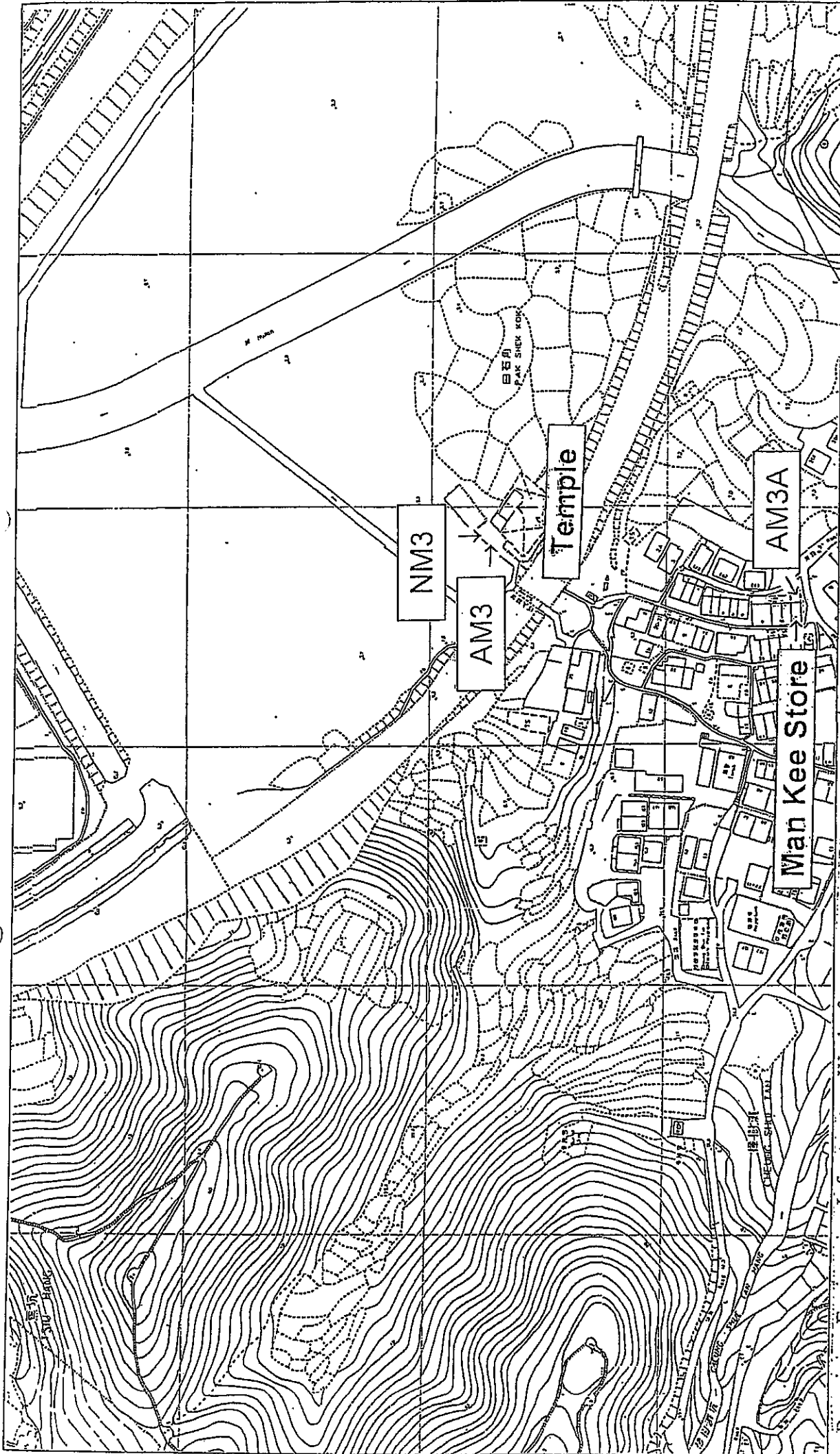
June 2004



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Remaining Engineering Infrastructure Works for
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Contract No. IP 37/03

Figure 4 Location of Noise Monitoring Station at CUHK Residence No.10



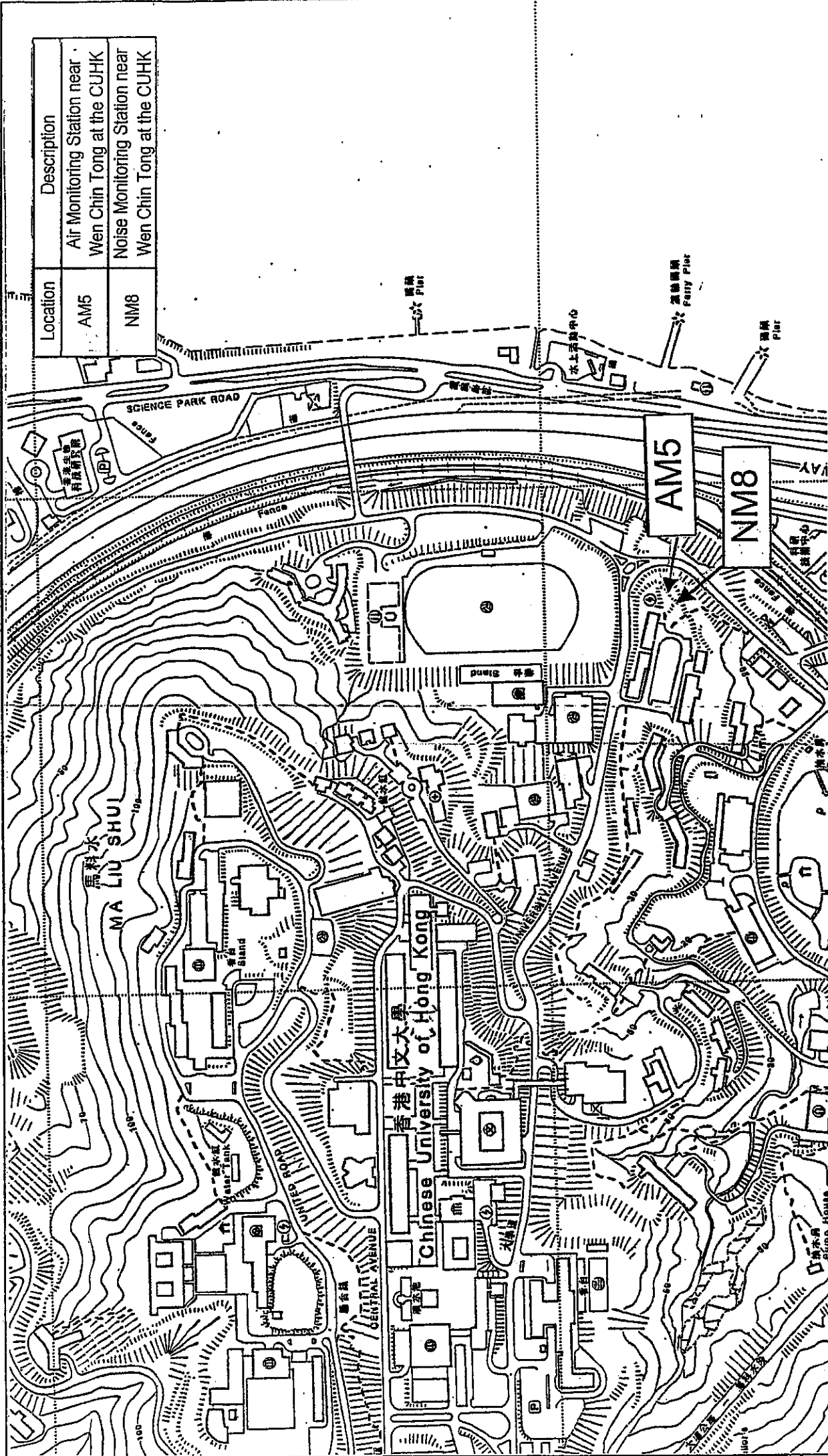
Remaining Engineering Infrastructure Works for
 Pak Shek Kok Development Package 2 A
 Contract No. TP 37/03
 Figure 5 Location of Air and Noise Monitoring Stations
 at Cheung Shue Ian Village

Scale : ---

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Remaining Engineering Infrastructure Works for Pak Shek Kok Development

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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